Transit Strategic Plan

FY 2020 – FY 2029

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FOURSQUARE ITP

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Executive Summary

This Transit Strategic Plan (TSP) will serve as a "road map" for public transportation improvements in the City of Suffolk over the FY 2020 - FY 2029 ten-year period. The Virginia Department of Rail and Public Transportation (DRPT) focuses investments in transit systems that are meeting the existing demand for public transportation, and that have a desire to meet the growing demand for improved public transportation services through careful coordination of transit and land use planning. As such, DRPT requires that public transit operators receiving state funding prepare, adopt, and submit a TSP at least every five years and update it annually each December.

The previous Transit Development Plan (TDP) for Suffolk Transit was completed in January 2014. This TSP for the City of Suffolk replace that TDP and will meet the new 2018 DRPT Transit Strategic Planning Guidelines, and provide the opportunity to:

- Document the changes in transit services.
- Adjust transit goals and objectives.
- Assess current transit services.
- Identify unmet transit needs.
- Determine appropriate courses of action within the ten-year planning horizon.

The TDP serves as a management and policy document for the City of Suffolk and as the basis of capital and operating grant requests in the Commonwealth's Six Year Improvement Program (SYIP), Statewide Transportation Improvement Program (STIP), Transportation Improvement Program (TIP), and Constrained Long-Range Plan (CLRP).

ES.1 System Overview and Strategic Vision

ES.1.1 System Overview

Suffolk Transit currently operates seven fixed-route bus routes. Of these seven routes, five operate during weekdays and on Saturday, while two routes operate on weekdays only, and one route operates only on Saturday. All Suffolk Transit fixed-route services originate or terminate in the City of Suffolk, although one route briefly travels into the neighboring City of Chesapeake. During the week, all routes operate between 6:00 a.m. and 6:30 p.m. On Saturdays, routes operate between 7:30 a.m. and 4:30 p.m. In addition to fixed-route service, there is also paratransit service for ADA certified individuals within three fourths of a mile from fixed-route service. There are also various other supplementary transportation options in Suffolk detailed in Section 1.1.1.

ES.1.2 Strategic Vision

Suffolk Transit's vision statement and goals were developed using common themes from feedback collected from riders, operators, and other stakeholders in the Spring of 2019. This TSP also includes several objectives for each goal and explains how each will be measured, the target for each, the strategy for achieving the goal, and what data sources will be used to measure if it is being achieved. Suffolk Transit's goals include:

- Growth / new opportunities.
- Operational excellence.
- Community integration.
- Financial accountability.
- Regulatory compliance.
- Environmental stewardship.

The TSP also outlines the service standards for Suffolk Transit, as well as other performance standards, which provide a general framework for measuring if the system is achieving its goals and objectives. The TSP includes details on four performance standards and methods for measuring each standard in Section 1.2.3. The performance standards are:

- Dependability.
- Passengers Per Revenue Hour/Cost Per Revenue Hour.
- Safety.
- Load Factor.

ES.2 System Performance and Operations Analysis

An evaluation of the demand for transit and a review of underserved areas was conducted throughout the City of Suffolk using both current and forecasted data on population and employment growth (Section 2.2). In order to evaluate Suffolk Transit's existing transit system and identify areas for improvement, both fixed-route and paratransit service was examined based on numerous performance and operating metrics, Sections 2.3 and 2.2. Both of these evaluations were then used during to identify opportunities for growth and improvement of transit throughout the Suffolk Transit service area.

ES.2.1 Evaluation of Transit Market Demand and Underserved Areas

A market analysis was conducted to determine the demand for different types of transit services throughout the City of Suffolk, and where certain types of transit could be supported. Areas that exhibited a high propensity or need for transit service

included: Downtown Suffolk, Wynnewood area in northern Suffolk, West Jericho neighborhood and the area along N. Main Street north of downtown Suffolk were other areas that exhibited high Transit Propensity.

A gap analysis was conducted to compare the existing transit service to find areas that could have new or increased service.

Two types of service gaps were identified:

- Level of Service: where more service could be implemented.
- Coverage: where services could be expanded.

Level of Service Gaps

In terms of providing general service all day, the following gaps in all-day service were identified: the Azalea Acres neighborhood on W Constance Road, and southern Suffolk, Whaleyville and Holland. The areas in Downtown Suffolk could benefit from increased service on existing routes, while the southern Suffolk areas could be further considered for on-demand or flexible services.

The gap analysis also found the following areas would benefit from enhanced services during the peak period, 6:00 a.m. – 9:00 a.m. and 3:00 p.m. – 7:00 p.m.: the Azalea Acres neighborhood on W Constance Road, Whaleyville and Holland in southern Suffolk, and areas of Crittenden, Hobson, and Chuckatuck in northwestern Suffolk. Additional considerations for these areas could be the implementation of on-demand or peak hour only commuter services which would require less resources and provide more flexible services.

Coverage Gaps

This analysis found Windsor has a cluster of existing work trip flows to Downtown Suffolk, which may support transit. There are additional strong flows into Downtown Suffolk that are further northwest than the Green or Red routes currently serve. These coverage gaps could be filled by peak hour commuter services.

In terms of all types of trips, rural areas south of Downtown Suffolk and west of Northern Suffolk have noticeable internal flows to the area but limited external flows. Currently, no Suffolk Transit routes serve these areas, but these areas could be considered for on-demand or flexible service.

ES.2.2 Performance Evaluation

A performance evaluation was conducted for fixed-route service. The Orange and Green routes performed the best in terms of passengers per hour and mile, respectively. Across the cost efficiency measures, farebox recovery and net cost per passenger, the Orange Route performed the best. Finally, trips on both the Green and Orange routes were found to be over capacity.

Five routes did not meet existing service standards. Based on their performance some opportunities for improvement include:

- Purple Route: eliminate low-performing segments.
- Pink Route: maximize ridership by eliminating segments without stops, such as Portsmouth Boulevard through Great Dismal Swamp. Realign to connect to job hubs on Progress Road.
- Yellow Route: straighten the route to make it quick for employees to connect to distribution centers.
- Green and Orange Routes: add additional service during the time period experiencing over capacity passenger loads.

To improve the performance of the system as a whole, Suffolk Transit can maximize ridership by making existing routes bi-directional.

ES.2.3 Operating and Network Efficiency Evaluation

In the Efficiency Evaluation that was conducted, all routes met the service standard of 60-minute headways, although there were several routes that did not meet the minimum span of 6:30 a.m. to 6:30 p.m. The Green and Orange routes have the highest ridership across the morning/afternoon peaks and midday. The Gold (Purple) and Yellow routes recorded the fastest speeds, while the other speeds were consistently slower, likely due to the more frequent stops and more densely-populated areas that are being served. The analysis also found that many Suffolk Transit routes leave late, affecting the schedule adherence of each route.

Suffolk Transit has opportunities to improve the reliability of its routes, these include: changing the departure times of routes, so they do not all leave on the top of the hour from the Downtown Transfer Station, interlining routes that have longer runtimes with routes with short runtimes, adjusting the schedules of routes that have extreme schedule deviations.

Additionally, to meet the service standards, the weekday spans of the Pink and Red Routes and the Saturday span of the Pink Route should be extended.

ES.2.4 Analysis of Opportunities to Collaborate with Other Transit Providers

The Hampton Roads Transportation Planning Organization (HRTPO), the Metropolitan Planning Organization (MPO) for Hampton Roads, features representatives from multiple agencies collaborating to address issues of regional importance. This includes representatives from all HRT member jurisdictions and other surrounding cities. At a May 2019 meeting of the HRTPO and transit agencies (Suffolk Transit, WATA, HRT) multiple strategies were developed to help increase collaboration between the regional partners.

These strategies included:

- Forming joint technical committees
- Joint purchasing
- Coordinated services
- Joint marketing
- Integrated fare systems, and
- Regionalization of paratransit service.

ES.3 Planned Improvements and Modifications

A number of planned service improvements were developed as part of this Transit Strategic Plan. Suffolk Transit proposes changes to all existing fixed routes, the implementation of two new fixed routes (i.e., the Blue route and the Lunch Circulator), and the introduction of commuter and on-demand service. The proposed service changes are expected to result in a 77 percent increase in ridership on fixed-route service during weekdays and a 74 percent increase in ridership on Saturday. Chapter 3 provides additional details on individual improvements, a prioritization plan and continued service development.

ES.4 Implementation Plan

An implementation plan is also included in this Transit Strategic Plan in Chapter 4 to quantify the capital improvements that are necessary for implementing the service improvements. Over the next ten years, the vehicles operated in maximum service is expected to increase from seven to nine vehicles, the fixed-route fleet is expected to increase by five vehicles, and the spare ratio will decrease to 22.2 percent from 28.6 percent.

Suffolk Transit is also planning to build a transit operations facility, which will include office space, a heated garage, large storage space, and vehicle storage. As well as to continue to fund improvement to passenger amenities throughout the ten-year plan.

ES.5 Financial Plan

The Financial Plan detailed in Chapter 5 provides a planning-level forecast of Suffolk Transit's anticipated costs and revenues over the ten-year TSP time-frame. The Financial Plan is composed of both an operating budget and a capital budget.

Suffolk Transit's operating budget is funded almost entirely by grants, with local funding totaling 43 percent of operating revenues and federal funding totaling 33 percent.

The short-term TSP recommendations require a relatively modest overall operating cost increase of three percent for full implementation (in current year dollars). Mid-term recommendations, which are expected to start in FY 2024, will yield a more substantial increase in net operating costs of just over $306,000 in FY 2024 and an additional $105,000 in FY 2026. Long-term recommendations, expected to start in FY 2028, also yield an increase in net operating costs of just over $168,000.

Suffolk Transit's capital needs are expected to total $4.28 million over the ten-year TSP planning timeframe.

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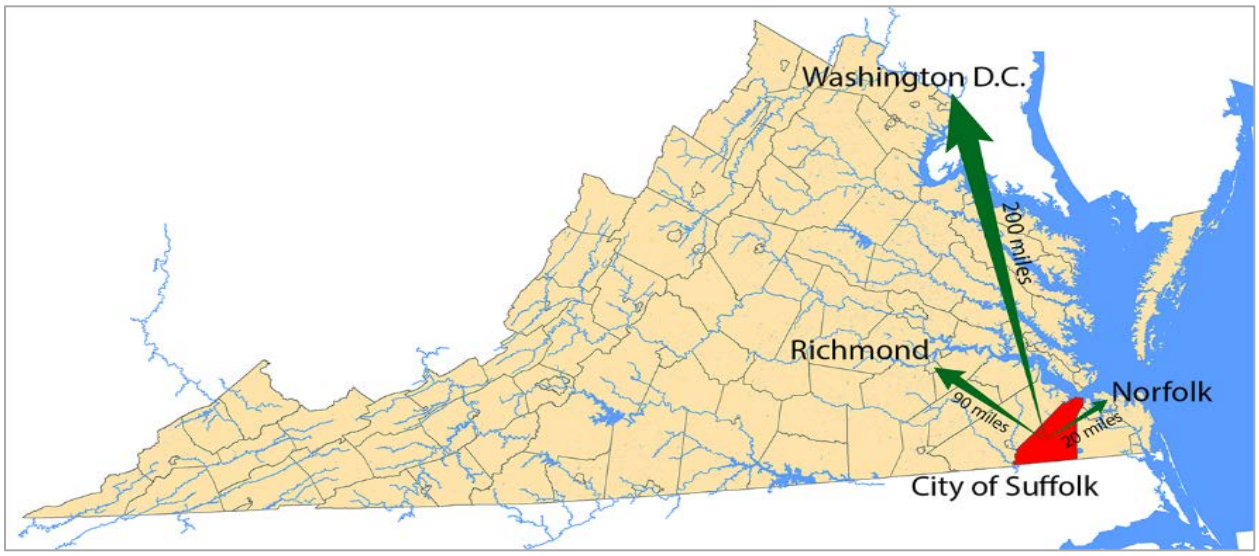
1. System Overview and Strategic Vision

The City of Suffolk is part of the Hampton Roads region in southeastern Virginia. The City consists predominantly of rural areas. The historic downtown, located in central Suffolk, and the mainly commercial/mixed use areas in northern Suffolk mark the two major nodes of development. Additionally, there are Villages located in rural or suburban areas that are compact historic districts similar in character to traditional neighborhoods[1]. The City of Suffolk is home to 88,057 residents as of 2017 and is one of seven major cities that form the Hampton Roads Metropolitan Statistical Area (MSA) with a total population of 1.6 million. Suffolk is the largest city in the Commonwealth in terms of land mass (430 square miles) and is close to important destinations in Virginia. As shown in Figure 1-1, the City of Suffolk is located 20 miles from Norfolk, 90 miles from Richmond, and 200 miles from Washington, D.C.

Figure 1-1: The location of City of Suffolk in Virginia



1.1. System Overview

1.1.1. Service Provided and Areas Served

Fixed Route Service

The City of Suffolk currently operates six fixed-routes Monday through Friday: Green, Orange, Red, Yellow, Pink, and Purple routes. These routes operate on one-hour headways and originate at the Downtown Transfer Station to allow timed transfers between routes. Five routes, Green, Orange, Pink, Purple and Blue operate on Saturday with one-hour headways. Fixed-route transit services are summarized in Table 1-1. Appendix A provides a detailed overview of each individual fixed route.

ADA Paratransit

The Virginia Regional Transit contracts with Virginia Regional Transit to provide paratransit for ADA certified individuals. Eligibility for ADA paratransit services is through an application process that requires completion by a medical professional who is knowledgeable of the applicant's disability. The service is door-to-door within ¾ of a mile from the fixed route service (Figure 1-2 and Figure 1-3). Passengers are required to schedule their trip at least the day before the trip is to take place.

[1] City of Suffolk Comprehensive Plan, April 1, 2015.

Table 1-1: Suffolk Transit Service Summary

Route	Service Days	Span		Headway (minutes)	Peak Vehicles
		Weekdays	Saturday		
Green	Weekdays/Saturday	6:30 a.m.–6:30 p.m.	7:30 a.m.-4:30 p.m.	60	1
Orange	Weekdays/Saturday	6:00 a.m.–6:30 p.m.	7:30 a.m.-4:30 p.m.	60	1
Red	Weekdays	8:30 a.m.–2:30 p.m.	---	60	1
Yellow	Weekdays	6:30 a.m-6:30 p.m.	---	60	1
Pink	Weekdays/Saturday	6:30 a.m.–9:30 a.m. 10:30 a.m.-5:30 p.m.	7:30 a.m.-3:30 p.m.	60	1
Purple	Weekdays/Saturday	6:30 a.m.–6:30 p.m.	7:30 a.m.-4:30 p.m.	60	1
Blue	Saturday	---	7:30 a.m.-4:30 p.m.	60	---

Figure 1-2: Weekday System Map with ADA Paratransit Service Area

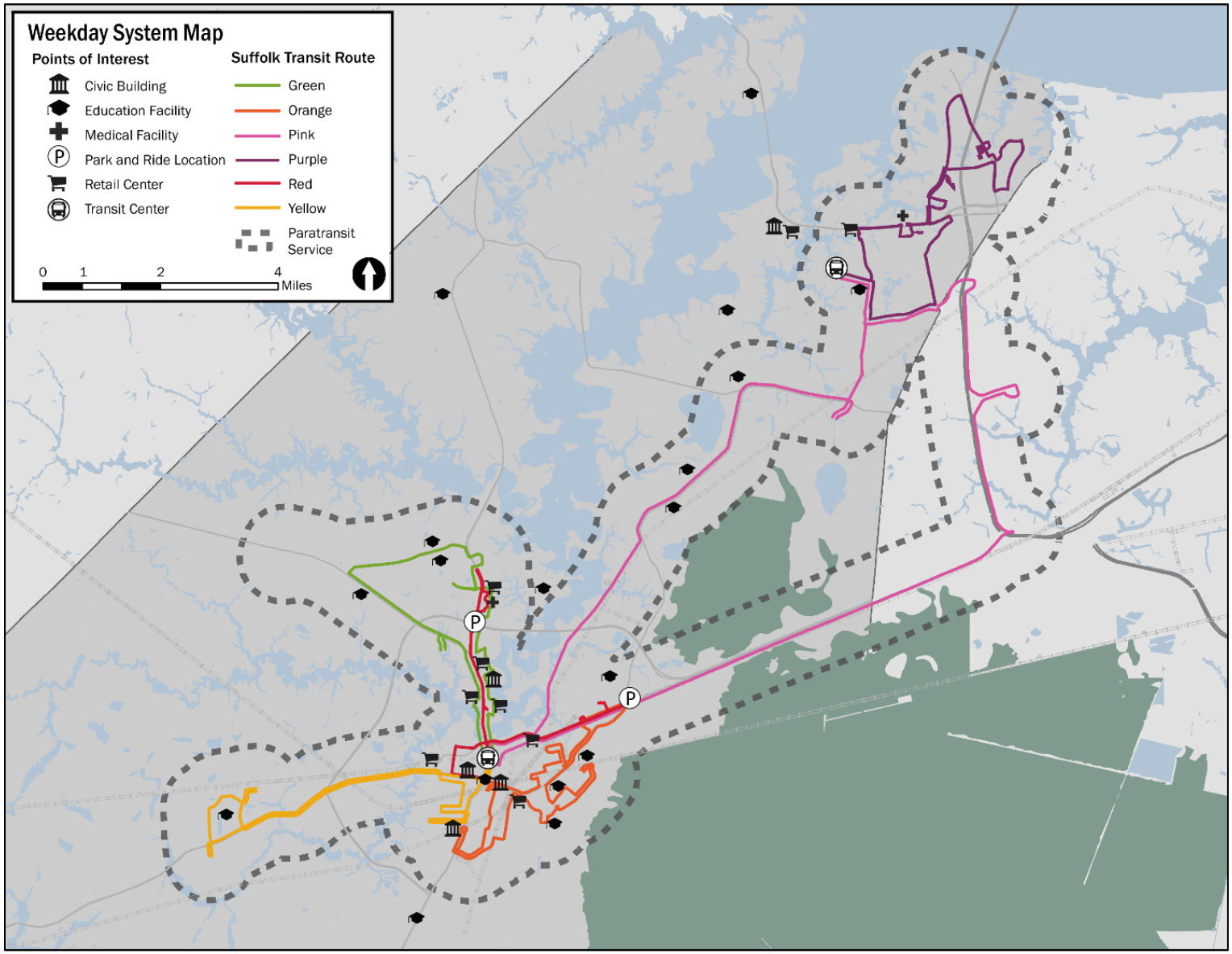
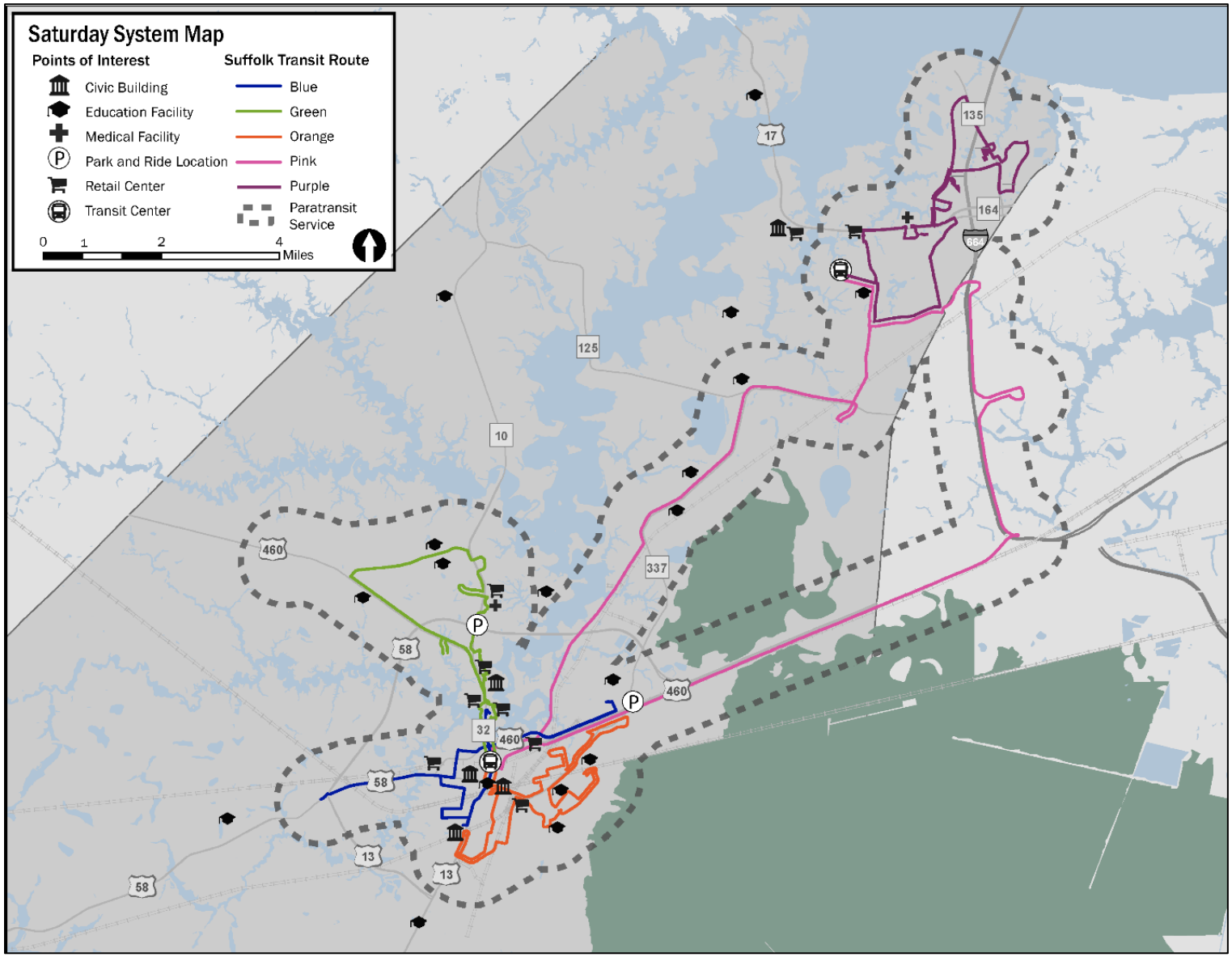


Figure 1-3: Saturday System Map with ADA Paratransit Service Area



Other Transportation Services

In addition to the regular fixed-route and paratransit services offered by Suffolk Transit, several supplementary transit options are also available for the residents of Suffolk. Some of these options are provided in adjacent or neighboring jurisdictions of Suffolk, and therefore, are not directly available for the Suffolk riders.

Hampton Roads Transit

HRT continues to service one stop in Suffolk, at College Drive and I-664 in northern Suffolk. HRT's Route 47 allows for travel to Chesapeake and Portsmouth by public transit.

Suffolk Parks and Recreation

The City of Suffolk's Parks and Recreation department operates a vehicle to transport participants to and from department programs. This service is provided on an as-needed basis and does not operate on specific days or at specific times.

Suffolk Redevelopment and Housing Authority

The Suffolk Redevelopment and Housing Authority partners with community transportation providers to provide transportation for low to moderate income residents when possible, for daily living, shopping, recreation and social events. The Authority owns and operates one 15-passenger van to transport residents to Authority sponsored events, community programs, and residential engagements.

Taxi Services

United Taxi Service, All City Taxi and Greenbrier Taxi provides the local taxi service.

Intercity Bus

Greyhound service to the City of Suffolk was discontinued. Current Greyhound bus service to the surrounding area includes service to Hampton, Norfolk, and Virginia Beach. In addition to Greyhound a handful of curbside bus companies serve Hampton Roads as well. Table 1-2 provides further detail on these services and the area served.

Table 1-2: Inter-city Bus Options and the Cities Served

Provider	Cities Served			
	Hampton	Newport News	Norfolk	Virginia Beach
Bus2NYC	X		X	
Megabus	X			
New Everyday	X	X	X	
Number1Bus			X	X
NYC Shuttle/Sprinter	X	X	X	X
NYTiger				X

Amtrak

Currently there are no Amtrak rail stations located in Suffolk, although Amtrak service passes through Suffolk. The closest stations are in Norfolk, Newport News and Virginia Beach, served by the Northeast Regional route. This route connects the Hampton Roads region to Boston, Mass. via Richmond, Va., Washington, D.C., Baltimore, Md., Philadelphia, Pa., New York, N.Y., and New Haven, Conn. The City of Suffolk supports the establishment of a Western Tidewater Amtrak station. Were this station created, Suffolk Transit would seek to establish direct service to the station.

Private Transportation

Additionally, there are several faith-based, medical, employment and education related transportation options available for Suffolk residents for Sunday church services, medical appointments, work places as well as education facilities.

1.1.2. Current Initiatives

Starting July 2018, Suffolk Transit introduced several transit enhancements including route name changes as well as the addition of Saturday services. To avoid similarity in colors on maps, the Gold route was changed to the Pink route, and the Blue Route was renamed the Purple route. The Saturday service is offered on five routes with various operating hours. In addition to the existing Green, Orange, Pink and Purple routes, the Saturday service is provided on a new Blue route which is a modified combination of Yellow and Red routes. Saturday services are available from 7:30 a.m. to 4:30 p.m. on all routes except the Pink route which ends its service at 3:30 p.m., instead. The Purple route has also been through slight route modification to serve Harbour View Boulevard area better. Additional hours were added to the Red, Yellow, and Pink routes for their weekday service as well.

A total of 180 bus stop signs are already installed by Suffolk Transit throughout its service areas. Each bus stop sign is reachable by wheel-chairs and contains essential stop information including a QR code. The riders may get bus arrival information through the Suffolk Transit App and its web-based portal.

1.2. Strategic Vision

In March 2019, stakeholders and staff from Suffolk Transit met to discuss the Transit Strategic Plan progress and give input to be incorporated into a strategic vision. As part of the exercise, stakeholders and Suffolk Transit staff participated in a trade-off activity. This activity asked attendees to choose between two options and vote using live polling software. The results are listed in Table 1-3.

Table 1-3: Trade-Off Activity Results

Question	Answer A	Answer B
A. More frequent bus service vs. B. Longer service hours (n = 14)	43%	57%
A. More weekday service vs. B. more weekend service (n = 14)	57%	43%
A. Fewer bus stops for faster bus service vs. B. More bus stops for more accessibility and less walking (n = 14)	36%	64%
A. Buses run more frequently but serve fewer streets vs. B. Buses run on more streets but less frequently (n = 16)	56%	44%
A. Improve existing services vs. B. Expand service to new areas (n = 15)	27%	73%

Following input from stakeholder and Suffolk Transit staff engagement, several recurring themes were identified:

- Continually advance accessibility.
- Deploy limited resources effectively.
- Strengthen community presence.
- Foster a positive/safe work environment.
- Fully leverage technology in outreach/branding.
- Straight-forward, easy to comprehend service delivery.
- Increased regional connections.
- Bring innovative ideas to increase ridership.

These themes were incorporated into an agreed upon vision statement as follows:

> *Operate an innovative transit system that works to increase access, delivers easy-to-understand services, and responds to the changing needs of the City of Suffolk residents.*

1.2.1. Goals and Objectives

The goals and objectives in this section have been categorized into six areas of activity for the public transit operator. These categories summarize the wide variety of goal/objective statements present in the relevant agency, municipal, and regional planning documents. Categories with limited coverage were targeted for enhanced goal/objective development during the TDP process. These categories are:

GO GROWTH / NEW OPPORTUNITIES: Objectives related to the expansion of service geographically or in terms of frequency, including development of new ridership markets, new connections with other service providers, or expanded facilities and fleet.

OE OPERATIONAL EXCELLENCE: Objectives that enhance the training and effectiveness of the workforce, address the monitoring and continual improvement of service delivery, and utilize studies or resources to support streamlined operations or project implementation.

CI COMMUNITY INTEGRATION: Objectives that further coordinate transit with economic development and local land use preferences and represent participation in studies or locally-based planning initiatives.

FA FINANCIAL ACCOUNTABILITY: Objectives that address efficiency of operations and cost recovery, as well as the pursuit of expanded or new revenue sources.

RC REGULATORY COMPLIANCE: Objectives that support meeting the agency's regulatory requirements. These should align with guidance and reporting requirements while establishing or exceeding any applicable performance metrics.

ES ENVIRONMENTAL STEWARDSHIP: Objectives that seek to reduce emissions via technology, promote travel alternatives other than driving alone, and reduce energy consumption at facilities.

The results of a review of relevant and recent planning documents that addressed transit goals, objectives, and service standards for the region are presented in the following sections

Previous Goals and Objectives

The previous TDP for Suffolk Transit analyzed existing issues, concerns and opportunities, and identified three goals and presented four recommendations, that are incorporated as objectives into Goal #1, to the City Council. Suffolk Transit's initial goals were identified during a kick-off meeting in 2013 as part of the initial TDP development process. Table 1-4 categorizes the previous goals and objectives, as well as assigns a "status" of whether it was a one time or continuous activity.

Table 1-4: Previous Major TDP Suffolk Transit Goals

Goals/Objectives	Category	Status
Goal #1: Support and ensure the strength of the current transit system serving downtown Suffolk.	GO OE	Ongoing
Expand Downtown Suffolk service	GO	Ongoing
Provide a circulator in northeastern Suffolk	GO	Ongoing
Introduce connecting service between downtown and the northeast area of the City	GO	One-Time
Schedule services a few times a week to different towns in rural Suffolk	GO	Ongoing
Goal #2: Create a recognizable brand	CI	One-Time
Goal #3: Explore opportunities and the feasibility of future partnerships to support the expansion of service to nearby areas.	GO CI	Ongoing

Alignment with Regional Goals/Regulations (State, Federal)

This section reviews the alignment of previous goals and objectives developed for Suffolk Transit with relevant transit/transportation goals for the region or by localities within the service area. This TDP update will afford the opportunity to further incorporate and/or strengthen Suffolk Transit goals, objectives, and service standards to align with the strategic planning elements of these adopted plans, especially those adopted since the last major TDP update.

Federal Transit Administration Rulemaking (2016): In August 2016, FTA published a final rule for the Public Transportation Safety Program, which provides the overall framework for FTA to monitor, oversee, and enforce safety in the public transportation industry. This builds upon implementing a Safety Program that is both scalable and flexible through the application of Safety Management System (SMS) principles. SMS builds on existing transit safety practices by using data to proactively identify, avoid, and mitigate risks to safety.

Just prior to this rulemaking, in July 2016, the FTA published a Final Rule for Transit Asset Management (TAM). The rule requires FTA grantees to develop asset management plans for their public transportation assets, including vehicles, facilities, equipment, and other infrastructure. FTA's national Transit Asset Management System Rule:

- Defines "state of good repair";
- Requires grantees to develop a TAM plan;
- Establishes performance measures;
- Establishes annual reporting requirements to the National Transit Database; and
- Requires FTA to provide technical assistance.

These federal rules also inform DRPT updates of TDP guidance and performanced-based monitoring of transit grantees throughout the Commonwealth.

HRTPO Long-Range Transportation Plan 2040 (2016):

The Hampton Roads Long-Range Transportation Plan (LRTP) was adopted on July 21, 2016, by the HRTPO Board, and serves as a guiding document for transportation investments in the HRTPO area. The City of Suffolk is a member of the HRTPO, and it is important to align Suffolk Transit's future goals with those set forth in the 2040 LRTP. Out of 13 goals identified in the 2040 LRTP document, seven goals are directly related to transit. These goals highlight a variety of areas such as safety, public engagement, environmental protection, and coordination between various initiatives that need further improvement and enhancement. In Table 1-5 these goals are categorized, and their respective status is noted.

As of writing, the HRTPO is currently drafting the 2045 LRTP. This will be the first LRTP to include Suffolk Transit and its initiatives.

Table 1-5: HRTPO LRTP 2040 Goals

Goals/Objectives	Category	Status
Increase the safety of the transportation system for all users, including minimizing conflicts between motorized and non-motorized modes.	OE	Ongoing
Protect and enhance the environment, promote energy conservation and improve the quality of life.	ES	Ongoing
Consider the impact of transportation investments on the environment.	ES	Ongoing
Promote compatibility between transportation improvements and planned land use and economic development patterns.	CI	Ongoing
Promote an efficient and reliable regional transportation system.	OE	Ongoing

Goals/Objectives	Category	Status
Engage a diverse public in the development of the region's transportation system	CI	Ongoing
Continue to work towards finding dedicated and sustainable revenue sources for transportation to close the funding gap	FA	Ongoing

City of Suffolk Comprehensive Plan 2035 (2015): The current City of Suffolk Comprehensive Plan was adopted on April 1, 2015 and has a 20-year implementation horizon. This comprehensive plan has a Transportation Plan component that identifies themes, policies and actions for the future years within the City. These themes include promoting a less car-dependent lifestyle for Suffolk residents, active participation in regional planning activities, preserving the rural character of the city, and revitalization of certain areas of the city through financial incentives. The transportation goals and objectives, or Policies and actions, presented in the comprehensive plan is categorized into the classes mentioned at the beginning of this chapter, and the current implementation status of each goal and objective is noted in Table 1-6.

Table 1-6: City of Suffolk Goals and Objectives

Goals/Objectives	Category	Status
Policy 4-1: Provide opportunities for residents to adopt a lifestyle that is less dependent on auto travel.	CI, GO	Ongoing
Action 4-1D: Promote the development of an internal transit circulator system within the two mixed use cores.	GO	Ongoing
Policy 4-2: Suffolk will be a responsible participant in the regional planning and programming process.	CI, GO	Ongoing
Action 4-2A: Develop roadway and transit improvement programs to be consistent with those adopted by the Hampton Roads Planning District Commission.	CI	Ongoing
Action 4-2C: Expand the type and location of transit service connections between routes within Suffolk and those serving regional destinations. Options for regional cooperation and connectivity should be considered	GO	Ongoing
Policy 4-4: The City will employ appropriate regulatory and financial incentives to ensure that access to and within the central core area supports private sector initiatives.	FA, RC	Ongoing
Action 4-4A: Prioritize transportation investments to ensure adequate access from Growth Areas to regional markets.	FA	Ongoing
Action 4-4D: Maintain the City's commitment to incorporate Transportation System Management Strategies (TSM) and Transportation Demand Management Strategies (TDM) in order to improve operational management and better utilize existing and new roadways.	OE, FA	Ongoing
Policy 4-5: Provide facilities and policies that ensure adequate multi-modal access throughout the growth areas of the City.	OE	Ongoing
Action 4-5E: Consider options to mitigate impacts of rail traffic through grade separation, new road connections, or rail relocation.	OE	Ongoing
Action 4-5G: Assure the incorporation of transit related features in conjunction with design and construction of new roadways and road improvements.	OE	Ongoing

Rationale for Change

The goals and objectives in the previous TDP were identified prior to Suffolk Transit initiating service with a new service contractor in 2012. The initial transit services were limited to certain areas of the city such as Downtown Suffolk. Therefore, expansion of service to other areas of the city (northern Suffolk in particular) and creating a recognizable brand for Suffolk Transit were set as primary goals to achieve. With the addition of new routes and reorganizing of old ones, and with service hours extended to Saturdays, key goals/objectives set forth in the previous TDP are already accomplished. Now, Suffolk Transit can further diversify its goals and objectives based on these accomplishments to date.

The regulatory environment has also changed since the initial TDP development and new performance-based state/national requirements need to be incorporated. The Suffolk Transit

goals/objectives and service standards need to address the Transit Asset Management (TAM) minimum standards to show its compliance toward smooth and efficient operation of its assets.

It is noted that most of the previous TDP goals are related to service expansion. A review of local and regional planning documents, including DRPT guidance to transit providers, indicates that goals and objectives related to Financial Accountability, Regulatory Compliance, as well as Community Integration are recurring themes not extensively reflected in Suffolk Transit's current goals and objectives. Additionally, safety, security and customer service-related objectives should be introduced to reflect Suffolk Transit now as an established service.

Lastly, the previous TDP included several goals without measurable objectives. This is also important to better integrate with the Service Standards set forth in this chapter. Some performance standards can be associated with relevant objectives to monitor and gauge progress toward ideal level of service.

New Goals and Objectives

New goals and objectives were developed based on the vision statement of Suffolk Transit and by incorporating agency, regional, and state priorities. Several objectives and/or recommendations from the past TDP were carried forward as ongoing initiatives. Examples of potential measures, desired targets, and strategies for reaching/maintaining targets in a timely fashion are provided. Additional detail is provided on potential sources of data or technology necessary to facilitate the measurements. Measures have been selected that best reflect Suffolk Transit's unique operating environment.

GOAL 1: Provide reliable fixed-route and paratransit service that meets the needs throughout downtown Suffolk and surrounding areas.

Measure	Target	Strategy	Data Sources
Objective 1.1: Maintain and monitor system performance on a monthly basis. OE FA			
Route metrics compiled for passengers per hour, passengers per mile, operating expense per passenger trip, and operating expense per capita.	Conduct service adjustments for routes 60 percent below system averages for 12 consecutive months for the metrics identified.	Use monthly reports to determine candidate routes for potential re-alignments, service frequency, or span of service changes.	Farebox data, APC data, schedule data, operations logs, financial data
Objective 1.2: Monitor and deliver bus service in a safe manner. OE			
Preventable bus accident rate per 100,000 miles.	Less than 1 per 100,000 miles.	Establish/maintain driver safety recognition program, conduct refresher training for routes/operators as needed.	Operations logs, farebox data, APC data
Objective 1.3: Identify a safe and secure location for bus storage. OE			
Number of vandalism incidents for system vehicles.	No vandalism events for 12 consecutive months.	Identify new secure locations downtown, and/or retrofit existing storage with lighting, cameras and fencing.	In-house documentation

GOAL 2: Promote the image of existing transit services through outreach and service improvement initiatives.

Measure	Target	Strategy	Data Sources
Objective 2.1: Educate the public about existing public transportation options throughout the service area. CI			
Outreach events held on an annual basis	At least four events focused on the local community needs.	Include "Try Transit" and other promotional events, increase business outlets to provide schedule information, develop/streamline graphical materials.	In-house documents
Amount of mailing or contact with outside agencies/organizations.	Grow list by 5 percent annually.	Maintain a mailing list of organizations and social service agencies that feature likely transit riders and provide information to those organizations.	In-house documents
Objective 2.2: Deliver quality service and responsive customer care. OE			
Load factor	Not to exceed 1.25 on any route for more than 15 minutes.	Use APC data to identify routes that may have crowding issues. Take action only if crowding is observed to be recurring.	APC data, operation logs, field observations (trains)
Amenities installed at stops with more than 25 daily boarding	90 percent of high-volume stops with an accessible shelter installed.	Provide sufficient amenities at high-volume stops and transfer locations.	APC data
On-time performance	70 percent on-time service (0 to 5 minutes late) -- No trips leaving early.	Identify any patterns in train schedule. Continue to explore routing or advocacy for infrastructure solutions to train delays.	APC data, operation logs, field observations (trains)

GOAL 3: Improve financial efficiency and demonstrate accountability to current and new partners.

Measure	Target	Strategy	Data Sources
Objective 3.1: Contain operating costs by monitoring and adjusting system performance while exploring cost savings measures. FA			
Operating expense growth (non-fuel).	Not to exceed 4 percent per year.	Monitor cost trends, adjust service in line with budgetary constraints.	Financial data, operations logs
Objective 3.2: Maximize and preserve the existing transit system. OE			
Miles Between Service Road Calls.	6,500 miles	Maintain preventative maintenance schedules.	Maintenance logs, TAM reporting, fleet inventory
Percent of fleet exceeding lifespan (years/miles).	No more than 20 percent of fleet.	Adherence to FTA Useful Life Benchmarks for vehicle classifications.	TAM reporting
Missed trips due to operational failures.	95 percent or more of all scheduled trips operated. 95 percent of all pull outs dispatched.	Reconcile schedule data with operating data/dispatch logs monthly.	Maintenance logs, TAM reporting, fleet inventory
Objective 3.3: Maintain compliance with all applicable outside guidance and reviews of Suffolk Transit operations. RC			
Findings from compliance reviews.	No more than 1 finding per year. No consecutive findings.	Establish recommended processes, timely close-out of any identified issues.	In house documentation

GOAL 4: Monitor and improve the overall customer satisfaction with Suffolk Transit Services.

Measure	Target	Strategy	Data Sources
Objective 4.1: Seek opportunities to increase regional transit connectivity. GO			
Participation in coordination studies.	Identify one coordination pilot project per year.	Develop new/more efficient service delivery options or connections collaboratively.	In-house documentation/rider surveys
Objective 4.2: Improve communication with customers via technology applications, website enhancements, social media presence and call center information dissemination. OE			
Presence on social media.	Website content current, well organized. Minimum of one social media post per month.	Monitor applications, refresh content of website regularly, push out service alerts.	In-house documentation

1.2.2. Service Design Standards

Service design standards are critical planning tools to evaluate the effectiveness of existing service and to assure impartiality in service modification decisions. Service standards are typically developed in several categories of service, such as service coverage, passenger convenience, fiscal condition, and passenger comfort. The most effective service standards are straightforward and relatively easy to calculate and understand. Service standards reinforce the performance measurement necessary to meet many of Suffolk Transit's objectives.

Suffolk Transit will continue to revisit, refine, and incorporate their service design standards based upon statewide goals and system performance monitoring. New service design standards during this update reflected an emphasis on safety, security, and reliability of services. Future and continued incorporation of statewide goals (SMART Scale, TAM) have been identified to include design standards that address asset conditions, accessibility, economic development, environmental quality, land use compatibility, and congestion mitigation as applicable. Each existing service standard has been identified with a status of either maintained, modified, or new for the purposes of this TDP update. Modifications are underlined to identify the newly proposed changes. Each measurable service standard is also associated with the most relevant objective (if applicable) in Table 1-7.

Table 1-7: Proposed Suffolk Transit Service Standards

Service Standard	Status	Objective
Hours of Operation		
Maintain current span of Monday through Friday from 6:30 a.m. to 6:30 p.m., maintain Saturday service from 7:30 a.m. to 4:30 p.m. Increase evening services as appropriate and feasible.	Modified	1.1
Frequency of Service		
Maintain hourly headways on current routes or any new fixed route services; reduce headways to 45 or 30 minutes when feasible.	Maintained	1.1
Loading Standard		
Standees for short periods acceptable, but up to 25 percent of total passenger load.	Maintained	2.2
Accessibility		
Residential Areas: > Areas with population densities of 2,000 people per sq./mile *Major Activity Centers:* > Employers or employment concentrations of 200+ employees > Health centers > Middle and high schools > Shopping centers with over 25 stores or 100,000 sq. ft. > Social service/government centers	Maintained	---
Bus Shelters and Benches		
Located at bus stops with 10 or more boardings per day; incorporated into site plans for major shopping and other developments.	Maintained	2.2
Bus Stop Signs		
Located at scheduled stops and key destinations; include system name and contact information.	Maintained	2.2
Passenger Productivity		

Service Standard	Status	Objective
Review service and consider modifications if productivity falls below the FY2018 average of 8.1 passenger trips per revenue hour.	Modified	3.1
Cost Effectiveness		
Review service and consider modifications if operating costs exceed the FY2018 average of $7.12 net cost per passenger trip for fixed route service and $48.95 net cost per passenger trip for ADA paratransit services.	Modified	3.1
Review service and consider modifications if the farebox recovery ratio is below the FY2018 average of seven percent for fixed route service.	New	3.1
Schedule Adherence		
70% on-time service (0 to 5 minutes late) – No trips leaving early.	Modified	2.2
Public Information		
Timetable, maps, and website maintained and updated as needed to be accurate.	Maintained	4.2
Safety		
0.10 or fewer "reportable incidents" per 100,000 miles, as defined by the National Transit Database.	New	1.2
Security		
No security incidents or losses due to vandalism.	New	1.3
Maintaining a record of incidents, vandalism losses, etc.	New	1.3
Service Reliability		
Maintain fewer than 6,500 miles between service road calls.	New	3.2
No more than 20 percent of fleet in excess of the FTA Useful Life Benchmarks (ULB) for the vehicle classification.	New	3.2
Less than five percent missed trips due to operational failures.	New	3.2

1.2.3. Performance Standards

This section provides additional details on the definition and measurement approaches for some of the service standards presented in Table 1-7. These approaches should be monitored on a recurring basis with adjustments made to avoid any excessively cumbersome data collection and/or measurement practices. Where possible, the agency will leverage technology (operations, maintenance, or financial systems) to streamline measurements. The measurement methodology should be documented in policy/procedures and the results should be reported as part of recurring (no less than quarterly) reporting unless otherwise noted.

Dependability

The system should be resilient to impacts caused by accidents, breakdowns, traffic delays, driver/vehicle availability, and other factors that could cause a scheduled trip to be missed. Service should also not be curtailed due to the unavailability of either a driver or a vehicle upon initial pull out from the garage. Keeping the age/miles per vehicle within the FTA Useful Life Benchmark can also help to promote more reliable operations. A related component for this reliability is tracking the average distance in service miles between when all vehicles in revenue service incur mechanical failures that prevent starting or finishing a run. The inclusion of dependability measures is new for Suffolk Transit.

Measurement Approach

> Logs shall be maintained and updated daily to accurately reflect vehicle status at the start of the trip. Vehicles unable to begin their assigned trip or that require an additional vehicle to be dispatched due to operability shall be reported as a missed trip.
> An operations/maintenance logs shall be maintained to record all service failures of a vehicle in revenue service. This measurement can be calculated each month by dividing the number of revenue miles operated by the number of road calls.

Passengers Per Revenue Hour / Cost Per Revenue Hour

These represent measures of passenger productivity and cost effectiveness. These measures represent industry wide standards used to assess overall performance and route efficiency. Existing Suffolk Transit service measures include these metrics, currently re-baselined as a result of this TDP update to the observed results for FY2018. Suffolk Transit may wish to explore an indexed threshold percentage of the system average, as this reflects the practice at other agencies within the Commonwealth. This accommodates for the variation among routes, which is not always best reflected in the system wide average alone, nor do specific targets account for inflationary adjustments during the lifetime of this TDP.

Measurement Approach

> Look at historic Suffolk Transit system trends by route in conjunction with financial data to establish appropriate benchmarks of productivity considering expected financial outcomes of operating that route (ridership vs. coverage). A conservative target starting point can be 60 percent of the historic average to identify the need for potential service adjustments. This would reflect routes with less than 60 percent of the average passenger productivity or routes 60 percent above the average cost per hour measure.
> Potentially establish a more aggressive intervention approach for route adjustments if under performance is observed during consecutive intervals or if the deviation from the system averages is excessive (larger percentage).

Safety

The National Transit Database (NTD) defines a reportable incident as one in which one or more of the following conditions apply: 1) A fatality; 2) Injuries requiring medical attention away from the scene for one or more persons; or 3) Property damage equal to or exceeding $25,000.

Measurement Approach

> Suffolk Transit should maintain and review quarterly safety logs of all incidents. As a limited NTD reporter, even if this information is not required to be reported, it would provide valuable operation insight. The incident logs should be reviewed no less than a quarterly basis for determination of any trends requiring service/training adjustments. As necessary, Suffolk Transit should use incident forms to record whether incidents were preventable, caused by other drivers, or caused by outside influences. For preventable incidents, the measurement should also identify operators who may need additional training following one or more occurrences.

Load Factor

Load standards are thresholds of the ratio of passengers on board to seats available. A fully seated passenger load would have a load factor of 1.0. Other considerations include the timing of maximum load and allowing for higher loads at peak periods. Also, other transit agencies consider the overall length of time the bus operates above a 1.0 load factor, with a desire to limit the maximum time a passenger may be left standing. Suffolk Transit's current Load Factor, of 1.25, should be taken into consideration with the average trip length (if known). Given the expanse of Suffolk Transit's service area, the load factor may be better evaluated in terms of average passenger trip length. A load factor of 1.25 would best be suited for short travel around downtown.

Measurement Approach

> Suffolk Transit should utilize APC data for estimation of overall loading and duration of peak loads on each route. Routes that show potential issues should also include on-board observation to confirm the duration of crowding and other issues that come from excessive loads (such as increased dwell times or, pass bys, etc.)

2. System Performance and Operations Analysis

2.1. System and Service Data

Suffolk Transit has operated since January 2012. It consists of both fixed-route and paratransit service. It has grown from two routes to six fixed-routes since its inception. The Suffolk Transit service area is approximately 73 square miles and encompasses over 87,000 people, resulting in approximately 1,191 people per square mile. Figure 1-2 and Figure 1-3 show the existing weekday and Saturday services, respectively.

2.1.1. Fixed-Route Service

There are currently six routes that operate during the weekday and five routes that operate on Saturdays. The service operates between 6:00 a.m. and 6:30 p.m., Monday through Friday, and 7:30 a.m. to 4:30 p.m. on Saturdays. All routes operate at a 60-minute headway all day long. Table 2-1 and Table 2-2 detail the level of service by route. In July 2018, Suffolk Transit renamed the Blue and Gold routes to Purple and Pink, respectively. When discussing data from before the renaming, the old route colors are used.

Most routes meet the Weekday hours of operation service standard of 6:30 a.m. to 6:30 p.m., but Pink and Red routes currently do not. Similarly, most routes meet the Saturday hours of operation standard of 7:30 a.m. to 4:30 p.m., but the Pink route ends early at 3:30 p.m. All routes meet the frequency service standard of 60-minute headways.

Table 2-1: Weekday Level of Service

Route	Number of Trips	Span	Headway (Minutes)	
			Peak	*Off-Peak*
Green	12	6:30 a.m. – 6:30 p.m.	60	60
Orange	13	6:00 a.m. – 6:30 p.m.	60	60
Pink	10	6:30 a.m. – 9:30 a.m.; 10:30 a.m. – 5:30 p.m.	60	60
Purple	12	6:30 a.m. – 6:30 p.m.	60	60
Red	6	8:30 a.m. – 2:30 p.m.	60	60
Yellow	12	6:30 a.m. – 6:30 p.m.	60	60

Table 2-2: Saturday Level of Service

Route	Number of Trips	Span	Headway (Minutes)
Blue	9	7:30 a.m. – 4:30 p.m.	60
Green	9	7:30 a.m. – 4:30 p.m.	60
Orange	9	7:30 a.m. – 4:30 p.m.	60
Pink	8	7:30 a.m. – 3:30 p.m.	60
Purple	9	7:30 a.m. – 4:30 p.m.	60

Operating Statistics

Each Suffolk Transit route needs one vehicle during peak periods, totaling six peak vehicles. The fleet consists of nine vehicles, making the spare ratio 33 percent. For FY 2019, Suffolk Transit will run over 19,000 revenue hours and over 357,000 revenue miles. The Pink Route has the most revenue miles with 99,000, over 70 percent more revenue miles than the next route, the Purple. Table 2-3 shows peak vehicle need, route mileage, and revenue hours and revenue miles by route by service day.

Table 2-3: Operating Statistics by Route, FY 2019

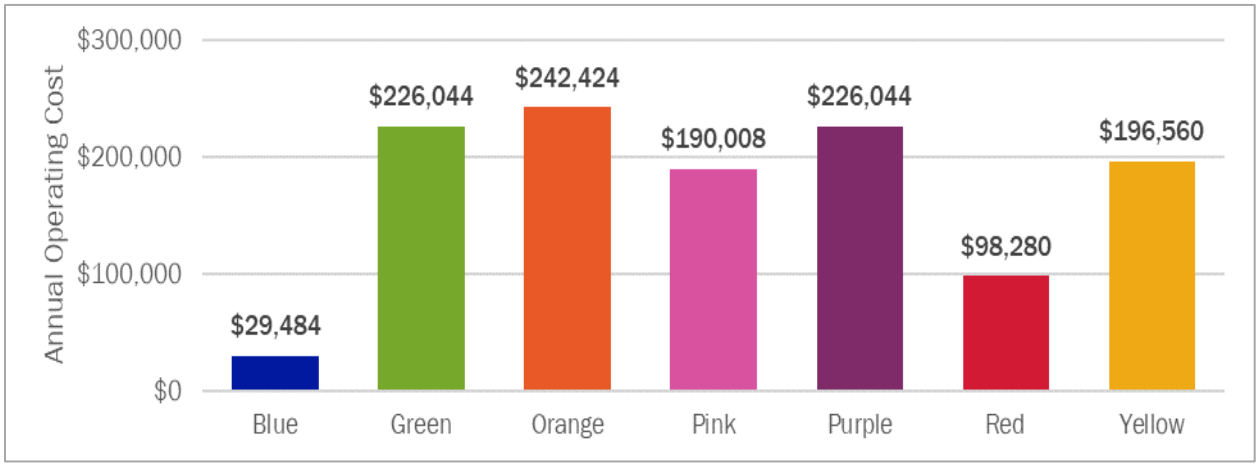
Route	Peak Vehicle Need	Route Mileage		Revenue Hours			Revenue Miles		
		Inbound	Outbound	Weekday	Saturday	Total	Weekday	Saturday	Total
Blue	-	5.6	10.3	-	468	468	-	7,660	7,660
Green	1	6.2	9.4	3,120	468	3,588	47,723	7,158	54,882
Orange	1	5.3	11.3	3,380	468	3,848	57,697	7,989	65,686
Pink	1	13.7	19.4	2,600	416	3,016	85,458	13,673	99,131
Purple	1	7.3	11.3	3,120	468	3,588	50,126	7,519	57,645
Red	1	3.4	11.7	1,560	-	1,560	21,127	-	21,127
Yellow	1	8.2	8.8	3,120	-	3,120	51,065	-	51,065
Total	6	49.7	82.2	16,900	2,288	19,188	313,197	43,999	357,196

Operating Cost

Suffolk Transit's cost per revenue hour is $61.23. The total operating cost for FY 2019 is estimated to be $1.21 million.

As seen in Figure 2-1, the Orange, Green, and Purple routes have the highest operating cost because they have the most revenue hours per year. The Red and Blue routes have the lowest operating costs due to their limited service.

Figure 2-1: Annual Operating Cost per Route, Estimate for FY 2019



Annual Ridership

In FY 2018, Suffolk Transit provided 110,659 unlinked passenger trips. Figure 2-2 summarizes the ridership by route during this period. Overall, the Orange Route carried the most passengers with 38,628 unlinked trips, while the Green Route was second with 34,902 unlinked trips. Of the other four routes, the Blue Route had the lowest level of ridership with 6,427 unlinked trips.

Average Daily Ridership

The average number of daily riders on Suffolk Transit service varies considerably depending on the route. On the Orange and Green routes, an average of 153 and 139 passengers rode each weekday, respectively. The Blue Route had the lowest number of average daily riders during this period, with 26 people using the route each weekday. Figure 2-3 summarizes the average daily weekday ridership by route.

Figure 2-2: Annual Ridership by Route, FY 2018

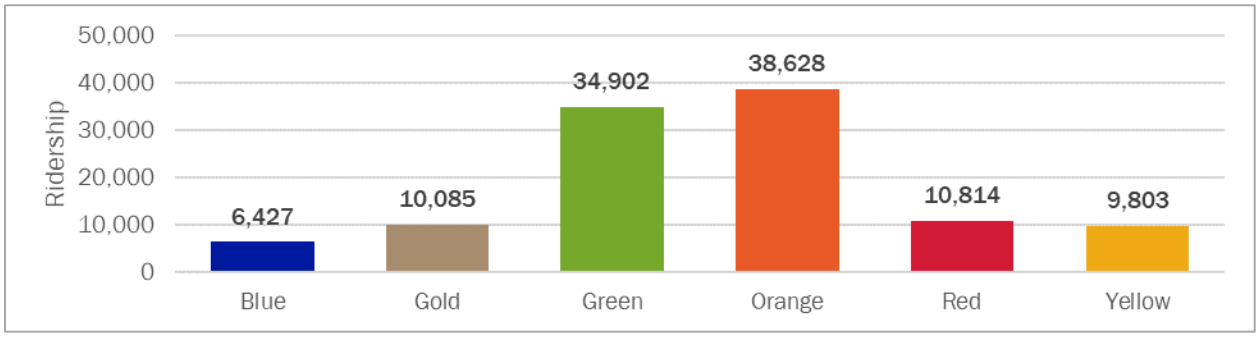
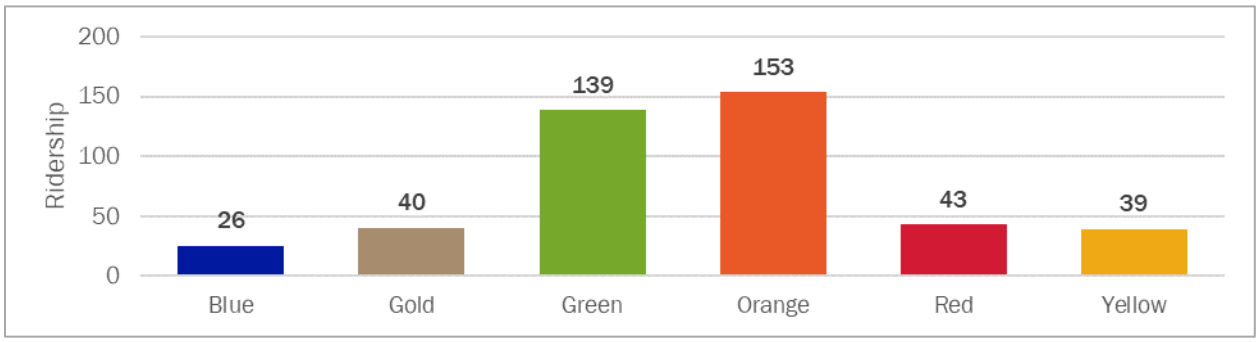


Figure 2-3: Average Daily Weekday Ridership by Route, FY 2018



Ridership by Trip

The average number of riders by trip also varied by route. Figure 2-4 shows the average ridership numbers per trip for each route. The Orange Route had the most passengers per trip with 11.8, followed closely by the Green Route with 11.5 passengers per trip. The Blue Route had 2.1 riders per trip, significantly less than the other five routes.

