Chapter 1
Introduction

INTRODUCTION

Passengers on Fairfax Connector. Source: Fairfax County

FROM CONGESTION RELIEF TO TRANSPORTATION CHOICE

The Washington Metropolitan area is continually ranked among the most congested in the United States. The region's transportation challenges were reaffirmed by the *2011 Annual Urban Mobility Report*[1], by the Texas A&M Transportation Institute. This report identified the region as the most congested in the country. The costs of widespread traffic congestion are significant and appreciably affect people's quality of life and the region's competitiveness. Decades of unsuccessfully addressing traffic congestion through major investments in the vehicular transportation system have convinced an increasing number of areas to change their approach to the development of their transportation systems.

The whole range of transportation solutions needs to be leveraged to maintain and improve people's mobility. The transportation system should offer people many travel choices for everyday trips. The Super NoVa Transit/Transportation Demand Management (TDM) Vision Plan is one part of the multifaceted approach that will be needed to keep people moving throughout the super region.

Mobility…

More than four-in-five voters (82 percent) say "the United States would benefit from an expanded and improved transportation system, such as rail and buses." When asked about reducing traffic congestion, three-in-five voters choose improving public transportation and making it easier to walk and bike compared to building more roads and expanding existing roads.

Source: Transportation For America, Future of Transportation National Survey (2010), http://t4america.org/resources/2010survey/

[1] *2011 Annual Urban Mobility Report, Texas Transportation Institute, September 2011, http://mobility.tamu.edu/ums/*

A NEW APPROACH

The prosperity of the greater Northern Virginia region has been remarkable throughout the past 50 years. The growth that has occurred during this period has made the area the most populous in Virginia. The growth in the number of jobs throughout the region has resulted in Northern Virginia being an employment destination for people from three states—Virginia, Maryland, and West Virginia—and the District of Columbia. Many people commute daily more than 100 miles each way to work in urban Northern Virginia.

While the growth in population and jobs has created tremendous benefits for Virginia, as well as the Washington Metropolitan area, it has not been without challenges. Much of Northern Virginia and the communities that are within its approximately 75-mile commuter shed experience significant periods of traffic congestion during weekday mornings and evenings and on weekends. With continued general scarcity of transportation funds for roadway capacity enhancements, especially related to the rate of increase in traffic congestion, significant stress exists on nearly every part of the region's major transportation infrastructure—roads and bridges, sidewalks and bikeways, airports, and transit. While the region has made, and continues to make, substantial investments in major roadway and transit facilities throughout the region, transportation demand continues to outpace new capacity.

Vision Mobility Beyond Boundaries...

"Northern Virginia is the most congested region in Virginia, and it is projected to continue to grow both in population and employment," said Governor McDonnell. "Anecdotal information indicates that some people now make daily commutes of 100 miles each way or more to get to their jobs. To truly address congestion in Northern Virginia, we have to take a broader view of what constitutes the region and the commuting patterns of its workforce. We must develop a geographically broader vision and plan for transit and TDMs that do not stop at local or state political borders."

Recognizing the current and anticipated mobility challenges facing the northern part of Virginia, the Commonwealth's leaders through the Virginia Department of Rail and Public Transportation (DRPT), initiated a vision plan development process for transit and TDM in the greater Northern Virginia region. The Super NoVa Transit/TDM Vision Plan has expanded the mobility dialogue beyond traditional local, regional, and state boundaries. The Plan looks at the needs of today, as well as those of the future—2040.

Transportation Fair in Arlington. Source: Arlington County

A Broad Focus...

"Every locality in Northern Virginia faces transportation challenges and most have developed jurisdictionally-specific projects to address those challenges," said Sean Connaughton, Secretary of Transportation. "We must broaden our focus and find the most cost-effective transit and TDM services that have the biggest impact on a regionwide basis. The Super NoVa study will help us do that."

STUDY AREA

The Vision Plan presents a transit and TDM vision that has an awareness of the effects of travel demand, land use policy, and population and employment patterns from three states—Virginia, Maryland, and West Virginia—and the District of Columbia. The planning effort encompassed an area (shown in **Figure 1.1**) of more than 6 million people and 3.5 million jobs. This area extended well beyond any single regional boundary and encompassed three states and the District of Columbia; four metropolitan planning organization's (MPO) boundaries; and dozens of counties, cities, and towns.

The study area's size enabled the Plan to be created with an understanding of multistate travel patterns, long commutes, and the increasing number of activity centers that exist already or will be created from future development and growth across the region.

