

Northern Virginia Transportation Authority

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AGENDA

Wednesday, July 24, 2013

6:00 p.m.- Public Hearing/6:30 p.m.-NVTa Meeting

City of Fairfax City Hall

10455 Armstrong Street

Fairfax, Virginia 22031

NVTa Meeting

1. Call to Order.....Chairman Nohe
2. Roll Call
3. Approval of the Minutes of the June 20, 2013 Meeting
4. HB 2313 - Working Group Reports/Recommendations
 - A. Public Outreach
 - B. Organizational
 - C. Project Implementation
 - D. Financial
 - E. Legal
5. Approval of Technical Advisory Committee Members
6. Approval of NVTa Letter to Gubernatorial Candidates
7. Information Items-CMAQ/RSTP Reallocation Requests
 - A. Arlington County
 - B. Fairfax County
 - C. City of Fairfax
 - D. Town of Herndon
8. Other Business
9. Adjournment

Next Scheduled NVTa Meeting:

Thursday, September 26, 2013 at 5:30 p.m. at the Northern Virginia Regional Commission, 3060 Williams Drive, Suite 510, Fairfax, VA 22031

SUMMARY MINUTES NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

June 20, 2013

City of Fairfax City Hall, 10455 Armstrong Street
Fairfax, VA 22031

NVTA Members Present:

Voting Members:

Martin Nohe, Chairman
William Euille, Vice Chairman
Board Member Chris Zimmerman
Chairman Sharon Bulova
Chairman Scott York
Council Member Rishell
Mayor Parrish
Council Member Snyder
Mayor Scott Silverthorne
Senator Ebbin
Delegate Rust
Delegate May
Ms. Bushue
Mr. Garczynski

Prince William County
City of Alexandria
Arlington County
Fairfax County
Loudoun County
City of Manassas Park
City of Manassas
City of Falls Church
City of Fairfax
Virginia General Assembly
Virginia General Assembly
Virginia General Assembly
Governor's Appointee
Governor's Appointee

Non-voting Members:

Helen Cuervo
Joe Swartz
Jerry Foreman

VDOT
DRPT
Town Representative

Staff:

Pam Martin
Monica Backmon

Various jurisdictional staff

Clerk
Chair, Jurisdictional and
Agency Coordinating Committee

Item I: Call to Order

Chairman Nohe called the meeting to order at 8:13 p.m.

Item II: Roll Call

The roll was called and members present are noted above.

Item III: Approval of the Minutes of May 23, 2013

Item IV: Discussion/Action Items

A. HB 2313 – Working Group Reports

i. Project Implementation

Board Member Zimmerman briefed the committee on the progress of the Project Implementation Working Group. He provided the detail of the three tiers and project selection process. He indicated that not all projects are recommended and the need to have a small list of projects. Mr. Garczynski stated the CTB adopted the Six-Year Plan and has funding for Route 28. Senator Ebbin asked about an inquiry regarding the expense of projects. Mr. Biesiadny, Director of Fairfax County Department of Transportation, stated that the projects met with the NVTA criteria and the significant costs of the right-of-way acquisition contribute to the overall cost of the projects. Chairman Nohe stated that there is a need for the analysis and proposed solutions to address the problem.

The Board Members discussed the next meeting, which was expected to be scheduled for July 24, 2013 at 6:00 p.m., in Fairfax City. Ms. Quintana confirmed that date and time. Mayor Parrish moved and Board Member Zimmerman seconded and the motion carried.

Chairman Nohe stated that the public hearing is closed, and the public comment will be closed on Thursday, June 27, 2013. The comments will be shared with other committee members.

Senator Ebbin asked about the public comments. Board Member Zimmerman explained the matrix and staff will compare the comments against the matrix in the spreadsheet. Chairman Nohe suggested advertising a longer list for the July 24 meeting, but the committee can adopt the shorter list. Board Member Zimmerman and Chairman York agreed with the recommendation. Delegate Rust asked if the Committee would be given the reason a project which is recommended. Board Member Zimmerman explained the criteria, and will give explanations to the Committee. Mr. Garczynski asked for the inputs and comments from other committee members.

Mayor Foreman asked about the next round of project selection. Board Member Zimmerman stated the next step will be the Six-Year plan will be developed in the next few months. Chairman Nohe stated that the Committee can always open a public hearing to include additional projects. Delegate Rust asked about the status of the ROW, design, and readiness. Mr. Board

Member Zimmerman replied that those projects are on the CLRP and have most of the work done.

Chairman Nohe asked staff to prepare project list for the July 24 meeting, and include a public comment process, as the Authority discussed. Board Member Zimmerman moved and Senator Ebbin seconded and the motion carried.

ii. Organizational

Chairman York provided the status report of the Organizational Working Group. The group received proposals from NVRC and GMU. They group will exam the proposals at the June 27 meeting. On the issue of the interim executive director, there are three people who have expressed interest to serve. Staff was asked to research way to pay for the full-time director. The financial group was asked to look at the issue with the CFO position.

iii. Public Outreach

Chairman Nohe provided the status report of the Public Outreach Working Group. He commended staff work their excellent work for preparing these meetings. He stated that there is a need to establish a better website, communication plan, and budget. A key to keeping the public informed is a better website for NVTa which would require additional funds.

iv. Financial

Mayor Euille provided the status report of the Financial Working Group. He also commended staff for their good work. The group discussed about the revenue for FY 2014, the Commercial and Industrial Property Tax (C&I), and how to distribute the 30%, bond sale and bond validation, etc. There is also a need to update the Memorandum of Understanding for 2013, the banking process to pay bills, and transfer the 30% to local governments.

Chairman Nohe stated that he received an email from VA Department of Taxation. Mr. Biesiadny responded that the document was referred to the Legal Working Group and they had no comment at this time

v. Legal

Mr. Snyder thanked the staff for their hard work and his appreciation for their generous time and effort in the working group. He introduced the Council of Counsels and also recommended other jurisdictions to engage in participation with the legal working group. Mr. Snyder briefed the Authority on several items: (a) the project list must meet the requirement of the law of HB 2313; payment of any administration expenses must meet certain criteria; bond validation must be considered; risk analysis to be considered if money is spent before bond validation.

Mr. Snyder requested that the Authority have a closed session to discussion personnel and legal matters.

B. Approval of I-66 TIER 1 EIS Comment Letter

Ms. Backmon discussed the I-66 Tier I EIS process and the recently action by the Commonwealth Transportation Board regarding concepts that would be forwarded for additional study. The concepts proposed for further study did not include Metrorail, VRE, or light rail. The proposed letter would share the concerns of the Authority on the exclusion of those transit options. Chairman Bulova moved and Mayor Parrish seconded and motion carried.

Mr. Snyder moved that the Authority convene a closed meeting, as authorized by Virginia Code sections 2.2-3711.A.1 and 7, for the purpose of discussing two personnel matters concerning candidates for employment by the Authority, and for consultation with the Authority's legal counsel concerning the meaning and application of House Bill 2313 as enacted this past session of the General Assembly, the potential for challenges to its legality and strategies to respond to such potential challenges, and the process for approval and funding of eligible projects under the legislation using cash and bond funding.

Senator Ebbin seconded the motion, the question was called on the motion and it carried by a unanimous vote.

At 10:39 p.m. the Authority reconvened their meeting.

Chairman Bulova moved that the members of the Northern Virginia Transportation Authority certify: (1) that only public business matters lawfully exempted from open meeting requirements under Chapter 37, Title 2.2 of the Code of Virginia; and (2) only such public business matters as were identified in the motion by which the closed meeting was convened were heard, discussed or considered by the Working Group. Chairman York seconded the motion and it carried by unanimous vote.

Mayor Euille moved and Chairman Bulova seconded to approve the initial phase of work for NVTa's financial advisor (PFM) to analyze the financial implications of an initial bond issuance and authorizes Chairman Nohe to sign a contract with PFM. The motion carried with Chairman York voting "nay."

Mayor Euille moved and Chairman moved to direct staff to prepare letter to the Chief Administrative Officers of the nine NVTa jurisdictions seeking information about each jurisdiction's intention related to adoption of the C&I property tax. The motion carried.

Item VII: Adjournment

The NVTa meeting was adjourned at 10:41 p.m.

4.C.

Project Implementation Working Group Northern Virginia Transportation Authority

MEMORANDUM

TO: Martin E. Nohe, Chairman
Northern Virginia Transportation Authority
Members
Northern Virginia Transportation Authority

FROM: Christopher Zimmerman, Chairman
Gary Garczynski, Vice-chairman
Project Implementation Working Group

SUBJECT: Report of the Project Implementation Working Group:
FY 2014 Project Selection Process and FY 2014 Program
Responses to Questions in Chairman's May 1, 2013 Memo

DATE: July 18, 2013

Recommendations of Working Group

The Working Group recommends that the Northern Virginia Transportation Authority ("NVRTA" or "the Authority") take the following actions on July 24, 2013:

- a. Approve the "FY 2014 Project Selection Process" as described in Attachment A.1 and A.2.
- b. Approve the projects identified in Attachment B.1 for FY 2014 NVRTA Program, contingent upon the availability of funds.
- c. Approve carryover of the List of Projects not Recommended for FY 2014 Funding identified in Attachment B.2. for consideration by the Authority in a future Six-Year Program ("Carryover Projects") (along with others that may be submitted under a process to be promulgated subsequent to this action).
- d. Approve the FY 2014 bond authorizing resolution for the FY 2014 Bond Projects (Attachment C).
- e. Approve the FY 2014 PAYGO funding for the FY 2014 PAYGO Projects (Attachment D).

Actions a., b. and c. will be embodied in one resolution, actions d. and e. will be embodied in two separate resolutions.

Final Proposal for FY 2014 Program

The Project Implementation Working Group (hereafter, the “Group”) has met six times since receiving its charge at the April 25, 2013 NVTA meeting. In April the Group was directed to discuss how projects might be implemented and to recommend actions that the NVTA can take to successfully undertake transportation projects. This included developing an FY 2014 project list for consideration by the Authority on May 23, 2013 with anticipated action on June 20, 2013. Pursuant to that charge, the Group developed recommendations for an FY 2014 list of projects within the limits of the revenue to be raised in the first year, at that time estimated at approximately \$190 million. On May 23, 2013 the NVTA adjusted its direction to reflect a revised timetable with Authority review of the FY 2014 project recommendations on June 20, 2013, with anticipated action on the final recommended FY 2014 Program in late July. Commensurate with that revised timetable, the Authority authorized the release of the FY 2014 project list and list of projects for consideration for a future Six-Year Program for public comment. At the June 20, 2013 open house and public hearing, the NVTA reviewed the Group’s initial project recommendations and directed the Group to develop a FY 2014 Program that would put the overall size of the FY 2014 pay-as-you-go (PAYGO) program at a magnitude well below the estimated FY 2014 revenues. The Group was also directed to include documents for an initial bond issuance for consideration by the Authority on July 24, 2013. Pursuant to that direction, this report contains our final recommendations for the FY 2014 Program.

Background for project recommendations

As noted in our earlier reports, the basis for the evaluation of project proposals, as undertaken by the Working Group, are the provisions of relevant statute, including HB 2313, and the most recent version of the adopted regional plan (“TransAction 2040”), as endorsed by the jurisdictions and approved by NVTA in November 2012. As you know, the basis of TransAction 2040, and the process by which it was developed, is the statutory mandate given to NVTA under § 15.2-4838, which states:

The Authority shall be responsible for long-range transportation planning for regional transportation projects in Northern Virginia. In carrying out this responsibility, the Authority shall, on the basis of a regional consensus, whenever possible, set regional transportation policies and priorities for regional transportation projects. The policies and priorities shall be guided by **performance-based criteria** such as the **ability to improve travel times, reduce delays, connect regional activity centers, improve safety, improve air quality, and move the most people in the most cost-effective manner**. [Emphasis added]

Since 2002, NVTA has been carrying out that function, preparing and periodically updating the plan. The plan is structured around eight regional corridors (with a ninth category for projects outside the corridors, or connecting multiple corridors), for which individual projects are identified, and are based on transportation modeling and cost-benefit analysis.

(From the TransAction 2040 Technical Report (p. 65):

Section 3.0, System-Level Evaluation, presented performance measures showing benefits from the combined effect of the TransAction 2040 projects. In addition to looking at system level performance, effort was also undertaken to rate, score, and prioritize the individual projects

making up the TransAction 2040 Plan. An important element of TransAction 2040 was ensuring that this project prioritization process was conducted using a data-driven and transparent method that provides the public and decision-makers with a clear view of why and how projects were ranked and prioritized. It also was critical to identify the projects that best met the goals and objectives of the Plan.)

Thus, TransAction 2040 provides a prioritization of more than 200 projects based on a system-level evaluation, for which performance evaluation criteria were developed and cost-benefit ratings conducted. A full description of the extensive public review process, together with explanations of the technical specifications employed by the outside analysts who performed the computer modeling and cost-benefit calculations on which the prioritization of individual projects is based, have been available on the NVTa website since the adoption of TransAction 2040 last fall.

As funding has not been available to the Authority, the ability to pursue the identified transportation improvements has been very limited, resulting in a backlog of projects. Prior to the passage of HB 2313, the shortfall between the full cost to implement TransAction 2040 and then-anticipated funding was estimated at \$27.5 billion, over and above the estimated \$58.2 billion in costs identified in the Northern Virginia Portion of the Region's Constrained Long-Range Plan.

The Recommended Program for FY 2014

The final recommendations include a list of 33 projects for the FY 2014 Program, totaling \$206,793,000 in proposed project funding (Attachment B.1). This list is a subset of the 48 projects submitted by the Authority's member jurisdictions and transportation agencies (with a total funding request of \$514,593,000). The recommended list represents the first steps in addressing a large backlog of transportation improvements that have been accumulating over a number of years. In general, the recommended list represents the highest ranking projects, based primarily on their ability to deliver rapid, noticeable congestion relief to the region, consistent with the special provision in HB 2313 which exempts FY 2014 funds from the Virginia Department of Transportation (VDOT) rating requirement which will not be complete before FY 2015.

In summary, the recommended FY 2014 Program includes a balance of road, transit and multimodal projects. Of the total 33 projects, 12 are roadway, totaling \$108,835,000 or 53% of the total recommended funding, and 21 are transit/multimodal, totaling \$97,958,000 or 47% of the total recommended funding. The list is broadly balanced in geographic terms, with projects in all jurisdictions that: 1) requested funding; and 2) had projects that meet the statutory requirements. While funding does not exactly match each jurisdiction's proportional share of the regional funding, it is the Group's intention to ensure that, in accordance with HB 2313, over the long-term the localities receive benefit generally proportional to the funding raised in each jurisdiction. For the 15 projects not recommended for FY 2014 funding (Attachment B.2), the Group recommends that the Authority approve the Carryover Projects for consideration as part of the future NVTa Six-Year Program, along with others that may be submitted under a process to be promulgated subsequent to this action.

To implement the project list as proposed, the Group recommends the projects be funded with FY 2014 pay-as-you-go (PAYGO) revenues and a FY 2014 bond package. Under the recommendation, FY 2014 expenditures would be \$87,979,159 below projected FY 2014 revenues of \$204,037,159, thus preserving

flexibility for the Authority going forward. The recommendation is to fund \$116,058,000 in projects with available revenues and the balance as part of a bond issuance. The final recommended FY 2014 PAYGO Projects (Attachment D) includes 25 projects, totaling \$116,058,000, while the final recommended FY 2014 Bond Projects (Attachment C) includes 9 projects, totaling \$90,735,000, for a total FY 2014 Program of \$206,793,000.

It is important to note that for one project (“Innovation Center Metrorail Station”), the requested funding is split, with funding both from FY 2014 PAYGO funds and from bond proceeds (\$21,000,000 on the FY 2014 PAYGO Projects list and \$20,000,000 on the FY 2014 Bond Projects list). Hence, the project is “counted twice” when the lists are considered separately.

A summary of the proposed FY 2014 PAYGO Projects and FY 2014 Bond Projects list, as well as the list of projects not selected for FY 2014 funding is provided in Attachment E.1.

FY 2014 Bond Projects

The final recommended FY 2014 Bond Projects includes nine (9) projects, totaling \$90,735,000. Of the total, four (4) are roadway projects representing 45% of the funding proposed, and five (5) are transit/multimodal projects which make up the remaining 55% of the total. The list was developed within the financial framework recommended by the Financial Working Group, which defined the lower and upper bounds of the bond list to be \$50 million - \$100 million.

The resolution authorizes the issuance of up to \$105 million in principal amount of bonds to be supported by the regional taxes and fees collected by the Commonwealth of Virginia. Proceeds from the sale of bonds will be used, together with other available funds, to fund the projects approved in Attachment C, pay issuance and financing costs, and fund capitalized interest and required reserves.

At its July 8, 2013 meeting the Group discussed and approved sending forward to the Authority the proposed FY 2014 Bond Projects along with two jurisdictional requests for modification:

- 1) Mr. Canizales, representing Prince William County, requested that the funding for Route 28 from Linton Hall Road to Fitzwater Drive be increased from the proposed \$25,000,000 to \$28,000,000 commensurate with the original funding request made by the County, in view of its likely funding through bond issuance.
- 2) Mr. Kroboth, representing Loudoun County, requested that the Route 28 Hot Spot Improvements, totaling \$6,400,000 and Leesburg Park and Ride, totaling \$1,000,000 be removed from the FY 2014 Bond Projects list and that they instead be placed on the FY 2014 PAYGO Projects list. Mr. Kroboth also submitted this request in writing prior to the meeting.

FY 2014 PAYGO Projects

The final recommended FY 2014 pay-as-you-go (PAYGO) Projects includes 25 projects, totaling \$116,058,000. Of the total, eight (8) are roadway projects representing 59% of the funding proposed, and 17 are transit/multimodal projects which make up the remaining 41% of the total.

The Group reviewed and approved the proposed FY 2014 PAYGO Projects at its July 8, 2013 meeting.

The Project Selection Process & Public Review

The Group has prepared the attached FY 2014 Project Selection Process documents (Attachment A.1. and A.2) which describe the methodology used to evaluate the list of 48 projects submitted by member jurisdictions and transportation agencies. The FY 2014 Project Selection Process has been reviewed by the Legal Working Group to ensure that the process is consistent with statutory requirements. Detailed information about each project including the stated regional benefits is provided in Attachment E.2.

As part of the project evaluation, the Group organized all public comments received during the official public comment period for the 48 projects submitted for consideration by the Authority for FY 2014 funding which ran from June 6, 2013 to June 27, 2013. Comments were received through a variety of venues including written and verbal testimony provided at the June 20, 2013 NVTa open house and public hearing and at local jurisdiction and transportation agency open houses as well as written comments submitted directly to the Authority.

A total of 72 comments were submitted for consideration by the Authority during the first official public comment period. A summary of the comments is provided in Attachment F.1. A detailed list of all of the comments with responses is provided in Attachment F.2. In addition, the Group developed a separate document with 237 project specific comments provided in Attachment F.3, which is a subset of the 72 total comments. Each of the comments was reviewed and where appropriate includes a response.

As directed by NVTa, the Group reviewed the comments in the context of the development of the FY 2014 Program. Of the 237 project specific comments received, 68 were comments on projects not contained in the list of 48 projects evaluated by the Group. The remaining 169 project specific comments were distributed across the list of 48 projects. More than 61% of these comments were in favor of the projects.

RESPONSES TO QUESTIONS IN CHAIRMAN'S MAY 1, 2013 MEMO

Overarching Questions

What projects should be recommended for FY 2014?

The Group recommends that the Authority approved the recommended FY 2014 Program as described above. This is reflective of the Group's sentiment that NVTa select projects that can be implemented quickly which will allow the Authority to show immediate accomplishments. Projects implemented by the NVTa should be: 1) included in the TransAction 2040 and/or Constrained Long Range Plan/Transportation Improvement Plan or is air quality neutral; 2) have completed (or will complete prior to project selection) major regulatory reviews and/or public input processes; 3) have the resources (staffing and funds) to move forward with the project when regional funding becomes available; 4) be ready to begin construction or revenue service in FY 2014, or begin or complete a project phase that will; 5) expedite project delivery if regional funding becomes available. The complete list of project selection criteria is contained in Attachment A.1 and A.2 which support the advancement of projects that improve safety, leverage external funding, and are balanced across modes. The Group recommends that the NVTa develop a Six-Year Program, to be updated annually, that will track with the Commonwealth Transportation Board's annual six year planning process.

What are the advantages and disadvantages of various approaches to implementing transportation projects and services (FY 2014)? (Contractor? Assistance from local governments? Assistance from

existing transportation agencies? Other? How will decisions on which approach to use be made (FY 2014)?

Over the long term, the NVTAs role will be different depending on whether the project is a single-jurisdiction or agency project, or involves more than one jurisdiction / agency. The NVTAs may implement projects on a reimbursable basis for a member jurisdiction or agency, or provide coordination among jurisdictions / agencies implementing larger, more complex projects.

In the short term, the Group recommends that for FY 2014, the member jurisdictions and transportation agencies that submitted the project funding requests also be responsible for administering the projects. The advantage of this approach is that the jurisdictions and agencies will be able to use project management processes and resources already in place to initiate the implementation of project, which will expedite the delivery of the project. One potential disadvantage to this approach is if the jurisdiction or transportation agency didn't have the capacity to manage additional projects. None of the jurisdictions and transportation agencies thus far have expressed concern about this being a potential issue.

How will interaction/coordination with the Commonwealth Transportation Board, the Virginia Department of Transportation, the Virginia Department of Rail and Public Transportation, and the Transportation Planning Board be handled?

The Group recognizes that coordination and support from the various agencies is needed to successfully implement projects. The Group has held preliminary discussions about the coordination with the various agencies listed above as it pertains to the development of an NVTAs Six-Year Program. With input from the agencies, the Group developed a draft schedule for the implementation of the Six-Year Program. Going forward, the Group will continue to discuss other issues related to the coordination amongst agencies, including a discussion on streamlining project implementation.

What role should the PCAC and TAC play in selecting projects for implementation?

The Group believes that the PCAC and TAC should have a role in assisting the Authority with project implementation, beyond their current role which has been to advise and provide guidance on the development of TransAction 2040. When the Group meets later this summer, it will continue to discuss ways in which the PCAC and TAC can be integrated into the project implementation process.

Responses to Other Questions Submitted to Project Implementation Working Group

In response to a question from the Financial Working Group ("how much money will be needed for business start-up?"), the Group believes that the Authority will need a minimum of two staff members responsible for program oversight and coordination for projects implemented in FY 2014. It should be noted that this recommendation may need to be revisited should the Authority decide to manage projects in-house. The Group also recommends that an amount of funds be reserved for consultant services that may be required to assist with the preparation and analysis of the Six-Year Program.

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

RESOLUTION

APPROVING THE PROCESS USED TO SELECT PROJECTS TO BE FINANCED WITH FISCAL YEAR 2014 NVTA FUNDS, THE PROJECTS TO BE FINANCED BY SUCH FUNDS AND THE CARRYOVER OF CERTAIN PROJECTS FOR FUTURE CONSIDERATION

July 24, 2013

WHEREAS, the Northern Virginia Transportation Authority ("NVTA") is a political subdivision of the Commonwealth of Virginia (the "Commonwealth") created by the Northern Virginia Transportation Authority Act (the "NVTA Act"), Chapter 48.2, Title 15.2, Code of Virginia of 1950, as amended (the "Virginia Code"); and

WHEREAS, as provided by Section 15.2-4831 of the NVTA Act, NVTA embraces the Counties of Arlington, Fairfax, Loudoun, and Prince William, and the Cities of Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park (collectively, the "Member Localities"); and

WHEREAS, Planning District 8 established pursuant to Chapter 42 of Title 15.2 of Virginia Code is composed of the Member Localities; and

WHEREAS, NVTA prepared and on November 8, 2012, approved a regional transportation plan for Planning District 8 entitled "TransAction 2040 Regional Transportation Plan" ("TransAction 2040") pursuant to Section 15.2-4838 of the NVTA Act; and

WHEREAS, on April 3, 2013, the Virginia General Assembly adopted the Governor's substitute for House Bill 2313 ("HB 2313"), which provides, among other things, for transportation funding and related reform both on a statewide basis and on a regional basis for NVTA and Planning District 8; and

WHEREAS, HB 2313 added Section 15.2-4838.01 to the NVTA Act, under which was established the Northern Virginia Transportation Authority Fund (the "NVTA Fund"); and

WHEREAS, the NVTA Fund will receive the revenues dedicated to it under Sections 58.1-638, 58.1-802.2 and 58.1-1742 of the Virginia Code and any other funds that may be appropriated to the Fund by the General Assembly (the "HB 2313 Transportation Revenues"); and

WHEREAS, subsection B of Section 15.2-4838.1 of the NVTA Act provides that 30% of the revenues received by NVTA (the "NVTA Revenues"), including the HB 2313 Transportation Revenues, shall be distributed on a pro rata basis to the Member Localities to be applied as provided therein; and

WHEREAS, subsection C.1. of Section 15.2-4838.1 ("Subsection C.1.") provides that in Fiscal Year 2014 NVTa shall use the remaining 70% of the NVTa Revenues plus the amount of any NVTa Revenues to be redistributed pursuant to subsection B (the "Regional NVTa Funds," which term, as used below, shall include the proceeds of bonds payable from the Regional NVTa Funds) to fund (i) transportation projects selected by NVTa that are contained in TransAction 2040 or (ii) mass transit capital projects that increase capacity; and

WHEREAS, Subsection C.1. further provides that NVTa shall give priority to selecting projects to be funded by Regional NVTa Funds that are expected to provide the greatest congestion reduction relative to the cost of the project and shall document this information for each project selected and that such projects shall be located (i) only in the Member Localities or (ii) in adjacent localities but only to the extent that such extension is an insubstantial part of the project and is essential to the viability of the project within the Member Localities; and

WHEREAS, the criteria set forth in Subsection C.1. for selecting projects to be funded shall be referred to collectively below as the "Subsection C.1. Criteria"; and

WHEREAS, subsection C.3. of Section 15.2-4838.1 provides that, with regard to the Regional NVTa Funds, each Member Locality's total long-term benefit shall be approximately equal to the proportion of the total of the Regional NVTa Funds received by NVTa that are generated by or attributable to the locality divided by total of such Regional NVTa Funds received by NVTa (together with the Subsection C.1. Criteria, the "Statutory Criteria"); and

WHEREAS, on April 25, 2013, NVTa directed the Project Implementation Working Group (the "PIWG") to recommend actions for NVTa to undertake transportation projects, including developing a list of projects to be funded in Fiscal Year 2014 through a process that, among other things, assures that each project will satisfy the Statutory Criteria; and

WHEREAS, the PIWG developed the selection process described in Attachment A.1. and Attachment A.2. (the "FY 2014 Project Selection Process") under which the Statutory Criteria and related measures were applied to 48 projects submitted by the Member Localities and transportation agencies; and

WHEREAS, NVTa invited public comment on the 48 projects from June 6, 2013, through July 1, 2013, and further public comment thereon from July 10, 2013, through July 24, 2013, and the PIWG considered the public comments received during each public comment period as well as the results of the FY 2014 Project Selection Process in developing the lists of projects attached to this Resolution; and

WHEREAS, the PIWG is recommending the list of projects in Attachment B.1. (the "Recommended FY 2014 Program") for funding with Regional NVTa Funds to be received in Fiscal Year 2014; and

WHEREAS, the PIWG is recommending the list of projects in Attachment B.2. (the "Carryover Projects") for consideration by NVTa for inclusion in a future six-year or other capital improvement program; and

WHEREAS, the PIWG developed the list of projects in the Recommended FY 2014 Program by assuming that the Regional NVTAs Funds to be received in Fiscal Year 2014 would consist of a combination of pay-as-you-go monies and bond proceeds equal to not less than \$206,793,000; and

WHEREAS, NNTA desires to approve the FY 2014 Project Selection Process, the Recommended FY 2014 Program and the Carryover Projects.

After careful consideration and to further the public purposes for which NNTA was created, NOW, THEREFORE, BE IT RESOLVED BY NNTA THAT:

1. Approval of FY 2014 Project Selection Process. NNTA hereby finds and determines that the FY 2014 Project Selection Process (i) considers all of the Statutory Criteria and (ii) provides a reasonable method by which to document that the projects selected for funding with Regional NNTA Funds received in Fiscal Year 2014 satisfy the Statutory Criteria. The FY 2014 Project Selection Process is hereby approved.

2. Approval of Recommended FY 2014 Program. NNTA hereby finds and determines that each project included in the Recommended FY 2014 Program (i) promotes the safety, health, welfare, convenience and prosperity of the residents of the Member Localities and Planning District 8, and (ii) satisfies the Statutory Criteria, including by being located (A) only in the Member Localities or (B) in adjacent localities but only to the extent that such extension is an insubstantial part of the project and is essential to the viability of the project within the Member Localities. NNTA hereby approves the undertaking of the Recommended FY 2014 Program contingent upon the availability of sufficient Regional NNTA Funds in Fiscal Year 2014, which availability will be determined in separate actions of NNTA.

3. Approval of Carryover Projects. NNTA hereby approves the consideration of the Carryover Projects in the development of future six-year or other capital improvement programs by NNTA.

4. Severability. If any section, subsection, paragraph, sentence, clause, or phrase of, or project approved by, this Resolution is for any reason held or decided to be unconstitutional or invalid, such decision of unconstitutionality or invalidity shall not affect the validity of the remaining portions. NNTA hereby declares that it would have adopted this Resolution and each section, subsection, sentence, clause and phrase thereof and project listed therein even though any one or more sections, subsections, sentences, clauses, phrases or projects might be declared unconstitutional or invalid.

5. Additional Actions. Each member, officer and authorized representative of NNTA is authorized to execute and deliver on NNTA's behalf such other instruments, documents or certificates, and to do and perform such things and acts as he or she shall deem necessary or appropriate to carry out the transactions authorized by this Resolution. Any of the foregoing previously done or performed by any member, officer, or authorized representative of NNTA is in all respects approved, ratified and confirmed. In the Chairman's absence, the Vice

Chairman is authorized to take any action specifically assigned to the Chairman under this Resolution.

6. **Effective Date.** This Resolution shall take effect immediately.

ATTACHMENT A.1.

FY 2014 PROJECT SELECTION PROCESS – STEP 1

(See Attached)

Northern Virginia Transportation Authority FY 2014 Project Selection Process – STEP 1

The Jurisdiction and Agency Coordinating Committee (JACC) was tasked with preparing an initial list of projects for funding received in Fiscal Year 2014 to begin discussions by the Northern Virginia Transportation Authority (“NVTA” or “the Authority”). The Authority forwarded this list of projects to the Project Implementation and Legal Working Groups to evaluate and ensure compliance with House Bill 2313 requirements.

The Project Implementation Working Group (“PIWG”) evaluated a total of 48 transportation projects submitted by NVTA member jurisdictions and transportation agencies. The following information describes the project selection process developed and supported by the Project Implementation Working Group.

The Code of Virginia has multiple provisions designed to guide how the NVTA selects projects. NVTA is required by § 15.2-4838.01.C.1 to use the 70% funds on:

- a. transportation projects in the regional plan (TransAction 2040) that have been rated by the Commonwealth based on a project’s ability to reduce congestion facilitate emergency evacuation (the Commonwealth rating is not required for funds received in FY2014); and
- b. mass transit capital projects that increase capacity.

The same Code section requires NVTA to give priority to projects that are expected to provide the greatest congestion reduction relative to the cost of the project, and must document this information for each project. It also requires that such projects be located (a) in NVTA member jurisdictions or (b) in adjacent localities but only to the extent that such extension is an insubstantial part of the project and is essential to the viability of the project within NVTA member jurisdictions.

The prioritization based on congestion reduction relative to cost is statutorily distinct from the regional transportation policies and priorities NVTA sets as part of long range transportation planning under §15.2-4838, which NVTA used when adopting its regional plan, TransAction 2040.

In setting long range planning policies and priorities, § 15.2-4838 requires that NVTA to be guided by performance based criteria such as the ability to improve travel times, reduce delays, connect regional activity centers, improve safety, improve air quality, and move the most people in the most cost effective manner. Several of these performance based criteria are, in essence, measures of congestion reduction.

Project Selection Process

NVTA approved a project selection process for Fiscal Year 2014 funds only. This selection process does not prescribe specific project funding decisions; instead it provides guidance to the Authority by relating investment decisions to statutory requirements and regional goals. The selection of projects is broken down into three tiers. Qualifying information for each project is available in Attachment E.2.

Tier I Screening

The first set of criteria is based on the required derived from statutory provisions governing NVTA’s actions, both under §15.2-4838.01.C.1 and §15.2-4838. The criteria are as follows:

- Contained in the regional transportation plan (TransAction 2040/CLRP/TIP)
- Mass transit project that increases capacity
- Reduces congestion

- Within a locality embraced by the Authority or in adjacent localities but only to the extent that such extension is an insubstantial part of the project and is essential to the viability of the project within the localities embraced by the Authority.

For a project to qualify and move forward under this first set of criteria, it must meet all the requirements. Projects that did not pass the tier one screening were placed on the list not considered for FY 2014 funding.

Tier II Screening

The second tier provides the basis for distinguishing among proposed projects that qualify under tier one, creating a relative ranking among them. The rationale for this approach was to select projects that provide rapid, noticeable improvements to address some of the region's transportation problems. Tier two has a total of five (5) criteria; however a project can receive a total of 10 points. A major of the points are weighted towards project readiness.

- **Improve auto and pedestrian safety.** Projects that improve auto and pedestrian safety receive one (1) point.
- **Project Readiness.** Readiness is described in terms of the degree to which the project is ready to be delivered (or at least advance it significantly) within FY 2014. The criterion is weighted using the following measures:
 - a. Project is included in TIP
 - b. Project is included in the CLRP or is air quality neutral.
 - c. Have completed (or will complete prior to project selection) major regulatory reviews and/or public input processes.
 - d. Resources available to move forward with project when funding becomes available.
 - e. Funding will provide expedition of project phase.
 - f. Projects will begin or complete next phase with requested funding.

Projects can receive a maximum of six (6) points if they meet all of the criteria stated above.

- **Mode Balance.** Transit, Road, Multimodal. Projects are coded as "R" for Roadway, "T" for Transit and "M" for Multimodal.
- **Leverages External Funding.** Short-term priorities of the jurisdictions that are partially funded in the Commonwealth's Six Year Improvement Program or by individual jurisdictions or agencies. Projects are assigned one (1) point if they meet this criterion.
- **Project with 20 year lifespan.** This is only to be used if bond project list is developed. This criterion is not applicable to the current FY 2014 project list and list of projects for consideration of the Six Year Plan. Projects are assigned one (1) point if they meet this criterion or "N/A" if not applicable.

Tier III Screening

The third tier is applied as an overlay to all projects.

- **Locality's total long-term benefit shall be approximately equal to the proportion of revenues attributable to the locality.** This requirement applies to a jurisdiction's share of the regional revenues over the long-term. Consequently, the first year of regional allocations may not exactly match the proportion of revenues generated by each locality, although the regional balance of the distribution of projects is to be considered. The NVTa working groups plan to

develop a method to track annual allocations to ensure that this statutory requirement is met over the long-term.

- **Counties and cities embraced by Authority must work cooperatively with towns and populations greater than 3,500 located within such counties to ensure that the towns receive their respective share of the revenues.** Counties and cities have been working with, and will continue to work with towns to ensure that the towns receive their respective share of the revenues. The NVTa Financial Working Group is developing revenue estimates for each of the towns. This work is being done in coordination with the towns.
- **Priority given to greatest congestion reduction relative to cost of the project.** There have been two rigorous rating processes of the projects identified as candidates for the FY 2014 NVTa regional funding. The analysis satisfies the requirement that NVTa give priority to projects that are expected to provide the greatest congestion reduction relative to the cost of the project.

The first set of analyses is conducted through the Transportation Planning Board's 2012 Financially Constrained Long-Range Transportation Plan (CLRP) for the National Capital Region. The Plan identifies and describes all regionally significant transportation projects and programs that are planned in the Washington metropolitan area between 2012 and 2040. Over 800 projects are included, ranging from simple highway landscaping to billion-dollar highway and transit projects. Of these projects, about 110 are considered to be "regionally significant". As developed and adopted by the National Capital Region Transportation Planning Board (TPB) the Metropolitan Planning Organization (MPO) for the area, the CLRP includes an evaluation of plan performance in the following categories:

- Population and Employment Growth
- Travel Demand and Congestion
- Transit Congestion
- Regional Highway Congestion
- Job Accessibility
- Air Quality: Mobile Source Emissions

The evaluation considers the performance of the CLRP as a single package of projects relative to the base year of the plan (for the currently adopted 2012 CLRP, the base year is 2013) and horizon year of the plan (2040). Analysis of individual projects occurs as a project advances from the CLRP to the six-year Transportation Improvement Program (TIP) and undergoes traditional project planning analysis with the funding agency (VDOT, DRPT, WMATA, local jurisdictions).

All of the projects in the 2011 CLRP are included in Baseline and Build scenarios for TransAction 2040. The TransAction 2040 Plan builds on the CLRP with additional projects to address highway and transit network performance as well as the region's Round 8.0 land use assumptions.

The CLRP reflects a regional consensus on the projects that are of the highest priority given the fiscal constraints that exist. Projects in the CLRP were included in TransAction 2040 as the top priority projects for existing revenue sources. As such, the NVTa project selection methodology gives greater weighting to projects in the CLRP and TIP because the projects are more prepared to be implemented and therefore could address congestion reduction more readily. They have also

been vetted through a public process. With CLRP projects considered the top priority projects, NVTa only has to determine which other projects in the regional plan meet the priority requirement.

A second set of analyses was performed in TransAction 2040 for projects not evaluated in the CLRP. This analysis was conducted in two steps: 1) System-Level Evaluation, presented performance measures showing benefits from the combined effect of the TransAction 2040 projects; and 2) benefit/cost analysis for individual projects.

A set of system-level performance criteria was developed to evaluate the benefits of adding the TransAction 2040 Plan projects. These criteria were related to the transportation planning objectives established for this Plan. The criteria described below were used to measure the performance of the entire transportation system; that is, all of the projects working together as a whole. The project team first looked at current conditions in 2007 and then evaluated conditions in the 2040 Baseline Scenario, Build Scenario, and Build 2 Scenario. The system-level performance criteria included:

- Daily vehicle-miles of travel (VMT);
- Daily person-miles of travel (PMT);
- Work trip length;
- Work trip mode share;
- Job accessibility;
- Screenline analysis; and
- Levels of service.

In addition to looking at system level performance, effort was also undertaken to rate, score, and prioritize the individual projects making up the TransAction 2040 Plan. An important element of TransAction 2040 was ensuring that this project prioritization process was conducted using a data-driven and transparent method that provides the public and decision-makers with a clear view of why and how projects were ranked and prioritized. It also was critical to identify the projects that best met the goals and objectives of the Plan.

Each project was individually evaluated using a set of project-based performance evaluation criteria. The project-level performance assessment provided feedback on how each project addressed the region's defined goals and performance objectives. This included a quantitative evaluation to measure the effects of a project on the transportation system with respect to the performance objectives, and a qualitative policy assessment to assess how well projects met broader considerations embodied in the region's goals. In addition to identifying the performance-based benefits for each project, a benefit/cost analysis was introduced to the prioritization process. The project prioritization process was applied within corridors and by project type (e.g., bicycle/pedestrian, transit, highway) and is described in more detail in the subsections which follow. The Plan conducted a benefit/cost analysis for each project based on a number of factors:

- Freight Movement
- Improved Bicycle/Pedestrian Options
- Multimodal Choices
- Urgency
- Project Readiness
- Reduce VMT

- Safety
- Person Throughput
- Reduce Roadway Congestion
- Reduce Time Spent Traveling
- Environmental Sensitivity
- Activity Center Connections
- Land Use Supports Transportation Investment
- Management and Operations
- Cost Sharing

Projects identified for FY 2014 regional funding are either in the CLRP, TIP, and TransAction 2040 Plan. All of the projects have been evaluated based on congestion reduction relative to cost. The projects identified on the FY 2014 project list have the greatest congestion benefit relative to cost. Detailed information about each project including the stated regional benefits is provided in Attachment B.

ATTACHMENT A.2.

FY 2014 PROJECT SELECTION PROCESS – STEP 2

(See Attached)

Northern Virginia Transportation Authority FY 2014 Project Selection Process – STEP II

The Project Implementation Working Group (PIWG) was directed by the Northern Virginia Transportation Authority (“NVTa” or “the Authority”) at its June 20, 2013 meeting to prepare an FY 2014 Program to include preparation of documents for an initial bond issuance for consideration by the Authority at its July 24, 2013 meeting. Pursuant to that charge, the PIWG developed and approved by consensus a list of FY 2014 bond selection criteria. The criteria do not prescribe specific project funding decisions; instead it provides guidance to the Authority by relating investment decisions to statutory requirements and regional goals. The bond selection process is provided in detail below.

Bond Selection Criteria

The PIWG developed the following selection criteria which provide the basis for selecting projects for a FY 2014 Bond List. All projects must have been evaluated through the FY 2014 Project Selection Process in order to be considered in this process. No projects that did not pass the Tier I Screening of the FY 2014 Project Selection Process were not considered.

As noted in the FY 2014 Project Selection Process (Attachment A.1.) the approach focuses on selecting projects that provide rapid, noticeable improvements to address some of the region’s transportation problems. There are a total of six (6) bond selection criteria.

- **Project with 20 year lifespan.**
- **High ranking project.** Priority is given to projects on the “List of Projects for FY 2014 Funding” as presented to the Authority on June 20, 2013. In order to be considered for bond funding, projects on the “List of Projects for Consideration for the Future Six-Year Program” as presented at the June 20, 2013 NVTa meeting must receive a high rating in the Tier II analysis.
- **Leverages external funding.** Short-term priorities of the jurisdictions that are partially funded in the Commonwealth’s Six Year Improvement Program or by individual jurisdictions or agencies.
- **Monetary size of project funding request.** Projects with relatively small funding requirements are not as suitable for bonding.

Projects that met these criteria were then screened to ensure that, as a package, the following criteria were satisfied:

- **Geographic balance.**
- **Mode balance.** Transit, Road, Multimodal. Projects are coded as “R” for Roadway, “T” for Transit and “M” for Multimodal.

Once the second screen was complete, the total value of the project funding requests on the draft list was evaluated to ensure that it met the Financial Working Group guidance on the overall size of the bond package, which took \$50 million to be the lower bound and \$100 million to be the upper bound, the PIWG searched for one project whose funding request could be split between the FY 2014 Bond List and the FY 2014 PAYG list.

Projects not removed from the “List of Projects for FY 2014 Funding” as presented to the Authority on June 20, 2013 were included on the FY 2014 PAYG List.

ATTACHMENT B.1.

RECOMMENDED FY 2014 PROGRAM

(See Attached)

Northern Virginia Transportation Authority (NVTa)
Recommended FY 2014 Program

ATTACHMENT B.1

ROADWAY PROJECTS																		
Item	Agency	Project	Funding Requested	Proposed Funding	Total Project Cost	Corridor	Status	GIS/PTP	TA2340	Predicts Capacity Increase	Withstands to RTA Boundary	Meets All Requirements (Y/N)	Improves Safety	Project Readiness (max 5 pts)	Mode	Leverages External Funding	25 year lifespan (only for bond projects)	Tier II Total Points
1	Arlington	Columbia Pike Multimodal Improvement Project	\$12,000,000	\$12,000,000	\$12,000,000	9	Final Design	Y/Y	Y	Y	Y	Y	1	5	R	1	-	-
2	Herndon	Herndon Parkway Intersection Improvements at Van Buren Street	\$500,000	\$500,000	\$3,000,000	1	Design concept completed. Town to begin PE in June 2013 and continue with ROW in FY2014.	N	Y	Y	Y	Y	1	5	R	1	-	-
3	Herndon	Herndon Parkway Intersection Improvements at Shilling Road	\$300,000	\$300,000	\$500,000	3	Concept design completed. Design to begin in June 2013 and continue with ROW in FY2014.	N	Y	Y	Y	Y	1	3	R	1	-	-
4	Prince William	Route 1 from Featherstone Road to Mary's Way	\$3,000,000	\$3,000,000	\$500,000	5	Planning complete	Y	Y	Y	Y	Y	1	4	R	1	-	-
5	Loudoun	Blairmont Ridge Road (Route 659, North of the Dulles Greenway) is approximately 5,800 linear feet. The estimated alone cost is \$20,000,000.	\$3,000,000	\$3,000,000	\$52,000,000	5	The NEPA document is complete and the plans are in final review.	Y	Y	Y	Y	Y	1	5	R	0	-	-
6	Loudoun	The project consists of development of a new grade-separated interchange on Edwards Ferry Road at the Route 28 widening 6 to 8 lanes (SB from the Dulles Toll Road to Route 50) \$20M. 6 to 8 lanes - SB from the Dulles Toll Road to Route 50.	\$20,000,000	\$20,000,000	\$20,000,000	2	Planning	Y/Y	Y	Y	Y	Y	1	5	R	0	-	-
7	Fairfax	Route 28 widening 6 to 8 lanes (NB from the Dulles Toll Road) \$11,10M. 6 to 8 lanes - NB from the Dulles Toll Road to Dulles Toll Road.	\$11,100,000	\$11,100,000	\$11,100,000	3	Design can be finalized, minimal ROW acquired, and environmental review completed. Anticipated construction could begin in late spring 2014.	Y	Y	Y	Y	Y	1	5	R	1	-	-
8	Fairfax	Route 28 widening 6 to 8 lanes (NB from the Dulles Toll Road) \$11,10M. 6 to 8 lanes - NB from the Dulles Toll Road to Dulles Toll Road.	\$11,100,000	\$11,100,000	\$11,100,000	3	Design can be finalized, minimal ROW acquired, and environmental review completed. Anticipated construction could begin in late spring 2014.	Y	Y	Y	Y	Y	1	5	R	1	-	-
9	Loudoun	Route 28 Red Spot Improvements	\$12,400,000	\$12,400,000	\$12,400,000	3	Design complete	Y	Y	Y	Y	Y	1	5	R	1	Y	Y
10	Arlington	Boundary Channel Drive Interchange	\$4,335,000	\$4,335,000	\$9,335,000	8	Planning and design complete. ROW acquisition to begin FY14, early FY15.	Y	Y	Y	Y	Y	1	4	R	1	Y	Y
11	Prince William	Route 28 from Union Hill Road to Fawcett Drive	\$28,000,000	\$28,000,000	\$28,000,000	3	ROW Acquisition anticipated to begin June 2013.	Y	Y	Y	Y	Y	1	4	R	1	Y	Y
12	Fairfax City	Chain Bridge Road Widening/Improvements from Route 28/650 to Elmon Place	\$9,500,000	\$9,500,000	\$21,000,000	6	ROW Acquisition anticipated to begin FY14.	Y/Y	Y	Y	Y	Y	1	5	R	1	Y	Y
Total Requested Funding:			\$106,835,000															
TRANSIT PROJECTS																		
Item	Agency	Project	Funding Requested	Proposed Funding	Total Project Cost	Corridor	Status	GIS/PTP	TA2340	Predicts Capacity Increase	Withstands to RTA Boundary	Meets All Requirements (Y/N)	Improves Safety	Project Readiness (max 5 pts)	Mode	Leverages External Funding	25 year lifespan (only for bond projects)	Tier II Total Points
1	Alexandria	Shirley and Rest-Town Transit Information for DASH/MWATA	\$450,000	\$450,000	\$1,500,000	8	CITY bus shelters currently at 95% design phase, expected 100% design by June 2013.	Y/Y	Y	Y	Y	Y	1	6	T	1	-	-
2	Alexandria	DASH Bus Expansion	\$3,350,000	\$3,350,000	\$3,350,000	6	Buses can be procured in FY2014.	Y	Y	Y	Y	Y	1	5	T	1	-	-
3	PRTC	PRTC New Gainesville Service					Project implementation anticipated for FY14, draft schedule and finalization of routing should be accomplished by June 15, 2013. Schedule finalized by July 31, 2013.	Y/Y	Y	Y	Y	Y	1	6	T	0	-	-
4	Alexandria	Traffic Signal Upgrade/Traffic Signal Priority	\$660,000	\$660,000	\$1,300,000	8	Design in FY2014 for DASH bus expansion.	Y	Y	Y	Y	Y	1	5	T	1	-	-

[illegible]

Grand Total

Grand Total

ATTACHMENT B.2.

CARRYOVER PROJECTS

(See Attached)

Projects not Recommended for FY 2014 List

[illegible]**Total Roadway**

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

RESOLUTION

AUTHORIZING THE ISSUANCE OF TRANSPORTATION FACILITIES REVENUE BONDS

July 24, 2013

WHEREAS, the Northern Virginia Transportation Authority ("NVTa") is a political subdivision of the Commonwealth of Virginia (the "Commonwealth") created by the Northern Virginia Transportation Authority Act (the "NVTa Act"), Chapter 48.2, Title 15.2, Code of Virginia of 1950, as amended (the "Virginia Code"); and

WHEREAS, as provided by Section 15.2-4831 of the NVTa Act, NVTa embraces the Counties of Arlington, Fairfax, Loudoun, and Prince William, and the Cities of Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park (collectively, the "Member Localities"); and

WHEREAS, Planning District 8 established pursuant to Chapter 42 of Title 15.2 of Virginia Code is composed of the Member Localities; and

WHEREAS, Section 15.2-4830 of the NVTa Act provides, among other things, that NVTa (i) shall prepare a regional transportation plan for Planning District 8, to include, but not necessarily be limited to, transportation improvements of regional significance, and those improvements necessary or incidental thereto, and will from time to time revise and amend the plan and (ii) has the power to construct or acquire, by purchase, lease, contract, or otherwise, the transportation facilities specified in the regional transportation plan when adopted; and

WHEREAS, NVTa prepared and on November 8, 2012, approved a regional transportation plan for Planning District 8 entitled "TransAction 2040 Regional Transportation Plan" ("TransAction 2040"); and

WHEREAS, Section 15.2-4839 of the NVTa Act authorizes and empowers NVTa to issue bonds and other evidences of debt and provides that the provisions of Article 5 (Section 15.2-4519 et seq.) of Chapter 45 of Title 15.2 of the Virginia Code, shall apply, *mutatis mutandis*, to the issuance of such bonds or other debt; and

WHEREAS, Section 15.2-4519 of the Virginia Code provides that NVTa's bonds may be payable from and secured by a pledge of all or any part of the revenues, moneys or funds of NVTa as specified in a resolution adopted or indenture entered into by NVTa; and

WHEREAS, NVTa has determined to proceed with the issuance of its bonds in a principal amount not to exceed \$105,000,000 (as more particularly defined below, the "Bonds") under the terms and conditions set forth below; and

WHEREAS, on April 3, 2013, the Virginia General Assembly adopted the Governor's substitute for House Bill 2313 ("HB 2313"), which provides, among other things, for transportation funding and related reform both on a statewide basis and on a regional basis for NVTa and the Member Localities; and

WHEREAS, under HB 2313, the Northern Virginia Transportation Authority Fund (the "Fund") will receive the revenues dedicated to it under Sections 58.1-638, 58.1-802.2 and 58.1-1742 of the Virginia Code and any other funds that may be appropriated to the Fund by the General Assembly (the "HB 2313 Transportation Revenues"); and

WHEREAS, subsection B of Section 15.2-4838.1 of the NVTa Act provides that 30% of the revenues received by NVTa (the "NVTa Revenues"), including the HB 2313 Transportation Revenues, shall be distributed on a pro rata basis to the Member Localities to be applied as provided therein; and

WHEREAS, subsection C.1. of Section 15.2-4838.1 ("Subsection C.1.") provides that in Fiscal Year 2014 NVTa shall use the remaining 70% of the NVTa Revenues plus the amount of any NVTa Revenues to be redistributed pursuant to subsection B (the "Regional NVTa Funds," which term, as used below, shall include the proceeds of bonds payable from the Regional NVTa Funds) to fund (i) transportation projects selected by NVTa that are contained in TransAction 2040 or (ii) mass transit capital projects that increase capacity; and

WHEREAS, NVTa has received from the Project Implementation Working Group (the "PIWG") a selection process (the "FY 2014 Project Selection Process") that has been previously approved by NVTa pursuant to a resolution entitled **"Resolution Approving the Process Used to Select Projects to be Financing with Fiscal Year 2014 NVTa Funds, the Projects to be Financed by such Funds and the Carryover of Certain Projects for Future Consideration"** (the "FY 2014 Project Selection Process Resolution"); and

WHEREAS, as described in the FY 2014 Project Selection Process Resolution, the PIWG (i) developed the FY 2014 Project Selection Process and applied it to a list of projects submitted by the Member Localities and transportation agencies and (ii) considered the public comments received regarding such projects as well as the results of the FY 2014 Project Selection Process in developing the list of the projects ultimately approved for financing and attached as Attachment B.1. to the FY 2014 Project Selection Process Resolution (the "Recommended FY 2014 Program"); and

WHEREAS, pursuant to direction received at the June 20, 2013, NVTa meeting, the PIWG developed a selection process to evaluate projects for bond financing, which is attached as Attachment A.2. (the "Bond Selection Process"); and

WHEREAS, PIWG applied the Bond Selection Process to the Recommended FY 2014 Program and developed a list of projects that satisfy the Bond Selection Process (the "FY 2014 Bond Projects"); and

WHEREAS, the list of FY 2014 Bond Projects is attached as Attachment C. and PIWG has recommended that NVTa approve the Bond Selection Process and the issuance of the Bonds to pay the costs of the FY 2014 Bond Projects; and

WHEREAS, to the extent the related Bonds are validated, NVTa will apply the proceeds of the Bonds, along with other available funds, to pay the issuance and financing costs thereof, to fund any required reserves and to pay the costs of the construction and acquisition of the FY 2014 Bond Projects; and

WHEREAS, debt service payments on the Bonds will be made from the portion of the Regional NVTa Funds pledged thereto as provided in this Resolution and the below-defined Indenture and the investment earnings on certain funds and accounts to be established under the Indenture; and

WHEREAS, the foregoing arrangements will be reflected in the following documents, forms of which have been presented to this meeting: (i) the Master Indenture of Trust (the "Master Indenture") between NVTa and a trustee to be named therein (the "Trustee"); and (ii) the First Supplemental Series Indenture between NVTa and the Trustee, to which the form of the Bonds is attached as an exhibit (the "First Supplemental Series Indenture" and, together with the Master Indenture, the "Indenture"); and

WHEREAS, on January 10, 2008, NVTa adopted Debt Policies relating to the issuance of NVTa debt (the "2008 Debt Policies"); and

WHEREAS, the 2008 Debt Policies related to NVTa debt secured by revenues derived from House Bill 3202, adopted April 4, 2007, and which are unrelated and inapplicable to the HB 2313 Transportation Revenues; and

WHEREAS, NVTa desires to suspend the 2008 Debt Policies because they are unrelated and inapplicable to the HB 2313 Transportation Revenues and the Bonds to be issued hereunder.

After careful consideration and to further the public purposes for which NVTa was created, NOW, THEREFORE, BE IT RESOLVED BY NVTa THAT:

1. Approval of the Bond Selection Process. NVTa hereby finds and determines that the Bond Selection Process provides a reasonable method by which to determine whether to provide bond financing for projects included in the Recommended FY 2014 Program. The Bond Selection Process is hereby approved.

2. Reaffirmation of Findings, Determinations and Approvals Regarding the FY 2014 Bond Projects. NVTa hereby reaffirms its findings, determinations and approvals that are embodied in the FY 2014 Project Selection Process Resolution regarding the FY 2014 Bond Projects, which form a subset of the projects included in the Recommended FY 2014 Program.

3. Authorization and Findings Regarding Bonds. There is hereby authorized the issuance of bonds of NVTa, in one or more series from time to time in accordance with the terms of this Resolution, to be known as the Northern Virginia Transportation Authority Transportation Facilities Revenue Bonds (the "Bonds") with appropriate series designations. The Bonds shall be in substantially the form attached as an exhibit to the First Supplemental Series Indenture. NVTa shall use the proceeds of the issuance

of the Bonds as described in the Recitals above and in accordance with the NVT Act and the Indenture to the extent the Bonds, the FY 2014 Bond Projects and the HB 2313 Transportation Revenues are validated in accordance with Section 15.2-4520 of the Virginia Code. NVT hereby finds and determines that (i) the issuance of the Bonds will be in all respects for the benefit of the inhabitants of the Commonwealth and the Member Localities and will promote their safety, health, welfare, convenience and prosperity, (ii) the undertaking of the construction and acquisition of the FY 2014 Bond Projects will constitute the performance of an essential governmental function, (iii) the issuance of the Bonds will further the purposes of NVT and the NVT Act by, among other things, financing the construction and acquisition of the FY 2014 Bond Projects, (iv) the proceeds of the Bonds will be used by NVT in accordance with subsections A. and C.1. of Section 15.2-4838.1 of the NVT Act and (v) the issuance of the Bonds and the application of the net proceeds thereof to pay the costs of the construction and acquisition of the FY 2014 Bond Projects will be consistent with the requirement set forth in subsection C.3. of Section 15.2-4838.1 that all revenues deposited to the credit of NVT be used for projects benefiting the Member Localities, with each Member Locality's total long-term benefits being approximately equal to the total of the fees and taxes expected to be received by NVT that are generated by or attributable to the Member Locality divided by the total of such fees and taxes received by NVT.

4. Details of Bonds. The final details of the Bonds, including without limitation, their series designation, dated date, aggregate principal amount, interest rates, maturity dates, redemption provisions, sale prices, and the principal amount of each maturity will be approved by subsequent resolution of NVT; provided, however, that (i) the aggregate principal amount of the Bonds shall not exceed \$105,000,000; (ii) the Bonds shall have a true interest cost that does not exceed 6.0%; (iii) no Bonds shall mature after December 31 of the year that is 20 years after the dated date of the Bonds; and (iv) the optional redemption premium on the Bonds, if any, shall not exceed 2%.

5. Approval of Indenture. The forms of the Master Indenture and the First Supplemental Series Indenture are approved. The Chairman is authorized to execute and deliver on NVT's behalf the Master Indenture and the First Supplemental Series Indenture in substantially the forms submitted to this meeting, with such changes, insertions or omissions as may be approved by the Chairman. Such approval shall be evidenced conclusively by the execution and delivery of such documents on NVT's behalf.

6. Preparation, Execution and Delivery of Bonds. The Chairman is authorized to have the Bonds prepared in substantially the form submitted to this meeting, to have the Bonds executed pursuant to the terms of the Master Indenture and the First Supplemental Series Indenture, to deliver the Bonds to the Trustee for authentication, and to cause the Bonds so executed and authenticated to be delivered to or for the account of the first purchasers thereof upon payment of the purchase price thereof as provided in the First Supplemental Series Indenture.

7. Pledge. The Regional NVT Funds are hereby pledged to secure the payment of the principal of and premium, if any, and interest on the Bonds in such amounts and under such terms and conditions as provided in the Indenture. Neither the members of NVT nor any person executing the Bonds shall be liable personally on the Bonds by reason of the

issuance thereof. The Bonds shall not be a debt of the Commonwealth or any political subdivision thereof (including any Member Locality) other than NVTa. The Bonds shall not constitute an indebtedness within the meaning of any debt limitation or restriction except as provided under the NVTa Act. NVTa hereby represents and acknowledges that its authority to receive any or all of the HB 2313 Transportation Revenues may be eliminated, changed or limited at any time by action of the General Assembly and that neither the General Assembly nor NVTa can or will pledge, covenant or agree to impose or maintain at any particular rate or level any of the taxes and fees described in Sections 58.1-638, 58.1-802.2 and 58.1-1742 of the Virginia Code or the HB 2313 Transportation Revenues for the benefit of the holders of the Bonds, the Trustee or any other person or entity.

8. Sale of Bonds. The Bonds may be sold in such manner, either at public or private sale or on a competitive or negotiated basis, as may be determined by NVTa by subsequent resolution to be in the best interests of NVTa.

9. Authorization of Bond Anticipation Notes. If market or other conditions are such that the Chairman determines that it is not advisable to enter into a long-term financing for all or any portion of the projects specified in the recitals, the Chairman, without further approval of NVTa as to documentation or otherwise, is hereby authorized to execute, deliver and issue short-term notes of NVTa (the "Notes") as provided in Section 15.2-4519 of the Virginia Code at public or private sale in anticipation of the issuance of any or all series of the Bonds; provided that the aggregate principal amount of the Notes shall not exceed the principal amount authorized hereby, the term to maturity thereof shall not exceed five years, and the Notes shall have a true interest costs that does not exceed 5.0%. The Notes shall be subject to such other terms and conditions contained in this Resolution to the extent not inconsistent with this paragraph. The interest payments on the Notes shall be secured in the same manner as the Bonds authorized hereunder and the principal and premium, if any, of such Notes shall be secured by the Bonds authorized hereby. NVTa shall retire the Notes either by issuing the Bonds authorized hereby or by making a payment or payments from any other lawfully available funds, provided that the maximum amount of the Bonds authorized hereby will be reduced by the amount of Notes retired by other lawfully available funds. If NVTa issues Bonds to retire the Notes, NVTa shall issue the Bonds in accordance with the terms of and subject to the parameters contained in this Resolution.

10. Federal Tax Matters. The Chairman is authorized and directed to execute and deliver on NVTa's behalf simultaneously with the issuance of the Bonds a Tax Regulatory Agreement and/or similar agreements or certificates. The Tax Regulatory Agreement and/or similar agreements or certificates shall set forth the expected use of and investment of all or any portion of the proceeds of the Bonds and include such covenants as may be necessary to qualify the interest on all or any portion of the Bonds for exemption from gross income for federal income tax purposes under the Internal Revenue Code of 1986, as amended, and the applicable Treasury Regulations (collectively, the "Tax Code"), and to maintain such exemption. The Chairman is further authorized to make on behalf of NVTa such elections under the Tax Code with respect to the Bonds as he may deem to be in the best interests of NVTa after consultation with NVTa's Bond Counsel and Financial Advisor.

11. Continuing Disclosure. The Chairman is authorized and directed to execute and deliver on NVTAs's behalf simultaneously with the issuance of any or all series of the Bonds a Continuing Disclosure Agreement, setting forth the disclosure to be made by or on behalf of NVTAs and containing such covenants as may be necessary in order to satisfy the provisions of Rule 15c2-12 promulgated under the Securities Exchange Act of 1934.

12. Suspension of 2008 Debt Policies. The 2008 Debt Policies are hereby suspended because they are unrelated and inapplicable to the HB 2313 Transportation Revenues and the Bonds authorized hereunder. The Chairman is authorized to direct the Financial Working Group to prepare revised debt policies that are based on the HB 2313 Transportation Revenues upon validation of such revenues and the Bonds.

13. Severability. If any section, subsection, paragraph, sentence, clause, or phrase of, or project approved by, this Resolution is for any reason held or decided to be unconstitutional or invalid, such decision of unconstitutionality or invalidity shall not affect the validity of the remaining portions. NVTAs hereby declares that it would have adopted this Resolution and each section, subsection, sentence, clause and phrase thereof and each project listed therein even though any one or more sections, subsections, sentences, clauses, phrases or projects might be declared unconstitutional or invalid.

14. Additional Actions. Each member, officer and authorized representative of NVTAs is authorized to execute and deliver on NVTAs's behalf such other instruments, documents or certificates, and to do and perform such things and acts as he or she shall deem necessary or appropriate to carry out the transactions authorized by this Resolution or contemplated by the Indenture. Any of the foregoing previously done or performed by any member, officer, or authorized representative of NVTAs is in all respects approved, ratified and confirmed. In the Chairman's absence, the Vice Chairman is authorized to take any action specifically assigned to the Chairman under this Resolution.

15. Effective Date. This Resolution shall take effect immediately.

ATTACHMENT A.2.

DESCRIPTION OF BOND SELECTION PROCESS

(See Attached)

Northern Virginia Transportation Authority FY 2014 Project Selection Process – STEP II

The Project Implementation Working Group (PIWG) was directed by the Northern Virginia Transportation Authority (“NVTa” or “the Authority”) at its June 20, 2013 meeting to prepare an FY 2014 Program to include preparation of documents for an initial bond issuance for consideration by the Authority at its July 24, 2013 meeting. Pursuant to that charge, the PIWG developed and approved by consensus a list of FY 2014 bond selection criteria. The criteria do not prescribe specific project funding decisions; instead it provides guidance to the Authority by relating investment decisions to statutory requirements and regional goals. The bond selection process is provided in detail below.

Bond Selection Criteria

The PIWG developed the following selection criteria which provide the basis for selecting projects for a FY 2014 Bond List. All projects must have been evaluated through the FY 2014 Project Selection Process in order to be considered in this process. No projects that did not pass the Tier I Screening of the FY 2014 Project Selection Process were not considered.

As noted in the FY 2014 Project Selection Process (Attachment A.1.) the approach focuses on selecting projects that provide rapid, noticeable improvements to address some of the region’s transportation problems. There are a total of six (6) bond selection criteria.

- **Project with 20 year lifespan.**
- **High ranking project.** Priority is given to projects on the “List of Projects for FY 2014 Funding” as presented to the Authority on June 20, 2013. In order to be considered for bond funding, projects on the “List of Projects for Consideration for the Future Six-Year Program” as presented at the June 20, 2013 NVTa meeting must receive a high rating in the Tier II analysis.
- **Leverages external funding.** Short-term priorities of the jurisdictions that are partially funded in the Commonwealth’s Six Year Improvement Program or by individual jurisdictions or agencies.
- **Monetary size of project funding request.** Projects with relatively small funding requirements are not as suitable for bonding.

Projects that met these criteria were then screened to ensure that, as a package, the following criteria were satisfied:

- **Geographic balance.**
- **Mode balance.** Transit, Road, Multimodal. Projects are coded as “R” for Roadway, “T” for Transit and “M” for Multimodal.

Once the second screen was complete, the total value of the project funding requests on the draft list was evaluated to ensure that it met the Financial Working Group guidance on the overall size of the bond package, which took \$50 million to be the lower bound and \$100 million to be the upper bound, the PIWG searched for one project whose funding request could be split between the FY 2014 Bond List and the FY 2014 PAYG list.

Projects not removed from the “List of Projects for FY 2014 Funding” as presented to the Authority on June 20, 2013 were included on the FY 2014 PAYG List.

