

## Chapter VIII

# Transportation Priority Areas

In this chapter, the reader will find:

- An understanding of critical transportation issues throughout the 2045 process
- Standards and considerations for development of transportation projects and recommendations
- Guidance to MPO officials on annual development of the UPWP
- Linkages with the West Piedmont Development District's Comprehensive Economic Development Strategy Plan

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# Transportation Priority Areas

This chapter identifies other transportation-related priorities that influences the 2045 process. Another function of this chapter is to guide development of future transportation projects. As the MPO and VDOT study recommendations from the Visioning List (see CHAPTER IX), the following should guide the design of those projects. D-MPO staff should refer to these last two chapters on an annual basis to help develop the Unified Planning Work Program (UPWP). While CHAPTER IX guides project selection for funding submittals, CHAPTER VIII guide operations of further studies in the MPO and its member governments.

The following should guide future transportation studies conducted by the MPO, VDOT, and member governments:

- **Connections to The Port of Virginia:** The Danville-Pittsylvania region should incorporate considerations for The Port of Virginia and its expansion plans
- **CEDS:** Future transportation studies should be tied to the CEDS plan vision, goals, and recommendations, to support economic development efforts in the region.
- **Complete Street:** Any future transportation studies should consider multi-modal approaches and consider complete street designs, where applicable. Future transportation studies should also emphasize placemaking in areas dedicated to revitalization and reinvestment.

## Connections to the Port of Virginia

During the 2045 LRTP process a representative from The Port of Virginia met with the MPO's staff and consultants. The presentation explored The Port of Virginia's expansion plans and how those investments can stimulate economic growth throughout the Commonwealth. The full presentation is in APPENDIX \_\_\_\_.

## Profile of The Port of Virginia

### WEST PIEDMONT DEVELOPMENT DISTRICT'S \$ COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY PLAN:

The CEDS element of this plan is a direct excerpt from Chapter 4 of the 2019 CEDS plan. This overlap between plans is intended to link the LRTP and CEDS documents, given the region's dedication to fostering economic health and resiliency.

Refer to Page VIII-4 for the transportation section of the CEDS implementation chapter, called the "Implementation Plan." This plan "includes a Regional Vision for the West Piedmont Economic Development District. It also describes a short-term implementation plan for the actions set by the CEDS Committee for the next one to two years. This section precedes the Region's Project Priority List for initiatives to be implemented in the next five years or so. Following that is a list of Transportation Priorities for each locality and the Region.

#### Other CEDS Considerations:

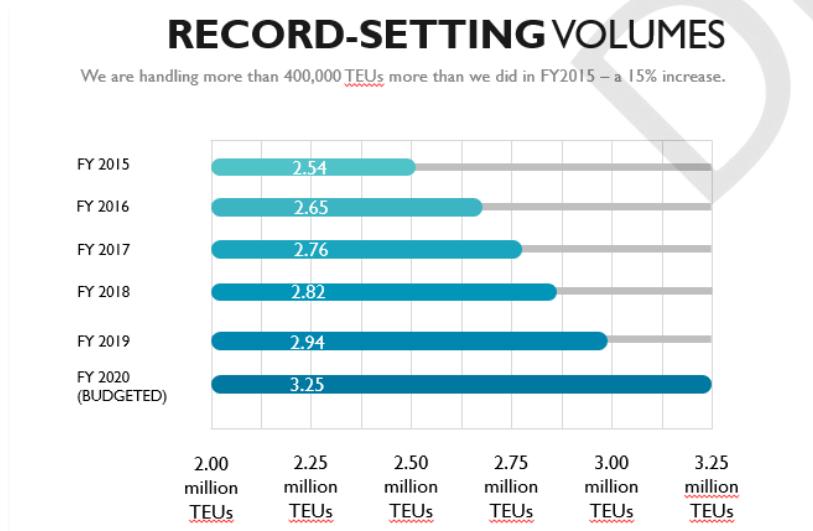
- **Agriculture:** With the current national economic situation, farmers across the region are caught in a money squeeze with the cost of fertilizer, chemicals, and transportation services.
- **Multi-Modal:** Improve regional multimodal transportation infrastructure; provide adequate transportation services; preserve, promote, and enhance transit systems
- **Resiliency:** Resiliency brings together many areas of
- community which often operate independently... the built environment, ecosystem services and the natural environment, energy production, food and water security, emergency preparedness, economic risk management, health services, transportation, communication, and education.