AREA TRAVEL CHARACTERISTICS

The nature of the job market in the greater Washington area, combined with rising cost of living, has led a considerable portion of the region's workforce to commute long distances each day for work. The majority of commuters in the region eventually find their way into one of four major travel sheds—I-95, I-66, Route 267/7/9 (Dulles), and I-270—that lead to the region's largest employment area. Congestion and transit use in each of these travel sheds increases with each mile as they approach the region's inner area.

In addition to significant travel demand within each of the region's four primary travel sheds, as the population and employment have expanded beyond the traditional urban area of the region, travel demand between and across these sheds has increased and is becoming increasingly difficult. In Northern Virginia, the Capital Beltway (I-495), Fairfax County Parkway, State Route 28, State Route 123, State Route 234, and the Prince William Parkway all carry significant travel volumes between the Dulles, I-66, and I-95 corridors. The increasing decentralized pattern of employment growth in the region, coupled with growth in housing in places like Fredericksburg, Warrenton, and Winchester, VA; the panhandle of West Virginia; and Frederick, MD, all have contributed to greater demand in circumferential travel.

Figure 1.1: Study Area

For perspective on the future of the region and its complexities, according to currently adopted future population forecasts, 11 localities will account for the addition of 1.23 million people by 2040. These 11 localities are Fairfax, Loudoun, Arlington, Prince William, Montgomery, Prince George's, and Frederick Counties and the District of Columbia, City of Falls Church, City of Alexandria, and Fairfax City. The remainder of the region (21 jurisdictions), and vast majority of the geographic area, will account for an additional 900,000 people. Generally, currently rural areas are forecast to retain rural characteristics in the future. While the largest (by number) population increases are projected in Fairfax, Prince William, and Montgomery Counties, Spotsylvania, Stafford, and Culpeper Counties are forecast to more than double in population by 2040.

REGIONAL GROWTH

Historically, investment in major transportation infrastructure and services in the region has focused on the system of major routes feeding the freeway system, the freeway system itself, and major transit infrastructure running within and parallel to these corridors. Far less regional investment has occurred in circumferential infrastructure and services. Projected increases in population and employment in the region (**Figure 1.2**), coupled with continued development of activity centers (**Figure 1.3**), will further strain radial and circumferential transportation services and infrastructure.