ATTACHMENT C

DESCRIPTION OF FY 2014 BOND PROJECTS

(See Attached)

ATTACHMENT C

Proposed FY 2014 Bond List (July 8, 2013)

[illegible]

Total Funding:

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

RESOLUTION

APPROVING THE PROJECTS TO BE FINANCED WITH REGIONAL NVT A FUNDS RECEIVED IN FISCAL YEAR 2014 ON A PAY-AS-YOU-GO BASIS

July 24, 2013

WHEREAS, the Northern Virginia Transportation Authority ("NVT A") is a political subdivision of the Commonwealth of Virginia (the "Commonwealth") created by the Northern Virginia Transportation Authority Act (the "NVT A Act"), Chapter 48.2, Title 15.2, Code of Virginia of 1950, as amended (the "Virginia Code"); and

WHEREAS, as provided by Section 15.2-4831 of the NVT A Act, NVT A embraces the Counties of Arlington, Fairfax, Loudoun, and Prince William, and the Cities of Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park (collectively, the "Member Localities"); and

WHEREAS, Planning District 8 established pursuant to Chapter 42 of Title 15.2 of Virginia Code is composed of the Member Localities; and

WHEREAS, NVT A prepared and on November 8, 2012, approved a regional transportation plan for Planning District 8 entitled "TransAction 2040 Regional Transportation Plan" ("TransAction 2040") pursuant to Section 15.2-4838 of the NVT A Act; and

WHEREAS, on April 3, 2013, the Virginia General Assembly adopted the Governor's substitute for House Bill 2313 ("HB 2313"), which provides, among other things, for transportation funding and related reform both on a statewide basis and on a regional basis for NVT A and Planning District 8; and

WHEREAS, HB 2313 added Section 15.2-4838.01 to the NVT A Act, under which was established the Northern Virginia Transportation Authority Fund (the "NVT A Fund"); and

WHEREAS, the NVT A Fund will receive the revenues dedicated to it under Sections 58.1-638, 58.1-802.2 and 58.1-1742 of the Virginia Code and any other funds that may be appropriated to the Fund by the General Assembly (the "HB 2313 Transportation Revenues"); and

WHEREAS, subsection B of Section 15.2-4838.1 of the NVT A Act provides that 30% of the revenues received by NVT A (the "NVT A Revenues"), including the HB 2313 Transportation Revenues, shall be distributed on a pro rata basis to the Member Localities to be applied as provided therein; and

WHEREAS, subsection C.1. of Section 15.2-4838.1 ("Subsection C.1.") provides that in Fiscal Year 2014 NVT A shall use the remaining 70% of the NVT A Revenues plus the amount of any NVT A Revenues to be redistributed pursuant to subsection B (the "Regional NVT A

Funds,") to fund (i) transportation projects selected by NVTa that are contained in TransAction 2040 or (ii) mass transit capital projects that increase capacity; and

WHEREAS, on April 25, 2013, NVTa directed the Project Implementation Working Group (the "PIWG") to recommend actions for NVTa to undertake transportation projects, including developing a list of projects to be funded in Fiscal Year 2014 through a process that, among other things, assures that each project will satisfy the statutory criteria for project selection set forth in the NVTa Act (the "Statutory Criteria"); and

WHEREAS, the PIWG developed a selection process (the "FY 2014 Project Selection Process") that has been previously approved by NVTa pursuant to a resolution entitled **"Resolution Approving the Process Used to Select Projects to be Financing with Fiscal Year 2014 NVTa Funds, the Projects to be Financed by such Funds and the Carryover of Certain Projects for Future Consideration"** (the "FY 2014 Project Selection Process Resolution"); and

WHEREAS, as described in the FY 2014 Project Selection Process Resolution, the PIWG (i) developed the FY 2014 Project Selection Process and applied it to a list of projects submitted by the Member Localities and transportation agencies and (ii) considered the public comments received regarding such projects as well as the results of the FY 2014 Project Selection Process in developing the projects ultimately approved for financing and attached as Attachment B.1. to the FY 2014 Project Selection Process Resolution (the "Recommended FY 2014 Program"); and

WHEREAS, pursuant to direction received at the June 20, 2013, NVTa meeting, the PIWG developed a selection process to evaluate projects for bond financing (the "Bond Selection Process"); and

WHEREAS, NVTa approved the application of the Bond Selection Process to the projects included in the Recommended FY 2014 Program pursuant to a resolution entitled **"Resolution Authorizing the Issuance of Transportation Facility Revenue Bonds"** (the "Bond Authorization Resolution");

WHEREAS, as described in the Bond Authorization Resolution, NVTa selected projects from the Recommended FY 2014 Program to receive bond financing (the "FY 2014 Bond Projects"); and

WHEREAS, the projects in the Recommended FY 2014 Program not selected to receive bond financing are set forth on Attachment D and referred to herein as the "FY 2014 PAYGO Projects;" and

WHEREAS, NVTa desires to approve the use of Regional NVTa Funds received in Fiscal Year 2014 to pay the costs of the FY 2014 PAYGO Projects on a pay-as-you-go basis.

After careful consideration and to further the public purposes for which NVTa was created, NOW, THEREFORE, BE IT RESOLVED BY NVTa THAT:

1. **Approval of FY 2014 PAYGO Projects.** NVTa hereby approves of the use of Regional NVTa Funds received in Fiscal Year 2014 to pay the costs of the FY 2014 PAYGO Projects. NVTa hereby reaffirms its findings, determinations and approvals that are embodied in the FY 2014 Project Selection Process Resolution regarding the FY 2014 PAYGO Projects, which form a subset of the projects in the Recommended FY 2014 Program.

2. **Severability.** If any section, subsection, paragraph, sentence, clause, or phrase of, or project approved by, this Resolution is for any reason held or decided to be unconstitutional or invalid, such decision of unconstitutionality or invalidity shall not affect the validity of the remaining portions. NVTa hereby declares that it would have adopted this Resolution and each section, subsection, sentence, clause and phrase thereof and project listed therein even though any one or more sections, subsections, sentences, clauses, phrases or projects might be declared unconstitutional or invalid.

3. **Additional Actions.** Each member, officer and authorized representative of NVTa is authorized to execute and deliver on NVTa's behalf such other instruments, documents or certificates, and to do and perform such things and acts as he or she shall deem necessary or appropriate to carry out the transactions authorized by this Resolution. Any of the foregoing previously done or performed by any member, officer, or authorized representative of NVTa is in all respects approved, ratified and confirmed. In the Chairman's absence, the Vice Chairman is authorized to take any action specifically assigned to the Chairman under this Resolution.

4. **Effective Date.** This Resolution shall take effect immediately.

ATTACHMENT D

DESCRIPTION OF FY 2014 PAYGO PROJECTS

(See Attached)

Proposed FY 2014 Project List (July 8, 2013)

ATTACHMENT D

[illegible]

[illegible]

Northern Virginia Transportation Authority FY 2014 Project Selection Process – STEP 1

The Jurisdiction and Agency Coordinating Committee (JACC) was tasked with preparing an initial list of projects for funding received in Fiscal Year 2014 to begin discussions by the Northern Virginia Transportation Authority (“NVTa” or “the Authority”). The Authority forwarded this list of projects to the Project Implementation and Legal Working Groups to evaluate and ensure compliance with House Bill 2313 requirements.

The Project Implementation Working Group (“PIWG”) evaluated a total of 48 transportation projects submitted by NVTa member jurisdictions and transportation agencies. The following information describes the project selection process developed and supported by the Project Implementation Working Group.

The Code of Virginia has multiple provisions designed to guide how the NVTa selects projects. NVTa is required by § 15.2-4838.01.C.1 to use the 70% funds on:

- a. transportation projects in the regional plan (TransAction 2040) that have been rated by the Commonwealth based on a project’s ability to reduce congestion facilitate emergency evacuation (the Commonwealth rating is not required for funds received in FY2014); and
- b. mass transit capital projects that increase capacity.

The same Code section requires NVTa to give priority to projects that are expected to provide the greatest congestion reduction relative to the cost of the project, and must document this information for each project. It also requires that such projects be located (a) in NVTa member jurisdictions or (b) in adjacent localities but only to the extent that such extension is an insubstantial part of the project and is essential to the viability of the project within NVTa member jurisdictions.

The prioritization based on congestion reduction relative to cost is statutorily distinct from the regional transportation policies and priorities NVTa sets as part of long range transportation planning under §15.2-4838, which NVTa used when adopting its regional plan, TransAction 2040.

In setting long range planning policies and priorities, § 15.2-4838 requires that NVTa to be guided by performance based criteria such as the ability to improve travel times, reduce delays, connect regional activity centers, improve safety, improve air quality, and move the most people in the most cost effective manner. Several of these performance based criteria are, in essence, measures of congestion reduction.

Project Selection Process

NVTa approved a project selection process for Fiscal Year 2014 funds only. This selection process does not prescribe specific project funding decisions; instead it provides guidance to the Authority by relating investment decisions to statutory requirements and regional goals. The selection of projects is broken down into three tiers. Qualifying information for each project is available in Attachment E.2.

Tier I Screening

The first set of criteria is based on the required derived from statutory provisions governing NVTa’s actions, both under §15.2-4838.01.C.1 and §15.2-4838. The criteria are as follows:

- Contained in the regional transportation plan (TransAction 2040/CLRP/TIP)
- Mass transit project that increases capacity
- Reduces congestion

- Within a locality embraced by the Authority or in adjacent localities but only to the extent that such extension is an insubstantial part of the project and is essential to the viability of the project within the localities embraced by the Authority.

For a project to qualify and move forward under this first set of criteria, it must meet all the requirements. Projects that did not pass the tier one screening were placed on the list not considered for FY 2014 funding.

Tier II Screening

The second tier provides the basis for distinguishing among proposed projects that qualify under tier one, creating a relative ranking among them. The rationale for this approach was to select projects that provide rapid, noticeable improvements to address some of the region's transportation problems. Tier two has a total of five (5) criteria; however a project can receive a total of 10 points. A major of the points are weighted towards project readiness.

- **Improve auto and pedestrian safety.** Projects that improve auto and pedestrian safety receive one (1) point.
- **Project Readiness.** Readiness is described in terms of the degree to which the project is ready to be delivered (or at least advance it significantly) within FY 2014. The criterion is weighted using the following measures:
 - a. Project is included in TIP
 - b. Project is included in the CLRP or is air quality neutral.
 - c. Have completed (or will complete prior to project selection) major regulatory reviews and/or public input processes.
 - d. Resources available to move forward with project when funding becomes available.
 - e. Funding will provide expedition of project phase.
 - f. Projects will begin or complete next phase with requested funding.

Projects can receive a maximum of six (6) points if they meet all of the criteria stated above.

- **Mode Balance.** Transit, Road, Multimodal. Projects are coded as "R" for Roadway, "T" for Transit and "M" for Multimodal.
- **Leverages External Funding.** Short-term priorities of the jurisdictions that are partially funded in the Commonwealth's Six Year Improvement Program or by individual jurisdictions or agencies. Projects are assigned one (1) point if they meet this criterion.
- **Project with 20 year lifespan.** This is only to be used if bond project list is developed. This criterion is not applicable to the current FY 2014 project list and list of projects for consideration of the Six Year Plan. Projects are assigned one (1) point if they meet this criterion or "N/A" if not applicable.

Tier III Screening

The third tier is applied as an overlay to all projects.

- **Locality's total long-term benefit shall be approximately equal to the proportion of revenues attributable to the locality.** This requirement applies to a jurisdiction's share of the regional revenues over the long-term. Consequently, the first year of regional allocations may not exactly match the proportion of revenues generated by each locality, although the regional balance of the distribution of projects is to be considered. The NVT working groups plan to

develop a method to track annual allocations to ensure that this statutory requirement is met over the long-term.

- **Counties and cities embraced by Authority must work cooperatively with towns and populations greater than 3,500 located within such counties to ensure that the towns receive their respective share of the revenues.** Counties and cities have been working with, and will continue to work with towns to ensure that the towns receive their respective share of the revenues. The NVTa Financial Working Group is developing revenue estimates for each of the towns. This work is being done in coordination with the towns.
- **Priority given to greatest congestion reduction relative to cost of the project.** There have been two rigorous rating processes of the projects identified as candidates for the FY 2014 NVTa regional funding. The analysis satisfies the requirement that NVTa give priority to projects that are expected to provide the greatest congestion reduction relative to the cost of the project.

The first set of analyses is conducted through the Transportation Planning Board's 2012 Financially Constrained Long-Range Transportation Plan (CLRP) for the National Capital Region. The Plan identifies and describes all regionally significant transportation projects and programs that are planned in the Washington metropolitan area between 2012 and 2040. Over 800 projects are included, ranging from simple highway landscaping to billion-dollar highway and transit projects. Of these projects, about 110 are considered to be "regionally significant". As developed and adopted by the National Capital Region Transportation Planning Board (TPB) the Metropolitan Planning Organization (MPO) for the area, the CLRP includes an evaluation of plan performance in the following categories:

- Population and Employment Growth
- Travel Demand and Congestion
- Transit Congestion
- Regional Highway Congestion
- Job Accessibility
- Air Quality: Mobile Source Emissions

The evaluation considers the performance of the CLRP as a single package of projects relative to the base year of the plan (for the currently adopted 2012 CLRP, the base year is 2013) and horizon year of the plan (2040). Analysis of individual projects occurs as a project advances from the CLRP to the six-year Transportation Improvement Program (TIP) and undergoes traditional project planning analysis with the funding agency (VDOT, DRPT, WMATA, local jurisdictions).

All of the projects in the 2011 CLRP are included in Baseline and Build scenarios for TransAction 2040. The TransAction 2040 Plan builds on the CLRP with additional projects to address highway and transit network performance as well as the region's Round 8.0 land use assumptions.

The CLRP reflects a regional consensus on the projects that are of the highest priority given the fiscal constraints that exist. Projects in the CLRP were included in TransAction 2040 as the top priority projects for existing revenue sources. As such, the NVTa project selection methodology gives greater weighting to projects in the CLRP and TIP because the projects are more prepared to be implemented and therefore could address congestion reduction more readily. They have also

been vetted through a public process. With CLRP projects considered the top priority projects, NVTa only has to determine which other projects in the regional plan meet the priority requirement.

A second set of analyses was performed in TransAction 2040 for projects not evaluated in the CLRP. This analysis was conducted in two steps: 1) System-Level Evaluation, presented performance measures showing benefits from the combined effect of the TransAction 2040 projects; and 2) benefit/cost analysis for individual projects.

A set of system-level performance criteria was developed to evaluate the benefits of adding the TransAction 2040 Plan projects. These criteria were related to the transportation planning objectives established for this Plan. The criteria described below were used to measure the performance of the entire transportation system; that is, all of the projects working together as a whole. The project team first looked at current conditions in 2007 and then evaluated conditions in the 2040 Baseline Scenario, Build Scenario, and Build 2 Scenario. The system-level performance criteria included:

- Daily vehicle-miles of travel (VMT);
- Daily person-miles of travel (PMT);
- Work trip length;
- Work trip mode share;
- Job accessibility;
- Screenline analysis; and
- Levels of service.

In addition to looking at system level performance, effort was also undertaken to rate, score, and prioritize the individual projects making up the TransAction 2040 Plan. An important element of TransAction 2040 was ensuring that this project prioritization process was conducted using a data-driven and transparent method that provides the public and decision-makers with a clear view of why and how projects were ranked and prioritized. It also was critical to identify the projects that best met the goals and objectives of the Plan.

Each project was individually evaluated using a set of project-based performance evaluation criteria. The project-level performance assessment provided feedback on how each project addressed the region's defined goals and performance objectives. This included a quantitative evaluation to measure the effects of a project on the transportation system with respect to the performance objectives, and a qualitative policy assessment to assess how well projects met broader considerations embodied in the region's goals. In addition to identifying the performance-based benefits for each project, a benefit/cost analysis was introduced to the prioritization process. The project prioritization process was applied within corridors and by project type (e.g., bicycle/pedestrian, transit, highway) and is described in more detail in the subsections which follow. The Plan conducted a benefit/cost analysis for each project based on a number of factors:

- Freight Movement
- Improved Bicycle/Pedestrian Options
- Multimodal Choices
- Urgency
- Project Readiness
- Reduce VMT

- Safety
- Person Throughput
- Reduce Roadway Congestion
- Reduce Time Spent Traveling
- Environmental Sensitivity
- Activity Center Connections
- Land Use Supports Transportation Investment
- Management and Operations
- Cost Sharing

Projects identified for FY 2014 regional funding are either in the CLRP, TIP, and TransAction 2040 Plan. All of the projects have been evaluated based on congestion reduction relative to cost. The projects identified on the FY 2014 project list have the greatest congestion benefit relative to cost. Detailed information about each project including the stated regional benefits is provided in Attachment B.

Northern Virginia Transportation Authority FY 2014 Project Selection Process – STEP II

The Project Implementation Working Group (PIWG) was directed by the Northern Virginia Transportation Authority (“NVTa” or “the Authority”) at its June 20, 2013 meeting to prepare an FY 2014 Program to include preparation of documents for an initial bond issuance for consideration by the Authority at its July 24, 2013 meeting. Pursuant to that charge, the PIWG developed and approved by consensus a list of FY 2014 bond selection criteria. The criteria do not prescribe specific project funding decisions; instead it provides guidance to the Authority by relating investment decisions to statutory requirements and regional goals. The bond selection process is provided in detail below.

Bond Selection Criteria

The PIWG developed the following selection criteria which provide the basis for selecting projects for a FY 2014 Bond List. All projects must have been evaluated through the FY 2014 Project Selection Process in order to be considered in this process. No projects that did not pass the Tier I Screening of the FY 2014 Project Selection Process were not considered.

As noted in the FY 2014 Project Selection Process (Attachment A.1.) the approach focuses on selecting projects that provide rapid, noticeable improvements to address some of the region’s transportation problems. There are a total of six (6) bond selection criteria.

- **Project with 20 year lifespan.**
- **High ranking project.** Priority is given to projects on the “List of Projects for FY 2014 Funding” as presented to the Authority on June 20, 2013. In order to be considered for bond funding, projects on the “List of Projects for Consideration for the Future Six-Year Program” as presented at the June 20, 2013 NVTa meeting must receive a high rating in the Tier II analysis.
- **Leverages external funding.** Short-term priorities of the jurisdictions that are partially funded in the Commonwealth’s Six Year Improvement Program or by individual jurisdictions or agencies.
- **Monetary size of project funding request.** Projects with relatively small funding requirements are not as suitable for bonding.

Projects that met these criteria were then screened to ensure that, as a package, the following criteria were satisfied:

- **Geographic balance.**
- **Mode balance.** Transit, Road, Multimodal. Projects are coded as “R” for Roadway, “T” for Transit and “M for Multimodal.

Once the second screen was complete, the total value of the project funding requests on the draft list was evaluated to ensure that it met the Financial Working Group guidance on the overall size of the bond package, which took \$50 million to be the lower bound and \$100 million to be the upper bound, the PIWG searched for one project whose funding request could be split between the FY 2014 Bond List and the FY 2014 PAYG list.

Projects not removed from the “List of Projects for FY 2014 Funding” as presented to the Authority on June 20, 2013 were included on the FY 2014 PAYG List.

Recommended FY 2014 Program

ROADWAY PROJECTS									Tier I Screen					Tier II Screen					
Item	Agency	Project	Funding Requested	Proposed Funding	Total Project Cost	Corridor	Status	CLRP/TIP	TA2040	Reduces Congestio	Increases Capacity - transit only	Within/adj. to NVTa Boundary	Meets All Requirements (Y/N)	Improves Safety	Project Readiness (max 6 pts)	Mode	Leverages External Funding	20 year lifespan (only for bond projects)	Tier II Total Points
1	Arlington	Columbia Pike Multimodal Improvement Project	\$12,000,000	\$12,000,000	\$12,000,000	9	Final Design	Y/Y	Y	Y	Y	Y	Y	1	5	R	1	-	7
2	Herndon	Herndon Parkway Intersection Improvements at Van Buren Street	\$500,000	\$500,000	\$3,000,000	1	Design concept completed. Town to begin PE in June 2013 and continue with ROW in FY2014.	N	Y	Y	Y	Y	Y	1	5	R	1	-	7
3	Herndon	Herndon Parkway Intersection Improvements at Sterling Road	\$500,000	\$500,000	\$500,000	3	Concept design completed. Town to begin PE in June 2013 and continue with ROW in FY2014.	N	Y	Y	Y	Y	Y	1	3	R	1	-	5
4	Prince William	Route 1 from Featherstone Road to Mary's Way	\$3,000,000	\$3,000,000	\$52,000,000	8	Planning complete	Y	Y	Y	Y	Y	Y	1	4	R	1	-	6
5	Loudoun	Belmont Ridge Road (Route 659), North of the Dulles Greenway is approximately 5,800 linear feet. The estimated stand alone cost is \$20,000,000.	\$20,000,000	\$20,000,000	\$20,000,000	2	The NEPA document is complete and the plans are ready for design/build procurement.	Y	Y	Y	Y	Y	Y	1	5	R	0	-	6
6	Leesburg	The project consists of development of a new grade-separated interchange on Edwards Ferry Road at the Route 15 Leesburg Bypass	\$5,000,000	\$1,000,000	\$40,000,000	1	Planning	Y/Y	Y	Y	Y	Y	Y	1	5	R	0	-	6
7	Fairfax	Route 28 Widening 6 to 8 lanes (SB from the Dulles Toll Road to Route 50) \$20M. 6 to 8 Lanes - SB from the Dulles Toll Road to to Route 50 .	\$20,000,000	\$20,000,000	\$20,000,000	3	Design can be finalized, minimal ROW acquired, and environmental permitting accomplished. Anticipate Construction could begin in late spring 2014.	Y	Y	Y	Y	Y	Y	1	5	R	1	-	7
8	Fairfax	Route 28 Widening 6 to 8 lanes (NB from McLearen Road to Dulles Toll Road) \$11.10M. 6 to 8 Lanes - NB from McLearen Road to Dulles Toll Road.	\$11,100,000	\$11,100,000	\$11,100,000	3	Design can be finalized, minimal ROW acquired, and environmental permitting accomplished. Anticipate Construction could begin in late spring 2014.	Y	Y	Y	Y	Y	Y	1	5	R	1	-	7
9	Loudoun	Route 28 Hot Spot Improvements	\$12,400,000	\$6,400,000	\$12,400,000	3	Design complete	Y	Y	Y	Y	Y	Y	1	5	R	1	Y	7
10	Arlington	Boundary Channel Drive Interchange	\$4,335,000	\$4,335,000	\$9,335,000	8	Planning and design underway. Construction to begin CY 14, early FY15	Y	Y	Y	Y	Y	Y	1	4	R	1	Y	6
11	Prince William	Route 28 from Linton Hall Road to Fitzwater Drive	\$28,000,000	\$25,000,000	\$28,000,000	3	ROW Acquisition anticipated to begin June 2013	Y	Y	Y	Y	Y	Y	1	4	R	1	Y	6
12	Fairfax City	Chain Bridge Road Widening/Improvements from Route 29/50 to Eaton Place	\$9,500,000	\$5,000,000	\$21,000,000	6	ROW Acquisition anticipated to begin FY14	Y/Y	Y	Y	Y	Y	Y	1	5	R	1	Y	7

Total Requested Funding:

\$108,835,000

TRANSIT PROJECTS									Tier I Screen					Tier II Screen					
Item	Agency	Project	Funding Requested	Proposed Funding	Total Project Cost	Corridor	Status	CLRP/TIP	TA2040	Reduces Congestion	Increases Capacity	Within/adj. to NVTa Boundary	Meets All Requirements (Y/N)	Improves Safety	Project Readiness (max 6 pts)	Mode	Leverages External Funding	20 year lifespan (only for bond projects)	Tier II Total Points
1	Alexandria	Shelters and Real-Time Transit Information for DASH/WMATA.	\$450,000	\$450,000	\$1,500,000	8	City's bus shelters currently at 95% design phase, expected 100% design by June 2013	Y/Y	Y	Y	Y	Y	Y	1	6	T	1	-	8
2	Alexandria	DASH Bus Expansion.	\$3,250,000	\$3,250,000	\$3,250,000	8	Buses can be procured in FY2014.	Y	Y	Y	Y	Y	Y	1	5	T	1	-	7
3	PRTC	PRTC New Gainesville Service.	\$580,000	\$580,000	\$580,000	8	Project implementation planned for Fall of FY14. draft schedule and finalization of routing should be accomplished by June 15, 2013. Schedule finalized by July 31, 2013.	Y/Y	Y	Y	Y	Y	Y	1	6	T	0	-	7
4	Alexandria	Traffic Signal Upgrades/Transit Signal Priority.	\$660,000	\$660,000	\$1,200,000	8	Design in FY2014 for Duke St. for \$60,000. Construction of \$600,000 for Route 1	Y	Y	Y	Y	Y	Y	1	5	T	1	-	7

Projects not Recommended for FY 2014 List ("Carryover Projects")

Total Roadway

\$90,100,000

TRANSIT PROJECTS								Tier I Screen					Tier II Screen					
Item	Agency	Project Description	Funding Required	Total Project Cost	Route	Status	CLRP/TIP	Transaction 2040	Reduces Congestion	Increases Capacity	Within/adj. to NVTB Boundary	Meets All Requirements (Y/N)	Improves Safety	Project Readiness (max 6 pts)	Mode	Leverages External Funding	20 year lifespan (only for bond projects)	Tier II Total Points
1	Fairfax	West Ox Bus Garage Phase II - This project expands the capacity of the West Ox facility and allows for additional Fairfax Connector service. This funding would allow project to proceed to construct 9 maintenance bays and expand facilities for bus drivers and security	\$17,000,000	\$20,000,000		Feasibility study complete. Negotiating contract for design; 18 month contract.	N	N	Y	Y	Y	Y	1	3	T	1	Y	5
2	Fairfax	Fairfax County Parkway Bus Service (Herndon to Fort Belvoir) - Capital Purchases 12 Buses - The County is planning a new high-quality, limited-stop bus service between Herndon and Fort Belvoir. There is no existing Connector service linking these activity centers, so additional buses will be needed to operate the service. The \$6 million requested would cover the purchase of the 10 buses needed for peak period service, plus 2 additional buses for use as spares to cover down time for bus servicing and repairs.	\$6,000,000	\$6,000,000		Buses could be purchased within 4-6 months of funding allocation; however the West Ox Bus Garage expansion must occur first. Anticipate revenue service in FY16	Y	Y	Y	Y	Y	Y	1	4	T	0	N	5
3	Fairfax	Innovation Center Metrorail Station parking garage – Design \$10M. Design of the Silver Line Phase 2 Parking garage which will provide 2037 parking spaces in accordance with the approved project plans and environmental approvals.	\$10,000,000	\$51,000,000		Fairfax County has committed to fund outside Dulles Rail Ph II	Y	Y	Y	Y	Y	Y	1	4	T	0	Y	5
4	Fairfax	Herndon Monroe Metrorail Station parking garage – Design \$10M. Design of the Silver Line Phase 2 Parking garage which will provide 1975 parking spaces in accordance with the approved project plans and environmental approvals.	\$10,000,000	\$49,400,000		Fairfax County has committed to fund outside Dulles Rail Ph II	Y	Y	Y	Y	Y	Y	1	4	T	0	Y	5
5	VRE	VRE Rippon station second platform This is a 650 foot second platform and extension of the existing platform at the VRE Rippon station in Prince William County to accommodate trains up to 8 cars in length.	\$10,900,000	\$10,900,000		Requested funding includes NEPA, design and construction. NEPA/design would be initiated in FY14.	N	Y	Y	Y	Y	Y	1	3	T	0	Y	4
6	Falls Church	Signal Improvements: \$300,000 Upgrade the traffic signal at Columbia Street and North Washington Street to include a bicycle detection system and pedestrian countdown timers and to connect to the City's coordinated traffic signal management system. This intersection is within 1 mile of the East Falls Church Metro Station, so the addition of pedestrian and bicycle infrastructure will increase accessibility and use of the Metro Rail system. Connecting this signal to the signal management system will ease traffic flow along South Washington Street for vehicles, pedestrians, and cyclists into and out of Arlington County, the I-66 corridor, Each Falls Church Metro Station, and the W&OD multi-use trail. Design: \$45,000 Right of Way: \$20,000 Construction: \$235,000	\$300,000	\$300,000	Corridor 6	Design.	N	Y	Y	Y	Y	Y	1	3	M	0	Y	4
7	VRE	VRE Crystal City platform expansion This project is a 400 foot extension of the existing platform at the VRE Crystal City station in Arlington County to accommodate trains up to 10 cars in length. It would alleviate existing crowding, expand VRE station capacity, and enhance operational flexibility and maintenance of VRE on-time performance.	\$4,000,000	\$4,000,000		Requested funding includes NEPA, design and construction. NEPA/design would be initiated in FY14.	N	Y	Y	Y	Y	Y	1	3	T	0	Y	4
8	WMATA	Upgrade of interlocking and platform/girder repairs at National Airport (\$5M). This project will allow Metrorail trains to turn back just past the Ronald Reagan Washington National Airport station on the Yellow/Blue Line. The work will allow increased operational flexibility on the Yellow/Blue Line.	\$5,000,000	\$10,000,000 to \$15,000,000	N/A	It is expected that this \$5 million project can be completed in FY 14.	N	N	Y	Y	Y	Y	1	4	T	0	Y	5
Total Transit			\$63,200,000															
Grand Total			\$153,300,000															

Northern Virginia Transportation Authority (NVRTA)

ATTACHMENT C

Proposed FY 2014 Bond Projects (July 8, 2013)										Tier I Screen					Tier II Screen					
Item	Agency	Project	Funding Requested	Proposed Funding	Total Project Cost	Corridor	Status	CLRP/TIP	TA2040	Reduces Congestion	Increases Capacity	Within/adj. to NVTA Boundary	Meets All Requirements (Y/N)	Improves Safety	Project Readiness (max 6 pts)	Mode	Leverages External Funding	20 year lifespan (only for bond projects)	Tier II Total Points	
1	Loudoun	Leesburg Park and Ride	\$1,000,000	\$1,000,000	\$1,000,000	1	ROW acquisition and construction FY14	Y	Y	Y	Y	Y	Y	1	4	T	1	Y	6	
2	Loudoun	Route 28 Hot Spot Improvements	\$12,400,000	\$6,400,000	\$12,400,000	3	Design complete	Y	Y	Y	Y	Y	Y	1	5	R	1	Y	7	
3	Fairfax	Innovation Center Metrorail Station	\$89,000,000	\$20,000,000	\$89,000,000	1	MWAA will select a design/build contractor in May 2013	Y	Y	Y	Y	Y	Y	1	4	T	1	Y	6	
4	Arlington	Boundary Channel Drive Interchange	\$4,335,000	\$4,335,000	\$9,335,000	8	Planning and design underway. Construction to begin CY 14, early FY15	Y	Y	Y	Y	Y	Y	1	4	R	1	Y	6	
5	Prince William	Route 28 from Linton Hall Road to Fitzwater Drive	\$28,000,000	\$25,000,000	\$28,000,000	3	ROW Acquisition anticipated to begin June 2013	Y	Y	Y	Y	Y	Y	1	4	R	1	Y	6	
6	VRE	VRE rolling stock purchase (9 additional coaches)	\$19,800,000	\$19,800,000	\$19,800,000	6,8	Open contract for equipment purchase	Y	Y	Y	Y	Y	Y	1	5	T	0	Y	6	
7	VRE	VRE Lorton station second platform	\$7,900,000	\$7,900,000	\$9,240,000	8	Final design and permitting could be completed and construction initiated within 12 months of receipt of funding.	Y	Y	Y	Y	Y	Y	1	4	T	1	Y	6	
8	VRE	VRE Alexandria station tunnel and platform improvements	\$1,300,000	\$1,300,000	\$10,000,000	8	NEPA/design of the project is underway; estimated completion March 2014.	Y/Y	Y	Y	Y	Y	Y	1	6	T	1	Y	8	
9	Fairfax City	Chain Bridge Road Widening/Improvements from Route 29/50 to Eaton Place	\$9,500,000	\$5,000,000	\$21,000,000	6	ROW Acquisition anticipated to begin FY14	Y/Y	Y	Y	Y	Y	Y	1	5	R	1	Y	7	

Total Funding: \$90,735,000

Proposed FY 2014 Projects (July 8, 2013)

ATTACHMENT D

ROADWAY PROJECTS									Tier I Screen					Tier II Screen					
Item	Agency	Project	Funding Requested	Proposed Funding	Total Project Cost	Corridor	Status	CLRP/TIP	TA2040	Reduces Congestio	Increases Capacity - transit only	Within/adj. to NVTa Boundary	Meets All Requirements (Y/N)	Improves Safety	Project Readiness (max 6 pts)	Mode	Leverages External Funding	20 year lifespan (only for bond projects)	Tier II Total Points
1	Arlington	Columbia Pike Multimodal Improvement Project	\$12,000,000	\$12,000,000	\$12,000,000	9	Final Design	Y/Y	Y	Y	Y	Y	Y	1	5	R	1	-	7
2	Herndon	Herndon Parkway Intersection Improvements at Van Buren Street	\$500,000	\$500,000	\$3,000,000	1	Design concept completed. Town to begin PE in June 2013 and continue with ROW in FY2014.	N	Y	Y	Y	Y	Y	1	5	R	1	-	7
3	Herndon	Herndon Parkway Intersection Improvements at Sterling Road	\$500,000	\$500,000	\$500,000	3	Concept design completed. Town to begin PE in June 2013 and continue with ROW in FY2014.	N	Y	Y	Y	Y	Y	1	3	R	1	-	5
4	Prince William	Route 1 from Featherstone Road to Mary's Way	\$3,000,000	\$3,000,000	\$52,000,000	8	Planning complete	Y	Y	Y	Y	Y	Y	1	4	R	1	-	6
5	Loudoun	Belmont Ridge Road (Route 659), North of the Dulles Greenway is approximately 5,800 linear feet. The estimated stand alone cost is \$20,000,000.	\$20,000,000	\$20,000,000	\$20,000,000	2	The NEPA document is complete and the plans are ready for design/build procurement.	Y	Y	Y	Y	Y	Y	1	5	R	0	-	6
6	Leesburg	The project consists of development of a new grade-separated interchange on Edwards Ferry Road at the Route 15 Leesburg Bypass	\$5,000,000	\$1,000,000	\$40,000,000	1	Planning	Y/Y	Y	Y	Y	Y	Y	1	5	R	0	-	6
7	Fairfax	Route 28 Widening 6 to 8 lanes (SB from the Dulles Toll Road to Route 50) \$20M. 6 to 8 Lanes - SB from the Dulles Toll Road to to Route 50 .	\$20,000,000	\$20,000,000	\$20,000,000	3	Design can be finalized, minimal ROW acquired, and environmental permitting accomplished. Anticipate Construction could begin in late spring 2014.	Y	Y	Y	Y	Y	Y	1	5	R	1	-	7
8	Fairfax	Route 28 Widening 6 to 8 lanes (NB from McLearen Road to Dulles Toll Road) \$11.10M. 6 to 8 Lanes - NB from McLearen Road to Dulles Toll Road.	\$11,100,000	\$11,100,000	\$11,100,000	3	Design can be finalized, minimal ROW acquired, and environmental permitting accomplished. Anticipate Construction could begin in late spring 2014.	Y	Y	Y	Y	Y	Y	1	5	R	1	-	7
Total Requested Funding:			\$68,100,000																

Northern Virginia Transportation Authority
PIWG Summary of Project Recommendations (July 7, 2013)

Attachment E.1

Recommendation Comparison	# Projects	Funding Proposed
Initial PIWG Recommendation (June 20, 2013)		
Proposed FY 2014 PAYGO Projects	32	186,993,000
Not Selected for FY 2014 List	16	173,100,000
Total	48	360,093,000
Final PIWG FY 2014 Project Recommendation (July 7, 2013)		
Proposed FY 2014 PAYGO Projects (1)	25	116,058,000
Proposed FY 2014 Bond Projects (1)	9	90,735,000
Not Recommended for FY 14 PAYGO or FY 14 Bond Projects	15	153,300,000
Total (2)	49	360,093,000
(1) Innovation Center - Split Request \$21M FY 2014 PAYGO / \$20 M Bond		
(2) Innovation Center is counted twice. Once in FY 14 PAYGO Projects and once in FY 14 Bond Projects.		

Proposed FY 2014 PAYGO Projects (July 7, 2013)

	Phase/s	Allocation
Alexandria		
DASH Bus Expansion (5 new buses)	FY 14 Revenue Service	3,250,000
Traffic Signal Upgrades/Transit Signal Priority	FY 14 Construction / FY 14 Design Start	660,000
Shelters and Real-Time Transit Information for DASH/WMATA.	FY 14 Construction Start	450,000
Potomac Yard Metrorail Station EIS	FY 14 Planning Complete, Begin Design	2,000,000
Subtotal		6,360,000
Arlington		
Columbia Pike Multimodal Street Improvements	FY 14 Construction Start	12,000,000
Silver/Blue Line Mitigation (4 buses)	FY 14 Revenue Service	1,000,000
Crystal City Multimodal Center	FY 14 Construction Start	1,500,000
Subtotal		14,500,000

Fairfax County

Route 28 Widening 6 to 8 lanes (SB from the Dulles Toll Road to Route 50)	FY14 Design/Build	20,000,000
Route 28 Widening 6 to 8 lanes (NB from McLearen Road to Dulles Toll Road)	FY14 Design/Build	11,100,000
Innovation Center Metrorail Station	FY14 Design/Build	21,000,000
Herndon Parkway Intersection Improvements at Van Buren St.	FY 14 Design Complete, ROW	500,000
Herndon Parkway Intersection Improvements at Sterling Road	FY 14 Design Complete, ROW	500,000
Herndon Metrorail Intermodal Access Improvements	FY 14 Design Complete, ROW	1,100,000
Subtotal		54,200,000

Falls Church

Pedestrian Access to Transit	FY 14 Design Complete	700,000
Funding for Bus Shelters	FY 14 Construction Start	200,000
Pedestrian Bridge at Van Buren Street	FY 14 Design Start	300,000
Subtotal		1,200,000

Loudoun

Belmont Ridge Road, North of the Dulles Greenway (Leesburg) Edwards Ferry Road at the Route 15 Leesburg Bypass	FY 14 Design/Build Start	20,000,000
Grade Separation.	FY 14 Design Start	1,000,000
2 New Transit Buses	FY 14 Revenue Service	880,000
Subtotal		21,880,000

Prince William

Route 1 from Featherstone Road to Mary's Way	FY 14 Design Start	3,000,000
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NVTC

Transit Alternatives Analysis Study in the Route 7 Corridor (King Street, Alexandria to Tysons Corner). (PHASE II)	FY 14 Planning Start	838,000
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PRTC

PRTC New Gainesville Service (1 bus)	FY 14 Revenue Service	580,000
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VRE

VRE Gainesville-Haymarket Extension Project Development	FY 14 Planning and Design Start	1,500,000
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WMATA

Traction Power Upgrades on the Orange Line in Virginia	FY 14 Design Start	5,000,000
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Ten New Buses on Virginia Routes	FY 14 Contract Start / FY 15 Rev Svc.	7,000,000
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Subtotal		12,000,000
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Total FY 14 Construction Projects	5	14,810,000
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Total FY 14 Revenue Service Projects	4	5,710,000
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Total FY 14 Design/Build Projects	5	79,100,000
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Total FY 14 ROW Acquisition Projects	3	2,100,000
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Total FY 14 Design Projects	7	13,500,000
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Total FY 14 Planning Projects	1	838,000
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Total FY 14 Projects (1)	25	116,058,000
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Mode Balance

	Projects	Allocation	% Share
Total Roadway Projects	8	68,100,000	59%
Total Transit/Multimodal Projects	17	47,958,000	41%
	25	116,058,000	100%

Proposed FY 2014 Bond Projects (July 7, 2013)

	Phase/s	Allocation
<u>Arlington County</u>		
Boundary Channel Drive Interchange	FY 14 Design Complete, FY 15 Const.	4,335,000
<u>Fairfax City</u>		
Chain Bridge Road Widening/Improvements	FY 14 ROW	5,000,000
<u>Fairfax County</u>		
Innovation Center Metrorail Station	FY14 Design/Build	20,000,000
<u>Loudoun County</u>		
Route 28 Hot Spot Improvements – Loudoun Segment (Sterling Boulevard and the Dulles Toll Road)	FY 14 Construction Start	6,400,000
Leesburg Park and Ride	FY 14 ROW and Construction Complete	1,000,000
Subtotal		7,400,000
<u>Prince William County</u>		
Route 28 from Linton Hall Road to Fitzwater Drive	FY 14 Construction Start	25,000,000
<u>VRE</u>		
VRE Rolling Stock	FY 16 Revenue Service	19,800,000
VRE Lorton station second platform	FY14 Design	7,900,000
VRE Alexandria station tunnel and platform improvements	FY 14 Construction	1,300,000
Subtotal		29,000,000
Total FY 14 Construction Projects	4	33,700,000
Total FY 16 Revenue Service Projects	1	19,800,000
Total FY 14 Design/Build Projects	2	24,335,000
Total FY 14 ROW Acquisition Projects	1	5,000,000
Total FY 14 Design Projects	1	7,900,000
Total FY 14 Planning Projects	0	0
Total FY 14 Projects (1)	9	90,735,000

Mode Balance	Projects	Allocation	% Share
Total Roadway Projects	4	40,735,000	45%
Total Transit/Multimodal Projects	5	50,000,000	55%
	9	90,735,000	100%

Projects not Recommended for FY 2014 Funding ("Carryover Projects") (July 7, 2013)

	Phase/s	Allocation
<u>Fairfax</u>		
Braddock Road HOV Widening	FY 14 Planning Start	10,000,000
Route 28 Widening; 4 to 6 lanes	FY 14 Design Start	10,000,000
Franconia/S. Van Dorn Interchange	FY 14 Concept Start	20,000,000
Route 29 Widening	FY 14 Utility Rel. Start	7,500,000
West Ox Bus Garage – Phase II	FY 14 Study Start	17,000,000
Fairfax County Bus Service	FY 16 Revenue Service	6,000,000
Innovation Metro Station Garage	FY 14 Design Start	10,000,000
Herndon Metro Station Garage	FY 14 Design Start	10,000,000
Subtotal		90,500,000
<u>Falls Church</u>		
Pedestrian Signal Improvements	FY 14 Design Start	300,000
<u>Herndon</u>		
East Elden Street Improvements	FY 14ROW /FY 14 Design	2,600,000
<u>Loudoun</u>		
Belmont Ridge Road (Segment 1A)	FY14 Design/Build	40,000,000
<u>Manassas Park</u>		
Route 28 widening (multiple juris.)	Planning	0
<u>VRE</u>		
VRE Crystal City Platform Ext.	FY 14 Planning/Design	4,000,000
<u>VRE Rippon Station Sec. Platform</u>	<u>FY 14 Planning Start</u>	<u>10,900,000</u>
Subtotal		14,900,000

WMATA

Upgrade interlocking and platform Girder repairs at National Airport	FY 14 Construction Start	5,000,000
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Total Requested		\$153,300,000
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Total FY 14 Construction Projects	1	5,000,000
Total FY 16 Revenue Service Projects	1	6,000,000
Total FY 14 Design/Build Projects	1	40,000,000
Total FY 14 ROW Acquisition Projects	1	7,500,000
Total FY 14 Design Projects	6	36,900,000
Total FY 14 Planning Projects	5	57,900,000
Total Projects not Recommended for FY 2014 Funds	15	153,300,000

Mode Balance	Projects	Allocation	% Share
Total Roadway Projects	7	90,100,000	59%
Total Transit/Multimodal Projects	8	63,200,000	41%
	15	153,300,000	100%

**Northern Virginia Transportation Authority
Project Implementation Working Group**

Summary of Public Comments Received (June 6, 2013 – June 27, 2013)

The official public comment period for the 48 projects submitted for consideration by the Northern Virginia Transportation Authority (NVTA) for FY 2014 regional funding ran from June 6, 2013 to 11:59pm June 27, 2013. Comments were received through a variety of venues including written and verbal testimony provided at the June 20, 2013 NVTA public hearing and at local jurisdiction and agency open houses as well as written comments submitted directly to the Authority.

As directed by the Authority, the Project Implementation Working Group (PIWG) organized all comments. The PIWG received a total of 72 comments (Attachment F.2). The comment list is not sorted. The PIWG developed a separate document with 237 project specific comments (Attachment F.3), which is a subset of the 72 total comments. The project specific comments are sorted first by corridor, second by jurisdiction/agency, third by project type, and then by commenter project position if applicable.

**Table 1
Summary of Comments**

Comment Type	Total Tally
Total comments received	72
General comments	29
Multiple project comments	27
Individual project comments	13
Other	5
Corridor 1 comments	35
Corridor 2 comments	13
Corridor 3 comments	52
Corridor 4 comments	0
Corridor 5 comments	4
Corridor 6 comments	37
Corridor 7 comments	2
Corridor 8 comments	61
Other (Outside Corridor) comments	33

Table 2
Summary of Project Specific Comments

Corridor	Project	Pro	Con	Neutral	N/A
1					
	Herndon garage	1			1
	Innovation garage	1	1		1
	Innovation Metro station	1	1		
	Falls Church Bus shelters	1	2		
	East Eldon Street Improvement Project	1	1		1
	Herndon Metro access				2
	Herndon Pkwy Van Buren				1
	Edwards Ferry Interchange	2			1
	Leesburg park and ride	1			1
	Loudoun Buses	1			
	Route 7 AA	2			1
	Overall	1			
	New Project				10
2					
	Belmont Ridge Rd Gloucester to Hay	3			
	Belmont Ridge Road	3			
	New Project				7
3					
	Route 28 Dulles to 50	7	4		
	Route 28 McLearen to Dulles	4	2		2
	Route 28 Widening (Fairfax)				1
	Rt 28 Hot Spots	2			2
	Route 28 (Manassas Park)	2			1
	Route 28 Widening (PWC)	4	3	1	1
	New Project				16
5					
	Fairfax Buses	3			
	New Project				1
6					
	Route 29 Widening	1	1		
	Chain Bridge Road widening	1	1		1
	EFC bridge	1	2		
	Pedestrian access	2	2		
	Pedestrian signals	1	2		
	W&OD lighting		1		
	Gainesville	6			1
	Traction power	3	1		

ATTACHMENT F.1

	New Project				10
7					
	Franconia Van Dorn	1	1		
8					
	Bus shelters (Alexandria)	2	2		
	Dash expansion	2	1		
	Potomac Yard EIS	3	2		
	Traffic signals	2			1
	VRE Tunnel	1	1		2
	Blue / Silver Line Mitigation	2	1		
	Boundary Channel interchange	5			1
	Crystal City multimodal	4	1		
	US-1 Featherstone to Mary's Way	4	1		
	PRTC Bus	1	1		
	Crystal City (VRE)	1	1		
	Lorton second platform		1		1
	Rippon	1	1		
	VRE Rolling Stock	6			
	Interlocking Girders	1			
	Overall				1
	New Project				7
9					
	Columbia Pike Multimodal	6	1		1
	Braddock HOV	2	1		
	West Ox	1			
	WMATA 10 buses	3			
	General				1
	Overall				1
	New Project				17

Northern Virginia Transportation Authority						
Public Comments and Responses: June 6, 2013 - June 27, 2013						
Num	Comment	Project Name	Comment Type	Comment By	Summarized Comment	Response
001	I am a VRE (Manassas line) rider between Burke Center and Alexandria. I am glad that there is a plan to put a tunnel between the VRE/Amtrack station and the King St. Metro station. It will be a very nice convenience for me. But, honestly, is it really worth the money? With funds so tight and there being so many useful projects, I just have to wonder if saving several steps is a good reason to spend the money on this project. Perhaps it was decided long ago -- perhaps there's another good reason ... I don't know. Just seems like while it's a nice upgrade, someone somewhere might get better use of the money. Thanks for reading my input.	Alexandria VRE tunnel	Project	Andrew Lawrence	Supports project, but questions if it's worth the expense.	The pedestrian tunnel is a major component of the project and will benefit both passenger safety by providing a grade-separated crossing of the railroad tracks as well as enhancing the connection to the Metrorail station. However, another key component of the project is the modification of the east side platform at the VRE station. The platform improvements will allow passengers to board trains from either side of the platform instead of only one side as is currently the case. Expanding the boarding capacity of the station enhances service flexibility and minimizes station dwell times, which support maintaining on-time operations. As train operations at each individual station affect the operation of the entire line, expanding station capacity through this project increases the capacity and efficiency of the entire line, thus enabling more trains to operate on it.
002	My wife and I strongly support the extension of VRE service to the Gainesville-Haymarket area. The explosive growth in that area reflects an increasing demand for reliable public transportation. We plan to move that direction in the next two/three years as we downsize from our Burke home. Rail service would definitely support our plan to move to Gainesville-Haymarket. Thanks!	VRE Gainesville	Project	Terrance Murtaugh	Supports project.	Planning for the Gainesville-Haymarket extension is in the initial stages and full funding to construct the extension has not been identified. As such it is difficult to predict when the extension might be realized. The extension is important to VRE and we continue to seek out opportunities such as NVTA funds to advance the project.
003	I am a strong proponent of public transportation of all sorts. I think we have too many cars on the roads we have and too many big vehicles. People driving large SUVs by themselves make no sense. I think there should be more access to e-vehicles, and charging stations for those vehicles. Related to public transportation, I find it incomprehensible that there is no VRE station in the Centreville/Clifton area on the Manassas line. Given the population density in that area, there should be a station available. I also have no idea why there is no bus service along Route 123 between Fairfax Station and Fairfax City. Finally, weekend bus service could be more available and reduce private vehicular traffic throughout the NVA area.	N/A	General	Michael R. Emery	Supports more transit and electric car charging stations. Wants VRE in Centreville and buses on Rt 123.	Extensive studies were conducted when VRE was established to determine station locations. Please see the Northern Virginia Transportation Commission web site at http://www.thinkoutsidethecar.org/research/research_vre.asp for a number of those past studies. In addition, the issue of a VRE station between the Fairfax/Prince William County border and Route 123, in the vicinity of Centerville/Town of Clifton, has been analyzed several times by Fairfax County and VRE and the conclusions have all been the same; there are no viable or feasible sites for a VRE station along this stretch of track. This conclusion was made after a 9 month study that took into account VRE operational criteria, location of the station (i.e., north or south side of the tracks), environmental constraints, road access, cost factors, land-use and community concerns and potential ridership. The study report can be found on the NVTA web site.
004	To Whom It May Concern at NoVA Transportation Authority, As a resident of Falls Church (within Fairfax County), I would like to state that I am pleased to see two proposals in the FY'14 budget: *Falls Church-pedestrian access to public transportation, and *NVTC Transit alternatives for the Rt. 7 corridor. Given the congestion and amount of traffic on Rt. 7, and the surrounding area, I am in great favor of these two initiatives. Lastly, for future fiscal years, I would like to see the VRE add more trains to increase the frequency of their service (especially, to add one more later train on the Manassas Line morning trip into DC). Thank you for the chance to comment. Thanks, Heidi Bonnaffon	Falls Church ped access, NVTC Rt 7 AA	Multiple projects	Heidi Bonnaffon	Supports projects and requests increased VRE train frequency.	Comments noted. See "Project Specific Comments" for additional responses.
005	Sir/Madam, Here are my thoughts concerning the upcoming Transit Projects. I noticed that you are discussing Rt. 28 in PWC only to Old Centreville Rod. What about from Old Centreville Rd. to Liberia Ave in Manassas City and then on to the PW Parkway and 234 ByPass? This is the main congested area that causes the PWC backups on Rt. 28 South in the evenings. The lights are not timed correctly. It seems that the concern is always for correcting and helping congestion in Fairfax County but not on the route cause which is the traffic through Manassas Park City and Manassas City areas. The proposal for the South side of Rt. 28 (after you get through Manassas City) is just another means to not assist the Manassas Park City or Manassas City residents. I would like to see the Virginia State Representatives drive the Dulles Corridor (both morning and evening rush hours) all the way between Loudon County and Manassas City for a two week period. Maybe then they would understand our pain. With the proposed extension of VRE to Gainesville and Haymarket, is there any plan to provide funds for an increase in the number of VRE trains? Currently, by the time the current trains pass through Manassas Park City, they start to become crowded. Adding stations in Gainesville and Haymarket will help alleviate traffic on Rt. 28 South of Manassas City. But it will increase the number of riders which will crowd the trains even more. Jennifer Jordan 9309 Laurie Court Manassas Park, VSA 20111 healinghands313@yahoo.com	Rt 28, VRE Gainesville	Multiple projects	Jennifer Jordan	Questions why Rt 28 widening does not include Manassas. Requests increased VRE train frequency.	Planning and analysis for the Gainesville-Haymarket extension will include an estimation of the potential new riders as well as impacts on existing service. At this time the level of service to support a Gainesville-Haymarket extension is unknown. A service/operating plan will be developed for the extension as well as a financial plan detailing both capital and operating costs. Once a decision is made to move forward with the extension and funding through construction has been committed, recommendations for funding additional service forwarded to the VRE Operations Board as appropriate.

006	Gail Parker advocated moving forward with rail projects that serve densely populated areas. Ms. Parker stated that rail travel is important in order to move people within and out of the metropolitan area. Rail conserves energy, reduces traffic, and improves the environment. Ms. Parker supports rail to Fort Belvoir and other rail projects listed in the newspaper.	N/A	General	Gail Parker	Supports more rail.	Comment noted.
007	Jerry King, Chair of the Alexandria Bicycle and Pedestrian Advisory Committee, offered testimony in support of mass transit and multi-modal transportation projects, including projects that get people to mass transit. These include safe sidewalks, crosswalks, and bicycle facilities such as bike lanes, cycle tracks bike share, and bike parking.	N/A	General	Jerry King, Alexandria BPAC	Supports transit and multimodal projects.	Both the Authority and the JACC recognize that in order to begin to solve the traffic gridlock in Northern Virginia that strategic investments need to be made across all modes of transportation. The Authority has consistently sought to balance its investments and is not biased toward one particular mode of transportation relative to another. Rather, the Authority is focused on congestion relief and improvements to our transportation infrastructure, and is deeply committed to funding projects of all modes that accomplish those most efficiently and effectively. The primary goal is to develop and sustain a multimodal transportation system that supports our economy and quality of life. This requires that investments be fiscally sustainable, that we promote areas of concentrated growth, manage both demand and capacity, and employ the best technology, joining rail, roadway, bus, air, water, pedestrian, and bicycle facilities into an interconnected network.
008	Transportation Commission passed a motion to recommend the staff supported projects, with the understanding that the AMTRAK surface lot project was removed from the list. The motion included a recommendation that \$500,000 be added for bicycle parking design and implementation along major regional commute corridors.	Alexandria projects	Multiple projects	Alexandria TC	Supports all Alexandria projects, recommends \$500k for bike parking.	Comment noted.
009	There were no public attendees who spoke to these items at either meeting however both the elected governing body and the appointed Planning Commission were very supported of the projects and complimentary of the good work efforts to implement HB2313. City Council supports the full list of projects submitted by the City of Falls Church staff and directed Vice-Mayor Snyder to convey their consensus at the June 20th NVTA meeting. If project criteria selection and funding constraints prevents all City of Falls Church specific projects being funded Council is supportive of the Project Implementation Working Group recommendation project list. The Planning Commission unanimously endorsed the five projects submitted by City Staff for Fiscal Year 2014 funding by the Northern Virginia Transportation Authority (NVTA). Those five projects are: (1) Phase II of the Transit Alternatives Analysis for Route 7, (2) Pedestrian Access to the Intermodal Plaza, (3) Bus Shelters along Broad Street, (4) Pedestrian Bridge on Van Buren Street, and (5) Pedestrian Signals at Columbia Street and North Washington Street. This action has been provided to City Council as well.	Falls Church projects	Multiple projects	Falls Church City Council and PC	Supports all Falls Church projects.	Comment noted.
010	Mr. Chairman, I'm president of the Northern Virginia Transportation Alliance. Speaking from a regional perspective, I want to commend Loudoun County and yourself for the FY-14 projects. It's very much in keeping with the spirit and the letter of how House Bill 2313. Each project has a very clear nexus to reducing congestion and making a regional transportation network work better. I wish I could say the same of some of the projects that some of the other jurisdictions have put forward. I think Loudoun County has been exemplary in the thought that it's put into this. Loudoun County's project choice is important, not only because of improved transportation for Loudoun County residents but also because it upholds the faith, hope and confidence of both the private and public sector leaders and individuals and organizations that called for new regional and statewide transportation funding for so many years. This creates exciting new opportunities for the region. It also brings with it great responsibility to make sure we choose wisely. The law doesn't require every available dollar be spent in this year. The alliance believes it would be more prudent to focus on a few projects in the region and save some of the funds for future years when we have had a chance to bring some of the other more important projects to us ready to go than it will be to look at this year's free for all that, well, we are not under any guidelines. Let's just spend it and then worry about the real criteria later on. We have good projects on the list. We have better projects right on the horizon. We think the taxpayers would appreciate it if we said we are going to spend money now but put -- save money for the next couple of years when we can invest it. We want to thank you for your leadership on the transportation authority over the years. It's a good common sense perspective to the debate. We appreciate it. Thank you.	N/A	General	Bob Chase, NVTAlliance	Supports Loudoun projects and suggests fewer larger projects.	Comments noted. See "Project Specific Comments" for additional responses.

011	<p>Good evening, Chairman York. I'm from Leesburg, Virginia. A couple of observations and comments I want to make. Thank you first for having this hearing. House bill 2313, I'm glad you have additional funding sources for transportation. I'm opposed to how Richmond came about with this bill increasing taxes on Virginia residents. I think they could have had a better bill and utilized existing revenue sources and not had to raise taxes. Putting that aside, there is one project that has been delayed for some reason. It would have helped with the Sycolin flyover and that's Miller Drive southeast on the airport property. That was originally intended to be completed around the time of the closing. As far as I know ground has not been broken on that. So if that could be expedited it would be beneficial for the Sycolin flyover alternate routes. The other projects that you have listed, one that I think, in my opinion was more important than the Sycolin flyover, is the Route 7 interchange. Having traveled on Route 7 frequently to get to work, that's a major bottleneck. I see it's on a schedule if there is a way to expedite or move that up in priority, that would be beneficial. Two projects that really I think have an impact on the quality of life at Loudoun County that are not on your list and I probably understand why they aren't. I want to bring them up anyway. The improvement to Route 15 north out of Leesburg up to the state line. I frequently take this route to go visit relatives in south Jersey. This is an area of Route 15 that's a major bottleneck. I believe there are restrictions on improving it any further than it is. I compare this to other sections of this 625-mile route from New York down to South Carolina. I frequented the Pennsylvania and New York portions of this. It's a modern two-lane in each direction divided highway. My thoughts are we can do bettr with relieving congestion heading north and south along that route on Route 15. The last point I want to make is we need another Potomac River crossing. It's been talked about extending Route 28. We have Maryland to deal with, Fairfax County and Loudoun County. But having just one route north of the capital beltway to get across into Maryland is a big impediment. Having grown up in southern New Jersey for instance, they have six Delaware River crossings. Six between Wilmington, Delaware, and Philadelphia. We have one. I think we can in Virginia, Loudoun County, and Maryland, work to make a crossing a reality in the future. Thank you very much.</p>	N/A	General	Dwight Dubliga	Likes transportation funding but wishes taxes hadn't been raised. Suggests additional future road projects, especially into MD.	Comment acknowledged.
012	<p>Chairman York, thank you for the opportunity to comment on behalf of the Washington Dulles Foreign Trade Zone as well as members of the Washington Airport Task Force. I will echo some of Tony's comments (Tony Howard). First priority is to ensure that this money is spent against the guidelines laid down and doesn't seep into cosmetic projects, bicycle trails that perhaps aren't going to help relieve congestion. Bicycles in urban areas are fine. One you had on your list is Route 606. I would absolutely endorse that as a priority. In supporting transportation improvements, we note that you have an aggressive program as a county to expand your commercial real estate tax base because that can help keep homeowners' real estate taxes down. What we would urge you to do is to apply this money to reduce congestion, to persuade NVTA to do the same. If the congestion is not cured, and if transportation not improved, I hate to say it, but you probably won't achieve your economic development goals which are so vital to everybody's pocketbook. Thank you.</p>	N/A	General	Leo Schafer, WDFTZ, WATF	Wants NVTA to follow guidelines, not do cosmetic projects. Supports Rt 606 project (says it is on the list but it is not). Opposes bike projects in suburban areas but says they're OK in urban ones.	Comment acknowledged.
013	<p>My name is Mark Miller. I'm a resident of Leesburg. I wanted to comment for the larger committee. One thing to note, the initial project was two sections of Belmont Ridge Road and whittled down to just one. If that one is done in conjunction with the Belmont Ridge Road interchange which includes, my understanding, the widening of Belmont Ridge to Gloucester Parkway, that would have two four lane sections that would bottleneck into two lanes going downhill. That would make the two lane curve around Loudoun County Parkway and Redskins Park like a walk in the park. Just on the record for other people that may not be as familiar with Belmont Ridge Road to one day hopefully encourage them if the two projects will be done to have the third missing link completed to avoid safety hazards going forward. One other comment or question, would be while I am all in favor of -- not in favor of more taxes but I am in favor of this bill because of what it does for the whole region as well as the commercial base in Loudoun County to develop what we want to develop. But the constitutionality of the bill on the whole is certainly going to be called into question as early as July. So I was curious what sort of provisions are in place as far as putting things in motion but then wondering if they come to a stop, if the constitutionality is questioned, then it probably gets started and then all of the sudden constitutionality is struck down. What sort of provisions does NVTA have so localities like us aren't left holding the bag on incomplete projects?</p>	Loudoun Belmont Ridge Rd	Project	Mark Miller	Wants all Belmont Ridge Rd projects to be completed at one to avoid temporary bottlenecks.	Comment acknowledged.
014	<p>I'm Pat Turner. I'm founder of Bike Loudoun County and also an avid cyclist. I want to point out when most new roads are built I believe VDOT is tasked with putting asphalt trails along the side of the roads. I assume that will be the case with these. Also, I note that the metro station -- I think they will require some bike and pedestrian access to them. Because there may not be enough parking spots in some of the garages. That will be not only economical but a healthy way for people to get to the metro stations. My other -- I have a question. How will these projects that have been identified by the NVTA and I was on the Technical Advisory Committee. We drew up Transaction 2040. How will these be integrated into the VDOT CTB six-year improvement plan? I don't know if they are on different levels or they try to integrate those or what.</p>	N/A	General	Pat Miller	Wants Loudoun's Metro stations to have bike/ped access.	Comment acknowledged.

015	Good evening, Chairman York. My name is Tony Howard. I am the president of the Loudoun County Chamber of Commerce. on behalf of the board of directors and 1100 members, thank you for the opportunity to speak on the NVTA proposed fiscal year 2014 project list. I want to commend you Chairman York for the opportunity to provide a forum for the business community and citizens to discuss the new transportation dollars to be made available through house bill 2313. Our chamber paid a vital role in the adoption of the historic legislation during the 2013 General Assembly session. We are excited about the millions of dollars this will generate to address the significant backlog of unfunded transportation project. We are excited about the additional \$300 million or more it will generate every year to improve mobility and safety here in Northern Virginia. This evening I'm pleased to convey the chamber's support for the project list the Loudoun County Board of Supervisors put in for inclusion in the priority list. Chairman, I would like to urge you and your colleagues to remain vigilant in ensuring that the NVTA does adhere to the mandate that all regional funds associated with 2313 be dedicated to projects that will provide the most congestion relief for the taxpayers investment. That will help ensure the additional Loudoun County projects and competition for the limited regional funding. One of the critical projects is the proposed Bi-county Parkway. I know there is considerable work that must be done before the project is ready for state or regional funds. The Bi-county Parkway is clearly of significant regional importance. By connecting major employment population centers in Loudoun County and Prince William we'll help reduce traffic congestion in the region, home to Virginia's fastest growing and most economically vibrant communities. I would ask you to urge the transportation authority to make the Bi-county Parkway a priority at the appropriate time and support a road to help improve the quality of life in our communities by getiing traffic off the neighborhood roads, making it easier to get to work, school, church, and the grocery store and ultimately home to their families. Thank you for this opportunity to provide the chamber's insight into this important issue.	Bi-County	Multiple projects	Tony Howard, LCCC	Supports Loudoun's projects and wants Bi-County Parkway added.	Comment acknowledged.
016	I was in Loudon for their NVTA meeting and there were only eight comments that were all given by developers and business owners and over half those commenters wanted to add the bi-county parkway to the list.	Bi-County	New Project	Unknown	No request. Commenting on other public comments.	Comment acknowledged.
017	On the projects for PWC and Fairfax County, both have Route 28 projects, both to widen roads. The areas they are widening don't compare in traffic and congestion to other areas. Would like to see money allocated to finishing Route 28/I-66 interchange because it's regional. I'd hate to spend money on projects that don't provide much congestion relief.	Rt 28	Multiple projects	Mark (last name unknown)	Supports Rt 28 projects, but wants more for 28/66 interchange.	The project will improve capacity ona segment of Route 28 which currently carries over 60,000 vehicles per day, for an LOS F. The intersection/signal improvements will improve through travel as well as travel to other corridors such as Route 29 and New Braddock Road. The I-66/Route 28 interchange project is now funded at \$50 million in the VDOT 6-Year Program. This funding level will allow VDOT to move forward with design of the improvements.
018	Is there somewhere we can find a summary of the study that was done on Route 29 from Danville to Northern Virginia during Governor (now Senator) Kaine's administration?	Rt 29	General	Unknown	Requests info about unrelated Rt 29 study.	Comment acknowledged.
019	Is any of the money we're discussing going to be allocated to the bi-county parkway? In the next two years. Do you know where they would get the money for it?	New Project	New Project	Fred Greco	Asks if NVTA is funding Bi-County.	Comment acknowledged.
020	Thank you for hosting this meeting. If we're talking about critical priorities from a transportation perspective, we've got to talk about the east/west corridor. And we've got to talk about relieving congestion on 28, either getting into the east/west corridor or 66 getting them. You've talked about increasing VRE priority to get more rails to decrease traffic on the road which is a great suggestion. You've talked about widening some of these roads to relieve choke points, which is great. Those are great priorities. Then you get the people talking about the tri-county parkway, and they are looking ahead to the future. The people in CTB in Richmond said they were maybe going to look into funneling money from NVTA into this project and it is shortsighted for you to say you don't know about it because if the people in Richmond decide to use money from NVTA we're going to come back in larger numbers and complaining about how you said you didn't know what we were talking about. This is the dream road of people in Richmond and would help developers up there in Loudoun which might increase cargo traffic, there are definitely going to be more cargo trucks on a road that we paid for and built that the State's not going to reimburse us one dime for that section of 234 on the Prince William County Parkway which is going to be seized by this tri-county parkway and the worst part is that we keep hearing about misinformation and bad information, that somebody is not telling you the truth. There needs to be more clear information. If they do come asking for money I'd like you to bar the door to them.	New Project	New Project	Mac (last name unknown)	Opposes Bi-County. Wants east/west connections instead.	Comment acknowledged.
021	The question I'm about to ask I already know the answer to but I think it's one that people should be aware of. How is, with the Metropolitan Washington Council of Governments, which is the Metropolitan planning organization for the urbanized areas which is about 150 square miles of the county and the two cities. How are you guys playing into with their consolidated work plan because they control a pot of money particularly there is going to be involvement from the beltway down and then the other parts through Fairfax.	N/A	General	Ray Beverage	Question about TPB process.	Comment acknowledged.

