



Date of Council Meeting: November 25, 2013

**TOWN OF LEESBURG
TOWN COUNCIL WORK SESSION**

Subject: Local Fixed Route Bus Service Analysis

Staff Contact: Betsy Fields, Research & Communications Manager
Michael Bruckner, Management Analyst

Recommendation: Staff recommends that the Town Council request that the Loudoun County Board of Supervisors pursue a single contract for operation of local fixed route bus service that includes service within the Town of Leesburg.

Issue: In December 2012, Virginia Regional Transit was informed by the Virginia Department of Rail and Public Transit (DRPT) that they were no longer eligible to receive federal rural transit funding for their fixed-route bus service in Leesburg and eastern Loudoun County. Under the urban transit funding program, the grant recipients must be government entities. Moving forward, the Town and/or Loudoun County will be the grant recipients and will contract for the operation of the local fixed route bus service.

Fiscal Analysis: In FY 2014, the Town budgeted \$594,016 for operation of the bus service. Under the County's proposal, the projected cost to the Town will increase to \$831,200 in FY 2015.

Background: In order to assist Leesburg and Loudoun County with the transition from funding under the federal rural program (in which the non-profit operator of the system is the grant recipient) to funding under the federal urban program (in which the local governments are the grant recipients), DRPT has funded a study of the current local fixed-route system, including routes, ridership, fare structure and operational costs. This study was conducted by Kimley-Horn under a contract with Loudoun County Transportation Services. Kimley-Horn presented their final report to the Board of Supervisors' Transportation and Land Use Committee (TLUC) on Friday, November 15, 2013. The full report and staff memo from that meeting are attached.

Key Findings

Representatives from Kimley-Horn will be at the work session to present the report findings relevant to the Town. Key points include:

- Converting the route structure from inefficient one-way loops to a hub-and-spokes system. The proposed system goes from three loops to five spokes.

- The new routes rely on a “pulse” system whereby all routes connect at a hub and buses don’t leave until all connections have been made.
- Eliminating redundancies between the Leesburg fixed routes, the Safe-T-Ride and the 7-to-7-on-7 route.
- Projected costs to the Town are based on the current percentage of service hours that the Town funds, rather than specific routes. These costs reflect a 21% increase in service hours.

Staff Recommendations

On November 15, County TLUC accepted Kimley-Horn’s report and has forwarded it to the full Board of Supervisors for action on December 4, 2013. Their recommended course of action is for the County issue an RFP for operation of the system, exclusive of the routes (or service hours) that the Town of Leesburg is currently funding. Their intent is to issue a contract that the Town of Leesburg can ride.

Staff recommends that the Council pursue an agreement with Loudoun County whereby the County issues a single contract for operation of the entire fixed route bus service system and the Town of Leesburg contributes an agreed-upon percentage of the costs of the Leesburg-specific service hours.

- Having separate contracts for the operation of different portions of the system is inefficient. The system operates as a whole, with interdependent routes.
- If the RFP is issued for the entire system, the per-hour cost of service is likely to be lower due to increased efficiencies of a larger system.
- Under a single contract, the Town would not be a grant recipient from the State, eliminating a duplicative process to get the same amount of state match for the local program.
- If the Town remains a grantee from the State, we will have to create a Transit Development Plan (TDP). The County already has a TDP, so there is no additional cost to the County.
- If the service is operated as a single system, customers will have a single point of contact for any problems.

Staff recommends that the Council send a letter to the Board of Supervisors requesting that their RFP for service include all of the Leesburg routes, with the intention of awarding a single contract.

Next Steps

The full Board of Supervisors will consider the final report and its recommendations at its December 4, 2013 meeting. Once the Board accepts the report and directs staff to move forward with an RFP for operation of the bus service, County staff will develop the RFP and issue it by January 2014, in order to award a contract in time for operation of the new service to begin on July 1, 2014.

Attachment: Local Fixed Route Transit Analysis, Board of Supervisors Transportation and Land Use Committee Action Item, dated November 15, 2013

Date of Meeting: November 15, 2013

**BOARD OF SUPERVISORS
TRANSPORTATION AND LAND USE COMMITTEE
ACTION ITEM**

2

SUBJECT: Local Fixed Route Transit Analysis

ELECTION DISTRICT: Countywide

CRITICAL ACTION DATE: December 4, 2013

STAFF CONTACTS: Nancy Gourley, Transportation & Capital Infrastructure
Joe Kroboth, Transportation & Capital Infrastructure

RECOMMENDATION:

Staff: Staff recommends that the Transportation and Land Use Committee (TLUC) recommend that the Board of Supervisors (Board) endorse the proposed changes and recommendations of the local fixed route transit analysis; and direct staff to use the analysis: 1) forward the local fixed route changes to the Virginia Department of Rail and Public Transportation (DRPT) as part of the annual Transit Development Plan (TDP) update; 2) develop the FY 2015 budget for local fixed route service; 3) develop the FY 2015 state grant application(s) related to local fixed route service; and 4) develop the procurement documents for a local fixed route transit provider for the period beginning July 1, 2014.

BACKGROUND:

A February 1, 2013 letter from the Virginia DRPT confirmed that under the 2010 census models, Loudoun County falls almost entirely within the Washington, D.C. urbanized area (UZA), and that effective October 1, 2013 most of the current Loudoun County and Leesburg transit routes operated by Virginia Regional Transit (VRT) no longer qualify for Federal Transit Administration (FTA) 5311 funding for rural areas. Effective October 1, 2013, the local fixed route transit services became a County contracted service under an emergency contract with VRT, approved by the Board on September 4, 2013 (9-0 consent agenda).

The DRPT agreed to fund a consultant led project to perform an analysis of the current local fixed route operations and make recommendations for service delivery in FY 2015 and beyond, up until the arrival of Metrorail in Loudoun County. The Town of Leesburg is participating in the study as a stakeholder. The Town of Leesburg staff has worked with the Consultant on the conceptual routes within the Town and the findings are anticipated to be presented at the November 25, 2013 Town Council meeting. The consultant, Kimley-Horn and Associates, Inc. (Consultant), presented the initial findings of the analysis to the TLUC on September 16, 2013. Attachment 1 is the written response to questions asked by committee members during the September TLUC meeting.

The Consultant has completed the draft analysis which is Attachment 2 of this item. The draft analysis makes recommendations on the preferred alternative for organization and oversight, along with a program plan to implement the results of the analysis. This information includes operating costs of recommended routes, fleet needs, identified funding sources, fare levels and structure, along with projected ridership and potential fare recovery. An Executive Summary of service and funding recommendations is included in the document.

ISSUES:

Annual Update of the TDP

An annual TDP update needs to be prepared and submitted to the DRPT in December of each year. The TDP submission must include all proposed changes to transit service. State Operating Assistance funding is predicated on this annual TDP update. Upon the Board's endorsement of the consultant's proposed local fixed route service revisions, staff will submit the TDP update to DRPT as well as complete the application for State Operating Assistance grant funding that is due in January 2014. The local funding source proposed to be included in the grant application is FY 2015 local gasoline tax revenue.

Transit Services Contract

The emergency contract issued to VRT for a nine-month period in FY 2014 will expire on June 30, 2014. There are no provisions for extensions or renewals included in the contract. As such, a request for proposal (RFP) needs to be issued in early 2014 to ensure that local fixed route bus service will continue to operate in FY 2015, and beyond. Based on Board direction, staff will utilize the information in this Local Fixed Route Analysis to develop an RFP, to be advertised by January 2014. The procurement process is anticipated to result in a contract award in March/April 2014, with a contract effective date of July 1, 2014.

County Funded Leesburg Routes

The FY 2015 local transit program assumes that Loudoun County will continue to apply for grant funds and provide local match to fund two fixed routes within the town limits of Leesburg; County Government Complex and Leesburg South King Street. Historically, the County has funded two of the Leesburg fixed routes (Battlefield and Sycolin Road) with local gasoline tax revenues, as well as provided a gasoline tax contribution to the Town of Leesburg to be used to partially fund the Safe-T-Ride (\$20,000 in FY 2013 and FY 2014). The Battlefield and Sycolin Road routes are being replaced with the proposed conceptual, County Government Complex and South King Street routes as part of the Consultant's recommendations.

Potential Alternative Funding Source for Udvar Hazy Route

The Udvar Hazy route is currently funded through state operating assistance, and the local match is a 50-percent cost share agreement with Fairfax County. Numbers provided by VRT demonstrate that ridership on this route derives primarily from Dulles Airport for which the route serves as a shuttle between the airport and the Udvar Hazy Air and Space Museum. Staff will initiate discussions with staff from Dulles Airport to explore alternative options for providing access to the Museum from the airport.

Fare Structure

The consultant’s financial projections assume that fares remain at the current level of \$1.00 for most routes, and \$2.00 for Metrorail connecting service until 2018 when a \$0.25 increase to all fares is recommended, followed by an additional \$0.25 in FY 2019. A consultant led fare study will be completed for the commuter bus system, including analysis of those services that will connect to the Phase I Silver Line stations. Upon completion of this study in early 2014, the results and recommendations will be presented to the Board for consideration and action. The fare for the local fixed route services that will provide all day connection to the Wiehle – Reston East Station should be considered for a comparable fare increase at that time.

ALTERNATIVES:

The Board can choose to not endorse the recommendations made in the analysis and direct staff how to move forward related to provision of local fixed route bus service beginning in FY 2015.

FISCAL IMPACT:

The analysis study includes an estimated total cost to operate local urban fixed route bus service in FY 2015 of \$4,439,800 based on the current vendor’s operating rate of \$69 per hour, plus an assumption for capital costs of buses and supportive facilities and includes \$498,300 for continued funding for the equivalent of two existing routes within the town limits of Leesburg and an annual contribution of \$20,000 for the Leesburg Safe-T-Ride. Revenues for the urban transit service are estimated to be \$1,252,200 in FY 2015 and are intended to offset the cost of the urban transit service program budget and derive from the various revenue sources included in the following table.

Urban Local Fixed Route (Loudoun County)	
<u>Revenues</u>	
State Operating	\$ 672,800
Fare box Recovery	332,200
Bus Advertisement	58,100
50-Percent Cost Share Agreements	189,100
Revenues- Subtotal	\$ 1,252,200
<u>Expenditures</u>	
Loudoun Urban	\$ 3,941,500
Leesburg Routes (County Funded)	498,300
Expenditures- Subtotal	\$ 4,439,800
Local Gasoline Tax Revenue	\$ 3,187,600

As a result, the remaining operating funding of \$3,187,600 is proposed to derive from local gasoline tax revenues within the Transportation District Fund and reflects an increase of \$1,572,004 over the FY 2014 appropriation of local gasoline tax revenues of \$1,615,596 for local fixed route transit service that is also supplemented by local tax funding of \$495,903 as well as the annual \$20,000 contribution for the Leesburg Safe-T-Ride. There is projected sufficient

FY 2015 local gasoline tax revenue for these costs due to the infusion of Virginia House Bill 2313 (HB2313) revenue being available to be utilized for State Revenue Sharing local match.

The FY 2015 Proposed Budget is to be developed based on the consultant's projected cost and revenue estimates; however, the final cost is contingent on the actual vendor proposal awarded to provide the transit service. The procurement process and award of the transit contract is projected to commence in January 2014, resulting in a contract award in March/April 2014. If available, the final contracted cost will be presented to the Board as part of their FY 2015 budget development process.

Furthermore, the rural transit services are anticipated to continue to be operated by Virginia Regional Transit (VRT) into the foreseeable future with a projected contribution of \$253,344 in local gasoline tax revenues required in FY 2015 or an increase of \$12,230 or 5 percent over the FY 2014 appropriation of \$241,114. The FY 2015 Proposed Budget is to include this estimated contribution to VRT in the Transportation District Fund and derive from local gasoline tax revenue.

DRAFT MOTIONS:

1. I move that the Transportation and Land Use Committee recommend that the Board of Supervisors endorse the proposed changes and recommendations of the local fixed route transit analysis; and direct staff to include those elements to:
 - a. Forward the local fixed route changes to the Virginia Department of Rail and Public Transportation as part of the annual TDP update;
 - b. Develop the FY 2015 Proposed budget for local fixed route service;
 - c. Develop the FY 2015 state grant application(s) related to local fixed route service; and
 - d. Develop the procurement documents for a local fixed route transit provider for a minimum three year contract period beginning July 1, 2014.

OR

2. I move an alternative motion.

ATTACHMENTS:

1. Staff responses to questions asked by committee members at the September 16, 2013 TLUC meeting regarding this issue.
2. Final Local Fixed Route Transit Analysis Report completed by Kimley-Horn and Associates, Inc.
3. Power Point Presentation

Loudoun County Local Fixed Route Transit Analysis

Transportation Land Use Committee Presentation, September 13, 2013

Response to Questions

Question: Will the final report include a narrative of service modifications by route?

Response: Yes, the final report will include language that summarizes all changes to service. This summary will include descriptions of new routes, route revisions, and any service deletions.

Question: Is there a reason the Ashburn Routes perform at such a high cost and low ridership?

Response: It should be noted that Ashburn Farms (Route #62) and Ashburn Village (Route #61) routes have been re-vamped several times since inception, in an effort to increase ridership and performance. However, these efforts have not successfully increased ridership to meet the minimum standards identified in the Countywide Transportation Plan (CTP). Several factors likely contribute to the low ridership. While the routes travel throughout residential communities, they may not travel to the key destinations that have the potential to generate higher ridership as other routes in the system, such as Dulles Town Center or NOVA Community College. Secondly, residents along the existing route may have alternative transportation options available other than local fixed route transit, such as a community shuttle service or family vehicle. Having other means of transportation reduces the likelihood that residents will use the local fixed service on a daily basis. Thirdly, some of the roads these routes travel do not allow buses to provide the greatest efficiency of service. Limited lane capacity and traffic congestion during peak period conditions may influence quality of service for these two particular routes.

Question: How will the introduction of Metro Phase II into Loudoun County impact the local fixed route bus system?

Response: This analysis is for the period of time beginning July 1, 2014 and includes the six year window of the Transit Development Plan. Future subsequent changes with metro extending into Loudoun County will require additional analysis closer to that time.

Question: Can you please provide data with Leesburg farebox recovery data separate from the entire system?

Response: According to information provided by Virginia Regional Transit, in 2012 the farebox receipts for Leesburg totaled \$33,277. In 2012 the Leesburg routes operated 13,920 hours of service at \$69/hour for an annual cost \$960,480. That means the Leesburg routes had a 3.46% farebox recovery rate.

Question: What is the feasibility of replacing some portion of the local fixed service with midday on-demand service (Dial-A-Ride)?

Response: On-demand service operates on a point-to-point basis (home to destination), differing from fixed route service in requiring advance reservations (usually the previous day) to receive the service. Where the number of users is low and widely dispersed, on-demand service may be the only realistic option. However, provision of on-demand service is far costlier than fixed route service. The 2012 GSA study of paratransit service showed that nationally the cost of on-demand/paratransit service per passenger is significantly higher than the cost per passenger of fixed route service.

Similarly, the average cost of providing an ADA paratransit trip in 2010 was \$29.30, an estimated three and a half times more expensive than the average cost of \$8.15 to provide a fixed-route trip.¹

Ridership statistics demonstrate that ridership on the local fixed route buses remains relatively level throughout the day.

¹Ada Paratransit Services, GAO Report to the Committee on Banking, Housing, and Urban Affairs, U.S. Senate, November 2012

Unfortunately, the cost and difficulty of running a system that went from fixed route (in the morning peak period) to on-demand (in midday) and back to fixed route service (in the afternoon peak period) each day would be substantial. All of the buses needed during the morning rush period would have to return to base and then be redeployed in the evening rush period – doubling the number of deadhead (non-revenue) miles and, therefore, the average cost per revenue mile substantially. In the midday the on-demand vehicles would need to be deployed and return to base within a 4 to 6 hour window, similarly logging substantial non-revenue miles and hours. During the change over there would either be gaps in service or duplicate staffing required. Two vehicle fleets would be required as well. In short, the cost of such an operation would be significantly greater than the current system and its operation would be more complicated and less reliable.

Finally, an on-demand service would almost certainly reduce ridership, as advanced scheduling would be required for all users. Users' needs vary during the day (let alone from day to day), benefiting from the predictability and dependability of fixed route local service, allowing greater choice for the user in deciding when to travel and where to travel at a given time.

Question: Please seek input from the Commuter Bus Advisory Board (CBAB) regarding this analysis.

Response: Input from citizens on the local fixed bus route analysis is welcomed. According to the CBAB bylaws, the members of CBAB are required to be riders of the Loudoun County commuter bus service. CBAB acts in an advisory capacity on policy and operational matters regarding the commuter bus service, and, it should be noted that the make-up of CBAB is focused on commuter long haul service between Loudoun County and the Washington, D.C. metropolitan area. This body does not represent the needs of local fixed route bus riders because each service accommodates a very different market. It is recommended that in the future, consideration be given to modifying and expanding the Commuter Bus Advisory Board to be a Transit Advisory group, representative of all transit options including long haul commuter bus, metro-connection service, local fixed route service, paratransit service, and, with the arrival of Metrorail in Loudoun, Metro riders.

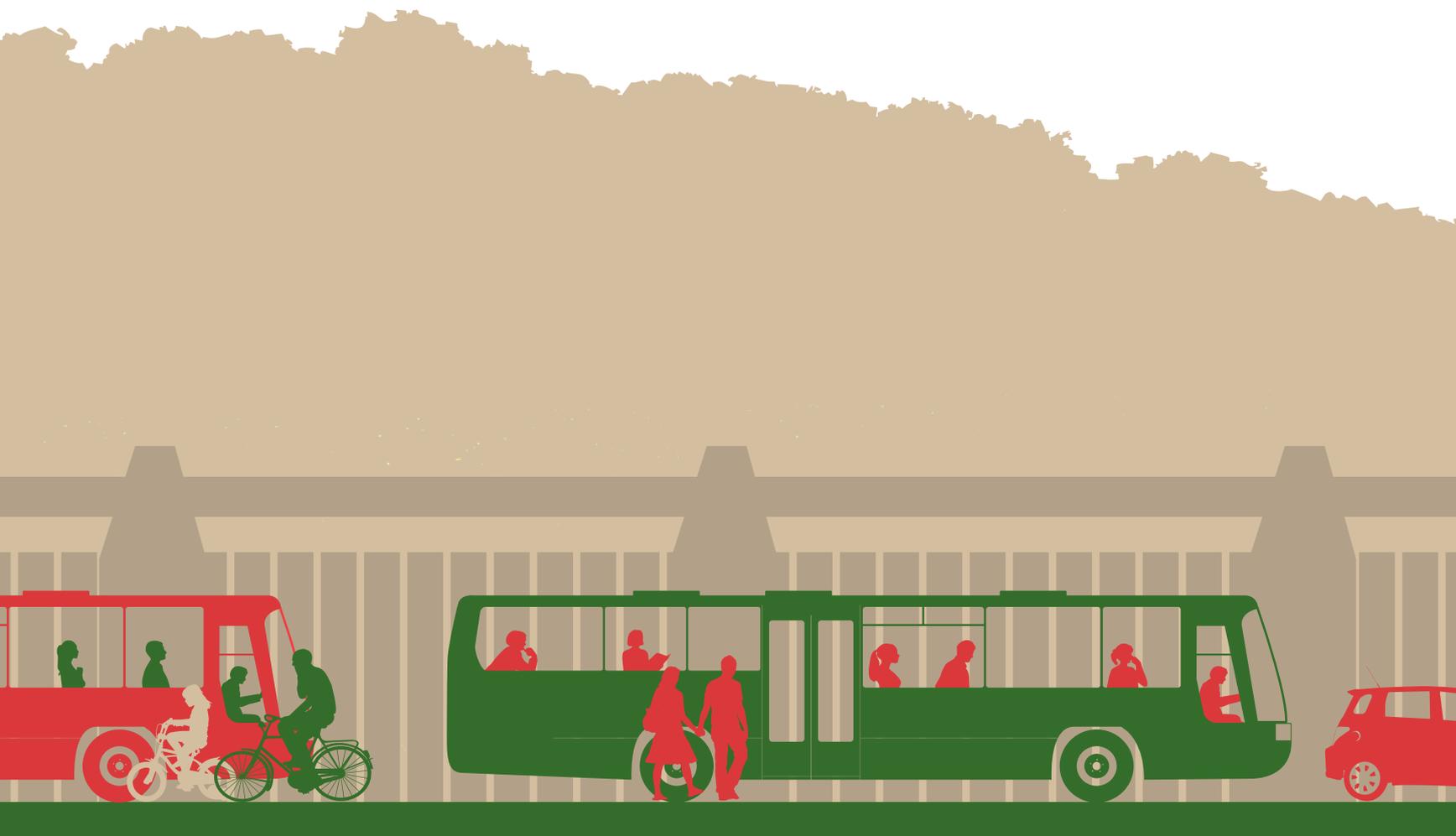
Question: Why does 7 to 7 on 7 (Route 70) not travel to the Village at Leesburg?

Response: The existing alignment of Route 70 (7 to 7 on7) currently performs well, serves employment centers and other key destinations throughout eastern Loudoun County, and operates on headways that meet the needs of a large number of riders. Re-routing these buses to include a stop at the Village at Leesburg would require that the route and stops be significantly altered, potentially eliminating or inconveniencing current riders. Additionally, the Village at Leesburg does not include bus accommodation on the private streets of the development.

Proposed service modifications include service and a transit hub site adjacent to the Village at Leesburg. Upon successful siting of the Leesburg East Transit Hub, people will have access to the Village of Leesburg Shopping Center via transit service.

LOUDOUN COUNTY

Transit Management Analysis Report



Prepared for:

Prepared by:

October 2013



Kimley-Horn
and Associates, Inc.

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C. Summary of Leesburg Stakeholder Meetings



1. Introduction

Background

Between 2000 and 2010, Loudoun County's population grew by 84 percent, dramatically outpacing every other county in the Commonwealth of Virginia. During this period, the County added 142,000 residents and the population increased to more than 312,000 people. This growth was focused primarily in the eastern third of the County. The rapid changes experienced by Loudoun County as a result of this growth will continue into the future as the population continues to increase and the transportation system that serves it continues to evolve.

The Silver Line extension of the Washington Metro Area Transit Authority (WMATA) rail transit system (Metro) into the Dulles Corridor represents a much anticipated addition to the transportation system and will provide regional transit access to and from Loudoun County. It will provide an interim terminus in Reston at Wiehle Avenue in early 2014 (Phase 1). This will be followed by a further extension of the line through Dulles International Airport to Ashburn (Phase 2). This second phase is currently expected to open in 2018. The significance of this project for transit service in Loudoun County cannot be overstated.

The opening of the Silver Line will expand public transportation options and have significant public finance implications as well. Loudoun County receives designated gas tax funds that, once the line reaches Loudoun County, will be reallocated to WMATA for the operation of the Silver Line. Loudoun County is also working with the Metropolitan Washington Airports Authority (MWAA) and other WMATA Compact signatories to determine how best to fund the Silver Line extension, the parking garages associated with it, and its ongoing operation.

Against this background, Virginia Department of Rail and Public Transportation (DRPT) confirmed that under the 2010 census models, Loudoun County falls almost entirely within the Washington, D.C. urbanized area (UZA), and, effective October 1, 2013, most of the

current Loudoun County and Leesburg local fixed and on-demand transit routes operated by Virginia Regional Transit (VRT) no longer qualified for Federal Transit Administration (FTA) 5311 funding for rural areas. Only the Purcellville Connector fixed-route and the three on-demand routes that operate primarily in western Loudoun County will remain eligible for the rural funding. The new urban designation eliminates the opportunity for federal operating grants for transit which are limited to rural and small urban areas with populations of less than 200,000. Furthermore, with this change in the federal funding designation, VRT is no longer an eligible recipient of state operating or capital grant funds for urban routes.

These important changes prompted Loudoun County to revisit the management, configuration, and operation of local fixed-route bus service in Loudoun County beyond 2014. This analysis considers the period of time beginning July 1, 2014 and includes the six year window of the Transit Development Plan. With Metro extending into Loudoun County, additional analysis will be required at a future date.

Study Purpose

The Loudoun County Transit Management Analysis is intended to:

- Evaluate the status of current local transit service in Loudoun County
- Identify and analyze alternative transit management arrangements for the provision of local transit service in Loudoun County
- Recommend a program plan for the implementation of the preferred transit service

¹ United States Census Bureau, <http://quickfacts.census.gov/qfd/states/51/51107.html>



2. INSTITUTIONAL STAKEHOLDERS AND EXISTING FUNDING

There are a variety of stakeholders involved with the planning, management, operation, and funding of transit services in Loudoun County.

Loudoun County

Loudoun County Division of Transit and Commuter Services is responsible for the planning and management of transit service for Loudoun County. It is located in the Department of Transportation and Capital Infrastructure (DTCI). DTCI coordinates matters related to road development, pedestrian and bicycle accommodations, and the implementation of traffic improvements and planning and is responsible for the management of county transit and commuter services. It is an integrated part of the county government and, as such, is governed by the Board of Supervisors. The board sets county policies, adopts ordinances, appropriates funds, approves land rezoning applications and special exceptions to the zoning ordinance, approves grant applications and is the ultimate governing body for the DTCI program. Its members appoint a County Administrator to manage county operations. The Director of the Department of Transportation and Capital Infrastructure reports to the County Administrator.

LC Transit, the current commuter bus branded service, is planned and managed by Loudoun County. LC Transit contracts with a private operator to provide its long haul, reverse peak, express, and shuttle operations. The fleet of buses is owned by the County, but is stored, run, and maintained by the operator. The service crosses into the service areas of Washington Metropolitan Area Transit Authority (WMATA) and Arlington and Fairfax Counties. Funding decisions regarding LC Transit service are ultimately made by the County Board of Supervisors, which receives recommendations from staff and the Commuter Bus Advisory Board (CBAB). The CBAB acts in an advisory capacity, through staff, to the Board of Supervisors on policy and operational matters pertaining to the system of commuter buses. The planning, day-to-day oversight of operations, and customer service functions are the responsibility of DTCI staff.

Town of Leesburg

The Town of Leesburg is the county seat of Loudoun County and its largest community with over 42,000 residents. Leesburg provides a portion of the funding needed for local bus service within the Town. Leesburg is served by four bus routes including a free shuttle bus

(Safe-T-Ride) and a rubber tired trolley bus (Leesburg Trolley). Historically, Leesburg has been solely responsible for the planning of transit service within the town.

Northern Virginia Transportation Authority (NVTA)

Regional transportation planning in Northern Virginia is coordinated by the Northern Virginia Transportation Authority (NVTA) which was established in 2002 by the Virginia General Assembly. The NVTA prioritizes transportation projects and allocates any funds made available to the Authority to the Northern Virginia member jurisdictions. The Authority covers nine jurisdictions including: Arlington, Fairfax, Loudoun and Prince William counties and the cities of Alexandria, Fairfax, Falls Church, Manassas and Manassas Park. The governing body includes the mayors or chairs of the nine cities and counties that are members of the NVTA; two members of the House of Delegates; one member of the Senate; and two citizens who reside in counties and cities included in the NVTA. In addition, the Director of the Virginia Department of Rail and Public Transportation (DRPT) and the Commonwealth Transportation Commissioner (Virginia Department of Transportation) serve as non-voting members of the transportation authority.

The NVTA is tasked with preparing an unconstrained, long-range regional transportation plan (the most recent is the TransAction 2040 Plan) for Planning District 8, including transportation improvements of regional significance. The NVTA has significant powers granted by the General Assembly to construct or otherwise implement projects in the adopted plan. These powers include, but are not limited to, the ability to acquire land, impose tolls, and have its bonds validated by Virginia's courts. Funding of NVTA is based on a number of taxes unique to the NVTA region including an additional transient occupancy tax and a tax on property transfers.

Northern Virginia Transportation Commission (NVTC)

The Northern Virginia Transportation Commission (NVTC) was established to manage and control the functions, affairs, and property of the Northern Virginia Transportation District. The Transportation District was created in 1964 by the Virginia General Assembly to

² United States Census Bureau, <http://quickfacts.census.gov/qfd/states/51/5144984.html>



develop transportation systems that encourage orderly growth and development of urban areas for the safety, comfort, and convenience of citizens and the economical utilization of public funds. Loudoun County is one of six member jurisdictions.

The gas tax fund is administered by the NVTC, and funds are allocated to member jurisdictions, most of which are located within the WMATA Compact. As part of the Compact, gas tax revenue from those jurisdictions is distributed by NVTC to WMATA to help defray Metrobus and Metrorail expenses. Loudoun County currently is not a paying Compact member and receives the full amount that is collected from gasoline sales within Loudoun County. This will change once Metrorail expands service into Loudoun County and will trigger the requirement for Loudoun County to become a paying member and all gasoline sales tax revenues will be used to subsidize Loudoun County's share of Metrorail operating expenditures.

Washington Metropolitan Area Transit Authority (WMATA)

The Washington Metropolitan Area Transit Authority (WMATA) was created by an interstate compact in 1967 to plan, develop, build, finance, and operate a balanced regional transportation system in the national capital area. Metrorail has 106 miles of track exclusive of the Silver Line Extension. Metrobus operates 1,500 buses. Metro began its paratransit service, MetroAccess, in 1994. Fares and advertising revenue do not pay for all of the costs of operating Metrorail, Metrobus, and MetroAccess service. The shortfall is covered by contributions from the District of Columbia, Maryland, Virginia, Arlington, Alexandria, Fairfax, Fairfax County, and Falls Church. WMATA is the designated recipient of federal (5309) capital and (5307) operating funds in the region.

Metrorail's Silver Line is expected to open in early 2014 to a new station at Wiehle Avenue in Reston, with four additional stations in Tysons Corner – Tysons West, Tysons Central 7, Tysons Central 123 and Tysons East. The Silver Line joins the Orange Line at East Falls Church, where Silver Line trains then continue into Washington, D.C. Phase 2 of the project will complete the extension through Dulles International Airport to Ashburn. Phase 2 is projected to open in 2018, and includes stations at Reston Parkway, Herndon-Monroe, Route 28, Dulles Airport, Route 606 and Route 772.

Department of Rail and Public Transportation (DRPT)

The Virginia Department of Rail and Public Transportation (DRPT) is a state agency that reports to the Secretary of Transportation. It is primarily responsible for rail, public transportation, and commuter services initiatives throughout Virginia and leads planning efforts to improve access to public transportation, carpools, vanpools, human service transportation, passenger rail, freight rail, and telecommuting. These efforts assist with managing growth in highway congestion while achieving the highest possible return on investment to maximize limited funding. There are 60 public transportation systems in Virginia that range in size from two-bus programs in small towns to larger regional systems like WMATA in Northern Virginia and Hampton Roads Transit (HRT) in Hampton Roads. DRPT advises and supports public transportation funding programs statewide through a variety of grants for public transportation, commuter service, and rail.

DRPT Grantee Master Agreement and Compliance Reviews

DRPT administers the dispersal of state and certain federal funding for transit systems in the Commonwealth of Virginia. A Master Agreement between DRPT and its grant recipients is required for receipt of grants supported by the Commonwealth Transportation Funds. The Master Agreement stipulates compliance with the provisions of the Grantee Handbook, maintenance of asset inventory through the Department's Online Grant Administration site (OLGA), and performance reporting, also through OLGA. The Master Agreement includes an annual audit requirement covering expenditures made by sub-recipients of grants, including consultants, sub-consultants and any other recipients of pass-through funds.

Virginia HB 2313 and Transit Service Delivery Advisory Committee (TSDAC)

During the 2013 General Assembly Session, the Commonwealth Mass Transit Fund was created to implement performance-based funding for mass transit for revenues generated above \$160 million in 2014 and after. This includes formation of the Transit Service Delivery Advisory Committee (TSDAC) to advise the Department of Rail and Public Transportation on the distribution of such funds and how transit systems can incorporate performance metrics into their transit development plans (TDP's). The committee consists of



representatives from the Virginia Transit Association (VTA), Community Transportation Association of Virginia (CTAV), Virginia Municipal League (VML), Virginia Association of Counties (VACO), and DRPT. The Commonwealth Transportation Board adopted the performance-based model to allocate Mass Transit Trust Funds for public transportation operating assistance in excess of \$160 million. The methodology uses performance metrics including net cost per passenger, customers per revenue hour, customers per revenue mile and transit system sizing to distribute funds through a two phased approach.

On July 1, 2013, House Bill 2313 became effective, enacting sweeping legislation affecting revenues and appropriations primarily for transportation. Among other things the bill eliminated the \$0.175 per gallon gas tax replacing it with a percentage based wholesale gas tax, increased some registration fees, increased the state sales and use tax from 4% to 4.3% and designated the increased revenues to highways, intercity passenger rail operations, the capital fund and the Commonwealth Mass Transit Fund. The law also raises separate revenue in Hampton Roads and Northern Virginia for priority projects in those regions. In Northern Virginia the result is projected to be \$284 million in 2014 and \$1.6 billion total by the end of 2018³.

Federal Transit Administration (FTA)

The Federal Transit Administration (FTA) is the agency within the United States Department of Transportation that provides financial and technical assistance to local public transit systems. The federal government provides financial assistance to develop new transit systems and improve, maintain, and operate existing systems through the FTA. It oversees grants to state and local transit providers. Recipients are responsible for managing their programs in accordance with federal requirements, and the FTA is responsible for ensuring that grantees follow federal mandates along with statutory and administrative requirements.

Two programs provide the majority of Federal funding to transit systems, referred to as Sections 5307 and 5309. Section 5307 is the Urbanized Area Formula Funding program (49 U.S.C. 5307) available to urbanized areas and to Governors for transit capital and operations in urbanized areas and for transportation related planning.

An urbanized area is an incorporated area with a population of 50,000 or more that is designated as such by the U.S. Department of Commerce, Bureau of the Census. The Section 5309 program provides funding for the establishment of new rail or busway projects (new starts), the improvement and maintenance of existing rail and other fixed guideway systems, and the upgrading of bus systems. Loudoun County and the Town of Leesburg are not eligible to receive FTA funds, as WMATA is the designated recipient of both of these funds for the region.

Section 5311 provides operating funding for rural areas. Section 5311 funds were previously provided to Virginia Regional Transit (VRT) for transit service in Loudoun County as the designated rural transit provider so long as Loudoun County was categorized as a rural area. When it was determined following the 2010 US Census that the portion of Loudoun County east of Purcellville is no longer classified as rural, Section 5311 funding was no longer available for that urban area.

Virginia Regional Transit (VRT)

Virginia Regional Transit (VRT), which began in August 1990 as the Loudoun County Transportation Association, is a Virginia 501 C-3 not-for-profit Corporation providing public transit primarily in rural areas. Services include ownership of transit vehicles, the operation of transit service utilizing VRT drivers, vehicle maintenance by VRT mechanics, vehicle storage at VRT facilities, and the provision of administrative services, including management of Commonwealth and federal operating and capital grants and liaison with the Virginia Department of Rail and Public Transportation. VRT is a state-designated recipient of Section 5311 funds as a rural transit provider and the current operator of local bus service and demand response service in Loudoun. The Town of Leesburg and Loudoun County have contributed funding for VRT operations to supplement state and federal funding.

³ <http://vasierrclub.org/2013/06/new-transportation-funding-explained/>

⁴ http://www.fta.dot.gov/grants/13093_3561.html

⁵ http://www.fta.dot.gov/grants_1261.html



3. Transit Operations

Current Transit Operations

Local Transit Service

Currently, VRT provides fixed-route bus transportation in Purcellville, Leesburg, Sterling/Countryside, Ashburn Village, and Ashburn Farm. Bus service also is in operation from Dulles Town Center. The fixed-route service is designed to include route-to-route transfer opportunities at hub locations in Leesburg, Ashburn, Dulles Town Center, and at INOVA Loudoun Hospital and Northern Virginia Community College. A complete list of local routes in Loudoun County follows. **Figure 1** illustrates local route alignments. **Appendix A** includes a detailed map of all local routes.

- Route 40 – Purcellville Connector
- Route 50 – Leesburg Safe-T-Ride
- Route 51 – Leesburg Battlefield – Ida Lee
- Route 52 – Leesburg Sycolin Road
- Route 53 – Leesburg Trolley
- Route 60 – Ashburn Village
- Route 61 – Ashburn Farm
- Route 70 – 7 to 7 on 7
- Route 80 – Sugarland Run Connector
- Route 81 – Countryside Connector
- Route 82 – Sterling Connector
- Route 83 – Dulles 2 Dulles

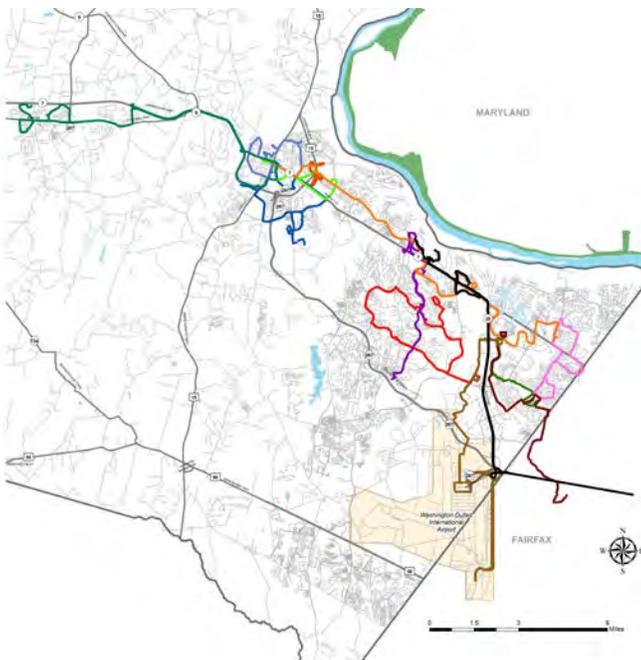


Figure 1. Existing Local Fixed-routes

Express Transit Service

The County offers two express routes—one to the Herndon/Monroe Park and Ride Lot and one to the West Falls Church Metro Station. These express routes provide connections to other regional buses including the Fairfax Connector and Metrobus Route 5A. **Figure 1** also illustrates express route alignments in Loudoun County.

- Route 84X – Herndon/Monroe Connector
- Route 72X – West Falls Church Express

Paratransit and On-Demand Services

Under the Americans with Disabilities Act (ADA), all people with disabilities must have access to transportation service that is comparable to that offered to people without disabilities. The ADA covers all public transportation systems and requires that:

- Lift-equipped buses must be available.
- Paratransit service is available to people who live within ¾ a mile of a fixed route bus but cannot access it.
- Securing wheelchairs correctly, calling out stops and other accessibility issues are also covered by the ADA.

However, the ADA does not require transit service be given to people with disabilities who live in an area where no transit is available at all. Only when transit service is present do the ADA transportation rules take effect.”

Virginia Regional Transit (VRT) operates both Americans with Disabilities Act (ADA) paratransit service and demand response service in Loudoun County with funding from the County. ADA paratransit service is provided to those who qualify and are traveling within three-quarters of a mile of a local fixed-route. Citizens who require ADA-regulated transportation services (i.e., curb-to-curb travel assistance), may complete an application to participate in Loudoun County’s paratransit program. Riders are required to schedule their paratransit trips 24 hours in advance. General demand response service is provided throughout the County to the general public, including riders who are registered as ADA paratransit eligible and who are traveling in areas located more than three-quarters of a mile from fixed-routes. This service is open to anyone with 24-hour scheduled reservations and is subject to availability. Service hours for the paratransit and demand response services are Monday through Friday from 7:00 AM until 7:00 PM.

At the time of this assessment, a parallel study is underway to evaluate Loudoun County's paratransit and on-demand services. The results of that study will not be prepared before the conclusion of this assessment.

Loudoun County's existing Commuter Services and Park and Ride Lots were not covered as part of this study.

Fare Structure

As of October 1, 2013, VRT's local fixed-route base fare for Loudoun County fixed-routes is \$1.00 in cash or bus pass, except for the West Falls Church (WFC) Express, which costs \$2.00 in exact cash for a one-way trip, and the Leesburg Safe-T-Ride, which is free for riders. Children under the age of 10 may ride for free. Students and employees of George Washington University (GWU) and the Howard Hughes Medical Institute (HHMI) are eligible for free rides on the WFC Express when they provide valid identification. Both GWU and HHMI are financial contributors to the WFC Express Route.

The current system does not include transfers, therefore a single fare is charged every time a transit rider boards a bus.

Shelters and Maintenance Facilities

All bus stops along the local fixed service routes are clearly marked with a bus stop sign. Approximately 15 of the bus stops have shelters. These shelters are 12 feet in length and are predominately located in the Purcellville, Leesburg, and Ashburn areas. **Figure 2** shows an example of a bus shelter in downtown Purcellville on local bus Route 40, Purcellville Connector. VRT's facility is located in Purcellville; vehicle storage, maintenance, operations, dispatch, and administrative functions occur at this site for both fixed-route and paratransit/on-demand service.



Figure 2. Bus Shelter on Route 40, Purcellville Connector at Shoppes of Main and Maple

Fleet

Local service requires 20 buses to accommodate weekday fixed-route operations. This does not include demand response service. In May 2013, VRT acquired ten 2013 Ford Transit Vehicles (at a cost of \$71,872 per vehicle) to replace older vehicles that had exceeded their useful life in Loudoun County and the Town of Leesburg. The newer vehicles are similar to the 2013 Ford Transit Allstar Passenger Bus with mobility aid systems that usually include a wheelchair lift or ramp. All equipment meets or exceeds ADA regulations and is handicap accessible. Vehicles are also equipped with bicycle racks. **Figure 3** shows a local fixed-route bus on Route 7 in Leesburg.



Figure 3. A VRT bus on Route 7 in Leesburg

Source: LoudounTimes.com, Times-Mirror Staff Photo/Raymond Thompson

Existing System Characteristics

Existing local fixed-routes were evaluated based on several factors that were categorized into three groups:

1. **Coverage** which considers user demographics and service area within a quarter-mile access of each route
2. **Ridership** which includes annual boardings, boardings per revenue hour, and boardings per revenue mile for each route
3. **Operating Cost** which considers the cost of operating each route

APPENDIX B summarizes how each performance measure was developed and includes the source.



Coverage

User demographics were analyzed for coverage area within a quarter-mile buffer of each route. A walking distance of up to one quarter-mile for bus riders is generally accepted as a baseline standard. Population and employment within the buffer area were considered for each route alignment. The buffer area was modified to a quarter-mile radius around stops on express routes that make a limited number of stops.

Considering systemwide coverage, approximately 35% of the population and 65% of jobs have access to local fixed transit service. **Table 2** and **Table 3** show the population and number of jobs within a quarter-mile of each route, respectively. Each table is sorted in descending order from largest to smallest values of population and jobs. Among all local fixed-routes in the County, Route 70 (7 to 7 on 7) has the greatest coverage, serving approximately 24,200 people and 26,000 jobs within the quarter-mile buffer of the route alignment. This is largely due to the 20-mile route length (one direction) and major employment centers along the route which include INOVA Loudoun Hospital, George Washington University, and Dulles Town Center.

Route 72X (WFC Express) and Route 84X (Herndon-Monroe Connector) serve the smallest number of jobs due to the nature of service provided with limited stops. Route 83 (Dulles 2 Dulles) serves a very small population primarily serving employment centers at the Dulles Town Center, Dulles Airport, and businesses along Pacific Boulevard.

Captive riders are those for whom transit service is the best option for their transportation needs. Most captive riders fall into three broad categories: lower income populations, households without vehicles, and persons with limited personal mobility. As individuals age, they become more likely to have attributes that would place them in one or more of these categories. These captive rider population subgroups and their geographic distribution are important in determining the market.

Census 2010 data and 2011 American Community Survey (ACS) data were used to determine the proportion and distribution of these population subgroups along existing routes. It should be noted that ACS data was provided at the Census Tract level and a distribution of tract level data to the smaller Traffic Analysis Zone (TAZ) units assumed level distribution across the entire census tract. If the distribution is significantly clustered in a Census Tract, a given TAZ could have more or fewer people (jobs, etc.) than the tract level average.

Tables 4, 5, and 6 show the percentages of population subgroups within a quarter-mile access of each route. The subgroups include low-income households (less than \$35,000 per year), households without a vehicle, and persons aged 65 and older, respectively.

As shown in **Table 4**, all Leesburg service areas—Route 50 (Safe-T-Ride), Route 51 (Leesburg Battlefield), Route 52 (Leesburg Sycolin Road), and Route 53 (Leesburg Trolley)—serve more than 18% of low-income households. Route 60 (Ashburn Village), Route 81 (Countryside Connector), Route 61 (Ashburn Farm), and Route 72X (WFC Express) serve less than 10% low income households possibly because these routes navigate communities in which fewer people are likely to use public transit, such as Ashburn, or the route has limited exposure to households with limited stops (WFC Express). Route 81 (Countryside Connector) serves Sterling with a 7-mile loop just east of the US Route 28/US Route 7 interchange connecting Dulles Town Center and the Brentwood Road community. Less than 10% of the households within a quarter-mile buffer of the route are considered low income. However, the greater Sterling community has a significantly lower median household income of \$83,000 when compared to the neighboring Ashburn community which has a median household income of \$120,000. This increases the likelihood of Sterling having transit-dependent residents.



Leesburg service, Route 40 (Purcellville Connector), and Route 61 (Ashburn Farm) encompass populations in which 3.2% to 4.1% of households are without a vehicle as shown in Table 5. Among all local fixed-routes, these routes provide transit service to users who do not have a vehicle. All other routes are either equal to or less than the system coverage area average of 2.8% households without a vehicle.

Table 6 summarizes the elderly living within 0.25 miles by route. Route 60 (Ashburn Village), Route 61 (Ashburn Farm), Route 40 (Purcellville Connector), and Route 82 (Sterling Connector) have at least 6.4% of persons age 65 years or older within 0.25 miles of access to the respective route alignment. These routes serve senior communities including the Winger House. All other routes serve less than the systemwide average of 6.2% persons aged 65 years and older.