The Port of Virginia is the third largest port on the east coast. The growth at the port will grow freight throughout the entire transportation system in the Commonwealth. By including The Port of Virginia within the updated LRTP, D-MPO can address the needs of freight in the region and better prepare for economic growth.

The Port of Virginia is an asset of the Commonwealth that promotes economic growth within the MPO and across the state. The region's freight transportation system is dependent on an interconnected system of rail, highways, and local roads for the movement of goods.

The Port of Virginia has experienced vast growth in annual container volumes. The construction projects at Virginia International Gateway and Norfolk International Terminals will add an additional 1 million annual TEU (Twenty Foot Equivalent Unit) capacity to the terminals, and therefore, on the transportation system across the Commonwealth (**Figure 59**). Expansions at the Virginia Inland Port in Front Royal and projected growth of Richmond Marine Terminal will also add more freight to the transportation system. The freight fluidity within the transportation system is crucial for the economic growth of the region as well as the projected growth of The Port of Virginia and other private terminals in the Commonwealth.

**Figure 58** Increases in freight volume at The Port of Virginia since FY2015.



**Figure 59** Economic Impacts and The Port of Virginia



It is important to consider the growth of freight within the transportation system for long-range planning of the region due to the positive contribution to the communities. Economic growth is paramount for a thriving region; however, addressing externalities of freight movements, including consideration of the health impacts of air pollution, noise, and vibration impacts of heavy trucks and trains must be part of the planning process.

### Port Considerations for the Danville/Pittsylvania Region:

Freight fluidity on the transportation system has many factors. Below are some areas for D-MPO to consider through the annual update of the UPWP. Although The Port of Virginia has some knowledge of direct port activity, D-MPO can provide the best information available, studying these areas in coordination with The Port of Virginia.

- **Motor Carriers:** Designated Truck Routes, Major Trucking Areas, Truck Stops
- **Rail Network:** Industrial Rail Access, Marshalling Yards, Rail Capacity, Commuter Rail Growth
- **Economic Development Sites:** VEDP Site Tiers, Future Growth, Brown Sites, Green Sites

# Comprehensive Economic Development Strategies

As noted by EDA, "The CEDS is a strategy-driven plan for regional economic development. It is a key component in establishing and maintaining a robust economic ecosystem by helping to build regional capacity (through hard and soft infrastructure) that contributes to individual, firm, and community success. The CEDS provides a vehicle for individuals, organizations, local governments, institutes of learning, and private industry to engage in a meaningful conversation and debate about what capacity building efforts would best serve economic development in the region."

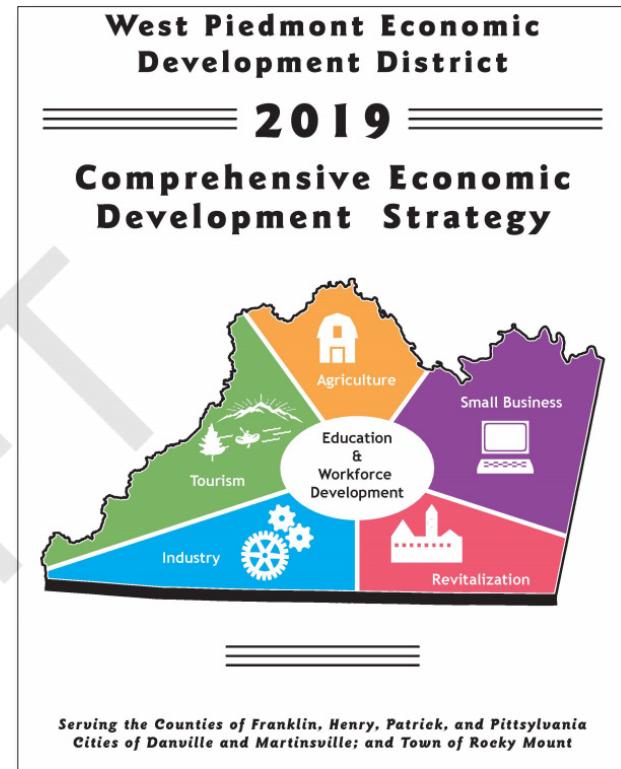
## CEDS Implementation Plan

An area's transportation accessibility serves as the framework wherein its communities grow. The adequacy of the transportation system has shaped and will continue to exert significant influence on economic growth within the West Piedmont Planning District. Transportation is a primary economic growth-forming factor because it makes land, labor, and resources both accessible and competitive inter-regionally and intra-regionally. Local transportation modes, for the same reason, impact the growth--or lack of growth--of specific areas within the region by making some areas relatively more accessible than others. The region needs an efficient transportation system because local firms are competing globally with other firms. The consumer, through the retailer, is requiring an approximation of just-in-time delivery.