Ridership by Stop

Bus stop level ridership is highest at the Downtown Transfer Station where five routes converge, making it an important transfer point. In addition to this location, there are high levels of ridership at and around the Main Street Marketplace stops. Within this area, there are many commercial businesses that riders can use Suffolk Transit service to access, which explains the relatively elevated ridership levels at these stops. Additionally, the two stops that serve Sentara Obici Hospital are also well used, although ridership at these stops is not as high as the other commercial areas along North Main Street.

In addition to these stops, the North Suffolk Library and Chesapeake Square stations have high levels of ridership. Like the Downtown Transfer Station, both stations allow riders to transfer to other routes or transit services, at the North Suffolk Library stop, riders can transfer between the Blue and Gold Routes, while at the Chesapeake Square station riders can transfer from Suffolk Transit's Gold Route to Hampton Roads Transit (HRT) Routes 44 and 967. Figure 2-5 shows a heatmap of ridership activity throughout the Suffolk Transit network.

Figure 2-4: Average Passengers per Trip, FY 2018

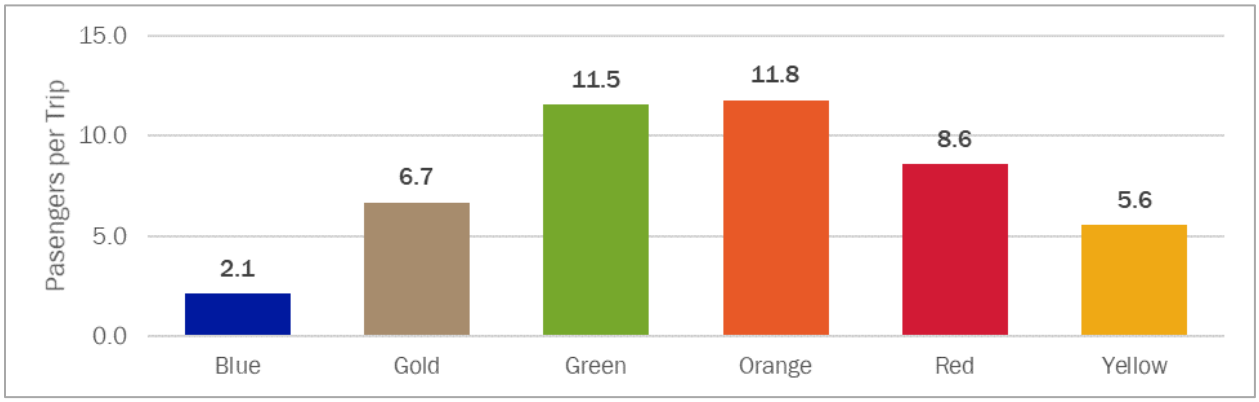
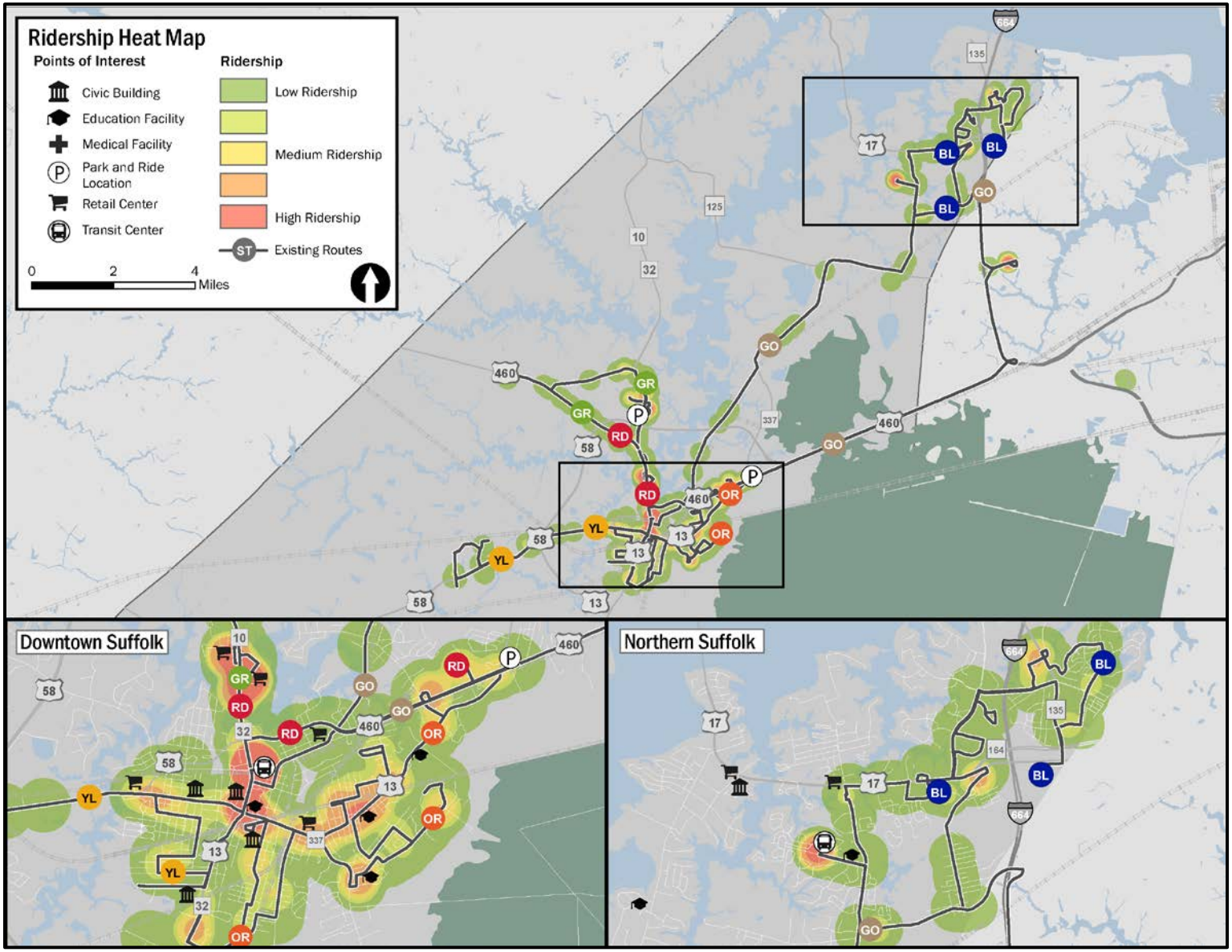


Figure 2-5: Bus Stop Ridership Heat Map, March - May 2018



2.1.2. Paratransit Service

The City of Suffolk provides complementary paratransit service within three-quarters of a mile from fixed routes. Riders are certified, and trips are reserved up to 24 hours before the pick-up time. Service is available during the span of the route within three-quarters of a mile, and trips can be made for all purposes. One personal care attendant may ride at no charge, and one family member or friend can ride by paying the basic fare of $3.00.

Operating Statistics

To run paratransit three-quarters of a mile from fixed routes, Suffolk Transit has one paratransit vehicle in its fleet. In FY 2018, Suffolk Transit operated over 1,000 revenue hours and ran almost 7,000 revenue miles. Table 2-4 shows the operating statistics for paratransit service.

Table 2-4: Operating Statistics for Paratransit Service, FY 2018

Peak Vehicle Need	Revenue Hours	Revenue Miles
1	1,028	6,986

Operating Costs

Like Suffolk Transit's fixed-route service, paratransit costs $61.23 per revenue hour. In FY 2018, Suffolk Transit spent $64,752 on paratransit service, averaging approximately $5,400 a month.

2.1.3. Service Design / Schedule Standards

Service design and schedule standards are critical planning tools to evaluate the effectiveness of existing service and to assure impartiality in service modification decisions. These standards are typically developed in several categories of service, such as service coverage, passenger convenience, fiscal condition, and passenger comfort. The most effective standards are straightforward and relatively easy to calculate and understand. Service design and schedule standards reinforce the performance measurement necessary to meet many of Suffolk Transit's objectives. Table 1-7 lists all of the service design and schedule standards.

2.1.4. Customer Service Survey

Suffolk Transit has not completed a customer intercept survey. This survey will be included in the next TSP update cycle.

2.2. Evaluation of Transit Market Demand and Underserved Areas

2.2.1. Transit Demand and Underserved Area Evaluation

The following market analysis maps the current density and population of Suffolk to determine the demand for different types of transit services throughout Suffolk. The market analysis is broken into multiple sub-analyses

- Transit Potential
- Transit-Oriented Populations Origin Index
- Commuter Origin Index
- Employment Destination Index
- Activity Destination Index

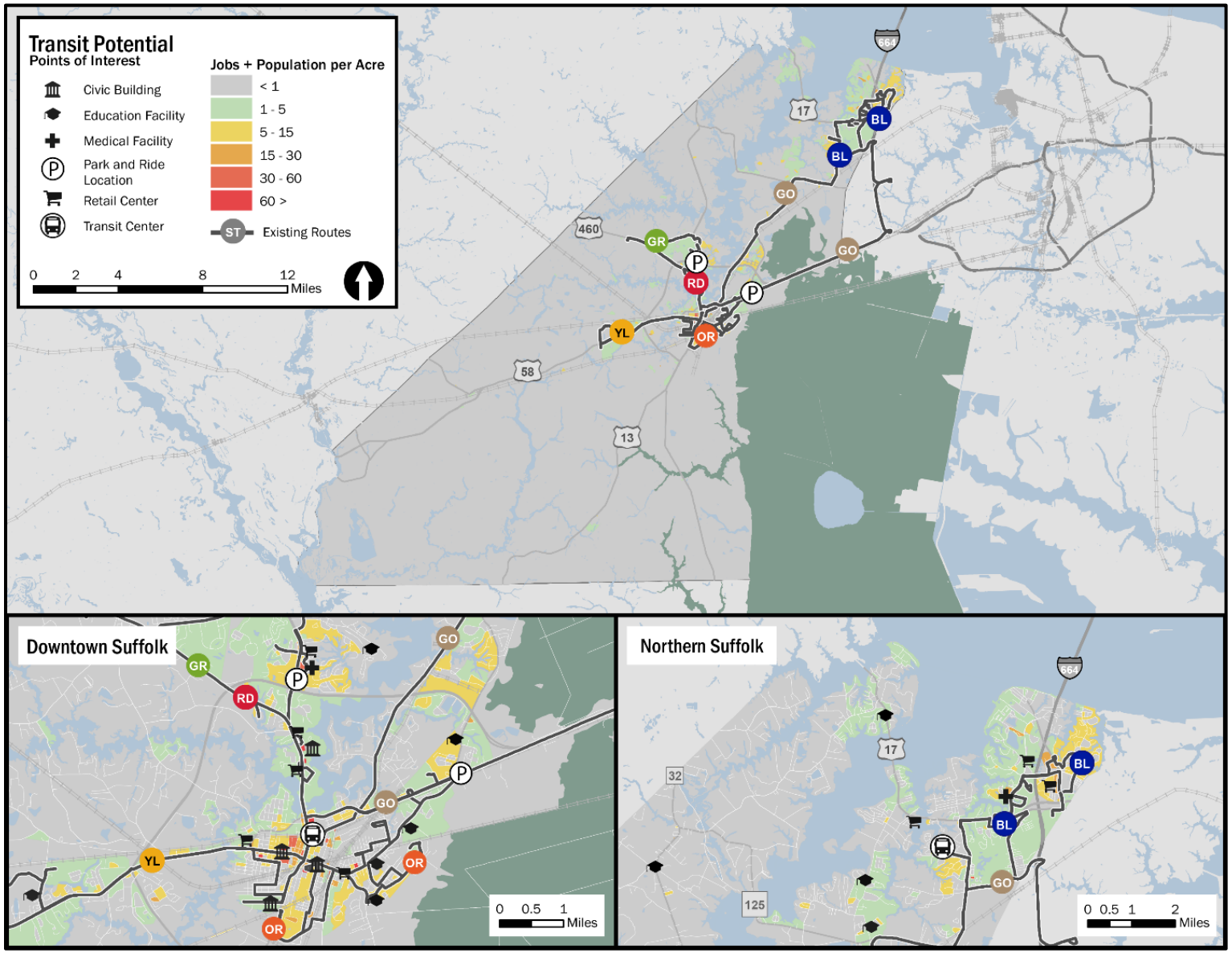
The purpose of these analyses is to determine where certain types of transit could be supported, where transit is needed and where transit could be supported.

Transit Potential

Transit Potential is a measure to identify where different types of transit services could be sustained. It illustrates the density of jobs and population per acre. According to the Transit Cooperative Research Program (TCRP) *Transit Capacity and Quality of Service Manual, 2nd Edition*, densities of three households per acre (approximately six people per acre) or four jobs per acre can support hourly fixed route transit service. Blocks with densities over five jobs plus population per acre are areas considered dense enough to support fixed transit, while blocks with densities between one and five jobs plus population per acre may still benefit from alternative transit options such as flexible or on-demand service.

The densest areas of Suffolk are in Downtown Suffolk, along with some pockets along Godwin Boulevard and in Northern Suffolk. Outside of Downtown Suffolk, areas in Crittenden, Driver, Holland, Whaleyville, and near Suffolk Executive Airport have densities of one to five jobs and people per acre. A small block group near Holland Road and Lummis Road, and a Dominion Power location south of Chuckatuck have densities between five to 15 jobs and people per acre. Figure 2-6 illustrates the Transit Potential across the City of Suffolk.

Figure 2-6: Transit Potential



Transit Propensity Analysis

The transit propensity analysis identifies where the opportunity and need for transit service exist. The following indices highlight where transit-oriented and commuter populations live and take trips. This is important in understanding how people are moving throughout a region.

Transit-Oriented Population Origin Index

The Transit-Oriented Population Origin index shows where residents who are likely to use transit live. This includes populations of young and senior citizens, low-income residents, households with one or fewer cars, and persons with disabilities. In Suffolk, the highest propensity areas are throughout Downtown Suffolk and east on Portsmouth Boulevard. These high propensity areas correspond with the strong levels of ridership on the Orange and Green routes. Northern Suffolk has large areas of moderate-low propensity around the Blue (now Purple) route. Figure 2-7 illustrates the Transit-Oriented Population Origin Index across the City of Suffolk.

Commuter Origin Index

The Commuter Origin index shows where commuters live. The data sources for this index include residents who are in the labor force or are employed, including those identifying as transit or non-single occupancy vehicle driver commuters. Suffolk has many high propensity areas for this index, including downtown Suffolk, neighborhoods near Sentara Obici Hospital on Godwin Boulevard, neighborhoods near North Suffolk Library off of Shoulders Hill Road, and other Northern Suffolk neighborhoods. Figure 2-8 illustrates the Commuter Origin Index across the City of Suffolk.

Employment Destination Index

The Employment Destination index shows where jobs are heavily concentrated in the city. In Suffolk, job densities are highest in Downtown Suffolk and along Godwin Boulevard, which are served by Orange, Green, Red, and Yellow routes. In Northern Suffolk, Sentara BelleHarbour Hospital and multiple shopping destinations have high densities of employment, which are served by the Blue (now Purple) route. Figure 2-9 illustrates the Employment Destination Index across the City of Suffolk.

Activity Destination Index

The Activity Destination index shows other than work destinations where residents might use transit to travel. These destinations include retail, health care, social assistance, education, government facilities, recreation, and restaurants. Similar to the Employment Destination Index, the highest propensity areas are Washington Street and Constance Street in Downtown Suffolk, Godwin Boulevard, and Sentara BelleHarbour Hospital in Northern Suffolk. Figure 2-10 illustrates the Activity Destination Index across the City of Suffolk.

Figure 2-7: Transit-Oriented Population Origin Index

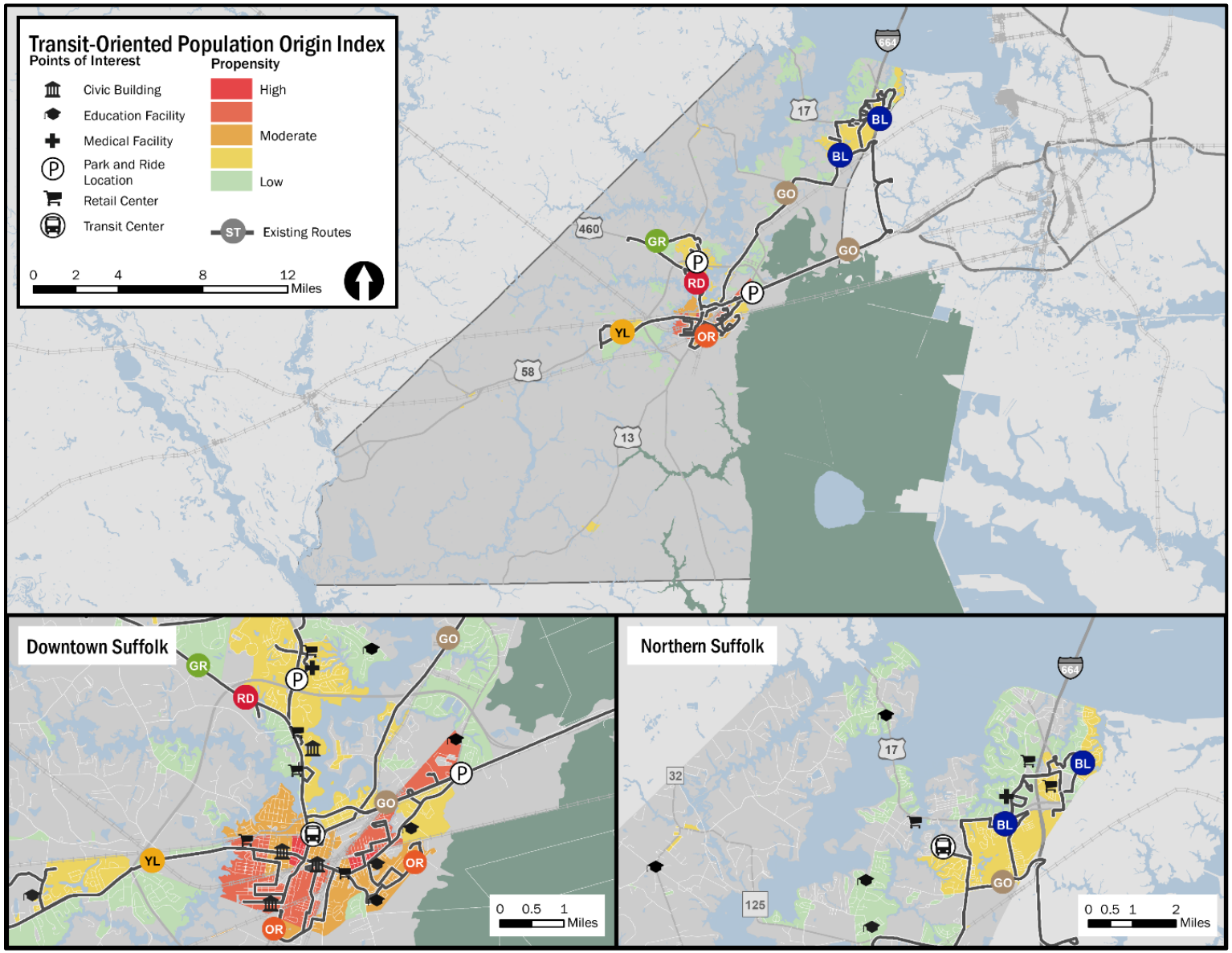


Figure 2-8: Commuter Origin Index

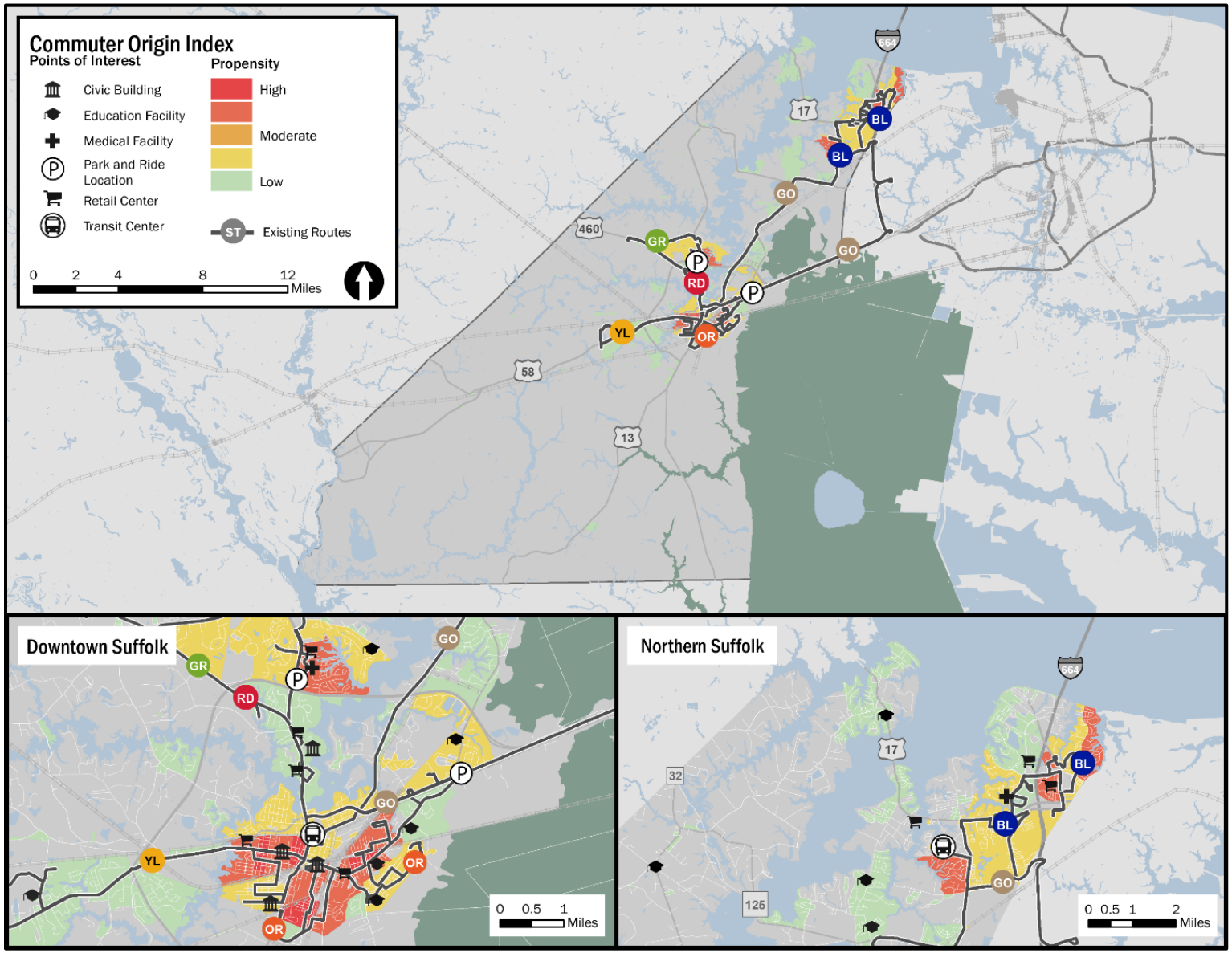


Figure 2-9: Employment Destination Index

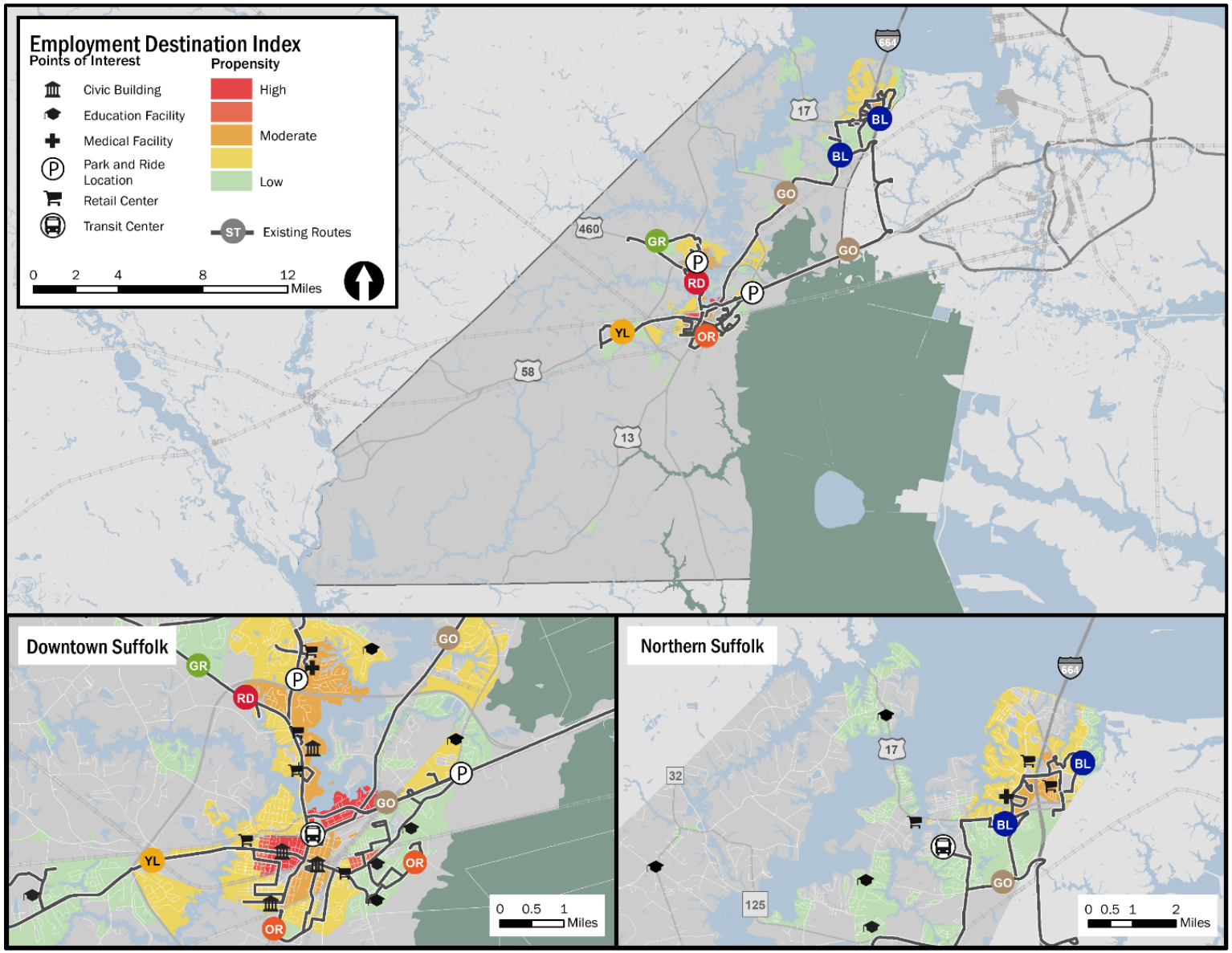
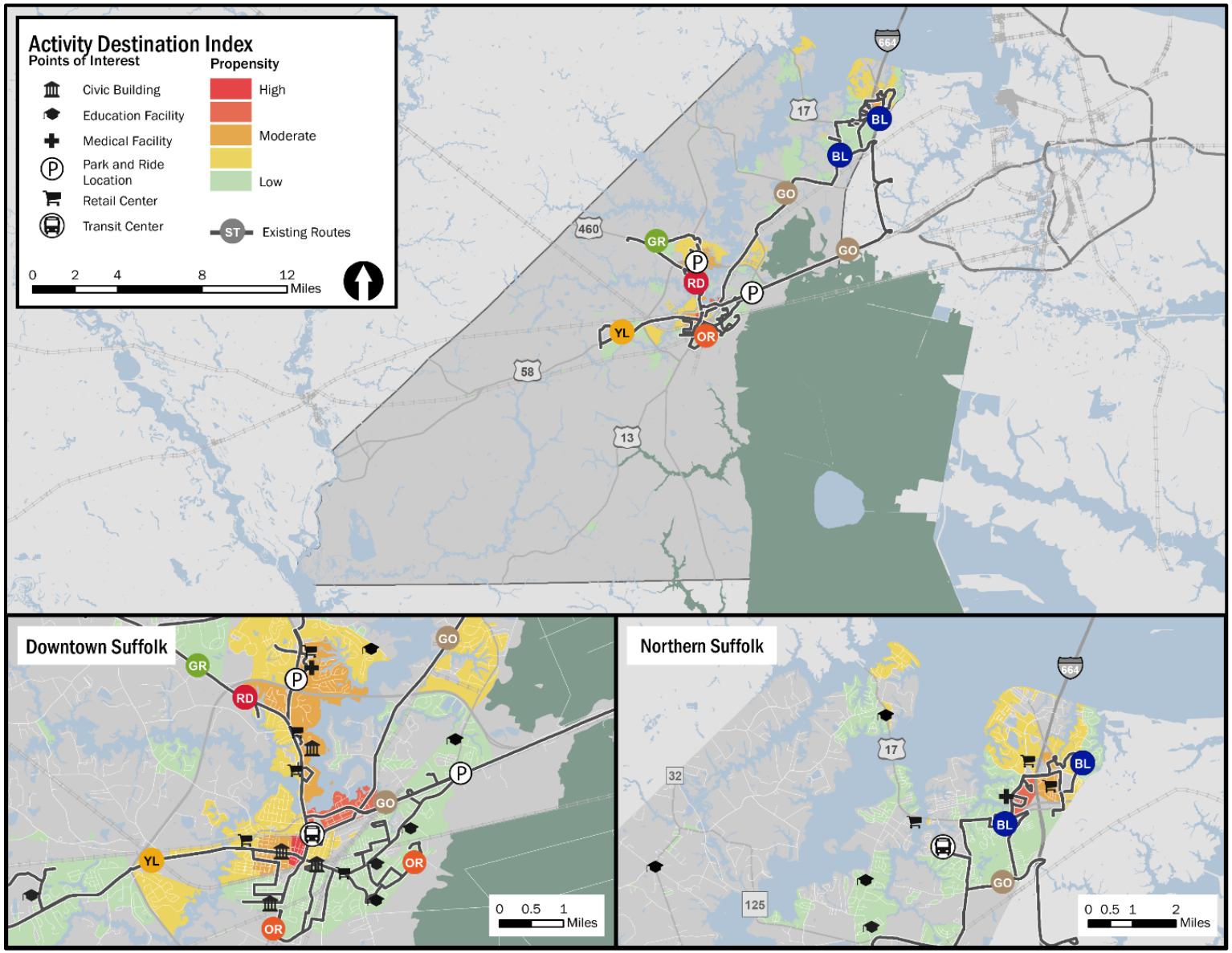


Figure 2-10: Activity Destination Index



Population and Employment Projections

The Hampton Roads Transportation Planning Organization (HRTPO) also provides data on population and employment growth in the greater Hampton Roads area through the HRTPO model. Overall, the City of Suffolk's population will grow 17 percent, from 90,426 people in 2015 to 105,370 in 2030. Employment will grow 4 percent, from 34,147 jobs in 2015 to 35,644 in 2030.

Figure 2-11 shows a map of the projected 2030 population for each Transportation Analysis Zone (TAZ) within the City of Suffolk. Many of the areas that are projected to have high populations are in North Suffolk and north of downtown Suffolk. The map also shows population growth rates greater than five percent within the City of Suffolk by TAZ's.

Figure 2-12 shows the number of 2030 jobs projected for each TAZ according to the HRTPO model. The TAZ north of downtown Suffolk exhibits high amounts of employment, likely due to the many retail and service centers in the area. There are also high levels of employment in Northern Suffolk near the Wynnewood area, where other shopping centers are located. The third area with high levels of employment is the Magnolia area, located northeast of downtown Suffolk. There are several large retail stores in this area, as well as large factories, that are contributing to employment in this area. The map also shows TAZs with growth rates greater than five percent. The area in between downtown Suffolk and the Suffolk Executive airport has a higher employment growth rate, as well as the area along Holland Road west of the Westgate area. Suffolk Transit serves both of these places via the Orange and Yellow routes respectively.

Figure 2-11: 2030 Population

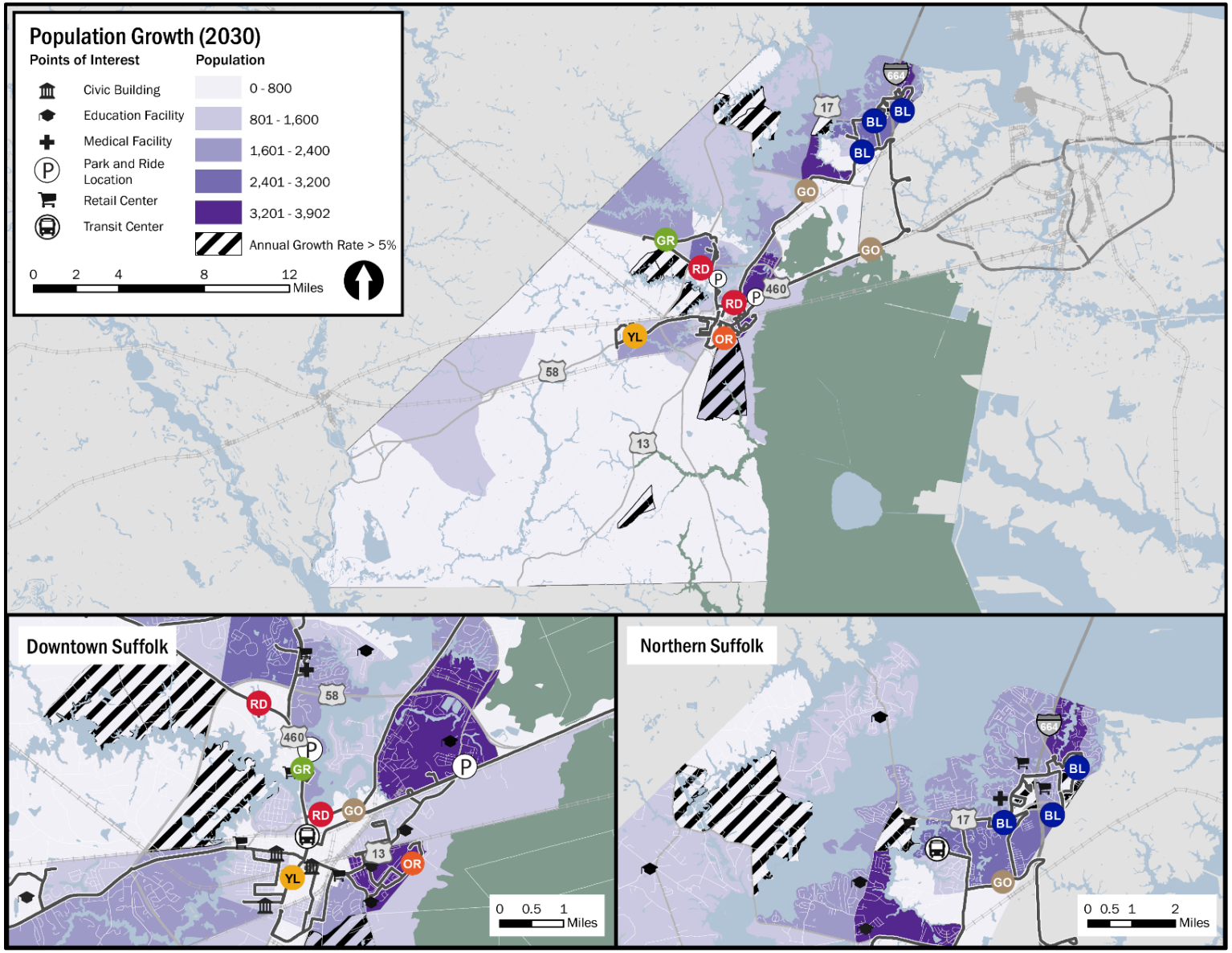
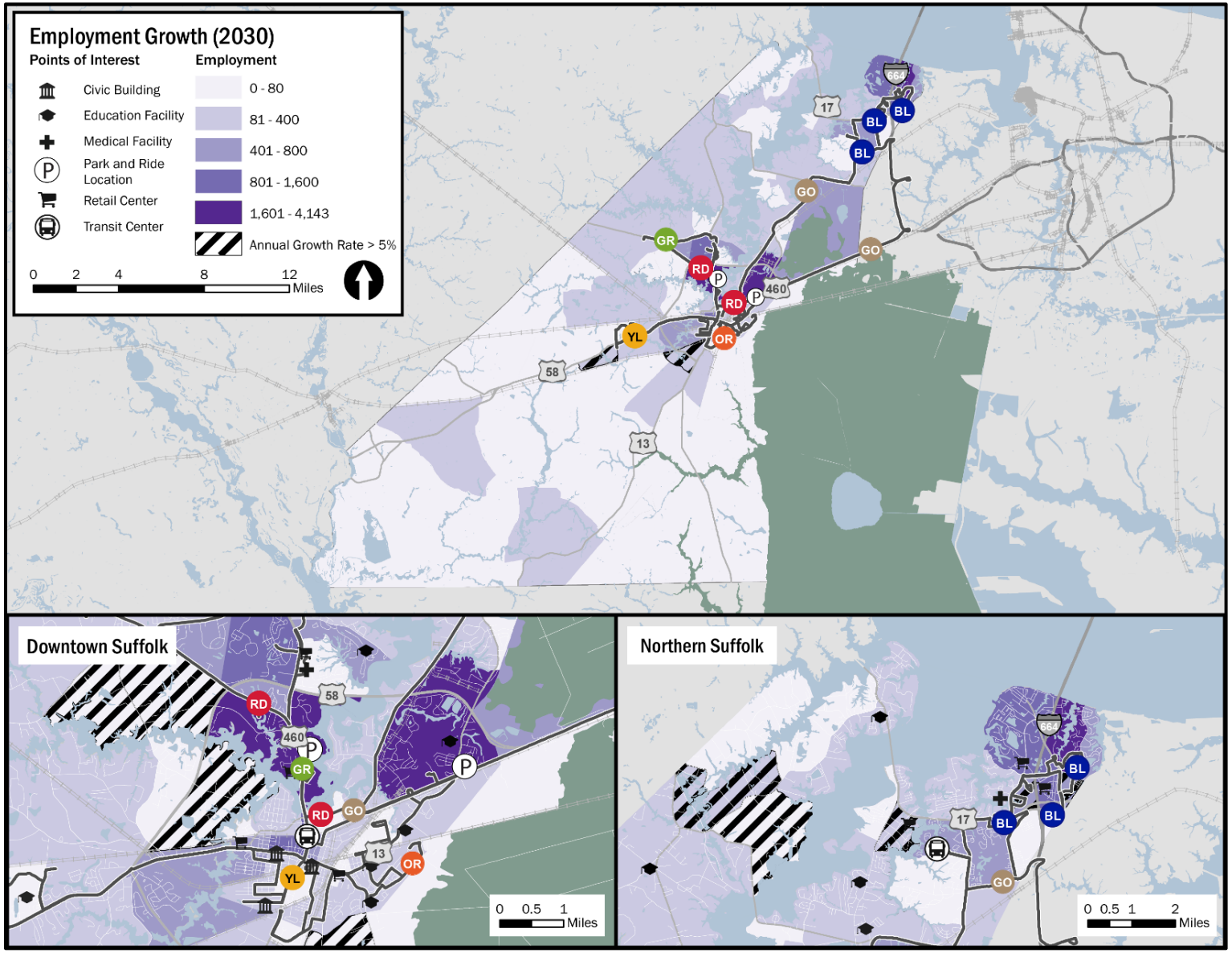


Figure 2-12: 2030 Employment



2.2.2. Transit Demand and Underserved Area Opportunities for Improvement

After determining the market for different types of transit services, a gaps analysis was conducted to compare the existing transit service to find areas that could have new or increased service.

Two types of service gaps were identified:

- Level of Service: where more service could be implemented.
- Coverage: where services could be expanded.

Level of Service Gaps

Level of service gaps refer to the frequency and span of service available during certain time periods as compared to the demand during that time period. The results of the propensity analysis were combined to highlight where peak period and all-day transit services have demand throughout the region.

Peak Period Index

The Peak Period index looks at where commuter populations live and where they travel to determine the best placement of peak period service. The span of peak period service is most commonly 6:00 a.m. – 9:00 a.m. and 3:00 pm. – 7:00 p.m. In Suffolk, many large areas can support peak service, including Downtown Suffolk, Godwin Boulevard, Kings Fork Road, and Portsmouth Boulevard. In Northern Suffolk, the Blue Route service area has high propensity levels for peak service (Figure 2-13).

While Suffolk Transit serves most high peak period propensity areas, there are some gaps. In Downtown Suffolk, the Azalea Acres neighborhood on W Constance Road has moderate peak period propensity. Whaleyville and Holland in southern Suffolk have moderate-low peak period propensity, as do areas of Crittenden, Hobson, and Chuckatuck in northwestern Suffolk. These areas would benefit from enhanced services during the peak period, 6:00 a.m. – 9:00 a.m. and 3:00 p.m. – 7:00 p.m. Additional considerations for these areas could be the implementation of on-demand or peak hour only commuter services which would require less resources and provide more flexible services.

All-Day Index

The All-Day index looks at where transit-oriented populations live and where they travel to determine areas than can support all-day service. Downtown Suffolk and Godwin Boulevard have high all-day propensities and Northern Suffolk has moderate all-day propensity (Figure 2-14).

Suffolk Transit already serves the majority of high and moderate all-day propensity areas, but there are some small gaps. In Downtown Suffolk, the Azalea Acres neighborhood on W Constance Road has moderate propensity, and in southern Suffolk, Whaleyville and Holland have moderate-low propensity. The areas in Downtown Suffolk could benefit from increased service on existing routes, while southern Suffolk could be further considered for on-demand or flexible services.

Figure 2-13: Peak Period Index

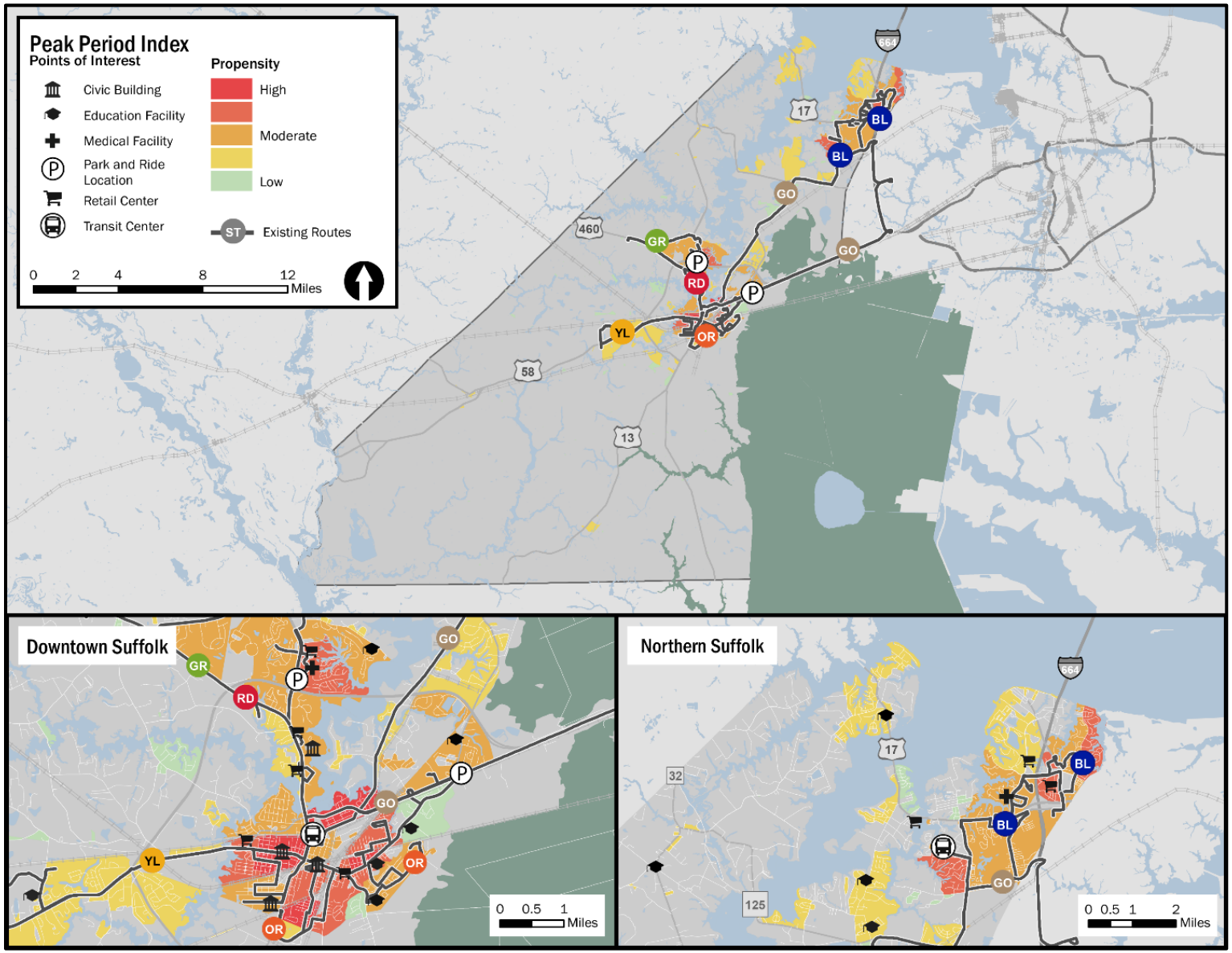
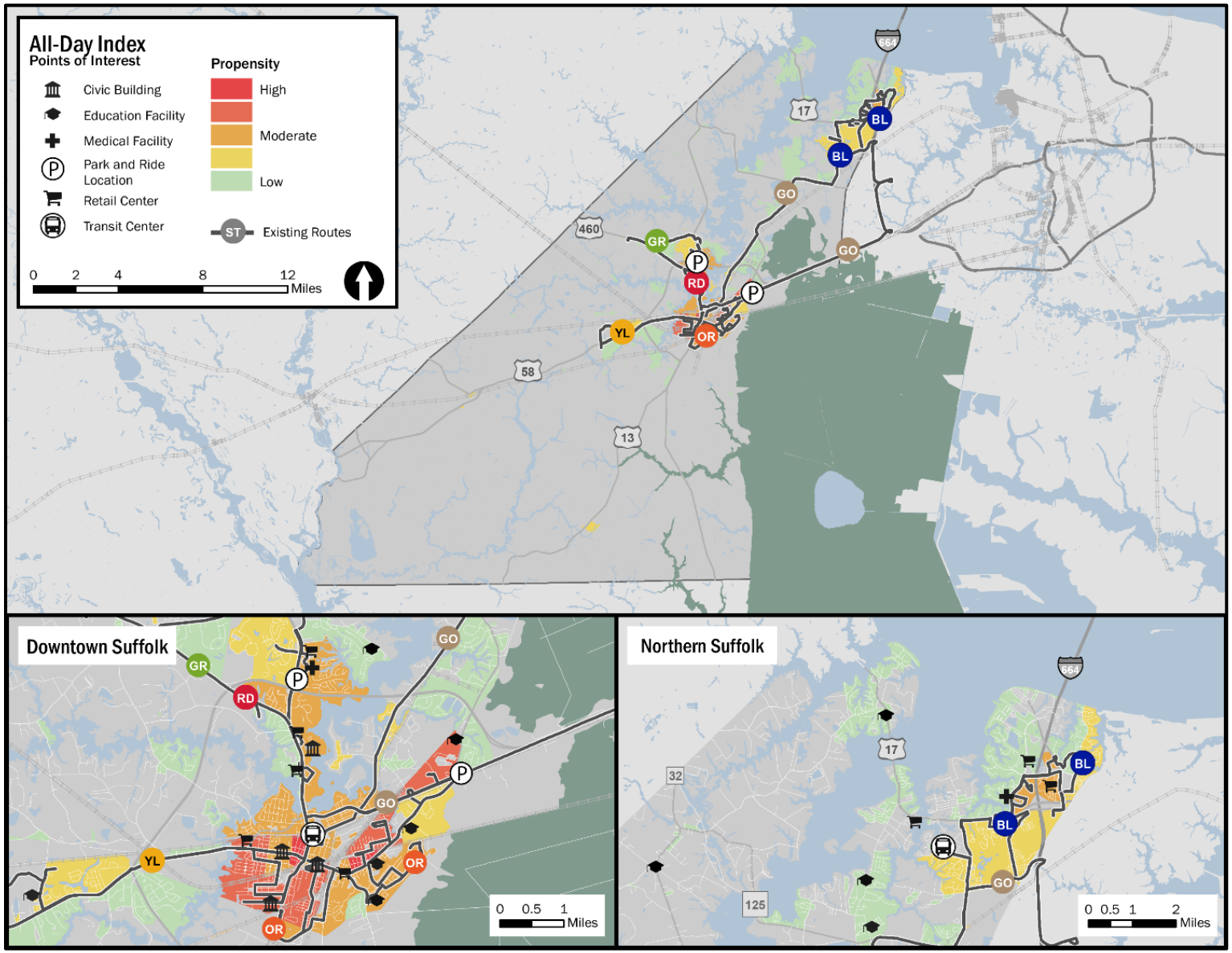


Figure 2-14: All-Day Index



Coverage Gaps

To find gaps in trip connections inside the City of Suffolk, origin and destination data from Hampton Roads Transportation Planning Organization's (HRTPO) 2009 travel demand forecasting model was mapped. Traffic analysis zones (TAZs) are used as the origins and destinations, but TAZs in Downtown Suffolk and Northern Suffolk were joined to summarize the data at a higher level.

The Town of Windsor and City of Franklin were included in the analysis to determine if there was a market travel between those jurisdictions and Downton Suffolk.

Home-Based Work Trips

Home-based work trips are trips originating at home and ending at a place of employment. Most trips are to external areas, although there are internal flows in Northern Suffolk and Downtown Suffolk (Figure 2-15). Downtown Suffolk is the most popular destination for employment inside the City of Suffolk. Existing Suffolk Transit routes Orange, Green, Yellow, and Red serve the trips into and through Downtown Suffolk, while the Purple route serves the internal trips in Northern Suffolk. The Pink route serves trips between Northern and Downtown Suffolk.

While Franklin has few flows to Suffolk, Windsor has more existing work trip flows to Downtown Suffolk, which may support transit. There are additional strong flows into Downtown Suffolk that are further northwest than the Green or Red routes currently serve. These coverage gaps could be filled by peak hour commuter services.

All Trips

All Trips include home-based work trips, home-based other trips, and non-home-based trips. Most trips are internal to the area, including Downton Suffolk, north of Downtown Suffolk, west of Downtown Suffolk, and Northern Suffolk (Figure 2-16). Existing Suffolk Transit routes serve these internal flows, including Orange, Green, Yellow, Red, and Purple. External flows are between Downton Suffolk, north of Downtown Suffolk and west of Downtown Suffolk, and are served by Pink, Yellow, and Blue routes.

Rural areas south of Downtown Suffolk and west of Northern Suffolk have noticeable internal flows but limited external flows. Currently, no Suffolk Transit routes serve these areas, but these areas could be considered for on-demand or flexible service. Neither Windsor nor Franklin have strong flows into Suffolk.

Figure 2-15: Existing Travel Flows, Home-Based Work Trips

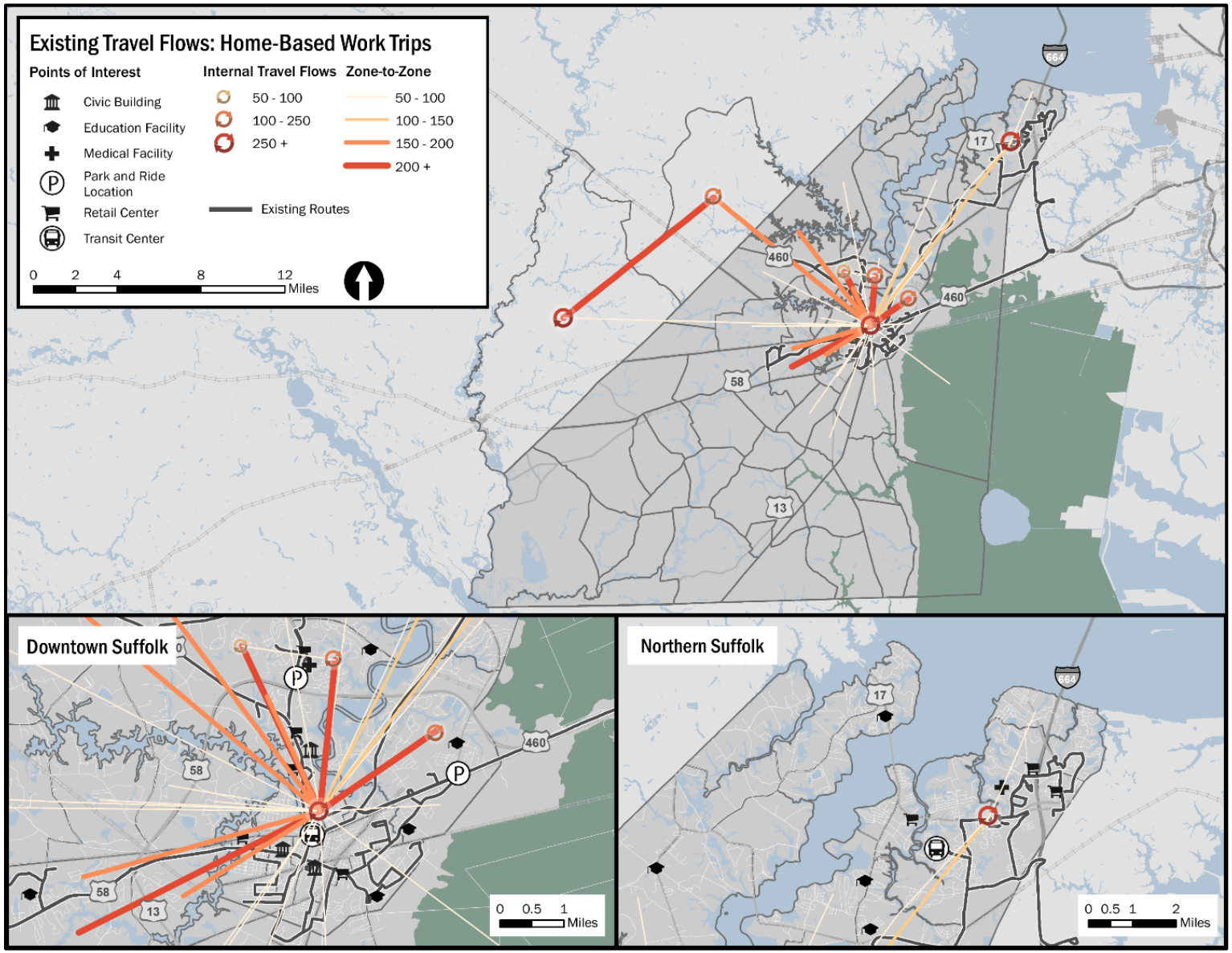
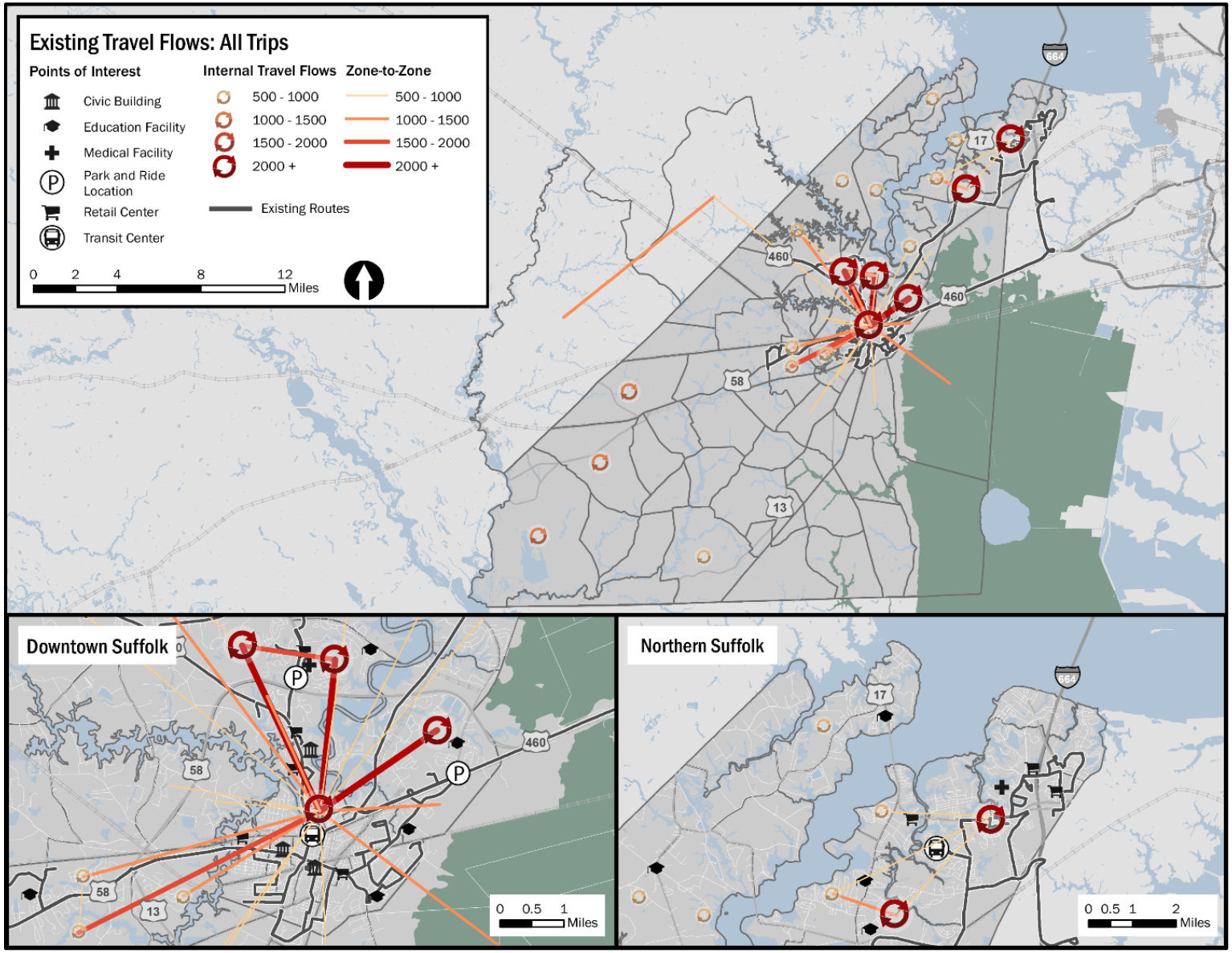


Figure 2-16: Existing Travel Flows, All Trips



2.3. Performance Evaluation

In the following system analyses, average daily and trip weekday ridership and service productivity data is derived from data collected during March - May 2018. Annual data was derived from FY 2018. The following analysis does not reflect the service and name changes that were implemented in July 2018. In July 2018, Suffolk Transit renamed the Blue and Gold routes to Purple and Pink, respectively. When discussing data from before the renaming, the old route colors are used.