022	I’m really new to this world of transportation planning but regarding the bi-county parkway, I have been surprised to hear so many ways of trying to sell this road. What concerns me is that I don’t understand the relationships that all these different organizations have to one another and which ones have more power than others. So my concern is that your organization could be used as a conduit to try to sneak money in to try to accomplish the building of this road. There has to be some reason that people are pushing so hard for this as it doesn’t make any practical sense from where I live and my experience it’s not going to help traffic, it’s going to make it worse. It’s going to hurt people and take their land. We’re going to lose access and our way of life is going to be affected. Where can we see the relationship between these organizations laid out, like an org chart? I think that needs to be out there for us to see. So who do I ask to get this information? And who holds the power regarding the bi-county parkway?	New Project	New Project	Susan Bartlett	Asks who makes final decision for Bi-County and if NVTA will be used to build it.	Comment acknowledged.
023	I’m opposed to the bi-county parkway. In the slides you talked about a proposal to collocate your meetings with the CTB public hearings and I think that’s a huge mistake. The public hearing process does not serve the public. It serves the agencies and their agendas. It’s difficult to get credible information in a timely way. Combining the two would not allow enough time for locals to have their say.	New Project	New Project	Barry (last name unknown)	Opposes Bi-County. Opposes holding NVTA meetings at CTB.	Comment acknowledged.
024	Can you educate me on what is done to eliminate these disconnects between parties and groups and addressing regional planning? Because my reaction when I came in here was that Virginia and Maryland don’t talk. I can tell that the regional planning is optional. There needs to be a switch in the am and pm for the timed lights on main roads and the feeder roads need to match because the bottleneck comes from the feeder roads. What can we do about this regional planning bottleneck? It’s obviously missing an area. In Chicago they use the freight lanes. They told the freight trains to park outside the city during rush hour so the commuter trains could run.	N/A	General	Unknown	Wants MD and VA to plan together. Wants to prioritize rail tracks for passengers over freight at rush hour.	Comment acknowledged.
025	Delegate Anderson and I voted against this bill and I voted against the creation of the NVTA in 2002. There is a provision in the bill about maintenance of effort and Prince William has a higher maintenance of effort per dollar ratio than Fairfax County and that is a problem. What is disturbing to me, among other things, is that fixing 28 near Nokesville is of primary benefit to Fauquier who is not stuck with the taxes, we should focus on fixing congestion in the areas that are being taxed. And one more question, what are the rules for amending the agenda or the list of projects at the next meeting? Can someone make a motion to add the agenda? Why can’t we take on projects that would benefit the higher tax areas instead of areas like Fauquier that has lower taxes? And how much money from NVTA is going into this project?	Rt 28	Project	Del. Marshall	Opposes Rt 28 project south of Manassas because it would serve drivers from outside NVTA region.	Comment acknowledged.
026	I’m going to follow up from some of what Del. Marshall said. All of us here are familiar with 28, with the rush hour and traffic flow there. Improving 28 on the border of Fauquier County and Prince William County, it’s a great improvement, however if you look at it as a whole and the traffic flow during rush hour you still get a bottle neck and that’s right there at Manassas Park at Old Centreville Road and US 29. And so, although you improve the southern part you still get this bottle neck, so therefore those residents that are going to be happy that in Prince William and Fauquier that this road has been expanded near their area, they’re still going to get this traffic as they try to go up north and south on the way home. I was thinking your problem is the criteria and I hear data. We have data. I mean there are 54,000 to 63,000 cars that travel per day in that portion of road I just mentioned that needs improvement in Manassas Park and that’s a lot of cars. However your criteria is skewed because you need to consider traffic flow and also the approach as a whole to the improvements you’re making because you’re improving one portion but you’ve got a bottle neck here. You’re really not improving the road. And in addition you’ve got Orchard Bridge development that’s coming along that’s going to provide more cars and more traffic. So my question is, can you amend your criteria because that is the crux of the problem here. Well just because we don’t specifically get it right or it’s not doable, how about five lanes, how about synchronizing the signals in that area, how about not providing for opposite turns on the road during rush hour. Those are innovative ideas that can improve the traffic flow in that area. It doesn’t seem like you’re considering traffic flow in these plans. How am I going to tell my citizens that they’re getting more for the money, their tax dollars, when we didn’t even make the list so I can’t give them a timeline for the future? A courtesy would have been to put our project on the list with a date but it isn’t even on the list.	Rt 28	Project	Preston (first name or last name unknown)	Wants something along Rt 28 in Manassas Park.	Comment acknowledged.
027	I guess I just don’t understand why 28 widening from the city of Manassas to Fairfax County line was not on anybody’s radar screen. This has been a problem for 10 years and to say it’s not on the comp plan, I have to say someone was asleep at the wheel. So I have to say I’m very disappointed in the County and whoever was in charge of that area for not doing that. You just stepped in, I know you just took over that region but it’s bizarre. You’ve seen the people have had problems there for 10 years now, so it’s an excuse and it’s a bad excuse. It should have been on the comp plan and why it’s not is a real question that I as a voter and as a citizen want to know. But I want to jump to something else. You know I heard you say how the NVTA is, that it forces us to think in a regional manner about everything. Everything I’ve heard here tonight just confirms that east/west is the commute and so the north/south, tri-county or bi-county or whatever you’re calling it today is not a road that helps Prince William County commuters and I would ask one more question. You said that this forces us to think in a regional manner; well I would ask what Chairman York has said about the widening of 15 from the Prince William County line through Loudoun County and through Oatlands. Is he in favor of that so he can help commuters that travel that 15 have a better commute?	Rt 28	Multiple projects	Mary Ann Ghadban	Wants something along Rt 28 in Manassas Park. And asks if Scott York is in favor of widening Rt 15.	Project not submitted for consideration for FY 14 NVTA funding.

028	For Route 28 you mentioned it’s shovel-ready. The insistence on shovel-ready projects is like a monument to the sales tax. The better use of money is to change the traffic light timing and to align the traffic lights together. That’s a relatively low cost solution to congestion. You can connect the traffic lights wirelessly or using a hard-line cable so the computers can control the traffic lights. You can use sensors. Talking about the east/west route, maybe we need another interchange on 66 to take the relief off of the smaller feeder roads. I know that would be a long term project. Another way is to build another secondary feeder road.	Rt 28	Multiple projects	Craig Summers	Thinks signal timing would work better on Rt 28. Wants more exits on I-66.	Project not submitted for consideration for FY 14 NVTA funding.
029	Every one of these no build situations results in a disaster. I think we should tie the Manassas airport into the Dulles airport and tie them into the ports and possibly add another port in the Potomac for light products. Having said that, I’m in favor of the bypass but we need to make sure that government is responsible for mitigating the thousand or so people that are going to be affected adversely by this road in order to balance the hundreds of thousands of people that are going to benefit from it. Apparently it’s faster to go down 50 than 66 because the construction has opened up. Do not close any more roads or paint any more yellow paint on pavement. HOV lanes are unconstitutional and terrible. We should set up a program where people are incentivized to ride with other people. Also see pdf p 50/50.	New Project	Multiple projects	Steve (last name unknown)	In favor of Bi-County. Hates HOV lanes.	Project not submitted for consideration for FY 14 NVTA funding.
030	You’ve done an excellent job and I can understand why your priorities are what they are. I imagine we’ll need more park & rides and commuter lots and I was wondering if we could bond that. It’s important to have the HOV lanes and the bus transit to get traffic off the roads. I’m concerned about your Transaction 2040 because you do have a lot of those dream roads in there and bridges. One of the questions I have is about I-66 improvement on Rt 15. When Route 15 between 29 and 66 with the rail crossing, that portion doesn’t get improves until 2035. That’s what I saw. What about Balls Ford Road? We have the crossing there. Is that something that you would consider?	N/A	General	Unknown	Commends work. Asks if we can bond for park and rides. Asks if improvements to Balls Ford Rd are possible.	Comment noted. Project not submitted for consideration for FY 14 NVTA funding.
031	I have no problem with Phase 1. Phase 2 from the relocated Vint Hill Road to Fitzwater Drive will not relieve any congestion. There are about 40 houses there and only 3 new ones have been built in the last 30 years. How will that relieve congestion? If it’s not going to go all the way to 29 there is no reason to displace all those people and take their land. Who is the proffer from? Is Avondale the only place they’re coming from for Fitzwater? Do you think this is really worth it for 40 houses? Is that really a benefit to the people of Prince William? If it only stops at Fitzwater? I ask that the money be used for something else like VRE to Bealeton.	Rt 28	Project	Shirley (last name unknown)	Opposes Fitzwater Dr segment of Rt 28 expansion. Wants money to go to VRE instead.	Comment noted.
032	We need to build new track and add more trains that run more often and to more places. Adding more roads just creates more traffic and we need less. I encourage you to move the rail projects to first priority.	N/A	General	Gail Parker	Supports more rail.	Comment noted.
033	Thanks for hosting this meeting and I want to express my support for the VRE proposals to increase the number of coaches and to build a Gainesville station. I’m a commuter that drives from Gainesville to Manassas City to take the train and I feel Like that would really help. I’m really new to this world of transportation planning but regarding the bi-county parkway, I have been surprised to hear so many ways of trying to sell this road. What concerns me is that I don’t understand the relationships that all these different organizations have to one another and which ones have more power than others. So my concern is that your organization could be used as a conduit to try to sneak money in to try to accomplish the building of this road. There has to be some reason that people are pushing so hard for this as it doesn’t make any practical sense from where I live and my experience it’s not going to help traffic, it’s going to make it worse. It’s going to hurt people and take their land. We’re going to lose access and our way of life is going to be affected. Where can we see the relationship between these organizations laid out, like an org chart? I think that needs to be out there for us to see. So who do I ask to get this information? And who holds the power regarding the bi-county parkway?	VRE Gainesville	Multiple projects	Susan Bartlett	Supports VRE Gainesville. Opposes Bi-County.	Comment noted.
034	Thanks to Congressman Connelly for sending a representative. First question is about House Resolution 907. I’d like to know what role the NVTA and the local governments played in that study to look at the multi-rail versions in a multi-modal study to address the congestion in Northern Virginia. I would support that about the relief of chokepoint for trains.	Metrorail	General	Unknown	Supports Metro expansion.	Comment noted.

035	See pdf p 3/50.	Rt 28	Multiple projects	Jeremy Seltz	Opposes Fairfax's Dulles/50 and Dulles/McLearnen Rt 28 projects, says they are free-flowing now.	These projects provide additional capacity on the highly congested north-south Route 28 corridor that provides travel within and between three counties in northern Virginia, as well as connections to the Dulles International Airport and major east-west highways such as I-66, Route 50, and the Dulles Toll Road/Greenway. The current Average Daily Traffic count of 111,000 vehicles puts this segment of Route 28 at a Level of Service (LOS) E, which is very congested for freeway conditions. Route 28 is a significant technology corridor in both Loudoun and Fairfax County as well as an important access to Washington Dulles International Airport. With its links to Prince William County, Manassas and Manassas Park, and future link to the Metrorail Silver Line, it is well qualified for regional investments by NVTA. In addition, VDOT and its contractor have developed plans to implement this widening which are “ready to go.” This project readiness criteria plays an important role in NVTA’s FY 2014 project selection. Concerning the I-66/Route 28 interchange, VDOT is currently soliciting proposals for the design of improvements at the interchange (and nearby intersections). In addition, VDOT’s draft Six-Year Improvement Plan (SYIP) does include \$50 million in funding over the next 4 years toward this project. VDOT has concluded the planning study phase of this project, with information posted on their website: http://www.virginiadot.org/projects/northernvirginia/i-66_and_rt_28.asp
036	See pdf p 4-5/50.	Rt 28 and new	Multiple projects	Mark Scheufler	Opposes Fairfax's Dulles/50 and Dulles/McLearnen Rt 28 projects, and wants Centreville Rd/Rt29 portion to end at Fairfax line. Proposes 3 new projects: StoneRd/NewBraddockRd/I-66 off ramp, OldCentrevilleRd/ComptonRd roundabout, BallsFordRd/BullRdDr new connection.	NVTA is currently considering projects for FY 2014 funding, which means the projects should be able to proceed to construction or begin a new project development phase in FY 2014. The 3 new projects have not yet been studied, and are therefore not positioned to move ahead with implementation.
037	See pdf p. 6/50.	New	Project	Del. Dave Albo	Requests \$23.7 million for Rolling Rd widening. Wants project redesigned to reduce duplicate bike access.	Although the Rolling Road Widening project is in Transaction 2040, Fairfax County felt that it might be unlikely to rise to the level of “project readiness” for prioritizing FY2014 regional NVTA projects. In addition, until the final VDOT Six-Year Improvement Program was released in mid-June, the County had hoped that some additional state or federal funding might be applied to the project. Fairfax County is considering this project for the NVTA 30 percent funding that is returned to the local governments for FY2014. This would allow a design update which would better position the project for FY2015-2019 NVTA regional funding by improving project readiness. Fairfax County is using a cost-benefit analysis tool to evaluate a number of unfunded projects, including this section of Rolling Road. The results of the analysis and other factors will be used in preparing project recommendations for the Board of Supervisors’ consideration this fall. These recommendations will include a number of different funding sources, such as the NVTA local funding and the County’s commercial and industrial property tax for transportation.
038	See pdf p 19/50.	Rt 28, Rt 1, VRE Gainesville	Multiple projects	Robert Clapper, PWCC	Supports congestion reduction. Supports following projects in PW: Rt 1 Featherstone, Rt 28 Fitzwater, VRE Gainesville	Comment noted.
039	See pdf p 28/50.	N/A	General	Barbara Varvaglione	Supports pedestrian projects, especially Alexandria, Arlington, Fairfax Co, and Fairfax City project lists.	Comment noted.

040	See pdf p 30/50.	New	Project	Kevin Raymond	Wants interim VRE stop at Sun Cal development.	VRE is working with both Sun Cal and CSX, who owns the railroad right-of-way, to come to agreement on a station at the Potomac Shores development. Ultimately CSX must grant permission for a station stop at that location.
041	See pdf p 32/52.	New	Project	George Fitzelle	Wants wifi on VRE trains.	VRE continues to explore options to provide WiFi service on its trains. Through a number of different tests and studies have been done as noted, we have discovered several areas along the tracks we use where a signal cannot be received. Until a provider is able to offer continuous service, we will not offer WIFI on our trains.
042	See pdf p 36/50.	VRE Gainesville	Project	Kennth Knarr	Supports VRE Gainesville. Wants more transit in Fairfax, PW, Loudoun generally.	Extension of the Orange Line to Gainesville, while included in TransAction 2040, is not a project for which FY2014 funds would be timely.
043	See pdf p 42-43/50.	Potomac Yard Metro, W&OD Trail	Multiple projects	Del. Randall Minchew	Opposes Potomac Yard Metro EIS and W&OD Trail lighting. Wants strict adherence to congestion test.	Comment noted.
044	See pdf p 46/50.	New	Multiple projects	Marie Potter	Wants improved exit at Dulles/Rt28, left turn lane at LoudounCtyPkwy/Shelhorn, removal of barriers at right turn lanes, lower tolls on Greenway, elimination of all HOV lanes.	Congestion on the DTR ramp to northbound Route 28 is likely attributable to weaving movements between the DTR and Innovation Interchanges. If the commenter could be more specific about the concerns at this ramp, the County and VDOT can discuss whether improvements can be made. (next 4 comments are outside Fairfax County) HOV Lanes are an important option for encouraging carpooling. HOV lanes work best when physically separated from general traffic. Driver education on their proper use and police enforcement are critical in areas where the lanes are only separated by striping.
045	See pdf p 47/50.	Rt 28	Multiple projects	Cheryl Rowland	Wants Rt 28 signals retimed in am, better "service to train", and asks why Manassas Park Rt 28 project didn't meet req'ts.	Concerning the I-66/Route 28 interchange, VDOT is currently soliciting proposals for the design of improvements at the interchange (and nearby intersections). In addition, VDOT's draft Six-Year Improvement Plan (SYIP) does include \$50 million in funding over the next 4 years toward this project. VDOT has concluded the planning study phase of this project, with information posted on their website: http://www.virginiadot.org/projects/northernvirginia/i-66_and_rt_28.asp
046	See pdf p 48/50.	Many	Multiple project	Wendy Kaczmer	Supports VRE Gainesville, wants I-66 widened to Haymarket, wants I-66/28 interchange improved, wants Rt 15 widened from 66 to Rt 7. Opposes Bi-County.	Comment noted.
047	See pdf p 49/50.	New Project	New Project	Jonathan Way	Wants southern end of Bi-County to be at Godwin Dr.	Comment noted.
048	I am writing on behalf of one of our constituents who attended the June 26th meeting at the Fairfax County Government Center. She attended the meeting but is not able to email comments by the deadline, she very much enjoyed the projects that were proposed but would like for all to keep in mind the challenges people with disabilities and the elderly may face.	N/A	General	Alexandra Dixon	Asks to keep in mind disabled/elderly needs.	Comment noted.
049	I would like to submit my comment to support the Alliance's testimony regarding their project list that have the greatest significance as well as the caution to disregard projects, like bus shelters and pedestrian walkways being that they will not have a significant impact on the regional traffic congestion.	N/A	General	Randy Brown	Only supports large impact projects. Opposes bus stops, pedestrian projects, other small things.	Comments noted. See "Project Specific Comments" for additional responses.

050	<p>I want to commend the NVTa for putting together a reasonable first priority list for spending the share of Transportation funds that will be coming to Northern Virginia region. The structure of the priority list makes sense and addresses the needs of the localities within the constraints of what is available to spend. The use of spending to speed up the RT 28 from Linton Hall to Fitzwater to complete the construction sooner and design RT 1 from Featherstone Rd to Mary’s Way is commendable. It is disappointing to see many routes like RT 1 segmented and separated in VDOT SYIP, and not get funding as it has in the past. These allocations are a great way to accelerate needed improvements. However, in the case of the RT 28 improvements the NVTa and PWC should evaluate the necessity of widening the roadway to four lanes where intersection and spot improvements might give the same outcome without jeopardizing 40 homes. There are many needs coming down the pike and considering the cost (\$580,000) of one bus to serve the PRTC Gainesville area, and the need of more park and ride lots along the future improved I-66. All of these future needs will have to be addressed holistically. The Balls Ford Rd park and ride lot is about to come on line and the need for others in the I-66 corridor will probably cost at least a \$1 million dollars to acquire land, as it has in Loudoun County. Removing just 7% of the single occupancy vehicles has been shown to improve the flow of traffic and we must do what we can to make it attractive for drivers to choose alternative modes of travel. With the Tier I Environmental Impact Statement on the I-66 improvements moving forward there will be many opportunities for regional funding in the future and we hope you will continue to work cooperatively and fiscally responsible. One of the concerns that I have is how you have addressed future transportation in the TransAction 2040 Plan. There is heavy emphasis on routes that are not planned other than as dream roads, e.g., N-S CoSS, Eastern and Western Washington Bypass with Potomac River bridges. Yet, you are not meeting the opportunities to improve existing roads that are congested and need to be improved now. For example, RT 28 from Manassas to Fairfax County Line. If existing RT 28 is widened it would help to get traffic moving towards I-66 and Dulles region and provide a lane for HOV and bus rapid transit. Another example, there will be pressing needs for overpasses for railroad crossings, specifically the widening of Balls Ford RD and RT 15 between RT 29 and I-66. I understand the interchanges are being slated for improvement and hopefully the railroad crossings can be improved as well. In the latter case, the widening of RT 15 in that area is not planned to be 4 laned until 2035 and that is something the community needs now. These are just a few suggestions I just wanted to present for possible funding scenarios where the NVTa can help accelerate needed projects in the future. Thank you.</p>	Rt 28 and new	Multiple projects	Philomena Hefter	<p>Supports the list of projects. Asks if widening Rt 28 is really necessary, or if spot improvements would be just as good. Says more park and rides are needed. Wants focus on improving existing routes, not building new ones. Wants Rt 15 widened now.</p>	Comment noted.
051	See pdf entitled "051.pdf"	Rt 28, Bi-County, more	Multiple projects	Leo Schefer, WATF	<p>Endorses NVTAlliance's comments. Wants more rigorous analysis and fewer larger projects. Wants completion of Silver Line, Dulles Loop, Rt 606, elimination of Rt28 and Rt66 congestion, Bi-County, other chokepoints</p>	Comments noted. See "Project Specific Comments" for additional responses.

052a	<p>Thank you for the opportunity of supplementing the written comments I made on June 7 and oral testimony on June 20 at the hearing regarding the subject proposals. Unfortunately you did not include my written comments of June 7 in your public comments packet distributed on June 20, so I have included them herewith. I have reviewed all of the extensive materials you added in your web site regarding individual projects. The staff clearly worked very hard to produce all of the materials, and I appreciate it. Nevertheless working hard in this case does not mean working smart. The Northern Virginia Transportation Alliance appropriately says the following on its web site regarding use of the funds from HB2313: “Unwise Choices May Not Turn the Region to Dust But Most Certainly Will Compromise a Tremendous Opportunity To Build the Transportation System We Need And the Public Confidence Necessary to Invest More in the Future.” As a university trained civil engineer with an MBA, I believe a rational and normal first step in analyzing regional needs would be to look at current congestion and accident locations and establish priorities based on needs for improvements. The Virginia Department of Transportation did this in their 2020 report. You can see it at the following Internet site: www.virginiadot.org/projects/resources/NorthernVirginia/NOVA_20_20Plan_summ.rpt.pdf. Base line analyses are missing. I have included the key maps from the 2020 report. It seems you should have made similar maps, along with supporting data and a report update for the public. On Annex I, you can see the situation that existed in 1999. The “Congestion [was] concentrated in core and inner jurisdictions (east of Route 28).” The roads with “One hour or more of stop-and-go traffic” are marked in red. The roadways in gray were “occasionally congested;” this means “stop and go” also. Since then the congestion has grown greater. I recommend you and VDOT provide an update. Accident / crash data should also be included. A major cause of congestion according to VDOT is accidents. Generally accidents during commuting hours are caused by impatient drivers. Once the data and maps are assembled, then an analysis of the worst (priority) areas should be done. VDOT and the State Police have this sort of basic information and it is shown on the VDOT web sites. It is strange that you presented us with a grab bag of projects with no overall analysis. It frankly seems like Political Pork, rather than rational regional analysis and establishment of logical priorities with clear methodology. Your undocumented presentation of project data raises the question of whether politicians have chosen projects that help their own or friends commuting or possible contracts to cronies. Given the referenced media release that lists expenditure by jurisdiction, rather than by project, is the expenditure allocation based on jurisdiction size and influence rather than regional commuting priority considerations? Annexes II and III show what the congestion patterns would be with \$4 billion of expenditures versus \$13 billion. These show the alternatives and how much it would cost to substantially alleviate congestion. You show no overall impact of your project proposals. The project list gives no realistic analysis.</p>	N/A	General	Thomas Cranmer	Opposes transit projects and wants more analysis on all projects. Wants a road expansion on Rt 7. Requests response.	<p>The widening of Route 7 from Jarrett Valley to Reston Avenue is one of the Tysons-wide Roadway Improvements included in the Tysons Amendment to the Fairfax County Comprehensive Plan, approved by the Board of Supervisors in June 2010. Since that time, the Board, the Planning Commission, County staff and others have been working to develop a funding plan for all of the transportation improvements in the comprehensive plan amendment, including the Route 7 project. On October 16, 2012, the Board of Supervisors endorsed a funding plan for the improvements in the Tysons Amendment to the Comprehensive Plan. Subsequently, on January 8, 2013, the Board approved three revenue sources that are part of the plan. At that time, the plan included \$200 million in “unidentified state and federal funding” over a 40 year period (an average of \$5 million per year). When the plan was adopted, there was no source for these funds. With the passage of HB2312, there are new sources of transportation funding for Northern Virginia. County staff believes that the \$200 million in “unidentified state and federal funding” can be addressed by either the 70 percent of this funding that the Northern Virginia Transportation Authority retains, the Fairfax County portion of 30 percent of the new funding that is transferred to the local governments or with additional funding the Commonwealth Transportation Board has to allocate. As a result of the Board of Supervisor’s action and the passage of HB 2313, County staff considers all of transportation projects in the Tysons Amendment to Comprehensive Plan as funded. Specifically, the Route 7 project is included in the first timeframe (FY 2013 and FY 2027) for the Tysons-wide Roadway Projects. It is scheduled to be complete by FY 2025. VDOT is involved in project planning now which will continue in FY 2014. (response continues on next line)</p>
052b	<p>The congestion relief cited does not provide any sources and backup data and thus could have been picked out of the air. Alternatives should be analyzed like the 2020 study did. Total cost is \$1.2 billion, with 74% going to Metro projects. It is surprising you did not show the total cost of projects on the Excel spread sheet. As I noted in my testimony on June 20, when the camel puts its nose in the tent, you have the whole camel in the tent. You just showed the camel’s head with 2014 expenditure totals, rather than the total costs for the projects. Excel makes it easy to make totals. Therefore I did it on Annex IV. You also did not provide increased ridership data to show how much congestion would be alleviated. Since only about \$300 million is going to road projects (one-third of which is for Route 28), this is a paltry sum compared to the \$4-13 billion proposed in the 2020 study. Based on these figures it seems the projects you are proposing would have minimal impact on congestion. Why should the bulk of the expenditures for Northern Virginia go to transit projects versus road improvements? This appears to be a matter of ideology, rather than economics. Virginia has published guidelines for the economic appropriateness of transit projects and you don’t mention them. Projects left out are not discussed, like widening Route 7. Annex II shows the massive congestion that still would result with a \$4 billion investment. You are not reviewing most of the roads shown in Annex II. For example, Route 7 has massive congestion from Reston Avenue to Tysons during commuting hours. It is not mentioned in your comments. Annex V shows VDOT is doing \$5 million of studies now about Route 7. Then no, repeat no, expenditures are budgeted for the rest of this decade. Why haven’t you mentioned Route 7 or any of the other congested areas and what is required to reduce congestion? Cost numbers are not justified or explained. None of the project costs show sources and methods of calculations. Government cost projections are generally underestimates for projects. The Silver Line costs were estimated at \$1.9 billion in 2001 and now are more like \$7 billion when garages and access roads are taken into account. Fairfax DOT estimated the cost of Route 7 at \$160 million until I worked with VDOT and the result was \$300 million as a projected cost as a 2012 estimate.</p>	N/A	General	Thomas Cranmer	Continuation of previous comment.	<p>(continued response from above) NVTA’s current funding effort is only addressing FY 2014. NVTA will be developing a longer-term capital program beginning later this year. The VDOT Six Year Plan has yet to include all the County funding for Tysons-related projects or any of the new funding approved for NVTA. The Six Year Plan is amended every year. By the time the FY 2015-2020 Six Year Program is considered by the CTB in June 2014, there will be more definitive information about the Route 7 project. Depending on how far VDOT proceeds with the design, the project may be ready for right-of-way money in the next year or two.</p>

052c	Economics of transit are not discussed. How much of the operating costs of transit are being covered? MWATA (Metro) has reported to its board that only 67% of operating costs (e.g. electricity, train drivers and sweepers’ salaries) are covered by fares. None of the Capital Needs are covered by fares and have to be made up by taxpayers, most of whom do not ride the Metro. Before the Metro was built, 16.7% of people in the Metropolitan Washington area took buses. After the Metro was built, 16.8% of people in the area took rail and buses. This is obviously a tiny change for a massive expenditure. People generally prefer driving cars. Why shouldn’t WMATA and VRE pay for their own expenditures? You haven’t discussed the basis for a decision to subsidize WMATA and VRE. By putting expenditures in a lot of different pots, people can’t see real total project and organizational costs. There should be more project transparency. WMATA has yet to provide ridership projections on the Silver Line. Metro ridership has been declining and flat in the last three years, due in part due to lack of parking, accidents, fires, inoperative escalators and other mismanagement. The economics of the Innovation garage are not discussed. The cost per car is roughly \$40,000 per car parking space for the \$89 million project. The Metropolitan Washington Airports Authority offered to build parking at \$34,000 per car. The construction manager for Loudoun County told me they are building a garage at a high school for \$18,000-20,000 per car. How much is going to be charged as a parking fee? What is the total annual revenue and expense projected to be? What is the payback period and rate of return for the garage? What are the payback periods and rates of return for any of the projects? In conclusion it appears that you are rushing to conclusions about a project list without adequate analysis and public knowledge of what you are planning. The risks of overruns and probable lack of reduction of congestion relief are high and not analyzed. Thank you for your consideration of my comments. Please provide a response to these points.	N/A	General	Thomas Cranmer	Continuation of previous comment.	Comments noted. See "Project Specific Comments" for additional responses.
053	Re Your Excel “Proposed Project List for Consideration for FY2014 Funding” That includes Total Project Cost as well as FY2014 Funding Required, dated 5/24/2013. The major problem in both of the subject documents is they do not conform to Virginia law HB 599, approved April 18, 2012, Code of VA 33.1-13.03:1. An evaluation is required to “provide an objective quantitative rating for each project according to the degree to which the project is expected to reduce congestion and to the extent feasible, the degree to which the project is expected to improve regional mobility in the event of a homeland security emergency. Such evaluation shall rely on analytical techniques and transportation modeling...” This is supposed to start January 1, 2013 under the law. Examples of such an evaluation and analytical techniques are the Draft Environmental Impact Statement Tier Interstate 66, From US Route 15 in Prince William County to I495 in Fairfax County dated 12 February 2013. Table 2-7 Shows Projected Number of Hours of Congestion on I-66 from 2011 to 2040 in each direction. The Statement shows Metrorail with periods highly congested (100-120 people per car). The Statement shows crash rates, such as 100 crashes per 100 million vehicle miles traveled. A key measure that should be provided, as illustrated in the Statement is the cost per incremental person accommodated. See Evaluation Table 3-4 of the Statement, with an evaluation of Capacity Improvement Scenarios. Alternatives should be considered, especially in the case transit with heavy rail, vs light rail, vs bus types, vs doing nothing. The World Bank and others have been doing rate of return analyses for 40 years to facilitate ranking of projects. VDOT and NVTA should do such rate of return analyses for each project. Without numerical evaluations, the projects just appear to be the normal Political Pork wish lists. Without numerical analyses, it is impossible to comment rationally. One project that strangely is omitted from all of the lists is expansion of Route 7 in Fairfax from Reston Avenue to Lewinsville Road (Jarrett Valley Drive) and beyond. Although work is being done on evaluating intersections and a traffic study is supposed to be completed in October 2013, only \$5.0 million dollars is allocated for FY2014 and nothing more through FY2019. \$25.0 million is “Required After FY2019.” However the \$25 million is only for preliminary engineering. The latest estimates I have obtained from VDOT are that the right of way would cost \$50 million and the construction would be \$220 million for a full project cost of \$300 million. Why didn’t any of the projections show Route 7 and the timing, if ever, for the widening?	N/A	General	Thomas Cranmer	Wants more analysis, wants widening of Rt 7.	Comments noted. See "Project Specific Comments" for additional responses.
054	I would like to strongly endorse the other NVTA (Northern Virginia Transportation Alliances’) priority list. * Route 28 improvements (Fairfax, Loudoun and Prince William Counties). * Route 659/Belmont Ridge Road (Loudoun). * US Route 1 (Prince William). * Metro Orange Line Power Upgrade to accommodate 8-car trains. * Purchase of more VRE passenger cars instead of proposed platform improvements. These projects give us broad benefit on a regional level and will demonstrate to the citizens and taxpayers of Virginia that the Authority has worked to put the long sought after new funding to the best possible use.	New	Multiple projects	Richard Entsminger	Wants a different set of projects. Includes some of the proposed road projects and a new project.	While adding more coaches to the VRE fleet will provide additional seating capacity, VRE is a system of components: trains, stations, parking, track, storage yards, etc. Train operations at each individual station affect the operation of the entire system. Expanding platform capacity by constructing second platforms or extending existing platforms not only provides room for more passengers and longer trains to use the station but also increases the efficiency of train operations over the entire system by minimizing station dwell times and providing flexibility to board passengers from either side of the railroad right-of-way. This, in turn, increases the capacity and efficiency of the entire line, thus enabling more trains to operate on it.

055	Are there any plans to do away with the traffic lights at the intersection of I-66 and Rt 28 in Centreville? It seems like all of Rt 28 now has overpasses with the exception of this one very congested intersection.	Rt 28	Project	Keith Holtermann	Asks if traffic lights at Rt 28 / I-66 interchange will be removed.	Concerning the I-66/Route 28 interchange, VDOT is currently soliciting proposals for the design of improvements at the interchange (and nearby intersections). In addition, VDOT's draft Six-Year Improvement Plan (SYIP) does include \$50 million in funding over the next 4 years toward this project. VDOT has concluded the planning study phase of this project, with information posted on their website: http://www.virginiadot.org/projects/northernvirginia/i-66_and_rt_28.asp
056a	After the Authority Hearing on June 20, The Alliance "urged the Authority to apply more rigorous objective analysis to the proposed project list". I am addressing what I think should be done to be truly professional work and to speed up the process to rank ALL improvements based on congestion relief. The main purpose for building most highway and transit infrastructure is to reduce congestion for the short run (like 2020) and for the long run (2040). Each highway and transit improvement in the TransAction 2040 Plan hopefully has some congestion relief and the degree to which it reduces congestion per cost is one way to rank all of them assuming we cannot afford to build them all. While there are other reasons to consider in ranking, the first test should be to rank them based on congestion relief per cost. When we did this at VDOT NOVA a few years ago with test software we developed we found that 30% of the funds could reduce about 70% of the regional congestion. If we do this same analysis today, the remaining 70% of the funds that do little for congestion relief could be diverted to other modes; like bike, walk, safety, or more buses, more train cars, etc. Here is my proposal: Run the MWCOG model to get future trip tables for forecast years by mode based on no new highways but transit being in place as in the CLRP. Next, add one of the 100+ highway improvements in the TransAction 2040 Plan to the No-Build network (Base network) and see how many vehicle-hours of delay at LOS F are reduced regionally from this one improvement. Next, do the same for another improvement to the Base Network. Repeat this process over and over for all 100+ projects to see how much regional congestion is reduced per dollar cost for each of the 100+ projects. Next, take the project that has the most congestion relief per cost and add this to the Base Network and repeat this process for the remaining 99+ projects. This would result in hundreds of thousands of computer runs. Each computer run would involve updating the network and running a traffic assignment to the network and calculating the regional vehicle-hours of delay reductions at LOS F per cost. To do this manually would be impossible because it would take years to do with current staff and/or consultants. We had developed a super model to do all these calculations which still took many, many computer hours to run because of the trillions of calculations. All we had to do was flag each of the 100+ projects with a project number and let the computer do the rest. This is like turning over the state of the art process for ranking based on congestion relief per cost to robots. This super model will require some improvements to address HOV lanes, HOT lanes and tolls in its capacity restrained traffic assignment algorithm but these improvements could be accomplished in a timely manner and would give us a vastly improved process in the state of the art of ranking projects based on congestion relief per cost.	N/A	General	Bill Mann	Wants much more extensive computer modelling to target only the most effective road projects, allowing the majority of funds to be used for transit and multimodal projects.	The proposed approach is useful as a pure analytical ranking exercise. Analyzing the Northern Virginia region's multimodal system however is complicated and requires the use of qualitative judgement to balance the mechanical process. The commentator's proposed process does not address synergistic (or competing) effects of certain project combinations, which is especially important given the corridor level analytical framework that NVTA has taken from TransAction 2040. A modified stepwise approach was used for the modeling and evaluation of projects in TransAction 2040. In addition, the Authority has provided a 5 page explanation of the "Project Selection Methodology" used by the Project Implementation Working Group to evaluate the 48 projects submitted to the Authority for FY 2014 regional funding. This document has been posted on the Authority's website.
056b	The advantage of using this model, once software improvements are done, is we could easily rerun it many times for each jurisdiction or each magisterial district, etc. to test as many changes as we want. For example, let's say a County Supervisor has project 36 as a preferred project but the model says this project produces very little congestion relief. We could study the problem and find that because Project 3 went first it stole most of the LOS F from Project 36. We could re-group Projects 3 and 36 as one project and rerun the model or we could alter project 36 in some way to improve its ranking. Modified 36 might now preempt Project 3 from ranking high. Modifying projects to increase their benefit-cost ratios is true planning and needs to be done to get the most bang for the buck for this region. The point is we can rerun the model as many times as we want by just modifying a few network updates. This would be a very powerful tool, once modified/repared making it easy to test tons of ideas to get the best possible transportation infrastructure construction strategy.	N/A	General	Bill Mann	Continuation of previous comment.	See response to comment #056A.

057a	<p>Please consider my following comments. I attended the NVTa meeting at the Fairfax County Courthouse on June 20th. As you decide which of the 33 proposed projects should be retained on the short list, you need to keep the following in mind: What was the cost/benefit analysis for each option? Should we upgrade using corridor basis selection? Is the project shovel ready or not? What is the expense of each project? Are there adequate funds available? Pay cash or float a bond? How soon will one relieve congestion vice another? With these competing questions/answers in mind, one also needs to keep in mind: Right-of-way acquisition / engineering costs are a large expense with no congestion relief. Right-of-way acquisition / engineering costs take considerable time and provide no congestion relief. Just because something is shovel ready doesn't mean it should move to the top of the list if a cheaper and/or better option/s will be available in the near future. Will land acquisition be cheaper or more expensive in the future? Will bonds be cheaper or more expensive in the future? Will any option selected simply create traffic problems somewhere else and therefore have a zero gain effect to traffic flow? Which upgrade/s will create and encourage more jobs in the region vice simply more homes and traffic congestion? Which upgrade will save the most lives? If I were in your shoes I would look at these issues, and any other issues you can think of, and give each project being considered a weight of between -5 and +5 to each and ever one of the above questions. After weighing each project, those with the highest value become the highest priorities. Comments on the reason for the value selected could be shared between members of the Authority and agreed upon before the totals are determined. I looked at the above list I created and then weighed it against either a light or heavy rail option. A paradigm shift away from just more and wider roads feeding into existing overcrowded roads which in turn require more and more upgrades and more and more tax dollars is just a vicious cycle. Rail, combined with cluster housing around businesses and entertainment seems to be the obvious answer. We have a unique opportunity to create a more efficient transportation infrastructure in relatively undeveloped areas of Loudoun and Prince William counties or just more of the same inefficient network. Railroads would fund transportation routes vice the taxpayers which would free up significant transportation funds to improve our existing inadequate road system while at the same time taking care of natural transportation growth. VDOT is estimating the proposed Bi-County Parkway will carry 60,000 vehicles/day by 2040. Much of this traffic will be freight traffic traveling North/South to avoid the existing traffic congestion on the Dulles Toll Road, 495 Beltway, and I-95 corridor. There are already 24 traffic lights on Rt-234(Dumfries Road) from the Prince William Parkway to I-95/Rt.1 intersection. With this much additional traffic on Dumfries Road the number of traffic lights needed would nearly double accommodate individual homes/businesses directly on the road, the existing housing developments and soon to be a 4th school (with 25 m.p.h. speed limit) to safely access this Parkway.</p>	N/A	General	Gary O'Brien	Opposes road widenings. Wants more transit. Especially along Bi-County.	Both the Authority and the JACC recognize that in order to begin to solve the traffic gridlock in Northern Virginia that strategic investments need to be made across all modes of transportation. The Authority has consistently sought to balance its investments and is not biased toward one particular mode of transportation relative to another. Rather, the Authority is focused on congestion relief and improvements to our transportation infrastructure, and is deeply committed to funding projects of all modes that accomplish those most efficiently and effectively. The primary goal is to develop and sustain a multimodal transportation system that supports our economy and quality of life. This requires that investments be fiscally sustainable, that we promote areas of concentrated growth, manage both demand and capacity, and employ the best technology,joining rail, roadway, bus, air, water, pedestrian, and bicycle facilities into an interconnected network. The Bi-County project was not submitted for consideration by the Authority for FY 14 funding.
057b	<p>Truck traffic mixed with commuter and other vehicles naturally slow traffic as trucks can neither brake nor accelerate as quickly as cars. Add to that, traffic lights every quarter to half mile and you have a recipe for total gridlock like Rt.1 is currently experiencing! If the Bi-County Parkway is to be a freight solution, it won't work on the Dumfries Road portion of this proposed North/South transportation link. An alternative rail option would have the following benefits: Avoid adding Loudoun county commuters to already congested Rt.66. Need considerably less land acquisition/expense. Eminent domain guidelines for rail links avoid lengthy/expensive legal battles. Connect Dulles and Manassas Airports with a commuter/freight/business connection. Connect Manassas to the Silverline Metro service at Dulles Airport. Promote visitors to the Manassas Battlefield tourism via rail from Dulles Airport. Create freight/warehouse/retail businesses and associated jobs in support of the multiple rail terminals. Have significantly less impact on the Rural Crescent than a 600 foot wide limited access highway. Allow and promote local farmers to quickly get their produce to the airport or points beyond. Take freight (trucks) off existing local roads to improve traffic flow and safety. Significantly reduce transportation costs for local businesses, increasing their bottom line as well as encouraging new businesses into the region. Take many trucks off I-81, I-95 and the 495 Beltway improving traffic flow/safety while providing a safer route for hazardous cargo. Would not restrict Mid-county home owners from having easy road access to and from their properties. A simple rail crossing with an occasional train is far less restrictive and intrusive than a 6-lane limited access highway! Would take commuters off the highways relieving growing traffic congestion; wasted expensive fuel; and reduce air pollution/greenhouse gases. Fewer vehicle miles traveled means less gasoline wasted; less property damage/injuries; and lives lost to highway deaths. More quality time available for families vice long commutes sitting in traffic jams. Encourage business exchange between Prince William and Loudoun counties. Provide new Loudoun county commuters with another commuter option South and East to Washington D.C. via the VRE. Add significant revenue stream to Norfolk-Southern and also the CSX rail companies. Would create new jobs at, and around, Dulles Airport as freight traffic increased. Could become part of the existing Norfolk-Southern freight rail connection from Manassas to the Virginia Inland Port at Front Royal, Virginia, which falls under the Virginia Port Authority. Could connect to the existing passenger/freight lines running parallel to I-95. One path for this option, West of Quantico Marine Base, has already been studied by VDOT years ago as one of the “Outer Beltway” road option. It would not require the same identical path; however, since some study has already been completed on this option it would reducing costs/time to develop. A shorter alternative could follow Bristow Road, past the Manassas Airport, and Joplin Road to Triangle to connect to the Norfolk-Southern line/station at Quantico.</p>	N/A	General	Gary O'Brien	Continuation of previous comment.	See above and below.

057c	With all the above benefits, and more, WHY do we continue to only think MORE and wider inefficient roads!?! In Maryland, MARC line ridership is already up 4.3% compared with April 2012. "More than 25,500 passengers ride the line between Perryville and Union Station in Washington, D.C." Like the baseball move "Field of Dreams" says "Build it and they will come." Additionally, to quote Chris Miller, president of the Piedmont Environmental Council: "There are only so many pounds of freight that you can move on an airplane in an economical way. I think it is less than one-tenth of one percent of freight in Virginia comes by air. It is going to be an important economic activity but it is not the major way to move freight in the United States." Thank you for your considerable time and efforts in finding and promoting economical and safe transportation solutions.	N/A	General	Gary O'Brien	Continuation of previous comment.	VRE is currently preparing a System Plan that will include looking at commuter rail travel markets in new corridors. While a detailed analysis is outside the scope of the plan, a preliminary review of potential demand for the suggested rail alignment(s) relative to projected regional travel patterns can be considered. While the Perryville to MARC line ridership cited is large, it also reflects service on the MARC Penn Line, the systems busiest line, which serves the Baltimore and Washington, DC central business districts as well as other regional destinations such as BWI and College Park. It is uncertain that a Dulles to Triangle rail alignment would include the number of employment and housing destinations necessary to support as robust commuter rail service as the Penn Line, even under future conditions.
058	One reason for the congestion in Northern Virginia is our dependence on a few major roads. Without a connected local road network, travelers, including bicyclists, are forced onto these major roads. Making those roads wider will not solve our congestion problems. Many of the same bottlenecks that currently cause congestion will continue. We need more alternatives to these big roads. Where good alternatives exist, such as in the Ballston Corridor, the quality of life is higher, people can more easily travel by transit, bicycle, and by walking. Fairfax County has decided to concentrate future development around transit, and their transportation funds should be going to support that vision. If the Route 28 widening project is funded, it must include a parallel bicycle facility that is included in the Fairfax County Trail Plan that is part of the Comprehensive Plan. We think more funds should be devoted to regionally significant bicycle projects. There have been comments made in earlier public hearings about the wisdom of investing in bicycling infrastructure as a solution to regional congestion. There are only two good regional bicycle facilities in Fairfax, the Washington & Old Dominion Trail, administered by the Northern Virginia Regional Park Authority, and the Mt Vernon Trail administered by the National Park Service. The W&OD Trail passes through Loudoun, Fairfax, and Arlington Counties, the Towns of Herndon and Vienna, and the City of Falls Church. Hundreds of commuters use the trail on a daily basis. Without that trail many of those people would be forced to drive, adding to our current congestion. On weekends both trails are extremely popular, allowing area residents an alternative to driving their cars. Several years ago it was estimated over 2 million annual trips are taken on the W&OD trail. That number has likely doubled since then. Both trails are overcrowded. We need to be planning a network of these regional trails, facilities that relieve congestion and are much more cost-effective than big road projects. The Custis Trail is another major commuter trail that extends parallel to I-66 inside the Beltway. That trail should be extended along I-66 outside the beltway. There should be major regional trails along our primary road corridors such as Route 7, Route 50, and Route 1. Commuting to work comprises only a portion of our daily trips. NVTA should be building a transportation infrastructure that allows NoVa residents the ability to take more short trips by walking and biking. If more children were able to walk and bike to school it would alleviate some of our daily congestion. Thank you for this opportunity to comment on the NVTA project list.	N/A	General	Bruce Wright, FABB	Opposes road widenings. Wants more alternatives to driving, especially long-distance regional trails.	Both the Authority and the JACC recognize that in order to begin to solve the traffic gridlock in Northern Virginia that strategic investments need to be made across all modes of transportation. The Authority has consistently sought to balance its investments and is not biased toward one particular mode of transportation relative to another. Rather, the Authority is focused on congestion relief and improvements to our transportation infrastructure, and is deeply committed to funding projects of all modes that accomplish those most efficiently and effectively. The primary goal is to develop and sustain a multimodal transportation system that supports our economy and quality of life. This requires that investments be fiscally sustainable, that we promote areas of concentrated growth, manage both demand and capacity, and employ the best technology, joining rail, roadway, bus, air, water, pedestrian, and bicycle facilities into an interconnected network.
059	I am pleased to offer the following comments regarding your FY14 proposed projects: The list of projects being considered, grouped by categories that reflect the recommendations of the Northern Virginia Transportation Alliance and my own, is attached. Additional Comments: S. W. Rodgers, Co. Inc.(SWR) is Heavy-Highway, Site Development Contractor dedicated to transportation improvements that relieve congestion & provide the most efficient use of infrastructure funds, to accomplish that goal. We have over 350 employees that try/need to get to their various jobs in northern Va. every day & on time. Long-term regional and statewide transportation funding is and has been a long-standing priority of the company. We supported HB 2313 and many of our region's legislators put their reputations and political careers on the line in an effort to pass this legislation. It is important to the business community, our legislators and, most importantly the public that is paying these taxes and fees, that these revenues be invested well. In this regard, we, at SWR urge you to support those suggested priority projects for FY 2014 regional funds, attached herein. In addition we ask you to endorse/include, Virginia's (VDOT's) designated and CTB approved COSS "Bi-County Parkway" providing a north-south connection from I-95 to Dulles Airport, in your FY14 plan. You are not required to spend all the allocated funds in the FY14 plan & it would be prudent to reserve a portion of the funds for future projects & unexpected needs. (For attached project list see document "059attachment.doc".)	Many	Multiple projects	Roy Beckner	Provides a list of NVTA's proposed projects and his opinions on the regional significance of each.	Comments noted. See "Project Specific Comments" for additional responses.

060	<p>The thirty-two projects included in the June 3rd version of the NVTa proposed project list provide a good initial balance of projects for consideration. The Columbia Pike Multimodal Project contains all the elements of forward thinking combined with more immediate benefits. It helps to implement not only an improved roadway, but also smart growth planning (Columbia Pike neighborhood plans) and preparation for future mass transit improvements (streetcar). It will improve the busiest bus transit corridor in the region. The Leesburg separate-grade interchange will improve one of the most pedestrian unfriendly intersections in northern Virginia. It will make it safer for both automobile and pedestrian traffic for both local and through traffic. Transit oriented improvements in Falls Church will add safety considerations and accessibility within a jurisdiction that needs both. Pedestrian access to/from the West Falls Church metro stop will be greatly improved. Investments in VRE will improve transit in the entire NVTa region by further improving that transit option. WMATA’s request for ten new buses will have multiple benefits and will provide additional capacity to fit into the wide regional transit improvements that are planned. The Route 1 buses are needed as the BRT option is implemented. Route 16 buses for Columbia Pike, already the most heavily travelled bus corridor in NoVa, will need revision when the streetcar comes on-line, but until then will help WMATYA address population increases that current redevelopment is bringing. There are many other projects that also should be lauded and NVTa should act to move the projects forward. It is imperative that NVTa continue to consider the long term impacts of shorter term projects. There are certainly road projects that need to be done. The primary focus must be on moving the most people with the most effective investment for the long term needs of the region. The Silver Line is critical to meeting those needs. The Bi-County Parkway is not. NVTa members must be pressed to engage in total planning for their communities. This means smart growth, complete streets, and development planning that works with 21st century transit. How will Potomac Yards, for example, be developed to link the area to commercial corridors where the residents may work? The way the City of Alexandria plans this development should be an important factor in future investments in roads and transit in that area. How will Fairfax development the road and transit infrastructure to move residents and workers within Tysons? Will bottlenecks be avoided by actions taken before re-development is completed? Those jurisdictions are dealing with those questions, as are most in the region, but it is in rewarding effective planning where NVTa can have the greatest influence and make sure that the region benefits for each and every ‘smart’ decision that members make and enact with NVTa assistance. I attended the June 20 open house and hearing held in Fairfax City</p>	Many	Multiple projects	Rick Keller, Sierra Club	Supports project list, especially transit and multimodal projects.	Comments noted. See "Project Specific Comments" for additional responses.
061	<p>Collect thousand of signatures every year, showing people want rail. There are a lot of short-term projects, but he notices that TransAction 2040 has a lot of long term projects, such as extending Blue and Orange lines, Light Rail on 28. All Rail that would require a huge investment. Hopes that NVTa can start allocating some funds not just on items now, but for things in the future. These are billion dollar projects and are key to 2040 actually happening. We can due a service by extending for those that commute. Even if we work on those other incremental pieces. Start doing utility work and design for the big proejects in the immediate sights.</p>	N/A	Multiple Projects	Joe Oddo, Indep. Greens	Supports more rail.	Comment noted.
062	<p>Appreciate the opportunity to make the presentation. Here to advocate for building rail. When we build more roads we get more traffic, and we need less traffic. Costs for rail per mile are less than roadway per mile. Also important for emergency evacuation.</p>	N/A	Multiple Projects	Gail Parker	Supports more rail.	Comment noted.
063	<p>The TransAction 2040 process is flawed, but the good news is that the majoirty of what is proposed here, he supports. Talked with Loudoun County about their bus request. How about regional service from Loudoun to Springfiled and Ft. Belvoir. Heard tonight about Fairfax project for bus service on Parkway and they can work together. Maybe use the HOT Lanes. Need to open up cross-border connections for buses. Regarding Rt 28, biggest concern is the intesection of Dulles Toll Road and 28 (SB28 to EB DTR). Great that you're widening 28, but what about that intersection.</p>	LC/Fairfax Connector; Rt. 28 Widening	General	Rob Whitfield	More cross-border connections for buses. Also, good about widening Rt. 28, but what about the DTR intersection.	If the commenter could be more specific about the concerns with the DTR/Route 28 interchange, the County, VDOT, and MWAA could consider future improvements.
064	<p>Pleased NVTa did not fund Arlington Streetcar. Do not want NVTa to fund in the future. Requested of the Arlington County Board that they comission an independent cost benefit analysis. Want BRT. Discussed merits of streetcar. Streetcar cost \$260 million more for 5 miles than BRT. FTA didn't approve the streetcar application because of its merits. The streetcar doesn't meet the requirement of congestion reduction relative to cost. Would like to see Arlington, Fairfax, and Alexandria collaborate on a regional BRT solution.</p>	Arlington Streetcar	Project	Steve Pontoon, Arlingtonians for Sensible Transit	Doesn't support Arlington streetcar. Wants region to consider BRT solutions.	Project not submitted for consideration for FY 14 NVTa funding.
065	<p>Thanks County Board Member Zimmerman for hard work and efforts. Has not issues with the four Arlington projects proposed for consideration for FY 14 funding. Streetcar is a real step forward. Would like streetcar along Wilson and Clarendon Blvd. Additional projects to consider for the future are 1) Courthouse Metro Station Second Elevator; and Blue /Silver Line Mitigation (create short shuttle trips into DC).</p>	Many	Multiple Projects	June O'Connell	Supports Arlingtons four projects. Suggests future projects.	Comments noted. See "Project Specific Comments" for additional responses.
066	<p>Thanks County Board Member Zimmerman for his support for bike and pedestrian projects. Belives that bike and pedestrain projects have regional value. Asks that the in the future Arlington and NVTa consider using the 30% and 70% funding on bike and pedestrian projects.</p>	New	General	James Schroll, Coalition for Smarter Growth	Supports bike/ped projects. Have real regional value. Consider using regional funding to support bike and ped projects in the future.	Comment noted.

067	Supports the Columbia Pike Streetcar and bikeshare. Would like more trains, less traffic. Quotes number of people killed in car crashes every year in the region. If you grow rail, you grow value of businesses and homes. References VA state study that shows that for every \$1 invested, \$20 return. Investing in rail cuts our dependency on foreign oil. Supports rail in the following areas: 1) Potomoc Yard Metro Stop; 2) Dedicated passenger (VRE) rail so that they can increase capacity; 3) Cameron Yard Metro stop; Rail to Manassas, Woodbridge, and Fredericksburg; 4) additional passenger rail tracks over the Potomac; 5) Crystal City Rail; 6) Rail along I-395 and I-495; 6) Finish rail to Dulles.	New	General	Kerry Cambell, Independent Green Party NoVa	Supports Columbia Pike streetcar and bikeshare. Wants more transit, especially rail in a number of places throughout region.	Comments noted. See "Project Specific Comments" for additional responses.
068	Thanks County Board Member Zimmerman and staff for hard work and efforts. Virginia Chapter of the Sierra Club as well as the Mt. Vernon Group submitted comments for the record. Addresses Bob Chase of the Northern Virginia Transportation Alliance comments made at the June 20, 2013 NVTA public hearing. Mr. Chase critized three projects in Arlington as not being of regional significance. Mr. Dickson explains that there are many regional benefits to these projects 1) Boundary Channel Drive is close to I-395. Anything that improves roadway congestion there is a regional projects; 2) Columbia Pike Multimodal has alot of congestion. Improvements to open choke points will help a great deal.; 3) 10 WMATA buses for regional routes is regions. Also addressed by another commentor regarding Columbia Pike Streetcar. Columbia Pike Streetcar was never considered by the NVTA and therefore was never declined for funding. The Sierra Club has supported the streetcar since 2007. The FTA did not deny funding on the basis of the streetcars merits, rather due to sequestration the FTA didn't fund any new projects. They suggested that Arlington and Fairfax is better suited for New Starts and thefore should reapply for New Starts funding which they could get more money for.	Many	Multiple Projects	David Dickson, Sierra Club	Supports Columbia Pike streetcar and Arlington's projects.	Comments noted. See "Project Specific Comments" for additional responses.
069	Supports Boundary Channel Drive, Crystal City Multimodal, Columbia Pike Multimodal, and ART bus Blue/Silver line mitigation.	Many	Multiple projects	Arlington Transportation Commission	Supports Arlington's 4 projects	Comment noted.
070a	Overall, the Northern Virginia Transportation Authority has established a credible process for helping the public understand what is involved in making decisions for regional transportation project priorities. It is evident that County transportation and regional agency staff have worked hard to produce documentation. Thanks are also due to Chairman Nohe and other NVTA Board members who have been involved in the process. At present, several of the priority setting criteria are too subjective in nature while no quantitative benefit cost criteria are applied in decision making. Improvements are needed in criteria used for subsequent funding decisions.Several general concerns: 1. A lack of coordination exists between VDOT and NVTA planning at present. Fairfax County Transportation Department Director Tom Biesiadny has acknowledged this problem and promises that later this year they will show projects planned in Northern Virginia on a more coordinated basis. 2. So far, VDOT has not produced Northern Virginia maps showing where most significant traffic congestion exists and location of projects already funded within the approved six year capital improvements program. Given that VDOT had several months notice of the NVTA project funding program, this is disappointing. An effort should be made by NVTA and VDOT, prior to the final NVTA public hearing on July 24, 2013 to prepare a map showing both VDOT/DRPT approved projects and proposed NVTA projects. 3. NVTA should not commit capital to projects for which vastly greater unfunded costs are involved. To illustrate. Tom Biesiadny described to Fairfax County residents a proposed highway improvement project for widening Elden Street in Herndon. Normally, this would lead me to say "Big deal. So What?" He then described how the \$2+ million requested from NVTA would be added to \$18 million already arranged from other sources to complete the capital structure. That said, it is not clear to me how big a congestion relief is involved. Tom outlined another proposed highway improvement project: Braddock Road widening with HOV/bus lanes from Burke Lake Parkway to I 495. Having lived between Braddock Road and Little River Turnpike thirty years ago, I readily understand his claim of travel time savings involved. By contrast, for Metrorail related projects, no NVTA funding should occur in FY 2014 unless the local jurisdictions involved provide written evidence of prior approvals within their respective capital budgets to fund the majority of costs. In the case of design of traction power stations in Arlington County and Alexandria, no NVTA funding should occur until an overall funding plan for Metrorail capital improvements and the appropriate funding commitments and financing plan have been approved by the Washington Metropolitan Area Transit Authority as well as the District of Columbia and Maryland state authorities. EMERGENCY PREPAREDNESS EVACUATION PLANS MUST BE PREPARED FOR EACH PRIMARY TRANSPORTATION CORRIDOR IN TRANSACTION 2040.	Many	General	Rob Whitfield, Dulles Corridor Users Group	Supports NVTA's transparency on prioritization process, but thinks its too subjective without any qualitative b/c applied in decision making. Identifies general concerns, doesn't want NVTA to fund projects with significant funding needs, wants NVTA to only fund projects that are approved in local budgets, that can be completed in two years without significant ROW, that are vastly unfunded and to restrict funds to those who oppose I-66 emergency improvements. Would like to see map of VDOT and NVTA projects at NVTA hearing. Suggests creation of emergency evac plans for each transportation corridor.	Comments noted. See "Project Specific Comments" for additional responses.
070b	For each of the eight transportation corridors shown in TransAction 2040, an emergency preparedness evacuation plan should be prepared during coming months. Contribution to emergency highway evacuation capacity should be added as an additional criterion for project selection and evaluated for each proposed highway funding project. Priority should be given to planning and implementing highway improvement projects which will increase the capacity of primary evacuation routes in each corridor. Jurisdiction(s) which have impeded completion of I-66 emergency evacuation highway improvements should not receive any FY 2014 NVTA funds. As a guide to your decision process, for FY 2014 projects, accept on a priority basis only those projects which can be completed within two years - by mid 2015, which do not require extensive right of way acquisition costs and for which no further decisions and funding approval requirements by other jurisdictions or authorities are involved. The bottom line in selecting projects: "Take the best, leave the rest!"	Many	General	Rob Whitfield, Dulles Corridor Users Group	Continuation of previous comment.	See above.

071a	<p>I am a retired transportation economist. I did analysis on numerous projects over 23 years with the U.S. Government Accountability Office. For the last 8 years I have been a member of Arlington’s Transit Advisory Committee which is responsible for advising the county manager on all transit matters in or affecting the county. I have made extensive comments to county staff about Arlington’s Master Transportation Plan drafts from 2006-08.</p> <p>I question whether the \$12 million in the NVTA’s list for the Columbia Pike Multi-Modal project is an improvement in reducing congestion which is the major goal of NVTA. There is a long history of how Col Pike is seen by the county board. A little background: Mr. Zimmerman as chairman of Arlington County Board in 2006 stated that the “Streets” section of the MTP is focused on the “Urban Village.” After adoption by the Board the Streets section stated that the only efforts to improve highway capacity involved improvements in key intersections (such as left turn lanes) of several four lane roads. Expanding overall capacity of main roads was not part of the plan. The \$12 million in the plan is simply a partial payment. Arlington’s FY 2013-22 Transportation Capital Improvement Plan shows the total cost of the project is \$69 million.</p> <p>The Multi-Modal project is the result of the Board approved the Streetscape Plan for the Pike. This plan among other items included a) narrowing the curb travel lane to 11 feet, and the outer lane to 10 feet; b) eliminating bus pull-outs; c) putting a 7 foot-wide parking lane on each side of the Pike in “Town Centers” which comprise 2.5 of the 3.5 mile length of the Pike being redeveloped; and, d) reducing speeds from 30 mph currently to 20 in town centers and 25 elsewhere on the Pike. These changes were later included in the Multi-Modal plan. The VDOTas early as 2005 stated (in an appendix to the July 2005 Columbia Pike Streetcar report) that a 7 foot width was dangerous!</p> <p>On March 19, 2007 I attended a Public Forum on the Master Transportation Plan; a discussion issue was whether arterial streets should be rebuilt with narrower lanes to “manage” traffic speeds. After the meeting I asked the Arlington Traffic Bureau Chief whether VISSIM was going to be used to model narrower lanes and parking lanes. Modeling was not done and there were no plans to do it, I was told. He also stated he didn’t know how highway capacity would be affected by lane narrowing. In an Oct.23 2007 meeting I was told by the Chief of Arlington’s Transportation Division that only traffic counts were needed to determine effects of narrowing lanes.</p>	Columbia Pike Multimodal	Project	Joseph Warren	Does not support Columbia Pike Multimodal project. Does not believe that it provides sufficient congestion relief.	Comments noted. See "Project Specific Comments" for additional responses.
071b	<p>In TAC meetings from 2008-12 I was frequently told by county staff that VISSIM would be used by the Col Pike Multi-Modal project staff. At a Multi-Modal project design meeting on 3/26/12 a bus representative from METRO objected to on-street parking with 7 foot wide lanes. I asked the county staff representative and consultant (from Kimley-Horn) about the impacts of the 7 foot parking lane and travel lane narrowing. They said no VISSIM analysis had been done; the consultant was sure that the 10 foot outer travel lane was safe, even for vehicles of 8 ½ wide passing each other. They said VISSIM analysis was the responsibility of the streetcar team.</p> <p>In view of these facts it is clear why Arlington wanted a transfer of the Pike from the State to county control. I discussed the proposed transfer of the Pike to Arlington with a local state rep on April 1, 2012. I was told that after a transfer to the county VDOT would have no role in modeling traffic effects or determining safety of a 7 foot parking lane width.</p> <p>In the absence of specific information about Multi-Modal project’s traffic impacts I believe it is most unwise and ill-advised to approve this project for FY 14 funding. At the June 20 NVTA meeting, Mr. Zimmerman expounded at length about the need for projects that will reduce congestion. This appears hypocritical in view of the absence of any formal modeling of specific roadway changes to Col Pike. This project should not receive funding until such analysis is done.</p>	Columbia Pike Multimodal	Project	Joseph Warren	Continuation of previous comment.	

