



Transit Development Plan Major Update (2022-2031)

Final Report

August 2021



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Section 1. Introduction

This planning effort was initiated by the Volusia County Council to update the Votran Transit Development Plan (TDP) for the 10-year period from 2022 through 2031. This TDP represents the County’s vision for public transportation during this time period and functions as the strategic guide for public transportation in the community.

Preparing and submitting a TDP major update that complies with Florida Administrative Code (F.A.C.) Rule 14-73.001 (commonly called the TDP Rule) every five years is also required by the Florida Department of Transportation (FDOT) as a prerequisite to the receipt of State Block Grant funds. According to F.A.C. Rule 14-73.001 – Public Transportation, “*The TDP shall be the applicant’s planning, development and operational guidance document to be used in developing the Transportation Improvement Program and the Department’s Five Year Work Program.*”

A major TDP update also allows transit agencies to outline actions to be taken in the following year and set goals for subsequent years. As a strategic plan, the TDP identifies needs in an unconstrained fashion and for which currently there is no funding. The most recent 10-year TDP major update for Volusia County’s fixed-route bus transit system, Votran, was adopted in September 2017 for Fiscal Years (FY) 2017–2026. This current major update of the TDP covers the 10-year period from FY 2022 to FY 2031 and is due by September 1, 2021.

Objectives of This Plan

The primary objective of this effort, which was conducted concurrently with Votran’s 2020 Comprehensive Operations Analysis (COA), was to develop a major update to the currently adopted Votran TDP, as required by state law. This TDP major update is expected to provide a 10-year vision plan for transit to help Volusia County continue to provide a desirable transit service that supports the broader local and regional multimodal transportation goals and create a crucial link between the transit system and the livability of and mobility in the communities that it serves.

It should be noted that findings from the Votran COA, which resulted in immediate and short-term operational recommendations, were incorporated into the TDP. These and all other TDP recommendations help provide a blueprint for Volusia County to improve transit while also assisting in the development of the Transportation Improvement Program and the FDOT Five-Year Work Program.

TDP Requirements

As a recipient of state Public Transit Block Grant funds, FDOT requires a major update of the Votran TDP every five years to ensure that the provision of public transportation is consistent with the mobility needs of local communities, as indicated previously. FDOT formally adopted the current requirements for TDPs on February 20, 2007. Major requirements of the regulation include the following:

- Major updates must be completed every 5 years, covering a 10-year planning horizon.

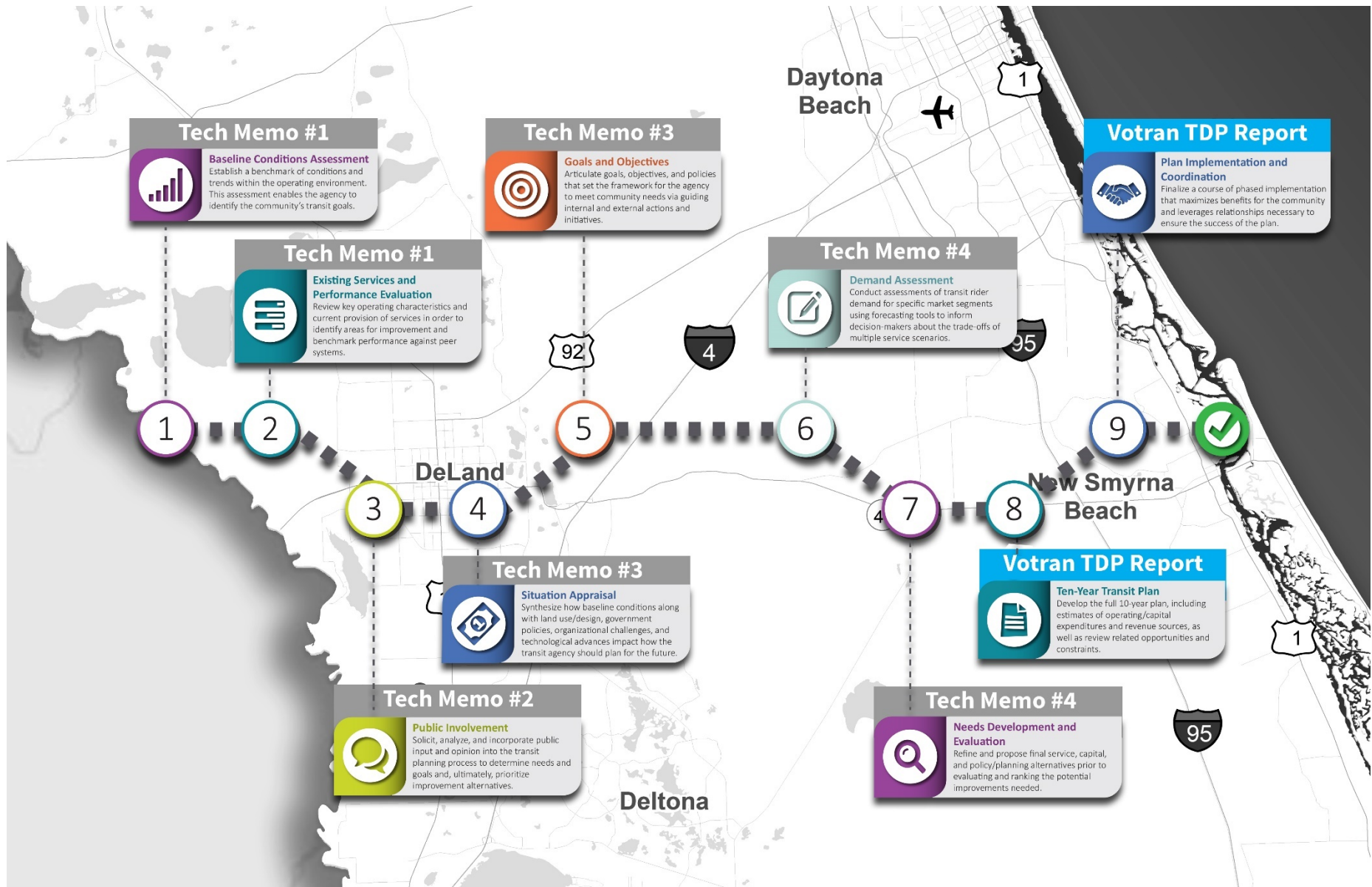
- A Public Involvement Plan (PIP) must be developed and approved by FDOT or be consistent with the approved Metropolitan Planning Organization (MPO) public participation plan.
- FDOT, the Regional Workforce Development Board, and the MPO must be advised of all public meetings at which the TDP is presented and discussed, and these entities must be given the opportunity to review and comment on the TDP during the development of the mission, goals, objectives, alternatives, and 10-year implementation program.
- Estimation of the community’s demand for transit service (10-year annual projections) using the planning tools provided by FDOT or a demand estimation technique approved by FDOT.

The Florida Legislature added an additional requirement for the TDP in 2007 with the adoption of House Bill 985. This legislation amended Florida Statutes (F.S.) 341.071, requiring transit agencies to “... specifically address potential enhancements to productivity and performance which would have the effect of increasing farebox recovery ratio.” FDOT subsequently issued guidance requiring the TDP and each annual update to include a 1–2-page summary report as an appendix to the major or annual TDP report on the farebox recovery ratio and strategies implemented and planned to improve it.

Votran TDP Process

The process and components Volusia County followed for the Votran TDP are consistent with the process and flow recommended by FDOT’s 2018 TDP Handbook. As shown in Figure 1-1, it includes the series of discrete and interrelated tasks (which were summarized with a number of technical memoranda that were reviewed by the multi-agency committee that guided the project) included in the development of this major update to Votran’s 10-year TDP, as presented in the remainder of this report.

Figure 1-1: Votran TDP Major Update Process



TDP Checklist

This TDP Update meets the requirements for a TDP major update in accordance with Rule Chapter 14-73, F.A.C. Table 1-1 is a list of TDP requirements from Rule 14-73.001 and indicates whether or not the item was accomplished as part of this Votran TDP, as well as its location within this 10-year plan.

Table 1-1: TDP Checklist

Public Involvement Process		TDP Section
√	Public Involvement Plan (PIP) drafted	4 & Appendix D
√	PIP approved by FDOT	4 & Appendix D
√	TDP includes description of Public Involvement Process	4
√	Provide notification to FDOT	4 & Appendix D
√	Provide notification to Regional Workforce Board	4
Situation Appraisal		
√	Land use	5
√	State and local transportation plans	5
√	Other governmental actions and policies	5
√	Socioeconomic trends	5
√	Organizational issues	5
√	Technology	5
√	10-year annual projections of transit ridership using approved model TBEST	7
√	Assessment of land uses and urban design patterns that support/hinder transit service provision	5
√	Calculate farebox recovery	3 & Appendix C
Mission and Goals		
√	Provider's vision	6
√	Provider's goals	6
√	Provider's objectives	6
Alternative Courses of Action		
√	Develop and evaluate alternative strategies and actions	8
√	Benefits and costs of each alternative	8
√	Financial alternatives examined	8, 9
Implementation Program		
√	Ten-year implementation program	9
√	Maps indicating areas to be served	9
√	Maps indicating types and levels of service	9
√	Monitoring program to track performance measures	9 & Appendix F
√	Ten-year financial plan listing operating and capital expenses	9
√	Capital acquisition or construction schedule	9
√	Anticipated revenues by source	9
Relationship to Other Plans		
√	Consistent with Florida Transportation Plan	5
√	Consistent with local government comprehensive plan	5
√	Consistent with regional transportation goals and objectives	5
Submission		
√	Adopted by Volusia County Council	
√	Submitted to FDOT	

Organization of This TDP

This report is organized into 10 major sections, including this **Introduction**.

Section 2 summarizes the **Operating Environment** for transit services in Volusia County. This includes a physical description of the study area, population and employment profiles, and demographic and socioeconomic characteristics and trends that may impact transit services. Additionally, travel behavior and commuting trends also are reviewed, including vehicle ownership, modes of commuting, regional commute flows, and journey-to-work characteristics. Land use trends, major transit trip generators and attractors, existing roadway conditions, and tourist and visitor levels also are explored. The information compiled and presented provides the basis for more-detailed analysis in subsequent tasks of the Votran 2022–2031 TDP.

Section 3 summarizes the **Existing Transit Services Evaluation** conducted for the TDP. The analysis uses data for the current fixed-route services from Votran and the National Transit Database (NTD), a national repository of validated transit data for all federally-subsidized transit agencies across the U.S., presenting a detailed examination of operating performance for Votran. In addition, a high-level review of the local paratransit services and transportation disadvantaged (TD) populations also is provided. Furthermore, a performance trend analysis presents a detailed examination over time of operating data for Votran’s fixed-route services. This is followed by a peer agency review to provide an opportunity for Votran to compare its system-wide effectiveness and efficiency indicators with selected US peer transit systems. This helps to determine how well transit service is performing locally compared to similar transit agencies elsewhere.

Section 4 presents the **Public Involvement Summary**, including a summary review of the outreach efforts completed and the associated findings. TDP outreach efforts were conducted in two phases and include stakeholder interviews, public input surveys, discussion groups workshops, grassroots outreach events, general public workshops, and presentations, as well as use of online platforms and tools.

Section 5 presents the **Situation Appraisal**, which reviews the current overall planning and policy environment within the county to better understand transit needs. First, a review of local plans and documents is presented; assessment of these plans helps to identify and evaluate applicable federal and state policies, as well as local community goals and objectives that relate to transit and mobility. Then, the appraisal examines the strengths and weaknesses of the system, as well as any existing threats to the provision of service in the county and key opportunities for addressing those threats and/or enhancing the transit-friendliness of the operating environment. Included in this section are detailed reviews of existing socioeconomic trends, travel behavior and trends, community feedback, land use and urban design efforts, organizational attributes, funding, and technology.

Section 6 identifies **Goals and Objectives** to serve as a policy guide for implementation of the TDP. A review and update of the goals and objectives outlined in the previous TDP major update was completed to stay consistent with the goals of Votran and its local and regional community with respect to public transportation.

Section 7 presents the **Transit Demand Assessment** summarizing the various demand and mobility needs assessments conducted as part of the TDP. Included is a market assessment that provides an examination of potential service gaps and latent demand using GIS-based analyses. A transit accessibility assessment also is conducted to provide Votran with an understanding of the reach of its existing services within a set time window.

Section 8 discusses the **10-Year Transit Needs Development and Evaluation** process and results. The identified improvements for Votran services represent the transit needs for the next 10 years that were developed without consideration for any funding constraints. The identified service improvements were prioritized using an evaluation process developed to rank the transit service alternatives. The resulting ranking of alternatives were then used to develop the 10-year implementation plan presented in Section 9.

Section 9 summarizes the **10-Year Transit Plan** developed for Votran's bus transit service. The Plan shows the recommended service and capital/technology/policy improvements, as well as the unfunded needs. It also includes a discussion of the revenue assumptions and capital and operating costs used. Thereafter, the 10-year phased implementation plan for the TDP is summarized. A set of service, capital/technology, and policy improvements are programmed for the 10-year period and the improvements that may not be funded now but should be considered if additional funding becomes available are also listed.

Section 10 summarizes the techniques and approaches to help facilitate **Plan Implementation and Coordination** after TDP adoption. This section identifies implementation strategies and ways to make use of the various relationships, tools, and outreach materials from the TDP process to continue to build support for the implementation of the 10-Year TDP.

Section 2. Operating Environment

Transit service functions best in an environment when it responds appropriately to the regulatory, geographic, environmental, land use, developmental, political, and socio-economic factors present within the operating service area. All these factors can and do impact the provision of services, so it is critical for transit service providers to understand them.

This section presents a review of the study area in the context of Volusia County and documents the existing operating environment to gain an understanding of the conditions in which Votran is operating. This information provides the foundation upon which to review or analyze trends and helps identify areas of opportunity for development of future modified, enhanced, and/or expanded transit services. A series of maps and tables is used with summary analyses to highlight key population, employment, demographic, and socioeconomic characteristics, as well as a multitude of other key elements relevant to transit services.

Data from the U.S. Census, American Community Survey (ACS), Bureau of Economics and Business Research (BEBR) at the University of Florida, Volusia County Council, River to Sea Transportation Planning Organization (R2CTPO), and Votran were used as primary data sources. The data were supplemented by data from other local and regional agencies and sources, as available.

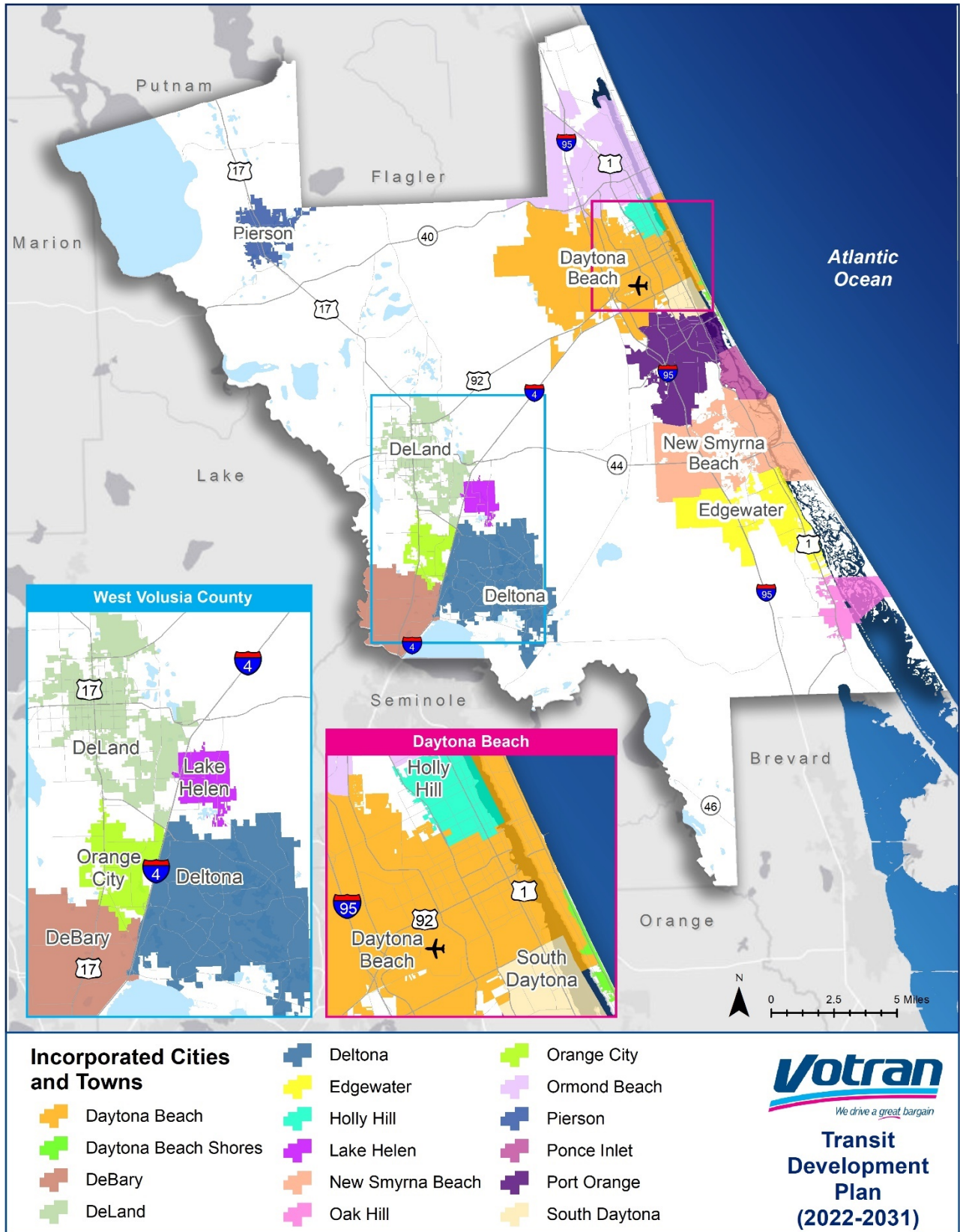
Study Area

Volusia County is located on the east coast of Florida and is bordered on the north by Flagler and Putnam counties; on the west by Marion, Lake, and Seminole counties; on the east by the Atlantic Ocean; and to the south by Orange and Brevard counties. The total land area of the county is 1,101 square miles. Map 2-1 illustrates the study area for the Votran TDP update.

Volusia County is a coastal county known for its beaches, racing speedway, and outdoor activities. Volusia County's incorporated cities and towns include Daytona Beach, Daytona Beach Shores, DeBary, DeLand, Deltona, Edgewater, Holly Hill, Lake Helen, New Smyrna Beach, Oak Hill, Orange City, Ormond Beach, Pierson, Ponce Inlet, Port Orange, and South Daytona. The County seat is DeLand while the city with the largest geographical footprint is Daytona Beach. Eight major roadways intersect Volusia County: I-4, I-95, US 1, US 17, US 92, SR A1A, SR 5A, SR 40, SR 44, SR 46, and SR 421.

Volusia County is home to annual major events such as Bike Week, the Coke Zero Sugar 400, and the Daytona 500. These events attract regional and international tourists. Additionally, Volusia County is home to a number of major post-secondary education institutions, including Bethune-Cookman University, Daytona State College, Embry-Riddle Aeronautical University, Stetson University, and a satellite campus of the University of Central Florida.

Map 2-1: Study Area



Population Profile

Data from the 2000 and 2010 U.S. Census combined with information from the ACS 2019 estimates were used to formulate and review the study area population profile. Table 2-1 shows that the total countywide population grew approximately 29 percent during the 2000–2019 period and 15 percent from 2010 to 2019. Population density has increased as a result of the growth. While a similar increase in the households per square mile over the last decade suggests that a growth in the number of housing units occurred in tandem with the population growth, it still is evident that overall density has outpaced housing density since 2000. A total increase of approximately 19 percent of workers was observed from 2000 to 2019, with an increase of approximately 13 percent experienced from 2010 to 2019.

Table 2-1: Population Characteristics, Volusia County, 2000-2019

Metrics	2000	2010	2019	2010-2019 %Change	2000-2019 %Change
Population	429,459	482,910	553,284	14.6%	28.8%
Households	184,723	190,757	219,451	15.0%	18.8%
Workers	202,516	213,229	240,527	12.8%	18.8%
Area (sq. miles)	1,101	1,101	1,101	No Change	No Change
Population per Sq. Mile	390	439	503	14.6%	28.8%
Households per Sq. Mile	168	173	199	15.0%	18.8%
Workers per Sq. Mile	184	194	218	12.8%	18.8%

Source: 2000 and 2010 Census, American Community Survey 2019 1-Year Estimates

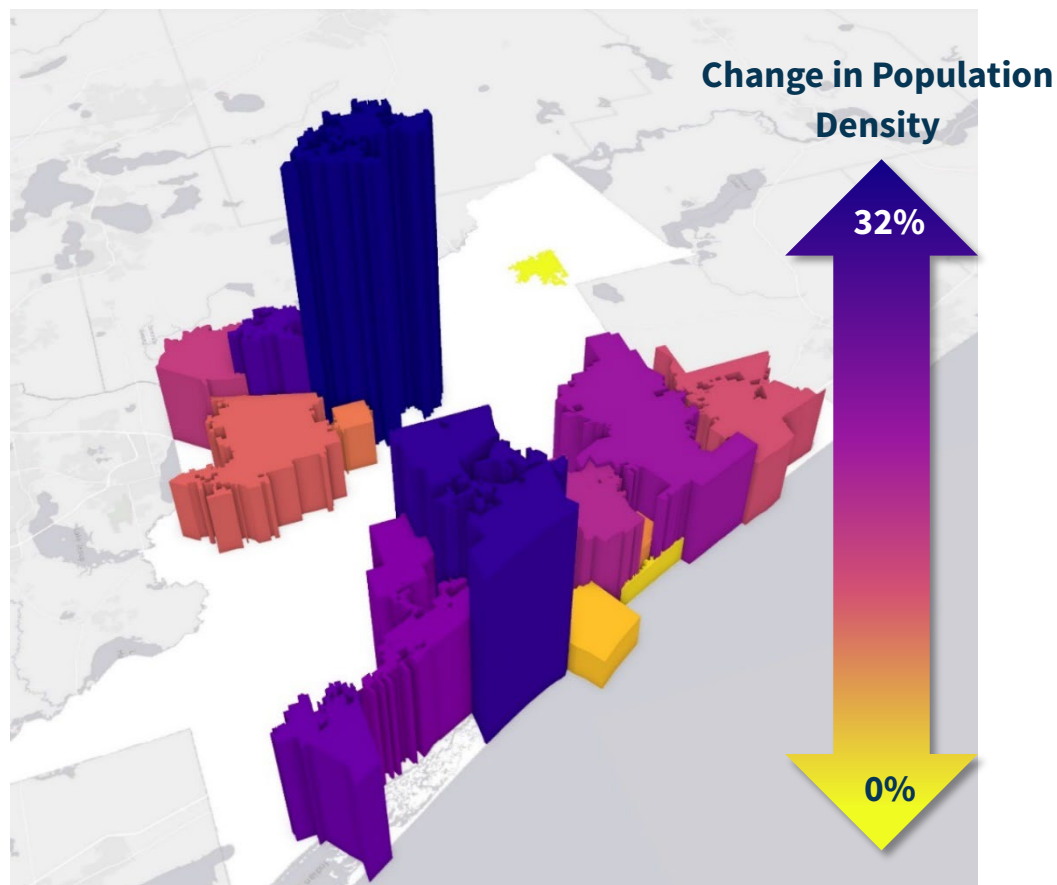
As overall population has increased in Volusia County, the populations in incorporated areas also have increased. Table 2-2 shows all municipalities with their corresponding 2010 and 2019 populations, respective population per square mile, and density change. While Daytona Beach Shores has the highest population density (4,665 people per square mile), it has experienced one of the lowest growth rates of all incorporated areas in the same 10-year time period, implying that it is an established area. DeLand, whose population density is less than 2,000 people per square mile, was the fastest growing municipality with approximately 32 percent growth since 2010, suggesting that this area has the potential for continuing future growth. Figure 2-1 shows the population density change from 2010 to 2019 in incorporated areas in Volusia County.

Table 2-2: Incorporated Population Characteristics, 2010-2019

Municipality	2010 Population	2019 Population	2010 Pop. per Sq Mi.	2019 Pop. per Sq Mi.	Density %Change
DeLand	27,031	35,763	1,444	1,911	32.3%
New Smyrna Beach	22,464	27,173	586	709	21.0%
Orange City	10,599	12,103	1,437	1,641	14.2%
Oak Hill	1,792	2,041	153	174	13.9%
Edgewater	20,750	23,455	918	1,037	13.0%
Daytona Beach	61,005	67,351	957	1,056	10.4%
Port Orange	56,048	61,617	1,946	2,139	9.9%
DeBary	19,320	21,176	887	972	9.6%
Ormond Beach	38,137	41,289	975	1,056	8.3%
Deltona	85,182	91,520	2,075	2,229	7.4%
Lake Helen	2,624	2,773	575	608	5.7%
South Daytona	12,252	12,819	2,429	2,541	4.6%
Holly Hill	11,659	12,153	2,550	2,658	4.2%
Ponce Inlet	3,032	3,151	205	213	3.9%
Daytona Beach Shores	4,247	4,372	4,532	4,665	2.9%
Pierson	1,736	1,739	198	198	0.0%

Source: 2020 BEBR Estimates

Figure 2-1: Population Density Change by Incorporated Area, 2010-2019



Population and Employment Densities

Population Density

Population density is often one of the key indicators of a healthy transit market. In terms of an area's transit market, areas of high population density have the capability to provide more residents within the traditional ¼-mile walk ridershed of a single bus stop. Additionally, areas with high population density often are associated with land uses that promote transit use and amenities that promote pedestrian and bicycle activity.

Volusia County currently has a countywide average of over 500 persons per square mile, with clusters of higher density areas in the east and lower densities in the western part of the county. Map 2-2 shows the projected population density, persons per square mile, by Traffic Analysis Zone (TAZ) for the TDP's base year, 2022, calculated based on socioeconomic data that were developed for the R2CTPO's Connect 2045 Long Range Transportation Plan (LRTP). Higher-density TAZs (3,000 persons per square mile) are concentrated along the coastline in Daytona Beach and Ormond Beach, along US 17 in DeLand, in Deltona adjacent to Normandy Boulevard, and in Orange City between US 17 and Enterprise Road. Other areas with density greater than 2,000 persons per square mile are adjacent to the aforementioned areas with higher densities. Map 2-3 shows similar densities forecasted for the TDP horizon year, 2031, with density increasing in already-established areas in and around western Volusia County including Deltona and in eastern Volusia County adjacent to US 1 in Edgewater.