2.3.1. Performance Evaluation

Fixed Route Service Effectiveness

Service effectiveness, which is expressed by showing the number of passengers per revenue hour and passengers per revenue mile, reflects the return that Suffolk Transit receives on its investment. Each Suffolk Transit route requires an investment of resources which is quantified by revenue hours and revenue miles. The relative success of each investment is measured by the ridership that each route generates.

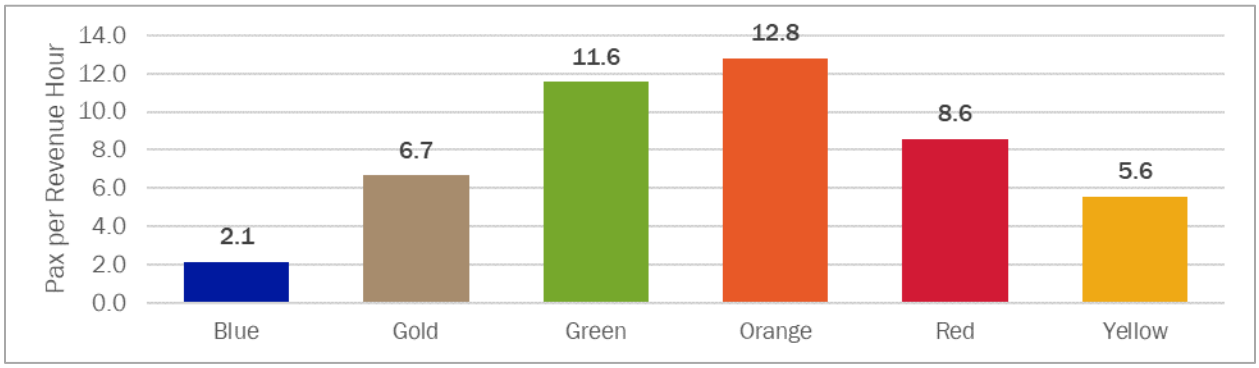
Ridership

Passengers per Revenue Hour

During FY 2018, Suffolk Transit carried an average of 8.1 passengers per revenue hour, which set the performance standard. Figure 2-17 shows the number of passengers per revenue hour for each route in the Suffolk Transit System. The Orange Route has the highest passengers per revenue hour with 12.8 riders, while the Blue Route has the lowest riders per revenue hour with 2.1. The Blue Route's total passengers per revenue hour is not only considerably less than the highest performing routes, such as the Green Route and Orange Route, but is also less than the other moderately performing routes, which are the Gold, Red, and Yellow routes.

The Blue, Gold, and Yellow routes do not meet the service standard of 8.1 passengers per revenue hour.

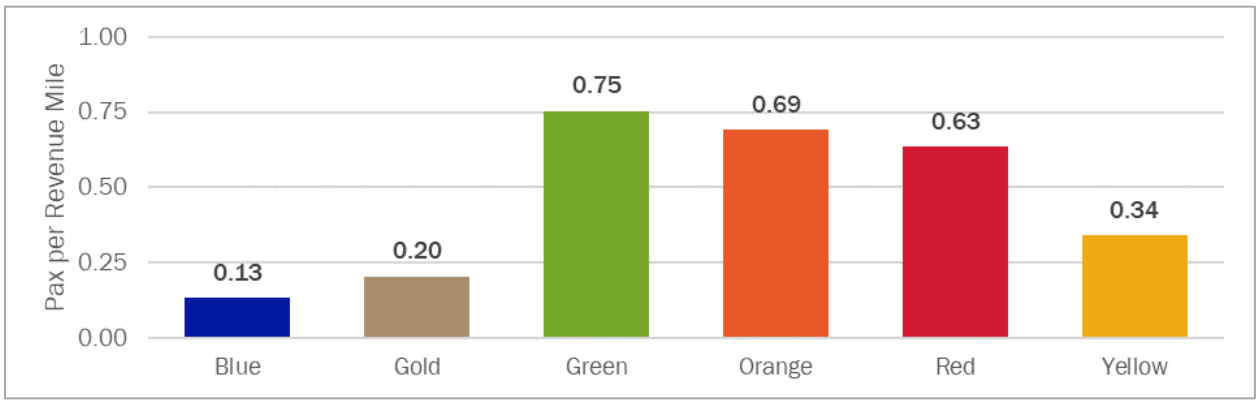
Figure 2-17: Passengers per Revenue Hour by Route, FY 2018



Passengers per Revenue Mile

During FY 2018, Suffolk Transit carried an average of 0.45 passengers per revenue mile. Figure 2-18 shows the breakdown of passengers per revenue mile for each route during this time period. The Green Route is the best performer with 0.75 passengers per mile. Much like the passengers per revenue hour, the Blue Route is the least productive with 0.13 passengers per mile.

Figure 2-18: Passengers per Revenue Mile by Route, FY 2018

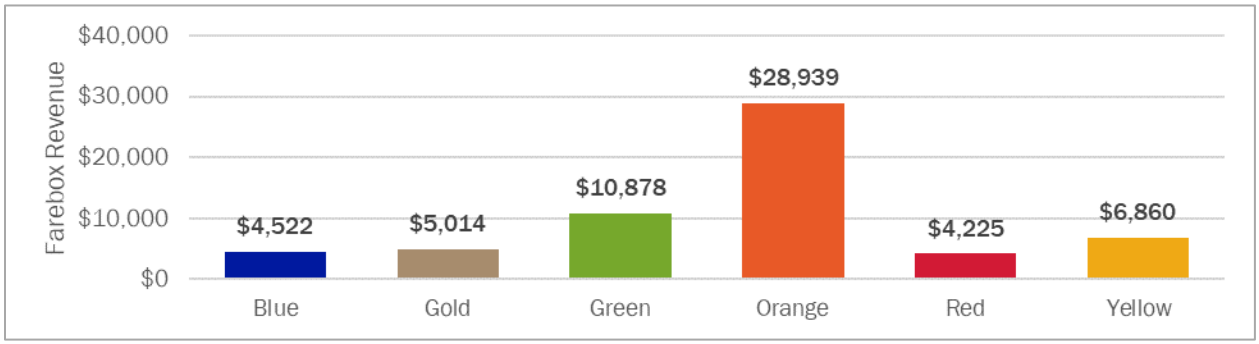


Cost Efficiency

Farebox Recovery

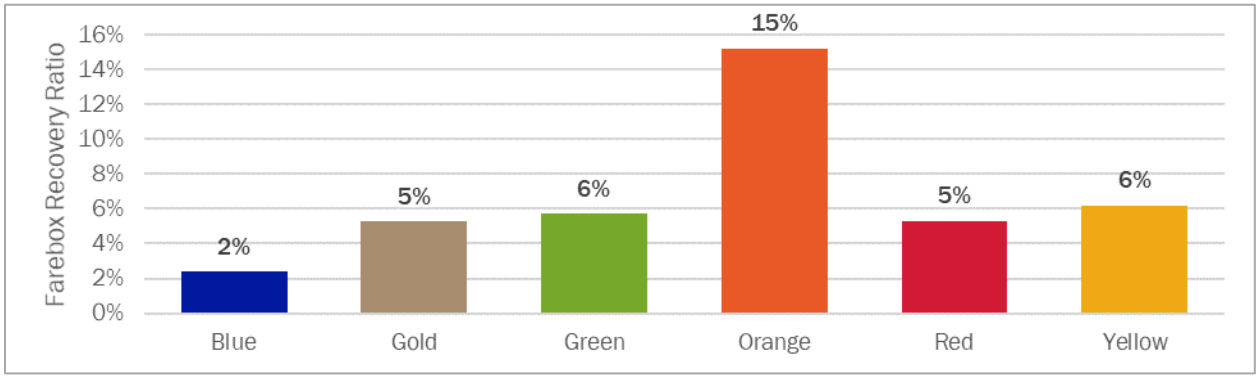
During FY 2018, Suffolk Transit generated $67,789 in farebox revenue, with $60,438 (89 percent) coming from farebox purchases and $7,352 (11 percent) from pass sales at VRT or at the treasurer's office. Riders can also purchase passes directly from the farebox. Figure 2-19 summarizes farebox revenue on Suffolk Transit's fixed routes. The Orange Route collected the most revenue with $28,939. The Green Route had the next highest amount of revenue with $10,878. The Red Route generated the least revenue with $4,225.

Figure 2-19: Farebox Revenue by Route, FY 2018



The farebox recovery measure finds the percentage of operating expenses recovered by fare revenue, which helps determine a service's cost effectiveness. In FY 2018, Suffolk Transit recovered seven percent of its operating expenses, which set the performance standard. Figure 2-20 shows the farebox recovery by route. The Orange Route recovered the highest percentage of its operating expenses, with 15 percent recovered, reflecting the fact it is the most productive route in the system. The Yellow and Green Routes recovered six percent, followed by the Red and Yellow routes with five percent. The Blue Route recovered the lowest percentage, with only two percent of its operating expenses recovered through fares.

Figure 2-20: Farebox Recovery by Route, FY 2018

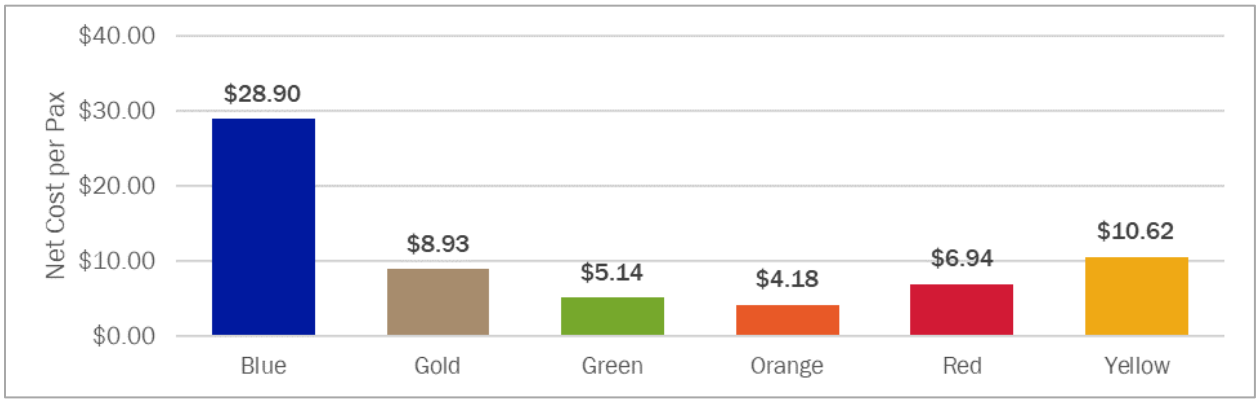


Net Cost per Passenger

Net cost per passenger shows the cost efficiency of a service based on its ridership, with a lower dollar amount signifying higher efficiency. Net cost per passenger is calculated by dividing the net costs of each route by unlinked passenger trips. In FY 2018, the system net cost per passenger was $7.12, which set the standard. Figure 2-21 shows the net cost per passenger at the route level. The Orange route has the lowest net cost per passenger at $4.18. The Blue Route has the highest at $28.90.

The Blue, Gold, and Yellow route did not meet the service standard of $7.12 net cost per passenger.

Figure 2-21: Net Cost per Passenger by Route, FY 2018



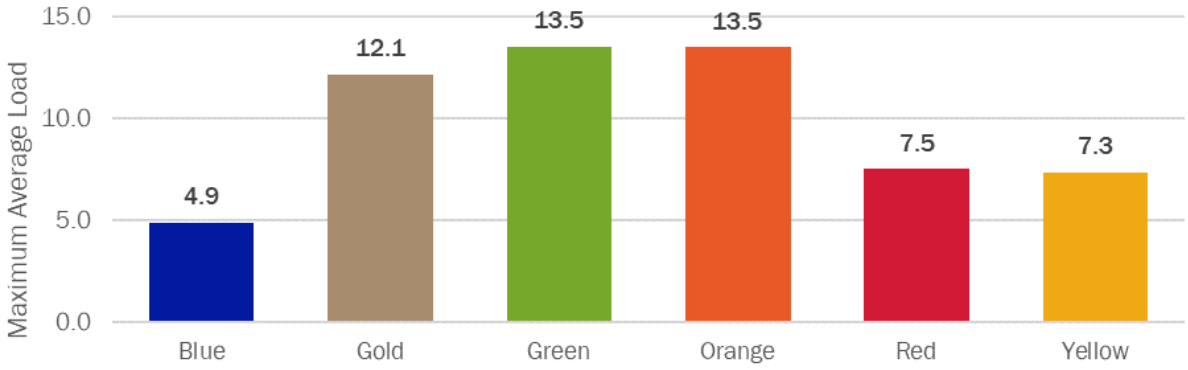
Safety

Suffolk Transit does not currently track data related to safety, such as crashes and injuries. As part of this plan, incidents, as defined by the National Transit Database, has been added as a new performance measure.

Overloaded Trips

Suffolk Transit defines an overloaded trip as having more than 25 percent standees. All vehicles used by Suffolk Transit have 21 seats, which makes 26 passengers the maximum acceptable load. As seen in Figure 2-22, the maximum average load for each route is well below the threshold.

Figure 2-22: Maximum Average Load by Route, March – May 2018



While the average maximum load for each route is under the threshold of 26 riders, six trips during the study period had maximum loads over the threshold. As seen in Table 2-5, three trips on the Green route in the morning period and three trips on the Orange route in the afternoon had over 26 passengers on at once.

Table 2-5: Overloaded Trips, March - May 2018

Route	Trip Start Time	Maximum Load
Green	7:30 a.m.	36
Green	9:30 a.m.	31
Green	7:30 a.m.	29
Orange	4:30 p.m.	32
Orange	4:30 p.m.	27
Orange	4:30 p.m.	27

Passengers per Revenue Mile

Like passengers per revenue hour, passengers per revenue mile shows how productive Suffolk Transit vehicles are. The measure, shown in Table 2-6, is calculated by dividing annual unlinked passenger trips by annual revenue miles. Between FY 2015 and FY 2018, fixed-route passengers per revenue mile remained the same, but there was a significant decrease between FY 2015 and FY 2016, and a significant increase between FY 2016 and FY 2018.

Table 2-6: Fixed-Route Passengers per Mile, FY 2015 – FY 2018

Fiscal Year	Passengers per Mile	Year-Over-Year Change
2015	0.43	-
2016	0.39	-10%
2017	0.42	9%
2018	0.43	1%

Paratransit passengers per revenue mile has decreased nine percent between FY 2016 and FY 2018. Table 2-7 shows the change in passengers per revenue mile in paratransit service. Revenue miles data for FY 2015 is not available.

Table 2-7: Paratransit Passengers per Mile, FY 2016 – FY 2018

Fiscal Year	Passengers per Mile	Year-Over-Year Change
2016	0.20	-
2017	0.21	6%
2018	0.18	-14%

System Accessibility

While the City of Suffolk is geographically the largest in Virginia, 77 percent of the population can access Suffolk Transit (Table 2-8). In addition, 88 percent of jobs in Suffolk can be accessed by Suffolk Transit.

Table 2-8: System Accessibility to Population and Jobs

Measure	Service Area	City of Suffolk	Percentage Covered
Resident Access	66,102	86,184	77%
Access to Jobs	23,059	26,270	88%

Sources: American Community Survey, 2015 and Longitudinal Employer-Household Dynamics, 2015

Trend Analysis

The following trend analysis compares service productivity and cost efficiency system-wide for FY 2015 – FY 2018. The Yellow Route was introduced in August 2013. The Blue (renamed Purple) and Gold (renamed Pink) Routes were introduced in August 2014. By 2015, all six routes were in service for the entirety of the year.

Service Productivity

Annual Ridership

Annual fixed-route ridership figures show how the system has been used overall. Table 2-9 shows annual Suffolk Transit ridership between FY 2015 and FY 2018. Over four years, fixed-route ridership grew 43 percent but has decreased two percent between FY 2017 and FY 2018. The overall increase is likely due to riders making newer routes (Yellow, Blue, and Gold) part of their transportation choices and using them more regularly.

Table 2-9: Annual Fixed-Route Ridership, FY 2015 – FY 2018

Fiscal Year	Total Passengers	Year-Over-Year Change
2015	77,631	-
2016	101,616	31%
2017	113,084	11%
2018	110,659	-2%

Table 2-10 shows annual paratransit ridership between FY 2015 and FY 2018. Over the past four years, paratransit ridership has decreased eight percent but saw growth between FY 2015 and FY 2017.

Table 2-10: Annual Paratransit Ridership, FY 2015 – FY 2018

Fiscal Year	Total Passengers	Year-Over-Year Change
2015	1,353	-
2016	1,537	14%
2017	1,917	25%
2018	1,247	-35%

Passengers per Revenue Hour

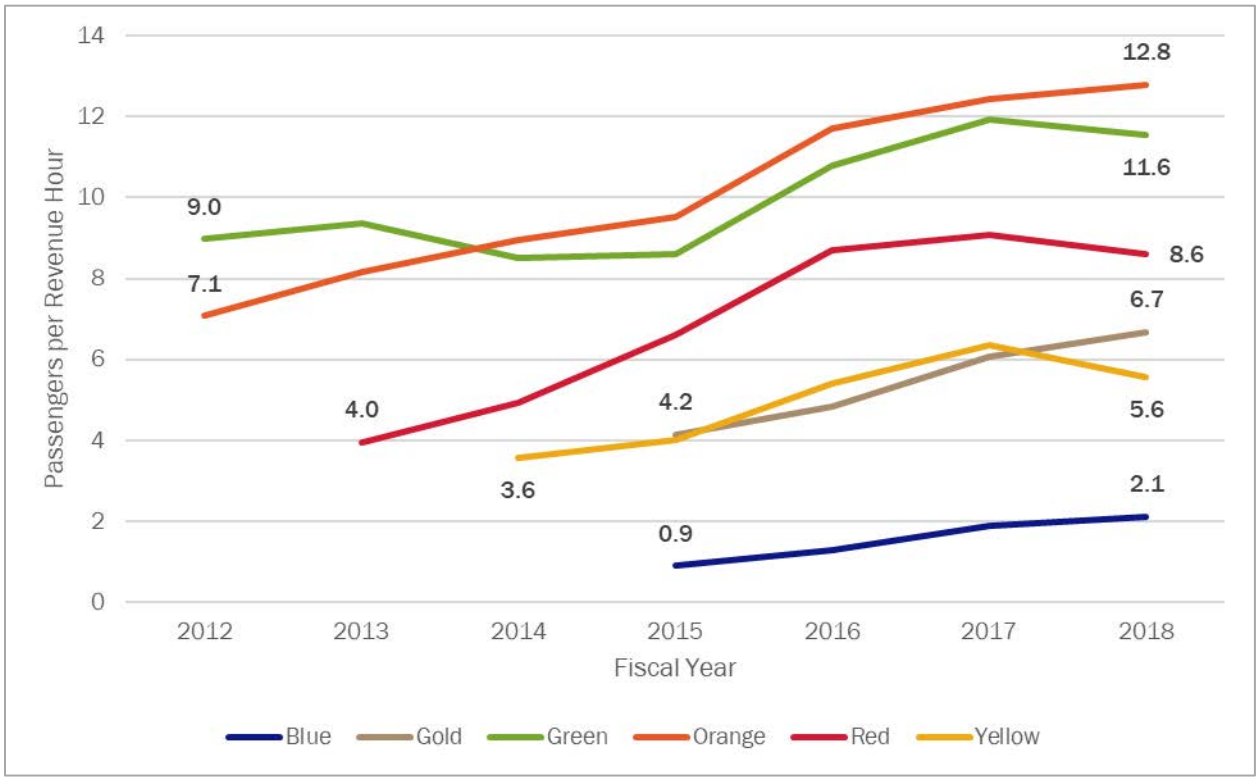
Between FY 2015 and FY 2018, passengers per revenue hour on fixed routes grew 36 percent. Table 2-11 shows the fixed-route passengers per revenue hour. Suffolk Transit became more productive over the four-year span due to fixed revenue hours and increased ridership, likely due to riders incorporating Suffolk Transit's new routes into their transportation choices.

Table 2-11: Annual Fixed-Route Passengers per Revenue Hour, FY 2015 – 2018

Fiscal Year	Passengers per Hour	Year-Over-Year Change
2015	6.0	-
2016	7.3	23%
2017	8.2	12%
2018	8.1	0%

As seen in Figure 2-23, all six routes have experienced significant increases in passengers per revenue hour from their introductions into service. From FY 2017 to FY 2018, the Orange, Gold, and Blue Routes experienced increases in passengers per revenue hour, while the Green, Red, and Yellow experienced decreases. The increases in Blue and Gold are likely due to riders' growing awareness of the routes' availability. The Orange Route saw increases likely due to its connections to multiple activity centers, making it an attractive choice. The Green, Red, and Yellow Routes may have seen decreases due to significant overlap downtown and alignment extensions, making the routes run more revenue hours that might not be as efficient, such as increased layovers.

Figure 2-23: Passengers per Revenue Hour by Route, FY 2012 – FY 2018



Paratransit passengers per revenue hour has decreased three percent between FY 2015 and FY 2018. Table 2-12 shows the change in passengers per revenue hour in paratransit service.

Table 2-12: Annual Paratransit Passengers per Revenue Hour, FY 2015 – FY 2018

Fiscal Year	Paratransit Passengers per Hour	Year-Over-Year Change
2015	1.3	-
2016	1.2	-3%
2017	1.3	9%
2018	1.2	-8%

Cost Efficiency

Annual Operating Cost

Annual operating cost is the total cost of operating the service for the year. Table 2-13 shows annual operating cost for FY 2015 to FY 2018. Between FY 2015 and FY 2018, operating costs grew four percent while inflation was six percent for the same time period[2]. As operating cost is based on revenue hours, the stable delivery of revenue hours contributes to the minimal growth in operating cost.

Table 2-13: Annual Fixed-Route Operating Cost, FY 2015 – FY 2018

Fiscal Year	Operating Cost	Year-Over-Year Change
2015	$819,252	-
2016	$872,928	7%
2017	$870,975	0%
2018	$856,076	-2%

Table 2-14 shows the change in annual operating cost for paratransit service. Between FY 2015 and FY 2018, operating costs decreased five percent. As operating costs for paratransit service are based on the revenue hours, serving fewer passengers will reduce the annual operating cost.

Table 2-14: Annual Paratransit Operating Cost, FY 2015 – FY 2018

Fiscal Year	Operating Cost	Year-Over-Year Change
2015	$68,106	-
2016	$80,073	18%
2017	$91,350	14%
2018	$64,752	-29%

Farebox Recovery

Farebox recovery shows how much of the annual operating cost is recovered by farebox revenue. This measure, shown in Table 2-15, is calculated by dividing farebox revenue by operating cost, yielding a percentage. A higher percentage signifies that farebox revenue is covering more of the operating cost. While farebox recovery has historically been low, it has increased 23 percent since FY 2015, likely due to increased ridership.

Table 2-15: Fixed-Route Farebox Recovery, FY 2015 – FY 2018

Fiscal Year	Farebox Recovery	Year-Over-Year Change
2015	5.7%	-
2016	6.6%	16%
2017	6.9%	3%
2018	7.1%	3%

Table 2-16 shows the change in farebox recovery for paratransit service. Between FY 2015 and FY 2018, farebox recovery grew slightly, less than one percent, from 5.6 to 5.7 percent.

Table 2-16: Paratransit Farebox Recovery, FY 2015 – FY 2018

Fiscal Year	Farebox Recovery	Year-Over-Year Change
2015	5.6%	-
2016	4.8%	-14%
2017	5.9%	24%
2018	5.7%	-3%

Fare per Passenger

Fare per passenger shows how much the average passenger is paying. This measure, shown in Table 2-17 is calculated by dividing farebox revenue by unlinked passenger trips. The average fare paid per passenger has decreased 10 percent since FY 2018, likely due to the increased use of passes.

Table 2-17: Fixed-Route Fare per Passenger, FY 2015 – FY 2018

Fiscal Year	Fare per Passenger	Year-Over-Year Change
2015	$0.61	-
2016	$0.57	-6%
2017	$0.53	-8%
2018	$0.55	3%

[2] Based on the Bureau of Labor Statistics' Consumer Price Index Inflation Calculator.

Table 2-18 shows the change in average fare paid per passenger for paratransit service. Between FY 2015 and FY 2018, average fare paid has increased to $2.98, close to the $3.00 paratransit fare.

Table 2-18: Paratransit Fare per Passenger, FY 2015 – FY 2018

Fiscal Year	Fare per Passenger	Year-Over-Year Change
2015	$2.80	
2016	$2.50	-11%
2017	$2.83	13%
2018	$2.98	5%

Net Cost per Passenger

Net cost per passenger shows how much the system pays per passenger. This measure, shown in Table 2-19, is calculated by subtracting farebox revenue from operating cost and dividing by unlinked passenger trips, yielding a dollar amount. Net cost per passenger decreased by 28 percent from FY 2015 to FY 2018. This reduction in net cost per passenger is due to the system becoming more productive.

Table 2-19: Fixed-Route Net Cost per Passenger, FY 2015 – FY 2018

Fiscal Year	Net Cost per Passenger	Year-Over-Year Change
2015	$9.92	-
2016	$7.96	-20%
2017	$7.08	-11%
2018	$7.12	1%

Table 2-20 shows net cost per passenger for paratransit. Between FY 2015 and FY 2018, net cost per passenger increased three percent. This increase in net cost per passenger is in spite of an increase of fare paid per passenger, suggesting that trips are taking more revenue hours per passenger than previous years.

Table 2-20: Paratransit Net Cost per Passenger, FY 2015 – FY 2018

Fiscal Year	Net Cost per Passenger	Year-Over-Year Change
2015	$47.54	-
2016	$49.60	4%
2017	$44.82	-10%
2018	$48.95	9%

2.3.2. Performance-Based Opportunities for Improvement

Five routes did not meet existing service standards. Based on their performance some opportunities for improvement include:

- Blue (Purple) Route: eliminate low-performing segments.
- Gold (Pink) Route: maximize ridership by eliminating segments without stops, such as Portsmouth Boulevard through Great Dismal Swamp. Realign to connect to job hubs on Progress Road.
- Yellow Route: straighten the route to make it quick for employees to connect to distribution centers.
- Green and Orange Routes: add additional service during the time period experiencing over capacity passenger loads.

To improve the performance of the system as a whole, Suffolk Transit can maximize ridership by making existing routes bi-directional. Currently, all route alignments have large loops, which can prevent riders from using the route in both directions of their trip. Removing these loops could attract new riders who might be deterred to use a system that doesn't give them a way to get back from their destination intuitively.

2.4. Operating and Network Efficiency Evaluation

2.4.1. Efficiency Evaluation

The following efficiency evaluation analyzes frequency, span, and ridership during different time periods, recorded speeds, reliability, and the effectiveness transit network design and network connectivity of fixed-route services.

Suffolk Transit does not collect reliability or ridership data from its demand response operator. This data will be proposed to be collected.

Span and Frequency

While all routes meet the service standard of 60-minutes headways, there is some variation in span. During weekdays, the Pink route and Red routes do not meet the minimum span of 6:30 a.m. to 6:30 p.m. Additionally the Blue route does not run on weekdays. On Saturdays, the Pink route does not meet the minimum span of 7:30 a.m. to 4:30 p.m., and the Red and Yellow routes do not run. Table 2-21 shows the span and frequency by route by day type for the Suffolk Transit system.

Table 2-21: Span and Frequency by Route, FY 2019

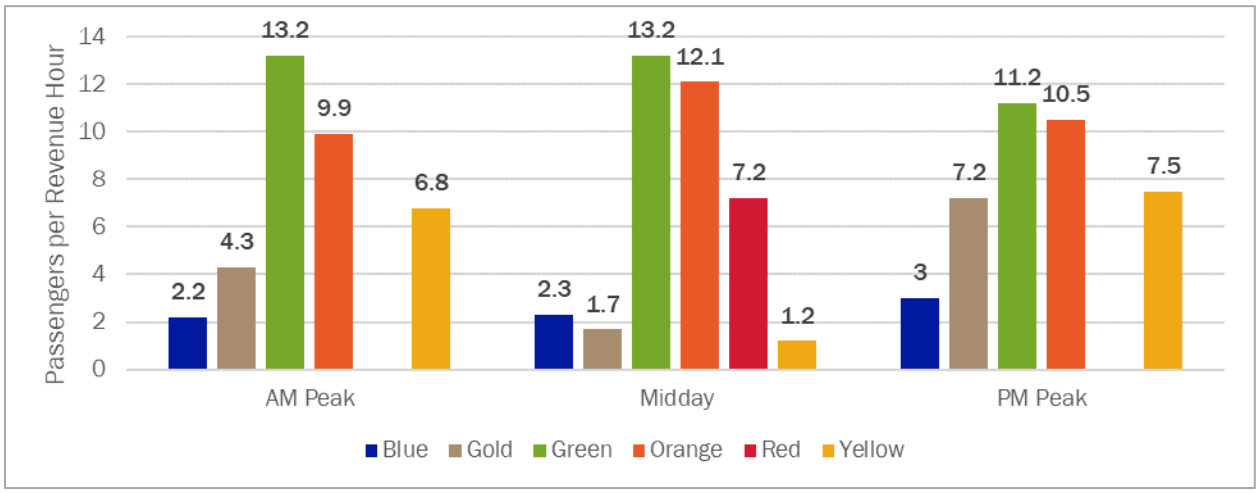
Route	Weekday Span	Saturday Span	Headway (Minutes)		
			Peak	*Off-Peak*	*Saturday*
Green	6:30 a.m. – 6:30 p.m.	7:30 a.m. – 4:30 p.m.	60	60	60
Blue	No Service	7:30 a.m. – 4:30 p.m.	-	-	60
Orange	6:00 a.m. – 6:30 p.m.	7:30 a.m. – 4:30 p.m.	60	60	60
Pink	6:30 a.m. – 9:30 a.m.; 10:30 a.m. – 5:30 p.m.	7:30 a.m. – 3:30 p.m.	60	60	60
Purple	6:30 a.m. – 6:30 p.m.	7:30 a.m. – 4:30 p.m.	60	60	60
Red	8:30 a.m. – 2:30 p.m.	No Service	60	60	-
Yellow	6:30 a.m. – 6:30 p.m.	No Service	60	60	-

*Deviations from standards in red

Ridership by Period

In this analysis, AM Peak is defined as 6:00 a.m. to 9:00 a.m., Midday is defined as 9:00 a.m. to 3:00 p.m., and PM Peak is defined as 3:00 p.m. to 6:30 p.m. The Green and Orange Routes consistently have high ridership in all three periods. The Blue and Gold Routes attract higher ridership in the PM Peak than in other periods. The Yellow Route has high AM Peak and PM Peak ridership, but low ridership midday. The Red Route mostly operates midday with half an hour of service during the AM Peak. Figure 2-24 shows average ridership per revenue hour by time period for the Suffolk Transit system.

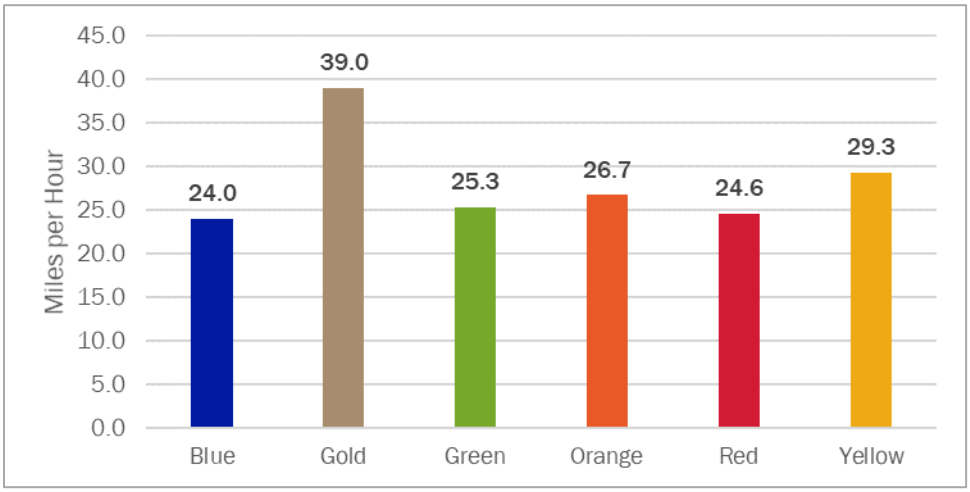
Figure 2-24: Average Ridership per Revenue Hour by Period, March – May 2018



Recorded Speeds

Speed was calculated by finding the average runtime by day type and dividing by the length of each route. The Gold and Yellow Routes recorded the fasted speeds because of their long, uninterrupted segments. The Blue, Green, and Red Routes recorded slower speeds due to frequent stops and service on neighborhood roads. Figure 2-25 illustrates the average speeds for each route in miles per hour.

Figure 2-25: Average Speeds, March – May 2018



Reliability

These following charts show when each route deviates from its schedule. In general, Suffolk Transit routes leave late, affecting the schedule adherence of each route. This trend is likely caused by buses waiting at the Downtown Transfer Station for other late routes so that riders can make their connections. Figure 2-26 through Figure 2-31 show schedule deviation for each route by time period.

Blue Route

The Blue Route leaves close to on-time from the North Suffolk Library during all periods but loses time on its trip to Bon Secours Medical Center, see Figure 2-26. It regains time in Hampton Roads Crossing and Harbour View East, but loses time on its trip to Belleharbour Hospital. The route arrives at the North Suffolk Library late on average during all periods.

Gold Route

The Gold Route starts late in all three periods from the Downtown Transfer Center (Figure 2-27). It makes up one to two minutes of time on E Washington Street towards the Magnolia Park and Ride but becomes later on its trip on US 58 and I-664. The route makes up time on Nansemond Parkway from Driver to Downtown, but the route still arrives late back at the Downtown Transfer Center. In the PM Peak, the route is on average 15 minutes late, or six minutes late after accounting for the late departure.

Figure 2-26: Average Schedule Deviation by Period by Timepoint for Blue Route, March – May 2018

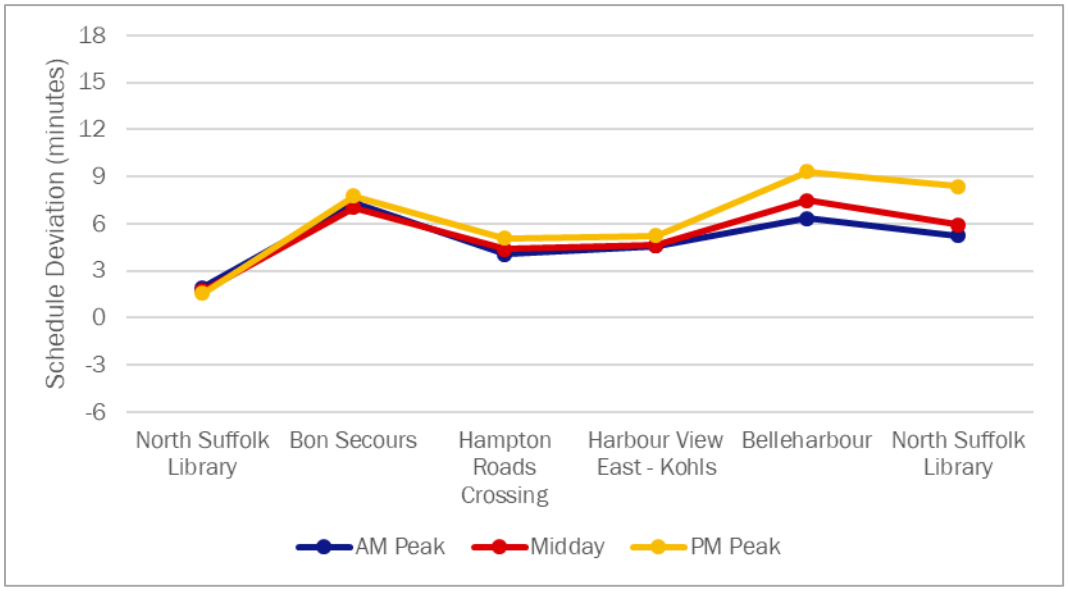
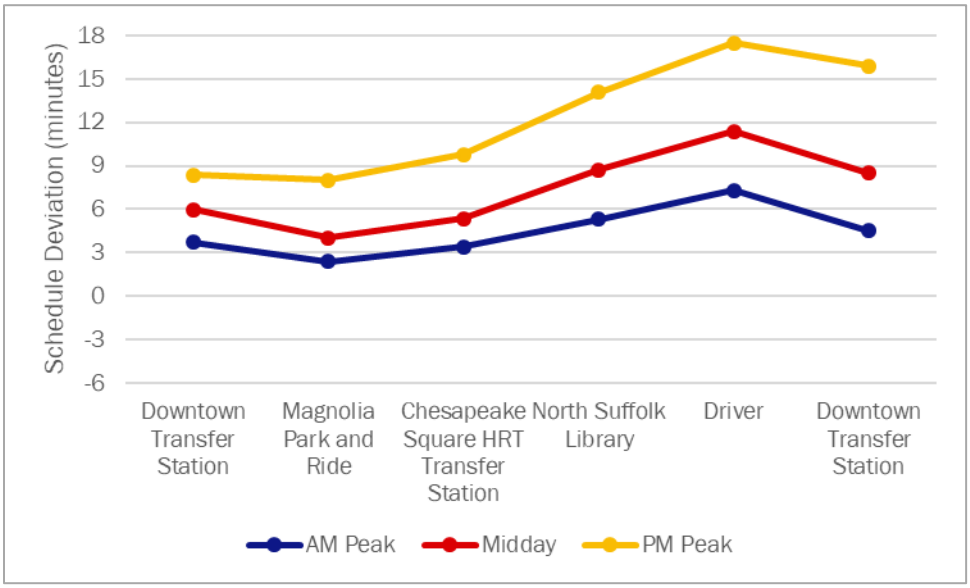


Figure 2-27: Average Schedule Deviation by Period by Timepoint for Gold Route, March – May 2018



Green Route

As seen in Figure 2-28, the Green Route leaves late from the Downtown Transfer Station during all three time periods. While traveling north on N Main Street, the bus regains about three minutes and even becomes early during the AM Peak period. However, during all three periods, the bus loses time when traveling between Obici Hospital and Kings Fork Middle School. Through the loop to the Pruden Center and back, the Green Route makes up some lost time and generally arrives late to the Downtown Transfer Station.

Orange Route

The Orange Route leaves between six and ten minutes late from the Downtown Transfer Station (Figure 2-29). While traveling south to Dill Road and Nancy Drive, the Orange Route gains some time, but loses it on its ways to Whitemarsh Plaza. While traveling east on E Washington Street and through the West Jericho neighborhood, the Orange Route comes close to becoming on schedule. Trips during Midday and PM Peak on average run late, while the trips during AM Peak on average arrive on-time at the Downtown Transfer Station.

Figure 2-28: Average Schedule Deviation by Period by Timepoint for Green Route, March – May 2018

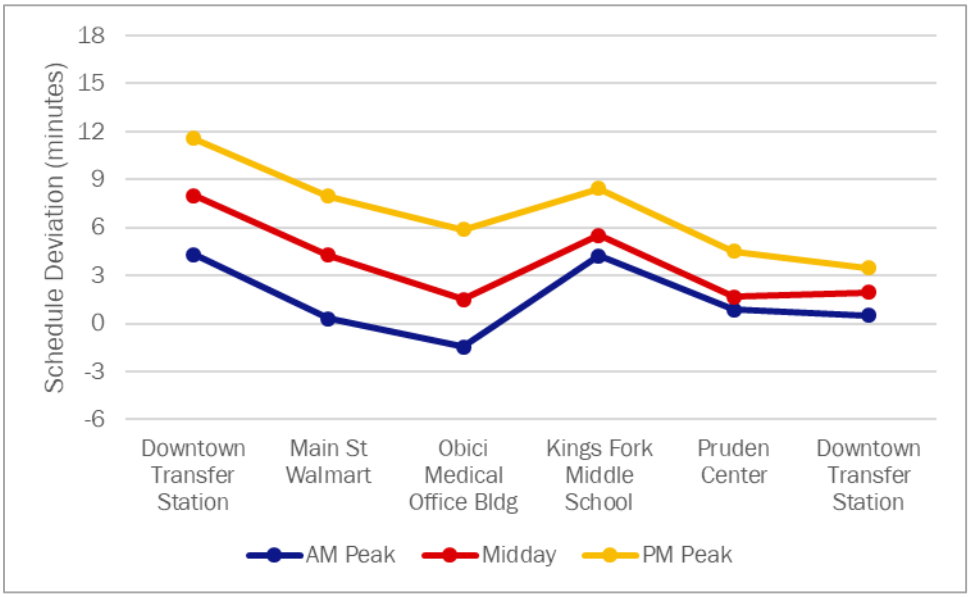
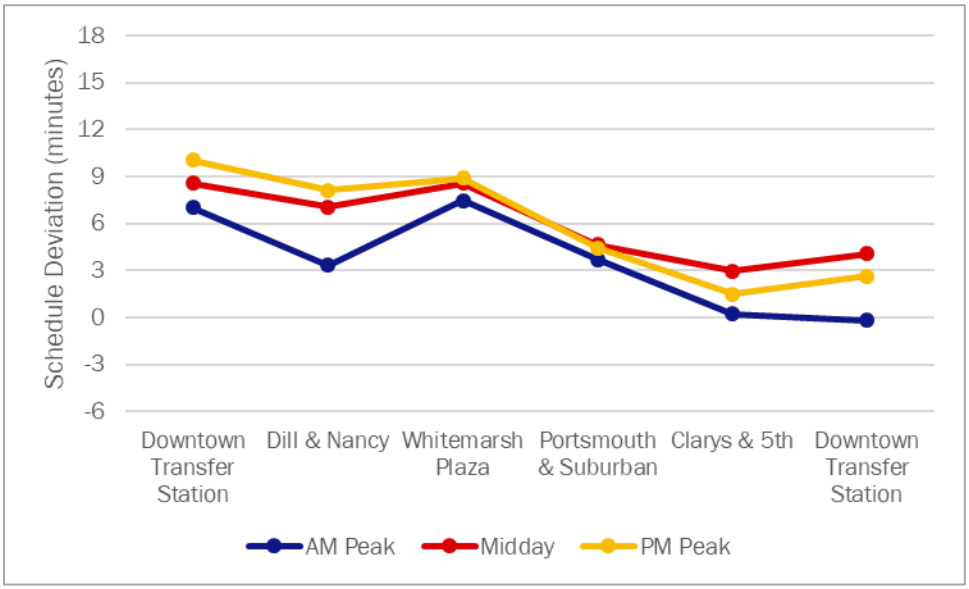


Figure 2-29: Average Schedule Deviation by Period by Timepoint for Orange Route, March – May 2018



Red Route

The Red Route only operates during the midday period. On average, the route leaves nine minutes late from the Downtown Transfer Station, but it regains its time for most of the route. As seen in Figure 2-30, the Red Route loses a minute traveling southbound on N Main Street and arrives to the Downtown Transfer Station three minutes late.

Yellow Route

The Yellow Route leaves late from the Downtown Transfer Station during all three periods but regains time throughout the route (Figure 2-31). In the AM Peak, the Yellow Route arrives three minutes early and during midday, the Route arrives one minute early to the Downtown Transfer Station. In the PM Peak, the route arrives one minute late to the Downtown Transfer Station. This suggests that the runtime is significantly shorter than the scheduled arrivals for each stop.

Figure 2-30: Average Schedule Deviation by Period by Timepoint for Red Route, March – May 2018

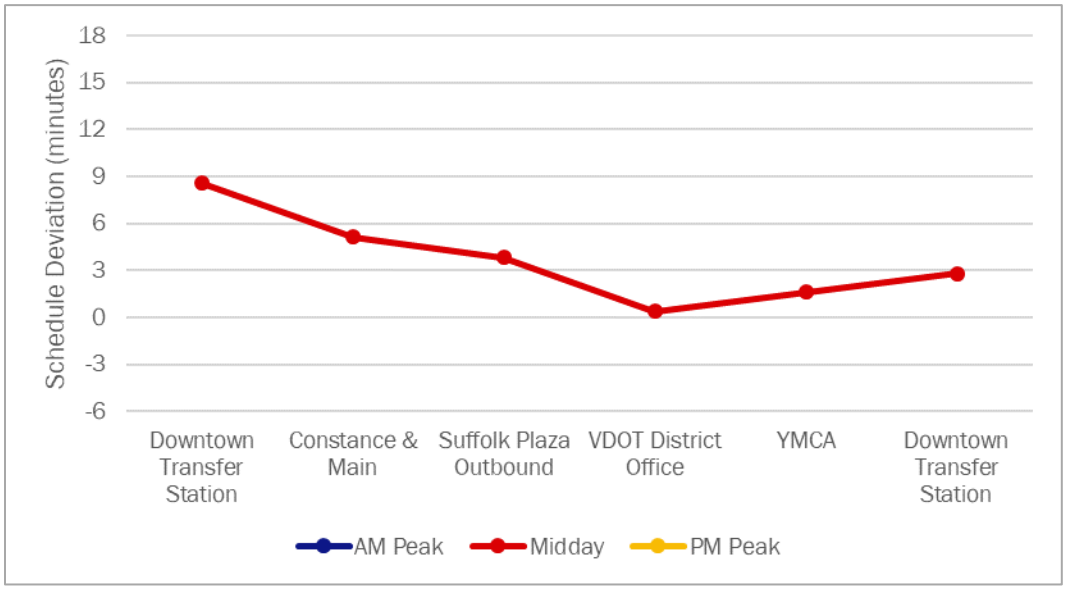
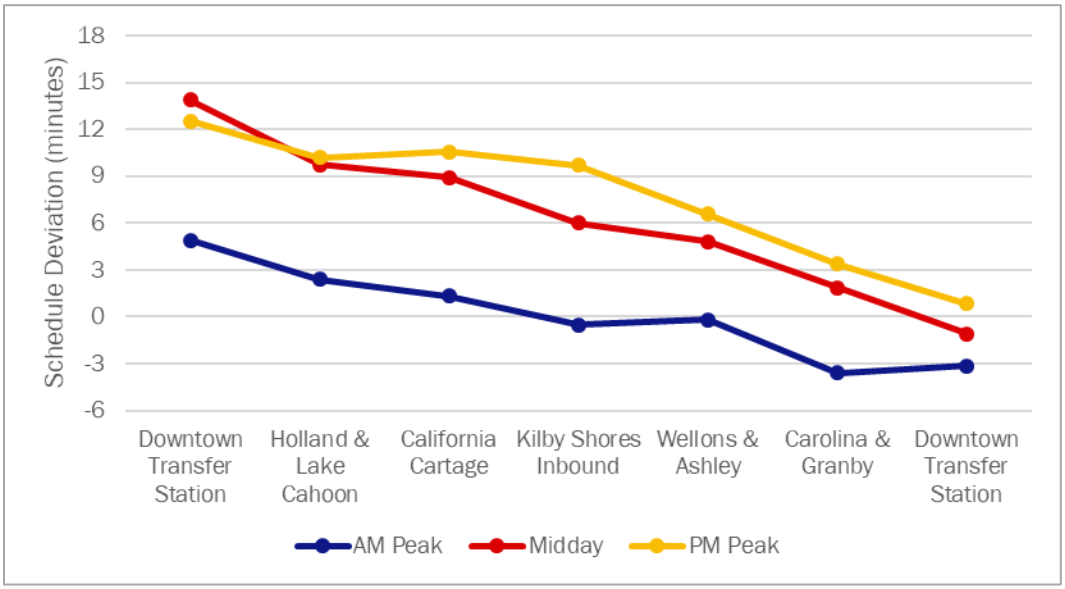


Figure 2-31: Average Schedule Deviation by Period by Timepoint for Yellow Route, March – May 2018



Network Design and Connectivity

Suffolk Transit's network design and connectivity has strengths and weaknesses. Routes with high ridership per revenue hour, such as the Green and Orange routes generally have high ridership during all time periods, suggesting that the routes are well-designed to reach the demand for transit. However, routes with low ridership per revenue hour, such as the Blue and Gold routes likely do not cover the right areas or are not direct enough to be attractive to potential riders.

While the current pulse system of each bus departing from the Downtown Transit Center at the same time (referred to as a "huddle" at Suffolk Transit) allows for each passenger to make their transfer, it appears to contribute to many late departures across all routes.

2.4.2. Efficiency-Based Opportunities for Improvement

Suffolk Transit has opportunities to improve the reliability of its routes. Three changes could improve reliability in different ways. First, Suffolk Transit could change the departure times of routes, so they do not all leave on the top of the hour from the Downtown Transfer Station. By changing the scheduling, buses would not need to wait for late arriving buses. Second, Suffolk Transit could interline routes that have longer runtimes with routes with short runtimes, such as the Gold and Yellow Routes. Finally, Suffolk Transit could adjust the schedules of routes that have extreme schedule deviations, such as the Gold Route.

Additionally, to meet the service standards, the weekday spans of the Pink and Red Routes and the Saturday span of the Pink Route should be extended.

2.5. Analysis of Opportunities to Collaborate with Other Transit Providers

2.5.1. Collaboration Analysis

The Hampton Roads Transportation Planning Organization (HRTPO), the Metropolitan Planning Organization (MPO) for Hampton Roads, features representatives from multiple agencies collaborating to address issues of regional importance. The HRTPO Board includes representation from each of Hampton Roads Transit member jurisdictions, and also includes representation from the Cities of Franklin, Poquoson, Suffolk, and Williamsburg, and the Counties of Gloucester, Isle of Wight, James City, Southampton, and York.

Relevant collaboration forums of the HRTPO include the Rail and Public Transportation Task Force and the Transportation Technical Advisory Committee (TTAC). The Hampton Roads Transportation Operations subcommittee (HRTO) is a subcommittee of TTAC dedicated to improving transportation operations in the region. Suffolk Transit currently does not directly participate in the HRTO.

The following regional transit service providers work collaboratively with Suffolk Transit either directly or as a regional partner:

- Hampton Roads Transit (HRT) provides bus, light rail, ferry, ridesharing, and paratransit service in Chesapeake, Hampton, Newport News, Norfolk, Portsmouth and Virginia Beach. Two Suffolk Transit routes connect with HRT: The Suffolk Transit Pink Route connects with HRT Routes 44 and 967 in Chesapeake at Portsmouth Boulevard and Capri Circle, and the Suffolk Transit Purple Route connects with HRT

Route 47 at College Drive and Lakeview Parkway in North Suffolk.

- Williamsburg Area Transit Authority (WATA) provides bus and paratransit service in Williamsburg, James City County, and York County. WATA does not connect with Suffolk Transit, but features regional connections to HRT at the Williamsburg Transportation Center and Lee Hall in Newport News.
- Virginia Regional Transit (VRT) is contracted by Suffolk Transit to provide bus and paratransit service to Suffolk's core downtown service area.

2.5.2. Collaboration Based Opportunities for Improvement

A meeting of the HRTPO and transit agencies (Suffolk Transit, WATA and HRT) was held on May 29, 2019 to initiate further discussion on opportunities for sharing across ongoing/planned efforts and to further outline methodological approaches for future regional transit collaboration. During this inter-agency discussion, the following was identified:

- Potential strategies with the least barriers to implementation.
- Initial discussions of a recurring collaboration forum under the HRTPO.
- A process to affirm documented TSP opportunities across all agencies.

As the regional methodology for transit collaboration evolves under the HRTPO, the progression of opportunities for Suffolk Transit to collaboratively participate, ranging from readily actionable to longer-term concepts, are outlined in the following section.

The anticipated benefits to the region from collaboration-based opportunities include many areas such as improved access to regional trip planning to integrated payment systems. Some opportunities are recognized as more straight-forward while others, due to alignment of technology, assets, or management approaches, are deemed more complex. The opportunities presented below progress from least to greatest complexity, based on experiences reported at agencies that have been engaged in these types of activities, and include the following improvement areas[3]:

- Joint technical committees – Leveraging the planned new HRTPO-based collaboration forum noted above, this will allow for the continuation of agency collaboration discussions on a recurring basis, with a focus on aligning service coordination, funding advocacy, capital investments, grant writing and procurement, and marketing.
- Joint purchasing – Through the collaboration forum, Suffolk Transit could work with the other regional agencies to potentially participate in a vehicle/equipment purchase program to leverage more favorable prices.
- Coordinated service – Approaches may include better alignment of schedules and operations at transfer locations, shared provision of bus stop amenities, and establishment of an agreed upon regional backbone of key routes/corridors.
- Joint marketing and rider information tools – Examples of common information tools developed jointly include regional transit maps, transit schedules/brochures, or a trip planning website.
- Integrated fare system – Strategies include multiple agencies developing common fares for similar types of services, shared transfer policies, with an ultimate goal of using a single fare mechanism and agreement on revenue allocation.
- Regionalization of paratransit services – Includes the designation of a regional paratransit service operator across jurisdictions. This could involve a regional shared contract with oversight from a mobility manager.

The initial collaboration actions for Suffolk Transit and its regional partners are recommended to include:

- Participation in the formal establishment of a HRTPO joint technical committee to meet regularly and develop specific initiatives related to the opportunities outlined herein.
- Subsequent steps of the joint technical committee will proceed with action plans to further meet the established goals and objectives, including but not limited to:
    - Establishing information sharing in support of joint purchasing among HRT, WATA and Suffolk Transit.
    - Coordinating on moving forward with on-demand service in lower-demand areas, a new service type that is being considered by Suffolk and HRT.
    - Integrated fare structures and fare payment.
    - Developing a truly regional backbone transit system on priority corridors.

Transit system coordination and collaboration can realize a variety of benefits. Collaboration success for Suffolk Transit will be measured by the ability to reinvest resources gained through greater efficiency back into the system to foster increased mobility and better access for current and potential riders.

[3] Select regionally identified activities, as defined by "TCRP Report 173, Improving Transit Integration Among Multiple Providers, Volume I: Transit Integration Manual", Transportation Research Board, 2014.

3. Planned Improvements and Modifications

3.1. Planned Service Improvements

This section details the planned service improvements, levels of service, and ridership estimates. Suffolk Transit proposes changes to all existing fixed routes, the implementation of two new fixed routes (i.e., the Blue route and the Lunch Circulator), and the introduction of commuter and on-demand service.

3.1.1. Improvements to Fixed-Route Service

Green Route

Description of Change

Suffolk Transit intends to improve the Green route (Table 3-1) by realigning the route into bi-directional service, preserving the most productive segments of the route and creating new direct connections to popular destinations. The proposed Green route would operate between Kings Fork High School, Downtown Transfer Station, and the Saratoga neighborhood south of West Washington Street (Figure 3-1). Segments on Pruden Boulevard will be served by the Red route. The segment between Kings Fork High School and Pruden Boulevard will be discontinued. Additionally, deviations into the Main Street Shoppes and Western Tidewater Community Service Board will discontinued.

Key destinations include:

- Kings Fork High School and Community Center
- Social Security Office
- Sentara Obici Hospital
- Aldi
- Wal-Mart
- Saratoga neighborhood
- Downtown Transfer Station

Justification

This realignment addresses Goals 1 and 3 as it will increase reliability, better meet the needs of riders, and maximize the existing route. The Green route is one of the best performing Suffolk Transit routes; the proposed alignment changes will maximize the route by removing low-performing segments and reducing deviations into shopping center parking lots.

In Section 2.3.2 Performance-Based Opportunities for Improvement, the addition of more frequent service on the Green route was identified as a way to reduce over-capacity trips. The alignment, coupled with the realignment of the Red route, will create an effective 30-minute headway on its high-ridership segments.

Table 3-1: Green Route Proposed Level of Service

Day Type	Span of Service	Frequency (Minutes)
Weekday	6:30 a.m. – 6:30 p.m.	60
Saturday	7:30 a.m. – 4:30 p.m.	60

Red Route

Description of Change

Suffolk Transit intends to improve the Red route (Table 3-2) by offering bi-directional service through the downtown area and by extending the route to Pruden Center (currently part of the Green route), see Figure 3-2, while also adding extended hours on weekdays and Saturdays. The segments of the existing Red route that operate in the Azalea Acres neighborhood will now be served by the Yellow route and segments on East Constance Avenue will be served by the Pink Route.

Key destinations include:

- Pruden Center
- Lakeview Medical Center
- Kroger
- Downtown Transfer Station

Justification

This re-alignment addresses Goals 1 and 3 as it will increase reliability, better meet the needs of riders, and maximize the existing route. The addition of hours meets the service standard of 6:30 a.m. to 6:30 p.m. on weekdays and 7:30 a.m. to 4:30 p.m. on Saturdays.