072a	<p>Following up on my verbal testimony from your hearing on June 20, the Coalition for Smarter Growth submits the following written comments. As you recall, we strongly disagree with the approach being pressed by Delegate LeMunyon and Bob Chase of the Northern Virginia Transportation Alliance, and Delegate Minchew. Their concept is that you can eliminate congestion through highway capacity expansion, or "get the red out" as they like to say. Unfortunately in a great metropolitan area with a strong economy you cannot do that. The proponents of capacity expansion are ignoring the power of induced traffic in a metropolitan area, a phenomenon well-known in the transportation planning community (we will transmit some of the studies to you). A newly widened highway in a metropolitan area can fill up with traffic again in as little as five years. In the short-term people change the time of their commute returning to the peak hour, they change the route of their commute, and they change the mode, leaving carpools and transit to use the temporarily expanded capacity. Longer term, highway and arterial expansion fuels the continuing spreading out of Northern Virginia, inducing new areas of auto-dependent development and new traffic. This region has done a terrific job in charting a different course, as captured in the Region Forward report and a number of the other studies that have been in the Council of Governments including the What Would it Take Scenario and the land use/transit component of the Aspirations Scenario. It is clear from those reports that a network of transit oriented centers and communities, addressing the east-west jobs/housing imbalance, and transit offers the most effective long-term approach to our transportation challenge -- providing strong alternatives to driving and creating patterns of land use that provide the greatest reduction in single occupant vehicle trips and vehicle miles traveled.</p> <p>Our localities are also trying to chart a different course. Chairman Bulova has made a transit-oriented development future the priority for continued growth in Fairfax County, and Arlington, Alexandria, and the District of Columbia have been national leaders. Arlington has added millions of square feet of development without adding traffic. The low car ownership and very high non-auto mode shares in Arlington and D.C. are astounding. Furthermore, Loudoun County developers have all been pushing mixed-use developments, unfortunately too many lack the matching transit needed to support them. North Woodbridge, Manassas and Manassas Park are all seeking compact mixed-use development as their future. The reason this new approach is so important for our transportation priorities, is that these transit-oriented communities are a regional traffic solution. That's because every person who lives in one of these communities or works in one of these communities is taking fewer car trips and driving many fewer miles per day. They may not even own a car, or they may own just one car and drive it on the weekends.</p>	Many	General	Stewart Schwartz, Coalition for Smarter Growth	<p>Supports regional process. Supports multiple projects throughout region, especially transit projects. Underscores importance of transit oriented development, providing strong alternatives to driving. and developing in general sustainable walkable communities. Notes that widening roads is a waste of resources. Need to address bottlenecks, but cannot do it forever.</p>	Comments noted. See "Project Specific Comments" for additional responses.
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Project Specific Comments: June 6, 2013 - June 27, 2013						
Num	Corridor	Jursdiction / Agency	Project Name	Comment	Response	Pro/Con/Neutral
039	1	Fairfax	Herndon garage	I especially support the Fairfax plan.	Comment noted.	Pro
072	1	Fairfax	Herndon garage	Herndon/Monroe Metrorail station garage should not be at the 100% most proximate location to the station and should be wrapped with active uses and/or groundfloor uses and well integrated into mixed-use development	Comment noted.	Undetermined
072	1	Fairfax	Innovation garage	The Innovation Center Metrorail station garage should not be at the 100% most proximate location to the station and should be wrapped with active uses and/or groundfloor uses and well integrated into mixed-use development	Comment noted.	Con
039	1	Fairfax	Innovation garage	I especially support the Fairfax plan.	Comment noted.	Pro
052	1	Fairfax	Innovation garage	The economics of the Innovation garage are not discussed. Why is it so expensive?	Comment noted.	Question
059	1	Fairfax	Innovation Metro station	Local obligation.	Comment noted.	Con
039	1	Fairfax	Innovation Metro station	I especially support the Fairfax plan.	Comment noted.	Pro
044	1	Fairfax	New Project	Stop creating barriers before right turns. Prime example is the exit off of Clairborn Rd going east on Rt 7. You have merge left into traffic then move right to get into the right turn lane. The piece of concrete is pointless. Mark the exit with right hand turn so you know you can stay for a right or merge left to wstay straight.	Congestion on the DTR ramp to northbound Route 28 is likely attributable to weaving movements between the DTR and Innovation Interchanges. If the commenter could be more specific about the concerns at this ramp, the County and VDOT can discuss whether improvements can be made. (next 4 comments are outside Fairfax County) HOV Lanes are an important option for encouraging carpooling. HOV lanes work best when physically separated from general traffic. Driver education on their proper use and police enforcement are critical in areas where the lanes are only separated by striping.	Con
049	1	Falls Church	Bus shelters	Disregard projects like bus shelters and pedestrian walkways.	See response to comment #4 Pedestrian access.	Con
059	1	Falls Church	Bus shelters	Local responsibility.	See response to comment #4 Pedestrian access.	Con
072	1	Falls Church	Bus shelters	We support all three projects.	See response to comment #4 Pedestrian access.	Pro
060	1	Falls Church	Overall	Transit oriented improvements in Falls Church will add safety considerations and accessibility within a jurisdiction that needs both. Pedestrian access to/from the West Falls Church metro stop will be greatly improved.	See response to comment #4 Pedestrian access.	Pro
070	1	Herndon	East Eldon Street Improvement Project	Tom Biesiadny described to Fairfax County residents a proposed highway improvement project for widening Elden Street in Herndon. Normally, this would lead me to say "Big deal. So What?" He then described how the \$2+ million requested from NVTA would be added to \$18 million already arranged from other sources to complete the capital structure. That said, it is not clear to me how big a congestion relief is involved.	See response to comment #072 East Eldon Street Improvement Project.	Con
012	1	Herndon	East Eldon Street Improvement Project	One you had on your list is Route 606. I would absolutely endorse that as a priority. In supporting transportation improvements, we note that you have an aggressive program as a county to expand your commercial real estate tax base because that can help keep homeowners' real estate taxes down.	Comment noted.	Pro
072	1	Herndon	East Eldon Street Improvement Project	Herndon investments should be complete streets with safe bicycle and pedestrian facilities.	The purpose of this multi-modal project is to reduce congestion through access management controls, facilitate vehicular circulation to / from Fairfax County Parkway and increase the efficiency of Route 606 / Herndon Parkway intersection. The design will incorporate ‘Complete Street’ practices and intersection enhancements that will improve the safety and accessibility for the traveling public, transit users, pedestrians and bicyclists to business and residential areas along the Elden Street commercial corridor. The project is listed in both the regional TransAction 2040 Plan and Constrained Long Range Plan.	Undetermined
049	1	Herndon	Herndon Metro access	Disregard projects like bus shelters and pedestrian walkways.	The project will offer bus transit, pedestrian and bicycle enhancements, accessibility and connectivity to transit-oriented development along Herndon Parkway, while also improving regional multi-modal connectivity to/from the north side area of the future Herndon Metrorail Station and the Dulles Metrorail’s Silver Line. The project includes bus pull-off lanes as well as needed bus shelters and wide pedestrian walkways to create improved access for transit users, bicyclists and pedestrians in the vicinity of the northside area of the Herndon Metrorail Station that will encourage increased ridership capacity onto the Dulles Metrorail Silver Line resulting in reduced vehicle reliance.	Undetermined
059	1	Herndon	Herndon Metro access	Undeterminable regional significance.	See response to comment #49 Herndon Metro access.	Undetermined
059	1	Herndon	Herndon Pkwy Van Buren	Undeterminable regional significance.	Herndon Parkway and Van Buren is a minor arterial intersection providing regional access for commuters to/from Monroe Street (Route 666), Sunrise Valley Drive and Herndon-Monroe Park & Ride Garage in Fairfax County. The project is for street capacity improvements to address heavy traffic congestion and lengthy peak hour delays. Proposed improvements are to include road widening to accommodate major intersection traffic capacity improvements, including dedicated turning lane(s) and bike/pedestrian improvements. The intersection currently operates at failing level-of-service during both the commuting AM and PM peak hours. Implementation of this intersection capacity project will reduce signal timing delays, improve level-of-service and provide significant congestion relief for local and regional commuters.	Undetermined
059	1	Leesburg	Edwards Ferry Interchange	High regional signifcance.	Comment acknowledged.	Pro
060	1	Leesburg	Edwards Ferry Interchange	The Leesburg separate-grade interchange will improve one of the most pedestrian unfriendly intersections in northern Virginia. It will make it safer for both automobile and pedestrian traffic for both local and through traffic.	Comment acknowledged.	Pro
072	1	Leesburg	Edwards Ferry Interchange	Edwards Ferry Road/Route 15 Leesburg Bypass -- we understand this will be bike/ped compatible but remain concerned about the continued focus on interchanges in areas surrounding Leesburg. The failure to build a better connected road grid has resulted in the large arterial and interchange approach at the cost of what could have been a community character more compatible with the historic town rather than anonymous sprawl.	Comment acknowledged.	Undetermined

072	1	Loudoun	Leesburg park and ride	We support the Leesburg Park and Ride and new transit buses.	Comment acknowledged.	Pro
059	1	Loudoun	Leesburg park and ride	Moderate regional significance.	Comment acknowledged.	Undetermined
063	1	Loudoun	Loudoun Buses	believes that the Loudoun buses request and Fairfax buses on Fairfax County Parkway request could work together and we need to open up cross-border connections for busses.	Comment acknowledged.	Pro
059	1	Loudoun	New Project	Local responsibility.	Comment acknowledged.	Undetermined
044	1	Loudoun	New Project	We need a left hand turn lane and traffic light at Loudoun County Parkway and Shellhorn Rd going north.	Comment acknowledged.	Undetermined
044	1	Loudoun	New Project	Decrease tolls on Greenway.	Comment acknowledged.	Undetermined
044	1	Loudoun	New Project	Eliminate HOV lanes.	Comment acknowledged.	Undetermined
051	1	Loudoun	New Project	Supports completion of improvements to Dulles Loop, in particular the current improvements planned for Route 606.	Comment acknowledged.	Undetermined
003	1	Loudoun	New Project	I find it incomprehensible that there is no VRE station in the Centreville/Clifton area on the Manassas line. Given the population density in that area, there should be a station available.	Comment acknowledged.	Undetermined
011	1	Loudoun	New Project	Putting that aside, there is one project that has been delayed for some reason. It would have helped with the Sycolin flyover and that's Miller Drive southeast on the airport property. That was originally intended to be completed around the time of the closing. As far as I know ground has not been broken on that. So if that could be expedited it would be beneficial for the Sycolin flyover alternate routes.	Comment acknowledged.	Undetermined
011	1	Loudoun	New Project	The improvement to Route 15 north out of Leesburg up to the state line. I frequently take this route to go visit relatives in south Jersey. This is an area of Route 15 that's a major bottleneck. I believe there are restrictions on improving it any further than it is. I compare this to other sections of this 625-mile route from New York down to South Carolina. I frequented the Pennsylvania and New York portions of this. It's a modern two-lane in each direction divided highway. My thoughts are we can do bettr with relieving congestion heading north and south along that route on Route 15.	Comment acknowledged.	Undetermined
011	1	Loudoun	New Project	The other projects that you have listed, one that I think, in my opinion was more important than the Sycolin flyover, is the Route 7 interchange. Having traveled on Route 7 frequently to get to work, that's a major bottleneck. I see it's on a schedule if there is a way to expedite or move that up in priority, that would be beneficial.	Comment acknowledged.	Undetermined
072	1	NVTC	Route 7 AA	NVTC: We support the Route 7 transit study.	Comment noted.	Pro
004	1	NVTC	Route 7 AA	*NVTC Transit alternatives for the Rt. 7 corridor.	Comment noted.	Pro
059	1	NVTC	Route 7 AA	Questionable immediate need.	Comment noted.	Undetermined
013	2	Loudoun	Belmont Ridge Rd Gloucester to Hay	One thing to note, the initial project was two sections of Belmont Ridge Road and whittled down to just one. If that one is done in conjunction with the Belmont Ridge Road interchange which includes, my understanding, the widening of Belmont Ridge to Gloucester Parkway, that would have two four lane sections that would bottleneck into two lanes going downhill. That would make the two lane curve around Loudoun County Parkway and Redskins Park like a walk in the park. Just on the record for other people that may not be as familiar with Belmont Ridge Road to one day hopefully encourage them if the two projects will be done to have the third missing link completed to avoid safety hazards going forward.	Comment acknowledged.	Pro
054	2	Loudoun	Belmont Ridge Rd Gloucester to Hay	Supports.	Comment acknowledged.	Pro
059	2	Loudoun	Belmont Ridge Rd Gloucester to Hay	High regional significance.	Comment acknowledged.	Pro
054	2	Loudoun	Belmont Ridge Road	Supports.	Comment acknowledged.	Pro
072	2	Loudoun	Belmont Ridge Road	Loudoun: Belmont Ridge Road -- we support but not as part of a North-South Corridor and that justification should be deleted	Comment acknowledged.	Pro
072	2	Loudoun	Belmont Ridge Road	Belmont Ridge Road -- We only support as part of the transportation network for surrounding communities, not as part of the proposed North-South Corridor	Comment acknowledged.	Pro
033	2	Prince William	New Project	I'm really new to this world of transportation planning but regarding the bi-county parkway, I have been surprised to hear so many ways of trying to sell this road. What concerns me is that I don't understand the relationships that all these different organizations have to one another and which ones have more power than others. So my concern is that your organization could be used as a conduit to try to sneak money in to try to accomplish the building of this road. There has to be some reason that people are pushing so hard for this as it doesn't make any practical sense from where I live and my experience it's not going to help traffic, it's going to make it worse. It's going to hurt people and take their land. We're going to lose access and our way of life is going to be affected. Where can we see the relationship between these organizations laid out, like an org chart? I think that needs to be out there for us to see. So who do I ask to get this information? And who holds the power regarding the bi-county parkway?	Project not submitted for consideration for FY 2014 NVTA regional funding.	Undetermined
020	2	Prince William	New Project	Opposes Bi-County Parkway	Project not submitted for consideration for FY 2014 NVTA regional funding.	Undetermined
022	2	Prince William	New Project	Opposes Bi-County Parkway	Project not submitted for consideration for FY 2014 NVTA regional funding.	Undetermined
023	2	Prince William	New Project	Opposes Bi-County Parkway	Project not submitted for consideration for FY 2014 NVTA regional funding.	Undetermined
057	2	Regional	New Project	Wants a transit solution instead of a road solution for Bi-County corridor.	Project not submitted for consideration for FY 2014 NVTA regional funding.	Undetermined
060	2	Regional	New Project	The Bi-County Parkway is not critical.	Project not submitted for consideration for FY 2014 NVTA regional funding.	Undetermined
059	2	Regional	New Project	we ask you to endorse/include, Virginia's (VDOT's) designated and CTB approved COSS "Bi-County Parkway"	Project not submitted for consideration for FY 2014 NVTA regional funding.	Undetermined
035	3	Fairfax	New Project	The intersection of 28 and 66 is by far the greatest impediment to travel on 28.	Comment noted.	Undetermined
036	3	Fairfax	New Project	It is recommended resources allocated for these projects be transferred to the Rt 28 / I-66 interchange.	NVTA is currently considering projects for FY 2014 funding, which means the projects should be able to proceed to construction or begin a new project development phase in FY 2014. The 3 new projects have not yet been studied, and are therefore not positioned to move ahead with implementation.	Undetermined
036	3	Fairfax	New Project	Old Centreville Rd / Compton Rd intersection	See response to comment #036 New Project.	Undetermined

046	3	Fairfax	New Project	Wants I-66 and VA-28 interchange improved.	Concerning the I-66/Route 28 interchange, VDOT is currently soliciting proposals for the design of improvements at the interchange (and nearby intersections). In addition, VDOT’s draft Six-Year Improvement Plan (SYIP) does include \$50 million in funding over the next 4 years toward this project. VDOT has concluded the planning study phase of this project, with information posted on their website: http://www.virginiadot.org/projects/northernvirginia/i-66_and_rt_28.asp	Undetermined
051	3	Fairfax	New Project	Wants interchange improvements to I-66/VA-28 interchange.	Comment noted.	Undetermined
055	3	Fairfax	New Project	Are there any plans to do away with the traffic lights at the intersection of I-66 and Rt 28 in Centreville?	Concerning the I-66/Route 28 interchange, VDOT is currently soliciting proposals for the design of improvements at the interchange (and nearby intersections). In addition, VDOT’s draft Six-Year Improvement Plan (SYIP) does include \$50 million in funding over the next 4 years toward this project. VDOT has concluded the planning study phase of this project, with information posted on their website: http://www.virginiadot.org/projects/northernvirginia/i-66_and_rt_28.asp	Undetermined
017	3	Fairfax	New Project	Would like to see money allocated to finishing Route 28/I-66 interchange because it’s regional. I’d hate to spend money on projects that don’t provide much congestion relief.	The project will improve capacity ona segment of Route 28 which currently carries over 60,000 vehicles per day, for an LOS F. The intersection/signal improvements will improve through travel as well as travel to other corridors such as Route 29 and New Braddock Road. The I-66/Route 28 interchange project is now funded at \$50 million in the VDOT 6-Year Program. This funding level will allow VDOT to move forward with design of the improvements.	Undetermined
028	3	Fairfax	New Project	For Route 28 you mentioned it’s shovel-ready. The insistence on shovel-ready projects is like a monument to the sales tax. The better use of money is to change the traffic light timing and to align the traffic lights together. That’s a relatively low cost solution to congestion. You can connect the traffic lights wirelessly or using a hard-line cable so the computers can control the traffic lights. You can use sensors. Talking about the east/west route, maybe we need another interchange on 66 to take the relief off of the smaller feeder roads. I know that would be a long term project. Another way is to build another secondary feeder road.	Comment noted.	Undetermined
072	3	Fairfax	Route 28 Widening	Fairfax County: Any new lanes on Route 28 should be HOV and dedicated transit or just dedicated express bus.	Comment noted.	Undetermined
017	3	Fairfax	Rt 28 Dulles to 50	On the projects for PWC and Fairfax County, both have Route 28 projects, both to widen roads. The areas they are widening don’t compare in traffic and congestion to other areas.	Comment noted.	Con
017	3	Fairfax	Rt 28 Dulles to 50	On the projects for PWC and Fairfax County, both have Route 28 projects, both to widen roads. The areas they are widening don’t compare in traffic and congestion to other areas.	Comment noted.	Con
035	3	Fairfax	Rt 28 Dulles to 50	I drive 28 every day and that area is just about the only stretch that is not congested.	These projects provide additional capacity on the highly congested north-south Route 28 corridor that provides travel within and between three counties in northern Virginia, as well as connections to the Dulles International Airport and major east-west highways such as I-66, Route 50, and the Dulles Toll Road/Greenway. The current Average Daily Traffic count of 111,000 vehicles puts this segment of Route 28 at a Level of Service (LOS) E, which is very congested for freeway conditions. Route 28 is a significant technology corridor in both Loudoun and Fairfax County as well as an important access to Washington Dulles International Airport. With its links to Prince William County, Manassas and Manassas Park, and future link to the Metrorail Silver Line, it is well qualified for regional investments by NVTA. In addition, VDOT and its contractor have developed plans to implement this widening which are “ready to go.” This project readiness criteria plays an important role in NVTA’s FY 2014 project selection. Concerning the I-66/Route 28 interchange, VDOT is currently soliciting proposals for the design of improvements at the interchange (and nearby intersections). In addition, VDOT’s draft Six-Year Improvement Plan (SYIP) does include \$50 million in funding over the next 4 years toward this project. VDOT has concluded the planning study phase of this project, with information posted on their website: http://www.virginiadot.org/projects/northernvirginia/i-66_and_rt_28.asp	Con
036	3	Fairfax	Rt 28 Dulles to 50	While these projects are easier to implement, they do not provide any congestion relieve to the current traffic conditions compared to other areas of the Rt 28.	See response to comment #035 Route 28 Dulles to 50.	Con
059	3	Fairfax	Rt 28 Dulles to 50	High regional significance.	Comment noted.	Pro
059	3	Fairfax	Rt 28 Dulles to 50	High regional significance.	Comment noted.	Pro
063	3	Fairfax	Rt 28 Dulles to 50	great that the project lists include widening Rt. 28, but what about the intersection with the Dulles Toll Road	If the commenter could be more specific about the concerns with the DTR/Route 28 interchange, the County, VDOT, and MWAA could consider future improvements.	Pro
063	3	Fairfax	Rt 28 Dulles to 50	great that the project lists include widening Rt. 28, but what about the intersection with the Dulles Toll Road	Comment noted.	Pro
039	3	Fairfax	Rt 28 Dulles to 50	I especially support the Fairfax plan.	Comment noted.	Pro
054	3	Fairfax	Rt 28 Dulles to 50	Supports all route 28 projects regionally.	Comment noted.	Pro
058	3	Fairfax	Rt 28 Dulles to 50	If the Route 28 widening project is funded, it must include a parallel bicycle facility that is included in the Fairfax County Trail Plan	Comment noted.	Pro
035	3	Fairfax	Rt 28 McLearn	I drive 28 every day and that area is just about the only stretch that is not congested.	Comment noted.	Con
036	3	Fairfax	Rt 28 McLearn	While these projects are easier to implement, they do not provide any congestion relieve to the current traffic conditions compared to other areas of the Rt 28.	Comment noted.	Con
039	3	Fairfax	Rt 28 McLearn	I especially support the Fairfax plan.	Comment noted.	Pro
054	3	Fairfax	Rt 28 McLearn	Supports all route 28 projects regionally.	Comment noted.	Pro
058	3	Fairfax	Rt 28 McLearn	If the Route 28 widening project is funded, it must include a parallel bicycle facility that is included in the Fairfax County Trail Plan	Comment noted.	Undetermined

039	3	Fairfax	Rt 28 PWC to Rt 29	I especially support the Fairfax plan.	Comment noted.	Pro
054	3	Fairfax	Rt 28 PWC to Rt 29	Supports all route 28 projects regionally.	Comment noted.	Pro
058	3	Fairfax	Rt 28 PWC to Rt 29	If the Route 28 widening project is funded, it must include a parallel bicycle facility that is included in the Fairfax County Trail Plan	Comment noted.	Undetermined
015	3	Loudoun	New Project	One of the critical projects is the proposed Bi-county Parkway. I know there is considerable work that must be done before the project is ready for state or regional funds. The Bi-county Parkway is clearly of significant regional importance. By connecting major employment population centers in Loudoun County and Prince William we'll help reduce traffic congestion in the region, home to Virginia's fastest growing and most economically vibrant communities. I would ask you to urge the transportation authority to make the Bi-county Parkway a priority at the appropriate time and support a road to help improve the quality of life in our communities by getiing traffic off the neighborhood roads, making it easier to get to work, school, church, and the grocery store and ultimately home to their families.	Comment acknowledged.	Undetermined
059	3	Loudoun	Route 28 Hot Spot	High regional significance.	Comment acknowledged.	Pro
054	3	Loudoun	Route 28 Hot Spot	Supports all route 28 projects regionally.	Comment acknowledged.	Pro
072	3	Loudoun	Route 28 Hot Spot	Route 28 hot spot improvements -- any lane expansion must be limited to use for HOV and bus or just express bus	Comment acknowledged.	Undetermined
044	3	Loudoun	Route 28 Hot Spot	Are you improving the exit off the Dulles Toll Rd onto Rt 28 going north? If you put expansions without improving that exit it will be a nightmare.	Comment acknowledged.	Undetermined
045	3	Manassas	New Project	Reverse timing of lights on Rt 28 in the am. They are timed for the evening in the am.	Project not submitted for consideration for FY 2014 NVTA regional funding.	Undetermined
005	3	Manassas City	New Project	I noticed that you are discussing Rt. 28 in PWC only to Old Centreville Rod. What about from Old Centreville Rd. to Liberia Ave in Manassas City and then on to the PW Parkway and 234 ByPass? This is the main congested area that causes the PWC backups on Rt. 28 South in the evenings. The lights are not timed correctly. It seems that the concern is always for correcting and helping congestion in Fairfax County but not on the route cause which is the traffic through Manassas Park City and Manassas City areas. The proposal for the South side of Rt. 28 (after you get through Manassas City) is just another means to not assist the Manassas Park City or Manassas City residents.	Project not submitted for consideration for FY 2014 NVTA regional funding.	Undetermined
027	3	Manassas City	New Project	I guess I just don't understand why 28 widening from the city of Manassas to Fairfax County line was not on anybody's radar screen. This has been a problem for 10 years and to say it's not on the comp plan, I have to say someone was asleep at the wheel. So I have to say I'm very disappointed in the County and whoever was in charge of that area for not doing that. You just stepped in, I know you just took over that region but it's bizarre. You've seen the people have had problems there for 10 years now, so it's an excuse and it's a bad excuse. It should have been on the comp plan and why it's not is a real question that I as a voter and as a citizen want to know. But I want to jump to something else.	Comment noted.	Undetermined
026	3	Manassas Park	Route 28	Improving 28 on the border of Fauquier County and Prince William County, it's a great improvement, however if you look at it as a whole and the traffic flow during rush hour you still get a bottle neck and that's right there at Manassas Park at Old Centreville Road and US 29. And so, although you improve the southern part you still get this bottle neck, so therefore those residents that are going to be happy that in Prince William and Fauquier that this road has been expanded near their area, they're still going to get this traffic as they try to go up north and south on the way home. However your criteria is skewed because you need to consider traffic flow and also the approach as a whole to the improvements you're making because you're improving one portion but you've got a bottle neck here. You're really not improving the road. And in addition you've got Orchard Bridge development that's coming along that's going to provide more cars and more traffic.	Comment noted.	Pro
054	3	Manassas Park	Rt 28	Supports all route 28 projects regionally.	Comment noted.	Pro
045	3	Manassas Park	Rt 28	What does it mean this section does not meet requirements?	NVTA conducted a project screening of all projects submitted for consideration for FY 14 regional funding. The project submitted by Manassas Park did not meet the Tier I screening requirement that requires that all projects considered for regional funding be included in the Authority's regional long-range plan TransAction 2040. This project, as proposed, is not in the TransAction 2040 plan.	Undetermined
036	3	Prince William	New Project	It is recommended this project be changed to Rt 28 widening from Old Centreville Rd in Prince William County to the Fairfax County line.	Comment noted.	Undetermined
050	3	Prince William	New Project	RT 28 from Manassas to Fairfax County Line. If existing RT 28 is widened it would help to get traffic moving towards I-66 and Dulles	Comment noted.	Undetermined
026	3	Prince William	New Project	Regarding Route 28: Well just because we don't specifically get it right or it's not doable, how about five lanes, how about synchronizing the signals in that area, how about not providing for opposite turns on the road during rush hour. Those are innovative ideas that can improve the traffic flow in that area. It doesn't seem like you're considering traffic flow in these plans. How am I going to tell my citizens that they're getting more for the money, their tax dollars, when we didn't even make the list so I can't give them a timeline for the future? A courtesy would have been to put our project on the list with a date but it isn't even on the list.	Project not submitted for consideration for FY 2014 NVTA regional funding.	Undetermined
017	3	Prince William	Route 28 Widening	On the projects for PWC and Fairfax County, both have Route 28 projects, both to widen roads. The areas they are widening don't compare in traffic and congestion to other areas.	Comment noted.	Con
025	3	Prince William	Route 28 Widening	What is disturbing to me, among other things, is that fixing 28 near Nokesville is of primary benefit to Fauquier who is not stuck with the taxes, we should focus on fixing congestion in the areas that are being taxed.	Comment noted.	Con
072	3	Prince William	Route 28 Widening	Route 28 -- we oppose additional Route 28 expansion west of the 234 Bypass because it will fuel more long-distance commuting and sprawling development.	Comment noted.	Con
031	3	Prince William	Route 28 Widening	I have no problem with Phase 1. Phase 2 from the relocated Vint Hill Road to Fitzwater Drive will not relieve any congestion. There are about 40 houses there and only 3 new ones have been built in the last 30 years. How will that relieve congestion? If it's not going to go all the way to 29 there is no reason to displace all those people and take their land. Who is the proffer from? Is Avondale the only place they're coming from for Fitzwater? Do you think this is really worth it for 40 houses? Is that really a benefit to the people of Prince William? If it only stops at Fitzwater? I ask that the money be used for something else like VRE to Bealeton.	Comment noted.	Neutral
026	3	Prince William	Route 28 Widening	I'm going to follow up from some of what Del. Marshall said. All of us here are familiar with 28, with the rush hour and traffic flow there. Improving 28 on the border of Fauquier County and Prince William County, it's a great improvement, however if you look at it as a whole and the traffic flow during rush hour you	Comment noted.	Pro
059	3	Prince William	Route 28 Widening	High regional significance.	Comment noted.	Pro
038	3	Prince William	Route 28 Widening	Urge you to include widening of Rt 28 from Fitzwater to Linton Hall.	Comment noted.	Pro
054	3	Prince William	Route 28 Widening	Supports all route 28 projects regionally.	Comment noted.	Pro

050	3	Prince William	Route 28 Widening	Spending to speed up the RT 28 from Linton Hall to Fitzwater to complete the construction sooner ... is commendable. However, should evaluate necessity of widening roadway to four lanes where intersection and spot improvements might give the same outcome.	Comment noted.	Undetermined
031	3	VRE	New Project	If Route 28 in Prince William County cannot be extended to Route 29, commenter asks that the money be used for something else like VRE to Bealeton.	Comment noted.	Undetermined
063	5	Fairfax	Fairfax Buses	believes that the Loudoun buses request and Fairfax buses on Fairfax County Parkway request could work together and we need to open up cross-border connections for busses.	Comment noted.	Pro
039	5	Fairfax	Fairfax Buses	I especially support the Fairfax plan.	Comment noted.	Pro
072	5	Fairfax	Fairfax Buses	General: We support the remaining transit improvements listed for the jurisdictions, VRE, WMATA.	Comment noted.	Pro
037	5	Fairfax	New Project	I wanted to express my thoughts on adding a project. Rolling Rd is in desperate need of improvements. Most importantly, the road needs to be widened from the Fairfax County parkway to Old Keene Mill Road here in Springfield.	Although the Rolling Road Widening project is in Transaction 2040, Fairfax County felt that it might be unlikely to rise to the level of “project readiness” for prioritizing FY2014 regional NVTa projects. In addition, until the final VDOT Six-Year Improvement Program was released in mid-June, the County had hoped that some additional state or federal funding might be applied to the project. Fairfax County is considering this project for the NVTa 30 percent funding that is returned to the local governments for FY2014. This would allow a design update which would better position the project for FY2015-2019 NVTa regional funding by improving project readiness. Fairfax County is using a cost-benefit analysis tool to evaluate a number of unfunded projects, including this section of Rolling Road. The results of the analysis and other factors will be used in preparing project recommendations for the Board of Supervisors’ consideration this fall. These recommendations will include a number of different funding sources, such as the NVTa local funding and the County’s commercial and industrial property tax for transportation.	Undetermined
065	6	Arlington	New project	Would like Courthouse Second Elevator	Project not submitted for consideration for FY 2014 NVTa regional funding.	Undetermined
065	6	Arlington	New project	Rosslyn-Ballston Streetcar	Project not submitted for consideration for FY 2014 NVTa regional funding.	Undetermined
036	6	Fairfax	New Project	Stone Rd / New Braddock Rd / I-66 connection	See response to comment #036 New Project.	Undetermined
072	6	Fairfax	Route 29 Widening	Route 29 Widening (Legato to Shirley Gate) -- We oppose unless the new lane capacity goes to HOV/express bus. This is another example of the never-ending and costly widening that fuels continued spread out development. More compact development and urban style boulevards would serve better over the long term	Comment noted.	Con
039	6	Fairfax	Route 29 Widening	I especially support the Fairfax plan.	Comment noted.	Pro
072	6	Fairfax City	Chain Bridge Road widening	Fairfax City: We are concerned about the VDOT proposed design for this project and recommend an area-wide solution that includes a better street network on both sides of Route 123 and parallel to Route 50, evaluation of routes around the core of the City of Fairfax, and evaluation of transit improvements between GMU and other areas south of the City of Fairfax and Vienna Metro. Major expansion of the 123/Route 50 interchange is only a short term approach and will create an area hostile to pedestrians and bicyclists, and hinder the walkable, mixed-use redevelopment of the area.	The improvements to the 123/50 intersection are first steps in a longer term vision for the area. The City is exploring options for an improved street network on both sides of 123 that could occur with redevelopment of the area. There have been modifications to the design to improve safety for pedestrians at the intersection.	Con
039	6	Fairfax City	Chain Bridge Road widening	I especially support the City of Fairfax plan.	Comment noted.	Pro
059	6	Fairfax City	Chain Bridge Road widening	Undeterminable regional significance.	Comment noted.	Undetermined
003	6	Fairfax City	New Project	I also have no idea why there is no bus service along Route 123 between Fairfax Station and Fairfax City.	Comment noted.	Undetermined
049	6	Falls Church	EFC bridge	Disregard projects like bus shelters and pedestrian walkways.	See response to comment #4 Pedestrian access.	Con
059	6	Falls Church	EFC bridge	Local responsibility.	See response to comment #4 Pedestrian access.	Con
072	6	Falls Church	EFC bridge	We support all three projects.	See response to comment #4 Pedestrian access.	Pro
049	6	Falls Church	Pedestrian access	Disregard projects like bus shelters and pedestrian walkways.	See response to comment #4 Pedestrian access.	Con
059	6	Falls Church	Pedestrian Access	Local responsibility.	See response to comment #4 Pedestrian access.	Con
072	6	Falls Church	Pedestrian access	We support all three projects.	See response to comment #4 Pedestrian access.	Pro

004	6	Falls Church	Pedestrian access	Falls Church-pedestrian access to public transportation Thank you for the chance to comment. Thanks, Heidi Bonnaffon	The Comprehensive Plan for the City of Falls Church establishes several transportation goals, including ensuring the safety of the traveling public and encouraging the use of non-automotive modes of transportation within the City and to the region. These goals are well-supported by the traveling public. Every day, 2,300 City residents, 37 percent of employed residents, travel to work by a mode other than driving alone. Regionally, the importance and effectiveness of providing transportation choices has been recognized as a key strategy for alleviating traffic congestion. The Region Forward plan was endorsed by the Metropolitan Washington Council of Governments and the 21 local member governments, including the City of Falls Church. The plan notes the following, “In many parts of the region, however, a lack of transportation choices for residents has led to a growing number of drivers contributing to congestion, longer commutes, and air pollution.” Providing transportation choices, such as transit, walking, and bicycling, in addition to automobiles is part of a regional strategy for reducing travel congestion. The selection of projects aligns with the statutory requirements set forth for NVTa regarding project selection and prioritization. The projects being considered for FY14 are included in the NVTa’s long term transportation plan, TransAction 2040. As part of that planning process, each project was evaluated for its impact on congestion relief and its benefit to cost ratio. That evaluation showed that all of the proposed projects affecting the City of Falls Church will reduce roadway congestion and have strong benefit to cost ratios for the region. The statutory requirements anticipate spending money in support of multiple modes of transportation. The legislation calls for spending on projects included in the NVTa’s existing transportation plan or on mass transit projects that increase capacity. Given that the NVTa’s existing transportation plan is multimodal and additional transit projects are explicitly permitted, it is clear that the funding was meant to be spent in a multi-modal fashion. The proposed regional projects affecting the City of Falls Church are effective, efficient, and equitable. They are effective in that they will address congestion in regional travel corridors. See the map below describing the connections between the projects and regional travel corridors. They are efficient because of their strong benefit to cost ratios. They are equitable because they align with established local and regional goals.	Pro
049	6	Falls Church	Pedestrian signals	Disregard projects like bus shelters and pedestrian walkways.	See response to comment #4 Pedestrian access.	Con
059	6	Falls Church	Pedestrian signals	Local responsibility.	See response to comment #4 Pedestrian access.	Con
072	6	Falls Church	Pedestrian signals	We support the pedestrian signal improvements.	See response to comment #4 Pedestrian access.	Pro
043	6	Falls Church	W&OD lighting	My initial review of the strawman project list suggesting funding for projects such as a Potomac yard Metrorail Station EIS and for a W&OD Trail Lighting Connecting To Future Intermodal Plaza will have a hard time demonstrating compliance with the funding test under this statutory mandate.	The W&OD project was removed from the projects for consideration by NVTa for FY 14 funding.	Con
046	6	Prince William	New Project	Wants I-66 widened to Haymarket.	Project not submitted for consideration for FY 2014 NVTa regional funding.	Undetermined
030	6	Prince William	New Project	One of the questions I have is about I-66 improvement on Rt 15. When Route 15 between 29 and 66 with the rail crossing, that portion doesn’t get improves until 2035. That’s what I saw. What about Balls Ford Road? We have the crossing there. Is that something that you would consider?	Project not submitted for consideration for FY 2014 NVTa regional funding.	Undetermined
046	6	Regional	New Project	Widen Rt 15 from I-66 to VA-7 instead of building Bi-County.	Project not submitted for consideration for FY 2014 NVTa regional funding.	Undetermined
060	6	Regional	New Project	The Silver Line is critical.	Project not submitted for consideration for FY 2014 NVTa regional funding.	Undetermined
038	6	VRE	Gainesville	Urge you to include planning for extension of VRE to Gainesville/Harmarket.	Comment noted.	Pro
042	6	VRE	Gainesville	Fully support.	Comment noted.	Pro
046	6	VRE	Gainesville	Supports.	Comment noted.	Pro
002	6	VRE	Gainesville	My wife and I strongly support the extension of VRE service to the Gainsville-Haymarket area. The explosive growth in that area reflects an increasing demand for reliable public transportation. We plan to move that direction in the next two/three years as we downsize from our Burke home. Rail service would definitely support our plan to move to Gainsville-Haymarket. Thanks!	Planning for the Gainesville-Haymarket extension is in the intial stages and full funding to construct the extension has not been identified. As such it is difficult to predict when the extension might be realized. The extension is important to VRE and we continue to seek out opportunities such as NVTa funds to advance the project.	Pro
033	6	VRE	Gainesville	Thanks for hosting this meeting and I want to express my support for the VRE proposals to increase the number of coaches and to build a Gainesville station. I’m a commuter that drives from Gainesville to Manassas City to take the train and I feel Like that would really help.	See response to comment #002 VRE Gainesville.	Pro
072	6	VRE	Gainesville	VRE: We support the three VRE requests and note that the Alexandria station improvement is an important state solution for intercity rail.	See response to comment #002 VRE Gainesville.	Pro
059	6	VRE	Gainesville	Questionable immediate need.	Comment noted.	Undetermined
042	6	WMATA	New Project	Supports extension to Gainesville.	Extension of the Orange Line to Gainesville, while included in TransAction 2040, is not a project for which FY2014 funds would be timely.	Undetermined
051	6	WMATA	New Project	Supports completion of Silver Line.	Comment noted.	Undetermined
070	6	WMATA	Traction Power	By contrast, for Metrorail related projects, no NVTa funding should occur in FY 2014 unless the local jurisdictions involved provide written evidence of prior approvals within their respective capital budgets to fund the majority of costs. In the case of design of traction power stations in Arlington County and Alexandria, no NVTa funding should occur until an overall funding plan for Metrorail capital improvements and the appropriate funding commitments and financing plan have been approved by the Washington Metropolitan Area Transit Authority as well as the District of Columbia and Maryland state authorities.	The NVTa would take a leadership step by allocating FY2014 funds for Metrorail, and facilitate getting DC & MD commitments for funding Momentum.	Con
054	6	WMATA	Traction power	Supports	Comment noted.	Pro
059	6	WMATA	Traction power	High regional significance.	Comment noted.	Pro
072	6	WMATA	Traction power	WMATA: We support the two WMATA projects.	Comment noted.	Pro

072	7	Fairfax	Franconia Van Dorn	Franconia/South Van Dorn Interchange (Project 5) -- we oppose this project in light of the scale of the projects on Franconia previously built as part of the Springfield Interchange. This new interchange would further divide communities on both sides of Van Dorn and Franconia. Instead we need a new approach of local connections, dedicated HOV/transit lanes, and urban style interchange that shrinks pedestrian crossing distances. That a major interchange is proposed here is a direct and predictable outcome of the construction of the massive Kingstowne development without effective transit connections.	Comment noted.	Con
039	7	Fairfax	Franconia Van Dorn	I especially support the Fairfax plan.	Comment noted.	Pro
049	8	Alexandria	Bus shelters	Disregard projects like bus shelters and pedestrian walkways.	See response to comment #059 bus shelters.	Con
059	8	Alexandria	Bus shelters	Local responsibility.	Bus shelters proposed in Alexandria City are regionally significant. This is indicated in the comprehensive justifications for this project.	Con
039	8	Alexandria	Bus shelters	I especially support the Alexandria plan.	Comment noted.	Pro
072	8	Alexandria	Bus shelters	2014 Projects: Alexandria: We support all four proposed projects.	Comment noted.	Pro
059	8	Alexandria	Dash expansion	Local responsibility.	DASH expansion buses is regional significant. This is indicated in the comprehensive justifications for this project.	Con
039	8	Alexandria	Dash expansion	I especially support the Alexandria plan.	Comment noted.	Pro
072	8	Alexandria	Dash expansion	2014 Projects: Alexandria: We support all four proposed projects.	Comment noted.	Pro
067	8	Alexandria	New Project	Cameron Yard Metro stop; Rail to Manassas, Woodbridge, and Fredericksburg;	Project not submitted for consideration for FY 2014 NVTa regional funding.	Undetermined
049	8	Alexandria	New Project	Disregard projects like bus shelters and pedestrian walkways.	Comment noted.	Undetermined
043	8	Alexandria	Potomac Yard EIS	My initial review of the strawman project list suggesting funding for projects such as a Potomac yard Metrorail Station EIS and for a W&OD Trail Lighting Connecting To Future Intermodal Plaza will have a hard time demonstrating compliance with the funding test under this statutory mandate.	Comment noted.	Con
039	8	Alexandria	Potomac Yard EIS	I especially support the Alexandria plan.	Comment noted.	Pro
067	8	Alexandria	Potomac Yard EIS	Supports rail in the following areas: 1) Potomoc Yard Metro Stop;	Comment noted.	Pro
072	8	Alexandria	Potomac Yard EIS	2014 Projects: Alexandria: We support all four proposed projects.	Comment noted.	Pro
039	8	Alexandria	Traffic signals	I especially support the Alexandria plan.	Comment noted.	Pro
072	8	Alexandria	Traffic signals	2014 Projects: Alexandria: We support all four proposed projects.	Comment noted.	Pro
059	8	Alexandria	Traffic signals	Moderate regional significance.	Traffic signals proposed in Alexandria City are regionally significant. This is indicated in the	Undetermined
049	8	Alexandria	VRE Tunnel	Disregard projects like bus shelters and pedestrian walkways.	See response to comment #001 VRE Tunnel.	Con
072	8	Alexandria	VRE Tunnel	We support the three VRE requests and note that the Alexandria station improvement is an important state solution for intercity rail.	Comment noted.	Pro
001	8	Alexandria	VRE Tunnel	Glad that there is a plan to put a tunnel between the VRE/Amtrack station and the King St. Metro station. It will be a very nice convenience for me. But, honestly, is it really worth the money? With funds so tight and there being so many useful projects, I just have to wonder if saving several steps is a good reason to spend the money on this project.	The investment in the VRE-WMATA King St Tunnel will make a significant investment in time savings for people throughout the region, will make the facility compliant with the Americans with Disabilities Act, and will leverage significant amounts of federal funds.The Alexandria Station is served by three tracks. VRE trains typically use one of two tracks that run between the station building and the second, island platform located east of the station building (Tracks 2 and 3). The platform adjacent to the station building that is served by a single track (Track 3). The island platform has tracks on either side –Track 1 on the east or Metrorail side of the platform and Track 2 on the Alexandria Station side of the platform – although VRE trains only use Track 2 on the Alexandria Station side of the platform. It is difficult for VRE trains to access the platform from Track 1 and it is not at the right height for VRE trains . The pedestrian tunnel project at the Alexandria Station will allow passengers to more safely and conveniently get to the island platform as well as the Metrorail station (Old Town/King Street). The project will also make improvements to the island platform so it is more accessible and usable by VRE trains on both Tracks 1 and 2. Opening up the Alexandria station to service from any of the three tracks provides a great deal of operational flexibility and capacity to the railroad. VRE and its partners are working with the host railroads to receive benefit from capacity improvements such as this and other VRE platform projects in the form of additional service considerations as well as considerations for additional stations, such as Potomac Shores Station.	Undetermined
059	8	Alexandria	VRE Tunnel	Moderate regional significance.	See response to comment #001 VRE Tunnel.	Undetermined
059	8	Alexandria	Potomac Yard EIS	Local responsibility.	The Potomac Yard EIS is a regionally significant project. This is indicated in the comprehensive justifications for this project.	Con
072	8	Arlington	Blue / Silver Line Mitigation	2014 Projects:Arlington: We support all four proposed projects.	Comment noted.	Pro

059	8	Arlington	Blue/Silver mitigation	Local responsibility.	Extending the ART 42 to the Crystal City Metro and nearby Virginia Regional Express (VRE) station will enable commuters from four rail lines to transfer to a bus route to destinations in Clarendon, Virginia Square, and Ballston at an estimated peak frequency of 16 minutes. This measure will moderately increase ART's north-south bus capacity within Arlington to coincide with the opening of the Silver Line. While the ART bus service is provided within the geographic boarders of Arlington County, the benefits of the service provided are regional in scope. The ART 45 serves commuters who walk or transfer from Metrobus 16-line service, with a catchment areas along Columbia Pike to Annandale, to jobs in Rosslyn. Those commuters formerly transferred to Metrorail's Blue Line at Pentagon City or Pentagon Metro stations. Addition of a fourth peak period ART 45 bus will increase capacity to absorb more passengers - the other three buses already have standing peak period passenger loads. Metrorail's Blue Line provided a direct connection for residents living in the corridor from Pentagon City to Springfield and by transfer to Fredericksburg and Manassas to jobs in Rosslyn, Foggy Bottom, and Farragut Square. Residents in the Orange Line corridor transferred to the Blue Line to reach jobs in Pentagon City and Crystal City. The current reduction in Blue Line Metro service from 6 minute peak frequency to 9 minutes has already resulted in reduced Metrorail ridership and diversion to single-occupancy automobile trips. The further reduction to 12-minute frequencies planned for the Blue Line will increase traffic congestion, unless a viable transit alternative is available to people. Extending ART 42 to Crystal City will provide that direct connection from the Blue Line and VRE to employment centers in Ballston.	Con
039	8	Arlington	Blue/Silver mitigation	I especially support the Arlington plan.	Comment noted.	Pro
039	8	Arlington	Boundary Channel interchange	I especially support the Arlington plan.	Comment noted.	Pro
065	8	Arlington	Boundary Channel interchange	Supports all Arlington's projects.	Comment noted.	Pro
068	8	Arlington	Boundary Channel interchange	This is a regional project which he supports.	Comment noted.	Pro
069	8	Arlington	Boundary Channel interchange	Supports all Arlington's projects.	Comment noted.	Pro
072	8	Arlington	Boundary Channel interchange	2014 Projects:Arlington: We support all four proposed projects.	Comment noted.	Pro
059	8	Arlington	Boundary Channel interchange	Undeterminable regional significance.	The primary benefit of the Boundary Channel Drive Interchange project will be the reduction of congestion of vehicular traffic on I-395 in the most congested areas of the Greater Washington region. The project also proposed to create multimodal connections for pedestrians and bicyclists from Virginia to the Humpback Bridge Trail connection and over the 14th Street Bridge. The existing Boundary Channel Drive Interchange is inadequate to meet current travel demands. The 14th Street Bridge Environmental Impact Study (EIS) called for the Boundary Channel Drive Interchange to be redesigned to eliminate ramp access points to I-395; based on the EIS rankings, the ramp eliminations for th einterchange were ranked third amongst the top priorities for the Highway Action Alternatives. This project proposes to eliminate two on/off ramps on Boundary Channel Drive by creating a roundabout at the ramps teminus. Additional information about the 14th Street Bridge EIS can be found at http://www.14thstreetbridgecorridoreis.com/deis.html .	Undetermined
059	8	Arlington	Crystal City multimodal	Local responsibility.	The Crystal City Multimodal Center will improve multimodal and transit access to the Crystal City Metrorail station which sees 13,837 weekday boardings, as well as Metrobus (cumulative) ridership of 12,294 on lines stopping in the vicinity (9A, 9S, 10AE, 16GHK, 23AC) and connection to VRE. The four new bus bays being proposed as part of this project will be utilized by local and regional commuter bus providers. Currently three regional commuter bus companies operate in the area in addition to WMATA: Fairfax Connection, Loudoun County, and PRTC Ombiride. During the AM Peak (6:00am to 9:00 am) there are 26 scheduled trips, while in the PM Peak (3:00 pm to 6:00 pm) there are 23 scheduled trips. Planned implementation of the Crystal City Potomac Yard Transitway may require relocation of co-located commuter stops due to longer dwell times. Access to these bus routes may become increasingly important with reduced Blue Line Metro service expected with the opening of the Silver Line by 2014. Additional curb space will be provided for kiss and ride and shuttle buses. Shuttle buses are operated by a number of providers including the Department of Defense, local hotels, car dealerships, and other private providers. During a recent (April 2013) observation, 40 shuttle trips were counted during a 1.5 hour peak period, with up to six different shuttles stopping concurrently by the Metro entrance on 18th Street South and South Bell Street. There is currently no designated space for their use and stopping patterns are informal and often interfere with traffic and Metrobus operations on South Bell Street.	Con
039	8	Arlington	Crystal City multimodal	I especially support the Arlington plan.	Comment noted.	Pro
065	8	Arlington	Crystal City multimodal	Supports all Arlington's projects.	Comment noted.	Pro
069	8	Arlington	Crystal City multimodal	Supports all Arlington's projects.	Comment noted.	Pro
072	8	Arlington	Crystal City multimodal	2014 Projects:Arlington: We support all four proposed projects.	Comment noted.	Pro

067	8	Arlington	New Project	Crystal City Streetcar	Project not submitted for consideration for FY 2014 NVTA regional funding.	Undetermined
067	8	Arlington	New Project	Rail along I-395 and I-495;	Project not submitted for consideration for FY 2014 NVTA regional funding.	Undetermined
072	8	Prince William	US-1 Featherstone to Mary's Way	Prince William: Route 1 -- we remain concerned about the focus on widening and the wide lanes. Route 1 should have 11 foot lanes and safe bike/ped facilities and be designed for future dedicated lane transit.	Comment noted.	Con
038	8	Prince William	US-1 Featherstone to Mary's Way	Urge you to include widening Rt 1 from Featherstone to Mary's Way.	Comment noted.	Pro
050	8	Prince William	US-1 Featherstone to Mary's Way	Design RT 1 from Featherstone Rd to Mary's Way is commendable	Comment noted.	Pro
054	8	Prince William	US-1 Featherstone to Mary's Way	Supports.	Comment noted.	Pro
059	8	Prince William	US-1 Featherstone to Mary's Way	High regional significance.	Comment noted.	Pro
059	8	PRTC	PRTC Bus	Local responsibility.	PRTC's project is an element of a regional transit improvement aimed at enhancing transit access between NVTA jurisdictions and serving multiple NVTA jurisdictions' residents. The new Gainesville Service bus will provide more direct service between western Prince William and Tyson's Corner as well as DC, serving residents in Prince William County, Manassas, and Manassas Park. In fact, this transit improvement plan is among the service improvements most often requested by the residents in our service area. A "one seat" transit service to more destinations is known to increase the use of public transit, helping to ease congestion, and thus the regional transit project prompting your comment will not only benefit those who use the service, but motorists as well. Thus we respectfully submit that the PRTC transit service improvement is a project of regional significance which is deserving of funding from the regional pot.	Con
072	8	PRTC	PRTC Bus	PRTC: We support the PRTC bus.	The Potomac and Rappahannock Transportation Commission (PRTC) appreciates your support for the new Gainesville Service bus. PRTC's project is an element of a regional transit improvement aimed at enhancing transit access between NVTA jurisdictions and serving multiple NVTA jurisdictions' residents. The new Gainesville Service bus will provide more direct service between western Prince William and Tyson's Corner as well as DC, serving residents in Prince William County, Manassas, and Manassas Park.	Pro
054	8	VRE	Crystal City	Purchase more VRE passenger cars instead of proposed platform improvements.	Comment noted.	Con
072	8	VRE	Crystal City	General: We support the remaining transit improvements listed for the jurisdictions, VRE, WMATA.	As VRE works to increase the lengths of trains to meet the growing demand, efforts need to take place to extend existing platforms as well. Crystal City is an example of this need. As part of this project it is likely that consideration will be given to eventually add a second platform to further increase the capacity of the system as noted in the previously described projects.	Pro
054	8	VRE	Lorton second platform	Purchase more VRE passenger cars instead of proposed platform improvements.	Expanding platform capacity by constructing second platforms, such as at the Lorton and Rippon stations, not only provides room for more passengers to board and longer trains to use the station but also enhances system efficiency by minimizing station dwell times and enabling a train to service a station from either of the tracks that serve these stations. As with the Alexandria project, the increased operational capacity and efficiency, in turn, enable more trains to run on the system. While improvements at an individual station may appear to be a local improvement, in fact they directly affect, and in this case expand, the capacity of the overall system.	Con
059	8	VRE	Lorton second platform	Questionable immediate need.	See response to comment #054 Lorton second platform.	Undetermined
041	8	VRE	New Project	Please work to develop wi-fi on the VRE trains.	VRE continues to explore options to provide WiFi service on its trains. Through a number of different tests and studies have been done as noted, we have discovered several areas along the tracks we use where a signal cannot be received. Until a provider is able to offer continuous service, we will not offer WIFI on our trains.	Undetermined
006	8	VRE	New Project	Gail Parker advocated moving forward with rail projects that serve densely populated areas. Ms. Parker supports rail to Fort Belvoir and other rail projects listed in the newspaper.	Comment noted.	Undetermined
067	8	VRE	New Project	Dedicated passenger (VRE) rail so that they can increase capacity;	Comment noted.	Undetermined
060	8	VRE	Overall	Investments in VRE will improve transit in the entire NVTA region by further improving that transit option.	Comment noted.	Undetermined
054	8	VRE	Rippon	Purchase more VRE passenger cars instead of proposed platform improvements.	Expanding platform capacity by constructing second platforms, such as at the Lorton and Rippon stations, not only provides room for more passengers to board and longer trains to use the station but also enhances system efficiency by minimizing station dwell times and enabling a train to service a station from either of the tracks that serve these stations. As with the Alexandria project, the increased operational capacity and efficiency, in turn, enable more trains to run on the system. While improvements at an individual station may appear to be a local improvement, in fact they directly affect, and in this case expand, the capacity of the overall system.	Con
072	8	VRE	Rippon	VRE: We support the three VRE requests and note that the Alexandria station improvement is an important state solution for intercity rail.	See response to comment #054 Rippon	Pro

054	8	VRE	VRE Rolling Stock	Purchase more VRE passenger cars instead of proposed platform improvements.	VRE is a system of components; trains, stations, parking, track, storage yards, etc. Increasing VRE’s capacity involves adding capacity to all of these components. While adding rail vehicles is the most tangible and immediate way to increase capacity, the VRE station-specific projects also add capacity, enhance safety and improve operational flexibility.	Pro
004	8	VRE	VRE Rolling Stock	I would like to see the VRE add more trains to increase the frequency of their service (especially, to add one more later train on the Manassas Line morning trip into DC).	Expanding VRE capacity through the projects proposed for NVTA funding will enable more trains to be operated over the VRE system.	Pro
005	8	VRE	VRE Rolling Stock	With the proposed extension of VRE to Gainesville and Haymarket, is there any plan to provide funds for an increase in the number of VRE trains? Currently, by the time the current trains pass through Manassas Park City, they start to become crowded. Adding stations in Gainesville and Haymarket will help alleviate traffic on Rt. 28 South of Manassas City. But it will increase the number of riders which will crowd the trains even more.	Planning and analysis for the Gainesville-Haymarket extension will include an estimation of the potential new riders as well as impacts on existing service. At this time the level of service to support a Gainesville-Haymarket extension is unknown. A service/operating plan will be developed for the extension as well as a financial plan detailing both capital and operating costs. Once a decision is made to move forward with the extension and funding through construction has been committed, recommendations for funding additional service forwarded to the VRE Operations Board as appropriate.	Pro
020	8	VRE	VRE Rolling Stock	You’ve talked about increasing VRE priority to get more rails to decrease traffic on the road which is a great suggestion.	Comment noted.	Pro
032	8	VRE	VRE Rolling Stock	We need to build new track and add more trains that run more often and to more places. Adding more roads just creates more traffic and we need less. I encourage you to move the rail projects to first priority.	Comment noted.	Pro
072	8	VRE	VRE Rolling Stock	General: We support the remaining transit improvements listed for the jurisdictions, VRE, WMATA.	Comment noted.	Pro
072	8	WMATA	Interlocking Girders	We support the remaining transit improvements listed for the jurisdictions, VRE, WMATA.	Comment noted.	Pro
071	9	Arlington	Columbia Pike Multimodal	<p>I question whether the \$12 million in the NVTA’s list for the Columbia Pike Multi-Modal project is an improvement in reducing congestion which is the major goal of NVTA. There is a long history of how Col Pike is seen by the county board. A little background: Mr. Zimmerman as chairman of Arlington County Board in 2006 stated that the “Streets” section of the MTP is focused on the “Urban Village.” After adoption by the Board the Streets section stated that the only efforts to improve highway capacity involved improvements in key intersections (such as left turn lanes) of several four lane roads. Expanding overall capacity of main roads was not part of the plan. The \$12 million in the plan is simply a partial payment. Arlington’s FY 2013-22 Transportation Capital Improvement Plan shows the total cost of the project is \$69 million.</p> <p>The Multi-Modal project is the result of the Board approved the Streetscape Plan for the Pike. This plan among other items included a) narrowing the curb travel lane to 11 feet, and the outer lane to 10 feet; b) eliminating bus pull-outs; c) putting a 7 foot-wide parking lane on each side of the Pike in “Town Centers” which comprise 2.5 of the 3.5 mile length of the Pike being redevolped; and, d) reducing speeds from 30 mph currently to 20 in town centers and 25 elsewhere on the Pike. These changes were later included in the Multi-Modal plan. The VDOTas early as 2005 stated (in an appendix to the July 2005 Columbia Pike Streetcar report) that a 7 foot width was dangerous!</p> <p>On March 19, 2007 I attended a Public Forum on the Master Transportation Plan; a discussion issue was whether arterial streets should be rebuilt with narrower lanes to “manage” traffic speeds. After the meeting I asked the Arlington Traffic Bureau Chief whether VISSIM was going to be used to model narrower lanes and parking lanes. Modeling was not done and there were no plans to do it, I was told. He also stated he didn’t know how highway capacity would be affected by lane narrowing. In an Oct.23 2007 meeting I was told by the Chief of Arlington’s Transportation Division that only traffic counts were needed to determine effects of narrowing lanes.</p> <p>In TAC meetings from 2008-12 I was frequently told by county staff that VISSIM would be used by the Col Pike Multi-Modal project staff. At a Multi-Modal project design meeting on 3/26/12 a bus representative from METRO objected to on-street parking with 7 foot wide lanes. I asked the county staff representative and consultant (from Kimley-Horn) about the impacts of the 7 foot parking lane and travel lane narrowing. They said no VISSIM analysis had been done; the consultant was sure that the 10 foot outer travel lane was safe, even for vehicles of 8 ½ wide passing each other. They said VISSIM analysis was the responsibility of the streetcar team.</p> <p>In view of these facts it is clear why Arlington wanted a transfer of the Pike from the State to county control. I discussed the proposed transfer of the Pike to Arlington with a local state rep on April 1, 2012. I was told that after a transfer to the county VDOT would have no role in modeling traffic effects or determining safety of a 7 foot parking lane width.</p> <p>In the absence of specific information about Multi-Modal project’s traffic impacts I believe it is most unwise and ill-advised to approve this project for FY 14 funding. At the June 20 NVTA meeting, Mr. Zimmerman expounded at length about the need for projects that will reduce congestion. This appears hypocritical in view of the absence of any formal modeling of specific roadway changes to Col Pike. This project should not receive funding until such analysis is done.</p>	See response to comment #59 Columbia Pike Multimodal.	Con
039	9	Arlington	Columbia Pike Multimodal	I especially support the Arlington plan.	Comment noted.	Pro
060	9	Arlington	Columbia Pike Multimodal	The Columbia Pike Multimodal Project contains all the elements of forward thinking combined with more immediate benefits. It helps to implement not only an improved roadway, but also smart growth planning (Columbia Pike neighborhood plans) and preparation for future mass transit improvements (streetcar). It will improve the busiest bus transit corridor in the region.	Comment noted.	Pro
065	9	Arlington	Columbia Pike Multimodal	Supports all Arlington’s projects.	Comment noted.	Pro
068	9	Arlington	Columbia Pike Multimodal	This is a regional project which he supports.	Comment noted.	Pro
069	9	Arlington	Columbia Pike Multimodal	Supports all Arlington’s projects.	Comment noted.	Pro
072	9	Arlington	Columbia Pike Multimodal	2014 Projects:Arlington: We support all four proposed projects.	Comment noted.	Pro

059	9	Arlington	Columbia Pike Multimodal	Undeterminable regional significance.	<p>The Columbia Pike Multimodal Improvements Project will reduce congestion and improve traffic flow through the addition of left-turn lanes in several locations where they currently don't exist. Currently vehicles turning causes traffic to back up causing significant travel time delays. Redundant commercial drive entrances will be consolidated. Currently vehicles turning into and out of these driveways interrupt and block traffic flow.</p> <p>A thorough and extensive transportation and multimodal level of service study was undertaken for this project and was completed in June, 2012. The study analyzed existing and future forecasts for traffic volumes, levels of service, average traffic delay times and queue lengths, and other transportation conditions. The multimodal study analyzed current and future conditions for all travel modes. The project design was developed based on the study and the resulting recommendations. The study and recommendations can be found on the project website at: http://www.columbiapikeva.us/multimodal-street-improvements/.</p>	Undetermined
064	9	Arlington	New Project	Opposes Columbia Pike Streetcar.	Project not submitted for consideration for FY 2014 NVTA regional funding.	Undetermined
065	9	Arlington	New project	Supports all Arlington's projects.	Comment noted.	Undetermined
065	9	Arlington	New project	ART to DC	Project not submitted for consideration for FY 2014 NVTA regional funding.	Undetermined
072	9	Fairfax	Braddock HOV	Braddock Road Expansion (Project 3) -- we oppose general purpose lane expansion and urge the new lane be dedicated to HOV/express bus service	Comment noted.	Con
039	9	Fairfax	Braddock HOV	I especially support the Fairfax plan.	Comment noted.	Pro
070	9	Fairfax	Braddock HOV	Tom outlined another proposed highway improvement project: Braddock Road widening with HOV/bus lanes from Burke Lake Parkway to I 495. Having lived between Braddock Road and Little River Turnpike thirty years ago, I readily understand his claim of travel time savings involved.	Comment noted.	Pro
039	9	Fairfax	West Ox	I especially support the Fairfax plan.	Comment noted.	Pro
003	9	General	General	I am a strong proponent of public transportation of all sorts. I think we have too many cars on the roads we have and too many big vehicles. People driving large SUVs by themselves make no sense. I think there should be more access to e-vehicles, and charging stations for those vehicles. Related to public transportation. Finally, weekend bus service could be more available and reduce private vehicular traffic throughout the NVA area.	Comment noted.	Undetermined
011	9	Loudoun	New Project	The last point I want to make is we need another Potomac River crossing. It's been talked about extending Route 28. We have Maryland to deal with, Fairfax County and Loudoun County. But having just one route north of the capital beltway to get across into Maryland is a big impediment. Having grown up in southern New Jersey for instance, they have six Delaware River crossings. Six between Wilmington, Delaware, and Philadelphia. We have one. I think we can in Virginia, Loudoun County, and Maryland, work to make a crossing a reality in the future.	Comment acknowledged.	Undetermined
072	9	Loudoun	New Project	We recommend greater focus on east-west commuter needs	Comment acknowledged.	Undetermined
060	9	Overall	Overall	The thirty-two projects included in the June 3rd version of the NVTA proposed project list provide a good initial balance of projects for consideration.	Comment acknowledged.	Undetermined
036	9	Prince William	New Project	Balls Ford Rd / Bull Run Dr connection	Project not submitted for consideration for FY 2014 NVTA regional funding.	Undetermined
050	9	Prince William	New Project	Widening of Balls Ford RD and RT 15 between RT 29 and I-66.	Project not submitted for consideration for FY 2014 NVTA regional funding.	Undetermined
072	9	Prince William	New Project	We recommend funds be targeted to supporting a grid of "complete streets" (ped/bike friendly) for North Woodbridge redevelopment	Project not submitted for consideration for FY 2014 NVTA regional funding.	Undetermined
046	9	Regional	New Project	Opposes.	Project not submitted for consideration for FY 2014 NVTA regional funding.	Undetermined
051	9	Regional	New Project	Supports	Comment noted.	Undetermined
047	9	Regional	New Project	Wants southern end to be at Godwin Drive.	Project not submitted for consideration for FY 2014 NVTA regional funding.	Undetermined
040	9	VRE	New Project	Is there any way NVTA can expedite the opening of the proposed VRE stop in the new Sun Can Development on Cherry Hill?	VRE is working with both Sun Cal and CSX, who owns the railroad right-of-way, to come to agreement on a station at the Potomac Shores development. Ultimately CSX must grant permission for a station stop at that location.	Undetermined
067	9	VRE	New Project	Rail to Manassas, Woodbridge, and Ft. Bellvior	Project not submitted for consideration for FY 2014 NVTA regional funding.	Undetermined
060	9	WMATA	New Project	WMATA's request for ten new buses will have multiple benefits and will provide additional capacity to fit into the wide regional transit improvements that are planned. The Route 1 buses are needed as the BRT option is implemented. Route 16 buses for Columbia Pike, already the most heavily travelled bus corridor in NoVa, will need revision when the streetcar comes on-line, but until then will help WMATYA address population increases that current redevelopment is bringing.	In addition to US 1 and Columbia Pike, VA 236 is a corridor for bus priority, and these buses will improve service frequency in that corridor.	Pro
067	9	WMATA	New Project	Metrorail Potomac Crossing	Though TransAction 2040 includes a new tunnel under the Potomac for the Blue Line, this project is not suitable for timely use for FY2014 funds.	Undetermined
059	9	WMATA	New Project	Undeterminable regional significance.	Buses along VA 236 serve a regional function, traversing Alexandria, Fairfax County and Fairfax City.	Undetermined
068	9	WMATA	WMATA 10 buses	This is a regional project which he supports.	Buses along VA 236 serve a regional function, traversing Alexandria, Fairfax County and Fairfax City.	Pro
072	9	WMATA	WMATA 10 buses	WMATA: We support the two WMATA projects.	See response to comment #068 WMATA 10 buses.	Pro
069	9	Arlington	New project	Supports all Arlington's projects.	Comment noted.	Undetermined



Final Report Overview of Financing Approaches Executive Summary

prepared for the

Northern Virginia Transportation Authority



The PFM Group

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July 24, 2013

Presentation Overview

- What are the advantages and disadvantages of both debt and pay-as-you-go (PAYGO) funding approaches?
- Given the recommended PAYGO & debt project lists for FY2014, what would NVTAs financial profile look like?
- Under various scenarios, what is NVTAs long term funding capacity for debt & PAYGO approaches?
- What would be the key legal & credit provisions for an NVTAs borrowing program?
- What is the impact/treatment of NVTAs debt on member localities?
- What types of debt structures should NVTAs consider?
- What are the alternatives to NVTAs issuing bonds directly in its name?

TransAction 2040 Plan (as of November 2012)

- NVRTA revises and amends TransAction 2040 every five years
- Intended to provide a guide for funding future transportation projects in Northern Virginia
- Northern Virginia Portion of Region's Constrained Long-Range Plan totals \$18.5 billion and TransAction 2040 Additional Projects totals \$23.2 billion over 30 years (2011 to 2040)

TransAction 2040 Additional Projects <i>Project Types</i>	Amount (\$ billions)
Highway	\$9.30
Transit	\$13.20
Bicycle/Pedestrian	\$0.64
Technology	\$0.06
Total	\$23.20



Overview of Revenue Streams

Revenue Source	Rate	FY 2014 Amount	70% Allocation (\$)	30% Allocation (\$)
Retail Sales Tax	0.7% of retail purchase amount	\$232,456,223	\$162,719,356	\$69,736,867
Regional Congestion Relief Fee (Additional Grantor's Tax)	\$0.15/\$100 of value	\$34,676,790	\$24,273,753	\$10,403,037
Transient Occupancy Tax	2% of room rate	\$24,348,642	\$17,044,049	\$7,304,593
Total	-	\$291,481,655	\$204,037,159	\$87,444,497

Source: HB2313_RevDistribution_NOVA_061113.

Revenue Forecast

Fiscal Year Ending	Annual Gross Sales Tax Revenue	Annual Gross Grantor's Tax Revenue	Annual Gross TOT Revenue	Total Annual Gross Tax Revenue	70% NVTA Revenues	NVTA Revenue % Change YOY
6/30/2014	\$232,456,223	\$34,676,790	\$24,348,642	\$291,481,655	\$204,037,159	
6/30/2015	239,429,910	34,676,790	24,592,128	298,698,828	209,089,180	2.48%
6/30/2016	246,612,807	34,676,790	24,838,050	306,127,647	214,289,353	2.49%
6/30/2017	254,011,192	34,676,790	25,086,430	313,774,412	219,642,089	2.50%
6/30/2018	261,631,527	34,676,790	25,337,295	321,645,612	225,151,928	2.51%
6/30/2019	269,480,473	34,676,790	25,590,667	329,747,930	230,823,551	2.52%
6/30/2020	277,564,887	34,676,790	25,846,574	338,088,251	236,661,776	2.53%
6/30/2021	285,891,834	34,676,790	26,105,040	346,673,664	242,671,565	2.54%
6/30/2022	294,468,589	34,676,790	26,366,090	355,511,469	248,858,028	2.55%
6/30/2023	303,302,647	34,676,790	26,629,751	364,609,188	255,226,432	2.56%
6/30/2024	312,401,726	34,676,790	26,896,049	373,974,565	261,782,195	2.57%
6/30/2025	321,773,778	34,676,790	27,165,009	383,615,577	268,530,904	2.58%
6/30/2026	331,426,991	34,676,790	27,436,659	393,540,440	275,478,308	2.59%
6/30/2027	341,369,801	34,676,790	27,711,026	403,757,617	282,630,332	2.60%
6/30/2028	351,610,895	34,676,790	27,988,136	414,275,821	289,993,075	2.61%
6/30/2029	362,159,222	34,676,790	28,268,017	425,104,029	297,572,821	2.61%
6/30/2030	373,023,999	34,676,790	28,550,698	436,251,487	305,376,041	2.62%
6/30/2031	384,214,719	34,676,790	28,836,205	447,727,714	313,409,400	2.63%
6/30/2032	395,741,160	34,676,790	29,124,567	459,542,517	321,679,762	2.64%
6/30/2033	407,613,395	34,676,790	29,415,812	471,705,997	330,194,198	2.65%

*Source: HB2313_RevDistribution_NOVA_061113 for FY 2014 to FY 2018. Thereafter, assumes annual growth rate of 3% for Sales Tax Revenue, 0% for Grantor's Tax Revenue & 1% for ToT Revenues.