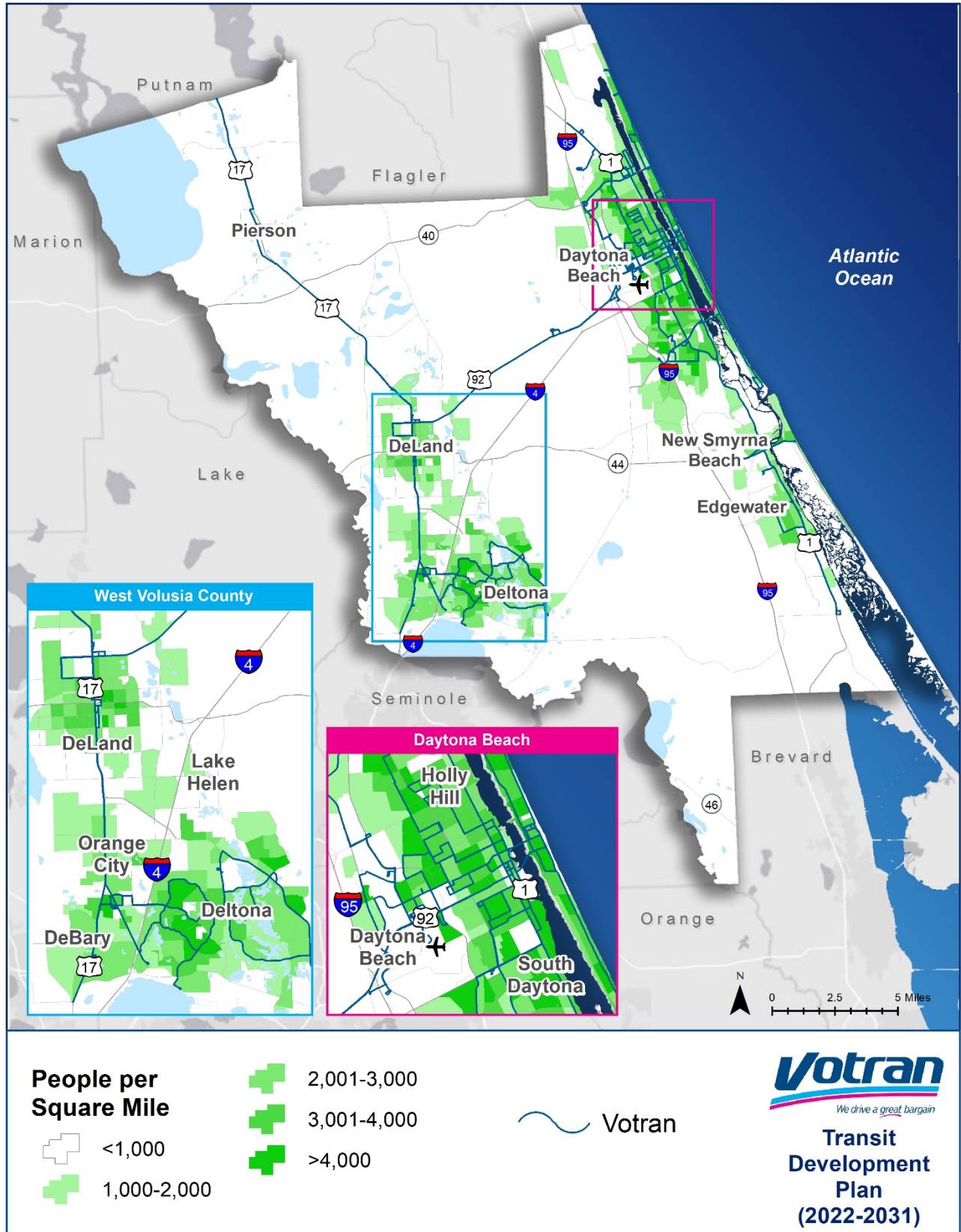
Employment Density

Employment density is another important factor to consider when analyzing a transit market. Areas of high employment density often include activity centers that cluster shopping centers, medical offices, and/or educational centers that attract transit trips. Downtowns also tend to have higher employment densities and often limited parking capacities, which also can help increase transit demand.

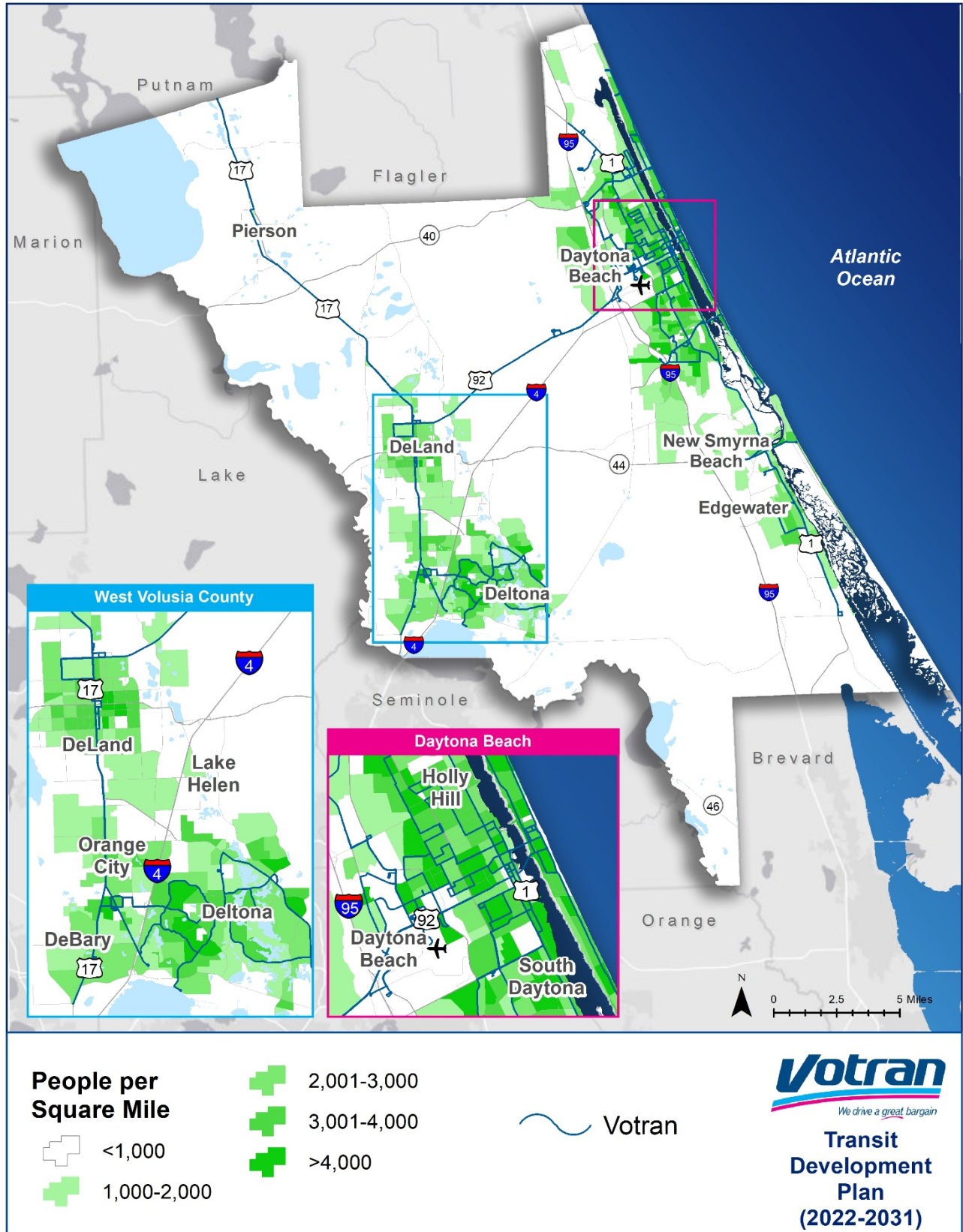
Similar to population density, Map 2-4 shows the projected employment density, jobs per square mile, by TAZ for 2022, calculated based on socioeconomic data that were developed for the R2CTPO's Connect 2045 LRTP. The following areas report clusters of 1,500 jobs or more per square mile, with some TAZs exceeding 2,000 jobs per square mile. The highest concentration of employment density is in Daytona Beach along major roadways such as US 1, US 92, and I-95. High employment density is also observed along the coast that transects a few municipalities. These jobs are typically related to the service industry at hotels, restaurants, and other tourism-related locations. Additional employment density in the eastern portion of Volusia County is located along US 1 in New Smyrna Beach and Edgewater. In the western portion of Volusia County, jobs are concentrated in DeLand along US 17, in Orange City between US 17 and Enterprise Road, and in Deltona along Providence Boulevard.

Other areas in the county that report moderate levels of employment density, at least 1,000 jobs per square mile, include South Daytona along Beville Road, adjacent to US 17 in DeBary, along Nova Road in Holly Hill, and along US 17 in the northern portion of Orange City. These are projected to continue to be high-density employment areas over the next 10 years with some growth adjacent to the established areas (Map 2-5).

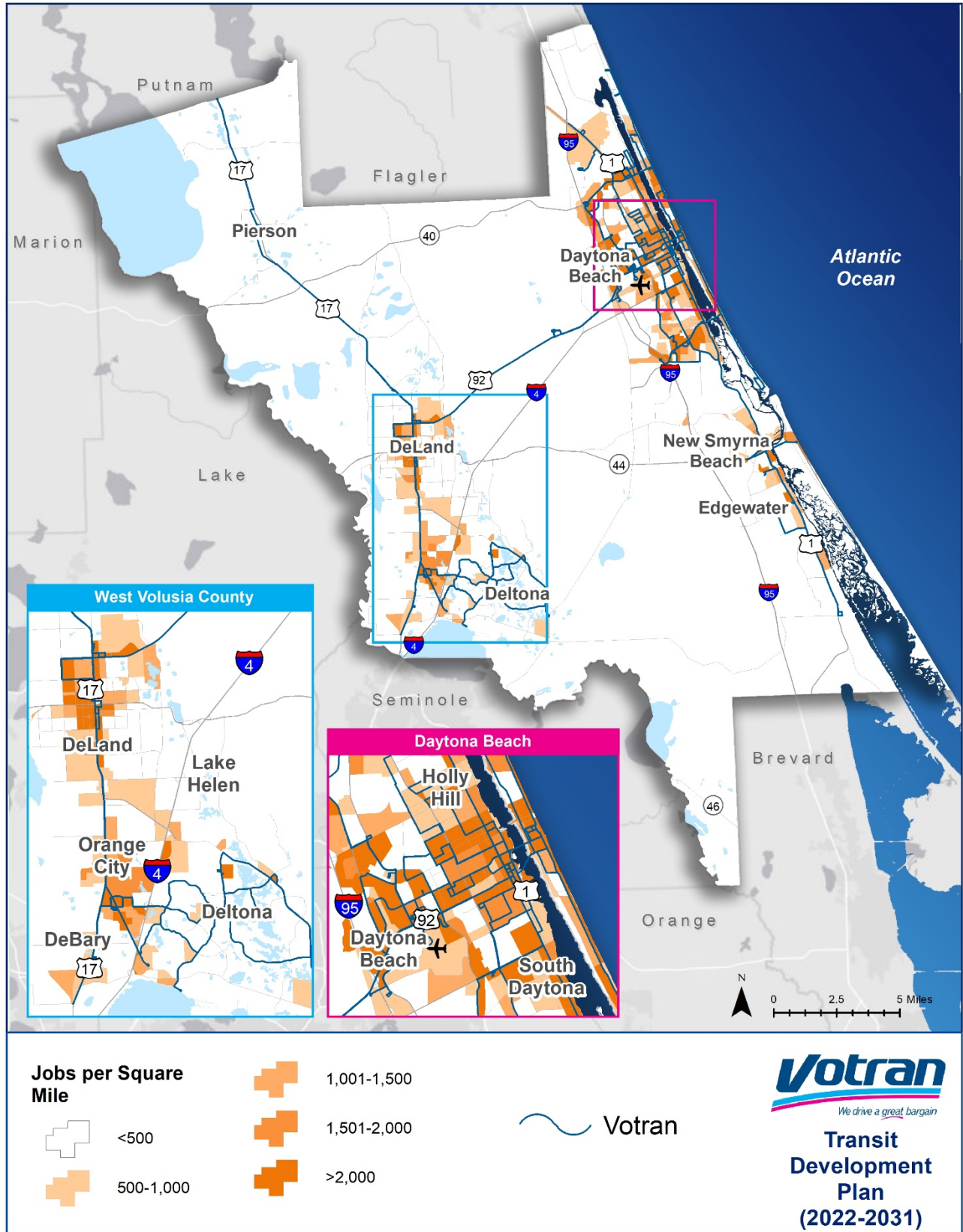
Map 2-2: 2022 Population Density



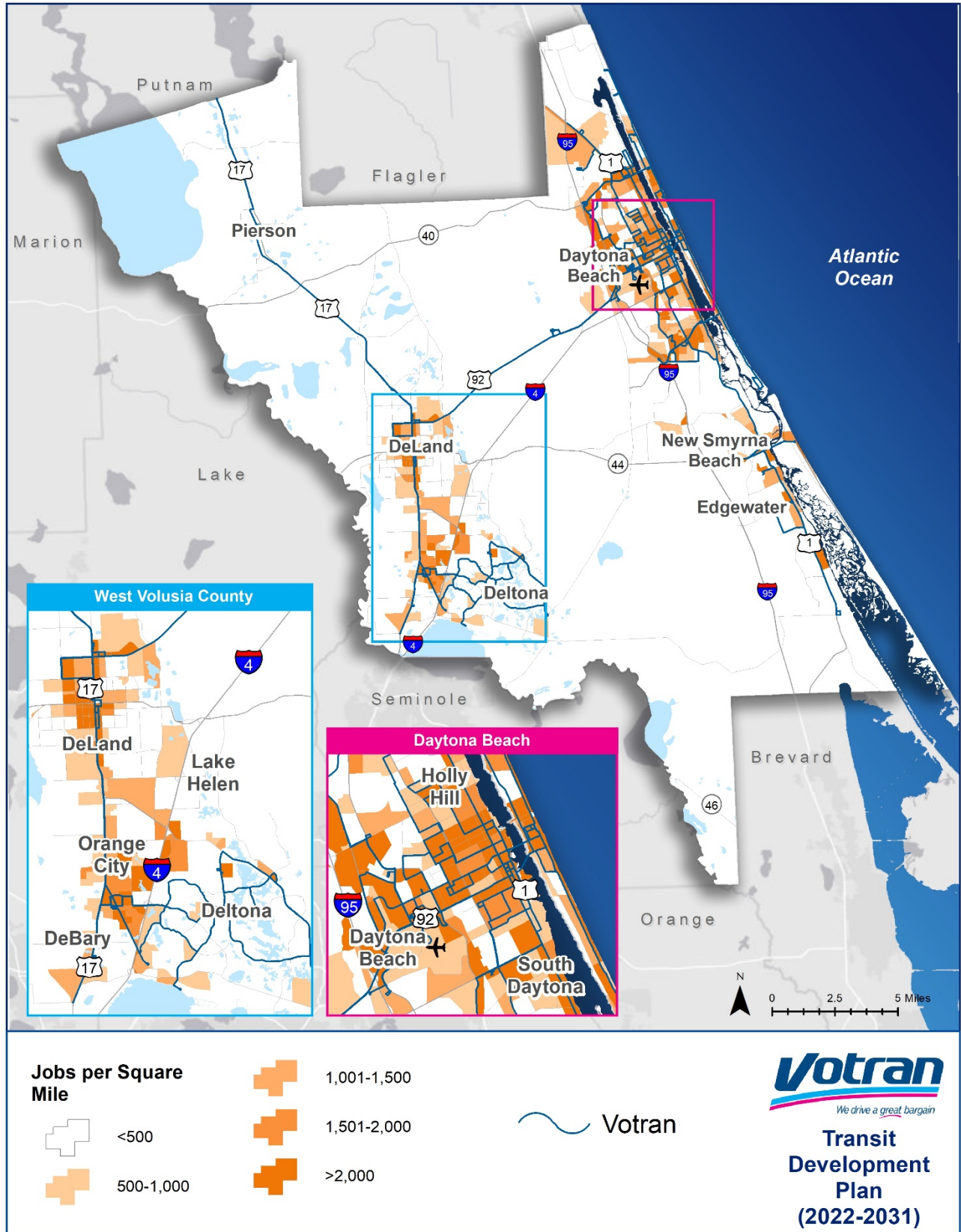
Map 2-3: 2031 Population Density



Map 2-4: 2022 Employment Density



Map 2-5: 2031 Employment Density



Socio-Demographic Characteristics and Trends

In addition to population and employment, the baseline conditions analysis also looked at key demographics such as age, income, labor force, educational attainment, racial and ethnic origin, and limited English proficiency, to better understand the community Votran currently serves.

Age Distribution

Millennials, or persons born between 1981 and 1996, generally exhibit a desire for different transportation modes and preferences than older generations. Millennials tend to drive less and desire more choices and flexibility in transit options. Younger adults born after Millennials, referred to as Generation Z, are continuing to exhibit these same preferences, indicating the possibility of a more positive, long-term shift in transit habits. The proportion of adults that is generally defined as Millennial (25 to 44 years old) currently comprises approximately 40.7 percent of the population, the largest segment of the overall population.

Figure 2-2 shows the existing age cohorts for Volusia County and the existing age cohorts for those that use transit. As previously mentioned, the largest existing age group in Volusia County is 25 to 44 years old (40.7%) and it is also the largest cohort to report using transit (49.9%). Approximately 10.2 percent of Volusia County residents are 55 to 59 years old but comprise 20.8 percent of transit riders. The median age of Volusia County residents is 44.3 years old, but the median age of those who report using transit is 37.7 years old, which would fall into the Millennial category.

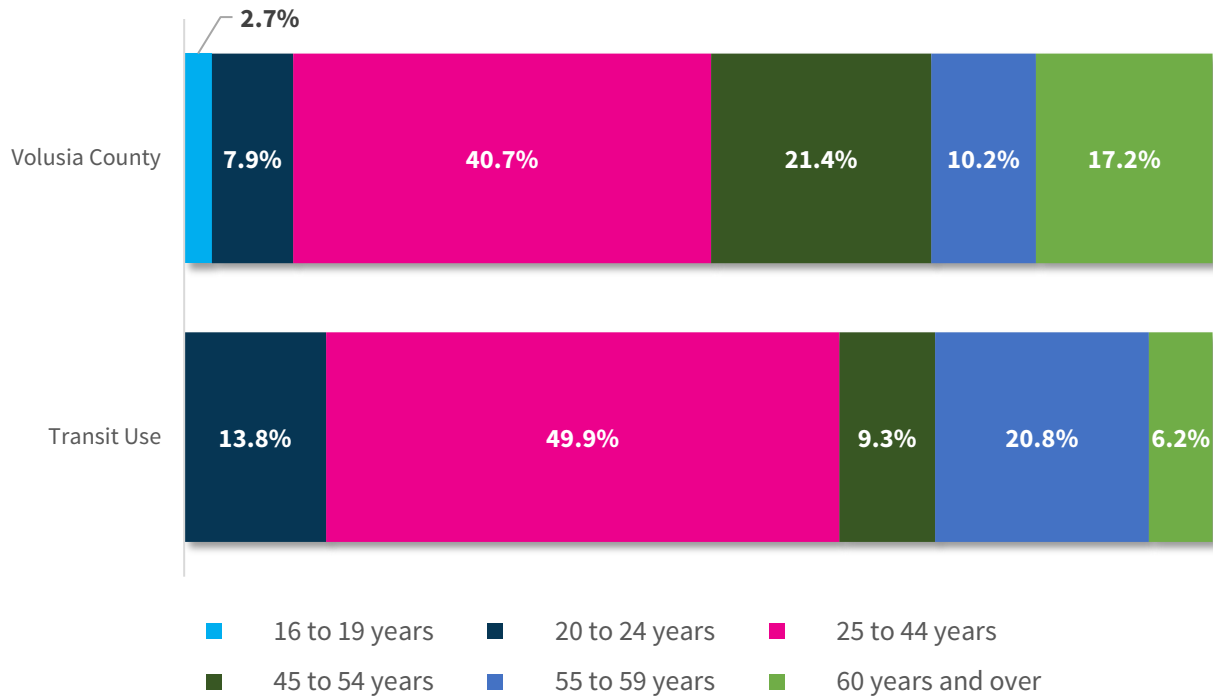
By 2045, the percentage of residents age 60 or older is expected to increase to approximately 33 percent of the total population. Growth within this age cohort is an important consideration for transit as a person's ability to drive is often reduced with age, leading to demand for other transportation options. According to BEBR, the percentage of residents age 60 and older in Volusia County is higher than that of the corresponding cohort in the overall Florida distribution.

The proportion of the population age cohorts 20–24 and 25-44 are projected to remain steady between now and 2045, although the 45-59 years age group is projected to decline. This age group represents most working-age residents and adult students, many of whom commute daily to school or work, therefore placing a potentially higher demand for transit options.

Map 2-6 shows the block groups by median age. Areas near higher education centers, such as Stetson University and Embry-Riddle Aeronautical University, show lower median age groups as students tend to cluster near the respective education centers. Areas where the median age is 65 and older appear near the Flagler County border by Ormond Beach, along the coastline in Edgewater, in Orange City, and in Deltona.

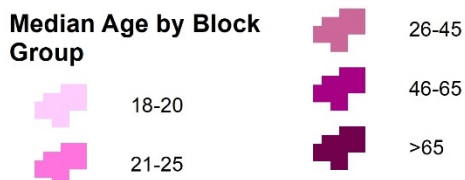
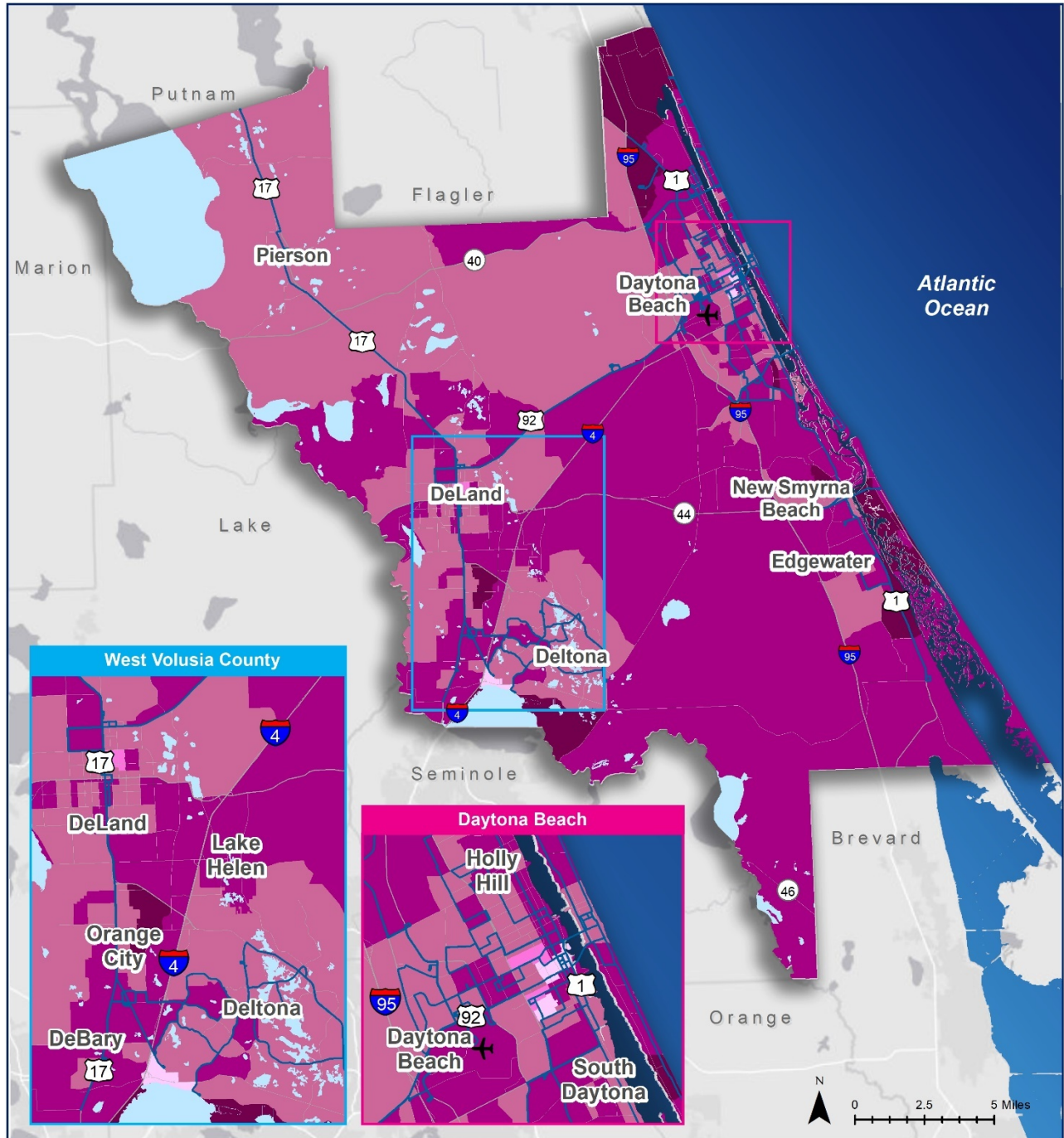
Higher concentrations of population age 60 and over are shown in Map 2-7. Areas within the region with the highest concentrations (over 50% of block group population) of this age group are similar to those with a higher median age in North Ormond Beach, Edgewater, Orange City, and Deltona.

