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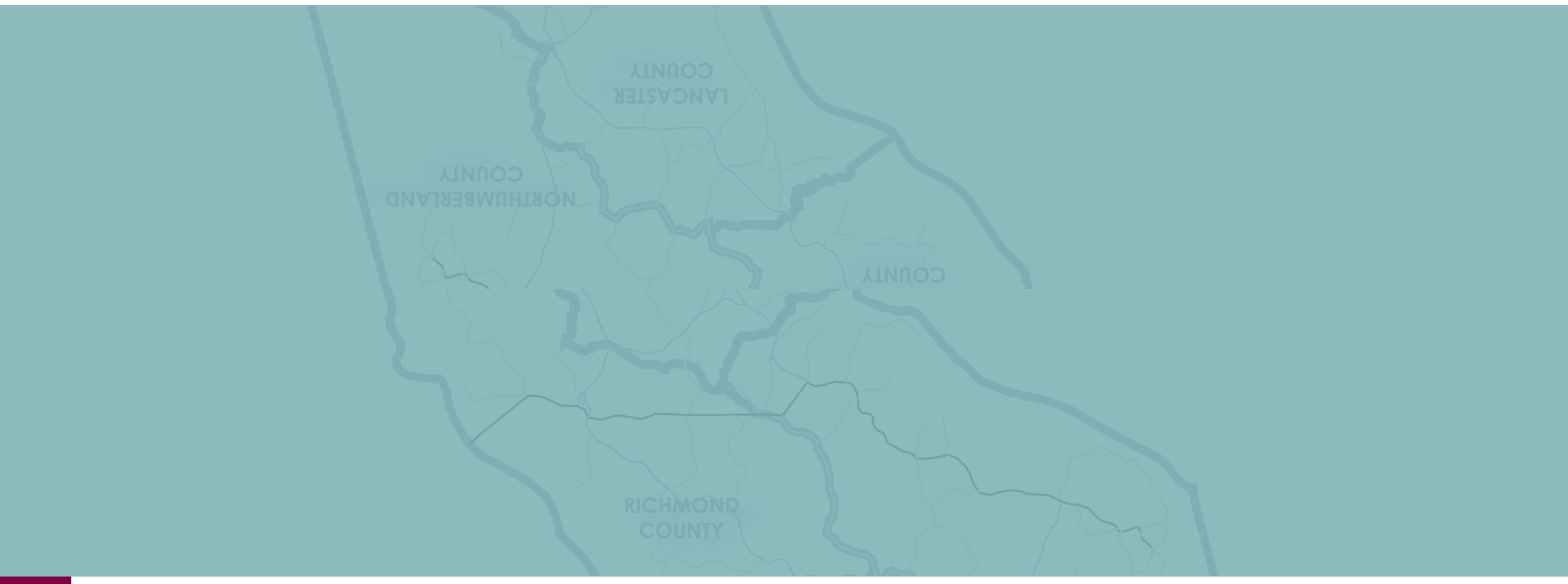
NORTHERN NECK PLANNING DISTRICT COMMISSION

2035 Regional Long Range Transportation Plan



Please visit the VDOT website to find additional information regarding this and other important transportation initiatives in your area.

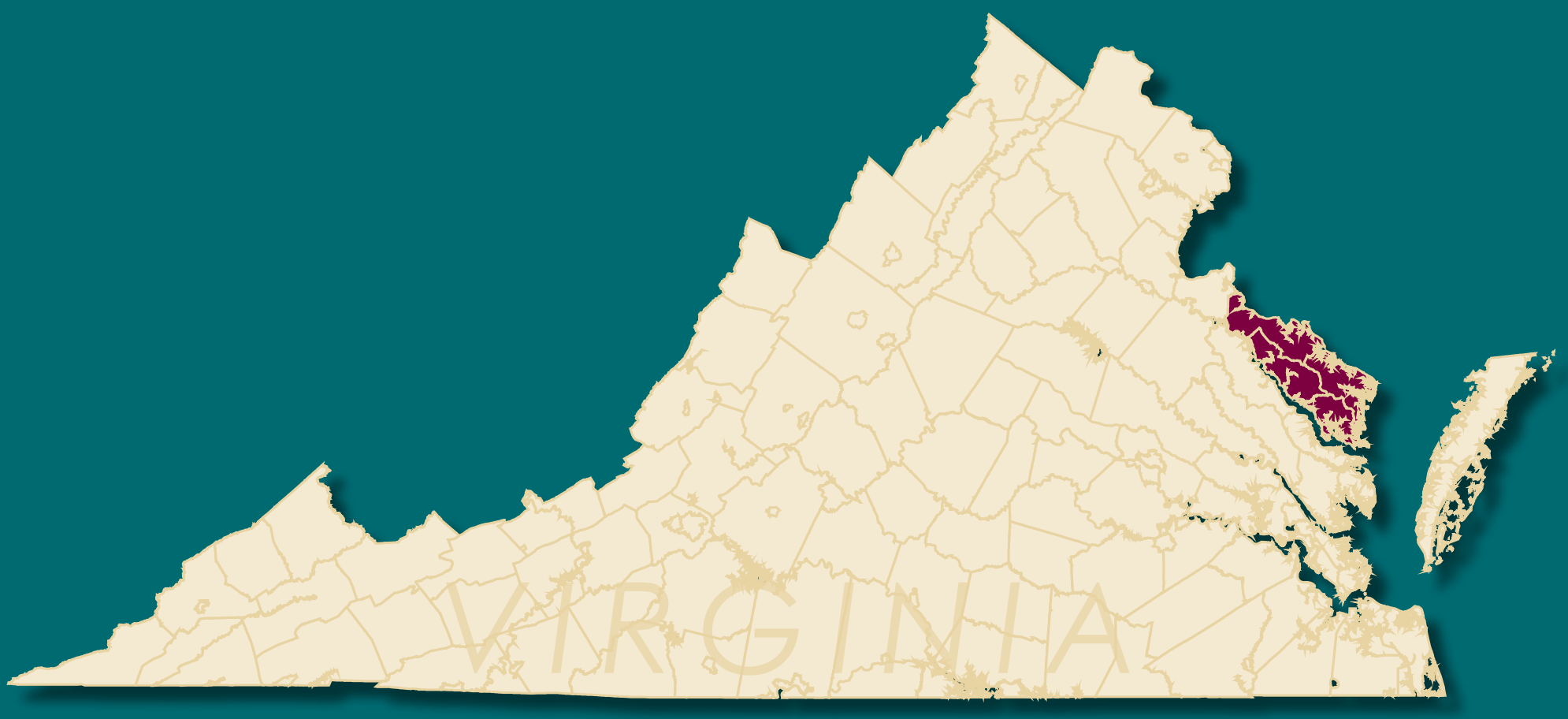
nnpdc.org **www.virginiadot.org**

Northern Neck Planning District Commission

2035 RURAL LONG RANGE TRANSPORTATION PLAN

VDOT Virginia Department of Transportation

NORTHERN NECK PLANNING DISTRICT COMMISSION



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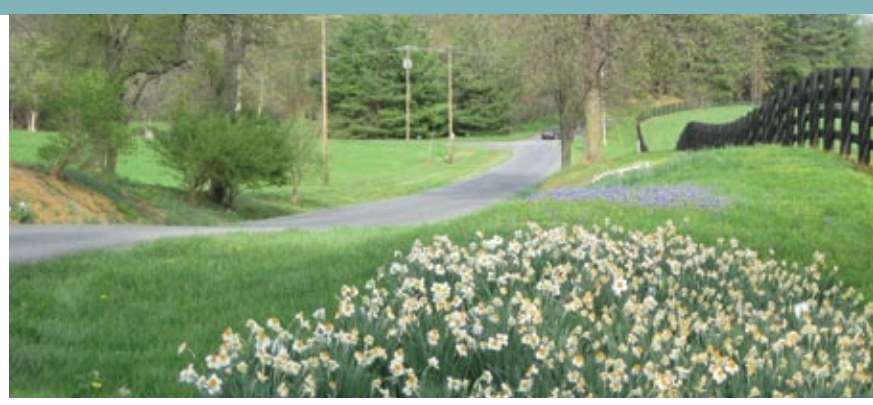


INTRODUCTION & PURPOSE

The Transportation and Mobility Planning Division (TMPD) of the Virginia Department of Transportation (VDOT) has worked with other modal agencies to develop *VTrans 2035*, the Commonwealth's multi-modal long range plan and a more detailed subset report known as the *2035 Surface Transportation Plan*. The highway element of the *2035 Surface Transportation Plan* include proposed improvements on Virginia's federal functionally classified roadways. This *Regional Long Range Transportation Plan* is one piece of the 2035 Plan. VDOT, Virginia's Planning District Commissions (PDCs), and the local governments they represent are partners in the development of this new initiative to create regional transportation plans in rural and small urban areas that complement those in Virginia's metropolitan areas.

The transportation system within the rural areas for each region was evaluated, and a range of transportation improvements - roadway, rail, transit, air, bicycle, and pedestrian - are recommended that can best satisfy existing and future needs. Some of the PDCs contain urbanized areas whose transportation needs are coordinated by a metropolitan planning organization (MPO). In the case of the Northern Neck Region, there is no MPO and the entire area is considered rural; therefore the entire transportation network within the region was analyzed and is addressed in this report.

It is envisioned that each regional plan will be used as a basis to identify transportation funding priorities.

Each rural regional plan has a horizon year of 2035 and addresses the anticipated impacts of population and employment growth upon the transportation system. This plan will be reviewed and updated as needed. Each rural plan was developed as a vision plan, addressing all needs of the transportation system studied regardless of anticipated funding availability. It is envisioned that each regional plan will be used as a basis to identify transportation funding priorities. Additional details on topics discussed in this plan can be found in the Technical Report.