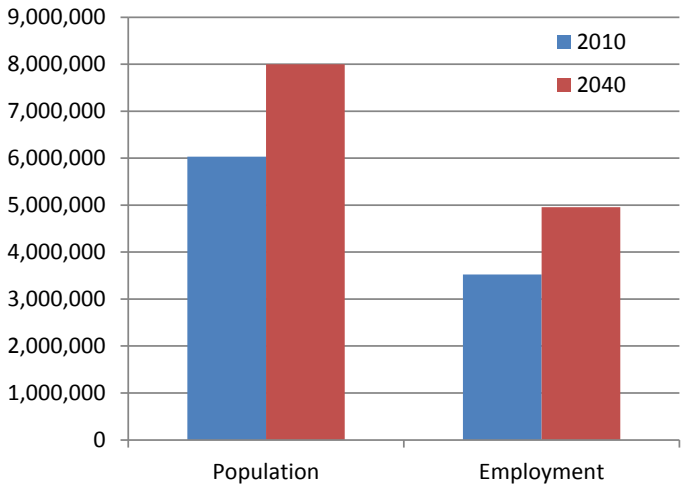


Figure 1.2: Projected Population and Employment Growth, 2010 to 2040

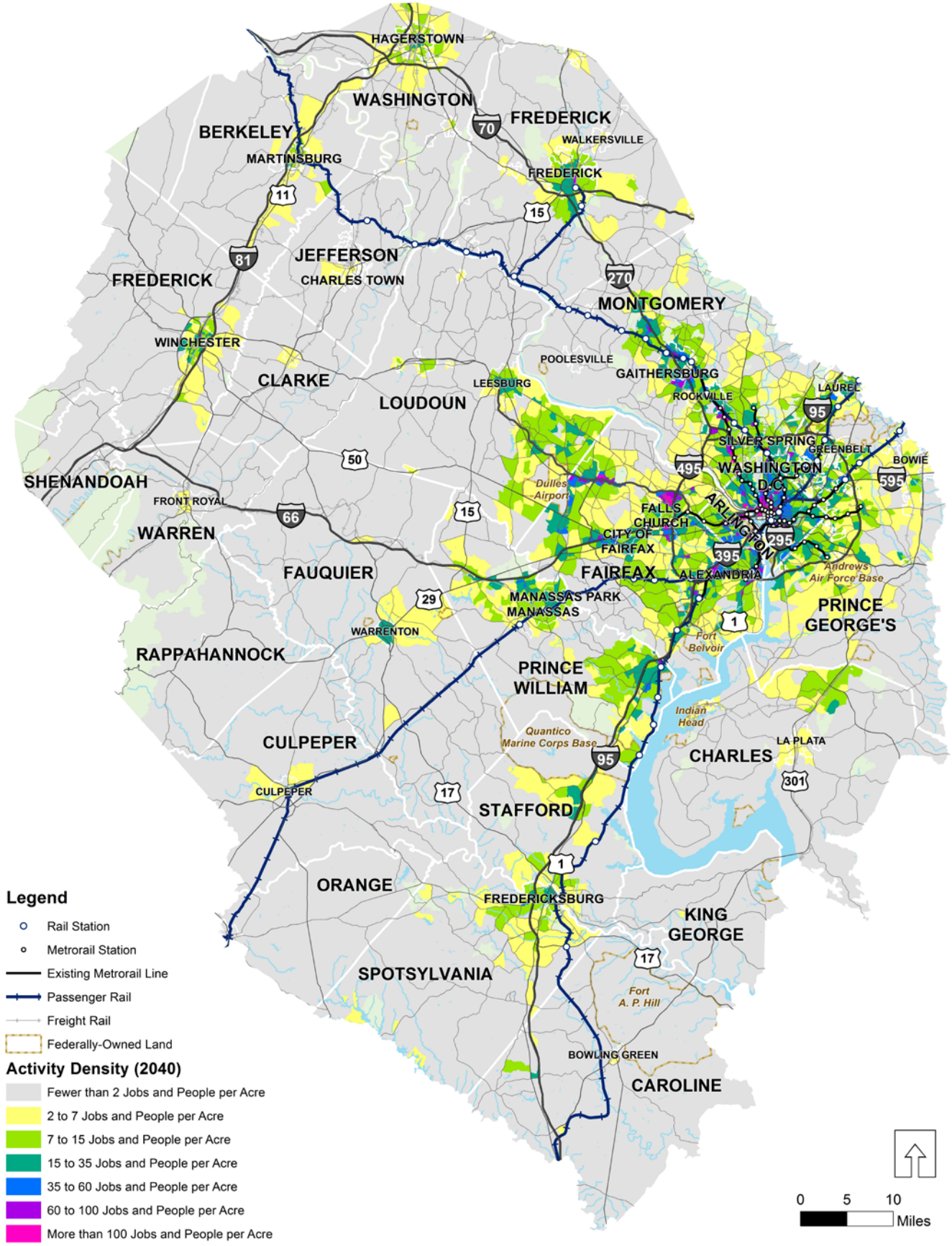


Figure 1.3 2040 Activity Density

This 2040 Activity Density map shows increasing growth outside the traditional urban area.

OPPORTUNITY

The region faces innumerable challenges as it continues to grow; however, abundant opportunities exist to enhance people's mobility through strategic investments in transit infrastructure and services. Rising population and employment, limited land resources to expand critical transportation facilities, spreading congestion, crowding on the transit system, gaps in transportation programs and services, and limited funding will challenge regional mobility. Strategic investments in linking land use and transportation decision-making, multimodal transportation system capacity, transportation education and culture, transit facilities and services, and TDM programs and services are real opportunities to help address the region's mobility challenges.

To move the region forward, significant infrastructure, program, and service investments will be needed. People have clearly indicated, through the choices they have made and the programs they support, that they will choose to walk, bicycle, and take transit more often and for more trip types when doing so is safe, convenient, and effective. A real opportunity in increasing regional mobility lies in the way in which more people can have access to more transportation choices that meet their travel needs.

MISSION AND GOALS

The mission is to vision mobility beyond boundaries. The vision is to identify safe, strategic, and seamless mobility options for rail, transit, and TDM in the Super NoVa area. Framing goals of the vision plan include:

- Increasing mobility and transportation choice through strategic investments in transit and TDM
- Efficiently using transportation infrastructure to meet current and future transportation needs
- Integration of transportation and land use planning and policy
- Sustained economic growth and prosperity

This mission, although simple, addresses a primary theme of the study—creating a plan for a seamless travel experience for the Super NoVa region. Today, transit and TDM programs and services are largely delivered based on individual jurisdictional or semiregional boundaries. These service and program boundaries are based mostly on the way in which programs and services are funded, rather than the way people desire to travel. Although some regional coordination and transit operations exist in the region, they cover an area that is considerably smaller than the defined Super NoVa region.