Figure 2-2: Age Distribution by County and by Transit Use, 2019

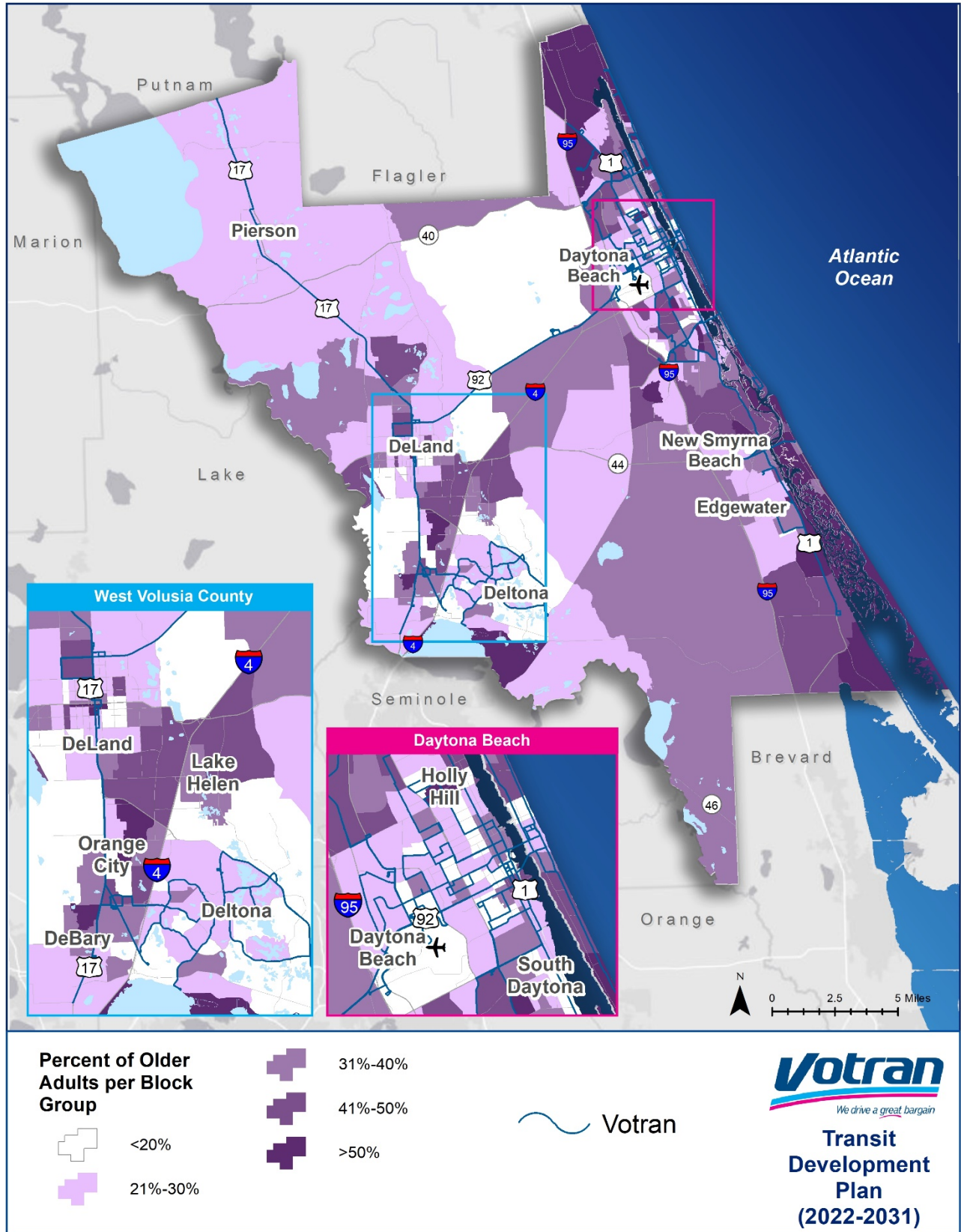


Source: American Community Survey 2019 1-Year Estimates

Map 2-6: Median Age, 2019



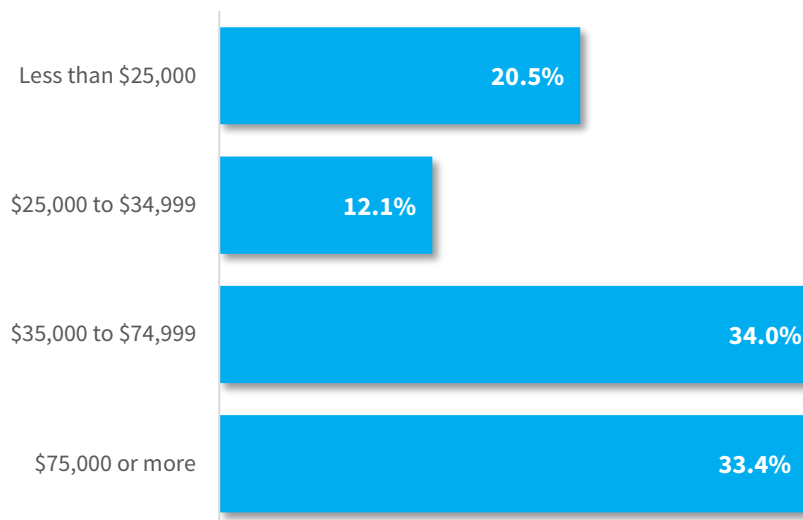
Map 2-7: Older Adults, 2019



Income Distribution

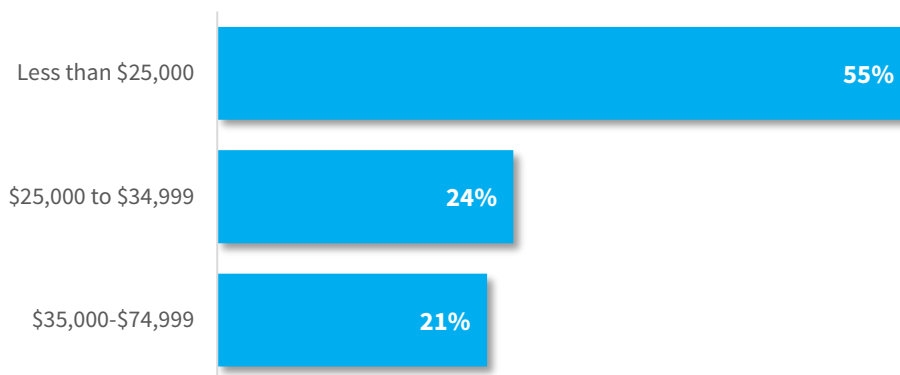
Earned annual income also can be a key indicator for determining the potential public transit needs of an area, as low-income populations tend to use transit more than higher income earners. Over a third, 34 percent, of Volusia County households have an income between \$35,000 to \$74,999. Furthermore, a significant portion of the population earns higher incomes over \$75,000, 33.4 percent (Figure 2-3). Figure 2-4 shows the income distribution for transit users in Volusia County. The majority of transit users, 55 percent, earn less than \$25,000, which is more than double the proportion of overall Volusia County households reporting a similar annual household income range. The remaining transit users, 45 percent, have an annual household income between \$25,000 to \$74,999, which is similar to the total county income distribution.

Figure 2-3: Volusia County Household Income Distribution, 2019



Source: American Community Survey 2019 1-Year Estimates

Figure 2-4: Volusia County Household Income Distribution, by Transit Users, 2019



Source: American Community Survey 2019 1-Year Estimates

Poverty

The U.S. Census Bureau defines the poverty threshold as under \$26,801 for a family of four with two children. As previously shown, in 2019, 20.5 percent of Volusia County’s 219,451 households had an annual income of less than \$25,000. Although 20.5 percent of households have the potential to be defined as being below the poverty threshold, 12.9 percent of Volusia County residents are considered to be below the poverty level. There has been an increase in the share of individuals that are considered below the poverty level, 11.6 percent in 2000 compared to 12.9 percent in 2019, as shown in Table 2-3. Although the proportion of individuals below the poverty level slightly increased from 2000 to 2019, the proportion has fallen more recently from 16 percent in 2010, likely due to the ongoing impacts of the Great Recession that occurred in 2008. Concurrently, the individual poverty level distribution for Florida followed a similar trend with a more significant decrease since 2010, but an overall slight increase from 2000.

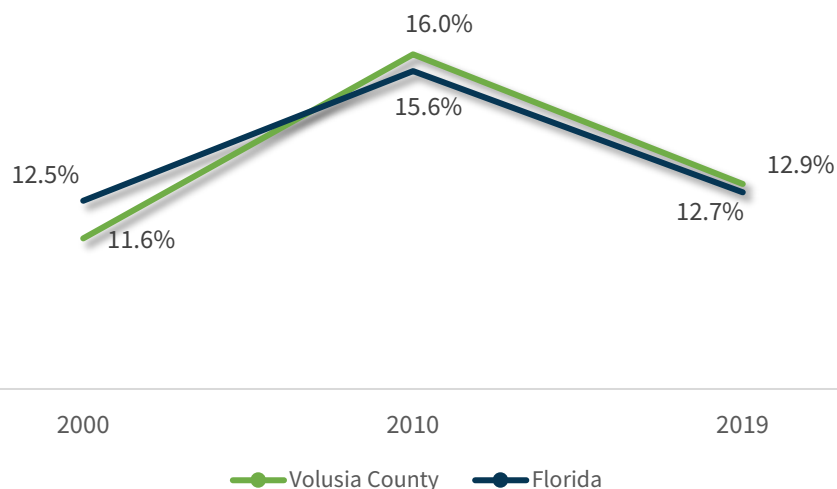
Figure 2-5 graphs the poverty level distributions for Florida and Volusia County residents and shows the similar trends followed by both populations. In 2000, Florida’s poverty level was slightly higher than Volusia County’s, but during the recession Volusia County’s poverty rate hit a higher peak, 16 percent. Although both poverty levels have decreased since 2010, Volusia County’s poverty rate continues to be marginally higher than Florida’s. Map 2-8 shows the geographic distribution of households that are considered to be below the poverty level. There is a concentration of block groups with more than 40 percent of households below the poverty level in Daytona Beach between the coastline and US 1, and in DeLand surrounding US 17 south of Euclid Avenue.

Table 2-3: Poverty Levels, Volusia County and Florida, 2000-2019

Population	2000	2010	2019	Change (2000-2019)
Volusia County	11.6%	16.0%	12.9%	1.3%
Florida	12.5%	15.6%	12.7%	0.2%

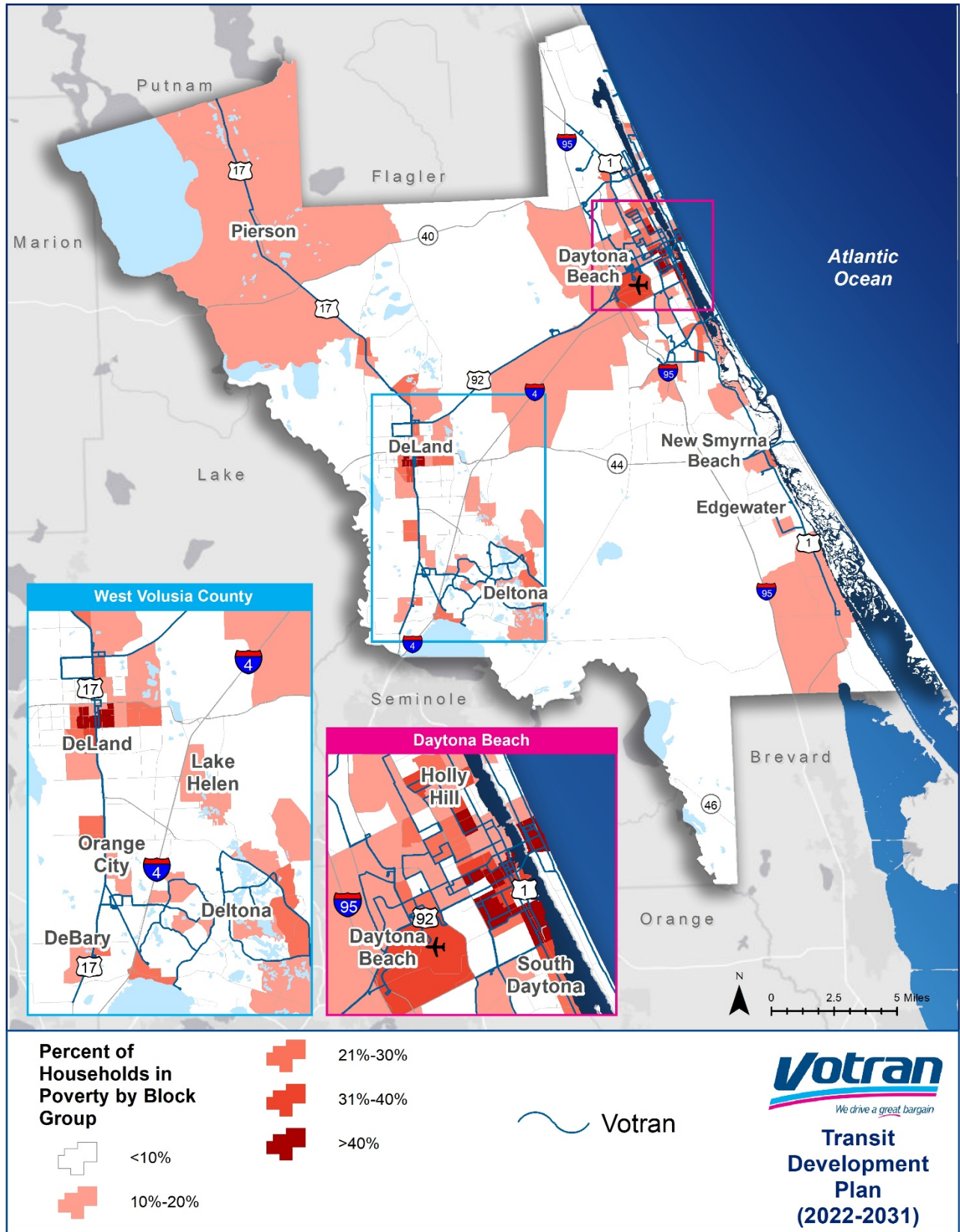
Source: 2000 and 2010 Census, American Community Survey 2019 1-Year Estimates

Figure 2-5: Poverty Level Trends, Volusia County and Florida, 2000-2019



Source: 2000 and 2010 Census, American Community Survey 2019 1-Year Estimates

Map 2-8: Households Below Poverty, 2019



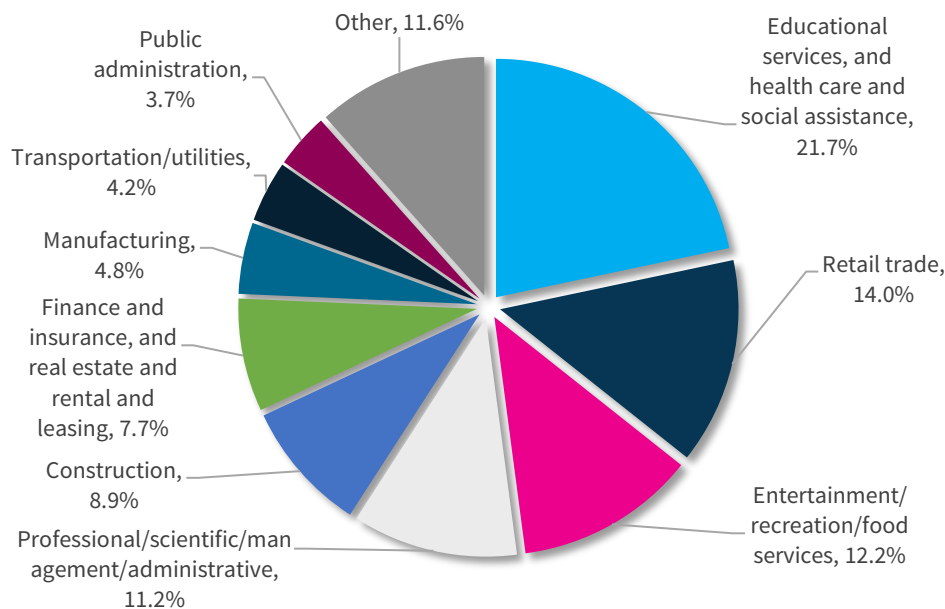
Asset Limited, Income Constrained Employed

Asset Limited, Income Constrained Employed (ALICE) individuals are individuals that are working but due to high cost of living in combination with childcare costs and transportation challenges are living paycheck to paycheck. Impacts from the COVID-19 global pandemic remain unforeseen in already vulnerable communities and reliable transit can assist these populations in accessing economic opportunities. In 2018, approximately 33 percent of Florida households were considered ALICE while 45 percent of households in Volusia County fell under the same category. Additionally, according to the United Way, approximately 62 percent of households in incorporated Daytona Beach and 76 percent of unincorporated DeLand Southwest CDP (Census Designated Place) households are considered ALICE or in poverty.

Employment Characteristics

Employment type may have an impact on the propensity to use transit and transit service hours also may influence the employment of those that are transit dependent. A review of the type of employment present in Volusia County was conducted using the 2019 ACS Estimates. In Figure 2-6, the Volusia County economy is broken down by its business industries. Based on 2019 data, the largest sectors are Educational services, healthcare, and social assistance (21.7%); followed by Retail trade (14.0%); and Entertainment, recreation, and food services (12.2%), making up almost half of the county’s employment. The economy is rounded out by Professional, scientific, management, and administration (11.2%); Construction (8.9%); Finance and insurance, and real estate and rental and leasing (7.7%); Manufacturing (4.8%); Transportation/utilities (4.2%); and Public administration (3.7%) occupations.

Figure 2-6: Volusia County Employment by Industry, 2019



Source: American Community Survey 2019 1-Year Estimates

Educational Attainment

Education level is an important factor in understanding an area’s population make-up. The level of education has been shown to correlate with income, which affects the propensity of the population to use public transit. Volusia County’s education attainment has increased in the last decade. Since 2010, the percentage of people that hold bachelor’s degrees or higher has increased by 3.3 percent, from 20.8 percent in 2010 to 24.1 percent in 2019 (Table 2-4). Concurrently, the percentage of people who do not have a high school degree or the equivalent has fallen 6.5 percent, from 15.4 percent in 2010 to 8.9 percent in 2019. Notably, there are major higher education centers within Volusia County, which could be a key catalyst for the increase in advanced degrees.

It is also important to examine the number of residents that are currently enrolled in public high school or higher education as it is more common for students to not have access to a vehicle and possibly be more dependent on transit. Table 2-5 shows the levels of enrollment by respective educational levels in Volusia County, according to 2019 estimates. Approximately half of enrolled residents are enrolled in a higher educational program (27.6%) or in high school (23.0%).

Table 2-4: Education Attainment, 2010-2019

Degree Type	2010	2019	Change (2010-2019)
Bachelor’s Degree or better	20.8%	24.1%	3.3%
Some College or Associates Degree	30.6%	33.1%	2.5%
High School Diploma	32.9%	34.0%	1.1%
Did not complete High School	15.4%	8.9%	-6.5%

Source: 2010 Census and American Community Survey 2019 1-Year Estimates

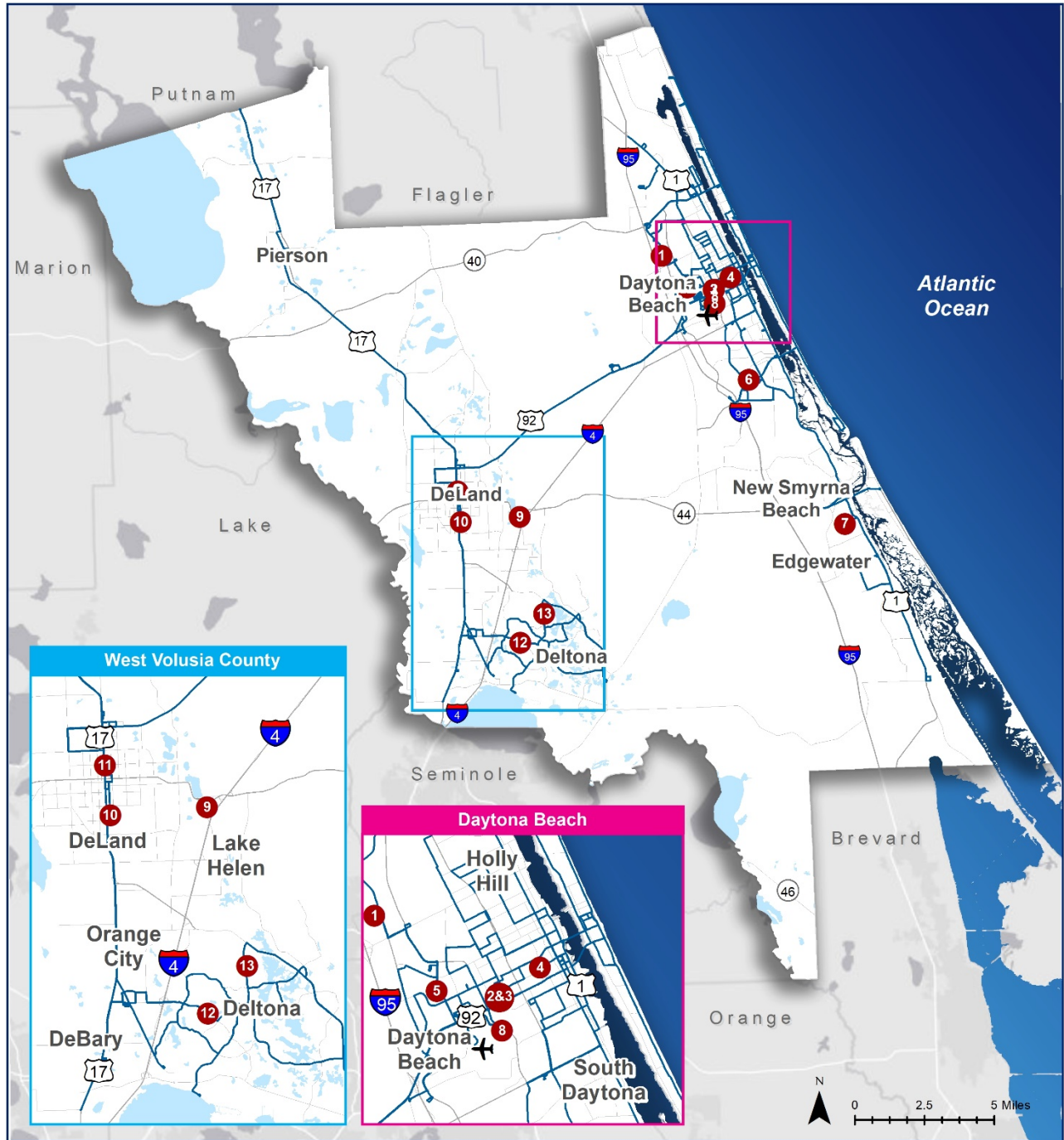
Table 2-5: Existing Education Enrollment, 2019

Education Level	2019	% of Total
Population 3 years and over enrolled in school	107,705	100%
Nursery school/preschool to 8th grade	53,342	49.4%
High school: grade 9 to grade 12	24,776	23.0%
College or graduate school	29,687	27.6%

Source: American Community Survey 2019 1-Year Estimates

Map 2-9 shows where post-secondary education facilities are located in Volusia County. All facilities are located in already established areas, but are highly concentrated in the eastern part of the county, particularly in the Daytona Beach area.

Map 2-9: Higher Education Facilities in Volusia County



Places of Higher Education

- | | | |
|--|---|--|
| ● 1. ADVANCED TECHNOLOGY COLLEGE | ● 5. KEISER COLLEGE | ● 9. DAYTONA STATE COLLEGE- WEST CAMPUS |
| ● 2. UNIVERSITY OF CENTRAL FLORIDA- DAYTONA BEACH CAMPUS | ● 6. PALMER COLLEGE OF CHIROPRACTIC | ● 10. FLORIDA TECHNICAL COLLEGE |
| ● 3. DAYTONA STATE COLLEGE | ● 7. DAYTONA STATE COLLEGE-SOUTH CAMPUS | ● 11. STETSON UNIVERSITY |
| ● 4. BETHUNE COOKMAN UNIVERSITY | ● 8. EMBRY RIDDLE AERONAUTICAL UNIVERSITY | ● 12. BETHUNE COOKMAN UNIVERSITY- DELTONA CAMPUS |
| | | ● 13. DAYTONA STATE COLLEGE-DELTONA CENTER |

Race and Ethnic Origin

Volusia County is becoming more ethnically diverse. As shown in Table 2-6, from 2000 to 2019, Volusia County had a significant decrease in the distribution of residents that identify as White alone (-10.9%). The percentage of Hispanic residents in Volusia County rose 8.1 percent, whereas the proportion of Black or African American, Other, and Asian population increased marginally. Furthermore, the American Indian and Alaska Native and Native Hawaiian and Other Pacific Islander populations decreased between 2000 and 2019.

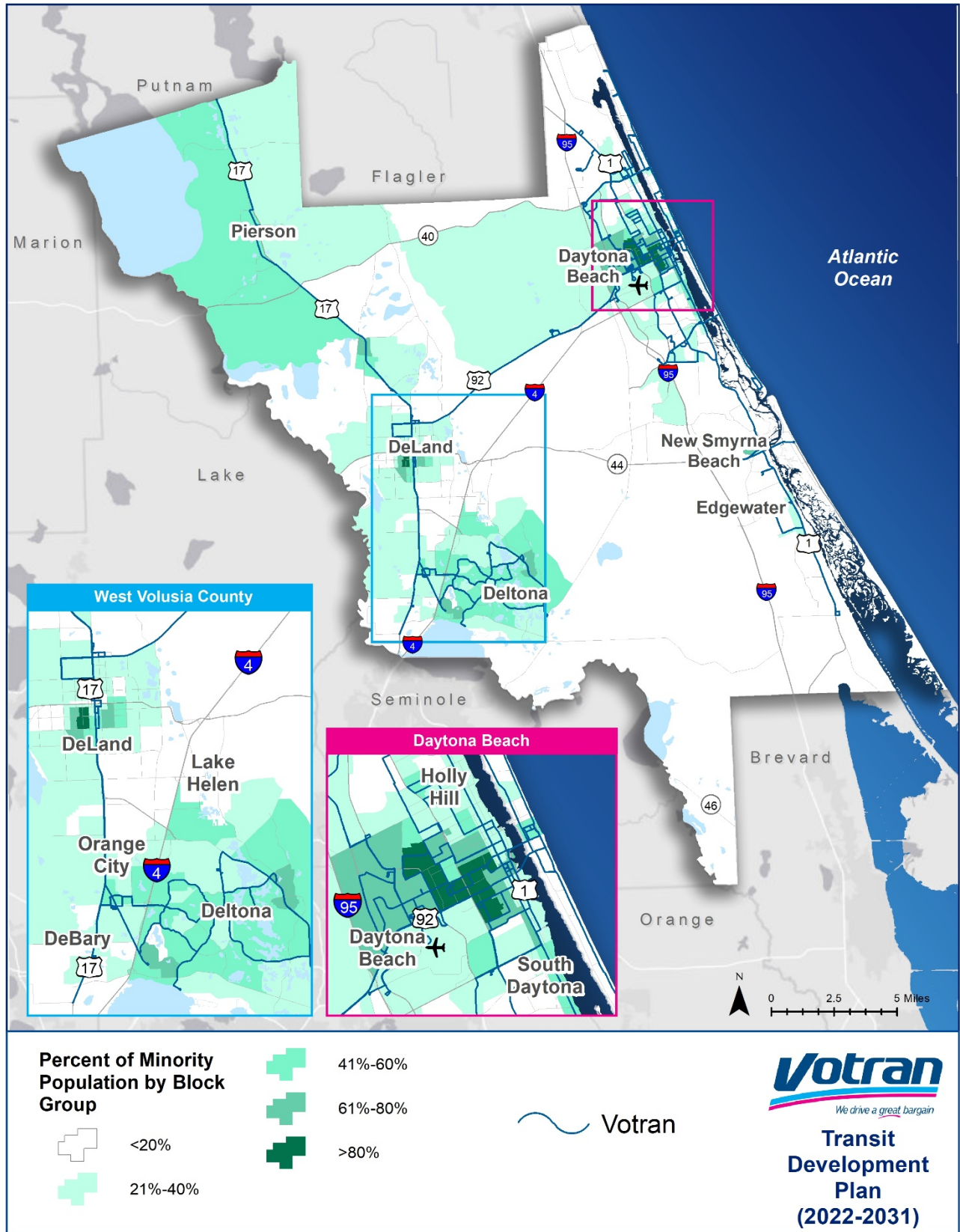
Map 2-10 shows the geographic distribution of minority populations in Volusia County. Clustered block groups of minority populations (61 percent or more) are observed in established areas such as Daytona Beach between Nova Road and US 1, north of the Daytona Beach International Airport between International Speedway Boulevard and LPGA Boulevard and east of Clyde Morris Boulevard, in Deltona between Beresford Avenue and Howry Avenue, south of SR 44 adjacent to Beresford Avenue east of US 17, between Deltona Boulevard and Providence Boulevard north of Debarry Avenue in Deltona, and along Howland Boulevard in North Deltona.