The highway network is the major element in the Planning District's transportation system. Five federal highways and twenty state primary highways provide the localities of the region with access to each other and the rest of the nation. There are numerous state secondary roads connecting to these larger highways. Over 471 miles of federal and state primary highways and 3,714 miles of state secondary roads are located within the Planning District; urban system mileage totals 397.5 miles.

VTrans 2040, Virginia's multi-modal transportation guidance and planning document, serves as an update to the Year 2035 State

Figure 60 Excerpt from the 2019 CEDS Plan



Highway Plan. This document provides guidance as to which transportation projects across the Commonwealth should be funded based on identified needs. It serves as a basis for new state transportation legislation, Smart Scale, formerly House Bill 2, which is designed to be a ranking mechanism to further identify projects for funding at a time when many projects are competing for fewer monetary resources.

Top regional priorities for infrastructure improvements for regional access are based on completion of construction of the I-73, I785, U.S. Route 58, and U.S. Route 29 corridors. The projects are essential and the timeframe for their construction is critical to the recovery of the regional economy and directly and indirectly affect the potential success of all other projects identified in the strategy. These

transportation projects will have a significant economic impact on the region. Additional information on these and other projects follow.

## Regional Priorities

- **U.S. Route 58 Corridor Improvement Program:** The U.S. Route 58 Corridor Improvement Program was initiated by the Virginia General Assembly in 1989 to enhance the nearly 680-mile long, mostly two-lane winding and hilly roadway which serves as the major transportation conduit across southern Virginia, extending from Virginia Beach in the eastern part of the state to the Cumberland Gap in eastern Tennessee, just west of the Virginia State Line. As of 2018, all but 10.8 miles of this roadway had been widened to at least four lanes, leaving the section between Meadows of Dan and the Town of Stuart as the last remaining segment. This project is currently listed in Virginia Department of Transportation's Six-Year Improvement Program (SYIP), and construction is scheduled to begin in Fiscal Year 2021.
- **U.S. Route 29 Upgrades:** U.S. Route 29 is a major transportation corridor connecting Virginia to the Mid-Atlantic and Southeast regions. Upgrades to this roadway in Danville and Pittsylvania County would have a positive impact on the area. In 1996, a group of government and business leaders in Danville and Greensboro, North Carolina formed the Interstate Connection Committee, a coalition to re-designate U.S. Route 29 as an interstate highway. In 1998, the future designation for U.S. Route 29 as I-785 was included in a \$204 billion federal transportation bill passed by Congress. The I-785 initiative fits with an overall effort to eventually see U.S. Route 29 become a 65 mph, limited access highway from Danville north to Washington, D.C. Until that time, spot improvements including access management, the addition of turn lanes and bays, opening and closing of median crossovers to promote the safe and efficient movement of traffic, and new and reconstructed interchanges should be pursued to improve safety and preserve roadway capacity. Because of a number of serious and fatal injury crashes at the intersection of Route 642 (Shula Drive) and U.S. Route 29 in recent years and

following input from VDOT, Pittsylvania County decided to close the existing western access point of this intersection and re-open it further south along U.S. Route 29, thereby creating an offset T-intersection. The County submitted a Smart Scale application in 2018 to request funding for this project.

## Other Regional Projects

- **Route 863 (Moorefield Bridge Road) from Westover Drive to Mount Cross Road (City of Danville/Pittsylvania County):** Spot improvements in three (3) locations, as noted in the Moorefield Bridge Road Planning Level Study, June 28, 2013
- **Route 729 (Kentuck Road) between U.S. 58 and Little Creek Road (City of Danville/Pittsylvania County):** Spot improvements in three (3) locations, as described in the Kentuck Road Planning Level Study, June 28, 2013. In 2018, Pittsylvania County submitted a Smart Scale application to request funding to implement intersection and access improvements in the vicinity of the Ringgold West Industrial Park to address increasing traffic volumes resulting from an expanded distribution center. However, funding was not approved.