Table 3-2: Red Route Proposed Level of Service

Day Type	Span of Service	Frequency (Minutes)
Weekday	6:30 a.m. – 6:30 p.m.	60
Saturday	7:30 a.m. – 4:30 p.m.	60

Figure 3-1: Green Route Proposed Alignment

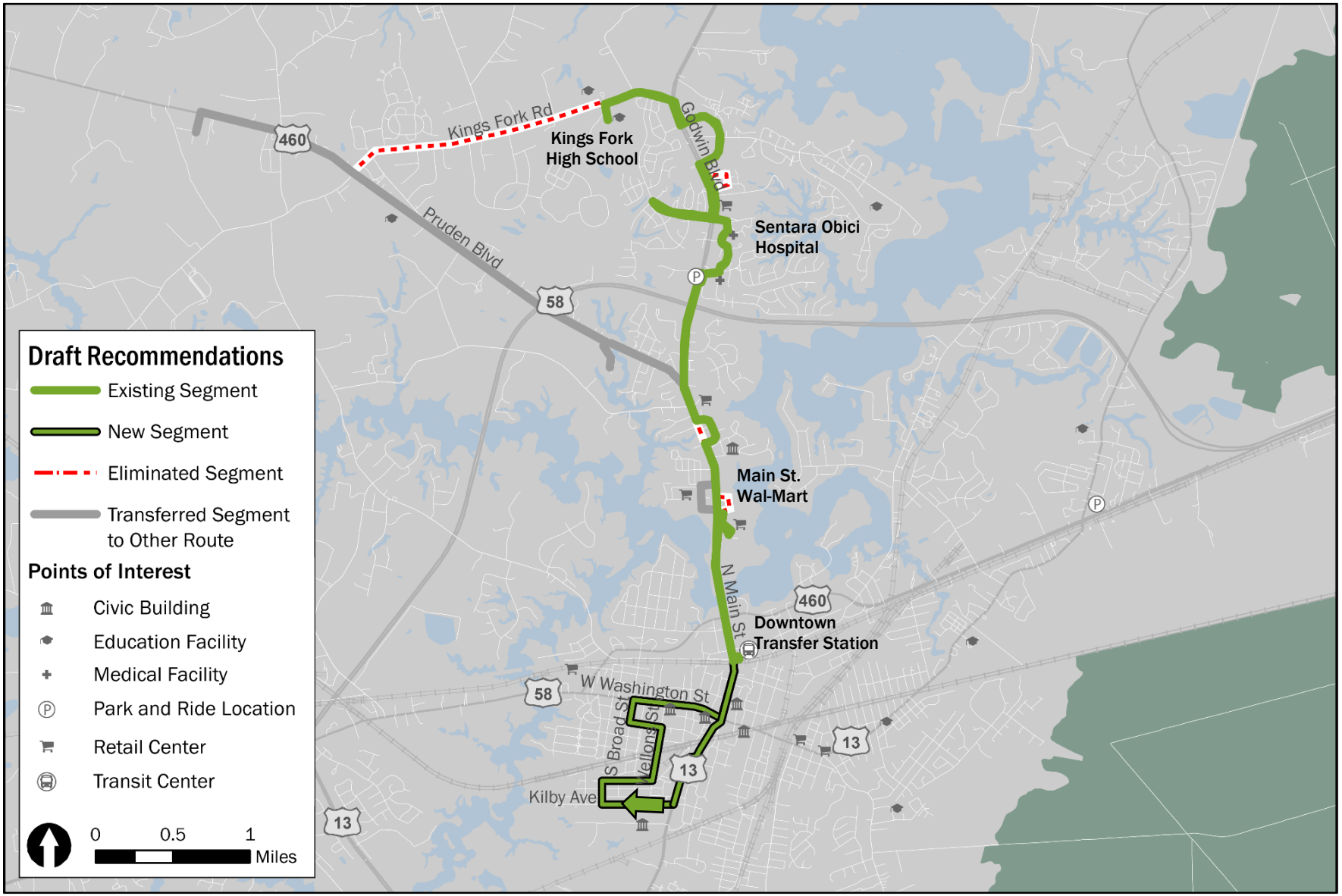
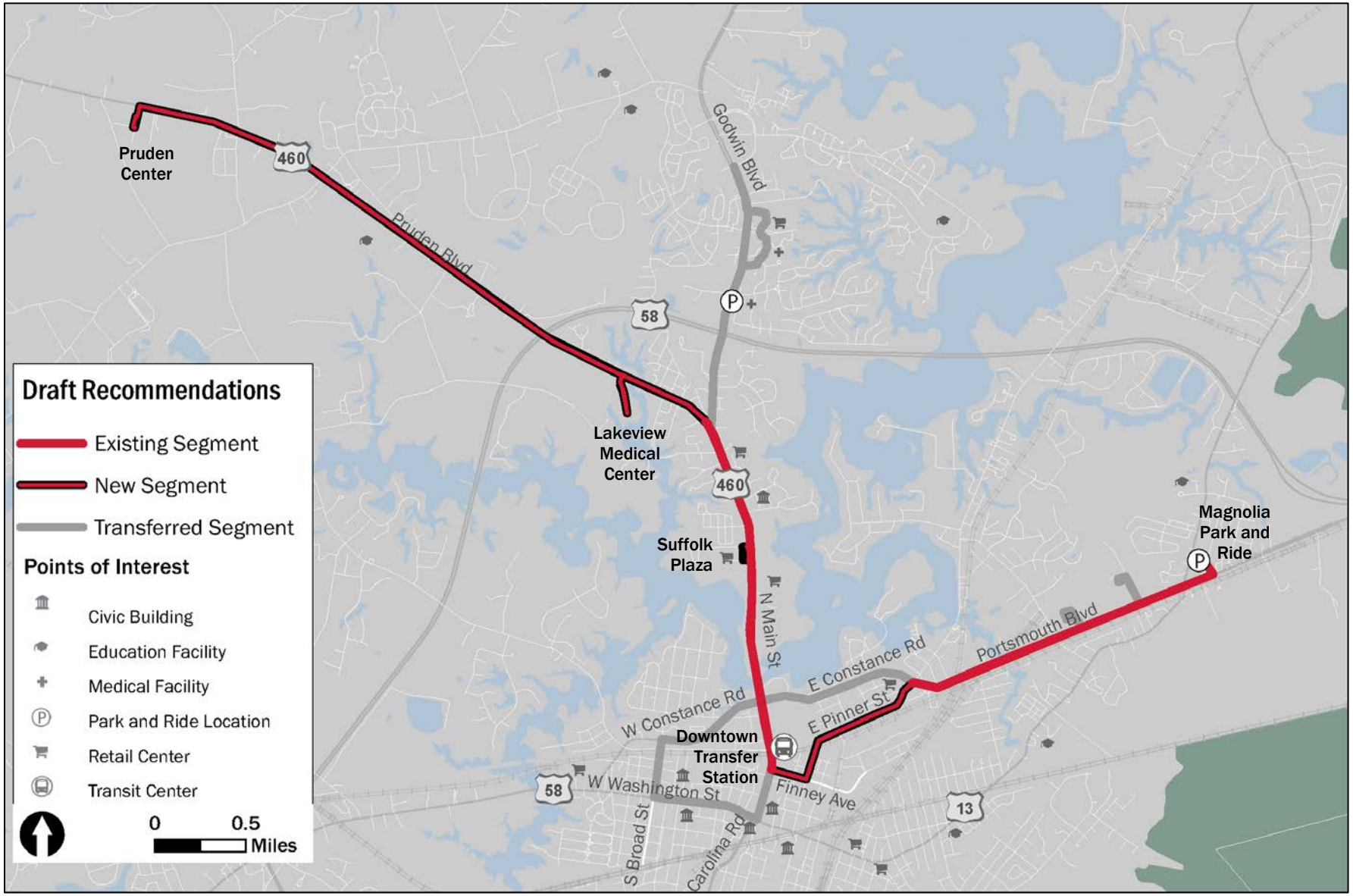


Figure 3-2: Red Route Proposed Alignment



Orange Route

Description of Change

Suffolk Transit intends to improve the Orange route (Table 3-3) by splitting the existing route into two new routes: the Orange route and the Blue route. The current Orange route loops through multiple neighborhoods and crosses over the railroad tracks nine times. Splitting the Orange route into two will make riders' trips more direct.

The proposed new Orange Route will continue to serve the Downtown Transfer Station, the West Jericho neighborhood, the Food Lion on Portsmouth Boulevard, and Magnolia Gardens. On the western portion of the proposed Orange Route, the service will operate southbound via Factory Street and northbound via Carolina Road (Figure 3-3). The proposed Blue route is similar in construction to the proposed Orange, but the Blue route will serve the neighborhoods south of East Washington Street and will operate southbound via Carolina Road and northbound via Culloden Road.

Key destinations include:

- Obici Industrial Park
- Suffolk Social Services Office
- West Jericho neighborhood
- Magnolia Gardens Apartments
- Food Lion
- Downtown Transfer Station

Justification

Splitting the existing Orange Route into two new services addresses Goals 1, 2, and 3 as it will better meet the needs of riders and adhere to the load factor of 1.25. The Orange route has the highest ridership of all Suffolk Transit routes. By adding a new route that compliments the Orange route, this proposal maximizes the available service by reducing the number of overcrowded trips.

In Section 2.3.2 Performance-Based Opportunities for Improvement, the addition of more frequent service on the Orange route was identified as a way to reduce over-capacity trips. The alignment, coupled with the introduction of the new Blue route, will create an effective 30-minute headway on its high-ridership segments.

Table 3-3: Orange Route Proposed Level of Service

Day Type	Span of Service	Frequency (Minutes)
Weekday	6:00 a.m. – 6:30 p.m.	60
Saturday	7:30 a.m. – 4:30 p.m.	60

Blue Route

Description of Change

Suffolk Transit's current Blue (Table 3-4) route runs only on Saturdays and serves similar destinations served by the existing Red and Yellow route. Suffolk Transit proposes the creation of a new Blue route by splitting the existing Orange route into two services that will operate with schedules that meets the Suffolk Transit service standards. The new Blue route will be similar to the realigned Orange route but will instead serve the neighborhoods south of East Washington Street (Figure 3-4). Where the proposed Orange route will provide northbound service via Carolina Road and southbound service via Factory Street, the Blue route will serve Carolina Road southbound and Culloden Street northbound.

Key destinations include:

- Suffolk Social Services Office
- Blythewood Lane/Truman Road neighborhood
- Food Lion
- Downtown Transfer Station

Justification

This re-alignment addresses Goals 1, 2, and 3 as the new route will better meet the needs of riders and reduce overcrowded trips on the Orange route.

Table 3-4: Blue Route Proposed Level of Service

Day Type	Span of Service	Frequency (Minutes)
Weekday	6:00 a.m. – 6:30 p.m.	60
Saturday	7:30 a.m. – 4:30 p.m.	60

Figure 3-3: Orange Route Proposed Alignment

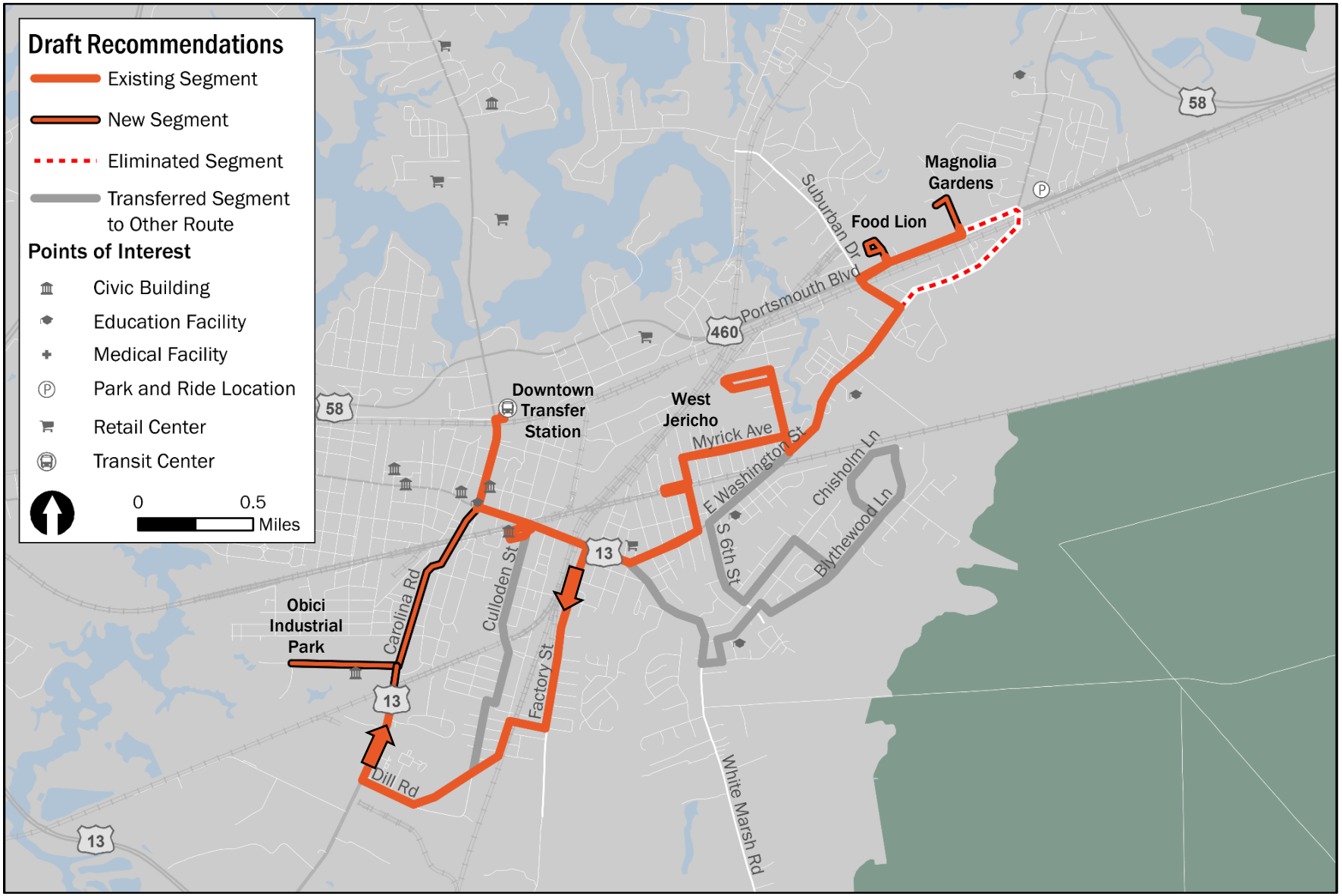
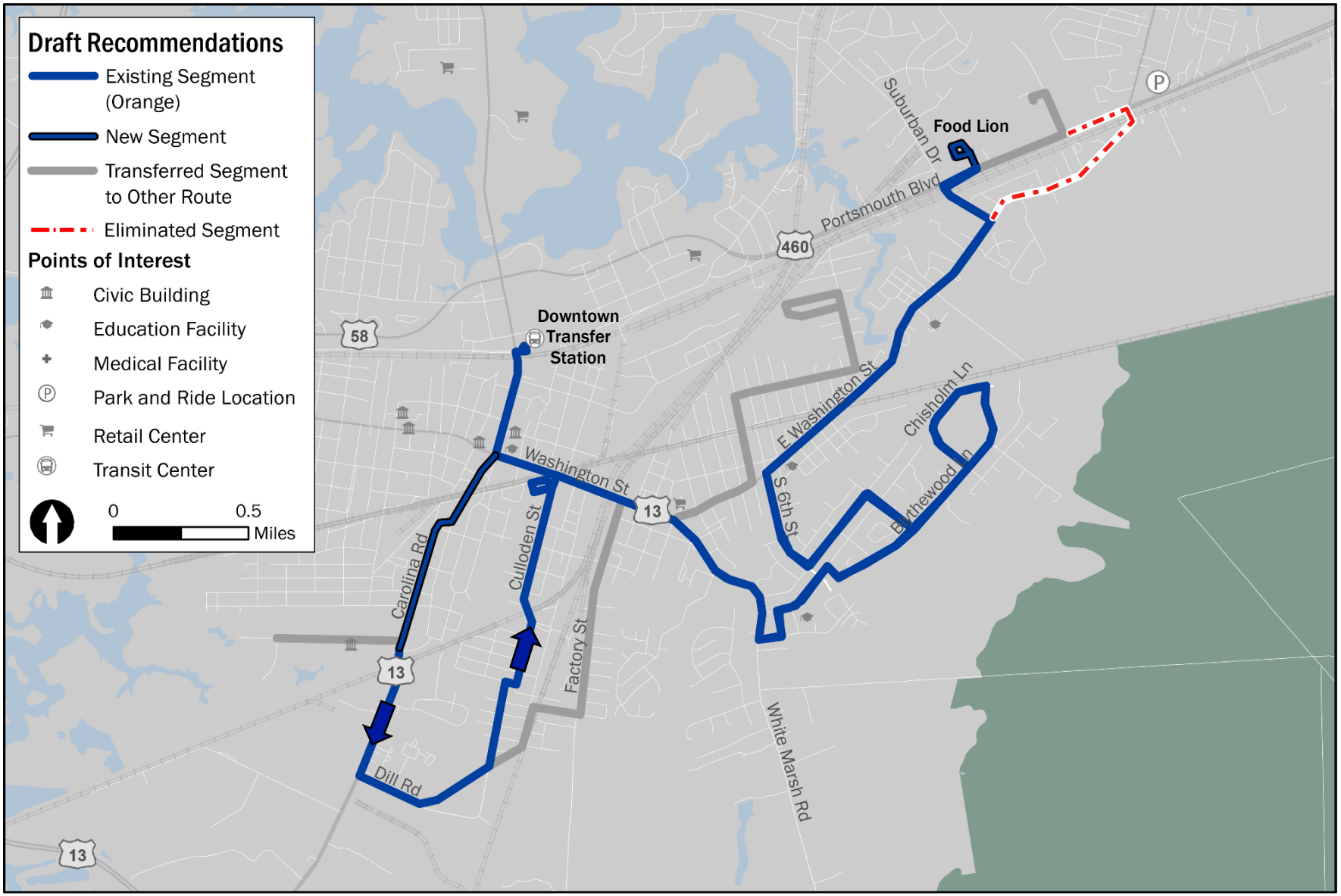


Figure 3-4: Blue Route Proposed Alignment



Yellow Route

Description of Change

Suffolk Transit intends to improve the Yellow Route (Table 3-5) by creating a more direct route that will promote faster system-wide connections between the CenterPoint Industrial Park area, the Food Lion on Holland Road and the Downtown Transfer Station area. By making the Yellow Route more direct, riders who connect to the distribution centers off Holland Road will have a faster trip to the Downtown Transfer Station. The new Yellow Route (Figure 3-5) will serve a short segment on North Broad Street and West Constance Road that is currently served by the Red Route. The Green route will now provide service in the neighborhood south of West Washington Street, which is part of the existing Yellow route.

Key destinations include:

- Paul D. Camp Community College
- Ace Distribution Center
- Target Distribution Center
- Food Lion
- Lipton Plant
- Downtown Transfer Station

Justification

As per the modified service standards, the Yellow route was initially reviewed because productivity fell below the FY 2018 average of 8.1 passenger trips per revenue hour. In addition, the route was reviewed because operating costs exceeded the FY 2018 average of $7.12 net cost per passenger trip.

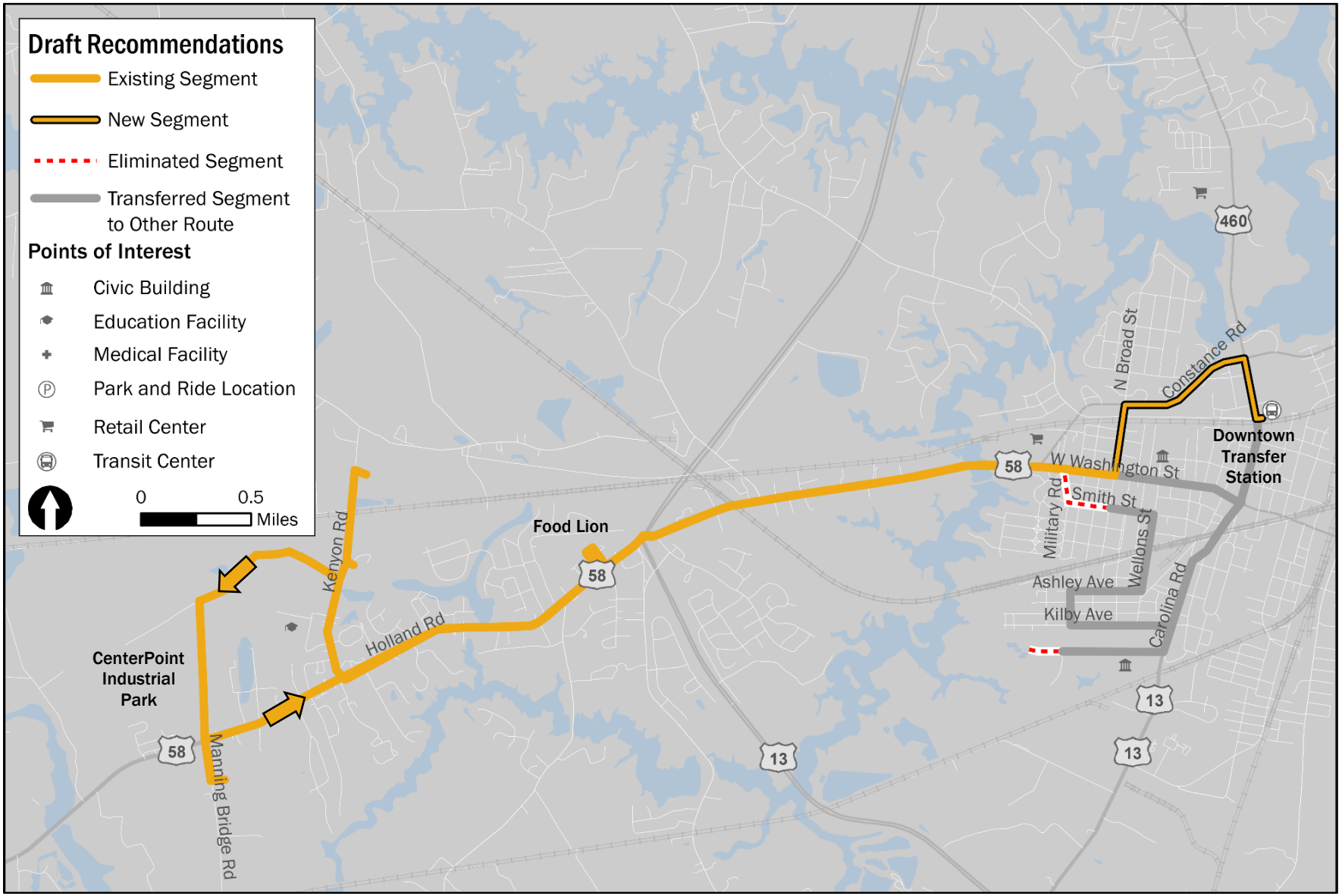
This re-alignment addresses Goals 1 and 3 as it will increase reliability, better meet the needs of riders, and maximize the existing route. In Section 2.3.2 Performance-Based Opportunities for Improvement, making the route more direct was identified as a possible strategy for improving ridership on the route. Additionally, in Section 2.4.2 Efficiency-Based Opportunities for Improvement, the Yellow route was identified as a candidate for interlining[4] with a route with a longer runtime. Suffolk Transit plans to interline the realigned Yellow route with the realigned Pink route.

Table 3-5: Yellow Route Proposed Level of Service

Day Type	Span of Service	Frequency (Minutes)
Weekday	6:30 a.m. – 6:30 p.m.	60
Saturday	7:30 a.m. – 4:30 p.m.	60

[4] Interlining is the term used for scheduling a vehicle to operate from one route to another during a service day. The interlining of two routes with non-optimal cycle times at a common location can create overall compatible cycle times for the route pair, reducing operating costs and the need for additional vehicles. (TCRP. (1998). Report 30: Transit Scheduling: Basic and Advanced Manuals, http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_30-a.pdf).

Figure 3-5: Yellow Route Proposed Alignment



Pink Route

Description of Change

Suffolk Transit intends to improve the Pink route (Table 3-6) by making the route more direct and by offering bi-directional service across the entire proposed alignment. The current Pink Route operates on Portsmouth Boulevard without stopping. By running the route on Nansemond Parkway, Progress Road, and Wilroy Road instead of Portsmouth Boulevard, riders will have service in both directions and have closer connections to job centers. Additionally, the HRT Transfer Station in Chesapeake will now be served in both directions, helping riders from both Downtown and Northern Suffolk connect to HRT routes and the region. This new route alignment (Figure 3-6) will result in a runtime that exceeds the hourly headway, which will be addressed by interlining with the Yellow Route.

Suffolk Transit will expand the weekday span of service from 6:30 a.m. to 5:30 p.m.

Key destinations include:

- North Suffolk Library
- Chesapeake Square Transfer Station
- Distribution Centers on Progress Road
- Downtown Transfer Station

Justification

Suffolk Transit will add an hour of service on weekdays, making the span of service 6:30 a.m. to 5:30 p.m. The reason for ending earlier than the service standards is because of the Pink route's function as a connector route.

The Pink route was reviewed because productivity fell below the FY 2018 average of 8.1 passenger trips per revenue hour. In addition, the route was reviewed because operating costs exceeded the FY 2018 average of $7.12 net cost per passenger trip.

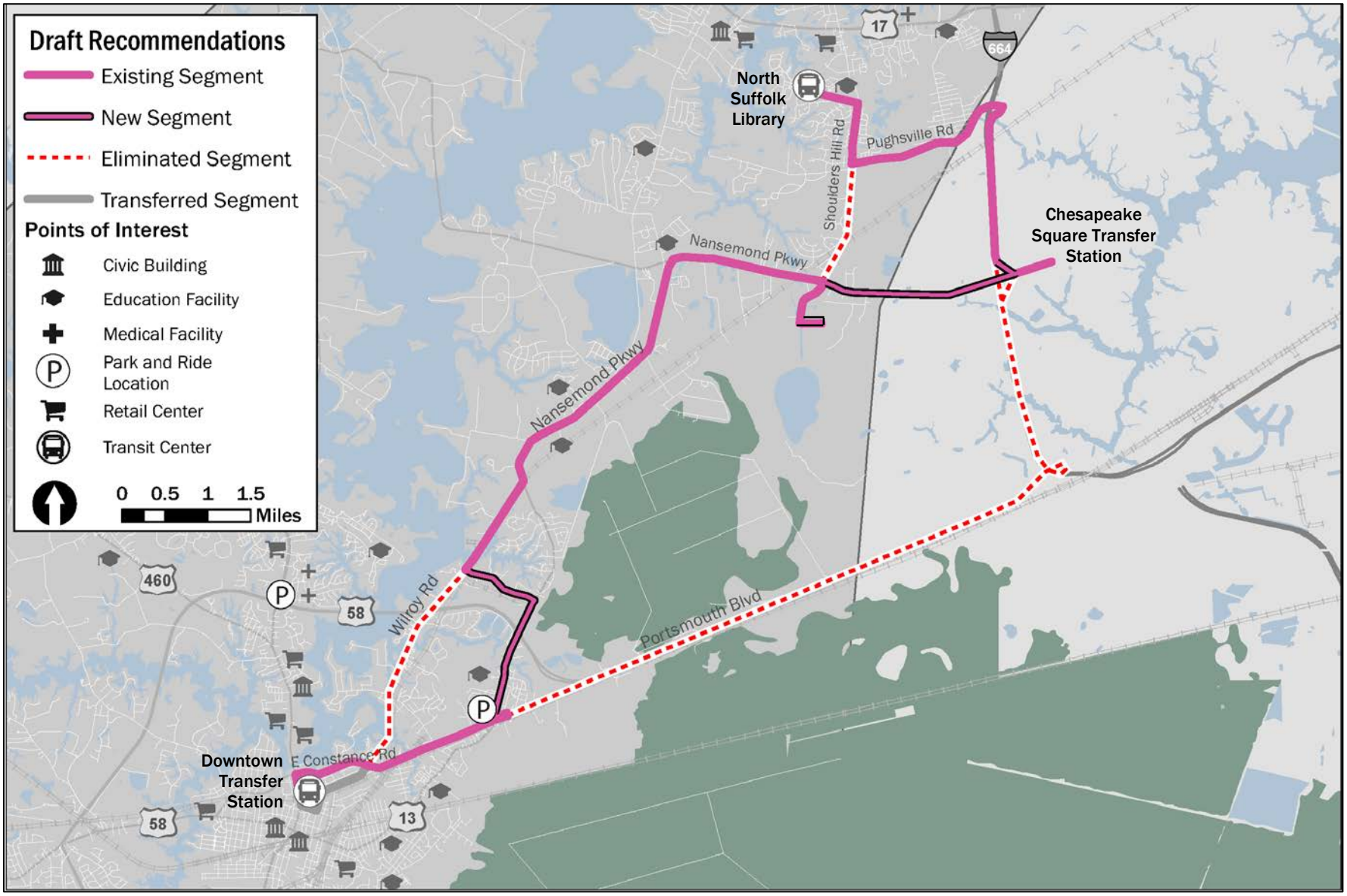
This re-alignment and addition of hours addresses Goals 1 and 3 as it will better meet the needs of riders and maximize the existing route. In Section 2.3.2 Performance-Based Opportunities for Improvement, eliminating segments without stops was identified as a possible strategy for improving the route's productivity.

Interlining the Pink Route with the Yellow Route will not only reduce the need to increase operating costs and add an additional vehicle on the Pink Route, but will also provide a direct connection between the CenterPoint Industrial Park and North Suffolk.

Table 3-6: Pink Route Proposed Level of Service

Day Type	Span of Service	Frequency (Minutes)
Weekday	6:30 a.m. – 5:30 p.m.	60
Saturday	7:30 a.m. – 3:30 p.m.	60

Figure 3-6: Proposed Pink Alignment



Purple Route

Description of Change

Suffolk Transit intends to improve the Purple route (Table 3-7) by removing unproductive segments and making the route more direct. Currently, the Purple Route loops around Walmart using Hampton Roads Parkway and then travels north along Harbour View Boulevard. By eliminating Hampton Roads Parkway, the Purple Route (Figure 3-7) will instead operate through the retail area in both directions, connecting residents in North Suffolk to grocery stores and shopping.

Key destinations include:

- North Suffolk Library
- Sentara BelleHarbour Hospital
- Harbourview Shopping Center
- Wal-Mart
- Kroger
- Pughsville neighborhood

Justification

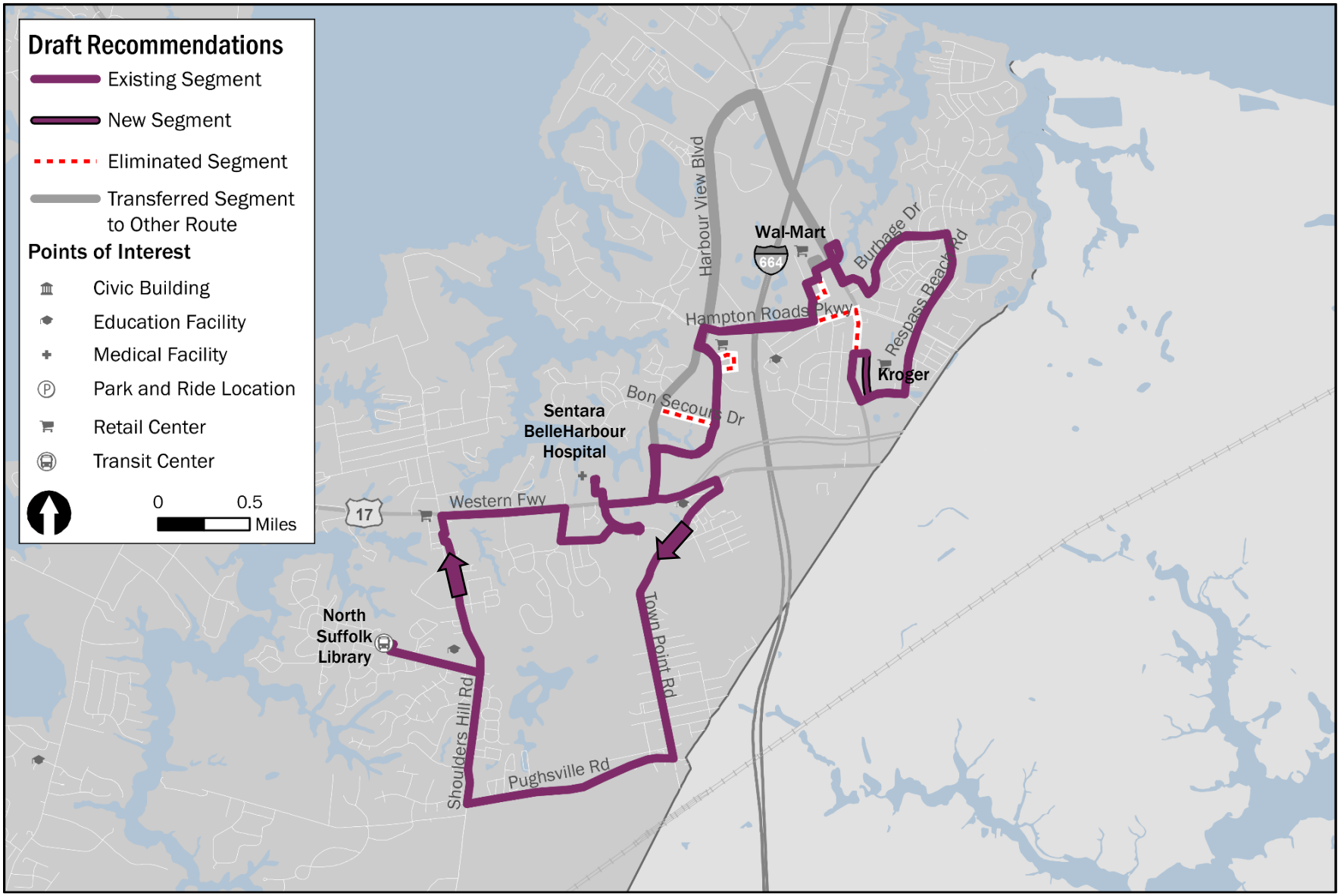
The Purple route was reviewed because productivity fell below the FY 2018 average of 8.1 passenger trips per revenue hour. In addition, the route was reviewed because operating costs exceeded the FY 2018 average of $7.12 net cost per passenger trip.

This re-alignment addresses Goals 1 and 3 as it will better meet the needs of riders and maximize the existing route. In Section 2.3.2 Performance-Based Opportunities for Improvement, eliminating low-performing segments was identified as a possible strategy for improving ridership on the route.

Table 3-7: Purple Route Proposed Level of Service

Day Type	Span of Service	Frequency (Minutes)
Weekday	6:30 a.m. – 6:30 p.m.	60
Saturday	7:30 a.m. – 4:30 p.m.	60

Figure 3-7: Purple Route Proposed Alignment



3.1.2. New Fixed-Route Service

North Suffolk Lunch Circulator

Description of Change

The North Suffolk Lunch Circulator (Table 3-8) will connect workers along Harbour View Boulevard and College Drive to several lunch destinations (Figure 3-8) during a limited midday span between 11:30 a.m. to 2:00 p.m. This service would be provided on these corridors instead of providing this service as part of the Purple Route service, and frequency would be increased to 30 minutes. By transferring these segments to the Lunch Circulator, the Purple Route will be more direct for North Suffolk residents and more productive overall.

In the future, due to proposed economic development along the route, increased hours of service should be considered.

Key destinations include:

- Department of Defense Complex
- Harbour View East (Wal-Mart)
- Employment at College Drive & Armstead Road
- Harbour View Marketplace (Buffalo Wild Wings)
- Bon Secours Health Center
- Kroger Shopping Area

Justification

This new route would help Suffolk Transit meet Goal 2 by promoting the image of transit services and increasing the quality of service. In Section 2.2.2 Transit Demand and Underserved Area Opportunities for Improvement, the level of service gaps analysis showed that this area could support midday service. In Section 2.3.2 Performance-Based Opportunities for Improvement, eliminating low-performing segments was identified as a possible strategy for improving ridership on the route.

Table 3-8: Lunch Circulator Proposed Level of Service

Day Type	Span of Service	Frequency (Minutes)
Weekday	11:30 a.m. – 2:00 p.m.	30

Windsor Commuter Route

Description of Change

As part of its planned service expansions, Suffolk Transit proposes starting a commuter route to the Town of Windsor, located in Isle of Wight County (Figure 3-9). Specific details about operations or fares have not been decided and would be subject to negotiations with a contractor. Additionally, collaboration with the Town of Windsor would be needed, as well as coordination for a designated park-and-ride spot. The Food Lion grocery store on Windsor Boulevard is both centrally located and has adequate parking, but Suffolk Transit has not conferred with store management.

Key destinations include:

- Twin Ponds Mobile Home Community
- Windsor Manor Park
- Food Lion on Windsor Boulevard
- Godwin Park and Ride
- Walmart on N Main Street
- Downtown Transfer Station

Justification

This introduction of service would meet Goal 1 as it would meet the needs of the surrounding areas of Suffolk. Workers would have increased opportunities to jobs by having reliable transit access. Commuter service would also meet Objective 4.1 by increasing regional transit connectivity outside of Suffolk. In Section 2.2.2 Transit Demand and Underserved Area Opportunities for Improvement, the existing travel flows for home-based work trips showed 150 trips from Windsor to Downtown Suffolk. Based on this quantity of trips, Suffolk Transit would provide one morning trip from Windsor to Downtown Suffolk and one PM trip from Downtown Suffolk to Windsor.

Figure 3-8: Lunch Circulator Proposed Alignment

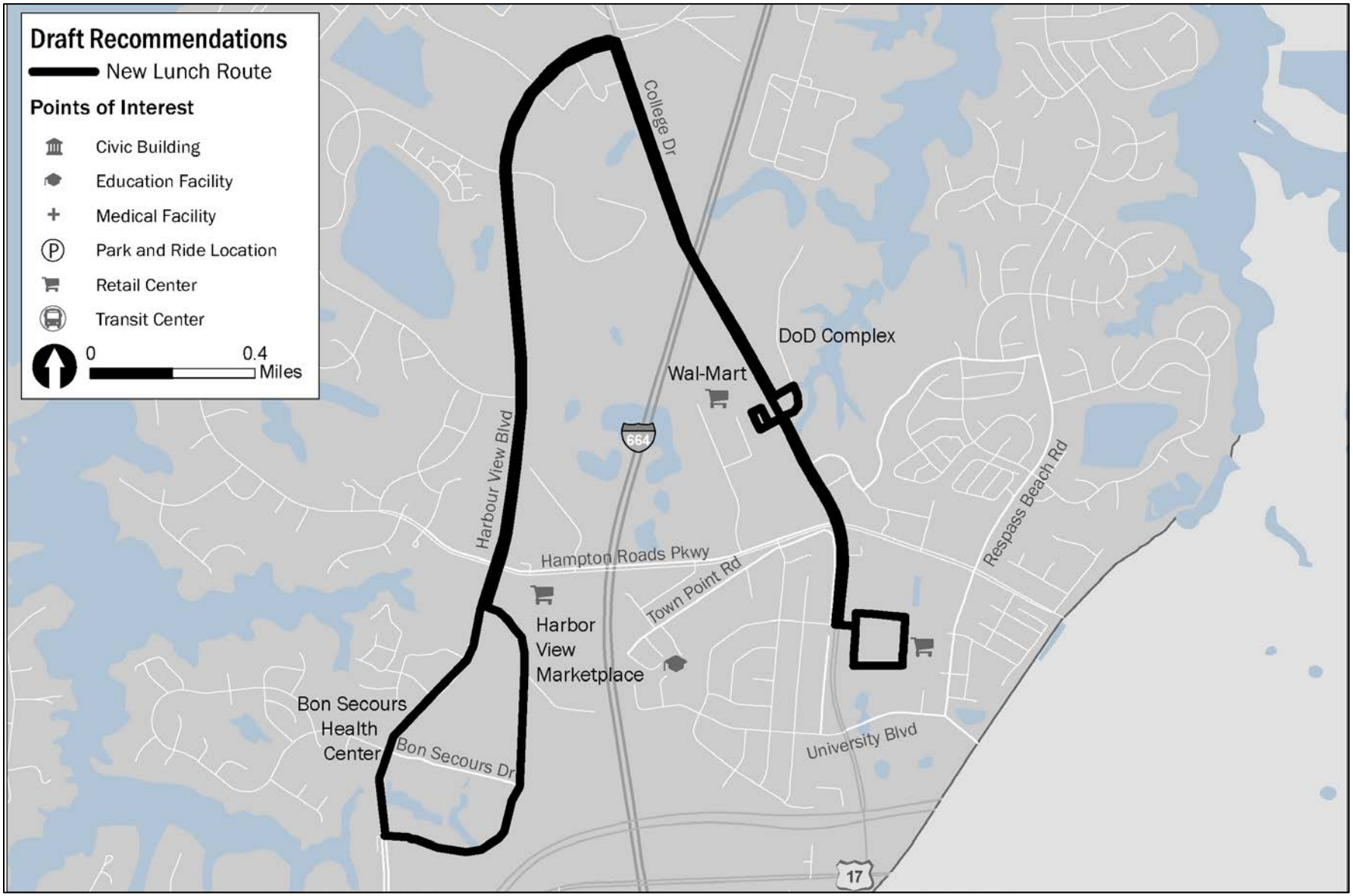
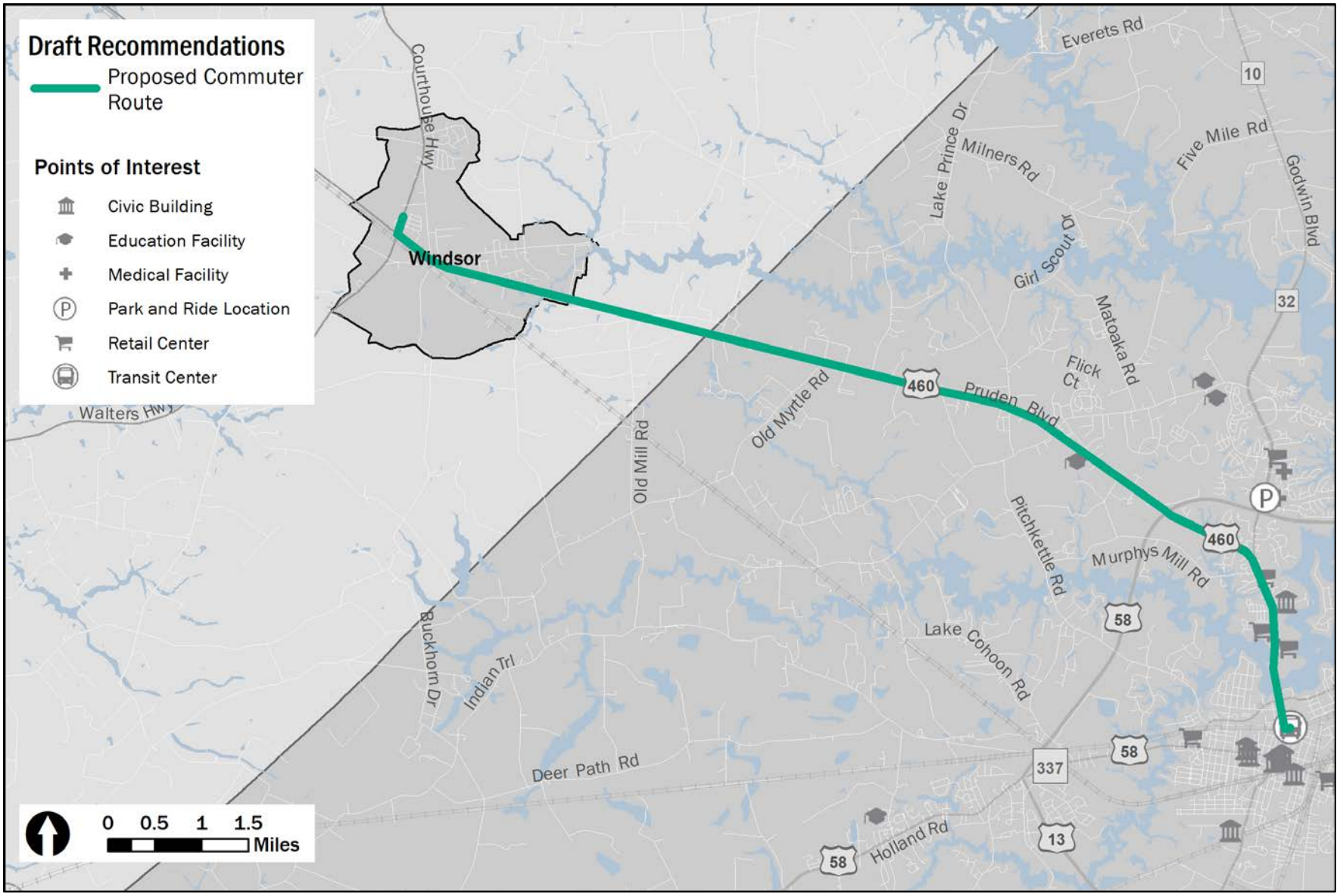


Figure 3-9: Proposed Windsor Commuter Route Alignment



3.1.3. Introduction of On-Demand Service

On-Demand Service

Description of Change

Based on the Transit-Oriented Populations Propensity Index and the Transit Potential, three areas in Suffolk could support on-demand transit service: Chuckatuck, Holland, and Whaleyville.

Residents who live within the zones defined by Suffolk Transit could call or use an app to request a ride, likely one business day in advance. Riders would be able to be dropped off within the same zone or at the Downtown Transfer Station or Godwin Park-and-Ride lot, where they could use the fixed-routes to connect to their ultimate destinations. On-demand service would operate as a curb-to-curb service.

On-demand service would be offered during weekdays within the midday service period (for example, 10:00 a.m. to 3:00 p.m.). It is likely that service would be available for each zone one or two times per week. For example, Holland may be available Monday and Wednesday, Chuckatuck available Tuesday, and Whaleyville available Thursday. Specific details about operations or fares have not been decided and would be subject to negotiations with a contractor.

Crittenden and Eclipse have densities to support on-demand transit service but has low levels of transit-oriented populations. Other areas to be considered include the Village of Driver (Nansemond Parkway & Kings Highway) and the developed area along Bennetts Pasture Road to Route 17. These areas could be included if a pilot proves successful.

Figure 3-10, Figure 3-11, and Figure 3-12 show the proposed zones for on-demand service in Chuckatuck, Holland, and Whaleyville.

Justification

The introduction of on-demand service would support Goal 1 by meeting the needs of Suffolk residents that live outside of the current fixed-route service area. It would also support Goal 3 by connecting more riders to the existing fixed-route system.

Figure 3-10: Proposed On-Demand Zone in Chuckatuck

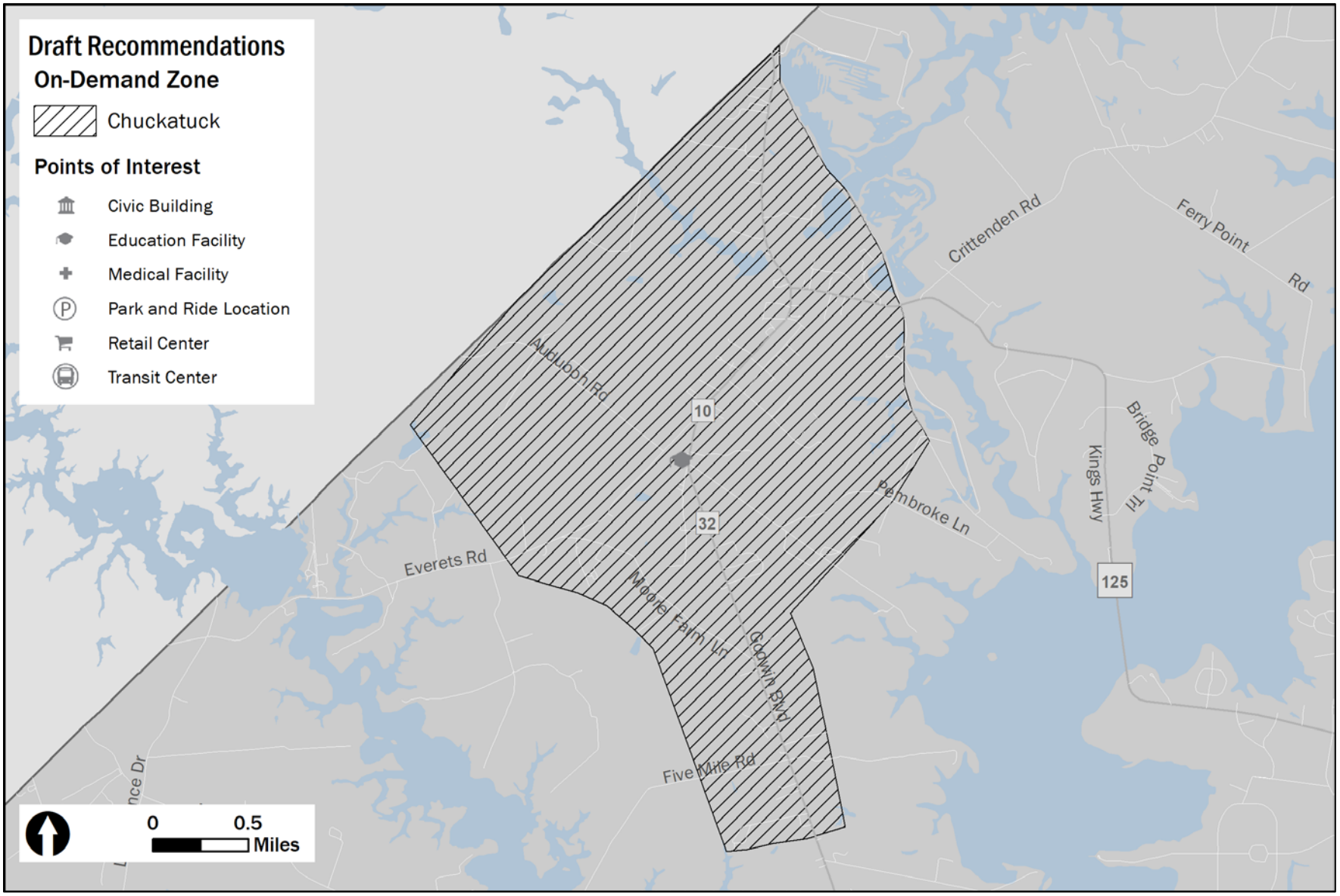


Figure 3-11: Proposed On-Demand Zone for Holland

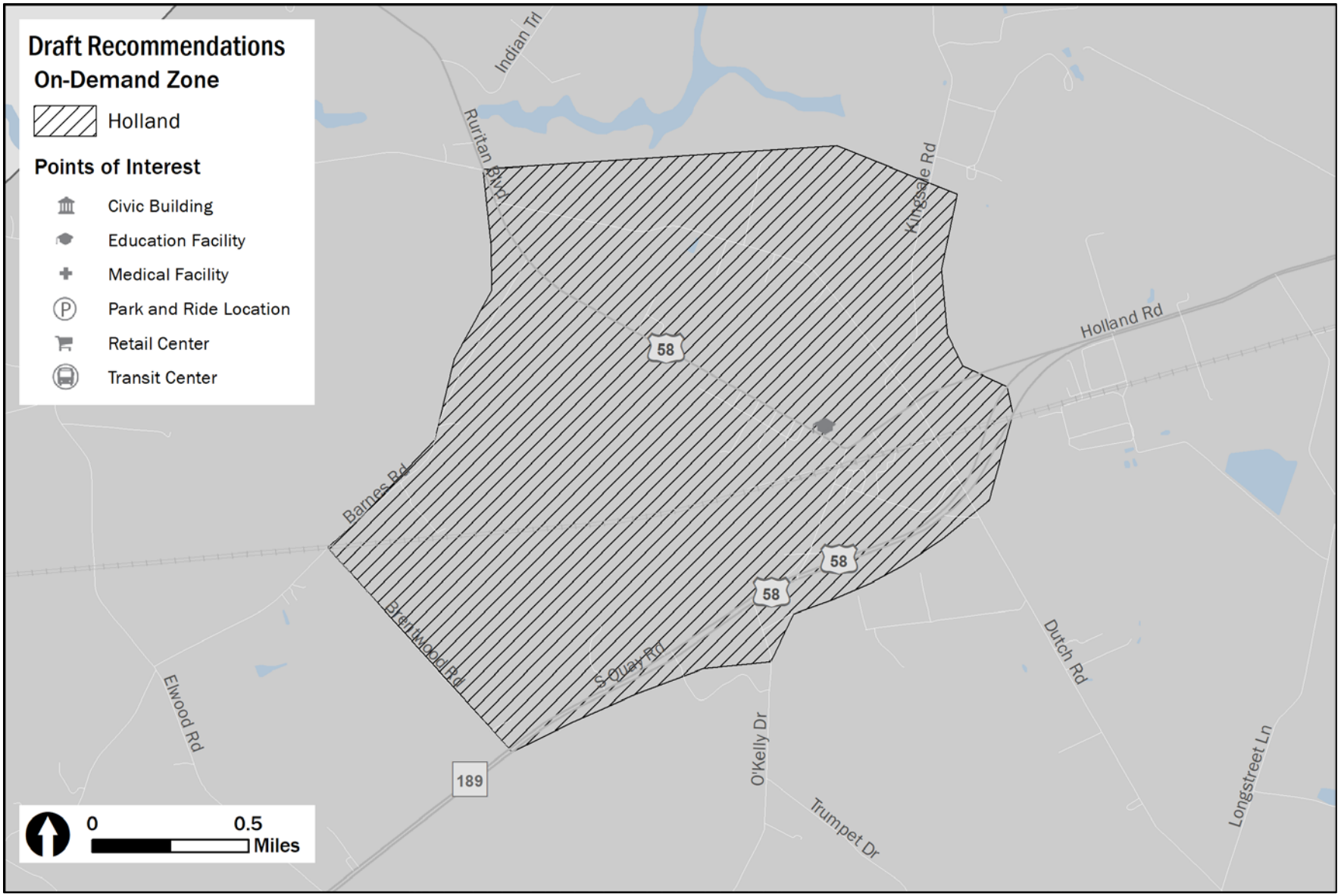
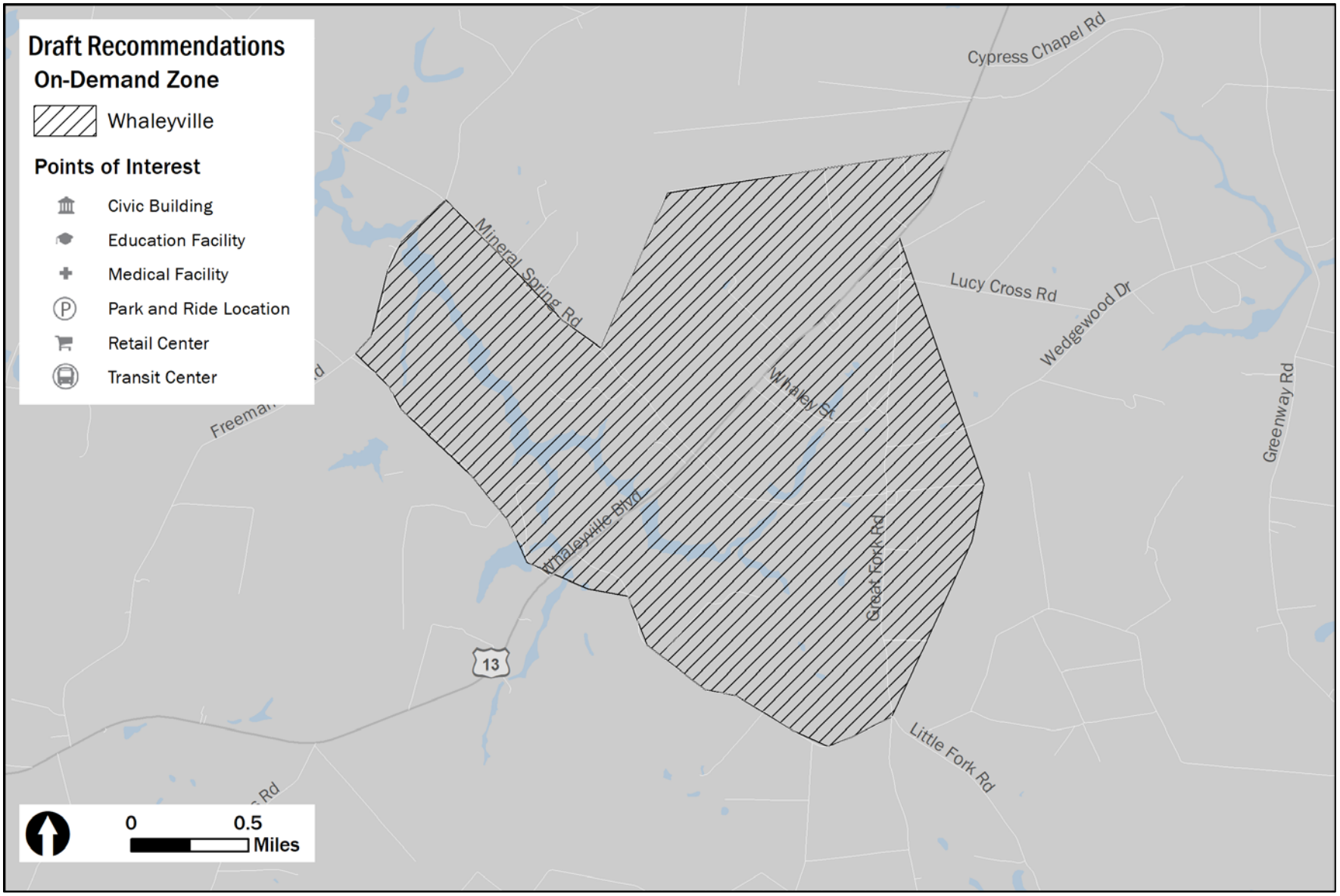


Figure 3-12: Proposed On-Demand Zone for Whaleyville



3.1.4. Ridership Estimations

Fixed-Route Service

Ridership estimates for fixed-route service are shown in Table 3-9 and Table 3-10. Estimates were calculated using the existing average daily ridership by service day for each stop.