Use of Debt & PAYGO Approaches

- Infrastructure capital improvement programs (“CIP”) often span multiple years (6+ years)
- Multi-year capital plans match identified needs with available resources
- Debt & PAYGO are commonly used together to fund projects
- Credit agencies view an affordable debt burden & flexibility derived from PAYGO as positives
- Mix of debt & PAYGO is driven by:
 - Magnitude of infrastructure needs vs. availability of resources
 - Timing objectives for project delivery
 - Project management capacity to plan, design & implement project construction
 - Financial strength of the project sponsor

Advantages & Disadvantages of Debt

Disadvantages

- Creates a fixed, non-discretionary & on-going obligation
- Incurs interest and other financing costs
- Staff time required to maintain bond ratings, execute bond transactions and administer debt post-issuance

Advantages

- Leverages value of future revenue for today's expenditures, which can accelerate project implementation
- Spreads infrastructure cost over multiple generations of users
- Spreads financing costs (debt service) over time to match expected tax receipts and the useful life of projects

Advantages & Disadvantages of PAYGO

Disadvantages

- Cost of a long term asset paid for by current users/taxpayers only
- Project delivery limited to current year resources
- Inflation may erode buying power overtime

Advantages

- Avoids interest costs and other financing costs
- Can be reduced or scaled back if revenue sources contract
- Once spent, requires less ongoing time and monitoring than debt

FY 2014 NVT A Project Lists

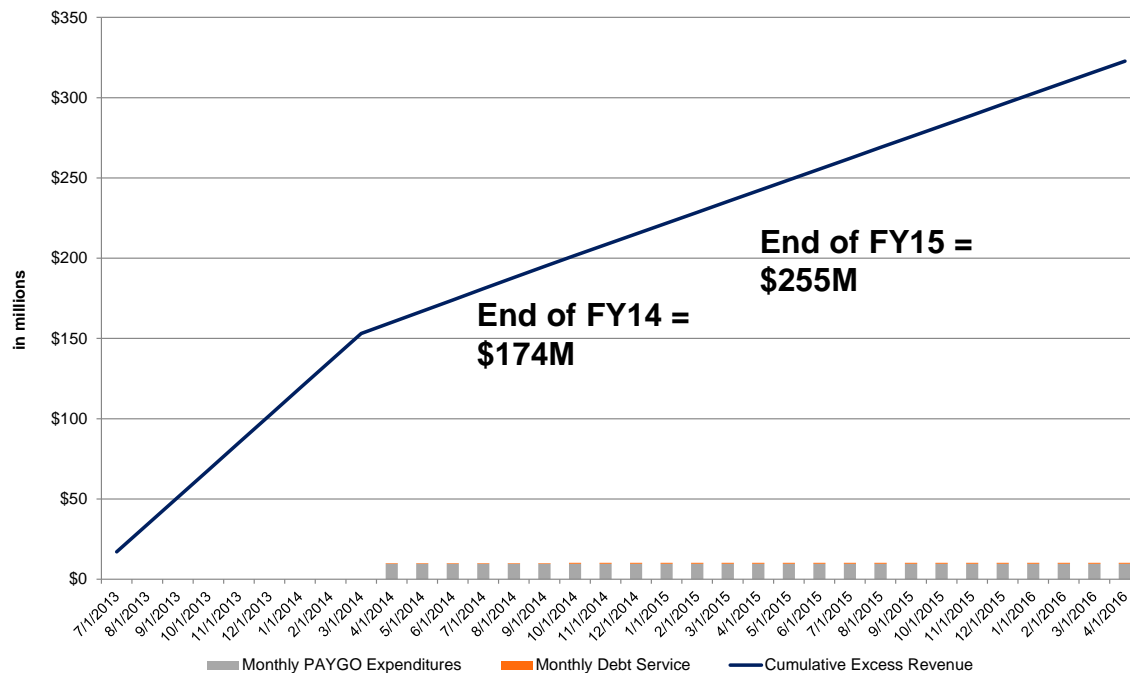
- Approximately \$360 million worth of projects previously identified for NVT A Project Implementation Committee's consideration
- At the July 7th Project Implementation Working Group meeting, three lists were presented
 - FY 2014 PAYGO projects totaling \$116.06 million
 - FY 2014 Proposed Bonded projects totaling \$90.7 million
 - \$153.3 million of projects were not recommended

Financial Analysis of FY 2014 Plan

- Level of debt issuance is modest & affordable for NVTAT
 - Prudent structure with rapid amortization
 - High quality credit ratings likely
- PAYGO expenditures can be accommodated, assuming a ramp up of revenue and spending begins in last half of FY 2014
- Considerations & observations
 - Projections of & parameters for construction draws by implementing entities are very important for both debt & PAYGO success
 - NVTAT should develop minimum thresholds for working capital
 - NVTAT should establish reserve levels as part of its financial policies

What is the impact of FY 2014 Proposed PAYGO List?

- \$116.058 million of PAYGO projects
 - If 100% of PAYGO funds are disbursed in FY 2014, approximately \$87.9 million of excess revenue would remain by end of FY 2014
 - Equates to roughly 57% of annual revenue
 - Assuming equal monthly draws of PAYGO over 12 months beginning on 4/1/2014, \$174 million of excess revenue remains by end of FY 2014



Potential Initial Issue: Structural Assumptions

Structural Assumptions for Potential Initial Bond Issue in 2014

Security:	NVTA's 70% share of HB2313 Tax Streams (Sales Tax, Grantors Tax, ToT)
Credit Enhancement:	None. No moral obligation or other support from NVTA Members or Commonwealth
Credit Rating:	AA-category
Interest Rate Mode:	Fixed
Interest Rates:	Current market conditions plus 0.50% cushion
Term:	20 years (Final maturity in 10/1/2034)
Amortization:	Level Debt Service
Debt Service Reserve Fund:	Funded with bond proceeds at maximum annual debt service

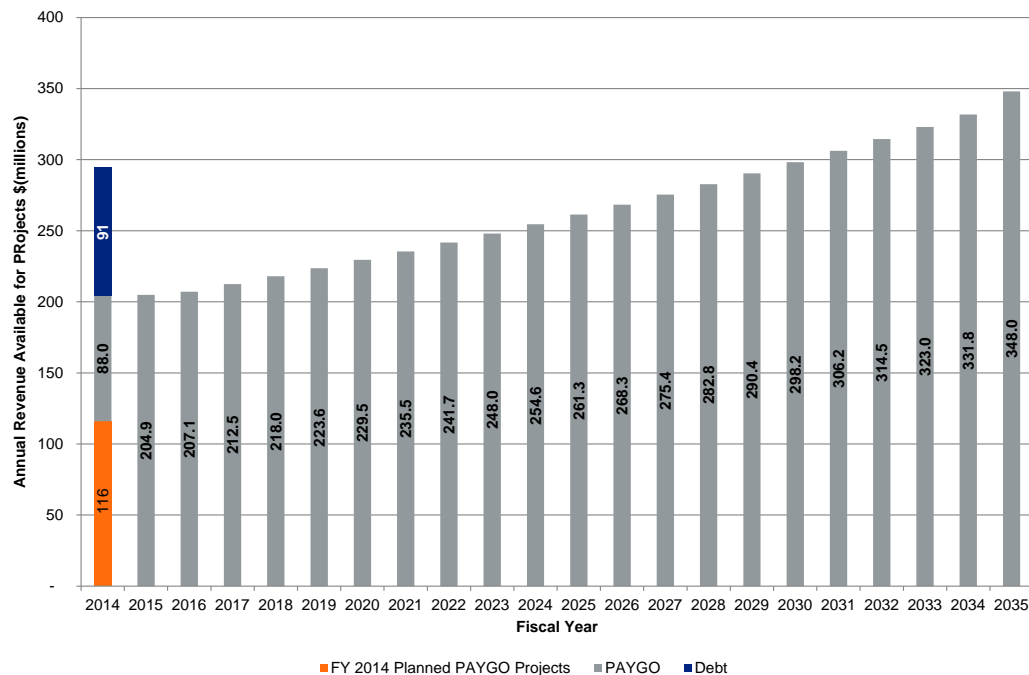
Potential Initial Issue: Bond Statistics

Key Statistics	
Par Amount	\$92,255,000
Project Fund	90,736,000
True Interest Cost ("TIC")	4.08%
Average Life	12.5 years
Total Net Debt Service	140,642,525
Maximum Annual Debt Service	7,185,300
Average Annual Net Debt Service	7,032,126

Financial Profile of the Initial Validation Issue

- \$90.7 million of bond funded projects
 - Average annual debt service of \$7.0 million per year over 20 years
 - Excess annual revenue of at least \$200 million per year after paying debt service
 - Annual debt service as a percent of annual revenue peaks at 3.4%
 - Robust debt service coverage with a floor of 29.8x
 - Strong excess cash flow

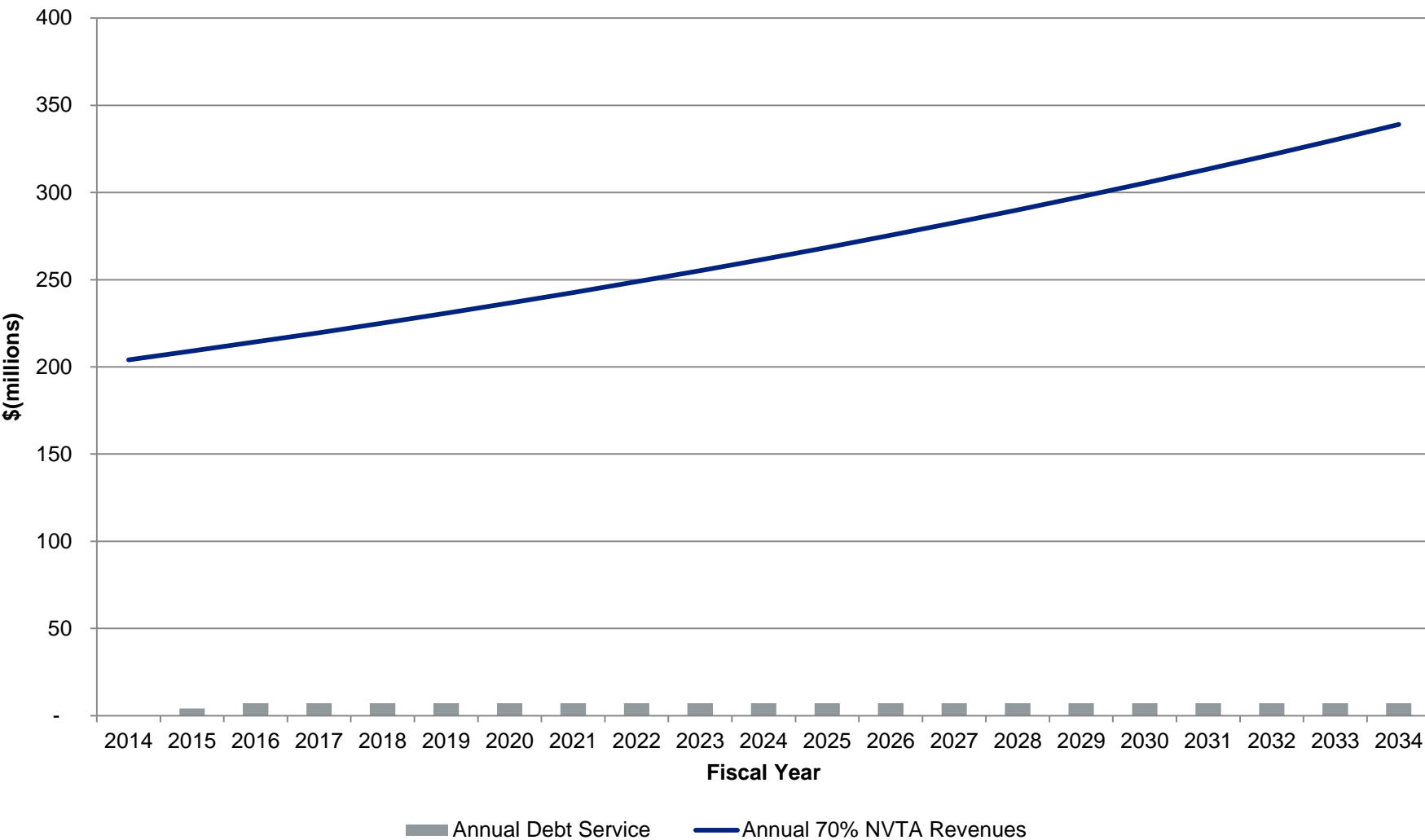
Total Amounts Available for NVTa Projects
Series 2014 Initial Issue



20-year Debt vs. PAYGO Mix			
	Nominal	NPV	%
Debt	\$90.7	\$90.7	2%
PAYGO	\$5,779.4	\$4,615.6	98%
Total	\$5,870.1	\$4,706.3	

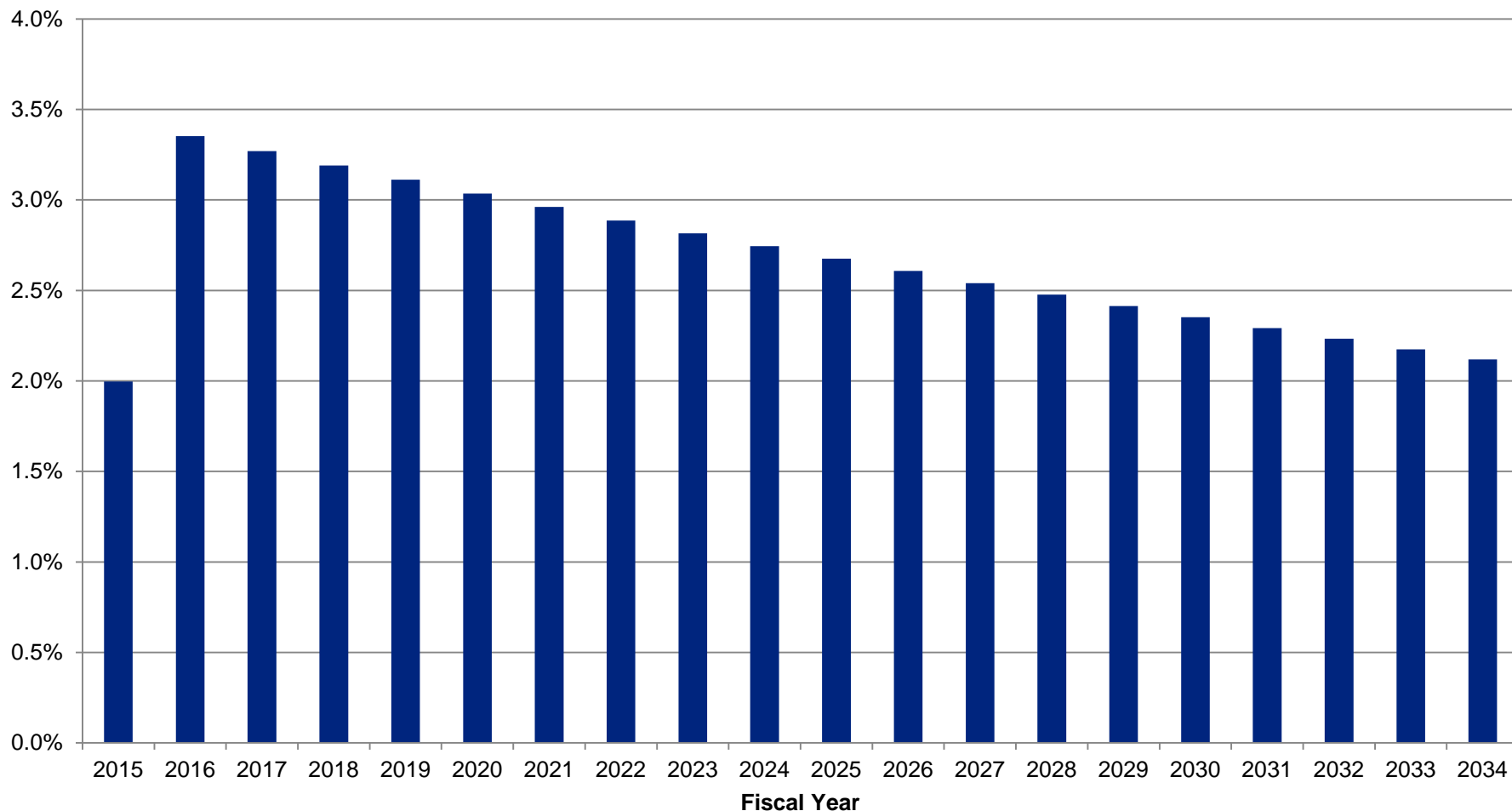
Financial Profile of the Potential Initial Issue (cont'd)

Annual Net Cash Flows



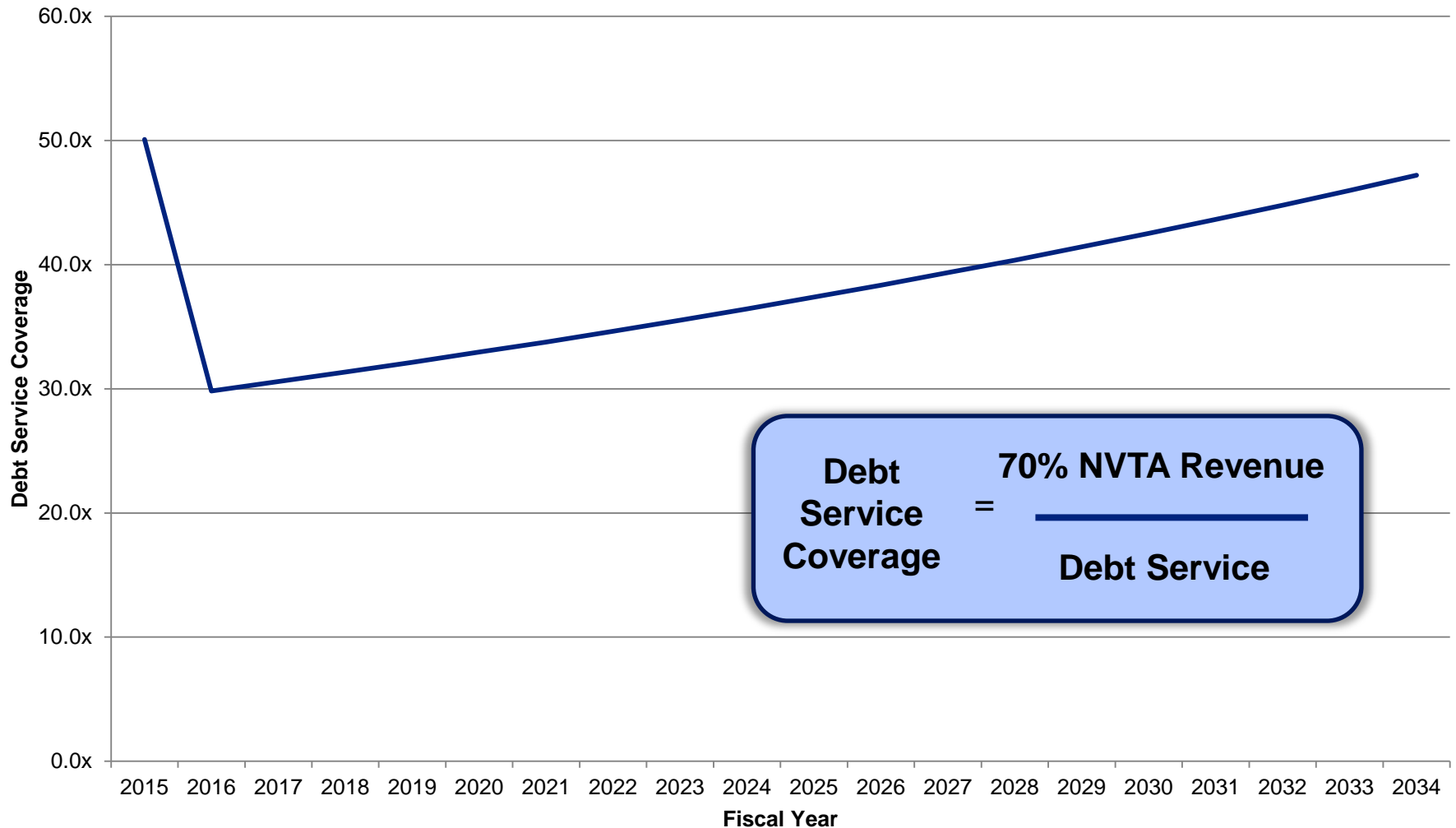
Financial Profile of the Potential Initial Issue (cont'd)

Annual Net Debt Service as a Percentage of the 70% NVTA Revenues



Financial Profile of the Potential Validation Issue (cont'd)

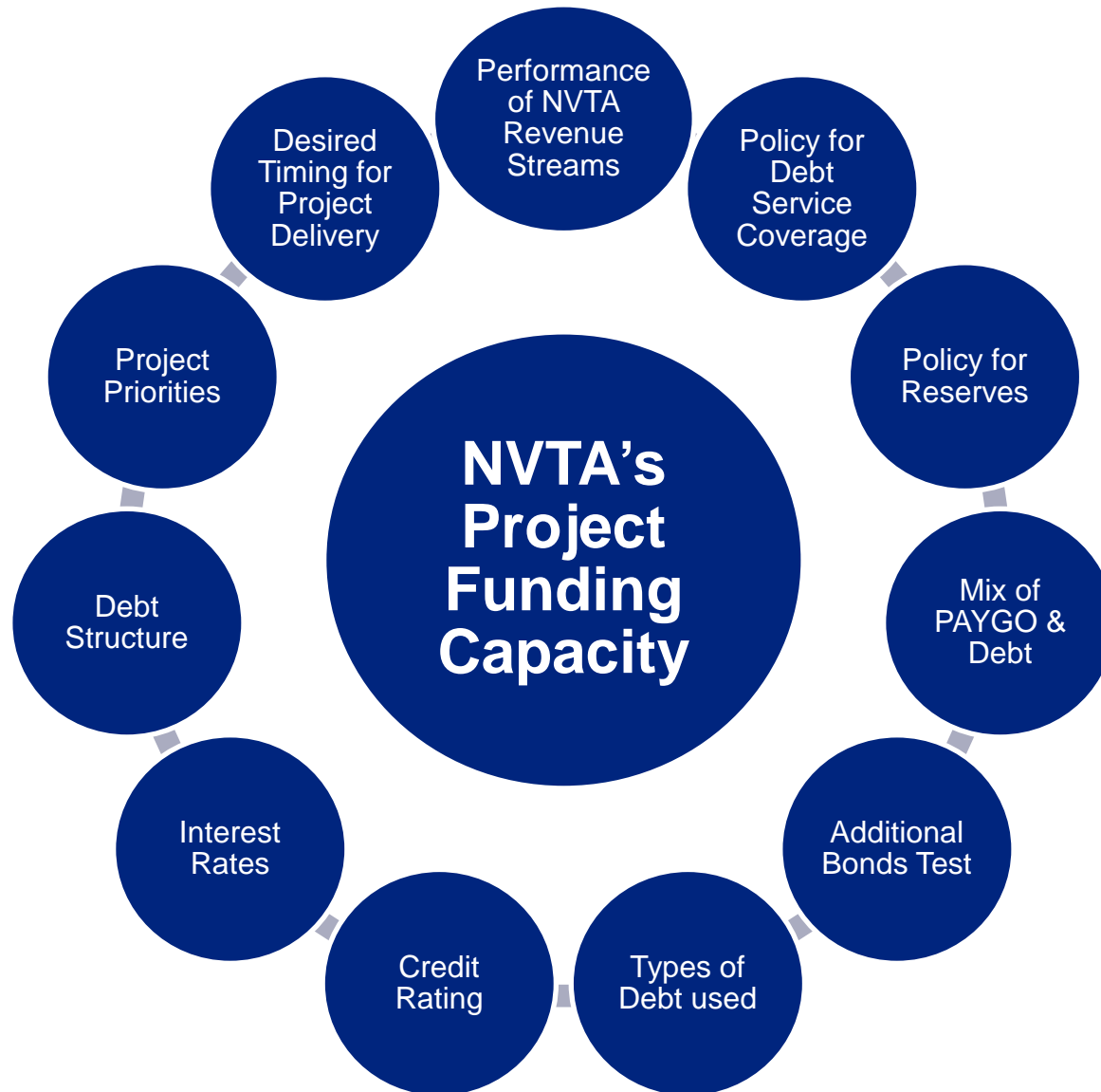
Annual Net Debt Service Coverage



Long Range Financial Planning

- Once NVRTA has defined its project priorities beyond FY 2014 & established a multi-year capital improvement plan (“CIP”), a long range financial plan can be developed to guide:
 - Mix of PAYGO & debt
 - Timing & structure of debt issuance
 - Debt, reserve & other financial policies
 - Appropriate use of financing techniques, i.e., interim financing
 - Overall financial strength & stability of NVRTA
- NVRTA’s funding capacity for projects will be driven by decisions regarding
 - Desired credit rating on debt
 - Mix of PAYGO & debt
 - Structure of debt
 - Types of financing techniques

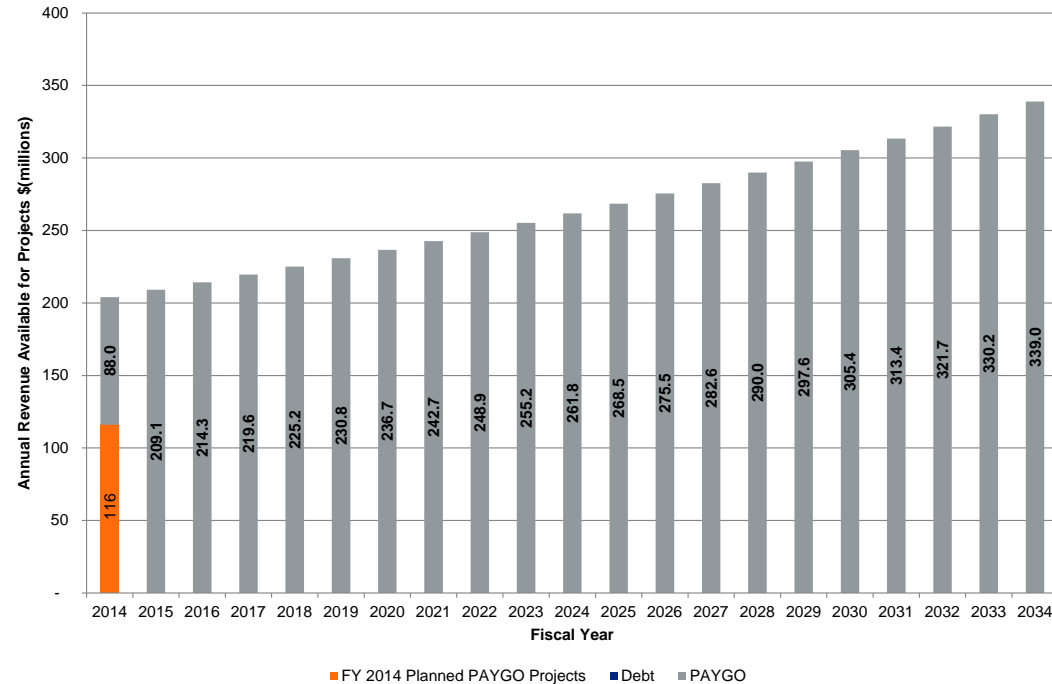
Four Scenarios to Evaluate NVTa's Project Funding Capacity



Scenario A: No Debt

- If NVTA does not issue any debt, revenue available for projects will accumulate to approximately at \$5.57 billion by FY 2034
- In today's dollars, total project funding capacity estimated at \$4.5 billion

Total Amounts Available for NVTA Projects
No Debt, all PAYGO



20-year Debt vs. PAYGO Mix (millions)			
	Nominal	NPV	%
Debt	\$0.0	\$0.0	0%
PAYGO	\$5,572.1	\$4,501.9	100%
Total	\$5,572.1	\$4,501.9	

Note: Net Present Value calculations based on a discount rate of 4.08%.

Debt Service Coverage (DSC) Ratio

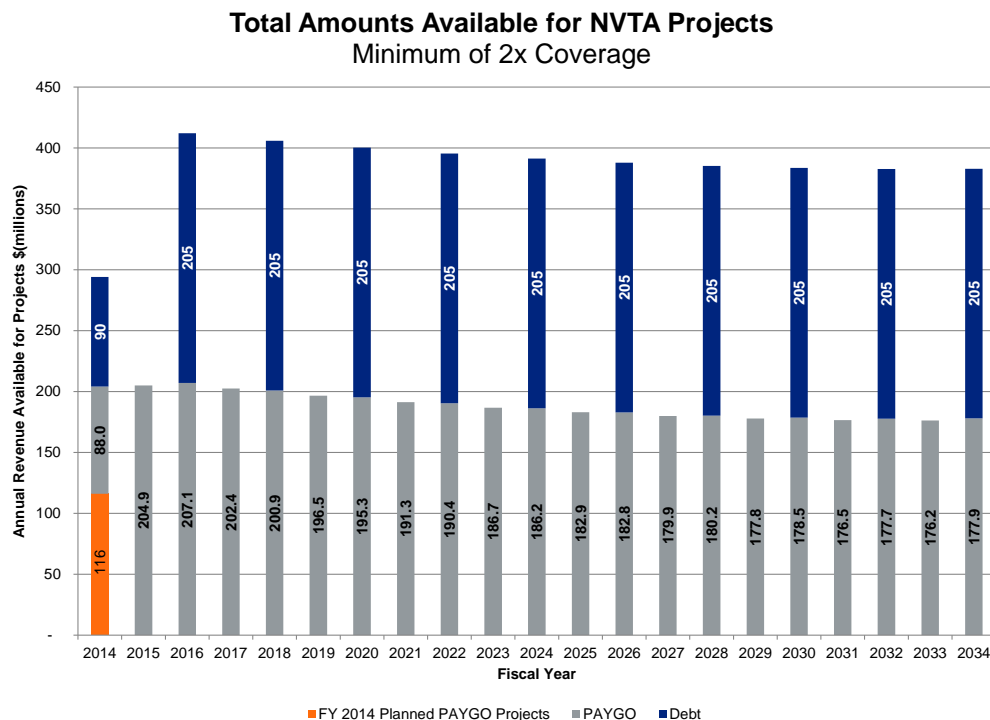
- Industry standard ratio used to evaluate dedicated tax backed bonds and revenue bonds
- Measures affordability of debt, comparing annual debt requirements to available annual revenue
- Ratio of net revenue available for debt service in a given year divided by annual debt service
 - NVTAs 70% revenue would be in numerator
 - Often times evaluated with maximum annual debt service (“MADS”) in the denominator

$$\text{Debt Service Coverage} = \frac{70\% \text{ Net NVTAs Revenue}}{\text{Annual Debt Service (or Maximum Annual Debt Service)}} = \frac{\$10}{\$5} = 2.0 \text{ times (x)}$$

- High ratings typically follow higher coverage, all other factors held equal

Scenario C: Limit Debt to a 2.0x Minimum Coverage Ratio

- If annual revenue exceeds annual debt service by at least 2.0x, NVTA could fund \$2.14 billion of projects with debt over the 20 year period from FY 2014 to FY 2034
- Equates to issuing \$205 million of bonds every other year from FY 2016 through FY 2034
- Excess revenue after paying debt service would reach \$3.95 billion over the 20 year period
- In today's dollars, total project funding capacity estimated at \$5.0 billion
- In this scenario, roughly 35% of capital expenditures are met with debt and 65% are met with PAYGO

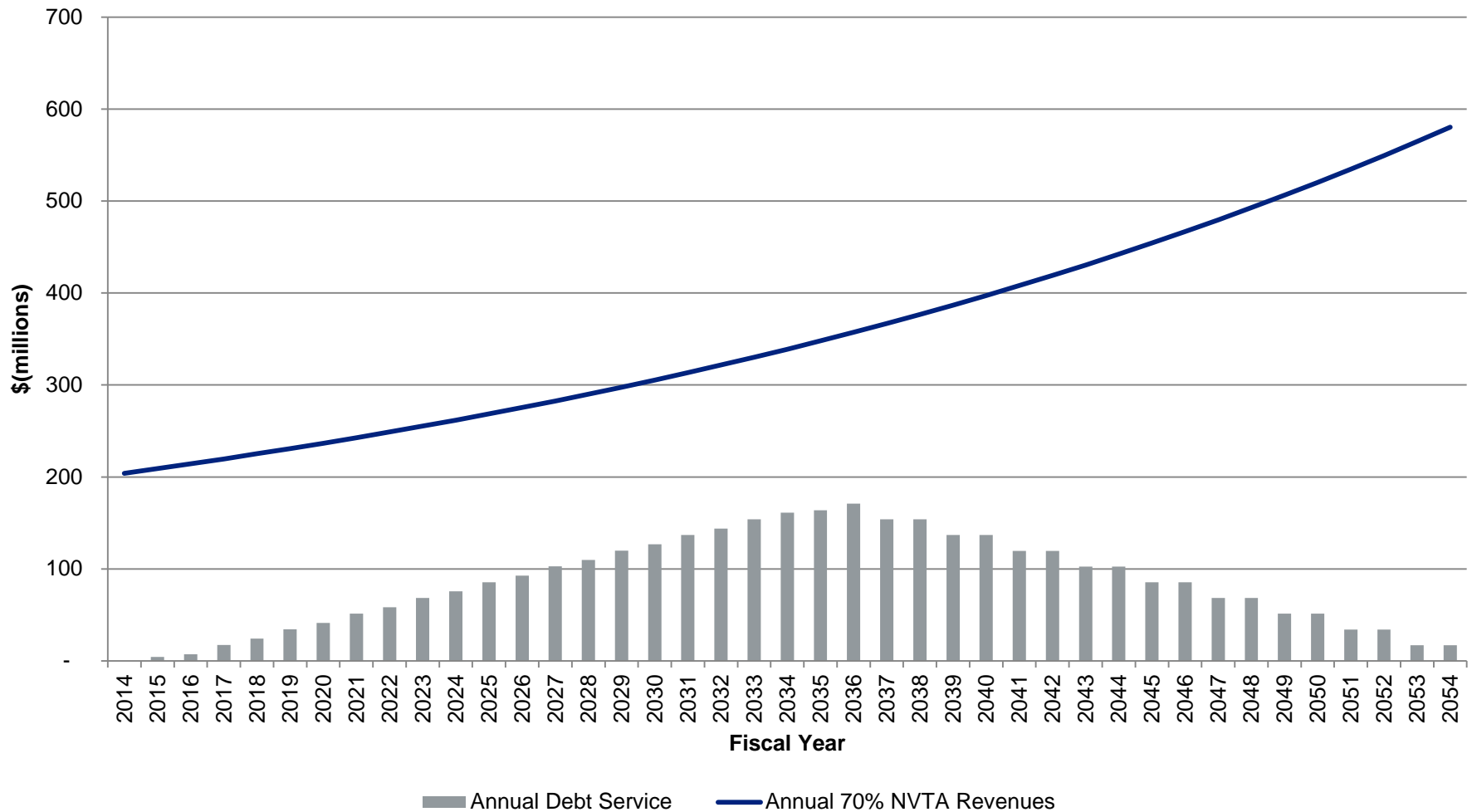


20-year Debt vs. PAYGO Mix (millions)			
	Nominal	NPV	%
Debt	\$2,140.0	\$1,742.7	35%
PAYGO	\$3,956.4	\$3,278.6	65%
Total	\$6,096.4	\$5,021.3	

Note: Net Present Value calculations based on a discount rate of 4.08%.

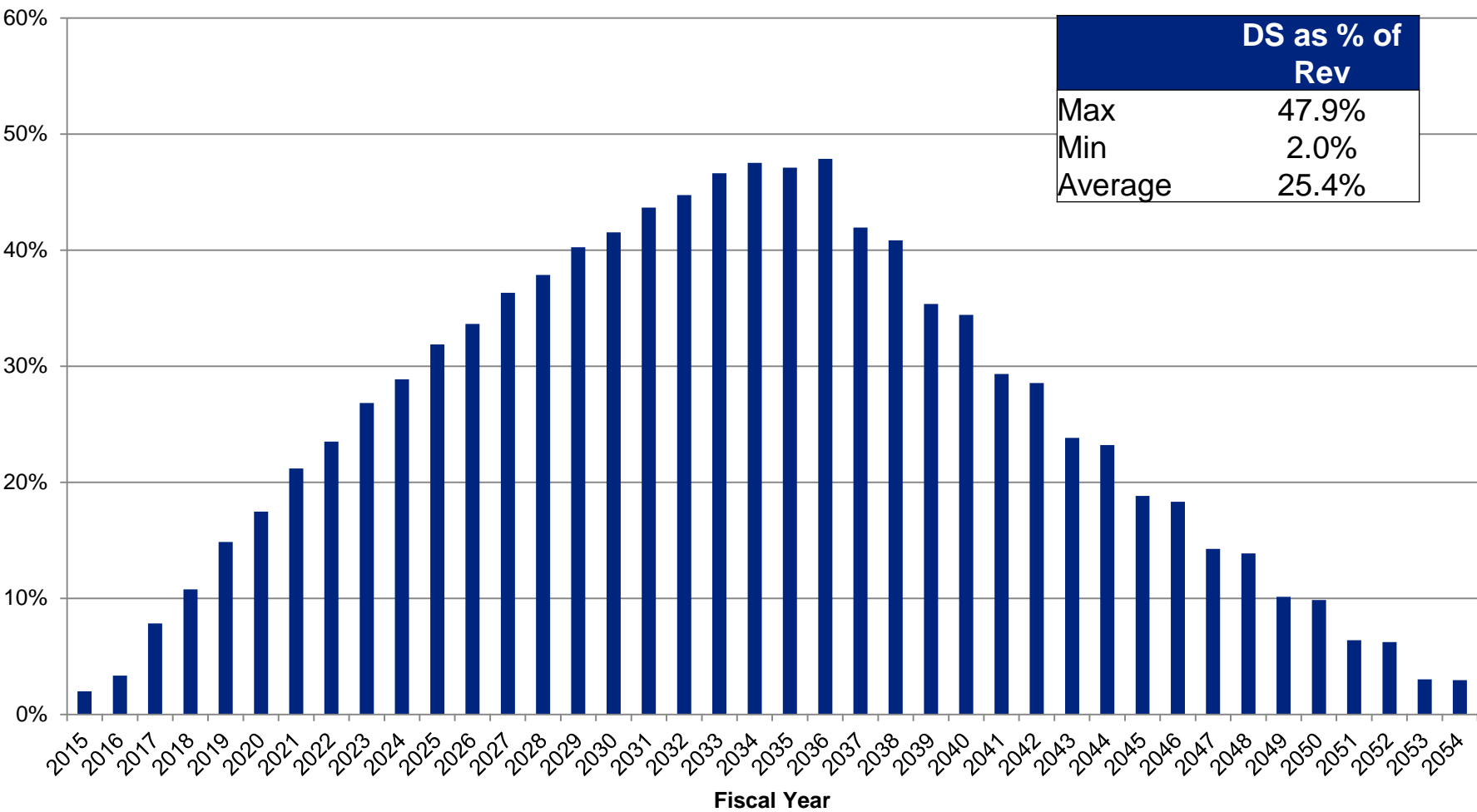
Scenario C: Limit Debt to a 2.0x Min DSC Ratio (cont'd)

Annual Net Cash Flows Minimum of 2x Coverage



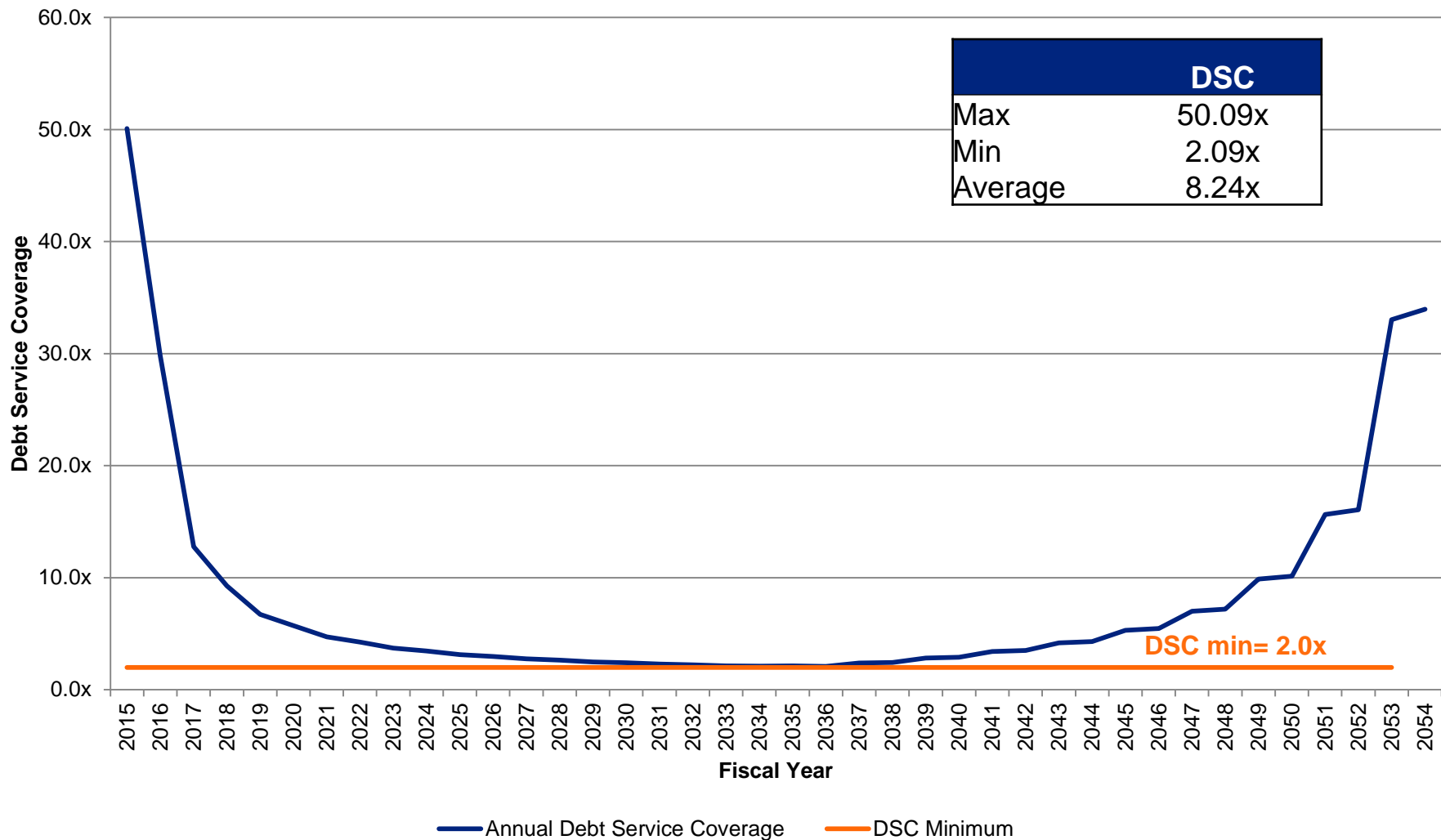
Scenario C: Limit Debt to a 2.0x Min DSC Ratio (cont'd)

Annual Net Debt Service as a Percentage of the 70% NVTA Revenues



Scenario C: Limit Debt to a 2.0x Min DSC Ratio (cont'd)

Annual Net Debt Service Coverage

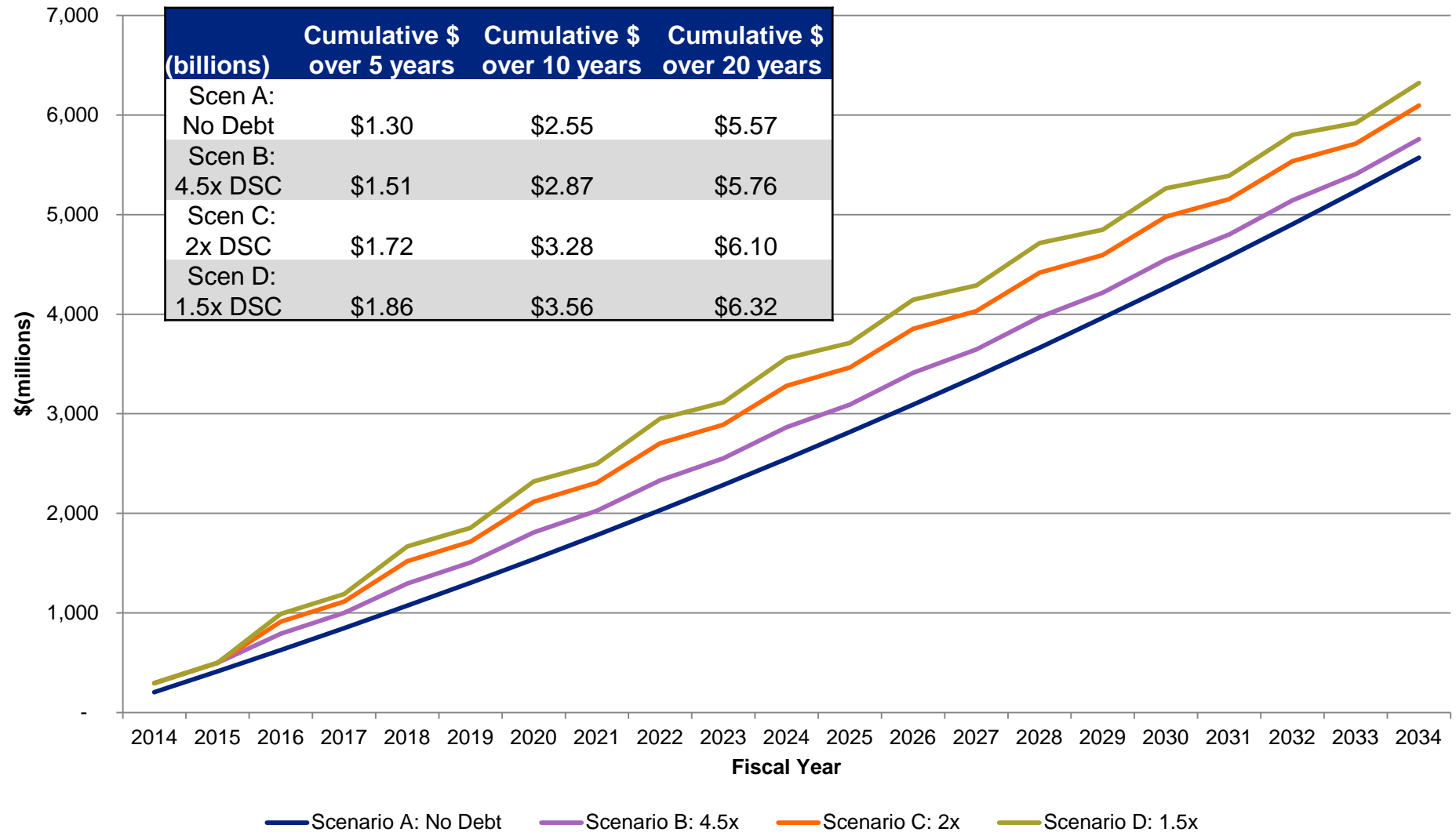


Summary of Scenarios A – D

	Scenario A: No Debt	Scenario B: Limit Debt to 4.5x DSC	Scenario C: Limit Debt to 2.0x DSC	Scenario D: Limit Debt to 1.5x DSC
Bi-Annual Bond Issuance Amount	\$0	\$85 million	\$205 million	\$285 million
Total Debt Funded Projects (FY14-34)	\$0	\$940 million	\$2.14 billion	\$2.94 billion
% Debt Financing	0%	20%	35%	47%
Total PAYGO (FY14-34)	\$5.57 billion	\$4.82 billion	\$3.96 billion	\$3.38 billion
% PAYGO Financing	100%	80%	65%	53%
Nominal Total Project Funding Capacity (FY14-34)	\$5.57 billion	\$5.76 billion	\$6.10 billion	\$6.32 billion
NPV Total Project Funding Capacity (FY14-34)	\$4.50 billion	\$4.70 billion	\$5.02 billion	\$5.23 billion
Max DSC (FY15-54)	-	81.7x	50.1x	50.9x
Min DSC (FY15-54)	-	4.6x	2.1x	1.5x
Average DSC (FY15-54)	-	16.1x	8.2x	6.6x

Cumulative Project Funding

Cumulative Project Funding



PAYGO & Debt: Conclusions

- Combining both PAYGO & debt leads to greater project funding capacity
- Over-reliance on either approach has its draw backs
 - Excessive debt limits financial flexibility, reduces creditworthiness
 - Exclusive use of PAYGO limits pace of project delivery
- Track record of balancing both is successful among NVTAs's members
- NVTAs's FY2014 proposed short term plan for PAYGO & debt is sound
- NVTAs needs to develop a CIP as well as debt & financial policies prior to commencing a long range financial plan

Credit Methodology for Potential NVTB Bonds

- Methodology varies among three agencies
 - Moody's: Separate method & criteria for Special Tax Bonds with scorecard approach
 - S&P: Separate method & criteria for Special Tax Bonds
 - Fitch: Embedded in Tax supported criteria
- Differences vs. evaluation factors for general obligation bonds and/or fee backed revenue bonds (i.e, water and wastewater bonds)
- What is a “Special Tax?” (for rating agency purposes)
 - Sales & excise
 - Tourist taxes (hotel, car rental, meals)
 - Income
 - Utility services
 - Highway user taxes & fees (i.e, gas tax & motor vehicle user fees)
 - Real estate property transfer taxes
 - Court fines

Credit Factors for Special Tax Bonds

- Major factors all three credit agencies evaluate:
 - Underlying economic drivers of the revenue streams
 - Breadth & concentration of tax base
 - Revenue trends/performance, diversity & volatility/sensitivity of pledged streams
 - Collection mechanics
 - Debt service coverage
 - Legal protections for bond holders, i.e., bond covenants such as ABT, reserves, flow of funds

Key Legal Provisions for NVTa

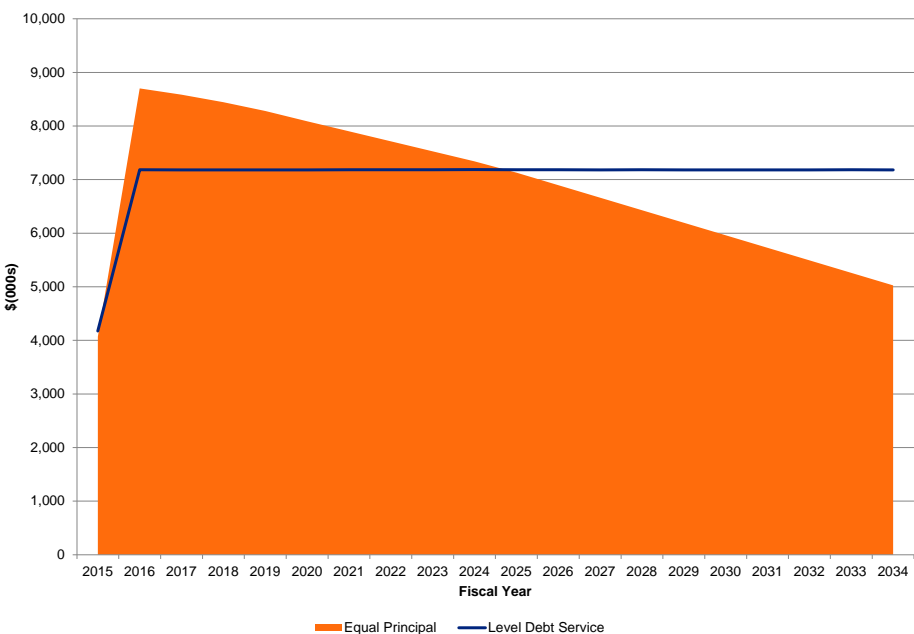
- Most important covenant is Additional Bonds Test (“ABT”)
 - Limits debt issuance
 - Tested & must be met at any issuance
 - Stricter ABT leads to higher credit ratings
 - Sample ABT
 - Historical back-looking test over 12 months period to exceed [2.0x]. DSC will be calculated using 70% of the NVTa revenue compared to MADs and all senior debt
- Flow of Funds
 - Specifies when and where revenues are received and expended
 - Describes which amounts are paid first, including debt service, administrative expenses, payments to localities and filling or refilling of reserves
- Reserves
- Early prepayment provisions for bonds

NVTA Debt in Context of Local Credit Ratings

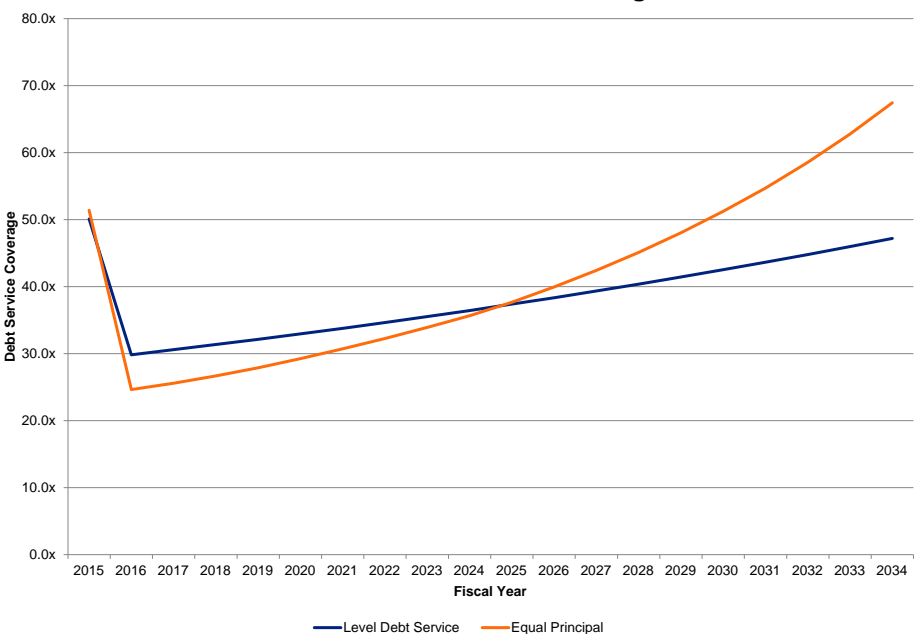
- Preliminary conversations with all three rating agencies subject to final evaluation prior to sale of bonds
- Moody's
 - Would not appear on local debt statements
 - Not direct debt and not overlapping debt
 - Localities not setting rates & not legally responsible for NVTA debt
- S&P
 - Would not appear on local debt statements
 - Not direct debt and not overlapping debt
 - S&P defines overlapping debt as debt secured by property taxes
- Fitch
 - Treated as overlapping debt on localities' debt statements
 - Tax revenue are derived from & generated by the local tax base
 - Only fee-backed (not tax backed) debt may be classified as “self supporting”

Comparison of Repayment Structures

Annual Net Debt Service

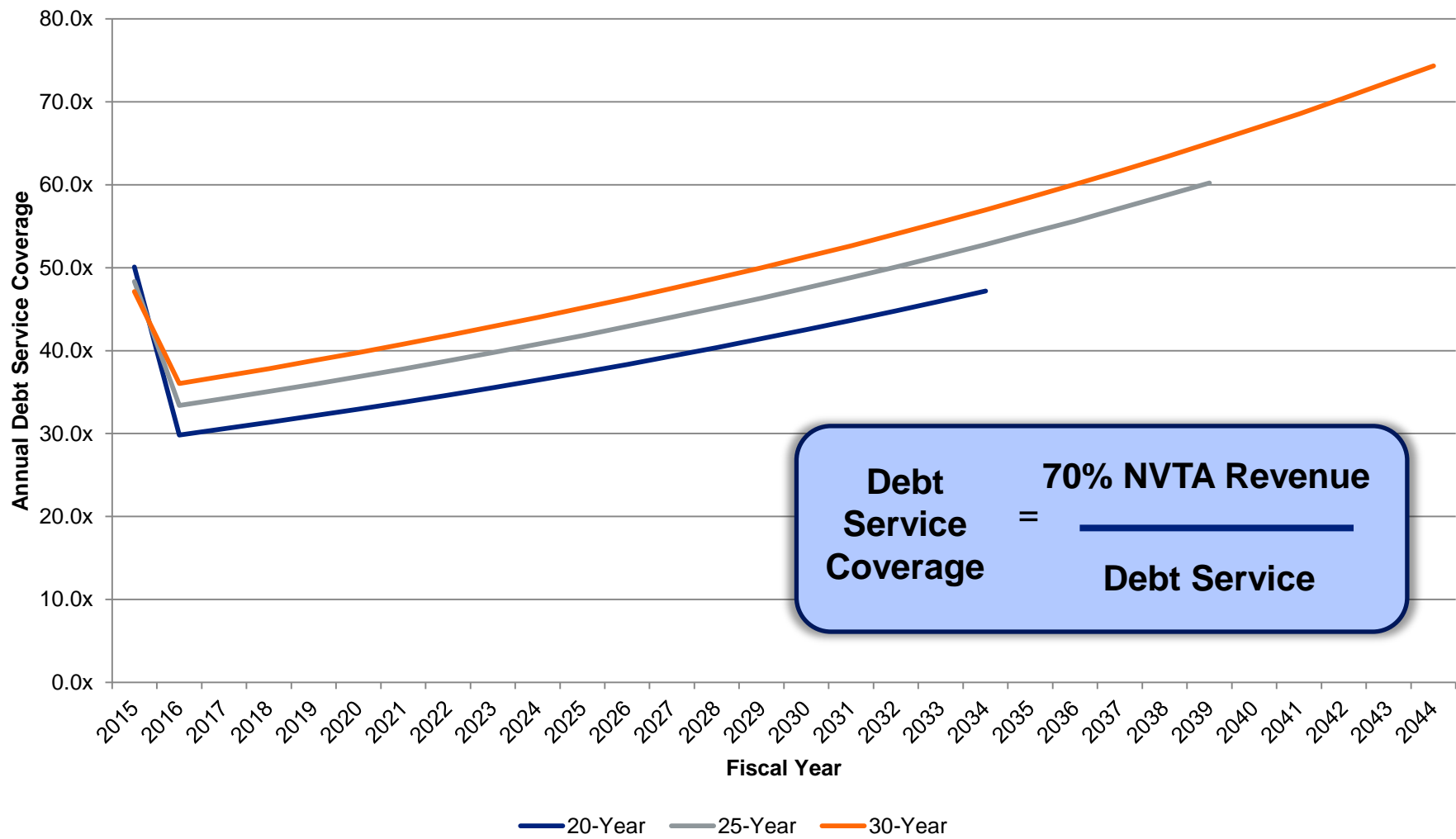


Annual Net Debt Service Coverage



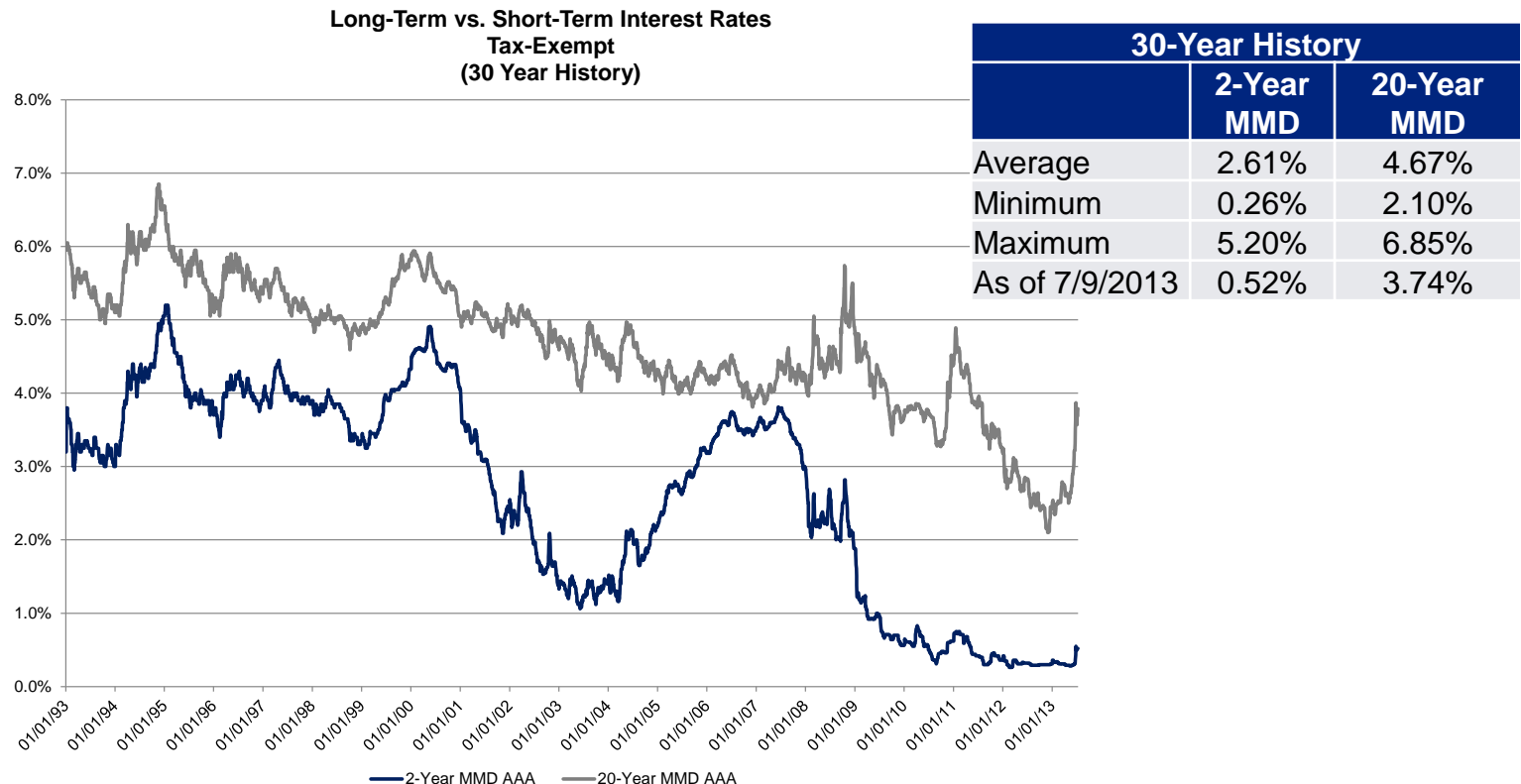
Comparison of Term of Bond Issues

Annual Net Debt Service Coverage



Short Term Interim Financing

- Short term financing used to meet expenditures during a project construction period
- Allows flexibility to address variability in spending and cashflow uncertainty
- Method of managing cash and liquidity
- For multi-year capital plans, may lead to fewer bond sales



Note: Thomson Reuters Municipal Market Data (MMD) AAA Curve represents the MMD analyst team's opinion of AAA valuation, based on institutional block size (\$2 million +) market activity in both the primary and secondary municipal bond market.

Alternatives to NVTB Issuance

- Why do borrowers use bond banks?
 - Shift certain administrative burdens
 - Access stronger credit with higher ratings & lower cost of capital
 - Low or no need for structuring flexibility or control at time of issuance or in the future
 - Project implementation & associated cash flow needs are routine & predictable
 - Modest, often 1-time borrowing needs
- Why do borrowers use conduit issuers?
 - Certain borrowers cannot issue directly themselves (i.e., counties using lease revenue debt, Route 28 transportation district commission)
 - Certain borrowers must use a conduit to issue tax-exempt debt (501c-3 entities)
 - Conduit entities offer wide discretion to borrowers to carry out the transaction to match the borrower's preferences & requirements

Pure Conduit Issuer	Bond Bank/ Potential Credit Support
Virginia Resources Authority (VRA)	Virginia Resources Authority (VRA)
NVTB Member Jurisdiction/EDA/IDA	NVTB Member Jurisdiction/EDA/IDA
Commonwealth Transportation Board (CTB)	
Virginia Small Business Financing Authority	

Issuance of NVTAs 70% by Member Jurisdiction

- Subject to legal review for consistency with Act
- According to legal counsel, funded projects would need to meet requirements of the Act
- If multiple issuers, would need to evaluate flow of funds
- Analysis assumes NVTAs attain double-A ratings
- No interest expressed by members of financial working group

Advantages

- Member G.O. Bonds rated triple-A offer lowest cost of capital
- Use of established issuers & borrowing programs
- Less NVTAs staff time
- NVTAs credit rating not required

Disadvantages

- Non-G.O. bonds would add layer of appropriation risk
- Additional staff time and ongoing administrative burden falls on member jurisdictions



Questions?



The PFM Group

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4.D.

Financial Working Group Northern Virginia Transportation Authority

MEMORANDUM

TO: Martin E. Nohe, Chairman
Northern Virginia Transportation Authority

Members
Northern Virginia Transportation Authority

FROM: William Euille, Chairman
Financial Working Group
Northern Virginia Transportation Authority

SUBJECT: Recommendations of the Financial Working Group related to the Implementation of
HB 2313 (Agenda Item 4.D.)

DATE: July 18, 2013

Recommendations:

The Financial Working Group recommends that the NVTa take the following actions related to the implementation of HB 2313:

- a) Approve a FY 2014 budget for the Authority;
- b) Approve a request to the local governments to fund the budget deficit for FY 2014;
- c) Approve a policy directing that none of the 70 percent of funding the Authority is receiving for regional projects be expended until a bond validation suit has been successfully completed;
- d) Approve a recommendation that the local governments not expend their 30 percent share of the revenues that the Authority will be receiving until a bond validation suit has been successfully completed, unless the local government is prepared to repay any money expended to the Authority, if the suit is not successful;
- e) Direct the Financial Working Group to work with the Legal Working Group to prepare a Memorandum of Agreement between the Authority and each local government outlining procedures for distribution and expenditure of the 30 percent share of Authority revenues being allocated to the local governments consistent with HB 2313, including repayment provisions;
- f) Authorize Chairman Nohe to execute a letter to the Commonwealth Treasury Board seeking an exemption from typical Treasury Board approval for selling bonds supported by the three taxes that the Authority will be receiving from the Commonwealth as a result of HB 2313;

Chairman Martin E. Nohe
Members, Northern Virginia Transportation Authority
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Page Two

- g) Authorize Chairman Nohe to execute an Electronic Funds Transfer agreement with the Department of Taxation to allow the Authority to receive the revenues from HB 2313; and**
- h) Suspend the debt policy adopted by the Authority in 2008.**

Background:

Since the June 20, 2013, NVTa meeting, the Financial Working Group has met three times to continue its efforts to prepare for the implementation of HB 2313. Several subcommittee meetings were also held. Each of the working group's recommendations is discussed in more detail below. In addition, the working group's discussions on several other topics are also described.

FY 2014 Budget

The Financial Working Group has coordinated with the other four working groups to prepare a recommended FY 2014 budget (Attachment A) for the Authority's consideration. The proposed budget is \$1,025,000 for administrative expenses. The budget includes for following:

- The costs associated with financial analysis (approved by the Authority on June 20, 2013), and a bond validation suit;
- Modest office space rental costs at the Northern Virginia Regional Commission;
- Continuation of Directors and Officers insurance coverage and the purchase of general liability insurance policy;
- Employment of up to six staff members staggered between August 15, 2013, and January 2014. These employees include: an Executive Director, a Chief Financial Officer, an accountant, two project coordinators and an administrative assistant. While the budget assumes that these individuals would be employees, that assumption would not prevent the Authority from procuring the functions provided by these positions on a contractual basis;
- Office furniture, information technology equipment, fringe benefits and vehicle mileage payments for each of the employees.
- A 20 percent contingency has been included to cover costs such as an annual audit and possible consultant support for the Project Implementation Working Group, as well as unidentified and unexpected expenses.

In addition, the Working Group has prepared an initial calculation of a FY 2015 full year budget, assuming the addition of a part time public information officer for illustrative purposes. A more formal FY 2015 budget will be submitted to the Authority for consideration in Spring 2014.