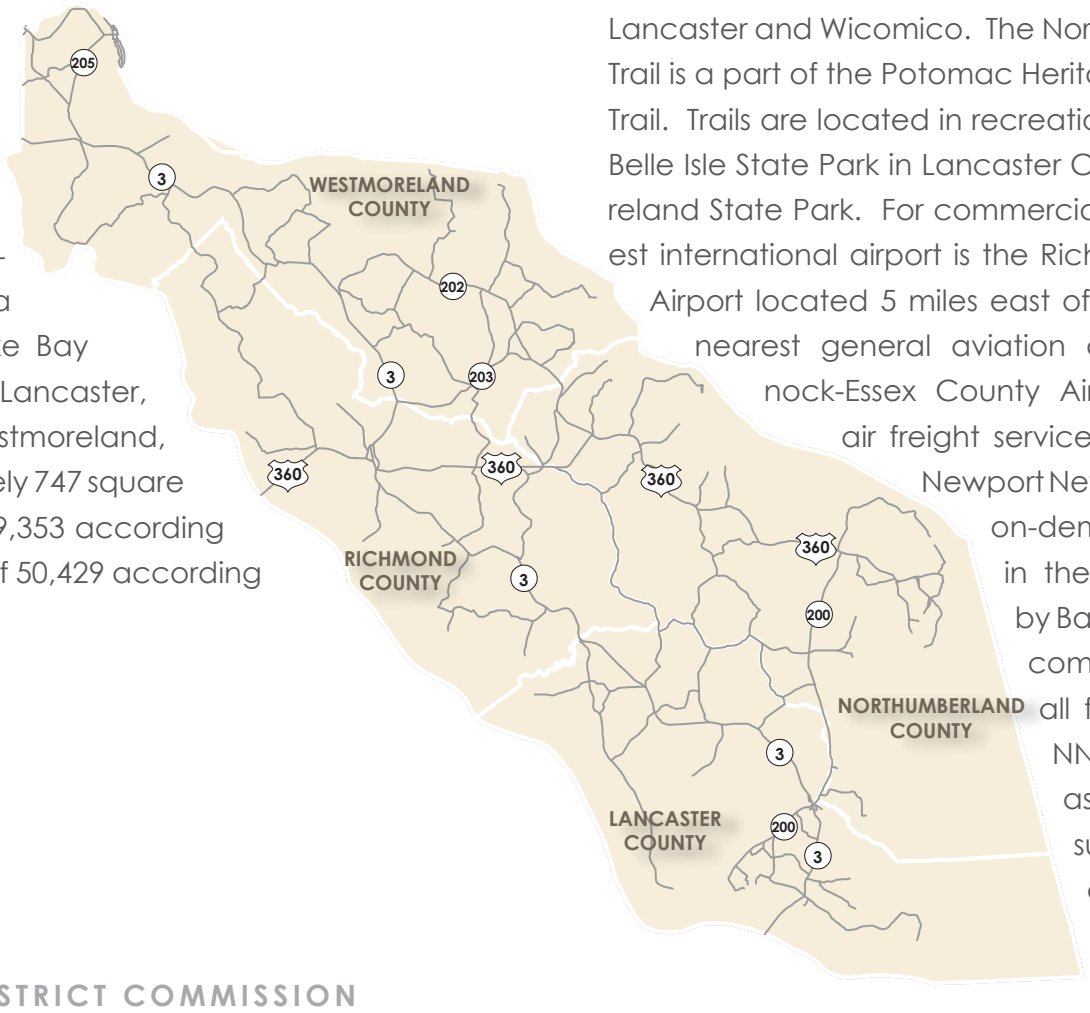
STUDY APPROACH

- Development of regional transportation goals and objectives,
- Public involvement,
- Data compilation and collection,
- Data analysis,
- Identification of transportation deficiencies and recommendations, and
- Environmental overview.

OVERVIEW OF THE REGION

Description and Function of the Northern Neck Planning District Commission

The Northern Neck Planning District Commission (PDC) serves the northernmost peninsula of the State of Virginia on the western shore of Chesapeake Bay and comprises of the counties of Lancaster, Northumberland, Richmond and Westmoreland, encompassing an area of approximately 747 square miles. The area has a population of 49,353 according to the 2000 census and a population of 50,429 according to the 2010 census.



Summary of Transportation Network

The primary east-west corridors in the region include US 360, VA 202, VA 200. The north-south corridors include VA 3, VA 203 and VA 205.

There are no Greyhound stops in the area. The nearest Greyhound stops are in Fredericksburg and Williamsburg. There are also no railroads in the NNPDC area. The Fredericksburg and Richmond Amtrak stations are the nearest commuter rail stops from the NNPDC region. The Northern Neck River Ride is an annual event and routes include areas in Irvington, Kilmarnock, Lancaster and Wicomico. The Northern Neck Heritage Trail is a part of the Potomac Heritage National Scenic Trail. Trails are located in recreational facilities like the Belle Isle State Park in Lancaster County and Westmoreland State Park. For commercial services, the nearest international airport is the Richmond International Airport located 5 miles east of Richmond and the nearest general aviation airport is Tappahanock-Essex County Airport. The nearest air freight service is provided by the Newport News Airport. Currently, on-demand transit service in the region is provided by Bay Transit, a non-profit community and serves all four counties of the NNPDC region, as well as the Middle Peninsula region and has a fleet of more than 40 vehicles.

Goals and Objectives

Needs for each regional plan were developed based on regional and statewide goals and objectives. A basic goal for all transportation programs in Virginia is the provision for the effective, safe, and efficient movement of people and goods. A number of goals have been developed to address rural transportation planning across the Commonwealth. These were developed using input from each of the 20 PDCs in Virginia that include rural areas within their boundaries. These goals are consistent with those of *VTrans 2035*:

GOAL 1 Enhance the connectivity of the existing transportation network within and between regions across all modes for both people and freight.

GOAL 2 Provide a safe and secure transportation system.

GOAL 3 Support and improve the economic vitality of the individual regions by providing access to economic opportunities, such as industrial access or recreational travel and tourism, as well as enhancing intermodal connectivity.

GOAL 4 Ensure continued quality of life during project development and implementation by considering natural, historic, and community environments, including special populations.

GOAL 5 Preserve the existing transportation system and promote efficient system management. Preserve the existing transportation network and promote efficient system management in order to promote access and mobility for both people and freight.

GOAL 6 Encourage land use and transportation coordination, including but not limited to, development of procedures or mechanisms to incorporate all modes, while engaging the private sector.

Common Rural Long Range Plan Goals

In addition to the regional goals, a number of goals have been developed to address rural transportation planning across the Commonwealth. These were developed using input from each of the 20 PDCs in Virginia that include rural areas within their boundaries. These goals are consistent with those of *VTrans 2035* and are listed below:

GOAL 1 Enhance the connectivity of the existing transportation network within and between regions across all modes for both people and freight.

GOAL 2 Provide a safe and secure transportation system.

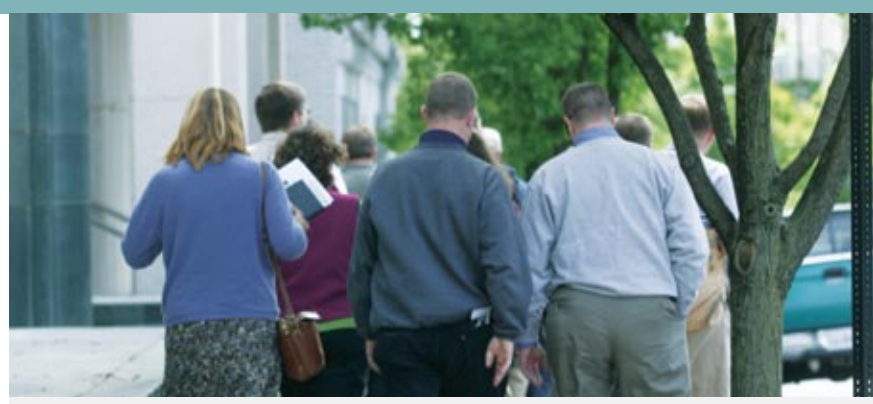
GOAL 3 Support and improve the economic vitality of the individual regions by providing access to economic opportunities, such as industrial access or recreational travel and tourism, as well as enhancing intermodal connectivity.

GOAL 4 Ensure continued quality of life during project development and implementation by considering natural, historic, and community environments, including special populations.

GOAL 5 Preserve the existing transportation network and promote efficient system management in order to promote access and mobility for both people and freight.

GOAL 6 Encourage land use and transportation coordination, including but not limited to, development of procedures or mechanisms to incorporate all modes, while engaging the private sector.

DEMOGRAPHIC AND LAND USE TRENDS



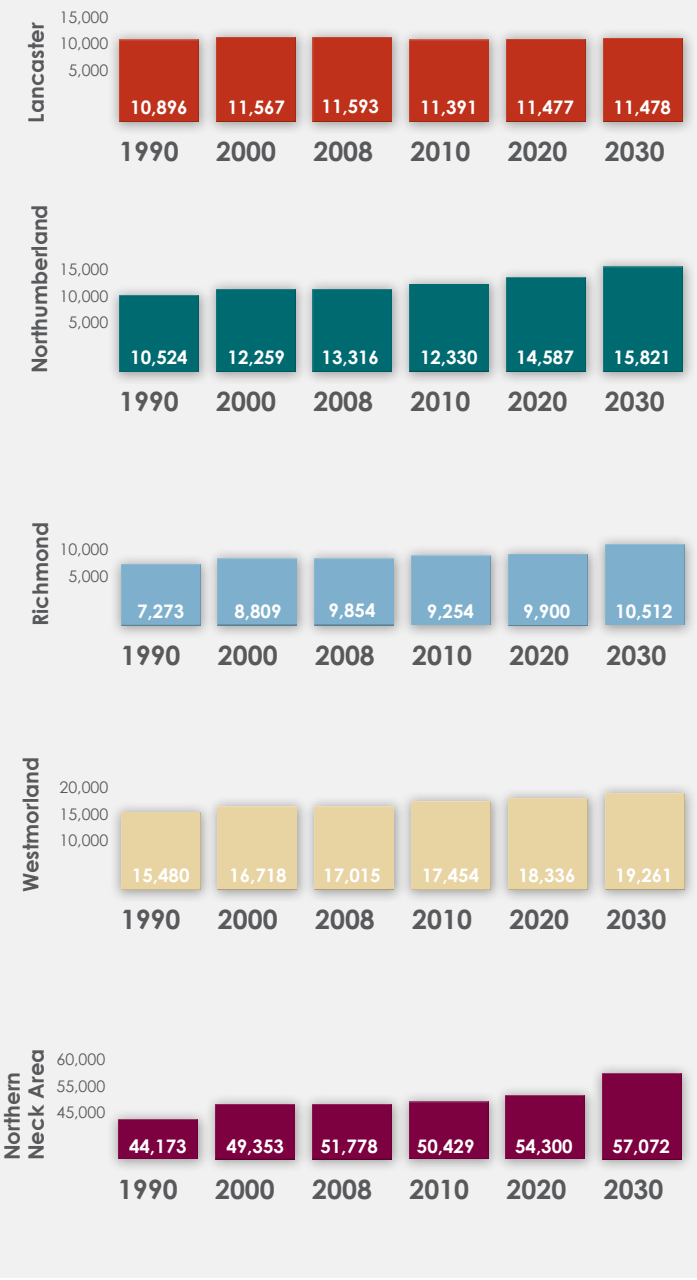
Relationship of Land Use and Development to Transportation