APPROACH

With an understanding of the complexities of planning in an area as large and significant as the Super NoVa region, a comprehensive and inclusive approach was undertaken in the development of the Vision Plan. This approach included agency and public outreach as well as technical and planning evaluations.

Agency and Public Outreach

A structured public outreach effort was initiated at the onset of the planning process and carried throughout the study. The effort involved communications with the public through print and broadcast media outlets, publication and frequent update of a project website, preparation of project informational materials, three rounds of public meetings held at locations across the study area, and the collection of comments through the project website and questionnaires coordinated with project milestones. Public agencies also were engaged during the study process through four rounds of workshops held across the region. At each agency and public meeting, a variety of input opportunities was offered ranging from whole group discussion sessions to specifically targeted input sessions.

Involving People...

"We plan to engage stakeholders and the public early and often during the study process," said Thelma Drake, DRPT Director. "Reaching a vision for transit in the Northern Virginia region will require significant input and cooperation from everyone in the study area. We look forward to starting that collaborative process."

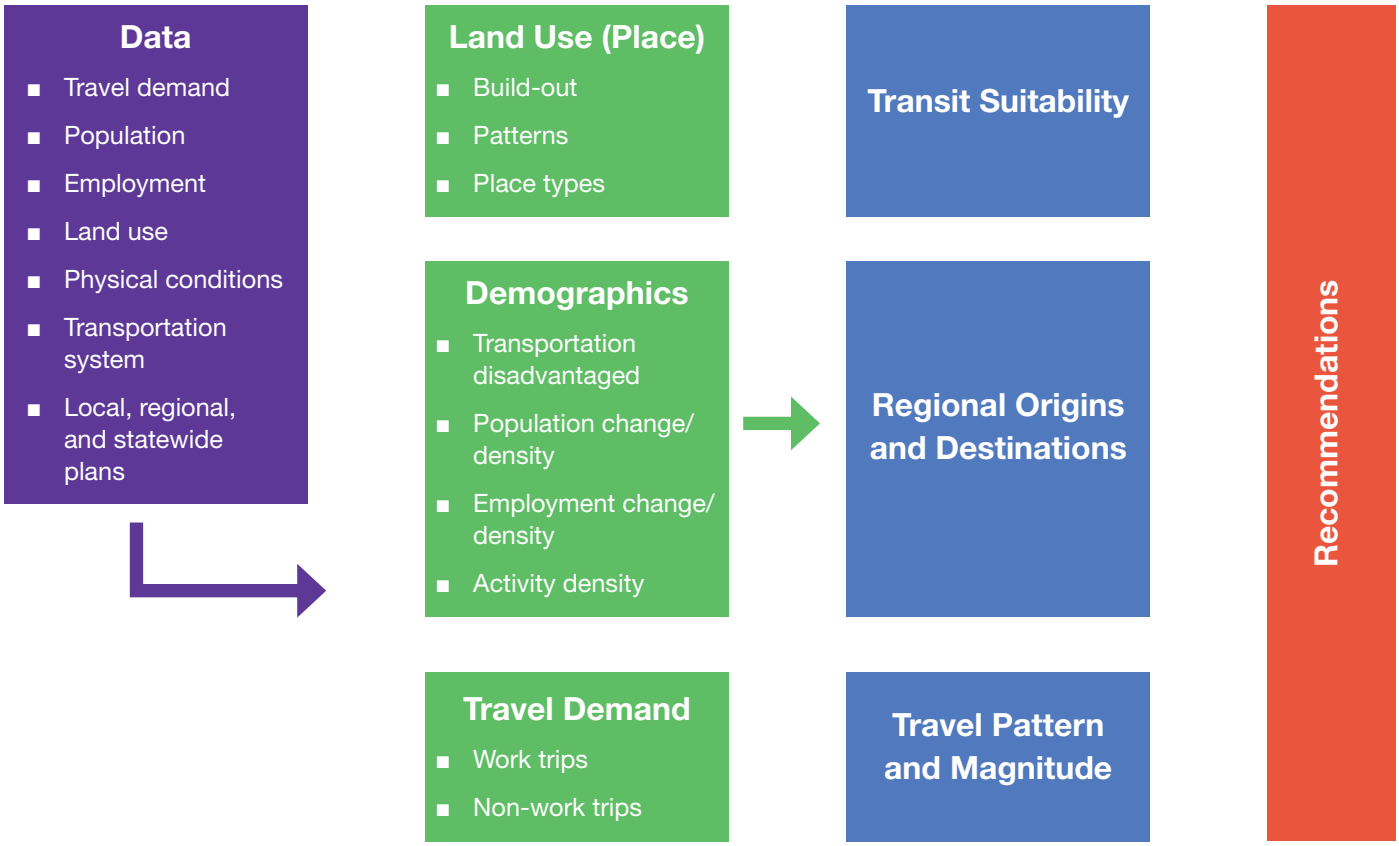
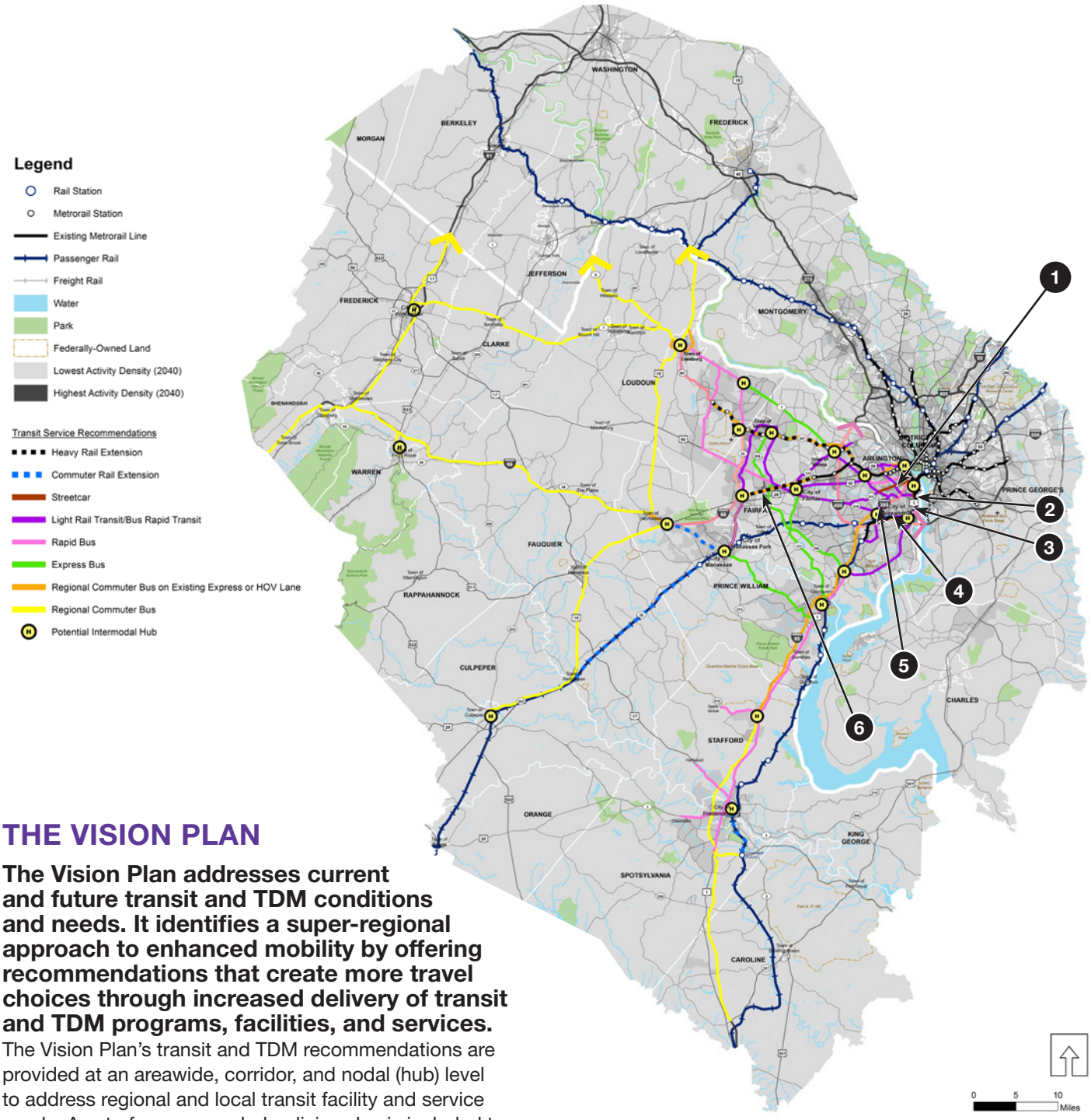