Table 2-6: Race and Ethnic Origin, 2019

Race/Ethnicity	2000	2010	2019	2000-2019 Change
White	81.5%	75.0%	70.6%	-10.9%
Hispanic	6.9%	11.6%	15.0%	8.1%
Black or African American	9.3%	10.5%	10.2%	0.9%
Other	0.3%	0.3%	2.2%	1.9%
Asian	1.2%	1.8%	1.9%	0.7%
American Indian and Alaska Native	0.7%	0.7%	0.1%	-0.6%
Native Hawaiian and Other Pacific Islander	0.1%	0.1%	0.0%	-0.1%

Source: 2000 and 2010 Census, American Community Survey 2019 1-Year Estimates

Map 2-10: Minority Population, 2019



Limited English Proficiency (LEP)

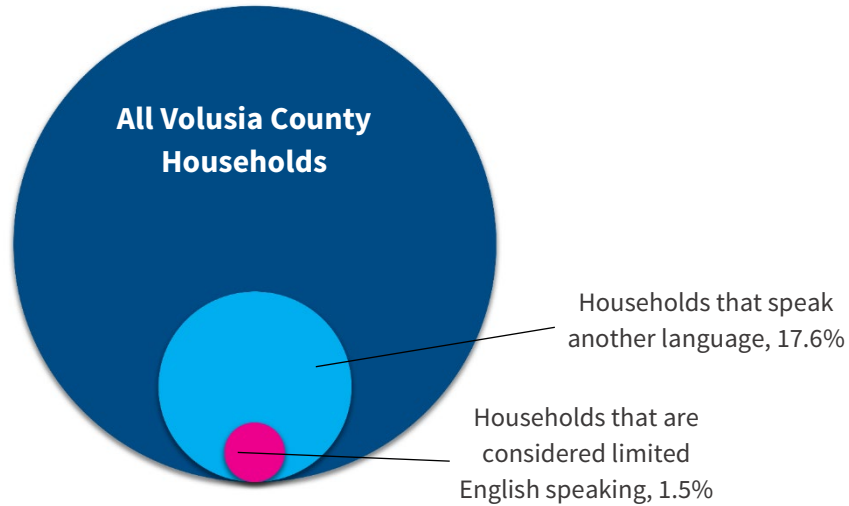
Transit may also provide Volusia County residents with Limited English Proficiency (LEP) additional means of travel options to services and jobs. In Volusia County, the number of residents of Hispanic or Latino origin is increasing, as is the number of people who speak Spanish in some capacity. As shown in Table 2-7, the majority of households speak English only while the majority of households that speak another language speak Spanish. Figure 2-7 shows that 1.47 percent of total households are considered to be LEP while 17.57 percent report speaking another language. When examining transit use and its relationship with persons who would be considered LEP, the majority speak English but a higher rate of transit users speak another language or are considered LEP than the overall Volusia County average (Figure 2-8). Map 2-11 shows the geographic distribution of LEP households. The largest presence of LEP households is located in Deltona bordering Lake Monroe and Enterprise Road while there are additional block groups south of Normandy Boulevard and west of Providence Boulevard. In the eastern portion of the county, there is a high-proportion LEP block group between Mason Avenue and Dunn Avenue. Nevertheless, it is important to recognize that all block groups that report a rate of five percent or more of LEP households are served by transit.

Table 2-7: Limited English Proficient Households by Language, 2019

Language Spoken and Household Status	Number of Households	% of Households
Total Households in Volusia County	219,451	100%
English only	180,902	82.43%
Spanish:	27,552	12.56%
Limited English-speaking household	2,029	0.93%
Not a limited English-speaking household	25,523	11.63%
French, Haitian, or Cajun:	1,712	0.78%
Limited English-speaking household	0	0.00%
Not a limited English-speaking household	1,712	0.78%
German or other West Germanic languages:	1,312	0.60%
Limited English-speaking household	107	0.05%
Not a limited English-speaking household	1,205	0.55%
Russian, Polish, or other Slavic languages:	899	0.41%
Limited English-speaking household	253	0.12%
Not a limited English-speaking household	646	0.29%
Other Indo-European languages:	1,954	0.89%
Limited English-speaking household	71	0.03%
Not a limited English-speaking household	1,883	0.86%
Other:	5,120	2.33%
Limited English-speaking household	756	0.34%
Not a limited English-speaking household	4,364	1.99%

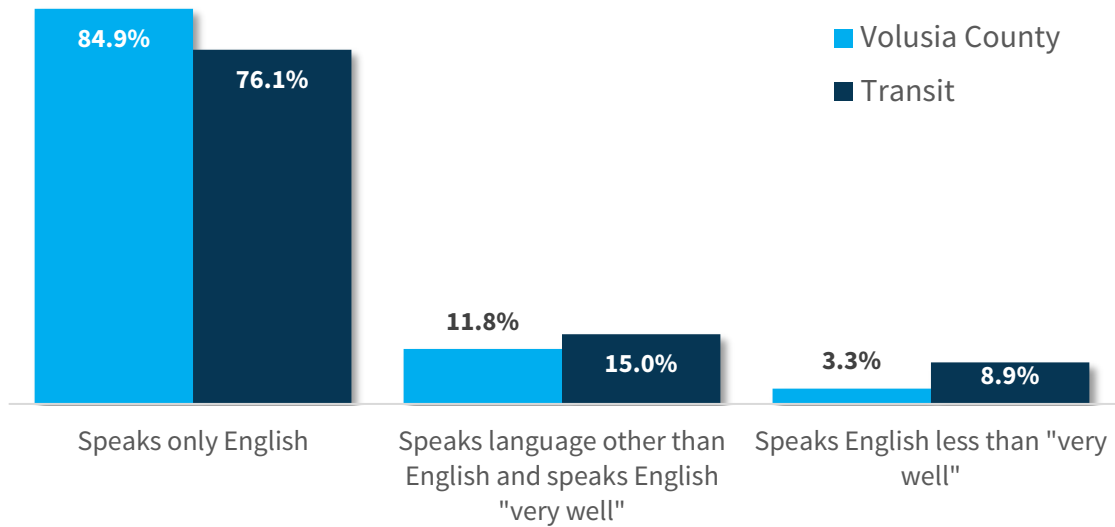
Source: American Community Survey 2019 1-Year Estimates

Figure 2-7: Limited English Proficiency by Households, 2019



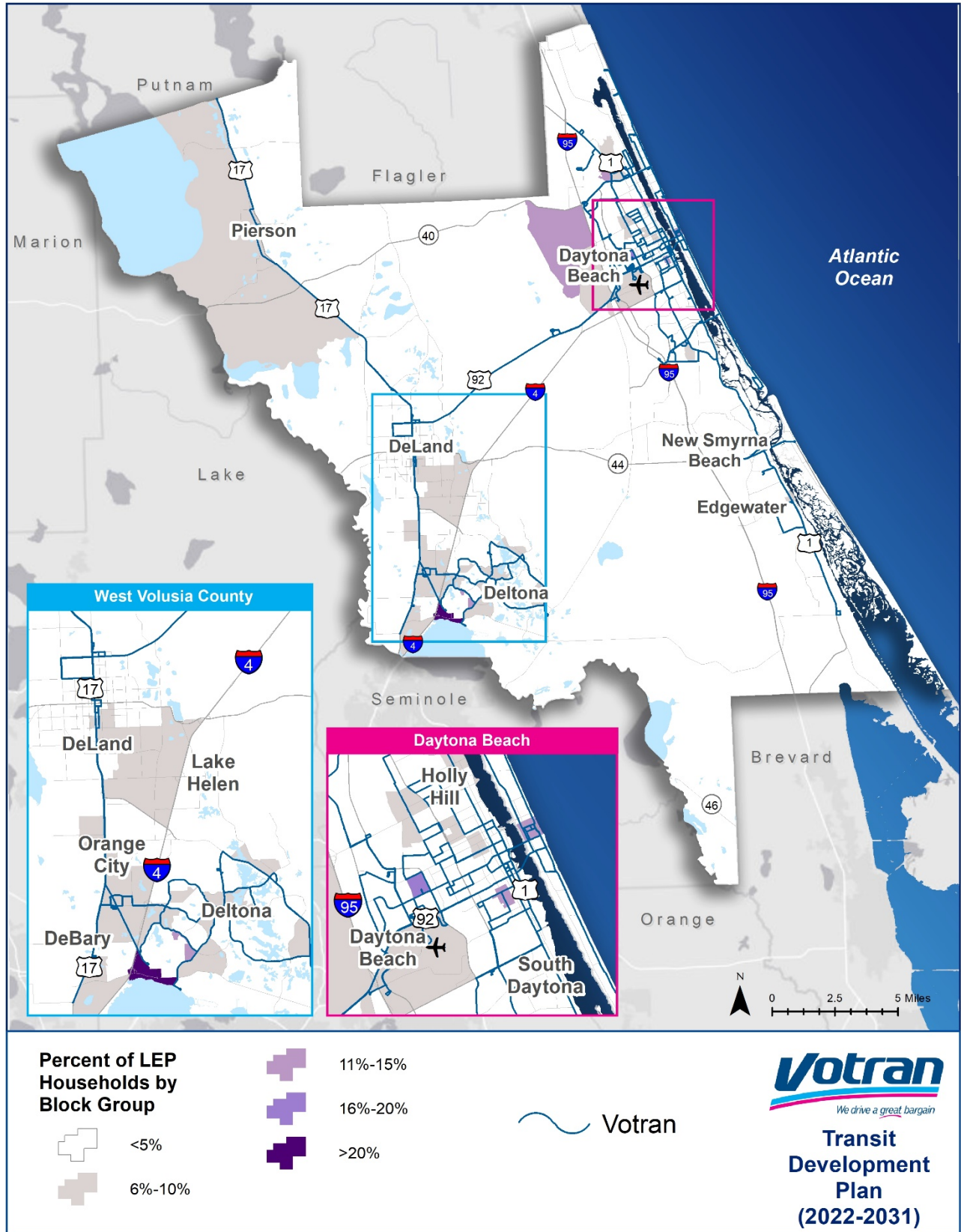
Source: American Community Survey 2019 1-Year Estimates

Figure 2-8: Language Proficiency by Individuals and Transit Use, 2019



Source: American Community Survey 2019 1-Year Estimates

Map 2-11: Limited English Proficiency, 2019



Travel and Commuting Trends

Data available on travel flows were also analyzed to assess general travel behaviors and patterns in Volusia County for people who commute for work. Transit can be used as an effective mode to connect residents to economic opportunities and link commuters to their jobs locally and regionally. By better understanding commuting behaviors and travel patterns, Votran can serve Volusia County with transit services more effectively. This analysis includes the modes used to commute to work, commute time and choices, geographic distribution of existing transit use, and regional geographic commuting patterns of jobs.

Journey to Work Travel

Examining data based on mode of travel in Volusia County provides insight to overall commuting trends from 2000 to 2019. Table 2-8 shows that public transit’s mode share, defined as the percentage of travelers using public transportation for work-based travel, while still very small, stayed stable from 2000 to 2019. Driving alone decreased marginally from 2000 to 2019, but experienced a larger decrease (-6%) in the more recent trend from 2010 to 2019. Despite the decrease in driving alone, it still remains the most popular commute option in Volusia County. Furthermore, the share of workers carpooling also decreased from 13 percent to 9 percent from 2000 to 2019, although the mode has begun increasing in popularity again since 2010. The number of workers who reported working from home increased from 2000 to 2019, while walking and other modes (i.e., bicycling, taxi, motorcycle) decreased marginally. The share of workers working from home is likely to increase due to lasting effects from the COVID-19 pandemic. This may change the overall distribution of travel modes to work.

Table 2-8: Mode to Work, 2000-2019

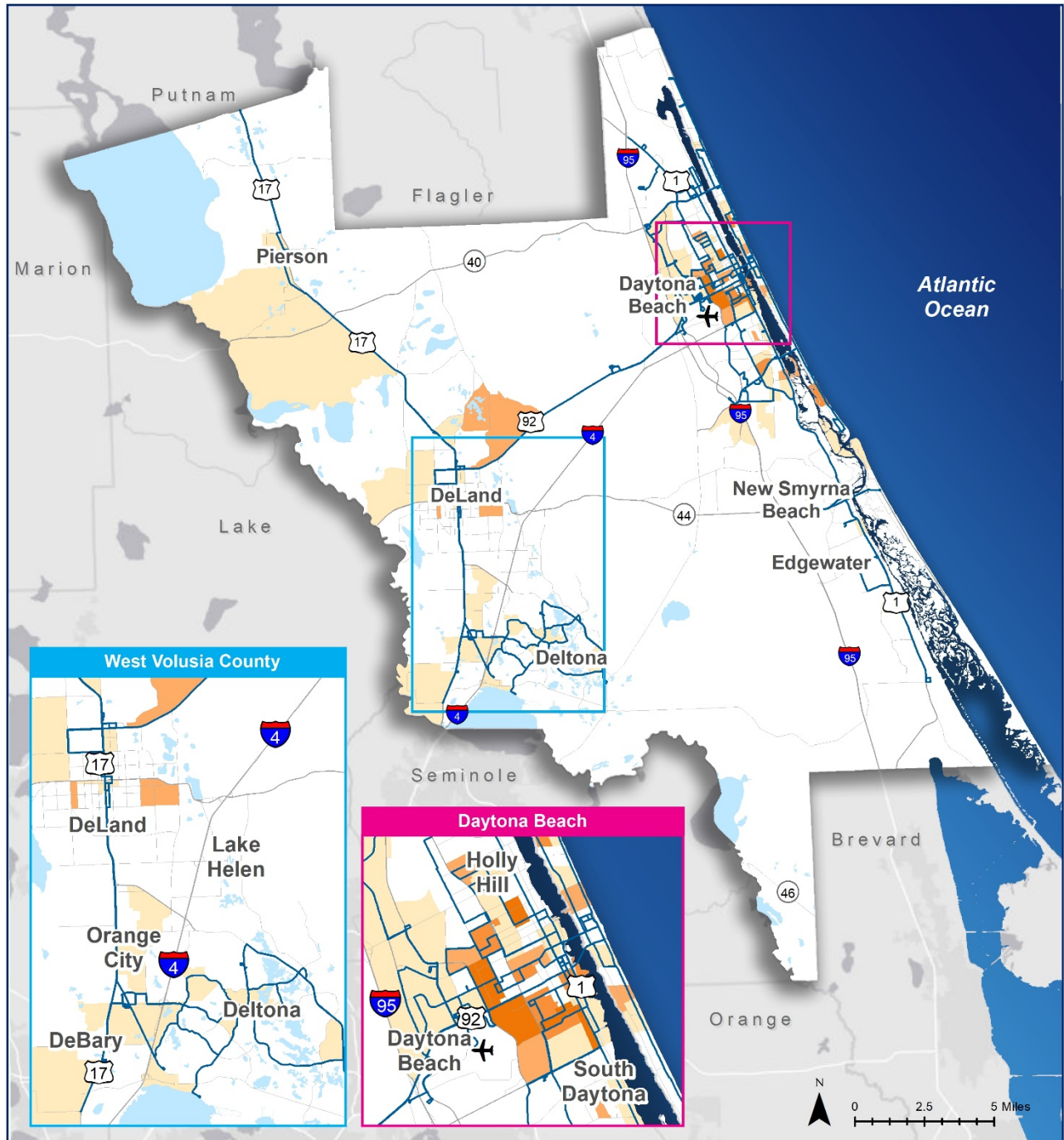
Mode	2000	2010	2019	Change (2010-2019)
Drive alone	79%	84%	78%	-1%
Carpool	13%	7%	9%	-4%
Public transit	1%	1%	1%	0%
Walk	2%	4%	1%	-1%
Work from home	2%	4%	9%	7%
Other	3%	-	2%	-1%

Source: 2000 and 2010 Census and American Community Survey 2019 1-Year Estimates

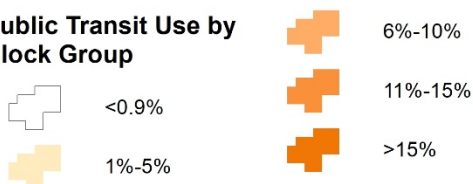
Commute Times and Choices

As shown in Figure 2-9, in 2019 the majority of commuters (63%) spent 30 minutes or less traveling to work, with nearly 19 percent spending 30–45 minutes. Conversely, transit users experienced longer commute times with over half (55%) spending 60 minutes or more while less than six percent had a commute of 30 minutes or less. The average commute time in Volusia County is 26 minutes while transit users have almost double the commute time, 51 minutes. Map 2-12 shows use of transit to commute to work by block group. Areas with high use of transit are concentrated in Daytona Beach and all block groups with a high proportion of persons that report choosing transit as their commute choice are adjacent to existing Votran routes.

Map 2-12: Existing Transit Use, 2019

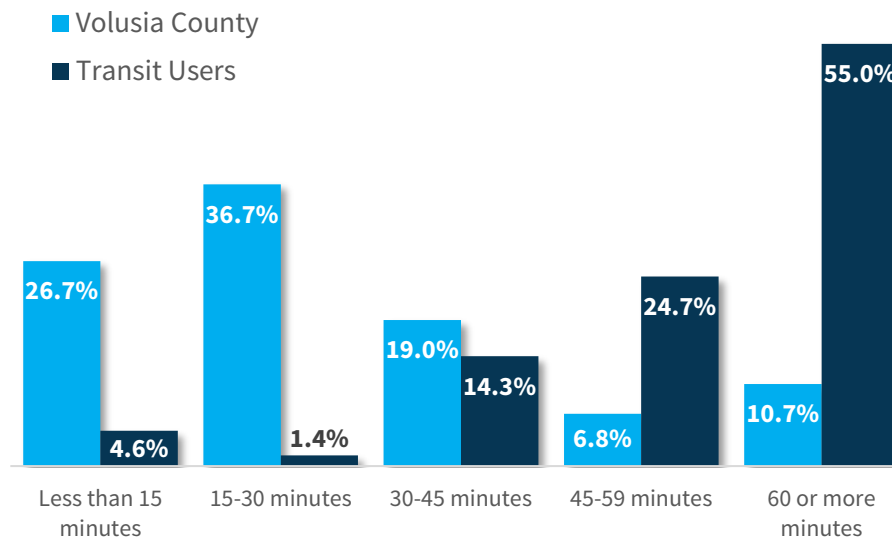


Public Transit Use by Block Group



Transit Development Plan (2022-2031)

Figure 2-9: Travel Time to Work, for Volusia County and Transit Users, 2019



Source: American Community Survey 2019 1-Year Estimates

Commuting Patterns

Review of commuting patterns is important for evaluating existing services and the possible need to establish regional connections. According to the 2017 Census data estimates, approximately 71 percent of Volusia County’s workers, over 170,000 workers, live in the county.

The most common inflow and outflow is between Orange County and Volusia County; over 28,000 residents leave Volusia County for work in Orange County (Figure 2-10) while over 7,100 Orange County residents commute to Volusia County (Figure 2-11). Table 2-9 shows that the three most significant commute trends, besides Orange County, are commuters traveling from Volusia to Seminole County (22,630 workers), Volusia County residents traveling to Duval County (6,997 workers), and Flagler County residents commuting to Volusia County (6,401 workers). Although the majority of Volusia County residents typically work within the county, it is apparent that more Volusia residents work outside the county than non-residents work within Volusia.

Table 2-9: Commuter Inflow and Outflow, Volusia County

County	Inflow (to Volusia County)	Outflow (from Volusia County)
Orange County	7,119	28,403
Seminole County	6,303	22,630
Duval County	3,632	6,997
Flagler County	6,401	3,260
Hillsborough County	2,573	4,788
Brevard County	3,630	3,881
Lake County	3,548	3,784
Polk County	2,059	2,110

Source: Census “OnTheMap” 2017 Estimates

Figure 2-10: Volusia County Commuter Outflows, 2017

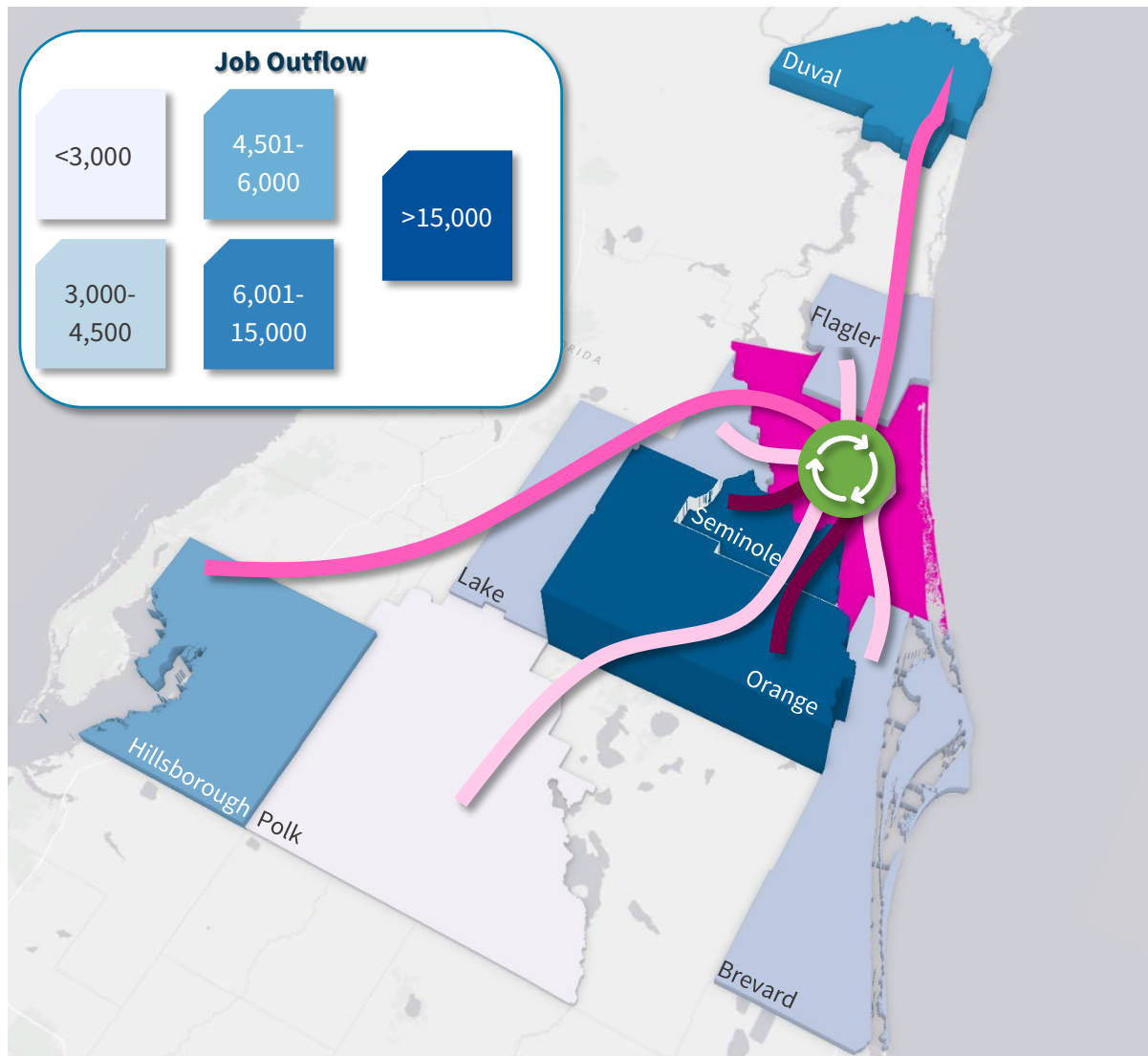
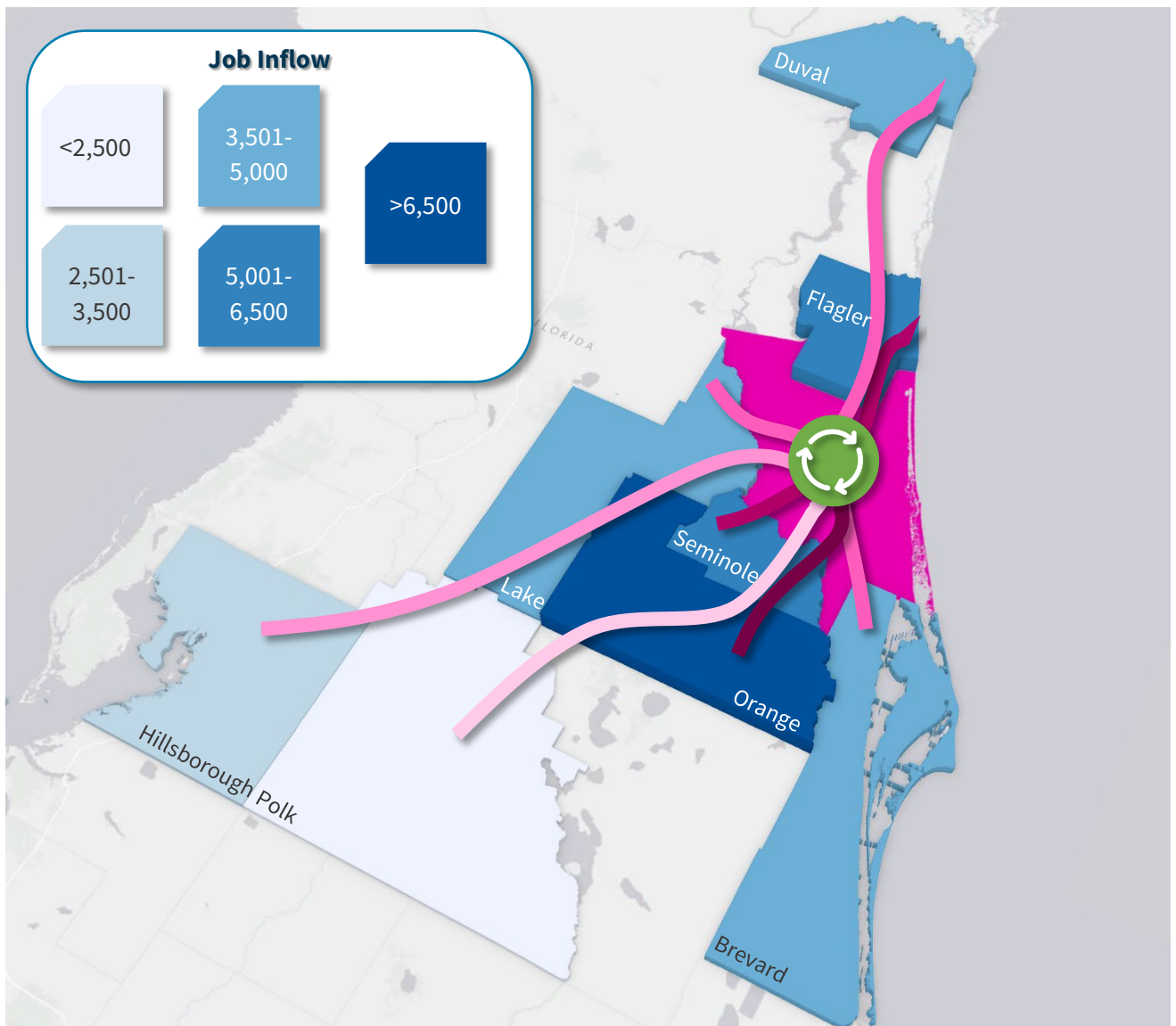


Figure 2-11: Volusia County Commuter Inflows, 2017



Transportation Disadvantaged

While the TDP focuses on fixed-route bus services, a brief look at the Transportation Disadvantaged (TD) services provided in Volusia County (currently branded as Gold Service) also was conducted. TD services support an important function to help increase access to activities such as health care, employment, and education for older adults, those who have disabilities and/or low incomes, and children classified as high risk or at-risk¹. The service is available to eligible people in the “TD population,” which includes individuals who meet the requirements to receive trips, subsidized by the Florida Commission for the Transportation Disadvantaged (CTD) Trust Fund that is allocated to the local Community Transportation Coordinators (CTC).