Rural counties throughout the Commonwealth and in the NNPDC are working either to seek new economic growth and diversification or to balance growth, while striving to preserve the rural character of the landscape. Most of the land in these counties is in agricultural or forested use, with more intensive land use in the towns and village centers, typically at the intersection of two roadways. There is a broad spectrum of the amount of growth and land use changes occurring throughout the Commonwealth and in the NNPDC, based particularly on proximity to urban areas. Many of the rural counties are trying to direct any new growth towards existing towns, village centers, or service districts in order to provide services and to continue to address the needs of residents as well as maintain a general agricultural setting. As the population fluctuates, either through in- or out-migration or shifting within the region, the needs of the communities - including education, health care, social services, employment, and transportation - shift and fluctuate as well. Land use and development changes that particularly affect transportation in rural areas include, but are not limited to, school consolidation, loss or gain of a major employer, movement of younger sectors of the population to more urban areas, retirement community development, and growth of bedroom-community type developments for nearby urban areas.

The total population of the NNPDC area is 49,353 from the 2000 Census.

Several factors have affected land use in the NNPDC: population growth within the region itself; population growth in the Richmond area; and the location of four state-wide roadway corridors which traverse the region including I-95, US 301 and US 17. The population growth of the adjacent regions have affected commuting patterns within the NNPDC. Commuting patterns based on the 2000 census revealed that in Westmoreland County the total net out-commuters were 3,745. In Lancaster County there are a total of 669 in-commuters. In Richmond County, total net in-commuters were 263. In Northumberland County, the total net out-commuters were 1,784.

Total Population Over Time



Population Trends

All counties within the NNPDC are working to balance growth while preserving the rural character of the landscape. The counties in general are rural with more intensive land use in the towns and village centers, typically at the intersection of two roadways. Amount of growth and land use changes occurring throughout the region ranges from moderate growth in Northumberland, Richmond and Westmoreland counties and limited growth in Lancaster County (till 2035).

The total population of the NNPDC area is 49,353 from the 2000 Census. The population of the Northern Neck PDC area increased by 11.73% from 1990 to 2000 and by 2.18% from 2000 to 2010.

Population trends have implications for the transportation network of any geographic area. Improvements to the network are needed because mobility and safety are affected by increases in population. In the case of the NNPDC, these population increases are pressuring additional development throughout the region. Development pressures from growth have contributed to some reductions in mobility. In addition, access from the Commonwealth Region to more urban areas outside of the region like Richmond is of continuing importance.

Disadvantaged groups studied include low-income, minority, elderly, and people with disabilities, as defined by the US Census.

Demographic Trends

Disadvantaged population groups were studied in order to determine if there are any gaps or deficiencies in the transportation network that could affect these groups. Disadvantaged groups studied include low-income, minority, elderly, and people with disabilities, as defined by the US Census. In the 2000 US Census, all of the jurisdictions had elderly population percentage higher than that of the state (11.2%). In 2000, all jurisdictions, had low-income populations above the state percentage of 9.6%. The portion of the population with disabilities in all jurisdictions is above the state percentage of 18.1%, except Richmond County.

Any segment of the population without a vehicle available are more dependent on demand responsive transit in a rural area than in urban areas.

Transportation Implications

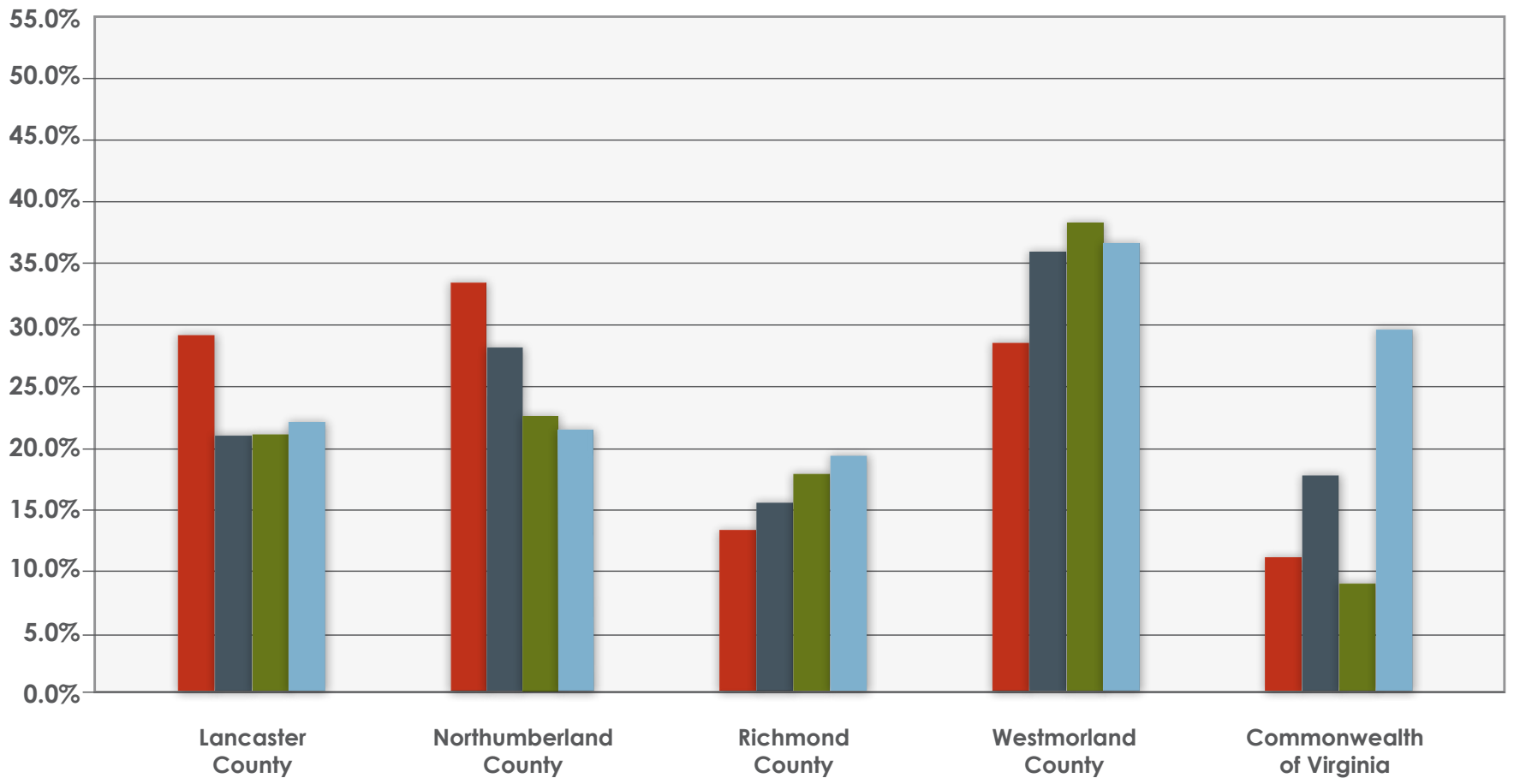
US Census data from 2000 were reviewed at the block group level in order to provide enough detail to assess possible areas of service expansion for fixed route and demand responsive transit. Any segment of the population without a vehicle available, which can include elderly, people with disabilities, and low-income groups, are more dependent on demand responsive transit in a rural area than in urban areas. This is due to the smaller network of fixed transit routes in rural areas when compared to urban areas. The NNPDC, in conjunction with the Virginia Department of Rail and Public Transportation's (DRPT) statewide effort, recently completed a Coordinated Human Service Mobility (CHSM) Plan that assessed the mobility needs of these target populations. Certain needs are being identified throughout the state such as limited demand responsive transit service, limited fixed route service, determination of a single point of contact for providers, and funding constraints. These needs were also identified in the NNPDC.

LEGEND

- Elderly
- Disability
- Low-Income
- Minority

Source: US Census, 2000. Note: People with disabilities is based on the population over 5 years of age. Low-income is a percentage of the population for whom poverty is determined.

Elderly, Disability, Low-Income, and Minority Populations in the Rural Areas for Northern Neck PDC



REGIONAL TRANSPORTATION SYSTEM

Each mode of travel – roadways, public transportation, rail, bicycle and pedestrian facilities, and airports – has been independently analyzed for both current and forecasted conditions.

Roadways

The primary east-west corridors in the region include US 360, VA 202, VA 200. The north-south corridors include VA 3, VA 203 and VA 205.

A fixed route system is being investigated between major villages and towns in the Northern Neck.