The methodology for estimating ridership is as follows:

- If a stop was eliminated from the system, the existing ridership was subtracted from the route.
- If a stop was transferred to another route, the existing ridership was assigned to the new route.
- If a stop had an increase in span, the existing ridership was increased using an elasticity.
- If a stop had an increase in frequency, the existing ridership was increased using an elasticity.
- If a route had a new segment, the length of the segment was multiplied by the route's average ridership per mile.
- If an existing segment had new bi-directional service, the one-way length of the segment was multiplied by the route's average ridership per mile.

The ridership estimation for the North Suffolk Lunch Circulator is a conservative estimate based on the Purple route's average ridership per mile. It is likely that, with enhanced marketing, the Lunch Circulator will attract different riders than those that currently ride the Purple route.

Table 3-9: Weekday Fixed-Route Ridership Estimates

Route	Existing Daily Ridership	Projected Daily Ridership	Percent Change
Green	122	210	72%
Red	35	86	146%
Yellow	77	57	-26%
Orange	149	159	7%
Blue	0	165	-
Pink	56	105	88%
Purple	31	38	23%
Lunch Circulator	0	10	-
Total	470	830	77%

Table 3-10: Saturday Fixed-Route Ridership Estimates

Route	Existing Daily Ridership	Projected Daily Ridership	Percent Change
Green	69	100	45%
Red	0	28	-
Yellow	0	23	-
Orange	76	75	-1%
Blue (old)	30	0	-100%
Blue (new, paired with Orange)	0	83	-
Pink	26	51	96%
Purple	19	23	21%
Total	220	383	74%

Commuter Service

Based on the HRTPO model, 150 daily home-based work trips are made from Windsor to Suffolk. Using the regional mode share of 1.8 percent, it is likely that about three people, or six trips, would be made daily using the Windsor-to-Suffolk commuter service. This is a conservative estimate and could increase based on the commuter route's connection to transit-oriented populations and direct connections to jobs centers like Walmart.

On-Demand Service

Using a population-based model from the National Center for Transit Research,[5] Suffolk Transit could expect an average of 13 daily trips taken on its on-demand service if operated four days a week and charged $3.00 a trip, the current paratransit fare. Based on the model, the ridership estimate would decrease if the fare increased.

The National Center for Transit Research found that the biggest contributor to ridership was lacking access to a car. If the population without a car increases by one percent, ridership increases by 21 percent. According to the 2015 American Community Survey, the Holland on-demand zone has 59 households without a car, the Whaleyville on-demand zone has 34, and the Chuckatuck on-demand zone has 24. Additionally, the percentage of population aged 65 and older also impacted ridership. If the senior population increases by one percent, ridership increases by eight percent. According to the 2015 American Community Survey, the Holland on-demand zone's population is 62 percent seniors, the Whaleyville on-demand zone is 56 percent seniors, and the Chuckatuck on-demand zone is 23 percent seniors. Overall, residents of Holland are more likely to ride Suffolk Transit's on-demand service.

3.2. Prioritization of Planned Service Improvements

This section explains the phase each service improvement will be implemented, as well as the operating and capital costs associated with each phase.

3.2.1. Phasing of Service Improvements

The phasing of service improvements was first determined using a ranking method. Each change was ranked based on the change in ridership, projected cost per rider, and the results of the public survey asking about level of support. The changes with the highest rankings were splitting the Orange route into two bidirectional routes; realigning the Pink route and adding hours of service; and realigning the Green route to bidirectionally serve Godwin Boulevard/N Main Street. Table 3-11 shows each service improvement by its service day, phase, and implementation year.

Then, high-ranking changes were paired with necessary changes for ease in implementation. Green and Red were paired as their changes work together, and Pink and Yellow were paired because they are proposed to be interlined.

Finally, operating and capital costs were considered. While no-cost or low-cost changes are easy to make in the short-term, higher cost changes like adding new routes were phased later. The exception was realigning the Orange into two bidirectional routes as the ridership impact is expected to be strongly positive.

Figure 3-13 to Figure 3-20 show the system as it changes through each implementation year.

Table 3-11: Service Improvements by Service Day, Phase, and Implementation Year

Service Improvement	Service Day	Phase	Implementation Year
Realign Green and Pink	Weekday and Saturday	Short-term	2021
Realign Yellow, replacing Blue on Saturdays	Weekday and Saturday	Short-term	2021
Realign Red	Weekday	Short-term	2021
Increase operating hours on Pink	Weekday	Short-term	2021
Realign Orange to Orange and Blue	Weekday and Saturday	Mid-term	2024
Increase operating hours on Red	Weekday	Mid-term	2024
Introduce Red route on Saturday	Saturday	Mid-term	2026
Realign Purple to Purple and Lunch Circulator	Weekday and Saturday	Mid-term	2026
Introduce on-demand service	Weekday	Mid-term / Long-term	2028
Introduce commuter service	Weekday	Mid-term / Long-term	2028

[5] Jeremy Mattson, "Estimating Ridership of Rural Demand-Response Transit Services for the General Public," National Center for Transit Research, August 2016.

Figure 3-13: Weekday System Map (2021)

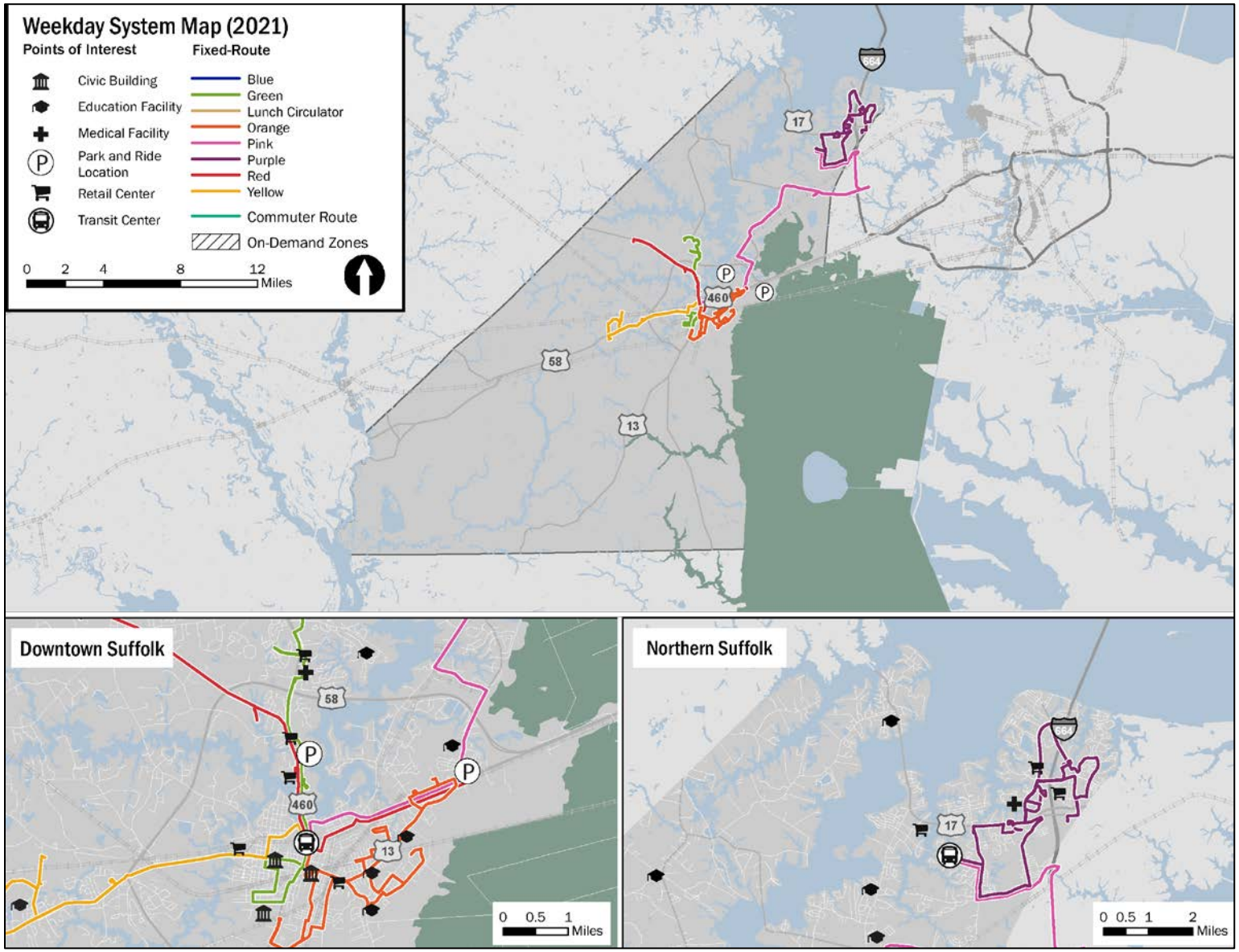


Figure 3-14: Saturday System Map (2021)

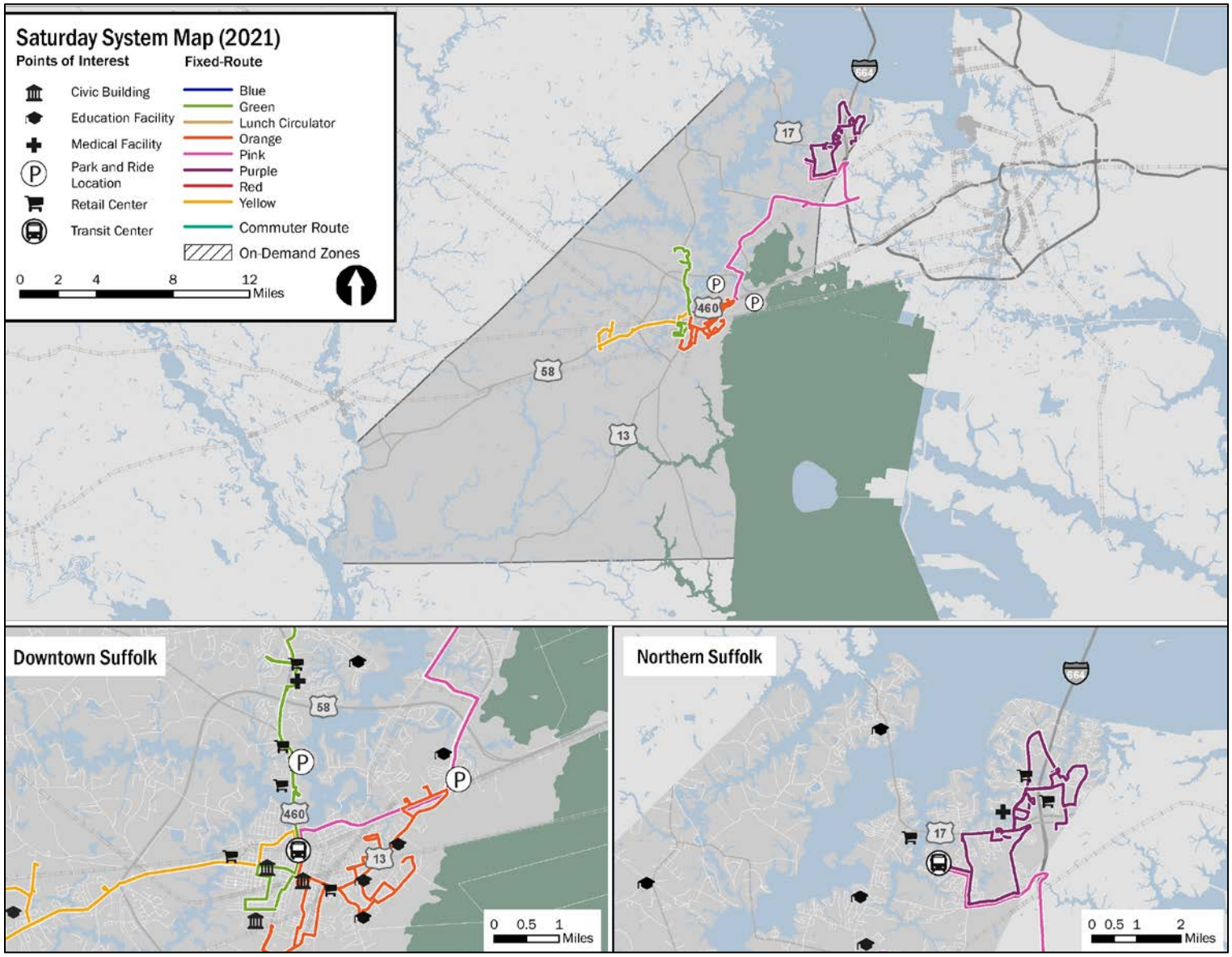


Figure 3-15: Weekday System Map (2024)

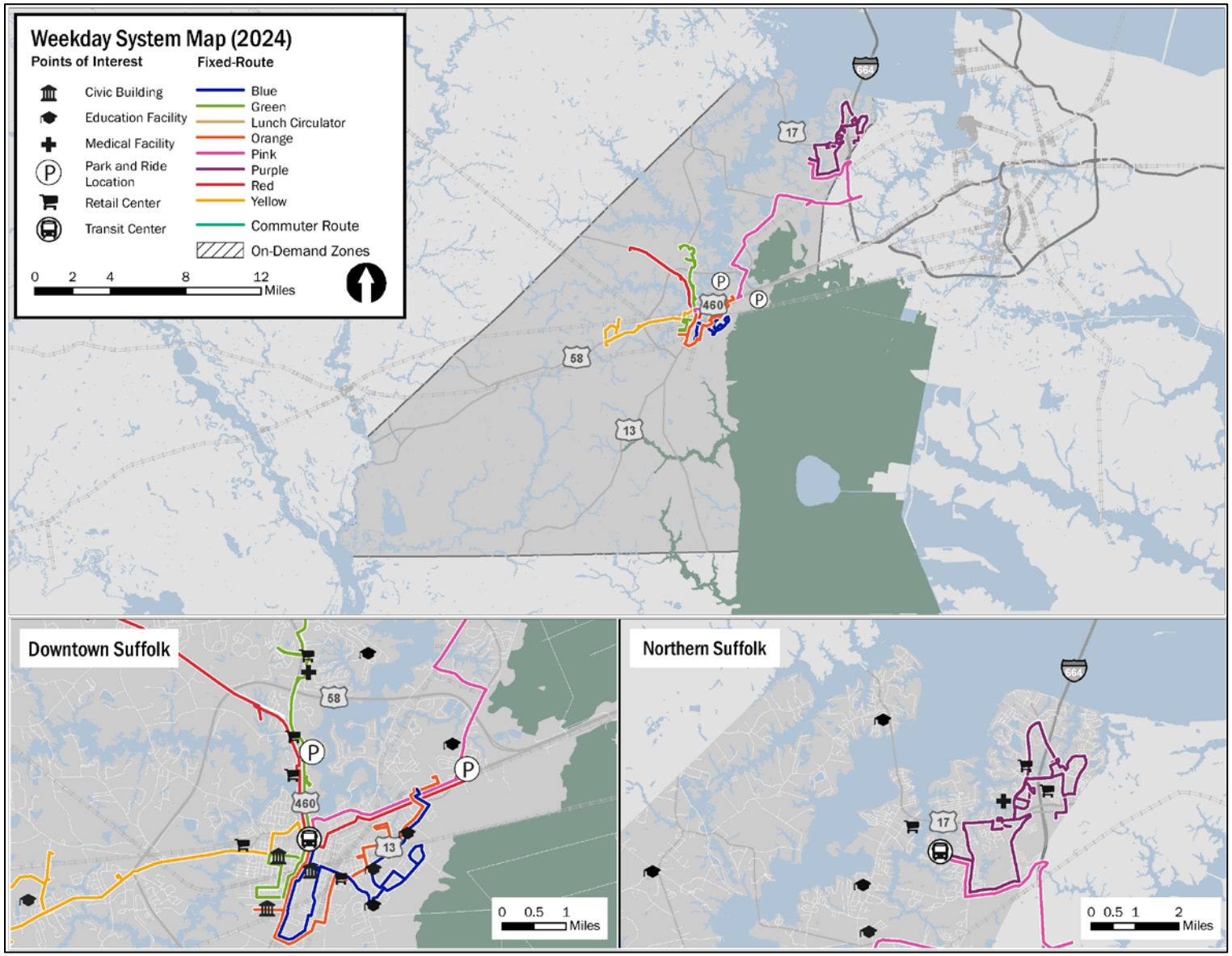


Figure 3-16: Saturday System Map (2024)

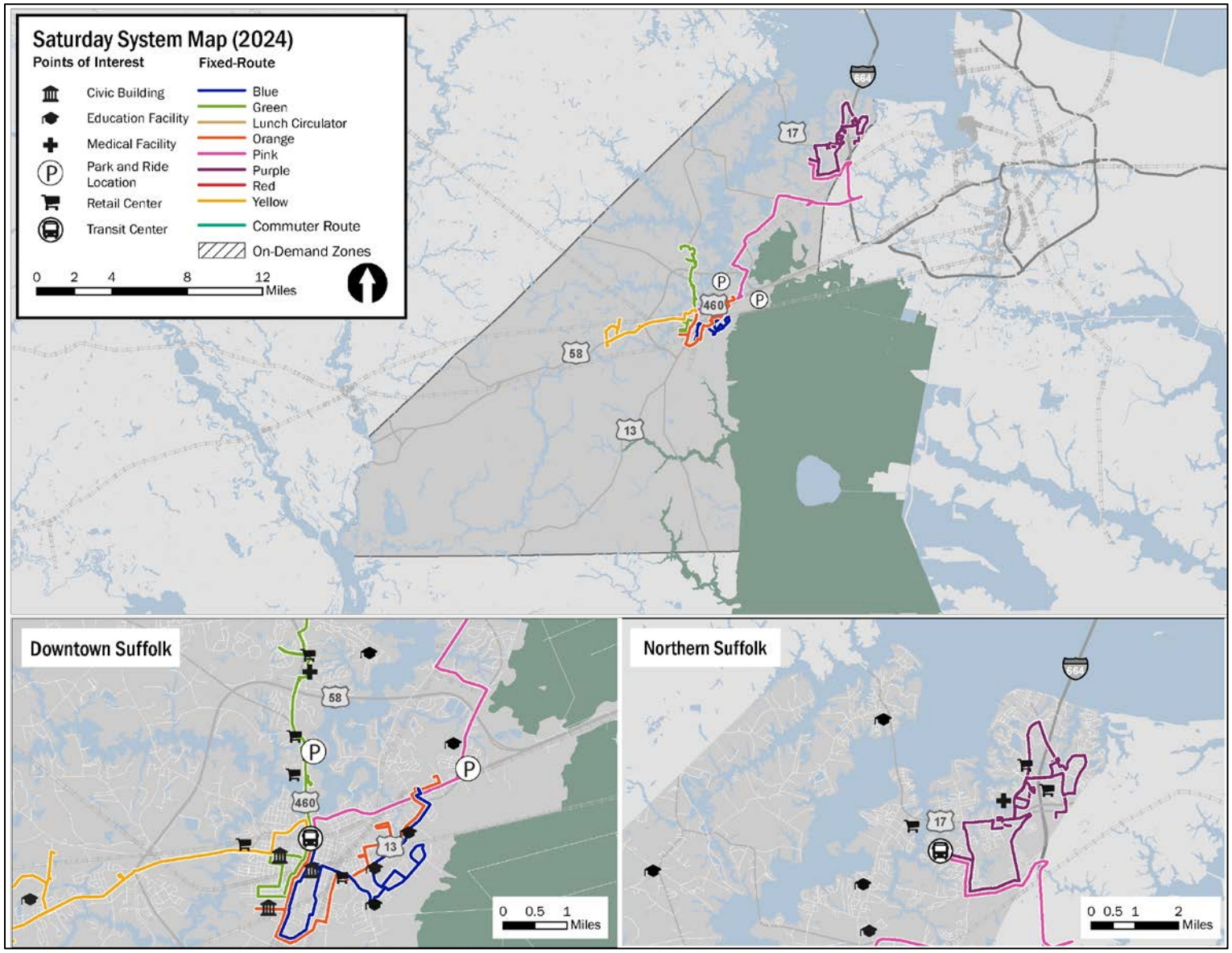


Figure 3-17: Weekday System Map (2026)

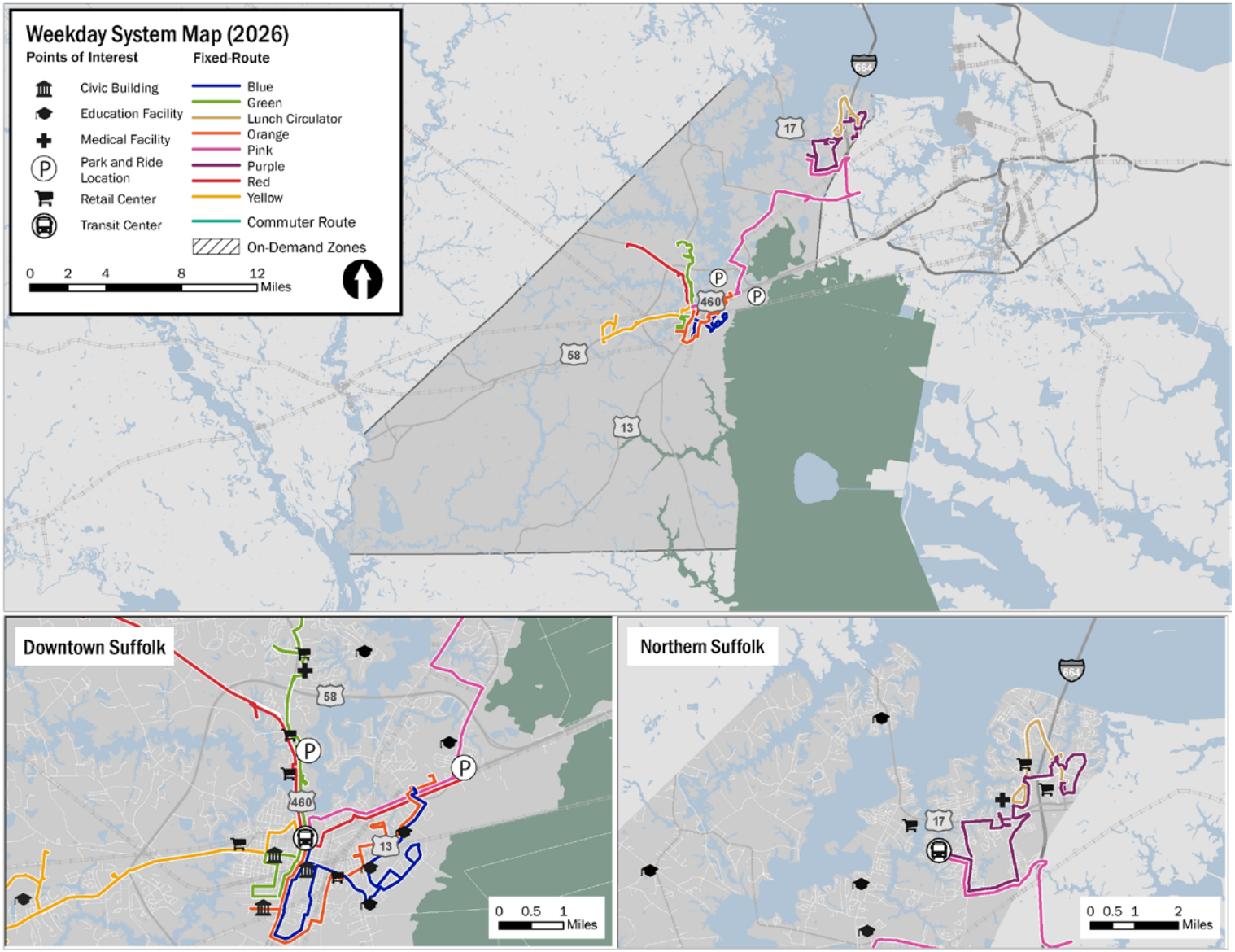


Figure 3-18: Saturday System Map (2026)

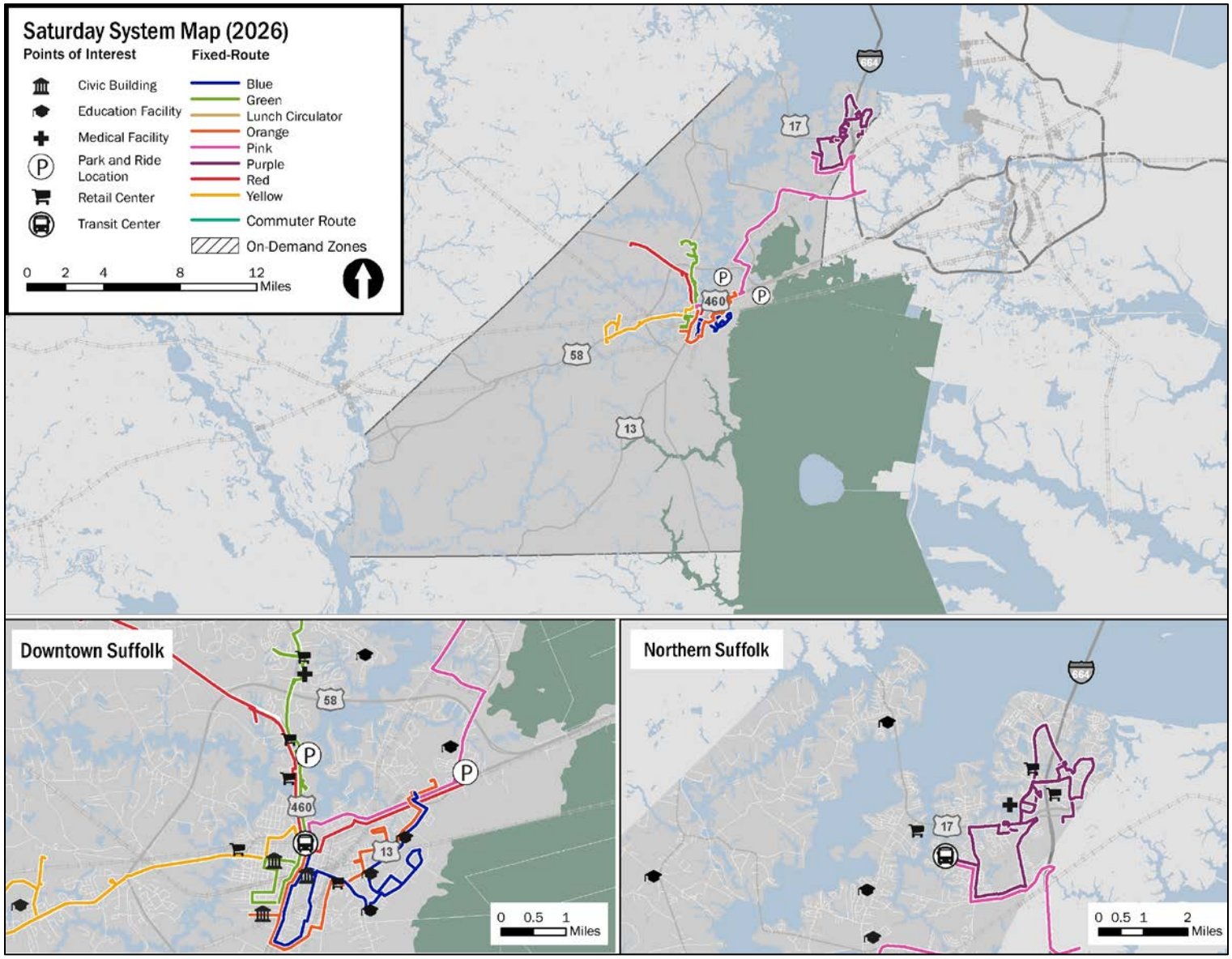


Figure 3-19: Weekday System Map (2028)

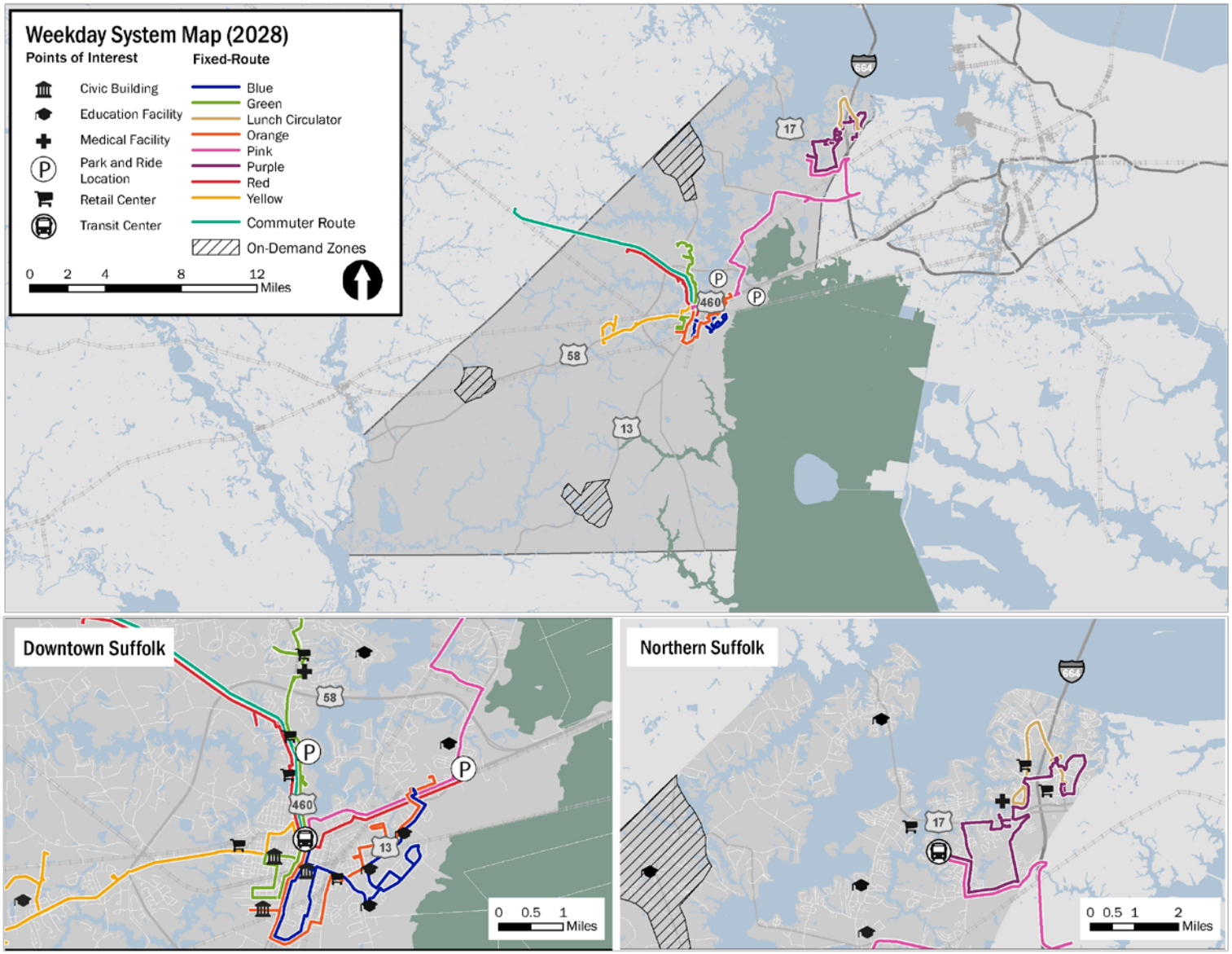
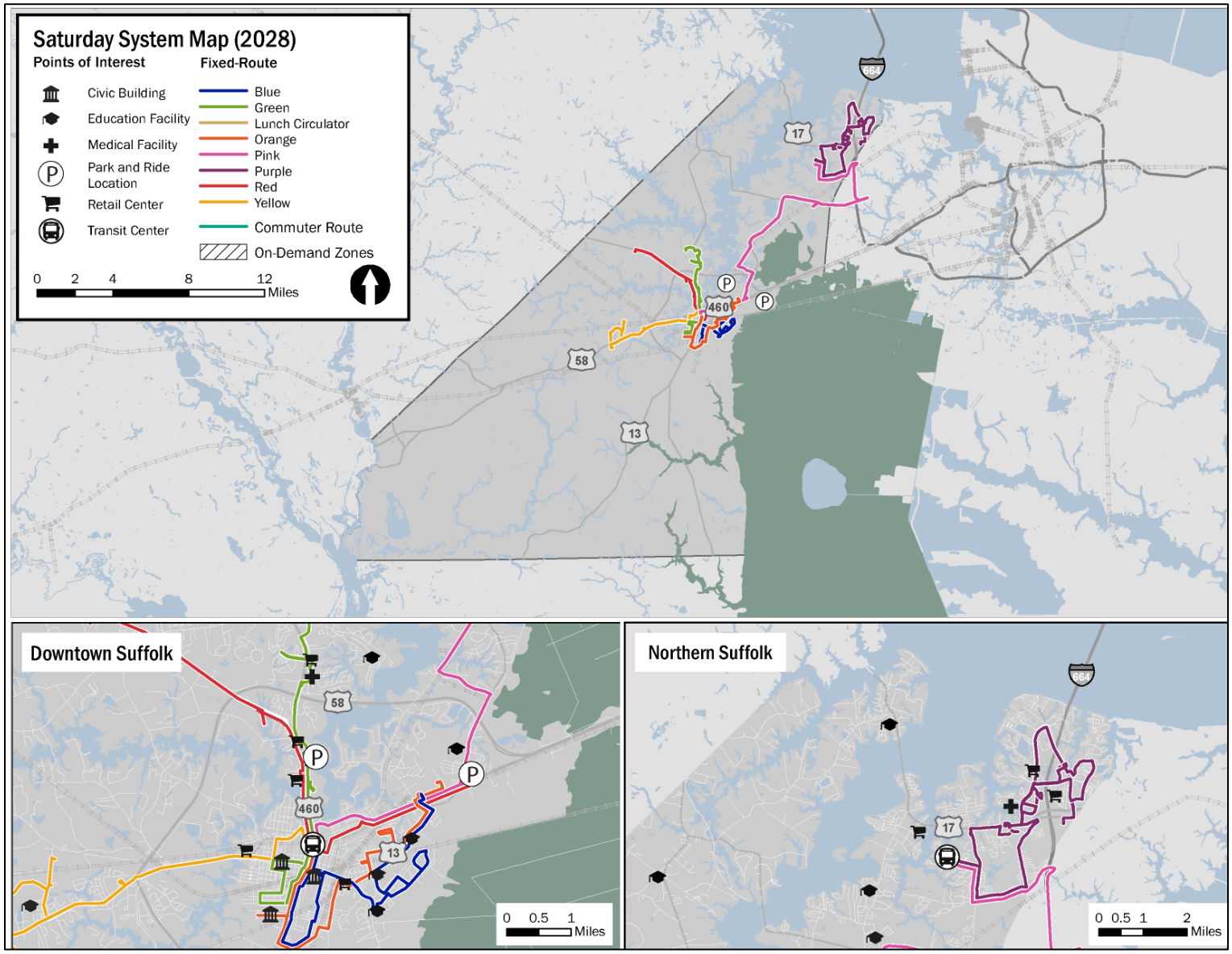


Figure 3-20: Saturday System Map (2028)



3.2.2. Operating and Capital Cost Estimates

Operating Cost Estimates

Table 3-12 shows estimated daily operating costs for weekday and Saturday service. Revenue hours are estimated using run times and multiplying by the number of trips. On-demand revenue hours are an estimate based on average trip time to Holland, Chuckatuck, and Whaleyville multiplied by the estimated number of trips. Operating cost estimates are determined by using the current cost per revenue hour of $61.23.

Table 3-12: Estimated Daily Operating Costs (2019 Dollars)

Route	Weekday Revenue	Weekday Operating	Saturday Revenue	Saturday Operating
Blue	12.5	$787.50	9	$567.00
Green	12	$756.00	9	$567.00
Lunch	5	$315.00	0	$0.00
On-Demand	9	$567.00	0	$0.00
Orange	12.5	$787.50	9	$567.00
Pink	11	$693.00	8	$504.00
Purple	12	$756.00	9	$567.00
Red	12	$756.00	9	$567.00
Windsor Commuter	4	$252.00	0	$0.00
Yellow	12	$756.00	9	$567.00
Total	102	$6,426.00	63	$3,906.00

Capital Cost Estimates

Table 3-13 shows estimated vehicle needs and capital costs associated with the service changes. Capital costs are estimated based on the book value of the most recent model of each vehicle type.

Table 3-13: Estimated Capital Costs (2019 Dollars)

Route	New Vehicle Needs	Capital Costs
Orange/Blue	1 bus	$109,000
On-Demand	2 van	$81,000
Purple	1 bus	$109,000
Windsor Commuter	1 van	$81,000
Total	4 vehicles	$300,000

Facility Improvements

Suffolk Transit expects to build a city-owned transit operations facility to replace existing facilities. Additional information about the phasing and costs of this facility is in Chapter 4: Implementation Plan.

3.3. Service Development

This section shows the planned levels of service for each implementation year and discusses policies and issues that may affect the existing or planned Suffolk Transit system.

3.3.1. Planned Levels of Service

Based on the phasing in Section 3.2.1, Table 3-14 through Table 3-17 show the daily revenue hours and miles for each year of implementation.

Table 3-14: Daily Revenue Hours and Miles in 2021

Route	Weekday Revenue	Weekday Revenue	Saturday Revenue	Saturday Revenue
Green	12	184	9	138
Orange	12.5	206	9	149
Pink	11	459	8	334
Purple	12	223	9	167
Red	8	140	0	0
Yellow	12	164	9	123
Total	67.5	1,376	44	910

Table 3-15: Daily Revenue Hours and Miles in 2024

Route	Weekday Revenue Hours	Weekday Revenue Miles	Saturday Revenue Hours	Saturday Revenue Miles
Blue	12.5	204	9	147
Green	12	184	9	138
Orange	12.5	191	9	137
Pink	11	459	8	334
Purple	12	223	9	167
Red	12	211	0	0
Yellow	12	164	9	123
Total	84	1,635	53	1,046

Table 3-16: Daily Revenue Hours and Miles in 2026

Route	Weekday Revenue Hours	Weekday Miles	Saturday Revenue Hours	Saturday Revenue Miles
Blue	12.5	204	9	147
Green	12	184	9	138
Lunch	5	16	0	0
Orange	12.5	191	9	137
Pink	11	459	8	334
Purple	12	284	9	213
Red	12	211	9	158
Yellow	12	164	9	123
Total	89	1,712	62	1,250

Table 3-17: Daily Revenue Hours and Miles in 2028

Route	Weekday Revenue Hours	Weekday Revenue Miles	Saturday Revenue Hours	Saturday Revenue Miles
Blue	12.5	204	9	147
Green	12	184	9	138
Lunch	5	16	0	0
On-Demand[6]	9	286	0	0
Orange	12.5	191	9	137
Pink	11	459	8	334
Purple	12	284	9	213
Red	12	211	9	158
Windsor Commuter	4	51	0	0
Yellow	12	164	9	123
Total	102	2,049	62	1,250

3.3.2. Planned Service Changes and Title VI

During each implementation year, Suffolk Transit will be required to complete a service equity analysis as part of its Title VI program. Suffolk Transit will consult its Major Service Changes policy and Disparate Impact/Disproportionate Burden thresholds to determine if any changes must be mitigated.

The Red route has multiple proposed changes that may affect the service equity analyses. After the Green route alignment, the Pruden Boulevard segment is proposed to be temporarily discontinued on Saturdays in 2021. By introducing the Red route on Saturdays, the Pruden Boulevard segment would be re-introduced in 2026. The Red route would also receive additional service hours on weekday in 2024.

Other proposed changes that may have an effect on the service equity analyses include the introduction of more service hours on the Pink route (2021), the introduction of the Blue route on Weekdays (2024), the elimination of the Harbour View Boulevard segment on Saturdays (2026), the increase in frequency on the Harbour View Boulevard segment on Weekdays (2026), and the introduction of commuter service (2028).

This list is not meant to be exhaustive; Suffolk Transit will complete a full-service equity analysis before each major service change is implemented.

3.3.3. Current or Anticipated Issues Affecting Operations

King's Highway Bridge

Separate from this Transit Strategic Plan effort, the City of Suffolk hopes to restore King's Highway Bridge. The bridge previously connected Chuckatuck and Driver over the Nansemond River but was closed in 2005 and demolished in 2007. A detour has been in place since the closing of the bridge which limits efficient transit connections. If the City of Suffolk were to receive funding to restore the bridge, Suffolk Transit should perform a study to review possible fixed-route connections between the Godwin Park and Ride, Chuckatuck, Driver, and North Suffolk. If the study deems fixed-route service as feasible, either a realigned existing Suffolk Transit service or a new fixed-route could replace the on-demand zone in Chuckatuck to create more efficient connections throughout the area.

Besides the King's Highway Bridge project, there are no policy, planning, funding, or operating issues that may affect the operations of the existing or planned transit system.

3.3.4. Current Project Schedules

Suffolk Transit has capital funding for an operations facility, but there is currently no anticipated project start date set for the construction of the facility, nor for the move-in and use of this facility. This facility will be mostly for administrative use and bus storage and may include limited maintenance facilities for minor repairs.

3.3.5. Transportation Network Company (TNC) Policy

Currently, the City of Suffolk and Suffolk Transit do not have a Transportation Network Company (TNC) policy to regulate the use of rideshare companies like Uber, Lyft, or Via. Before implementing the on-demand service in 2028, it is recommended that the City of Suffolk create a guiding policy for TNC's in the area, especially if a TNC is contracted to.

[6] On-Demand revenue hours and miles are estimates based on average trip time and mileage to Holland, Chuckatuck, and Whaleyville.

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4. Implementation Plan

This chapter quantifies the capital improvements necessary for implementing the service improvements identified in Chapter 3. All elements of this chapter form the basis for a capital improvement program (CIP) to guide Suffolk Transit throughout a ten-year planning horizon. Primary capital components include the fleet (replacements, ongoing maintenance, and expansion) and facilities (stations, and operation/maintenance facilities). Essential maintenance, rehabilitation, and state of good repair projects are emphasized to inform Suffolk Transit's ongoing transit asset management program. Funding for project costs will be identified from federal, state, and local sources.

4.1 Asset Management

4.1.1 Rolling Stock Utilization

This section presents the vehicle replacement and expansion needs to provide envisioned services throughout this TSP period. Included in this section are the implications of realignment of service routes, introduction of on-demand service, opening of new fixed-route services, vehicle life-cycle maintenance to the overall utilization of the fleet during the implementation of new services outlined in Chapter 3.

Fleet Inventory

Suffolk Transit has a total fleet of 13 vehicles. There are 11 light duty buses that provide fixed-route service, and there are two minivans that provide paratransit service. There are no support vehicles in the fleet. Among the 11 light duty buses in the fleet, two buses are currently inactive. One bus is in the process to be auctioned, and the other one was placed in the emergency contingency fleet.[7]

As of July 2019, the default Useful Life Benchmark (ULB) service years for the light duty buses and minivans are specified as four and eight years, respectively, by the Federal Transit Administration (FTA).[8] DRPT's requirement on the ULB for vehicle types are concurrent with the FTA's requirements.

All vehicle information for Suffolk Transit's fixed-route and paratransit vehicles is provided in Table 4-1. Vehicle replacement and retirement analysis in the subsequent sections will begin starting with FY 2020.

Table 4-1: Suffolk Transit Fleet Inventory, FY 2019

Year	Make/Model	Length (Feet)	Capacity	FTA ULB (Years)	Number of Vehicles	Inventory Number	Service Type
2012	CMD Chevrolet Express	< 30	19	4	1	7268[9]	Fixed-route
2013	FRD Ford Challenger	< 30	19	4	4	7278, 7279, 7280[10], 7281	Fixed-route
2015	FRD Ford Challenger	< 30	19	4	2	7282, 7283	Fixed-route
2016	FRD Ford Challenger	< 30	19	4	1	7284	Fixed-route
2017	FRD Ford Challenger	< 30	19	4	1	7285	Fixed-route
2019	STR-ALLSTAR	< 30	19	4	2	7288, 7289	Fixed-route
2018	BRA-Minivan	Minivan	8	8	2	7286, 7287	Paratransit
Total Fleet (In service)					13		

Vehicle Replacement

From FY 2020 to FY 2029, Suffolk Transit's baseline fleet requirements would entail retiring a total of 31 vehicles and replacing 29 vehicles. As mentioned in the previous section, two vehicles of the current fleet were already inactive. The spare ratio will decrease from 57.1 percent in FY 2019 to 28.6 percent in FY 2020, this reduction won't affect normal transit service. Table 4-2 provides a detailed replacement schedule for the existing fleet.

Vehicle Expansion

For Suffolk Transit to operate services based on the recommended improvements identified in Section 3.1: Planned Service Improvements, the current fleet would need to expand. To realize the realignment of the Orange and Purple lines, introduction of on-demand service and

[7] Vehicles that will not be activated into service unless there are absolutely no spare vehicles to run the service.

[8] https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA%20TAM%20ULB%20Cheat%20Sheet%202016-10-26.pdf

[9] Vehicle is currently inactive and to be auctioned.

[10] Vehicle is currently inactive and placed in the emergency contingency fleet.

commuter service, Suffolk Transit needs to add two additional light duty buses, three vans, and one SUV as support vehicle to its fleet. In order to space procurements across the years, some vehicles will exceed their ULB by one or two year.

The timing and implementation of service recommendations that increase Vehicle of Maximum Service (VOMS) are as follows:

- FY 2021: Support Vehicle – Addition of a support vehicle (one additional vehicle - SUV)
- FY 2024: Orange Route – Realignment into two routes (one additional vehicle - bus)
- FY 2026: Purple Route – Realignment and adding Lunch Circulator (one additional vehicle - bus)
- FY 2028: Introduction of On-demand and Commuter Service (three additional vehicles - vans[11])

From FY 2020 to FY 2029, Suffolk Transit's fleet expansion would require six additional vehicles over baseline. Because of the fleet expansion and increase in VOMS, the spare ratio drops steadily from 28.6 percent in FY 2020 to 22.2 percent in FY 2029 for light duty buses, slightly above the 20 percent recommendation by the FTA. The expansion and replacement vehicle schedule and analysis are presented in Table 4-2. The costs of the expansion vehicle acquisitions and baseline replacement program for the existing fleet is presented in Table 4-3.

Table 4-2: Suffolk Transit Vehicle Replacement and Expansion Schedule, FY 2020 – FY 2029

	Fiscal Year									
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Carryover	13	11	12	12	12	13	13	14	15	16
Retire	6	2	1	2	4	3	3	2	5	3
Replacement	4	2	1	2	4	3	3	2	5	3
Expansion[12]	-	1	-	-	1	-	1	-	3	-
Total Fixed-route Fleet	9	9	9	9	10	10	11	11	14	14
Total Paratransit Fleet	2	2	2	2	2	2	2	2	2	2
Total Support Fleet		1	1	1	1	1	1	1	1	1
Vehicles Operated in Maximum	7	7	7	7	8	8	9	9	11	11
Spare Ratio - Fixed Route										
Light Duty Buses	28.6%	28.6%	28.6%	28.6%	25.0%	25.0%	22.2%	22.2%	22.2%	22.2%
Van	-	-	-	-	-	-	-	-	50.0%	50.0%

[11] Includes a spare van

[12] "Expansion" vehicles in this table refers to the number of vehicles added to the fleet for the first time. The subsequent replacements of these vehicles are incorporated into the "Replacement" line.

Table 4-3: Suffolk Transit Fleet Vehicle Replacement and Expansion Annual Cost, FY 2020 – FY 2029

Vehicle Type	Fiscal Year									
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Ford Challenger / Starcraft-ALLSTAR	4	2	1	2	5	2	2	2	5	2
CurbSmart Van	-	-	-	-	-	-	-	-	3	-
Braun-Minivan	-	-	-	-	-	-	2	-	-	-
Support Vehicle SUV	-	1	-	-	-	1	-	-	-	1
Total Vehicles	4	3	1	2	5	3	4	2	8	3
Total Cost	$453	$273	$123	$255	$663	$319	$402	$298	$1,121	$373

Replacement and Expansion Comparisons

This section contrasts replacement and expansion acquisition requirements. Figure 4-1 represents the total annual vehicles acquired for the ten-year period from FY 2020 to FY 2029 for both replacement and expansion plans.

Figure 4-2 represents the net effect on the total Suffolk Transit fleet size over the same ten-year period. Figure 4-3 represents the expenditures over the entire ten-year duration for both the replacement and expansion programs.

Figure 4-1: Annual Vehicle Procurement, FY 2020 -FY 2029

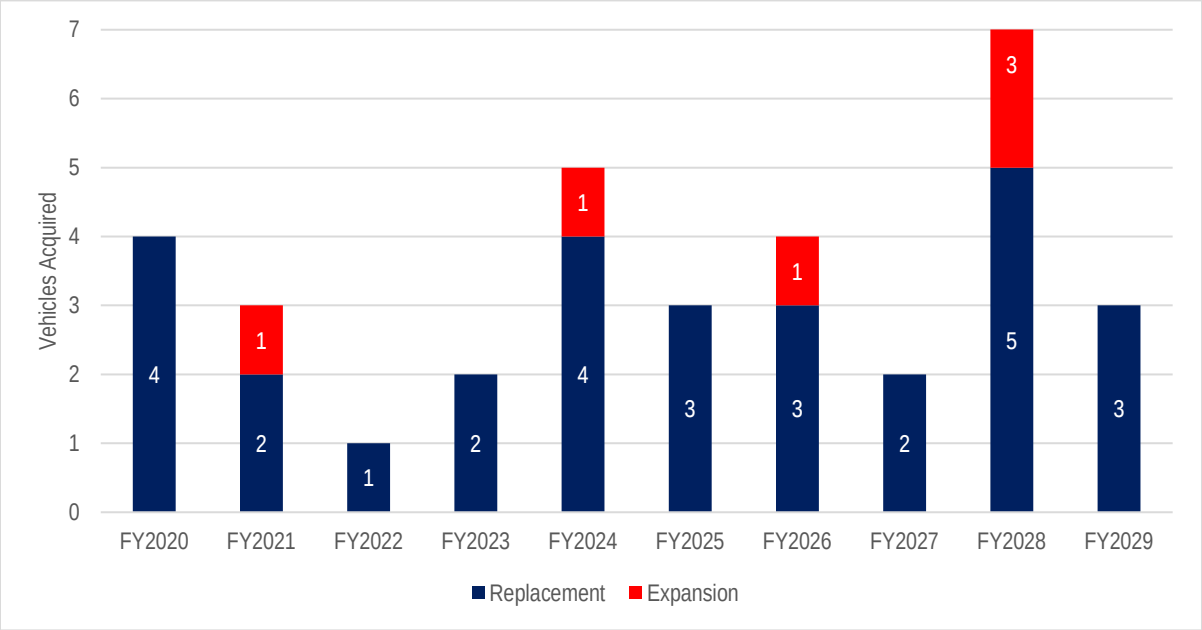


Figure 4-2: Total Fleet Size, FY 2020 – FY 2029

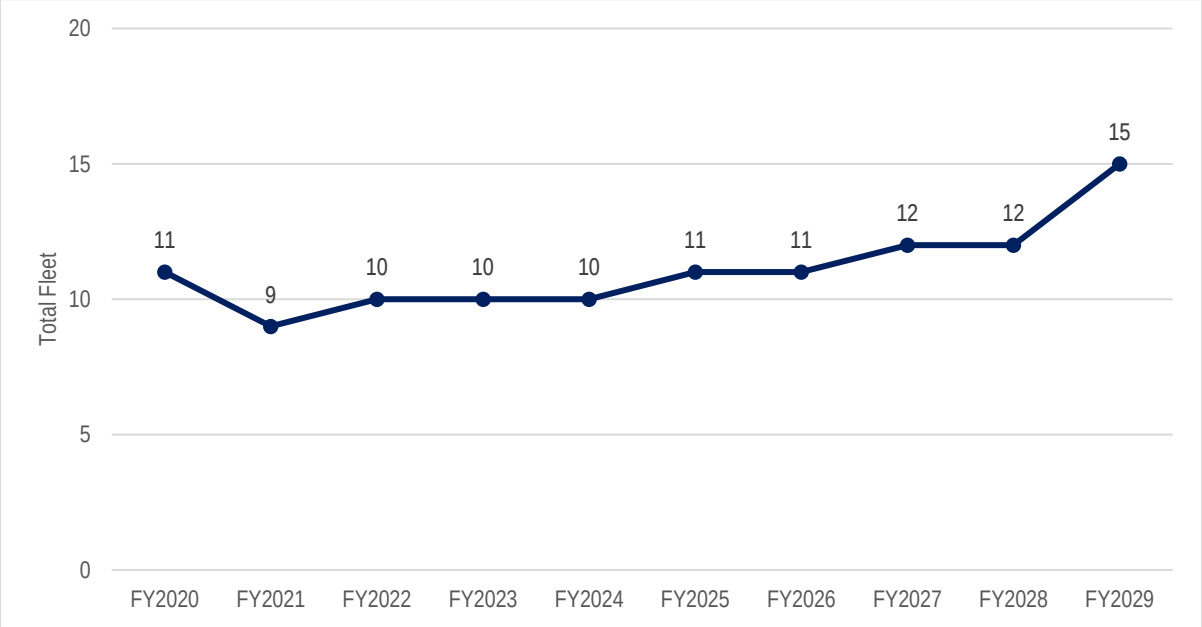
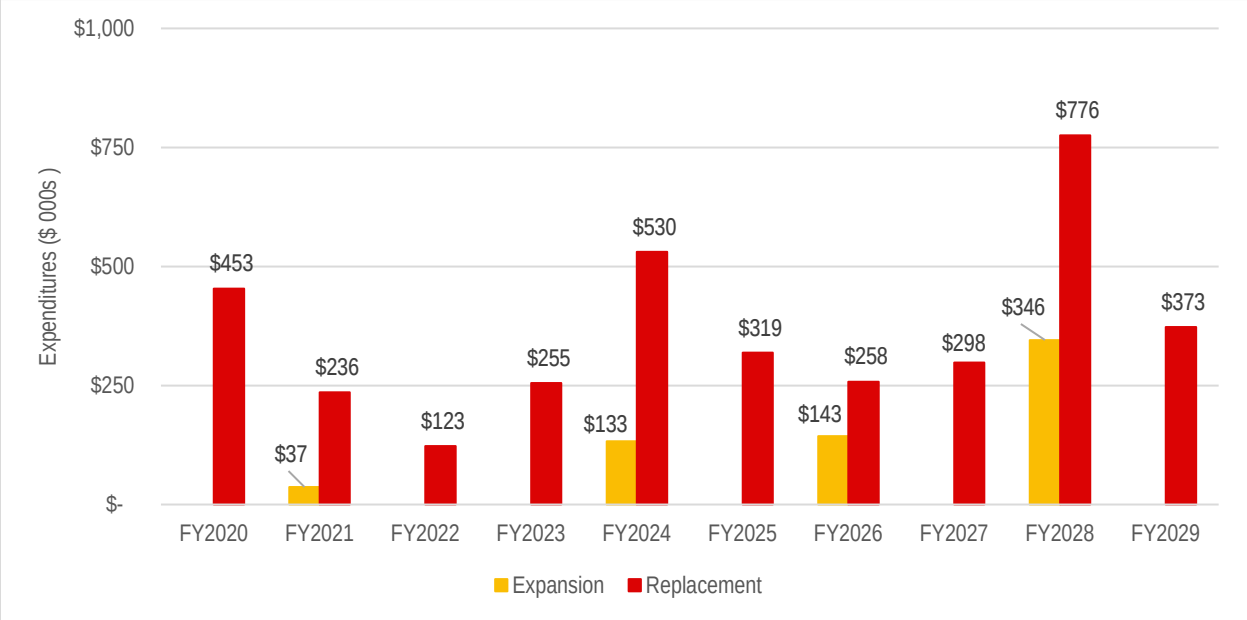


Figure 4-3: Annual Vehicle Expansion/Replacement Expenditure, FY 2020 – FY 2029



4.2 Capital Implementation Plan

4.2.1 Major Operations Facilities

Suffolk Transit is expecting to build a transit operations facility through a phased approach. The new facility includes office space, a heated garage, and a large storage space of approximately 2,000 square feet. The operations facility is outside fenced and gated and allows for safe parking and storage of 20 large vehicles. Suffolk Transit will not be able to conduct maintenance operations in this facility. Suffolk Transit expects the newly proposed fleet facility to consider providing the transit services with the possibility of conducting maintenance operations. Suffolk Transit is at the beginning stage of the design of the building, and a selected location is not yet decided. Funding for a site feasibility study was granted in FY 2019, the funding in FY 2020 will cover the design and engineering of the new facility, and construction is slated to begin in FY 2025 and is expected to be completed by FY 2027 (Table 4-4).

4.2.2 Passenger Amenities

In terms of passenger amenities, Suffolk Transit foresees improvements on sidewalks, lighting, signage, as well as the possibility of adding cameras at some bus stops. The Five-Year Capital Budget for FY 2020 – FY 2024 and FY 2021 – FY 2025 includes these improvements (Table 4-5).

Table 4-4: Transit Operations Facility Annual Cost, FY 2020 – FY 2029

Transit Operations Facility	Fiscal Year									
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Total Cost (in 000s)	-	-	$160.5	-	-	$60.0	$1,830.0	-	-	-

Table 4-5: Passenger Amenities Annual Cost, FY 2020 – FY 2029

Passenger Amenities & Safety Improvements	Fiscal Year									
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Total Cost (in 000s)	$30.0	$30.0	$30.0	$30.0	$30.0	$30.0	$30.0	$30.0	$30.0	$30.0

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5. Financial Plan

The purpose of the Financial Plan is to provide a planning-level forecast of Suffolk Transit's anticipated costs and revenues over the ten-year TSP time-frame. The Financial Plan is composed of both an operating budget and a capital budget.

The operating budget includes regularly reoccurring costs such as labor, maintenance, insurance, and administration. These costs are generally stable over time and are tied to the amount of service provided. The operating budget for this TSP has been broken down further by the cost of operating *existing* service and the cost associated with implementing the TSP recommendations. The additional costs associated with the TSP recommendations would require additional funds above Suffolk Transit's current projected funding allocation.