## Pittsylvania County Priorities

- **Proposed U.S. Route 29/58 Bypass Interchange and Enhancements to U.S. Route 311 (Berry Hill Road) and U.S. Route 58:** Pittsylvania County, with the help of a Strategically Targeted Affordable Roadway Solutions (STARS) II study, conducted by VDOT at a cost of nearly \$1.8 million, evaluated a potential interchange to be constructed at the intersection of U.S. Route 311 (Berry Hill Road) and U.S. Route 29/58 (Danville Expressway) as a means to establish more direct access from the expressway to the Berry Hill Industrial Park. An alternative proposal, the Berry Hill Connector Road – Oak Ridge Farms Interchange (with U.S. 58 Bypass) to Berry Hill Road will help promote development of the Berry Hill Industrial Park. Improvements to more than five miles of U.S. Route 311 are planned to take place once funding is secured. In 2017, the Danville Metropolitan Planning

Organization (MPO), staffed by the West Piedmont Planning District Commission, retained the services of Dewberry consultants to update a study that firm conducted in 2010 to evaluate the feasibility of the Berry Hill Connector Road as a more cost-effective alternative to an interchange at the intersection of Berry Hill Road and the Danville Expressway. The updated study was completed in 2018 and served as the basis for the submission of a Smart Scale application for the Connector Road, which is proposed to extend from Berry Hill Road east to the Danville Expressway. The MPO assisted with this study by providing mapping and conducting a crash analysis. This project was recommended for funding.

### Other Pittsylvania County Projects

- **U.S. 58 from Route 855 to Route 708 East:** Safety and geometric improvements to address deficiencies
- In 2018, Pittsylvania County submitted a Smart Scale application to fund various improvements at the intersection of Route 40 and McBride Lane in the Town of Gretna because of recent and anticipated non-residential development which includes the opening several years ago of the Centra Gretna Medical Center along McBride Lane. This project was not approved for funding.
- **VA 41 (from Route 844 to Route 703 West):** Improvements to address safety and geometric deficiencies
- **U.S. 29 in Pittsylvania County:** Improvements for safety and geometric deficiencies.

### City of Danville Priorities

- **Riverside Drive (U.S. 58 Business) Corridor Improvement Study:** In 2018, VDOT, EPR consultants, the Danville MPO, and the City of Danville collaboratively kicked off the Riverside Drive (U.S. 58 Business) Corridor Improvement Study to evaluate needs and formulate recommendations along a three-mile segment of Riverside Drive in the City of Danville between Piedmont Drive and Main Street. A VTrans 2040 safety needs analysis determined that numerous intersections and segments within this study area exhibited higher than predicted crash rates for their respected roadway geometry

types. Therefore, Strategically Targeted Affordable Roadway Solutions (STARS) funding has been allocated for the study team to evaluate this corridor and formulate recommendations to improve safety and efficiency within the study area. The study is anticipated to be completed in June 2019, with the expectation of a future Smart Scale submission to implement suggested improvements.

- **U.S. 58 West Access Management Study:** An update of the previous 2012 study, just west of Piedmont Drive in Danville to Long Circle, which will include spot improvements and safety measures.

### Other City of Danville Projects

- **U.S. 58 (South Boston Road) West Bound Third Lane Extension:** Extension of the recently completed third west bound lane on South Boston Road from Airport Drive to 600 feet east of Kentuck Road. In 2018, the City of Danville submitted a Smart Scale application to request funding for this project.
- In 2018, the City of Danville submitted a Smart Scale application to fund pedestrian circulation and safety improvements in the vicinity of the Danville Mall to include the implementation of sidewalks, crosswalks, and pedestrian signalization.
- **Mount Cross Road Improvements Phase II:** Continuation of Mount Cross Road Improvements Phase I with added highway capacity and improved alignment from Dimon Drive north to the Danville City limits; preliminary estimated cost of \$15 million.
- Additionally, a roundabout is proposed at the intersection of Mount Cross Road and the Averett University's North Campus entrance. Preliminary estimated cost is \$3.3 million, which will greatly improve intersection safety and efficiency. The City of Danville submitted a Smart Scale application in 2018 to request funding for this project; however, funding was not approved.