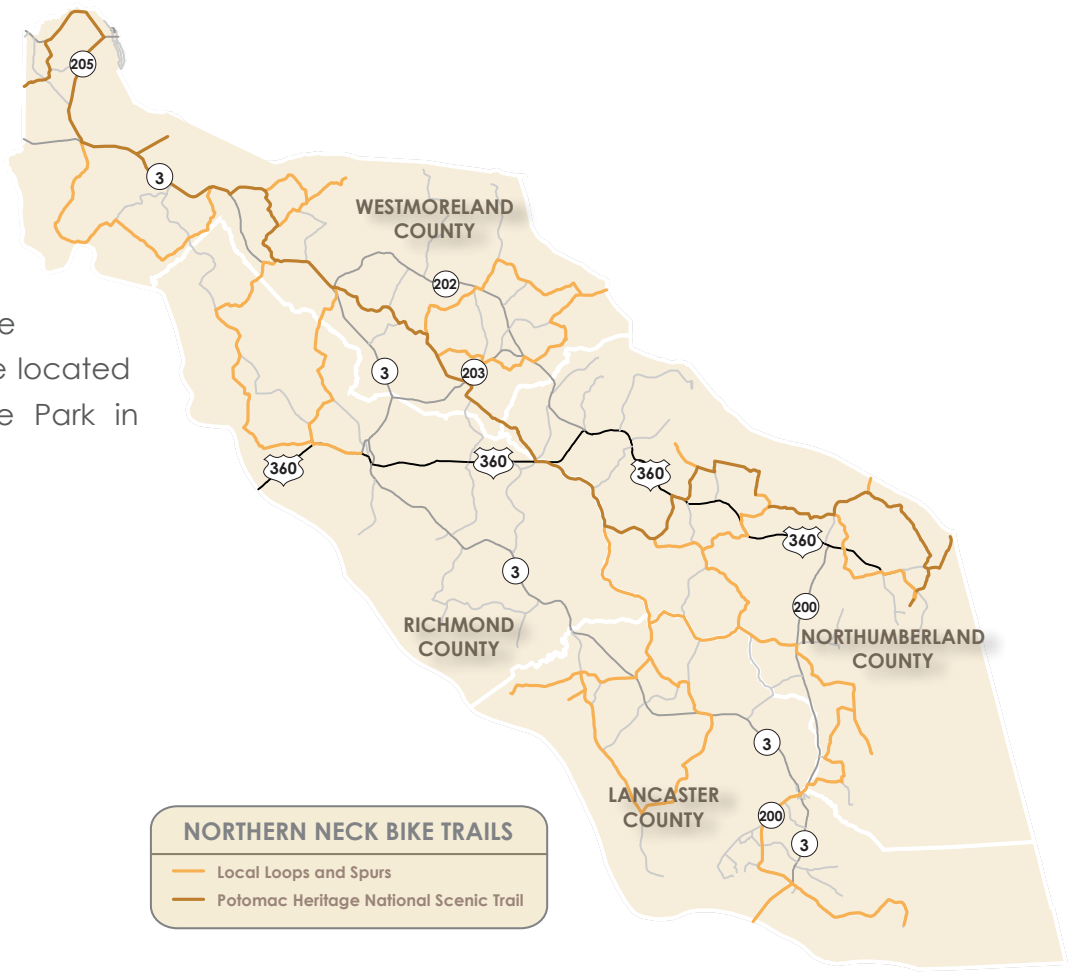
Public Transportation

Public transportation includes public transit, both fixed-route and demand-responsive, volunteer transportation, and private providers. Human services transportation encompasses multiple programs including public transit, both fixed-route and demand response, specialized demand response service, volunteer transportation, and private providers, including taxi and medical transport companies. Although most human services transportation programs are designed to meet needs of elderly and low-income residents, and residents with disabilities, some of these services also serve the objectives of travel demand management. The NNPDC coordinates the Northern Neck Rideshare Program which helps commuters find carpools and vanpools. There are no Greyhound stops in the area. The nearest Greyhound stops are in Fredericksburg and Williamsburg. There are also no railroads in the NNPDC area. The Fredericksburg and Richmond Amtrak stations are the nearest commuter rail stops from the NNPDC region. A fixed route system is being investigated between major villages and towns in the Northern Neck. Rappahanock River in Richmond County in navigable and barge port facilities are available on Totuskey Creek.

Currently, on-demand transit service in the region is provided by Bay Transit, a non-profit community and serves all four counties of the NNPDC region, as well as the Middle Peninsula region and has a fleet of more than 40 vehicles. The Colonial Beach Transit is managed by the Bay Transit and provides demand-responsive service in Colonial Beach, Westmoreland County.

Bicycle and Pedestrian Facilities

The Comprehensive Plans of the individual jurisdictions in the Northern Neck region include bicycle and walking elements and embrace the desire for more compact development patterns that would facilitate increased bicycling and walking. The Northern Neck River Ride is an annual event and routes include areas in Irvington, Kilmarnock, Lancaster and Wicomico. The Northern Neck Heritage Trail is a part of the Potomac Heritage National Scenic Trail. Trails are located in recreational facilities like the Belle Isle State Park in Lancaster County and Westmoreland State Park.



Goods Movement

No commercial railroads are present in the area.

The Northern Neck River Ride is an annual event and routes include areas in Irvington, Kilmarnock, Lancaster and Wicomico.

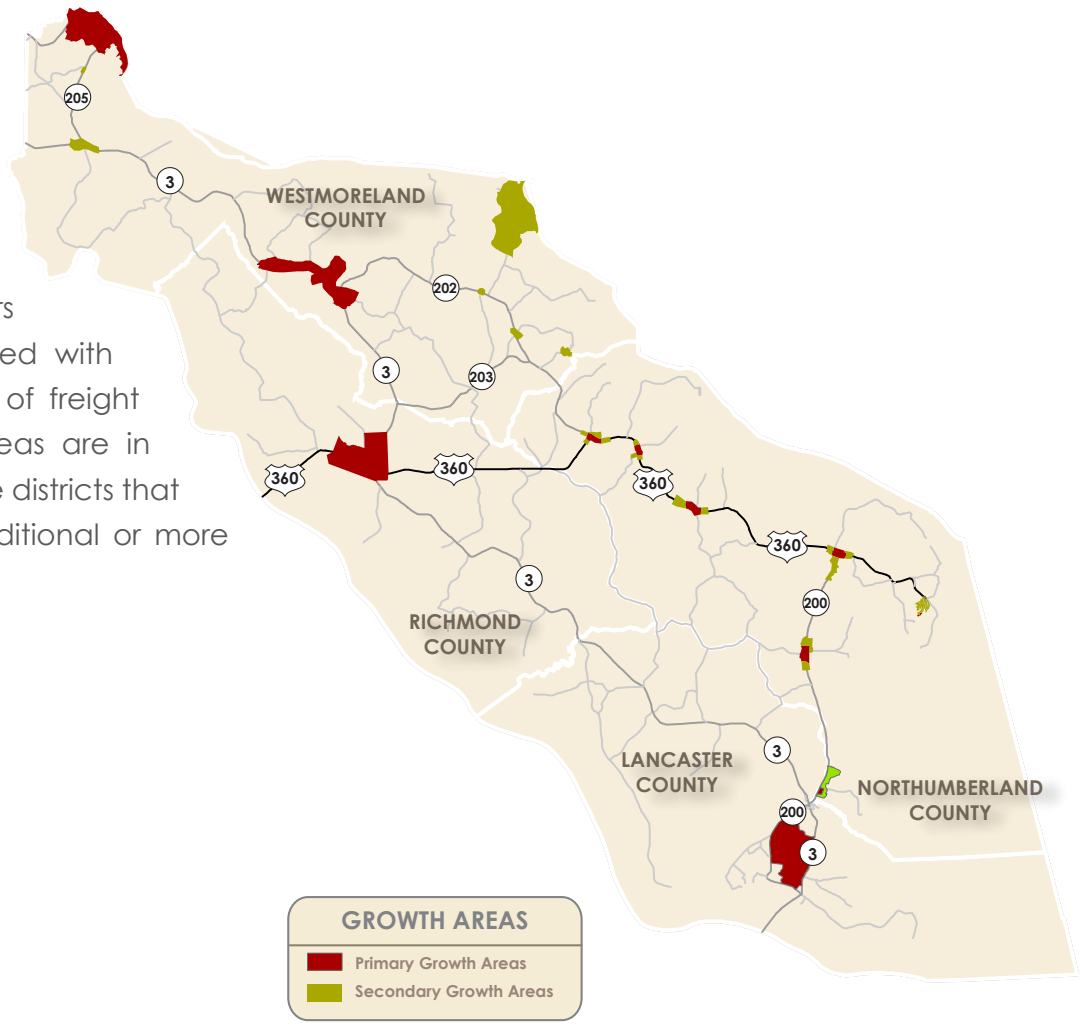
Airports

For commercial services, the nearest international airport is the Richmond International Airport located 5 miles east of Richmond and the nearest general aviation airport is Tappahanock-Essex County Airport. The nearest air freight service is provided by the Newport News Airport. The Richmond County Comprehensive Plan mentions that the Northern Neck PDC is conducting a feasibility study for a general aviation airport in the region.

Land Use

The land use/land cover in the Commonwealth Region is generally rural residential, agricultural, and forested with more dense residential and commercial uses centered around the existing towns.

The NNPDC, working with VDOT, determined the location of freight generators along with major employers and trip generators. Growth areas were also combined with these locations in order to present a complete picture of freight movement and trip generation. The future growth areas are in general the existing towns, village centers/areas, or service districts that the individual counties and towns have planned for additional or more intensive land uses.