Route	Population
Route 70 - 7 to 7 on 7	24,146
Route 61 - Ashburn Farm	19,076
Route 80 - Sugarland Run Connector	18,984
Route 40 - Purcellville Connector	13,325
Route 51 - Leesburg Battlefield	13,261
Route 52 - Leesburg Sycolin Road	12,993
Route 60 - Ashburn Village	11,798
Route 53 - Leesburg Trolley	11,278
Route 82 - Sterling Connector	9,145
Route 81 - Countryside Connector	6,596
Route 50 - Leesburg Safe-T-Ride	3,993
Route 84X - Herndon/Monroe Connector	2,986
Route 72X - West Falls Church Express	1,422
Route 83 - Dulles 2 Dulles	158

Route	Jobs
Route 70 - 7 to 7 on 7	25,968
Route 52 - Leesburg Sycolin Road	11,801
Route 53 - Leesburg Trolley	11,064
Route 61 - Ashburn Farm	8,623
Route 40 - Purcellville Connector	8,015
Route 60 - Ashburn Village	7,763
Route 51 - Leesburg Battlefield	7,495
Route 81 - Countryside Connector	7,319
Route 82 - Sterling Connector	6,910
Route 80 - Sugarland Run Connector	4,433
Route 83 - Dulles 2 Dulles	3,842
Route 50 - Leesburg Safe-T-Ride	3,242
Route 72X - West Falls Church Express	2,669
Route 84X - Herndon/Monroe Connector	2,369

Route	% HHS Less 35K
Route 53 - Leesburg Trolley	26.5%
Route 50 - Leesburg Safe-T-Ride	21.8%
Route 52 - Leesburg Sycolin Road	21.2%
Route 51 - Leesburg Battlefield	18.4%
Route 40 - Purcellville Connector	16.7%
Route 84X - Herndon/Monroe Connector	13.6%
Route 82 - Sterling Connector	13.6%
Route 83 - Dulles 2 Dulles	13.0%
Route 70 - 7 to 7 on 7	13.0%
Route 80 - Sugarland Run Connector	11.2%
Route 61 - Ashburn Farm	9.8%
Route 72X - West Falls Church Express	9.3%
Route 81 - Countryside Connector	9.3%
Route 60 - Ashburn Village	9.2%

System Coverage Area Average: 11.5% households with annual incomes of less than \$35,000
 Countywide: 7.8% households with annual incomes of less than \$35,000.



Table 5. Percentage of Households Without a Vehicle Living Within One-Quarter Mile of Access to Route

Route	% HHS without a vehicle
Route 61 - Ashburn Farm	4.1%
Route 51 - Leesburg Battlefield	4.1%
Route 40 - Purcellville Connector	3.8%
Route 53 - Leesburg Trolley	3.8%
Route 60 - Ashburn Village	3.7%
Route 50 - Leesburg Safe-T-Ride	3.2%
Route 52 - Leesburg Sycolin Road	3.2%
Route 72X - West Falls Church Express	2.8%
Route 70 - 7 to 7 on 7	2.7%
Route 82 - Sterling Connector	2.1%
Route 84X - Herndon/Monroe Connector	2.0%
Route 81 - Countryside Connector	1.9%
Route 83 - Dulles 2 Dulles	1.9%
Route 80 - Sugarland Run Connector	1.6%

System Coverage Area Average: 2.8% households without a vehicle;
Countywide: 1.9% households without a vehicle.

Table 6. Percentage of Persons Aged 65 and Older Living Within One-Quarter Mile of Access to Route

Route	% Persons Age 65 and Older
Route 60 - Ashburn Village	9.1%
Route 61 - Ashburn Farm	7.6%
Route 40 - Purcellville Connector	7.6%
Route 82 - Sterling Connector	6.4%
Route 81 - Countryside Connector	6.0%
Route 83 - Dulles 2 Dulles	5.7%
Route 51 - Leesburg Battlefield	5.6%
Route 80 - Sugarland Run Connector	5.6%
Route 84X - Herndon/Monroe Connector	5.2%
Route 52 - Leesburg Sycolin Road	5.0%
Route 70 - 7 to 7 on 7	4.5%
Route 53 - Leesburg Trolley	4.2%
Route 50 - Leesburg Safe-T-Ride	3.6%
Route 72X - West Falls Church Express	3.0%

System Coverage Area Average: 6.2% persons aged 65 and older
Countywide: 6.4% persons aged 65 and older.

Ridership

Daily and monthly ridership data for this study were provided by VRT. Daily revenue hours and revenue miles were determined using the published schedule and routing information available for each local fixed-route. An annualization factor was applied to daily values to develop annual revenue miles and revenue hours.

Tables 7 and 8 summarize boardings by revenue hour and revenue mile respective to each route. Service in Sterling, Leesburg, along Route 7, and Dulles area exceeds the systemwide average of 10 boardings per hour. Route 60 (Ashburn Village) and Route 61 (Ashburn Farm) exhibit the lowest ridership during operating hours at five and four boardings per revenue hour, respectively.

Considering ridership with respect to distance traveled, Route 82 (Sterling Connector), Route 50 (Safe-T-Ride), and Route 53 (Leesburg Trolley) each have more than one boarding per mile. In contrast, the Ashburn Village, Ashburn Farms, Purcellville, and WFC Express routes operate with less than 0.3 boardings per revenue mile. The lengthy trip distance on the Purcellville and West Falls Church routes contributes to the lower values, while the trip lengths and lower ridership contribute to fewer boardings per revenue mile in Ashburn.

It should be noted that Route 62 (Ashburn Farm) and Route 61 (Ashburn Village) have been re-vamped several times since inception in an effort to increase ridership and performance. However, these efforts have not successfully increased ridership to meet the minimum standards identified in the Countywide Transportation Plan. Several factors likely contribute to the low ridership. While the routes operate throughout residential communities, they may not travel to the key destinations that have the potential to generate higher ridership as other routes in the system, such as Dulles Town Center or Northern Virginia Community College. Secondly, residents along the existing route may have alternative transportation options available such as a community shuttle service or a family vehicle. Having other means of transportation reduces the likelihood that residents will use the local fixed-service transportation on a daily basis. Thirdly, some of the roads these routes travel do not allow buses to provide the greatest efficiency of service. Limited lane capacity and traffic congestion during peak period conditions may influence quality of service for these two particular routes.



Table 7. Boardings per Hour

Route	Boardings per Revenue Hour
Route 82 - Sterling Connector	16
Route 70 - 7 to 7 on 7	14
Route 83 - Dulles 2 Dulles	13
Route 50 - Leesburg Safe-T-Ride	12
Route 53 - Leesburg Trolley	11
Route 80 - Sugarland Run Connector	11
Route 52 - Leesburg Sycolin Road	10
Route 40 - Purcellville Connector	8
Route 72X - West Falls Church Express	8
Route 84X - Herndon/Monroe Connector	8
Route 51 - Leesburg Battlefield	7
Route 81 - Countryside Connector	7
Route 60 - Ashburn Village	5
Route 61 - Ashburn Farm	4

Systemwide Average: 10 Boardings per Revenue Hour.

Table 8. Boardings per Revenue Mile

Route	Boardings per Revenue Mile
Route 50 - Leesburg Safe-T-Ride	1.5
Route 82 - Sterling Connector	1.2
Route 53 - Leesburg Trolley	1.0
Route 80 - Sugarland Run Connector	0.9
Route 52 - Leesburg Sycolin Road	0.8
Route 51 - Leesburg Battlefield	0.7
Route 70 - 7 to 7 on 7	0.7
Route 83 - Dulles 2 Dulles	0.6
Route 84X - Herndon/Monroe Connector	0.6
Route 81 - Countryside Connector	0.5
Route 61 - Ashburn Farm	0.3
Route 60 - Ashburn Village	0.3
Route 40 - Purcellville Connector	0.3
Route 72X - West Falls Church Express	0.3

Systemwide Average: 0.5 Boardings per Revenue Mile.

Operating Cost

Cost by route information was developed using annualized operation characteristics and the \$69.00 per hour operating rate. Appendix B-1 summarizes how each performance measure was developed.

Tables 9 and 10 summarize annual cost per revenue mile and cost per boarding for each route, respectively. The cost per revenue mile is a function of operating hours, an operating cost of \$69.00 per hour, and miles of service. The system costs range from \$2.25 per revenue mile to \$8.63 per revenue mile. Each route varies in mileage covered. Route 72X (WFC Express), Route 40 (Purcellville Connector), Route 83 (Dulles 2 Dulles), and Route 70 (7 to 7 on 7) each cover more than 80,000 miles per year and cost less than the systemwide average of \$3.94 per revenue mile. Route 51 (Leesburg Battlefield) and Route 50 (Leesburg Safe-T-Ride) have the highest cost per revenue mile at \$8.41 and \$8.56, respectively. Both of these routes have relatively short bus routes. More specifically, Route 50 (Leesburg Safe-T-Ride) covers a relatively shorter distance of 4 miles per roundtrip. Leesburg Safe-T-Ride, a free shuttle service funded by the Town of Leesburg and the County, provides riders with a safe alternative to crossing the Route 15 Bypass on foot in the vicinity of Fort Evans and Edwards Ferry roads. The shuttle includes stops at the Leesburg Corner Premium Outlets, Fort Evans Plaza I, Battlefield Shopping Center (Shoppers Food Warehouse), Loudoun County's Shenandoah Building, the Montessori School, Evans Ridge Apartments and Battlefield Marketplace (Costco). Route 82 (Sterling Connector) has the lowest cost per boarding while Route 60 (Ashburn Village) and Route 61 (Ashburn Farm) exhibit the highest costs per boarding.



Table 9. Annual Cost per Revenue Mile

Route	Annual Cost per Revenue Mile
Route 72X - West Falls Church Express	\$2.25
Route 40 - Purcellville Connector	\$2.57
Route 83 - Dulles 2 Dulles	\$3.40
Route 70 - 7 to 7 on 7	\$3.47
Route 60 - Ashburn Village	\$4.45
Route 81 - Countryside Connector	\$5.15
Route 61 - Ashburn Farm	\$5.19
Route 84X - Herndon/Monroe Connector	\$5.33
Route 82 - Sterling Connector	\$5.56
Route 52 - Leesburg Sycolin Road	\$5.75
Route 80 - Sugarland Run Connector	\$6.16
Route 53 - Leesburg Trolley	\$6.23
Route 51 - Leesburg Battlefield - Ida Lee	\$8.41
Route 50 - Leesburg Safe-T-Ride	\$8.63

Systemwide Average: \$3.94 per revenue mile.

Table 10. Cost per Boarding

	Cost per Boarding
Route 82 - Sterling Connector	\$4.54
Route 70 - 7 to 7 on 7	\$5.13
Route 83 - Dulles 2 Dulles	\$5.37
Route 50 - Leesburg Safe-T-Ride	\$5.77
Route 53 - Leesburg Trolley	\$6.53
Route 80 - Sugarland Run Connector	\$6.77
Route 52 - Leesburg Sycolin Road	\$7.44
Route 72X - West Falls Church Express	\$8.65
Route 84X - Herndon/Monroe Connector	\$9.06
Route 40 - Purcellville Connector	\$9.19
Route 81 - Countryside Connector	\$10.63
Route 51 - Leesburg Battlefield - Ida Lee	\$11.45
Route 60 - Ashburn Village	\$15.83
Route 61 - Ashburn Farm	\$17.72

Systemwide Average: \$6.89 per boarding



Comparable Transit Systems

One of the best ways to assess transit performance is to benchmark against other transit systems. The challenge lies in identifying comparable systems against which benchmarking is both fair and informative. While there are no exact comparables, there are systems that share many of the same attributes of the Loudoun County local bus service.

For this analysis, factors considered in the selection of comparable systems included geographical locations with similar weather, seasons, and labor market; similar operating budgets and fleet size; comparable number of fixed-routes; and similar number of revenue miles and hours of service. The systems selected as comparables are listed below with similar attributes noted.

Howard Transit, Maryland

- Howard Transit serves Howard County. Like Loudoun County, it is on the perimeter of the Washington, D.C. metro area, has a comparable level of development, and has a similarly sized population of 284,952. Howard Transit operates fewer routes but has comparable revenue hours and revenue miles of service and has a budget in line with that of VRT for Loudoun County.

Transit Services of Frederick County, Maryland

- Frederick County is another Washington, DC metro area system that, despite a significantly smaller population, operates a transit service with 11 routes (compared to Loudoun County's 14), and has 58,649 revenue hours (compared to Loudoun County's 64,407). Most of its other measures are substantially different.

Williamsburg Area Transit Authority (WATA) Local Bus, Virginia

- Williamsburg Virginia's local bus operation is similar to Loudoun County's. It offers 9 routes compared to Loudoun County's 14, and provides 951,376 revenue miles of service compared to Loudoun County's 1,128,926 despite having a population that is approximately one-sixth the size of Loudoun County.

Fredericksburg Regional Transit (FRED), Virginia

- Fredericksburg operates a comparable level of service at 947,967 revenue miles and 81,449 revenue hours compared to Loudoun County's 1,128,926 and 64,407 respectively. Located outside the Washington metro area, it has a different transit scenario.

Charlottesville Area Transit (CAT), Virginia

- The Charlottesville transit system is comparable to Loudoun County in its operations. It has the same number of routes but operates longer hours over fewer miles of revenue service.

Blacksburg Transit, Virginia

- Blacksburg differs in region and population served, but operates 10 routes versus Loudoun County's 14, and operates slightly more hours but fewer miles of revenue service.

It should be noted that the Williamsburg Area Transit Authority (WATA) Local Bus and Blacksburg Transit systems each serve a major university or college population which is not captured in the 2010 Census population. WATA Local Bus serves the College of William & Mary. Blacksburg Transit serves Virginia Polytechnic Institute and State University.



Table 11 provides information on the selected comparable systems, including the amount of service they provide and the underlying service area characteristics.

Table 11. Comparable Bus Systems Service Systems and Area Characteristics							
System Name	Routes	Average Fare	Revenue Hours	Revenue Miles	Service Area Population	Average Speed (RM/RH)	Total Operating Expense
Howard Transit	8	\$0.70	73,072	1,099,734	284,952	15.05	\$5,948,866
Transit Services of Frederick County	11	\$0.74	58,469	668,349	65,787	11.43	\$3,905,501
WATA Local Bus ¹	9	\$0.37	57,627	951,376	57,000	16.51	\$4,074,146
FRED	21	\$0.52	55,076	911,414	113,716	16.55	\$3,300,354
CAT	14	\$0.36	88,831	947,967	81,449	10.67	\$6,175,458
Blacksburg Transit ¹	10	\$0.75	77,487	744,332	56,260	9.61	\$4,631,897
Loudoun County Local Bus Service	14	\$0.29	64,407	1,128,926	310,000	17.53	\$5,972,000 ²
Average (Exclusive of Loudoun County)		\$0.61	61,163	799,772	101,082	13.64	\$4,128,779

¹ System serves a university or college population.
² Local Gasoline Tax Fund - FY 2011-2012 Budget Request



Table 12 provides the fare structure for each system, another factor that affects ridership and revenues. Where systems do not have a stated transfer fare price, it is assumed that a full fare is required unless otherwise stated (e.g. Transit services of Frederick County provide free transfers). Reduced or free fares for college students are available in several systems but each is the result of an agreement between the transit operator and the school to provide funding for the students.

Table 12. Comparable System Fare Structures							
System Name	Adult – Regular Service	Transfers	Adults – VRE Feeder	Children Ride Free	Day Pass	Seniors, Disabled, Medicare	Middle or HS Students (3 – 17)
Howard Transit	\$2.00	Free	N/A	Under 5 years	N/A	\$1.00	N/A
Transit Services of Frederick County	\$1.25	Free	N/A	Under 3 feet	N/A	\$0.60	N/A
WATA Local Bus	\$1.25	\$0.50	N/A	Under 3 years	\$2.00	\$1.00	\$0.50
FRED	\$1.00	\$1.00	\$1.50	Under 3 years	N/A	N/A	N/A
CAT	\$0.75	\$0.75	N/A	Under 5 years	\$1.50	\$0.35	Free
Blacksburg Transit	\$0.50	\$0.50	N/A	Under 3 years	N/A	\$0.25	\$0.25
Loudoun County Local Bus Service	\$0.50 ¹	\$0.50 ¹	N/A	Under 10 years	N/A	N/A	N/A
Average (Exclusive of Loudoun County)	\$1.11					\$0.62	

¹During this analysis the fare structure changed. As of October 1, 2013, base fare for Loudoun County fixed routes increased from \$0.50 to \$1.00.

As illustrated in **Table 12**, Loudoun County is tied with Blacksburg Transit for the lowest nominal fare. It should be noted that the average fare differs from the nominal (stated) fare because some routes operate free and the lower fares for children, seniors, students, and free or lower priced transfers (depending on the system) result in a lower average.



Table 13 provides a summary of system performance in terms of riders, efficiency, and operating cost. Unfortunately, Loudoun County's local bus service did not perform well in this comparable assessment. The ridership, trips per mile, farebox recovery, and average fares were among the lowest. Loudoun's cost per passenger trip and total operating cost were among the highest. Not a single system is an exact match to Loudoun County so differences are expected, but the overall pattern is clear. This assessment identifies opportunities for improvement in operations and efficiency.

Table 13. Comparable Transit Systems Performance Characteristics

System Name	Operating Expense Per Passenger Trip	Operating Expense Per Peak Vehicle	Operating Expense Per Revenue Hour	Passenger Trips (Annual)	Farebox Recovery (%)	Passenger Trips Per Revenue Hour	Passenger Trips Per Revenue Mile
Howard Transit	\$6.73	\$349,933	\$81.41	884,331	10%	12	0.80
Transit Services of Frederick County	\$5.18	\$216,972	\$66.80	753,682	14%	13	1.13
WATA Local Bus	\$3.86	\$177,137	\$70.70	1,056,158	10%	18	1.11
FRED	\$6.26	\$165,018	\$59.92	527,147	8%	10	0.58
CAT	\$2.67	\$247,018	\$69.52	2,312,126	14%	26	2.44
Blacksburg Transit	\$1.39	\$140,361	\$59.78	3,339,388	54%	43	4.49
Loudoun County Local Bus Service	\$8.37	\$270,000	\$69.00	645,189	3%	10	0.57
Average (Exclusive of Loudoun County)	\$4.24	\$205,806	\$65.34	1,301,838	19%	19	1.63



4. FRAMEWORK

The Loudoun County 2010 Revised Countywide Transportation Plan (CTP) provided the framework for this analysis.

Chapter Three, Transit and Other Mobility Options, includes the statement that “A successful local fixed route transit service is a key component of a safe, affordable, convenient, efficient and environmentally sound multi-modal transportation system to serve Loudoun County.”

Goals & Strategies

The Project Management Team, comprised of staff from Loudoun County, the Town of Leesburg and the consultant firm, developed the following goals for the local bus service:

- To increase ridership
- To find and leverage funding sources
- To improve operational and financial efficiency of service
- To connect riders to destinations within Loudoun County

Six strategies were identified to achieve these goals:

1. **Ensure each route mile counts** by eliminating route segments where the bus service cannot stop because of the road facility.
2. **Ensure routes have good travel times** by reducing or eliminating long one-way loops which tend to deteriorate service efficiency and discourage ridership.
3. **Create on-demand service** in currently underserved communities to evaluate transit demand for future potential routing decisions.
4. **Create transit hubs** to maximize rider options, accessibility, and connectivity.
5. **Implement pulse service** to facilitate an operational plan that allows for timed transfers and eliminate extended layovers.
6. **Evaluate extended hours and weekend service** for increased service options.



5. SERVICE RECOMMENDATIONS

The Project Management Team held a series of meetings to develop appropriate service modifications for the County’s local bus system. The evaluation began with a review of existing bus routes and service area coverage. Findings from this review are documented in Transit Operations Section of this report. The existing conditions analysis helped identify opportunities to improve operations and efficiency to better serve the community.

The strategies identified in the previous section were used to develop conceptual service modifications. Those conceptual routes were evaluated and refined based on potential cost and ridership. Ultimately, the team recommended modifications to achieve a successful local fixed route transit network.

The following sections summarize the recommended modifications. They are also documented in the update to the Loudoun County Transit Development Plan (TDP).

Pulse Service and Transit Hubs

Considering existing conditions, operational improvements should be made to improve coordination and frequency of the current local bus service. Pulse service is an operational plan that would support timed transfers and eliminate extended layovers. Under this operational strategy, all local bus routes arrive at a designated location near the same time and buses will not leave before transfers are completed. The connecting bus routes are designed within running time parameters that facilitate timed transfers and improve rider experience. It is recommended that the County implement pulse service to improve local operations and efficiency of service.

While some existing bus routes have a common start or end point throughout the County, the operational efficiency could improve by identifying transit hubs as designated locations for bus transfers. Such improvements would facilitate integrated connectivity between local and regional bus services.

The Project Management Team identified key locations within the County that would serve as transit hubs. It is recommended that the County implements two types of transit hubs – local and regional. Local hubs will serve more than one local fixed route and offer amenities such as bus bays, shelters, seating, lighting, and service information that enhance the overall rider experience. Regional hubs will offer the same amenities as local hubs and provide additional transportation demand management options to efficiently serve local buses, regional buses, carpooling, vanpooling, and shuttle services.

While the level of provisions will vary for each type of hub, proposed amenities include seating, lighting, shelter, parking, Kiss-and-Ride, and service information. Recommended transit hub locations include:

Local Service Hub

- Leesburg
- INOVA Hospital
- NOVA (Community College)
- Sterling

Regional Service Hub

- Leesburg East
- One Loudoun
- Dulles Town Center
- Brambleton
- Dulles South

Figure 4 shows a map of proposed transit hubs locations.

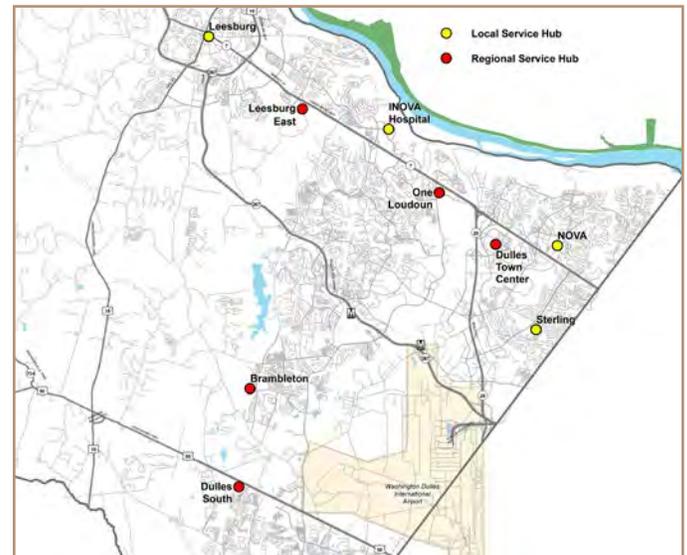


Figure 4 - Proposed Transit Hubs

Route Modifications

Route alignment and frequency modifications were proposed to provide improved service to residents of Loudoun County and Leesburg in a manner that supports the transit hub and pulse service concepts described above. Potential ridership and costs were estimated to ensure service proposals were cost effective.

Transit service recommendations have been categorized as:

- Loudoun Urban Transit Service
- Loudoun Rural Transit Service
- Leesburg Transit Service

Descriptions of proposed service improvements by Fiscal year (FY 2015 through FY 2020) follow. **Figures 5 and 6** illustrate the Leesburg and Loudoun fixed route bus network proposed to be in place in this time period. The service improvements described below are also being incorporated into updates of Chapters 5-7 of the Loudoun County Transit Development Plan (TDP).

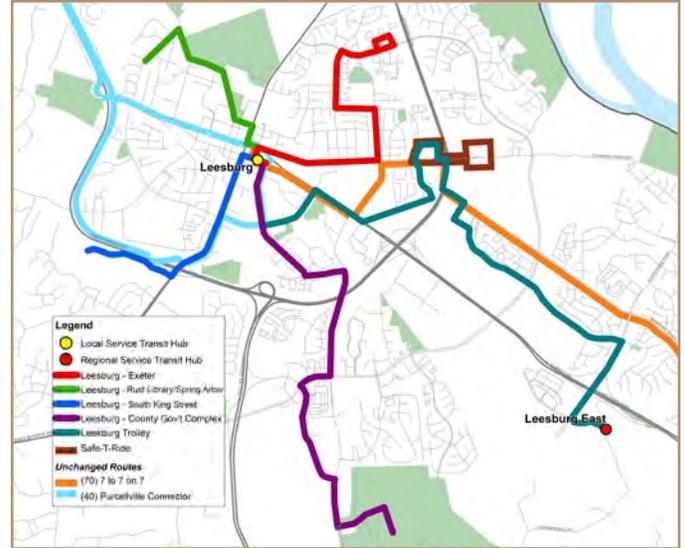


Figure 5 - Proposed Leesburg Local Routes

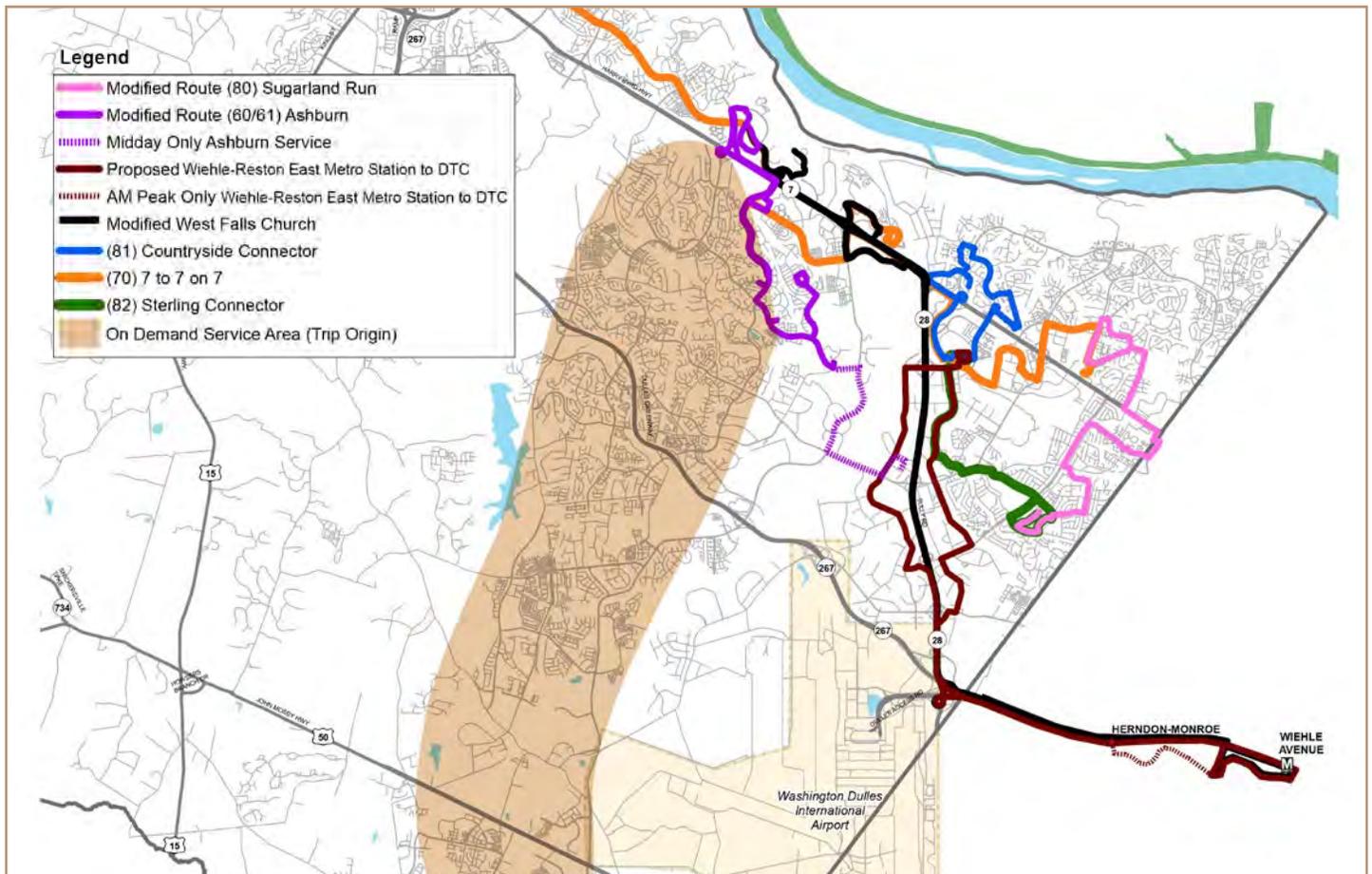


Figure 6 - Proposed Loudoun County Local Routes



Loudoun Urban Transit Service

FY 2015 TRANSIT SERVICE IMPROVEMENTS

Routes 60 (Ashburn Village Connector) and 61 (Ashburn Farm Connector)

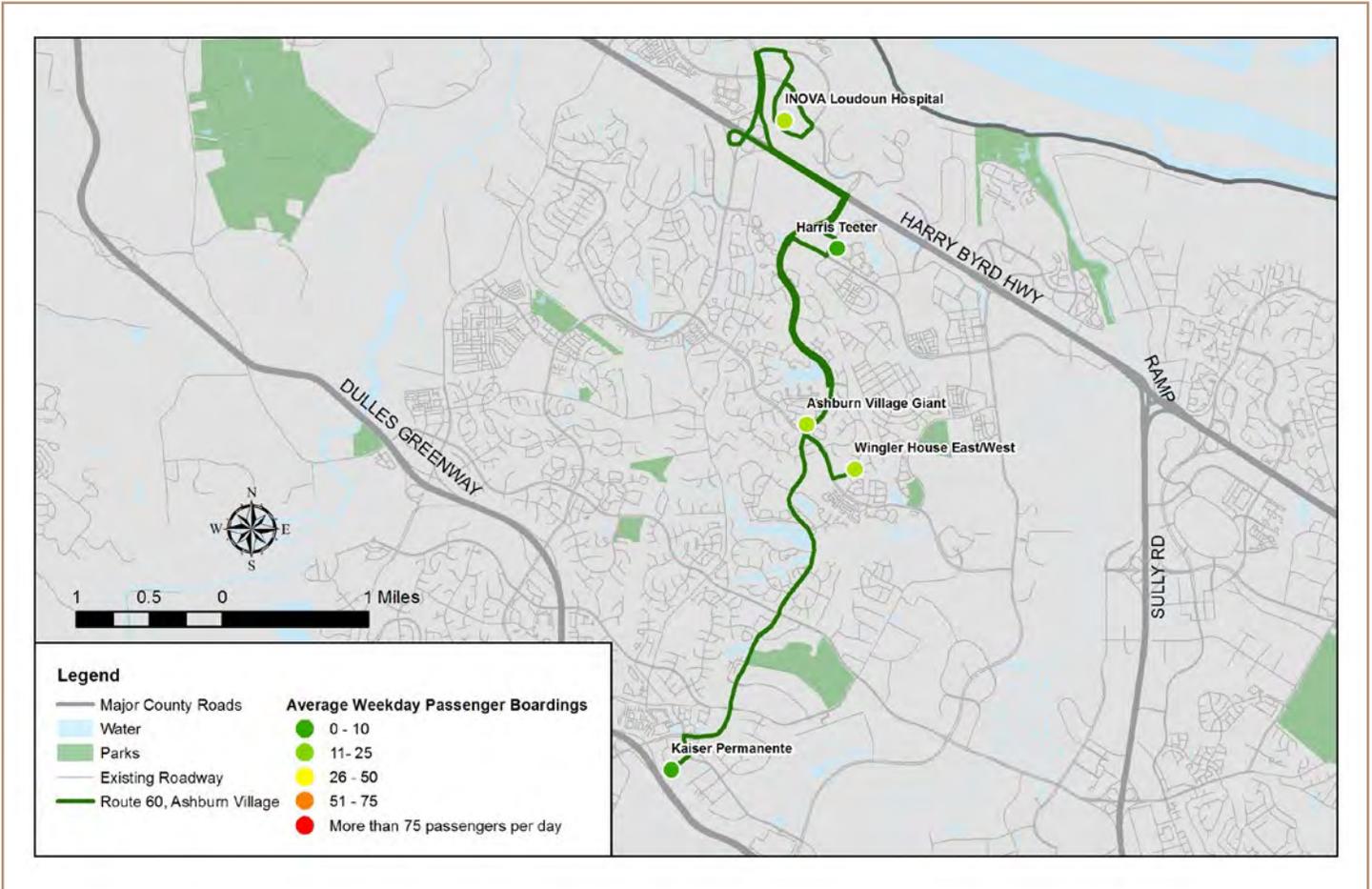


Figure 7 – Existing Route 60 (Ashburn Village Connector)

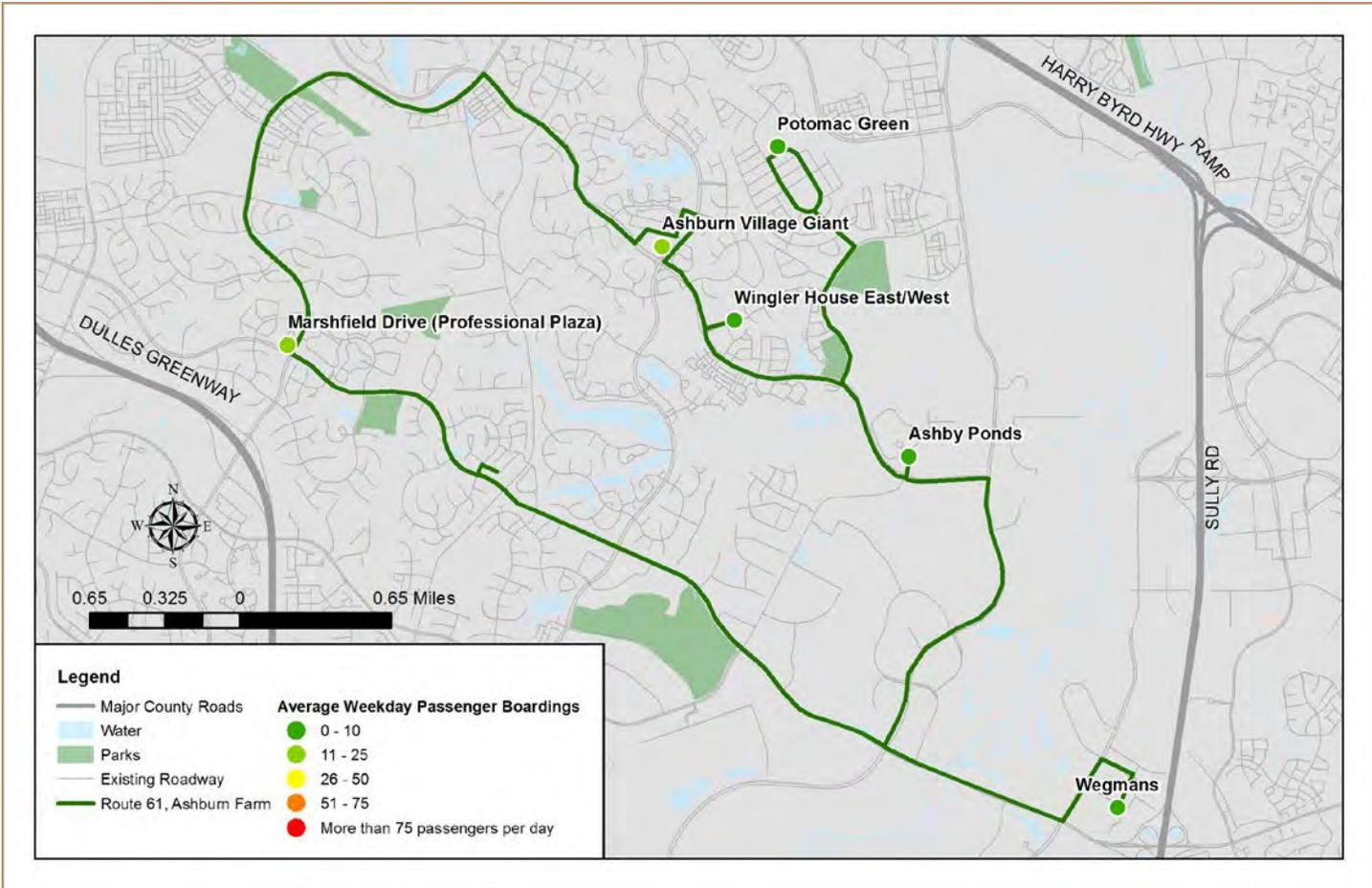


Figure 8 – Existing Route 61 (Ashburn Farm Connector)



Route 62 - Ashburn

Existing routes 60 (Ashburn Village Connector) and 61 (Ashburn Farm Connector) are proposed to be combined into one route that operates from the INOVA Loudoun Hospital, along Ashburn Road and Gloucester Parkway, to Potomac Green and Ashby Ponds. Service is extended to the Dulles 28 Centre at Pacific Boulevard and Columbia Place during the midday. Proposed frequencies are 60-minutes during the peak periods and 90 minutes in the midday with one bus, with service provided on weekdays only.

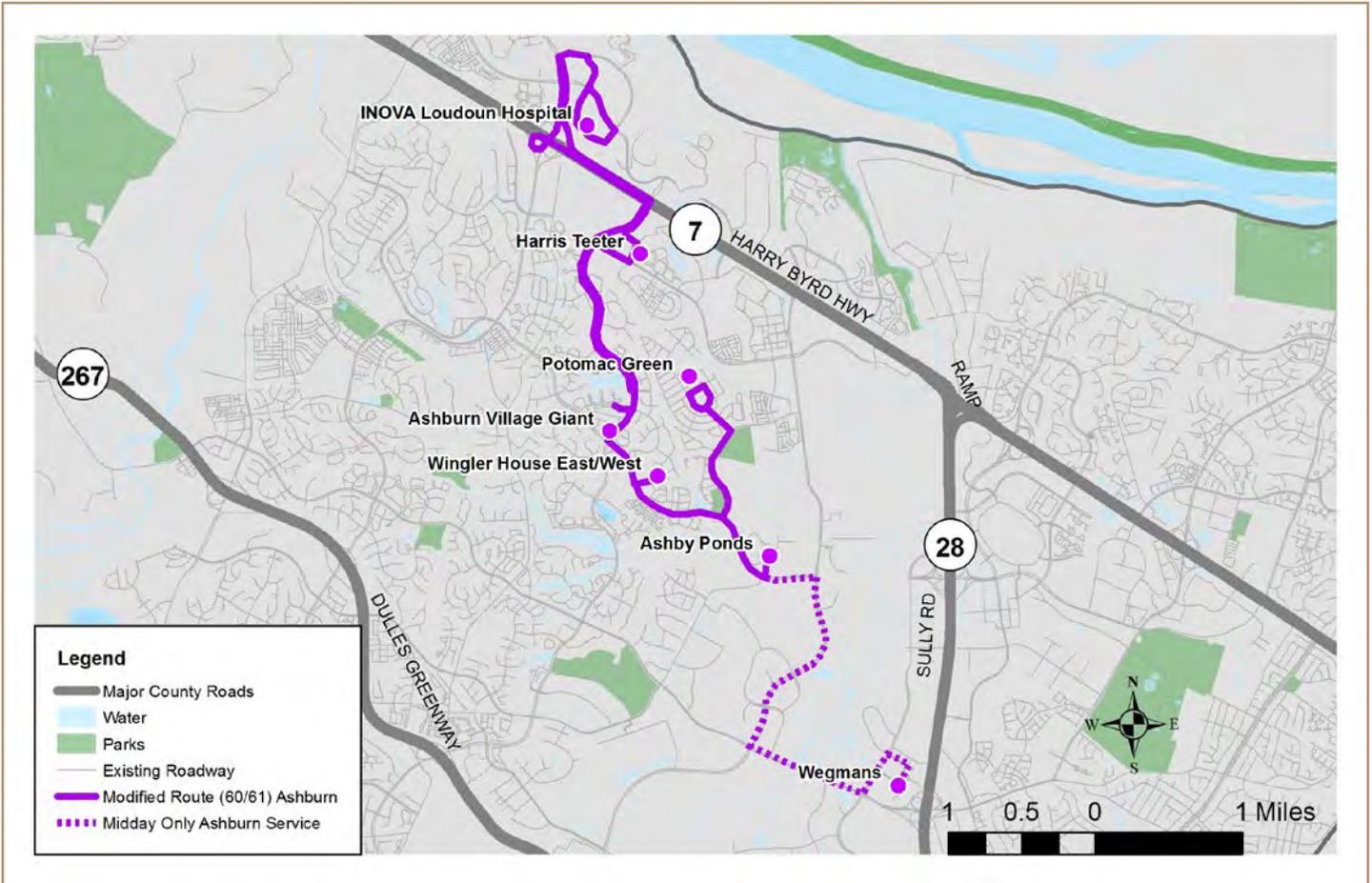


Figure 9 – Proposed Route 62 (Ashburn)

Route 70 – 7 to 7 on 7

No changes are proposed to this route. Service will continue to operate on weekdays only, from 7:00 A.M. until approximately 10:00 P.M., at 30-minute frequencies in the peak and midday periods, and 60-minute frequencies in the evenings. Service is provided along Route 7 between the Loudoun County Government Center in Leesburg and Potomac View Road. Major stops include Ft. Evans Road, Riverside Parkway, Inova Loudoun Hospital, George Washington University, Dulles Town Center, Ridgetop Circle, NOVA Campus, and Cascades.

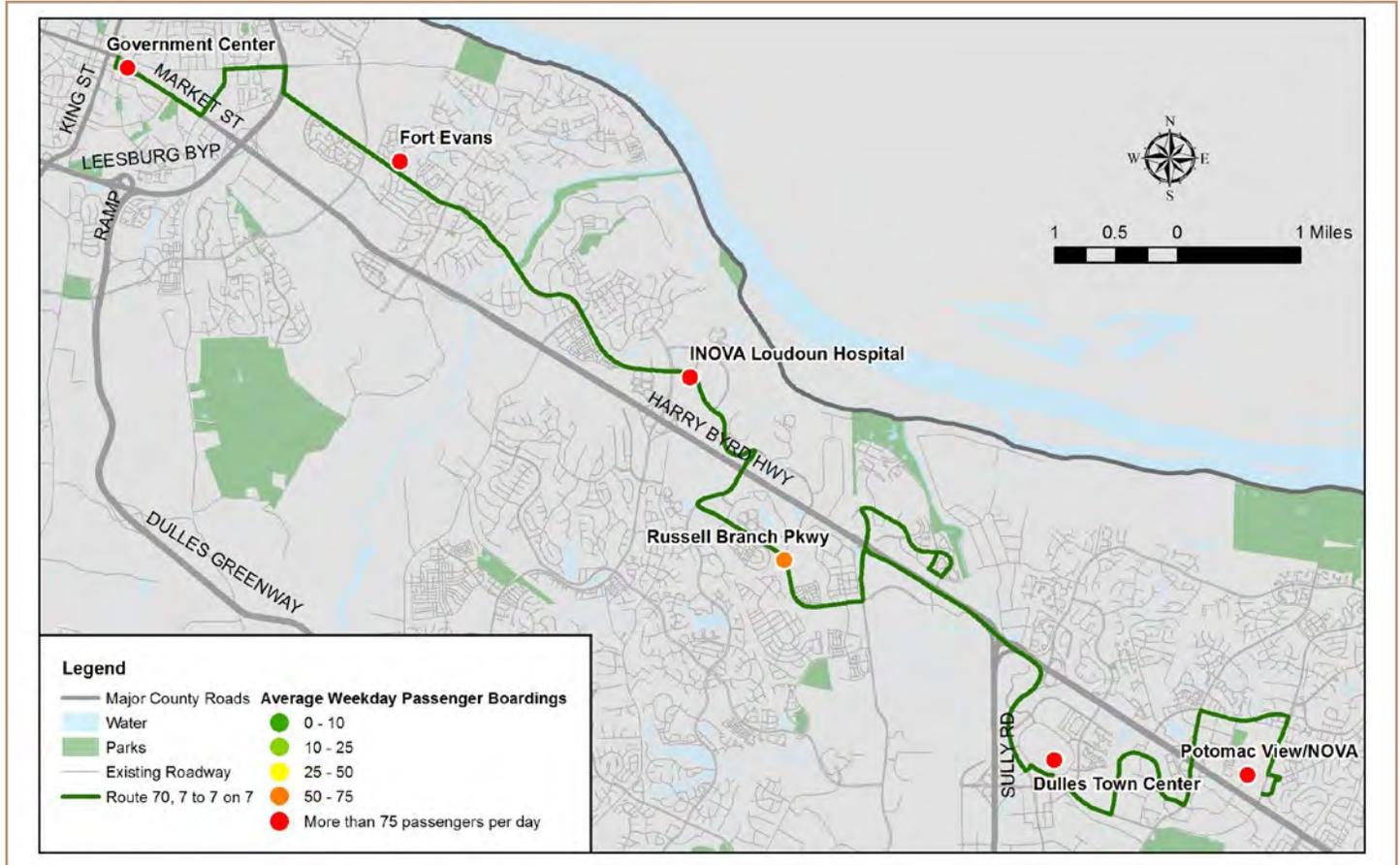


Figure 10 – Existing Route 70 (7 to 7 on 7)



Route 72X – Wiehle-Reston East Station Express

This route is modified to operate to/from the new Wiehle-Reston East Metrorail Station instead of West Falls Church Metrorail Station. Proposed frequencies are 30-minutes in the peak periods and 60-minutes in the midday, with service provided Monday through Friday only. It is important to note that this route is currently financed through a combination of funds: one-half of the funding is provided by George Washington University and Howard Hughes Medical Institute; Loudoun County and the Commonwealth (State Operating Assistance) provide the other half. Continued private funding is necessary for this route to remain in place in the future.