Request to Local Governments to Fund FY 2014 Budget Deficit

The Financial Working Group has identified approximately \$300,000 to fund the FY 2014 budget. These funds include approximately \$212,117 in Virginia Department of Transportation grant funds and approximately \$100,000 in interest to be earned on the taxes the Authority receives. Subtracting these revenues results in a deficit of approximately \$712,883. The Code of Virginia indicates that unless funded through other sources, the administrative expenses of the Authority will be allocated to each of its member jurisdictions based on population. While the Financial Working Group understands that difficulties of submitting a funding request to the local governments after their annual budgets are adopted, the working group believes that this is the best way to fund the Authority's FY 2014 administrative expenses. A proposed distribution of these costs is shown in the attachment. Each local government will need to determine how to pay its share of the FY 2014 budget. This could include using a portion of the 30 percent of funding allocated to the local governments who qualify for it with the caveats describe below or using some other locally available funding source. Payments would be due around October 1, 2014.

There are two other alternatives. The Authority could choose to use a portion of the 30 percent funding it will be transferring to the local government (off the top) to fund these expenses. This approach would avoid an unexpected mid-year billing to the local governments. However, as is indicated below, the Financial Working Group cautions against spending these 30 percent revenues before a bond validation suit is successfully concluded to avoid problems with refunding revenues, if the bond validation is not successful. In 2007, the Authority asked the Virginia Department of Transportation to provide a short-term loan for initial expenses. However, at the time, the Authority voted to implement the taxes and fees effective January 1, 2008, so there was a need to fund expenses before revenues were being received.

Policy Related to 70 Percent of Funding NVTa is Retaining

Based on the Authority's experience with the bond validation suit associated with the HB 3202 revenues in 2007-2008, the Financial Working Group is concerned about the possibility of needing to refund some or all of the new HB 2313 regional revenues, if the Authority decided to sell bonds and file a bond validation suit, and the suit is unsuccessful. Alternatively, if the Authority chooses not to sell bonds and loses a subsequent court challenge, there might also be a need to refund revenues collected by the Commonwealth on the Authority's behalf. As a result, the Financial Working Group recommends that the Authority approve a policy statement that it will not spend any of the 70 percent of regional funds it retains, until there is a final ruling in a bond validation case.

One disadvantage of this approach is that Authority will be collecting revenue for approximately eight months before the bond validation suit is resolved. During this time approximately, \$94 million might be collected, but not immediately used. This would be contrary to urging from some state officials to begin showing progress on implementing projects as quickly as possible. The Financial Working Group believes that holding the revenue is preferable to having the Virginia

Supreme Court rule against the Authority when projects are under construction.

Recommendation Regarding the Local Jurisdictions' Expenditure of 30 Percent of Funding NVTa will Receive

As noted above, the Financial Working Group is concerned about the possibility that the Authority's bond validation suit will be unsuccessful. In 2008, the Authority was required to refund approximately \$30 million in taxes and fees collected before the bond validation litigation was complete. HB 2313 requires that the Authority transfer 30 percent of the revenues it receives to the local governments in which the revenues are raised. In addition, counties are directed to work with towns to ensure that they receive their share of the funding. The Financial Working Group anticipates that NVTa will start receiving revenues from HB 2313 in September 2013. The working group is attempting to put various procedures in place to allow the Authority to begin transferring funds to the local governments in late September 2013. Some additional approvals will be needed from the Authority at the September 26, 2013, meeting to accomplish this. However, in light of the uncertainty about the outcome of a bond validation suit, the Financial Working Group strongly recommends that the Authority caution local governments to either avoid spending the money until a bond validation suit is resolved or be prepared to reimburse the Authority for any money spent, if the bond validation is not successful. This approach would allow each local governing body that qualifies to receive a portion of the 30 percent of funding the Authority will be distributing to the local governments the opportunity to decide which approach works best for its local government. The Financial Working Group further recommends that this concept be included in the Memorandum of Agreements (MOAs) between the Authority and its local governments. These MOAs will be presented for the Authority's consideration at the September 26, 2013, meeting.

Direct the Financial Working Group and the Legal Working Group prepare a Memorandum of Agreement with each Local Government

As noted above, the Financial Working Group and the Legal Working Group recommend that the Authority enter into an MOA with each of its local governments establishing the procedures for the disbursement and expenditure of the 30 percent of funding that the Authority will be transferring to the local governments. The agreement would address several topics including:

- Address the timing and frequency of distribution of tax revenues to the local governments;
- Reiterate the statutory requirements included in HB 2313 for the use of the funding, including the penalties for failure to abide by these requirements;
- Outline the reporting requirements for the local government to demonstrate how the funding was spent;

- Discuss the local governments' options for spending funding before the bond validation suit is complete and the requirement that the local governments repay the Authority, if the bonds are not validated.

The Financial Working Group believes that these agreements should be as short as possible, while ensuring that all requirements are met. The working group expects that these agreements will be ready for the Authority's consideration at the September 26, 2013, meeting. In addition, the working group will also be developing a separate agreement between the Authority and each local government and transportation agencies outlining the procedures for implementing projects with the 70 percent of funds that the Authority will be distributing to regional projects. This agreement should also be available for the Authority's consideration in September 2013.

Exemption from the Commonwealth Treasury Board

If the Authority determines to issue bonds payable from and secured by the regional taxes and fees, then because the Authority is a state authority and the revenues from the regional taxes and fees are appropriated to the NVTA Fund, "terms and structure" approval of the Treasury Board of the Commonwealth may be required under Section 2.2-2416(7) of the Virginia Code. However, Section 2.2-2416(8) authorizes the Treasury Board to exempt certain types or classes of bonds and other financing arrangements from its review and approval. Treasury Board staff has already indicated that it will support such an exemption and, if Treasury Board receives a formal request from the Authority relatively soon, it will consider approving the exemption at either its August or September meeting. The Financial Working Group recommends that the Authority authorize the Chairman to send a letter to the Treasury Board requesting this exemption. The letter will be prepared by the Authority's bond counsel and coordinated with the Legal Working Group.

Electronic Funds Transfer Agreement

HB 2313 requires that the revenue from the three regional taxes and fees be deposited into the Northern Virginia Transportation Authority Fund. The revenue is then to be distributed from that fund to the Authority via electronic means. As a result, the Authority must enter into an Electronic Funds Transfer Agreement with the Commonwealth of Virginia through the Department of Accounts. This agreement has been reviewed by the Legal Working Group. The Financial Working Group recommends that the Authority authorize Chairman Nohe to execute this agreement.

Suspension of Debt Policy

In January 2008, the Authority approved a debt policy based on the situation at the time. This policy was based on the fact the Authority had imposed seven taxes and fees in July 2007, and began collecting these taxes and fees on January 1, 2008. It was also structured based on the requirements

of HB 3202 (2007), some of which no longer apply. Since the Authority's revenue sources are different as a result of HB 2313 and the financial markets have also changed considerably since 2008, bond counsel recommends that the Authority suspend the current debt policy. The Financial Working Group, in conjunction with the Legal Working Group, bond counsel and the Authority financial advisor will bring a new debt policy forward for the Authority's consideration later this fall.

Report of the Financial Advisor

On June 20, 2013, the Authority authorized engaging PFM (the Authority's financial advisor) to undertake a scope of work (Attachment B) for an analysis for bond funding projects versus "pay of you go" financing. This effort was also intended to address a number of items that were included in a memorandum from Davenport and Company to Loudoun County (Attachment C) regarding a possible bond sale. The Financial Working Group established a subcommittee of debt managers from Loudoun, Prince William, Fairfax and Arlington Counties to assist PFM in addressing the scope of work. The subcommittee met with PFM several times. PFM also met with the entire Financial Working Group and with the financial advisors for the NVTa member jurisdictions that it does not represent as it prepared its analysis. PFM's Managing Partner JoAnne Carter will present PFM's analysis, findings and recommendations at the NVTa meeting on July 24, 2013.

Allocation of Revenues to Towns

Staff from each of the three affected counties (Fairfax, Loudoun and Prince William) have been met with or discussed the allocation and distribution of revenues with the appropriate towns. The Financial Working Group will be preparing final recommendation on the distribution of revenues to the towns for the Authority's consideration on September 26, 2013.

Preparation for an Initial Bond Sale

As directed by the Authority on June 20, 2013, the Financial Working Group has continued to work with the Legal Working Group and the Project Implementation Working Group to prepare the appropriate documents for an initial bond issuance for the Authority's consideration on July 24, 2013. Those documents are included elsewhere on the agenda. The Financial Working Group believes that a modest bond issue (in the range of \$50 to \$100 million) may not only assist NVTa in resolving any legal challenges, but would also provide upfront revenues to initiate some regional projects. Such revenues would allow the Authority and its member local governments to begin implementing projects faster than simply relying on a "pay as you go" method. The Financial Working Group recognizes that debt and "pay as you go" financing are both important tools to achieving an improved transportation system in Northern Virginia.

Chairman Martin E. Nohe
Members, Northern Virginia Transportation Authority
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On-Going Activities

The Financial Working Group is still working on several additional tasks. These include:

- documenting each local government's intention related to the adoption of the Commercial and Industrial Property Tax for Transportation at \$0.125 per \$100 valuation or equivalent and current levels of transportation expenditures;
- establishing procedures for cash flow analyses for projects;
- developing audit procedures;
- updating NVTa's procurement policies;
- preparing a position description for a Chief Financial Officer or consultant to handle the same functions.
- preparing a recommendation for the Authority related to the calculation of the long-term benefit that jurisdictions will receive from the implementation of the projects and services supported by the 70 percent of funding that the Authority will retain for regional projects.

Financial Working Group members and I will be available at the NVTa meeting on July 24, 2013, to answer questions.

Cc: Members, NVTa Jurisdiction and Agency Coordinating Committee
Members, NVTa Financial Working Group

NVTA Financial Analysis – Scope of Work
Approved: June 20, 2013

The NVTA desires the performance of the Financial Advisor to develop a comprehensive, long range plan of finance based on the 70 percent income projected from the recently adopted transportation bill (HB 2313). The plan of finance will build upon the NVTA Project List for FY 2014 and NVTA's TransAction 2040 Regional Transportation Plan and overlay certain required financial analyses and metrics, such as debt capacity. The initial analysis shall focus on the most effective uses of the projected multi-year income stream, and provide a sound foundation for best financial management practices that include investment and debt affordability policies. Dependent upon the findings and recommendations from the initial phase and the recommendations of the Financial Working Group and the decisions of the NVTA, the long range financing plan will be an important prerequisite to the rating dialog and will enable NVTA to present a comprehensive financial strategy to the rating agencies and participants in the bond market. This approach will give the rating agencies the in-depth analysis and a financing plan on which to perform their credit analysis and help NVTA achieve credibility with the participants in the bond market.

Initial Phase of Finance Development

The company will develop a comprehensive plan of finance that encompasses NVTA's long range capital plan and revenue forecast. The plan shall provide alternatives for financing the transportation program. The individual tasks and deliverables will be:

1. An analysis of debt vs. pay-as-you-go financing, including an analysis of alternatives to debt financing.
2. An analysis of various financial alternatives and debt structures, including, but not limited to fixed rate debt, variable rate debt, & interim financing. Identify the types and amounts of securities required for NVTA to issue a bond. How do these requirements compare to those of larger jurisdictions requirements? Recommend specific details and schedule for an initial bond issue, including size, maturity schedules, timing of sale, call provisions and other related items.
3. Analyze the impact of items 1 and 2 on the legal and credit provisions of NVTA's borrowing program, such as debt service coverage thresholds, including an analysis of the implications and potential impacts on localities of the issuance of debt by NVTA.
4. An analysis of implications and potential impacts on NVTA and the localities should another entity or conduit borrower, such as the Virginia Resource Authority, issue debt on behalf of NVTA member jurisdictions supported by the 70 percent share of funding NVTA retains.
5. An analysis of pros and cons of bond sales supported by the 70 percent share of funding NVTA retains through NVTA versus individual locality or localities.
6. Attend all NVTA Financial Working Group meetings
7. Participate in conference calls and meetings as necessary
8. Prepare and provide a memorandum and presentation for the NVTA Board on July 24, 2013, and a presentation to the Financial Working Group before the NVTA meeting.
9. Provide other financial advisory services, as requested by NVTA

A Future Phase

1. Support the Council of Counsels, Bond Counsel and the Financial Working Group with the bond validation proceedings, as needed, including potential expert witness testimony
2. Develop financial, investment and debt affordability policies, in accordance with the recommendation of the financial working group
3. Develop a multi-year debt capacity model, which can accommodate various scenarios and “what if” analysis
4. Work with NVTAs bond counsel, McGuireWoods, to review bond validation authorizing resolution and documents, including the following:
 - a. Review NVTAs plan to issue the bond validation suit. Analyze, evaluate and, if appropriate, recommend modifications to NVTAs plan.
 - b. Work with NVTAs staff and McGuire Woods to complete the authorizing resolution, and to review all documentation, including ordinances and bond documents relating to the bond validation suit, and make recommendations as appropriate.
5. Provide options and a recommendation regarding an optimal long-range plan of finance. Recommend specific details and schedule for this initial bond issue, including size, maturity schedules, timing of sale, call provisions and other related items.

DRAFT FY 2014 Administrative Budget
July 18, 2013

		<u>FY 2008</u>	Proposed FY 2014	Draft <u>FY 2015</u>
Legal	1	\$125,000	\$125,000	\$0 Bond Counsel expenses (to be reimbursed by bond issue) + Other costs associated with validation
Public Outreach	2	\$25,000	\$30,000	\$75,000 Includes part time PIO in FY 2015
Organizational	3	\$212,500	\$156,000	\$179,227 Executive Director and administrative support; ED hired 8/15/13; administrative support 9/1/13
Financial	4	\$162,500	\$178,333	\$230,000 CFO + Accountant (9/1/13, 11/1/13)
Project Implementation	5	\$144,000	\$90,000	\$144,000 Two Program Coordinators; Start dates (10/1/13 and 1/1/14)
Fringe Benefits	6		\$127,300	\$183,968 Budgeted at 30% of personnel costs
Office Space Lease	7	\$78,750	\$2,550	\$5,100 Waived for first six months
Office Space Build Out	8	\$81,000	\$36,000	\$6,000 Furniture, computers for six people (FY 2014) + PIO (FY 2015)
Telecommunications Equip.	9	\$18,000	\$10,000	\$12,000 Cell phones for five people (FY 2014); six people (FY 2015)
Vehicle/Transportation	10	\$35,560	\$6,000	\$14,000 Mileage allowance
Financial Services	11		\$80,000	\$60,000 PFM contract (FY 2014); Other financial services (FY 2015)
Operating Expenses	12	\$30,000	\$10,000	\$10,000 Copies, Postage
Insurance	13	<u>\$7,500</u>	<u>\$3,000</u>	<u>\$3,000</u> Continue existing directors and officers coverage. Additional coverage: General Liability
Subtotal		\$919,810	\$854,183	\$922,295
Contingency (20%)		<u>\$183,962</u>	<u>\$170,818</u>	<u>\$184,459</u>
Total		\$1,103,772	\$1,025,000	\$1,106,754

1. Costs are expected to be similar as the bond validation in 2007.

2. FY 2014: rebuild website (\$20,000) + public notifications/outreach (\$10,000). FY 2015: Part time public information officer (\$60,000) + public notifications/outreach (\$10,000) + website maintenance (\$5,000)

3. Assumes ED hired 8/15/13. Annual Salary: \$155, 227 (\$130,000 + inflation); 10.5 months = \$135,823. Admin. Assistant starting 9/1/13. Annual = \$24,000. 10 month = \$20,000

4. CFO = \$150,000. Start 9/1/13. 10 months = \$125,000. Accountant = \$80,000 Starting 11/1/13. 8 months = \$53,333.

5. Two Staff Coordinators. Annual Salary: \$72,000 each. One hiring on 10/1/13 and one on 1/1/14

8. \$6,000 per employee including work station and computer.

10. Mileage allowance: \$2,000 per employees (half year - FY 2014)

11. PFM Phase I work = \$80,000. FY 2015 include \$60,000 for financial support.

12. Copies and Postage. Internet and phone covered by NVRC

13. \$500 for directors and officers coverage. \$2,500 for General liability coverage

FY 2014 Projected Revenue for Administrative Expenses
July 18, 2013

Existing Cash On Hand	\$212,117	
Interest on Transportation Revenues	\$100,000	
Billed to Local Governments (see below)	<u>\$712,883</u>	
Total	\$1,025,000	\$1,025,000

	2010	
	Population	
Alexandria	6.30%	\$44,912
Arlington	9.40%	\$67,011
Fairfax City	1.00%	\$7,129
Fairfax County	48.00%	\$342,184
Falls Church	0.60%	\$4,277
Loudoun	14.20%	\$101,229
Manassas	1.70%	\$12,119
Manassas Park	0.60%	\$4,277
Prince William	18.20%	<u>\$129,745</u>
	100.00%	\$712,883



Davenport Public Finance
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901 East Cary Street – 11th Floor
Richmond, Virginia 23219-4037
804-697-2900

MEMORANDUM

To: Hon. Scott York

From: Courtney E. Rogers, *Senior Vice President, Davenport Public Finance*

Re: Northern Virginia Transportation Authority

Cc: Tim Hemstreet, County Administrator
Charles Yudd, Assistant County Administrator
Ben Mays, Chief Financial Officer
Penny Newquist, Deputy Chief Financial Officer
Janet Romanchyk, Comptroller
Martina Williams, Debt Manager
David P. Rose, *Senior Vice President and Manager, Davenport Public Finance*
Joe Mason, *Senior Vice President, Davenport Public Finance*

Date: May 22, 2013

With the recent passage of HB 2313 and subsequent signing of the legislation by Governor McDonnell, planning for use of the approximately \$270 million+ in annual transportation revenue has begun in earnest. It has come to our attention, through consultation and discussion with County Staff, that both you and they have identified a number of critical and fundamental questions that need to be addressed regarding the strategic use of the annual revenues coming to the NVTa. As Financial Advisor to Loudoun County, Davenport & Company LLC (“Davenport”) shares these concerns and through this letter, we seek to further articulate them, as well as to suggest a proactive path forward.

As you are aware, 30% of the annual revenue derived from HB 2313 will go directly to the localities. These revenues may either be used to cash fund projects, or leveraged, as each individual locality determines. The remaining 70% of annual revenue may be used as determined collectively by the NVTa board, insofar as such use is consistent with State Statutes. It is the monies making up the 70% and the planning process for their use that we wish to draw your attention.

According to County Staff, it appears that a decision has been made, at least among several of the parties participating in the various NVTAs working groups, to leverage these future revenues through the issuance of debt by the NVTAs, rather than using the funds on a pay-as-you-go basis in the coming year. While there are many factors that may influence the NVTAs' decision to issue debt or cash fund projects, to our knowledge, the rationale to use leverage versus other options has not been fully vetted based on the financial environment we are in today.

It is our understanding that the NVTAs distributed draft "Debt Policies" to its members pursuant to a memorandum dated January 7, 2008, and it is pursuant to these policies that the NVTAs anticipate issuing debt by leveraging future revenue streams. These policies make certain assumptions about the structural requirements for the NVTAs to issue bonds on an investment grade basis. For example, the policies establish a requirement that annual revenue must exceed annual debt service by more than 150% (i.e., for every \$1.00 of debt service the NVTAs need \$1.50 of revenue) and that the NVTAs must establish a reserve funded from bond proceeds. These policies may, or may not, be consistent with the rating objective or other legal covenant requirements commonly accepted in today's municipal marketplace. For example, if Loudoun County were to obtain its proportionate share of the 70% in the form of a direct payment, then the County could leverage these dollars without having to require roughly \$1.50 of revenues for each \$1.00 of debt service. Moreover, a debt service reserve fund, costly in today's interest rate environment, would most likely be unnecessary. Finally, the interest rate(s) paid by Loudoun could be equal, if not lower than that of the NVTAs depending upon the ultimate credit/security determined by Loudoun.

There have been material changes in the Public Capital Markets since the financial crisis in late 2008. Any policies or debt issuance contemplated in today's market must be reviewed based on the current environment and not policies promulgated in 2008. Further, it is our understanding that Loudoun County Staff has not been involved in the development or recommendations of these policies. At a minimum, the NVTAs planning process needs to first incorporate a multi-faceted review of any and all Plan of Finance options before the NVTAs moves forward with a bond issue or bond validation suit.

We respectfully recommend a more measured, consensus-driven approach. All parties will benefit from a full understanding of all alternatives by NVTAs members and recognition that critical choices made now will have far reaching implications for the member localities over the next 20 years or more. We would be pleased to participate in the planning process to add our perspective to the alternatives under consideration. Davenport serves as financial advisor to five of the nine localities that are NVTAs members (Loudoun County and the Cities of Alexandria, Fairfax, Manassas Park and Falls Church) and, as such, we believe that our clients' interests would be best served by an inclusive approach to the planning process.

We recognize the magnitude of the decisions related to the utilization of revenues derived from HB 2313 and the potential issuance of debt by the NVTAs. Prior to any formal decisions, we

believe it is imperative for Loudoun and the other members to have a clear understanding of the ultimate Plan of Finance and the rationale for any currently proposed Plan of Finance. To that end, we suggest a meeting take place between the key stakeholders, including their Finance Staff and respective Financial Advisor(s) so that all affected parties can be fully aware of and have input into the final Plan of Finance for the NVTa.

We believe that three members, the Counties of Arlington, Prince William and Fairfax are served by Public Financial Management, and that the City of Manassas has worked with Springsted in the past. Davenport has worked on regional projects effectively with both of these firms to the benefit of all interested parties.

Suggested Plan of Action:

As a next step, we suggest that the NVTa have the two Financial Advisors who represent the majority of the stakeholders, Davenport and Public Financial Management, collectively present the pros and cons of using the 70% as pay-go funding versus leveraging the funds by issuing bonds. Some of the items that would be discussed include:

- If bonds are issued should the bonds be leveraged by NVTa or the individual localities;
- What are the credit implications of NVTa borrowing on the individual localities if any;
- What happens if the General Assembly were to make changes to the formula in later years while bonds are still outstanding;
- Do the draft policies need further refinement in light of the 2008 credit crisis;
- Are there other alternatives to debt financing which NVTa should consider;
- How will debt issued by NVTa be viewed by the rating agencies as it relates to the individual localities? (eg. Overlapping debt)

Northern Virginia Transportation Authority

MEMORANDUM

TO: Martin E. Nohe, Chairman
Northern Virginia Transportation Authority

Members
Northern Virginia Transportation Authority

FROM: David Snyder
Legal Working Group, Chairman
Northern Virginia Transportation Authority

SUBJECT: Legal Working Group Third Interim Report

DATE: July 18, 2013

Background and Recommendations:

On Tuesday, July 16, 2013, the NVTA Legal Working Group held its third meeting in the City of Falls Church.

I presided at that meeting. Also in attendance were Steve MacIsaac, Angela Horan, Ellen Posner, John Foster, Rob Dickerson, Erin Ward, Corinne Lockett, Tom Biesiadny, Todd Wigglesworth, Jennifer Fioretti, Monica Backmon, Arthur Andersen, Cindy Mester, Rob Whitfield, Chris Harlow, and Mark Thomas.

The meeting was called to order at 10:00am.

The first order of business was the delivery of updates from the NVTA's other working groups. Steve MacIsaac delivered a brief update on the activities of the NVTA Project Implementation Group. Because NVTA's Project Implementation Group's Staff Coordinator Jennifer Fioretti was in attendance, she would later in the meeting address the Legal Working Group on specific matters considered and actions taken by the Project Implementation Group since NVTA's June 20, 2013, meeting.

In conjunction with Tom Biesiadny, Ellen Posner then delivered a brief synopsis of the matters considered by and actions taken by NVTA's Financial Working Group which were relevant to issues referred to or under consideration by the Legal Working Group. The Financial Working Group last met on July 15, 2013. One matter that has been the subject of ongoing discussion by both the Financial and Legal Working Groups was the development of Memoranda of Agreement ('MOAs') as between NVTA and its constituent counties and cities with regard to matters of fund distribution, annual reporting, documentation, reimbursements, and town disbursements. Both the Financial Working Group and Legal Working Group agreed that such

“MOAs” were essential for NVTa and locality operational needs and record keeping purposes. Consequently, a multi-part motion was made, seconded, and unanimously adopted that the Legal Working Group, in tandem with the Financial Working Group, recommend to NVTa at its July 24, 2013, meeting that none of the funds generated by HB 2313 be disbursed until acceptable MOAs had been developed, agreed to, and executed by NVTa and its respective member localities and that NVTa request that its Financial Working Group confer and work with NVTa’s Council of Counsels and each of NVTa’s member locality’s counsel and staff to develop and prepare a working draft of a proposed MOA to be reviewed and considered by NVTa’s Financial Working Group at its next scheduled meeting and by the Legal Working Group at its August 20, 2013, meeting.

Jennifer Fioretti then delivered a brief update on the matters considered and actions taken by NVTa’s Project Implementation Group at its July 8, 2013, meeting. She again described in depth the criteria used and analysis undertaken by the Project Implementation Group in developing the list of projects to be funded by NVTa in FY 2014 and the criteria used, analysis undertaken, and methodology employed by the Project Implementation Group in selecting those projects that the Project Implementation Group would recommend to NVTa for FY 2014 bond funding or pay as you go (“pay go”) funding. She and members of the Legal Working Group also discussed recent activities by NVTa’s VRE and WMATA subgroups with regard to project scenarios offered by and/or on behalf of those transit agencies which could qualify for NVTa project funding in FY 2014 and beyond. She advised the Legal Working Group that, based upon all the analyses made by and comments received by the Project Implementation Group to date, and with input from the Financial Working Group, the Project Implementation Group was prepared to recommend to NVTa funding a \$116,000,000 “pay go” project list and an estimated \$90,000,000 bond issuance project list for FY 2014 as is permitted by law.

Ms. Fioretti also circulated for the Legal Working Group’s information and consideration a table entitled “FY14 Project Selection Ranking Methodology (July 8, 2013)” (copy attached). This table-in summary format- described the criteria developed and the methodology used by the Project Implementation Group to select projects that would be recommended for FY 2014 funding by NVTa.

Based upon the matters contained in Ms. Fioretti’s presentation on June 19, 2013, her follow-up presentation on July 16, 2013, and the matters set forth on the summary table, a motion was made, seconded, and unanimously passed to support as a matter of law the projects that the Project Implementation Group would be recommending for funding in FY 2014. A follow-up motion was made, seconded, and unanimously passed which would also support as a matter of law the methodology developed and used by the Project Implementation Group in selecting projects for bond funding and “pay-go” funding by NVTa in 2014.

The Legal Working Group next discussed the related matters of bond counsel retention by NVTa and the possible filing of a bond validation proceeding by NVTa. Ellen Posner updated the Legal Working Group with respect to NVTa’s decision to continue with McGuire Woods as its bond counsel subject to execution of an updated retainer agreement with the firm. She also briefly outlined and explained the procurement process used by NVTa in 2007 when it initially retained McGuire Woods as its bond counsel and NVTa’s 2013 decision to continue that relationship. In order to continue that relationship, NVTa would be asked to approve an updated retainer agreement at its July 24, 2013, meeting.

With respect to the filing of any potential bond validation proceeding by NVTA, Ellen Posner explained that, pursuant to NVTA's previous directives, NVTA's counsel was continuing to make the necessary preparations in the event that NVTA authorized a bond issuance and directed that a bond validation proceeding be filed. A question was raised as to where such a proceeding might be filed. Counsel replied that a concrete decision had not yet been made as to venue since NVTA would need to authorize where any such suit was filed. However, filing in the Fairfax County Circuit Court seemed logical since NVTA's current home is Fairfax. There was a follow-up question posed regarding the overall timing of any such suit. Counsel explained that the answer to that question depended on whether and when NVTA authorized any such filing so as to commence the statutory timetable. Given the expedited consideration accorded to a bond validation proceeding as provided by statute and given NVTA's recent historical experience, a reasonable estimation would be that final resolution could be had in approximately 7-8 months after initial filing in the Circuit Court. Steve MacIsaac reported that he recently had a follow-up conversation with Assistant Attorney General Jeff Allen with regard to the Commonwealth's possible participation in any such proceeding and that Mr. Allen indicated internal discussions on this matter were ongoing and that the Commonwealth did not disfavor any such request.

Based upon those discussions and previous discussions regarding these matters, the Legal Working Group entertained a multi-part motion with regard to bond counsel retention and the possible filing of a bond validation proceeding. A motion was made, seconded, and passed unanimously that would support the continuation of McGuire Woods as NVTA's bond counsel, that would support NVTA's execution of an updated retainer agreement with the law firm, and that would support NVTA's authorizing the filing of a bond validation proceeding for the reasons previously discussed by the Legal Working Group.

The Legal Working Group also briefly discussed several miscellaneous matters. These matters had both legal and financial implications for NVTA.

Ellen Posner advised the Legal Working Group that for NVTA's proposed FY 2014 budget a request of \$125,000 was included under the column "Legal." That amount was designed to cover the upfront expenses associated with a bond issuance and a bond validation proceeding. She explained that the estimated amount of \$125,000 was based upon NVTA's actual 2008 experience and had only been modestly adjusted for inflation. None of those funds were earmarked for NVTA's Council of Counsels legal services as those services are donated free of charge by the participant localities.

The Legal Working Group then briefly discussed the Financial Working Group's recommendation for the payment of NVTA's proposed FY 2014 administrative expenses. The Financial Working Group will propose to the NVTA that in order to pay those expenses, NVTA first use funds from a \$200,000 grant that NVTA received from the state and the interest earned on NVTA's unspent funds on account with the balance coming from each locality's proportionate 30% revenues or a locality's own funds. In either event, each locality would be billed for its respective, obligated amounts via invoice.

The next legal/ financial matter discussed involved liability and insurance coverage for NVTA. Tom Biesiadny advised that there were amounts included in NVTA's proposed FY 2014 budget to account for the necessary increase in insurance coverage due to NVTA's expanded activities

and operations. Since the Legal Working Group was in general agreement that the NVTAs enabling statute was unclear as to the extent of NVTAs sovereign immunity and related liability issues affecting the entity, NVTAs appointed members, and its employees, the Legal Working Group concluded that the liability and insurance issues warranted greater analysis. Accordingly, a motion was made, seconded, and passed unanimously to recommend to the NVTAs that it direct its staff and its Council of Counsels develop a recommendation for the liability issues and a recommendation as to appropriate insurance coverage. In addition, the Legal Working Group agreed to carry this matter over for additional consideration at its next meeting.

The other legal/financial matter involved the towns. Tom Biesiadny advised that Fairfax County staff had met with representatives from the Towns of Herndon and Vienna and that the respective County and Town staffs were in general agreement that the school aged population method was the preferred method to calculate the towns' respective shares of the County's 30% revenues under HB 2313. Counsel for Prince William County indicated that Prince William County staff members had met with Town of Dumfries staff members and those discussions were generally in line with the position of Fairfax County and its towns. Since there was no Loudoun County representative present at the July 16, 2013, Legal Working Group meeting, there was no update as to the status of discussions as between Loudoun County and the Town of Leesburg on this issue. Consequently, the Legal Working Group deemed it best to carry this matter over to its next meeting.

The Legal Working Groups next meeting is scheduled for Wednesday, August 20, 2013, at 10:00am in the City of Falls Church.

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

RESOLUTION

CONFIRMING THE APPOINTMENT OF BOND COUNSEL AND AUTHORIZING THE EXECUTION OF AN ENGAGEMENT LETTER

WHEREAS, the Northern Virginia Transportation Authority ("NVTA") is a political subdivision of the Commonwealth of Virginia created by the Northern Virginia Transportation Authority Act, Chapter 48.2, of Title 15.2, of the Code of Virginia of 1950, as amended (the "Act"); and

WHEREAS, Section 15.2-4839 of the Act authorizes and empowers NVTA to issue bonds and other evidences of debt and provides that the provisions of Article 5 (section 15.2-4519 et seq.) of Chapter 45 of Title 15.2 of the Code of Virginia of 1950, as amended shall apply, *mutatis mutandis*, to the issuance of such bonds or other debt; and

WHEREAS, NVTA is proposing to issue bonds and other evidences of debt and to file a bond validation suit in furtherance of that issuance, necessitating the assistance of bond counsel; and

WHEREAS, McGuireWoods LLP ("McGuireWoods") was approved as bond counsel to NVTA by resolution adopted July 12, 2007; and

WHEREAS, NVTA desires to confirm McGuireWoods as bond counsel for NVTA's Fiscal Year 2014 bond issuance upon the recommendation of the Legal Working Group, which interviewed McGuireWoods in connection with selecting NVTA's bond counsel, subject to final approval by NVTA on July 24, 2013; and

WHEREAS, NVTA has agreed to pay to McGuireWoods the amount of \$50,000.00 in fees plus its actually-incurred expenses, with the remainder of the bond counsel fees to be paid on a contingent basis; and

WHEREAS, McGuireWoods has agreed to continue its engagement as NVTA's bond counsel on such terms; and

WHEREAS, NVTA and McGuireWoods intend to formalize their relationship in an engagement letter to be executed by both parties.

After careful consideration and to further the public purposes for which NVTA was created, NOW, THEREFORE, BE IT RESOLVED BY NVTA THAT:

1. NVTA hereby approves and authorizes the firm of McGuireWoods to continue to act as NVTA's bond counsel for purposes of NVTA's Fiscal Year 2014 bond issuance and for the filing and prosecution of a bond validation suit for such bond issuance on the terms and conditions set forth in the engagement letter to be signed by both parties.

2. NVT A authorizes the Chairman of NVT A to sign the engagement letter with McGuireWoods on behalf of NVT A.

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

RESOLUTION

AUTHORIZING CERTAIN LEGAL PROCEEDINGS IN CONNECTION WITH THE ISSUANCE OF THE AUTHORITY'S TRANSPORTATION FACILITIES REVENUE BONDS

July 24, 2013

WHEREAS, the Northern Virginia Transportation Authority ("NVTa") is a political subdivision of the Commonwealth of Virginia (the "Commonwealth") created by the Northern Virginia Transportation Authority Act (the "NVTa Act"), Chapter 48.2, Title 15.2, Code of Virginia of 1950, as amended (the "Virginia Code"); and

WHEREAS, as provided by Section 15.2-4831 of the NVTa Act, NVTa embraces the Counties of Arlington, Fairfax, Loudoun, and Prince William, and the Cities of Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park (collectively, the "Member Localities"); and

WHEREAS, Section 15.2-4839 of the NVTa Act authorizes and empowers NVTa to issue bonds and other evidences of debt and provides that the provisions of Article 5 (Section 15.2-4519 et seq.) of Chapter 45 of Title 15.2 of the Virginia Code, shall apply, *mutatis mutandis*, to the issuance of such bonds or other debt; and

WHEREAS, Section 15.2-4519 of the Virginia Code provides that NVTa's bonds may be payable from and secured by a pledge of all or any part of the revenues, moneys or funds of NVTa as specified in a resolution adopted or indenture entered into by NVTa; and

WHEREAS, on April 3, 2013, the Virginia General Assembly adopted the Governor's substitute for House Bill 2313 ("HB 2313"), which provides, among other things, for transportation funding and related reform both on a statewide basis and on a regional basis for NVTa and the Member Localities; and

WHEREAS, under HB 2313, the Northern Virginia Transportation Authority Fund (the "Fund") will receive the revenues dedicated to it under §§58.1-638, 58.1-802.2 and 58.1-1742 of the Virginia Code and any other funds that may be appropriated to the Fund by the General Assembly (the "HB 2313 Transportation Revenues"); and

WHEREAS, NVTa has determined to proceed with the issuance of its bonds (as more particularly defined below, the "Bonds") under the terms and conditions set forth in that certain resolution adopted the date hereof entitled "**Resolution Authorizing the Issuance of Transportation Facilities Revenue Bonds**" (the "Bond Authorization Resolution"); and

WHEREAS, NVTa will apply the proceeds of the Bonds, along with other available funds, to pay the issuance and financing costs thereof, to fund any required reserves and to pay the costs of the construction and acquisition of the transportation facilities and projects described in the Bond Authorization Resolution; and

WHEREAS, debt service payments on the Bonds will be made from the portion of the HB 2313 Transportation Revenues pledged thereto as provided in the Bond Authorization Resolution and the Indenture (defined in the Bond Authorization Resolution) and the investment earnings on certain funds and accounts to be established under the Indenture; and

WHEREAS, the NVTa Act provides in Section 15.2-4520 that Article 6, Chapter 26, Title 15.2 of the Virginia Code pertaining to the judicial determination of validity of bonds (the "Validation Procedures") shall apply to all suits, actions and proceedings of whatever nature involving the validity of bonds issued by NVTa under the NVTa Act, and the Validation Procedures may, among other things, establish the validity of the bonds, the legality of all proceedings taken in connection with the authorization or issuance of the bonds, the validity of the tax or other means provided for the payment of the bonds, and the validity of all pledges of revenues and of all the covenants and provisions that constitute a part of the contract between the issuer and the owners of the bonds; and

After careful consideration and to further the public purposes for which NVTa was created, NOW, THEREFORE, BE IT RESOLVED BY NVTa THAT:

Authorization of Validation. In consultation with and with the approval of the Council of Counsels, McGuireWoods LLP, as Bond Counsel, is authorized to initiate a validation proceeding in the Circuit Court of Fairfax County with respect to the Bonds under the Validation Procedures to establish the validity of the Bonds and any or all of the other matters permitted under the Validation Procedures. Bond Counsel is also authorized on NVTa's behalf and under the supervision and direction of the Council of Counsels to continue all proceedings and undertake all acts (including without limitation the preparation and filing of required documents and the giving of required notices) as it may deem necessary and proper in connection with the validation proceeding.

Authorization of Defense. Acting under the supervision and direction of the Council of Counsels, Bond Counsel is also authorized to undertake the defense of NVTa in any legal challenge of the validity of the Bonds, HB 2313 and the HB 2313 Transportation Revenues or any related matters or proceedings.

Severability. If any section, subsection, paragraph, sentence, clause, or phrase of this Resolution is for any reason held or decided to be unconstitutional or invalid, such decision of unconstitutionality or invalidity shall not affect the validity of the remaining portions. NVTa hereby declares that it would have adopted this Resolution and each section, subsection, sentence, clause and phrase thereof even though any one or more sections, subsections, sentences, clauses, or phrases might be declared unconstitutional or invalid.

Effective Date. This Resolution shall take effect immediately.



Northern Virginia Transportation Authority

The Authority for Transportation in Northern Virginia

4031 University Drive ♦ Suite 200 ♦ Fairfax, VA 22030

www.TheNoVaAuthority.org

July 18, 2013

Ken Cuccinelli
Attorney General
10560 Main Street, Suite 218
Fairfax, VA 22030

RE: Meeting with the Northern Virginia Transportation Authority

Dear Attorney General Cuccinelli:

I am writing on behalf of the Northern Virginia Transportation Authority (NVTA) to express the Authority's desire to meet with the gubernatorial candidates regarding transportation issues in Northern Virginia. As you know, a strong transportation system is important to all regions of the Commonwealth, and is particularly critical to Northern Virginia, which experiences some of the worst traffic in the nation. HB 2313 (Howell, 2013) was recently passed by the General Assembly to help address our transportation needs, and we would like to extend an invitation to meet at your convenience to discuss NVTA's implementation of HB 2313 (Howell, 2013) and other issues in the context of the evolving transportation funding landscape in the Commonwealth. The Authority and the Commonwealth will each play significant roles in the implementation of this bill, and it will be important to effectively coordinate those efforts.

The NVTA looks forward to working with the next administration to implement projects that will improve mobility in our region, which will have direct, positive impacts on the economy of the Commonwealth and the daily lives of Northern Virginia residents and those who work in our area. To that end, we hope to establish a dialogue with you, answering any questions you may have about the Authority, and laying a foundation for a productive relationship between the Authority and the next Governor. To schedule a time to meet, please contact me at (703) 792-4620.

Sincerely,

Martin E. Nohe
Chairman

Cc: Members, Northern Virginia Transportation Authority



Northern Virginia Transportation Authority

The Authority for Transportation in Northern Virginia

4031 University Drive ♦ Suite 200 ♦ Fairfax, VA 22030

www.TheNoVaAuthority.org

July 18, 2013

Terry McAuliffe
P.O. Box 13881
Arlington, VA 22219

RE: Meeting with the Northern Virginia Transportation Authority

Dear Mr. McAuliffe:

I am writing on behalf of the Northern Virginia Transportation Authority (NVTA) to express the Authority's desire to meet with the gubernatorial candidates regarding transportation issues in Northern Virginia. As you know, a strong transportation system is important to all regions of the Commonwealth, and is particularly critical to Northern Virginia, which experiences some of the worst traffic in the nation. HB 2313 (Howell, 2013) was recently passed by the General Assembly to help address our transportation needs, and we would like to extend an invitation to meet at your convenience to discuss NVTA's implementation of HB 2313 (Howell, 2013) and other issues in the context of the evolving transportation funding landscape in the Commonwealth. The Authority and the Commonwealth will each play significant roles in the implementation of this bill, and it will be important to effectively coordinate those efforts.

The NVTA looks forward to working with the next administration to implement projects that will improve mobility in our region, which will have direct, positive impacts on the economy of the Commonwealth and the daily lives of Northern Virginia residents and those who work in our area. To that end, we hope to establish a dialogue with you, answering any questions you may have about the Authority, and laying a foundation for a productive relationship between the Authority and the next Governor. To schedule a time to meet, please contact me at (703) 792-4620.

Sincerely,

Martin E. Nohe
Chairman

Cc: Members, Northern Virginia Transportation Authority

**Jurisdiction and Agency Coordinating Committee
Northern Virginia Transportation Authority**

MEMORANDUM

TO: Martin E. Nohe, Chairman
Northern Virginia Transportation Authority

Members
Northern Virginia Transportation Authority

FROM: Monica Backmon, Chairman
Jurisdiction and Agency Coordinating Committee
Northern Virginia Transportation Authority

SUBJECT: JACC Approval of the Reallocation of Regional Surface Transportation Program Funds for the Cities of Fairfax and Falls Church

DATE: July 24, 2013

Background:

On September 11, 2008, the NVTa delegated the authority to approve requests to reallocate Congestion Mitigation and Air Quality (CMAQ) and Regional Surface Transportation Program (RSTP) funding between projects that were previously approved by the NVTa to the Jurisdiction and Agency Coordinating Committee (JACC).

On July 11, 2013, the City of Fairfax, Arlington and Fairfax Counties and the Town of Herndon requested such reallocations. The reallocation requests are noted below:

City of Fairfax

- Transfer \$20,394 in residual Regional Surface Transportation Program funds from UPC 82838 Traffic Signal Controller Upgrades (project complete) to UPC 103038 Signal Optimization

Arlington County

- Reallocate \$555,694 in residual FY 2010 Regional Surface Transportation Program (RSTP) funds from TransAction 2040 (UPC 93250) to (UPC 101689) Transportation System Management and Communications Plant Upgrade (Phase III).

Fairfax County

- Transfer \$380,000 in FY 2013 Regional Surface Transportation Program (RSTP) funds from the Rolling Road Loop Ramp project (UPC 100391) to the Virginia

Department of Transportation (VDOT) administered Walney Road Improvements project (UPC 104103)

Town of Herndon

- Transfer \$49,494 of remaining Congestion Mitigation Air Quality (CMAQ) funds from “Pedestrian and Bike Improvements for Elden Street” (UPC 86414) to Herndon Metrorail Intermodal Access Improvements (UPC 104328); and \$3,843 of remaining CMAQ funds from “Traffic Signal Signalization” (UPC 70583) to Herndon Metrorail Intermodal Access Improvements (UPC 104328).

NVTA’s delegation requires that the JACC notify the NVTA of these requests. The JACC approved these requests on July 11, 2013. Unless otherwise directed, I will send the attached letter to VDOT NOVA District Administrator, Helen Cuervo, asking that the funds be reallocated.

Cc: Members, NVTA Jurisdictional and Agency Coordinating Committee

Northern Virginia Transportation Authority

4031 University Drive, Suite 200
Fairfax, Virginia 22030

July 24, 2013

Mr. Helen Cuervo
District Administrator
Virginia Department of Transportation
4975 Alliance Dr. Suite 4E-342
Fairfax, Virginia 22030

Reference: Request to Reallocate CMAQ and RSTP Funds for the City of Fairfax,
Arlington and Fairfax Counties and the Town of Herndon

Dear Ms. Cuervo:

On September 11, 2008, the NVTa delegated the authority to approve requests to reallocate Congestion Mitigation and Air Quality (CMAQ) and Regional Surface Transportation Program (RSTP) funding between projects that were previously approved by the NVTa to the Jurisdiction and Agency Coordinating Committee (JACC).

On July 11, 2013, the City of Fairfax, Arlington and Fairfax Counties and the Town of Herndon requested such reallocations. The reallocation requests are noted below:

City of Fairfax

- Transfer \$20,394 in residual Regional Surface Transportation Program funds from UPC 82838 Traffic Signal Controller Upgrades (project complete) to UPC 103038 Signal Optimization

Arlington County

- Reallocate \$555,694 in residual FY 2010 Regional Surface Transportation Program (RSTP) funds from TransAction 2040 (UPC 93250) to (UPC 101689) Transportation System Management and Communications Plant Upgrade (Phase III).

Fairfax County

- Transfer \$380,000 in FY 2013 Regional Surface Transportation Program (RSTP) funds from the Rolling Road Loop Ramp project (UPC 100391) to the Virginia Department of Transportation (VDOT) administered Walney Road Improvements project (UPC 104103)

Town of Herndon

- Transfer \$49,494 of remaining Congestion Mitigation Air Quality (CMAQ) funds from "Pedestrian and Bike Improvements for Elden Street" (UPC 86414) to Herndon Metrorail Intermodal Access Improvements (UPC 104328); and \$3,843 of remaining CMAQ funds from "Traffic Signal Signalization" (UPC 70583) to Herndon Metrorail Intermodal Access Improvements (UPC 104328).

Please take the necessary steps to reallocate these funds in the Transportation Improvement Program and the State Transportation Improvement Program. Thank you very much.

Sincerely,

Monica Backmon
NVTJ JACC Chairman

Cc: Jan Vaughn, Transportation Planning Section, VDOT
Dic Burke, Transportation Planning Section, VDOT
Wendy Block Sanford, Director, City of Fairfax Department of Transportation
Jennifer Fioretti, Planner, Capital Projects Manager, Arlington County
Ray Johnson, Transportation Planner, Fairfax County
Mark Duceman, Planner, Town of Herndon



DEPARTMENT OF ENVIRONMENTAL SERVICES
Division of Transportation and Development

Planning Bureau 2100 Clarendon Boulevard, Suite 900, Arlington, VA 22201
TEL 703-228-3681 FAX 703-228-7548 www.arlingtonva.us

July 09, 2013

Ms. Monica Backmon, Chair
Northern Virginia Transportation Authority
Jurisdiction and Agency Coordinating Committee
4031 University Drive, Suite 200
Fairfax, VA 22030

Dear Ms. Backmon:

Arlington County seeks approval from the Northern Virginia Transportation Authority's Jurisdiction and Agency Coordinating Committee to reallocate \$555,694 in residual FY 2010 Regional Surface Transportation Program (RSTP) funds from TransAction 2040 to UPC 101689 Transportation System Management and Communications Plant Upgrade (Phase III).

If you have any questions or comments on this request, please contact Ms. Jennifer Fioretti, Regional Transportation Planning Coordinator at (703) 228-4967 or jfioretti@arlingtonva.us.

Sincerely,

A handwritten signature in blue ink, appearing to read "Dennis M. Leach".

Dennis M. Leach
Director

cc: Anna Fortune, VDOT NoVa District



City of Fairfax

10455 Armstrong Street
Fairfax, VA 22030-3630

Wendy Block Sanford
Transportation Director
Department of Public Works
(703) 385-7889
(703) 385-7863 FAX
Wendy.Sanford@fairfaxva.gov

June 26, 2013

Ms. Monica Backmon
Chairman, Jurisdiction and Agency Coordinating Committee
Northern Virginia Transportation Authority
4031 University Drive, Suite 200
Fairfax, VA 22030

Dear Ms. Backmon:

The City of Fairfax would like to request the following:

Transfer \$20,964 in residual RSTP funds from UPC 82838 Traffic Signal Controller Upgrades (project complete) to UPC 103038 Signal Optimization.

The signal optimization project is almost complete. The City requested additional work from the contractor, which increased the cost of the project. The transfer of these funds will enable the City to complete this project. VDOT is managing this project on behalf of the City under their Transportation Engineering on-call contract. If you have any questions, please contact me at (703) 385-7889 or Wendy.Sanford@fairfaxva.gov.

Sincerely,

A handwritten signature in cursive script that reads "Wendy Block Sanford".

Wendy Block Sanford
Transportation Director

cc: David Summers, City of Fairfax Public Works Director
Curt McCullough, City of Fairfax Traffic Engineer
Jan Vaughan, VDOT Urban Program Manager



County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

July 11, 2013

Ms. Monica Backmon, Chairman
Jurisdiction and Agency Coordinating Committee
Northern Virginia Transportation Authority
4031 University Drive, Suite 200
Fairfax, Virginia 22030

Re: Reallocation of Fairfax County Regional Surface Transportation Program Funds.

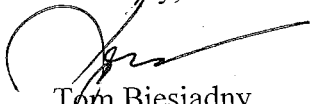
Dear Ms. Backmon: *Monica*

Fairfax County requests the approval of the Jurisdiction and Agency Coordinating Committee (JACC) to transfer the following funds:

- \$380,000 in FY 2013 Regional Surface Transportation Program (RSTP) funds from the Rolling Road Loop Ramp project (UPC 100391) to the Virginia Department of Transportation (VDOT) administered Walney Road Improvements project (UPC 104103).

On April 25, 2013, Fairfax County requested of the JACC an RSTP funds transfer in the amount of \$1,068,081 for the Walney Road Improvements, which was subsequently approved. This transfer will address an increased estimate in cost, and allow the project to proceed expeditiously. If you have any questions or concerns about this request please contact Ray Johnson at (703) 877-5617.

Sincerely,


Tom Biesiadny
Director

cc. Todd Wigglesworth, Coordination & Funding
Ray Johnson, Coordination & Funding
Seyed Nabavi, Capital Projects
Karyn Moreland, Capital Projects
Jan Vaughn, Virginia Department of Transportation
Arifur Rahman, Virginia Department of Transportation

TOWN OF
Herndon
DEPARTMENT OF PUBLIC WORKS

Robert B. Boxer
DIRECTOR
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July 5, 2013

Ms. Monica Backmon, Chair
Northern Virginia Transportation Authority --
Jurisdiction and Agency Coordinating Committee
Prince William County Department of Transportation
5 County Complex Court, Suite 290
Prince William County, VA 22192

RE: Town of Herndon - request to transfer Regional Congestion Mitigation and Air Quality (CMAQ) funds

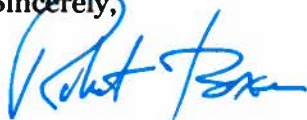
Ms. Backmon,

The Town of Herndon requests the approval of the Northern Virginia Transportation Authority - Jurisdiction and Agency Coordinating Committee to transfer CMAQ funds as listed below:

- \$49,494 of remaining CMAQ funds from 'Pedestrian and Bike Improvements for Elden Street' (UPC 86414) to 'Herndon Metrorail Intermodal Access Improvements' (UPC 104328); and
- \$3,843 of remaining CMAQ funds from 'Traffic Signal Signalization' (UPC 70583) to 'Herndon Metrorail Intermodal Access Improvements' (UPC 104328).

Both projects have been completed resulting in this request to transfer remaining CMAQ funds towards the town's CMAQ project named Herndon Metrorail Intermodal Access Improvements. If there are any questions or more information is needed, please contact me at (703)787-7368 or Mark Duceman, Transportation Program Manager at (703)787-7380. Thank you for your assistance.

Sincerely,



Robert B. Boxer, P.E.
Director of Public Works

c: Dana Singer, Deputy Director of Public Works
Mark Duceman, Transportation Program Manager
Jan Vaughan, Urban Program Manager, VDOT

MASTER INDENTURE OF TRUST

between

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

and

A TRUSTEE TO BE NAMED

Dated as of July 1, 2013

**Relating to
Northern Virginia Transportation Authority
Transportation Facilities Revenue Bonds**

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This **MASTER INDENTURE OF TRUST** (this "Master Indenture") is made as of July 1, 2013, between the **NORTHERN VIRGINIA TRANSPORTATION AUTHORITY**, a political subdivision of the Commonwealth of Virginia ("NVTA" or the "Authority"), and **A TRUSTEE TO BE NAMED**, and its successors (the "Trustee").

RECITALS

WHEREAS, NVTA is a political subdivision of the Commonwealth of Virginia (the "Commonwealth") created by the Northern Virginia Transportation Authority Act (the "NVTA Act"), Chapter 48.2, Title 15.2, Code of Virginia of 1950, as amended (the "Virginia Code"); and

WHEREAS, as provided by Section 15.2-4831 of the NVTA Act, as of the date hereof NVTA embraces the Counties of Arlington, Fairfax, Loudoun, and Prince William, and the Cities of Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park (as more particularly defined below, the "Member Localities"); and

WHEREAS, Section 15.2-4839 of the NVTA Act authorizes and empowers NVTA to issue bonds and other evidences of debt and provides that the provisions of Article 5 (Section 15.2-4519 et seq.) of Chapter 45 of Title 15.2 of the Virginia Code, shall apply, *mutatis mutandis*, to the issuance of such bonds and other evidences of debt; and

WHEREAS, Section 15.2-4519 of the Virginia Code provides that NVTA's bonds may be payable from and secured by a pledge of all or any part of the revenues, moneys or funds of NVTA as specified in a resolution adopted or indenture entered into by NVTA; and

WHEREAS, NVTA has determined that it is in the best interests of NVTA for NVTA to enter into this Master Indenture to provide for the issuance from time to time of its bonds and other evidences of debt for the purposes authorized under the NVTA Act; and

NOW, THEREFORE, NVTA hereby covenants and agrees with the Trustee and with the Owners, from time to time, of the Bonds, as follows:

ARTICLE I DEFINITIONS AND RULES OF CONSTRUCTION

Section 1.1 Definitions. The following words and terms shall have the following meanings in this Master Indenture unless the context requires otherwise:

"Account" means any account established in a Fund with respect to a Related Series of Bonds or otherwise pursuant to the terms of this Master Indenture or any Supplemental Indenture.

"Accreted Value" means with respect to Capital Appreciation Bonds of any Series, the amount set forth in the Related Series Supplement as the amount representing the initial public offering price plus the accreted and compounded interest on such Bonds as of any point in time.

"Agency Obligations" means senior debt obligations of U.S. government-sponsored agencies that are not backed by the full faith and credit of the U.S. government, including, but

not limited to, Federal Home Loan Mortgage Corporation debt obligations, Farm Credit System consolidated system wide bonds and notes, Federal Home Loan Banks consolidated debt obligations, Federal National Mortgage Association debt obligations, Student Loan Marketing Association debt obligations, Resolution Funding Corporation debt obligations, and U.S. Agency for International Development guaranteed notes.

"Amortization Requirement" as applied to any Term Bonds of any maturity for any Bond Year, means the principal amount or amounts fixed by, or computed in accordance with the terms of, the Related Series Supplement for the retirement of such Term Bonds by mandatory purchase or redemption on the Principal Payment Date or Dates established by such Series Supplement.

"Annual Budget" means the administrative expense budget of NVTa for any Fiscal Year as adopted by NVTa, as it may be amended from time to time throughout such Fiscal Year.

"Bond" or **"Bonds"** means any or all of the NVTa Debt issued pursuant to Article V, but excludes the Subordinate Obligations.

"Bond Counsel" means (i) McGuireWoods LLP or (ii) other counsel selected by NVTa which is nationally recognized as experienced in matters relating to obligations issued or incurred by states and their political subdivisions.

"Bond Credit Facility" means a line of credit, letter of credit, standby bond purchase agreement, municipal bond insurance or similar credit enhancement or liquidity facility established to provide credit or liquidity support for all or any portion of a Series of Bonds as provided in the Related Series Supplement.

"Bond Credit Provider" means, as to all or any portion of a Series of Bonds, the Person providing a Bond Credit Facility, as designated in the Related Series Supplement in respect of such Bonds.

"Bond Debt Service Fund" means the Bond Debt Service Fund established with respect to a Series of Bonds pursuant to Section 7.1.

"Business Day" means any day on which commercial banking institutions generally are open for business in New York and Virginia.

"Capital Appreciation Bonds" means Bonds the interest on which is compounded and accumulated at the rates and on the dates set forth in the Related Series Supplement and is payable upon redemption or on the maturity date of such Bonds or on the date, if any, upon which such Bonds become Current Interest Bonds.

"Commonwealth" means the Commonwealth of Virginia.

"Cost of Issuance Fund" means the Cost of Issuance Fund established with respect to a Series of Bonds as provided in Section 7.1.

"Current Interest Bonds" means Bonds the interest on which is payable currently on the Interest Payment Dates provided therefor in the Related Series Supplement.

"Custodian" means a bank or trust company that is (i) organized and existing under the laws of the United States or any of its states and (ii) acceptable to the Trustee.

"Debt Service Reserve Fund" means the Debt Service Reserve Fund established with respect to a Series of Bonds pursuant to Section 7.1. No Debt Service Reserve Fund shall secure any Subordinate Obligations.

"Defeasance Obligations" means noncallable (i) Agency Obligations, (ii) Government Obligations, (iii) Government Certificates, (iv) Defeased Municipal Obligations, and (v) Defeased Municipal Obligation Certificates.

"Defeased Municipal Obligation Certificates" means evidence of ownership of a proportionate interest in specified Defeased Municipal Obligations, which Defeased Municipal Obligations are held by a Custodian.

"Defeased Municipal Obligations" means obligations of the Commonwealth or any county, city, town, district, authority, agency, political subdivision or other public body of the Commonwealth, which are rated in the highest rating category by any Rating Agency, provision for the payment of the principal of and interest on which has been made by the deposit with a trustee or escrow agent of Government Obligations or Government Certificates, the maturing principal of and interest on which, when due and payable, will provide sufficient money to pay the principal of, redemption premium, if any, and interest on such obligations.

"DSRF Credit Facility" means a letter of credit, surety bond or similar credit enhancement facility acquired by NVTa to substitute for cash or investments required to be held in a Debt Service Reserve Fund for any Series of Bonds pursuant to the Related Series Supplement.

"DSRF Credit Provider" means the Person providing a DSRF Credit Facility.

"Escrow Fund" means an escrow fund relating to a Series of Refunding Bonds that may be established pursuant to the Related Series Supplement and Sections 7.1 and 7.2 hereof.

"Event of Default" means any of the events enumerated in Section 13.1.

"Facilities Agreement" means any contract or agreement that the Authority may enter into with one or more of the Member Localities or with the other parties contemplated by subdivision 4 of Section 15.2-4830 of the NVTa Act pursuant to which NVTa receives payments, as such contract or agreement may be modified, altered, amended and supplemented from time to time in accordance with its terms.

"Fiscal Year" means the twelve-month period commencing on July 1 of one year and ending on June 30 of the following year.

"Fund" means any fund established pursuant to the terms of this Master Indenture or any Supplemental Indenture.

"GAAP" means generally accepted accounting principles, existing from time to time, as applicable to state and local governmental units.

"Government Certificates" mean certificates representing ownership of United States Treasury bond principal at maturity or interest coupons for accrued periods, which bonds or coupons are held in the capacity of custodian by a Custodian that is independent of the seller of such certificates.

"Government Obligations" means direct obligations of, or obligations the payment of the principal of and interest on which is unconditionally guaranteed by, the United States of America.

"HB 2313" means the Governor's substitute for House Bill 2313, which the Virginia General Assembly adopted on April 3, 2013, and is set forth in Chapter 766 of the Virginia Acts of Assembly-2013 Session.

"HB 2313 Transportation Revenues" means the revenues dedicated to the NVTa Fund under Sections 58.1-638, 58.1-802.2 and 58.1-1742 of the Virginia Code as provided in HB 2313 and any other funds that may be appropriated to the NVTa Fund by the General Assembly.

"Interest Payment Date" means any April 1 or October 1, as the case may be; provided, however, that "Interest Payment Date" may mean, if so provided in a Series Supplement, such other date or dates provided therein or permitted thereby.

"Interest Requirement" for any Interest Payment Date, as applied to all of the Current Interest Bonds or a portion thereof, means the total of the interest regularly scheduled to become due on such Bonds on such Interest Payment Date. Interest expense shall be excluded from the definition of Interest Requirement to the extent that proceeds of any Bonds or other funds are held by the Trustee to pay such interest. Unless NVTa shall otherwise provide in a Supplemental Indenture, interest expense on Bond Credit Facilities drawn upon to purchase but not to retire Bonds, to the extent such interest exceeds the interest otherwise payable on such Bonds, shall not be included in the determination of an Interest Requirement.

"Majority Owners" means the Owners of at least 51% of the aggregate principal amount of the Bonds Outstanding.

"Master Indenture" means this Master Indenture of Trust dated as of July 1, 2013, between NVTa and the Trustee, as the same may be modified, altered, amended and supplemented in accordance with its terms by one or more Series Supplements and other Supplemental Indentures.

"Member Localities" means, collectively, the Counties of Arlington, Fairfax, Loudoun, and Prince William, and the Cities of Alexandria, Fairfax, Falls Church, Manassas and Manassas Park and any other localities which may be added to NVTa by amendment to the NVTa Act.

"Member Locality Distribution Fund" means the Member Locality Distribution Fund established by Section 7.1.

"NVTa" or "Authority" means the Northern Virginia Transportation Authority, a political subdivision of the Commonwealth of Virginia.

"NVTa Act" means the Northern Virginia Transportation Authority Act, Chapter 48.2, Title 15.2, Code of Virginia of 1950, as amended, including without limitation by HB 2313.

"NVTa Debt" means any bonds or other evidences of debt that NVTa is permitted to issue under the NVTa Act.

"NVTa Fund" means the Northern Virginia Transportation Authority Fund established pursuant to Section 15.2-4838.01 of the Virginia Code.

"NVTa Representative" means any of the Chairman, Vice Chairman or Executive Director of NVTa and any other member, officer or employee of NVTa authorized by resolution of NVTa to perform the act or sign the document in question.

"NVTa Revenues" means, in any period, all revenues received by NVTa during such period, except for the revenues and receipts from any Toll Facility for such period. Subject to the foregoing, NVTa Revenues shall include the following: (i) all HB 2313 Transportation Revenues, (ii) payments received by NVTa under any Facilities Agreement (except to the extent such payment may be generated by a Toll Facility), and (iii) any and all other revenues that may be identified as NVTa Revenues pursuant to a Supplemental Indenture.

"Officer's Certificate" means a certificate signed by an NVTa Representative and filed with the Trustee.

"Operating Expenses" means any expenditure made or to be made by NVTa that is properly categorized as an "expense" under GAAP, including without limitation the administrative expenses of NVTa and expenses incurred with respect to the operation and maintenance of any Project but shall exclude for this purpose expenses related to the payment of debt service on any Bonds or Subordinate Obligations.

"Operating Fund" means the Operating Fund established pursuant to Section 7.1.

"Opinion" or "Opinion of Counsel" means a written opinion of any attorney or firm of attorneys, who or which may be Bond Counsel or counsel for NVTa or the Trustee.

"Optional Tender Bonds" means any Bonds issued under this Master Indenture a feature of which is an option on the part of the Owners of such Bonds to tender to NVTa, or to the Trustee, any Paying Agent or other fiduciary for such Owners, or to an agent of any of the foregoing, all or a portion of such Bonds for payment or purchase.

"Outstanding" when used in reference to the Bonds and as of a particular date, means all Bonds authenticated and delivered under this Master Indenture except:

(a) Any Bond canceled or required to be canceled by the Trustee at or before such date;

(b) Any Bond in lieu of or in substitution for which another Bond shall have been authenticated and delivered under this Master Indenture;

(c) Any Bond deemed paid under Article XII except that any such Bond shall be considered Outstanding until its maturity or redemption date only for the purpose of actually being paid and for purposes of Articles III and IV and Section 6.1 (or the corresponding provisions of the Related Series Supplement, as the case may be); and

(d) Any Bond not deemed Outstanding under, but only to the extent provided for in, Section 15.2.

"Owner" means the registered owner of any Bond.

"Paying Agent" means any paying agent(s) for the Bonds (which may include the Trustee) and any successor or successors as paying agent(s) appointed pursuant to this Master Indenture or the provisions of any Series Supplement. Unless otherwise provided in a Series Supplement, the Trustee shall be the Paying Agent.

"Payment Date" means a date that is an Interest Payment Date or a Principal Payment Date or both.

"Person" means an individual, a corporation, a partnership, an association, a joint stock company, a trust, any unincorporated organization or a government or political subdivision thereof.

"Principal" means (i) with respect to a Capital Appreciation Bond, the Accreted Amount thereof (the difference between the stated amount to be paid at maturity and the Accreted Amount being deemed unearned interest) except when used in connection with the authorization and issuance of Bonds and with the order of priority of payments of Bonds after an Event of Default in which case "principal" means the initial public offering price of the Capital Appreciation Bond (the difference between the Accreted Amount and the initial public offering price being deemed interest) and (ii) with respect to the principal amount of any Current Interest Bond, the principal amount of such Bond payable in satisfaction of an Amortization Requirement, if applicable, or at maturity.

"Principal and Interest Requirements" for any Payment Date or for any period means the sum of the Principal Requirements and the Interest Requirements for such date or such period, respectively.

"Principal Payment Date" means any October 1 upon which the principal amount of any Bond is stated to mature or upon which the principal of any Term Bond is subject to

redemption in satisfaction of an Amortization Requirement or such other date or dates as may be provided by the Related Series Supplement.

"Principal Requirement" means for any Principal Payment Date, as applied to all Bonds or a portion thereof, the total of the principal regularly scheduled to become due on such Principal Payment Date. Principal payments shall be excluded from the definition of Principal Requirement to the extent that proceeds of any Bonds are held by the Trustee to pay such Principal.

"Project" means any transportation facility or project that NVTA may finance or provide pursuant to the NVTA Act.

"Project Fund" means the Project Fund to be established as with respect to a Series of Bonds provided in Section 7.1.

"Purchase Price" means the purchase price established in any Series Supplement for Optional Tender Bonds as the purchase price to be paid for such Bonds upon an optional or mandatory tender of all or a portion of such Bonds.

"Rating Agency" means, with respect to any Bonds Outstanding, any nationally recognized credit rating agency if and for so long as such rating agency, at the request of NVTA, maintains a rating on such Bonds.

"Rating Confirmation" means written evidence that no rating that has been requested by NVTA and is then in effect from a Rating Agency with respect to a Series of Bonds will be withdrawn, reduced, or suspended solely as a result of an action to be taken hereunder.

"Rebate Amount" means the liability of NVTA under Section 148 of the Tax Code (including any "yield reduction payments") with respect to any Series of Bonds as may be calculated or specified (including with such reserves or error margin as NVTA may deem appropriate) in accordance with the Related Series Supplement or the Related Tax Regulatory Agreement.

"Rebate Fund" means the Rebate Fund to be established with respect to a Series of Bonds as provided in Section 7.1.

"Refunding Bonds" shall have the meaning set forth in Section 5.3.

"Regional NVTA Funds" means the NVTA Revenues remaining after NVTA has made the FIRST distribution described in Section 8.1(b).

"Reimbursement Fund" means the Reimbursement Fund Related to a Series of Bonds that may be established by the Related Series Supplement and Section 7.2 hereof.