In addition to providing fixed-route service, Votran also serves as the community’s CTC. In 2019, Votran received the safety award of the year from the Florida CTD after the agency reduced its road calls, accidents, and worker compensation claims.

According to the 2019 Florida CTD Annual Report, there were 507,977 TD trips in 2019, which represents a 13 percent decrease over the past five years (Figure 2-12). Almost half, 45.9 percent, of Volusia County’s TD trips were categorized as life-sustaining/other. Figure 2-13 shows that although the overall number of trips declined, Volusia County experienced an increase in its nutritional and life-sustaining number of trips provided during that period.

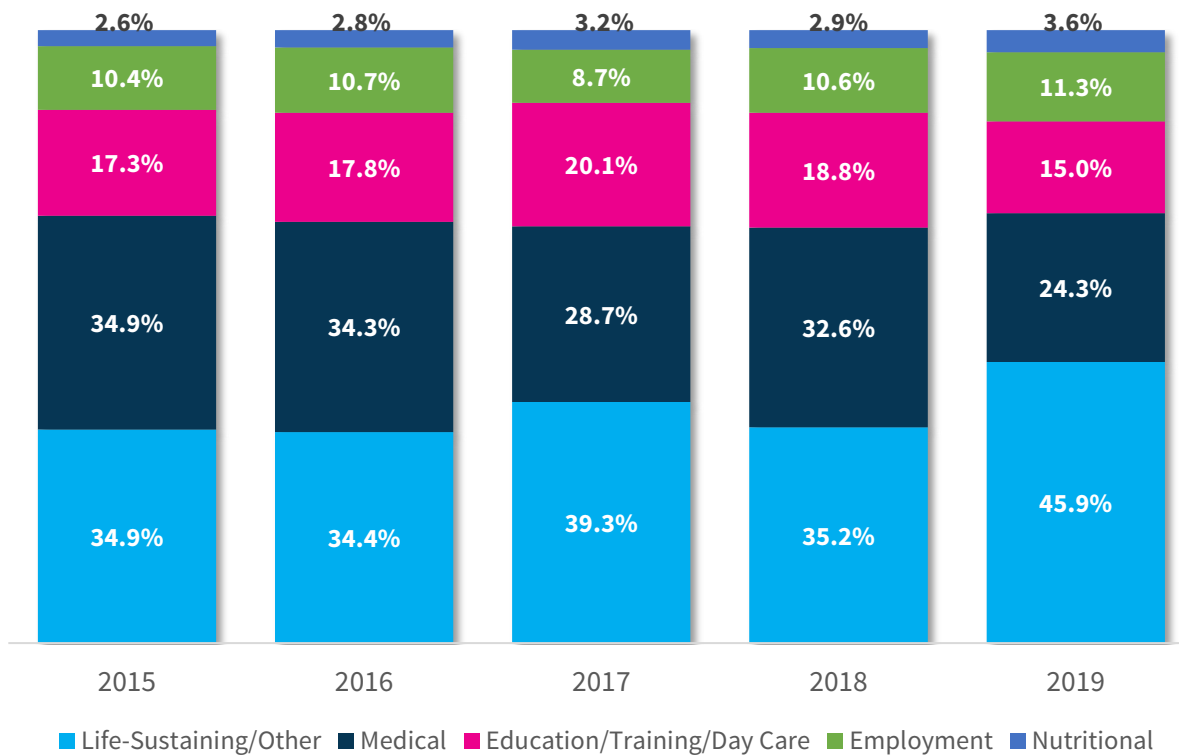
Figure 2-12: Transportation Disadvantaged Ridership Trend (2015-2019)



Source: Florida Commission for the Transportation Disadvantaged 2015-2019 Annual Performance Report Data

¹ “High-risk child” or “at-risk child” defined by the Florida Commission for Transportation Disadvantaged, is a preschool child with one or more of the following characteristics: a victim or a sibling of a victim in a confirmed or indicated report of child abuse or neglect; a graduate of a perinatal intensive care unit; the mother is under 18 years of age (unless the mother received necessary comprehensive maternity care and the mother and child currently receive necessary support services); has a developmental delay of one standard deviation below the mean in cognition, language, or physical development; has survived a catastrophic infectious or traumatic illness known to be associated with developmental delay; has survived an accident resulting in a developmental delay; has a parent or guardian who is developmentally disabled, severely emotionally disturbed, drug or alcohol dependent, or incarcerated and who requires assistance in meeting the child’s developmental needs; has no parent or guardian; is drug exposed; the child’s family’s income is at or below 100 percent of the federal poverty level or the child’s family’s income level impairs the development of the child; the child is a handicapped child as defined in Florida statute subsection (8); the child has been placed in residential care under the custody of the state through dependency proceedings pursuant to Florida statute chapter 39; is a member of a migrant farmworker family.

Figure 2-13: Transportation Disadvantaged Trip Type (2015-2019)

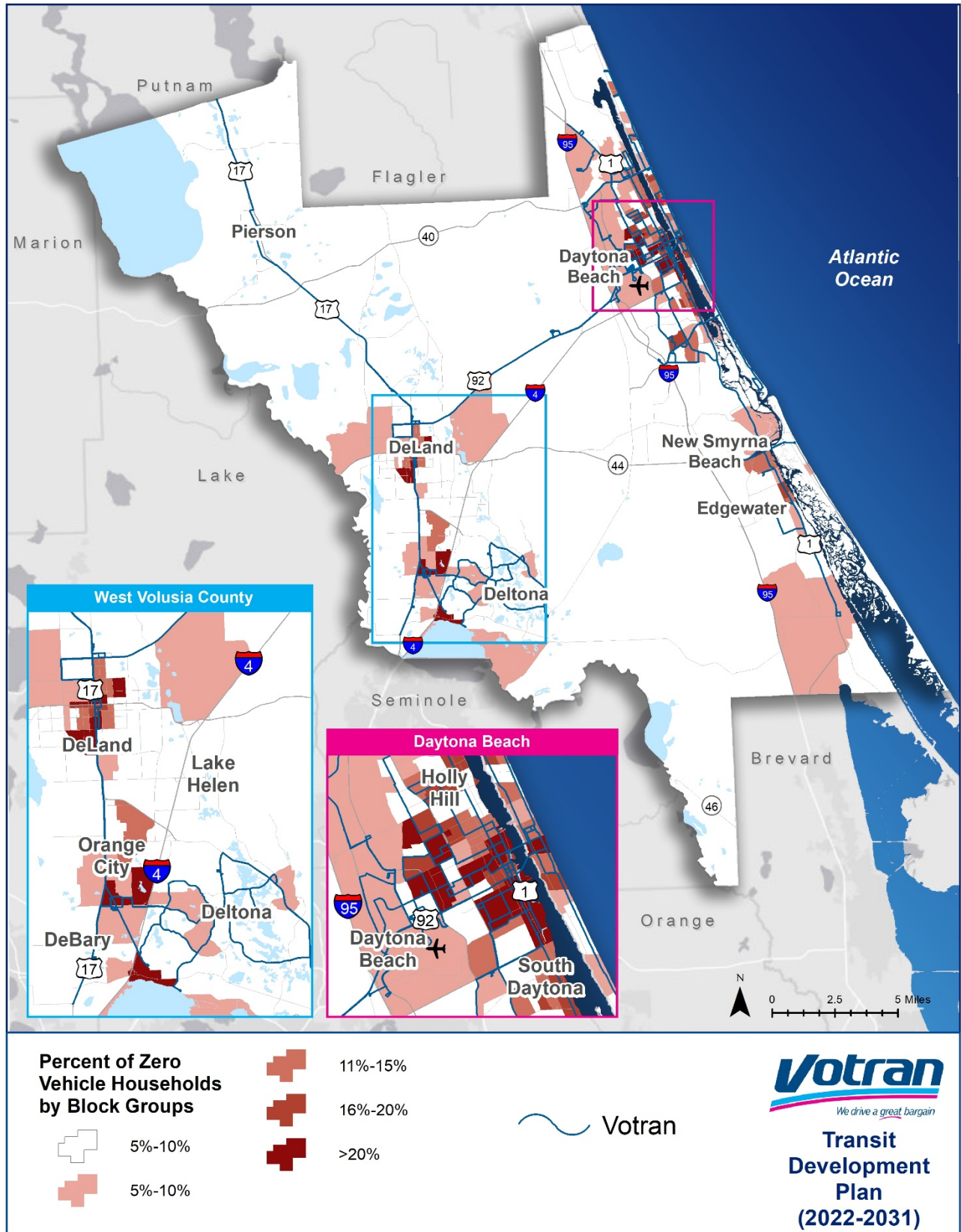


Source: Florida Commission for the Transportation Disadvantaged 2015-2019 Annual Performance Report Data

Automobile Ownership

Owning a vehicle can be a significant financial burden, particularly for households already near or below the poverty line. Households that do not own a vehicle are considered “zero-vehicle households” and are more likely to be dependent on public transportation for work, education, and recreation. According to the 2019 ACS Estimates, approximately 5.8 percent of households were considered zero-vehicle households in Volusia County, slightly lower than the rate of 6.6 percent zero-vehicle households in Florida. In Volusia County, approximately 37.8 percent of households have one vehicle available and approximately 56.4 percent have two or more vehicles available. Volusia County has a below average percentage of zero-vehicle households with the greatest concentrations in downtown Daytona Beach, in DeLand adjacent to Stetson University, east of US 17 in Orange City by I-4, and adjacent to Lake Monroe in Deltona (Map 2-13).

Map 2-13: Zero-Vehicle Households, 2019



Major Activity Centers and Tourism

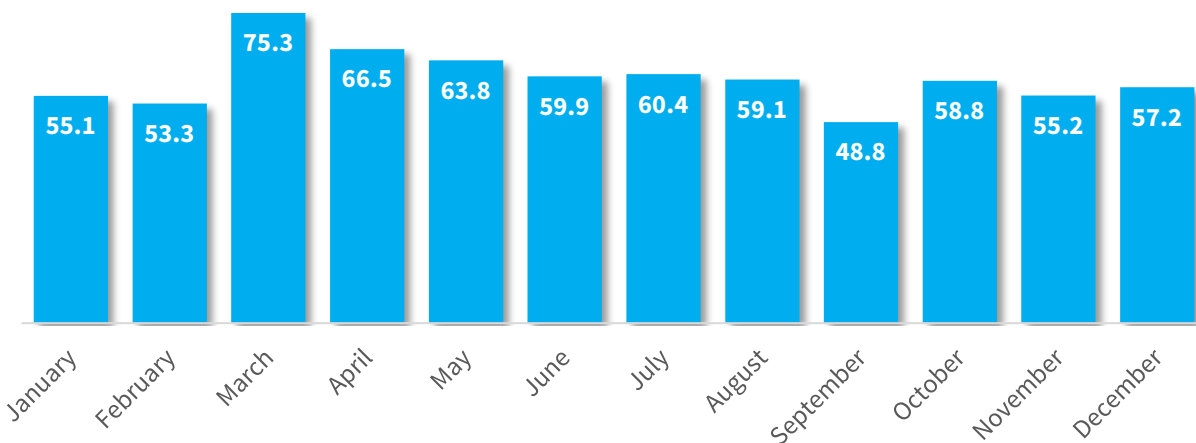
Major trip attractors are places that generate a great need for residents to travel to them either for employment, recreation, or shopping and include medical facilities, recreational areas, educational establishments, major shopping centers, ports, piers, and government or business offices.

Additionally, Volusia County attracts millions of people from all over the world with its signature trip generators of beaches, cultural celebrations, leisure resorts, sporting events, retail, and outdoor attractions.

The major hub of activity in Volusia County is Daytona Beach, which is home to beaches, the Daytona International Speedway, cultural celebrations, and major educational establishments. Daytona Beach is a world-famous travel destination, with tourists hailing from all over the globe to experience what the city has to offer. It has a thriving tourist industry that welcomes millions of visitors every year and, as a result, has a gross economic output of billions of dollars every year, according to the Daytona Conventions and Visitors Bureau. In 2018, Daytona Beach’s tourism experienced an increase of more than two hundred thousand tourists since 2017 reaching a record 10.2 million visitors and a corresponding influx of \$6.1 billion in revenues. Furthermore, there were more than 60,000 jobs and \$821 million in payroll generated in 2018.

Airports, especially those that serve international flights, create a significant transit demand since arriving visitors typically do not have vehicles readily available. In 2019, the Daytona Beach International Airport (DAB) served over 700,000 passengers. As shown in Figure 2-14 as an example for a typical year (i.e., barring major and atypical interruptions like the COVID-19 slowdown), the airport serves the most passengers from March to August. The month of March served 75.3 thousand passengers, supplying approximately 11 percent of 2019 trips. According to the Daytona Convention and Visitors Bureau, 41 percent of visitors reported flying to visit Volusia County; 60 percent used DAB while the remaining flew into neighboring Orlando. Currently, transit services connect to DAB. DAB is served by three routes: Routes 18, 19, and 60 (twice a day).

Figure 2-14: Daytona Beach Airport Passengers Arrivals, 2019 (000s)



Source: Daytona Beach International Airport

Approximately 20 percent of visitors to the Daytona Beach area are from foreign countries. The highest percentage of international visitors are from Canada (12%), the United Kingdom (4%), and Germany (4%). The remaining 80 percent of visitors are domestic, with 28 percent of those visitors from the greater Orlando area.

When asked on choosing a season to travel, 65 percent of visitors reported that the season did not influence their travel plans, but 95 percent also said that they preferred visiting in the winter. Furthermore, approximately 93 percent of all visitors stay overnight while 65 percent are repeat visitors to the area. The most popular activity reported by the majority (93%) of out-of-state visitors is walking on the beach.



Source: Daytona International Speedway

The Daytona International Speedway, located in Daytona Beach and home to the Daytona 500, has been hosting the event since 1962. In 2016, the stadium was reopened after renovations that refurbished over 100,000 seats to ensure a better experience for visitors. According to NASCAR, the stadium has sold out the Daytona 500 since the renovations, which in turn has had a major economic impact in Volusia County. The Speedway reports that more than \$214 million is raised in federal, state, and local taxes and it provides 18,000 permanent jobs.

Furthermore, 60 percent of patrons travel from out of state and report staying five or more nights while attending Speedway events.



The City also hosts the Daytona Bike Week, which occurs every March and attracts hundreds of thousands of people. While Daytona Beach hosts a lot of the Bike Week experiences, typically there are events throughout the area from Ormond Beach to DeLand. In a typical year, there are approximately a half million visitors during this time, creating parking and traffic issues that may provide opportunities to promote transit. It is estimated that about half of the visitors stay at local accommodations.

Major shopping centers are also important to consider as they can attract thousands of visitors and become employment hubs, creating a significant travel demand to a particular area. The Tanger Outlets shopping center offers a variety of shops and an outside activity center for children that includes amenities such as shaded seating, Wi-Fi, and charging stations.

The Riverfront Shops of Daytona Beach offer more than 60 attractions such as shops and restaurants and is located in downtown Daytona Beach. Additionally, the local Farmer's Market was moved to the area since this area was considered a better location for business by vendors, existing businesses will benefit from the increased foot traffic generated by the market, and it is closer to Votran bus stops. The Riverfront Shops



of Daytona Beach is also home to the Sweetheart Trail, the Halifax Historical Museum, and the Veterans Museum and Education Center. The Sweetheart Trail connects Beach Street to the Halifax River to access Manatee Island Park. The trail is part of the East Coast Greenway, a trail network that connects the east coast of the United States. Additionally, City Island Park is adjacent to the trail and hosts attractions such as baseball fields, tennis courts, and volleyball courts with picnic areas.

Large public parks and spaces also can be considered major trip generators as visitors and residents want to enjoy them. The western portion of the county is home to DeLeon Springs State Park and Blue Springs State Park.

DeLeon Springs State Park offers recreational activities such as bird watching, boat tours, canoe and kayak rentals, swimming, hiking, picnicking, and a restaurant for visitors. The 625-acre park is open every day from 8:00 AM to sunset. The restaurant is its own attraction as a historic replica and is on a historic site. This State Park is adjacent to Route 24 via US 17.

Blue Springs State Park follows a similar schedule as DeLeon Springs State Park, although it is closed for manatee season from November to March. This popular attraction also hosts bird watching, boat tours, camping, fishing, hiking, picnicking, scuba diving, and space for RVs.

Volusia County is also home to the Daytona Tortugas, the minor league baseball team affiliated with the Cincinnati Reds at the Jackie Robinson Ballpark (Figure 2-15). The stadium was established in 1914 in downtown Daytona Beach and has 5,100 seats. “The Jack,” as it is known by locals, connects people to the location on a regular basis with community recreation events year-round.

Figure 2-15: Jackie Robinson Ballpark



Major Employers and Developments

Another key set of trip generators in an area is its major employers. The top 10 major employers in Volusia County in 2018 are listed in Table 2-10 along with their respective industries. The largest employer, Volusia County Schools, is actually dispersed throughout the county with 82 facilities. The top industry sector of employers is education with the remaining educational employers, other than Volusia County Schools, serving in higher education. Most of the listed employers have locations distributed throughout the county and are not centered in one location.

Table 2-10: Major Employers, Volusia County

	Employer	Number of Employees	Industry
1	Volusia County Schools	7,521	Education
2	Advent Health System	5,885	Healthcare
3	Halifax Health System	4,050	Healthcare
4	Volusia County Government	3,408	Government
5	Publix Supermarkets	3,244	Retail
6	Walmart	3,050	Retail
7	State of Florida	2,976	Government
8	Stetson University	1,793	Education
9	Daytona State College	1,490	Education
10	Embry-Riddle Aeronautical University	1,405	Education

Source: 2020-2023 Florida and Metro Forecast, University of Central Florida Institute for Economic Forecasting

Ormond Beach Developments

In East Volusia, there are several high-density dwelling unit developments planned in Ormond Beach. The Ormond Crossings is a mixed-use planned development of over 2,900 acres adjacent to I-95 and US 1. The development will include a business park, town center, and residential. The town center will be pedestrian oriented and include assisted living and independent living facilities. Additionally, this development will include a new elementary school. The first phase of development will include parts

of the business park while the second phase will include the town center and the majority of the residential plots.

Additionally, Ormond Beach is adding a 55-and-over community adjacent to I-95 and US 1. The Plantation Oaks will be northeast of the Ormond Crossings development. Plantation Oaks boasts affordable housing and many amenities such as a clubhouse with tennis courts, outdoor spaces, outdoor grilling, fitness facilities, game rooms, event space, and a pool.

These new developments will bring increased demand for an area with limited existing transit services. Furthermore, these developments will be adjacent to the Flagler County line suggesting a possible need for regional partnership.

In addition to the aforementioned residential projects, the area will be adding commercial, retail, and hotel developments. Along US 1, a Courtyards hotel will be added adjacent to SR 40. Additionally, a 123-unit assisted living facility will be developed along SR 40. On the west side of I-95, an Extended Stay America will be added. These developments bring not only guests that may not have access to a vehicle, but also the demand for more service jobs in the area. Along SR 40, a 20-acre shopping center hosting a Wawa, retail space, and a grocery store has been approved. Along the coast, there will be new retail shops, improvements to the art museum, and a remodeled Publix shopping center.

Edgewater Developments

In 2019, the City of Edgewater issued 3,100 permits, added over \$15.9 million in residential developments, and added over \$642,000 in commercial development. The majority of commercial development, which primarily includes warehouses, occurred along Park Avenue. Along Ridgewood Avenue, an Aldi grocery store, office spaces, and retail spaces were added. Between Indian River Boulevard and I-95, 8,500 dwelling units will be added as a part of the development that is adjacent to the Deering Park mixed-use development. The site is considered a development of regional impact and is a part of Edgewater and New Smyrna Beach, although the residential area will be located in Edgewater. The Edgewater Preserve, adjacent to Volco Road, will include both multi-family and single-family dwelling units.

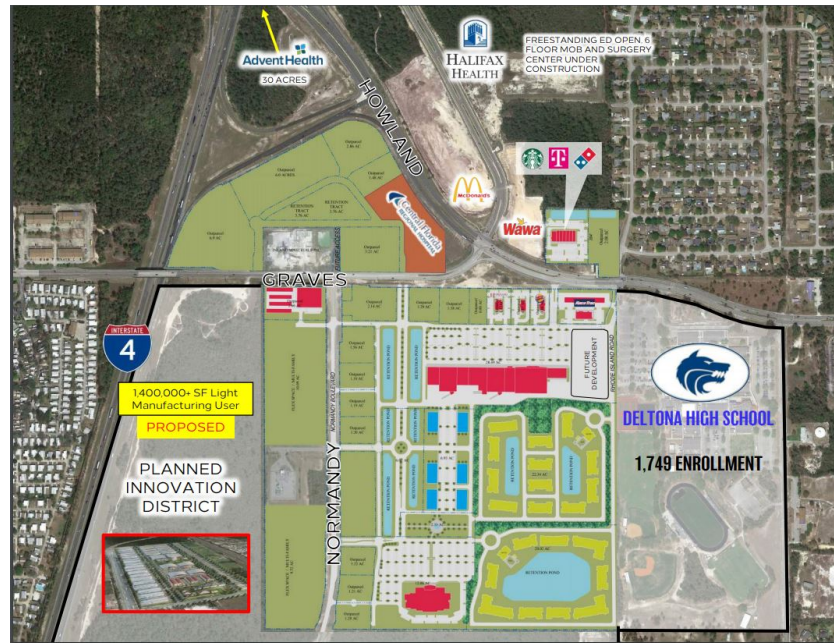
New Smyrna Beach Developments

As of November 2020, New Smyrna Beach has 43 projects that have been approved and are under construction. The majority of these projects are concentrated by the intersection of SR 44 and I-95 or by the coast. Most of the developments are residential or restaurants. A Walmart grocery store will be developed along SR 44 west of I-95. On the western side of I-95, there is an addition of 76 apartment units, over 21,000 square feet of retail space, and 220 condominium units that will be in the town center of an existing development, Venetian Bay. Additionally, another development, The Palms, is expanding its residential section and adding an amenity center. Adjacent to US 1, the Alonzo “Babe” James Splash Pad, a public water park recreation area, opened. Along the coast, more high-density condominiums will be developed and new restaurants will be added to the area by the North Causeway.

Deltona and Orange City Developments

In West Volusia, there are multiple new housing and commercial developments. In the Orange City and Deltona area adjacent to I-4, there are clusters of high-density, multi-family housing and commercial uses. A new 1.4-million-square-foot Amazon facility adjacent to Graves Avenue and I-4 is estimated to create approximately 500 new jobs by 2023. The Amazon facility will be a part of a larger development, the Portland Industrial Park, which is planned to accommodate similar uses. To the northeast of the Amazon facility, overlapping on both sides of Graves Avenue, is Deltona Village. The new Deltona Village will be home to over 20 acres of multi-family housing, a new Central Florida Regional Hospital, Halifax Health Hospital and Surgery Center, and other commercial and retail business.

Figure 2-16: Deltona Village



Source: Deltona Village

Adjacent to the Portland Industrial Park and Deltona Village, on the west side of I-4, a large development called The Crossings is planned to host 288 multi-family units, a hotel with space for 100 rooms, 31,000 square feet of neighborhood commercial use, and 13,600 square feet of office space. To the east of The Crossings, there is another planned development for 560 residential units by 2025 and 1,120 units by 2030.

In central Orange City, there are plans for the West Volusia Retail Center, that will also host 105 multi-family units that will be adjacent to a planned assisted living facility that will host under 100 beds. In the same cluster, there is the Parc Hill development. Parc Hill is a multi-phase mix of single family and multi-family homes that also includes a senior living apartment community.

DeLand Developments

As previously mentioned, DeLand has experienced the most growth of all incorporated municipalities in Volusia County. The city specifies that it hopes to add more activity centers and transit-oriented developments in the long-term. There are a few developments in the area that will be high-density residential developments. Adjacent to I-4, there are two planned developments that are projected to have over 800 residential units on approximately 203 acres.

Affordable Housing

As previously mentioned, transportation costs can be a burden on a household. Furthermore, transportation is typically estimated to be the second largest household expense after the cost of housing. Personal transportation is often needed to reach jobs and other economic opportunities that can help support household income. Affordable housing and transit have a symbiotic relationship and can create connected communities that are more budget friendly.