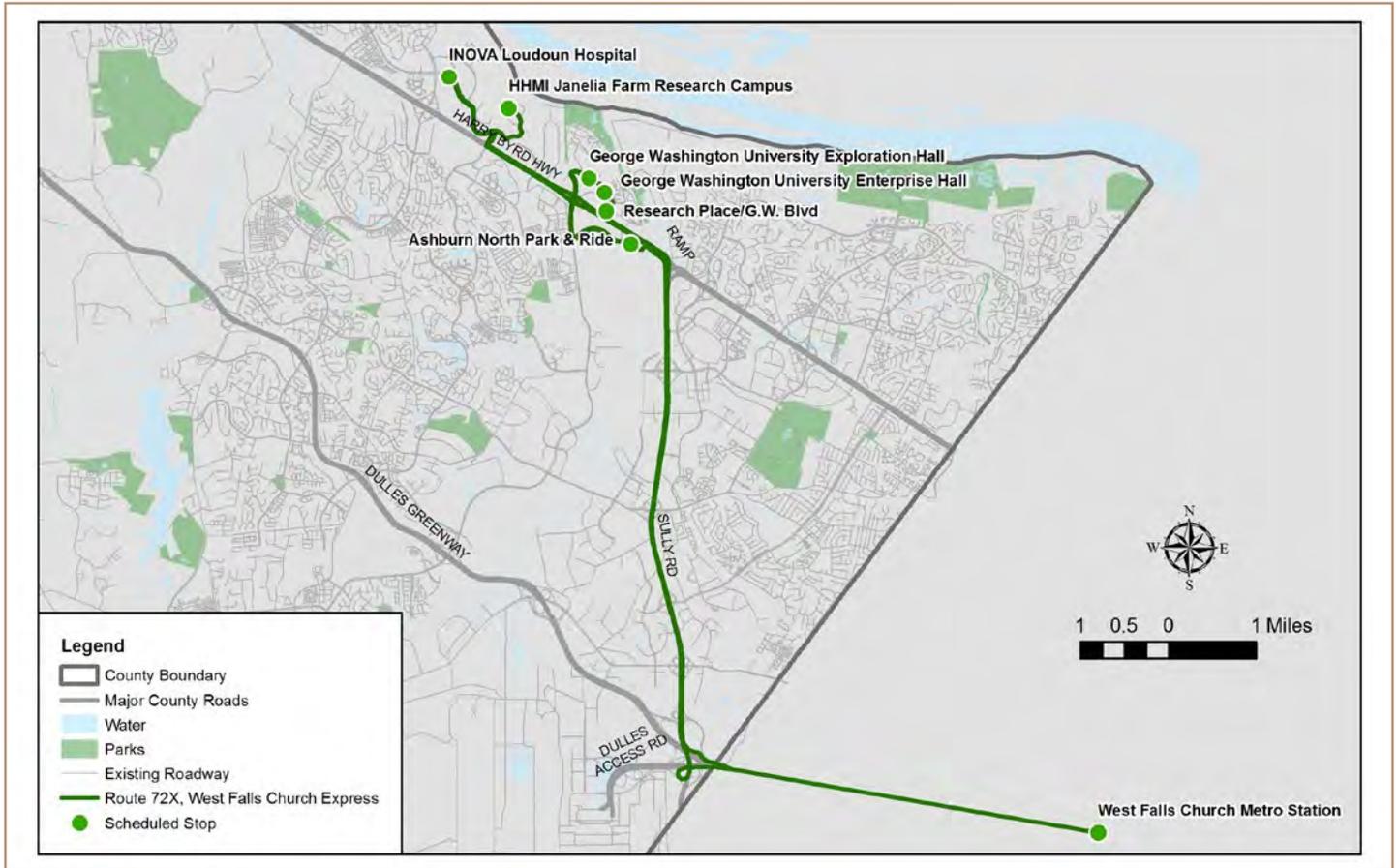


Figure 11 – Existing Route 72X (West Falls Church)

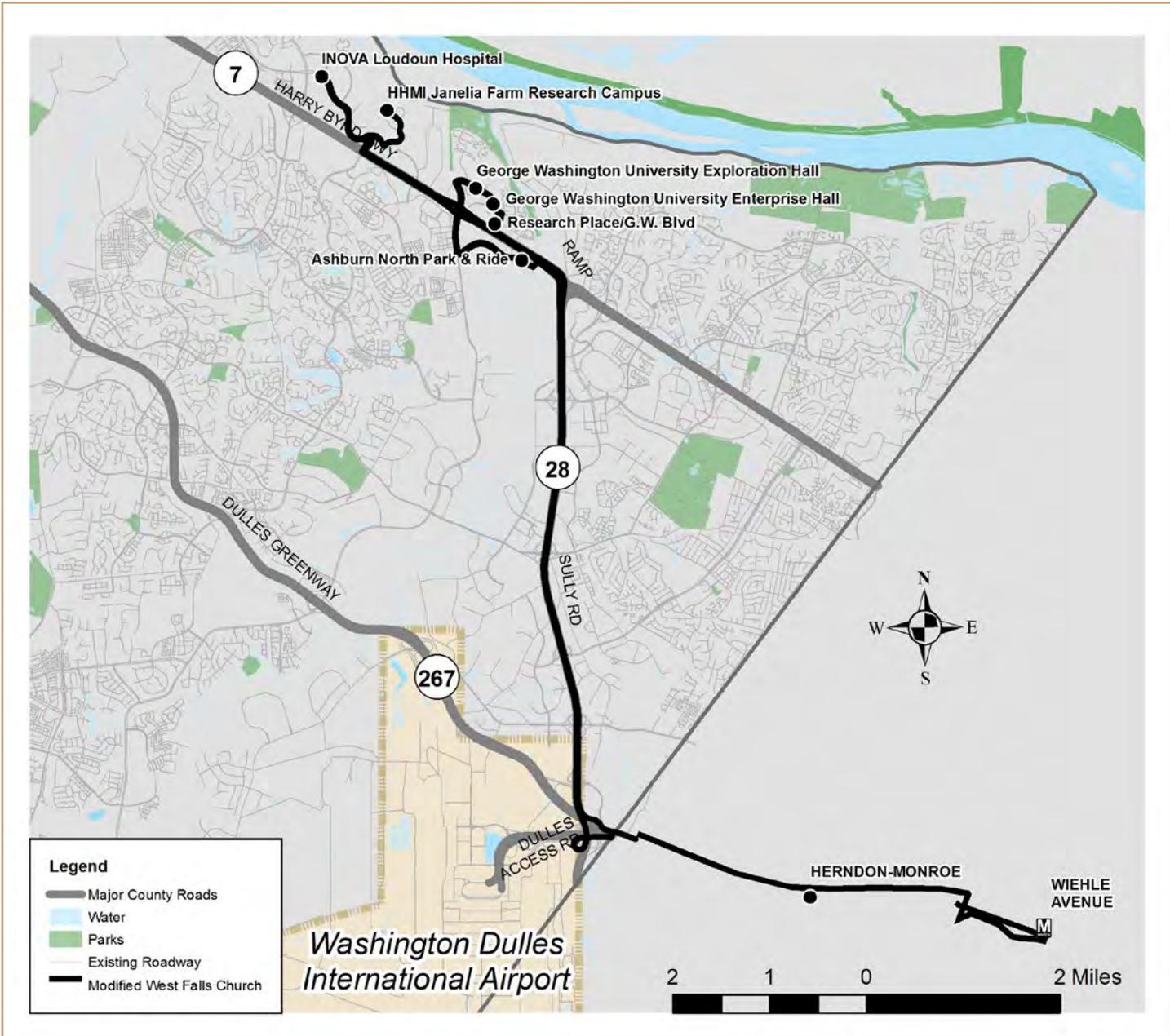


Figure 12 – Proposed Route 72X (Wiehle-Reston East Station Express)



Route 80 – Sugarland Run Connector

This route’s current alignment is modified to eliminate large one-direction loop service and existing segments that do not accommodate areas for passenger access. The proposed new route runs between Enterprise Drive and Northern Virginia Community College along Potomac View Road, Cottage Road, Augusta Drive, Leesburg Pike (Route 7), Frederick Drive, Sterling Boulevard, Lincoln Avenue, East Holly Avenue, and Enterprise Drive. The current frequency is 45 minutes; proposed frequencies on the modified route alignment are 60-minutes in the peak and midday periods, with service on weekdays only. The proposed 60-minute frequency also provides opportunities to pulse service with other routes.

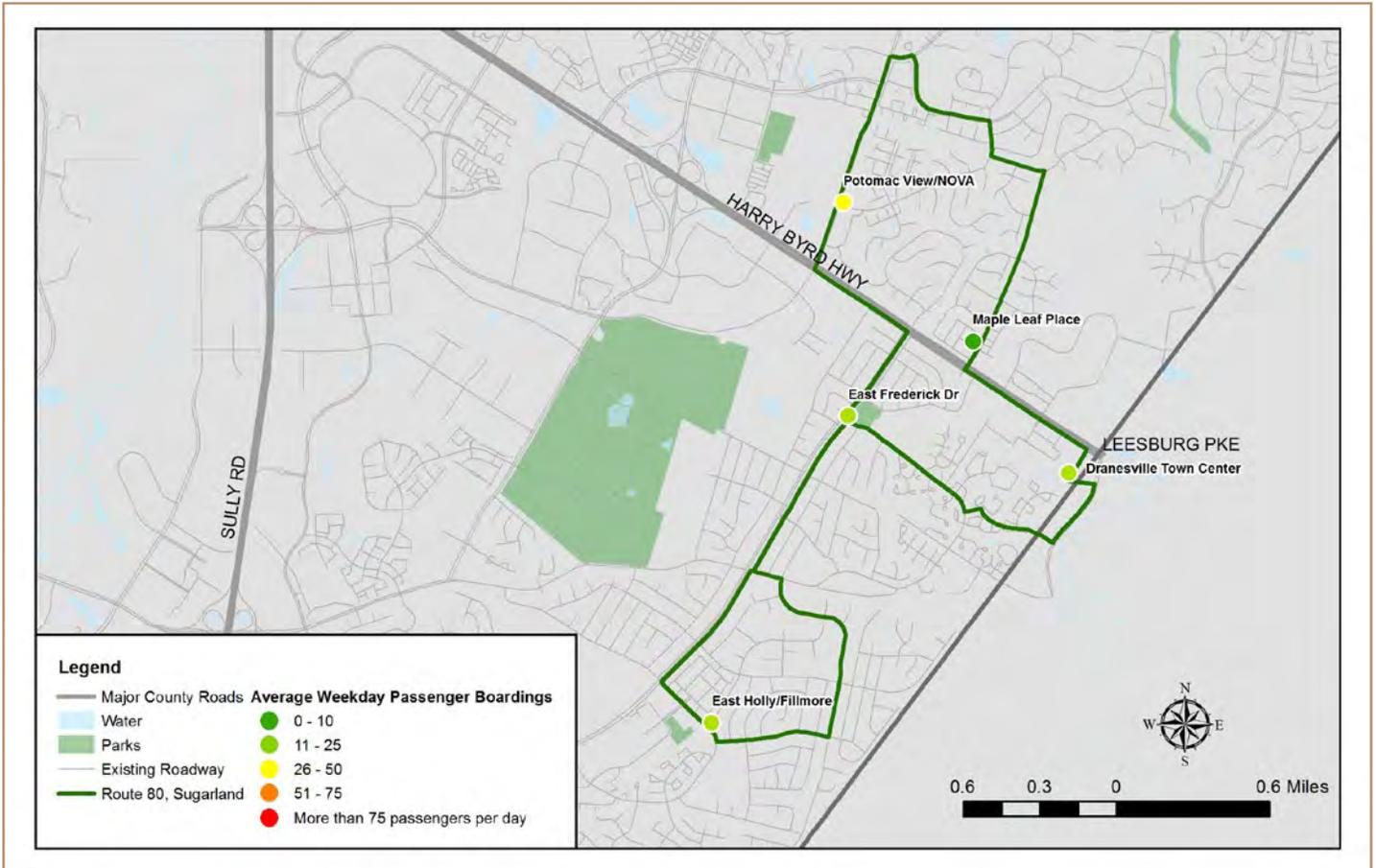


Figure 13 – Existing Route 80 (Sugarland Run Connector)

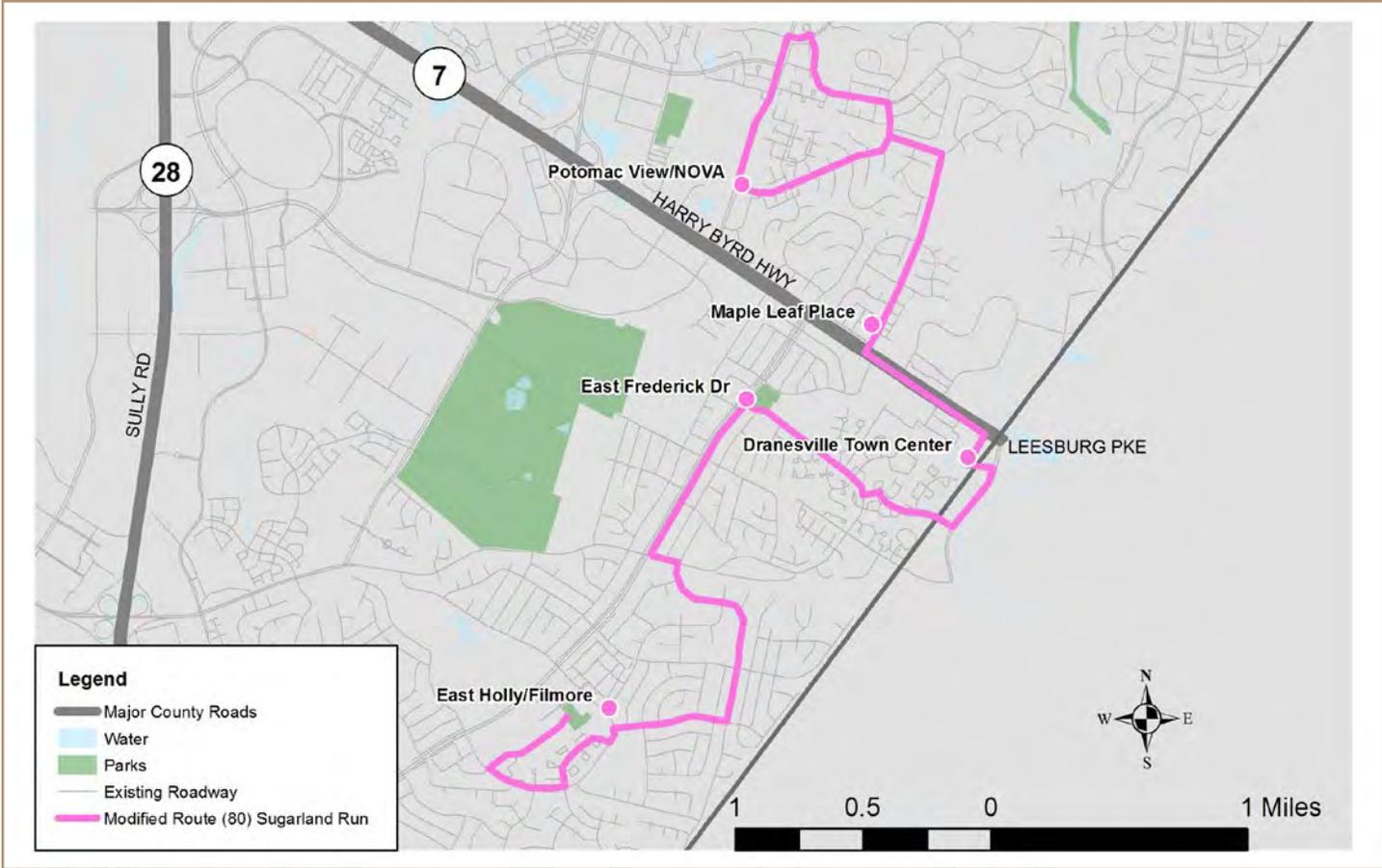


Figure 14– Proposed Route 80 (Sugarland Run Connector)



Route 81 – Countryside Connector

No changes are proposed to this route’s alignment. It is, however, proposed that this route is interlined with Route 82 (Sterling Connector) to share buses on the two routes. Proposed frequencies are 60-minutes in the peak and midday periods, with service on weekdays only. The 60-minute service frequency provides opportunities to pulse with other routes and, with the proposed interline, to provide frequency improvements on Route 82 as described below.

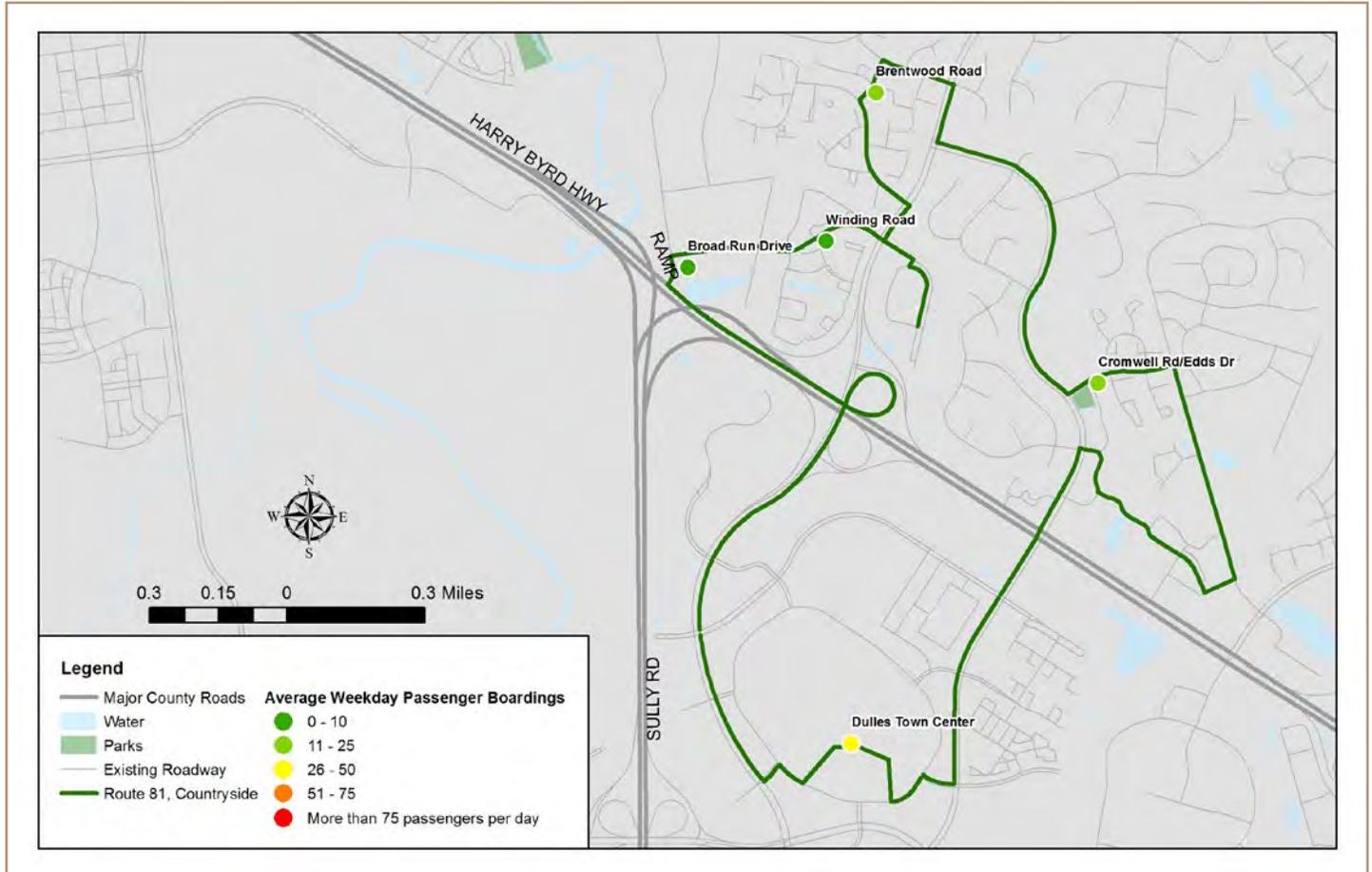


Figure 15 – Existing Route 81 (Countryside Connector)

Route 82 – Sterling Connector

No changes are proposed to this route’s alignment. Service frequencies are improved to 30-minutes in the peak and midday periods, with 60-minute service in the evenings until approximately 10:00 p.m. (weekdays only). As noted above, the proposed interline with Route 81 provides a means to improve service frequencies on this route. The proposed 30-minute frequency also provides opportunities to pulse Route 82 service with other nearby bus routes including 70, 80, 81, and 84.

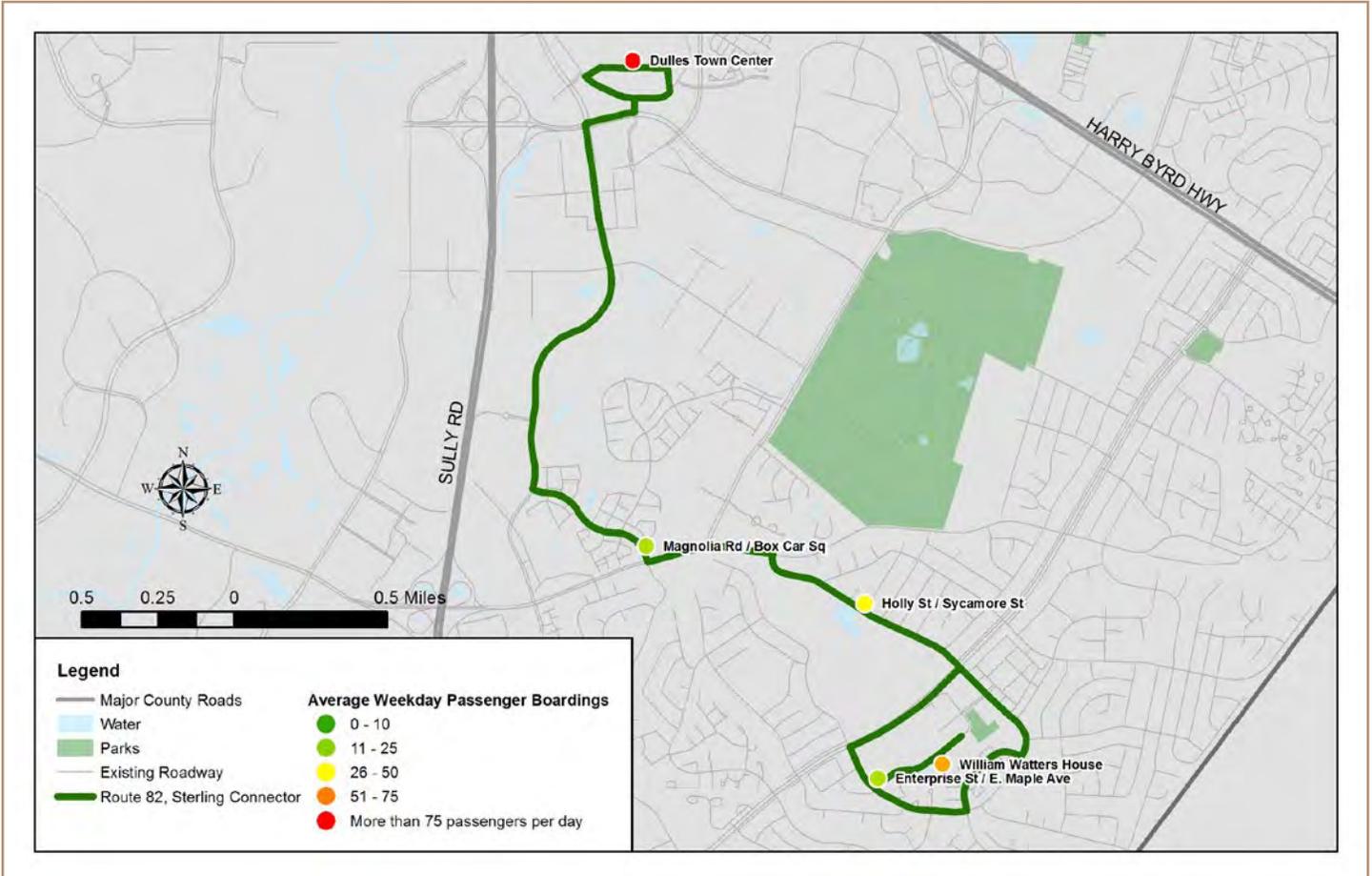


Figure 16 – Existing Route 82 (Sterling Connector)



Routes 83 (Dulles 2 Dulles Connector) and Route 84X (Herndon-Monroe Connector)

These routes are eliminated and replaced with new Route 84 service that provides improved service coverage in the Route 28 corridor (see below). Existing service on Route 83 (Dulles 2 Dulles Connector) between the Dulles Airport and Udvar Hazy Air and Space Museum will not be replaced. Ridership between those destinations is relatively high indicating that the majority of riders are boarding at the airport to specifically visit the Museum, which is not serving Loudoun County citizens. Equal or better service is provided for the Route 28 corridor area.

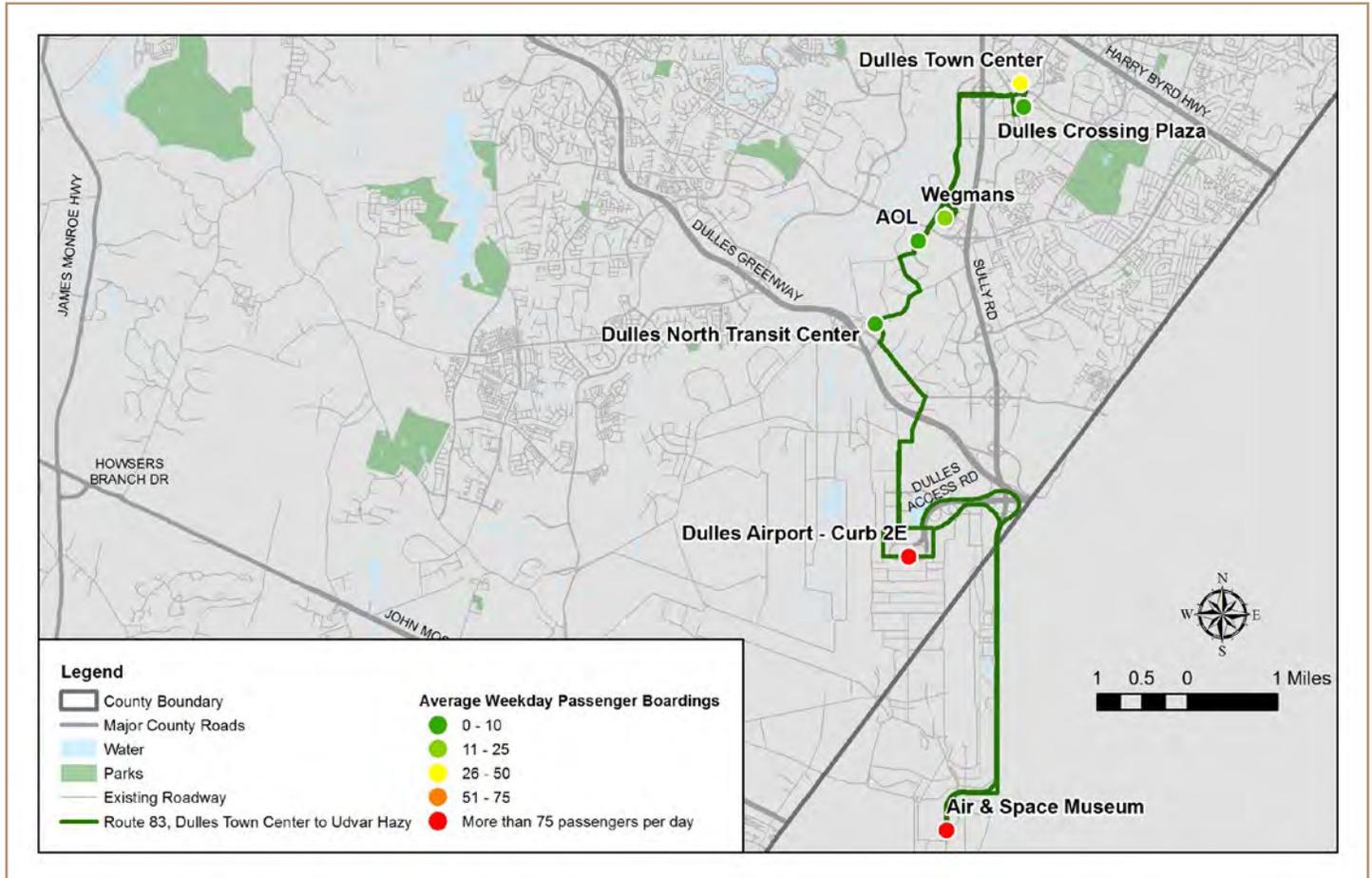


Figure 17 – Existing Route 83 (Dulles 2 Dulles Connector)

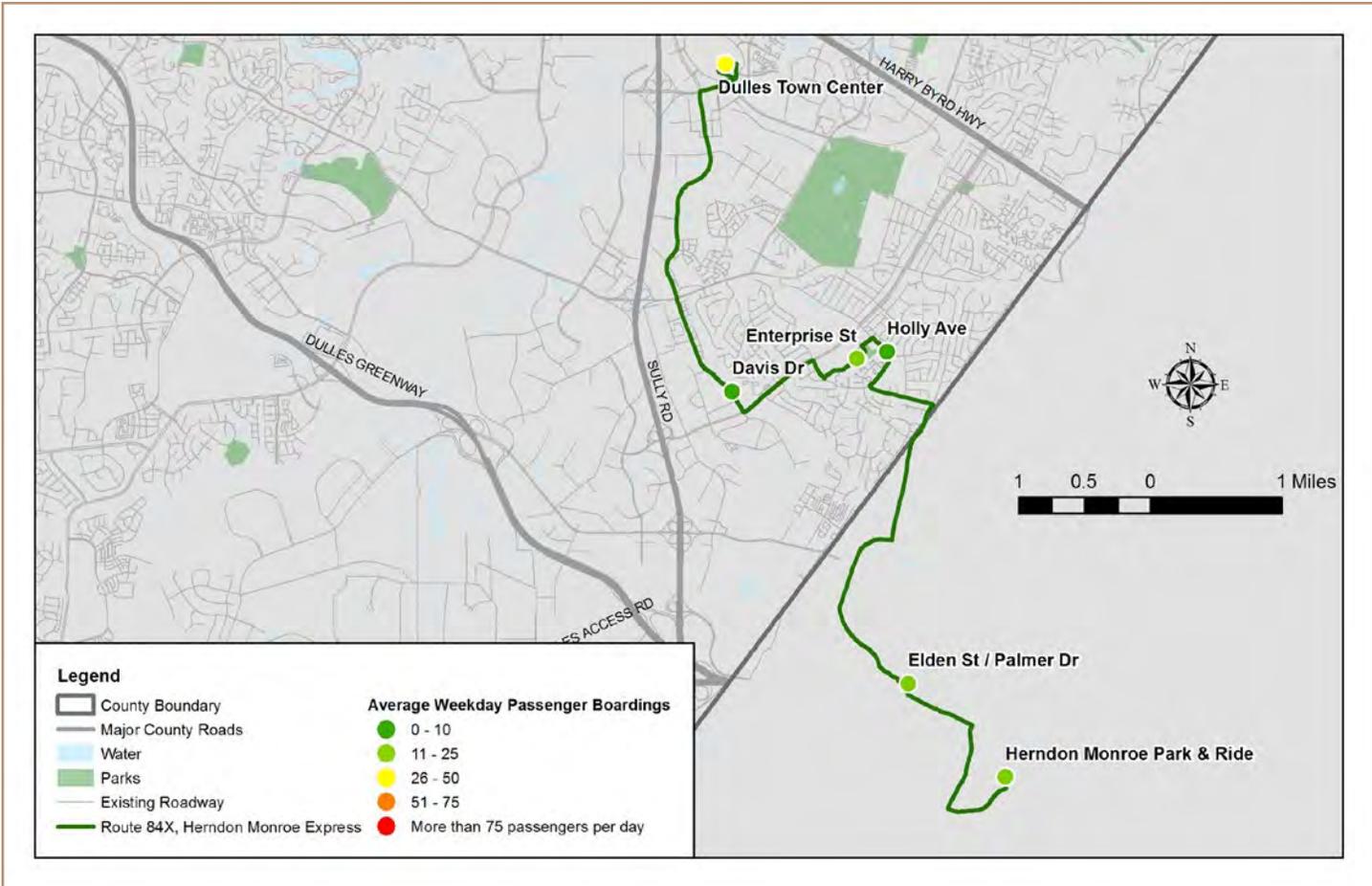


Figure 18 – Existing Route 84X (Herndon/Monroe Connector)



Route 84 – Wiehle-Reston East Metro to Dulles Town Center

This route replaces both the Dulles 2 Dulles Connector and the Herndon-Monroe Connector to enhance connectivity between the Route 28 corridor employment centers and the Metro Silver Line. The new route will operate between the Dulles Town Center and the new Wiehle-Reston East Metro station. Service will operate at 30-minute frequencies, with every other trip operating either on Atlantic or Pacific boulevards in the Route 28 corridor. This route will also include a stop at the Herndon-Monroe park-and-ride lot.

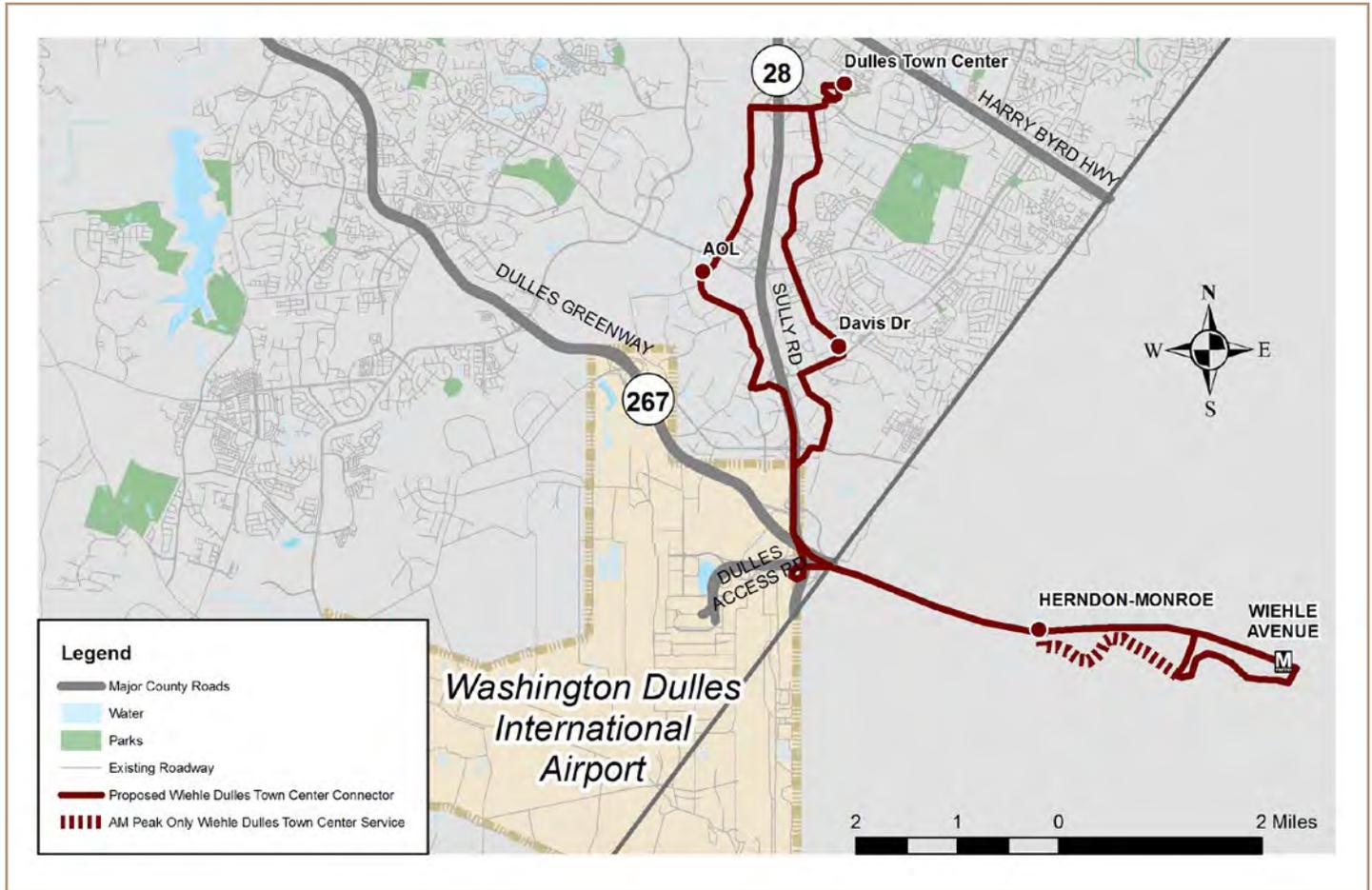


Figure 19 – Proposed Route 84 (Wiehle-Reston East to Dulles Town Center)

East Loudoun Dial-A-Ride Service (Demand Response)

In addition to the referenced local fixed routes, an on-demand dial-a-ride service area is proposed west of the Dulles Airport area. The dial-a-ride area includes the Stone Ridge, Brambleton, Broadlands and Ashburn areas. Initially, one bus is proposed to provide this dial-a-ride service area.

Supporting ADA Service

Supporting ADA service must also be provided within three-quarters of a mile of fixed route alignments for patrons who cannot access the fixed route network. Two small buses are proposed to provide ADA service during the daytime (7:00 a.m. to 7:00 p.m.) for the areas covered by fixed route bus service and one bus is proposed in the evenings (7:00 p.m. to 10:00 p.m.).

FY 2016 TRANSIT SERVICE IMPROVEMENTS

Route 70 – 7 to 7 on 7

New Saturday service is proposed on this route from 7:00 a.m. to 7:00 p.m. at 60-minute frequencies.

Route 82 – Sterling Connector

New Saturday service is proposed on this route from 7:00 a.m. to 7:00 p.m. at 60-minute frequencies.

Route 84 – Wiehle-Reston East to Dulles Town Center

New Saturday service is proposed on this route from 7:00 a.m. to 7:00 p.m. at 30-minute frequencies. This will provide 60-minute service on Atlantic and Pacific Boulevards (every other trip), and connection to the Silver Line.

Supporting ADA Service

Supporting ADA service will also be provided on Saturdays with one bus available from 7:00 a.m. to 7:00 p.m.

FY 2017 TRANSIT SERVICE IMPROVEMENTS

East Loudoun Dial-a-Ride Service

It is anticipated that a second bus may be required to meet the demand to serve this area from 7:00 a.m. to 7:00 p.m. on weekdays.

FY 2018 TRANSIT SERVICE IMPROVEMENTS

Route 70 – 7 to 7 on 7

New Sunday service is proposed on this route from 9:00 a.m. to 6:00 p.m. at 60-minute frequencies.

Route 82 – Sterling Connector

New Sunday service is proposed on this route from 9:00 a.m. to 6:00 p.m. at 60-minute frequencies.

Route 84 – Wiehle-Reston East to Dulles Town Center

New Sunday service is proposed on this route from 9:00 a.m. to 6:00 p.m. at 30-minute frequencies. This will provide 60-minute service on Atlantic and Pacific Boulevards (every other trip) and connection to the Silver Line.

Supporting ADA Service

Supporting ADA service will also be provided on Saturdays with one bus available from 9:00 a.m. to 6:00 p.m.

FY 2019 TRANSIT SERVICE IMPROVEMENTS

Route 70 – 7 to 7 on 7

Saturday service is extended into the evenings on this route from 7:00 p.m. to 10:00 p.m. at 60-minute frequencies.

Route 82 – Sterling Connector

Saturday service is extended into the evenings on this route from 7:00 p.m. to 10:00 p.m. at 60-minute frequencies.

Route 84 – Wiehle-Reston East to Dulles Town Center

Saturday service is extended into the evenings on this route from 7:00 p.m. to 10:00 p.m. at 30-minute frequencies. This will provide 60-minute service on Atlantic and Pacific Boulevards (i.e., every other trip operates on either Atlantic or Pacific Boulevards), and connection to the Silver Line.

Supporting ADA Service

Supporting ADA service will also be provided on Saturday evenings with one bus.

FY 2020 TRANSIT SERVICE IMPROVEMENTS

No additional local service modifications are proposed at this time for FY 2020. It is anticipated that the Metrorail Silver Line will be extended into Loudoun County by FY 2020 and will necessitate modifications to local route service. Those changes are yet to be determined.

Loudoun Rural Transit Service

Transit service in the rural portions of Loudoun County presently consists of the existing Purcellville-Leesburg route (Route 40) and three buses devoted to providing ADA and rural demand response service. These buses provide service on weekdays only. No changes are proposed to Loudoun rural transit services.



Leesburg Transit Service

FY 2015 TRANSIT SERVICE IMPROVEMENTS

Route 50 – Leesburg Safe-T-Ride

This route is modified to run between the Shenandoah Building and Costco, serving WalMart Shopping Center, Shopper's Food Warehouse, and Battlefield Shopping Center. Proposed service frequencies are 15-minutes. This route will operate at its service hours (12 hours on weekdays and 9 hours on weekends).



Figure 20 – Proposed Route 50 – Leesburg Safe-T-Ride

Routes 51 (Battlefield/Ida Lee Drive) and 52 (Leesburg Sycolin Road/Miller Drive/South King Street)

These two routes are eliminated and modified into routes 54, 55, 56 and 57 as described below.

Route 53 – Leesburg Trolley

The existing trolley route is modified to operate between downtown Leesburg and the proposed Regional Transit Hub in the vicinity of the Village of Leesburg. Proposed weekday frequencies are 30 minutes in the peak and midday periods. This route would share buses with proposed routes 55 and 56 (i.e., routes would be interlined at the Loudoun County Government Center). This route would also continue to operate on Saturdays from 10:00 a.m. to 9:00 p.m. and on Sundays from noon to 6:00 p.m. at 60-minute frequencies.

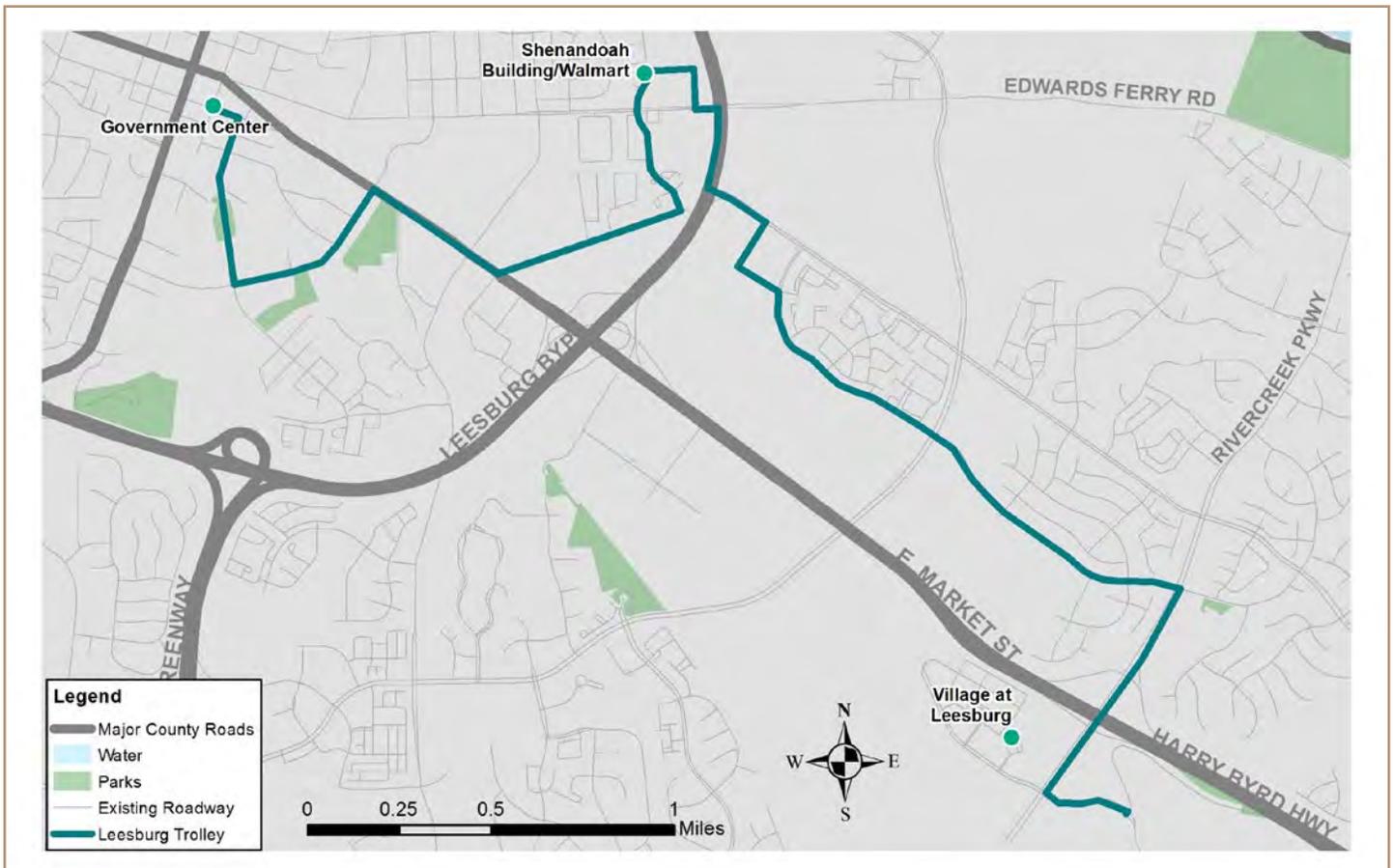


Figure 21 – Proposed Route 53 – Leesburg Trolley



Route 54 – Leesburg County Government Complex

This proposed new route operates between downtown Leesburg and the Government Complex south of Battlefield Parkway off of Sycolin Road. Proposed weekday frequencies are 60-minutes in the peak and midday periods. This route would share buses with Route 57 (i.e., routes would be interlined at the Loudoun County Government Center).