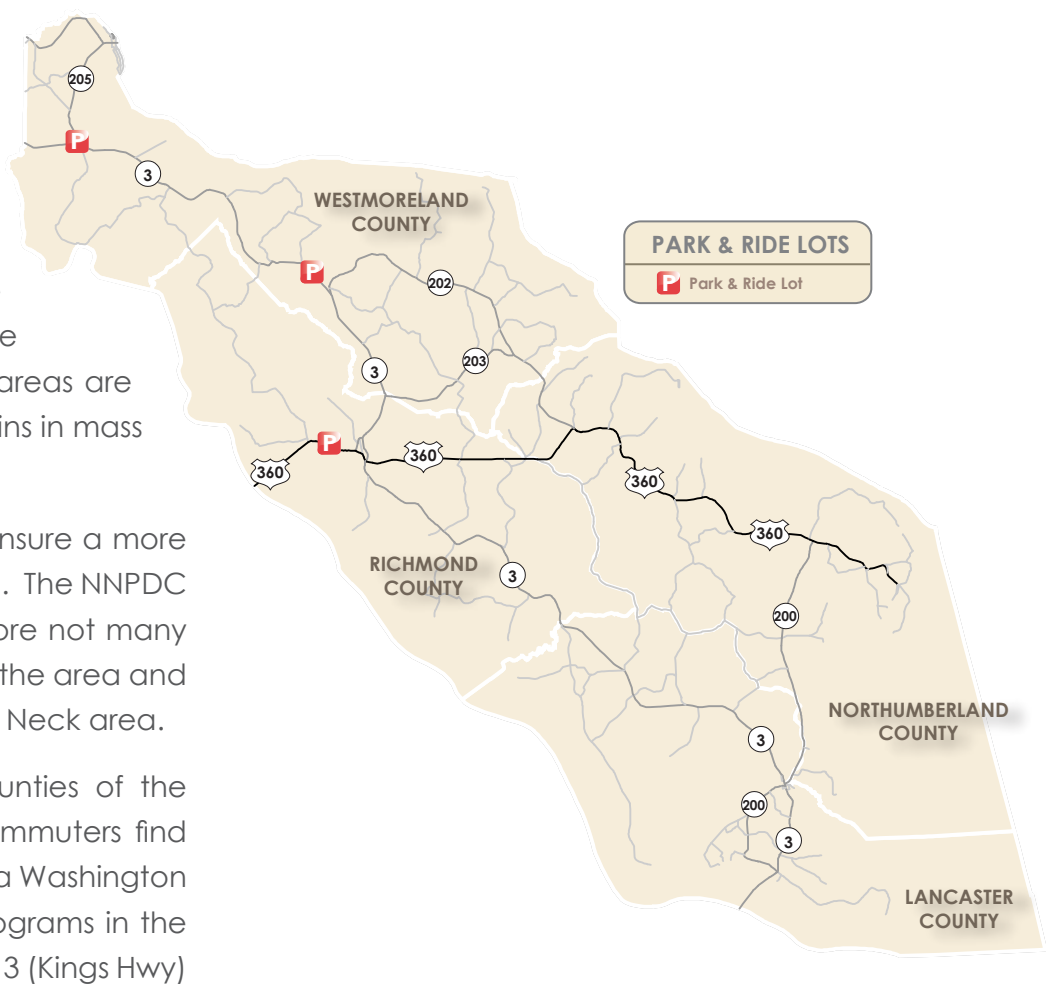
The NNPDC operates two park-and-ride lots.

Travel Demand Management

Travel demand management (TDM) holds the potential for enhancing many elements of the transportation network, and with other improvements, has been shown to greatly aid in reducing single-occupant vehicle trips. TDM measures include carpooling and vanpooling programs, expanded peak hour public transit, commuter buses, park and ride lots, as well as better coordination between modes to facilitate intermodal transfers. While low population densities in rural areas are not always conducive to major shifts to mass transit, some gains in mass transit ridership for commuters could be realized.

Travel demand management (TDM) measures are used to ensure a more efficient use of the various transportation measures in a region. The NNPDC region is predominantly rural with sparse trip densities therefore not many areas are conducive to mass transit. Public transit is sparse in the area and paratransit service operates on a limited basis in the Northern Neck area.

The Northern Neck Rideshare program serving all four counties of the NNPDC region, operates as the TDM agency and helps commuters find carpools and vanpools. In addition, Commuter Connections a Washington DC based agency also helps commuters with assistance programs in the NN region. The NNPDC has two park-and-ride lots both off Rte 3 (Kings Hwy) in Montross and Oak Grove areas of Westmoreland County.



TRANSPORTATION SYSTEM PERFORMANCE & RECOMMENDATIONS

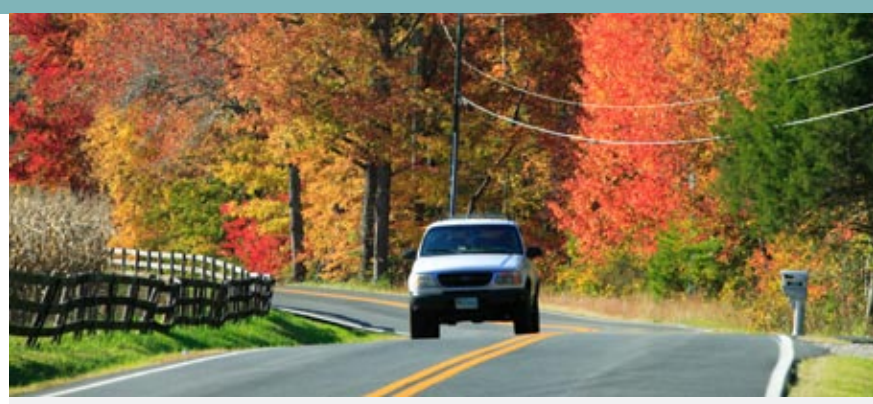
Roadways

Roadway analysis focused on safety, geometry and structure, and congestion. Through the review of available data, input at public meetings, and information provided by local and regional officials, the NNPDC, in conjunction with the local jurisdictions, prepared a list of priority locations. The priority study location list is based on roadway performance measures, safety considerations, or a combination of the two. Some priority locations had current improvement recommendations from recent studies and required no further analysis. Other priority locations required a new or updated analysis. Within the NNPDC, priority locations were analyzed; recommendations for these locations are identified separately in the list of recommendations that follow. Several of these locations were identified for assessment of congestion concerns, while the remaining were analyzed for safety. The safety assessment locations were identified using safety and crash database information, and input from local officials and the public. A more detailed discussion of all deficiencies and recommendations with planning-level cost estimates is located in the Technical Report recommendations with planning-level cost estimates is located in the Technical Report.

Some priority locations had current improvement recommendations from recent studies and required no further analysis.

Bridge Deficiency Summary

	Functionally Obsolete			Structural Deficiency		
	REPLACE	REPAIR		REPLACE	REPAIR	
Bridge Sufficiency Rating	**0-50**	**51-80**	**80+**	**0-50**	**51-80**	**80+**
Lancaster	0	3	0	0	0	0
Northumberland	0	1	1	0	3	0
Richmond	0	0	0	1	1	0
Westmorland	0	2	1	3	0	0
NNPDC Total	0	6	2	4	4	0



1. Safety

The roadway safety assessments identified deficiencies such as sight distance and visibility, access management, and inadequate signage. Recommendations were developed for both intersections and segments throughout the region. The recommendations are identified by jurisdiction. More detailed deficiency data appear in the Technical Report.

2. Operations and Maintenance

a. Geometric Weaknesses

Roadways and intersections with geometric deficiencies such as substandard lane width, shoulder width, or horizontal and vertical curvature, were identified from the VDOT Statewide Planning System (SPS) database. Higher priorities were given to those roadways with potential geometric concerns that also carried higher levels of traffic. Recommendations to address these needs are identified by jurisdiction. More detailed deficiency data appear in the Technical Report.

b. Bridge Condition

Current bridge sufficiency ratings were reviewed and those structures with a rating of less than 50 were considered deficient and in need of structural upgrade or replacement. These appear in a separate table by jurisdiction.

3. Capacity

Level of service analyses were performed on all functionally classified roadways in the NNPDC to assess current and projected year 2035 operations. In addition, analyses were conducted for intersections identified by the NNPDC and local governments as priority study locations. The recommendations to address the deficient locations are identified as congestion or safety, by jurisdiction. Current Day, Mid-Term, and Long-Term recommendations were combined in the tables and maps.

Deficiencies in the forecast year were noted for the functionally classified roadway network. Forecasted deficiencies are applicable only to anticipated mobility performance measures, since it is not possible to forecast safety issues or geometric and structural deficiencies.


Colonial Beach
205
3
WESTMORELAND
COUNTY
Montross
202
3
203
Warsaw
360
360
360
RICHMOND
COUNTY
3
200
NORTHUMBERLAND
COUNTY
3
Kilmarnock
LANCASTER
COUNTY
200
3
Irvington
White Stone
ROADWAY SYSTEM DEFICIENCIES
Segment Deficiency
Operation Deficiency
Safety Deficiency
Both Operation and Safety Deficiency
Geometric Deficiency
Intersection Deficiency
Operation Deficiency
Safety Deficiency
Both Deficiencies
Other Deficiencies

LANCASTER COUNTY RECOMMENDATIONS

1 **VA-354 from VA-3 to VA-201**
Segment determined not to be a congestion priority.

2 **T-634 from T-672 to VA-200**
Short-term: Trim vegetation to improve sight distance at horizontal curve.

3 **T-695 from T-639 to White Stone SCL**
Short-term: Install Advance Intersection Warning (W2 series) signs on VA-695; paint Stop Bar on Little Bay Rd.

4 **VA-646 from VA-200 to VA-3 N.**
Short-term: Install No Passing (W14-3) and Curve Warning signs at appropriate locations.

5 **VA-3 from VA-604 to VA-614**
Long-term: 4-lane widening of SR 3

6 **VA-3 from VA-200 S to Norris Bridge**
Long-term: Replace Norris Bridge with 4-lane bridge; widen to four lanes with median.

7 **VA-200 from Kilmarnock NCL to Northumberland CL**
Long-term: Widen road to 12-ft lanes and install shoulders

8 **VA-222 from VA-709 to VA-200**
Short-term: Construct intersection improvements at VA-200 including W2 series signs, double headed arrow sign (W1-7) and speed limit signs on VA-222.

9 **VA-600 from VA-3 to Northumberland Co. Line**
Long-term: reconstruct road to address geometric deficiencies (12-foot lanes).

10 **VA-605 from VA-3 W to VA-615**
Long-term: reconstruct road to address geometric deficiencies (12-foot lanes).

11 **VA-3 from VA-201 to VA-605**
Mid-term: Construct shoulder and pull-off enhancements; Long-term: widen to four lanes with median.