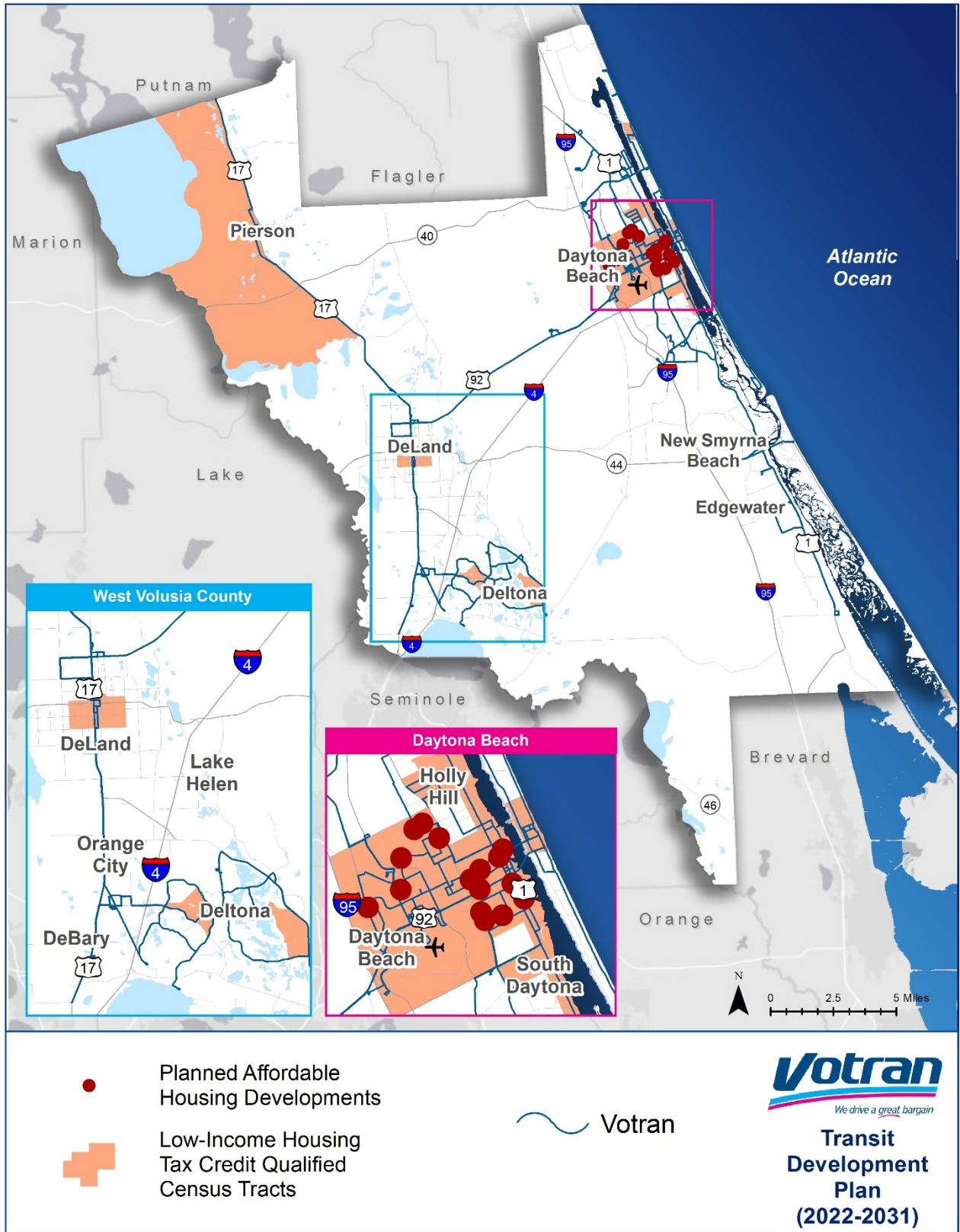
To identify areas with affordable housing, Low-Income Housing Tax Credit Qualified Census Tract data were evaluated. According to the U.S. Department of Housing and Urban Development (HUD), Low-Income Housing Tax Credit (LIHTC) Qualified Census Tracts are defined as areas that have more than 50 percent of households with incomes below 60 percent of the Area Median Gross Income and/or have a poverty rate of 25 percent or more.

Additionally, HUD reports that homeownership affordability remains above the historic average in 2020 as mortgage rates are low while national trends are showing rental affordability is a challenge due to rising rents. The median gross monthly rent in Volusia County is \$1,074, which is lower than Florida's average of \$1,530, according to the 2019 ACS Estimates.

The Daytona Beach Housing Authority (DBHA) offers affordable housing opportunities through subsidized housing and homeownership for households that qualify as low-income, elderly, or persons with disabilities. There are 17 affordable housing developments in Daytona Beach, of which there are 2,112 units available for those that qualify. These developments are adjacent to existing Votran transit services.

Map 2-14 shows the areas that qualify under the aforementioned categories and geographic distribution of the affordable housing developments in Volusia County. The Daytona Beach area, including South Daytona and Holly Hill, fall into the categories in East Volusia. All of the affordable housing developments in Daytona Beach also are within the qualified zone. In West Volusia, east of US 17 in Pierson, areas adjacent to US 17 and Euclid Avenue in DeLand, and pockets in Deltona could qualify for affordable housing developments. To incentivize affordable housing projects in these areas, investments financed with the LIHTC are eligible for a 30-percent increase in its tax credit basis.

Map 2-14: Qualified Census Tracts/Difficult Development Areas and Affordable Housing Developments



Roadway and Traffic Conditions

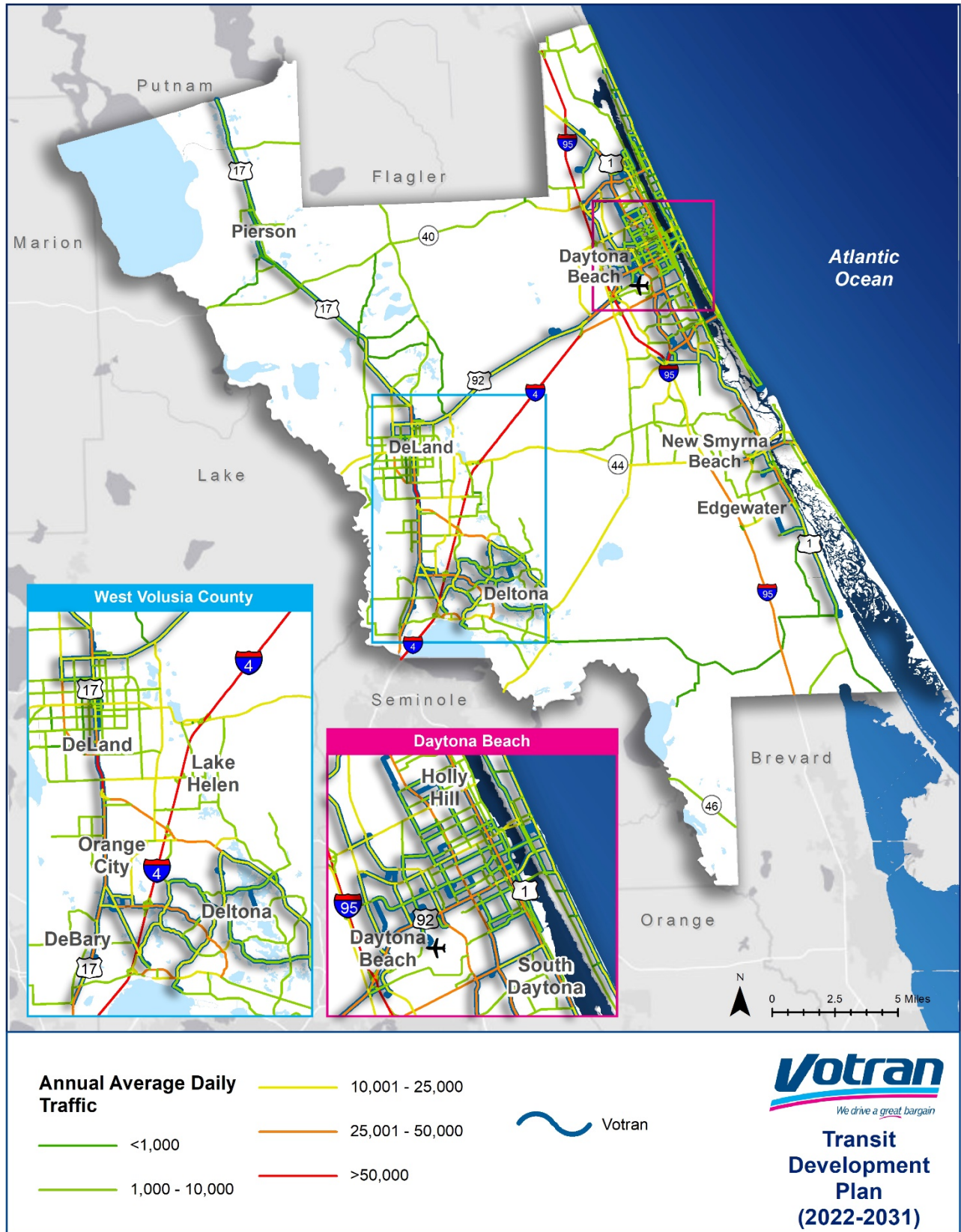
Congestion on major roadways can be a major issue impacting the quality of life of residents and visitors in Volusia County. Identifying these congested roadway segments is important as alternative modes of travel, such as transit, can be introduced to help mitigate traffic congestion. Table 2-11 shows the most congested segments of roadway in Volusia County, with a current or projected Level of Service (LOS) rating of D or lower. LOS is a measure, a quantitative calculation regarding the carrying capacity of roadways for traffic volumes, to monitor traffic congestion on roadways. The rating is from A to F, with A considered free-flow and F considered highly unstable with forced and breakdown of traffic flow. In addition, the change in the Annual Average Daily Traffic (AADT), defined as the total volume of traffic on a section of roadway for a year, was also included to examine whether traffic is increasing or decreasing. The availability of transit services on these segments is shown and the majority of these roadways are served by transit. The section of roadway from the FDOT Park-and-Ride to I-4 on Saxon Boulevard is the only road to experience a decrease in traffic. Map 2-15 shows the AADT overlaid on existing Votran routes while Map 2-16 shows the 2019 LOS and roadways that FDOT identified as critically or near-critically congested.

Table 2-11: Roadway Level of Service and AADT in Volusia County, 2018

Roadway	Section	Allowed LOS (2018)	Current LOS (2018)	AADT % Change (2009-2018)	Transit Availability
US 17/92	Euclid Ave to Beresford Ave	E	F	18%	Yes
SR 40	US 1 to Halifax Ave	D	F	14%	Yes
Catalina Blvd	Howland Blvd to Sixma Rd	D	E	n/a	No
Dunn Ave/Mason Ave	Bill France Blvd to Clyde Morris Blvd	E	F	17%	Partial
Fort Smith Blvd	Providence Blvd to Newmark Dr	D	F	n/a	Yes
Graves Ave	Veteran's Memorial Pkwy to Kentucky Ave	E	F	18%	No
Howland Blvd	Providence Blvd to Elkcam Blvd	E	F	41%	Yes
Main St	I-4 to Lakeview Dr	C	D	62%	No
Normandy Blvd	Deltona Blvd to Tivoli Dr	D	E	n/a	Yes
Normandy Blvd	Saxon Blvd to Ft Smith Blvd	D	F	n/a	Yes
Providence Blvd	Anderson Dr to Doyle Rd	E	F	19%	Yes
Saxon Blvd	FDOT Park & Ride to I-4	E	F	-8%	Yes
Tivoli Dr	Saxon Blvd to Providence Blvd	D	E	n/a	Yes
W Volusia Bldwy	Minnesota Ave to SR 44	E	F	39%	Partial
W Volusia Bldwy	Rhode Island Ave to Harley Strickland Blvd	E	F	32%	Yes
Williamson Blvd	Hand Ave to LPGA Blvd	E	F	41%	Yes
Williamson Blvd	Beville Rd to Madeline Ave	E	F	71%	No
Williamson Blvd	Madeline Ave to Willow Run Blvd	E	F	41%	No
Williamson Blvd	Willow Run Blvd to Town W Blvd	E	F	62%	No

Source: Volusia County Traffic Engineering

Map 2-15: Annual Average Daily Traffic and Existing Transit, 2018



Land Use

Reviewing and understanding future land use designations is important as it illustrates the vision at the county and/or municipal level for growth and development patterns. Transit supportive land uses such as high density/multi-family residential areas and mixed-use areas may provide more opportunities for transit to succeed with their potential for higher demand for transit. Identifying such land uses in future land use maps may provide valuable guidance and direction for the 10-year TDP. Therefore, a review of future land uses was conducted for key areas, including Volusia County, the City of Daytona, and the City of DeLand.

Volusia County

The Volusia County future land use map was reviewed for key trends. The following land uses were observed from Figure 2-17:

- Urban uses of all intensities (tan, orange, and dark orange) are concentrated near established and incorporated areas. Commercial uses (red) are found near interstates and major roadways.
- Environmentally sensitive areas are prevalent throughout the county. Conservation (dark green), environmental systems corridor (light green-yellow), and forestry resource (medium green) land uses are observed distributed throughout the county, but clustered in the central and western areas.
- The southern central area and some clustered areas in West Volusia County are devoted to local plan areas (salmon). Volusia County defines local plan areas as localized or detailed plans that address issues or areas that either require additional analysis due to changing circumstances from the original Comprehensive Plan or were required as part of implementing the Comprehensive Plan. Currently, there are 15 plans.
- Rural areas (brown) are distributed throughout the county, mainly concentrated in West Volusia with some areas in the east. This land use is found adjacent to environmentally sensitive areas.

Daytona Beach

Daytona Beach is the most popular destination in Volusia County and currently has the most geographic coverage of existing transit services. After a review of the Daytona Beach future land use map (Figure 2-18), the following trends were noted:

- Retail uses (red) are found adjacent to major corridors, such as Nova Road. Mixed uses (orange stripes) are scattered throughout the city and are generally adjacent to general industrial uses or retail.
- The majority of the residential uses are Level 1 or Level 2 (light yellow and yellow, respectively). Level 1 land use will not exceed eight dwelling units per acre while Level 2 will not exceed 20 dwelling units per acre.

Figure 2-17: Volusia County Future Land Use

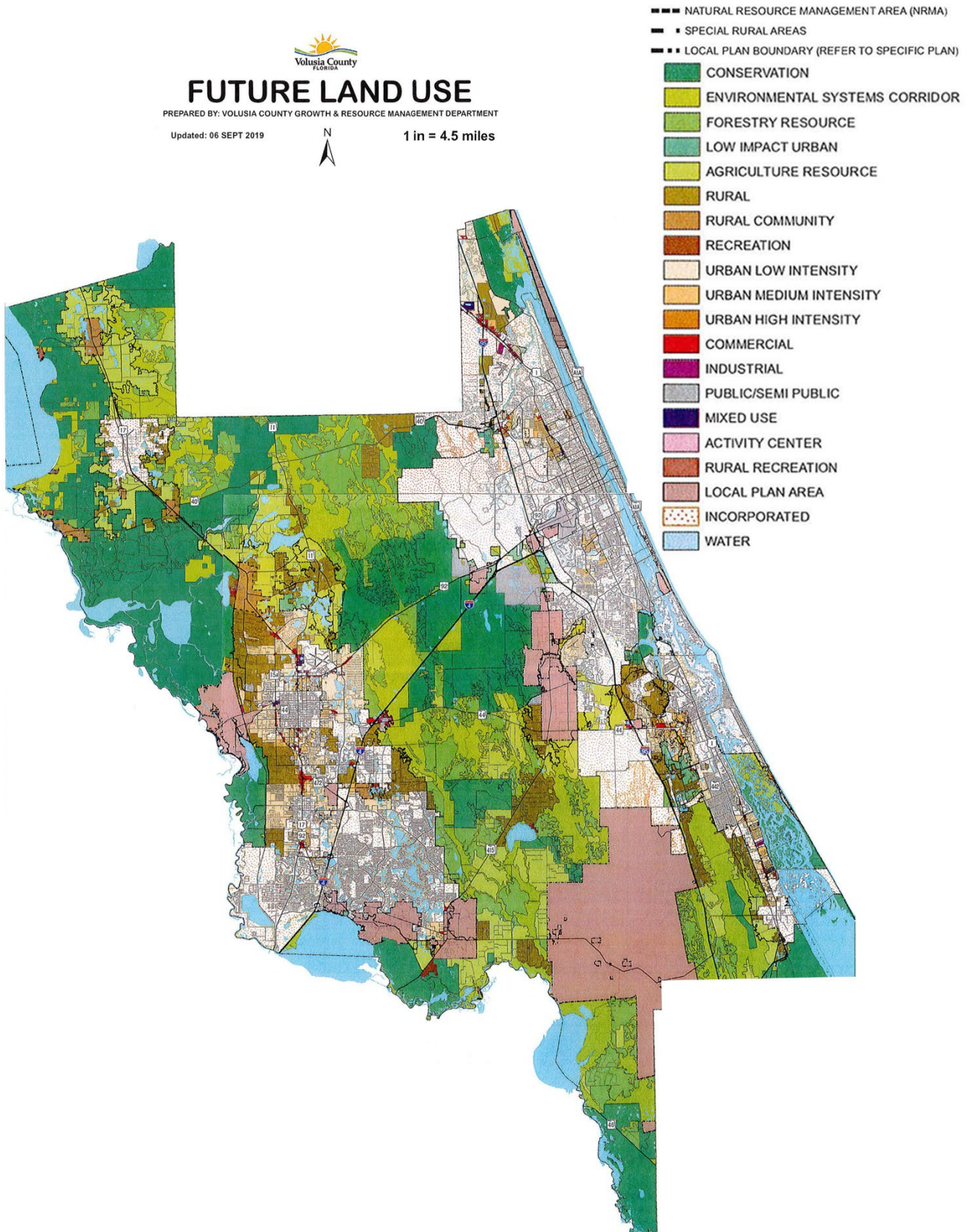
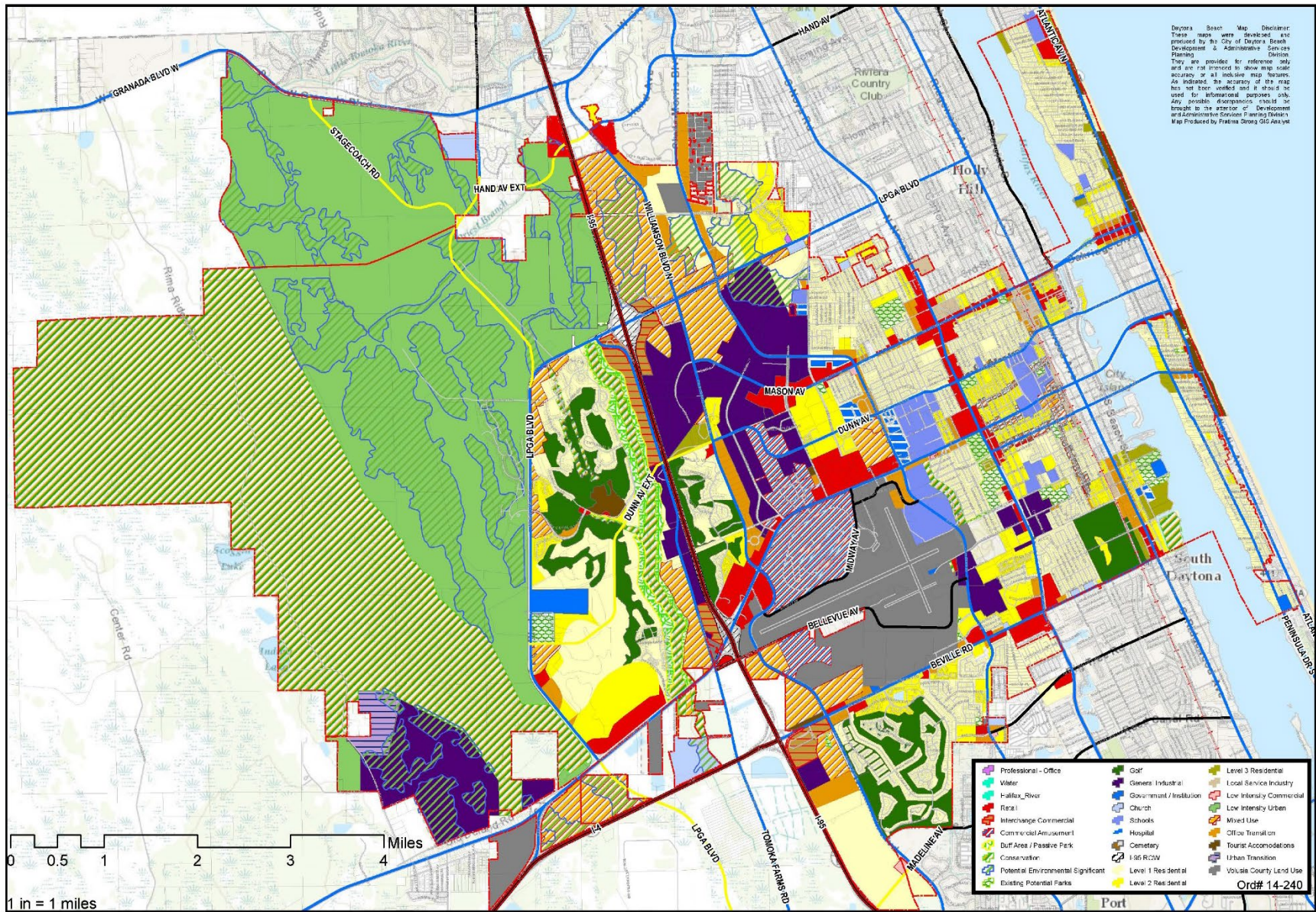


Figure 2-18: Daytona Beach Future Land Use

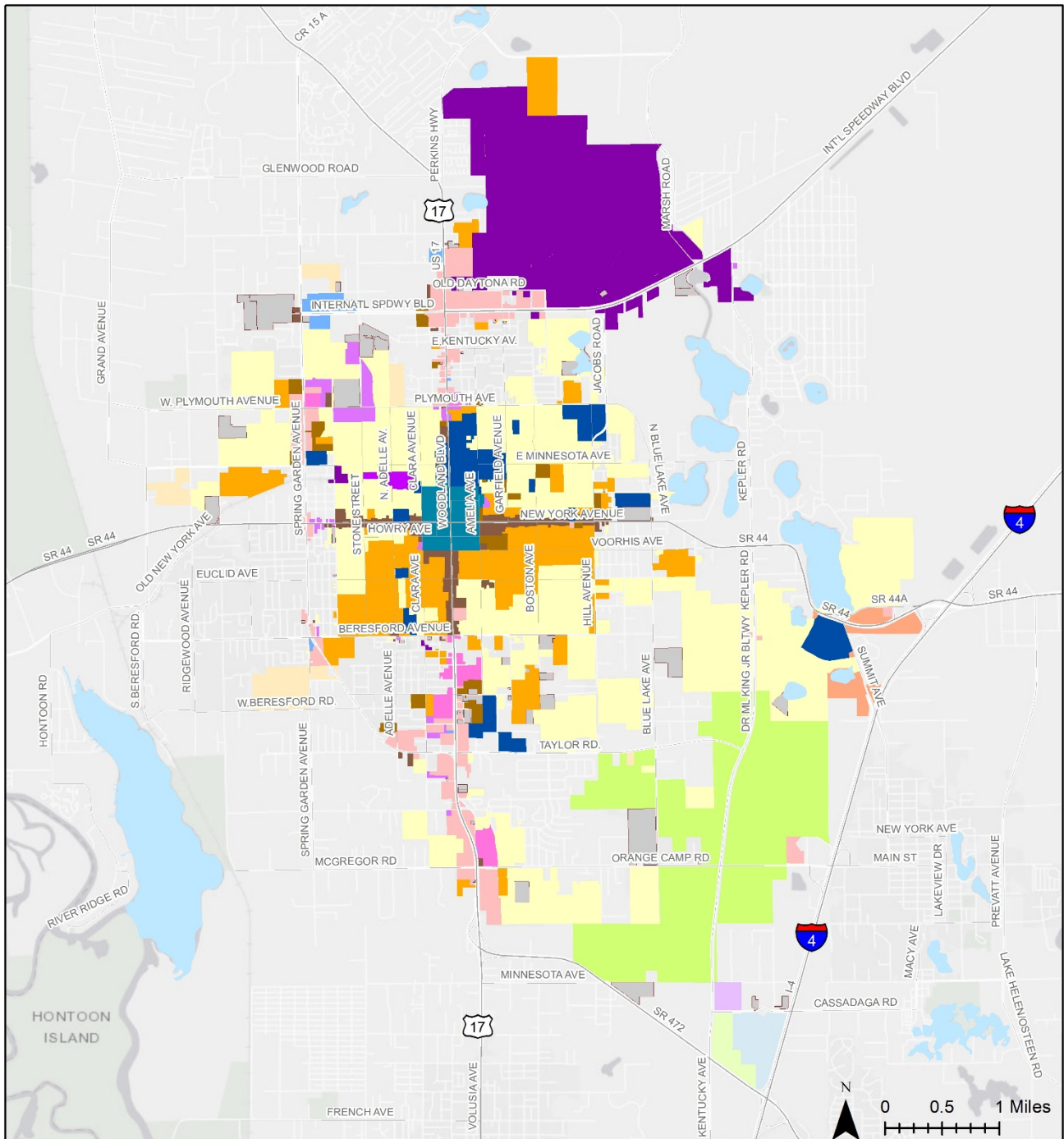


DeLand

DeLand is the fastest growing incorporated area and also the county seat for Volusia County. The future land uses for DeLand also were assessed (Figure 2-19) and the subsequent observations were noted:

- The center of the city is zoned for downtown commercial (teal) while the adjacent land uses are high density residential (light brown), mixed office-residential (light purple), and education (navy).
- Medium-density residential land uses (orange) are prominent south of SR 44, adjacent to other low-density residential uses. Medium-density residential uses permit up to 12 dwelling units per acre.
- The majority of residential land uses are low-density (light yellow). Low-density residential can allot up to 5.8 dwelling units per acre.
- The majority of the southeastern portion of the city limits are dedicated to new community development (light green).

Figure 2-19: DeLand Future Land Use



- | Future Land Use | | | |
|---|---------------------|---|----------------------------|
|  | Business Retail |  | Mixed Office-Residential |
|  | Community |  | New Community Development |
|  | Commerce |  | Redevelopment |
|  | County |  | Industrial |
|  | Downtown Commercial |  | Low Density Residential |
|  | Education |  | Medium Density Residential |
|  | Highway Commercial |  | West Central District |
|  | Mixed Commercial |  | Urban Low Intensity |
|  | Rail Spur | | |

Source: City of DeLand

Section 3. Existing Transit Services Evaluation

This section provides an overview of public transportation services and facilities provided by Votran, including a brief overview of the individual routes in the transit system. In addition to fixed-route services, Votran also provides federally-mandated complementary Americans with Disabilities Act (ADA) paratransit service to cover trips for those who are eligible.