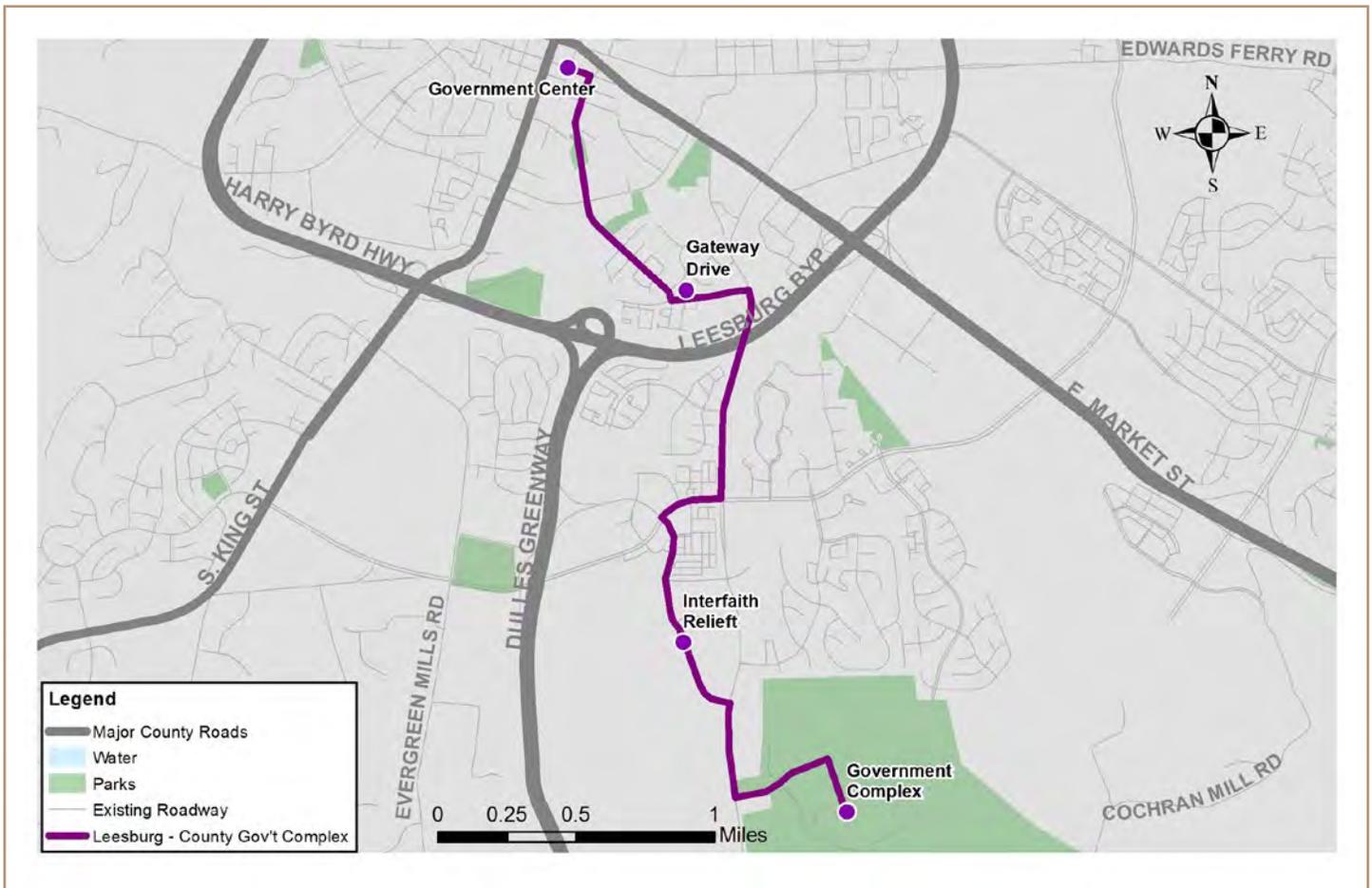


Figure 22 – Proposed Route 54 – Leesburg County Government Complex

Route 55 – Leesburg South King Street

This proposed route would operate between downtown Leesburg and the Tuscarora apartments on Clubhouse Drive via South King Street. Proposed weekday frequencies are 30 minutes in the peak and midday periods. This route would share buses with Routes 53 and 56 (i.e., routes would be interlined at the Loudoun County Government Center).

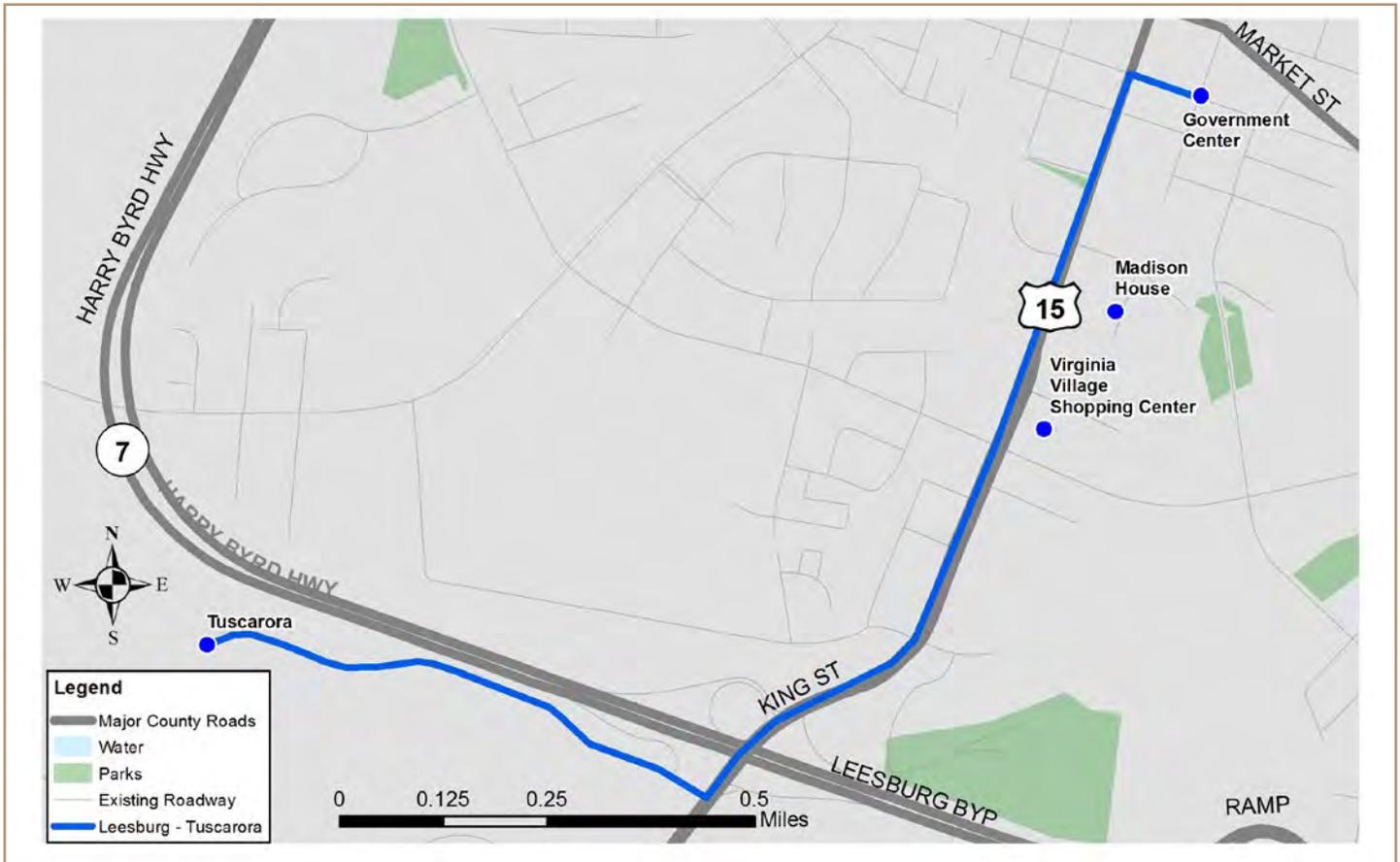


Figure 23 – Proposed Route 55 – Leesburg South King Street



Route 56 – Leesburg Rust Library/Spring Arbor

This proposed route operates between downtown Leesburg and Fairview Street in northwest Leesburg. Proposed weekday frequencies are 30 minutes in the peak and midday periods. This route would share buses with Routes 53 and 55 (i.e., routes would be interlined at the Loudoun County Government Center).

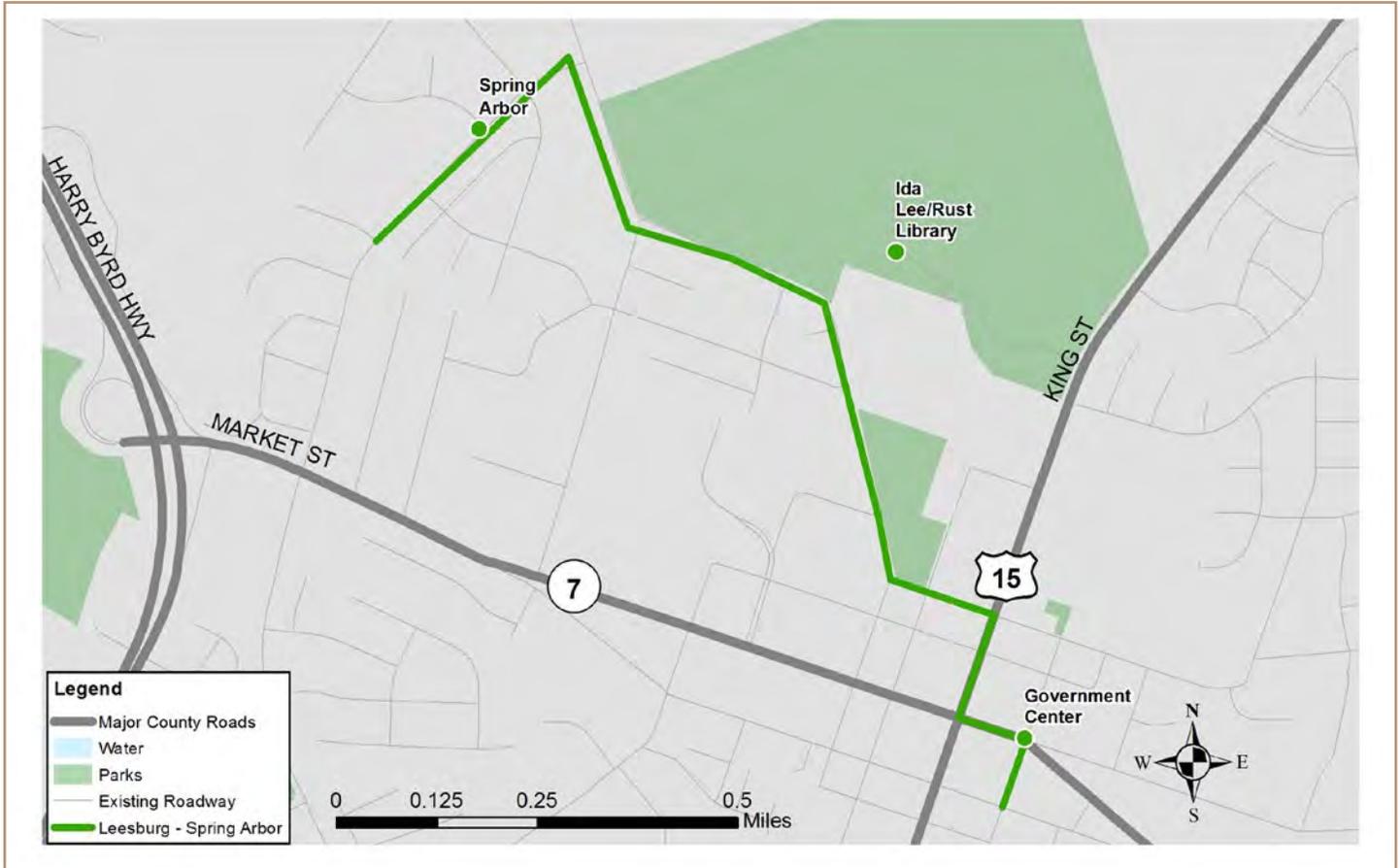


Figure 24 – Proposed Route 56 – Leesburg Rust Library/Spring Arbor

Route 57 – Leesburg Exeter

This proposed route operates between downtown Leesburg and the Exeter Shopping Center located off Fieldstone Drive at Battlefield Parkway in northeast Leesburg. Proposed weekday frequencies are 60minutes in the peak and midday periods. This route would share buses with Route 54 (i.e., routes would be interlined at the Loudoun County Government Center).

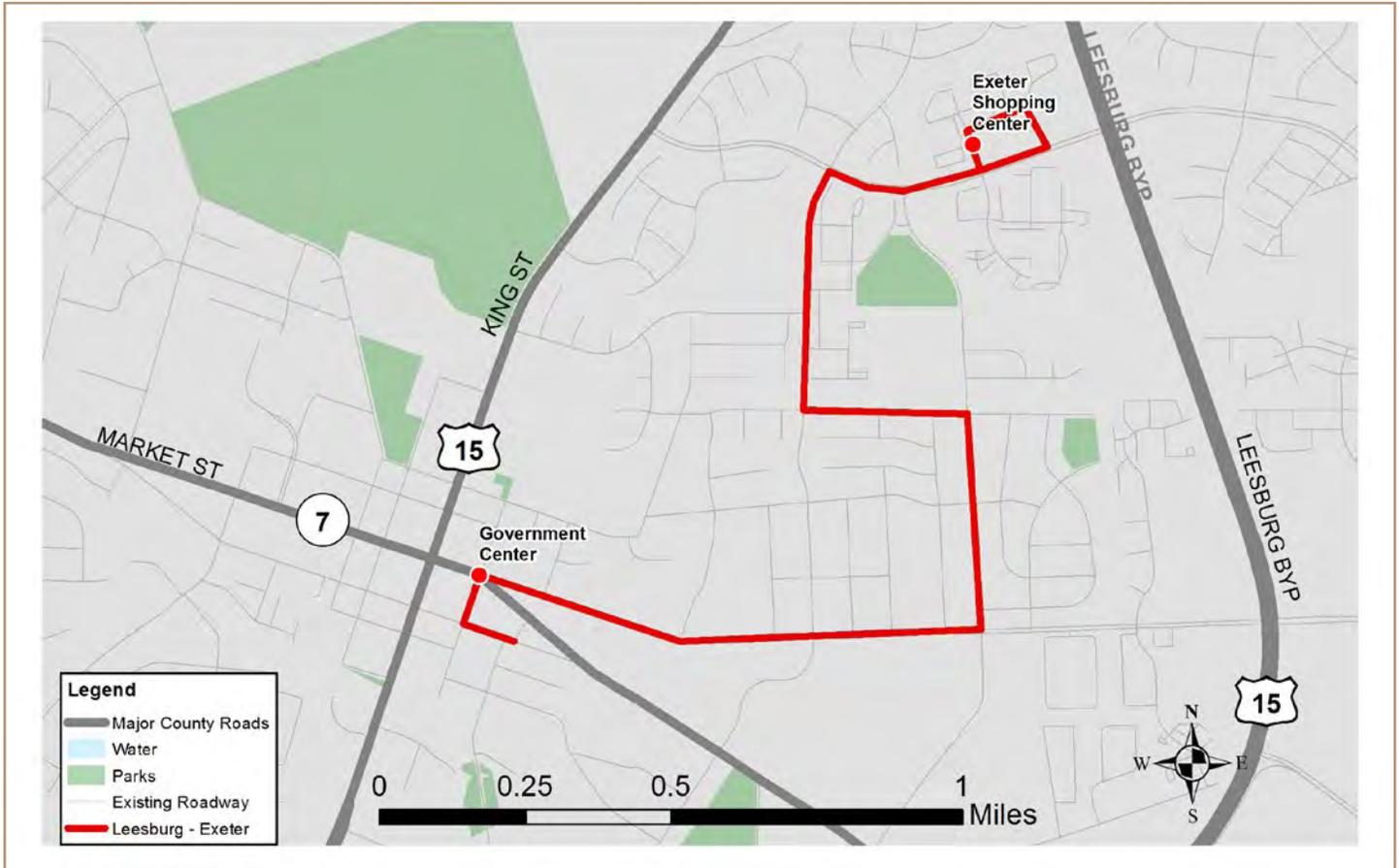


Figure 25 – Proposed Route 57 – Leesburg Exeter



Supporting ADA Service

Supporting ADA service must also be provided within three-quarters of a mile of fixed route alignments for patrons who cannot access the fixed route network. One bus is proposed to provide ADA service within Leesburg during the daytime (7:00 a.m. to 7:00 p.m.) for the areas covered by fixed route bus service. Existing Saturday and Sunday Leesburg Trolley service would operate as flexible route deviation service to meet ADA service requirements. Buses deviate up to three-quarters of a mile from the normal fixed route to accommodate ADA trips.

FY 2016 TRANSIT SERVICE IMPROVEMENTS

Route 53 – Leesburg Trolley

Existing Saturday service on this route is modified to begin at 7:00 a.m.

Route 56 – Leesburg Rust Library/Spring Arbor

New Saturday service is proposed on this route at 60-minute frequencies from 7:00 a.m. to 7:00 p.m.

FY 2017 TRANSIT SERVICE IMPROVEMENTS

Route 53 – Leesburg Trolley

Existing Sunday service on this route is modified to begin at 9:00 a.m.

Route 56 – Leesburg Rust Library/Spring Arbor

New Sunday service is proposed on this route at 60-minute frequencies from 9:00 a.m. to 6:00 p.m.

FY 2018 TRANSIT SERVICE IMPROVEMENTS

Route 53 – Leesburg Trolley

New Sunday service is proposed on this route at 60-minute frequencies from 9:00 a.m. to 6:00 p.m.

Route 56 – Leesburg Rust Library/Spring Arbor

New Saturday service is proposed on this route at 60-minute frequencies from 9:00 a.m. to 6:00 p.m.

FY 2019 TRANSIT SERVICE IMPROVEMENTS

Route 53 – Leesburg Trolley

It is proposed that weekday and Saturday service be extended until 10:00 p.m. on this route.

Route 55 – Leesburg South King Street

It is proposed that weekday service be extended until 10:00 p.m. on this route.

Route 56 – Leesburg Spring Arbor

It is proposed that weekday and Saturday service be extended until 10:00 p.m. on this route.

Supporting ADA Service

It is proposed that supporting ADA weekday evening service be provided by extending operations for the current proposed ADA bus by 3 hours. Saturday evening ADA service will be provided through flexible route deviation service. Buses deviate up to three-quarters of a mile from the normal fixed route to accommodate ADA trips.

FY 2020 TRANSIT SERVICE IMPROVEMENTS

No additional service modifications are proposed at this time for FY 2020. It is anticipated that the Metrorail Silver Line will be extended into Loudoun County by FY 2020 and will necessitate modifications to local route service. Those changes are yet to be determined.

Fare

A fare analysis was made to identify appropriate fare and structure to complement the recommended service improvements described in the previous sections.

Fare Level

As of October 1, 2013, the local fixed-route base fare for Loudoun County fixed-routes is \$1.00 in cash, except for the West Falls Church (WFC) Express, which costs \$2.00 in exact cash for a one-way trip, and the Leesburg Safe-T-Ride, which is free for riders. Children the age of 5 and under may ride for free. Students and employees of George Washington University (GWU) and the Howard Hughes Medical Institute (HHMI) are eligible for free rides on the WFC Express when they provide valid identification. Both GWU and HHMI contribute to the WFC Express Route in order that their students and employees may ride free.

An average system fare is the effective fare paid for every transit trip (after discounting for free or reduced fares). With the \$1.00 base fare that recently was implemented, this would imply an average effective fare of \$0.58 (double the current \$0.29 on a base fare of \$0.50). However, the current average fare reflects a higher number of free fares for children (previously allowed to ride for free if under the age of 10 but now



only if under the age of 5) as well the discontinued free fare for the elderly on Thursdays. Therefore, eliminating these free fares will increase the average fare. Therefore, the average fare is projected to be about \$0.65, about 10% higher more than the rate before those free fares were eliminated.

Prior to the recent fare increase, the local fixed route bus service operated by VRT had a 3 percent farebox recovery rate for the local fixed route system. With the recent doubling of base fare, the recovery rate is expected to initially increase to a minimum of six percent. Estimated ridership increase as a result of proposed FY 2015 service modifications should further increase the farebox recovery rate.

Based on typical rider behavior, the net impact of an additional fare increase to \$1.25 would be expected to reduce ridership by about 10 percent for a net increase in revenues of 22.5 percent.^[1] A \$1.50 fare would be expected to reduce ridership by 20 percent and increase net revenues by 40 percent. At no point would increasing fares offset operating costs. The most effective way to increase ridership and revenue is to improve the transit service and provide a better experience for riders. Based on the fare level evaluation, it is recommended that Loudoun County maintain the current \$1.00 base fare (which is a recent change) while riders adjust to the modified local bus system. System ridership should stabilize from the new fare level and the planned service changes within six to nine months. Farebox revenues and ridership analysis over the following year will provide a basis to consider whether a further increase in the base fare would be advisable. If projected demand is significantly higher than anticipated, particularly if it approaches system capacity of a number of routes, an additional increase in the base fare could be advisable to help pay for increased service levels or large buses on selected routes. If actual demand is close to projected demand or even lower, the \$1.00 fare should remain in effect.

Passes & Transfers

Passes are used to permit riders to make a specified number of boardings or to allow unlimited travel within a specific time period. Day and monthly passes often are priced to provide a discount to visitors and frequent riders, if they choose a pass over making individual trip payments. Passes offer convenience and, potentially, cost savings to the riders. Transit systems benefit because passes generate revenue in advance of usage and they reduce fare collection and money handling requirements. With passes, a transit system may also

have the opportunity to gather more information about the ridership habits of regular users.

Pass programs providing free or deeply discounted employee and student travel via transit are often focused on localized traffic congestion mitigation, parking needs reduction, air quality, and accessibility objectives. Senior passes are common in which senior citizens are offered discounts.

Currently the local fixed bus system does not provide free or discounted transfers; hence a full fare is imposed when a rider transfers (each ride requires a full fare even if two rides are needed to complete a trip in one direction). The County's planned pulse operations will increase the number of transfers in Leesburg due to the planned route structure within the Town. The remaining routes will likely not experience a significant increase in transfers. It is recommended that Loudoun County maintains the current transfer system on the local fixed route system and introduce day and monthly passes.

The County should implement day passes at \$2.00 per day and monthly passes at \$2.00 per working day. Such pass pricing will allow riders who are forced to transfer under the new pulse system to do so without being penalized (given that they make a return trip). Day passes can be sold by the bus operators and monthly passes can be sold from convenient locations within the County. Weekly passes are not recommended at this time because the management of passes by drivers may impact their ability to effectively operate on-time and a week pass requires the same level of administration as a monthly pass.

Free or discounted transfers are not recommended at this time because the day and monthly passes will offset the impacts of increased transfer rate. Free fares for children 5 years old and under when accompanied by an adult should be maintained. It is further recommended that Loudoun County institute half fare discount during off peak periods for senior citizens and the mobility impaired. In addition to the obvious humanitarian basis for such discounts, by restricting them to off peak periods those users are encouraged to plan their trips during the times when delays in boarding or alighting would impact the fewest other riders, and when traffic conditions are optimal to recoup any delays.

Ridership should be monitored and if the system approaches capacity limits, equipment changes and increased fares should be considered. It should be noted that there is substantial opportunity for growth in the system before demand outpaces capacity.

¹ *Fare Elasticity and Its Application to Forecasting Transit Demand, American Public Transit Association, August 1991*



6. OPERATIONAL REQUIREMENTS

The following tables and figures are from the Loudoun County TDP Update that is being prepared as part of this project. This section summarizes the operational requirements of recommended service modifications. **Table 14** presents a listing of bus-hours and bus requirements associated with each identified local transit bus service improvement. **Table 15** summarizes annual revenue bus-hours by type of service (Loudoun Urban, Loudoun Rural and Leesburg). **Figure 22** illustrates the

projected annual change in bus-hours over the six-year period by type of service. Totals shown for Leesburg in **Table 15** and **Figure 22** include both Leesburg and Loudoun County-funded transit service. As noted in **Table 15**, Loudoun Urban bus service is projected to grow by 26.5 percent, Loudoun Rural service remains unchanged and Leesburg service is projected to grow by 37.8 percent.

Table 14 – Proposed Local Route Service Changes by Type of Service and Fiscal Year

Service Type	Fiscal Year	Service Improvements	Add'l Vehicles Required	Span of Service	Daily Rev. Hours	Annual Factor	Annual Hours	
Loudoun Urban	2015	Multiple Weekday Fixed Route Changes	n/a	n/a	-10	251	-2,526	
		New East Loudoun Wkdy. Demand Response	1	12	12	251	3,012	
		New Eve. 70/82 Wkdy Eve. Demand Response	1	3	3	251	753	
	2016	Route 70 Sat. Service (7 to 7 on 7)	2	12	24	52	1,248	
		Route 82 Sat. Service (Sterling Connector)	1	12	12	52	624	
		Route 84 to Wihele Sat. Service	3	12	36	52	1,872	
		Sat. Demand Response Service	1	12	12	52	624	
	2017	2nd Bus on East Loudoun Wkdy. Demand Response	1	12	12	251	3,012	
	2018	Route 70 Sun. Service (7 to 7 on 7)	2	9	18	52	936	
		Route 82 Sun. Service (Sterling Connector)	1	9	9	52	468	
		Route 84 Sun. Service	3	9	27	52	1,404	
		Sun. Demand Response Service	1	9	9	52	468	
	2019	Route 70 Sat. Eve. Service (7 to 7 on 7)	2	3	6	52	312	
		Route 82 Sat. Eve. Service (Sterling Connector)	1	3	3	52	156	
		Route 84 to Wiehle Sat. Eve. Service	3	2	6	52	312	
		Sat.Eve. Demand Response Service	1	3	3	52	156	
	2020	To Be Determined in Future						
	Leesburg	2015	Multiple Weekday Fixed Route Changes	1.00	12	12	251	3,012
		2016	Extend Sat. morning Leesburg Trolley Service	0.73	3	2.19	52	114
2016		New Leesburg Rust Library/Spring Arbor Saturday Service	0.27	3	0.81	52	42	
2018		Extended Leesburg Trolley Sunday Service	0.73	3	2.19	52	114	
		Leesburg Rust Library/Spring Arbor Sunday Service	0.27	3	0.81	52	42	
2019		Leesburg Trolley Wkdy Eve. Service Extended	1.67	3	5.01	251	1,258	
		Leesburg South King Street Wkdy Eve. Service	0.67	3	2.01	251	505	
		Leesburg Rust Library/Spring Arbor Wkdy Eve. Service	0.66	3	1.98	251	497	
		Leesburg Wkdy Eve. Demand Response Service	1	3	3	251	753	
		Leesburg Trolley Sat. Eve. Service	0.73	1	0.73	52	38	
		Leesburg Rust Library/Spring Arbor Sat. Eve. Service	0.27	1	0.27	52	14	
2020	To Be Determined in Future							

Notes:

1. Leesburg buses are shown as partial buses because of route interlining assumptions.



Table 15 – Summary of Annual Revenue Bus-Hours by Type of Service

Annual Revenue Hours

Service Type	Fiscal Year	Loudoun Urban		Loudoun Rural		Leesburg		Total	
		Total	Ann. %	Total	Ann. %	Total	Ann. %	Total	Ann. %
Fixed Route	FY 14	45,447		3,012		13,868		62,327	
	FY 15	42,921	-5.6%	3,012	0.0%	16,880	21.7%	62,813	0.8%
	FY 16	46,665	8.7%	3,012	0.0%	17,036	0.9%	66,713	6.2%
	FY 17	46,665	0.0%	3,012	0.0%	17,036	0.0%	66,713	-0.0%
	FY 18	49,473	6.0%	3,012	0.0%	17,192	0.9%	69,677	4.4%
	FY 19	50,253	1.6%	3,012	0.0%	19,503	13.4%	72,768	4.4%
	FY 20	50,253	0.0%	3,012	0.0%	19,503	0.0%	72,768	-0.0%
Demand Response	FY 14	3,012		8,032		3,012		14,056	
	FY 15	6,777	125.0%	8,032	0.0%	3,012	0.0%	17,822	26.8%
	FY 16	7,401	9.2%	8,032	0.0%	3,012	0.0%	18,445	3.5%
	FY 17	10,413	40.7%	8,032	0.0%	3,012	0.0%	21,457	16.3%
	FY 18	10,881	4.5%	8,032	0.0%	3,012	0.0%	21,925	2.2%
	FY 19	11,037	1.4%	8,032	0.0%	3,765	25.0%	22,834	4.1%
	FY 20	11,037	0.0%	8,032	0.0%	3,765	0.0%	22,834	-0.0%
Total	FY 14	48,459		11,044		16,880		76,383	
	FY 15	49,698	2.6%	11,044	0.0%	19,892	17.8%	80,634	5.6%
	FY 16	54,066	8.8%	11,044	0.0%	20,048	0.8%	85,158	5.6%
	FY 17	57,078	5.6%	11,044	0.0%	20,048	0.0%	88,170	3.5%
	FY 18	60,354	5.7%	11,044	0.0%	20,204	0.8%	91,602	3.9%
	FY 19	61,290	1.6%	11,044	0.0%	23,268	15.2%	95,602	4.4%
	FY 20	61,290	0.0%	11,044	0.0%	23,268	0.0%	95,602	-0.0%
	5 yr % change:		26.5%		0.0%		37.8%		25.2%

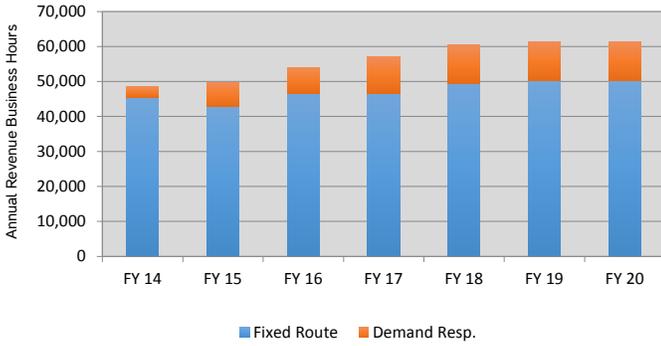
NOTES:

1. Fixed route revenue-hour estimates based on each FY service plan.
2. FY 20 assumes same service plan as FY 19. Metrorail Silver Line will be extended into Loudoun County in FY 20 and will necessitate need to modify local route service. Those service changes are yet to be determined.
3. Demand Response revenue hour assumptions:
 - a. FY 2014 reflects 1 Loudoun Urban bus at 12 hrs, 3 Loudoun Rural buses (2 operate at 10-hours, 1 at 12-hours) and 1 Leesburg bus at 12 hrs.
 - b. FY 2015 assumes add'l wkdy Loudoun Urban bus for Brambleton/Broadlands D R. at 12 hrs & 3 add'l wkdy. eve. Hours for Sterling.
 - c. FY 2016 assumes an add'l. Loudoun Urban bus for new Sat. service at 12 hrs. New Leesburg service assumed to be deviated fixed route.
 - d. FY 2017 assumes an additional wkdy Brambleton/Broadlands Demand Response bus at 12 hrs.
 - e. FY 2018 assumes an add'l. Loudoun Urban bus for new Sun. service at 9 hours. New Leesburg service assumed to be deviated fixed route.
 - f. FY 2019 assumes 3 additional Sat. hours for Loudoun Urban for extended evening fixed route service.
4. Annualization assumptions are:
 - Wkdy 251
 - Sat 52
 - Sun 52



Figure 26 - Annual Revenue Bus-Hours by Type of Service

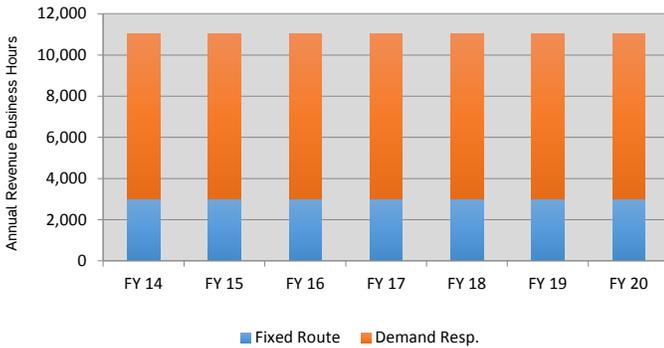
Loudoun Urban Transit Service Annual Revenue Bus-Hours



Leesburg Transit Service Annual Revenue Bus-Hours



Loudoun Rural Transit Service Annual Revenue Bus-Hours



7. RIDERSHIP IMPACTS

Proposed changes to local transit services in Loudoun County and Leesburg are anticipated to have a positive impact on ridership. Existing (FY 2014) average daily ridership is 2,186 on Loudoun County and Leesburg fixed routes. Proposed changes to the local transit network will result in more two-direction service (instead of one-direction loops), increased opportunities for timed transfers (through pulsing), and improved accessibility to residents and employment (through route alignment changes). Access to Metrorail will also be improved with all-day 30-minute service between Dulles Town Center and the new Wiehle-Reston East Metrorail station.

Ridership impacts were estimated by reviewing several existing transit service-to-ridership productivity metrics, and applying those metrics to the proposed transit network. Population growth projections from the Metropolitan Washington Council of Governments (MWCOCG) were also taken into account (approximately 2.5 percent per year between 2015 and 2020). The

following metrics were evaluated and taken into account in the development of ridership projections:

- Riders per revenue bus-mile
- Riders per revenue bus-hour
- Riders per directional route-mile
- Riders per one-way bus trip
- Riders per 1,000 population & jobs within ¼ mile of the route

Table 16 presents projected weekday, Saturday and Sunday ridership for Loudoun County and Leesburg fixed route transit services over the TDP six-year period. Totals shown for Leesburg include both Leesburg and Loudoun County-funded transit service. Total county and town ridership (fixed route, demand response, urban and rural) is estimated to increase by over 50 percent between FY 2014 and FY 2020.

Table 16 - Daily Ridership Projections for Local Fixed Route Services

Service Type	Service Day	2014	2015	2016	2017	2018	2019	2020
Loudoun Urban	Weekday	1,698	1,730	1,860	1,905	1,955	2,010	2,050
	Saturday	0	0	1,020	1,045	1,075	1,250	1,270
	Sunday	0	0	0	0	800	825	840
	Annual	426,200	434,200	519,900	532,500	588,200	612,400	624,300
Leesburg	Weekday	408	490	560	570	595	690	705
	Saturday	171	180	250	260	260	280	280
	Sunday	171	175	185	190	235	240	245
	Annual	120,200	141,500	163,200	166,500	175,100	200,200	204,300
Rural	Weekday	80	80	80	80	85	85	90
	Annual	20,100	20,100	20,100	20,100	21,300	21,300	22,600
Total Annual Ridership		566,500	595,800	703,200	719,100	784,600	833,900	851,200



8. OPERATING AND MAINTENANCE COSTS

This analysis assumes that local transit service is contracted to a private service provider, and that the private operator provides buses as part of their contract. The provision of privately owned buses will increase the rate per bus-hour that is charged to Loudoun County. It is important to note that the actual rate charged to Loudoun County for local route service cannot be known until a Request for Proposal (RFP) for service is issued and a contract is secured with a private service provider. The rates used in this analysis should be considered as estimates at this time. Costs were estimated by assuming \$69 per service bus-hour (in-service and layover, but not including deadhead) for contracted local route service

(the same rate currently paid for local route service) with an additional \$8 per service-hour to account for capital costs that would be included in a contract service provider charge (e.g., bus purchase costs). **Table 17** presents estimated annual O&M costs for each local transit service improvement by fiscal year. Costs are presented in current year (FY 2014 dollars). **Table 18** presents a summary of total O&M cost estimates for each local service type (Loudoun Urban, Loudoun Rural and Leesburg transit service). Totals shown for Leesburg in Table 18 include both Leesburg and Loudoun County-funded transit service.

Table 17 – Estimated Operating Cost for Proposed Service Changes Local Transit Service in Loudoun County and Leesburg in FY 2014 dollars)

Service Type	Fiscal Year	Service Improvements	Add'l Vehicles Required	Span of Service	Annual Hours	Annual O&M Cost	Yearly Total	
Loudoun Urban	2015	Multiple Weekday Fixed Route Changes	n/a	n/a	-2,526	-\$194,500		
		New East Loudoun Wkdy. Demand Response	1	12	3,012	\$231,900		
		New Eve. 70/82 Wkdy Eve. Demand Response	1	3	753	\$58,000	\$95,400	
	2016	Route 70 Sat. Service (7 to 7 on 7)	2	12	1,248	\$96,100		
		Route 82 Sat. Service (Sterling Connector)	1	12	624	\$48,000		
		Route 84 to Wihele Sat. Service	3	12	1,872	\$144,100		
		Sat. Demand Response Service	1	12	624	\$48,000	\$336,200	
	2017	2nd Bus on East Loudoun Wkdy. Demand Response	1	12	3,012	\$231,900	\$231,900	
	2018	Route 70 Sun. Service (7 to 7 on 7)	2	9	936	\$72,100		
		Route 82 Sun. Service (Sterling Connector)	1	9	468	\$36,000		
		Route 84 Sun. Service	3	9	1,404	\$108,100		
		Sun. Demand Response Service	1	9	468	\$36,000	\$252,200	
	2019	Route 70 Sat. Eve. Service (7 to 7 on 7)	2	3	312	\$24,000		
		Route 82 Sat. Eve. Service (Sterling Connector)	1	3	156	\$12,000		
		Route 84 to Wiehle Sat. Eve. Service	3	2	312	\$24,000		
		Sat.Eve. Demand Response Service	1	3	156	\$12,000	\$72,000	
	2020	To Be Determined in Future					\$0	
	Loudoun Urban Total Additional O&M Costs (2014 dollars)							\$987,700



Table 17 continued.

Table 17 – Estimated Operating Cost for Proposed Service Changes Local Transit Service in Loudoun County and Leesburg in FY 2014 dollars)

Service Type	Fiscal Year	Service Improvements	Add'l Vehicles Required	Span of Service	Annual Hours	Annual O&M Cost	Yearly Total	
Leesburg	2015	Multiple Weekday Fixed Route Route Changes	1.00	12	3,012	\$231,900	\$231,900	
	2016	Extend Sat. morning Leesburg Trolley Service	0.73	3	114	\$8,800		
	2016	New Leesburg Rust Library/Spring Arbor Saturday Service	0.27	3	42	\$3,200	\$12,000	
	2018	Extended Leesburg Trolley Sunday Service	0.73	3	114	\$8,800		
		Leesburg Rust Library/Spring Arbor Sunday Service	0.27	3	42	\$3,200	\$12,000	
	2019	Leesburg Trolley Wkdy Eve. Service Extended	1.67	3	1,258	\$96,800		
		Leesburg South King Street Wkdy Eve. Service	0.67	3	505	\$38,800		
		Leesburg Rust Library/Spring Arbor Wkdy Eve. Service	0.66	3	497	\$38,300		
		Leesburg Wkdy Eve. Demand Response Service	1	3	753	\$58,000		
		Leesburg Trolley Sat. Eve. Service	0.73	1	38	\$2,900		
		Leesburg Rust Library/Spring Arbor Sat. Eve. Service	0.27	1	14	\$1,100	\$235,900	
	2020	To Be Determined in Future						\$0
	Loudoun Urban Total Additional O&M Costs (2014 dollars)							\$491,800

Notes:

1. Leesburg buses are shown as partial buses because of route interlining assumptions.
2. Costs are based on a rate of \$77 per revenue bus-hour.
3. Costs are shown in FY 2014 dollars.





Table 18 – Estimated Total O&M Costs for Local Route Service in Loudoun County and Leesburg (Costs in 2014 dollars)

Service Type	Fiscal Year	Loudoun Urban			Loudoun Rural			Leesburg			TOTAL			
		Rev. Hrs.	Cost	Ann. Change	Rev. Hrs.	Cost	Ann. Change	Rev. Hrs.	Cost	Ann. Change	Rev. Hrs.	Cost	Ann. Change	
Fixed Route	FY 14	45,447	\$3,135,800		3,012	\$207,800		13,868	\$956,900		62,327	\$4,300,500		
	FY 15	42,921	\$3,304,900	\$169,100	3,012	\$231,900	\$24,100	16,880	\$1,299,800	\$342,900	62,813	\$4,836,600	\$536,100	
	FY 16	46,665	\$3,593,200	\$288,300	3,012	\$231,900	\$0	17,036	\$1,311,800	\$12,000	66,713	\$5,136,900	\$300,300	
	FY 17	46,665	\$3,593,200	\$0	3,012	\$231,900	\$0	17,036	\$1,311,800	\$0	66,713	\$5,136,900	\$0	
	FY 18	49,473	\$3,809,400	\$216,200	3,012	\$231,900	\$0	17,192	\$1,323,800	\$12,000	69,677	\$5,365,100	\$228,200	
	FY 19	50,253	\$3,869,500	\$60,100	3,012	\$231,900	\$0	19,503	\$1,501,700	\$177,900	72,768	\$5,603,100	\$238,000	
FY 20	50,253	\$3,869,500	\$0	3,012	\$231,900	\$0	19,503	\$1,501,700	\$0	72,768	\$5,603,100	\$0		
Demand Response	FY 14	3,012	\$207,800		8,032	\$554,200		3,012	\$207,800		14,056	\$969,900		
	FY 15	6,777	\$521,800	\$314,000	8,032	\$618,500	\$64,300	3,012	\$231,900	\$24,100	17,821	\$1,372,200	\$402,300	
	FY 16	7,401	\$569,900	\$48,100	8,032	\$618,500	\$0	3,012	\$231,900	\$0	18,445	\$1,420,300	\$48,100	
	FY 17	10,413	\$801,800	\$231,900	8,032	\$618,500	\$0	3,012	\$231,900	\$0	21,457	\$1,652,200	\$231,900	
	FY 18	10,881	\$837,800	\$36,000	8,032	\$618,500	\$0	3,012	\$231,900	\$0	21,925	\$1,688,200	\$36,000	
	FY 19	11,037	\$849,800	\$12,000	8,032	\$618,500	\$0	3,765	\$289,900	\$58,000	22,834	\$1,758,200	\$70,000	
FY 20	11,037	\$849,800	\$0	8,032	\$618,500	\$0	3,765	\$289,900	\$0	22,834	\$1,758,200	\$0		
Total	FY 14	48,459	\$3,343,600		11,044	\$762,000		16,880	\$1,164,700		76,383	\$5,270,400		
	FY 15	49,698	\$3,826,700	\$483,100	11,044	\$850,400	\$88,400	19,892	\$1,531,700	\$367,000	80,634	\$6,208,800	\$938,400	
	FY 16	54,066	\$4,163,100	\$336,400	11,044	\$850,400	\$0	20,048	\$1,543,700	\$12,000	85,158	\$6,557,200	\$348,400	
	FY 17	57,078	\$4,395,000	\$231,900	11,044	\$850,400	\$0	20,048	\$1,543,700	\$0	88,170	\$6,789,100	\$231,900	
	FY 18	60,354	\$4,647,200	\$252,200	11,044	\$850,400	\$0	20,204	\$1,555,700	\$12,000	91,602	\$7,053,300	\$264,200	
	FY 19	61,290	\$4,719,300	\$72,100	11,044	\$850,400	\$0	23,268	\$1,791,600	\$235,900	95,602	\$7,361,300	\$308,000	
FY 20	61,290	\$4,719,300	\$0	11,044	\$850,400	\$88,400	23,268	\$1,791,600	\$0	95,602	\$7,361,300	\$0		
						\$1,375,700				\$88,400			\$626,900	

NOTES:

1. Hourly cost assumptions (2014\$)

	Base Rate	Capital Add-On	Total
Fixed route cost/hour:	\$69.00	\$8.00	\$77.00
Demand Resp. cost/hour:	\$69.00	\$8.00	\$77.00

- Base rate of \$69 based on current VRT rate.
- Bus add-on cost included to reflect an annualized cost for a contract service provider to include buses in hourly rate.
- FY 14 costs estimated with above-noted hourly cost rates for purpose of determining incremental change in costs.
- FY 14 costs do not include the capital add-on rate.

9. TRANSIT CAPITAL AND FACILITY RECOMMENDATIONS

Proposed service changes will have an impact on the bus fleet requirement for Loudoun County and Leesburg transit services. **Table 19** presents estimated fleet bus requirements by type of service (Loudoun Urban, Loudoun Rural and Leesburg) and by year. Buses with a seated passenger capacity of approximately 30 passengers are recommended for Routes 70 (7 to 7 on 7) and 84 (Dulles Town Center to Wiehle-Reston East Metrorail). Smaller buses (15-20 passenger seat buses) are recommended for all other fixed routes and demand response services. After service changes are implemented, the County should evaluate ridership on all routes and may modify the type of bus based on passenger loads. This analysis assumes that Loudoun County and Leesburg will contract with a private service provider for local route service, and that the private

operator will be required to provide buses as part of their contract rate. Thus, buses shown in **Table 19** are not anticipated to be owned by Loudoun County or Leesburg. County owned fleet is the most fiscally efficient operating model and should be considered for a subsequent contract in the future.

This analysis also includes the phased implementation of local and regional transit hubs in Loudoun County. These hubs will accommodate transfers between routes. A total of four local and five regional transit hubs are proposed over the six-year time period as noted earlier. Many of the identified locations currently serve local bus service and will simply require some additional improvements. Transit hub development is assumed to occur primarily through development proffers.

Table 19 – Anticipated Fleet Bus Requirements for Local Route Service in Loudoun County

Service Type	Fiscal Year	Fleet Bus Requirements				Fleet Bus Requirements by Type of Bus					TOTALS	
		Loudoun Urban	Loudoun Rural	Leesburg	Total	Loudoun Urban		Loud. Rural	Leesburg		Med. Bus	Cutaway
		Urban	Rural	Leesburg	Total	Med. Bus	Cutaway	Cutaway	Med. Bus	Cutaway		
Fixed Route	FY 14	17	1	5	23	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	FY 15	17	1	6	24	12	5	1	0	6	12	12
	FY 16	17	1	6	24	12	5	1	0	6	12	12
	FY 17	17	1	6	24	12	5	1	0	6	12	12
	FY 18	17	1	6	24	12	5	1	0	6	12	12
	FY 19	17	1	6	24	12	5	1	0	6	12	12
	FY 20	17	1	6	24	12	5	1	0	6	12	12
Demand Response	FY 14	1	4	1	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	FY 15	3	4	1	8	n/a	3	4	n/a	1	n/a	8
	FY 16	3	4	1	8	n/a	3	4	n/a	1	n/a	8
	FY 17	4	4	1	9	n/a	4	4	n/a	1	n/a	9
	FY 18	4	4	1	9	n/a	4	4	n/a	1	n/a	9
	FY 19	4	4	1	9	n/a	4	4	n/a	1	n/a	9
	FY 20	4	4	1	9	n/a	4	4	n/a	1	n/a	9
Total	FY 14	18	5	6	29	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	FY 15	20	5	7	32	12	8	5	0	7	12	20
	FY 16	20	5	7	32	12	8	5	0	7	12	20
	FY 17	21	5	7	33	12	9	5	0	7	12	21
	FY 18	21	5	7	33	12	9	5	0	7	12	21
	FY 19	21	5	7	33	12	9	5	0	7	12	21
	FY 20	21	5	7	33	12	9	5	0	7	12	21

NOTES:

1. For Loudoun Urban, Medium buses assumed on 70 and 84 (9 pk/12 fleet). Cutaways assumed on all others.
2. Loudoun Rural assumes all cutaways.
3. Leesburg assumes all cutaways.
4. All demand response buses shown as cutaways.