12 **VA-3 from VA-200 N. to VA-200 S.**
Mid-term: Install deer crossing signage at high crash locations, streetscaping, signage & parking improvements

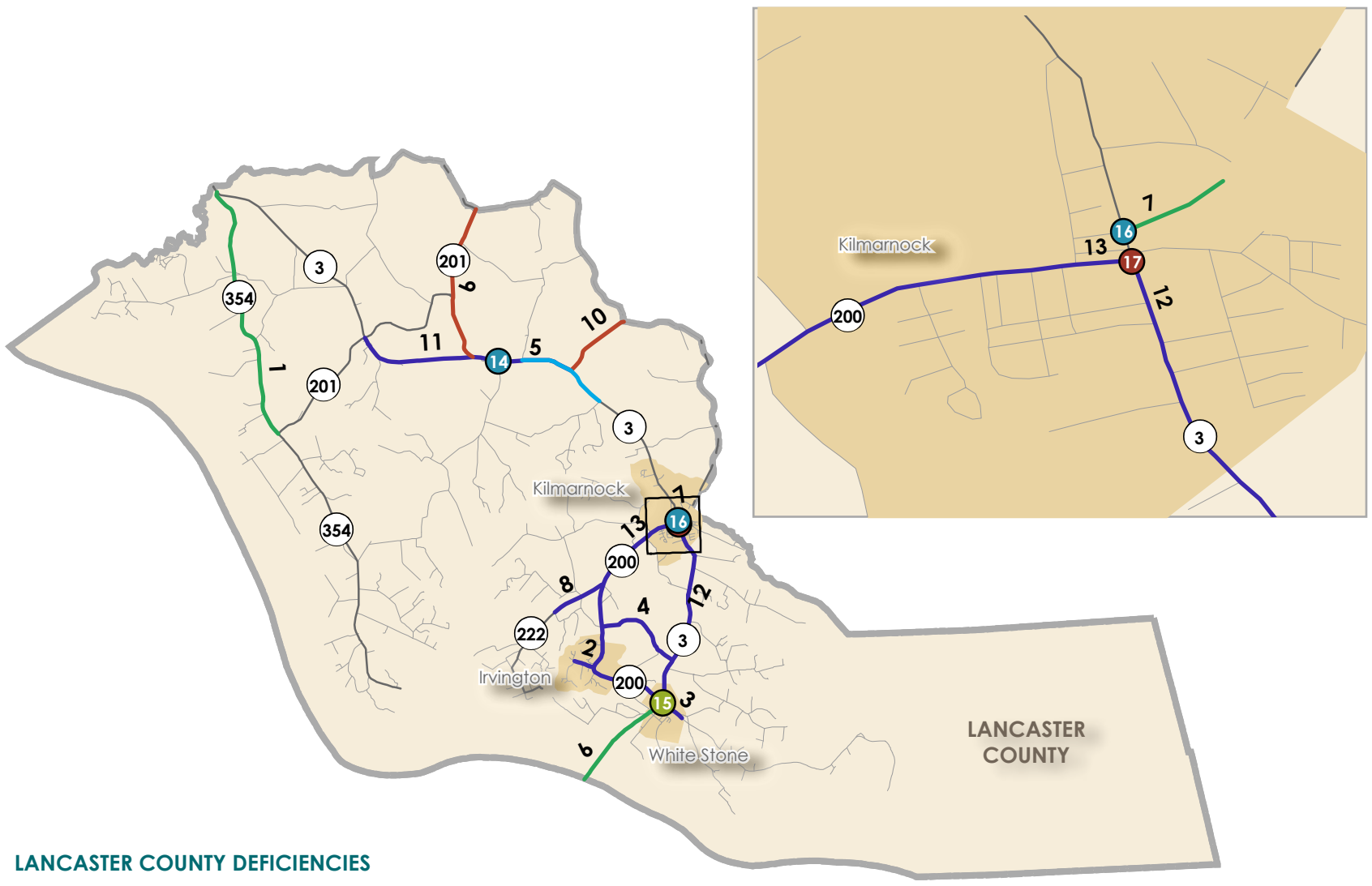
13 **VA-200 from VA-3 N to VA-3 S/VA-695**
Mid-term: Install deer crossing, speed reduction and truck route signage, Install pedestrian/bike path

14 **VA-3 (Mary Ball Rd.) at VA-604 (Merry Point Rd.)**
Mid-term: Install turn bays on VA-3

15 **PR 200 (Irvington Rd.) at SR 3 (Mary Ball Rd.)/ VA-695**
Short-term: Install 400-ft left turn bay on VA-200 (Irvington Rd): Long-term: widen to urban four lanes with median. on VA-3

16 **PR 200 (E. Church St.) N. at SR 3 (S. Main St.)**
Short-term: Parking bumpout removal on NB approach.

17 **PR 200 (Irvington Rd.) S. at SR 3 (S. Main St.)**
Short-term: WB configuration change to Left/Left-Right, parking bumpout removal on SB and NB approaches.



LANCASTER COUNTY DEFICIENCIES

Intersection Deficiency
- Operation Deficiency
- Safety Deficiency
- Both Deficiencies
- Other Deficiency

Segment Deficiency
- Operation Deficiency
- Safety Deficiency
- Geometric Deficiency
- Both Operation & Safety Deficiency

WESTMORELAND COUNTY RECOMMENDATIONS

18 VA-3 from VA-637 to VA-205
Long-term: Reconstruct road to address geometric deficiencies (12-foot lanes).

19 VA-643 from VA-622 W to VA-645
Short-term: Widen road to 12-ft lanes and install shoulders.

20 VA-645 from VA-3 to VA-643
Short-term: Paint new edgelines and restripe center double yellow. Install Curve warning and Chevron signs at horizontal curves.

21 VA-202 from VA-3 to VA-202 Y
Short-term: Enhance curvature and hidden entrance signage.

22 VA-205 (James Monroe Hwy.) at VA-628 (Stoney Knoll Rd.)
Short-term: Install Intersection Warning (W 2) series on both approaches of VA-205; trim vegetation to improve sight distance for VA-628.

23 VA-205 from VA-3 to VA-628 N.
Short-term: Install Object Markers (OM-3) at bridge ends and Intersection Warning (W2) signs.

24 VA-3 from VA-664 to VA-204
Short-term: Install No Passing (W14-3) and Deer Warning signs at appropriate locations; Mid-term:VA-3 Widen shoulders; Long-term: reconstruct road to address geometric deficiencies (12-foot lanes).

25 VA-3 from VA-204 to VA-624
Short-term: Install No Passing (W14-3) and Deer Warning signs at appropriate locations; Mid-term: VA-3 Widen shoulders; Long-term: reconstruct road to address geometric deficiencies (12-foot lanes).

26 VA-621 from VA-600 N. to VA-202
Short-term: Bridge rehabilitation; Long-term: Rural - 2 Lane 22 Feet

27 VA-631 from VA-205 S. to VA-205 N.
Long-term: reconstruct road to address geometric deficiencies (11-foot lanes).

28 VA-3 from T-622 E. to T-1202
Long-term: widen to urban four lanes with median.

29 VA-3 from Montross W. CL to T-622 W.
Long-term: widen to urban four lanes with median.

30 VA-600 from VA-619 to VA-203
Short-term: Install Curve warning and Chevron signs at horizontal curves; Long-term: reconstruct road to address geometric deficiencies (12-foot lanes).

31 VA-600 from VA-621 E. to VA-621 W.
Short-term: Install Curve warning and Chevron signs at horizontal curves; Long-term: reconstruct road to address geometric deficiencies (12-foot lanes).

32 VA-3 from King George Co. Line to VA-637
Long-term: reconstruct road to address geometric deficiencies (12-foot lanes).

33 VA-3 from VA-624 W. to VA-622
Long-term: reconstruct road to address geometric deficiencies (12-foot lanes).

34 VA-622 from VA-609 to Montross N. City Limits
Long-term: reconstruct road to address geometric deficiencies (11-foot lanes).

35 VA-622 from Montross S. City Limits to Richmond Co. Line
Long-term: reconstruct road to address geometric deficiencies (11-foot lanes).

36 VA-600 from VA-202 to VA-621 W.
Long-term: reconstruct road to address geometric deficiencies (12-foot lanes).

37 VA-626 from VA-202 W. to VA-621 S.
Long-term: reconstruct road to address geometric deficiencies (11-foot lanes).

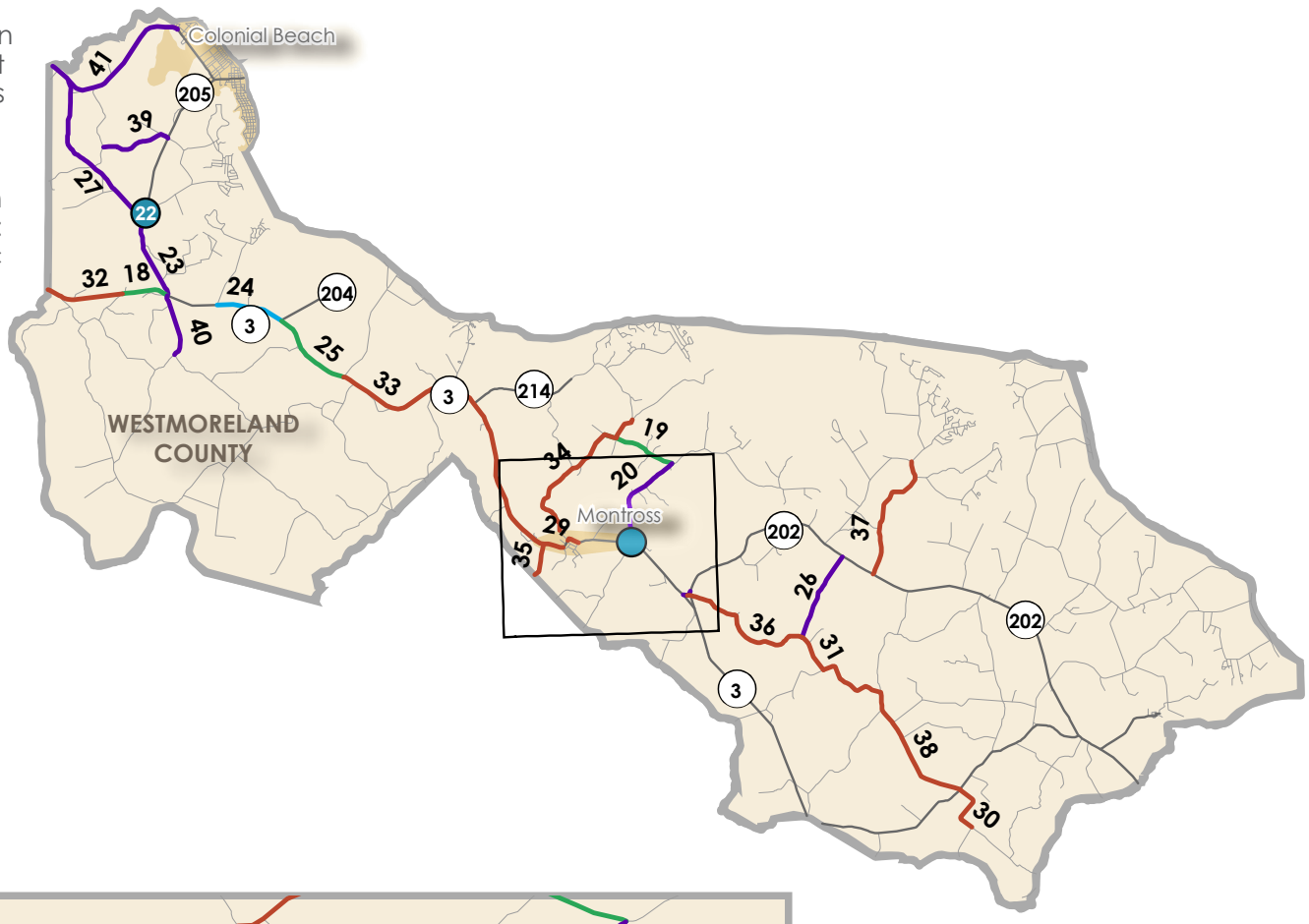
38 VA-600 from VA-621 E. to VA-203
Long-term: reconstruct road to address geometric deficiencies (12-foot lanes).