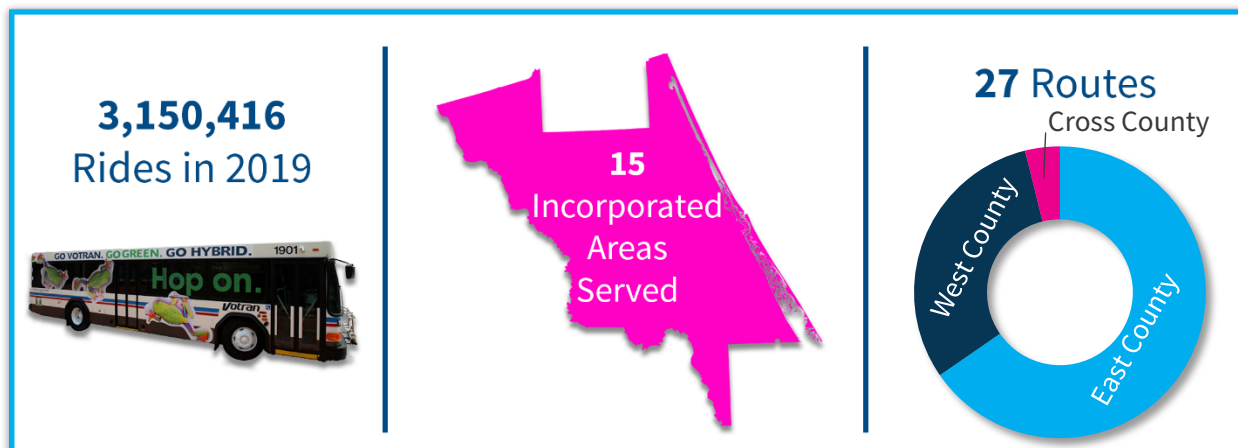
Presented first in this section is an overview of all public transportation services and facilities provided by Votran. Information on other transportation services currently available in Volusia County also is summarized to provide a comprehensive picture of the services that may be available for the residents and visitors to the county.

Furthermore, results of a performance trend analysis and a peer review analysis of critical performance indicators for Votran’s fixed-route services also are summarized. This was conducted to assess how efficiently Votran supplies its transit service and how effectively those services meet the needs of the community it serves.

Votran Fixed-Route Transit Services Overview

Votran has provided service in Volusia County since 1975. Currently, there are 27 routes that serve all incorporated municipalities, with the exception of Lake Helen, and connect the eastern and western portions of the county.

Figure 3-1: Votran Fixed-Route Transit Services, FY19



The majority of routes operate from approximately 6:00 AM to 7:00 PM on weekdays and Saturday with frequencies ranging from 30 to 60 minutes, while some operate all seven days of the week. The routes that operate seven days a week have consistent frequencies and span Monday through Saturday with limited Sunday service. The earliest weekday service begins at approximately 4:22 AM on Route 31 and ends at 12:30 AM with Route 1. Although most route frequencies are 60 minutes, some routes operate every 30-minutes and some every two hours. The majority of routes are located in the eastern portion of the county and service begins there at 5:37 AM with Route 15 and ends at 12:30 AM on Route 1. The

western portion of the county is served by nine routes, with Route 31 operating the longest span in the area from 4:22 AM to 8:48 PM. There is no service after that time in West Volusia County. Route 60, the route that connects the eastern and western parts of Volusia County, operates every 30 minutes Monday through Saturday from 5:15 AM to 7:48 PM.

Gold Service

in addition to being the County’s CTC, Votran also provides “Gold Service,” which is paratransit service for eligible TD populations and eligible bus riders within 0.75-mile of a fixed bus route. It is available to persons who, because of physical or mental disability or age, are unable to transport themselves and/or persons meeting requirements of the ADA who cannot use fixed-route bus service due to the distance to a route and/or the inaccessibility of the pathway to access the route.

The Gold Service schedules appointments for trips for those who meet the eligibility criteria either the day prior or up to one week in advance. To use the service, residents must apply, meet requirements, and be approved. Again, qualifying criteria include having a disability, inability to transport oneself, and/or inability to use fixed-route services. The current fare for this service is \$3 per trip. Scheduled pickup times for the service correspond to the hours of service within the area.



Vanpool and Commuter Services

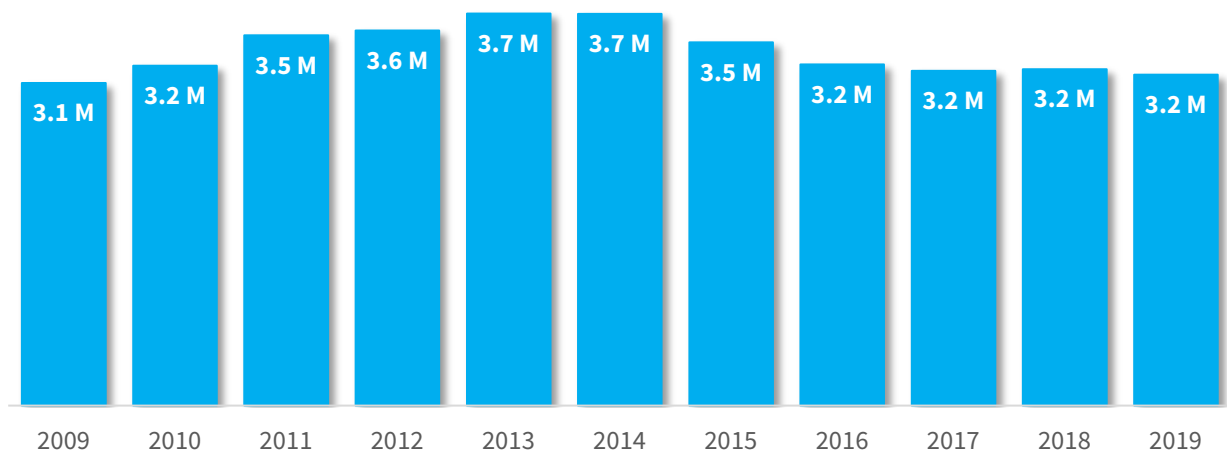
Votran also facilitates and subsidizes the vanpool program in conjunction with Enterprise Rental Car Company. A vanpool is a group of people who commute together on a regular basis in a van. In FY 2019, the program had 11 active vanpools and averaged 4 people per vanpool. Each van's route is customizable based on the needs of the employees and is estimated to have reduced the number of single-occupant car trips by 10,517 trips in FY 2019.

Fixed-Route Service Profile

A closer look at Votran’s services and facilities, including a review of the current fixed-route network, past ridership, fare structure, and inventory of transit facilities and vehicles is presented, as summarized below.

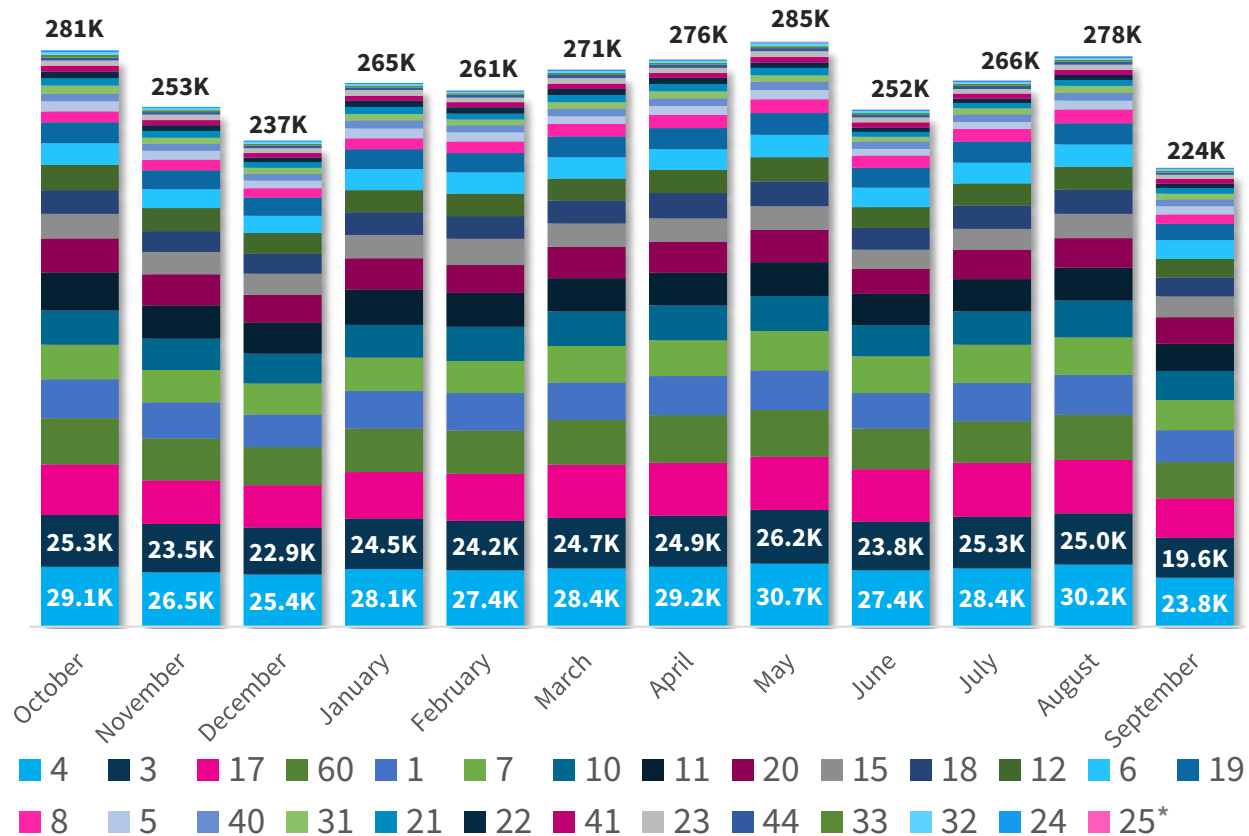
Votran provided approximately 3.2 million rides in FY 2019, with its 27 routes operating various headways and spans, as shown in Figure 3-2. Figure 3-3 shows the ridership by route for each month in FY 2019. As shown, Route 4 has the highest ridership, providing over 334,000 trips in 2019, which makes up over 10 percent of Votran’s total fixed-route ridership. The route with next-highest ridership demand is Route 3, serving over 289,000 trips during the same time. Map 3-1 presents the existing (prior to COVID-19 related service reductions) Votran fixed-route service network.

Figure 3-2: Votran Ridership, 2009-2019



Source: Votran

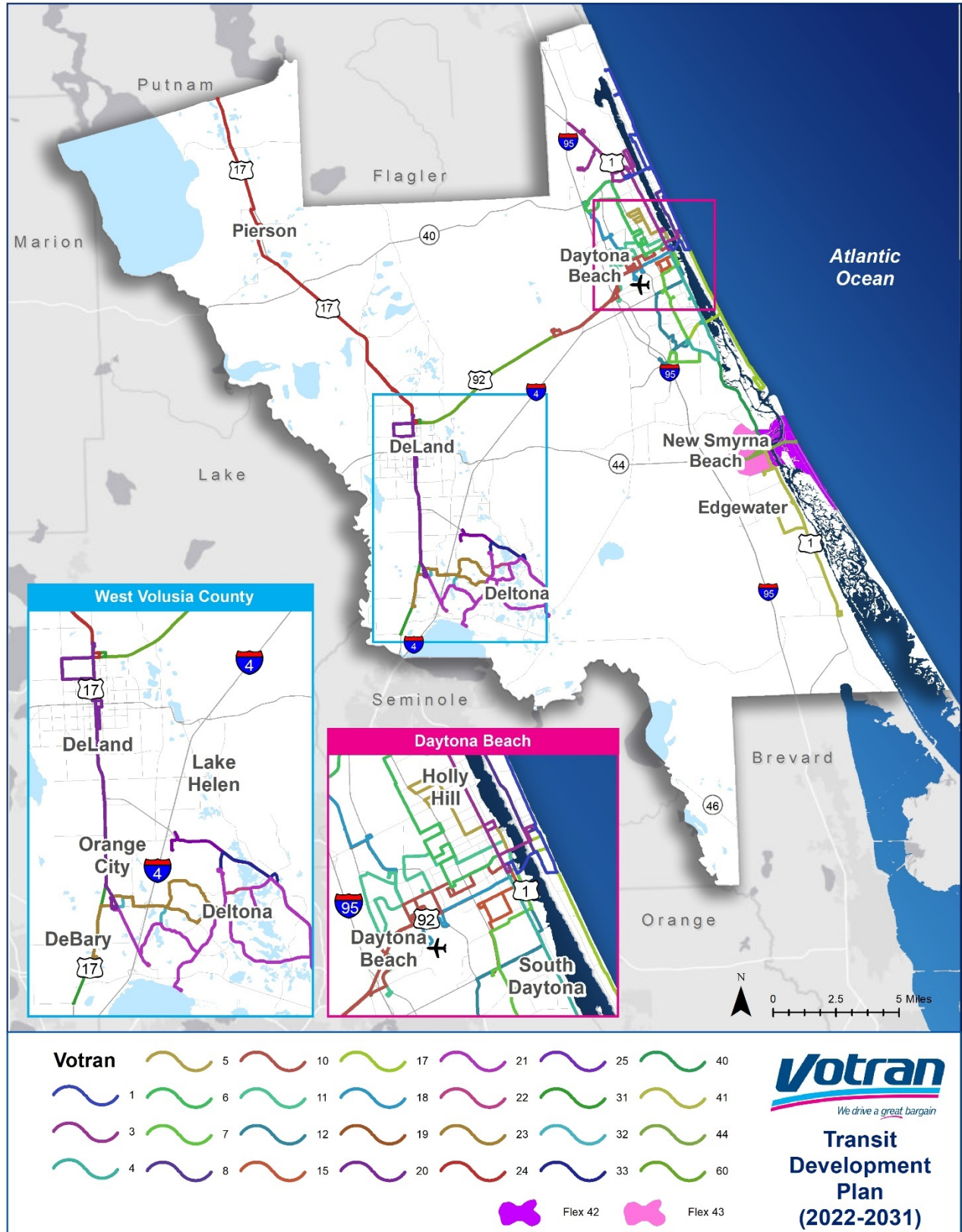
Figure 3-3: Votran Ridership by Route by Month for FY19



*Route 25 was suspended in 2020.

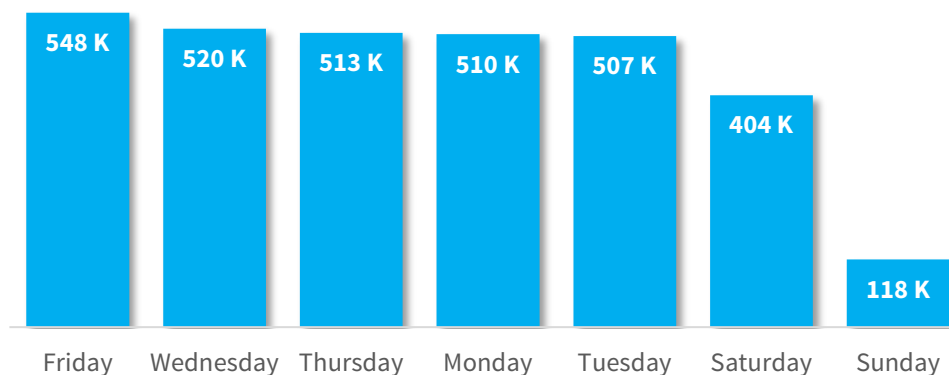
Source: Votran

Map 3-1: Existing Votran Fixed-Route Transit Services



In addition to examining annual ridership trends and ridership by route and month, ridership by day of service was examined. It is important to understand what days of service have the highest demand as it may be necessary to provide more service supply. As shown in Figure 3-4, analysis from Votran data shows that Friday is the most utilized day of service while Sunday is the least utilized, with 18 percent of annual ridership on Fridays and just 4 percent of total FY 2019 ridership on Sundays. Of course, level of service availability on each day will impact utilization, as well, so it is important to recognize that the lower levels of fixed-route service on weekends (especially on Sundays) also has an impact on these comparative utilization figures. As for Friday’s demand level as compared to other days of the work week, a large segment of the County population is employed in the service industry, which may have a slightly higher demand on Friday. Also, there may be more recreational and shopping trips on that particular day of the week. All other days of service served over half a million riders except Saturday and Sunday, as shown in Figure 3-4.

Figure 3-4: Votran Ridership by Day of Service, FY 2019

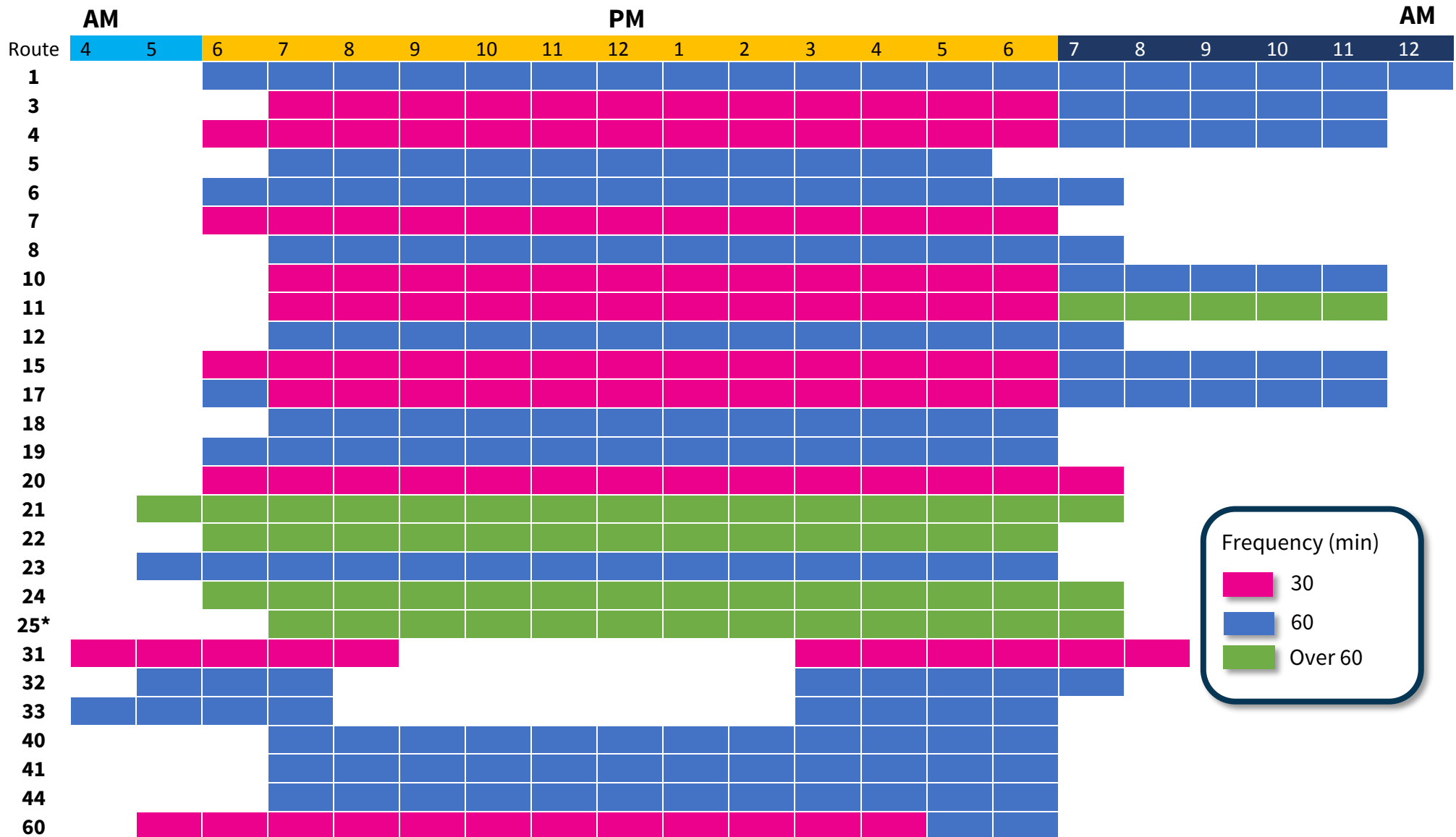


Source: Votran

Operating characteristics were examined to understand the level of service currently available for the study area. Table 3-1 shows the spans for operation on weekdays that run from 4:22 AM to 12:30 AM. As shown, all current route frequencies are 30 minutes or greater. Before peak morning service begins at 6:00 AM, six routes start service between 4:22 and 5:45 AM. During peak morning hours (6:00 AM–9:00 AM), all routes in the system are operating to provide riders connection to work and other destinations. As previously mentioned, Route 31 begins service at 4:22 AM with all other routes starting service between 6:00 AM and 7:00 AM.

The only routes providing 30-minute headways are Routes 3, 4, 7, 10, 11, 15, 17, 20, 31, and 60. Route 15 begins service at 5:37 AM and ends operation at 12:18 AM, the longest service span among the frequent routes. Route 4 begins service at 6:32 AM and ends operation at 12:08 AM, while Route 20 begins service at 5:52 AM and ends at 8:01 PM. The cross-county connector, Route 60, operates from 5:15 AM to 7:48 PM. The majority of the routes have 60-minute headways throughout their weekday and Saturday service span. The remaining routes, Routes 21, 22, 24, and 25, operate with over 60-minute headways during peak hours, leaving residents in Pierson and some parts of Deltona with limited options and no higher-frequency services to connect to job/economic opportunities. During midday on a weekday, all routes maintain the same frequencies as during the peak hours.

Table 3-1: Existing Votran Weekday Service Spans and Frequencies



Frequency (min)

- 30
- 60
- Over 60

*Route 25 was suspended in 2020.

Service on Sunday is limited with six routes, Routes 1, 3, 4, 10, 15, and 17, operating with approximately 60-minute headways. All routes begin operation around 7:00 AM with Route 17 beginning service at 6:55 AM. Although most routes are not operating, the majority of the routes that serve the county on weekends operate at a similar frequency as their weekday services. All Sunday services end between 6:30 PM and 7:00 PM.

Transit Infrastructure/Facilities

Administration/Operations Facility

Votran maintains a number of facilities to accommodate the provisions of its fixed-route bus and paratransit services throughout Volusia County. Votran’s operations and administration office is located in South Daytona at 950 Big Tree Road, as shown in Figure 3-5. The facility was completed in 1998 and is home to the maintenance department, dispatch office, customer service office, reservation office, and all other administrative functions. The facility is served by Route 7 (South Nova).

Figure 3-5: Votran Administration and Operations Facility



Westside Maintenance Facility

Votran maintains the Westside Maintenance Facility for Operations and Maintenance in West Volusia County. Located at 1344 Tractor Way in Orange City, the facility has vehicle parking for staff, bus parking, equipment for bus fueling, and a bus washing area. Votran maintains a 30-year lease on the property, which is primarily used to support service on the west side.

Votran Transfer Plaza

The Votran Transfer Plaza is located in Daytona Beach adjacent to the Halifax River in downtown Daytona. The facility, shown in Figure 3-6, serves 14 routes: Routes 1, 3 (all variations), 4, 5, 6, 7, 8, 10, 11 (all variations), 12, 15, 17 (all variations), 18, 19, and 60.

Figure 3-6: Votran Transfer Plaza



Beachside Intermodal Transportation Facility

The Beachside Intermodal Transportation Facility (ITF), east of the Votran Transfer Plaza, serves Votran Routes 1 (all variations), 3n, 3s, 4n, 4s, 8, 10n, 10s, 11n, 15n, 15s, 17, 18, and 19.

Bus Stop Infrastructure

In addition to the larger facilities discussed previously, individual bus stops also play an important role with Votran’s bus transit system, providing riders with a safe and designated place to catch a bus and a way for the transit agency to promote its services.

In addition to more than 2,000 regular bus stops, Votran’s network of transit infrastructure also includes enhanced bus stops with a few additional features

beyond that of a regular bus stop, called Super Stops. The Amelia Super Stop in DeLand has a large pull-off area for buses, two bus shelters with amenities and connected sidewalks (Figure 3-7). This stop is served by Routes 20, 24, 31, and 60 and is adjacent to the Northgate Shopping Centre. Another Super Stop

Figure 3-7: Amelia Super Stop, DeLand



in western Volusia County is located at the Market Place Shopping Center in Orange City. It is served by Routes 20, 21, 22, and 23 and is considered the main connection point for Orange City and Deltona.

In eastern Volusia County, there are Connection Points and Super Stops in Port Orange and New Smyrna Beach. The Swallowtail Connection Point in Port Orange is located on Swallowtail Drive adjacent to Village Trail Drive and serves Route 4, 7, 12, 17b, and 40. The downtown New Smyrna Beach Super Stop is located at the intersection of Julia Street and Sams Avenue. This location serves both Flex zones, Routes 40, 41, and 44. Additionally, this location has two covered shelters and bicycle storage as shown in Figure 3-8.

Figure 3-8: Downtown New Smyrna Beach Super Stop



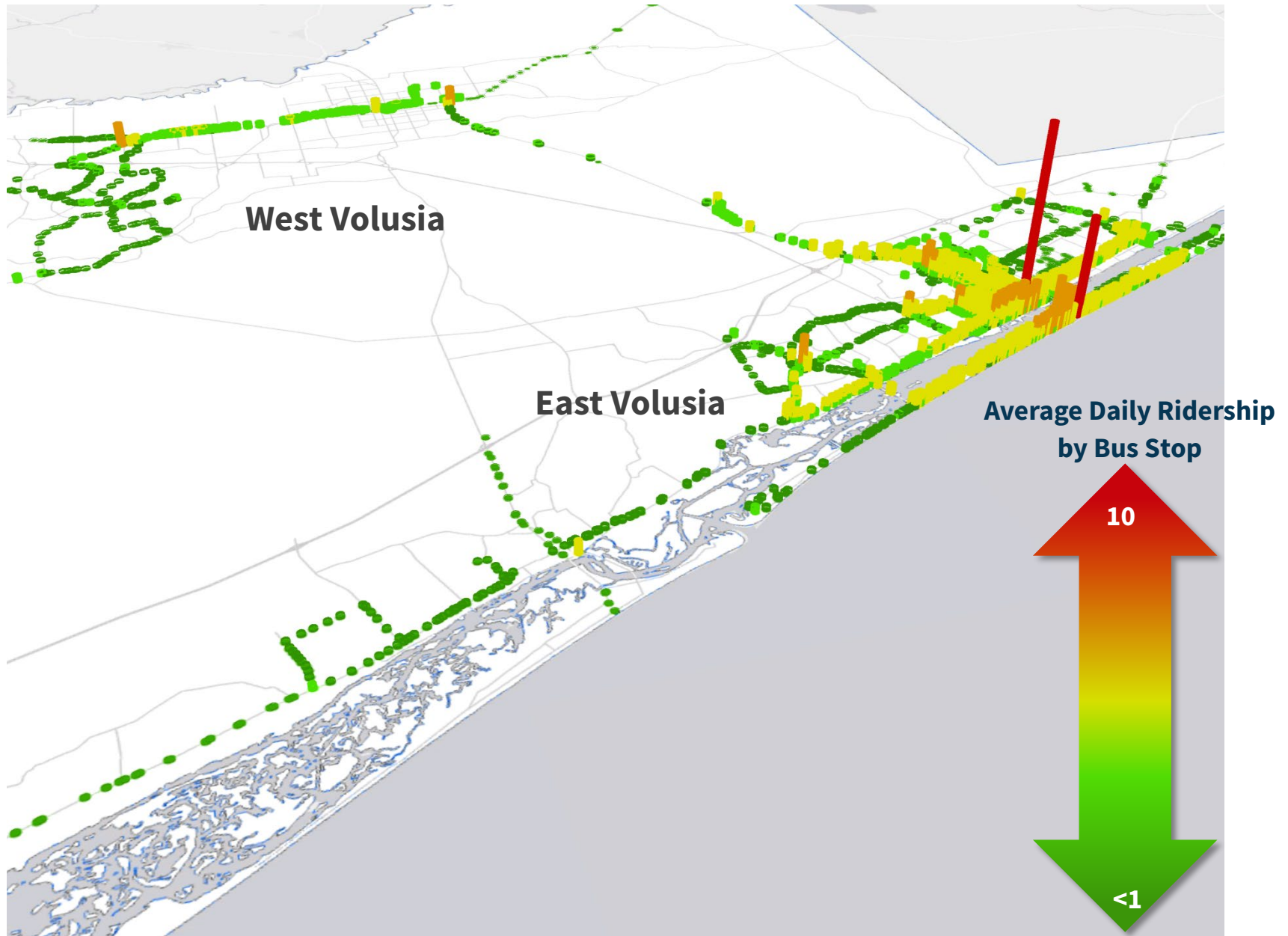
Bus Stop Ridership Activity

The majority of the over 2,000 Votran bus stops in Volusia County are located in East Volusia County. As the scale and extent of use of these existing capital facilities in the county are important to understand, GIS data on ridership/usage at those locations were also analyzed.