10. COST AND FUNDING SOURCES

This section describes anticipated Loudoun County and Leesburg transit operating funding sources.

Loudoun County Urban Transit Operating Revenue Assumptions

Anticipated funding sources for Loudoun County urban transit services are as follows:

Farebox Revenues

Beginning in October 2013 the fare for local route service increased from \$0.50 to \$1.00 per bus trip. At this time, there are no free transfers. The \$1.00 fare is assumed to remain in place, but with some discounting for transfers. Specifically, discounted monthly and day passes are assumed that could be used by riders who must transfer to other routes when riding transit.

The existing net effective fare (average paid fare for every transit trip) is very low on existing service because of the extensive distribution of discounted and free passes to social services agencies that occurred before the October 2013 fare increase. The new fare of \$1.00 has not been in place long enough to determine how that has impacted the net effective cash fare. For purposes of this analysis, a net effective fare of \$0.65 has been assumed for estimating farebox revenues. This fare is comparable to data presented in nationally published studies. A 25 cent fare increase has also been assumed beginning in year 4 of the TDP time period (FY 2018) to accommodate typical inflation. Fares for demand response services are assumed to be double fixed route fares.

State Mass Transit Fund

Presently, about 15 percent of transit agency operating expenditures in Virginia are covered through the State Mass Transit Fund (SMTF). Recent state legislation (Senate Bill 1140) will result in a significant increase in this program's total funds (37.5% increase for FY 2015 according to the Commonwealth Transportation Board FY 2014 Rail and Public Transportation Improvement Program). Additional statewide funds generated above \$160 million in 2014 and after will be distributed on the basis of performance-based funding. The funding impact for revised Loudoun County and Leesburg transit service is not yet known. For purpose of this study, it is conservatively assumed that the SMTF will cover 15 percent of Loudoun County's operating costs in FY 2015 (the current average statewide funding level). For subsequent years, SMTF funding is assumed to grow between 2.47 and 4.26% annually, based on the State's projected annual increase in SMTF program funds.

Private Sources

Fifty percent of Route 72's (West Fall Church Express) operating costs are presently funded through private funds. This study assumes this route will continue to be 50 percent funded by private sources, with county and state funds used for the remaining 50 percent.

Advertising Sources

This funding source can include revenues from sources such as advertising. LC Transit's (commuter bus) current advertising revenues presently cover 1.75% of total operating expenditures. For purposes of this analysis, it is assumed that advertising revenue sources will cover 1.5% of operating expenditures for Loudoun Urban Transit services, either through direct advertising revenues to the county or a reduction in the contract operator's fees (e.g., on-bus advertising with the contract operator retaining those revenues). The forms of advertising that are possible even if Loudoun County does not own the local bus fleet include placards within the vehicles, advertising at bus shelters advertising at transit hubs and advertising on the route/schedule brochures.

Loudoun County Contribution

The remaining amount of needed funds is assumed to come from Loudoun County funding sources.

Loudoun County Rural Transit Operating Revenue Assumptions

Rural transit services in Loudoun County include Route 40 (Purcellville-Leesburg) and three buses devoted to demand response and ADA services. No changes are proposed to Loudoun County rural transit services over the TDP's six year time period. Anticipated funding sources for this service are as follows:

Farebox Revenues

A \$1.00 fare is assumed to remain in place for the Purcellville-Leesburg route (Route 40). The existing zone-based fare is assumed to remain in place for rural on-demand transit services, with a fare of \$1.00 for travel within a zone, \$2.00 for travel between two zones and \$3.00 for travel between three zones. An average fare of \$2.00 is assumed for rural on-demand transit services. Revenue forecasts assume the net effective fare is 5 percent of the cash fare (to account for pass usage). This assumption is consistent with the assumption used for Loudoun Urban transit service. A 25 percent fare increase is assumed in year 4 (FY 2018 to accommodate typical inflation (same assumption used for Loudoun Urban transit service).



State Mass Transit Fund

Funding levels from the State Mass Transit Fund (SMTF) are the same as noted for Loudoun Urban transit services.

Federal 5311 Non-urbanized Area Formula Program

It is assumed VRT will continue to be the rural service provider and designated recipient of Federal Non-urbanized Area Formula or Section 5311 program (49 U.S.C. 5311) funds. The 5311 program is the Federal Transit Administration's (FTA) formula assistance program for public transportation in non-urbanized areas (rural areas and urban areas under 50,000 in population and not included in an urbanized area). Section 5311 funds cover 50% of rural transit services operating costs after consideration of fare revenue.

Loudoun County Contribution

The remaining amount of needed funds is assumed to come from Loudoun County funding sources.

Leesburg Transit Operating Revenue Assumptions

Local funding for Leesburg transit service presently comes from the Town of Leesburg and Loudoun County. The County provides funding for two existing routes. This level of funding is assumed to remain in place in the future (i.e., funding for 24 bus hours each weekday). The County also presently contributes \$24,000 towards Safe-T-Ride. That funding is also assumed to remain in place in the future. Other funding sources for Leesburg Transit service are the same as noted for Loudoun Urban services, with funds coming from farebox revenues, the State Mass Transit Fund, and advertising revenues. Remaining funds would come from the Town of Leesburg.

Annual Cash Flow Analysis

Table 20 presents a cash flow analysis of O&M costs and likely revenues for local transit, ADA and demand response services in Loudoun County and Leesburg. Key assumptions in this table are as follows:

- Costs for the first year of the TDP six-year time period (FY 2015) have been broken-out for Loudoun County Urban, Loudoun County Rural, Leesburg and Leesburg-Loudoun County funded transit services.
- Costs for new local route services reflect costs previously presented in Table 5.
- An annual inflation rate of 3% has been assumed in the cost estimates.
- Farebox revenues are based on ridership projections and average fare per passenger trip, which vary by type of service.

The last row in each subsection of **Table 20** presents Loudoun County and Leesburg funds needed to cover remaining funding needs.



Table 20 - Local Transit Service O&M Costs and Potential Revenue Sources (Year of Expenditure Dollars)

Service	Service Costs/Funding Category	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Loudoun Urban Service	Projected Operating & Maintenance Costs						
	Fixed Route Service	\$3,404,000	\$3,812,000	\$3,926,400	\$4,287,500	\$4,485,800	\$4,620,400
	ADA & D.R. Service	\$537,500	\$604,600	\$876,100	\$943,000	\$985,200	\$1,014,700
	Total Loudoun Urban Service	\$3,941,500	\$4,416,600	\$4,802,500	\$5,230,500	\$5,471,000	\$5,635,100
	Anticipated Funding Sources						
	Farebox Revenues	\$304,400	\$352,300	\$366,400	\$575,900	\$599,000	\$610,200
	State Mass Transit Fund	\$591,200	\$616,400	\$635,800	\$651,500	\$667,700	\$684,300
	Private Sources (72X)	\$189,100	\$194,800	\$200,600	\$206,700	\$212,900	\$226,900
	Misc. Sources (e.g., Advertising)	\$51,100	\$57,200	\$58,900	\$64,300	\$67,300	\$69,300
	Loudoun County Contribution Req'd.	\$2,805,700	\$3,195,900	\$3,540,800	\$3,732,100	\$3,924,100	\$4,044,400
Loudoun Rural Service	Projected Operating & Maintenance Costs						
	Fixed Route Service	\$238,900	\$246,000	\$253,400	\$261,000	\$268,800	\$276,900
	ADA & D.R. Service	\$637,100	\$656,200	\$675,900	\$696,100	\$717,000	\$738,500
	Total Loudoun Rural Service	\$876,000	\$902,200	\$929,300	\$957,100	\$985,800	\$1,015,400
	Anticipated Funding Sources						
	Farebox Revenues	\$23,500	\$23,500	\$23,500	\$32,000	\$32,000	\$33,200
	State Mass Transit Fund	\$131,400	\$137,000	\$141,300	\$144,800	\$148,400	\$152,100
	FTA Section 5311	\$426,300	\$439,400	\$452,900	\$462,600	\$476,900	\$491,100
	Loudoun County Contribution Req'd.	\$294,800	\$302,300	\$311,600	\$317,700	\$328,500	\$339,000
Leesburg Service	Projected Operating & Maintenance Costs						
	Fixed Route Service	\$840,400	\$878,300	\$904,700	\$945,300	\$1,180,000	\$1,215,400
	ADA Service	\$238,900	\$246,000	\$253,400	\$261,000	\$336,100	\$346,200
	Total Leesburg Service	\$1,079,300	\$1,124,300	\$1,158,100	\$1,206,300	\$1,516,100	\$1,561,600
	Anticipated Funding Sources						
	Farebox Revenues	\$70,000	\$87,500	\$89,100	\$133,200	\$157,500	\$160,500
	State Mass Transit Fund	\$161,900	\$168,800	\$174,100	\$178,400	\$182,800	\$187,300
	Misc. Sources (e.g., Advertising)	\$16,200	\$16,900	\$17,400	\$18,100	\$22,700	\$23,400
Town of Leesburg Contribution Req'd.	\$831,200	\$851,100	\$877,500	\$876,600	\$1,153,100	\$1,190,400	
Leesburg County Funded Service	Projected Operating & Maintenance Costs						
	Fixed Route Service	\$498,300	\$513,300	\$528,700	\$544,500	\$560,900	\$577,700
	ADA Service	\$0	\$0	\$0	\$0	\$0	\$0
	Total Leesburg Service Funded by Loudoun	\$498,300	\$513,300	\$528,700	\$544,500	\$560,900	\$577,700
	Anticipated Funding Sources						
	Farebox Revenues	\$27,800	\$24,500	\$25,000	\$26,100	\$26,800	\$27,300
	State Mass Transit Fund	\$74,700	\$77,900	\$80,400	\$82,400	\$84,400	\$86,500
	Misc. Sources (e.g., Advertising)	\$7,500	\$7,700	\$7,900	\$8,200	\$8,400	\$8,700
Loudoun County Contribution Req'd.	\$388,300	\$403,200	\$415,400	\$427,800	\$441,300	\$455,200	

NOTES:

1. Annual inflation factor = 1.03
2. Initial SMTF % contribution for Loudoun Urban & Leesburg = 15.0%
3. Funding increases in SMTF based on overall funding projections for program that are shown in FY 14 SYIP.
4. Miscellaneous Sources as % of total expenses = 1.5%
5. 5311 Funding = 50% of net rural O&M costs after fare revenues.
6. Fare revenues assume a \$0.25 fixed route and \$0.50 demand response fare increase in FY 2018. No other increases assumed.
7. Route 72X private funding reflects 50% of route operating costs.
8. Leesburg County-funded service assumes continued equivalent funding of two existing routes (24 daily bus-hours) and \$20,000 contribution to Safe-T-Ride.



11. MANAGEMENT ANALYSIS

As Loudoun County and the Town of Leesburg transition to directly obtaining or providing local transit services, it is important to evaluate the most common and successful management alternatives and select the best option for Loudoun County. There are four common management options currently used in the Commonwealth of Virginia which Loudoun County can consider to provide public transit service:

1. Contract Operation
2. Managed System
3. Direct Operation
4. Independent Agency
 - With primarily direct operation
 - With primarily contracted operation

Contract Operation

Under this alternative, Loudoun County would directly procure the services of a private operator for transit service delivery. This option allows variations such as retention by the County of certain functions related to service delivery including public information and customer service, fare collection and accounting, ownership of the vehicle fleet, and even maintenance functions. Some level of retained ownership in the transit assets is typical of contract operations, for example responsibility for bus stops and shelters is often retained by the public entity. Loudoun County would develop and issue a solicitation for proposals for provision of service, evaluate proposals, negotiate with the preferred proposer, develop and execute a contract, and then administer that contract. A contract between the County and a private transportation provider would be developed and executed that would provide for services over an established period of time (usually 3 to 5 years) with specific operational, quality, and performance requirements clearly communicated. This cycle would repeat with the possibility of a different contract operator each cycle.

Contracted operation represents the most efficient approach because it replicates Loudoun County's current management model with the LC Transit commuter bus system. This County managed/contractor operated model has worked successfully for almost twenty years. Contract management functions for the local fixed route buses may differ from those required for the commuter bus, and there will be added cost and staff time required to develop the procurement document, evaluate proposals, and select and manage a transit provider.

These costs would recur with each subsequent procurement. The cost of operations by the contractor should be comparable to those associated with the current operation but will include the addition of equipment and capital costs (including buses and some storage and maintenance facility costs). There are no definitive studies that demonstrate that a contracted model is more cost effective than other service models. There are, however, significant savings in up-front and ongoing costs because there is no need to purchase equipment; provide a maintenance, storage, and operations facility; or hire and manage a staff of drivers, dispatchers, supervisors, and maintenance personnel. The contract can be drafted to identify the capital assets and functions that are to be provided by the contractor and those that will be the responsibility of the County and.

As a provision of the funding Master Agreement between the DRPT and Loudoun County and Leesburg, County and Town staff must remain responsible for grant application and administration and will be accountable to DRPT through reporting and compliance reviews.

Managed System

Under this alternative, a public service corporation would be created that would be owned by Loudoun County and the Town of Leesburg under Title 56 of the Virginia Code. This public service corporation would have a board of directors appointed by Loudoun County and the Town of Leesburg. The corporation would own all of the assets needed to operate the transit system. The public service corporation could, in turn, own a second corporation that would employ all staff or it could contract for the operation. This is essentially the model used by the Richmond transit system, Greater Richmond Transit Company (GRTC) In the case of the GRTC, a public service corporation owns a second corporation. The second tier corporation enables the transit system to avoid the need to bid services.

GRTC is a local, government-owned public service company that operates urban-suburban bus services. It uses government-funded equipment and resources. GRTC's CEO and COO are employees of a transit management company under contract to GRTC. The contract with the corporation can be maintained for a longer period than is the case with the contract option and need not be competed. In addition, the public service corporation can be a grantee for State funds.



While funding support would be from Loudoun County and Leesburg, the public service corporation would not be a County or Town agency and no County or Town department or agency would have direct responsibilities to the public service corporation. Each year the corporation would submit a budget to Loudoun County and the Town of Leesburg as well as to the State for funding. Creating the public service corporation required for this approach and then organizing, staffing and equipping such an entity would likely entail a year or more. The long term benefits would be the elimination of the need to rebid the services periodically and the potential for state funds.

Creation of a public service corporation and providing the necessary facilities and equipment would also require a substantial up-front investment that would require time to be fully amortized. Not all of the costs would necessarily need to be borne by Loudoun County or the Town of Leesburg, since some assistance from the Commonwealth may be available. However, in the short term it is unlikely such assistance can be obtained and some interim measures would be required. Given these considerations, while there may be long term cost savings possible from this approach, any savings would potentially be overwhelmed by mobilization costs.

Under this alternative, control of the system lies with a board of directors, removing direct control from Loudoun County or the Town of Leesburg. They would still retain control as the annual budget would have to be approved and there is no reason to assume it would be less compliant with requests. Still, this option entails some lessening of control.

Direct Operation

Under this alternative, Loudoun County and the Town of Leesburg would directly employ the staff needed to operate the transit service, would provide direct management and control of the service, and would own all of the required equipment and facilities necessary for that operation. Montgomery County, Maryland's Ride-On service operates under this model.

Like the managed system model, this option would, require rapid acquisition of equipment, facilities, and mobilization and training of a work force. Transit operations are often created within governmental units but direct operation is more involved than contracted service and would likely require substantially more time than is available to facilitate.

Direct operations can be managed by a single purpose department within Loudoun County or dispersed across multiple departments. Montgomery County adopted the latter approach. This eliminates the risk of duplication but lessens the control of operations between departments. For instance, maintenance of the fleet falls with one department while operation of that fleet is the responsibility of another. This division of operations can lead to coordination and accountability issues.

In many cases the governmental unit creates a single department to manage all aspects of the transit system. This can improve coordination and accountability, but results in some level of duplication since purchasing, legal services, contracting and similar administrative functions already exist in the current government organization. Hybrid approaches abound with a single department responsible for most but not all functions.

The mobilization costs and time required to implement this option make it realistically impractical for Loudoun County in the near term.

Independent Agency

Virginia law authorizes the creation of transportation districts to facilitate regional transportation solutions to problems that transcend individual localities' borders. Because Loudoun County is part of NVTA/NVTC, it cannot establish its own transit district. Service could be provided via NVTA/NVTC with the agreement of the other members.

The major difference between this option and a managed system is that the agency would be a public entity managed by a board of directors comprised of appointees from Loudoun County and the Town of Leesburg. The Potomac and Rappahannock Transportation Commission (PRTC) is an example of an independent agency. PRTC was established in 1986 to help create and oversee the Virginia Railway Express (VRE) commuter rail service and also to assume responsibility for bus service implementation as its member governments saw fit.

Creation of an independent agency allows primarily direct operation or a primarily contracted operation. In the case of PRTC, the agency has ownership of its facilities and equipment but contracts its operations.

As with Managed Systems and Direct Operations, formation of an independent agency requires substantial time and effort over and above the effort needed to contract for service. Agreements to form the agency



require negotiation and approvals. Staffing and mobilization can only occur after the structure has been approved and funding secured. In short, this option would not meet the schedule requirements of Loudoun County at this time.

An independent agency is the functional equivalent of a Managed System and, like a Managed System, can achieve cost efficiencies once it is fully mobilized. Those cost efficiencies would occur in out years as the initial investment required in equipment and facilities would be substantial.

Summary and Recommendation

Of the four management alternatives, contracting for operations is the most appropriate alternative management approach and offers the following advantages:

- It represents the proven model Loudoun County has successfully used with LC Transit
- It does not require up-front investment of time or money for equipment or facilities
- It does not require formation of a new management structure or agreements with other governmental entities
- It does not require the rapid mobilization of new staff or significant addition, training and management of new staff
- It can be accomplished within the identified timeframe, which may not be realistically achievable for the other options

By opting to contract transit operations, Loudoun County can secure transit services in a timely manner. As the initial contract period passes, it may be desirable to revisit these options in terms of a long-term strategy.



12. NEXT STEPS

To move forward with contracted operations, next steps include:

- Development of the procurement document,
- Issuance of that document and the solicitation of bids
- Evaluation of proposals
- Selection of the operator and negotiation of the contract

The procurement document will spell out the responsibilities of the contractor and Loudoun County. The following lists provide a top level overview of the roles for each party.

Contractor responsibilities:

1. Mobilization
2. Employment and supervision of personnel including supervisors, vehicle operators, dispatchers, clerical, and other support staff
3. Operations (as described in the service plan)
4. Operations training and safety programs
5. Provision of performance reports, monitoring and analyses of performance, and clerical and administrative services
6. Provision of the vehicle fleet including buses and support vehicle(s) (unless otherwise specified by Loudoun County)
7. Maintenance and condition of the fleet
8. Repairs and replacement of equipment as necessary and approved by Loudoun County
9. Scheduling and dispatching
10. Provision of fuel, lubricants, and supplies unless otherwise specified by Loudoun County
11. Insurance and bonding
12. Customer service
13. Compliance with regulations, policies, procedures, and directives

Loudoun County responsibilities:

1. Contract management and administration
2. Grant application and administration
3. Service planning
4. Scheduling direction
5. Public information

Administrative Approach

Loudoun County is currently a “grantee” of DRPT and has received grants from the Commonwealth through annual application for the LC Transit commuter bus service capital and operating funds. Due to the change in classification from rural to urban, Loudoun County and the Town of Leesburg are now the designated grantees and need to apply to DRPT to receive Commonwealth funds for fixed route service.

Commonwealth funds are distributed in part by formula, and will be in part by performance in the future. Funding is accountable and “grantees” are monitored by DRPT individually for the use and benefit of funds distributed. Often these funds require significant matching local funds. The marriage of state and local funds will require the local “grantee” to be directly responsible and accountable for the funds provided and used.

The County will remain a DRPT “grantee” and will expand application for fixed route service as well as the commuter services. The Town of Leesburg will need to apply to DRPT and will assume the responsibilities of the annual grant application process.

Various grantee /contracting options include:

- a. **Single Grantee:** Loudoun County is the sole grantee with Leesburg and Loudoun County working together to plan and fund the local bus system, or
- b. **Dual Grantees/Two Contracts:** Loudoun County and the Town of Leesburg each remain a grantee with each seeking funding, procuring a contract operator and separately planning and administering their transit operations, or
- c. **Dual Grantee/One Contract:** Loudoun County and the Town of Leesburg each remain a grantee with each seeking funding, but jointly procuring a contract operator and planning the service and Loudoun County administering the contract operation

Funding – It is almost certain that whether Leesburg and Loudoun County jointly or separately seek funding from DRPT, the level of assistance will be about the same.

Contracting – A single procurement with a single contract can potentially prevent conflicts or gaps that may occur through separate procurements or contracts. If a single contractor is selected and two contracts are created that are legally identical (except for the contract holders) and the services totally coordinated, the potential problems can be avoided.



Administration – Administration of a single contract with a single vendor by a single contract administrator is the simplest approach. Two contracts would require duplicate administrative functions, which would entail some added costs for Loudoun County and Leesburg as well as the contractor.

Recommendation:

Loudoun County and the Town of Leesburg each remain a “grantee” of DRPT to annually apply for Commonwealth grant funds for capital and operating costs in support of local fixed route bus services. The County’s procurement and resultant contract should be written to allow the Town of Leesburg the option to ride the contract.

Overview of Grant Programs Administered by DRPT

Below is a snapshot of the Grant Programs and Process for the application for Commonwealth funds through DRPT. Grant funds administered by DRPT generally provide support for capital, operating or planning expenses. Capital expenditures are long-term assets such as vehicles, transit facilities and infrastructure, machinery or heavy equipment. Operating expenditures are annual costs to support transit operations, maintenance, repairs and administrative costs. Planning expenditures are for studies of public transportation and/or Transportation Demand Management (TDM) improvements, such as service expansions or ridesharing programs.

DRPT administers eight State Aid Grant Programs:

- Operating Assistance
- Capital Assistance
- Demonstration Project Assistance
- Technical Assistance
- Public Transportation Intern Program
- TDM Operating Assistance
- Transportation Management Project Assistance
- Senior Transportation Program

A variety of grants are awarded each year. DRPT provides guidance on qualifications for grant applications and the expenses that are eligible for each category. The Public Transportation Division of DRPT administers and manages state grant programs, conducts performance

evaluations, provides technical assistance and supports more than 57 public transit systems, 49 human service providers, and 18 regional commuter assistance programs throughout the state.

The following is a timeline generally followed by DRPT for state public transportation and commuter services grants.

- Early December: DRPT announces the opening of the annual applications period
- On or About February 1: Applications are due for all state aid programs
- March/April: DRPT evaluates applications and requests any additional information needed from applicants
- April/May: DRPT completes evaluation of applications and develops the public transportation and commuter services portion of the draft Six-Year Improvement Plan
- June: Commonwealth Transportation Board adopts the Six-Year Improvement Plan. DRPT notifies applicants of approved grants and funding levels
- July 1: Fiscal Year begins, contracts executed and payments initiated

Branding and Passenger Information

With the institution of a new contract and revisions to the local bus service, it is an opportune time to consider updating the brand of the local bus service. It is important to brand the local service so that it is recognized by the public as a County and Town service, not the operator’s brand. This allows the County and Town to take on a sense of ownership for the service. One brand may be established with a single procurement or separate procurements for the County and the Town.

Since the fleet to be used for the local bus service will presumably be dedicated to Loudoun County and Leesburg, the branding can be reinforced through the creation of a branded logo that will allow differentiation from private shuttles, enhance recognition, and clearly communicate the name of the service. Additional branding research is recommended. The name of the service could be as simple as the Loudoun County and Leesburg Local Bus System but peer systems within the region have opted for unique names including DASH (Alexandria), Ride-On (Montgomery County MD), The Bus



(Prince George's County MD), Fairfax Connector, ART (Arlington County) and The Circulator (Washington, D.C.).

Passenger information refers to the provision of information to the public about the location of bus stops, destinations, fare levels, and service schedules. Currently this information can be difficult to locate. Therefore it is recommended that a single site be developed (assuming the system will be operated as a single coordinated operation) that is accessible on the Loudoun County web site. Content will include:

1. Routes and schedules
2. Fare levels and options
3. Usage rules and tips
4. A system level map Alerts and announcements

It would also be beneficial to have the local bus system represented in Google Maps. This requires providing the coded network, schedule, and stop locations to Google. This is a significant exercise but it will enable users to use the information when planning trips on the Loudoun County local bus system, and use the system in conjunction with adjacent transit systems such as the Fairfax Connector and WMATA. In short, it would provide valuable trip planning capabilities that are currently unavailable to users.



13. EXECUTIVE SUMMARY OF RECOMMENDATIONS

This document includes recommendations to maximize operation of the local bus system. This analysis considered the period of time beginning July 1, 2014 and includes the six year window of the Transit Development Plan.

SERVICE RECOMMENDATIONS

1. Maximize route potential by eliminating segments where the bus service cannot stop because of the road facility.
2. Ensure routes have good travel times by reducing or eliminating long one-way loops which tend to deteriorate service efficiency and discourage ridership.
3. Create on-demand service in currently under-served or unserved communities.
4. Implement a pulsed service operation plan to support timed transfers and eliminate extended layovers between buses.
5. Create four local and five regional transit hubs to maximize rider options, accessibility, and connectivity.
6. Implement modified routes identified in this document for FY2015 through FY2020 to improve service that supports the transit hub and pulse service concepts and efficient service to County destinations and Metrorail connections.
7. Use buses with a seated passenger capacity of approximately 30 passengers for Routes 70 (7 to 7 on 7) and 84 (Dulles Town Center to Wiehle-Reston East Metrorail) and smaller buses (15-20 passenger seat buses) for all other fixed routes and demand response services.
8. Create a passenger information web site on the Loudoun County and Town of Leesburg web pages to promote the service and inform potential users of service related information.
9. Develop a new unified brand for the local bus service that is unique to Loudoun County and Leesburg, including development of signage, graphics, and a logo to help users recognize the service.

BUDGET AND FUNDING RECOMMENDATIONS

1. Maintain the current \$1.00 base fare and introduce day passes at \$2.00 per day and monthly passes at \$2.00 per working day to minimize the cost of transfers. Add senior and disabled off-peak discounted passes.
2. Loudoun County will apply to DRPT as a grantee for operating assistance to support the local bus service.
3. The Town of Leesburg will continue to apply to DRPT as a grantee for operating assistance for its local bus service, separate from Loudoun County.
4. The County's procurement and resultant contract should be written to allow the Town of Leesburg the option to ride the contract.
5. Explore options to secure additional transit funding through advertising inside the buses, at bus shelters and transit hubs, and on the route/schedule brochures.
6. Seek proffers through the land development process for transit hub sites and transit infrastructure.
7. Pursue private participation and funding in support of transit operations.
8. Pursue grants to acquire buses in the future

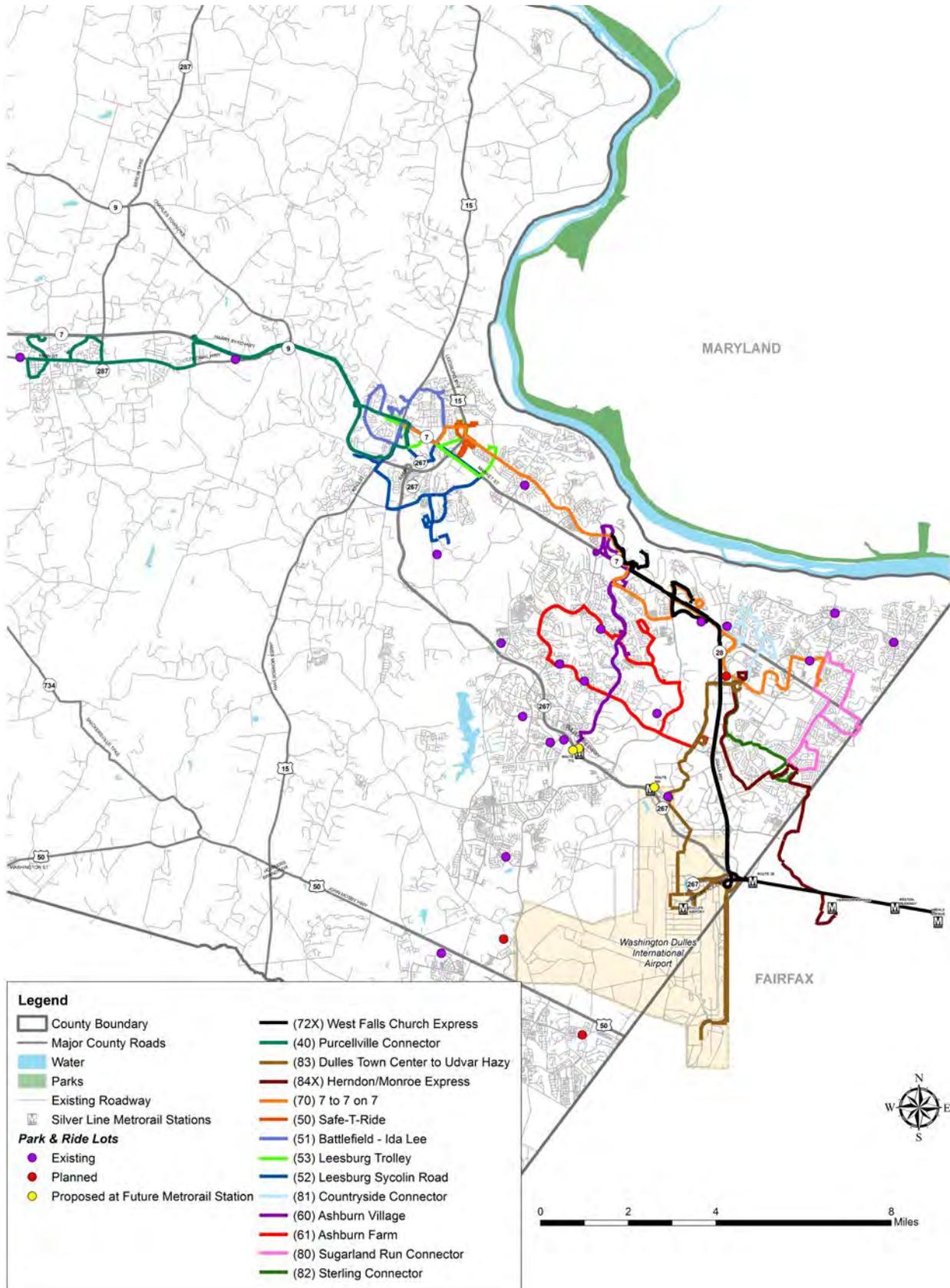


APPENDIX A

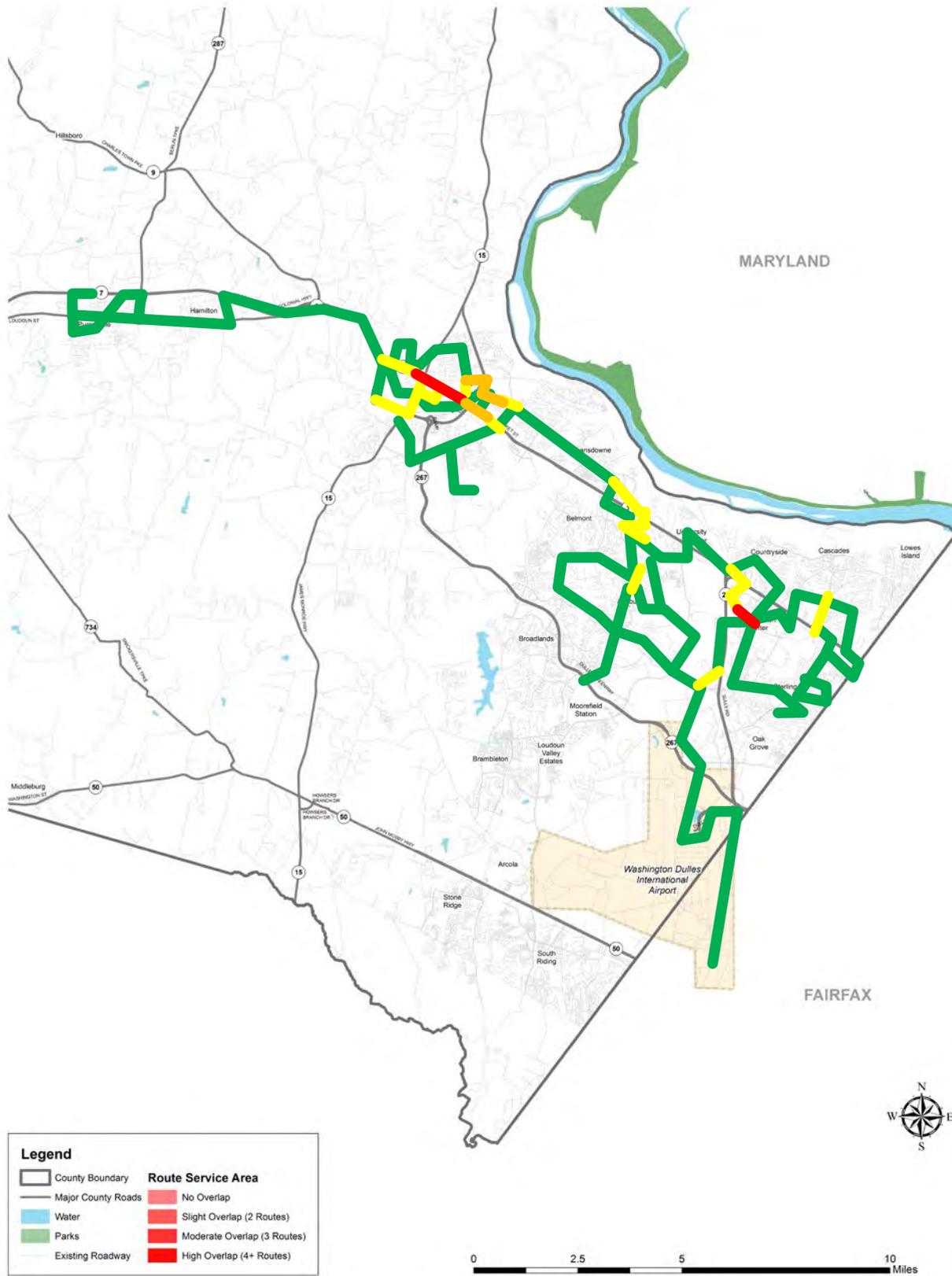
Study Area Maps



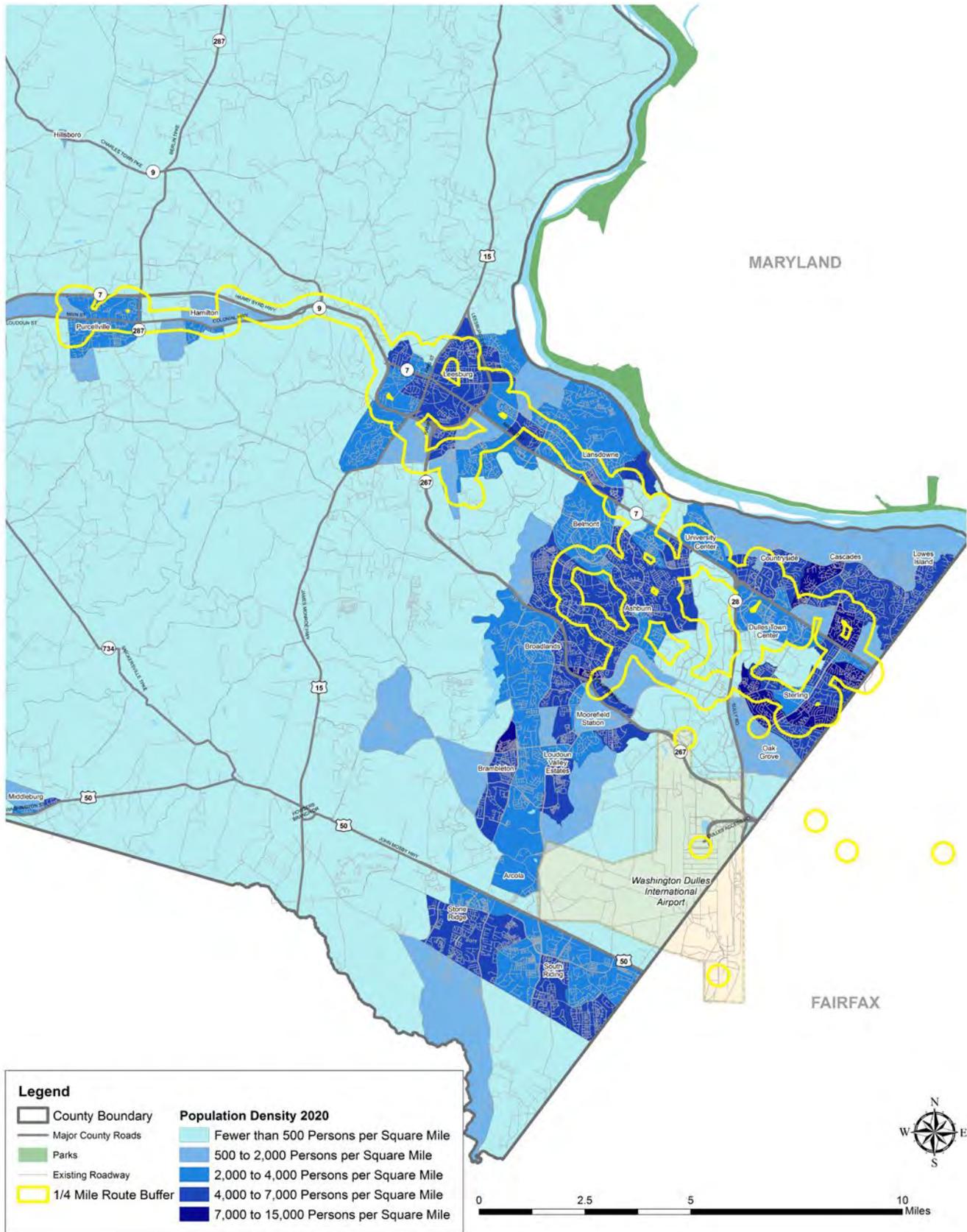
EXISTING LOCAL FIXED-ROUTES



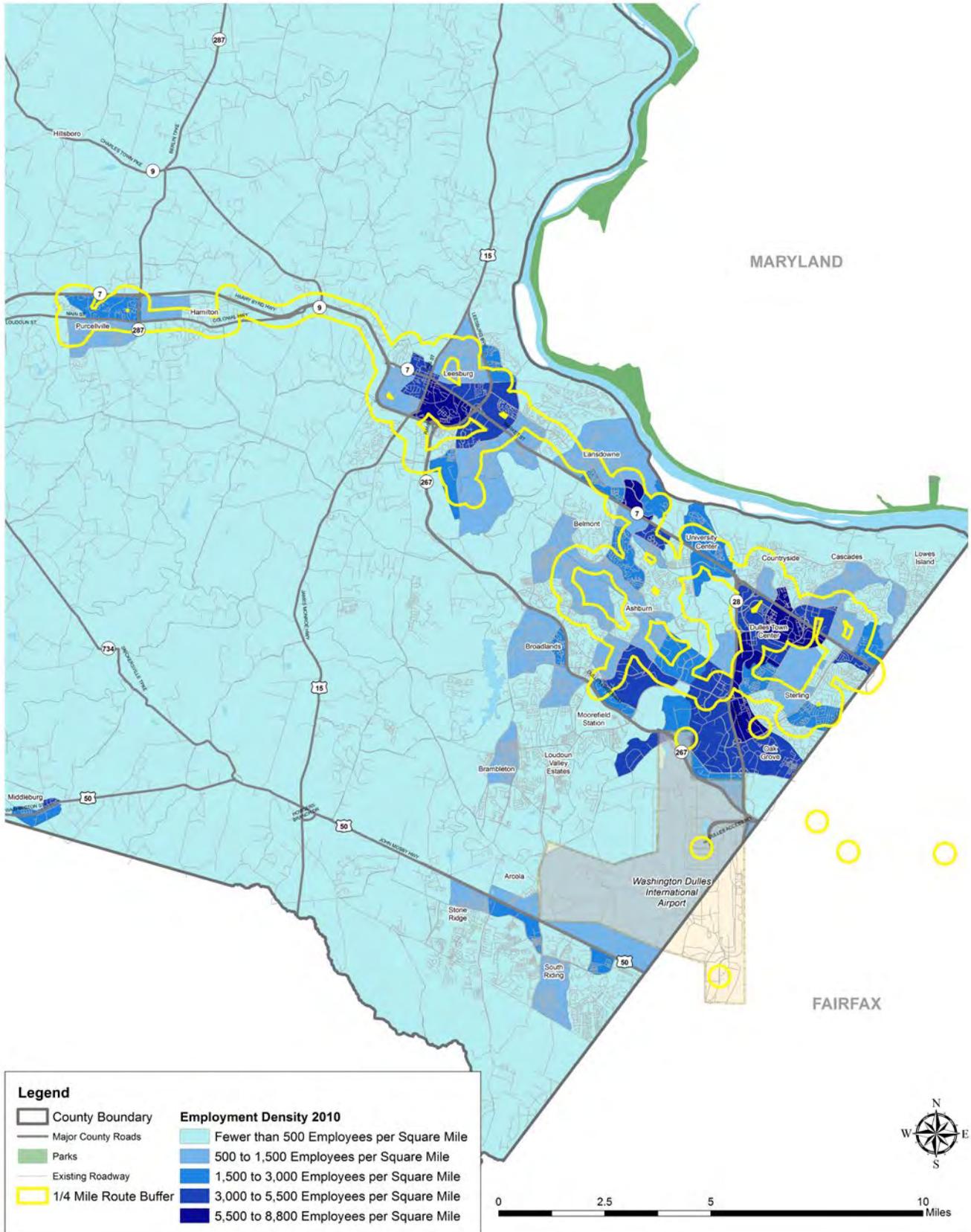
EXISTING LOCAL FIXED-ROUTE TRANSIT SERVICE COVERAGE



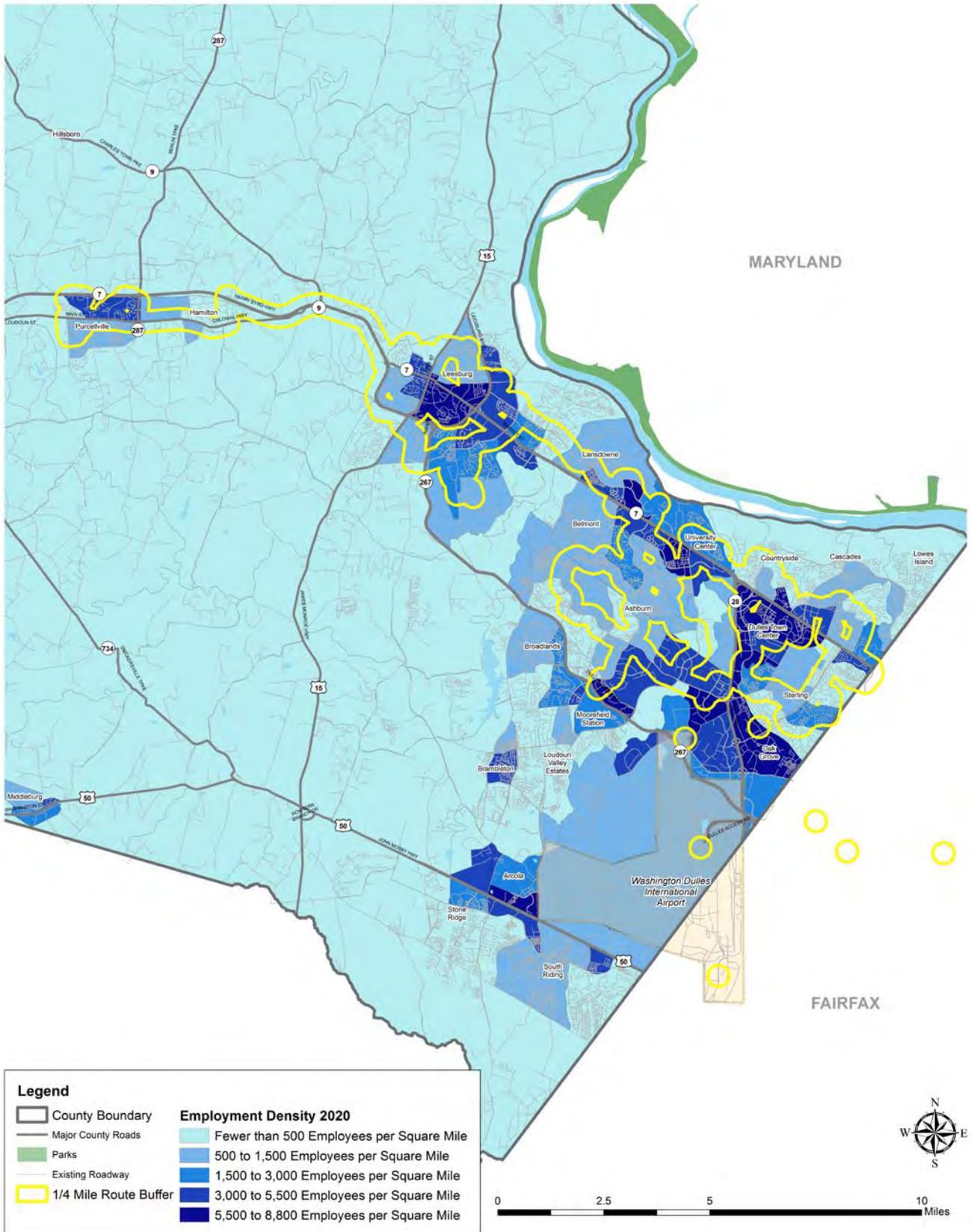
2020 POPULATION DENSITY WITH QUARTER-MILE BUFFER