"Reimbursement Obligations" means any reimbursement or payment obligations of NVTA for which moneys in the Reimbursement Fund are pledged or payable pursuant to the provisions of this Master Indenture or any Series Supplement.

"Related" as the context may require, means (i) when used with respect to any Cost of Issuance Fund, Escrow Fund, Project Fund, Debt Service Reserve Fund, Rebate Fund or Reimbursement Fund, the Fund so designated and established by this Master Indenture and the Series Supplement authorizing a particular Series of Bonds, (ii) when used with respect to a Series Supplement, the Series Supplement authorizing a particular Series of Bonds, or Supplemental Indenture related thereto (iii) when used with respect to a Bond Credit Facility or Reimbursement Obligation, the Bond Credit Facility securing a particular Series of Bonds and the Reimbursement Obligation entered into in connection therewith.

"Reserve Determination Date" means (i) the tenth day after each Interest Payment Date, or, if such day is not a Business Day, on the first Business Day thereafter or (ii) any other date set forth in a Series Supplement or an Officer's Certificate for the valuation of a Debt Service Reserve Fund.

"Reserve Requirement" means, with respect to a Series of Bonds, the maximum Principal and Interest Requirements on such Bonds in the then-current or any future Fiscal Year, unless a greater or lesser amount (including \$0.00) is specified in the Related Series Supplement.

"Revenue Fund" means the Revenue Fund established by Section 7.1.

"Serial Bonds" means the Bonds of a Series that are stated to mature in semiannual or annual installments and that are so designated in the Related Series Supplement.

"Series" means all of the Bonds of a particular series authenticated and delivered pursuant to this Master Indenture and the Related Series Supplement and identified as such pursuant to such Series Supplement, and any Bonds of such Series thereafter authenticated and delivered in lieu of or in substitution for such Bonds pursuant to this Master Indenture and such Series Supplement, regardless of variations in lien status, maturity, interest rate, sinking fund installments or other provisions.

"Series Supplement" means a Supplemental Indenture providing for the issuance of a Series of Bonds, as such Series Supplement may be modified, altered, amended and supplemented by a Supplemental Indenture in accordance with the provisions of this Master Indenture.

"Subordinate Obligations" means any other NVT A Debt that is made specifically subordinate as to payment and security to the Bonds.

"Supplemental Indenture" means any indenture supplementary to or amendatory of this Master Indenture or any Supplemental Indenture or Series Supplement now or hereafter duly executed and delivered in accordance with the provisions of this Master Indenture, including a Series Supplement.

"Tax Code" means the Internal Revenue Code of 1986, as amended, as in effect upon the issuance of and thereafter applicable to any Series of Bonds and the regulations of the U.S. Department of the Treasury promulgated thereunder as in effect upon the issuance of and thereafter applicable to any Series of Bonds.

"Tax Regulatory Agreement" means, with respect to any Series of Bonds, the Tax Certificate and Regulatory Agreement, dated the date of the issuance of the Related Series of Bonds, between NVTa and the Trustee, as the same may be modified, altered, amended or supplemented pursuant to its terms.

"Term Bonds" means all or some of the Bonds of a Series, other than Serial Bonds, that shall be stated to mature on one or more dates and that are so designated in the Related Series Supplement.

"Toll Facility" means a facility provided in or to the service area embraced by NVTa upon which tolls for the use thereof are imposed, collected, and set, provided that such facility is either newly constructed or reconstructed solely with revenues of NVTa (or revenues that are under its control) in such a way as to increase the facility's traffic capacity.

"Trustee" means a trustee to be named, and its successors serving in the same capacity under this Master Indenture.

"Variable Rate Bonds" means any Bonds the interest rate on which is not established, at the time such Bonds are issued, at a single numerical rate for the entire term of the Bonds.

"Virginia Code" means the Code of Virginia of 1950, as amended.

Section 1.2 Rules of Construction. The following rules shall apply to the construction of this Master Indenture unless the context requires otherwise:

(a) Singular words shall connote the plural number as well as the singular and vice versa.

(b) Words importing the redemption or calling for redemption of Bonds shall not be deemed to refer to or connote the payment of Bonds at their stated maturity.

(c) All references in this Master Indenture to particular Articles, Sections or Exhibits are references to Articles, Sections or Exhibits of this Master Indenture unless otherwise indicated.

(d) The headings and table of contents as used in this Master Indenture are solely for convenience of reference and shall not constitute a part of this Master Indenture nor shall they affect its meaning, construction or effect.

(e) Unless specifically provided otherwise in this Master Indenture or a Supplemental Indenture, any requirement that an obligation be or remain in a particular rating category assigned by a Rating Agency shall be applied without regard to any refinement or gradation of the rating category by numerical modifier or otherwise.

(f) Unless otherwise provided in a Supplemental Indenture, where the character or amount of any asset, liability or item of income or expense is required to be determined or any consolidation, combination or other accounting computation is required to be made for the purposes hereof or for the purpose of any document, affidavit or certificate to be

executed and delivered in accordance with or pursuant this Master Indenture or Supplemental Indenture, the same shall be done in accordance with GAAP; provided, however, that whenever the context makes clear that the requirement is that cash, or its equivalent, be available to pay debt service on NVT A Debt, computations regarding such requirement shall be computed on a cash basis, and not on a GAAP basis.

ARTICLE II

ESTABLISHMENT OF TRUST

Section 2.1 Security for Bonds. (a) In order to provide for the payment of the principal of and the premium, if any, and interest on the Bonds issued hereunder, and to secure the performance of all of the obligations of NVT A with respect to the Bonds, this Master Indenture and the Series Supplements, subject to the terms hereof and thereof, NVT A pledges and grants to the Trustee:

(1) All of the Regional NVT A Funds; and

(2) All other property of any kind mortgaged, pledged or hypothecated to provide for the payment of or to secure the Bonds by NVT A or by anyone on its behalf and with its written consent at any time as and for additional security under this Master Indenture and the Series Supplements in favor of the Trustee, which is authorized to receive all such property at any time and to hold and apply it subject to the terms of this Master Indenture and the Series Supplements.

(b) In order to provide for the payment of the principal of and the premium, if any, and interest on each Series of Bonds issued hereunder, and to secure the performance of all of the obligations of NVT A with respect to such Series, this Master Indenture, and the Related Series Supplement, subject to the terms hereof and thereof, NVT A pledges and grants to the Trustee with respect to such Series (and to such Series only) the money and investments held in the Related Project Fund (if any), Bond Debt Service Fund and Debt Service Reserve Fund.

Section 2.2 Bond Credit Facility. Any Bond Credit Facility which is given to secure some, but not all, of the Bonds, together with money drawn or paid under it, shall be held by the Trustee solely as security for the Bonds of the Series to which such Bond Credit Facility is Related. Neither such Bond Credit Facility nor any money drawn or paid under it will secure the payment of any other Series of Bonds. The status of the Bond Credit Facility as a bond or a Subordinate Obligation or otherwise will be provided for in the Related Series Supplement.

ARTICLE III

GENERAL TERMS AND CONDITIONS OF BONDS

Section 3.1 Authority for Master Indenture. This Master Indenture has been executed and delivered under a resolution adopted by NVT A on July 24, 2013. NVT A has ascertained that the execution of and the transactions contemplated by this Master Indenture are in furtherance of both NVT A's purposes and the exercise of the powers granted to NVT A by the NVT A Act.

Section 3.2 Indenture Constitutes Contract. In consideration of the Owners' purchase and acceptance of the Bonds, the provisions of this Master Indenture and the Supplemental Indentures shall be a part of NVTA's contract with the Owners and shall be deemed to be and shall constitute a contract among NVTA, the Trustee and the Owners from time to time of the Bonds.

Section 3.3 Form and Details of Each Series of Bonds. The forms, details and terms of each Series of Bonds, the funds and accounts to be established with respect to such Series, and such other matters as NVTA may deem appropriate shall be set forth in the Related Series Supplement.

Section 3.4 Obligation of Bonds. This Master Indenture creates a continuing pledge and lien to secure the full and final payment of the principal of and premium, if any, and interest of each Series of Bonds. The Bonds of each Series are limited obligations of NVTA payable solely from the revenues, money and other property pledged by this Master Indenture and the Related Series Supplement. Each Bond shall contain on its face a statement to the effect that (i) it shall not be a debt of the Commonwealth or any political subdivision thereof (including any Member Locality) other than NVTA, and (ii) it shall not constitute indebtedness within the meaning of any debt limitation or restriction, except as may be provided under the Act.

Section 3.5 Payment of Bonds. The principal of and premium, if any, and interest on Bonds of each Series shall be payable in lawful money of the United States of America, but only from the revenues, money or property pledged to such payment pursuant to this Master Indenture and the Related Series Supplement. The principal of and premium, if any, and interest on Bonds of each Series shall be payable at such place or places and in such manner as specified in the Related Series Supplement. Unless otherwise provided in the Related Series Supplement, if a Payment Date for any Bonds of any Series or the date fixed for the redemption of any such Bonds is not a Business Day, then payment of the principal and premium, if any, and interest need not be made on such date, but may be made on the next succeeding date which is a Business Day, and if made on such next succeeding Business Day no additional interest will accrue for the period after such Payment Date or date fixed for redemption.

Section 3.6 Execution of Bonds. (a) Except as may be otherwise provided in the Related Series Supplement, all of the Bonds of each Series shall be executed on behalf of NVTA by, or bear the facsimile signature of the Chairman or Vice Chairman of NVTA, and the corporate seal of NVTA (which may be a facsimile) will be affixed (or imprinted or engraved if a facsimile) thereon and attested by the manual or facsimile signature of the Executive Director of NVTA.

(b) If any of the officers who have signed or sealed any of the Bonds of a Series or whose facsimile signature is on such Bonds ceases to be an officer of NVTA before the Bonds so signed and sealed have been actually authenticated by the Trustee or delivered by NVTA, the Bonds nevertheless may be authenticated, issued and delivered with the same force and effect as though such officer had not ceased to be an officer of NVTA. Any Bond of a Series may be signed and sealed on behalf of NVTA by those Persons who, at the actual date of the execution of the Bond, are the proper officers of NVTA, although at the date of the original issuance of the Bond they were not officers of NVTA.

Section 3.7 Authentication of Bonds. Except as may be otherwise provided in the Related Series Supplement, no Bond of any Series shall be secured by this Master Indenture, entitled to its benefits or be valid for any purpose unless there is endorsed on the Bond the Trustee's certificate or authentication, substantially in the form prescribed by the Related Series Supplement. The Trustee shall authenticate each Bond with the signature of an authorized officer or employee of the Trustee, but it shall not be necessary for the same Person to authenticate all of the Bonds. The Trustee's certificate of authentication on a Bond of any Series issued by NVTa shall be conclusive evidence and the only competent evidence that the Bond has been duly authenticated and delivered under this Master Indenture.

Section 3.8 Registration, Transfer and Exchange. (a) Except as may be otherwise provided in the Related Series Supplement, NVTa shall cause books for the registration and registration for transfer or exchange of the Bonds of each Series to be kept at the designated corporate trust office of the Paying Agent. NVTa appoints the Paying Agent as its registrar and transfer agent to keep such books and to make registrations and registrations of transfer or exchange under such reasonable regulations as NVTa or the Paying Agent may prescribe.

(b) Upon surrender for registration of transfer or exchange of any Bond at the designated corporate trust office of the Paying Agent, NVTa shall execute and the Paying Agent shall authenticate and deliver in the name of the transferee or transferees a new Bond or Bonds of like date, tenor and of any authorized denomination for the aggregate principal amount which the Owner is entitled to receive, subject in each case to such reasonable regulations as NVTa or the Paying Agent may prescribe. All Bonds presented for registration of transfer, exchange, redemption or payment shall be accompanied by a written instrument or instruments of transfer or authorization for exchange, in form and substance reasonably satisfactory to NVTa and the Paying Agent, duly executed by the Owner or by the Owner's duly authorized attorney-in-fact or legal representative. No Bond may be registered to bearer.

(c) New Bonds of any Series delivered upon any transfer or exchange shall be valid obligations of NVTa evidencing the same debt as the Bonds surrendered and shall be secured by this Master Indenture and the Related Series Supplement and entitled to their benefits to the same extent as the Bonds surrendered. Registrations of transfers or exchange will be made by the Paying Agent within such time periods as are customary in the municipal securities industry.

Section 3.9 Charges for Exchange or Transfer. Except as provided in Section 3.11, no charge shall be made for any registration of transfer or exchange of Bonds, but NVTa or the Paying Agent may require payment by the Owner of the Bonds of a sum sufficient to cover any applicable tax or other governmental charge that may be imposed.

Section 3.10 Temporary Bonds. (a) Until Bonds of any Series in definitive form are ready for delivery, NVTa may execute, and upon its request in writing, the Trustee shall authenticate and deliver in lieu of definitive Bonds and subject to the same provisions, limitations and conditions, one or more printed, lithographed or typewritten Bonds in temporary form, in substantially the form set forth in the Related Series Supplement, with appropriate omission, variations and insertions.

(b) Except as may be otherwise provided in the Related Series Supplement, NVTa shall, without unreasonable delay, prepare, execute and deliver to the Paying Agent, and, upon the presentation and surrender of the Bond or Bonds of any Series in temporary form to the Paying Agent at its designated corporate trust office, the Paying Agent shall authenticate and deliver in exchange, a Bond or Bonds of the same maturity and Series in definitive form, in the authorized denominations, and for the same aggregate principal amount as the Bond or Bonds in temporary form surrendered. Such exchange shall be made at NVTa's expense.

Section 3.11 Mutilated, Lost, Stolen or Destroyed Bonds. (a) If any Outstanding Bond is mutilated, lost, stolen or destroyed, NVTa shall execute, and, upon NVTa's request in writing, the Paying Agent shall authenticate and deliver, a new Bond of the same Series, principal amount and maturity and of like tenor as the mutilated, lost, stolen or destroyed Bond in exchanged and substitution for a mutilated Bond, or in lieu of and substitution for a lost, stolen or destroyed Bond.

(b) Application for exchange and substitution of mutilated, lost, stolen or destroyed Bonds shall be made to the Paying Agent at its designated corporate trust office and the applicant shall furnish to NVTa and the Paying Agent security or indemnification to their satisfaction. In every case of loss, theft or destruction of a Bond, the applicant shall also furnish to NVTa and the Paying Agent evidence to their satisfaction of the loss, theft or destruction and of the identity of the applicant. In every case of mutilation of a Bond, the applicant shall surrender the Bond so mutilated for cancellation.

(c) Notwithstanding the foregoing provisions of this Section, if any Bond has matured and no default has occurred which is then continuing in the payment of the principal of or premium, if any, or interest on the Bond, NVTa may authorize the payment of the Bond (without surrender except in the case of a mutilated Bond) instead of issuing a substitute Bond, provided security or indemnification is furnished as provided in this Section.

(d) NVTa and the Paying Agent may charge the Owner their reasonable fees and expenses in connection with the issuance of any substitute Bond. Every substitute Bond issued pursuant to the provisions of this Section shall constitute a contractual obligation of NVTa, whether or not the lost, stolen or destroyed Bond is found or delivered at any time, or is enforceable by anyone, and shall be entitled to all of the benefits of this Master Indenture and the Supplemental Indentures equally and proportionally with any and all other Bonds duly issued under this Master Indenture to the same extent as the Bond in substitution for which such Bond was issued.

(e) The provisions of this Section are exclusive and shall preclude (to the extent lawful) all of the rights and remedies with respect to the payment of mutilated, lost, stolen, or destroyed Bonds, including those granted by any law or statute now existing or hereafter enacted.

Section 3.12 Cancellation of Bonds. Any temporary or mutilated Bond surrendered to the Paying Agent, or any Bond redeemed or paid at maturity, or any Bond delivered for transfer, exchange or replacement, or purchase pursuant to instructions from NVTa, shall be canceled or

destroyed, and the Paying Agent shall deliver the canceled Bond or a certificate of destruction of such Bond to NVT A.

ARTICLE IV REDEMPTION OF BONDS

Section 4.1 Redemption of Bonds. The Bond of each Series shall be subject to redemption as specified in the Related Series Supplement.

Section 4.2 Selection of Bonds for Redemption. Bonds of any Series to be called for redemption shall be selected as provided in the Related Series Supplement. The Paying Agent shall treat each Bond of a denomination greater than the minimum denomination authorized in the Related Series Supplement as representing the number of separate Bonds that can be obtained by dividing the Bond's actual principal amount by such minimum denomination.

Section 4.3 Notice of Redemption. (a) Except as otherwise provided in the Related Series Supplement, in the case of any redemption of the Bonds of any Series, the Paying Agent shall give notice, in its own name or in the name of NVT A, as provided for in this Section, that Bonds of particular Series identified by serial or CUSIP numbers have been called for redemption and, in the case of Bonds to be redeemed in part only, the principal amount of the Bonds that have been called for redemption (or if all the Outstanding Bonds of a Series are to be redeemed, so stating, in which event serial or CUSIP numbers may be omitted), that they will be due and payable on the date fixed for redemption (specifying the date) upon surrender of the Bonds at the designated corporate trust office of the Paying Agent, at the applicable redemption price (specifying the price) together with any accrued interest to such date, and that all interest on the Bonds to be redeemed will cease to accrue on and after such date.

(b) Unless otherwise specified in the Related Series Supplement, such notice shall be mailed by first class mail, postage prepaid, not less than thirty nor more than sixty days before the date fixed for redemption, to the Owners of the Bonds called for redemption, at their respective addresses as they last appear on the registration books maintained by the Paying Agent. The receipt of notice will not be a condition precedent to the redemption and failure to mail any notice to an Owner or any defect in any notice will not affect the validity of the proceedings for the redemption of Bonds. If, at the time of mailing of the notice of any optional redemption, there has not been deposited with the Paying Agent moneys sufficient to redeem all of the Bonds called for redemption, the notice may state that it is conditional on the deposit of redemption moneys with the Paying Agent not later than the opening of business on the redemption date.

Section 4.4 Payment of Redeemed Bonds. (a) Except as otherwise provided in the Related Series Supplement, if notice of redemption has been given as provided in Section 4.3, the Bonds called for redemption shall be due and payable on the date fixed for redemption at a redemption price equal to the principal amount of and premium, if any, on the Bonds, together with accrued interest to the date fixed for redemption. Payment of the redemption price shall be made by the Paying Agent upon surrender of the Bonds. If less than the full principal amount of a Bond is called for redemption, NVT A shall execute and deliver and the Paying Agent shall

authenticate, upon surrender of the Bond, and without charge to the Owner, Bonds of the same Series for the unredeemed portion of the principal amount of the Bond so surrendered.

(b) If any Bond has been duly called for redemption and payment of the principal of and premium, if any, and unpaid interest accrued to the date fixed for redemption on the Bond has been made or provided for, then, notwithstanding that the Bond called for redemption has not been surrendered for cancellation, interest on the Bond shall cease to accrue from the date fixed for redemption. In addition, from and after the date fixed for redemption, the Bond shall no longer be entitled to any lien, benefit or security under this Master Indenture, and its Owner shall have no rights in respect of the Bond except to receive payment of the principal of and premium, if any, and unpaid interest accrued to the date fixed for redemption of the Bond.

ARTICLE V ISSUANCE OF BONDS

Section 5.1 Issuance of Bonds. (a) NVTa may issue Bonds, subject to the terms and conditions contained in this Master Indenture, for any purpose permitted to be financed from the proceeds of NVTa Debt under the NVTa Act, including without limitation the construction and acquisition of any Project and the refunding of any Bonds previously issued and Outstanding. Such Bonds may be issued in any form permitted by law, including, but not limited to, Current Interest Bonds, Variable Rate Bonds, Capital Appreciation Bonds, Optional Tender Bonds, Serial Bonds or Term Bonds or any combination thereof.

(b) NVTa shall not issue or incur any NVTa Debt that will be secured by a pledge of revenues, money or property pledged by this Master Indenture to the payment of any Series of Bonds, except for Bonds and Subordinate Obligations; provided, however, that nothing contained in this Master Indenture shall prevent NVTa from issuing or incurring NVTa Debt payable out of or secured by a pledge of revenues to be derived on and after the date the pledge and lien of this Master Indenture is discharged and satisfied as provided in Article XII.

(c) Subject to the restrictions set forth in subsection (b) of this Section, NVTa reserves the right in its sole discretion and without the consent of the Trustee or any Owner of any Bond or the holder or owner of any Subordinate Obligation to issue from time to time NVTa Debt for any lawful purpose authorized by the NVTa Act.

Section 5.2 Parity of Bonds. This Master Indenture constitutes a continuing irrevocable pledge of the Regional NVTa Funds and other revenues, money and property of NVTa pledged in Section 2.1(a) to secure payment of the principal of and premium, if any, and interest on all Bonds which may, from time to time, be executed authenticated and delivered under this Master Indenture. Except as otherwise provided in this Master Indenture, all Bonds shall in all respects be equally and ratably secured under this Master Indenture without preference, priority or distinction on account of the time of their authentication, delivery or maturity, so that all Bonds at any time outstanding under this Master Indenture will have the same right, lien and preference under this Master Indenture with respect to the pledge set forth in Section 2.1(a) with like effect as if they had all been executed, authenticated and delivered simultaneously. Nothing in this Master Indenture shall be construed, however, as (i) requiring that any Bonds bear interest at the same rate or in the same manner as any other Bonds, have the

same or an earlier or later maturity, have the same Principal or Interest Payment Dates as other Bonds, or be subject to mandatory or optional redemption before maturity on the same basis as any other Bonds, (ii) prohibiting NVTa from entering into financial arrangements, including any Bond Credit Facility or DSRF Credit Facility, designed to assure that funds will be available for the payment of certain Bonds at their maturity or tender for purchase, or (iii) prohibiting NVTa from pledging funds or assets of NVTa other than those pledged under this Master Indenture or any Supplemental Indenture for the benefit of any Bonds.

Section 5.3 Conditions of Issuing a Series of Bonds. Before the issuance and authentication of any Series of Bonds by the Paying Agent, NVTa shall deliver or cause to be delivered to the Trustee:

(a) In the case of the initial Series of Bonds issued under this Master Indenture only:

(1) An original executed counterpart of this Master Indenture;

(2) A certified copy of the resolution of NVTa authorizing the execution and delivery of this Master Indenture; and

(3) An Opinion or Opinions of Counsel, subject to customary exceptions and qualifications, to the effect that this Master Indenture has been duly authorized, executed and delivered by NVTa.

(b) An original executed counterpart of the Related Series Supplement which may include provisions (i) authorizing the issuance, fixing the principal amount and setting forth the details of the Bonds of the Series then to be issued, the interest rate or rates and the manner in which the Bonds are to bear interest, the Principal and Interest Payment Dates of the Bonds, the purposes for which the Bonds are being issued, the date and the manner of numbering the Bonds, the series designation, the denominations, the maturity dates and amounts, the Amortization Requirements or the manner for determining such Amortization Requirements, and any other provisions for redemption before maturity; (ii) for Bond Credit Facilities for the Series and for the Funds to be established with respect to the Series of Bonds as required or authorized under this Master Indenture; (iii) for the application of the proceeds of the Bonds of the Series; (iv) any term or condition necessary or expedient for the issuance of Bonds constituting Variable Rate Bonds or Optional Tender Bonds, including without limitation, tender and remarketing provisions, liquidity facility provisions and provisions for establishing the variable rate and changing interest rate modes; (v) for the amount, if any, to be deposited into the Related Debt Service Reserve Fund, which will be an amount at least equal to the Reserve Requirement for the Bonds of the Series then to be issued; and (vi) for such other matters as NVTa may deem appropriate.

(c) A certified copy of each resolution adopted by NVTa authorizing the execution and delivery of the Related Series Supplement, any Related Bond Credit Facility and any Related Reimbursement Obligation and the issuance, sale, execution and delivery of the Series of Bonds then to be issued.

(d) Original executed counterparts of the Related Tax Regulatory Agreement, any Related Bond Credit Facility and any Related Reimbursement Obligation.

(e) [Reserved for debt service coverage requirement].

(f) If the Bonds of the Series then to be issued are to be issued to refund Bonds issued and outstanding under this Master Indenture ("Refunding Bonds"):

(1) Evidence satisfactory to the Trustee that NVTa has made provision as required by this Master Indenture for the payment or redemption of all Bonds to be refunded; and

(2) A written determination by a knowledgeable professional, (excluding any employee of NVTa), a firm of nationally-recognized independent verification agent or a firm of independent certified public accountants that the proceeds (excluding accrued interest) of the Refunding Bonds, together with any other money to be deposited for such purpose with the Trustee or an escrow agent satisfactory to the Trustee in the Related Escrow Fund or otherwise upon the issuance of the Refunding Bonds and the investment income to be earned on funds held by the Trustee for the payment or redemption of Bonds to be refunded, will be sufficient to pay, whether upon redemption or at maturity, the principal of and premium, if any, and interest on the Bonds to be refunded and the estimated expenses incident to the refunding.

(g) An opinion of Bond Counsel to the effect that (i) the Bonds of the Series then to be issued have been duly authorized, (ii) all conditions precedent to the issuance of such Bonds have been fulfilled (iii) the Related Series Supplement has been duly authorized, executed and delivered by NVTa and complies in all respects with the requirements of this Master Indenture and (iv) Bonds are valid and legally binding limited obligations of NVTa and are secured by this Master Indenture and the Related Series Supplement to the extent provided herein and therein.

(h) An Officer's Certificate, dated the date of delivery of the Bonds of the Series then to be issued, to the effect that to the best of the knowledge of the signatory, upon and immediately following such delivery, no Event of Default under this Master Indenture or any Series Supplement with respect to any Series of Bonds Outstanding will have occurred and be continuing.

(i) A written order and authorization to the Trustee on behalf of NVTa, signed by a NVTa Representative, to authenticate and deliver the Bonds of the Series then to be issued to or upon the order of the purchaser or purchasers therein identified upon payment to the Trustee of the purchase price (including accrued interest, if any) of such Series of Bonds.

(j) [Reserved for rating confirmation requirement, if any.]

(k) Any additional document or instrument specified in the Related Series Supplement.

Section 5.4 Modification of Certain Definitions. [Reserved].

Section 5.5 Delivery of Bonds. When the documents mentioned in Section 5.3 shall have been filed with the Trustee and when the Bonds of the Series then to be issued shall have been executed and authenticated as required by this Master Indenture, the Paying Agent shall deliver such Bonds at one time to or upon the order of the purchasers named in the Related Series Supplement, but only upon payment to or upon the order of NVT A of the purchase price of such Bonds and the accrued interest, if any, thereon.

Section 5.6 Application of Bond Proceeds. The Trustee shall apply the proceeds of any Series of Bonds as provided in the Related Series Supplement.

Section 5.7 Subordinate Obligations. Nothing in this Master Indenture shall prohibit or prevent NVT A from authorizing and issuing Subordinate Obligations for any lawful purpose payable from Regional NVT A Funds subject and subordinate to the payment of any Bonds and to the deposits required to be made from Regional NVT A Funds to the Bond Debt Service Funds, the Debt Service Reserve Funds and the Rebate Funds or any other Fund or Account established to secure any Bonds, or from securing any Subordinate Obligations and their payment by a lien and pledge of Regional NVT A Funds junior and inferior to the lien on and pledge thereof for the payment and security of the Bonds; provided, however, that such Subordinate Obligations may only be declared immediately due and payable upon the occurrence of a default under it if payment of the Bonds has been accelerated in accordance with Article XIII.

**ARTICLE VI
GENERAL COVENANTS AND PROVISIONS**

Section 6.1 Payment of Bonds. NVT A shall promptly pay the principal of (whether at maturity, by mandatory sinking fund or optional redemption, or otherwise) and premium, if any, and interest on each Series of the Bonds on the dates and as provided in this Master Indenture, the Related Series Supplement and in such Series of Bonds; provided, however, that such obligations are limited obligations of NVT A and are payable solely from revenues, moneys and other property pledged by NVT A to the Trustee under Article II to secure payment of such Series of Bonds or all Series of Bonds issued under this Master Indenture.

Section 6.2 Covenants and Representations of NVT A. NVT A shall faithfully observe and perform all of its covenants, conditions and agreements contained in this Master Indenture, in every Bond executed, authenticated and delivered under this Master Indenture and in all pertinent proceedings of its members; provided, however, that NVT A's liability for any breach of or default under any such covenant, condition or agreement shall be limited solely to and satisfied solely from the sources of payment described in Section 6.1.

Section 6.3 Further Assurances. Subject to the provisions of Section 6.1, NVT A shall do, execute, acknowledge and deliver, or cause to be done, executed, acknowledged or delivered, such Supplemental Indentures and such further acts, instruments and transfers as the Trustee may reasonably require for the better assuring, transferring, conveying and pledging to the Trustee of all the rights assigned by this Master Indenture and revenues, money and other

property pledged by this Master Indenture to the payment of the principal of and premium, if any, and interest on the Bonds. NVTa shall fully cooperate with the Trustee in protecting the Owners' rights and security.

Section 6.4 Records and Accounts; Inspections and Reports. NVTa shall maintain or cause to be maintained proper books of record and account, separate from any of its other records and accounts, showing complete and correct entries of all transactions relating to the Bonds. All books and documents in NVTa's possession relating to the Bonds shall at all times be open to inspection by such agents as may be designated by the Trustee or the Owners of twenty-five percent or more in aggregate principal amount of Bonds then Outstanding. NVTa shall have an annual audit made by an accountant or accounting firm within 180 days after the end of each Fiscal Year and shall furnish to the Trustee copies of the audit report as soon as such report is available, which report shall include statements in reasonable detail, certified by the accountant or accounting firm who or which prepared the report. Such audit report shall reflect NVTa's financial position as of the end of such Fiscal Year and the results of its operations and changes in the financial position of its fund for such Fiscal Year.

Section 6.5 Reports by Trustee. The Trustee shall make periodic reports to NVTa of all money received, invested and expended by it with respect to the Bonds. The Trustee shall furnish to NVTa upon request (i) a statement of the principal amount of Bonds Outstanding and unpaid as of the date of such request, (ii) the balance in each of the Funds and Accounts held by it pursuant to this Master Indenture, and (iii) such information as may be necessary to complete the annual audit of NVTa as required by the Act or to make any other report required by any other law now or hereafter in effect.

Section 6.6 Covenants with Bond Credit Providers and DSRF Credit Providers. NVTa may make such covenants as it may in its sole discretion determine to be appropriate with any Bond Credit Provider or DSRF Provider that shall agree to provide for Bonds of any one or more Series a Bond Credit Facility or a DSRF Credit Facility that shall enhance the security or the value of such Bonds and thereby reduce the Principal and Interest Requirements on such Bonds or substitute for amounts in the Related Debt Service Reserve Fund. Such covenants may be set forth in the Related Series Supplement or other Supplemental Indenture and shall be binding on NVTa, the Trustee, the Paying Agent and the Owners of the Bonds the same as if such covenants were set forth in full in this Master Indenture.

ARTICLE VII ESTABLISHMENT OF FUNDS AND ACCOUNTS

Section 7.1 Establishment of Funds.

(a) The Funds listed below are hereby established with respect to all of the Outstanding Bonds and Subordinate Obligations issued under or in accordance herewith and NVTa's operations, and NVTa shall hold each such Fund without commingling the monies held therein.

- (1) Revenue Fund;
- (2) Member Locality Distribution Fund;

- (3) Operating Fund; and
- (4) General Fund.

(b) The Funds listed below are to be established with respect to each separate Series of Bonds in the Related Series Supplement, and the Trustee shall hold such Funds without commingling the monies held therein, except that NVTa shall hold each Cost of Issuance Fund.

- (1) Cost of Issuance Fund;
- (2) Project Fund and/or Escrow Fund, as appropriate;
- (3) Bond Debt Service Fund;
- (4) Debt Service Reserve Fund; and
- (5) Rebate Fund.

(c) A Subordinate Debt Service Fund is to be established with respect to each Subordinate Obligation or series thereof issued by NVTa, and the Trustee shall hold each such Fund without commingling the monies held therein.

(d) NVTa may provide that a Bond Debt Service Fund and/or Debt Service Reserve Fund established for a Series of Bonds may also provide for the payment of and/or secure any Refunding Bonds issued to refund such Series of Bonds in whole or in part.

Section 7.2 Establishment and Custody of Certain Special Funds. (a) NVTa may establish with the Trustee or an escrow agent satisfactory to the Trustee in connection with the issuance of any Series of Refunding Bonds an Escrow Fund to provide for the application and investment of the portion of the proceeds of such Series to be used to refund the refunded Bonds. Such Escrow Fund shall be established under or in accordance with the Related Series Supplement.

(b) NVTa may establish with the Trustee in connection with the incurrence of any Reimbursement Obligation a Reimbursement Fund. Amounts held for the credit of any Reimbursement Fund shall be paid out by the Trustee as necessary to enable NVTa to meet its obligations constituting Reimbursement Obligations. Amounts held for the credit of a Reimbursement Fund may be pledged to the payment of any Related Reimbursement Obligation incurred by NVTa.

ARTICLE VIII

OPERATION OF REVENUE FUND, PLEDGED FUNDS AND GENERAL FUND

Section 8.1 Revenue Fund. (a) NVTa will hold the Revenue Fund as a separate account. The Revenue Fund itself is not pledged to secure any of the Bonds or the Subordinate Obligations. NVTa will deposit into the Revenue Fund all NVTa Revenues, including any HB 2313 Transportation Revenues transferred from the NVTa Fund, immediately upon receipt.

(b) On the last Business Day of each month, NVTa shall make transfers from the Revenue Fund in the amounts and in the order of priority set forth below:

FIRST: To the Member Locality Distribution Fund, 30% (or such other percentage as may be required under the NVTa Act or other applicable law), of the NVTa Revenues (the "Local NVTa Revenues");

SECOND: To each Bond Debt Service Fund ratably, the amount, if any, required so that the balance therein shall equal the amount of principal, if any, and interest due on the Related Series of Bonds on the next Payment Date; provided that NVTa shall receive a credit against such transfer for the amount, if any, held in a Bond Debt Service Fund as capitalized interest or otherwise, together with the investment earnings thereon;

THIRD: To each Debt Service Reserve Fund, ratably, the amount, if any, required so that the balance in each such Fund shall equal to the respective Reserve Requirement (which shall include the reimbursement of any DSRF Credit Provider for any drawings on a DSRF Credit Facility and the payment of any interest, penalties or fees assessed by the DSRF Credit Provider);

FOURTH: To each Subordinate Debt Service Fund, ratably, the amount, if any, required so that the balance in each such Fund shall equal the amount of principal, if any, and interest due on the next ensuing payment date for the related Subordinate Obligations; provided that NVTa shall receive a credit against such transfer for the amount, if any, held in a Subordinate Debt Service Fund as capitalized interest or otherwise, together with the investment earnings thereon;

FIFTH: To each Rebate Fund the amounts necessary to provide for the payment of any Rebate Amounts with respect to the Related Series of Bonds as confirmed in an Officer's Certificate;

SIXTH: To each Subordinate Debt Service Fund ratably, the amount, if any, required so that the balance therein shall equal the amount of principal, if any, and interest on the Related Subordinate Obligations on the next payment date; provided that NVTa shall receive a credit against such transfer for the amount, if any, held in a Subordinate Debt Service Fund as capitalized interest or otherwise, together with the investment earnings thereon; and

SEVENTH: To the General Fund, the balance remaining in the Revenue Fund.

(c) In the case of Bonds of a Series secured by a Bond Credit Facility, amounts on deposit in the Revenue Fund may be transferred to the Bond Debt Service Fund or as the case may be, the Related Reimbursement Fund or elsewhere as provided in the Related Series Supplement to reimburse the Bond Credit Provider for amounts drawn under the Bond Credit Facility to pay the principal of and premium, if any, and interest on such Bonds.

Section 8.2 Member Locality Distribution Fund. (a) NVTA will hold the Member Locality Distribution Fund and neither such Fund nor the balance therein shall be pledged to secure the Bonds or the Subordinate Obligations. On the last Business Day of each month, NVTA shall make transfers from the Member Locality Distribution Fund in the amounts and in the order of priority set forth below:

FIRST: To the Operating Fund the amount required, if any, to fund the next 30 days of Operating Expenses, based upon the NVTA's Annual Budget as it then exists; and

SECOND: To the Member Localities, the balance remaining in the Member Locality Distribution Fund, in accordance with subdivision B of Section 15.2-4838.1 of the NVTA Act or other applicable law.

(b) To the extent that the NVTA Act or other applicable law requires NVTA to reduce the amount of the Local NVTA Revenues distributed to any Member Locality, such amount shall be treated as if deposited into the Revenue Fund and subject to the transfers described in SECOND through SEVENTH of Section 8.1(b) and shall be treated as Regional NVTA Funds.

Section 8.3 Operating Fund. (a) NVTA shall promptly deposit the following amounts in the Operating Fund:

(1) Any amounts made available to NVTA for deposit therein, including funds received from the Member Localities; and

(2) Any amounts transferred thereto from the Member Locality Distribution Fund as provided in Section 8.2 above.

(b) NVTA will hold the Operating Fund and neither such Fund nor the balance therein shall be pledged to secure the Bonds or the Subordinate Obligations. NVTA shall pay Operating Expenses from the Operating Fund as they become due and in accordance with the purposes and amounts provided in the Annual Budget. In determining the balance on deposit in the Operating Fund for any purpose of this Master Indenture, there shall be deducted the amount of any issued but unpaid checks drawn against the Operating Fund. Investment earnings on amounts from the Operating Fund shall be retained therein and applied for purposes of this Section.

Section 8.4 Bond Debt Service Funds. (a) The Trustee shall promptly deposit the following amounts in each Bond Debt Service Fund:

(1) The amount, if any, of the proceeds of the Related Series of Bonds required by the Related Series Supplement to be deposited in the Bond Debt Service Fund with respect to accrued and/or capitalized interest;

(2) All amounts required to be transferred to the Bond Debt Service Fund from the Revenue Fund pursuant to Section 8.1(b);

(3) Any amounts required to be transferred to the Bond Debt Service Fund from the Bond Debt Service Reserve Fund as provided under this Master Indenture; and

(4) Any other amounts required to be paid to the Bond Debt Service Fund or otherwise made available for deposit therein by NVTa, including amounts made available pursuant to the Related Series Supplement.

(b) The Trustee shall pay out of each Bond Debt Service Fund ratably to the Paying Agent for the Related Series of Bonds (i) on each Interest Payment Date, the amount required for the payment of interest on such Bonds then due, (ii) on any redemption date, the amount required for the payment of accrued interest on such Bonds to be redeemed, unless the payment of such accrued interest shall be otherwise provided for, and such amounts shall be applied by the Paying Agents to such payment, and (iii) the accrued interest included in the Purchase Price of any Bonds of the Related Series purchased for retirement pursuant to this Master Indenture.

(c) The Trustee shall pay out of each Bond Debt Service Fund to the Paying Agent for the Related Series Bonds on each Principal Payment Date and redemption date for such Bonds, the amounts then required for the payment of such principal or redemption price, and such amounts shall be applied by the Paying Agent to such payments.

Section 8.5 Debt Service Reserve Funds. (a) Except as specifically provided below, the amount in each Debt Service Reserve Fund shall be used solely to cure deficiencies in the amount on deposit in the Related Bond Debt Service Fund and only with respect to the Related Series of Bonds. If there are insufficient funds in the Related Bond Debt Service Fund to pay the principal of and interest on a particular Series of Bonds when due, then the Trustee shall transfer the amount of deficiency from the amount, if any, on deposit in the Related Debt Service Reserve Fund to such Bond Debt Service Fund. The Trustee immediately shall notify NVTa of the transfer.

(b) On each Reserve Determination Date, the Trustee shall determine if the balance in each of the Debt Service Reserve Funds is at least equal to the Reserve Requirement for the Related Series of Bonds. In making each such determination, investments in each Debt Service Reserve Fund shall be valued as provided in Section 11.3 or as otherwise provided in the Related Series Supplement. If on any Reserve Determination Date the amount in any Debt Service Reserve Fund is less than its Reserve Requirement, the Trustee shall immediately notify NVTa of such fact and the amount of the deficiency.

(c) NVTa may deposit its own funds directly into any Debt Service Reserve Fund to cure any deficiency in it.

(d) Any interest earned from the investment of money in a Debt Service Reserve Fund shall be transferred upon receipt to the Revenue Fund and/or to the Related Rebate Fund to pay any Rebate Amounts in accordance with the Series Supplements and Tax Regulatory Agreements (as confirmed in an Officer's Certificate) to the extent that such transfer will not cause the balance in a Debt Service Reserve Fund to be less than the aggregate amount of its

Reserve Requirement. If on any Reserve Determination Date there exists a surplus in a Debt Service Reserve Fund, the Trustee shall transfer such surplus to the Revenue Fund and/or to the Related Rebate Fund to pay any Rebate Amounts in accordance with the Series Supplements and Tax Regulatory Agreements (as confirmed in an Officer's Certificate); provided, however, that if on any Reserve Determination Date there exists or will exist a surplus in a Debt Service Reserve Fund as the result of the payment at maturity, redemption or defeasance under Article XII of a portion of the Bonds of the Related Series on or as of such Reserve Determination Date, then the Trustee is authorized to transfer the surplus (including to an Escrow Fund for any such Bonds to be redeemed or defeased) as specified in (i) a Series Supplement (as confirmed in an Officer's Certificate) or (ii) an Officer's Certificate.

(e) In lieu of maintaining and depositing money or securities in a Debt Service Reserve Fund, NVTa may deposit with the Trustee a DSRF Credit Facility in an amount equal to all or a portion of the applicable Reserve Requirement. Any DSRF Credit Facility will permit the Trustee to draw or obtain under it for deposit in the Debt Service Reserve Fund amounts that, when combined with the other amounts in such Fund, are not less than the applicable Reserve Requirement.

(1) The Trustee will make a drawing on or otherwise obtain funds under any DSRF Credit Facility before its expiration or termination (i) whenever money is required for the purposes for which Debt Service Reserve Fund money may be applied and (ii) unless such DSRF Credit Facility has been extended or a qualified replacement for it delivered to the Trustee, in the event NVTa has not deposited immediately available funds equal to the applicable Reserve Requirement at least two Business Days preceding the expiration or termination of such DSRF Credit Facility.

(2) If NVTa provides the Trustee with a DSRF Credit Facility as provided in this subsection, the Trustee will transfer the corresponding amount of funds then on deposit in the applicable Debt Service Reserve Fund to NVTa, provided NVTa delivers to the Trustee (i) an Opinion of Bond Counsel that such transfer of funds will not adversely affect the excludability from gross income for purposes of federal income taxation of interest on any Bonds the interest on which was excludable on the date of their issuance and (ii) NVTa covenants to comply with any directions or restrictions contained in such opinion concerning the use of such funds.

Section 8.6 Subordinate Debt Service Funds. (a) The Trustee shall promptly deposit the following amounts in each Subordinate Debt Service Fund:

(1) The amount, if any, of the proceeds of the Related Subordinate Obligation, required to be deposited in the Subordinate Debt Service Fund in respect of accrued and/or capitalized interest;

(2) All amounts required to be transferred to the Subordinate Debt Service Fund from the Revenue Fund pursuant to Section 8.1(b); and

(3) Any other amounts required to be paid to the Subordinate Debt Service Fund or otherwise made available for deposit therein by NVT A.

(b) The Trustee shall pay out of each Subordinate Debt Service Fund (i) on each interest payment date, the amount required for the payment of interest on the Related Subordinate Obligations then due and (ii) on any redemption date, the amount required for the payment of accrued interest on the Related Subordinate Obligations to be redeemed, unless the payment of such accrued interest shall be otherwise provided for, and such amounts shall be applied to such payment. The Trustee shall also pay out of the Subordinate Debt Service Fund the accrued interest included in the Purchase Price of any Subordinate Obligations purchased for retirement pursuant to this Master Indenture.

(c) The Trustee shall pay out of each Subordinate Debt Service Fund on each principal payment date and redemption date for the Related Subordinate Obligations, the amounts then required for the payment of such principal or redemption price, and such amounts shall be applied to such payments.

Section 8.7 General Fund. (a) NVT A shall hold the General Fund and, except as otherwise provided below, neither such Fund nor any moneys or investments therein shall be pledged to secure the Bonds or the Subordinate Obligations.

(b) NVT A shall apply the balance in the General Fund as follows:

FIRST: To cure any deficiency in the amount required to be on deposit in any Bond Debt Service Fund, Debt Service Reserve Fund, Rebate Fund or Subordinate Debt Service Fund, in that order; and

SECOND: To any lawful purpose approved by resolution of NVT A.

ARTICLE IX OPERATION OF CERTAIN SERIES-SPECIFIC FUNDS

Section 9.1 Cost of Issuance Funds. There shall be deposited in each Cost of Issuance Fund the portion of the proceeds of the Related Series of Bonds and such other amounts as may be specified in the Related Series Supplement. NVT A shall use such amounts to pay costs of issuance incurred in connection with the issuance of the Related Series of Bonds. NVT A shall transfer any amounts remaining on deposit in such Fund to the Revenue Fund, the Related Project Fund and/or another Fund or Account established hereunder as may be authorized or directed by the Related Series Supplement or Tax Regulatory Agreement. Investment earnings on any Cost of Issuance Fund may be transferred therefrom periodically as provided in the Related Series Supplement and Tax Regulatory Agreement.

Section 9.2 Project Funds. There shall be deposited into each Project Fund such portion of the proceeds of the Related Series of Bonds and other amounts as may be specified in the Related Series Supplement. NVT A shall use the amounts in each Project Fund in accordance with the requirements of the Related Series Supplement and Tax Regulatory Agreement. Upon the filing with the Trustee of an Officer's Certificate that a Project is complete the Trustee shall transfer any amounts remaining on deposit in the Related Project Fund to the Revenue Fund

and/or another Fund or Account established hereunder as may be authorized or directed by the Related Series Supplement or Tax Regulatory Agreement. Investment earnings in a Project Fund may be transferred periodically therefrom as provided in the Related Series Supplement and Tax Regulatory Agreement.

Section 9.3 Rebate Funds. There shall be deposited in each Rebate Fund amounts to be used to pay Rebate Amounts with respect to the Related Series of Bonds as may be specified in the Related Series Supplement and the Related Tax Regulatory Agreement. NVTa shall use the balance in a Rebate Fund to pay the Rebate Amounts and any other obligations under Section 148 of the Tax Code in connection with the Related Series of Bonds. NVTa may transfer any amounts on deposit in a Rebate Fund that are not needed for such purpose to the Revenue Fund and/or another Fund or Account established hereunder as may be authorized or directed by the Related Series Supplement or Tax Regulatory Agreement and confirmed in an Officer's Certificate.

ARTICLE X GENERAL FUND AND ACCOUNT PROVISIONS

Section 10.1 Additional Funds and Accounts. Upon payment of its additional reasonable costs and expenses, if any, the Trustee may create additional Funds and Accounts or subaccounts within any Fund or Account established by this Master Indenture or any Supplemental Indenture if NVTa so directs in a Supplemental Indenture or the Trustee deems such additional Funds, Accounts or subaccounts to be necessary for the proper administration of the various Funds and Accounts. The Trustee shall make transfers to or from such Funds, Accounts or subaccounts so long as required transfers can be made consistently with the provisions of this Master Indenture or any Supplemental Indenture.

Section 10.2 Non-Presentment of Bonds. (a) If any Owner fails to present his or her Bond for payment when its principal becomes due (whether at maturity, by mandatory or optional redemption, by acceleration, or otherwise), all liability of NVTa to the Owner for the payment of the Bond shall be completely discharged if the Trustee holds for the Owner's benefit money sufficient to pay the principal of and premium, if any, and interest due on such Bond to its maturity or redemption date and thereupon it shall be the Trustee's duty to hold this money, without liability to the Owner for interest on it, for the Owner's benefit, who shall thereafter be restricted exclusively to this money for any claim under this Master Indenture or on the Bond.

(b) Any money which shall have been set aside by the Trustee for the payment of the principal of and premium, if any, and interest on the Bonds and which shall remain unclaimed by the Owners of any of the Bonds for a period of four years and eleven months after the date on which such money shall have become payable, shall, unless otherwise required by law, be paid to NVTa (along with any investment earnings on such money earned after the respective maturity or redemption date), and thereafter the Trustee shall have no further responsibility with respect to such money.

Section 10.3 Trustee's Fees, Costs and Expenses. The Trustee's initial or acceptance fees and expenses for a Series of Bonds shall be paid from the Related Cost of Issuance Fund. NVTa shall pay or provide for the payment of all other fees and expenses of the Trustee as

provided in Section 14.2. The Trustee shall not deposit any such payments it receives in the Funds or Accounts established by this Master Indenture.

Section 10.4 Purchase of Term Bonds. (a) Amounts made available by or on behalf of NVTa for such purpose may, and if so directed by NVTa in an Officer's Certificate shall, be applied by the Trustee prior to the 45th day preceding any mandatory sinking fund redemption date for Term Bonds of the Related Series to the purchase of the Term Bonds that are subject to such sinking fund redemption, at prices (including any brokerage and other charges) not exceeding the redemption price payable for such Term Bonds pursuant to such sinking fund redemption plus unpaid interest accrued to the date of purchase. Upon such purchase of any Term Bond, the Trustee shall then credit an amount equal to the principal of the Bond so purchased toward the next succeeding Amortization Requirement for such Term Bond.

(b) As soon as practicable after the 45th day preceding the date of any mandatory sinking fund redemption for the Term Bonds of the Related Series, the Trustee shall proceed to call for redemption on such redemption date the Term Bonds of the maturity for which sinking fund redemption is required in such amount as shall be necessary to complete the retirement of the principal amount specified for such sinking fund redemption. The Trustee shall so call such Term Bonds for redemption whether or not it then has moneys in the Related Bond Debt Service Fund, as applicable, sufficient to pay the applicable redemption price thereof and interest thereon to the redemption date. The Trustee shall pay out of each such Fund to the appropriate Paying Agents, on each such redemption date, the amount required for the redemption of the Related Term Bonds so called for redemption, and such amount shall be applied by such Paying Agents to such redemption.

ARTICLE XI

SECURITY FOR DEPOSITS AND PERMITTED INVESTMENTS

Section 11.1 Security for Deposits. All amounts deposited with NVTa or the Trustee under the Master Indenture in excess of the amount guaranteed by the Federal Deposit Insurance Corporation or other federal agency shall be continuously held in bank accounts which are secured for the benefit of NVTa and the Owners of the Bonds in the manner required and to the full extent permitted by the Virginia Security for Public Deposits Act, Chapter 44, Title 2.2, Code of Virginia of 1950, as amended, or any successor provision of law; provided, however, that it shall not be necessary for the Paying Agent to give security for the deposit of any amounts with it for the payment of the principal of or premium, if any, or interest on any Bonds issued under the Master Indenture, or for any Person to give security for any investments described in Section 11.2 below purchased under the provisions of this Article XII as an investment of such amounts.

Section 11.2 Permitted Investments. (a) Subject to the provisions of any Supplemental Indenture, any amounts held in any Fund or Account established by this Master Indenture or any Supplemental Indenture may be separately invested and reinvested by the Trustee, at the request of and as directed in writing by a NVTa Representative, in any investments which are at the time legal investments for public funds of the type to be invested under Virginia law, including without limitation the NVTa Act and the Investment of Public Funds Act, Chapter 45, Title 2.2, Code of Virginia of 1950; as amended, or any successor

provision of law. Notwithstanding anything to the contrary contained herein, NVTa may invest the amounts on deposit in the General Fund to the same extent as provided in Section 33.1-23.03:5 of the Virginia Code for excess funds in the Transportation Trust Fund.

(b) Subject to the provision of any Supplemental Indenture, all Investments shall be held by or under the control of the Trustee or NVTa, as the case may be, and while so held shall be deemed a part of the Fund or Account in which the amounts were originally held. The Trustee and NVTa shall sell and reduce to cash a sufficient amount of investments whenever the case balance in any Fund or Account is insufficient for its purposes.

Section 11.3 Valuation of Investments. (a) Unless otherwise provided in a Supplemental Indenture, NVTa or the Trustee shall value the investments in each Fund and Account established under this Master Indenture or any Supplemental Indenture and held by it or at its direction as of the last Business Day of each month; provided that, notwithstanding the foregoing, a Debt Service Reserve Fund shall be valued only on Reserve Determination Dates.

(b) Unless otherwise provided in a Supplemental Indenture, each such investment shall be valued (i) at amortized cost if the weighted average life of all investments held in the same Fund or Account is five years or less or (ii) at its fair market value or the amortized cost thereof, whichever is lower if the weighted average life of all investments held in the same Fund or Account exceeds five years. A DSRF Credit Facility shall be valued at the amount that the Trustee is authorized to draw thereon to pay debt service on the Series of Bonds secured thereby.

Section 11.4 Investments through Trustee's Bond Department. The Trustee may make investments permitted by Section 11.2 through its own trust or bond department.

ARTICLE XII DEFEASANCE

Section 12.1 Defeasance. If NVTa shall pay or provided for the payment of the entire indebtedness on all Bonds Outstanding if any one or more of the following ways:

(a) by paying or causing to be paid the principal of and premium, if any, and interest on such Bonds, as and when the same shall become due and payable;

(b) by delivering such Bonds to the Trustee for cancellation; or

(c) by depositing with the Trustee (or an escrow agent acceptable to the Trustee), in trust, cash and/or Defeasance Obligations in such amount as will, together with the income or increment to accrue thereon (the "Payment Amount"), be fully sufficient to pay or redeem (when redeemable) and discharge the indebtedness on all Bonds Outstanding at or before their respective maturity dates, without consideration of any reinvestment of the Payment Amount, as a firm of nationally-recognized independent verification agents or a firm of independent certified public accountants shall verify to the Trustee's satisfaction;

and if NVTa shall pay or provide for the payment of (on the date of defeasance or over time) all other sums payable hereunder by NVTa, and if any of the Bonds Outstanding are to be

redeemed before their maturity, notice of such redemption shall have been given as provided in Article IV (and the corresponding sections of the Series Supplements) or provisions satisfactory to the Trustee shall have been made for the giving of such notice, this Master Indenture and the estate and rights granted hereunder (except for the provisions of Articles III and IV and Section 6.1) shall cease, determine, and become null and void. Thereupon the Trustee shall, upon receipt by the Trustee of an officer's Certificate and an opinion of Bond Counsel, each stating that in the opinion of the signers all conditions precedent to the satisfaction and discharge of this Master Indenture as provided above have been complied with, forthwith execute proper instruments acknowledging satisfaction of and discharging this Master Indenture (except for the provisions of Article III and IV (and the corresponding sections of the Series Supplements) and Section 6.1) and the lien hereof.

Any moneys, securities, or other property remaining on deposit in any of the Funds or Accounts established by this Master Indenture and held by the Trustee (except the cash and/or Defeasance Obligations deposited in trust as above provided) shall, upon the full satisfaction of this Master Indenture as provided above, forthwith be distributed to NVT A.

Section 12.2 Liability of NVT A. Upon the deposit with the Trustee (or an escrow agent acceptable to the Trustee), in trust, at or before maturity, of cash and/or Defeasance Obligations in the necessary amount to pay or redeem all Bonds Outstanding (whether upon or before their maturity or the redemption date of such Bonds) and compliance with the other payment requirements of Section 12.1, provided that if such Bonds are to be redeemed before their maturity, notice of such redemption shall have been given as provided in Article IV (and the corresponding sections of the Series Supplements), or provisions satisfactory to the Trustee shall have been made for the giving of such notice, this Master Indenture may be discharged in accordance with its provisions (except for the provisions of Articles III and IV (and the corresponding sections of the Series Supplements) and Section 6.1) but the liability of NVT A under the Bonds shall continue provided that the Owners shall thereafter be entitled to payment only out of the cash and/or Defeasance Obligations deposited with the Trustee (or an escrow agent acceptable to the Trustee) as aforesaid.

Section 12.3 Provision for Payment of Particular Bonds. If NVT A shall pay or provide for the payment of the entire indebtedness on particular Bonds in any one or more of the following ways:

- (a) by paying or causing to be paid the principal of and premium, if any, and interest on such Bonds, as and when the same shall become due and payable;
- (b) by delivering such Bonds to the Trustee for cancellation; or
- (c) by depositing with the Trustee (or an escrow agent acceptable to the Trustee), in trust, cash and/or Defeasance Obligations in such amount as will, together with the income or increment to accrue thereon (the "Payment Amount"), be fully sufficient to pay or redeem (when redeemable) and discharge the indebtedness on such Bonds at or before their respective maturity dates, without consideration of any reinvestment of the payment Amount, as a firm of nationally-recognized independent verification agents or a firm of independent certified public accountants shall verify to the Trustee's satisfaction;

and if NVTa shall also pay or provide for the payment of all other sums payable hereunder by NVTa with respect to such Bonds, and, if such Bonds are to be redeemed before their maturity, notice of such redemption shall have been given as provided in Article IV of this Master indenture (or the corresponding provisions of the Related Series Supplements) or provisions satisfactory to the Trustee shall have been made for the giving of such notice, such Bonds shall cease to be entitled to any lien, benefit or security under this Master Indenture. The liability of NVTa under such Bonds shall continue but their Owners shall thereafter be entitled to payment (to the exclusion of all other Owners) only out of the cash and/or Defeasance Obligations deposited with the Trustee (or an escrow agent acceptable to the Trustee) as aforesaid.

NVTa may at any time surrender to the Trustee for cancellation any Bonds previously authenticated and delivered that NVTa may have acquired in any manner whatsoever, and such Bonds, upon such surrender and cancellation, shall be deemed to be paid and retired as provided in this Article.

ARTICLE XIII DEFAULT PROVISIONS AND REMEDIES OF TRUSTEE AND OWNERS

Section 13.1 Events of Default; No Acceleration. (a) The occurrence and continuation of one or more of the following events shall constitute an Event of Default with respect to the Bonds:

(1) default in the payment of any installment of interest in respect of the Bonds of any Series as the same shall become due and payable; or

(2) default in the payment of the principal of or premium, if any, in respect of the Bonds of any Series as the same shall become due and payable either at maturity, upon redemption, or otherwise; or

(3) default in the payment of any Amortization Requirement in respect of any Term Bond as the same shall become due and payable; or

(4) failure on the part of NVTa duly to observe or perform any other of the covenants or agreements on the part of NVTa contained in this Master Indenture, a Series Supplement, a Tax Regulatory Agreement or any Bond; or

(5) appointment by a court of competent jurisdiction of a receiver for all or any substantial part of the Revenues and the other Funds and Accounts pledged pursuant to this Master Indenture, or the filing by NVTa of any petition for reorganization of NVTa or rearrangement or readjustment of the obligations of NVTa under the provisions of any applicable bankruptcy or insolvency law.

(b) Notwithstanding any other provision of this Master Indenture, failure to pay the principal or any Amortization Requirement of or interest on any Subordinate Obligation will not constitute an Event of Default with respect to any of the Bonds.

(c) NVT A may, pursuant to a Series Supplement, provide for a particular Series of Bonds different or additional Events of Default and remedies upon the occurrence thereof including, but not limited to, Events of Default upon the occurrence of events specified in any agreement entered into in connection with the delivery of a Bond Credit Facility and acceleration of the full principal amount of such Bonds.

Section 13.2 Reserved.

Section 13.3 Other Remedies. (a) Upon the occurrence and continuation of an Event of Default, the Trustee may in its discretion, and shall at the written request of the Majority Owners of the Bonds Outstanding, and having been indemnified as provided in Section 14.1(1), pursue any available remedy, at law or in equity, to enforce the payment of the principal of and premium, if any, and interest on the Bonds, to enforce any covenant or condition under this Master Indenture or the Supplemental Indentures or to remedy any Event of Default.

(b) Notwithstanding anything in this Master Indenture or the Supplemental Indentures to the contrary, upon the occurrence and continuation of an Event of Default, the Majority Owners of the Bonds Outstanding will control and direct all actions of the Trustee in exercising such of the rights and powers conferred by this Section on the Trustee or the Owners.

(c) So long as any Bonds are Outstanding, no owner or holder of any Subordinate Obligation may exercise any remedy under this Master Indenture or any Supplemental Indenture.

Section 13.4 Effect of Discontinuance or Abandonment. If any proceeding taken by the Trustee on account of any default has been discontinued or abandoned for any reason, or has been determined adversely to the Trustee, then NVT A, the Trustee, and the Owners will be restored to their former positions and rights under this Master Indenture and all rights, remedies and powers of the Trustee will continue as though no such proceeding had been taken.

Section 13.5 Restriction on Owners' Actions. In addition to the other restrictions on the rights of Owners to request action upon the occurrence of an Event of Default and to enforce remedies set forth in this Article, no Owner will have any right to institute any suite, action or proceeding in equity or at law for the enforcement of this Master Indenture or any remedy under this Master Indenture or any Supplemental Indenture or the Bonds, unless (i) an Event of Default has occurred and is continuing of which the Trustee has been notified as provided in Section 14.1(h), or of which by such Section it is deemed to have notice; (ii) the Majority Owners of the Bonds have been made written request of the Trustee to institute the suit, action, proceeding or other remedy, after the right to exercise the powers or rights of action, as the case may be, has accrued, and have afforded the Trustee a reasonable opportunity either to proceed to exercise the powers granted in this Master Indenture or to institute the action, suit or proceeding in its or their name; (iii) there has been offered to the Trustee security and indemnity reasonably satisfactory to it against the costs, expenses and liabilities to be incurred as provided in Section 14.1(1); and (iv) the Trustee has not complied with the request within a reasonable time. Such notification, request and offer of indemnity are declared, at the option of the Trustee, to be conditions precedent to the execution of the trusts of this Master Indenture or for any other remedy under this Master Indenture. It is intended that no one or more Owners will have any right to affect,

disturb or prejudice the security of this Master Indenture, or to enforce any right under this Master Indenture or the Bonds, except in the manner provided for in this Master Indenture, and that all proceedings at law or in equity will be instituted, had and maintained in the manner provided in this Master Indenture and for the benefit of all Owners. Nothing in this Master Indenture will affect or impair the right of the Owners to enforce payment of the Bonds in accordance with their terms.

Section 13.6 Power of Trustee to Enforce. All rights of action under this Master Indenture or under any of the Bonds secured by it which are enforceable by the Trustee may be enforced without the possession of any of the Bonds, or their production at the trial or other related proceedings. Any suit, action or proceedings instituted by the Trustee may be brought in its own name, as trustee, for the equal and ratable benefit of the Owners subject to the provisions of this Master Indenture.

Section 13.7 Remedies Not Exclusive. No remedy in this Master Indenture conferred on or reserved to the Trustee, or on or to the Owners, is intended to be exclusive of any other remedy, and each remedy is cumulative, and is in addition to every other remedy given under this Master Indenture or now or hereafter existing at law, in equity or by statute.

Section 13.8 Waiver of Events of Default; Effect of Waiver. (a) The Trustee will waive any Event of Default and its consequences at the written request of the Majority Owners of the Bonds Outstanding. If any Event of Default with respect to the Bonds has been waived as provided in this Master Indenture, the Trustee will promptly give written notice of the waiver to NVTa and by first class mail, postage prepaid, to all Owners if the Owners had previously been given notice of the Event of Default. No waiver, rescission and annulment will extend to or affect any subsequent Event of Default or impair any right, power or remedy available under this Master Indenture.

(b) No delay or omission of the Trustee or of any Owner to exercise any right, power or remedy accruing upon any default or Event of Default will impair any such right, power or remedy or will be construed to be a waiver of or acquiescence in any such default or Event of Default. Every right, power and remedy given by this Article to the Trustee and to the Owners, respectively, may be exercised from time to time and as often as may be deemed expedient.

Section 13.9 Application of Money. (a) Any amounts received by the Trustee pursuant to this Article will, after payment of the costs and expenses of the proceedings resulting in the collection of the money, the expenses, liabilities and advances incurred or made by the Trustee and the fees (whether ordinary or extraordinary) of the Trustee and expenses of NVTa in carrying out the provisions of this Master Indenture, be deposited in an appropriate Account that the Trustee will establish in the Revenue Fund. The amounts in such Account shall be applied as follows

FIRST: To the payment of the persons entitled to it of all installments of interest then due on the Bonds, in order of the maturity of the installments of such interest and, if the money available is not sufficient to pay in full any particular

installment, then ratably, according to the amounts due on such installment, to the persons entitled to it, without any discrimination or privilege;

SECOND: To the payment of the persons entitled to it of the unpaid principal or Amortization Requirements of on any of the Bonds which have become due (other than Bonds matured or called for redemption for the payment of which money is held pursuant to the provisions of this Master Indenture), in the order of their due dates and, if the amount available is not sufficient to pay in full such Bonds due on any particular date, then ratably, according to the amount of principal due on such date, to the persons entitled to it without any discrimination or privilege;

THIRD: To the payment of the persons entitled to it of all installments of interest then due on the Subordinate Obligations, in order of the maturity of the installments of such interest and, if the money available is not sufficient to pay in full any particular installment, then ratably, according to the amounts due on such installment, to the persons entitled to it, without any discrimination or privilege; and

FOURTH: To the payment of the persons entitled to it of the unpaid principal or Amortization Requirements of any of the Subordinate Obligations that have become due (other than Subordinate Obligations matured or called for redemption for the payment of which money is held pursuant to the provisions of this Master Indenture), in the order of their due dates and, if the amount available is not sufficient to pay in full such Subordinate Obligations due on any particular date, then ratably, according to the amount of principal due on such date, to the persons entitled to it without any discrimination or privilege.

(b) Whenever money is to be applied pursuant to the provisions of this Section, it will be applied at such times, and from time to time, as the Trustee determines, having due regard to the amount of money available for application and the likelihood of additional money becoming available for application in the future. Whenever the Trustee applies such money, it will fix the date on which payment is to be made, and interest on the amount of principal to be paid on such date will cease to accrue. The Trustee will give, by first class mail as it may deem appropriate, notice to the Owners of the fixing of such payment date.

Section 13.10 Notice of Certain Defaults; Opportunity to Cure Such Defaults. Notwithstanding anything to the contrary in this Master Indenture, no default under Section 13.1(a)(4) will constitute an Event of Default until actual notice of the default is given to NVT A by the Trustee or by the Owners of not less than 25% in aggregate principal amount of all Outstanding Bonds, and NVT A has had (i) 30 days after receipt of the notice with respect to any default in the payment of money or (ii) 90 days after receipt of the notice of any other default to correct the default or to cause the default to be corrected; provided, however, that if the default can be corrected, but cannot within the applicable period, it will not constitute an Event of Default if corrective action is instituted by NVT A within the applicable period and diligently pursued until the default is corrected.

Section 13.11 Rights of Bond Credit Provider. Notwithstanding anything contained in this Master Indenture to the contrary, until NVT A has reimbursed a Bond Credit Provider for amounts paid under a Bond Credit Facility to pay the interest on or the principal of any Bonds on any Payment Date, (i) such Bonds shall be deemed to be Outstanding and such Bond Credit Provider shall succeed to the rights and interests of the Owners to the extent of the amounts paid under the Bond Credit Facility until such amounts have been reimbursed and (ii) upon presentation to the Trustee, such Bond shall be registered in the name of the Bond Credit Provider or its nominee.