39 VA-628 from VA-630 to VA-205 N.
Short-term: Install Curve warning (W1 series) signage; Long-term: reconstruct road to address geometric deficiencies (11-foot lanes.

40 VA-638 from VA-3 to VA-625
Short-term: Paint new edgelines and restripe center double yellow; Install Curve warning and Chevron signs at horizontal curves; Long-term: Widen road to 12-ft lanes and install shoulders.

41 VA-205 from Colonial Beach CL to King George CL
Mid-term: Install Curve warning and Chevron signs at horizontal curves Long-term: Bridge rehabilitation

42 VA-3 (Kings Hwy.) at VA-645 (Zacata Rd)
Short-term: Assess lane configuration changes on VA-3 to provide exclusive turn bays; Mid-term: Install turn bays on VA-3



WESTMORELAND COUNTY DEFICIENCIES

Intersection Deficiency
- Operation Deficiency
- Safety Deficiency
- Both Deficiencies
- Other Deficiency

Segment Deficiency
- Operation Deficiency
- Safety Deficiency
- Geometric Deficiency
- Both Operation & Safety Deficiency

NORTHUMBERLAND COUNTY RECOMMENDATIONS

43 **VA-646 from VA-702 to VA-662**
Short-term: Enhance Curve warning and Chevron signs at horizontal curves.

44 **US-360 from VA-601 to VA-634**
Long-term: widen to urban four lanes with median.

45 **VA-614 from VA-600 to US-360 S.**
Long-term: reconstruct road to address geometric deficiencies (11-foot lanes).

46 **VA-201 from US 360 to Lancaster Co. Line**
Long-term: reconstruct road to address geometric deficiencies (12-foot lanes).

47 **VA-604 from VA-201 S. to US-360 S.**
Long-term: reconstruct road to address geometric deficiencies (11-foot lanes).

48 **US-360 from VA-630 to VA-644 W.**
Long-term: reconstruct road to address geometric deficiencies (4 Lane With Median)

49 **VA-665 from VA-609 W. to VA-664**
Long-term: reconstruct road to address geometric deficiencies (12-foot lanes).

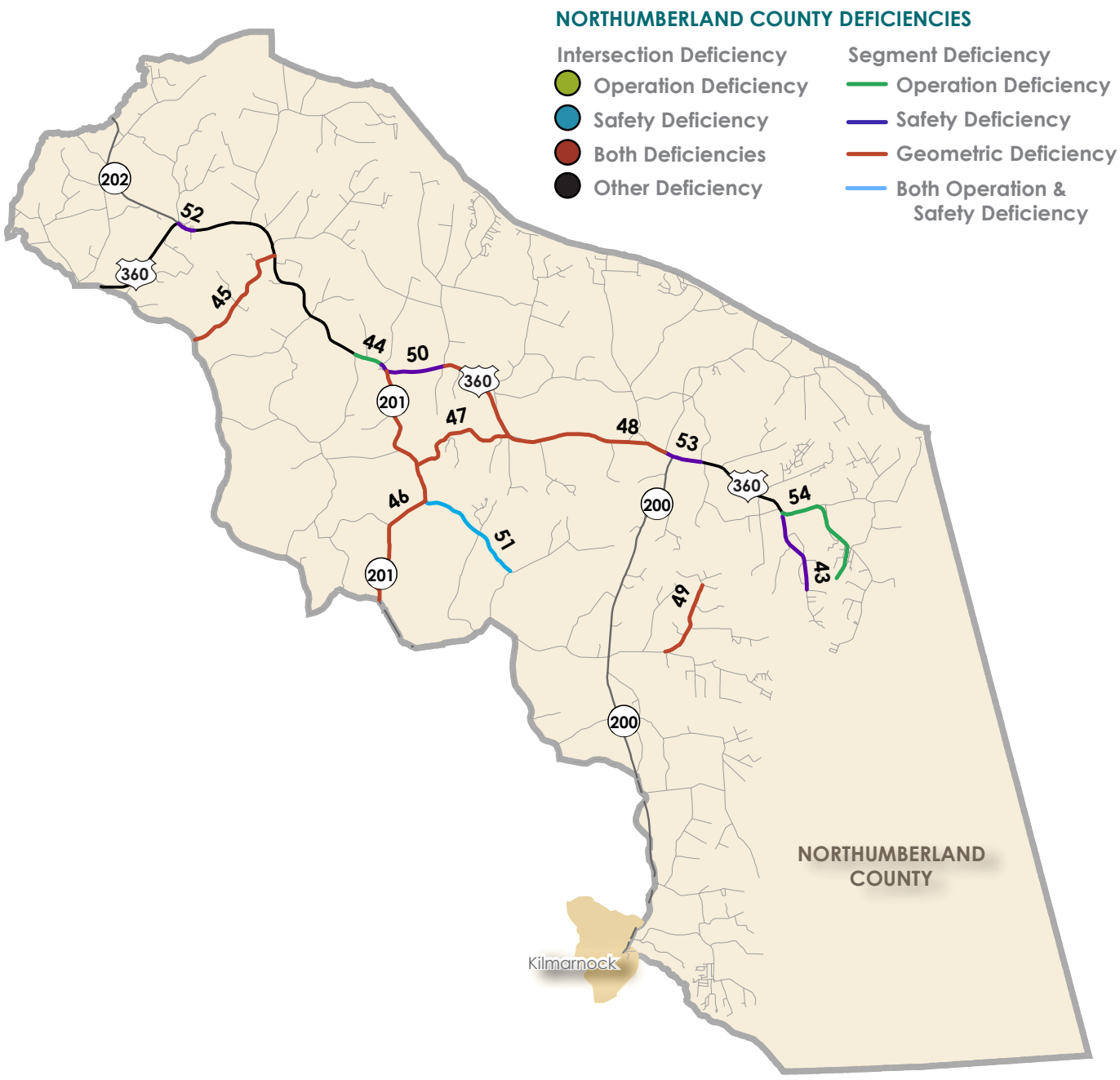
50 **US-360 from VA-634 to VA-630**
Short-term: Install Advance Intersection Warning (W2 series) signs at VA-201; Mid-term: Construct US 360 improvements from Heathsville to Horsehead and Burgess; Long-term: widen to rural four lanes with median.

51 **VA-642 from VA-201 to VA-610**
Short-term: Widen road to 12-ft lanes; Long-term: reconstruct road to address geometric deficiencies (11-foot lanes).

52 **US-360 from VA-202 to VA-750**
Short-term: widen to urban four lanes with median; Mid-term: High Angle and Rear-end crashes - Investigate conversion of driveway entrances to right-in/right-out; Long-term.

53 **US-360 from VA-644 to VA-646**
Short-term: Install Advance Intersection Warning signs (W2 series); Long-term: Investigate installation of TWLTL at some sections.

54 **US-360 from VA-646 to Toulson Ave.**
Mid-term: reconstruct road to address geometric deficiencies (12-foot lanes); Long-term: Improve US 360 to 4-lane from Lilian to Reedville.



RICHMOND COUNTY RECOMMENDATIONS

55 US 360 (Richmond Rd,) at Rt. 624 (Newland Rd.)
Short-term: Install larger "Divided Hwy" signs; install wider Stop Bars on storage space; Mid-term: Assess intersection for signal warrants and installation of turn bays on VA-624.

56 US 360 (Richmond Rd.) at VA-624 (Sabine Hill Rd.)
Short-term: Install "Divided Hwy" signs on VA-624; install wider Stop Bar on storage space; Assess intersection for signal warrants; Mid-term: Assess intersection for signal warrants and installation of turn bays on VA-624.

57 VA-3 from VA-619 to VA-642
Long-term: reconstruct road to address geometric deficiencies (4 Lane With Median).

58 Main St. from US-360 to VA-3
Mid-term: VA-3 Construction of off-street parking, S/W, landscaping and ped/bike trails; Long-term: Widen road to 4-lanes

59 VA-3 from Main St. to VA-203
Long-term: Rural - 4 Lane with Median

60 US-360 from Essex CL to Downing Bridge
Long-term: Bridge replacement; widen to urban four lanes with median.

61 VA-3 from VA-601 to Lancaster CL
Short-term: Bridge rehabilitation; Long-term: widen to rural four lanes with median.

62 VA-607 from VA-677 to VA-617
Short-term: Install Curve warning and Chevron signs at horizontal curves; Long-term: reconstruct road to address geometric deficiencies (11-foot lanes).