Capital costs reflect investments replacement or expansion assets such as vehicles, as well as purchases or major changes to facilities and IT systems. Capital costs can fluctuate considerably year over year.

5.1. Data Assumptions and Sources

To develop this financial plan, a range of assumptions were made. Long-range budgets are a projection based on a snapshot in time and, as such, should be updated regularly to ensure accuracy. Generally, certainty over costs and revenues decreases further into the future.

5.1.1. Operating Budget Assumptions

Direct Revenue

Direct operating revenue includes funds raised from fares, contracted services, sale of assets, advertising, or any other revenue-generated directly by a transit property. The direct revenue figures are based on estimates for FY 2020 reported in DRPT's FY 2020 Six-Year Improvement Plan (SYIP). They are broken into two categories: fare revenue and advertising; currently, Suffolk Transit does not derive any revenues from contracted services or the sale of its assets.

These figures have been escalated over time based on the DRPT three percent annual growth assumption. The only exceptions to this escalation are fare revenues, which are assumed to grow by 1.2 percent annually based on the City's population growth.

Fare revenue increases resulting from new service are based on the estimated change in ridership developed in Section 3.1.4: Ridership Estimations, multiplied by Suffolk Transit's average fare revenue per trip of $0.60.

Operating Grant Revenue

The federal government and the Commonwealth of Virginia provide operating assistance to Suffolk Transit in the form of grants. The base year allocation for federal and state funding is derived from DRPT's FY 2020 Six-Year Improvement Plan (SYIP). Local funding from the City of Suffolk covers the remaining balance after all other revenues (fares, advertising, federal grants, and state grants) are taken into account.

Suffolk Transit's federal funding for operations comes from Section 5307 Urbanized Area formula funds. This funding is expected to grow year-over-year by 2.1 percent, the nationwide average growth of the Federal formula fund program.

State funding is escalated from the FY 2020 base year according to DRPT's projected statewide transit operating assistance budget from FY 2021 to FY 2024, as reported in the FY 2020 SYIP. After FY 2024, state operating assistance is assumed to grow annually by three percent.

Operating Costs

Operating costs are assumed to grow by three percent a year over the FY 2019 cost per revenue hour of $61.23. The operating budget assumes that the TSP short-term recommendations are implemented in FY 2021; two phases of mid-term recommendations are introduced in FY 2024 and FY 2026; and long-term recommendations are introduced in FY 2028.

5.1.2. Capital Budget Assumptions

Capital Revenue

Suffolk Transit relies on Federal Flexible STP/RTSP/CMAQ funding for the federal portion of its capital funding. The capital budget assumes federal funds will continue to support 80 percent of capital needs, with 16 percent coming from state matching funds, and four percent from local matching funds.

Capital Costs

Suffolk Transit capital costs are derived from the Capital Implementation Plan outlined in Section 4.2. Costs in the Implementation Plan have been escalated from FY 2019 values by three percent a year to account for inflation. Vehicle costs have been escalated by four percent annually.

5.2. Operating Budget

Table 5-1 presents the ten-year operating budget forecast for Suffolk Transit. The budget includes the cost of operating existing service, as well as the net costs associated with implementing the TSP recommendations.

Suffolk Transit's operating budget is funded almost entirely by grants, with local funding totaling 43 percent of operating revenues and federal funding totaling 33 percent.

The short-term TSP recommendations require a relatively modest overall operating cost increase of three percent for full implementation (in current year dollars).

Mid-term recommendations, which are expected to start in FY 2024, will yield a more substantial increase in net operating costs of just over $306,000 in FY 2024 and an additional $105,000 in FY 2026. No funding has been identified to cover these costs; new sources of revenue, or increased revenues from the current sources, will be required to implement the mid-term recommendations.

Long-term recommendations, expected to start in FY 2028, also yield an increase in net operating costs of just over $168,000. No funding has been identified to cover these costs; new sources of revenue, or increased revenues from the current sources, will be required to implement the long-term recommendations.

5.1. Capital Budget

Table 5-2 presents the ten-year capital budget forecast for Suffolk Transit. Suffolk Transit's capital needs are expected to total $4.28 million over the ten-year TSP planning timeframe. Needs fluctuate considerably year-over-year based on vehicle, facility, and equipment needs.

Table 5-1: Operating Budget Forecast (in thousands)

	Fiscal Year									
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Operating Revenue										
Fare Revenue	$81.4	$82.3	$83.3	$84.3	$85.3	$86.3	$87.4	$88.4	$89.5	$90.6
Advertising Revenue	$8.5	$8.8	$9.0	$9.3	$9.6	$9.9	$10.1	$10.5	$10.8	$11.1
Operating Revenue Subtotal	$89.9	$91.1	$92.3	$93.6	$94.9	$96.2	$97.5	$98.9	$100.3	$101.7
Federal Grants	$504.8	$515.4	$526.2	$537.2	$548.5	$560.0	$571.8	$583.8	$596.1	$608.6
State Grants	$239.1	$236.7	$242.6	$246.2	$249.9	$253.7	$261.3	$269.1	$277.2	$285.5
Local Grants	$644.3	$679.2	$706.9	$738.0	$770.2	$803.5	$834.2	$865.9	$898.8	$932.7
Grant Revenue Subtotal	$1,388.1	$1,431.2	$1,475.7	$1,521.4	$1,568.6	$1,617.2	$1,667.3	$1,718.9	$1,772.0	$1,826.8
Total Revenue	$1,478.0	$1,522.3	$1,568.0	$1,615.0	$1,663.5	$1,713.4	$1,764.8	$1,817.7	$1,872.3	$1,928.4
Operating Cost										
Existing Service	$1,478.0	$1,522.3	$1,568.0	$1,615.0	$1,663.5	$1,713.4	$1,764.8	$1,817.7	$1,872.3	$1,928.4
Net Cost of TDP Recommendations	$0.0	$1.9	$2.4	$2.8	$309.0	$319.3	$424.5	$438.3	$606.7	$626.1
Total Operating Costs	$1,478.0	$1,524.2	$1,570.4	$1,617.9	$1,972.5	$2,032.7	$2,189.3	$2,256.1	$2,479.0	$2,554.6
Additional Funding Need to Implement TDP Recommendations	$0.0	$1.9	$2.4	$2.8	$309.0	$319.3	$424.5	$438.3	$606.7	$626.1

Table 5-2: Capital Budget Forecast (in thousands)

	Fiscal Year									
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Capital Revenue										
Federal	$386.4	$242.4	$122.4	$228.0	$554.4	$339.2	$2,175.0	$262.4	$920.8	$322.4
State	$77.3	$48.5	$40.5	$45.6	$110.9	$55.8	$69.1	$52.5	$184.2	$64.5
Local	$19.3	$12.1	$150.6	$11.4	$27.7	$14.0	$17.3	$13.1	$46.0	$16.1
Total Capital Revenue	$483.0	$303.0	$313.5	$285.0	$693.0	$409.0	$2,270.0	$328.0	$1,151.0	$403.0
Capital Costs										
Vehicle Acquisition	$453.0	$273.0	$123.0	$255.0	$6630.0	$319.0	$402.0	$298.0	$1,121.0	$373.0
Transit Facility	-	-	$160.5	-	-	$60.0	$1,830.0	-	-	-
Passenger Amenities	$30.0	$30.0	$30.0	$30.0	$30.0	$30.0	$30.0	$30.0	$30.0	$30.0
Total Capital Costs	$483.0	$320.0	$313.5	$285.0	$693.0	$409.0	$2,270.0	$390.0	$1,151.0	$403.0

A. Agency Profile and System Overview

A.1 History

The City of Suffolk was a member of Hampton Roads Transit (HRT) up until January 1, 2012. Four HRT routes served the City of Suffolk, oriented to the downtown Suffolk central business district. Following HRT's 2010 service efficiency study which concluded that two HRT routes in Suffolk should be discontinued due to poor performance, the city decided to withdraw from the service district of HRT and contract with a private vendor to operate bus services. Virginia Regional Transit (VRT), a not-for-profit 501(c)(3) organization, was selected and took over the operation of the City of Suffolk's public transportation in January 2012.

Since VRT begin its operations in Suffolk, several improvements have been made such as service route expansion and an increase in service hours. A timeline of such events is shown in Figure A-1. In August 2014, two new service routes, the Blue Route and Gold Route, are added to the existing four routes. This service enabled residents to reach residential, medical, and business locations throughout the northern part of Suffolk, and access HRT transfer points located in Portsmouth.

A.2 Governance

The City Council governs the City's transit services. Two city staff administer and coordinate transit operations with VRT: an Assistant Director of Public Works that allocates 20-40 percent of their time on transit-related tasks, and a full-time Transit Manager.

A.3 Organizational Structure

For Suffolk's bus operations, as Figure A-2 shows, VRT employs a CEO, a director of finance, a director of operations, a Transit Manager, two Operations Supervisors three dispatchers and 18 bus operators. The Green, Orange, Yellow and Purple Routes are divided into six- hour shifts and are covered by two drivers each per day, while the Red Route is covered by one driver a day. The Pink Route is divided into five- hour shirts and is covered by two drivers each day. The drivers receive their schedules for two weeks at a time and each driver rotates the days of the week and routes to which he is assigned. According to VRT, each of the drivers is capable of driving any of the Suffolk bus routes.

A copy of the contract between the City of Suffolk and VRT can be found in Appendix C.

Figure A-1 Timeline of Major Transit-related Events

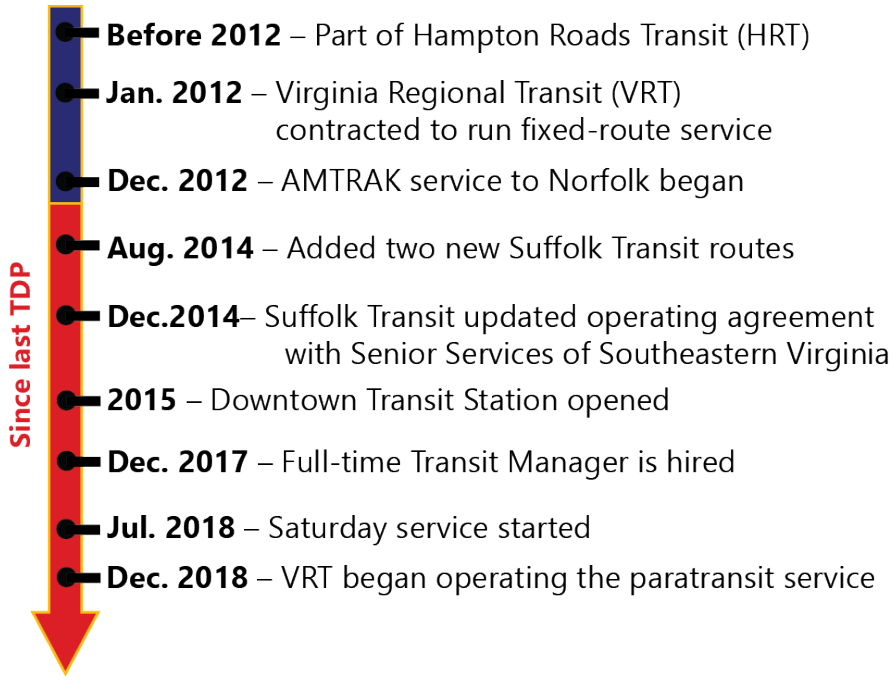
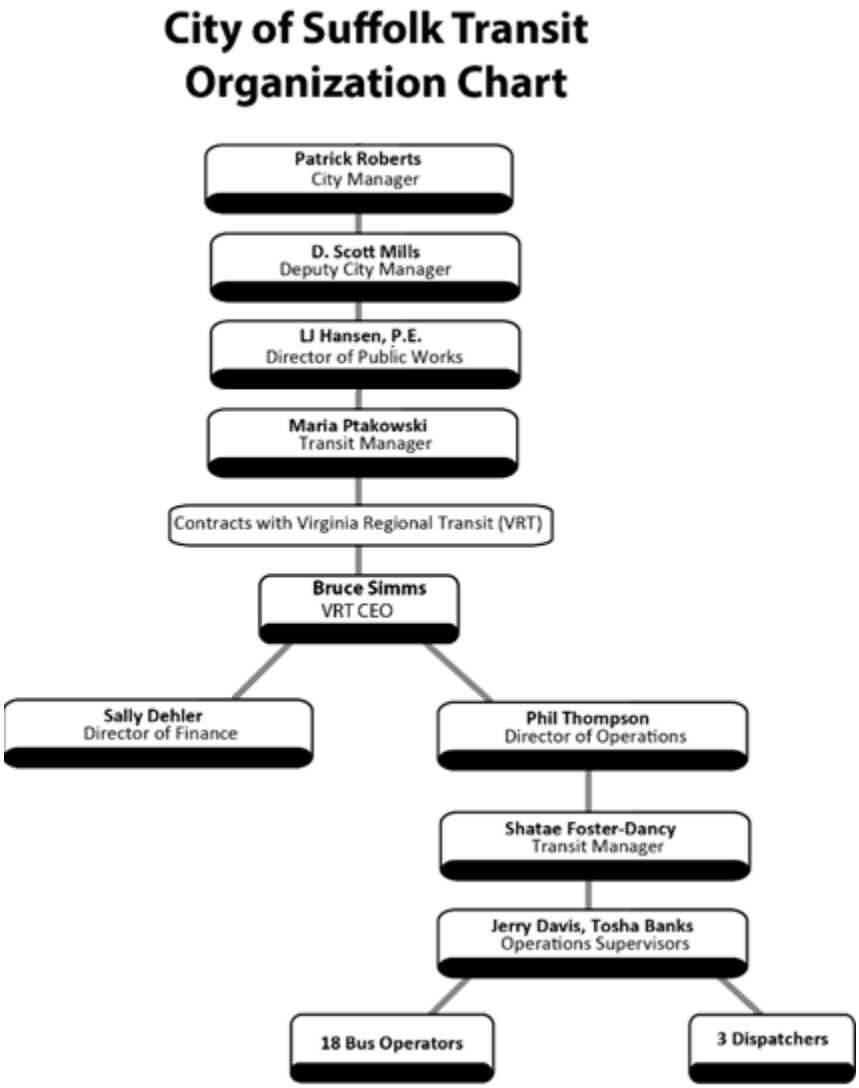


Figure A-2: City of Suffolk Transit Organization Chart



A.4 Services Provided and Areas Served

A.4.1 Fixed Route Service

The City of Suffolk currently operates six fixed-routes Monday through Friday, these are the Green, Orange, Red, Yellow, Pink, and Purple routes. These routes operate on one-hour headways and originate at the Downtown Transfer Station or North Suffolk Library to allow timed transfers between routes. Five routes, Green, Orange, Pink, Purple and Blue operate on Saturday with one-hour headways. Fixed-route transit services are summarized in Table A-1.

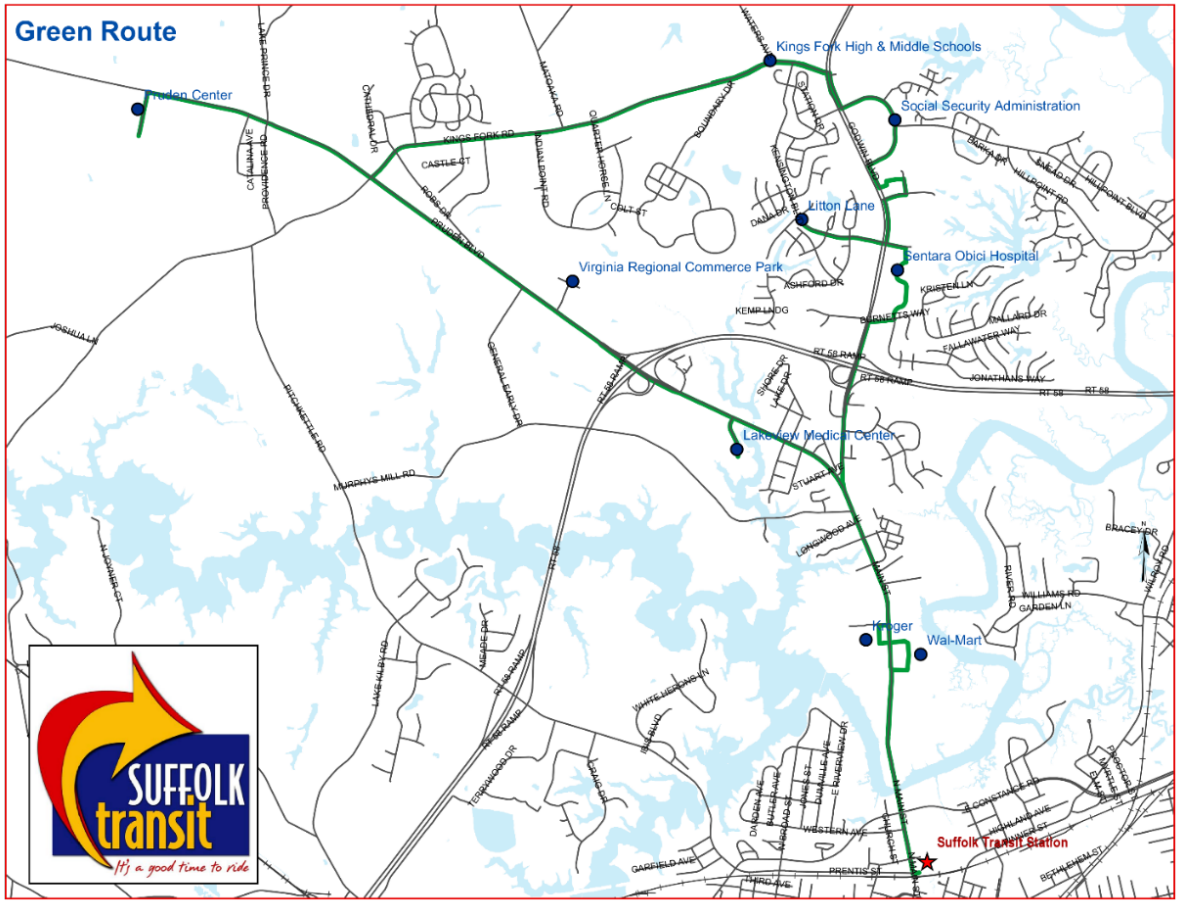
Table A-1: Suffolk Transit Service Summary

Route	Service Days	Span		Headway (minutes)	Peak Vehicles
		Weekdays	Saturday		
Green	Weekdays/Saturday	6:30 a.m.–6:30 p.m.	7:30 a.m.–4:30 p.m.	60	1
Orange	Weekdays/Saturday	6:00 a.m.–6:30 p.m.	7:30 a.m.–4:30 p.m.	60	1
Red	Weekdays	8:30 a.m.–2:30 p.m.	---	60	1
Yellow	Weekdays	6:30 a.m.–6:30 p.m.	---	60	1
Pink	Weekdays/Saturday	6:30 a.m.–9:30 a.m. 10:30 a.m.–5:30 p.m.	7:30 a.m.–3:30 p.m.	60	1
Purple	Weekdays/Saturday	6:30 a.m.–6:30 p.m.	7:30 a.m.–4:30 p.m.	60	1
Blue	Saturday	---	7:30 a.m.–4:30 p.m.	60	---

Green Route

The Green Route operates Monday through Friday from 6:30 a.m. to 6:30 p.m., and on Saturdays from 7:30 a.m. to 4:30 p.m. Starting at the Downtown Transfer Station, this route travels on Main Street to Obici Hospital. The route continues down Hillpoint Boulevard to Kings Fork Road where it travels up Route 460 to the Pruden Center and then back down Main Street (Figure A-3). The Green route serves major destinations such as Walmart, Food Lion, the Sentara Obici Hospital, and office parks.

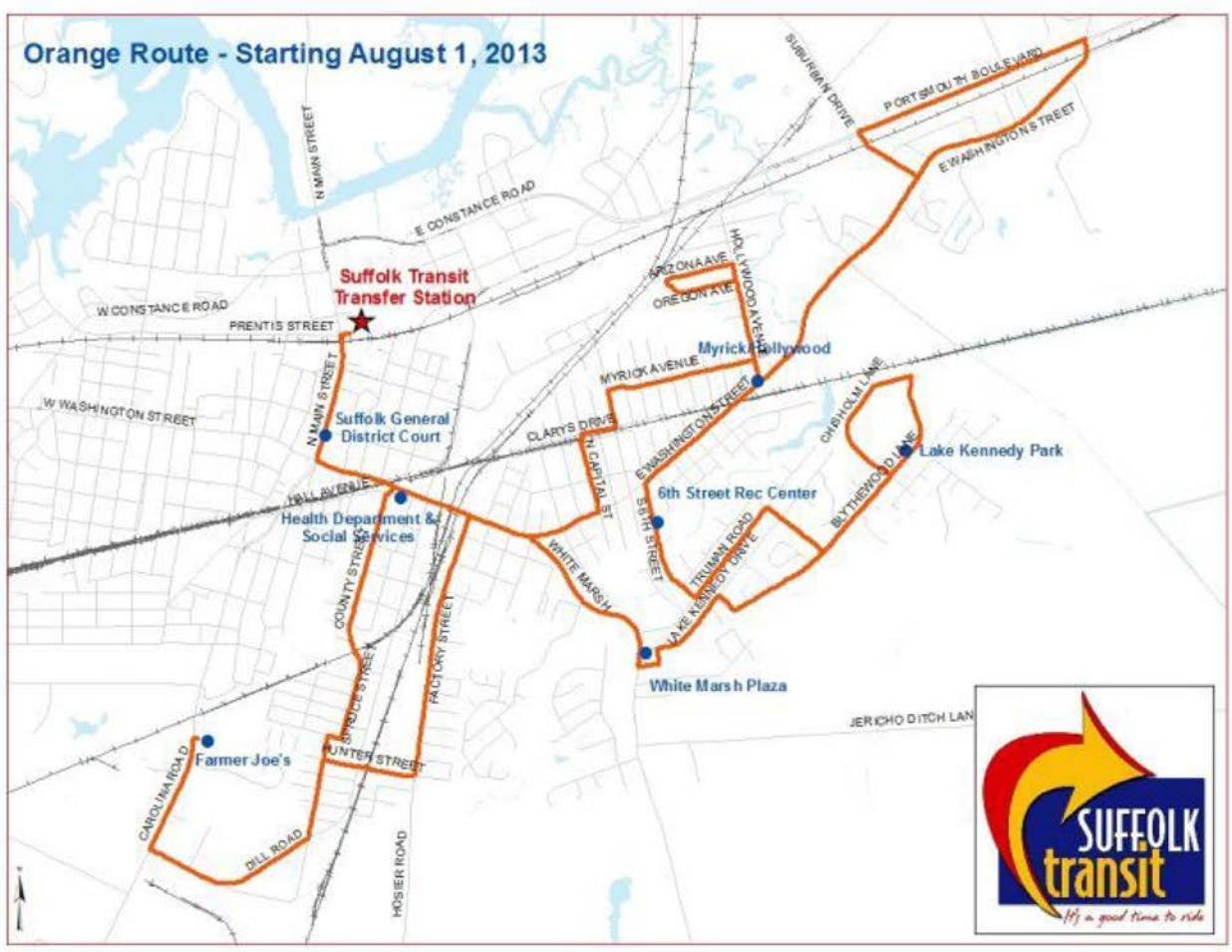
Figure A-3: Green Route Map



Orange Route

The Orange Route operates Monday through Friday from 6:00 a.m. to 6:30 p.m., and on Saturdays from 7:30 a.m. to 4:30 p.m. This route starts at the Downtown Transfer Station and travels through Downtown to East Washington Street (Figure A-4). From East Washington Street the route serves Hall Avenue, White Marsh Road, Lake Kennedy Park, and Hollywood Avenue. This route also serves many residential neighborhoods, as well as the Health Department, and other businesses.

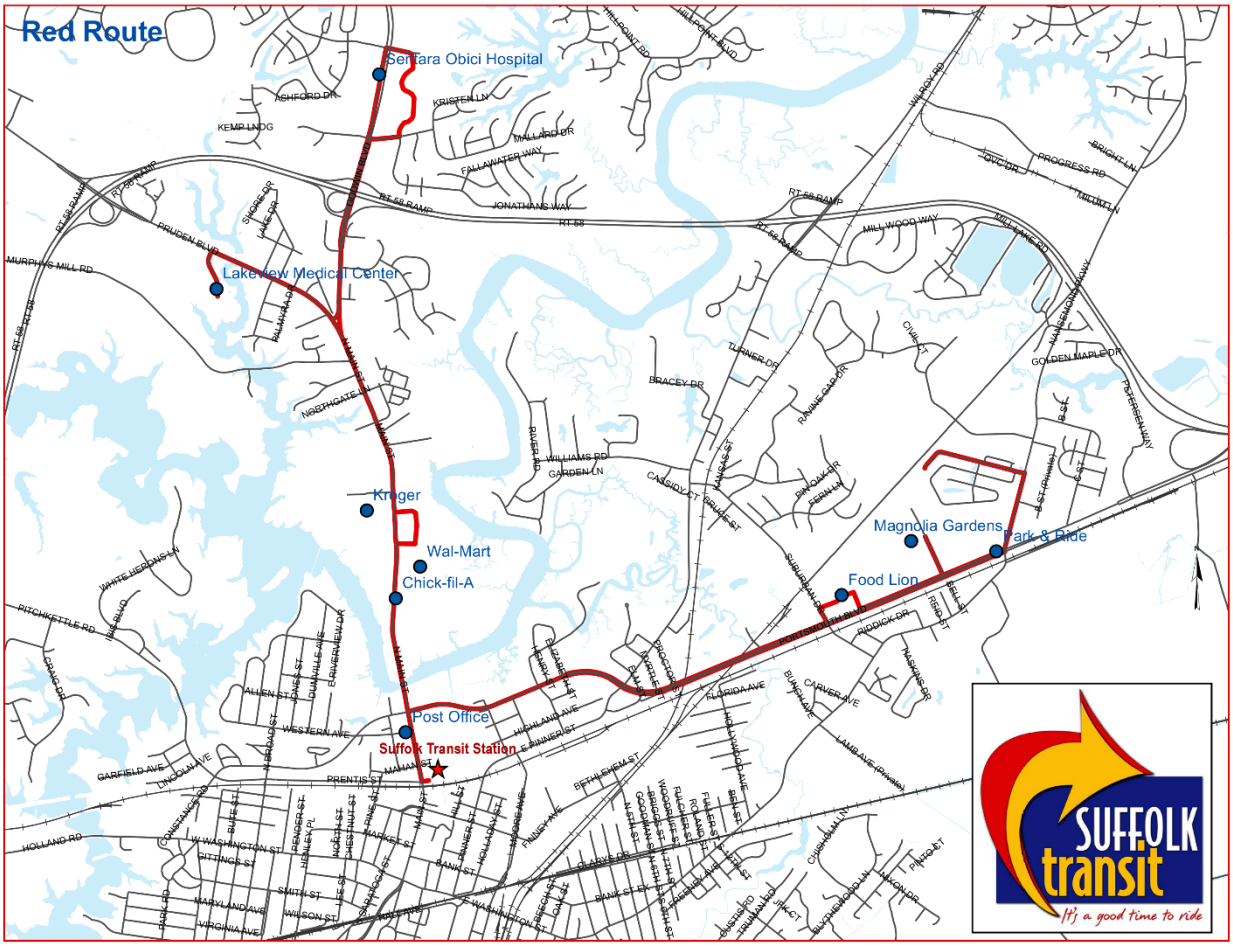
Figure A-4: Orange Route Map



Red Route

The Red Route operates Monday through Friday, from 8:30 a.m. to 2:30 p.m. This route starts at the Downtown Transfer Station and travels through Downtown to North Board Street. It travels on Constance Road to Food Lion and Magnolia Gardens on Prospect Street (Figure A-5). It also serves Walmart, Obici Hospital and Goodwill.

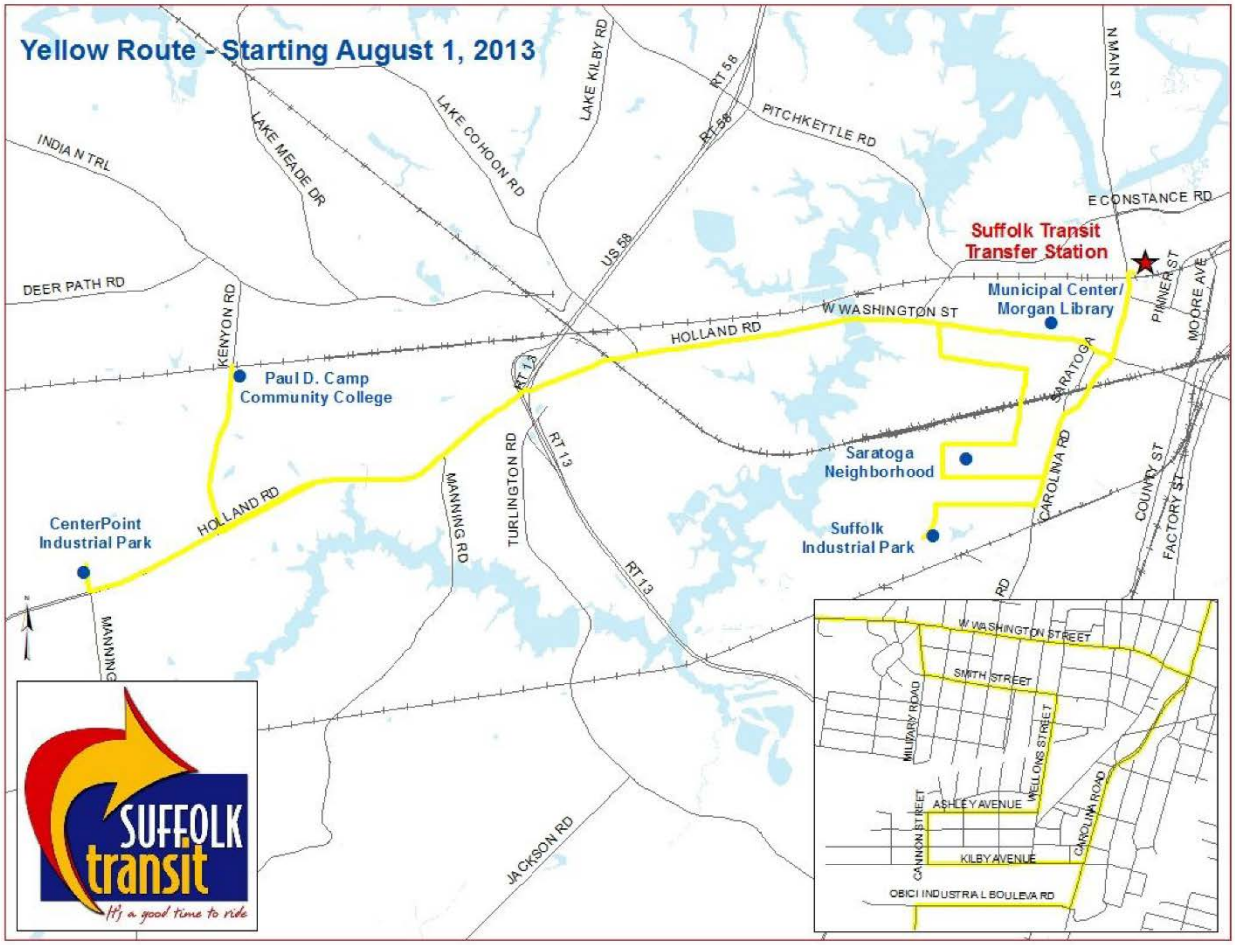
Figure A-5: Red Route Map



Yellow Route

The Yellow Route operates Monday through Friday, from 6:30 a.m. to 6:30 p.m. This route starts at the Downtown Transfer Station and travels through Downtown to Holland Road. It proceeds down Route 58 to Food Lion, Paul D. Camp and the Ace Hardware distribution center. On its way back into town it travels down Military Road to Wellons Street where it serves the Saratoga Neighborhood and then down Carolina Road to the Obici Industrial Park (Figure A-6).

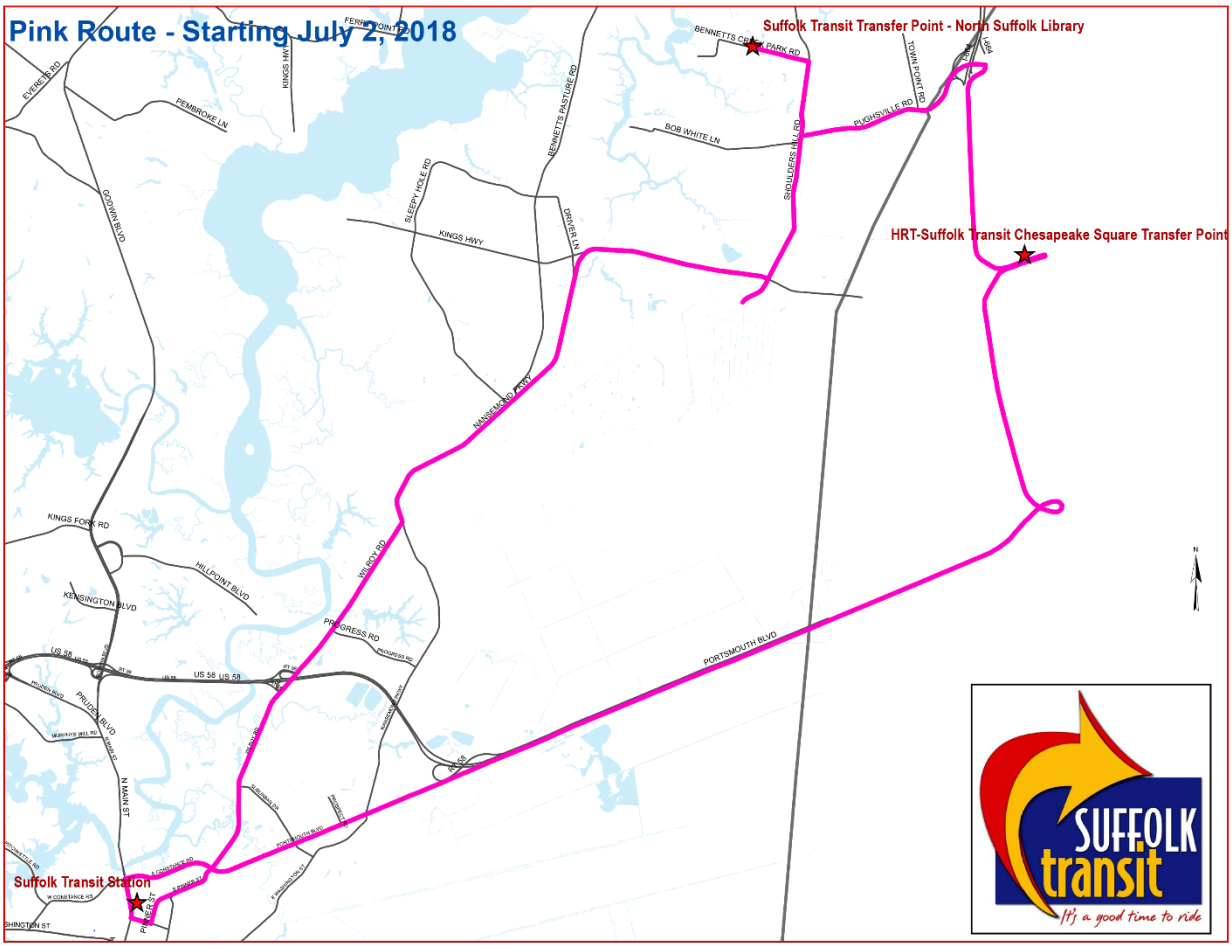
Figure A-6: Yellow Route Map



Pink Route

The Pink Route operates Monday through Friday from 6:30 a.m. to 9:30 a.m. and from 10:30 a.m. to 5:30 p.m. (there is no trip at 9:30 a.m.), and on Saturdays from 7:30 a.m. to 3:30 p.m. This route serves as the connector route for Downtown Suffolk, HRT at Chesapeake Square, and Northern Suffolk. This route begins at the Downtown Transfer station heads to the HRT Bus Stop on Portsmouth Boulevard in Chesapeake and then heads to the North Suffolk Library. It leaves the North Suffolk Library to serve Northgate Commerce Park then heads back Downtown via Nansemond Parkway and Wilroy Road (Figure A-7).

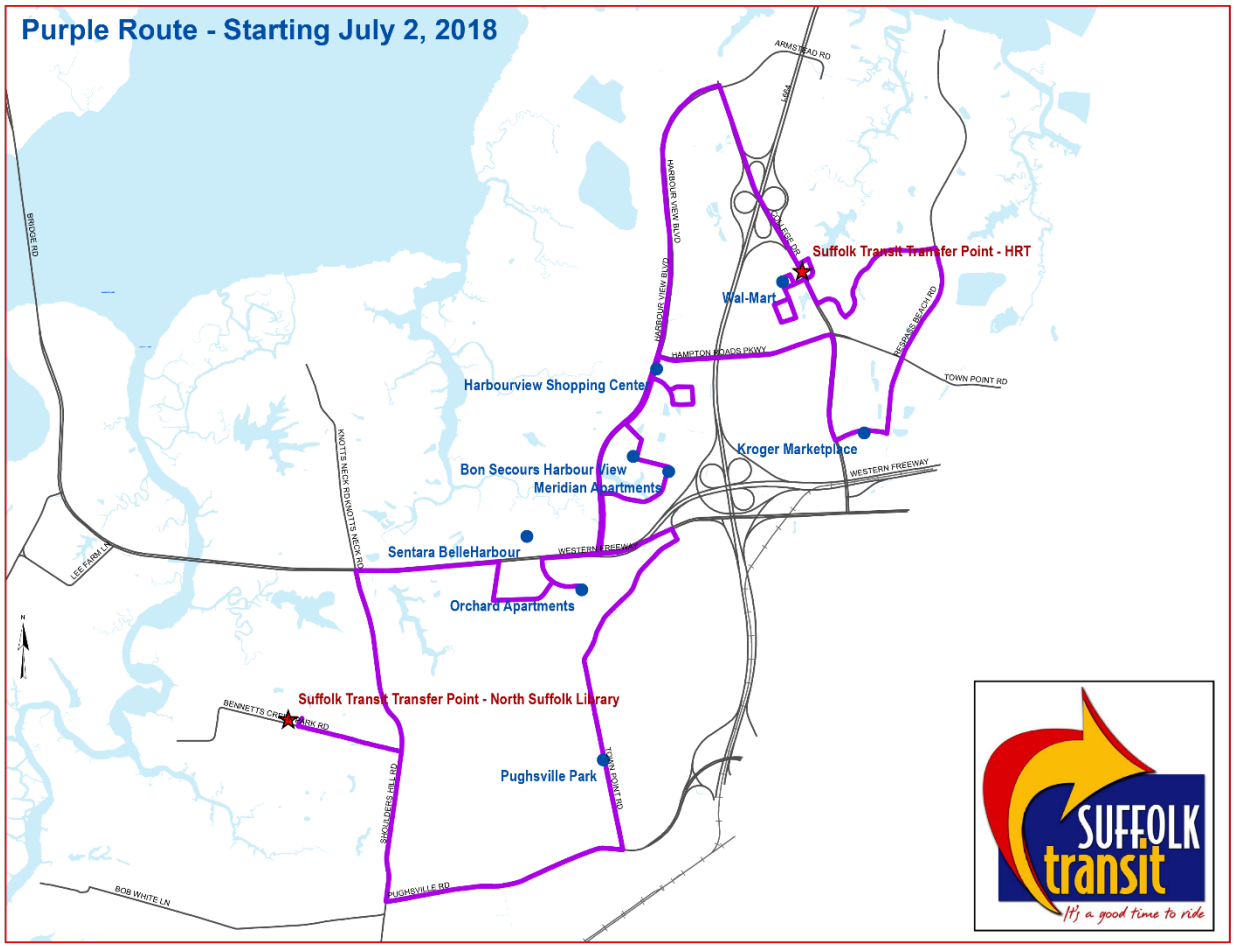
Figure A-7: Pink Route Map



Purple Route

The Purple route operates Monday through Friday from 6:30 a.m. to 6:30 p.m. and on Saturdays from 7:30 a.m. to 4:30 p.m. The Purple route is the North Suffolk bus route. The route starts at the North Suffolk Library and travels down Shoulders Hill Road to Bridge Road. From Bridge Road the bus heads to Belle Orchard and Sentara Belle Harbour. It then heads to Harbour View, down Hampton Roads Parkway to College Drive where you can reach Kroger and Wal-Mart. The route then continues to head down College Drive to serve the rest of Harbour View Blvd. The route then heads to Bridge Road and goes down Town Point Road and Pughsville Road as it makes its way back to the North Suffolk Library (Figure A-8).

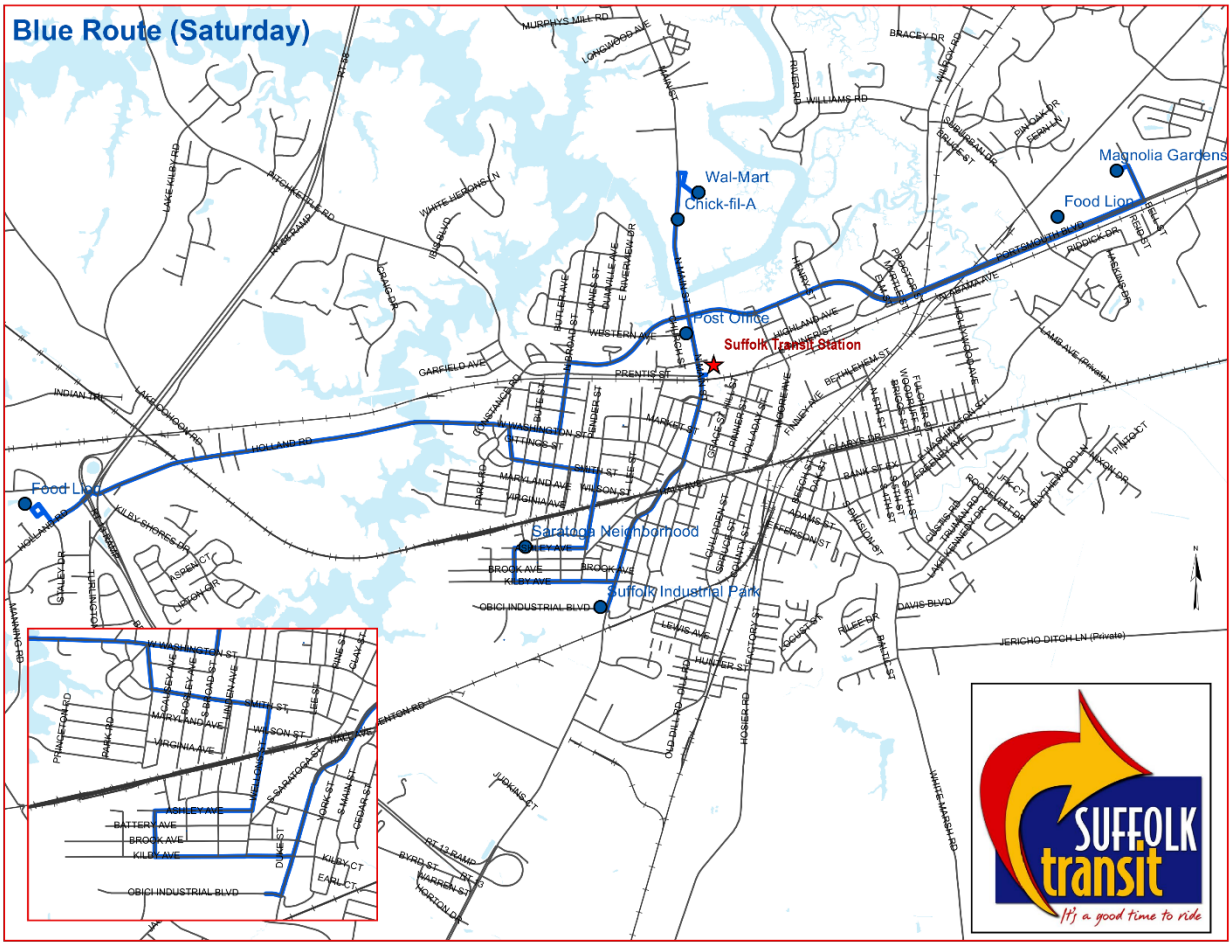
Figure A-8: Purple Route Map



Blue Route

The Blue route is a Saturday-only service route, it operates from 7:30 a.m. to 4:30 p.m. Its trip starts at the Downtown Transfer Station travelling east toward Magnolia Gardens. Then the bus travels in opposite directions along the same route and turns north at the Suffolk Visitor Center toward Main Street Walmart. From there, the bus goes southwest toward Westgate area of the city and then travels in southeast direction arriving at the Obici Industrial Park. Eventually, the Blue Route comes back to the Downtown Transfer Station (Figure A-9).

Figure A-9: Blue Route Map



A.4.2 ADA Paratransit

Virginia Regional Transit provides paratransit for ADA certified individuals. Eligibility for ADA paratransit services is through an application process that requires completion by a medical professional who is knowledgeable of the applicant's disability. The paratransit service provides door-to-door service within ¾ of a mile from the fixed route service (Figure A-10 and Figure A-12). Passengers are required to schedule their trip at least the day before the trip is to take place.

Figure A-10: Weekday System Map with ADA Paratransit Service Area

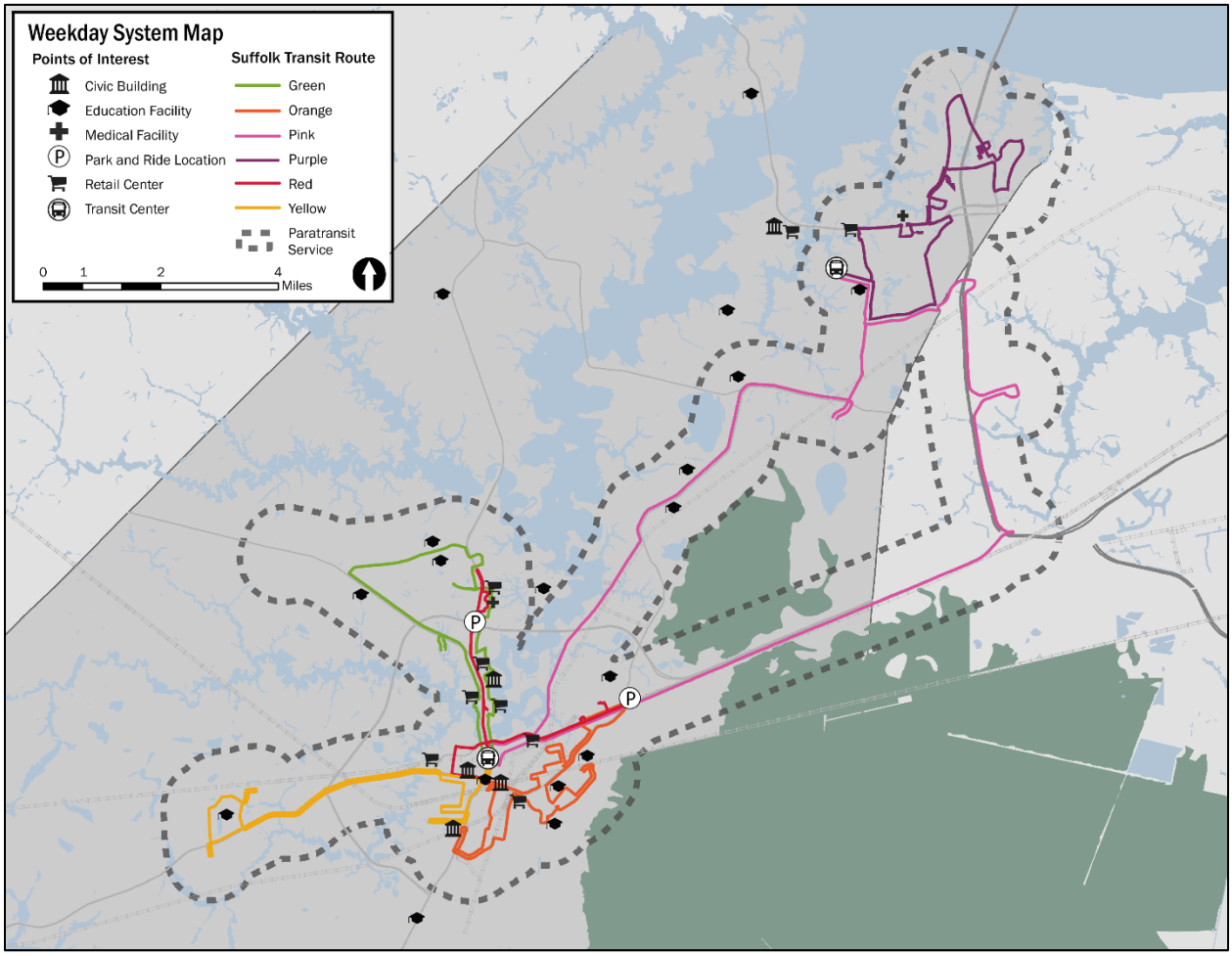
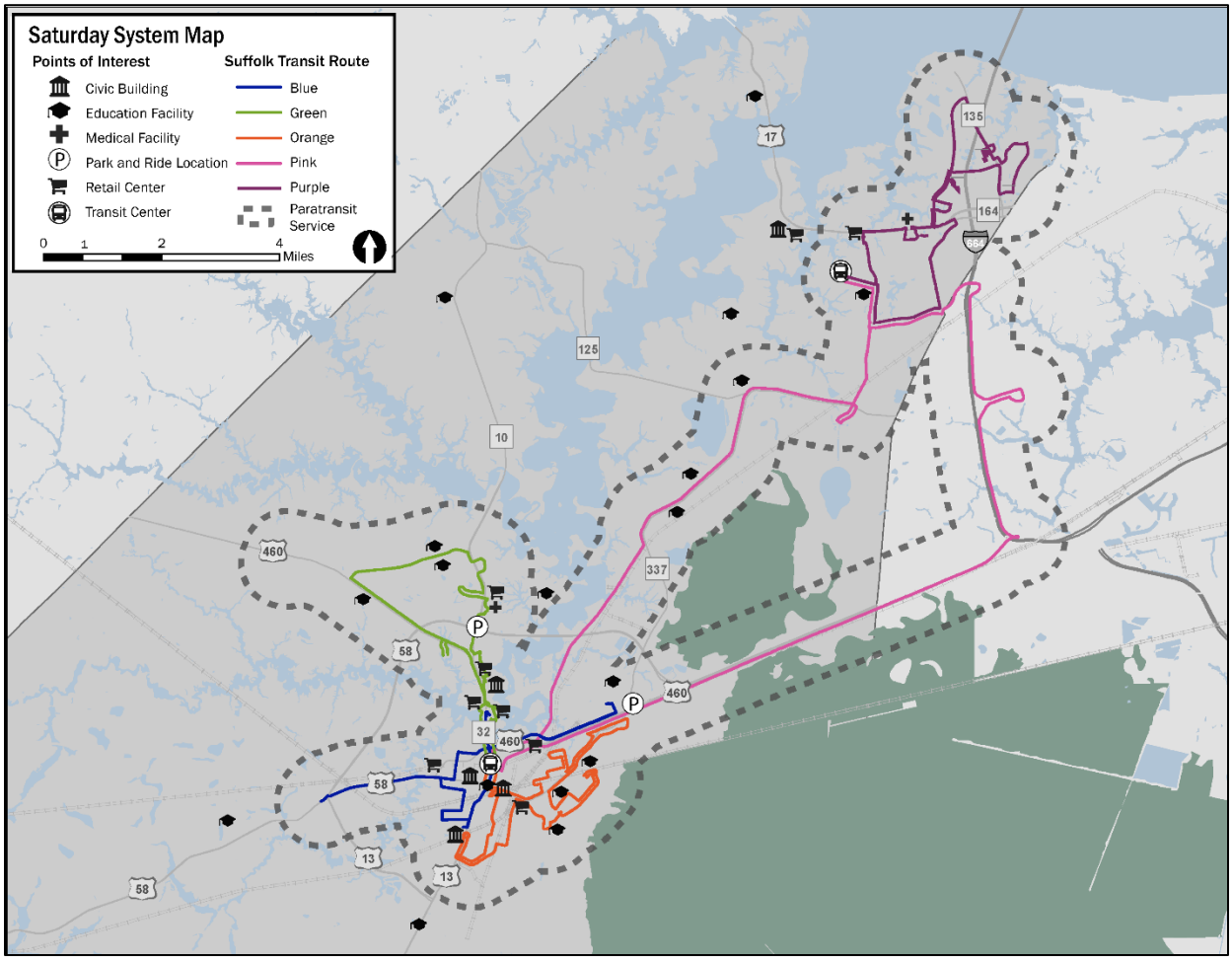


Figure A-11: Saturday System Map with ADA Paratransit Service Area



A.5 Fare Structure, Payment, and Purchasing

Suffolk Transit provides various fare classes that consider riders' age and special needs. The one-way fare for an adult is $1.50, an all-day pass is $3.00, and a monthly pass is $57.50. The fare for ADA-certified passengers using the paratransit service is $3.00 for a one-way trip. Discounted fares are applied to students, and the service is free for children less than five years in age. The transit riders may purchase the tickets and passes at the City of Suffolk treasurer's Office on 442 West Washington Street and the Virginia Regional Transit Office located on 139 E Washington Street, or by paying cash on the bus. Fares are collected in Diamond fare boxes. Table A-2 provides a breakdown of all the fare options for different groups.

Table A-2: Ticket Options and Fares

Ticket	Fares - each way	All Day Pass	Monthly Pass
Americans with Disabilities Act (ADA) Certified	$3.00	N/A	N/A
Adult	$1.50	$3.00	$57.50
Student	$1.00	$2.00	$37.50
Less than 5 years	Free	Free	Free
Seniors 55 and over	$0.75	$1.50	$27.50

A.6 Transit Asset Management - Existing Fleet and Facilities

A.6.1 Fleet

On July 1, 2013, Suffolk started using a new bus fleet of its own. Currently, there are nine fixed-route and two paratransit service vehicles available, and all of Suffolk's buses are ADA accessible and equipped with the latest wheelchair lifts and securement systems. All Suffolk Transit buses are also equipped with three-position bicycle racks. The current vehicle inventory can be viewed in Table A-3.

Table A-3: Vehicles in Current Fleet

Vehicle #	Make (all BOC)	Mileage	Seating	Year of Purchase
7278	Ford Challenger	208,983	19	2013
7279	Ford Challenger	202,898	19	2013
7281	Ford Challenger	211,282	19	2013
7282	Ford Challenger	166,465	19	2015
7283	Ford Challenger	168,317	19	2015
7284	Ford Challenger	155,405	19	2016
7285	Ford Challenger	137,614	19	2017
7288	Starcraft ALLSTAR	30,455	19	2019
7289	Starcraft ALLSTAR	34,208	19	2019
7286	Braun Minivan	12,355	8	2018
7287	Braun Minivan	9,381	8	2018

A.6.2 Facilities

The Downtown Transfer Station is located on North Main Street and Prentis Street. This building (Figure A-12) features amenities such as restrooms and informational kiosks. It was completed in 2015, and serves as the transfer location for five out of six total routes of Suffolk Transit. Suffolk Transit performs maintenance tasks at the facility as needed.

There is a total of 162 Suffolk Transit bus stops. A total of eleven stops have shelters currently, and more may be installed. Due to difficulties in securing agreements, Suffolk has shelter parts available, yet uninstalled, for future inclusion at more bus stops. Some shared bus stops use shelters installed by HRT as well.

Bus stop signage is another feature that Suffolk Transit is investing for improvement. The agency started installing bus stop signs starting late 2013. As of August 2018, around 40 of the bus stops have signs installed. More bus stop signs are already on order, and Suffolk Transit is planning to install bus stops signs at all stops by the end of 2018.

Figure A-12: Downtown Transfer Station (left) and a Shared Suffolk Transit Bus Stop (right)

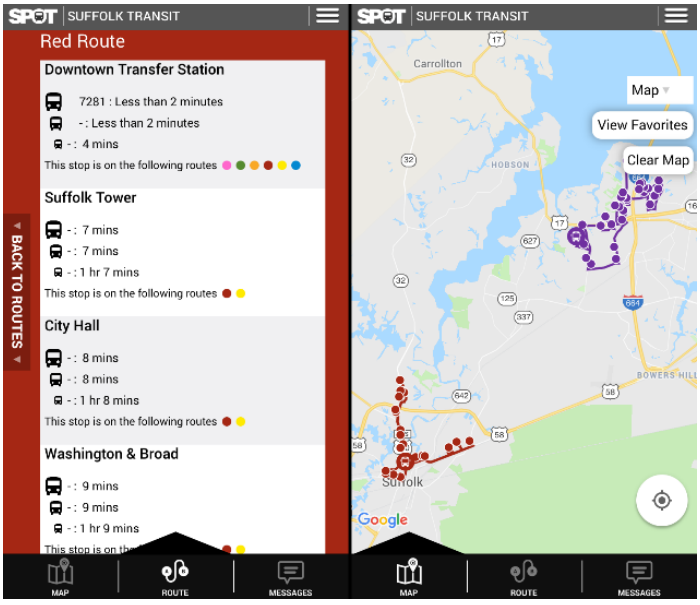
A.7 Transit Security Program

To provide the passengers and drivers with sense of security, Suffolk Transit equipped nine buses in service with onboard cameras, as of August 2018, and the Downtown Transit Station has video surveillance in place.

A.8 Intelligent Transportation Systems (ITS) Program

Since the last TDP, Suffolk Transit has launched several ITS programs to meet the riders' demand for information and to optimize service. The transit riders may plan their trips and obtain bus arrival time on each bus stop using the Suffolk Transit web-portal. This new feature called SPOT, developed in partnership with ETA Transit Services, is also available in app format (Figure A-13) for smartphone user on both IOS and Android platform.