2010 EMPLOYMENT DENSITY WITH QUARTER-MILE BUFFER



2020 EMPLOYMENT DENSITY WITH QUARTER-MILE BUFFER



APPENDIX B

Route Profiles



Appendix B Table B-1. Loudoun County Transit Study – Factors for Local Bus Routes

Factors	Source/Approach
Service Span & Frequency	Local bus service map
Outbound/Inbound Trips	Local bus service map
Route Length (roundtrip)	Calculated using ArcGIS to measure the route as identified in the shape file provided by Loudoun County
Deadhead Miles	Non-revenue miles calculated between VRT maintenance facility (109 N. Bailey Lane Purcellville, VA) and route.
Connections	Local bus service map
Run Time	Local bus service map
Buses Required to Operate	Determined based on schedule, service span, and frequency derived from the local bus service map
Average Weekday Ridership	Ridership data provided by VRT for the week of March 18-22, 2013 Note: When weekday data was not available, March 2013 monthly ridership and days of service was used to determine weekday ridership. VRT provided monthly ridership data.
Annualization Factor (A.F.)	For most routes, annualization factor reflects full service each weekday and no service on weekends and holidays: [365 – 104 (Sat/Sun) – 10 (Federal Holidays) = 251] Route 83 (Dulles Town Center) operates weekend service for half the day on Saturday and Sunday. The following factor approach was used: [365 – 104 * 0.5 (Sat/Sun) – 10 (Federal Holidays) = 303] Route 50 (Safe-T-Ride) and Route 53 (Leesburg Trolley) operates weekend service for three-quarters of the day on Saturday and Sunday. The following factor approach was used: [365 – 104 * 0.25 (Sat/Sun) – 10 (Federal Holidays) = 329]
Annual Ridership	Initially calculated using annualization factor and average weekday ridership for each route Calculated difference between the system annual ridership with annualization factor and the historic data provided by VRT (May 2012 – April 2013) [Difference = 65,286 passengers] Ridership difference added to the calculated ridership proportionately up to the document historic annual ridership value.
Annual Route Miles	(AF) * (Route Length) * (Total Number of Round Trips)
Annual Revenue Hours	(AF) * (Total Weekday Hours)
Passengers per Hour	(Annual Ridership) / (Annual Revenue Hours)
Passengers per Mile	(Annual Ridership) / (Annual Route Miles)
Annual Operating Cost	(Annual Revenue Hours) * (\$69.00) \$69.00 hourly rate documented in March 6, 2013, FY 2011 VRT Budget Enhancement Memo.
Annual Cost per Mile	(Annual Operating Cost) / (Annual Route Miles)
Annual Cost per Hour	(Annual Operating Cost) / (Annual Revenue Hours)
Annual Cost per Passenger	(Annual Operating Cost) / (Annual Ridership)



Appendix B Table B-1. Loudoun County Transit Study – Factors for Local Bus Routes

Factors	Source/Approach
Estimated Effective Farebox Rate	<p>Effective Fare Rate = \$0.29</p> <p>Calculation based on annual systemwide farebox recovery and ridership for local fixed routes with fare. This estimated rate does not include routes without fare, on-demand services, or non-paying riders.</p>
Estimated Annual Farebox Recovery	<p>(Annual Ridership) * (Effective Farebox Rate)</p>
Demographic Data	<p>Source: 2011 American Community Survey & 2010 Metropolitan Washington Council of Governments (MWCOG)</p> <p>TAZ data from MWCOG was used to determine population and employees within a quarter-mile buffer of each route. Quarter-mile buffer was not applied to routes with limited stops—Route 72X (West Falls Church Express), Route 84X (Herndon Express), and Route 83 (Dulles Town Center). Instead, a quarter-mile buffer was applied to the time-schedule stops.</p> <p>Census tract data from ACS was used to determine the proportions of households with income less than \$35,000 per year; households with income less than \$50,000 per year; households without a vehicle; and persons over age of 65. The proportion was applied to TAZ data population.</p>

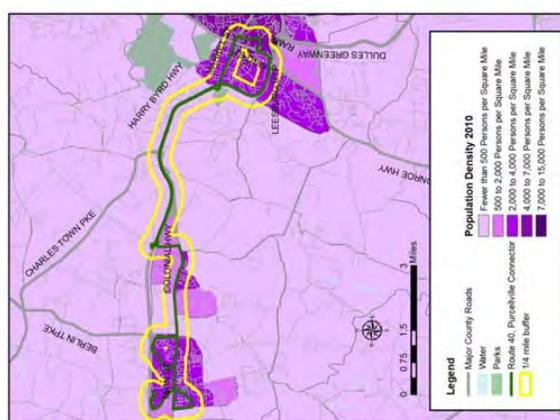
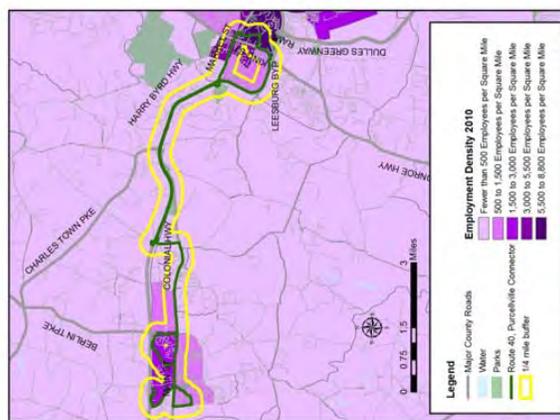
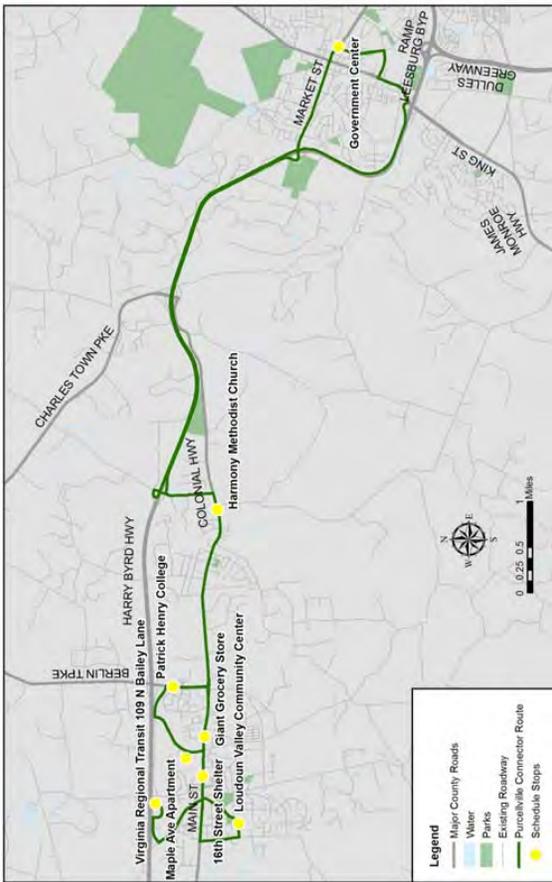




Route 40: Purcellville Connector

Major Generators Served	
Government Center, Shoppes of Main & Maple, Patrick Henry College, Loudoun Valley Community Center	
Weekday Service	
Hours of Operation	7:00 AM - 7:00 PM
Service Hours	12
Outbound Trips	12
Inbound Trips	12
Weekday Average Frequency	
Peak	60 minutes
Midday	60 minutes
Evening	60 minutes
Route Characteristics	
Length	26.8 miles (WB & EB)
Run Time	30 minutes WB/30 minutes EB
Scheduled Average Speed	26.8 MPH
Deadhead Miles	0.0 miles
Connections	Routes 70, 51, 53, and 52
Buses Required to Operate	1
Daily Ridership	81 boardings
Annual Ridership	22,620 boardings
Annual Revenue Miles	80,722 miles
Annual Revenue Hours	3,012 hours
Boardings per Revenue Hour	8 boardings/hour
Boardings per Revenue Mile	1 boarding/mile
Operating Costs	
Annualization Factor	251
Annual Cost Per Revenue Mile	\$2.57 per mile
Annual Cost Per Revenue Hour	\$69.00 per hour
Annual Cost Per Boarding	\$9.19 per boarding
2010 Demographics within 1/4 Mile Buffer of Route	
Jobs	8,015
Population	13,325
Total Households	4,466
Households with Incomes of Less than \$35,000/yr	744 / 16.7%
Households with Incomes of Less than \$50,000/yr	1,131 / 25.3%
Households without a Vehicle	170 / 3.8%
Persons Age 65 and Older	1,007 / 7.6%

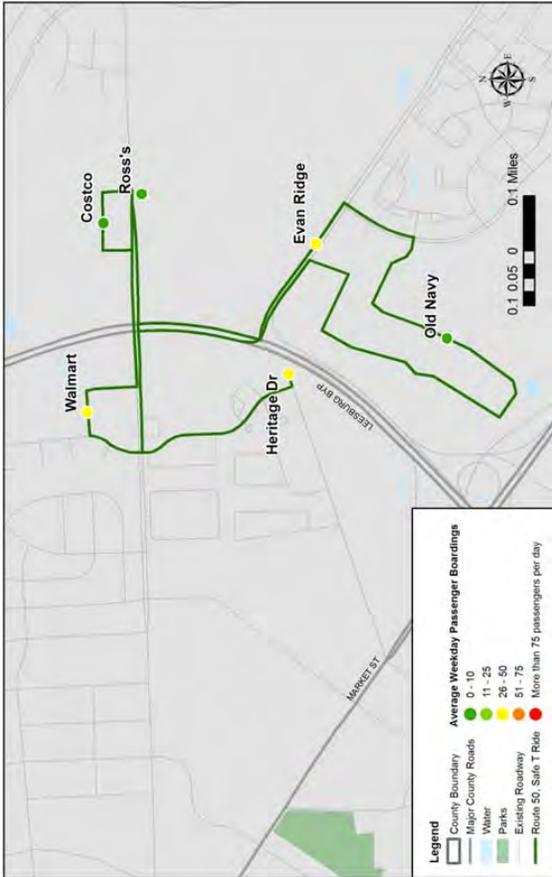
Note: 2011 American Community Survey (ACS) and 2010 MWCOG data were used to develop demographic measures. ACS data was provided at the Census Tract level and a distribution of tract level data to the smaller TAZ units assumed level distribution across the entire census tract. If the distribution is significantly clustered in a Census Tract, a given TAZ could have more or fewer people (jobs, etc.) than the tract level average.



Route 50: Safe T Ride

Major Generators Served	
Leesburg Corner Premium Outlets, Shoppers Food Warehouse, Costco, Target, Walmart	
Weekday Service	
Hours of Operation	7:00 AM - 7:00 PM
Service Hours	12
Outbound Trips	24
Inbound Trips	24
Weekend Service	
Hours of Operation	9:00 AM - 6:00 PM (Saturday/Sunday)
Service Hours	9
Outbound Trips	18
Inbound Trips	18
Weekday/Weekend Average Frequency	
Peak	30 minutes
Midday	30 minutes
Evening	30 minutes
Route Characteristics	
Length	4.0 mile loop
Run Time	25 minutes
Scheduled Average Speed	9.6 MPH
Deadhead Miles	21.6 miles
Buses Required to Operate	1
Daily Ridership (Average Weekday)	129 boardings
Daily Ridership (Average Weekend)	99 boardings
Annual Ridership	47,219 boardings
Annual Revenue Miles	31,584 miles
Annual Revenue Hours	3,948 hours
Boardings per Revenue Hour	12 boardings/hour
Boardings per Revenue Mile	2 boardings/mile
Operating Costs	
Annualization Factor	329
Annual Cost Per Revenue Mile	\$8.63 per mile
Annual Cost Per Revenue Hour	\$69.00 per hour
Annual Cost Per Boarding	\$5.77 per boarding
2010 Demographics within 1/4 Mile Buffer of Route	
Jobs	3,242
Population	3,993
Total Households	1,246
Households with Incomes of Less than \$35,000/yr	272 / 21.8%
Households with Incomes of Less than \$50,000/yr	413 / 33.1%
Households without a Vehicle	40 / 3.2%
Persons Age 65 and Older	142 / 3.6%

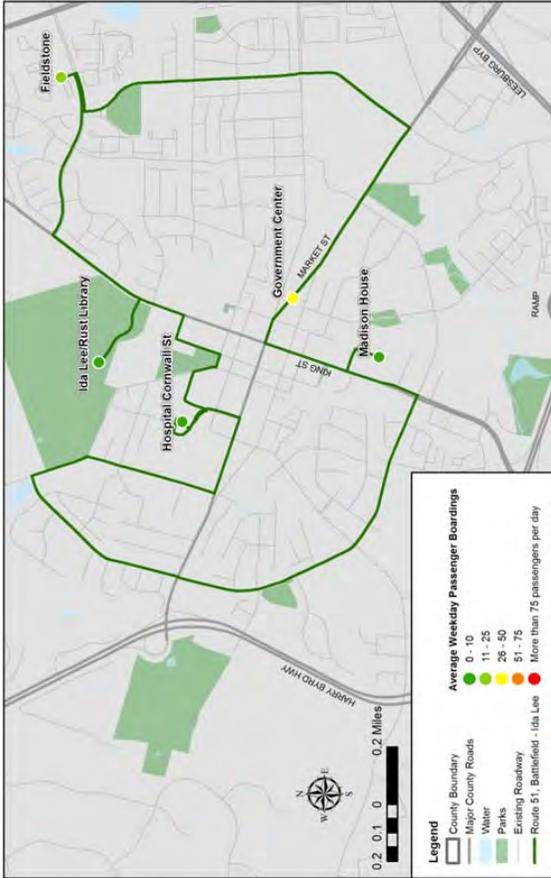
Note: 2011 American Community Survey (ACS) and 2010 WWCOC data were used to develop demographic measures. ACS data was provided at the Census Tract level and a distribution of tract level data to the smaller TAZ units assumed level distribution across the entire census tract. If the distribution is significantly clustered in a Census Tract, a given TAZ could have more or fewer people (jobs, etc.) than the tract level average.



Route 51: Battlefield – Ida Lee

Major Generators Served	
Government Center, Leesburg Plaza, Exeter Shopping Center, Ida Lee Park Recreation Center, Loudoun Community Health Center, Virginia Village Shopping Center	
Weekday Service	
Hours of Operation	7:00 AM - 7:00 PM
Service Hours	12
Outbound Trips	16
Inbound Trips	16
Weekday Average Frequency	
Peak	45 minutes
Midday	45 minutes
Evening	45 minutes
Route Characteristics	
Length	8.2 miles
Run Time	40 minutes
Scheduled Average Speed	12.3 MPH
Deadhead Miles	19.6 miles
Connections	Routes 53, 52, 40, and 70
Buses Required to Operate	1
Daily Ridership	65 boardings
Annual Ridership	18,152 boardings
Annual Revenue Miles	24,698 miles
Annual Revenue Hours	3,012 hours
Boardings per Revenue Hour	7 boardings/hour
Boardings per Revenue Mile	1 boarding/mile
Operating Costs	
Annualization Factor	251
Annual Cost Per Revenue Mile	\$8.41 per mile
Annual Cost Per Revenue Hour	\$69.00 per hour
Annual Cost Per Boarding	\$11.45 per boarding
2010 Demographics within 1/4 Mile Buffer of Route	
Jobs	7,495
Population	13,261
Total Households	4,394
Households with Incomes of Less than \$35,000/yr	810 / 18.4%
Households with Incomes of Less than \$50,000/yr	1,249 / 28.4%
Households without a Vehicle	179 / 4.1%
Persons Age 65 and Older	744 / 5.6%

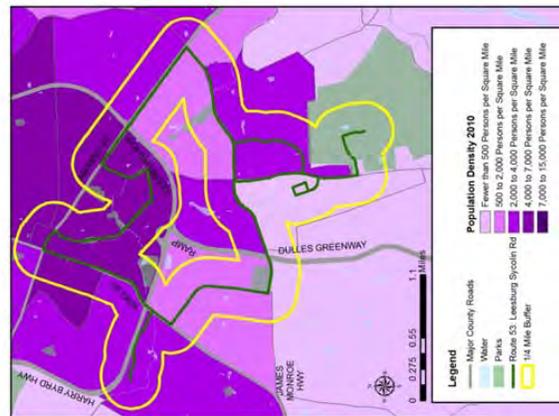
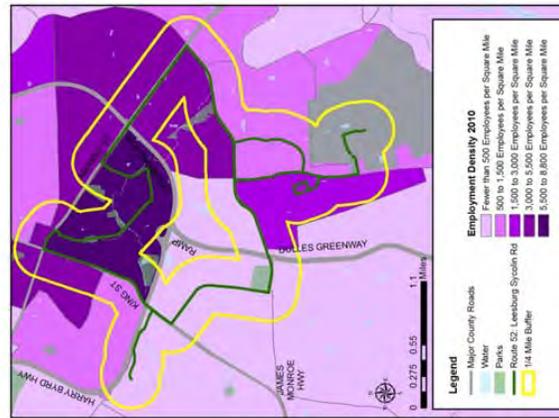
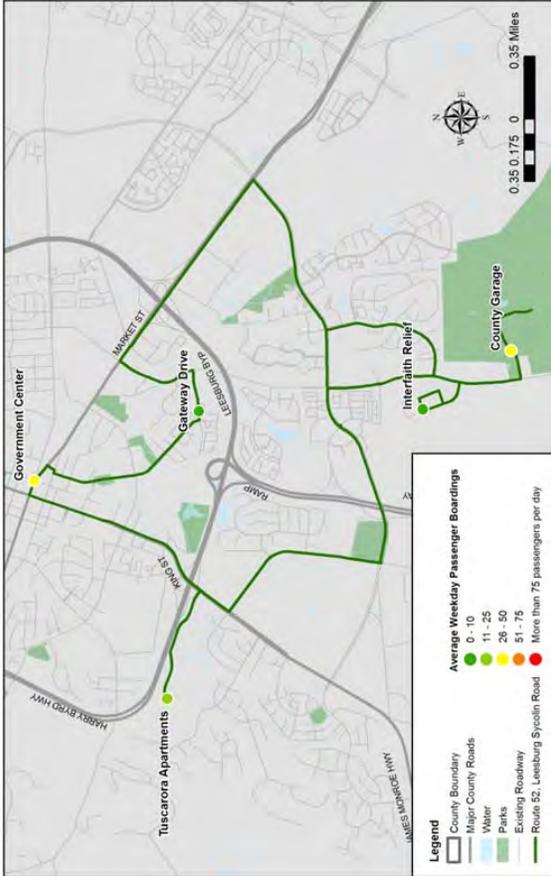
Note: 2011 American Community Survey (ACS) and 2010 MWCOG data were used to develop demographic measures. ACS data was provided at the Census Tract level and a distribution of tract level data to the smaller TAZ units assumed level distribution across the entire census tract. If the distribution is significantly clustered in a Census Tract, a given TAZ could have more or fewer people (jobs, etc.) than the tract level average.



Route 52: Leesburg Sycolin Road

Major Generators Served	
Virginia Village Shopping Center, Government Center, Leesburg Plaza	
Weekday Service	
Hours of Operation	7:00 AM - 7:00 PM
Service Hours	12
Outbound Trips	16
Inbound Trips	16
Weekday Average Frequency	
Peak	45 minutes
Midday	45 minutes
Evening	45 minutes
Route Characteristics	
Length	12.0 miles
Run Time	32 minutes
Scheduled Average Speed	22.5 MPH
Deadhead Miles	19.2 miles
Connections	Routes 51, 53, 40, and 70; Leesburg Park and Ride (upon request)
Buses Required to Operate	1
Daily Ridership	100 boardings
Annual Ridership	27,926 boardings
Annual Revenue Miles	36,144 miles
Annual Revenue Hours	3,012 hours
Boardings per Revenue Hour	10 boardings/hour
Boardings per Revenue Mile	1 boarding/mile
Operating Costs	
Annualization Factor	251
Annual Cost Per Revenue Mile	\$5.75 per mile
Annual Cost Per Revenue Hour	\$69.00 per hour
Annual Cost Per Boarding	\$7.44 per boarding
2010 Demographics within 1/4 Mile Buffer of Route	
Jobs	11,801
Population	12,993
Total Households	4,340
Households with Incomes of Less than \$35,000/yr	921 / 21.2%
Households with Incomes of Less than \$50,000/yr	1,381 / 31.8%
Households without a Vehicle	137 / 3.2%
Persons Age 65 and Older	649 / 5.0%

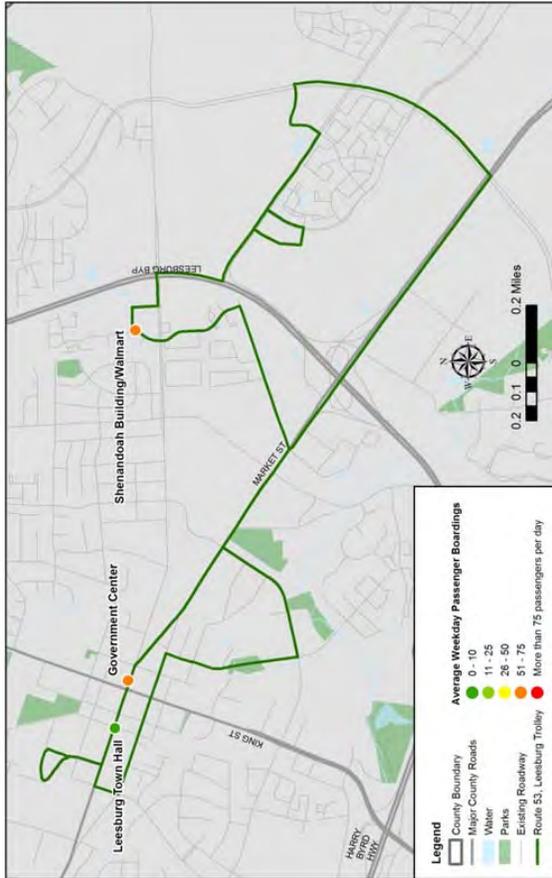
Note: 2011 American Community Survey (ACS) and 2010 MWCOG data were used to develop demographic measures. ACS data was provided at the Census Tract level and a distribution of tract level data to the smaller TAZ units assumed level distribution across the entire census tract. If the distribution is significantly clustered in a Census Tract, a given TAZ could have more or fewer people (jobs, etc.) than the tract level average.



Route 53: Leesburg Trolley

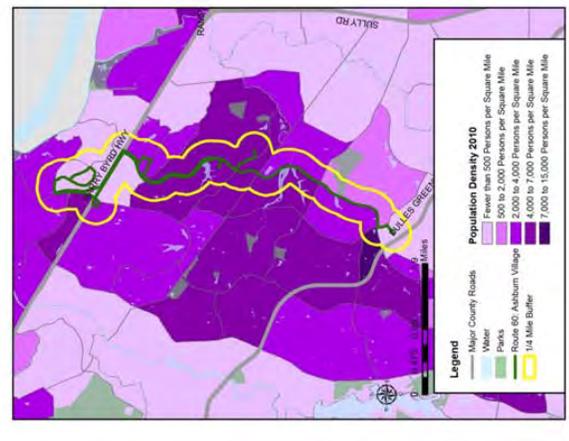
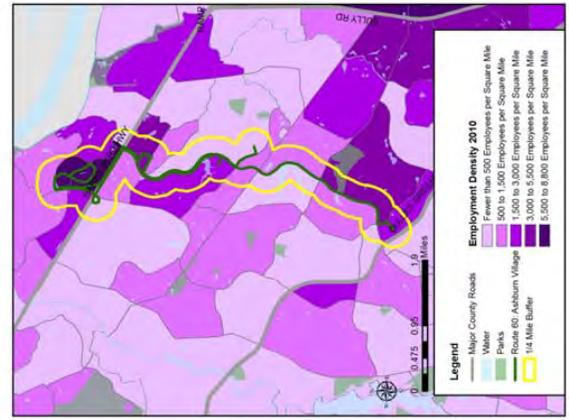
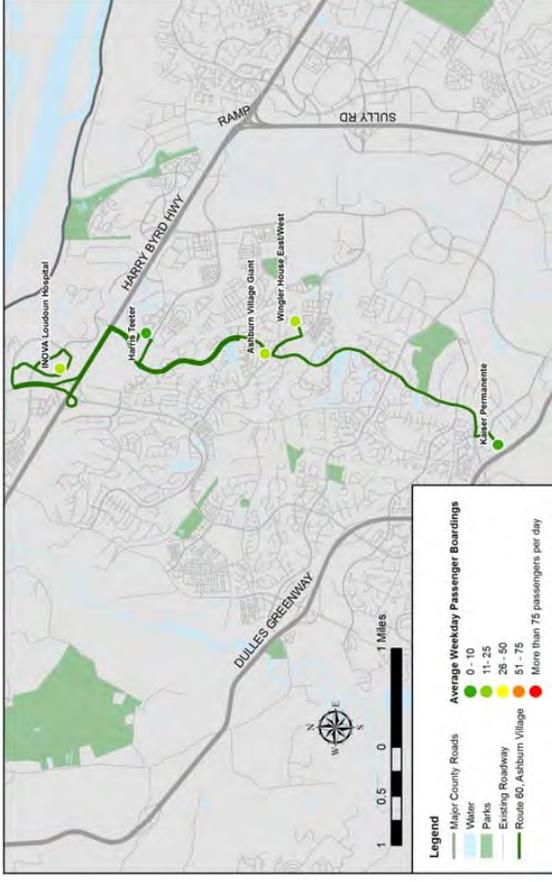
Major Generators Served	
Government Center, Leesburg Town Hall, Walmart, Leesburg Plaza, Leesburg Corner Premium Outlets	
Weekday Service	
Hours of Operation	7:00 AM - 7:00 PM
Service Hours	12
Outbound Trips	16
Inbound Trips	16
Weekend Service	
Hours of Operation	10:00 AM – 9:00 PM (Saturday) 12:15 PM – 6:15 PM (Sunday)
Service Hours	11 (Saturday) / 6 (Sunday)
Outbound Trips	15 (Saturday) / 8 (Sunday)
Inbound Trips	15 (Saturday) / 8 (Sunday)
Weekday/Weekend Average Frequency	
Peak	45 minutes
Midday	45 minutes
Evening	45 minutes
Route Characteristics	
Length	8.3 mile
Run Time	38 minutes
Scheduled Average Speed	13.1 MPH
Deadhead Miles	18.8 miles
Routes Required to Operate	1
Connections	Routes 51, 52, 40, and 70
Daily Ridership (Average Weekday)	114 boardings
Daily Ridership (Average Weekend)	72 boardings
Annual Ridership	41,728 boardings
Annual Revenue Miles	43,691 miles
Annual Revenue Hours	3,948 hours
Boardings per Revenue Hour	11 boardings/hour
Boardings per Revenue Mile	1 boarding/mile
Operating Costs	
Annualization Factor	329
Annual Cost Per Revenue Mile	\$6.23 per mile
Annual Cost Per Revenue Hour	\$69.00 per hour
Annual Cost Per Boarding	\$6.53 per boarding
2010 Demographics within 1/4 Mile Buffer of Route	
Jobs	11,064
Population	11,278
Total Households	3,652
Households with Incomes of Less than \$35,000/yr	969 / 19.0%
Households with Incomes of Less than \$50,000/yr	1,428 / 39.1%
Households without a Vehicle	138 / 3.8%
Persons Age 65 and Older	477 / 4.2%

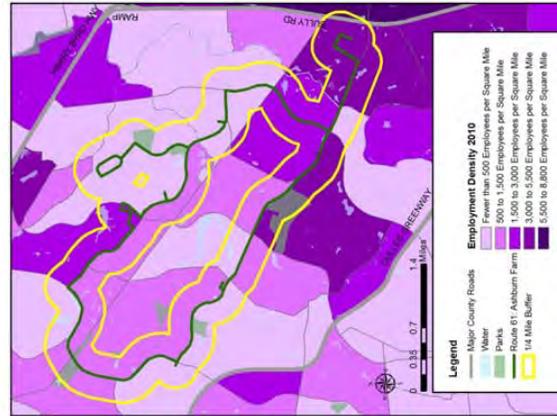
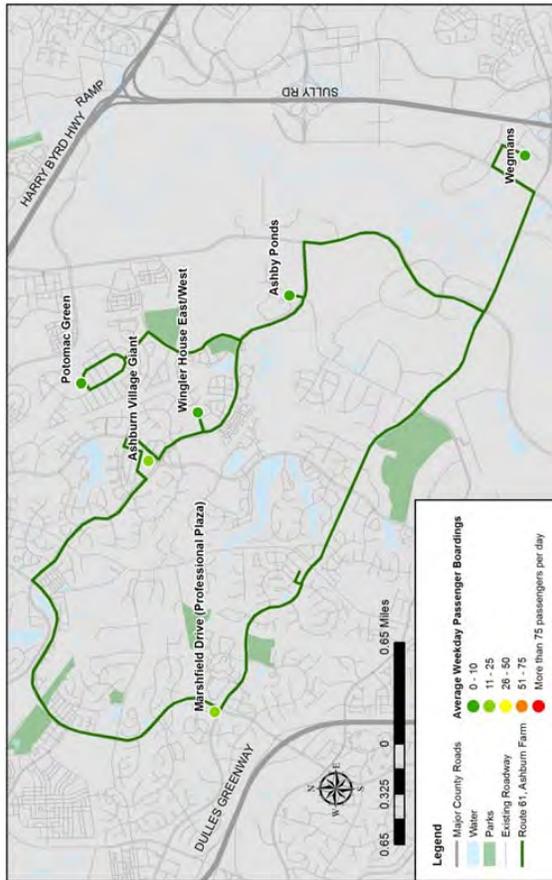
note: 2011 American Community Survey (ACS) and 2010 WWCOC data were used to develop demographic measures. ACS data was provided at the Census Tract level and a distribution of tract level data to the smaller TAZ units assumed level distribution across the entire census tract. If the distribution is significantly clustered in a Census Tract, a given TAZ could have more or fewer people (jobs, etc.) than the tract level average.



Route 60: Ashburn Village	
Major Generators Served	
Loudoun Hospital, Ashbrook Common Shopping Center, Ashburn Village Shopping Center, Wingler House Apartments, Pipeline Plaza, Shoppes at Ryan Park	
Weekday Service	
Hours of Operation	7:00 AM - 7:00 PM
Service Hours	12
Outbound Trips	12
Inbound Trips	12
Weekday Average Frequency	
Peak	60 minutes
Midday	60 minutes
Evening	60 minutes
Route Characteristics	
Length	15.5 miles
Run Time	52 minutes
Scheduled Average Speed	17.9 MPH
Deadhead Miles	38.4 miles
Connections	Routes 61, 70, 72X
Buses Required to Operate	1
Daily Ridership	47 boardings
Annual Ridership	13,125 boardings
Annual Revenue Miles	46,686 miles
Annual Revenue Hours	3,012 hours
Boardings per Revenue Hour	5 boardings/hour
Boardings per Revenue Mile	1 boarding/mile
Operating Costs	
Annualization Factor	251
Annual Cost Per Revenue Mile	\$4.45 per mile
Annual Cost Per Revenue Hour	\$69.00 per hour
Annual Cost Per Boarding	\$15.83 per boarding
2010 Demographics within 1/4 Mile Buffer of Route	
Jobs	7,763
Population	11,798
Total Households	4,136
Households with Incomes of Less than \$35,000/yr	379 / 9.2%
Households with Incomes of Less than \$50,000/yr	716 / 17.3%
Households without a Vehicle	151 / 3.7%
Persons Age 65 and Older	1,075 / 9.1%

Note: 2011 American Community Survey (ACS) and 2010 MWCOG data were used to develop demographic measures. ACS data was provided at the Census Tract level and a distribution of tract level data to the smaller TAZ units assumed level distribution across the entire census tract. If the distribution is significantly clustered in a Census Tract, a given TAZ could have more or fewer people (jobs, etc.) than the tract level average.





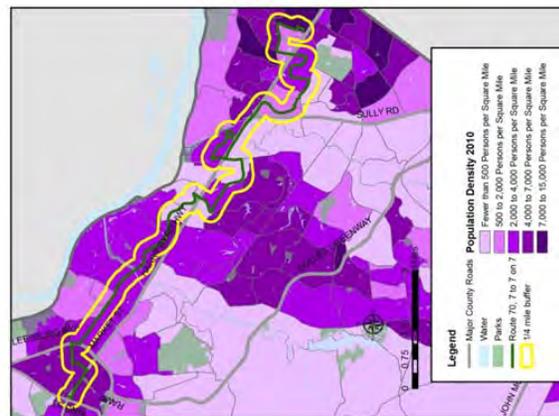
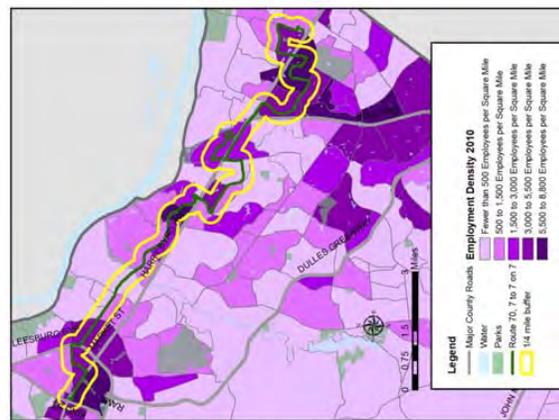
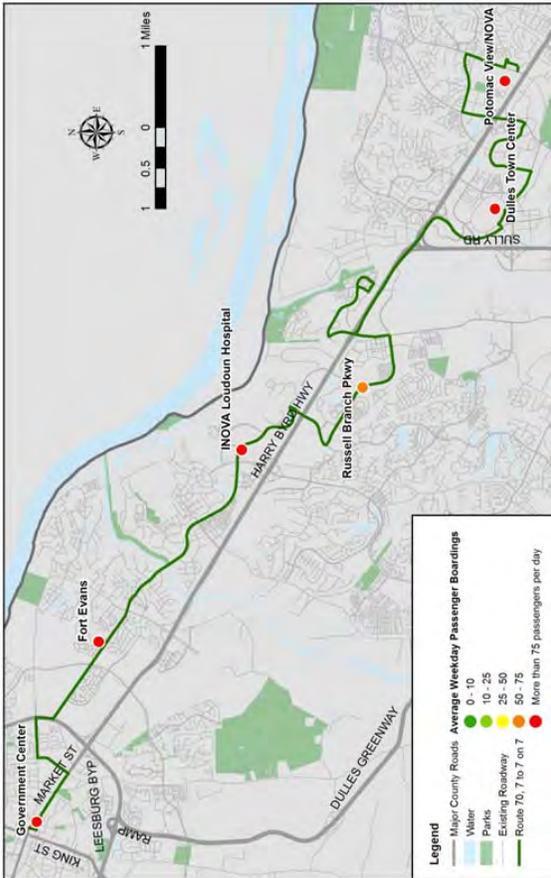
Route 61: Ashburn Farm	
Major Generators Served	
Dulles 28 Center, Ashburn Village Shopping Center, Ashburn Farm Market Center, Ashburn Farm Village Center, Pipeline Plaza	
Weekday Service	
Hours of Operation	7:30 AM - 7:30 PM
Service Hours	12
Outbound Trips	12
Inbound Trips	12
Weekday Average Frequency	
Peak	60 minutes
Midday	60 minutes
Evening	60 minutes
Route Characteristics	
Length	13.3 miles
Run Time	45 minutes
Scheduled Average Speed	17.7 MPH
Deadhead Miles	45.2 miles
Connections	Routes 83 and 60
Buses Required to Operate	1
Daily Ridership	42 boardings
Annual Ridership	11,729 boardings
Annual Revenue Miles	40,060 miles
Annual Revenue Hours	3,012 hours
Boardings per Revenue Hour	4 boardings/hour
Boardings per Revenue Mile	1 boarding/mile
Operating Costs	
Annualization Factor	251
Annual Cost Per Revenue Mile	\$5.19 per mile
Annual Cost Per Revenue Hour	\$69.00 per hour
Annual Cost Per Boarding	\$17.72 per boarding
2010 Demographics within 1/4 Mile Buffer of Route	
Jobs	8,623
Population	19,076
Total Households	6,535
Households with Incomes of Less than \$35,000/yr	640 / 9.8%
Households with Incomes of Less than \$50,000/yr	1,033 / 15.8%
Households without a Vehicle	268 / 4.1%
Persons Age 65 and Older	1,455 / 7.6%

Note: 2011 American Community Survey (ACS) and 2010 MWCOG data were used to develop demographic measures. ACS data was provided at the Census Tract level and a distribution of tract level data to the smaller TAZ units assumed level distribution across the entire census tract. If the distribution is significantly clustered in a Census Tract, a given TAZ could have more or fewer people (jobs, etc.) than the tract level average.

Route 70: 7 to 7 on 7

Major Generators Served	
Loudoun Hospital, Dulles Town Center, Northern Virginia Community College, Government Center	
Weekday Service	
Hours of Operation	7:00 AM – 10:00 PM
Service Hours	15
Outbound Trips	27
Inbound Trips	27
Weekday Average Frequency	
Peak	30 minutes
Midday	30 minutes
Evening	60 minutes (7:00 PM – 10:00 PM)
Route Characteristics	
Length	19.9 miles WB / 19.9 miles EB
Run Time	58 minutes WB / 58 minutes EB
Scheduled Average Speed	20.6 MPH WB/20.6 MPH EB
Deadhead Miles	107.8 miles (4 buses)
Connections	Routes 40, 60, 72X, 80, 81, 82, 83, and 84X
Buses Required to Operate	4
Daily Ridership	653 boardings
Annual Ridership	182,355 boardings
Annual Revenue Miles	269,725 miles
Annual Revenue Hours	13,554 hours
Boardings per Revenue Hour	14 boardings/hour
Boardings per Revenue Mile	1 boarding/mile
Operating Costs	
Annualization Factor	251
Annual Cost Per Revenue Mile	\$3.47 per mile
Annual Cost Per Revenue Hour	\$69.00 per hour
Annual Cost Per Boarding	\$5.13 per boarding
2010 Demographics within 1/4 Mile Buffer of Route	
Jobs	25,968
Population	24,146
Total Households	8,452
Households with Incomes of Less than \$35,000/yr	1,095 / 13.0%
Households with Incomes of Less than \$50,000/yr	1,869 / 22.1%
Households without a Vehicle	227 / 2.7%
Persons Age 65 and Older	1,081 / 4.5%

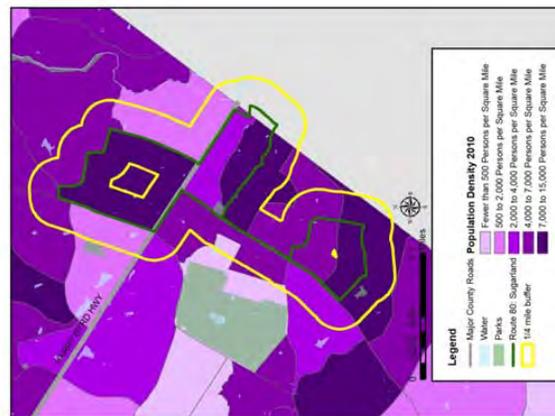
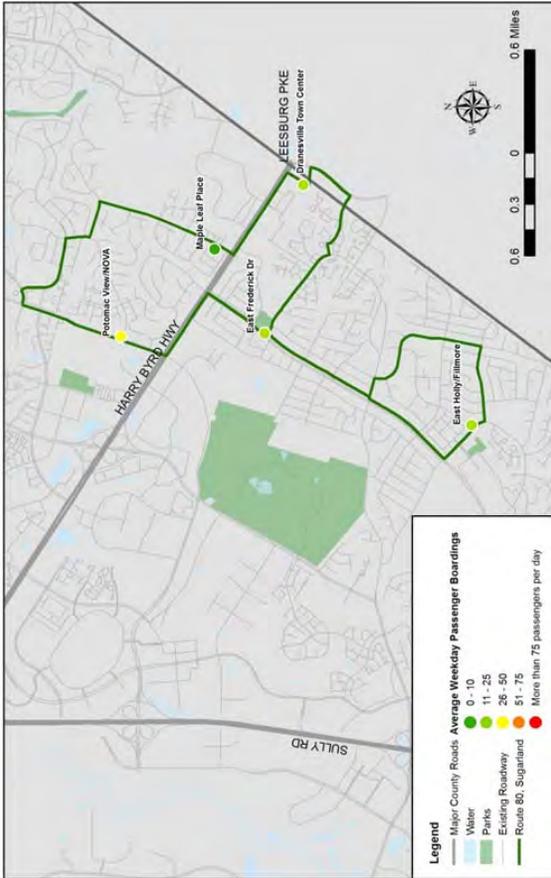
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Route 80: Sugarland

Major Generators Served	
Northern Virginia Community College, Dranesville Town Center, Sugarland Plaza Shopping Center, Pembroke Apartments	
Weekday Service	
Hours of Operation	7:15 AM - 7:15 PM
Service Hours	12
Outbound Trips	16
Inbound Trips	16
Weekday Average Frequency	
Peak	45 minutes
Midday	45 minutes
Evening	45 minutes
Route Characteristics	
Length	8.4 miles
Run Time	39 minutes
Scheduled Average Speed	12.9 MPH
Deadhead Miles	46.2 miles
Connections	Routes 84X, 82, and 70
Buses Required to Operate	1
Daily Ridership	110 boardings
Annual Ridership	30,718 boardings
Annual Revenue Miles	33,734 miles
Annual Revenue Hours	3,012 hours
Boardings per Revenue Hour	11 boardings/hour
Boardings per Revenue Mile	1 boarding/mile
Operating Costs	
Annualization Factor	251
Annual Cost Per Revenue Mile	\$6.16 per mile
Annual Cost Per Revenue Hour	\$69.00 per hour
Annual Cost Per Boarding	\$6.77 per boarding
2010 Demographics within 1/4 Mile Buffer of Route	
Jobs	4,433
Population	18,984
Total Households	6,001
Households with Incomes of Less than \$35,000/yr	673 / 11.2%
Households with Incomes of Less than \$50,000/yr	1,122 / 18.7%
Households without a Vehicle	98 / 1.6%
Persons Age 65 and Older	1,061 / 5.6%

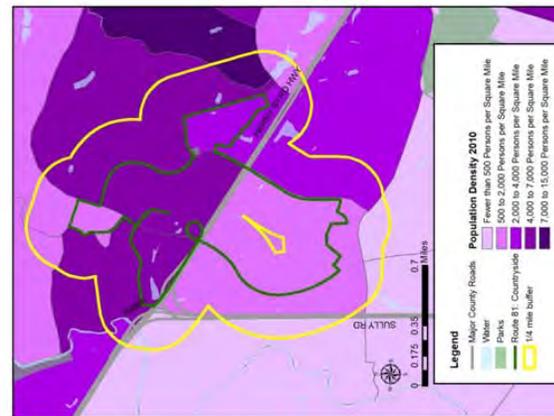
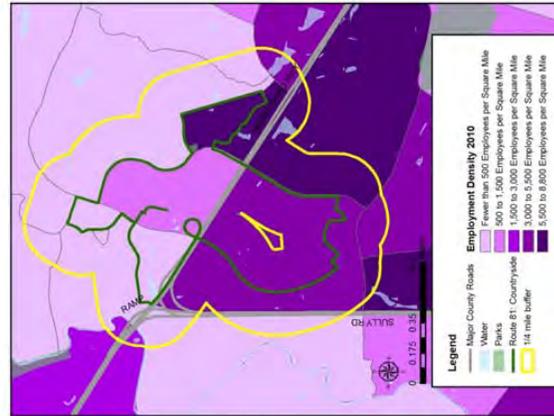
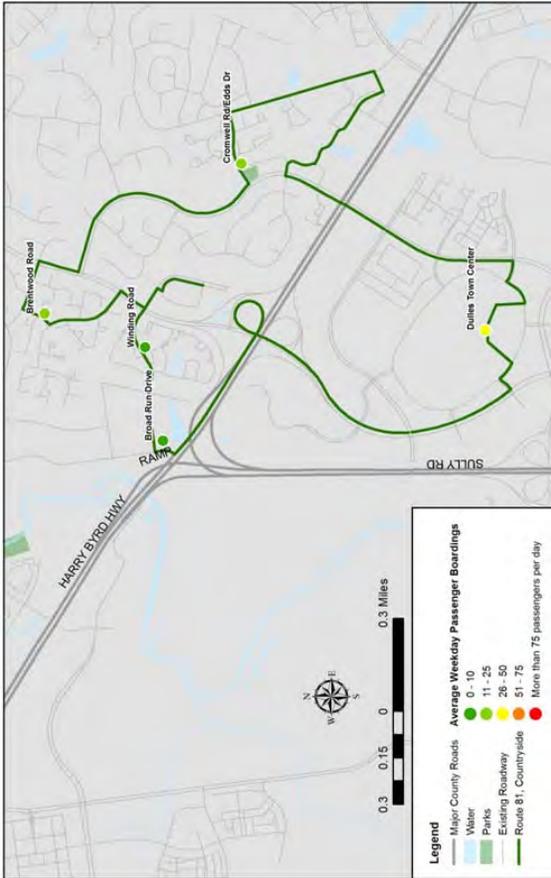
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Route 81: Countryside

Major Generators Served	
Regal Center, Dulles Town Center, Brentwood Road Community	
Weekday Service	
Hours of Operation	6:55 AM – 6:52 PM
Service Hours	12
Outbound Trips	24
Inbound Trips	24
Weekday Average Frequency	
Peak	30 minutes
Midday	30 minutes
Evening	30 minutes
Route Characteristics	
Length	6.7 miles
Run Time	27 minutes
Scheduled Average Speed	14.8 MPH
Deadhead Miles	39.4 miles
Connections	Routes 70, 82, 83 and 84X
Buses Required to Operate	1
Daily Ridership	70 boardings
Annual Ridership	19,548 boardings
Annual Revenue Miles	40,361 miles
Annual Revenue Hours	3,012 hours
Boardings per Revenue Hour	7 boardings/hour
Boardings per Revenue Mile	1 boarding/mile
Operating Costs	
Annualization Factor	251
Annual Cost Per Revenue Mile	\$5.15 per mile
Annual Cost Per Revenue Hour	\$69.00 per hour
Annual Cost Per Boarding	\$10.63 per boarding
2010 Demographics within 1/4 Mile Buffer of Route	
Jobs	7,319
Population	6,596
Total Households	2,472
Households with Incomes of Less than \$35,000/yr	230 / 9.3%
Households with Incomes of Less than \$50,000/yr	392 / 15.9%
Households without a Vehicle	46 / 1.9%
Persons Age 65 and Older	394 / 6.0%

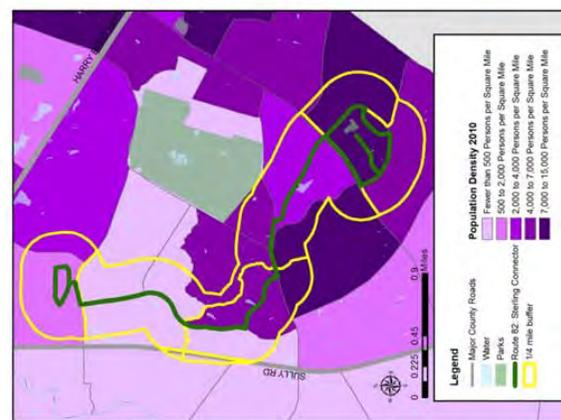
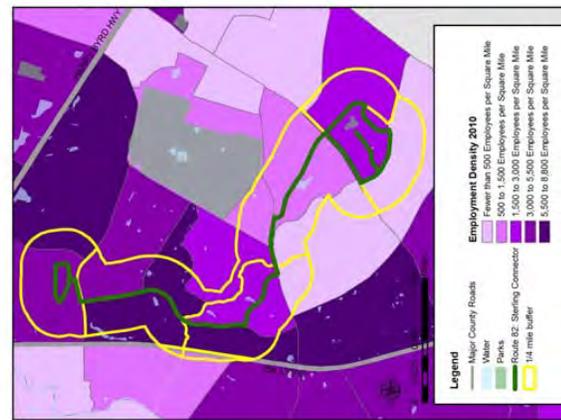
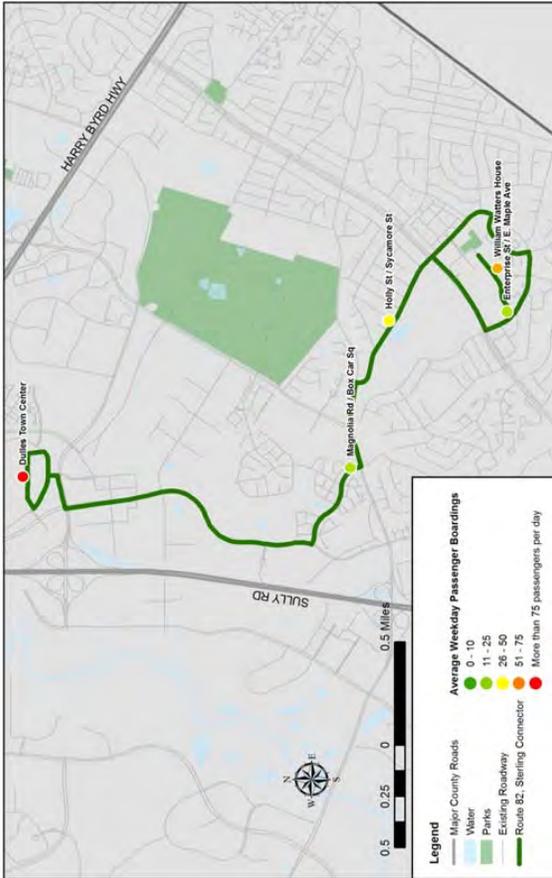
Note: 2011 American Community Survey (ACS) and 2010 MWCOG data were used to develop demographic measures. ACS data was provided at the Census Tract level and a distribution of tract level data to the smaller TAZ units assumed level distribution across the entire census tract. If the distribution is significantly clustered in a Census Tract, a given TAZ could have more or fewer people (jobs, etc.) than the tract level average.