ARTICLE XIV THE TRUSTEE

Section 14.1 Acceptance of Trusts and Obligations. The Trustee hereby accepts the trusts and obligations imposed upon it by this Master Indenture and agrees to perform such trusts and obligations, but only upon and subject to the following express terms and conditions and no implied covenants or obligations shall be read into this Master Indenture against the Trustee:

(a) The Trustee, before the occurrence of an Event of Default and after the curing of all Events of Default that may have occurred, undertakes to perform such duties and only such duties as are specifically set forth in this Master Indenture and as a corporate trustee ordinarily would perform such duties under a corporate indenture. If an Event of Default has occurred (that has not been cured or waived), the Trustee shall exercise such of the rights and powers vested in it by this Master Indenture and the Related Series Supplement, and use the same degree of care and skill in their exercise, as a prudent person would exercise or use under the circumstances in the conduct of his or her own affairs.

(b) The Trustee may execute any of the trusts or powers under this Master Indenture and perform any of its duties by or through attorneys, accountants, agents, receivers or employees, but shall be answerable for the conduct of the same in accordance with the standards specified in subsection (a) of this Section. The Trustee also shall be entitled to act on the opinion or advice of its counsel concerning all matters of trust and the duties under this Master Indenture, and may be reimbursed for reasonable compensation to all such attorneys, accountants, agents, receivers and employees as may reasonably be employed in connection with this Master Indenture. The Trustee may act on an Opinion of Counsel and shall not be responsible for any loss or damage resulting from any action or nonaction by it taken or omitted to be taken in good faith in reliance on such Opinion of Counsel.

(c) The Trustee shall not be responsible for any recital in this Master Indenture or in the Bonds (except in respect to the certificate of authentication of the Trustee endorsed on the Bonds), or for the filing or re-filing of any financing or continuation statement or other document or instrument, or for insuring any property of NVT A or collecting any insurance money, or for the validity of NVT A's execution of this Master Indenture or of any supplements to it or instruments of further assurance, or for the sufficiency of the security for the Bonds. The Trustee shall not be responsible or liable for any loss suffered in connection with any investment of money made by it in accordance with Article XI.

(d) The Trustee shall not be accountable for the use of any Bonds authenticated or delivered under this Master Indenture. The bank or trust company acting as Trustee and its directors, officers, employees or agents may in good faith buy, sell, own, hold and deal in the Bonds and may join in any action which any Owner may be entitled to take with like effect as if such bank or trust company were not the Trustee. To the extent permitted by law, such bank or trust company may also receive tenders and purchase in good faith Bonds from itself, including any department, affiliate or subsidiary, with like effect as if it were not the Trustee.

(e) The Trustee shall be protected in acting on any Officer's Certificate, notice, request, consent, certificate, order, affidavit, letter, telegram or other paper or document reasonably believed by it to be genuine and correct and to have been signed or sent by the proper Person or Persons. Any action taken by the Trustee under this Master Indenture at the request, authority or consent of any Person who at the time of making such request or giving such authority or consent is the Owner of any Bond shall be conclusive and binding on all future Owners of the same Bond and on Bonds issued in exchange for it or in place of it.

(f) As to the existence or non-existence of any fact or as to the sufficiency or validity of any instrument, paper or proceeding, the Trustee shall be entitled to rely on an Officer's Certificate as sufficient evidence of the facts therein contained. Before the occurrence of a default of which the Trustee has been notified as provided in subsection (h) of this Section, or of which by such subsection it is deemed to have notice, may also accept a similar certificate to the effect that any particular dealing, transaction or action is necessary or expedient, but may at its discretion secure such further evidence deemed necessary or advisable, but shall in no case be bound to secure the same. The Trustee may accept an Officer's Certificate to the effect that an attached resolution has been adopted by NVTAs as conclusive evidence that such resolution has been duly adopted and is in full force and effect.

(g) The Trustee's permissive right to do things enumerated in this Master Indenture shall not be construed as a duty, and the Trustee shall not be answerable for other than its negligence or willful misconduct.

(h) The Trustee shall not be required to take notice or be deemed to have notice of any default under this Master Indenture, except defaults arising from the failure by NVTAs to make any payments due on the Bonds or the failure by NVTAs to file with the Trustee any document required by this Master Indenture to be so filed, unless the Trustee shall be notified of such default by NVTAs or by the Owners of not less than twenty-five percent in aggregate principal amount of Bonds then Outstanding.

(i) The Trustee shall not be required to give any bond or surety with respect to the execution of its rights and obligations under this Master Indenture.

(j) Notwithstanding any other provision of this Master Indenture, the Trustee shall have the right, but shall not be required, to demand, as a condition of (i) any action by the Trustee in respect of the authentication of any Bonds, (ii) the withdrawal of any cash, (iii) the release of any property or (iv) any action whatsoever within the purview of this Master Indenture, any showings, certificates (including Officer's Certificates), opinions, appraisals or

other information or corporate action or evidence thereof reasonably required by the Trustee, in addition to that required by the terms of this Master Indenture.

(k) All money the Trustee receives shall, until used or applied or invested as provided in this Master Indenture, be held in trust for the purposes for which it was received but need not be segregated from other funds except to the extent required by this Master Indenture or by law. The Trustee shall not be under any liability for interest on any money received under this Master Indenture except as may be agreed upon in writing.

(l) Before taking any action under this Master Indenture, the Trustee may require that indemnity to its satisfaction be furnished to it for the reimbursement of all expenses which may be incurred by it and to protect it against all liability by reason of any action so taken, except liability which is adjudicated to have resulted from its negligence or willful misconduct.

Section 14.2 Fees, Charges and Expenses of Trustee. If NVTA fails to make any payment on a Series of Bonds on the day such payment is due and payable, the Trustee shall give notice thereof by telephone or facsimile to NVTA on the next succeeding Business Day. If (i) any such failure of NVTA to make a payment on a Series of Bonds continues for thirty days, or (ii) the Owners of not less than twenty-five percent in aggregate principal amount of Bonds then Outstanding notify the Trustee of any default under this Master Indenture, then the Trustee shall give notice of such default by registered or certified mail to the Owner of each Bond of such Series then Outstanding. The Trustee's failure to give any notice required by this Section shall not subject the Trustee to any liability to any person, firm, corporation or other entity, including, but not limited to, NVTA and the Owners, nor shall such failure relieve NVTA of its obligation to make payments under the Bonds and this Master Indenture or waive the Trustee's right to exercise its remedies under this Master Indenture.

Section 14.3 Notice Required of Trustee. If NVTA fails to make any payment on a Series of Bonds on the day such payment is due and payable, the Trustee shall give notice thereof by telephone or facsimile to NVTA on the next succeeding Business Day. If (i) any such failure of NVTA to make a payment on a Series of Bonds continues for thirty days, or (ii) the owners of not less than twenty-five percent in aggregate principal amount of Bonds then Outstanding notify the Trustee of any default under this Master Indenture, then the Trustee shall give notice of such default by registered or certified mail to the Owner of each Bond of such Series then Outstanding. The Trustee's failure to give any notice required by this Section shall not subject the Trustee to any liability to any person, firm, corporation or other entity, including, to make payments under the Bonds and this Master Indenture or waive the Trustee's right to exercise its remedies under this Master Indenture.

Section 14.4 Intervention by Trustee. In any judicial proceeding to which NVTA is a party and that in the Trustee's opinion has a substantial bearing on the Owners' interests, the Trustee may intervene on the Owners' behalf and, subject to Section 14.1(1), shall do so if requested by the Owners of not less than 25% in aggregate principal amount of Bonds then Outstanding. The Trustee's rights and obligations under this Section are subject to the approval of a court of competent jurisdiction.

Section 14.5 Merger or Consolidation of Trustee. Any corporation or association into which the Trustee may be converted or merged, or with which it may be consolidated, or to which it may sell or transfer its corporate trust business and assets as a whole or substantially as a whole, or any corporation or association resulting from any such conversion, sale, merger, consolidation or transfer to which it is a party, shall be and become successor Trustee under this Master Indenture and vested with all the trusts, powers, discretion, immunities, privileges and all other matters as were vested in its predecessor without the execution or filing of any instrument or any further act, deed or conveyance on the part of any of the parties to this Master Indenture, anything herein to the contrary notwithstanding, if such corporation or association satisfies the requirements of the last sentence of Section 14.8.

Section 14.6 Resignation by Trustee. If the Trustee desires to resign at any time from the trusts created by this Master Indenture, it shall give notice to NVT A and each Owner of Bonds then Outstanding, but shall continue to serve as Trustee until such time as a successor Trustee is appointed. If a successor Trustee has not been appointed within thirty days, the Trustee shall have the right to petition a court of competent jurisdiction for appointment of a successor Trustee and such resignation shall become effective upon designation of such successor Trustee.

Section 14.7 Removal of Trustee. The Trustee may be removed at any time (i) by an instrument or concurrent instruments in writing delivered to the Trustee and to NVT A and signed by the Owners of a majority in aggregate principal amount of Bonds then Outstanding or (ii) by NVT A by notice in writing given by a NVT A Representative to the Trustee not less than sixty days before the removal date; provided, however, that NVT A shall have no right to remove the Trustee during any time when an Event of Default has occurred and is continuing or when an event has occurred and is continuing or condition exists that with the giving of notice or the passage of time, or both, would be an Event of Default. If applicable, the removed Trustee shall return to NVT A the amount of the Trustee's annual fee allocable to the portion of the then current year remaining after the removal date. Notwithstanding the foregoing, nothing contained in this Master Indenture shall relieve NVT A of its obligation to pay the Trustee's fees and expenses incurred to the date of such removal.

Section 14.8 Appointment of Successor Trustee; Temporary Trustee. If the Trustee shall resign, be removed, be dissolved, be in the course of dissolution or liquidation or otherwise become incapable of acting hereunder, or if it shall be taken under the control of any public officer or officers or of a receiver appointed by a court, then, unless an Event of Default with respect to any Series of Bonds has occurred and is continuing, a successor may be appointed by NVT A by an instrument in writing signed by a NVT A Representative. If an Event of Default has occurred and is continuing, a successor may be appointed by the Owners of a majority in aggregate principal amount of Bonds then Outstanding by an instrument or concurrent instruments in writing signed by such Owners. In case of such vacancy, NVT A, by an instrument signed by a NVT A Representative, may appoint a temporary Trustee to fill such vacancy until a successor Trustee shall be appointed by the Owners as provided above and any such temporary Trustee so appointed by NVT A shall immediately and without further act be replaced by the Trustee so appointed by such Owners. Any Trustee appointed under this Section shall be, if there be such an institution willing, qualified and able to accept the trust upon reasonable or customary terms, (i) a bank or trust company within or without the Commonwealth

of Virginia, in good standing and having a reported capital, surplus and undivided profits of not less than \$50,000,000, or (ii) a subsidiary trust company whose parent bank or bank holding company has undertaken to be fully responsible for the acts and omissions of such subsidiary trust company, and whose capital, surplus and undivided profits, together with that of its parent bank or bank holding company, as the case may be, is not less than \$50,000,000.

Section 14.9 Concerning any Successor Trustee. Every successor Trustee appointed under this Master Indenture shall execute, acknowledge and deliver to its predecessor and also to NVTa an instrument in writing accepting such appointment, and thereafter such successor, without any further act, deed or conveyance, shall become fully vested with all the properties, rights, powers, trusts, duties and obligations of its predecessor. Such predecessor shall, nevertheless, on the written request of NVTa or the Trustee's successor, execute and deliver an instrument transferring to such successor Trustee all the properties, rights, powers and trusts of such predecessor under this Master Indenture; and every predecessor Trustee shall deliver all securities and money held by it as Trustee under this Master Indenture to its successor. Should any instrument in writing from NVTa be required by any successor Trustee for more fully and certainly vesting in such successor the properties, rights, powers and duties hereby vested or intended to be vested in the predecessor, any and all such instruments in writing shall, on request, be executed, acknowledged and delivered by NVTa. The resignation of any Trustee and the instrument or instruments removing any Trustee and appointing a successor hereunder, together with all other instruments provided for in this Article, shall be filed and/or recorded by the successor Trustee in each recording office where this Master Indenture may have been filed and/or recorded.

Section 14.10 Trustee Protected in Relying on Resolutions. The resolutions, opinions, certificates and other instruments provided for in this Master Indenture may be accepted by the Trustee as conclusive evidence of the facts and conclusions stated therein and shall be full warrant, protection and authority to the Trustee for the release of property, the withdrawal of cash hereunder or the taking of any other action by the Trustee as provided under this Master Indenture, unless the Trustee has actual knowledge or notice to the contrary.

Section 14.11 Appointment of and Acceptance of Paying Agent. NVTa may at any time or from time to time appoint one or more Paying Agents for each Series of Bonds in the manner and subject to the conditions set forth in Section 14.12 for the appointment of a successor Paying Agent. Unless another Paying Agent is appointed for a Series of Bonds in the Related Series Supplement, the Trustee shall serve as Paying Agent. Each Paying Agent (other than the Trustee) will signify its acceptance of the duties and obligations imposed on it under this Master Indenture and any Supplemental Indenture by written instrument of acceptance deposited with NVTa and the Trustee.

Section 14.12 Resignation or Removal of Paying Agent; Appointment of Successor.

(a) Any Paying Agent may at any time resign and be discharged of the duties and obligations created by this Master Indenture by giving at least sixty days written notice to NVTa and the Trustee. Any Paying Agent may be removed at any time by an instrument signed by a NVTa Representative and filed with the Paying Agent and the Trustee. Any successor Paying Agent shall be appointed by NVTa, and shall be a bank or trust company duly organized

under the laws of the United States or any of its states or territories, having a capital stock and surplus aggregating at least \$50,000,000, and willing and able to accept the office on reasonable and customary terms and authorized by law to perform all the duties imposed upon the Paying Agent by this Master Indenture and any Supplemental Indenture.

(b) If any Paying Agent resigns or is removed, the Paying Agent shall pay over, assign and deliver any money held by it as Paying Agent to its successor or to the Trustee. If for any reason there is a vacancy in the office of any Paying Agent, the Trustee shall act as such until a new Paying Agent is appointed.

Section 14.13 Notification to Rating Agency. The Trustee shall notify each Rating Agency of (i) the execution and delivery of any Supplemental Indenture, (ii) the appointment of any successor Trustee under this Master Indenture, and (iii) the payment or redemption in full of the Bonds. Notice of any of the foregoing shall be given to the Rating Agency before or as soon as possible after its occurrence.

ARTICLE XV SUPPLEMENTAL INDENTURES

Section 15.1 Supplemental Indentures Not Requiring Consent of Owners. NVT A and the Trustee may, without the consent of, or notice to, any of the Owners of the Bonds, enter into such Supplemental Indenture or Supplemental Indentures as shall not be inconsistent with the terms and provisions of this Master Indenture or any Series Supplement for any one or more of the following purposes:

(a) To cure or correct any ambiguity, formal defect, omission or inconsistent provision in this Master Indenture or in a Series Supplement.

(b) To grant to or confer on the Trustee for the benefit of the Owners any additional rights, remedies, powers or authority that may lawfully be granted to or conferred on the Owners or the Trustee or either of them.

(c) To subject to the lien and pledge of this Master Indenture additional revenues, properties or collateral.

(d) To provide for the issuance of coupon Bonds if authorized under the Related Series Supplement.

(e) To amend certain provisions of this Master Indenture or any Series Supplement in any manner consistent with Sections 103 and 141 through 150 of the Code (or such other hereinafter enacted sections of the Code as may be applicable to the Bonds) as in effect at the time of the amendment.

(f) To confirm, as further assurance, any pledge under, and the subjection to any lien or pledge created or to be created by, this Master Indenture or any Series Supplement of the Regional NVT A Funds or any other moneys, property or Funds or Accounts.

(g) To modify, amend or supplement this Master Indenture or any Supplemental Indenture as required to permit its qualification under the Trust Indenture Act of 1939, as amended, or any similar federal statute hereafter in effect, or to permit the qualification of any of the Bonds for sale under the securities laws of any of the states of the United States, and, if NVTa and the Trustee so determine, to add to this Master Indenture or any Supplemental Indenture such other terms, conditions and provisions as may be permitted by the Trust Indenture Act of 1939, as amended, or similar federal statute.

(h) To add to the covenants and agreements of NVTa contained in this Master Indenture or any Supplemental Indenture other covenants and agreements thereafter to be observed for the Owners' protection, including, but not limited to, additional requirements imposed by virtue of a change of law, or to surrender or to limit any right, power or authority therein reserved to or conferred upon NVTa.

(i) To amend, modify or change the terms of any agreements governing any book-entry-only system for any of the Bonds.

(j) In the case of Series Supplements, to provide for the issuance of additional Series of Bonds (including Refunding Bonds) and to provide for such other related matters as may be required or contemplated by or appropriate under this Master Indenture.

(k) To make any changes necessary to comply with the requirements of a Rating Agency, a Bond Credit Provider, or a DSRF Credit Provider that, as expressed in a finding or determination by NVTa (which is included in the Supplemental Indenture), would not materially adversely affect the security for the Bonds.

(l) To make any other changes that (i) will have no adverse effect upon the ratings currently assigned to the applicable Series of Bonds by any Rating Agency, as expressed in a Rating Confirmation or (ii) shall not prejudice in any material respect the rights of the Owners of the Bonds then Outstanding, as expressed in a determination or finding by NVTa (which shall be stated in the Supplemental Indenture, and may be based upon an Opinion of Counsel and/or the opinion of NVTa's financial advisor).

(m) To restate in one document this Master Indenture and all effective Series Supplements and other Supplemental Indentures, which restatement shall then become this Master Indenture for all purposes, effective as of the date of this Master Indenture with respect to matters set forth therein and as of the date of any Supplemental Indenture included in the restatement as to matters set forth in any such Supplemental Indenture. Series Supplements and the Bonds issued thereunder prior to a restatement shall be deemed to relate to the restated Master Indenture without any further action or amendment.

Section 15.2 Supplemental Indentures Requiring Consent. Exclusive of Supplemental Indentures covered by Section 15.1 and subject to the terms and provisions contained in this Section, the Owners of a majority in aggregate principal amount of Bonds then Outstanding shall have the right from time to time, notwithstanding any other provision of this Indenture, to consent to and approve the execution by NVTa and the Trustee of such other Supplemental Indenture or Supplemental Indentures as NVTa shall deem necessary or desirable

to modify, alter, amend, add to or rescind, in any particular, any of the terms or provisions contained in this Master Indenture or in any Supplemental Indenture; provided, however, that without the consent and approval of the Owners of all of the affected Bonds then Outstanding nothing in this Master Indenture shall permit, or be construed as permitting (i) an extension of the maturity of the principal of or the interest on any Bond, (ii) a reduction in the principal amount of any Bond or the rate of interest on it, (iii) a privilege or priority of any Bond or Bonds over any other Bond or Bonds except as otherwise provided herein, or (iv) a reduction in the aggregate principal amount of Bonds required for consent to such Supplemental Indenture.

If at any time NVTa shall request the Trustee to enter into any such Supplemental Indenture for any of the purposes of this Section, the Trustee shall, upon being satisfactorily indemnified with respect to expenses, cause notice of the proposed execution of the Supplemental Indenture to be mailed to each Owner of Bonds then Outstanding by registered or certified mail to the address of each such Owner as it appears on the registration books for the Bonds; provided, however, that failure to give such notice by mailing, or any defect in it, shall not affect the validity of any proceedings under this Section. Such notice shall briefly state the nature of the proposed Supplemental Indenture and shall state that copies of it are on file at the Trustee's designated corporate trust office for inspection by all Owners. If, within six months or such longer period as shall be prescribed by NVTa following the giving of such notice, the Owners of a majority in aggregate principal amount of Bonds then Outstanding shall have consented to and approved its execution as provided under this Section, no Owner of any Bond shall have any right to object to any of the terms and provisions contained in it, or its operation, or in any manner to question the propriety of its execution, or to enjoin or restrain the Trustee or NVTa from executing such Supplemental Indenture or from taking any action under its provisions. Upon the execution of any such Supplemental Indenture as in this Section permitted and provided, this Master Indenture shall be deemed to be modified and amended in accordance therewith.

Bonds owned or held by or for the account of NVTa or any Person controlling, controlled by or under common control with NVTa shall not be deemed Outstanding for the purpose of consent or any calculation of Outstanding Bonds provided for in this Article XV. At the time of any such calculation, NVTa shall furnish the Trustee an Officer's Certificate, upon which the Trustee may rely, describing all Bonds so to be excluded.

Anything contained in this Master Indenture to the contrary notwithstanding, NVTa and the Trustee may enter into any Supplemental Indenture upon receipt of the consent of the Owners of all Bonds then Outstanding.

Section 15.3 Opinion of Counsel Required. The Trustee shall not execute any Supplemental Indenture unless there shall have been filed with the Trustee an Opinion (or Opinions) of Counsel, subject to customary exceptions and qualifications, stating that (i) such Supplemental Indenture is authorized or permitted by this Master Indenture and (ii) upon execution the Supplemental Indenture will be valid and binding on NVTa in accordance with its terms.

Section 15.4 No Unreasonable Refusal. The Trustee shall not unreasonably refuse to enter into any Supplemental Indenture permitted under this Article; provided, however, that such

refusal shall not be deemed unreasonable if the Trustee believes in good faith that such Supplemental Indenture will or may prejudice any right of the Owners of the Bonds then Outstanding or adversely affect the rights and immunities, or increase the duties, of the Trustee.

ARTICLE XVI MISCELLANEOUS

Section 16.1 Consents of Owners. Any consent, request, direction, approval, objection or other instrument required by this Master Indenture to be signed and executed by the Owners of the Bonds may be in any number of concurrent writings of similar tenor and may be signed or executed by such Owners in person or by agents appointed in writing. Proof of the execution of any such consent, request, direction, approval, objection or other instrument or of the writing appointing any such agents, if made in the manner stated in the next sentence, shall be sufficient for any of the purposes of this Master Indenture, and shall be conclusive in the Trustee's favor with regard to any action taken under such request or other instrument. The fact and date of the execution by any person of any such writing may be proved by the certificate of any officer in any jurisdiction who by law has power to take acknowledgments within such jurisdiction that the person signing such writing acknowledged before such officer the execution thereof, or by affidavit of any witness to such execution.

Section 16.2 Limitation of Rights. With the exception of the rights expressly conferred in this Master Indenture, nothing expressed or mentioned or to be implied from this Master Indenture or the Bonds is intended or shall be construed to give to any person or entity other than the parties to this Master Indenture and the Owners any legal or equitable right, remedy or claim under or in respect to this Master Indenture or any covenants, conditions and agreements contained in it; this Master Indenture and all of the covenants, conditions and agreements in it being intended to be and being for the sole and exclusive benefit of the parties to it and the Owners

Section 16.3 Limitation of Liability of Directors, Officers, Etc., of Authority and the Trustee. No covenant, agreement or obligation contained in this Master Indenture shall be deemed to be a covenant, agreement or obligation of any present or future director, officer, employee or agent of NVT A or the Trustee in his or her individual capacity, and neither the directors of NVT A or the Trustee nor any officer, employee or agent thereof executing the Bonds shall be liable personally on the Bonds or be subject to any personal liability or accountability by reason of their execution or issuance. No director, officer, employee, agent or adviser of NVT A or the Trustee shall incur any personal liability with respect to any action taken by him or her under this Master Indenture or the Act, provided such director, officer, employee, agent or adviser acts in good faith.

Section 16.4 Notices. Unless otherwise provided in this Master Indenture, all demands, notices, approvals, consents, requests, opinions and other communications under this Master Indenture shall be in writing and shall be deemed to have been given when delivered in person or mailed by first class mail addressed (i) if to NVT A, at [to be determined], Attention: Executive Director; or (ii) if to the Trustee, at [to be determined]. NVT A and the Trustee may by notice given under this Section, designate any further or different addresses to which subsequent

demands, notices, approvals, consents, requests, opinions or other communications shall be sent or persons to whose attention the same shall be directed.

Section 16.5 Successors and Assigns. This Master Indenture shall be binding on, inure to the benefit of and be enforceable by the parties to it and their respective successors and assigns.

Section 16.6 Severability. If any clause, provision or section of this Master Indenture be held illegal or invalid by any court, the illegality or invalidity of such clause, provision or section shall not affect any of the remaining clauses, provisions or sections of this Master Indenture, and this Master Indenture shall be construed and enforced as if such illegal or invalid clause, provision or section had not been contained in it. If any agreement or obligation contained in this Master Indenture be held to be in violation of law, then such agreement or obligation shall be deemed to be the agreement or obligation of the parties to this Master Indenture to the full extent permitted by law.

Section 16.7 Applicable Law. This Master Indenture shall be governed by the laws of the Commonwealth.

Section 16.8 Counterparts. This Master Indenture may be executed in several counterparts, each of which shall be an original and all of which together shall constitute one and the same instrument.

[Signature Page Follows]

IN WITNESS WHEREOF, NVTA and the Trustee have caused this Master Indenture to be executed in their respective corporate names by their duly authorized representatives, all as of the date first above written.

**NORTHERN VIRGINIA TRANSPORTATION
AUTHORITY**

By: _____
Chairman

A TRUSTEE TO BE NAMED, as Trustee

By: _____
Its: _____

[Signature Page of Master Indenture]

FIRST SUPPLEMENTAL SERIES INDENTURE OF TRUST

Between

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

And

A TRUSTEE TO BE NAMED,

As Trustee

Dated as of July 1, 2013

**Relating to
[\$105,000,000]
Northern Virginia Transportation Authority
Transportation Facilities Revenue Bonds
Series 2013**

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FIRST SUPPLEMENTAL SERIES INDENTURE OF TRUST

This **FIRST SUPPLEMENTAL SERIES INDENTURE OF TRUST** (this "First Series Supplement") is made as of July 1, 2013, between the **NORTHERN VIRGINIA TRANSPORTATION AUTHORITY**, a political subdivision of the Commonwealth of Virginia ("NVTA"), and **A TRUSTEE TO BE NAMED**, and its successors, as trustee (the "Trustee").

RECITALS

WHEREAS, NVTA was duly created under the Northern Virginia Transportation Authority Act, Chapter 48.2, Title 15.2, Code of Virginia of 1950, as amended, including without limitation by HB 2313 adopted by the General Assembly on April 3, 2013 (the "NVTA Act"); and

WHEREAS, Section 15.2-4830 of the NVTA Act provides, *inter alia*, that NVTA (i) will prepare a regional transportation plan for Planning District Eight, to include, but not necessarily be limited to, transportation improvements of regional significance, and those improvements necessary or incidental thereto, and will from time to time revise and amend the plan and (ii) has the power to construct or acquire, by purchase, lease, contract, or otherwise, the transportation facilities specified in the regional transportation plan when adopted; and

WHEREAS, NVTA prepared, and on November 8, 2012, approved, a regional transportation plan for Planning District 8 entitled "TransAction 2040 Regional Transportation Plan" (the "Plan"); and

WHEREAS, Section 15.2-4839 of the NVTA Act authorizes and empowers NVTA to issue bonds and other evidences of debt and provides that the provisions of Article 5 (Section 15.2-4519 et seq.) of Chapter 45 of Title 15.2 of the Virginia Code, shall apply, *mutatis mutandis*, to the issuance of such bonds or other evidences of debt; and

WHEREAS, Section 15.2-4519 of the Virginia Code provides that NVTA's bonds may be payable from and secured by a pledge of all or any part of the revenues, moneys or funds of NVTA as specified in a resolution adopted or indenture entered into by NVTA; and

WHEREAS, NVTA has executed and delivered to the Trustee a Master Indenture of Trust dated as of July 1, 2013 (the "Master Indenture"), under which, among other things, NVTA has provided for the issuance from time to time of bonds to finance and refinance the cost of any Project (as defined in the Master Indenture), and for such other purposes as may be authorized under and pursuant to the NVTA Act and provided for the security for and sources of payment of the debt service on such bonds; and

WHEREAS, NVTA now desires to issue, sell, and deliver a Series of Bonds under the Master Indenture in the maximum aggregate principal amount of [\$105,000,000] (the "2013 Bonds"); and

WHEREAS, NVTA will use the proceeds of the 2013 Bonds, along with other available funds, to pay the issuance and financing costs thereof, to fund any required reserves and to pay

the costs of the construction and acquisition of the transportation facilities and projects described in Exhibit A hereto (collectively, the "2013 Project"), each of which is a Project specified in the Plan and previously determined by NVTa to satisfy the requirements of Section 15.2-4838.1 of the NVTa Act; and

WHEREAS, the Master Indenture provides that, as a condition to the issuance and authentication of any Series of Bonds, NVTa shall deliver to the Trustee a Series Supplement; and

WHEREAS, all things necessary to make the 2013 Bonds valid and binding limited obligations of NVTa, when authenticated and issued as provided in this First Series Supplement, and to constitute this First Series Supplement a valid and binding agreement securing the payment of the principal of and premium, if any, and interest on the 2013 Bonds, have been done and performed; and

NOW, THEREFORE, NVTa hereby covenants and agrees with the Trustee and with the Owners, from time to time, of the 2013 Bonds, as follows:

ARTICLE I FIRST SERIES SUPPLEMENT

Section 1.1 First Series Supplement. This First Series Supplement is authorized and executed by NVTa and delivered to the Trustee pursuant to and in accordance with the Bond Resolution and Articles V and XV of the Master Indenture. All terms, covenants, conditions and agreements of the Master Indenture apply with full force and effect to the 2013 Bonds, except as otherwise provided in this First Series Supplement.

Section 1.2 Definitions. All capitalized words and terms used in this First Series Supplement have the meanings set forth in Article I of the Master Indenture. In addition, the following words and terms have the following meanings in this First Series Supplement unless the context clearly requires otherwise:

"2013 Bonds" means the Series of Bonds authorized to be issued under Section 2.1(a) hereof.

"2013 Bond Debt Service Fund" means the Bond Debt Service Fund Related to the 2013 Bonds established pursuant to Section 7.1 of the Master Indenture and Section 4.1 of this First Series Supplement.

"2013 Cost of Issuance Fund" means the Cost of Issuance Fund Related to the 2013 Bonds established pursuant to Section 7.1 of the Master Indenture and Section 4.1 of this First Series Supplement.

"2013 Debt Service Reserve Fund" means the Debt Service Reserve Fund Related to the 2013 Bonds established pursuant to Section 7.1 of the Master Indenture and Section 4.1 of this First Series Supplement.

"2013 Project" means, collectively, the Projects described in Exhibit A hereto.

"2013 Project Fund" means the Project Fund Related to the 2013 Bonds established pursuant to Section 7.1 of the Master Indenture and Section 4.1 of this First Series Supplement.

"2013 Rebate Fund" means the Rebate Fund Related to the 2013 Bonds established pursuant to Section 7.1 of the Master Indenture and Section 4.1 of this First Series Supplement.

"2013 Tax Regulatory Agreement" means the Series 2013 Tax Certificate and Regulatory Agreement dated the Closing Date made by NVTa for the benefit of the Trustee and the Owners of the 2013 Bonds.

"Bond Resolution" means the resolution adopted by NVTa on July 24, 2013, and entitled "Resolution Authorizing the Issuance of Transportation Facilities Revenue Bonds."

"Closing Date" means the date of the issuance and delivery of the 2013 Bonds.

"Dated Date" means the Closing Date.

"DTC" shall have the meaning set forth in Section 2.3 hereof.

"First Series Supplement" means this First Series Supplement of Trust dated as of July 1, 2013, between NVTa and the Trustee, as it may be modified, altered, amended or supplemented from time to time in accordance with the provisions of the Master Indenture.

"Letter of Representations" means NVTa's Blanket Letter of Representations to DTC.

"Master Indenture" means the Master Indenture of Trust dated as of July 1, 2013, between NVTa and the Trustee, as the same may be modified, altered, amended and supplemented from time to time in accordance with its terms.

"Partial Refunding Bonds" means any Bonds issued under the Master Indenture to refund and defease the 2013 Bonds in part (for example, to refund and defease only the callable 2013 Bonds).

"Rebate Requirement" means, collectively, the requirements applicable to tax-exempt bonds under Section 148(f)(2) and (3) of the Tax Code.

"Reserve Requirement" means, with respect to the 2013 Bonds, an amount equal to the maximum Principal and Interest Requirements on the 2013 Bonds in the then-current or any future Fiscal Year.

Section 1.3 Representations of NVTa. NVTa represents that (i) it is duly authorized under the Constitution and laws of the Commonwealth, including particularly and without limitation the NVTa Act, to issue the 2013 Bonds, to execute this First Series Supplement, and to pledge and grant a security interest in the Pledgeable NVTa Revenues and the 2013 Bond Debt Service Fund and the 2013 Debt Service Reserve Fund as security for the 2013 Bonds in the manner and to the extent set forth in the Master Indenture and this First Series Supplement, (ii) all action on its part necessary for the execution and delivery of this First Series

Supplement has been taken, and (iii) the 2013 Bonds in the hands of the Owners thereof are and will be valid and enforceable limited obligations of NVTA.

ARTICLE II AUTHORIZATION AND DETAILS OF 2013 BONDS

Section 2.1 Authorization of 2013 Bonds. (a) There is authorized to be issued pursuant to the Master Indenture a Series of Bonds of NVTA in the aggregate principal amount of [\$105,000,000] to be called the "Transportation Facilities Revenue Bonds, Series 2013."

(b) The proceeds of the 2013 Bonds shall be used for the purposes set forth in the recitals, including to pay the costs of the construction and acquisition of the 2013 Projects.

Section 2.2 Details of 2013 Bonds. (a) The 2013 Bonds shall be dated the Dated Date, shall be issued in denominations of \$5,000 and integral multiples of \$5,000, shall be numbered from R-1 upwards, sequentially, and shall bear interest, payable on each April 1 and October 1, commencing on October 1, 2014, at the rates set forth below and shall mature, subject to prior redemption, on October 1 in the years and in the amounts set forth below:

<u>Year</u>	<u>Principal Amount</u>	<u>Interest Rate</u>	<u>Year</u>	<u>Principal Amount</u>	<u>Interest Rate</u>
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(a) Each 2013 Bond shall bear interest (i) from the Dated Date, if such 2013 Bond is authenticated before October 1, 2014, or (ii) otherwise from the Interest Payment Date that is, or immediately precedes, the date on which such 2013 Bond is authenticated; provided, however, that if at the time of authentication any payment of interest is in default, such 2013 Bond shall bear interest from the date to which interest has been paid. Interest on the 2013 Bonds shall be computed on the basis of a year of 360 days and twelve 30-day months.

(b) Interest on the 2013 Bonds shall be payable by checks or drafts mailed to the Owners thereof at their addresses as they appear on the fifteenth day of the month preceding the Interest Payment Date on the registration books kept by the Paying Agent. Notwithstanding the foregoing, if (i) the Owner of a 2013 Bond owns at least \$1,000,000 in aggregate principal

amount of 2013 Bonds and (ii) such Owner has provided satisfactory prior notice to the Paying Agent regarding payment by wire transfer, then interest shall be paid to such Owner by wire transfer. Principal of and premium, if any, on the 2013 Bonds shall be payable to the Owners thereof upon the surrender of the 2013 Bonds at the Paying Agent's corporate trust office in _____, Virginia.

(c) Notwithstanding the foregoing, for so long as Cede & Co. or other nominee of DTC is Owner of all of the 2013 Bonds, principal of and premium, if any, and interest on the 2013 Bonds shall be payable as provided in the Letter of Representations.

(d) The principal of and premium, if any, and interest on the 2013 Bonds shall be payable in lawful money of the United States of America.

(e) If the principal of any 2013 Bond is not paid when due (whether at maturity, by mandatory sinking fund redemption or call for redemption or otherwise), then the overdue principal shall continue to bear interest until paid at the rate set forth in the 2013 Bond.

(f) The 2013 Bonds maturing on October 1, ____, and October 1, ____, are Term Bonds. The Amortization Requirements for such Term Bonds are set forth in Section 3.2 below. All of the other 2013 Bonds are Serial Bonds.

Section 2.3 Book Entry Provisions for the 2013 Bonds. (a) The 2013 Bonds will be registered in the name of Cede & Co., a nominee of The Depository Trust Company, New York, New York ("DTC"), and immobilized in DTC's custody. One fully registered Bond for the original principal amount of each maturity of each Series will be registered to Cede & Co. Beneficial owners of the 2013 Bonds will not receive physical delivery of the 2013 Bonds. Individual purchases of the 2013 Bonds may be made in book-entry form only in original principal amounts of \$5,000 and integral multiples of \$5,000. For as long as the 2013 Bonds are held in book-entry format, payments of principal of and premium, if any, and interest on the 2013 Bonds will be made to DTC or its nominee as the sole Owner on the applicable Payment Date in accordance with the Letter of Representations.

DTC is responsible for the transfer of the payments of the principal of and premium, if any, and interest on the 2013 Bonds to the participants of DTC, which include securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations (the "Participants"). Transfer of the payments of the principal of and premium, if any, and interest on the 2013 Bonds to the beneficial owners of the 2013 Bonds is the responsibility of the Participants and other nominees of such beneficial owners.

Transfer of beneficial ownership interests in the 2013 Bonds shall be made by DTC and its Participants, acting as nominees of the beneficial owners of the 2013 Bonds, in accordance with rules specified by DTC and its Participants. Neither NVTa, the Trustee nor the Paying Agent makes any assurances that DTC, its Participants or other nominees of the beneficial owners of the 2013 Bonds will act in accordance with such rules or on a timely basis.

NVTa, the Trustee and the Paying Agent disclaim any responsibility or obligations to the Participants or the beneficial owners with respect to (i) the accuracy of any records maintained by DTC or any Participant, (ii) the payment by DTC or any Participant of any

amount due to any beneficial owner in respect of the principal of and premium, if any, and interest on the 2013 Bonds, (iii) the delivery by DTC or any Participant of any notice to any beneficial owner that is required or permitted under the terms of the Master Indenture or this First Series Supplement to be given to Owners of the 2013 Bonds, (iv) the selection of the beneficial owners to receive payment in any partial redemption of the 2013 Bonds, or (v) any consent given or other action taken by DTC as Owner.

So long as Cede & Co., as nominee of DTC, is the sole Owner of the 2013 Bonds, references in the Master Indenture or this First Series Supplement to the Owners or registered owners of the 2013 Bonds shall mean Cede & Co. and not the beneficial owners of the 2013 Bonds. Any notice to or consent requested of Owners of 2013 Bonds under the Master Indenture or this First Series Supplement shall be given to or requested of Cede & Co.

(b) Replacement Bonds (the "Replacement Bonds") will be registered in the name of and be issued directly to beneficial owners of the 2013 Bonds rather than to DTC, or its nominee, but only if:

(1) DTC determines not to continue to act as securities depository for the 2013 Bonds; or

(2) The Trustee or NVTA has advised DTC of NVTA's determination that DTC is incapable of discharging its duties or that it is otherwise in the best interests of the beneficial owners of the 2013 Bonds to discontinue the book-entry system of transfer.

(c) Upon the occurrence of an event described in subsection (b)(1)(A) or (B) above (and the Trustee and NVTA undertake no obligation to make any investigation regarding the matters described in subsection (b)(1)(B) above, NVTA may attempt to locate another qualified securities depository. If NVTA fails to locate another qualified securities depository to replace DTC, NVTA shall execute and the Paying Agent shall authenticate and deliver to the Participants the Replacement Bonds (substantially in the form set forth in Exhibit B with such appropriate variations, omissions and insertions as are permitted or required by the Master Indenture or this First Series Supplement) to which the Participants are entitled for delivery to the beneficial owners of the 2013 Bonds. The Paying Agent shall be entitled to rely on the records provided by DTC as to the Participants entitled to receive Replacement Bonds. The Owners of the Replacement Bonds shall be entitled to the lien and benefits of the Master Indenture and this First Series Supplement.

Section 2.4 Form of 2013 Bonds. Each of the 2013 Bonds shall be substantially in the form attached as Exhibit B to this First Series Supplement, with such appropriate variations, omissions and insertions as permitted or required by the Master Indenture or this First Series Supplement. There may be endorsed on any of the 2013 Bonds such legend or text as may be necessary or appropriate to conform to any applicable rules and regulations of any governmental authority or any usage or requirement of law.

Section 2.5 Authentication of 2013 Bonds. Each 2013 Bond shall bear a certificate of authentication, substantially as set forth in the applicable form of the 2013 Bond attached as an exhibit, duly executed by the Paying Agent. The Paying Agent shall authenticate each 2013 Bond with the signature of one of its authorized officers or employees, but it shall not be necessary for the same person to authenticate all of the 2013 Bonds. Only such authenticated 2013 Bonds shall be entitled to any right or benefit under the Master Indenture or this First Series Supplement, and such certificate on any 2013 Bond shall be conclusive evidence that the 2013 Bond has been duly issued under and is secured by the provisions of the Master Indenture and this First Series Supplement.

ARTICLE III REDEMPTION OF 2013 BONDS

Section 3.1 Optional Redemption. (a) NVTa may call the 2013 Bonds for optional redemption only as provided in this section.

(b) The 2013 Bonds maturing on or before October 1, ____, shall not be subject to redemption at NVTa's option before their respective maturity dates.

(c) The 2013 Bonds maturing on or after October 1, ____, may be redeemed prior to their respective maturities, at the option of NVTa, from any moneys that may be made available for such purpose, either in whole or in part (in \$5,000 increments), on any date and in such order as NVTa may determine on and after October 1, ____, at 100% of the principal amount to be redeemed together with the interest accrued thereon to the date fixed for redemption.

Section 3.2 Amortization Requirements for Term Bonds. (a) The 2013 Bonds maturing on October 1, ____, are subject to mandatory sinking fund redemption in part, on October 1 in the years and in the amounts set forth below, at a redemption price equal to 100% of the principal amount of such Bonds to be redeemed plus accrued interest to the date fixed for redemption:

<u>Year</u>	<u>Amount</u>	<u>Year</u>	<u>Amount</u>
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(b) The 2013 Bonds maturing on October 1, ____, are subject to mandatory sinking fund redemption in part, on October 1 in the years and in the amounts set forth below, at a redemption price equal to 100% of the principal amount of such Bonds to be redeemed plus accrued interest to the date fixed for redemption:

<u>Year</u>	<u>Amount</u>	<u>Year</u>	<u>Amount</u>
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(c) NVTa shall receive a credit for payments required to be made on any mandatory sinking fund redemption date in an amount equal to the principal amount of any of the Term Bonds subject to mandatory sinking fund redemption on such date as described in

subsections (a) and (b) above that have been redeemed (otherwise than by mandatory sinking fund redemption) before such mandatory sinking fund redemption date or purchased by NVTa or by anyone acting on behalf of NVTa as provided pursuant to Section 10.4 of the Master Indenture.

Section 3.3 Selection of 2013 Bonds for Redemption. (a) The maturities of the 2013 Bonds to be redeemed by optional redemption shall be selected by NVTa and specified for each optional redemption in an Officer's Certificate.

(b) In the case of any partial redemption of a maturity of the 2013 Bonds, the particular 2013 Bonds to be redeemed shall be selected by DTC in accordance with its procedures or, if the book-entry system has been discontinued, by the Paying Agent by lot in such manner as the Paying Agent shall determine.

(c) Each increment of \$5,000 of principal amount of 2013 Bonds shall be counted as one 2013 Bond for purposes of selecting 2013 Bonds for a partial redemption.

(d) If a 2013 Bond shall be called for partial redemption, upon its surrender a new 2013 Bond, representing the unredeemed balance of the principal amount of the 2013 Bond, shall be issued to its Owner.

Section 3.4 Notice of Redemption. (a) When (i) required to redeem 2013 Bonds under any provision of the Master Indenture or this First Series Supplement or (ii) directed to do so by a NVTa Representative in writing, the Paying Agent shall cause notice of the redemption to be mailed by certified or registered mail, not less than thirty (30) nor more than sixty (60) days before the redemption date, to all Owners of 2013 Bonds to be redeemed at their addresses as they appear on the registration books maintained by the Paying Agent; provided, however, that the failure to mail any such notice or any defect in the mailing to any one or more of the Owners shall not affect the validity of the redemption with respect to any Owners to whom such notice was properly mailed.

(b) The Trustee shall give further notice of such redemption not less than one day before the date on which it gives notice of redemption to the Owners by certified or registered mail to (i) all registered national securities depositories then in the business of holding substantial amounts of obligations of types similar to the 2013 Bonds and (ii) to at least one national information service that disseminates notices of redemption of obligations such as the 2013 Bonds. Notwithstanding the foregoing, no defect in such further notice and no failure to give all or any portion of such further notice shall in any manner affect the effectiveness of a call for redemption.

(c) Any notice of redemption may state that it is conditioned upon there being available on the redemption date an amount of money sufficient to pay the redemption price plus interest accrued and unpaid to the redemption date, and any conditional notice so given may be rescinded at any time before the payment of the redemption price of any such condition so specified is not satisfied.

(d) Any notice of redemption mailed in the manner specified above shall be deemed to have been duly given when mailed by the Paying Agent.

(e) In preparing any notice of redemption, the Paying Agent shall take into account, to the extent applicable, the prevailing tax-exempt securities industry standards and any regulatory statement of any federal or state administrative body having jurisdiction over NVTa or the tax-exempt securities industry, including without limitation, Release No. 34-23856 of the Securities and Exchange Commission, or any subsequent amending or superseding release.

(f) Any notices given to DTC under this Section shall be given at the times and in the manner set forth in the Letter of Representations.

Section 3.5 Payment of Redemption Price. (a) On or before the date fixed for redemption, funds shall be deposited with the Paying Agent to pay the redemption price of the 2013 Bonds called for redemption. Provided funds for their redemption are on deposit at the place of payment on the redemption date and the required notice shall have been given, the 2013 Bonds called for redemption shall cease to bear interest from and after the redemption date, shall no longer be entitled to the benefits provided by the Master Indenture and this First Series Supplement and shall not be deemed to be Outstanding under the provisions of the Master Indenture and this First Series Supplement.

(b) The Paying Agent shall ensure that CUSIP number identification accompanies all redemption payments on the 2013 Bonds.

ARTICLE IV ESTABLISHMENT OF ACCOUNTS; APPLICATION OF SALE PROCEEDS

Section 4.1 Establishment of Accounts for the 2013 Bonds. (a) In accordance with Section 7.1 of the Master Indenture, the 2013 Cost of Issuance Fund, the 2013 Project Fund, the 2013 Bond Debt Service Fund, the 2013 Debt Service Reserve Fund, and the 2013 Rebate Fund are hereby established for the 2013 Bonds.

(b) All of the Accounts established pursuant to this Section shall be held by the Trustee, except the 2013 Cost of Issuance Fund which shall be held by NVTa.

Section 4.2 Application of Sale Proceeds of the 2013 Bonds. (a) On the Closing Date, the Trustee shall apply the total amount received from the underwriters for the 2013 Bonds in payment therefor (\$_____) as follows:

(1) \$_____ shall be deposited in the 2013 Cost of Issuance Fund;

(2) \$_____ shall be deposited in the 2013 Project Fund;
and

(3) \$_____ shall be deposited in the 2013 Debt Service Reserve Fund.

(b) NVTa represents that the amount deposited into the 2013 Debt Service Reserve Fund is equal to the Reserve Requirement for the 2013 Bonds as of the Closing Date.

ARTICLE V
APPLICATION OF CERTAIN FUNDS

Section 5.1 2013 Cost of Issuance Fund. (a) NVTA shall apply the amounts in the 2013 Cost of Issuance Fund to pay the issuance and financing costs of the 2013 Bonds.

(b) Any amounts deposited in the 2013 Cost of Issuance Fund as described in Section 4.2(a)(i) that are not applied in accordance with Section 9.1 of the Master Indenture to pay the costs of issuance of the 2013 Bonds shall be transferred by NVTA to the 2013 Bond Debt Service Fund and applied by the Trustee to pay debt service on the 2013 Bonds before any other amounts therein are so used.

Section 5.2 2013 Bond Debt Service Fund and 2013 Debt Service Reserve Fund and Partial Refunding Bonds. (a) NVTA may elect in the Related Series Supplement to have the 2013 Bond Debt Service Fund or the 2013 Debt Service Reserve Fund, or both, provide for the payment of or secure a Series of Partial Refunding Bonds, or both.

(b) If NVTA makes the above-described election with respect to the 2013 Debt Service Reserve Fund, then the definition of "Reserve Requirement" as set forth herein shall change to read as follows: "Reserve Requirement" means an amount equal to the maximum Principal and Interest Requirements in the then-current or any future Fiscal Year on the Outstanding 2013 Bonds and the Outstanding Partial Refunding Bonds.

Section 5.3 2013 Rebate Fund. The Trustee shall invest and apply amounts on deposit in the 2013 Rebate Fund as directed by Officer's Certificates provided pursuant to and in accordance with the 2013 Tax Regulatory Agreement.

ARTICLE VI
SPECIAL COVENANTS

Section 6.1 2013 Tax Regulatory Agreement. (a) NVTA agrees that it will not take any action, or omit to take any action, if any such action or omission would adversely affect the excludability from gross income of interest on the 2013 Bonds under Section 103 of the Tax Code. NVTA agrees that it will not directly or indirectly use or permit the use of any proceeds of the 2013 Bonds or any other funds of NVTA or take or omit to take any action that would cause the 2013 Bonds to be "arbitrage bonds" under Section 148(a) of the Tax Code. To these ends, NVTA will comply with all requirements of Sections 141 through 150 of the Tax Code, including the Rebate Requirement, to the extent applicable to the 2013 Bonds.

(b) Without limiting the generality of the foregoing, NVTA agrees that (i) it will not directly or indirectly use or permit the use of the proceeds of the 2013 Bonds except in accordance with the 2013 Tax Regulatory Agreement and (ii) insofar as the 2013 Tax Regulatory Agreement imposes duties and responsibilities on NVTA, the 2013 Tax Regulatory Agreement is specifically incorporated by reference into this Section.

(c) The Trustee agrees to comply with all written instructions of a NVTA Representative given in accordance with the 2013 Tax Regulatory Agreement, but the Trustee shall not be required to ascertain that the instructions comply with the 2013 Tax Regulatory

Agreement. The Trustee shall be entitled to receive and may request from time to time from NVTa written instructions from a nationally-recognized bond counsel acceptable to the Trustee regarding the interpretation of Sections 141 through 150 of the Tax Code, and the Trustee agrees that it will comply with such directions (upon which the Trustee and NVTa may conclusively rely) so as to enable NVTa to perform its covenants under this Section.

(d) Notwithstanding any provisions of this Section, if NVTa shall provide to the Trustee an opinion of nationally-recognized bond counsel addressed and acceptable to NVTa and the Trustee to the effect that any action required under this Section by incorporation or otherwise is not required or is no longer required to maintain the excludability from gross income of the interest on the 2013 Bonds under Section 103 of the Tax Code, NVTa and the Trustee may rely conclusively on such opinion in complying with the provisions of this Section.

Section 6.2 Bond Insurance Covenants. [Reserved].

**ARTICLE VII
CONTINUING DISCLOSURE AGREEMENT**

Section 7.1 Purpose. This Article is for the benefit of the Owners of the 2013 Bonds and in order to assist the underwriters of the 2013 Bonds in complying with the provisions of Section (b)(5)(i) of Rule 15c2-12 (the "Rule") promulgated by the Securities and Exchange Commission by providing certain annual financial information and material event notices required by the Rule (collectively, "Continuing Disclosure").

Section 7.2 Annual Disclosure. (a) NVTa shall provide or cause to be provided annually financial information and operating data in accordance with the provisions of Section (b)(5)(i) of the Rule, the operating data with respect to each NVTa as specified in Exhibit C hereto.

(b) NVTa shall provide or cause to be provided annually the financial information and operating data described in subsection (a) above (collectively, the "Annual Disclosure") within 270 days after the end of each Fiscal Year, commencing with the Fiscal Year ending June 30, 2014, to the Municipal Securities Rating Board (the "MSRB"). If the financial statements filed pursuant to this subsection are not audited, NVTa shall file such statements as audited when available.

(c) Any Annual Disclosure may be included by specific reference to other documents previously provided to the MSRB or filed with the SEC.

(d) NVTa shall provide or cause to be provided in a timely manner to the MSRB notice specifying any failure of NVTa to provide the Annual Disclosure by the date specified.

Section 7.3 Event Disclosure. NVTa shall provide or cause to be provided in a timely manner, not in excess of ten business days from the occurrence of such event, to the MSRB notice of the occurrence of any of the following events with respect to the 2013 Bonds:

- (a) principal and interest payment delinquencies;

- (b) non-payment related defaults, if material;
- (c) unscheduled draws on debt service reserves reflecting financial difficulties;
- (d) unscheduled draws on any credit enhancement reflecting financial difficulties;
- (e) substitution of credit or liquidity providers, or their failure to perform;
- (f) adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701 - TEB) or other material notices or determinations with respect to the tax status of the Bonds, or other material events affecting the tax status of the 2013 Bonds;
- (g) modifications to rights of the Owners of 2013 Bonds, if material;
- (h) bond calls, if material, and tender offers;
- (i) defeasance of all or any portion of the 2013 Bonds;
- (j) release, substitution, or sale of property securing repayment of the 2013 Bonds;
- (k) rating changes;
- (l) bankruptcy, insolvency, receivership or similar event of NVTA;
- (m) the consummation of a merger, consolidation, or acquisition involving NVTA or the sale of all or substantially all of the assets of NVTA, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material; and
- (n) appointment of a successor or additional trustee or the change of name of a trustee, if material.

Section 7.4 Termination. With respect to any 2013 Bond, the obligations of NVTA under this Article will terminate upon the redemption, defeasance (within the meaning of the Rule) or payment in full of such 2013 Bonds.

Section 7.5 Amendment. NVTA may modify its obligations under this Article without the consent of the Owners of the Bonds, provided that this Article as so modified complies with the Rule as it exists at the time of modification. NVTA shall within a reasonable time thereafter send to the MSRB a description of such modification(s).

Section 7.6 Defaults. (a) If NVTA fails to comply with any covenant or obligation regarding Continuing Disclosure specified in this Article, any holder (within the meaning of the

Rule) of Bonds then Outstanding may, by notice to NVT A, proceed to protect and enforce its rights and the rights of the other holders by an action for specific performance of NVT A's covenant to provide the Continuing Disclosure.

(b) Notwithstanding anything herein to the contrary, any failure of NVT A to comply with any obligation regarding Continuing Disclosure specified in this Article (i) shall not be deemed to constitute an event of default under the Bonds or the Master Indenture and (ii) shall not give rise to any right or remedy other than that described in subsection (a) above.

Section 7.7 Additional Disclosure. NVT A may from time to time disclose certain information and data in addition to the Continuing Disclosure. Notwithstanding anything herein to the contrary, NVT A shall not incur any obligation to continue to provide, or to update, such additional information or data.

Section 7.8 Dissemination Agent. NVT A may, in its discretion, from time to time appoint or engage an entity to serve as Dissemination Agent to assist NVT A in providing its Continuing Disclosure under this Article.

Section 7.9 Form of Disclosure. When NVT A, or a Dissemination Agent, makes disclosures to MSRB, the disclosures made to MSRB shall be in the format and contain the identifying information required by MSRB.

ARTICLE VIII MISCELLANEOUS

Section 8.1 Successors and Assigns. This First Series Supplement is binding upon, inures to the benefit of and is enforceable by its parties and their respective successors and assigns.

Section 8.2 Severability. If any provision of this First Series Supplement is held invalid by any court of competent jurisdiction, such holding will not invalidate any other provision.

Section 8.3 Governing Law. This First Series Supplement will be governed by and construed under the applicable laws of the Commonwealth of Virginia.

Section 8.4 Counterparts. This First Series Supplement may be executed in several counterparts, each of which will be an original, and the counterparts will together constitute one and the same instrument.

Section 8.5 Parties Interested. Nothing in this First Series Supplement expressed or implied is intended or will be construed to confer upon any Person, other than NVT A, the Trustee and the Owners of the 2013 Bonds, any right, remedy or claim under or by reason of this First Series Supplement, this First Series Supplement being intended for the sole and exclusive benefit of NVT A, the Trustee and the Owners of the 2013 Bonds.

[Signature Page Follows]

IN WITNESS WHEREOF, NVTA and the Trustee have caused this First Series Supplement to be executed in their respective corporate names by their duly authorized officers, all as of the date first above written.

**NORTHERN VIRGINIA TRANSPORTATION
AUTHORITY**

By: _____
Chairman

A TRUSTEE TO BE NAMED, as Trustee

By: _____

Its: _____

[Signature Page of First Series Supplement]

EXHIBIT A

DESCRIPTION OF 2013 PROJECT

(See Attached)

EXHIBIT B
FORM OF 2013 BOND

REGISTERED
R-___

CUSIP

UNITED STATES OF AMERICA
COMMONWEALTH OF VIRGINIA

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY
TRANSPORTATION FACILITIES REVENUE BOND
SERIES 2013

INTEREST RATE

_____%

MATURITY DATE

October 1, 20__

DATED DATE

_____, 2013

REGISTERED OWNER:

PRINCIPAL AMOUNT:

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY, a political subdivision of the Commonwealth of Virginia ("NVTa"), acknowledges itself indebted and for value received promises to pay upon surrender of this Bond at the corporate trust office of [a Trustee to be named], or its successor, as paying agent (the "Paying Agent") under the Indenture (as defined below), to the registered owner of this Bond (the "Owner"), or registered assigns or legal representative, the principal sum stated above on the maturity date stated above, and to pay interest on this Bond semiannually on each April 1 and October 1, commencing October 1, 2014, at the annual rate stated above, solely from the sources pledged for such purpose as described below. The principal of and premium, if any, and interest on this Bond are payable in lawful money of the United States of America.

"Indenture" means the Master Indenture of Trust dated as of July 1, 2013 (the "Master Indenture"), between NVTa and [a Trustee to be named], or its successor, as trustee (the "Trustee"), and as supplemented by the First Supplemental Series Indenture of Trust dated as of July 1, 2013 (the "First Series Supplement," and together with the Master Indenture, the "Indenture"), between NVTa and the Trustee. Unless otherwise defined, each capitalized term used in this Bond has the meaning given it in the Indenture.

Interest is payable (i) from the dated date set forth above (the "Dated Date"), if this Bond is authenticated before _____, 20__, or (ii) otherwise from the interest payment date that is, or immediately precedes, the date on which this Bond is authenticated (unless payment of interest on this Bond is in default, in which case this Bond shall bear interest from the date to

which interest has been paid). Interest on this Bond is computed on the basis of a year of 360 days and twelve 30-day months.

Interest is payable by check or draft mailed to the holder of this Bond at the address that appears on the fifteenth day of the month preceding each interest payment date on the registration books kept by the Paying Agent. Notwithstanding the foregoing, if (i) the Owner of this Bond owns at least \$1,000,000 in aggregate principal amount of Bonds (as defined below), and (ii) such Owner has provided satisfactory prior notice to the Trustee regarding payment by wire transfer, then interest shall be paid to such Owner by wire transfer. Notwithstanding anything to the contrary contained in this Bond or in the Indenture, for so long as Cede & Co. or any other nominee of The Depository Trust Company ("DTC") is the Owner of all of the Bonds, the principal of and premium, if any, and interest on this Bond shall be payable pursuant to the additional requirements provided under NVTA's Blanket Issuer Letter of Representations to DTC dated _____, 2014.

If the date of maturity of the principal of this Bond or the date fixed for the payment of interest on or the redemption of this Bond shall not be a Business Day (as defined in the Indenture), then payment of principal, premium, if any, and interest need not be made on such date, but may be made on the next succeeding Business Day, and, if made on such next succeeding Business Day, no additional interest shall accrue for the period after such date of maturity or date fixed for the payment of interest or redemption.

This Bond and the issue of which it is a part and the premium, if any, and the interest on them are limited obligations of NVTA and payable solely from the revenues, moneys and other property pledged to the Trustee for such purpose under the Indenture on a parity with the other Bonds issued simultaneously herewith and the other Outstanding Bonds or hereafter to be issued under the Indenture. THE PRINCIPAL OF AND PREMIUM, IF ANY, AND INTEREST ON THIS BOND SHALL NOT BE DEEMED TO CONSTITUTE A DEBT OF THE COMMONWEALTH OF VIRGINIA OR ANY POLITICAL SUBDIVISION THEREOF (INCLUDING ANY MEMBER LOCALITY) OTHER THAN NVTA. THIS BOND SHALL NOT CONSTITUTE AN INDEBTEDNESS IWHTIN THE MEANING OF ANY DEBT LIMITATION OR RESTRICTION EXCEPT AS PROVIDED UNDER THE NVTA ACT.

This Bond is one of an issue of [\$105,000,000] Transportation Facilities Revenue Bonds, Series 2013 (the "Bonds"), of like date and tenor, except as to number, denomination, rate of interest, privilege of redemption and maturity, authorized and issued by NVTA pursuant to the Northern Virginia Transportation Authority Act, Chapter 48.2, Title 15.2, Code of Virginia of 1950, as amended, a resolution adopted by NVTA on July 24, 2013, and the Indenture, to provide proceeds to be used, along with other available funds to pay the issuance and financing costs of the Bonds, to fund any required reserves and to pay the costs of the construction and acquisition of the transportation facilities and projects described in Exhibit A to the First Series Supplement.

Reference is made to the Indenture and all amendments and supplements to it for a description of the provisions, among others, with respect to the nature and extent of the security for the Bonds, the rights, duties and obligations of NVTA and the Trustee, the rights of the Owners of the Bonds and the terms upon which the Bonds are issued and secured. NVTA may

from time to time hereafter issue additional bonds ranking equally with or subordinate to the Bonds for certain purposes on the terms provided in the Indenture.

The Bonds may not be called for redemption except as provided in the Indenture and as described in the succeeding numbered paragraphs.

(1) The Bonds maturing on or before October 1, 20__, will not be subject to optional or mandatory redemption.

(2) The Bonds maturing on or after October 1, 20__, may be redeemed before maturity at the option of NVT A from any available moneys on and after October 1, 20__, in whole or in part in \$5,000 increments at any time, at 100% of the principal amount of the Bonds to be redeemed, plus interest accrued to the date fixed for redemption.

(3) The Bonds maturing on October 1, 20__, are required to be redeemed in part before maturity and paid at maturity by NVT A on October 1 20__ in the years and in the amounts set forth below, at a redemption price equal to 100% of the principal amount of such Bonds to be redeemed plus interest accrued to the date fixed for redemption:

<u>Year</u>	<u>Amount</u>
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(4) The Bonds maturing on October 1, 20__, are required to be redeemed in part before maturity and paid at maturity by NVT A on October 1 in the years and in the amounts set forth below, at a redemption price equal to 100% of the principal amount of such Bonds to be redeemed plus interest accrued to the date fixed for redemption:

<u>Year</u>	<u>Amount</u>
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(5) NVT A shall receive a credit for payments required to be made on any mandatory sinking fund redemption date in an amount equal to the principal amount of any of the Bonds subject to mandatory sinking fund redemption on such date as described in paragraphs (3) and (4) above that have been redeemed (otherwise than by mandatory sinking fund redemption) before such mandatory sinking fund redemption date or purchased by NVT A or by anyone acting on behalf of NVT A as provided pursuant to the Master Indenture.

The maturities of the Bonds to be redeemed by optional redemption shall be selected by NVT A. In the case of any partial redemption of a maturity of the Bonds, the particular Bonds to be redeemed shall be selected by DTC in accordance with its procedures or, if the book-entry system has been discontinued, by the Paying Agent by lot in such manner as the Paying Agent shall determine. Each increment of \$5,000 principal amount of Bonds shall be counted as one Bond for purposes of selecting Bonds for a partial redemption. If this Bond shall be called for partial redemption, upon its surrender a new Bond representing the unredeemed balance of the principal amount will be issued to the Owner.

If any of the Bonds are called for redemption, the Paying Agent shall send notice of the call for redemption identifying the Bonds to be redeemed by first class mail not less than thirty nor more than sixty days before the date fixed for redemption to the Owner of each Bond to be redeemed at such Owner's address as it appears on the registration books maintained by the Paying Agent. Provided funds for their redemption are on deposit at the place of payment on the date fixed for redemption, all Bonds called for redemption shall cease to bear interest on such date, shall no longer be secured by the Indenture and shall not be deemed to be outstanding under the provisions of the Indenture.

The Owner of this Bond shall have no right to enforce the provisions of the Indenture or to take any action with respect to any Event of Default under the Indenture or to institute, appear in or defend any suit or other proceedings with respect to it, except as provided in the Indenture.

Modifications or alterations of the Indenture, or of any supplement to it, may be made only to the extent and in the circumstances permitted by the Indenture.

The Bonds are issuable as registered bonds in denominations of \$5,000 and integral multiples of \$5,000. Upon surrender for transfer or exchange of this Bond at the Paying Agent's designated corporate trust office, NVT A shall execute and the Paying Agent shall authenticate and deliver in the name of the transferee or transferees or Owner, as applicable, a new Bond or Bonds of like date, tenor and of any authorized denomination for the aggregate principal amount any such transferee or Owner is entitled to receive, subject in each case to such reasonable regulations as NVT A or the Paying Agent may prescribe. When presented for transfer, exchange, redemption or payment, this Bond must be accompanied by a written instrument or instruments of transfer or authorization for exchange, in form and substance reasonably satisfactory to NVT A and the Paying Agent, duly executed by the Owner or by his or her duly authorized attorney-in-fact or legal representative. Any such transfer or exchange shall be at NVT A's expense, except that the Paying Agent may charge the person requesting such transfer or exchange the amount of any tax or other governmental charge required to be paid with respect to it.

The Owner of this Bond shall be treated as the person exclusively entitled to payment of principal, premium, if any, and interest and the exercise of all other rights and powers of the Owner, except that interest payments shall be made to the person registered as Owner on the fifteenth day of the month preceding each interest payment date.

All acts, conditions and things required to happen, exist or be performed precedent to and in the issuance of this Bond have happened, exist and have been performed.

This Bond shall not become obligatory for any purpose, be entitled to any security or benefit under the Indenture or be valid until the Paying Agent has executed the Certificate of Authentication appearing on this Bond and inserted the date of authentication.

[Signature Page Follows]

IN WITNESS WHEREOF, the Northern Virginia Transportation Authority has caused this Bond to be signed by the facsimile signature of its Chairman, a facsimile of its seal to be printed on it and attested by the facsimile signature of its Executive Director, and this Bond to be dated the Dated Date.

(SEAL)

**NORTHERN VIRGINIA TRANSPORTATION
AUTHORITY**

By: _____

Chairman

ATTEST:

Executive Director

[Signature Page of the Bond]

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CERTIFICATE OF AUTHENTICATION

This Bond is one of the Bonds described in the above-mentioned Indenture.

Authentication Date: _____

A TRUSTEE TO BE NAMED,
as Paying Agent

By: _____
Authorized Signature

ASSIGNMENT

FOR VALUE RECEIVED, the undersigned sells, assigns and transfers unto

PLEASE INSERT SOCIAL SECURITY OR OTHER
IDENTIFYING NUMBER OF TRANSFEREE

(PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS, INCLUDING ZIP CODE OF
TRANSFEREE)

this Bond and all rights under it, and irrevocably constitutes and appoints
_____, attorney, to transfer this Bond on the books kept for its
registration, with full power of substitution.

Dated: _____

Tax I.D. No. _____

Signature Guaranteed:

(NOTE: The signature of the registered owner or owners must be guaranteed by an Eligible Guarantor Institution such as a Commercial Bank, Trust Company, Securities Broker/Dealer, Credit Union or Savings Association which is a member of a medallion program approved by The Securities Transfer Association, Inc.)

Registered Owner

(NOTE: The signature above must correspond exactly with must correspond exactly with the name of the registered owner as it appears on the front of this Bond.)

EXHIBIT C
OPERATING DATA

(See Attached)