## Typical Roadway Sections & Complete Streets Conversions

WPPDC, which houses the staff to the MPO, has been actively encouraging the development of complete streets throughout the region. Complete streets are streets that are built to accommodate all users – pedestrians, vehicles, bicycles, and buses – and are a key building block towards building economically viable places where people want to live and work. Complete streets conversions entail reallocating some roadway space from vehicles to other elements such as wider sidewalks, shared use paths, or bicycle facilities, where the traffic volumes and capacity merit such reconfigurations. The following outlines a strategy to develop a network of complete streets that connect residents with activity centers in the MPO.

A network of complete streets is proposed that would provide multimodal connectivity between employment activity centers along Riverside Dr, Piney Forest Rd and Downtown and the neighborhoods to the north and south. THE 2018 WEST PIEDMONT REGIONAL BICYCLE PLAN served as the guiding document for these considerations. **Figure 63** shows the regional road network segments that were highlighted in the bike plan as having potential for new bike lanes. A handful of north-south roads that were identified based on traffic volumes and road widths to serve as the primary routes of the new network. These routes connect many neighborhoods to the activity centers. Recognizing the popularity and geographical centrality Riverwalk trail, the trail could serve as the spine of the network, allowing for east-west travel between the activity centers. **Figure 64** shows the proposed network overlaid on the employment density of the MPO. Once the primary routes have been converted to complete streets, the secondary routes could be converted to thicken the network. Several examples of complete streets conversions are outlined below to serve as a guide for the development of the network.

### North Main St

North Main St is a Minor Arterial road that connects Downtown with the Danville Expressway (via Richmond Blvd), Franklin Tpke, and Piney Forest Rd. The southern half is a two-lane road that runs through residential areas, while the north half opens to four-lanes

and serves commercial land uses in addition to residential uses. A typical cross section of the southern portion of North Main St has about 38' of pavement curb to curb. Both sides of the street are used for parking, with one section that includes marked parking spaces. While North Main St has sidewalks on both sides, it lacks bike

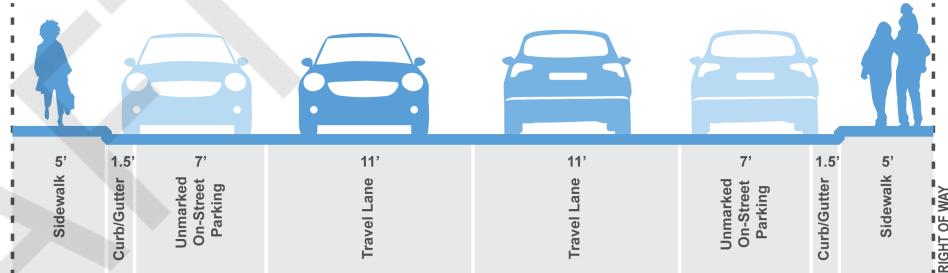
**Figure 61** Two streetscapes alternatives that would accommodate cyclists on North Main St

#### North Main St Typical Sections

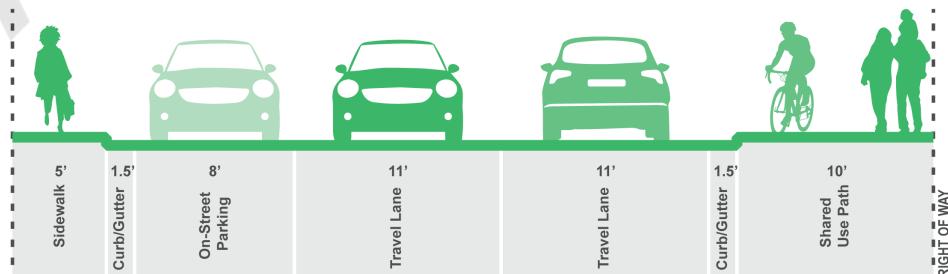
CURB TO CURB: 38'

TOTAL ROW: 48'