Route 82: Sterling Connector

Major Generators Served	
Sterling Plaza Shopping Center, Walmart, Dulles Town Center, Countryside Shopping Center, Dulles Town Crossing, William Watters House	
Weekday Service	
Hours of Operation	7:00 AM – 10:00 PM
Service Hours	15
Outbound Trips	20
Inbound Trips	20
Weekday Average Frequency	
Peak	45 minutes
Midday	45 minutes
Evening	45 minutes
Route Characteristics	
Length	9.3 miles
Run Time	40 minutes
Scheduled Average Speed	14.0 MPH
Deadhead Miles	24.8 miles
Connections	Routes 70, 81, 83, and 84X
Buses Required to Operate	1
Daily Ridership	205 boardings
Annual Ridership	57,248 boardings
Annual Revenue Miles	46,686 miles
Annual Revenue Hours	3,765 hours
Boardings per Revenue Hour	16 boardings/hour
Boardings per Revenue Mile	2 boardings/mile
Operating Costs	
Annualization Factor	251
Annual Cost Per Revenue Mile	\$5.56 per mile
Annual Cost Per Revenue Hour	\$69.00 per hour
Annual Cost Per Boarding	\$4.54 per boarding
2010 Demographics within 1/4 Mile Buffer of Route	
Jobs	6,910
Population	9,145
Total Households	3,105
Households with Incomes of Less than \$35,000/yr	422 / 13.6%
Households with Incomes of Less than \$50,000/yr	683 / 22.0%
Households without a Vehicle	66 / 2.1%
Persons Age 65 and Older	588 / 6.4%

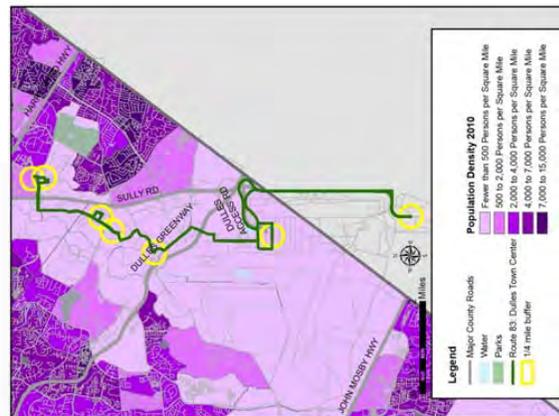
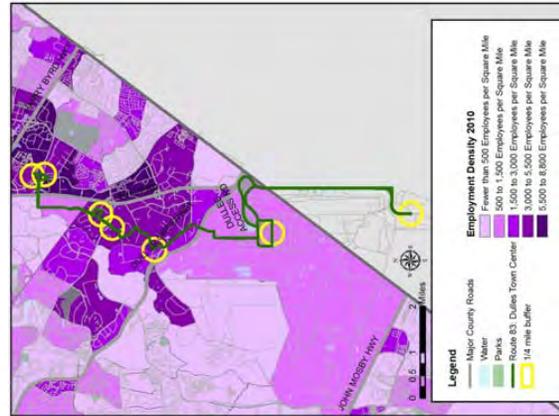
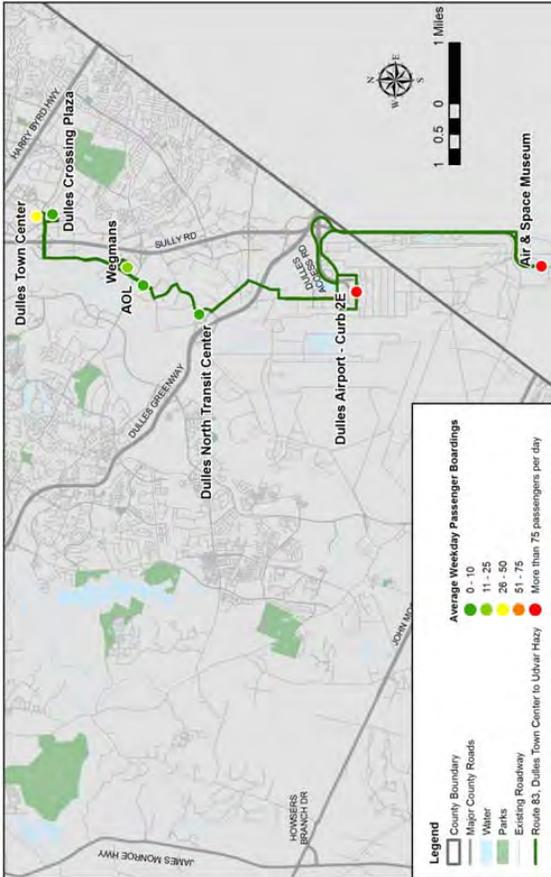
Note: 2011 American Community Survey (ACS) and 2010 MWCOG data were used to develop demographic measures. ACS data was provided at the Census Tract level and a distribution of tract level data to the smaller TAZ units assumed level distribution across the entire census tract. If the distribution is significantly clustered in a Census Tract, a given TAZ could have more or fewer people (jobs, etc.) than the tract level average.



Route 83: Dulles 2 Dulles

Major Generators Served	
Dulles Town Center, Dulles 28 Center, Dulles Airport, Dulles Crossing Plaza	
Weekday Service	
Hours of Operation	7:00 AM - 7:00 PM
Service Hours	12
Outbound Trips	15
Inbound Trips	14
Weekend Service	
Hours of Operation	11:00 AM - 6:00 PM (Saturday/Sunday)
Service Hours	7
Outbound Trips	7
Inbound Trips	7
Weekday/Weekend Average Frequency	
Peak	60 minutes
Midday	45 minutes (weekday) / 60 minutes (weekend)
Evening	45 minutes (weekday) / 60 minutes (weekend)
Route Characteristics	
Length	14 miles SB/14 miles NB
Run Time	25-45 minutes
Scheduled Average Speed	SB: 19 MPH (45 min run time) – 28 MPH (30 min run time) NB: 21 MPH (41 min run time) – 34 MPH (25 min run time)
Deadhead Miles	87.5 miles (2 buses)
Buses Required to Operate	2
Connections	Routes 61, 70, 82, 81, and 84X
Daily Ridership (Average Weekday)	231 boardings (Note: Weekend data not available)
Annual Ridership	77,873 boardings
Annual Revenue Miles	123,018 miles
Annual Revenue Hours	6,060 hours
Boardings per Revenue Hour	13 boardings/hour
Boardings per Revenue Mile	1 boarding/mile
Operating Costs	
Annualization Factor	303
Annual Cost Per Revenue Mile	\$3.40 per mile
Annual Cost Per Revenue Hour	\$69.00 per hour
Annual Cost Per Boarding	\$5.37 per boarding
2010 Demographics within 1/4 Mile Buffer of Route	
Jobs	3,842
Population	158
Total Households	54
Households with Incomes of Less than \$35,000/yr	7 / 13.0%
Households with Incomes of Less than \$50,000/yr	10 / 18.5%
Households without a Vehicle	1 / 1.9%
Persons Age 65 and Older	9 / 5.7%

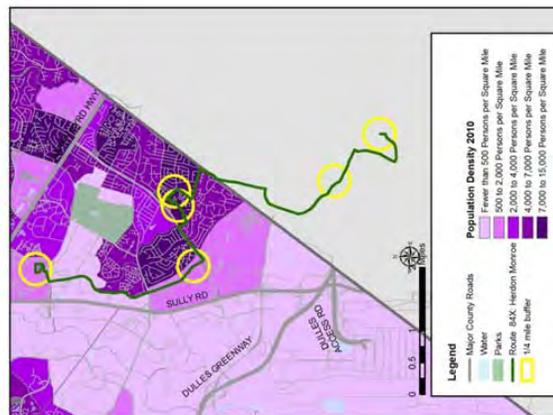
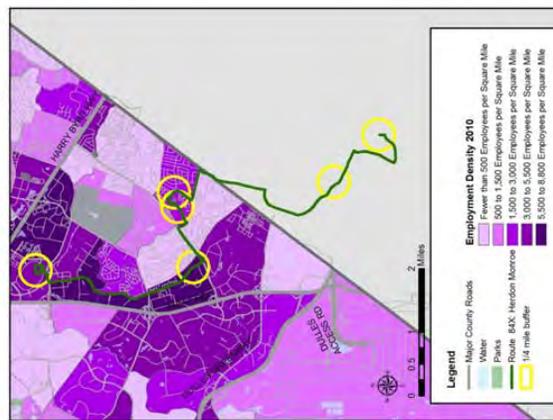
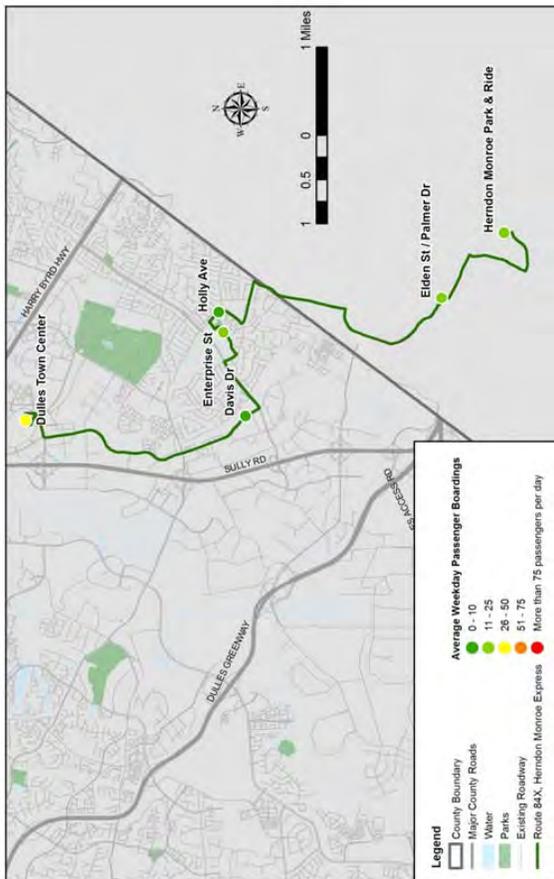
Note: 2011 American Community Survey (ACS) and 2010 MWCOG data were used to develop demographic measures. ACS data was provided at the Census Tract level and a distribution of tract level data to the smaller TAZ units assumed level distribution across the entire census tract. If the distribution is significantly clustered in a Census Tract, a given TAZ could have more or fewer people (jobs, etc.) than the tract level average.



Route 84X: Herndon/Monroe Connector

Major Generators Served	
Herndon/Monroe Park and Ride, Dulles Town Center, Sterling Plaza Shopping Center	
Weekday Service	
Hours of Operation	6:30 AM - 7:15 PM
Service Hours	12.75
Outbound Trips	9
Inbound Trips	8
Weekday Average Frequency	
Peak	30 minutes
Midday	90 minutes
Evening	90 minutes
Route Characteristics	
Length	9.9 miles NB/ 9.9 miles SB
Run Time	45 minutes
Scheduled Average Speed	13.2 MPH
Deadhead Miles	53.7 miles
Connections	Routes 83, 82, 81, 70, and 80
Buses Required to Operate	1
Daily Ridership	89 boardings
Annual Ridership	24,854 boardings
Annual Revenue Miles	42,243 miles
Annual Revenue Hours	3,263 hours
Boardings per Revenue Hour	8 boardings/hour
Boardings per Revenue Mile	1 boarding/mile
Operating Costs	
Annualization Factor	251
Annual Cost Per Revenue Mile	\$5.33 per mile
Annual Cost Per Revenue Hour	\$69.00 per hour
Annual Cost Per Boarding	\$9.06 per boarding
2010 Demographics within 1/4 Mile Buffer of Route	
Jobs	2,369
Population	2,986
Total Households	1,008
Households with Incomes of Less than \$35,000/yr	137 / 13.6%
Households with Incomes of Less than \$50,000/yr	216 / 21.4%
Households without a Vehicle	20 / 2.0%
Persons Age 65 and Older	154 / 5.2%

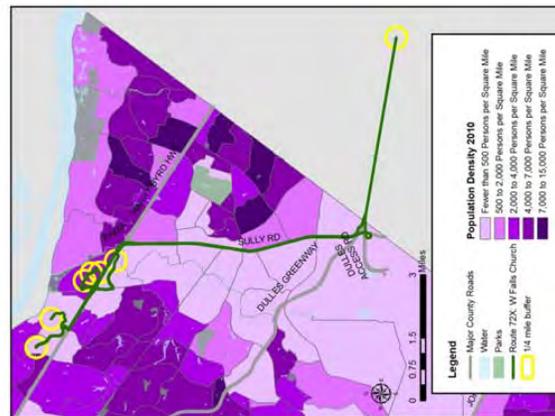
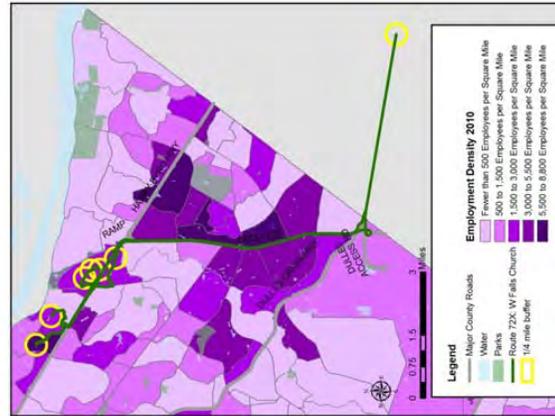
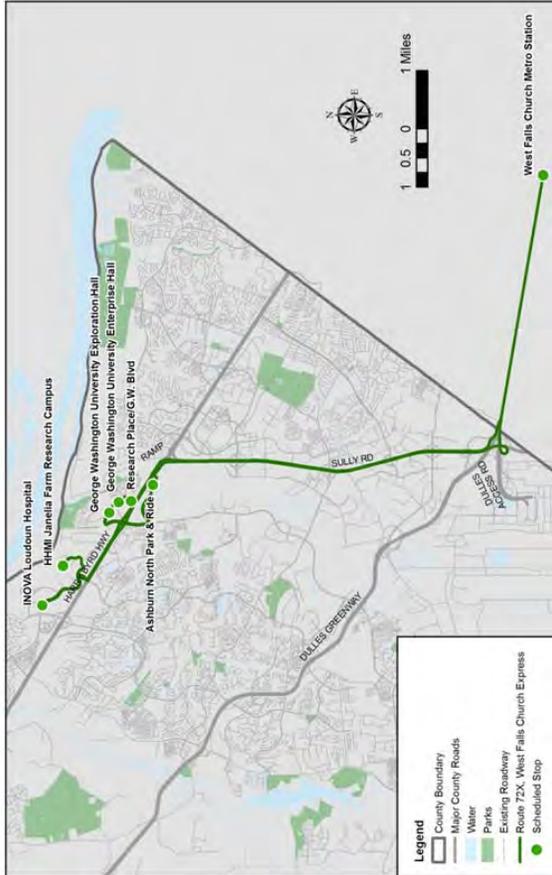
Note: 2011 American Community Survey (ACS) and 2010 MWCOG data were used to develop demographic measures. ACS data was provided at the Census Tract level and a distribution of tract level data to the smaller TAZ units assumed level distribution across the entire census tract. If the distribution is significantly clustered in a Census Tract, a given TAZ could have more or fewer people (jobs, etc.) than the tract level average.



Route 72X: West Falls Church Express

Major Generators Served	
West Fall Church Metro, Ashburn North Park and Ride, George Washington University, Loudoun Hospital, HHMI Janelia Farm Research Campus	
Weekday Service	
Hours of Operation	6:15 AM - 8:40 PM
Service Hours	14.5
Outbound Trips	20
Inbound Trips	20
Weekday Average Frequency	
Peak	20-40 minutes
Midday	30-65 minutes
Evening	30-45 minutes
Route Characteristics	
Length	53.7 miles
Run Time	Morning: 90 min, exception 30 min between 8:45-9:35 AM for partial route Afternoon: 105 min, exception 50 min between 5:20-6:10 PM for partial route
Scheduled Average Speed	35.8 MPH (Morning) / 30.6 MPH (Evening)
Deadhead Miles	307.2 miles
Connections	Routes 70 and 60
Buses Required to Operate	3
Daily Ridership	251 boardings
Annual Ridership	70,094 boardings
Annual Revenue Miles	269,574 miles
Annual Revenue Hours	8,785 hours
Boardings per Revenue Hour	8 boardings/hour
Boardings per Revenue Mile	1 boarding/mile
Operating Costs	
Annualization Factor	251
Annual Cost Per Revenue Mile	\$2.25 per mile
Annual Cost Per Revenue Hour	\$69.00 per hour
Annual Cost Per Boarding	\$8.65 per boarding
2010 Demographics within 1/4 Mile Buffer of Route	
Jobs	2,669
Population	1,422
Total Households	569
Households with Incomes of Less than \$35,000/yr	53 / 9.3%
Households with Incomes of Less than \$50,000/yr	113 / 19.9%
Households without a Vehicle	16 / 2.8%
Persons Age 65 and Older	43 / 3.0%

Note: 2011 American Community Survey (ACS) and 2010 MWCOG data were used to develop demographic measures. ACS data was provided at the Census Tract level and a distribution of tract level data to the smaller TAZ units assumed level distribution across the entire census tract. If the distribution is significantly clustered in a Census Tract, a given TAZ could have more or fewer people (jobs, etc.) than the tract level average.



APPENDIX C

Summary of Leesburg Stakeholder Meetings



APPENDIX C - Town of Leesburg Stakeholder Meetings

At the request of the Town of Leesburg, stakeholder meetings were hosted on August 21, 2013 to listen to issues and concerns related to existing local bus service. The first stakeholder meeting was for businesses or agencies whose clients, customers or employees may rely upon the bus service. The second stakeholder meeting was for the general public and users of the local bus service. Ten people attended the first meeting and six people attended the second meeting. In general, comments are summarized by the following:

- Riders would like service extended to evenings and weekends to better accommodate their work schedules.
- Some existing circulator routes are inefficient and it takes longer to make the return trip.
- Representatives from various government agencies indicated that any users of their service rely on transit system to make certain appointments. Improved service would help better meet their needs.
- Customers are willing to pay a bit more for extended and more frequent service.
- Riders support reduced fares for seniors on Thursdays, in lieu of free senior fare on Thursdays.

Individuals who could not attend either session were able to submit comments in writing to the Town. The Town of Leesburg also sent a survey to major employers and businesses to solicit feedback. Responses received indicate that 25 to 50 percent of employees use the local bus service to get to work from surrounding areas. Those employees arrive as early as 6:00AM and leave as late as 10:00PM. All written comments received by the Town via postal mail, email, and the Town's Facebook page are summarized below.



COMMENT RECEIVED THURSDAY AUGUST 22, 2013

I am a regular rider of the #70 bus route. I take the bus from my house in Leesburg to Janelia Farm where I work. I find the bus route very helpful and enjoy being able to take my bike on the bus.

COMMENT RECEIVED SATURDAY SEPTEMBER 14, 2013

Dear Ms. Fields:

I'm way late to give you my comments on the Leesburg Bus Service but I wanted to share them anyway.

In my opinion the Leesburg Bus Service is designed to serve only those who HAVE to use it. Anyone who has a car or even a bicycle is better off using those than the bus.

My car failed to start one morning and, since the bus comes by the foot of my street and drops me off right in front of my workplace, I decided to give it a try. I live in NE Leesburg and work in SE Leesburg. By car the one-way distance is 3.6 miles. I drive straight down Plaza St/Sycolin Rd.

Unfortunately, the bus picked me up but was going outbound. The bus then meandered through NE, then NW, Then SW and then even poked into a stop in SE Leesburg before getting to the Government Center. Since there are no free transfers, I then had to pay another fare to get on the Sycolin Rd bus. This then meandered through SE Leesburg and dropped me off near the bus garages for a total trip time of one hour and fifteen minutes. One hour and fifteen minutes to go 3.6 miles. On a bad day the drive takes 15 minutes.

The Leesburg Bus Service is simply is not viable as a commuter option. I can drive the distance for less money and far less time.

I do not wish to disparage those who have to use the bus nor do I wish to disparage the Town of Leesburg for providing this service to them. I simply want to make it clear that the Town of Leesburg should expect relatively empty buses because the service is designed to serve such a very limited population.

EMPLOYER SURVEY RECEIVED FRIDAY AUGUST 30, 2013

- 1. Name & address of business:**
Shoppers Food & Pharmacy
- 2. Approximate number of employees (total # of people, not FTEs):**
40
- 3. What percentage of your employees use the bus service to get to work?**
40-50%
- 4. What time(s) do these employees need to arrive at work?**
Different times from 6am-6pm
- 5. What time(s) do these employees leave work?**
Different times from 10am-10pm
- 6. Where do these employees live (general locations, list as many as necessary)?**
Surrounding areas
- 7. Do your customers use the bus service to get to your location? If so, approximate number per day?**
10-20
- 8. Do you have any comments or observations about the current bus service routes, schedules or stop locations? Any recommendations for changes?**
Customers and employees are very appreciative of this bus service provided by the town of Leesburg.



EMPLOYER SURVEY RECEIVED TUESDAY SEPTEMBER 3, 2013

- 1. Name & address of business:**
Leesburg #1904
950 Edwards Ferry Road
Leesburg, Va 20176
- 2. Approximate number of employees (total # of people, not FTEs):**
187 total
- 3. What percentage of your employees use the bus service to get to work?**
20%
- 4. What time(s) do these employees need to arrive at work?**
7am, 5pm, 9pm
- 5. What time(s) do these employees leave work?**
7am, 4pm, 5pm, 9pm, 10pm
- 6. Where do these employees live (general locations, list as many as necessary)?**
All around the Leesburg area (town houses, apartments near store)
- 7. Do your customers use the bus service to get to your location? If so, approximate number per day?**
50-75 customers
- 8. Do you have any comments or observations about the current bus service routes, schedules or stop locations? Any recommendations for changes?**
Works out well with my associates

COMMENTS ON TOWN OF LEESBURG FACEBOOK PAGE

August 22, 2013

It's too slow. We can actually walk from se near county to Walmart faster than we can take the bus

August 22, 2013

My kids and I were happy to have this option available this summer when my car died.

August 22, 2013

Used to be a bus in my neighborhood in the early 2000's but guess it went away for lack of use...wish there was a bus option from Greenway Drive to the commuter lot.

August 22, 2013

I use the trolley and safety bus I really love having this service I also know many other people that use 7 on 7 and the sterling and countryside buses and relay on it for work

August 23, 2013

My sister uses this service to get to work. It's unfortunate that the 7 on 7 to 7 does not run on weekends. I know there are a lot of people who live in Leesburg, work weekends at the hospital, Ashburn, Dulles Town Center, Sterling, etc. especially with all the shopping centers in Loudoun County, that need the service. Also is the bus stops are so far apart from each other and the buses will not stop in between.



APPENDIX D

Transportation Land Use Committee Presentation

September 13, 2013





Kimley-Horn
and Associates, Inc.

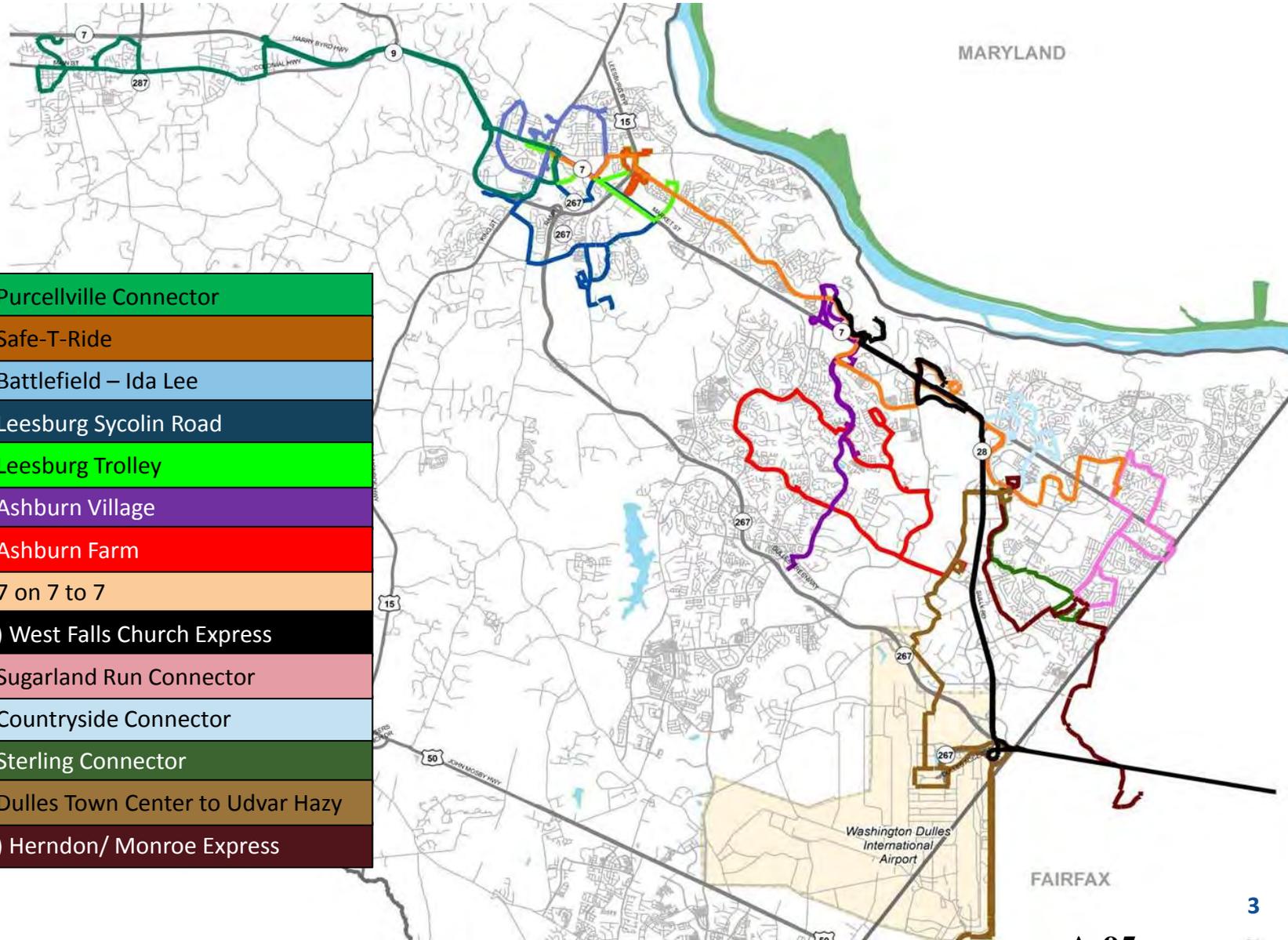
PROGRESS REPORT ON THE
Loudoun County Analysis of
LOCAL FIXED ROUTE BUS SERVICE
BEYOND FY 2014

OVERVIEW

<i>Task 1</i>	Analysis Review routes Evaluate system
<i>Task 2</i>	Route Modifications Identify and Evaluate Modifications Operating Model
<i>Task 3</i>	Develop a Program Plan & Update TDP <i>(Under Development)</i>

EXISTING LOCAL ROUTES

- (40) Purcellville Connector
- (50) Safe-T-Ride
- (51) Battlefield – Ida Lee
- (52) Leesburg Sycolin Road
- (53) Leesburg Trolley
- (60) Ashburn Village
- (61) Ashburn Farm
- (70) 7 on 7 to 7
- (72X) West Falls Church Express
- (80) Sugarland Run Connector
- (81) Countryside Connector
- (82) Sterling Connector
- (83) Dulles Town Center to Udvar Hazy
- (84X) Herndon/ Monroe Express

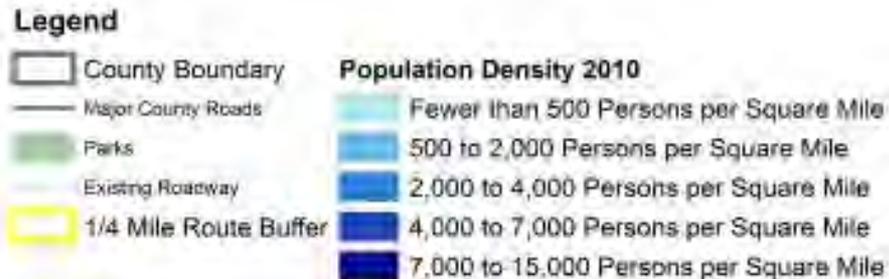
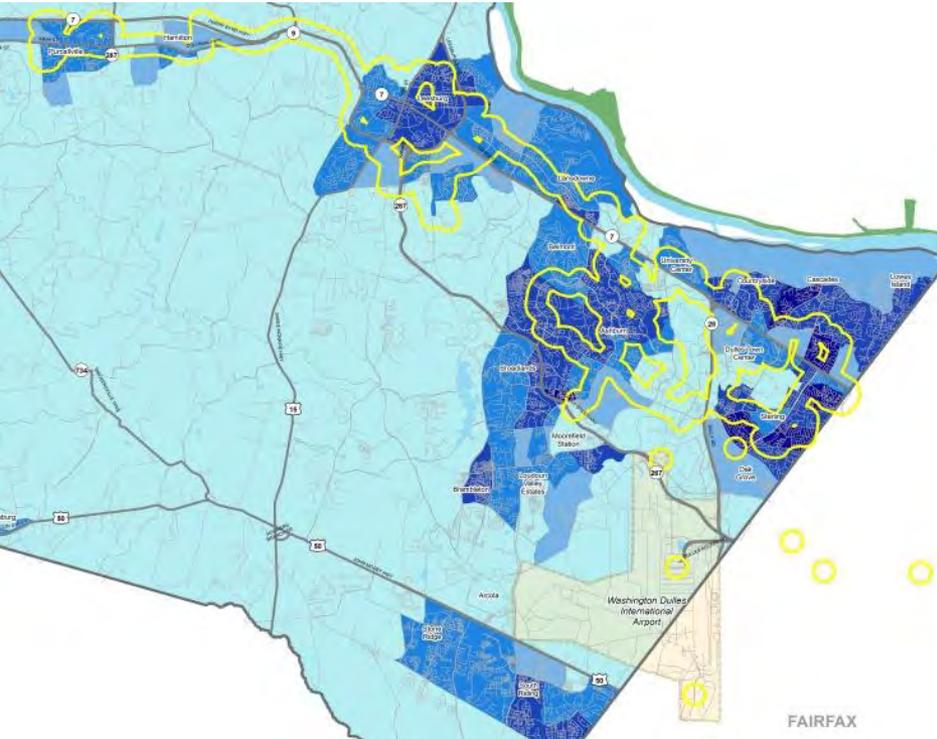


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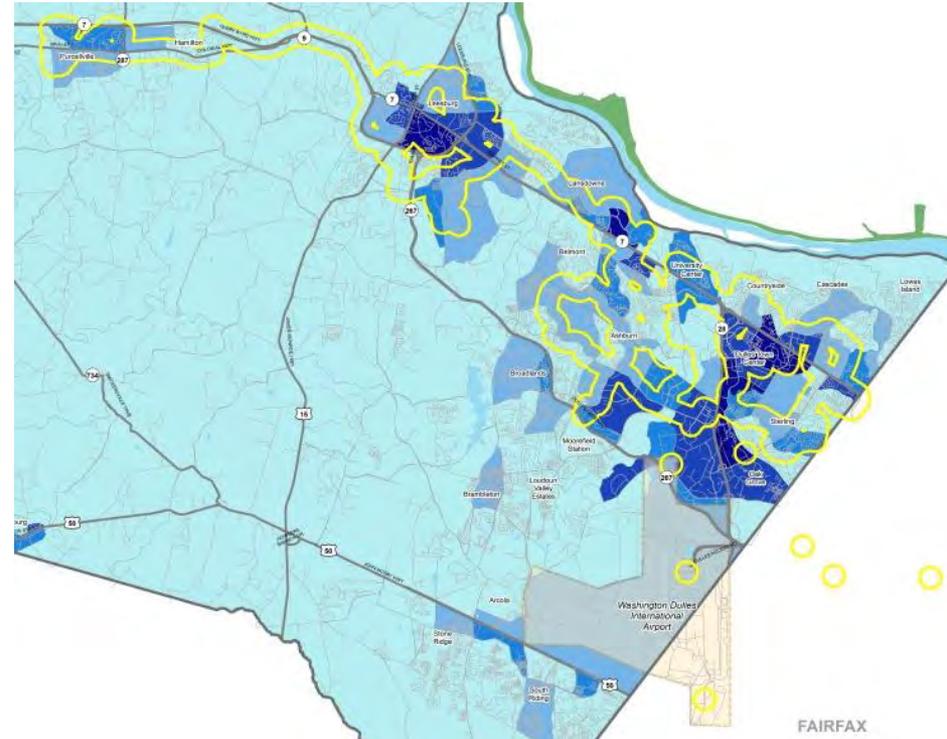
A-95

EXISTING ROUTE COVERAGE WITH ¼ MILE BUFFER

2010 Population Density

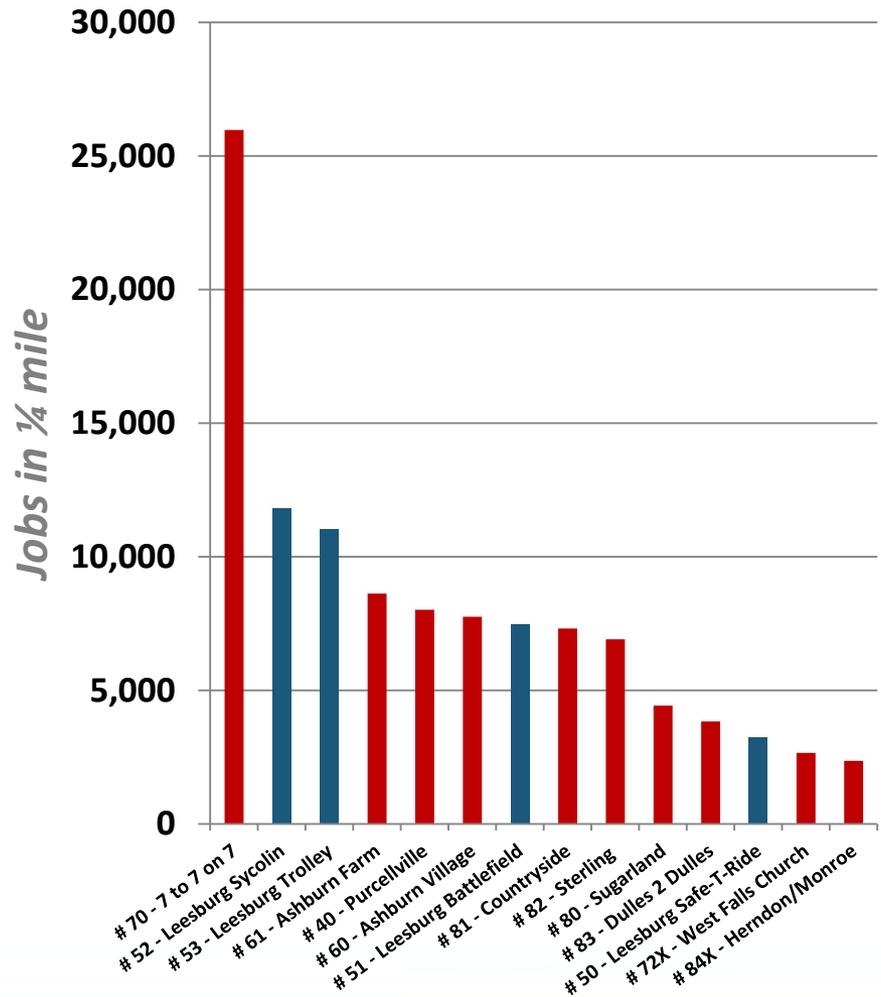
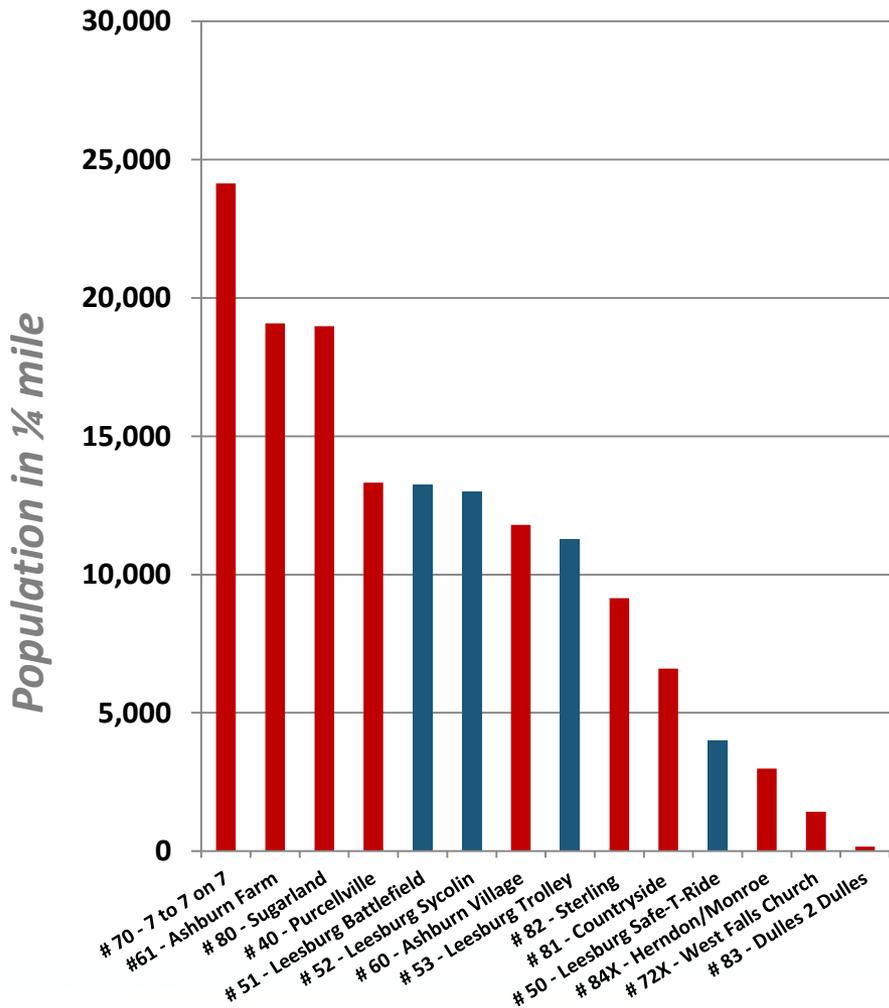


2010 Employment Density



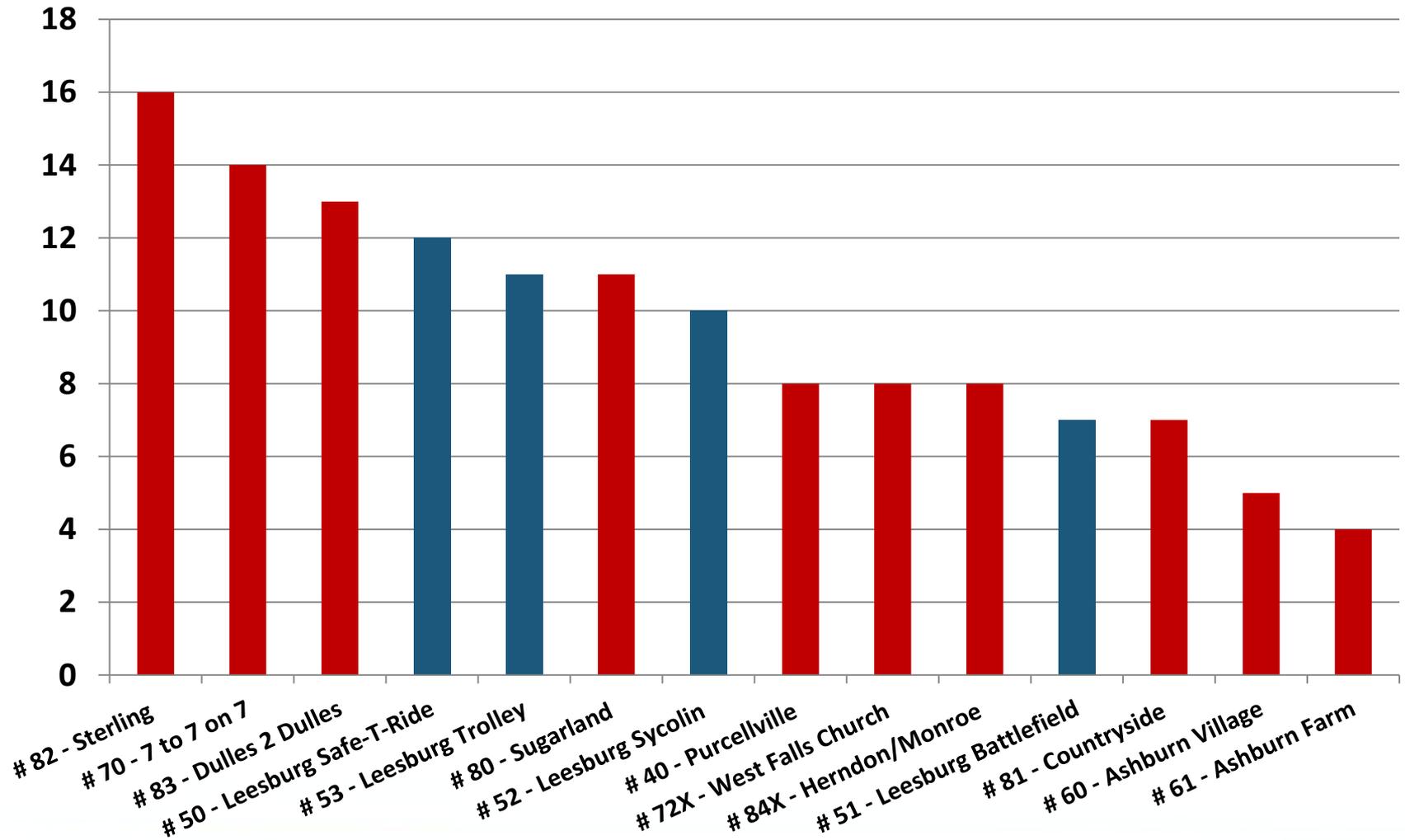
ROUTE PROXIMITY TO POPULATION AND EMPLOYMENT

County
Leesburg



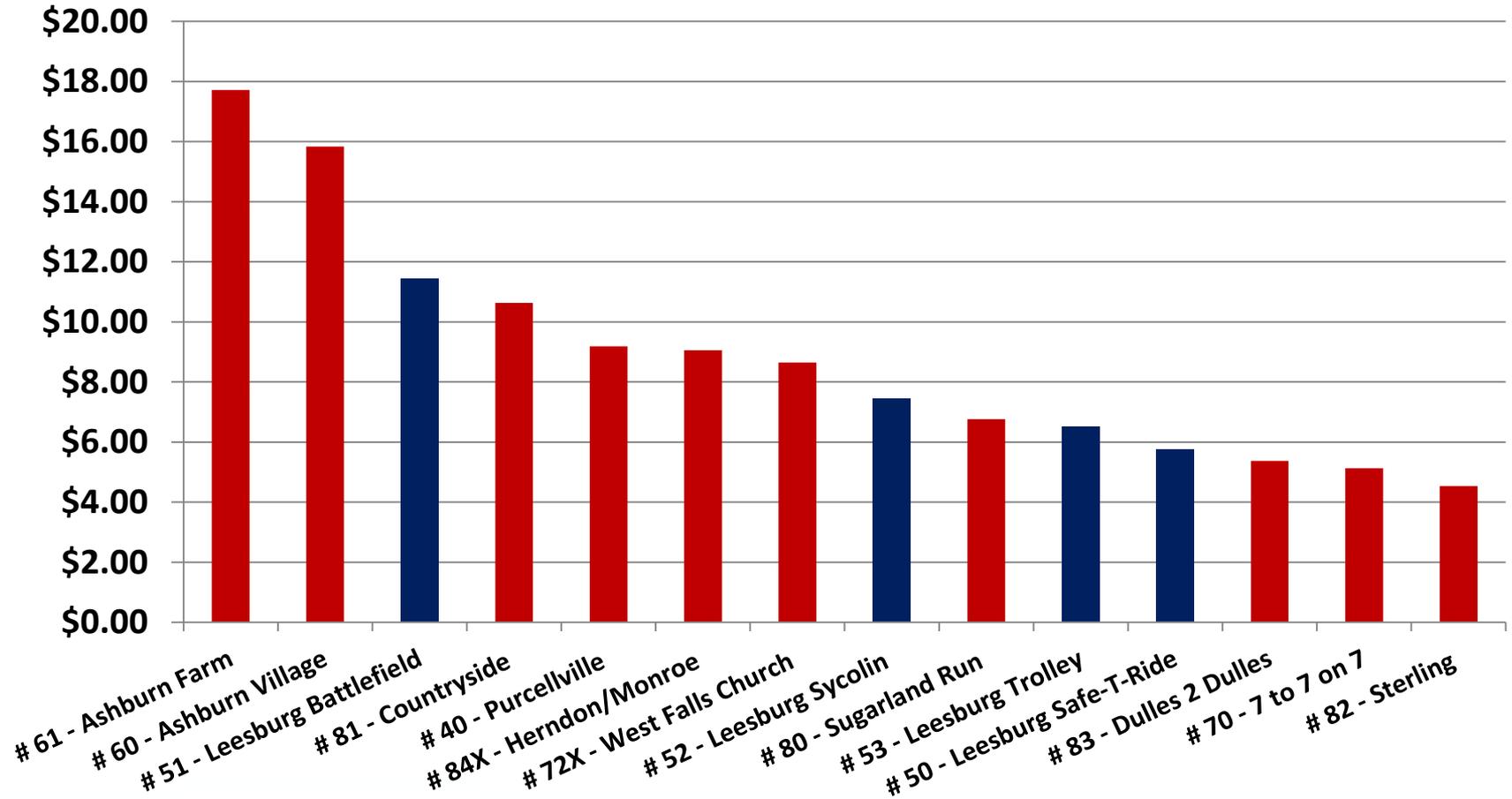
BOARDINGS PER HOUR

County
Leesburg



OPERATING COST PER BOARDING BY ROUTE

County
Leesburg



SELECTION OF “COMPARABLES”

- Same region (weather/seasons/labor market)
- Similar operating budgets/size
- Comparable number of routes
- Similar number of miles and hours of service

COMPARABLES MEASURES

<i>SYSTEM NAME</i>	Population (2010 Census)	Passenger Trips (Annual)	Passenger Trips Per Revenue Mile	Operating Expense Per Passenger Trip	Total Operating Expense	Farebox Recovery (%)	Average Fare
Howard Transit (MD)	284,952	884,331	0.80	\$6.73	\$5,948,866	10%	\$0.70
Transit Services of Frederick County (MD)	65,787	753,682	1.13	\$5.18	\$3,905,501	14%	\$0.74
Williamsburg Area Transit Authority (WATA) Local bus	57,000	1,056,158	1.11	\$3.86	\$4,074,146	10%	\$0.37
Fredericksburg Regional Transit - FRED (VA)	113,716	527,147	0.58	\$6.26	\$3,300,354	8%	\$0.52
Charlottesville Area Transit (CAT)	81,449	2,312,126	2.44	\$2.67	\$6,175,458	14%	\$0.36
Blacksburg Transit	56,260	3,339,388	4.49	\$1.39	\$4,631,897	54%	\$0.75
Loudoun County & Leesburg Local Bus Service	310,000	645,189	0.57	\$8.37	\$5,972,000	3%	\$0.29
How does Loudoun County Local Bus Service Compare?	Highest	Near the bottom	Lowest	Highest	Near the top	Lowest	Lowest average fares

TASK 2

- Route Modifications to Local Bus Service
 - Revise Routes based on Performance and Coverage
 - Evaluate Potential Modifications
 - Potential Ridership
 - Potential Cost

MISSION STATEMENT

A successful local fixed route transit service is a key component of a safe, affordable, convenient, efficient and environmentally sound multi-modal transportation system to serve Loudoun County.