63 VA-638 from Westmoreland Co. Line to VA-639
Long-term: reconstruct road to address geometric deficiencies (11-foot lanes).

64 VA-630 from VA-631 to VA-3
Long-term: reconstruct road to address geometric deficiencies (12-foot lanes).

65 VA-607 from VA-677 to VA-692
Long-term: reconstruct road to address geometric deficiencies (11-foot lanes).

66 VA-3 from VA-642 to VA-607
Long-term: reconstruct road to address geometric deficiencies (4 Lane With Median)

67 VA-608 from VA-3 to VA-606
Long-term: reconstruct road to address geometric deficiencies (11-foot lanes).

68 VA-642 from VA-614 to VA-641
Long-term: reconstruct road to address geometric deficiencies (11-foot lanes).

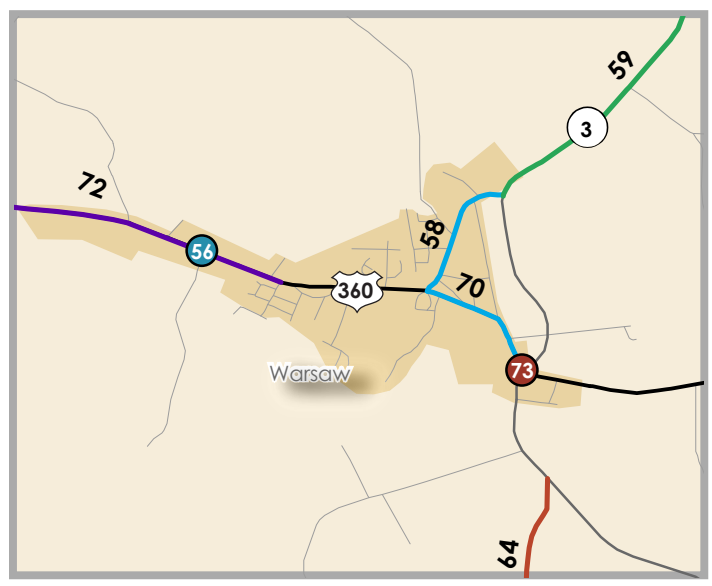
69 VA-608 from VA-613 to VA-642
Long-term: reconstruct road to address geometric deficiencies (11-foot lanes).

70 US-360 from VA-3 to Main St.
Short-term: Enhance Speed Limit signs and Speed Reduction signs; Investigate TWLTL warrants; Long-term: Investigate TWLTL warrants

71 VA-624 from US-360 to VA-676
Short-term: Install rumble strips; Mid-term: reconstruct road to address geometric deficiencies (12-foot lanes).

72 US-360 from Warsaw W. City Limits to VA-624
Short-term: Install turning vehicle warning signs at intersection with flashers; Long-term: widen to urban four lanes with median.

73 US 360 (Richmond Rd.) at Rt. 3 (History Land Hwy.)
Short-term: Modify left turn signal phasing on US 360 to protected-only; Improve signal timing to provide more green time to the critical movements.



Public Transportation

Deficiencies and recommendations were developed primarily from the CHSM plan for the region (DRPT, 2008). The recommended strategies address the needs and deficiencies identified by the plan. Demand-responsive transit is a vital service offered in many rural areas throughout the state because the providers offer transportation services to those with no other means of travel to necessary trip destinations. The CHSM Plan for the region also identifies the needs and deficiencies for demand-responsive transit:

- Continue to support and maintain capital needs of coordinated human service public transportation providers;
- Expand availability of demand-response and specialized transportation services to provide additional trips for older adults, people with disabilities, and people with lower incomes;
- Expand outreach and information on available transportation options in the region, including establishment of a centralized point of access;
- Build coordination among existing public transportation and human service transportation providers;
- Bring new funding partners to public transit/ human service transportation;
- Implement new public transportation services or operate existing public transit services on more frequent basis;

The Richmond County Comprehensive Plan includes a map of designated bike trails in the county.

- Provide flexible transportation options and more specialized one-to-one services through expanded use of volunteers;
- Provide targeted shuttle services to access employment opportunities;
- Expand access to taxi services and other private transportation operators;

The review of disadvantaged population groups determined that there is limited access to public transportation for these populations. There are several census tract block group areas which had a high portion of one or more transportation disadvantaged groups according to the 2000 Census. These block groups had higher percentages of a particular group than their respective county's percentages. The expansion of fixed-route and flexible fixed-route transit service in the Kilmarnock, Montross and the southern portion of Richmond County, in addition to increase along the principal arterials would provide better mobility and access to and from these areas and populations.

Airports

There are no general aviation airports in the NNPDC region. The NNPDC discussed the feasibility of a General Aviation Airport in the region as a part of it 2006-2007 plan and the preliminary feasibility plan was completed in 1999. The nearest airport is the Middle Peninsula Regional Airport in Tappahannock. A UNC report recommended that "one airport in the region should be upgraded sufficiently to allow business jet service" to allow corporate jets for business recruitment.

Bicycle and Pedestrian Facilities

The primary source of recommendations was the individual jurisdictions' bike plans and/or comprehensive plans. Currently, the two jurisdictions to include specific bicycle and pedestrian routes in its comprehensive plan are Northumberland and Richmond counties.

The Lancaster County Comprehensive Plan 2007, adopted a series of Class III bikeways and are shown in the plan. The plan states that bicycle trails will continue to be promoted in growth areas and several routes including 354, 695 and 646 have "Share the Road" signs installed in an effort to make room for bicyclists. The plan states that "it shall be a policy goal to develop, through a regional approach consistent with the plan, trails that are suitable for use by bicyclists, pedestrians, and horse riders". The Northumberland County Plan includes implementation of a plan for a system of regional bike trails as a strategy under community development issues and has a designated bicycle trail map. The Richmond County Comprehensive Plan includes a map of designated bike trails in the county. The Westmorland County Comprehensive Plan 2009 states inclusion of sidewalks and bikeways concurrent with other road improvements as an easier and cheaper technique compared to retrofitting. Striping the 4-lane portion of Route 3 south of Montross, near Washington and Lee High School and Lyells are mentioned as possibilities.

Land Use and Future Growth

A review of the jurisdictions' comprehensive plans, zoning, and proposed future land use determined where future growth areas could be. These locations are where the individual jurisdictions wish to direct future growth based on the presence of existing transportation infrastructure, water and sewer existing and future capacity, existing retail locations, and major employers. By directing development and in particular businesses and industries that move freight towards these growth areas, there is the potential to maximize the future performance of the region's transportation system and protect and enhance the region's existing agricultural landscape and setting. Primary and secondary future growth areas were determined.

The Lancaster County Comprehensive Plan details various approaches or tools including conservation development/design where maximum amount of open space is allocated per parcel and restrictive zoning practices. The primary centers of commercial and development activity were the three towns of Kilmarnock, White Stone and Irvington.

The Northumberland County Comprehensive Plan several measures of land use planning including updating the zoning ordinance to include waterfront support areas, to control large residential subdivisions to protect agricultural and forest lands.

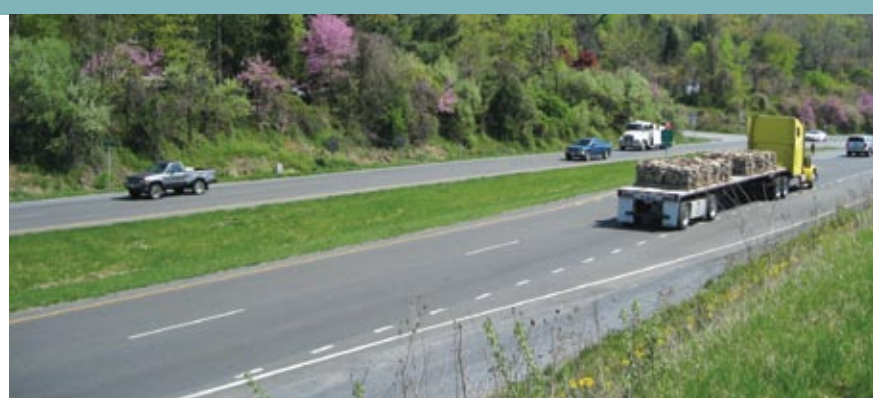
The primary centers of commercial and development activity were the three towns of Kilmarnock, White Stone and Irvington.

The Richmond County Comprehensive Plan identified Warsaw as a growth area and laid out specific policies regarding conservation of the Chesapeake Bay,

The Westmoreland County Comprehensive Plan (working document at the time of writing), outlines the primary growth areas to be the towns of Colonial Beach and Montross. The secondary growth areas are Monroe Hall, Oak Grove, Coles Point, Carmel Church and Kinsale. Recommendations were included for coastal management, conservation, residential and commercial development, planning and tourism.

Goods Movement

No commercial railroads are present in the area.



Travel Demand Management

IIn rural areas, low residential densities and dispersed work destinations are not conducive to high public transportation use. However, the NNPDC region does have some concentration of work destinations in the Warsaw in Richmond County, and Kilmarnock, Irvington and White Stone areas in Lancaster County. Decreases in single-occupant vehicle trips are possible in and around the towns and on heavily traveled commuter routes.

The programs and services of VRT and Commuter Services of the NNPDC will continue to be important tools for decreasing single-occupant vehicle trips, particularly during the peak hour.

Park and ride lots in the region are expected to continue to be of importance to the commuting population, particularly as in-migration from northern Virginia, Charlottesville, and Fredericksburg continues. Implementation of pedestrian sidewalks, bike trails plans, and greenways to support bicyclists and other modes have been discussed and strategized in the NNPDC area, including Northumberland and Westmoreland counties.

Projects can be prioritized for funding based on the recommendations that have been identified.

PLAN ADOPTION

The 2035 Rural Long Range Transportation Plan for the Commonwealth Region was adopted by the Northern Neck Planning District Commission on XX, 2011. This Plan will serve as a long term strategy for the transportation network of the region and as a component of the *2035 Surface Transportation Plan*. Projects can be prioritized for funding based on the recommendations that have been identified. Further information on this Plan and the *2035 Surface Transportation Plan* and VTrans 2035 can be found at www.vdot.virginia.gov.

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