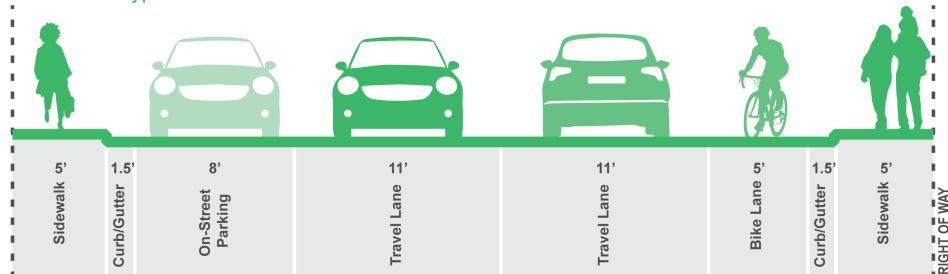
#### Existing Typical Cross Section



#### Alternative Typical Cross Section 1



#### Alternative Typical Cross Section 2



lanes. **Figure 61** depicts two streetscapes alternatives that would accommodate cyclists on North Main St.

### Arnett Blvd

Arnett Blvd is a Minor Arterial road that connects Riverside Dr (US Route 58 Business) with Piney Forest Rd (US Route 29 Business). It is primarily a two-lane road that serves residential land uses with a four-lane section in the middle that serves small commercial establishments, along with Johnson Elementary School and Northside Preschool. A typical cross section of the residential portions of Arnett Blvd has about 53 feet of right-of-way. Both sides of the road are used as on-street parking, although there are markings only on one side. Arnett Blvd has no bike lanes and aside from the four-lane section has no sidewalks. **Figure 62** shows two alternative streetscapes that could accommodate bike and pedestrian travel.

**Figure 62** Two alternative streetscapes that could accommodate bike and pedestrian travel

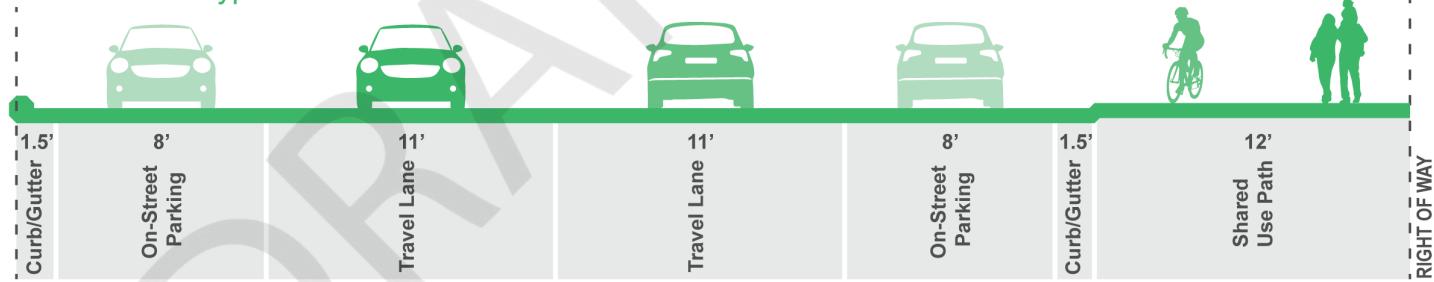
### Arnett Blvd Typical Sections

TOTAL ROW: 53'