Figure 1.4: Technical Approach

Technical and Planning Needs Evaluation

Within the study area, a wide range of existing and future land use, employment, population, and transportation conditions were evaluated to understand travel needs and identify where gaps in transit service exist. Data used in the planning process was gathered from local, regional, state, and national data sets, plans, models, studies, and reports. **Figure 1.4** and the following briefly summarize the technical and planning evaluation process used in the study.

- **Travel Demand Development** — Information from four regional travel demand models—the Metropolitan Washington Council of Governments (MWCOG), Fredericksburg Area Metropolitan Planning Organization (FAMPO), Winchester-Frederick Metropolitan Planning Organization (Win-Fred MPO), and Hagerstown-Eastern Panhandle (WV) Metropolitan Planning Organization (HEPMPO)—were combined to create a travel demand forecasting tool for the study.
- **Population and Employment Evaluation** — Data was gathered from local comprehensive plans, population and employment forecasts, MPO travel demand model data, census data, and state population forecasts. This data was mapped and evaluated to identify changes in population and employment density patterns across the region and their effects on transit and TDM needs.
- **Land Use Evaluation** — Future land use data was gathered from local comprehensive plans, zoning maps, and other land use documents. The data was organized into a regionally consistent set of land use definitions. The data was then used to help identify regional transit needs.



THE VISION PLAN

The Vision Plan addresses current and future transit and TDM conditions and needs. It identifies a super-regional approach to enhanced mobility by offering recommendations that create more travel choices through increased delivery of transit and TDM programs, facilities, and services.

The Vision Plan's transit and TDM recommendations are provided at an areawide, corridor, and nodal (hub) level to address regional and local transit facility and service needs. A set of recommended policies also is included to support the overall vision as well as specific facility and service recommendations.

Figure 1.5: Future Regional Transit Network Map

Notes:

1. *Columbia Pike: Arlington County and Fairfax County Boards have adopted, as the locally preferred alternative, modern streetcar service and continued bus service between Pentagon City in Arlington County and the Skyline area of Fairfax County.*
2. *US Route 1: Arlington County Board and Alexandria City council have a coordination agreement for the joint Route 1 Corridor Streetcar Conversion project that would convert the bus transitway (under construction) to a streetcar between Crystal City in Arlington County and the potential new Potomac Yard Metrorail station in the City of Alexandria.*
3. *US Route 1: City of Alexandria is currently constructing a bus transitway between East Glebe Road and the Braddock Road Metrorail station.*
4. *Duke Street: Alexandria City Council has approved a resolution identifying a high-capacity bus transitway as the locally preferred alternative for Duke Street between the King Street Metrorail station and Landmark Mall.*
5. *Van Dorn Street/Beauregard Street: Alexandria City Council has approved a resolution identifying a high-capacity bus transitway as the locally preferred alternative for sections of Van Dorn Street and Beauregard Street between the Van Dorn Metrorail station and the Mark Center. At the Mark Center, the high-capacity bus transitway would branch into two lines with one serving Pentagon/Pentagon City via I-395 and the second serving the Northern Virginia Community College, Shirlington, and Pentagon/Pentagon City via Beauregard Street, S. Arlington Mill Drive, and I-395.*
6. *I-66 Between I-495 and US 15: DRPT and VDOT are conducting a Tier 1 Environmental Study. Recommendations from the study may differ from the Super NoVa Vision Plan. Bus solutions may be implemented as an interim solution in the corridor and do not preclude future rail implementation.*

* *Fairfax County is currently studying an interconnected network of high-capacity transit corridors as part of the Fairfax Countywide Transit Network Study. Recommendations from that study may differ from the Super NoVa Vision Plan due to differences that include approach, goals, objectives, and constraints of the two studies.*

** *The Super NoVa Transit/TDM Vision Plan includes policies, area, and corridor-specific recommendations not currently included in local or regional plans. Local and/or regional action or studies to incorporate these recommendations into local and regional plans would be needed prior to the implementation of many of the Super NoVa recommendations.*