(Revised 2010 Countywide Transportation Plan)

GOALS OF THE LOCAL FIXED ROUTE ANALYSIS

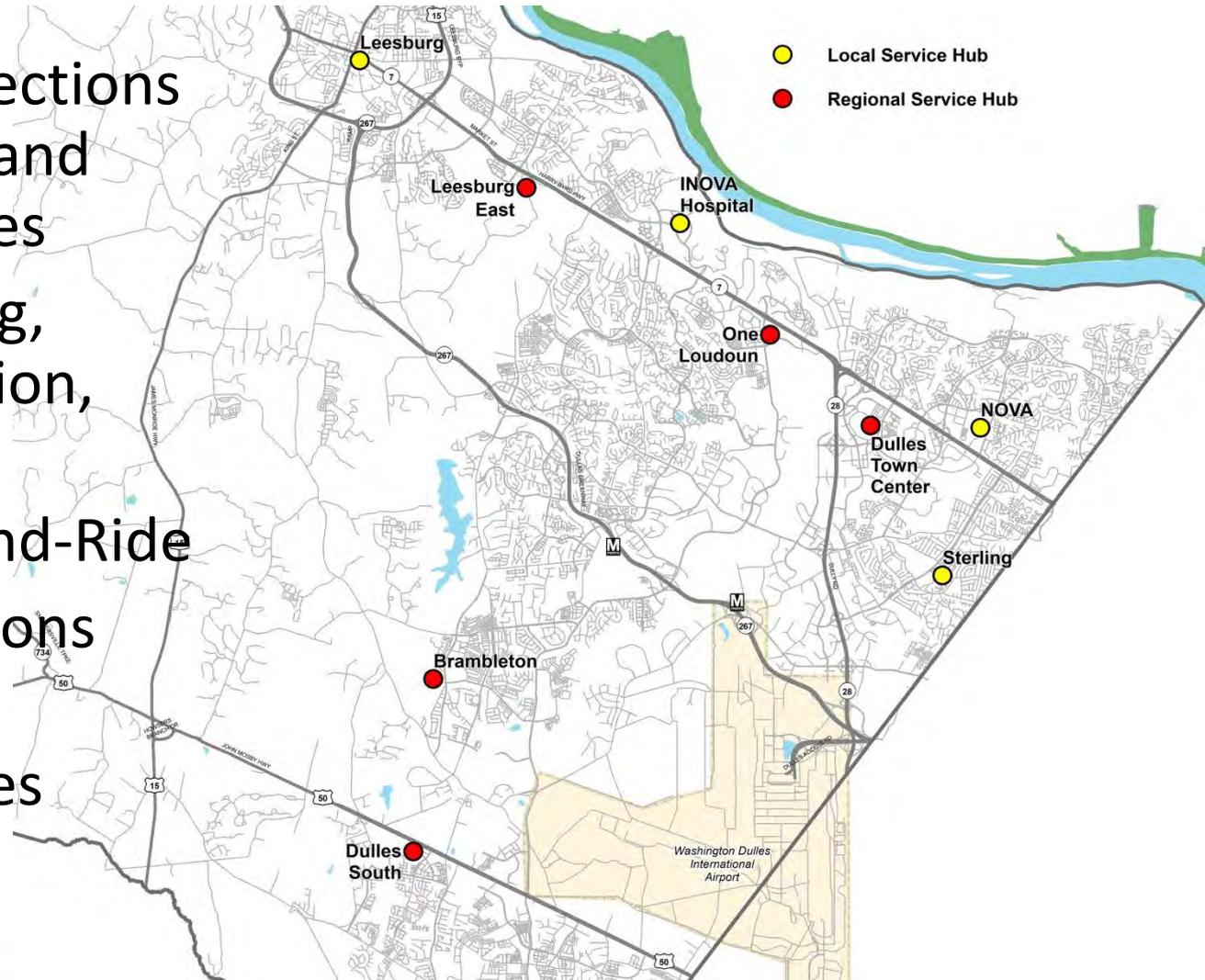
- Increase ridership
- Maximize funding
- Improve efficiency
- Connect riders to destinations

STRATEGIES IDENTIFIED FOR ACHIEVING GOALS

- Ensure each route mile counts – take routes off roads where the bus cannot stop
- Ensure routes have good travel times by reducing or eliminating long one-way loops
- Create on-demand service in currently underserved communities to evaluate transit demand
- Create transit hubs to maximize rider options and accessibility
- Pulse service to facilitate transfers
- Evaluate extended hours and weekend service

PLANNED TRANSIT HUBS

- Facilitate connections between local and regional services
- Seating, lighting, route information, shelter
- Parking, Kiss-and-Ride
- Level of provisions vary
- Fare media sales



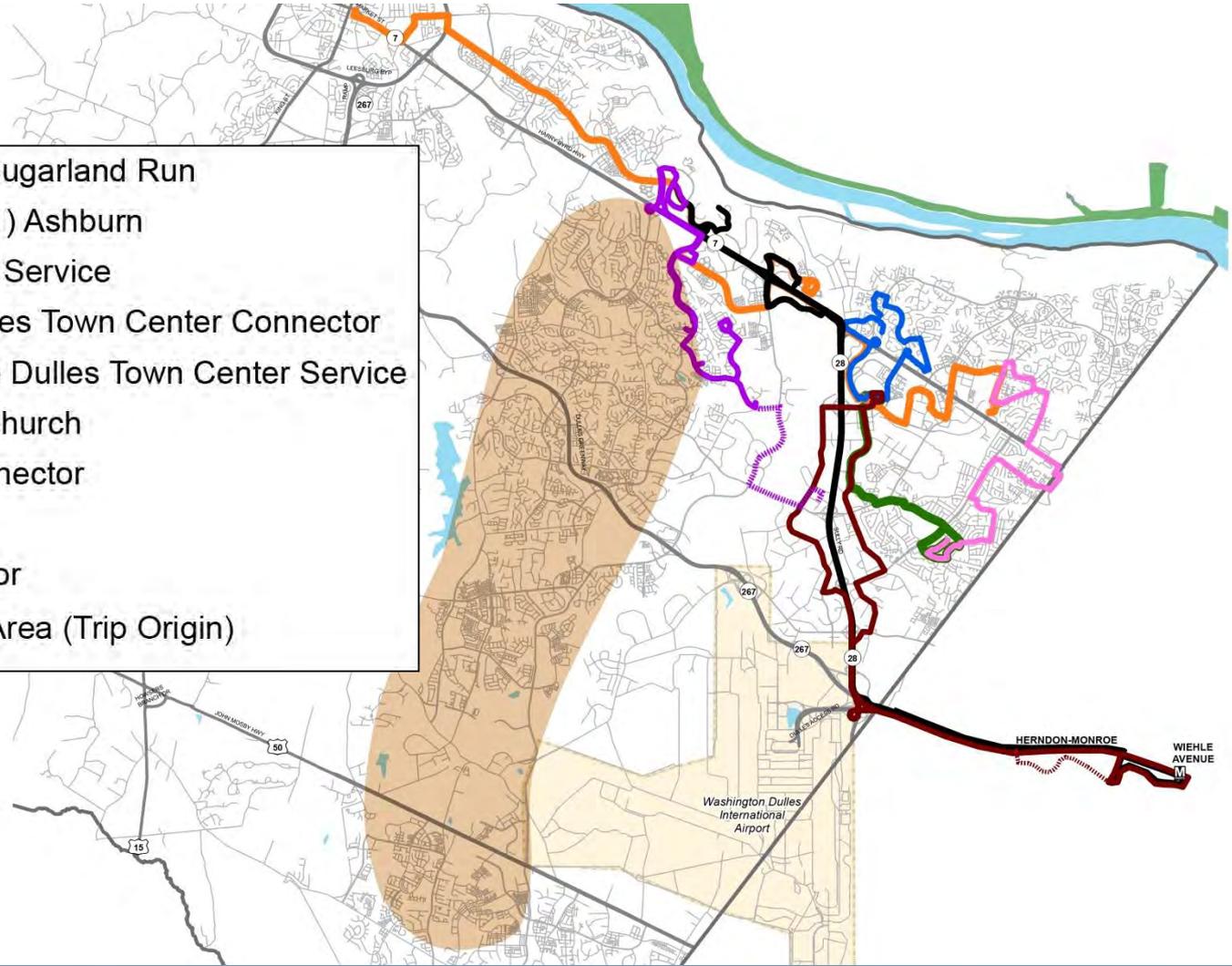
PULSED SERVICE

- Pulsed Service means all routes at each hub will arrive near the same time
- Buses do not leave before transfers are made
- Eliminates long wait times between buses

PLANNED LOUDOUN LOCAL ROUTES

Legend

-  Modified Route (80) Sugarland Run
-  Modified Route (60/61) Ashburn
-  Midday Only Ashburn Service
-  Proposed Wiehle Dulles Town Center Connector
-  AM Peak Only Wiehle Dulles Town Center Service
-  Modified West Falls Church
-  (81) Countryside Connector
-  (70) 7 to 7 on 7
-  (82) Sterling Connector
-  On Demand Service Area (Trip Origin)



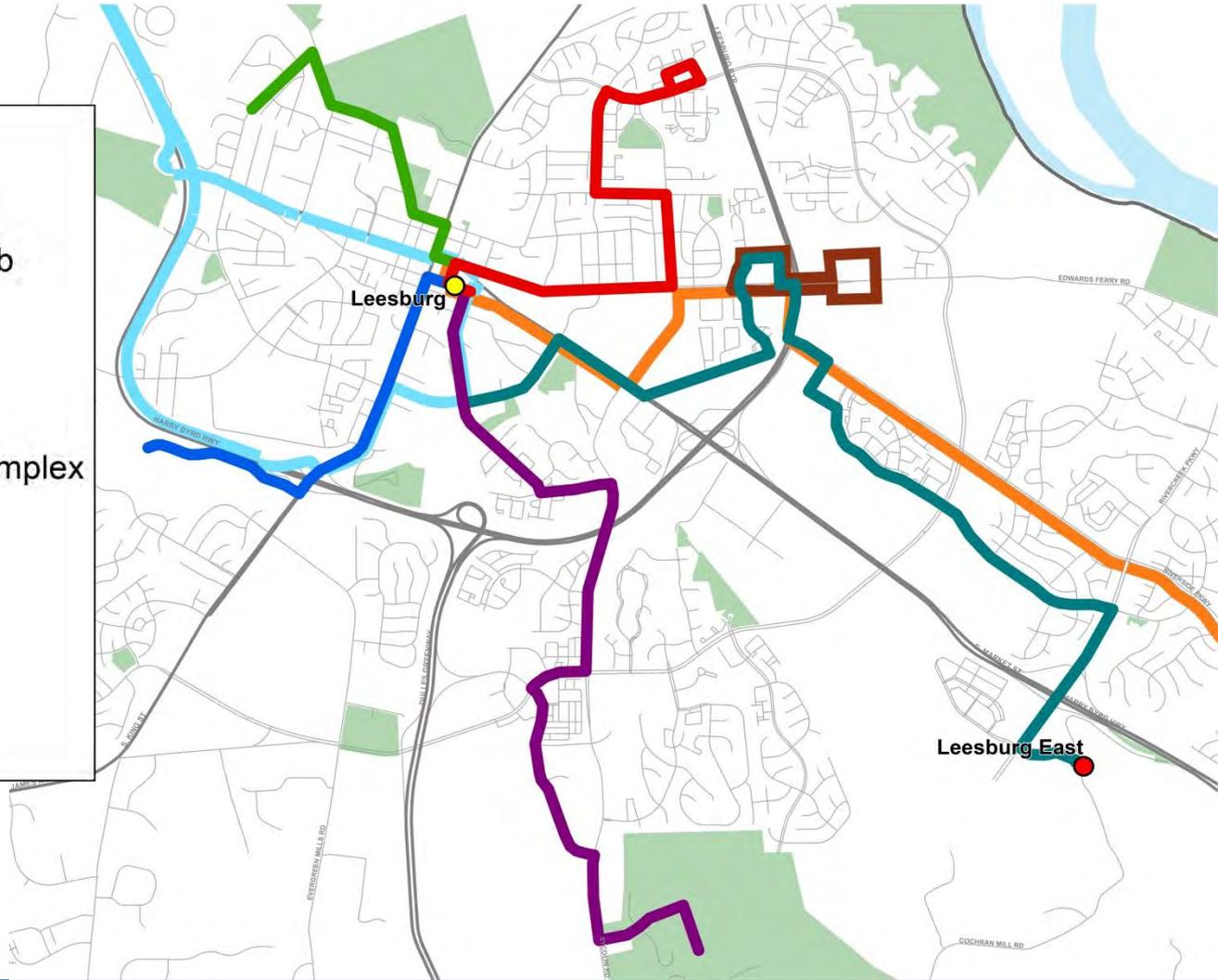
LEESBURG PROPOSED CHANGES

Legend

-  Local Service Transit Hub
-  Regional Service Transit Hub
-  Leesburg - Exeter
-  Leesburg - Spring Arbor
-  Leesburg - Tuscarora
-  Leesburg - County Gov't Complex
-  Leesburg Trolley
-  Safe-T-Ride

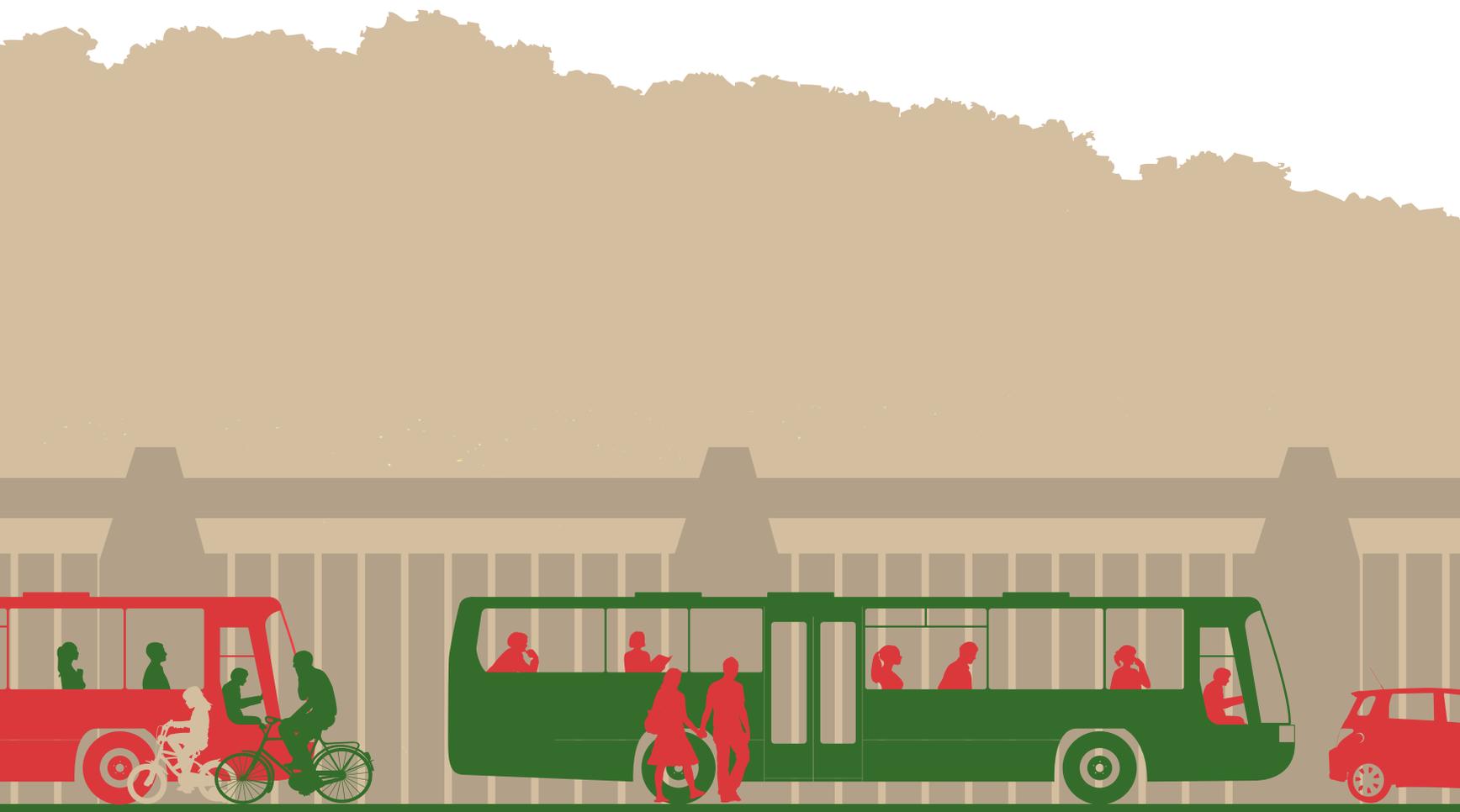
Unchanged Routes

-  (70) 7 to 7 on 7
-  (40) Purcellville Connector



NEXT STEPS

- Finalize Conceptual Routes
- Develop Ridership and Cost Estimates
- Analyze Operating Model
- Identify Funding Strategies
- Update Transit Development Plan





Kimley-Horn
and Associates, Inc.

FINAL REPORT

**Loudoun County Analysis of
LOCAL FIXED ROUTE BUS SERVICE
BEYOND FY 2014**



OVERVIEW

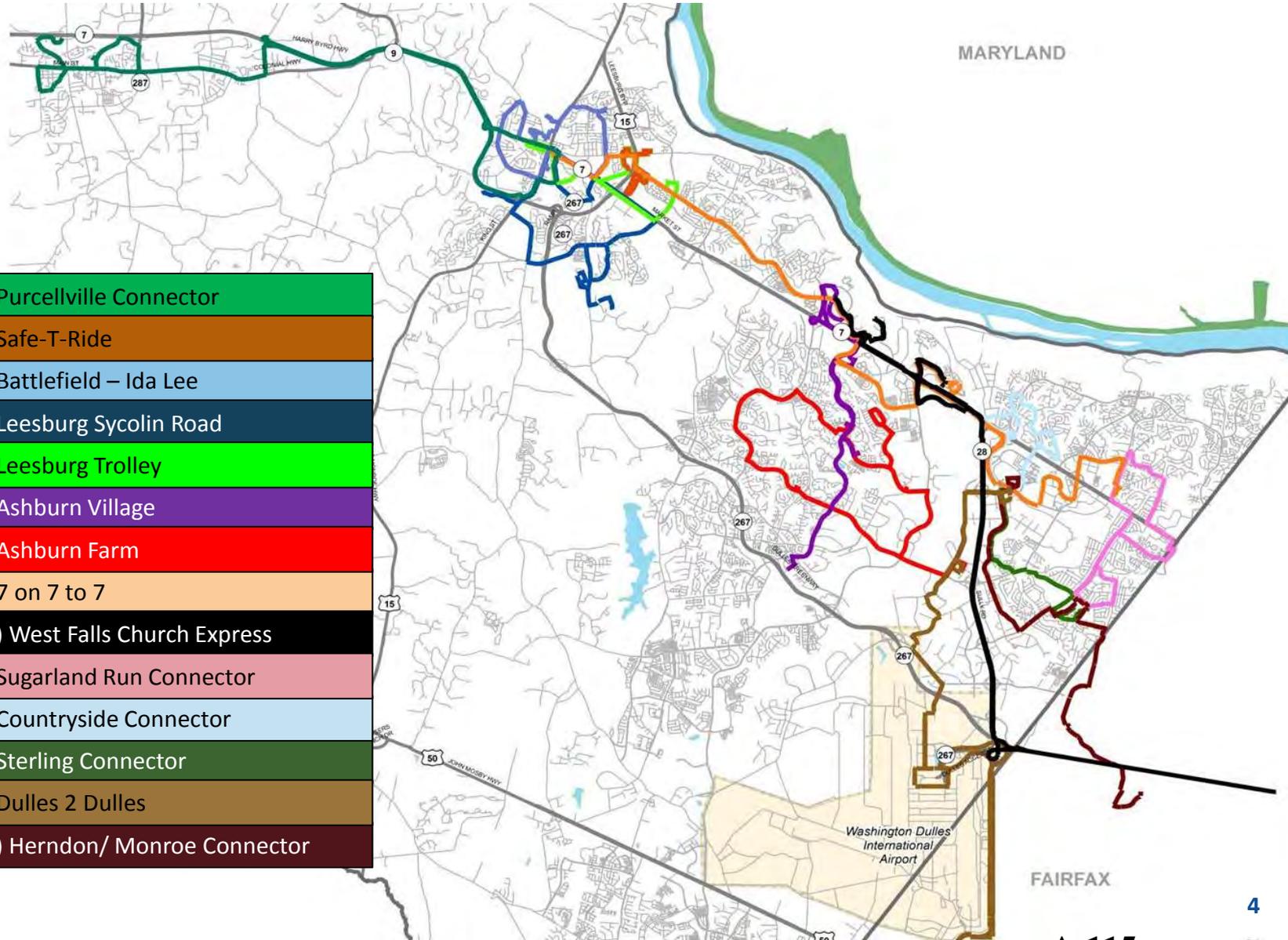
<i>Task 1</i>	Analysis Review routes Evaluate system
<i>Task 2</i>	Route Modifications Identify and Evaluate Modifications Operating Model
<i>Task 3</i>	Develop a Program Plan & Update TDP

SUMMARY OF STRATEGIES

- Route Miles Count
- Reduce Loops
- On-demand Service
- Transit Hubs
- Pulse Service
- Extended Hours

EXISTING LOCAL ROUTES

- (40) Purcellville Connector
- (50) Safe-T-Ride
- (51) Battlefield – Ida Lee
- (52) Leesburg Sycolin Road
- (53) Leesburg Trolley
- (60) Ashburn Village
- (61) Ashburn Farm
- (70) 7 on 7 to 7
- (72X) West Falls Church Express
- (80) Sugarland Run Connector
- (81) Countryside Connector
- (82) Sterling Connector
- (83) Dulles 2 Dulles
- (84X) Herndon/ Monroe Connector

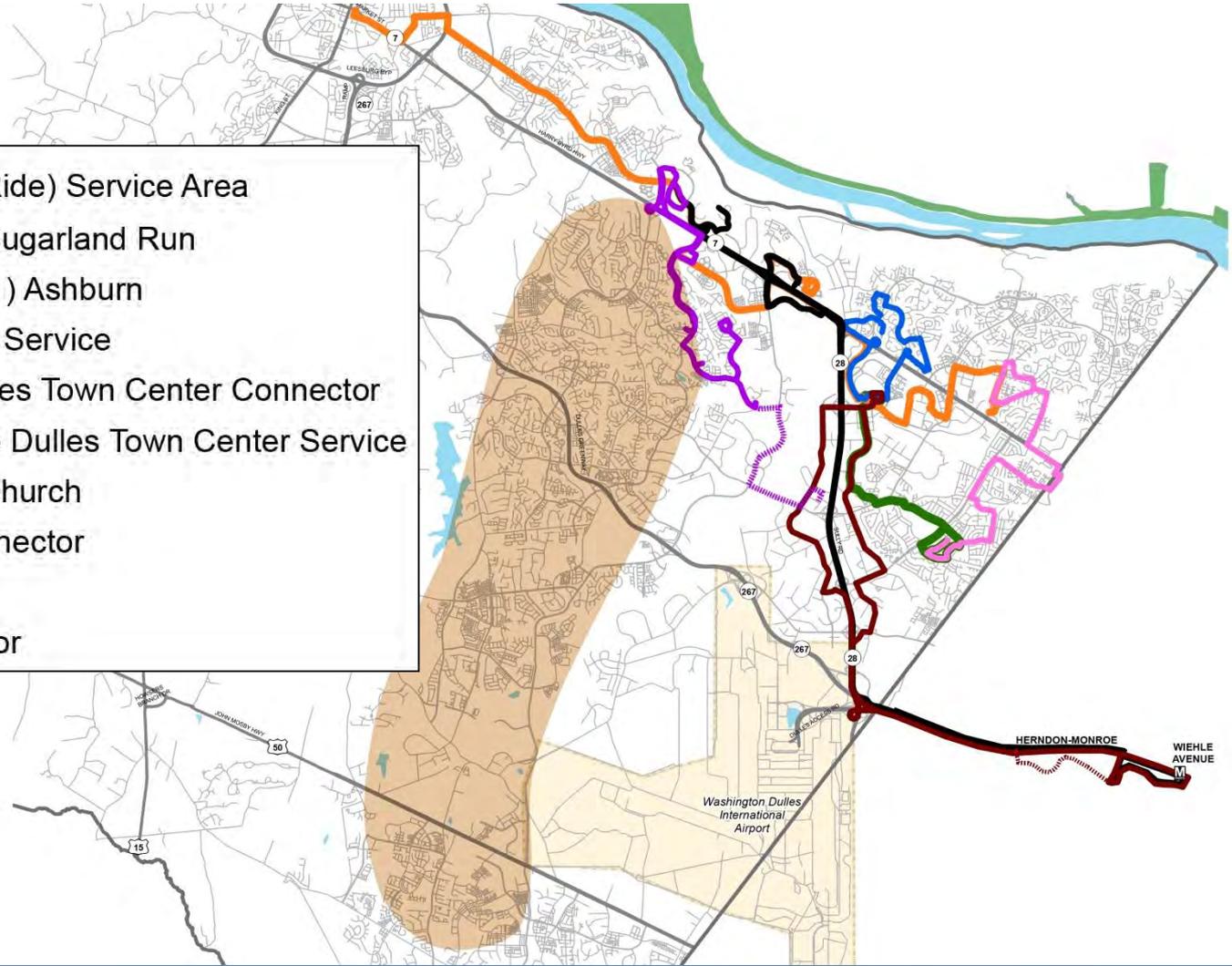


FAIRFAX

FINAL CONCEPTUAL ROUTES: LOUDOUN COUNTY

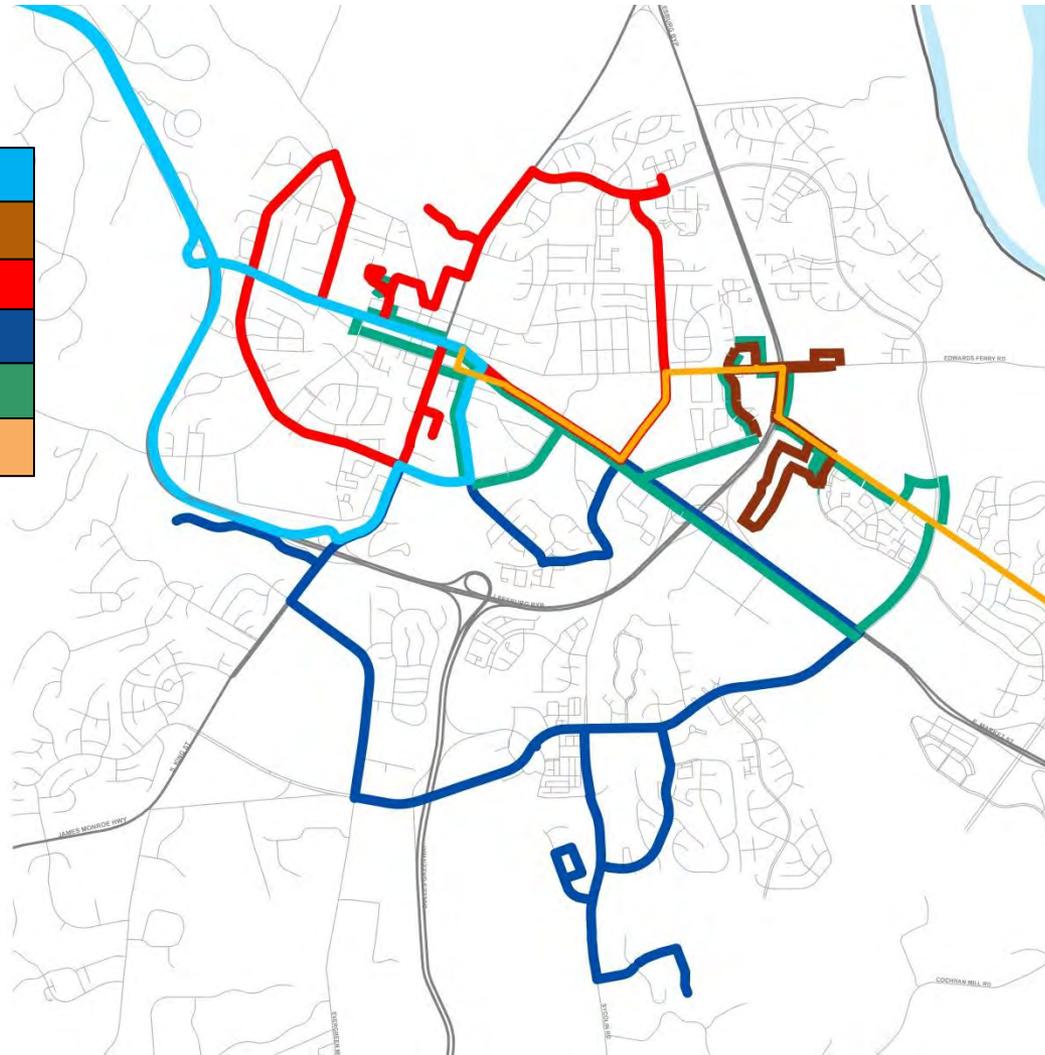
Legend

-  On Demand (Dial-A-Ride) Service Area
-  Modified Route (80) Sugarland Run
-  Modified Route (60/61) Ashburn
-  Midday Only Ashburn Service
-  Proposed Wiehle Dulles Town Center Connector
-  AM Peak Only Wiehle Dulles Town Center Service
-  Modified West Falls Church
-  (81) Countryside Connector
-  (70) 7 to 7 on 7
-  (82) Sterling Connector



EXISTING LOCAL ROUTES: LEESBURG

(40) Purcellville Connector
(50) Safe-T-Ride
(51) Battlefield – Ida Lee
(52) Leesburg Sycolin Road
(53) Leesburg Trolley
(70) 7 on 7 to 7



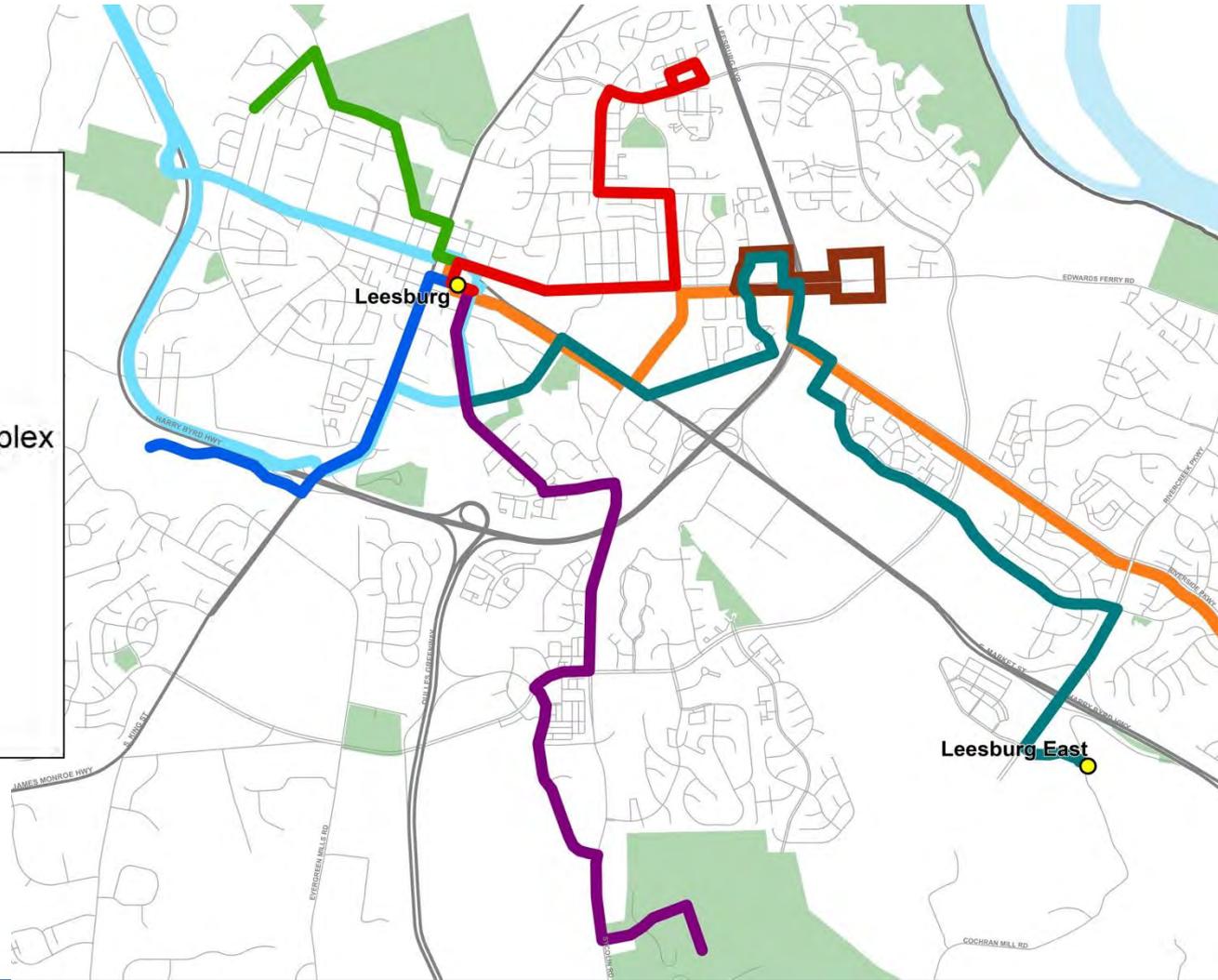
FINAL CONCEPTUAL ROUTES: LEESBURG

Legend

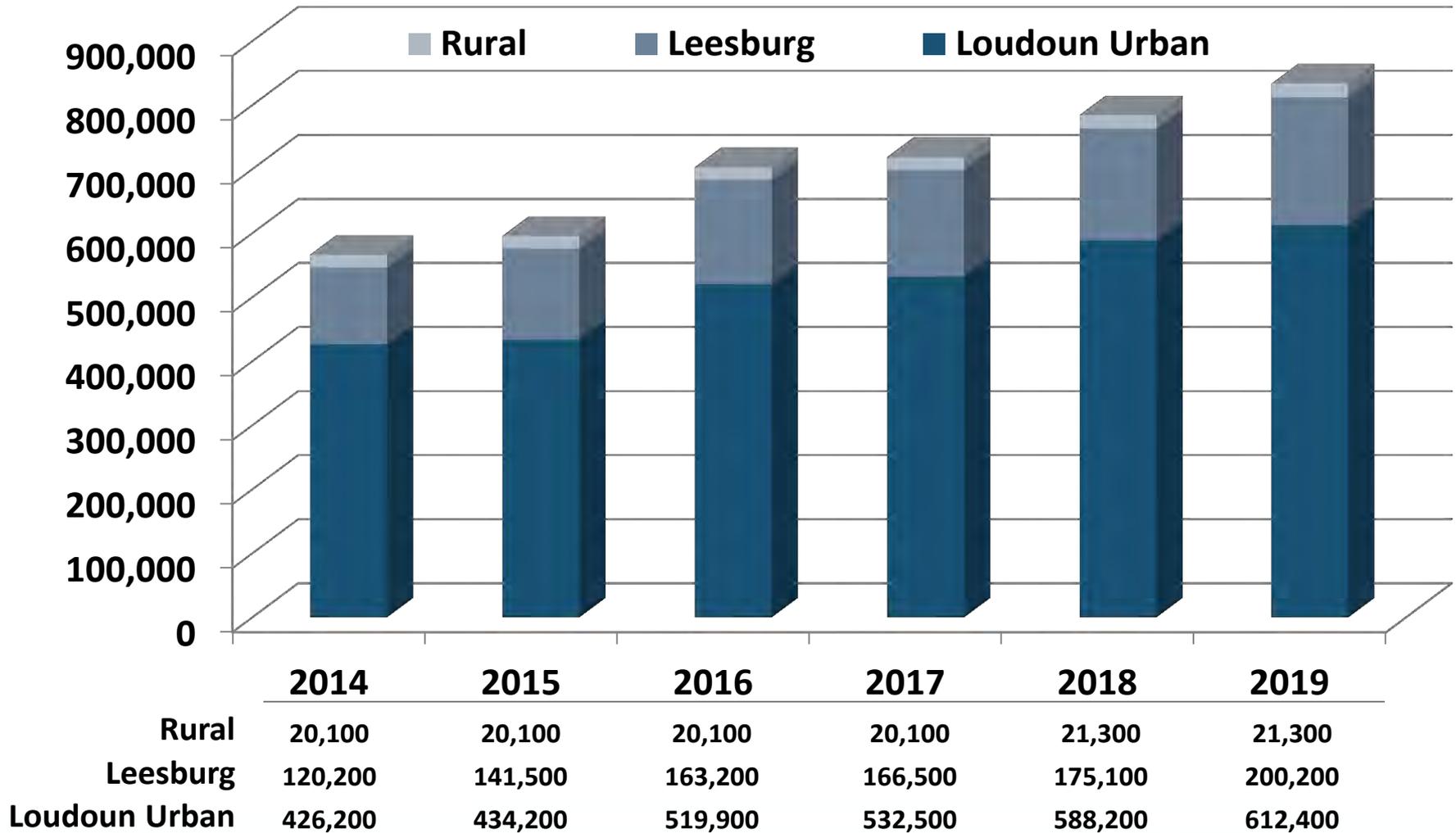
- Proposed Transit Hub
- Leesburg - Exeter
- Leesburg - Spring Arbor
- Leesburg - Tuscarora
- Leesburg - County Gov't Complex
- Leesburg Trolley
- Safe-T-Ride

Unchanged Routes

- (70) 7 to 7 on 7
- (40) Purcellville Connector
- On Demand Service



ANNUAL RIDERSHIP PROJECTION



OPERATING MODEL

Recommendation: Contract Operation

- Loudoun County and the Town of Leesburg each remain a “grantee” of DRPT to annually apply for Commonwealth grant funds for capital and operating costs in support of local fixed route bus services.
- The County’s procurement and resultant contract should be written to allow the Town of Leesburg the option to ride the contract.

BUDGET & FUNDING RECOMMENDATIONS

- Maintain current fare level, but add day and monthly passes
- Discount seniors and disabled off-peak fares
- Seek proffers for transit infrastructure
- Funding Sources:
 - State
 - Fare
 - Advertising
 - Private Participation

PROJECTED NET COST (Year of Expenditure)

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Gross Annual Cost					
Loudoun Rural	\$876,000	\$902,200	\$929,300	\$957,100	\$985,800
Leesburg	\$1,079,300	\$1,124,300	\$1,158,100	\$1,206,300	\$1,516,100
Loudoun Urban	\$3,941,500	\$4,416,600	\$4,802,500	\$5,230,500	\$5,471,000
Leesburg-County Funded	\$498,300	\$513,300	\$528,700	\$544,500	\$560,900
Revenue					
Loudoun Rural	\$581,200	\$599,900	\$617,700	\$639,400	\$657,300
Leesburg	\$248,100	\$273,200	\$280,600	\$329,700	\$363,000
Loudoun Urban	\$1,135,800	\$1,220,700	\$1,261,700	\$1,498,400	\$1,546,900
Leesburg-County Funded	\$110,000	\$110,100	\$113,300	\$116,700	\$119,600

PROJECTED NET COST (Year of Expenditure)

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
	Net Cost				
Loudoun Rural	\$294,800	\$302,300	\$311,600	\$317,700	\$328,500
Leesburg	\$831,200	\$851,100	\$877,500	\$876,600	\$1,153,100
Loudoun Urban	\$2,805,700	\$3,195,900	\$3,540,800	\$3,732,100	\$3,924,100
Leesburg-County Funded	\$388,300	\$403,200	\$415,400	\$427,800	\$441,300

Notes:

- 1. Annual Gross Annual Cost increases include costs for specific service improvements and 3% annual inflation.*
- 2. Leesburg-County Funded costs assume continued equivalent contribution for two existing local routes and \$20,000 contribution for the Leesburg Safe-T-Ride.*
- 3. Revenues include revenues from farebox, State Mass Transit Fund, advertising, private sector contributions and FTA 5311 funds (applied to rural services only). Farebox revenues assume a fare increase in FY 2018 to keep pace with inflation.*

Next Steps

- Consultant Finalize Transit Development Plan
- County Develop RFP for Services
- County Apply for Grant Funds
- Begin Implementation of Service Modifications