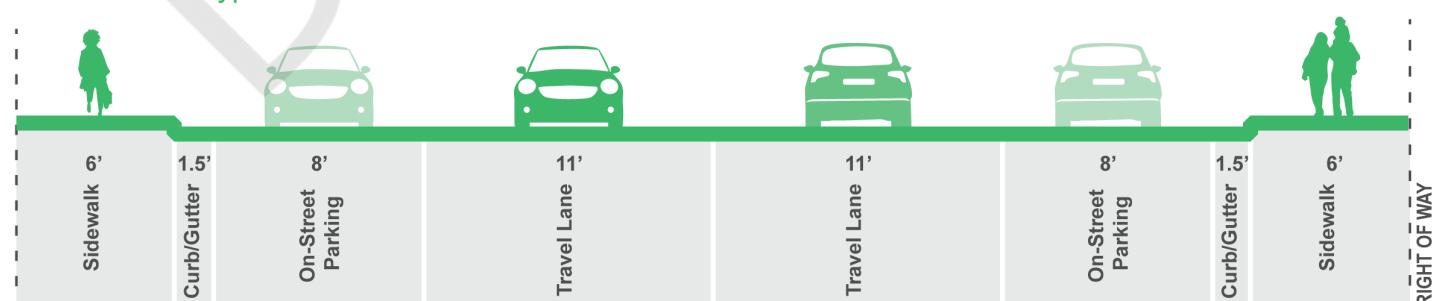
#### Existing Typical Cross Section



#### Alternative Typical Cross Section 1



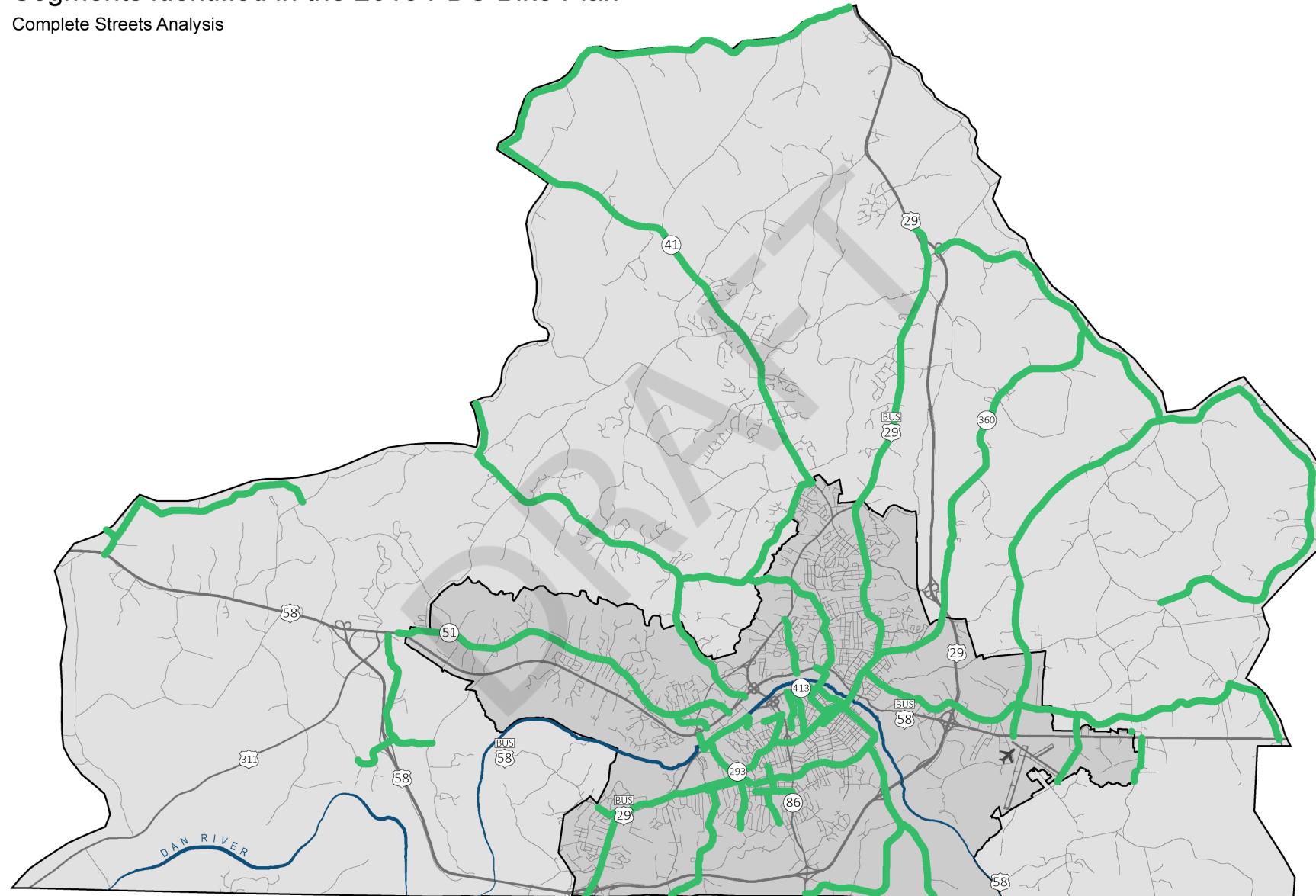
#### Alternative Typical Cross Section 2