Figure A-13: A View of SPOT ETA App on iPhone



A.9 Data Collection and Ridership/Revenue Reporting Method

Suffolk Transit tracks ridership in two ways: an automated count and a manual count of passengers. As of August 2018, each Suffolk Transit bus is equipped with Automatic Passenger Counters (APCs) which have not yet been validated for National Transit Database (NTD) reporting. The drivers also take a manual tally of passengers as they board, record passenger counts on the ETA tablet on the bus, and monitor payments made by the riders. Once the ridership numbers are obtained, the accuracy of the APC devices will be tested by comparing the manual counts against the automated counts. The fares collected are also compared to the ridership numbers to ensure that there aren't major discrepancies between the two.

The ridership and fare data are delivered in a monthly report to the Transit Manager, as well as the revenue mileage, non-revenue mileage, and number of trips for each route. The mileage and revenue hours are also checked through regular odometer readings at the beginning and end of each service day and recorded in driver logs.

Suffolk Transit submits a report package to NTD at the end of each year. The City has a transit account and it breaks out Suffolk Transit's expenses and revenues. Suffolk Transit prepares budget performance reports to identify how money is being spent from the transit fund and where the revenues are coming from.

A.10 Coordination with Other Transportation Service Providers

In addition to the regular fixed-route and paratransit services offered by Suffolk Transit, several supplementary transit options are also available for the residents of Suffolk. Some of these options are provided in adjacent or neighboring jurisdictions of Suffolk, and therefore, are not directly available for the Suffolk riders.

A.10.1 Hampton Roads Transit

HRT continues to service one stop in Suffolk, at College Drive and I-664 in northern Suffolk. HRT's Route 47 allows for travel to Chesapeake and Portsmouth by public transit.

A.10.2 Transportation Service by Other City Departments

Suffolk Parks and Recreation

The City of Suffolk's Parks and Recreation department operates a vehicle to transport participants to and from department programs. This service is provided on an as-needed basis and does not operate on specific days or at specific times.

Suffolk Redevelopment and Housing Authority

The Suffolk Redevelopment and Housing Authority partners with community transportation providers to provide transportation for low to moderate income residents when possible, for daily living, shopping, recreation and social events. The Authority owns and operates one 15-passenger van to transport residents to Authority sponsored events, community programs, and residential engagements.

Taxi Services

United Taxi Service, All City Taxi and Greenbrier Taxi provides the local taxi service.

Intercity Bus

Greyhound service to the City of Suffolk was discontinued. Current Greyhound bus service to the surrounding area includes service to Hampton, Norfolk, and Virginia Beach. In addition to Greyhound a handful of curbside bus companies serve Hampton Roads as well. **Table A-4** provides further detail on these services and the area served.

Table A-4: Inter-city Bus Options and the Cities Served

Provider	Cities Served			
	Hampton	Newport News	Norfolk	Virginia Beach
Bus2NYC	X		X	
Megabus	X			
New Everyday	X	X	X	
Number1Bus			X	X
NYC Shuttle/Sprinter	X	X	X	X
NYTiger				X

Amtrak

Currently there are no Amtrak rail stations located in Suffolk, and the closest stations are in Norfolk, Newport News and Virginia Beach, served by the Northeast Regional route. This route connects the Hampton Roads region to Boston (MA) via Richmond, Washington D.C., Baltimore (MD), Philadelphia (PA), New York (NY) and New Haven (CT).

Additionally, there are several faith-based, medical, employment and education related transportation options available for Suffolk residents for Sunday church services, medical appointments, work places as well as education facilities.

A.11 Public Outreach

Most of transit service-related information is available on Suffolk Transit as well as VRT's website. A concise summary of Suffolk Transit services is also stored in the Virginia 2-1-1 database. Hardcopy brochures are available on the buses and at the Morgan Memorial Library. The City's Media and Community Relations department also has a supply of brochures that are distributed throughout the city.

Every change in Suffolk Transit service is passenger-driven. The transit agency receives feedback made directly via phone calls and indirectly offered through the drivers. Prior to increasing the number of service routes, and the launching of Saturday services, Suffolk Transit actively reached out to the public by holding a public meeting. The meeting was advertised two weeks prior on local media outlets, such as Suffolk News-Herald, on posters at the downtown transit station, on Suffolk Transit's website, and on the buses. Attendees at the meeting expressed their support for the route increase and service expansion.

As of August 2018, Suffolk Transit does not have an official Facebook page or Twitter account. The agency uses City of Suffolk's Facebook page, twitter, as well as the YouTube channel to deliver news updates and announcements in addition to its own website.

A.12 Current Initiatives

Starting July 2018, Suffolk Transit introduced several transit enhancements including route name changes as well as the addition of Saturday services. To avoid similarity in colors, the Gold route was changed to the Pink route, and the Blue Route was renamed the Purple route. The Saturday service is offered on five routes with various operating hours. In addition to the existing Green, Orange, Pink and Purple routes, the Saturday service is provided on a new Blue route which is a modified combination of Yellow and Red routes. Saturday services are available from 7:30 a.m. to 4:30 p.m. on all routes except the Pink route which ends its service at 3:30 p.m., instead. The Purple route has also been through slight route modification to serve Harbour View Boulevard area better. Additional hours were added to the Red, Yellow, and Pink routes for their weekday service as well.

A total of 180 bus stop signs are already installed by Suffolk Transit throughout its service areas. Each bus stop sign is reachable by wheel-chairs and contains essential stop information including a QR code. The riders may get bus arrival information through the Suffolk Transit App and its web-based portal.

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B. Outreach Summary

B.1 Outreach Timeline

B.1.1 Phase I

Phase I of public outreach provided participants an opportunity to inform the initial service planning recommendations and to comment on key trade-offs scenarios that are behind every service planning and capital decision, especially in tight budget situations.

This phase consisted of a survey, both an online and paper version, that captured general transit preferences (via trade off questions); travel patterns (origin and destination and frequency of transit use questions); trip purpose; and demographic information. The survey was available October 1 to October 19, 2018.

B.1.2 Phase II

Phase II of public outreach provided participants an opportunity to respond to recommendations and to comment on any issues they identify with the new route structures and service levels.

This phase consisted of a survey, both an online and paper version, that captured general thoughts on route recommendations. The survey was available January 30 to February 22, 2019.

This phase also included two pop-up events at the Downtown Transfer Center to capture feedback from regular riders, as well as a Suffolk Transit operator meeting to explain the plan process, collect feedback on the recommendations, and encourage operators to share their knowledge with their riders. Table B-1 details the location, date and time of each event.

Table B-1: List of Events

Event	Location	Date and Time
Pop-up Event 1	Downtown Transfer Station	February 4, 2019, 3:00–5:00 p.m.
Pop-up Event 2	Downtown Transfer Station	February 5, 2019, 8:00–10:00 a.m.
Operator Meeting	Suffolk Transit Office	February 5, 2019, 12:00–2:00 p.m.

B.1.3 Phase III

Phase III of outreach engaged internal stakeholders and the Suffolk City Council to obtain buy-in on the strategic vision of Suffolk Transit, as well as the goals, objectives and strategies already developed through the TDP process. Both meetings occurred on March 20, 2019.

B.2 Phase I - Survey Analysis

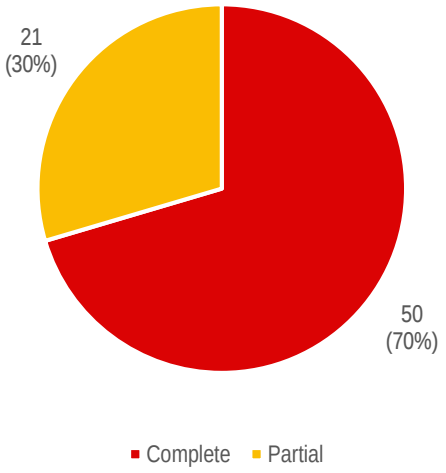
The goal of the Phase I survey was to determine the transit priorities for existing riders and non-riders, alike. Each respondent's priorities were assessed through trade-off activities based on real world realities and decision points. The responses were then used when creating the recommendations for the Suffolk County Transit Strategic Plan.

The survey was open for almost three weeks, from October 1 to October 19, 2018. Surveys were available in paper form on buses or at public libraries, or available online through Survey Monkey. The online survey was advertised on the City of Suffolk and Virginia Regional Transit social media accounts.

B.2.1 Surveys by Completion

A survey is "completed" when the survey taker answered at least one of the final trade-off questions. "Completed" does not mean all questions were answered, as most survey questions were not required. A total of 70 percent of survey respondents answered at least one of the trade-off questions (**Figure B-1**).

Figure B-1: Phase I - Percentage of Surveys Completed (n = 71)



B.2.2 Surveys by Type

There were two ways respondents could take the surveys, respondents could use paper surveys that were provided on Suffolk Transit buses or at public libraries, or through an online survey. Both survey instruments contained the exact same information. Online survey respondents represented 86 percent of the survey taking population, while 14 percent employed a paper survey (**Figure B-2**).

Figure B-2: Phase I - Surveys by Type (n = 71)

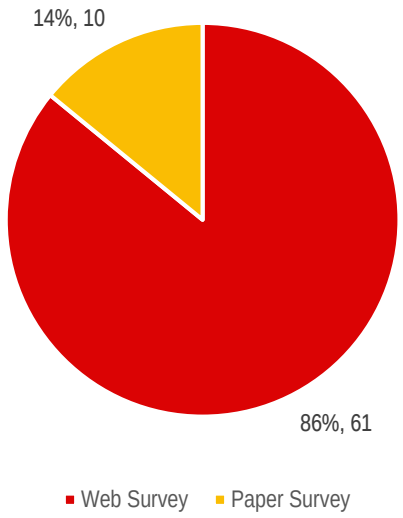
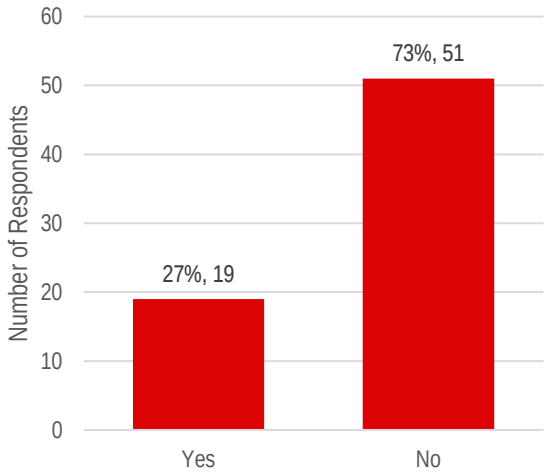


Figure B-3: Phase I - Do you currently ride Suffolk Transit? (n = 70)



B.2.3 Rider Status

Respondents were asked if they currently use any of the transit services provided by Suffolk Transit. Of the 71 respondents, 27 percent said they have used Suffolk Transit services, while 73 percent said they did not (**Figure B-3**). One respondent did not answer this question.

Reasons for Not Riding Suffolk Transit

When asked why they do not ride Suffolk Transit, 45 respondents provided a response (Figure B-4). The most common reason for not riding was that they were not interested in taking transit, with approximately 24 percent responded in this manner. Another 22 percent suggested that they needed more information about Suffolk Transit. In addition to these answers, 20 percent said that there was no service near their home, and 16 percent said that Suffolk Transit does not go where they need to go. Eleven percent selected "other" and provided write in responses as to why they do not use the Suffolk Transit, and seven percent of respondents said Suffolk Transit doesn't run when I need it to run. Additionally, a breakdown of the reasons respondents gave if they selected "other" is included in Table B-2.

Figure B-4: Phase I - If you do not currently ride Suffolk Transit, what is the main reason you do not ride? (n = 51)

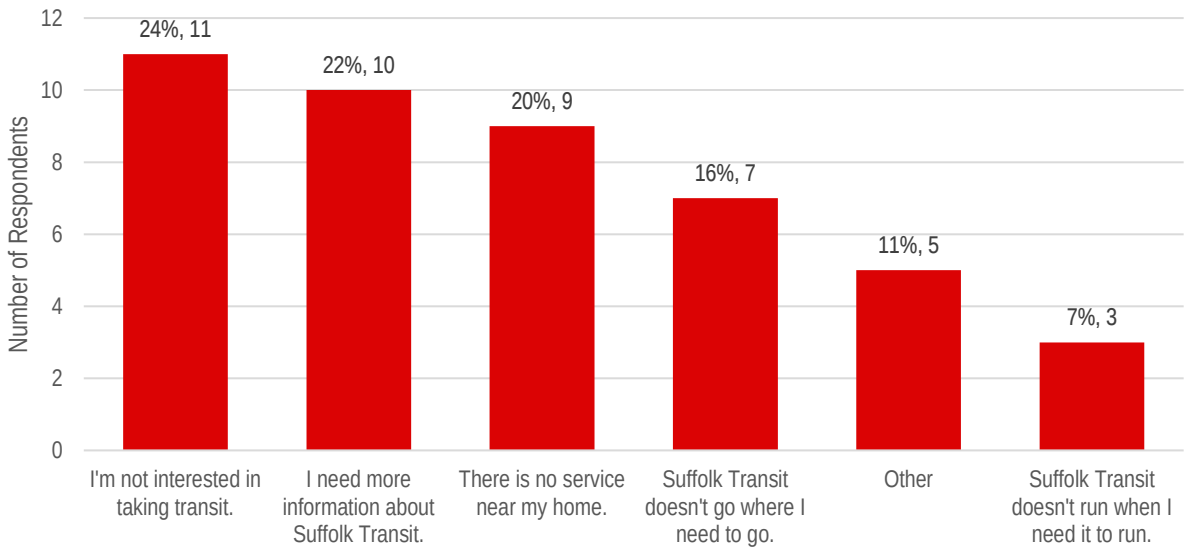


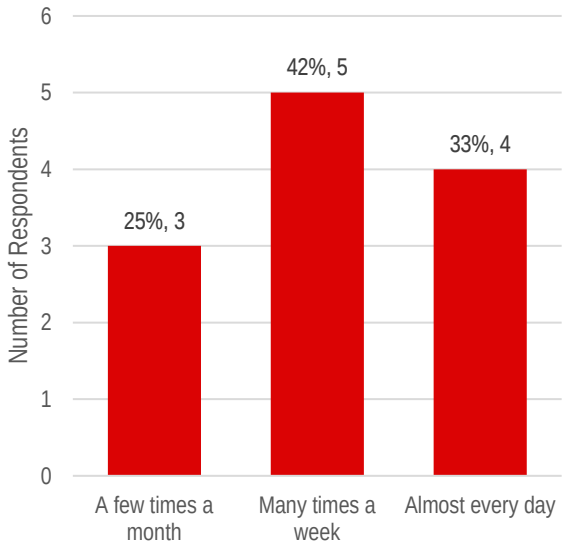
Table B-2: Phase I - Breakdown of "Other" Responses

Theme	Count
Already have a reliable transportation option	3
Do not live in Suffolk	1
Accessibility to bus stops is not safe enough	1

Frequency of Riding Suffolk Transit

Of the 19 respondents who said they rode Suffolk Transit, 12 provided answers regarding how often they used Suffolk Transit. Of those riders 25 percent said they use it a few times each month, 42 percent said they used it many times a week, and 33 percent said they use it almost every day (Figure 5). Other options included "Rarely" and "This is my first time," but no respondents chose those answers.

Figure B-5: Phase I - How often do you ride Suffolk Transit? (n = 12)



B.2.4 Trip Information

Only respondents who said they currently ride Suffolk Transit were asked the following questions about the trips taken using Suffolk Transit.

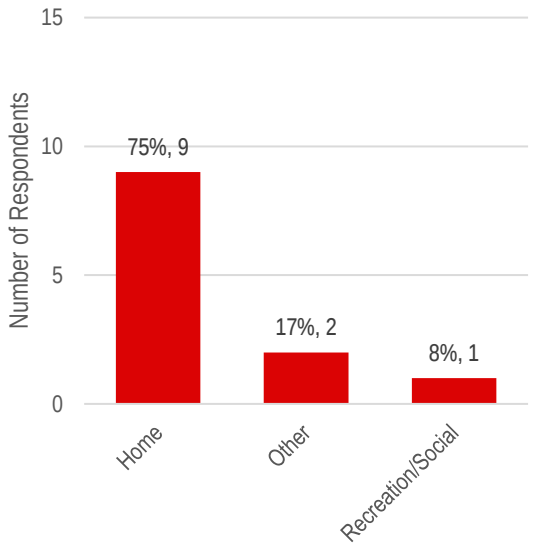
Bus Routes Used

Many of the paper surveys received did not have any answer for the question "which Suffolk Transit or Hampton Roads Transit bus routes will you use to complete your most common one-way trip?" Of the nine surveys that included an answer to this question, nine people circled or checked that they would use a bus route but did not provide the name of that route. One respondent said they would use the Yellow, Green, then Orange routes and another respondent said they would use the Red, Green, and Orange routes.

Origin

Twelve of the respondents answered the question "where will you begin this one-way trip?" Seventy-five percent of respondents said they were beginning their trip at home, which was the most common answer. One person began their trip from a recreational facility, and two people said "other" (Figure B-6).

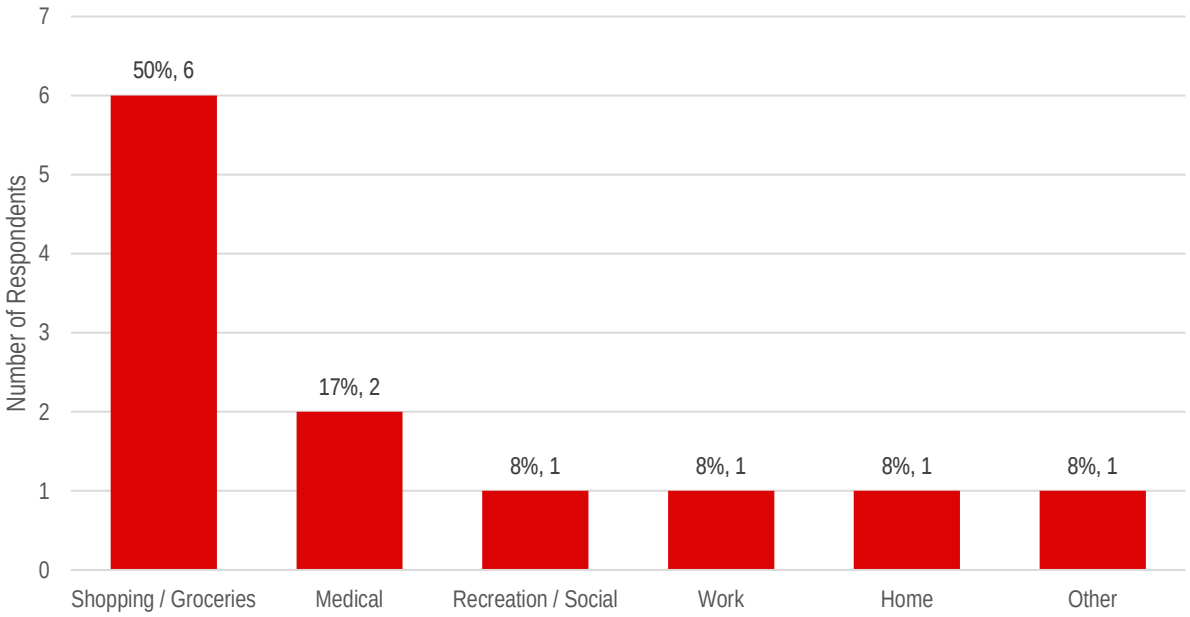
Figure B-6: Phase I - Where will you begin this one-way trip? (n = 12)



Destination

Twelve people responded to the question, "Where will you end this one-way trip?" Of these 12 responses, half selected shopping, while 17 percent of the respondents indicated that they were traveling to a medical facility. Additionally, recreation/social, work, home, and other were each chosen by a single respondent (Figure B-7).

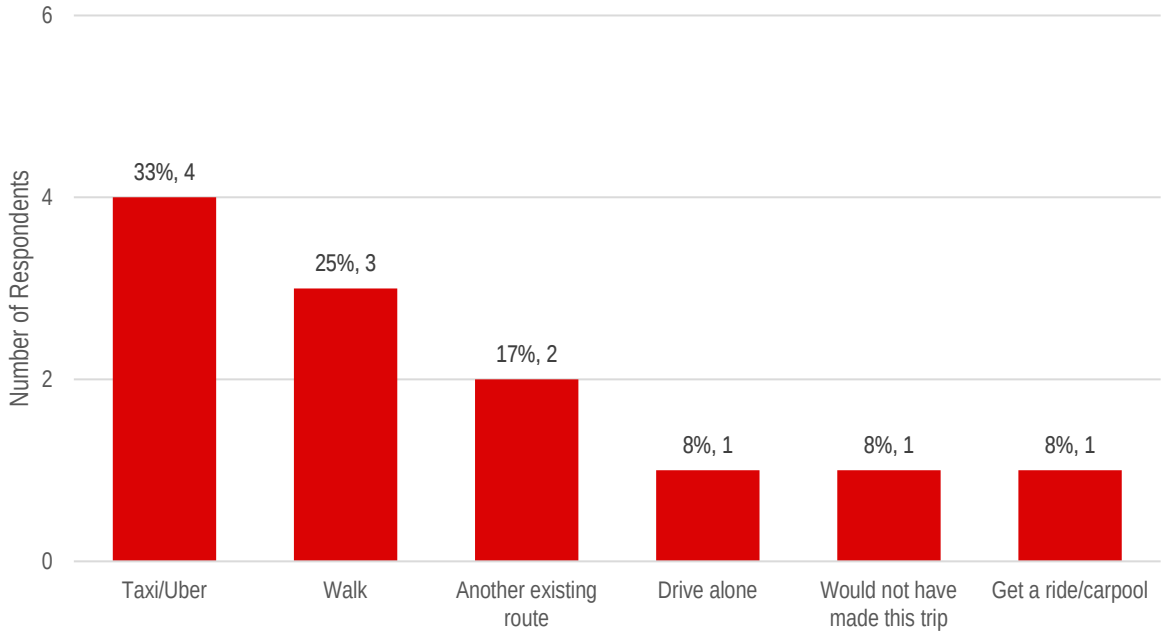
Figure B-7: Phase I - Where will you end this one-way trip? (n =12)



Alternate Modes

There were 12 responses for the question "If this route didn't exist, how would you make this trip?" Of those 12 respondents, 33 percent said they would use a taxi or ride hailing service (such as Uber), 25 percent selected that they would walk, and 17 percent said they would use another existing Suffolk Transit route. There was also one response each for driving alone, carpooling, or not making the trip respectively.

Figure B-8: Phase I - If this route didn't exist, how would you make this trip? (n = 12)



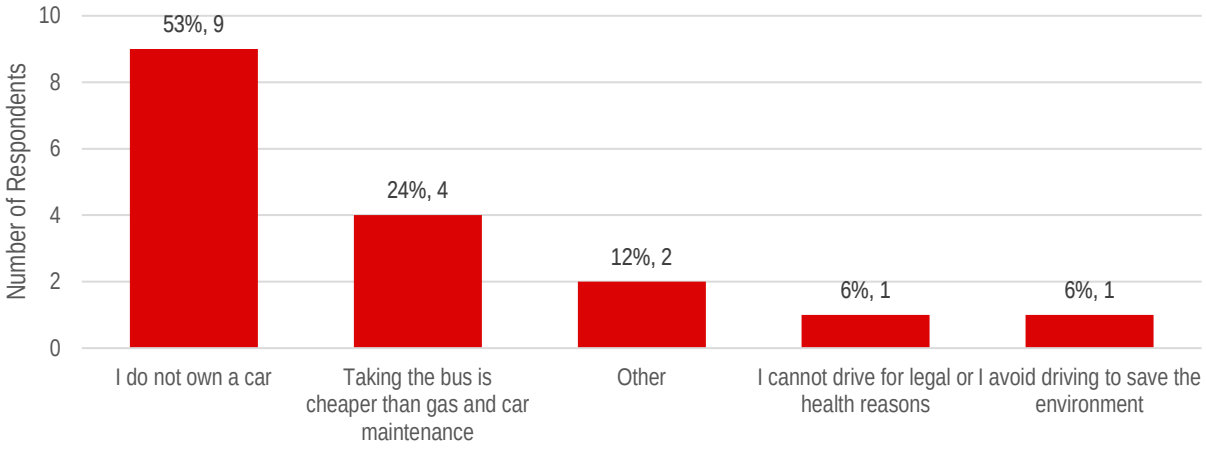
B.2.5 Using Suffolk Transit

Only respondents that marked that they currently ride Suffolk Transit were asked the following questions about the service.

Why Use Suffolk Transit

Seventeen respondents answered the question, "Which of the following describe the reasons that you use Suffolk Transit?" Respondents were given a choice of seven different options, as well as a choice for "other" when answering. Of the respondents, 53 percent said that they use Suffolk Transit because they do not own a car, while 24 percent said that taking the bus is cheaper than gas and car maintenance, and another 12 percent selected "other." One person answered that they could not drive for legal or health reasons, while another answered that they avoid driving to save the environment (Figure 9). In addition to these options, respondents could have selected "my car is not working," "I prefer to spend time on activities other than driving," or "parking is not available or is expensive at my destination," however there were no submitted surveys with these responses. The two "other" responses were both from people who said they did not have cars but do now.

Figure B-9: Phase I - Which of the following describe the reasons that you use Suffolk Transit? (n = 17)

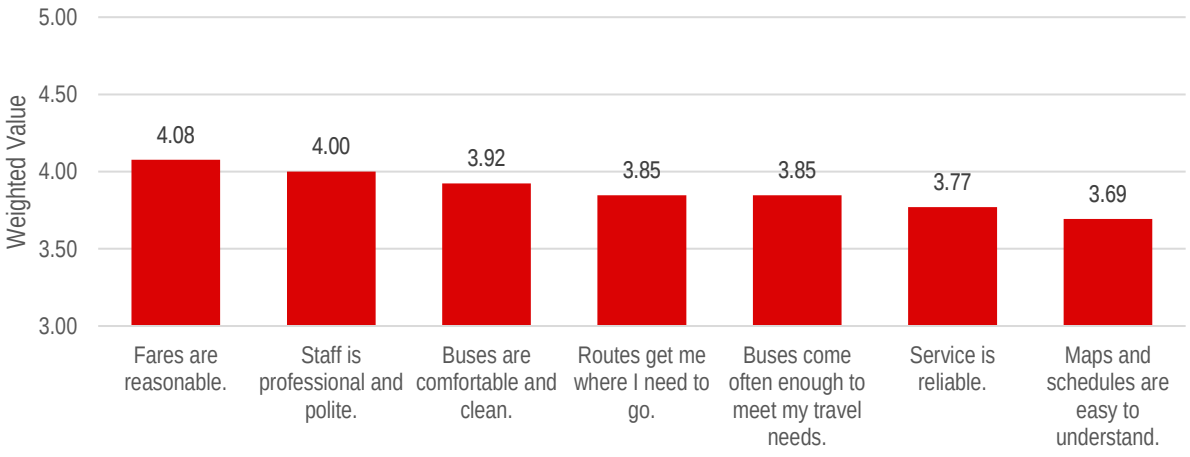


Opinions of Suffolk Transit

In the next section of the survey, Suffolk Transit riders were asked how strongly they agreed with a number of statements. Respondents could answer strongly agree, agree, neutral, disagree, strongly disagree. There were 13 responses to this question, and each response was given a weighted value from 1 (strongly disagree) to 5 (strongly agree). These values were multiplied by the number of responses for each category and divided by the total number of responses for each statement to find the weighted average for each (Figure B-10).

On average, respondents agreed that "Fares are reasonable" (4.08) and "Staff is professional" (4.00). Respondents were less likely to agree that "Maps and schedules are easy to understand" (3.69) or that "Service is reliable" (3.77).

Figure B-10: Phase I - Based on your experience riding Suffolk Transit, how strongly do you agree with the following statements? (n = 13)



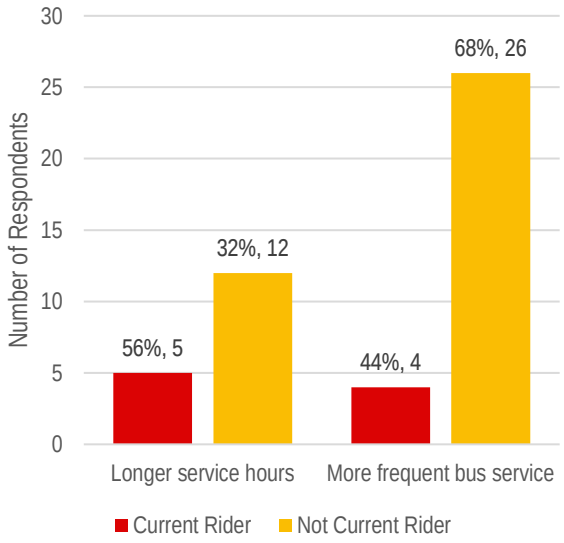
B.2.6 Trade-Off Activities

All respondents, regardless of rider status, were asked a series of five trade-off questions in which they were asked to choose between two given scenarios.

Frequency vs. Span of Service

For the first trade-off activity, respondents were asked if they would rather have more frequent bus service or longer service hours. The option for more frequent bus service was more popular with non-riders; however, current bus riders were split, with 44 percent choosing more frequent bus service and 56 percent choosing longer service hours (Figure B-11). In addition to these 47 surveys, there was one additional respondent who left the question about currently riding Suffolk Transit blank. This respondent chose more frequent bus service in the tradeoff activity.

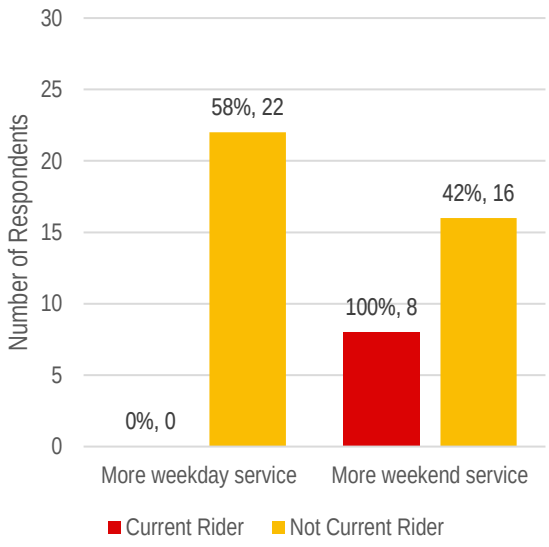
Figure B-11: Phase I - Trade Off 1: Frequency vs. Span of Service (n = 47)



Weekday vs. Weekend Service

In the second trade-off scenario, respondents were asked to choose between more weekday or more weekend service. Of the people who indicated that they were not current Suffolk Transit riders, 58 percent chose more weekday service, compared to 42 percent that chose more weekend service. Among respondents who indicated that they currently use Suffolk Transit, all 8 responses, 100 percent, were in favor of more weekend service (Figure B-12). In addition to these 46 responses, there was one survey in which the respondent did not indicate if they used Suffolk Transit Service, on which more weekday service was chosen.

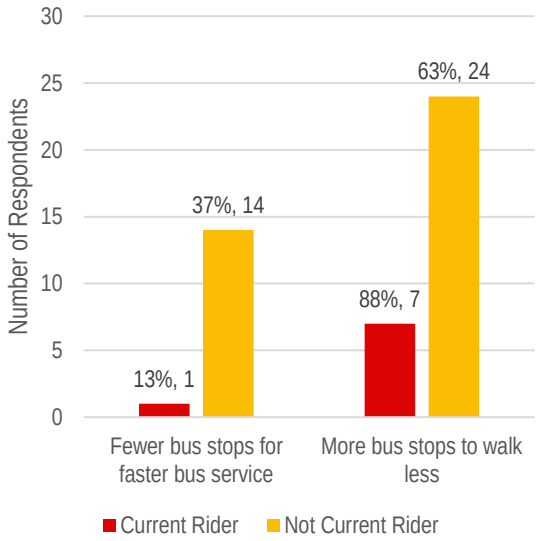
Figure B-12: Phase I - Trade Off 2: Weekday vs. Weekend Service (n = 46)



Bus Stop Spacing

In the third trade off scenario, survey respondents were asked if they would prefer fewer bus stops for faster bus service or more bus stops so that they would not have to walk as much before and after their ride. Among the non-riders, 37 percent said they would prefer fewer bus stops, while 63 percent chose more bus stops. Among Suffolk Transit riders, only 13 percent selected fewer bus stops for faster service (Figure B-13). There was one survey that did not answer the question about riding Suffolk Transit. This person chose fewer bus stops for faster bus service.

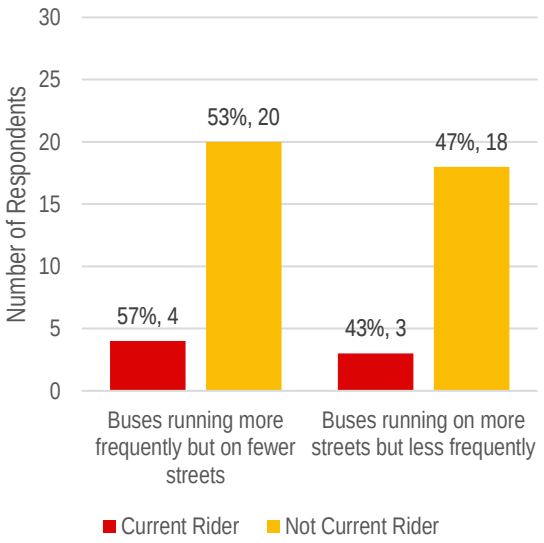
Figure B-13: Phase I - Trade Off 3: Bus Stop Spacing (n = 46)



Frequency vs. Distance

In the fourth trade-off scenario, respondents were asked if they would prefer buses that ran more frequently but served fewer streets or buses running on more streets but less frequently. Fifty-three percent of respondents who did not ride Suffolk Transit chose more frequent services, while 47 percent chose service that served more streets. Of the respondents who said they rode Suffolk Transit, 57 percent selected more frequent service, while 43 percent chose buses running on more streets (Figure B-14). On one survey that did not indicate if the respondent was a Suffolk Transit rider, more frequent service was chosen.

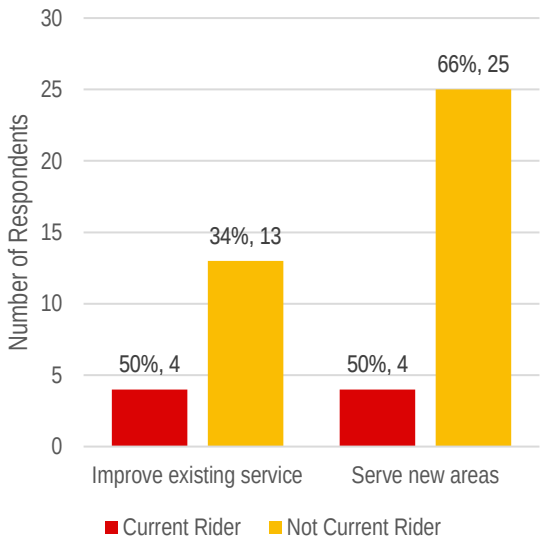
Figure B-14: Phase I - Trade Off 4: Frequency vs. Distance (n = 45)



Improve Service vs. New Service

In the final trade-off question, respondents were asked what they thought was more important: Improving existing service or expanding service to serve new areas. Sixty-six percent of the respondents who were not Suffolk Transit Riders said that serving new areas was important, while 34 percent of non-riders chose improving existing service as more important. Respondents who used Suffolk Transit were evenly split, as 50 percent of respondents chose improving existing service and serving new areas respectively (Figure B-15). On the survey where the respondent did not indicate if they were a Suffolk Transit rider, the respondent chose to improve existing service over serving new areas.

Figure B-15: Phase I - Trade Off 5: Improve Service vs. New Service (n = 46)



B.2.7 Open Comments

Respondents were also given the opportunity to leave open-ended comments regarding the Suffolk Transit system. Nine respondents left a comment; the comments addressed several different subject areas, with a few respondents providing input on multiple subjects. For example, one respondent commented that service does not currently run for early shifts at warehouses, and that affected communities should be included in the planning conversation.

A breakdown of the subject areas can be found in Table B-3.

Table B-3: Phase I - Comments by Topic (n = 9)

Topic	Count
Operator Behavior	2
Route or Stop Location	2
Schedules or Span	2
Fleet Size	1
Public Outreach	1
Other	4

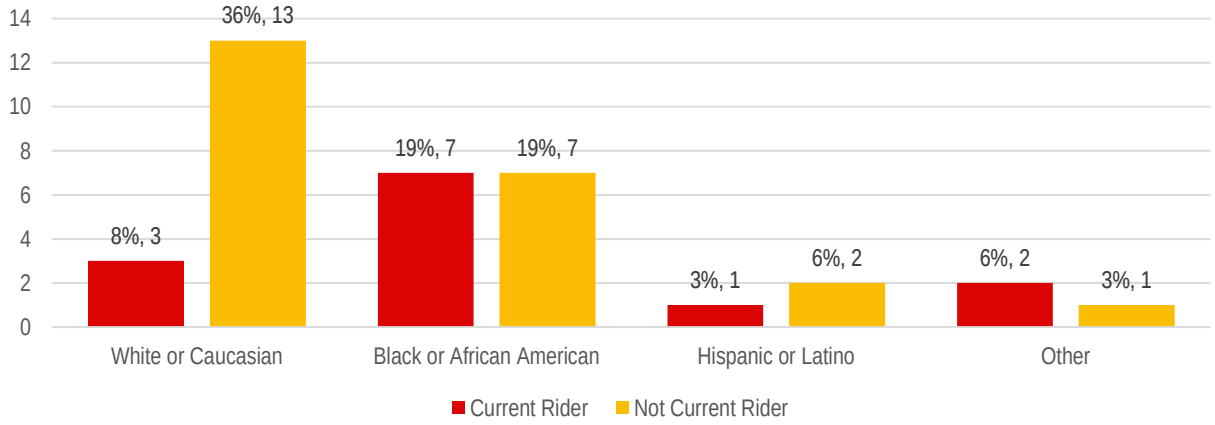
B.2.8 Demographics

At the end of the survey, respondents were asked, but not required, to answer a series of demographic questions.

Race and Ethnicity

When asked their race or ethnicity, 44 percent chose white or Caucasian. Of this 44 percent, three people said they used Suffolk Transit service and 13 said they did not. In addition to these respondents, 38 percent of the people chose Black or African-American when answering this question. There were also nine percent Hispanic or Latino responses, one of which was from a Suffolk Transit rider, while two were not. Finally, there were nine percent of the respondents who selected "other." Two of these were from current riders and one was from a non-rider (Figure B-16). Other options included Asian; American Indian or Alaska Native; and Native Hawaiian or Pacific Islander, but no respondents chose those options.

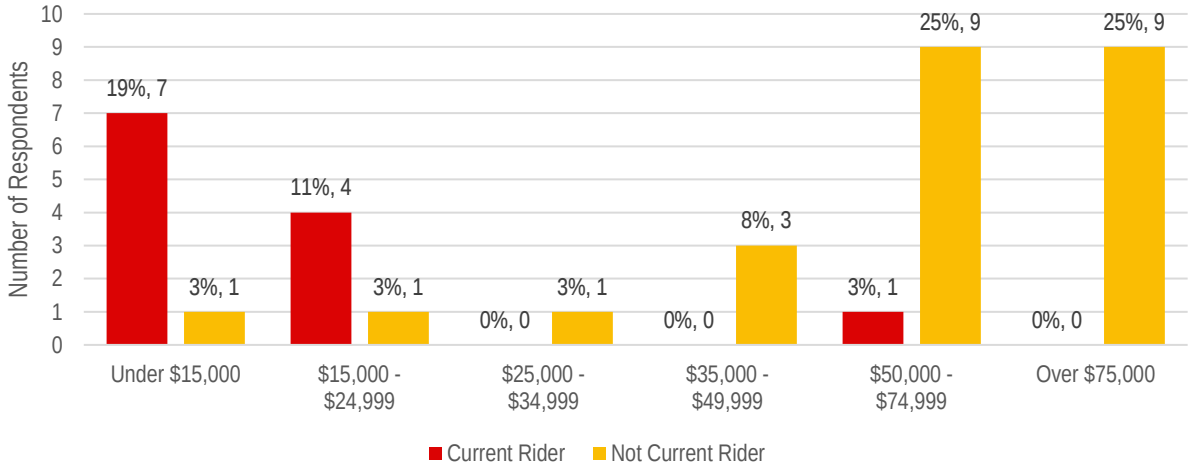
Figure B-16: Phase I - Race and Ethnicity by Rider Status (n = 36)



Income

Of the 22 percent of the responding population who selected that their income was below $15,000, seven people said that they were Suffolk Transit Riders. Fourteen percent indicated that their income was between $15,000 and $24,999. Four of these people said they rode Suffolk Transit, while one did not. Three percent (i.e., one person) selected an income between $25,000 and $34,999 and answered that they were not a Suffolk Transit rider. Eight percent answered that their income was between $35,000 and $49,000, all of whom said that they did not ride Suffolk Transit. Twenty-eight percent selected an income between $50,000 and $74,999, nine of those people were not Suffolk Transit riders, while one was. Finally, another 25 percent of the respondents that said their income was over $75,000 and all of those said they were not Suffolk Transit riders (Figure B-17).

Figure B-17: Phase I - Income by Rider Status (n = 36)



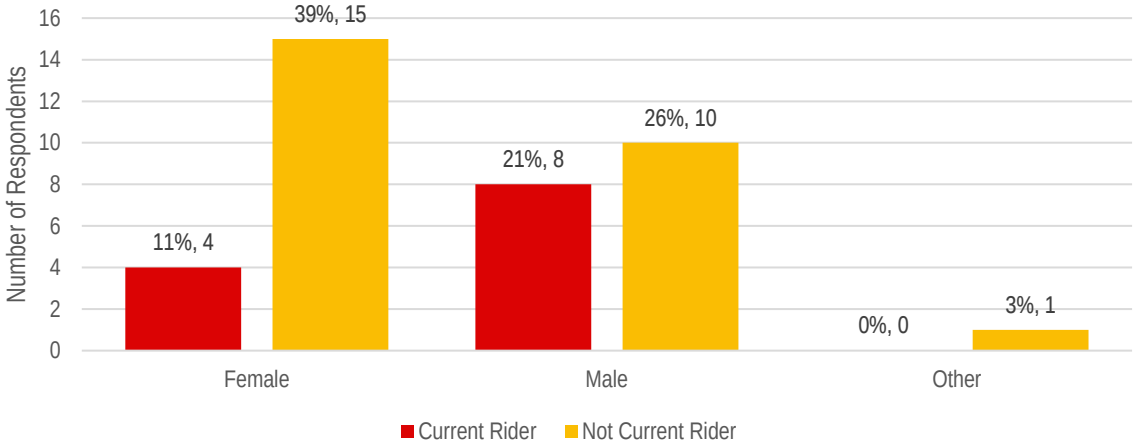
Language

All 38 people who responded to the question, "What is the primary language you speak at home?" selected English.

Gender

The survey was answered by almost the same number of women and men. Of 50 percent of the respondents who said they were female, four said they were Suffolk Transit riders, while 15 said they were not. The breakdown between the 47 percent male respondents was more even; eight of these respondents were Suffolk Transit Riders and ten were not. Additionally, one person who answered other to this question also said they did not ride Suffolk Transit (Figure B-18).

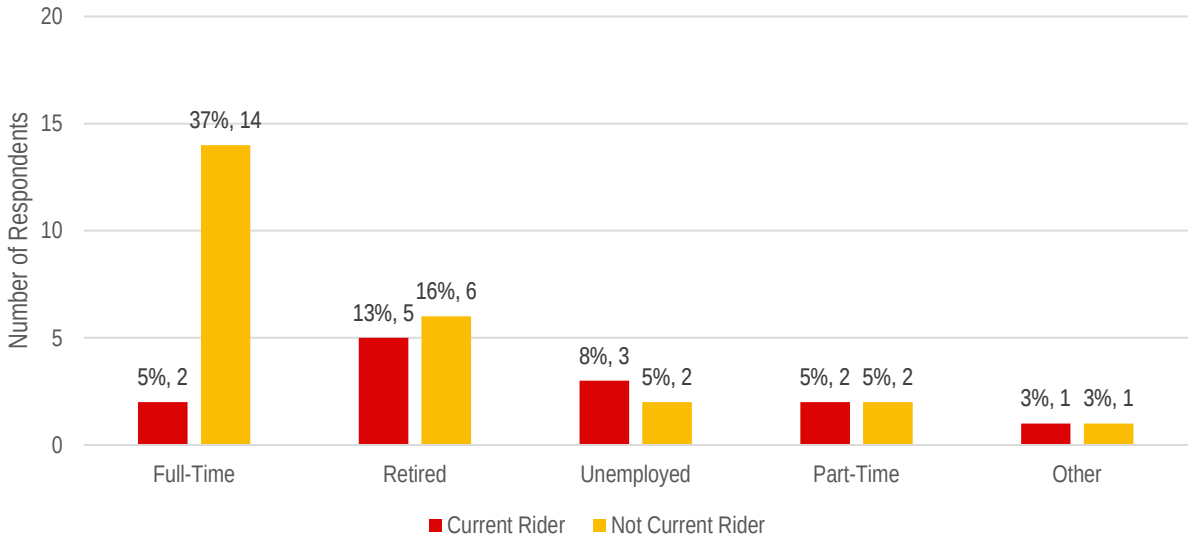
Figure B-18: Phase I - Gender by Rider Status (n = 38)



Employment Status

The final demographic question asked respondents about their current employment status, and allowed them to select full time, part time, retired, unemployed, or other. Forty-two percent of the respondents answered that they were full time employees, two of which were Suffolk Transit riders and 14 who were not. Another 29 percent selected "retired" and were made up of five Suffolk Transit riders and six non-riders. Additionally, 13 percent said they were unemployed. Three of these people use Suffolk Transit and two did not. Ten percent work part time, with two identifying as Suffolk Transit riders and two people saying they did not use the service. Finally, six percent (i.e., two people) marked other, each giving a different answer to the question about using Suffolk Transit (Figure B-19).

Figure B-19: Phase I - Employment Status by Rider Status (n = 38)



B.3 Phase II - Survey Analysis

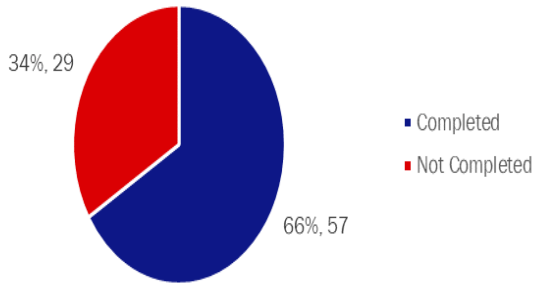
The goal of the survey was to present draft recommendations and understand the support for each potential change. The survey was designed to be taken by riders, non-riders, and operators of Suffolk Transit. Each respondent's support was assessed through Likert scale questions about each potential change to the existing Suffolk Transit route. The responses were then used when revising the recommendations for the City of Suffolk Transit Strategic Plan.

The survey was open for three weeks, from January 30 to February 22, 2019. Surveys were available in paper form on buses or at public libraries, or available online through Survey Monkey. The online survey was advertised on the City of Suffolk and Virginia Regional Transit social media accounts. The survey was also administered at two pop-up events on February 4 and 5, 2019. At the pop-ups, respondents could give their answers to the survey, which were collected via iPads. Flyers about the survey were also handed out.

B.3.1 Surveys by Completion

A survey is "completed" when the survey taker responded to at least one question about their support for a potential change. "Completed" does not mean all questions were answered, as all survey questions were not required. A total of 66 percent of survey respondents answered at least one of the recommendation support questions (**Figure B-20**).

Figure B-20: Phase II - Percentage of Surveys Completed (n = 86)



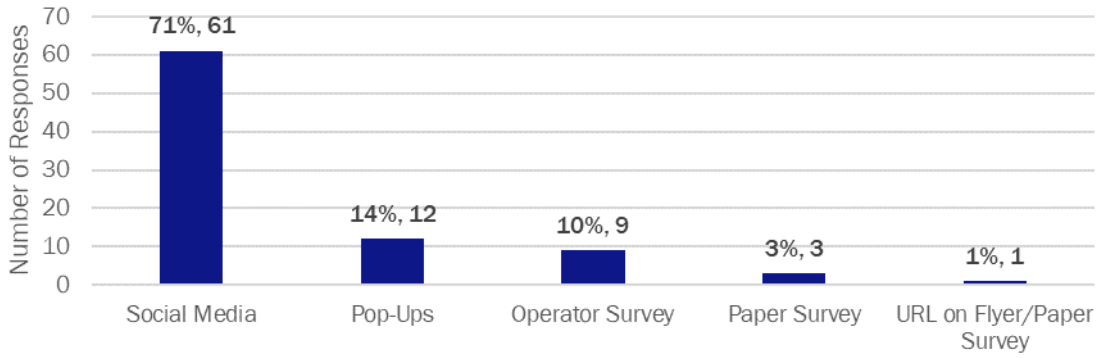
B.3.2 Surveys by Source

Respondents could take the survey in many ways:

- Online, through a link advertised on social media.
- On a paper survey available on buses and at libraries.
- At a pop-up using an iPad tablet.
- Online, via a URL listed on paper flyers and surveys.

Additionally, Suffolk Transit operators were invited to take the survey on paper. All survey instruments contained the same questions in the same order. Online survey respondents represented 71 percent of the sample, while 14 percent came from the pop-up events (**Figure B-21**). Operators represent 10 percent of the sample.

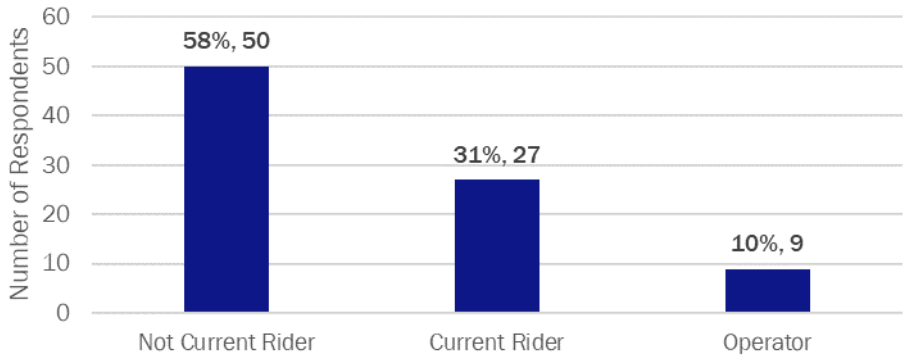
Figure B-21: Phase II - Surveys by Source (n = 86)



B.3.3 Rider Status

Respondents were asked if they currently use any of the transit services provided by Suffolk Transit. Of the 86 respondents, 31 percent said they use Suffolk Transit services, while 58 percent they did not (**Figure B-22**). Operators were 10 percent of the sample.

Figure B-22: Phase II - Rider Status (n = 86)



B.3.4 Support for Recommendations

Respondents were asked about their support for each potential change to the existing routes. All changes for a route were separated out to be assessed individually. A Likert scale from "Very Supportive" to "Not Supportive at All" captured each respondent's level of support for each change. The responses to each question informed the prioritization of the changes in the final recommendations.

To understand the changes, in the online survey, a map and a table of the existing and proposed frequency and span were provided. Each bus and library had a paper copy of the route sheets for survey takers to refer to when taking the survey.

Green

Respondents were asked two questions about the Green route:

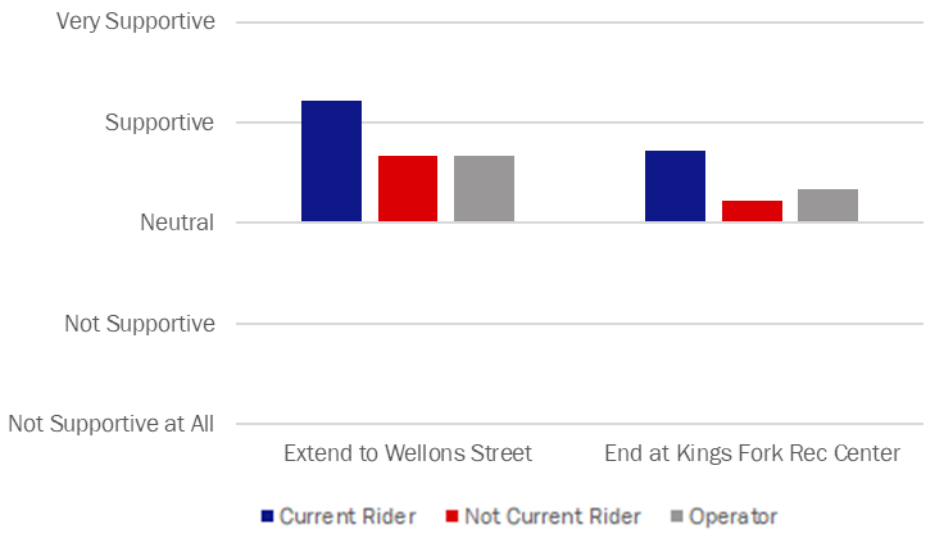
- Do you support changing the Green Route to end at the Kings Fork Recreation Center and discontinuing service to the Pruden Center? The Red Route would serve the Pruden Center.
- Do you support extending the Green Route to Wellons Street?

As seen in **Figure B-23**, respondents were supportive of the extension to Wellons Street, but were less supportive of the realignment to discontinue service to the Pruden Center.

Figure B-23: Phase II - Level of Support of Green Route Changes from All Respondents (n = 32)

When breaking out by rider status, the extension to Wellons Street had more support from current riders than non-riders and operators (**Figure B-24**). The realignment to discontinue service to the Pruden Center also had more support from current riders than non-riders and operators.

Figure B-24: Phase II - Level of Support of Green Route Changes by Rider Status (n = 32)



Open-Ended Comments

Seven people wrote a comment related to the Green route (**Table B-4**). Two respondents were doubtful if the new route would work and one requested the Pruden Center segment be kept. One respondent thought the route was too long but did not clarify whether they meant the existing route or proposed route.

Table B-4: Phase II - Open-Ended Comments about the Green Route

Comment	Count
Unsure if new route will work	2
Keep Pruden Center segment	1
Need larger buses	1
Route too long	1
Stop request – the Commons at Centerbrooke Apartments	1
Positive comment (unspecified)	1

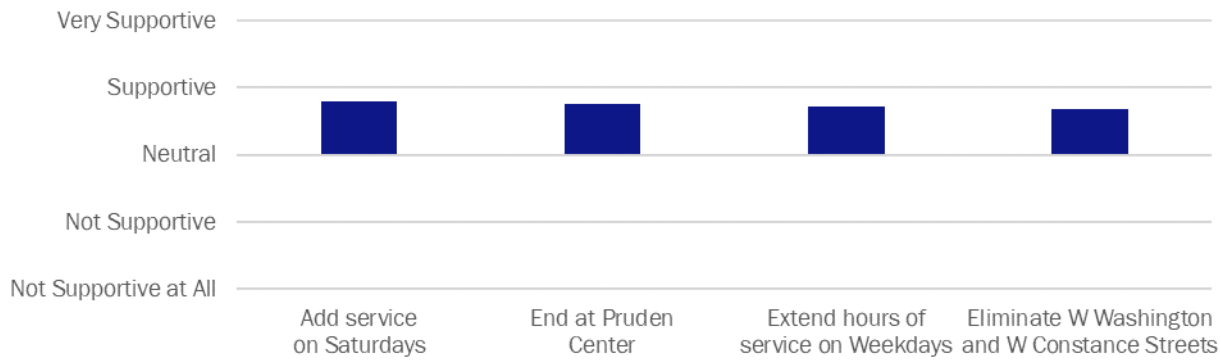
Red

Respondents were asked four questions about the Red route:

- Do you support discontinuing service on Godwin Boulevard and adjusting the Red Route alignment to end at the Pruden Center? The Green Route would serve Godwin Boulevard.
- Do you support adjusting the Red Route alignment to discontinue service on W Washington Street and W Constance Avenue? The Green and Yellow Routes would serve these areas.
- Do you support extending the hours of service during Weekdays?
- Do you support adding new Saturday service?

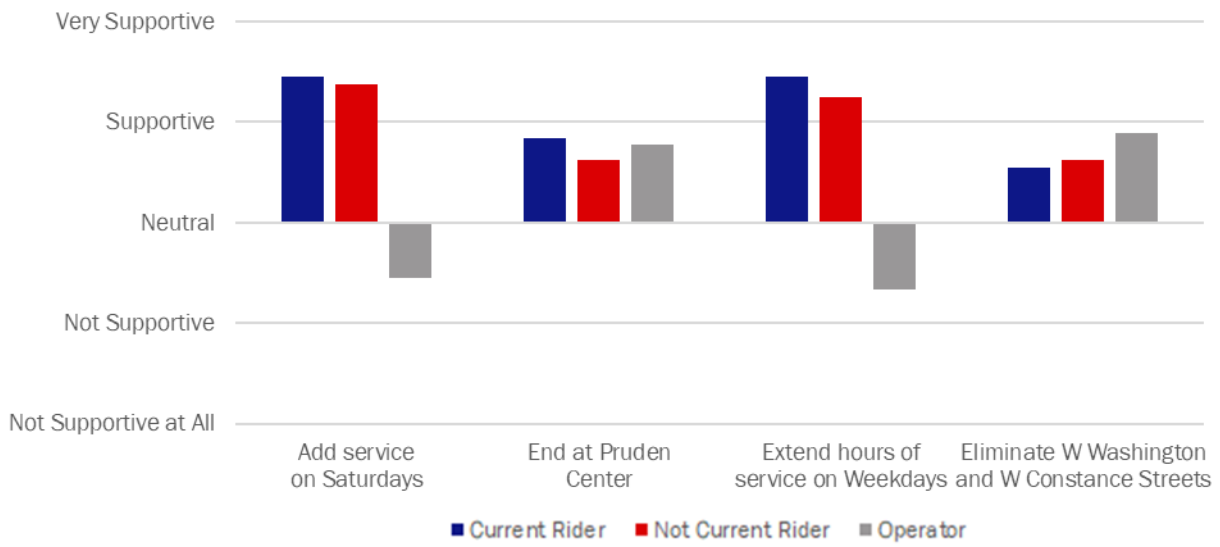
As seen in **Figure B-25**, respondents were somewhat supportive of all recommendations and did not favor one over others.