**Figure 63** Regional road network segments that were highlighted in the bike plan

## Segments identified in the 2018 PDC Bike Plan

Complete Streets Analysis



0 0.5 1 Miles

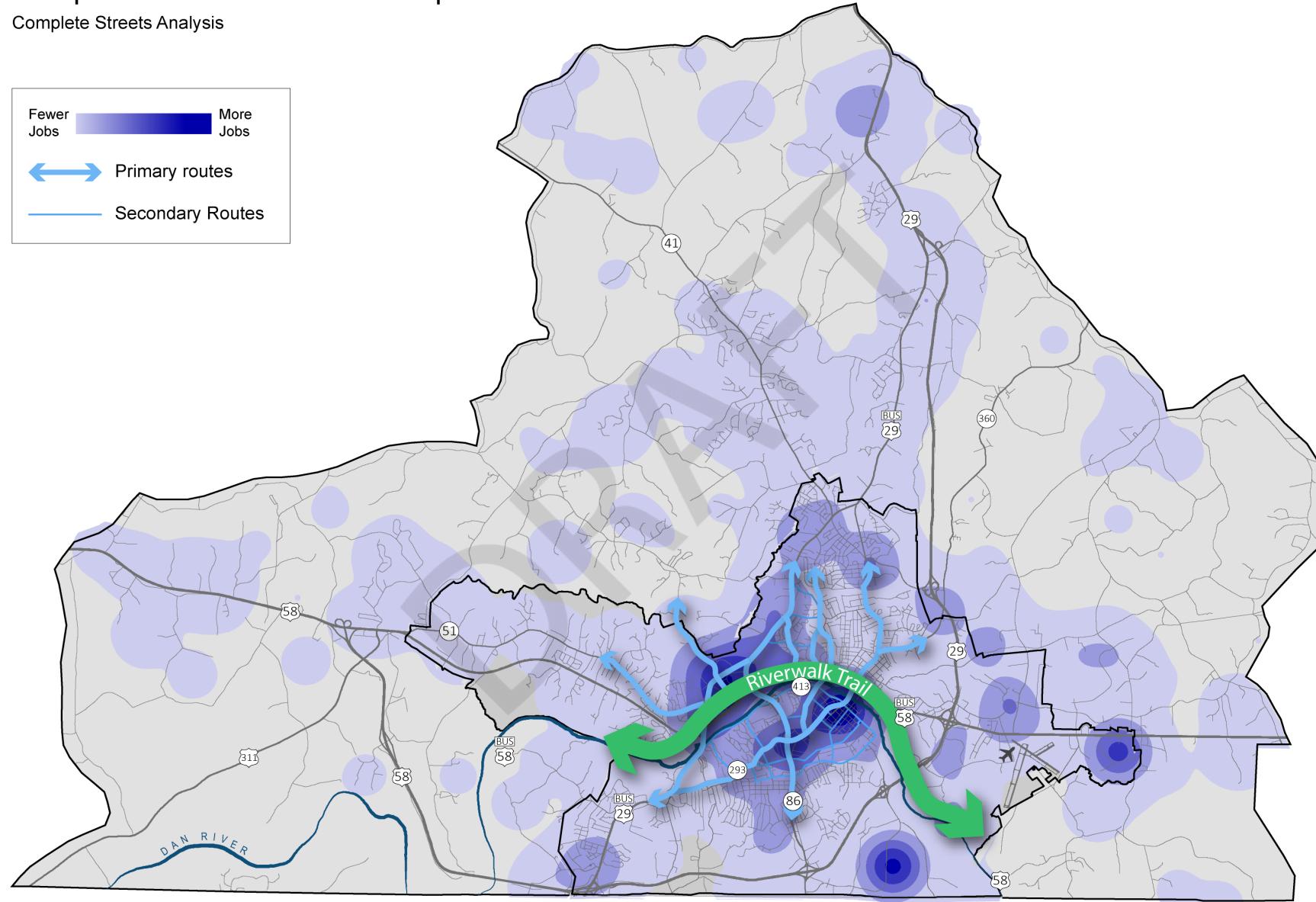
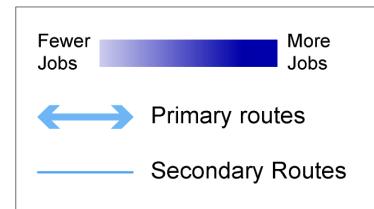
DANVILLE METROPOLITAN PLANNING AREA



**Figure 64** Proposed network overlaid on the employment density of the MPO

## Complete Streets Network Concept

### Complete Streets Analysis



0 0.5 1 2 3 Miles

DANVILLE METROPOLITAN PLANNING AREA