Figure B-25: Phase II - Level of Support of Red Route Changes from All Respondents (n = 28)



When breaking out by rider status, current riders and non-riders supported the addition of hours on both Weekdays and Saturdays (**Figure B-26**). The realignment of the Pruden Center and elimination of W Washington and Constance Streets were somewhat supported by current riders and non-riders. Operators did not support the addition of new hours, but somewhat supported the proposed realignments.

Figure B-26: Phase II - Level of Support of Red Route Changes by Rider Status (n = 28)



Open-Ended Comments

One person wrote a comment to express general support for the new Red alignment but did not specify further.

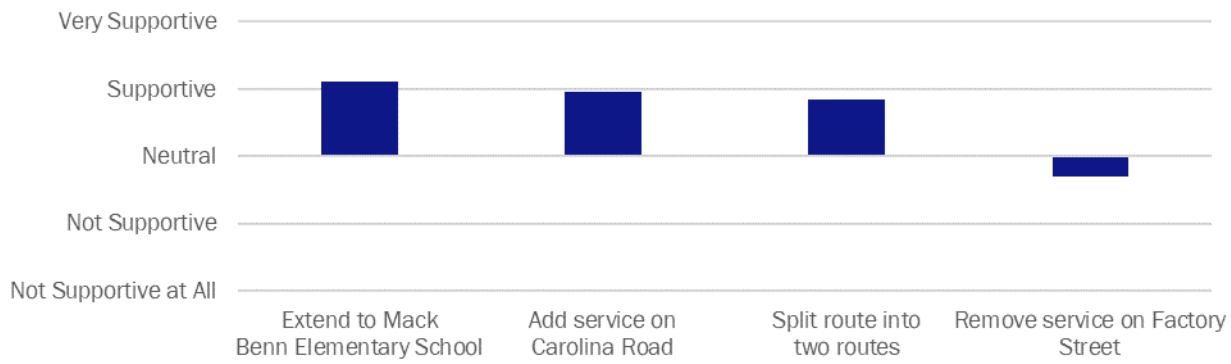
Orange

Respondents were asked four questions about the Orange route:

- Do you support splitting the Orange Route into two routes, the Orange and Blue Route?
- Do you support adding service on Carolina Road?
- Do you support adding service to Mack Benn Elementary School?
- Do you support removing service on Factory Street?

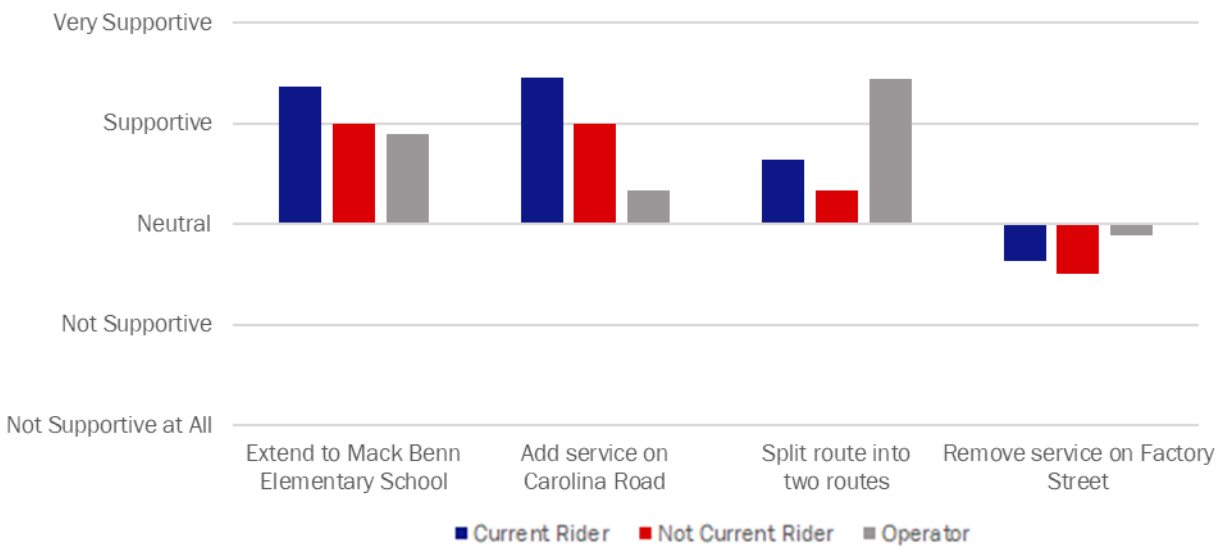
As seen in **Figure B-27**, respondents were supportive of extending the route to Mack Benn Elementary School, adding service on Carolina Road. They were less supportive of splitting the Orange route into two routes and did not support removing service on Factory Street.

Figure B-27: Phase II - Level of Support of Orange Route Changes from All Respondents (n = 26)



When breaking out by rider status, current riders and non-riders supported extending the Orange route to Mack Benn Elementary School and adding service on Carolina Road (**Figure B-28**). Operators also supported extending service to Mack Benn but were less supportive of adding service on Carolina Road. Current riders and non-riders were somewhat supportive of splitting the Orange route into two routes, yet operators solidly supported the realignment. Removing service on Factory Street was not supported by current riders and non-riders, with operators more neutral about the change than the public.

Figure B-28: Phase II - Level of Support of Orange Route Changes by Rider Status (n = 26)



Open-Ended Comments

Three people wrote a comment related to the Orange route (**Table B-5**). One respondent did not like the removal of Factory Street, and one respondent found the new alignments confusing.

Table B-5: Phase II - Open-Ended Comments about the Orange Route

Comment	Count
Dislike removal of Factory Street	1
New alignments confusing	1
Positive support (unspecified)	1

Yellow

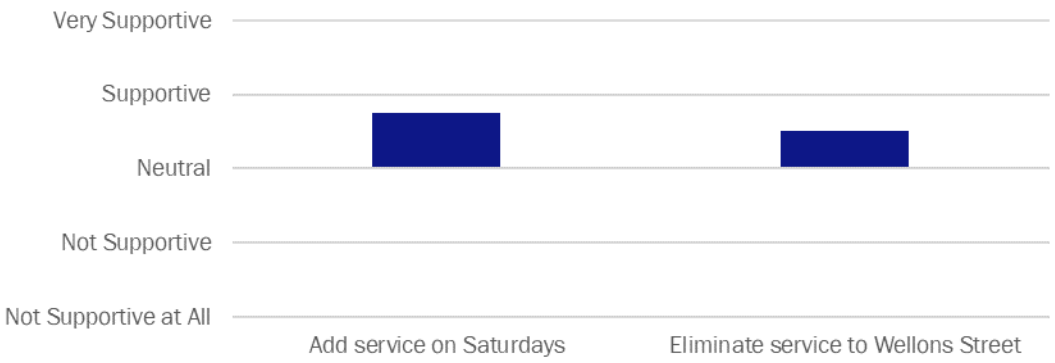
Respondents were asked two questions about the Yellow route:

> Do you support discontinuing the Yellow Route service to Obici Industrial Park/Wellons Street and adjusting the alignment to serve W Constance Avenue? The Green Route would serve Wellons Street and the Orange and Blue Routes would serve the Obici Industrial Park.

> Do you support adding Saturday hours?

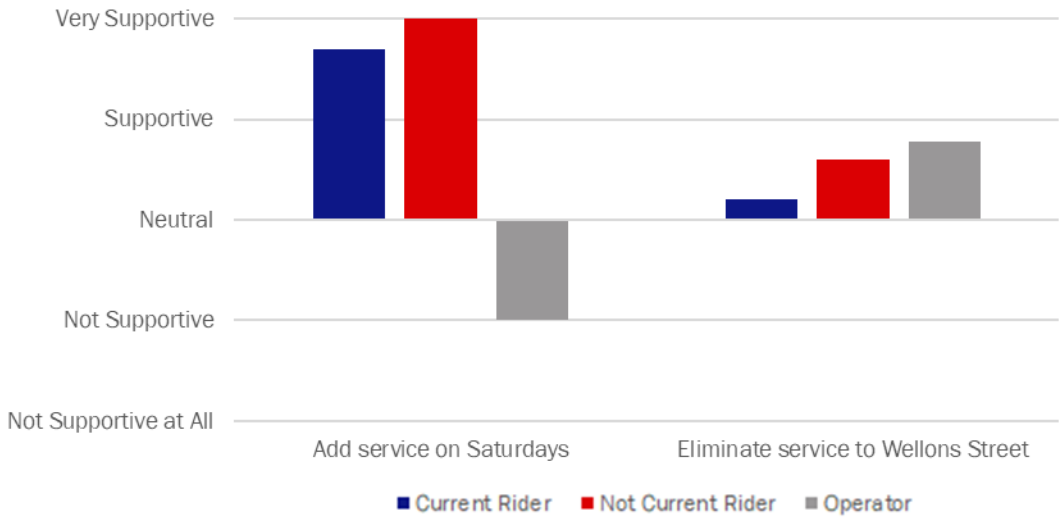
As seen in **Figure B-29**, respondents were somewhat supportive of both adding service on Saturdays and eliminating service to Wellons Street.

Figure B-29: Phase II - Level of Support of Yellow Route Changes from All Respondents (n = 24)



When breaking out by rider status, current riders and non-riders strongly supported adding service to the Yellow route on Saturdays (**Figure B-30**), yet operators were solidly not supportive. Current riders were neutral on the elimination of service to Wellons Street, while non-riders and operators were somewhat supportive.

Figure B-30: Phase II - Level of Support of Yellow Route Changes by Rider Status (n = 24)



Open-Ended Comments

No respondents wrote a comment related to the Yellow route.

Pink

Respondents were asked three questions about the Pink route:

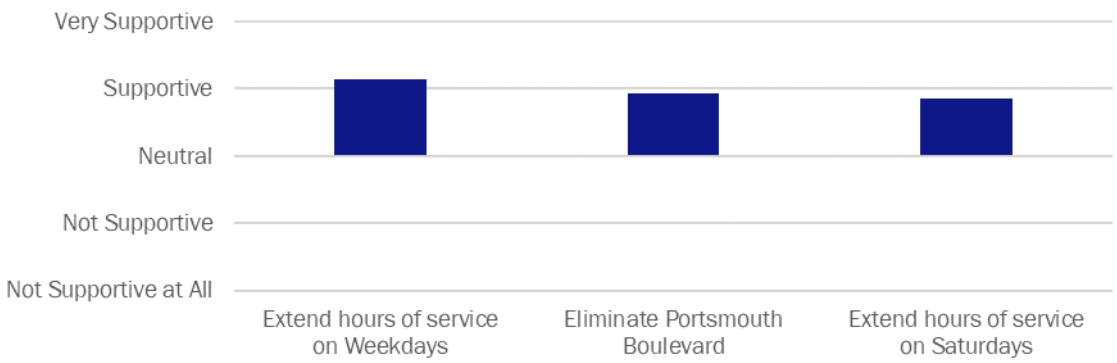
> Do you support changing the Pink Route to not run on Portsmouth Boulevard? The Pink Route would run on Wilroy Road/Nansemond Parkway in both directions.

> Do you support extending the hours of service, as well as adding midday service, during Weekdays?

> Do you support extending the hours of service on Saturday?

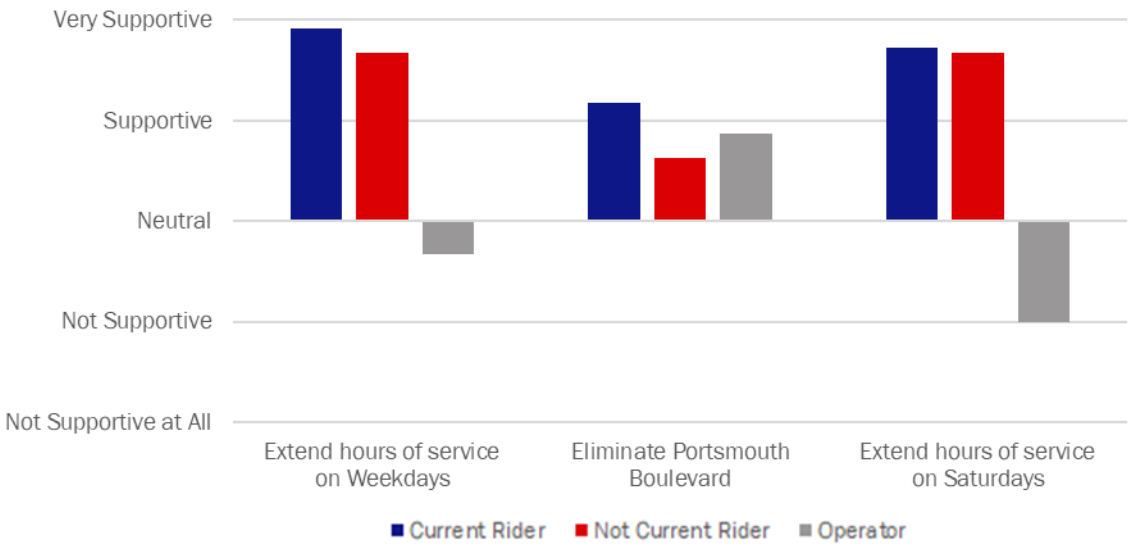
As seen in **Figure B-31**, respondents were supportive of all potential changes to the Pink Route.

Figure B-31: Phase II - Level of Support of Pink Route Changes from All Respondents (n = 29)



When breaking out by rider status, current riders and non-riders strongly supported extending the hours of service on Weekdays and Sundays (**Figure B-32**), yet operators were neutral on adding hours on Weekdays and did not support adding hours on Saturdays. Current riders were supportive of eliminating Portsmouth Boulevard from the Pink route, while non-riders and operators were somewhat supportive.

Figure B-32: Phase II - Level of Support of Pink Route Changes by Rider Status (n = 29)



Open-Ended Comments

Four people wrote a comment related to the Pink route (**Table B-6**). One respondent was confused about the change, and one respondent wanted the Saturday hours extended even more than proposed.

Table B-6: Phase II - Open-Ended Comments about the Pink Route

Comment	Count
Confused about change	1
Expand north to College Drive	1
Extend Saturday hours to 6:30 a.m.–6:30 p.m.	1
Extend to Portsmouth Harris Teeter near US 17	1

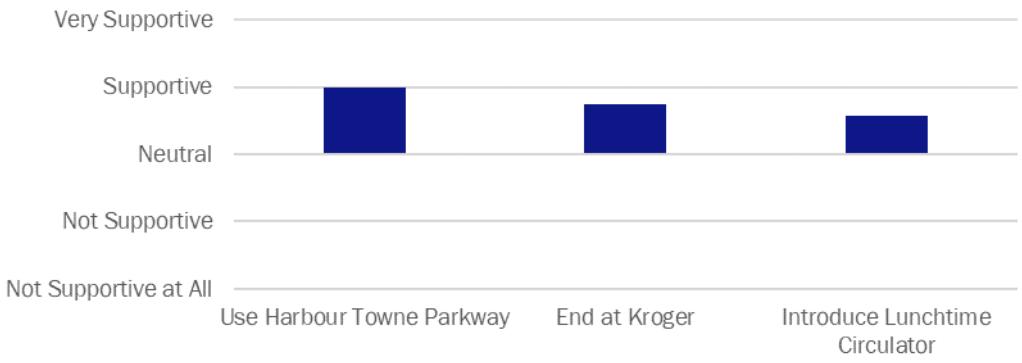
Purple

Respondents were asked three questions about the Purple route:

- Do you support discontinuing the Purple Route on Harbour View Boulevard, north of Hampton Roads Parkway, and adding a lunchtime circulator (11:00am – 1:30pm) that would service this area?
- Do you support changing the Purple Route to turn around at the Kroger Marketplace on University Boulevard?
- Do you support changing the Purple Route to use Harbour Towne Parkway to serve Bon Secours Health Center?

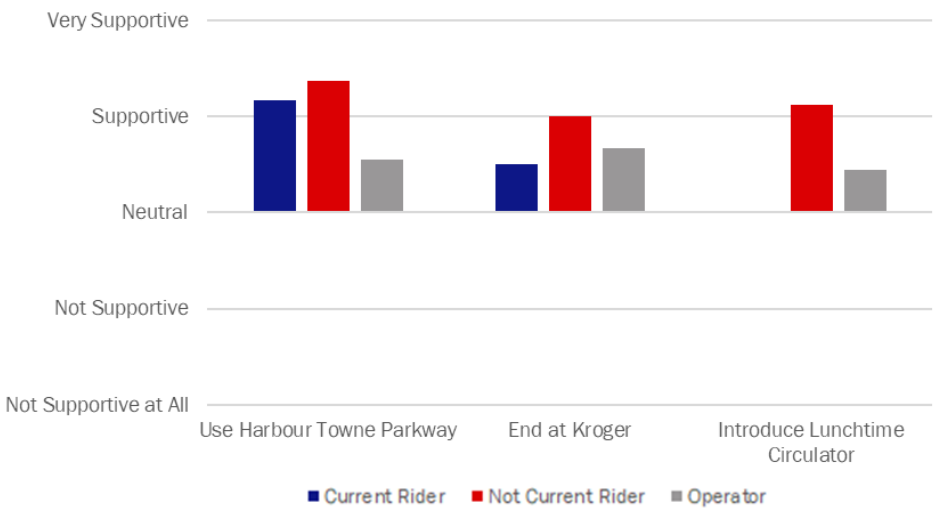
As seen in **Figure B-33**, respondents were supportive of using Harbour Towne Parkway to serve Bon Secours Health Center, while they were less supportive of ending the route at Kroger and introducing the lunchtime circulator.

Figure B-33: Phase II - Level of Support of Purple Route Changes from All Respondents (n = 23)



When breaking out by rider status, current riders supported using Harbour Towne Parkway and somewhat supported ending the route at Kroger (**Figure B-34**). Current riders were exactly neutral towards introducing a lunchtime circulator. Current riders solidly supported all three changes. Operators were somewhat supportive of all three changes.

Figure B-34: Phase II - Level of Support of Purple Route Changes by Rider Status (n = 23)



Open-Ended Comments

Three people wrote a comment related to the Purple route and made five unique comments (**Table B-7**). One respondent wanted the lunchtime circulator hours longer than proposed and asked that the new route be connected to healthcare destinations.

Table B-7: Phase II - Open-Ended Comments about the Purple Route

Comment	Count
Build pedestrian-friendly bus stops with shelters and seats	1
Make lunchtime circulator connect to healthcare destinations	1
Make lunchtime circulator hours 10:30 a.m.–2:00 p.m.	1
Positive support (unspecified)	1
Run on Bennetts Pasture Road	1

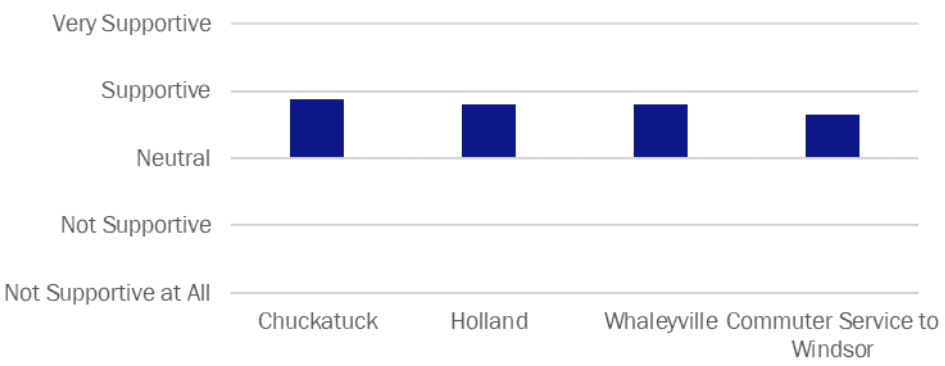
New Services

Respondents were asked four questions about potential new services offered by Suffolk Transit:

- Do you support new on-demand service in Chuckatuck that would connect to Downtown Suffolk?
- Do you support new on-demand service in Holland that would connect to Downtown Suffolk?
- Do you support new on-demand service in Whaleyville that would connect to Downtown Suffolk?
- Do you support new commuter service between Windsor and Downtown Suffolk?

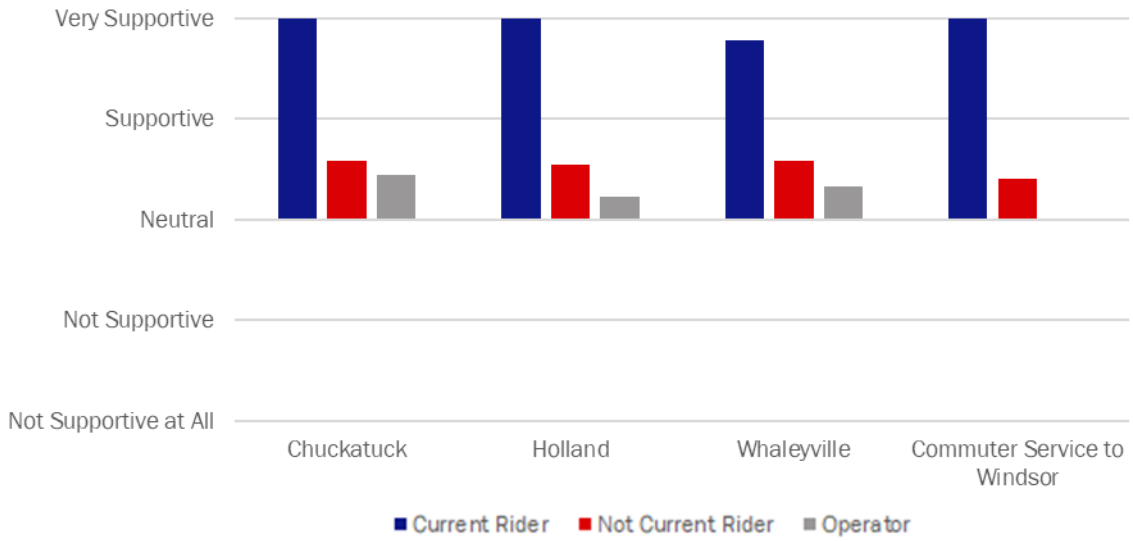
As seen in **Figure B-35**, all four new services received support from respondents. On-demand service to Chuckatuck had the most support, while commuter service between Windsor and Downtown Suffolk had less support.

Figure B-35: Phase II - Level of Support of New Services from All Respondents (n = 39)



When breaking out by rider status, current riders were very supportive of all four new services (**Figure B-36**). Non-riders were somewhat supportive of all four. Operators had lower levels of support, with the most for Chuckatuck and exactly neutral support for commuter service between Windsor and Suffolk.

Figure B-36: Phase II - Level of Support of New Services by Rider Status (n = 39)



Open-Ended Comments

Six people wrote comments about the proposed on-demand and commuter service (**Table B-8**). One person thought the new service would not be cost effective, while five expressed general support.

Table B-8: Phase II - Open-Ended Comments about New Services

Comment	Count
Positive support (unspecified)	5
Not cost effective	1

B.3.5 Additional Open-Ended Comments

At the end of the survey, respondents were given space to give additional comments. Thirteen people wrote 14 general comments about the service (**Table B-9**). Three complained about public transit being funding and three wanted more connections to HRT's service area. Two comments referenced issues with the Downtown Transfer Station – specifically, issues with traffic from museum visitors, panhandling and drug use. Two comments expressed the desire to attract more teenagers to the service.

Table B-9: Phase II - Additional Open-Ended Comments

Comment	Count
Complaints about funding public transit	3
More connections to HRT, Hampton, and Portsmouth	3
Issues with Downtown Transfer Station	2
More service hours	2
Teens should ride free/get more young people riding	2
Eliminate fares completely	1
Make system map available on website without using app	1

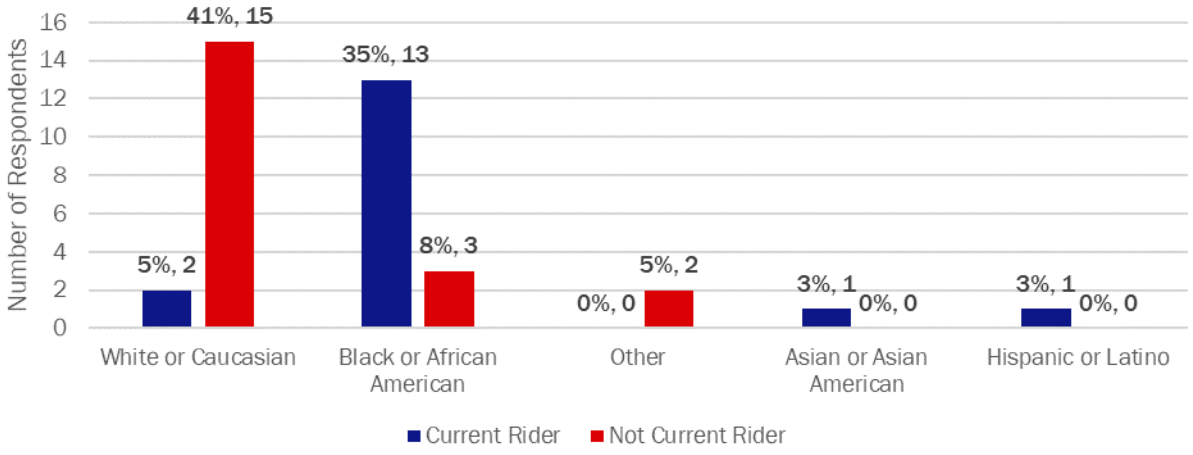
B.3.6 Demographics

At the end of the survey, respondents were asked a series of optional, demographic questions. The following analysis does not include operators.

Race

When asked their race or ethnicity, 46 percent chose white or Caucasian. Of this 46 percent, two said they used Suffolk Transit service and 15 said they did not. In addition to these respondents, 43 percent of respondents chose Black or African-American, with 13 riders and three non-riders. There were also two respondents who chose "other", one respondent who chose Asian or Asian American, and one respondent who chose Hispanic or Latino (**Figure B-37**). Other options included American Indian or Alaska Native and Native Hawaiian or Pacific Islander, but no respondents chose those options.

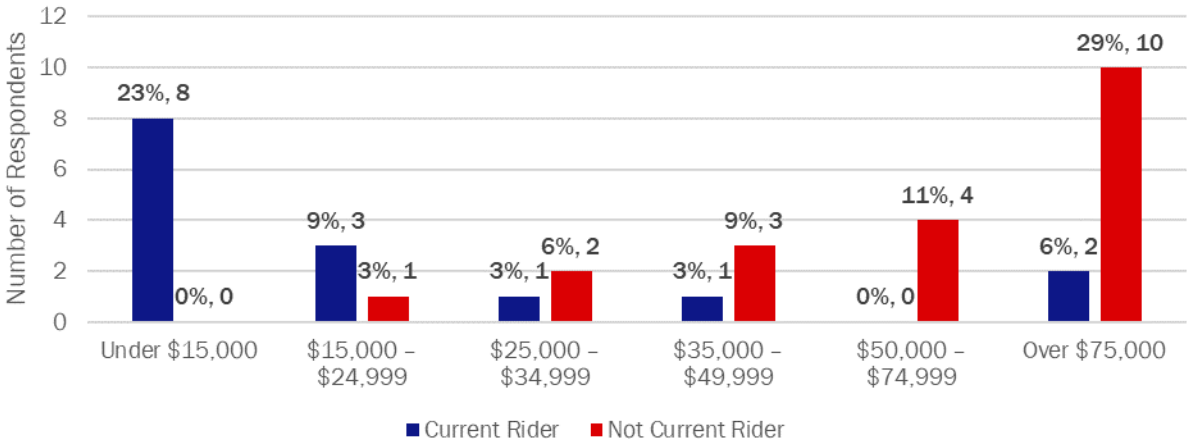
Figure B-37: Phase II - Race and Ethnicity by Rider Status (n = 37)



Income

Of the 23 percent of respondents who stated their annual household income was below $15,000, all eight were Suffolk Transit riders. Twelve percent indicated their income was between $15,000 and $24,999; three respondents were Suffolk Transit riders while one was not. Nine percent answered that their income was between $25,000 and $34,999; two respondents were a rider and one was not. Twelve percent answered that their income was between $35,000 and $49,999, with three riders and one non-rider. Eleven percent stated their income was between $50,000 and $74,999; all four were non-riders. Finally, 35 percent said their income was over $75,000, with two respondents stating they were riders and 10 stating they were not riders (**Figure B-38**).

Figure B-38: Phase II - Income by Rider Status (n = 35)



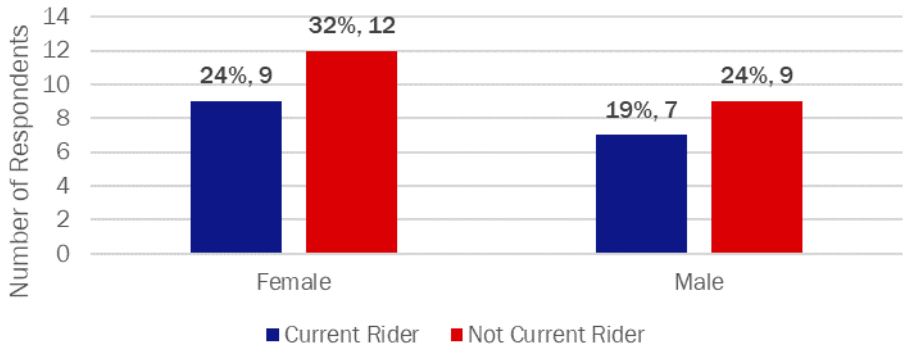
Language

All 37 people who responded to the question, "What is the primary language you speak at home?" selected English.

Gender

More respondents stated they were female than male (**Figure B-39**). Of the 56 percent of the female respondents, nine respondents said they were current riders while 12 said they were not. Of the 44 percent of male respondents, seven said they were current riders and nine said they were not. Respondents also could have chosen "other" as an option.

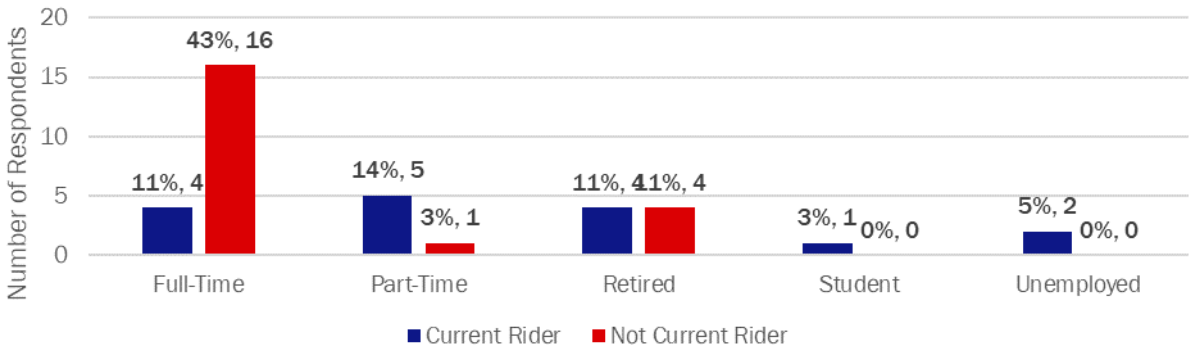
Figure B-39: Phase II - Gender by Rider Status (n = 37)



Employment

When asked about their employment status, 54 percent said they were employed full-time, with four respondents stating they were current riders and 16 stating they did not ride Suffolk Transit (**Figure B-40**). Seventeen percent marked they were employed part-time; five were current riders and one did not ride Suffolk Transit. Twenty-two percent stated they were retired, with four respondents riding Suffolk Transit and four not. One respondent said they were a student, and two respondents said they were unemployed.

Figure B-40: Phase II - Employment Status by Rider Status (n = 37)



B.4 Phase III – Minutes

B.4.1 Stakeholder Meeting

Attendee List

- L.J. Hansen – Public Works
- Maria Ptakowski – Public Works
- Meagan Sanders – Lake Prince Woods
- Roxanne Flamer - SRHA
- Mike Smith - SRHA
- Kevin Wyne – City of Suffolk Planning
- Grace Heagy – City of Suffolk Planning
- Deanna Holt – City of Suffolk Economic Development
- Shatae Dancy – Virginia Regional Transit
- Phil Thompson - Virginia Regional Transit
- Helena Gabriel – Parks & Recreation
- Jason Souders – Public Works
- Jeff Zeigler – The Children's Corner
- Steve Julian – Sentara Obici
- Angela Lawhorne - PDCCC
- Cheryl Griffin - CAPS
- Sarah Crouch – Obici Healthcare Foundation
- Ryan Furgerson – Michael Baker International
- Faruk Hesenjan – Michael Baker International
- Rachel Lesniak – Foursquare ITP

Introductions

- Ryan Furgerson introduced the consultant team. He asked attendees to introduce themselves and explain how transit connects to their organizations.
- Themes of the introductions included connecting residents and clients to job opportunities and medical care; attracting businesses and downtown redevelopment; helping residents and clients be self-sufficient; and understanding how changes to transit affect riders.

Overview of the Strategic Plan Process

- Ryan Furgerson gave an overview of the strategic plan process.
- Ryan Furgerson explained what a transit strategic plan is and its connection to the state government. He emphasized that a strategic plan allows a transit system to think far into the future and create a document to be used internally and to use in funding requests.
- Ryan Furgerson showed the project schedule and explained where the strategic vision process fits into the overall plan.

Goals and Objectives

- Faruk Hesenjan presented the section on the strategic plan's goals and objectives.
- Faruk Hesenjan explained that previous goals were focused on starting a new system, and now Suffolk Transit needs more comprehensive goals. These goals should align with local and regional transportation goals and regulations.
- Faruk Hesenjan explained that the new goals are now measurable and touch upon:
  - Growth and Opportunity
  - Operational Excellence
  - Community Integration
  - Financial Accountability
  - Regulator Compliance
- Shatae Dancy asked if these new goals would affect data and performance, especially under operational excellence. There are geographic obstacles (i.e. multiple rail lines) that make meeting targets like on-time performance difficult.

Trade-Off Activity

- Rachel Lesniak led a trade-off activity for the stakeholders. Using Poll Everywhere, a live polling program, stakeholders could test their response to five trade-off scenarios. The percentages below reflect the responses

Table B-10: Stakeholder Meeting - Trade-off Activity Results

Question	Answer A	Answer B
A. More frequent bus service vs. B. Longer service hours (n = 14)	43%	57%
A. More weekday service vs. B. more weekend service (n = 14)	57%	43%
A. Fewer bus stops for faster bus service vs. B. More bus stops for more accessibility and less walking (n = 14)	36%	64%
A. Buses run more frequently but serve fewer streets vs. B. Buses run on more streets but less frequently (n = 16)	56%	44%
A. Improve existing services vs. B. Expand service to new areas (n = 15)	27%	73%

Public Outreach Summary

> Rachel Lesniak showed the results of the same trade-off questions that were asked in a public survey in October 2018.

Recommendations Overview

> Rachel Lesniak explained the guiding principles for transit that informed the draft recommendations.
> Rachel Lesniak presented a map of the draft recommendations for the existing fixed route system. She explained these would be changed further to reflect the stakeholders' responses to the trade-off activities.
> Rachel Lesniak also explained two potential new types of service: on-demand service and commuter service.
    — Stakeholders asked about the proposed fare structure. Rachel Lesniak and L.J. Hansen clarified that the fare structure would be different than the fixed-route system, but details are not yet proposed.
    — Stakeholders asked if the on-demand service would be available for groups. Rachel Lesniak clarified that the service is designed for individuals rather than groups.
    — L.J. Hansen clarified that on-demand service will not provide instant service like Uber or Lyft and will be dependent on funding services. He also said the goal was to connect residents of rural boroughs to Downtown Suffolk and Northern Suffolk.

General Questions/Discussion

> Ryan Furgerson led a discussion session for any general questions or ideas for the strategic plan.
> Shatae Dancy had concerns with the Green route turning around at Kings Fork High School because of the congestion in the area.
> Shatae Dancy supported breaking the existing Orange route into two routes.
> L.J. Hansen expressed support for bidirectional service and explained to stakeholders the benefits of removing loops and deviations.
> Multiple stakeholders mentioned increasing span of service:
    — A stakeholder mentioned that workers have shifts at all hours, not just when buses currently run. Industrial parks have previously requested increased service and requests have been made where possible.
    — Similarly, a stakeholder said that community college night classes start at 6 p.m. and end at 9 p.m. Students can take transit to get to class but cannot take transit home.
    — A stakeholder said that her clients need dialysis three times a week, and increasing service on the weekends would give clients more options.
> Multiple stakeholders talked about marketing.
    — A stakeholder mentioned that people are still surprised there is a transit system in Suffolk. The stakeholder thought that installing paper brochures in common places like Wal-Mart might reach new riders.
    — Maria Ptakowski explained their real-time arrival system, ETA Spot, and how it is accessible to riders at bus stops. She encouraged the stakeholders at non-profits to show clients the web-based map to see the system.
    — Ryan Furgerson mentioned that an effective method of marketing might be asking for volunteer ride ambassadors to help new riders understand transit.
    — Maria Ptakowski answered more questions about signage, availability of bike rack on buses, the number of daily riders, and the frequency of overcrowded trips.

Next Steps

> Ryan Furgerson detailed the next steps, which include:
    — Summarize Stakeholder Outreach
    — Finalize Recommendations
    — Develop the financial and implementation plans
    — Finalize the Transit Strategic Plan

B.4.2 City Council Meeting

L.J. Hansen explained the project and introduced Ryan Furgerson to give the presentation.

Overview of Presentation

Ryan Furgerson explained the purpose of a Transit Strategic Plan and presented the current project schedule.

Ryan Furgerson discussed why the Transit Strategic Plan outlines new goals and objectives. These new goals and objectives align with recent local and regional transportation goals and regulations. The goals and objectives now touch on:

> Growth and Opportunity.
> Operational Excellence.
> Community Integration.
> Financial Accountability.
> Regulatory Compliance.

Ryan Furgerson showed the results from the first phase of public outreach and explained that the public was given trade-off exercises to complete. The results of these exercises informed the recommendations.

Ryan Furgerson explained the guiding principles that also informed the recommendations. These principles, based on the goal that service should be simple, are:

- Service Should Operate at Regular Intervals.
- Routes Should Operate Along a Direct Path.
- Route Should be Symmetrical.
- Routes Should Serve Well-Defined Markets.
- Service Should be Well-Coordinated.

Ryan Furgerson showed a map of the draft recommendations. Ryan Furgerson also discussed the possibility for on-demand service and commuter service, which would be new types of services for Suffolk Transit.

Comments from the City Council

Councilmember Duman said that Chuckatuck has no service currently and would like infrequent, fixed-route service to medical and retail destinations plus a connection to central Suffolk. He asked about the possibility of this happening.

L.J. Hansen explained that the proposed demand response model would cover rural areas like Chuckatuck, but that he did not have specific details yet. He also mentioned that it is not currently cost effective to run fixed-route service to Chuckatuck, but it could be in the future if the demand response service established a market.

Councilmember Duman asked if a survey had been administered to Chuckatuck residents about the viability of transit. L.J. Hansen said they had and that there was interest in demand response service. Councilmember Duman requested a survey to determine if there is viability for fixed-route service to Chuckatuck.

B.5 Additional Input Received

The Virginia Organizing group obtained over 100 surveys on Suffolk Transit service. The survey asked participants if they were satisfied with Suffolk Transit's bus service and how they would change it. While some respondents were satisfied with Suffolk Transit's bus service, many were dissatisfied with the hours of service. The most frequent comment from respondents was that service should run longer, beginning as early as 5:00 a.m. and running until at least 11:00 p.m., on weekdays and weekends. A few respondents also suggested that service be more frequent, and a small portion felt that the bus could improve their on-time performance and that the Suffolk Transit service could be expanded geographically.

C. Suffolk Transit Operator Contract

CONTRACT
BETWEEN
CITY OF SUFFOLK, VA AND VIRGINIA REGIONAL TRANSIT

This CONTRACT (CONTRACT) made and entered into this, the 9th day of November, 2011 by and between the **CITY OF SUFFOLK, VIRGINIA** whose principal office is the Municipal Center, 441 Market Street, Suffolk, VA 23434, hereinafter referred to as the "CITY", party of the first part, and **VIRGINIA REGIONAL TRANSIT** with an office located at 109 North Bailey Lane, Purcellville, VA 20132 hereinafter referred to as the "CONTRACTOR", party of the second part.

CONTRACT

The CONTRACTOR did on the 30th day of August, 2011 submit a Request for Proposal to perform the services stipulated in accordance with the Request for Proposal to Provide Transit Services hereinafter referred to as "PROJECT", which by reference is made a part hereof.

In consideration of the following mutual agreements and covenants to be kept by each party, the parties agree as follows:

1. CONTRACT DOCUMENTS

It is mutually understood and agreed by the parties hereto that the following documents are incorporated herein by reference the same as if each had been fully set out and attached hereto and hereinafter shall be referred to as the "Contract Documents":

Request for Proposal #2012-00012 inviting firms to submit a proposal as published August 1, 2011, Conditions of Contract (General, Special, Supplemental and other conditions as they may be titled); VIRGINIA REGIONAL TRANSIT proposal dated August 30, 2011, "Exhibit "A" and Anticollusion/Nondiscrimination/Drug Free Workplace clauses, all documents of which are collectively referred to herein as "Contract Documents" and are incorporated by reference herein.

Should there be conflicts among and between the Contract Documents, the terms of the final executed CONTRACT shall take precedence over the other Contract Documents. Should there be conflicts amount between the final executed CONTRACT and any subsequent change orders or other written modifications, the terms of the subsequent change order or other written modification shall take precedence.

2. SCOPE OF WORK/COMPENSATION

A. CONTRACTOR'S SERVICES

1. Prepare a Comprehensive Operation Analysis Plan (COAP)

2. Present Draft and Final Reports of Findings and Recommendations

3. Development of a transit plan that will meet the mobility needs of the CITY, subject to approval and funding by City Council.

4 Provide public transportation services for routes currently designated as 71 and 74, to include body on chassis buses with logo as approved by City staff beginning January 2, 2012 with service charges to be implemented following the adoption of the COAP and following periodic reviews of service during the life of the AGREEMENT.

5. Provide ADA service as mandated by state and federal requirements at levels of service necessary to maintain funding and compliance with those requirements.

6. Assist City staff with applications for state and federal capital and operating assistance grants through the Virginia Department of Rail and Transportation.

7. Collect all fares collected from the riders; fares to be determined by the CITY

8. Provide trolley service for special events

9. Gives presentations to City Council as directed

10. Develops and provides a marketing plan to include developing and distributing an updated service brochure

11. Provide signage for fixed bus stops that will be identified in the COAP and work with CITY staff to develop a standard for bus stop requirements.

B. THE CITY SHALL PROVIDE

1. Available pertinent information and available data requested by the CONTRACTOR during the COAP project and any subsequent studies or reviews.

2. Timely review of draft and preliminary materials submitted by the CONTRACTOR.

4. Appropriate authorizations and signatures.

5. Without charge, a temporary office location to conduct transit operations for the City of Suffolk. This arrangement shall not last longer than one year from the effective date of this AGREEMENT, unless authorized by subsequent action.

6. Availability of fuel thru the Fleet Management Division. The CONTRACTOR shall be responsible to reimburse the CITY for all fuel utilized by the CONTRACTOR'S vehicles, without markup by the CITY.

C. COMPENSATION TO THE CONTRACTOR

In consideration of the satisfactory performance of the provisions of this CONTRACT, the CITY shall pay to VIRGINIA REGIONAL TRANSIT an amount not to exceed $22,500.00 for a one time consulting fee to cover the cost of the Comprehensive

Operations Analysis Plan (COAP). Transportation services to be provided at a rate of $63.00 per hour for service plus $7.00 per hour for capital costs. Trolley services, as requested for special events, shall be billed at a rate of $70.00 per hour.

Upon acceptance of work, the CITY will render payment within forty-five (45) days of receipt of invoice. Interest shall accrue at the rate of one percent per month.

Prior to payment, the CONTRACTOR shall provide their federal employer identification number.

Unless otherwise provided under the terms of this CONTRACT, interest for late payment shall not exceed one percent (1%) per month.

3. CHANGES AND ADDITIONS

It shall be the responsibility of the CONTRACTOR to notify the CITY, in writing, of any necessary modifications or additions to the Scope of this CONTRACT. Compensation for changes or additions in the Scope of this CONTRACT will be negotiated and approved by the CITY in writing.

It is understood and agreed to by both the CITY and the CONTRACTOR that such modifications or additions to this CONTRACT shall be made only by the full execution of the CITY'S standard CONTRACT change order form. Furthermore, it is understood and agreed by both parties that any work done by the CONTRACTOR based upon such modification or addition to this CONTRACT prior to the CITY'S execution of its standard CONTRACT change order form shall be at the total risk of the CONTRACTOR, and said work may not be compensated by the CITY.

4. PAYMENT TO SUBCONTRACTOR

Payments to subcontractor(s) shall be made in accordance with § 2.2-4354 of Code of Virginia (1950), as amended. Unless otherwise specified in this CONTRACT, interest shall accrue at the rate of one percent (1%) per month.

5. TERMINATION WITHOUT CAUSE

The CITY may at any time, and for any reason, terminate this Contract by written notice to CONTRACTOR specifying the termination date, which shall be not less than thirty (30) days from the date such notice is mailed.

Notice shall be given to CONTRACTOR by certified mail/return receipt requested at the address set forth in CONTRACTOR'S Proposal or as provided in this Contract.

In the event of such termination, CONTRACTOR shall be paid such amount as shall compensate CONTRACTOR for the work satisfactorily completed, and accepted by the CITY in this Transit Services CONTRACT 2011, at the time of termination.

If the CITY terminates this Contract, CONTRACTOR shall withdraw its personnel and equipment, cease performance of any further work under this Contract, and turn over to the CITY any work completed or in process for which payment has been made.

6. TERMINATION WITH CAUSE/DEFAULT/CANCELLATION

In the event that CONTRACTOR shall for any reason or through any cause be in default of the terms of this Contract, the CITY may give CONTRACTOR written notice of such default by certified mail/return receipt requested at the address set forth in CONTRACTOR'S proposal or as provided in this Contract.

Unless otherwise provided, CONTRACTOR shall have ten (10) days from the date such notice is mailed in which to cure the default. Upon failure of CONTRACTOR to cure the default, the CITY may immediately cancel and terminate this Contract as of the mailing date of the default notice.

Upon termination, CONTRACTOR shall withdraw its personnel and equipment, cease performance of any further work under the Contract, and turn over to the CITY any work in process for which payment has been made.

In the event of violations of law, safety or health standards and regulations, this Contract may be immediately cancelled and terminated by the CITY and provisions herein with respect to opportunity to cure default shall not be applicable.

7. NON-APPROPRIATION- Availability of Funds

It is understood and agreed between the parties hereto that the CITY shall be bound and obligated hereunder only to the extent that the funds shall have been appropriated and budgeted for the purpose of this Contract. In the event funds are not appropriated and budgeted in any fiscal year for payments due under this Contrac0t, the CITY shall immediately notify CONTRACTOR of such occurrence and this Contract shall terminate on the last day of the fiscal year for which an appropriation was made without penalty or expense to the CITY of any kind whatsoever.

8. ASSIGNMENT

Neither the CITY nor the CONTRACTOR shall assign, sublet or transfer their right or obligations in the CONTRACT without the written consent of the other; such consent shall not be unreasonably withheld. Assignment by the CONTRACTOR to any current or future parent, subsidiary, or affiliate in connection with a corporate transaction shall require the consent of the CITY.

9. NOTICE

Any notice, demand, or request by or made pursuant to this CONTRACT shall be personally delivered in writing or deposited in the United States mail, postage prepaid, to the representative specified below or as otherwise designated in writing and mutually agreed.

Linda S. Story
Purchasing Agent
441 Market Street, Room 105
Suffolk, Virginia 23434

With a copy to: Selena Cuffee-Glenn
City Manager
441 Market Street
Suffolk, Virginia 23434

CONTRACTOR: Mark McGregor
President/Chief Executive Officer
109 North Bailey Lane
Purcellville, VA 20132

The CITY'S representative will be Eric Nielsen, Director of Public Works or as otherwise designated in writing:

Eric Nielsen
Director of Public Works
440 Market Street, 2nd Floor
Suffolk, Virginia 23434
(757) 514-4356

The CONTRACTOR'S representative shall be Darrel M. Feasel, or as otherwise designated in writing and accepted by the CITY in writing:

Darrel Feasel
Transit Operations Program Manager
Virginia Regional Transit
109 North Bailey Lane
Purcellville, VA 20132
(877) 777-2708
darrell@vatransit.org

Nothing contained in this Article shall be construed to restrict the transmission of routine communications between representatives of the CONTRACTOR and the CITY.

10. CONFLICT OF INTEREST

CONTRACTOR shall not accept or receive commissions or other payments from third parties for soliciting, negotiating, procuring, or effecting insurance on behalf of the CITY.

11. NON-DISCRIMINATION

During the performance of this CONTRACT, the CONTRACTOR agrees that they will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, service disabled veterans or any other basis prohibited by law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the CONTRACTOR. The CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

Also, the CONTRACTOR in all solicitations or advertisements for employees placed by or on behalf of the CONTRACTOR, will state that the CONTRACTOR is an equal

opportunity employer.

Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

The CONTRACTOR will include the provisions of this nondiscrimination clause in every subcontract or purchase order of over $10,000, so that the provisions will be binding upon each subcontractor vendor supplying services, goods or materials in connection with this CONTRACT.

12. DRUG-FREE WORKPLACE REQUIREMENTS

During performance of this CONTRACT, the CONTRACTOR agrees as follows: (i) to provide a drug-free workplace for the CONTRACTOR'S employees; (ii) to post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the CONTRACTOR'S workplace, specifying the actions that will be taken against employees for violations of such prohibition; and (iii) state in all solicitations or advertisements for employees placed by or on behalf of the CONTRACTOR that the CONTRACTOR maintains a drug-free workplace; (iv) CONTRACTOR will include the provisions of the foregoing Sections (i), (ii) and (iii) in every subcontract or purchase order of over $10,000, so that the provisions will be binding upon each subcontractor or vendor.

For the purposes of this paragraph, "drug-free workplace" means a site for the performance of work done in connection with a specific CONTRACT awarded to the CONTRACTOR where employees at such site are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the CONTRACT.

13. INSURANCE

The successful offeror shall procure, maintain, and provide proof of, insurance coverages for injuries to persons and/or property damage as may arise from or in conjunction with, the work performed on behalf of the City by the offeror, his agents, representatives, employees or subcontractors. Proof of coverage as contained herein shall be submitted fifteen (15) days prior to the commencement of work and such coverage shall be maintained by the offeror for the duration of the contract period; for occurrence policies. Claims made policies must be in force or that coverage purchased for three (3) years after contract completion date.

a. General Liability: Coverage shall be as broad as: Comprehensive General Liability endorsed to include Broad Form, Commercial General Liability form including Products/Completed Operations.

Minimum Limits

General Liability:
$1,000,000 General Aggregate Limit

$1,000,000 Products & Completed Operations
$1,000,000 Personal and Advertising Injury
$1,000,000 Each Occurrence Limit
$50,000 Fire Damage Limit
$5,000 Medical Expense Limit

Professional Liability (Error and Omissions):
$2,000,000 Annual Aggregate Limit
$1,000,000 Each Occurrence Limit

b. Automobile Liability: Coverage sufficient to cover all vehicles owned, used, or hired by the offeror, his agents, representatives, employees or subcontractors.

Minimum Limits

Automobile Liability:
$1,000,000 Combined Single Limit
$1,000,000 Each Occurrence Limit
$5,000 Medical Expense Limit

c. Workers' Compensation: Limits as required by the Workers' Compensation Act of Virginia. Employers Liability, $1,000,000.

d. Coverage Provisions

1. All deductibles or self-insured retention shall appear on the certificate(s).

2. The City of Suffolk, its' officers/officials, employees, agents and volunteers shall be added as "additional insured" as their interests may appear. This provision does not apply to Professional Liability or Workers' Compensation/Employers' Liability.

3. The offeror's insurance shall be primary over any applicable insurance or self-insurance maintained by the City.

4. Shall provide 30 days written notice to the City before any cancellation, suspension, or void of coverage in whole or part, where such provision is reasonable.

5. All coverages for subcontractors of the offeror shall be subject to all of the requirements stated herein.

6. All deductibles or self-insured retention shall appear on the certificate(s) and shall be subject to approval by the City. At the option of the City, the insurer shall reduce or eliminate such deductible or self-insured retention; or the offeror shall be required to procure a bond guaranteeing payment of losses and related claims expenses.

7. Failure to comply with any reporting provisions of the policy(s) shall not affect coverage provided the City, its' officers/officials, agents, employees

8. The insurer shall agree to waive all rights of subrogation against the City, its' officers/officials, agents, employees or volunteers for any act, omission or condition of premises which the parties may be held liable by reason of negligence.

9. The offeror shall furnish the City certificates of insurance including endorsements affecting coverage. The certificates are to be signed by a person authorized by the insurance company(s) to bind coverage on its' behalf, if executed by a broker, notarized copy of authorization to bind, or certify coverage must be attached.

10. All insurance shall be placed with insurers maintaining an A.M. Best rating of no less than an A: VII. If A.M. Best rating is less than A: VII, approval must be received from City's Risk Manager.

All coverages designated herein shall be as broad as the Insurance Services Office (ISO) forms filed for use with the Commonwealth of Virginia.

14. HOLD HARMLESS/INDEMNIFICATION

The CONTRACTOR shall indemnify, defend, and hold harmless the CITY, its officials, employees, agents, and representatives thereof from any and all losses, damages, claims, fines, penalties, suits, costs, actions, or claims of any kind, including attorney's fees, brought on account of any personal injuries, damages, or violations of rights, sustained by any person or property which arise out of any violation of law by, and all acts and omissions of the CONTRACTOR, the CONTRACTOR'S agents, employees, or customers occurring in connection with the products and services covered herein or from any claims or amounts arising from the violation of any law, bylaw, ordinance, regulation or decree.

The CONTRACTOR'S indemnification obligation with respect to any and all claims against the CITY or any of its officers, agents, employees, by any employee or statutory employee of the CONTRACTOR, or any of CONTRACTOR'S subcontractors, or anyone directly or indirectly employed by any of them, or anyone for whose acts the CONTRACTOR or CONTRACTOR'S subcontractor may be liable, shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the CONTRACTOR or any of CONTRACTOR'S subcontractors under workers' compensation laws, disability benefit laws or other applicable employee benefit laws.

15. RESPONSIBILITY OF CONTRACTOR

The CONTRACTOR shall, without additional costs or fee to the CITY, correct or revise any errors or deficiencies in his performance. Neither the CITY'S review, approval or acceptance of, nor payment for any of the services required under this CONTRACT shall be deemed a waiver of rights by the CITY, and the CONTRACTOR shall remain liable to the CITY for all costs which are incurred by the CITY as a result of the CONTRACTOR'S negligent performance of any of the services furnished under this CONTRACT.

16. COMPLIANCE WITH FEDERAL IMMIGRATION LAW

CONTRACTOR does not, and shall not, during the performance of the CONTRACT for goods and services in the Commonwealth, knowingly employ an unauthorized alien as defined in the Federal Immigration Reform and Control Act of 1986.

17. SEVERABILITY

In the event that any provision shall be adjudged or decreed to be invalid, such ruling shall not invalidate the entire CONTRACT but shall pertain only to the provision in question and the remaining provisions shall continue to be valid, binding and in full force and effect.

18. CONTROLLING LAW; VENUE, PENDING/DURING LITIGATION

This CONTRACT is made, entered into, and shall be performed in the CITY of Suffolk, Virginia, and shall be governed by the applicable laws of the Commonwealth of Virginia without regard to its conflict of law rules. In the event of litigation concerning this CONTRACT, the parties agree to the exclusive jurisdiction and venue of a court of competent jurisdiction in the City of Suffolk, Virginia; however, in the event that the federal court has jurisdiction over the matter, then the parties agree to the exclusive jurisdiction and venue of the U.S. District Court for the Eastern District of Virginia, Norfolk Division.

The CONTRACTOR shall not cause a delay in services because of the pending or during litigation proceedings, except with the express, written consent of the CITY or written instruction/order from the Court.

19. Compliance with State Law; Foreign and Domestic Business authorized to Transact Business in the Commonwealth (VPPA §2.2 – 4311.2)

A CONTRACTOR organized as a stock or nonstock corporation, limited liability company, business trust, or limited partnership or registered as a registered limited liability partnership shall be authorized to transact business in the Commonwealth as a domestic or foreign business entity if such is required by Title 13.1 or Title 50 or as otherwise required by law. Such status shall be maintained during the term of the contract. A public body may void any contract with a business if the business fails to remain in compliance with the provisions of this section.

20. ENTIRE AGREEMENT

This CONTRACT comprises the entire understanding between the parties and cannot be modified, altered or amended, except in writing and signed by all parties.

21. WAIVER

The failure by one party to require performance of any provision of this CONTRACT shall not affect that party's right to require performance at any time thereafter, nor shall a waiver of any breach or default of the CONTRACT constitute a waiver of any subsequent breach or default or a waiver of the provision itself.

IN WITNESS WHEREOF, the parties hereto have executed and sealed this CONTRACT as of the day and year first above written.

CITY OF SUFFOLK, VA

BY: _____
Selena Cuffee-Glenn
City Manager

ATTEST:

BY: _____
Erika S. Dawley
City Clerk

APPROVED AS TO FORM

BY: _____
Karla Williams
Assistant City Attorney

VIRGINIA REGIONAL TRANSIT

BY: _____ Pres/CEO
Mark McGregor
President/Chief Executive Officer

ATTEST:

BY: _____

Print Name: _____

Title: CFO

Read & approved
_____
Secretary, VRT