Figure 3-9 shows the ridership activity at existing Votran bus stops of all sizes and scales. As shown, the majority of facilities with higher ridership are located in East Volusia, clustered primarily in Daytona Beach. The highest activity occurs at the transfer centers, as expected, which assist riders with connections to other routes. Furthermore, the bus stops near the beach, where there are higher levels of tourism-related activities, also show higher rates of daily use. Other high ridership bus stops in the immediate area are at the Volusia Mall adjacent to the Daytona International Speedway and DAB. South of Daytona Beach, in Port Orange, there is another hot spot at the Countryside Shopping Center.

In West Volusia, two current facilities showed higher ridership activity, including the Amelia Super Stop and the bus stop at the Market Place in Orange City. Other areas with notable ridership are the DeLand ITF and a stretch of US 17 from Graves Avenue to Birch Avenue. There also are pockets of moderate ridership along US 17 from Orange City to North DeLand and west of I-4 in Deltona.

Figure 3-9: Votran Average Daily Ridership by Bus Stop - 2019



Park-and-Ride Facilities

There are three Park-and-Ride facilities located in West Volusia. Parking at all lots is free and two facilities connect to Votran routes or the SunRail commuter rail service.

Saxon Boulevard Park-and-Ride

This Park-and-Ride is located adjacent to I-4 on Saxon Boulevard at 1297 Saxon Boulevard in Orange City. This location, as shown in Figure 3-10, is served by Routes 23, 32, and 33. Route 23 connects to the Market Place Shopping Plaza, Saxon Market Place, AdventHealth Fish Memorial, and the Crowne Center Shopping Plaza. Routes 32 and 33 connect riders to SunRail during the weekday, when SunRail is operating. This location has 119 parking spaces, of which 6 are accessible, a bike rack, a bike locker, and a shelter in a lighted area.

Figure 3-10: Saxon Boulevard Park-and-Ride



DeLand ITF

This facility, located in DeLand, is served by two Votran routes (Figure 3-11). Route 20 links riders to the Market Place Shopping Plaza, the Thomas C. Kelly County Administration Center, AdventHealth DeLand, the DeLand Walmart, Crowne Center Shopping Plaza, and the Amelia Super Stop adjacent to International Speedway Boulevard. Route 31 links riders to the SunRail station in DeBary, but also stops at the Amelia Super Stop. The facility has 28 parking spots, of which 2 are accessible, a bike rack, a covered and lighted waiting area, area for passenger pick-up/drop-off, and premium amenities such as real-time bus arrival information displays.

Figure 3-11: DeLand Intermodal Facility



Dirksen Drive Park-and-Ride

Currently, there are not any routes that serve this facility located at 295 Dirksen Drive in Deltona. The Park-and-Ride is adjacent to I-4 and has 50 parking spots and 2 accessible spots. The closest routes to this facility are Routes 21 and 22, which serve the surrounding Deltona area.

Transit Vehicle Inventory

It is important also to review Votran’s bus fleet that provides the transit services and serves the facilities previously described. Votran’s fixed-route fleet consists of 77 active vehicles, as shown in Table 3-2. All current vehicles are manufactured by Gillig and the majority of vehicles have a seating capacity of 30 or more. While most of the vehicles are fueled by diesel, 25 percent of the fleet are

hybrid vehicles. Based on information from Votran, most vehicles are still within their useful life, based on vehicle life cycle guidelines set by the Federal Transit Administration (FTA).

Table 3-2: Votran Fixed-Route Vehicle Inventory

Manufacturer	Number of Vehicles	Year Manufactured	Seating Capacity	Fuel Type
Gillig	3	2003	36	Diesel
Gillig	6	2006	32	Diesel
Gillig	2	2008	28	Diesel
Gillig	9	2010	32	Diesel/Hybrid
Gillig	6	2012	31	Diesel/Hybrid
Gillig	4	2013	31	Diesel/Hybrid
Gillig	9	2014	31	Diesel
Gillig	11	2015	31	Diesel
Gillig	4	2016	31	Diesel
Gillig	5	2018	31	Diesel
Gillig	11	2019	31	Diesel
Gillig	7	2020	31	Diesel

Source: Votran

Fare Structure

While not a major source of revenue, the fare revenues play a key role in supporting Votran’s ability to continue to provide its services to the community. The current regular one-way adult cash fare on Votran fixed-route services is \$1.75. In addition, there are multiple fare pass options including the All-Day Pass, 3-Day Pass, 7-Day Pass, 31-Day Pass, and Ten Fare Tokens, as shown in Table 3-3. Votran also offers reduced fares for students, adults age 65 and older, and individuals with disabilities, who may ride the services by just showing proof via Medicare card, agency ID, or valid government-issued ID. A Votran ID can be bought for \$2.00 by showing proof of disability, age, or student status at the agency’s main hub at the Votran administration office. Additionally, children under seven years of age ride for free.

Votran passes are available at multiple locations. At this time, bus passes can be purchased over the internet, at the Thomas C. Kelly Administration Center, Volusia County Council on Aging, Votran Transfer Plaza, and public libraries including City Island, Deltona Regional, Edgewater, New Smyrna Beach, and Ormond Beach Regional.

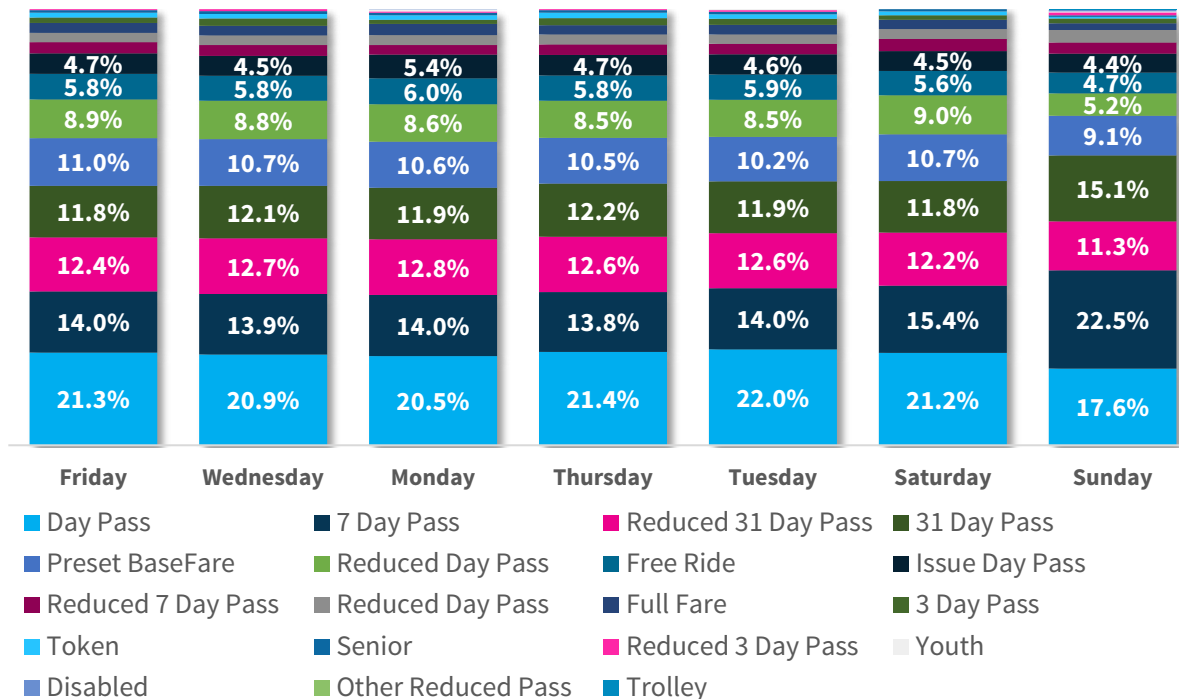
Table 3-3: Votran Fixed-Route Fares

Fare Category	Full Fare	Reduced Fare
One-Way Trip	\$1.75	\$0.85
All-Day Pass	\$3.75	\$1.85
3-Day Pass	\$7.50	\$3.75
7-Day Pass	\$13.00	\$6.50
31-Day Pass	\$46.00	\$23.00
Ten Fare Tokens	\$16.50	\$7.50

Source: Votran

When analyzing the fare type by day of service, the Day Pass (21%), the 7-Day Pass (14%), and the Reduced 31-Day Pass (13%) made up almost half, 48 percent, of all fares sold (Figure 3-12). The Day Pass and the 7-Day Pass were the most popular fare options during FY 2019, suggesting that tourists or visitors that are in town for the short-term are represent a significant component of ridership. Conversely, the Reduced and Regular 31-Day Pass were the next most commonly utilized fare types, implying that there are also many long-term riders on the system. Both short- and long-term pass sales suggest that Votran is important to both residents and tourists alike.

Figure 3-12: FY 19 Votran Ridership by Fare Type and Day of Service



Source: Votran

Other Transportation Providers

A review of existing transit services in Volusia County also was conducted to identify any other public transportation options available for use in the County, as summarized below.

The review of other private and public organizations providing transportation services in Volusia County was conducted based on information on such operators as provided by Votran and also available publicly from various local and regional resources. The results of this inventory of transportation providers are included in Appendix A. These providers serve the general public and/or specific client groups such as persons with disabilities, older adults, and/or people needing medical care exclusively in Volusia County or in the whole region. In addition to collecting basic information, the private providers were contacted to obtain specific information on the following items using a specially designed survey to facilitate the data collection process.

- Type of service provided
- Restrictions of clients
- Boundaries of service area and primary destinations
- Hours of operations and any applicable frequency, annual ridership, fares
- Information on facilities, including location, type, age, number of vehicles, and equipment

There were 20 private providers contacted using emails and phone calls, of which some had closed their business due to the COVID-19 pandemic, suspended service until the COVID-19 pandemic was controlled, or elected not to provide information due to perceived competition issues. A copy of the survey instrument that was used for this purpose also is included in Appendix A.

Following are some of the transportation options available within Volusia County that were not included in the provider inventory because of the scale and/or nature of their respective services. Instead, they are briefly identified herein to provide a more complete picture of the various public mobility options available for Volusia County residents and visitors.

Uber and Lyft

These popular app-based, on-demand transportation options are also available in Volusia County. These two Transportation Network Companies provide on-demand trips without much limitation, but their services are mostly available in urban areas where the demand (and driver supply) may be higher than the more rural areas of Volusia County.

Greyhound

Greyhound is a national over-the-road bus service that serves longer trips between communities and states. As such, it provides regional connections from Volusia County to other areas throughout Florida and in other areas throughout the U.S.

Megabus

Megabus is a private national bus operator that offers daily service to other cities in the southeast region from the Tanger Outlets in Daytona Beach. The service began operating in 2017 and makes

trips to Orlando, Jacksonville, and Atlanta. These hubs offer connections to other regional and national destinations. The service also has amenities such as reclining seats, Wi-Fi, and power outlets.

Embry-Riddle Shuttles

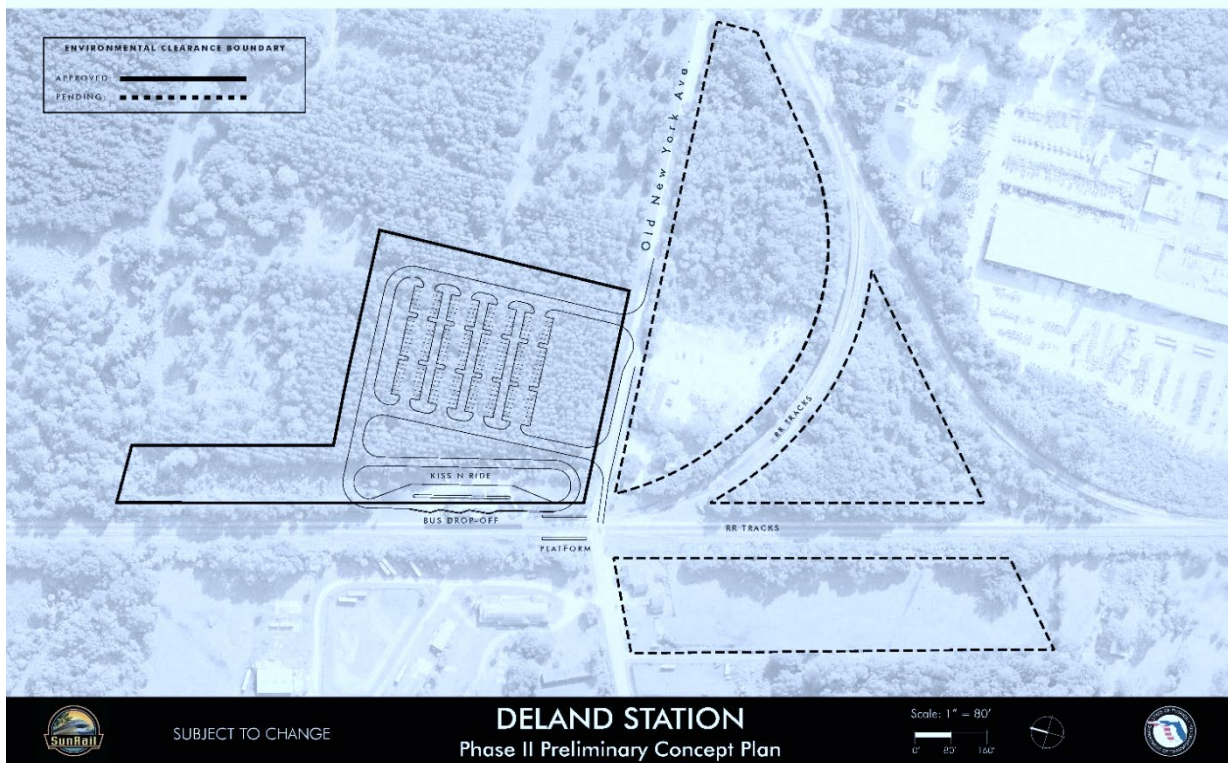
Embry-Riddle Aeronautical University provides three shuttle routes when classes are in session from August to late April. The routes connect surrounding student housing, such as the Eagle Landing Express, Bellamy, and the Chanute Eagle Landing, to the university and also circulate students to popular attractions on campus.

SunRail

The SunRail regional commuter rail service, which began its operations in 2014, has its northern terminus in DeBary and the southern terminus in Poinciana in Osceola County, spanning 49 miles with 16 rail stations in four counties. According to SunRail’s ridership data, the commuter rail line provided over 1.5 million rides in FY 2019. The DeBary station is the third most popular stop, with approximately 105,000 riders in the same time period. SunRail has plans to expand north to DeLand. FDOT secured \$41.95 million funding for the DeLand Station, which was approved by the Volusia County Council in January 2021.

The proposed SunRail station in DeLand, as shown in the rendering in Figure 3-13, would be located adjacent to Old New York Avenue and would also have park-and-ride facilities as well as a bus drop-off area. In addition to serving central Volusia County, the station would be accessible to Lake County residents.

Figure 3-13: Proposed SunRail Station in DeLand



Source: SunRail

Trend and Peer Analysis

This section includes a review of selected service performance trends for Votran, using available NTD data from the last five years. Various performance measures were used to present the data that relate to overall system performance.

A trend analysis is only one aspect of transit performance evaluation; however, when combined also with a peer transit system comparison, that combined analysis can provide a starting point for understanding Votran's performance over time and among the agencies with similar characteristics.

Therefore, a peer review analysis also was conducted to compare Votran's performance at a given point in time with other transit systems. For that peer comparison, systems with similar operating characteristics to that of Votran were selected. The performance indicators included in this analysis help evaluate and benchmark the effectiveness and efficiency of Votran services.

Each analysis is summarized in detail in the remainder of this section.

Performance Trend Analysis

To conduct this trend analysis, data from the Florida Transit Information System (FTIS), which is a comprehensive data repository of historical and the most recent validated NTD data for transit agencies in the U.S., was used. However, as validated transit data in the NTD is typically two years behind the current operating year due to FTA's rigorous review and validation processes, performance data for 2019 were not available from NTD and were obtained directly from Votran.

Analysis Indicators and Measures

To assess how efficiently Votran supplies its fixed-route transit service and how effectively those services meet the needs of the area, the trend analysis used key performance indicators and two types of measures, as summarized below.

- **General Indicators** - quantity of service supply, passenger and fare revenue generation, and resource input
- **Effectiveness Measures** - extent to which the service is effectively provided
- **Efficiency Measures** - extent to which cost efficiency is achieved

The trend analysis is organized by type of measure or indicator and includes statistics, figures, and tables to illustrate Votran's performance over the past five years. This analysis includes statistics that summarize selected system performance indicators, effectiveness measures, and efficiency measures for the five-year period.

Only the summary findings of the trend analysis are presented here in Table 3-4. Appendix B provides a more complete and detailed summary of the trend analysis.

Table 3-4: Trend Analysis, 2015-2019

Indicator/ Measure	2015	2016	2017	2018	2019	% Change (2015- 2019)
General Indicators						
Passenger Trips	3,459,344	3,248,466	3,189,082	3,202,754	3,150,416	-8.9%
Service Area Population*	355,257	358,795	362,352	369,447	373,023	5.0%
Population Density*	1,444	1,459	1,473	1,502	1,516	5.0%
Revenue Miles	2,648,019	2,634,065	2,792,889	3,014,556	3,149,536	18.9%
Revenue Hours	169,845	171,701	179,453	194,822	202,313	19.1%
Total Operating Expense	\$13,807,368	\$13,726,496	\$14,744,255	\$16,295,796	\$17,399,248	26.0%
Vehicles Operated in Max. Service	51	54	54	60	64	25.5%
Effectiveness Measures						
Revenue Miles per Capita	7.45	7.34	7.71	8.16	8.44	13.3%
Revenue Miles per Revenue Hour	15.59	15.34	15.56	15.47	15.57	-0.1%
Passenger Trips per Capita	9.74	9.05	8.80	8.67	8.45	-13.3%
Passenger Trips per Revenue Hour	20.37	18.92	17.77	16.44	15.57	-23.5%
Passenger Trips per Revenue Mile	1.31	1.23	1.14	1.06	1.00	-23.4%
Average Age of Fleet (in years)	6.05	6.93	7.57	8.05	8.98	48.3%
Efficiency Measures						
Operating Expense per Capita	\$38.87	\$38.26	\$40.69	\$44.11	\$46.64	20.0%
Operating Expense per Passenger Trip	\$3.99	\$4.23	\$4.62	\$5.09	\$5.52	38.4%
Operating Exp. per Revenue Mile	\$5.21	\$5.21	\$5.28	\$5.41	\$5.52	5.9%
Operating Expense per Revenue Hour	\$81.29	\$79.94	\$82.16	\$83.64	\$86.00	5.8%
Farebox Recovery (%)	20.9%	19.8%	16.9%	16.6%	14.8%	-29.5%
Average Fare	\$0.84	\$0.84	\$0.78	\$0.84	\$0.81	-2.4%

Source: NTD and Votran

*A review of NTD data showed that Votran reported its county population as a proxy for its transit service area population. To stay consistent and provide a fair assessment of Votran operating data, service area population data from NTD were not used. The service area population (defined as population within ¼-miles of any bus route) and density were calculated using a Geographic Information System and TAZ-level population data from the socioeconomic data forecasts developed for the LRTP.

Trend Analysis Summary

- **General Indicators**

- All metrics have increased with exception of passenger trips, which decreased about nine percent. The decline of passenger trips has been the national trend due to many factors, including low gas prices, historically low unemployment rates resulting in improved economic conditions that allowed people to buy cars, and riders shifting to Mobility-on-Demand (MOD) services such as Uber and Lyft. However, Votran is one of the few agencies nationally and locally that has been able to drastically minimize this ridership decline.
- Revenue hours and miles increased significantly (19.1 and 18.9%, respectively) indicating that the service supply was increased. Revenue hours increased at a slightly higher rate than revenue miles suggesting the ongoing impact that growth and increasing congestion in the county have been having on Votran vehicle speeds and performance over time.
- One of the key indicators, total operating cost, has increased about 26 percent in the five-year period. While cost increases are not desirable in any industry, they are somewhat inevitable due to the impact of market and inflationary factors beyond the control of the transit agency. However, Votran has managed to keep its operating cost increases parallel with the vehicles operated in maximum service, suggesting that the operating expense increase is tied to the level and quality of service provided.

- **Effectiveness Measures**

- As seen with the regional and national trends in the transit industry, effectiveness measures have mostly declined over the past five years. Due to the decrease in passenger trips discussed above and the increase of other service metrics, all of the trip-related effectiveness measures have declined significantly.
- Passenger trips per revenue hour has decreased -23.5 percent since 2015, due to the aforementioned decline in ridership and the nearly 20 percent increase in revenue hours. However, Votran's ability to keep its ridership levels somewhat steady in the last few years has helped stabilize this measure a bit over the last couple years.
- Votran's average age of its vehicle fleet has increased significantly, by more than 48 percent in the last five years. Although the fleet is still below the suggested useful vehicle life thresholds set by the FTA guidelines, it is often more difficult and costly to maintain an older fleet, so this is an indicator worth watching to ensure that Votran continues to be consistent in replacing its fleet when the useful life of vehicles is reached.

- **Efficiency Measures**

- The impacts of operating cost growth outstripping that of revenue miles and hours along with the ridership drop all are evident in the noted declines in the performance of the efficiency measures. Operating expense per passenger trip (38.4%), operating expense per revenue mile (5.9%), and operating expense per revenue hour (5.8%) all have increased since 2015. However, the cost per hour and mile measures are within the expected range for normal inflationary impacts. Only the cost per trip measure truly indicates a specifically significant decline in cost efficiency and it appears that this measure has stabilized a bit in the last two years.
- Farebox recovery also has declined (-29.5%) due primarily to the decline in ridership as fewer riders generally results in lower fare proceeds. Furthermore, the average fare has declined marginally, indicating that riders who are using the service are making better use of the multi-day pass options and/or paying reduced fares.
- The declines in the efficiency and effectiveness performance discussed in this section are not surprising as they seem to be common for most agencies in the transit industry in the last five years due to the national trends previously mentioned.

Farebox Recovery

One of the additional requirements for the TDP that was added by the Florida Legislature in 2007 when it adopted House Bill 985 was a closer look at a transit agency's farebox recovery ratio so that agencies can address "potential enhancements to productivity and performance which would have the effect of increasing farebox recovery ratio." FDOT subsequently issued guidance requiring the TDP Major Updates to provide a summary report on the farebox recovery ratio.

Therefore, in addition to summarizing the most recent farebox recovery trend for Votran in this section, a farebox recovery analysis and a set of recommendations to improve the farebox recovery was developed and is included in Appendix C.

Agency Peer Review Analysis

In addition to the trend analysis previously presented, a peer system review also was conducted to assess how Votran compares to comparable transit agencies. The same source of NTD data, the FTIS data repository that includes transit data for agencies nationwide, was used again to obtain the necessary validated NTD data to complete the analysis. The most recent nationwide validated data available in FTIS is for 2018 and, therefore, the agency peer review analysis was conducted for FY 2018.

Using the same measures utilized for the systemwide trend analysis presented previously, a peer system review analysis was conducted, as summarized in the remainder of this section. This analysis uses these measures again to compare Votran's fixed-route performance characteristics to a selected group of transit agency peers.

The selection process for the peer agency systems is described first, followed by the summary results of the peer review analysis using the same three categories used previously, including General Indicators, Effectiveness Measures, and Efficiency Measures.

Peer System Selection Methodology

The fixed-route peer system selection was conducted using FY 2018 NTD data available in FTIS. The pool of possible agency peers was assessed and subsequently scored through an objective assessment of nine standard variables, as shown in Table 3-5.

Table 3-5: Peer Selection Criteria

Peer Selection Criteria	
Geography (southeastern US)	Service area population density
Passenger trips	Total operating expense
Revenue miles	Average speed (revenue miles/revenue hours)
Revenue hours	Vehicles operated in maximum service (VOMS)
Service area population	

The peers were first selected based on geographic location (southeastern states), including Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia. Fixed-route systems operating in these states, all of which have more similar operating conditions to Florida than other areas of the country, were added to the pool of possible peers and were analyzed again based on the eight remaining criteria described previously.

As part of the methodology, a potential peer received 1.0 points when one of the eight criteria was within 1 standard deviation of Votran’s performance value and 0.5 points for each criterion that fell within 2 standard deviations of Votran’s value.

Table 3-6 presents the final set of peers selected using the methodology summarized above. These peers were then used for the peer system review analysis summarized in the remainder of this section.

Table 3-6: Selected Peer Systems for Votran Peer Review Analysis

Agency Name	Location
Lee County (LeeTran)	Fort Myers, Florida
Birmingham Jefferson County Transit Authority (MAX)	Birmingham, Alabama
Transit Authority of Northern Kentucky (TANK)	Fort Wright, Kentucky
Sarasota County Area Transit (SCAT)	Sarasota, Florida
Corpus Christi Regional Transportation Authority (CCRTA)	Corpus Christi, Texas
City of Knoxville (KAT)	Knoxville, Tennessee
Central Midlands Regional Transportation Authority (COMET)	Columbia, South Carolina
City of Tallahassee (StarMetro)	Tallahassee, Florida

Figure 3-14 and Table 3-7 show the results of the peer review analysis. In addition, Appendix B provides a more complete and detailed summary of the peer analysis.

Figure 3-14: Votran Peer Review Analysis

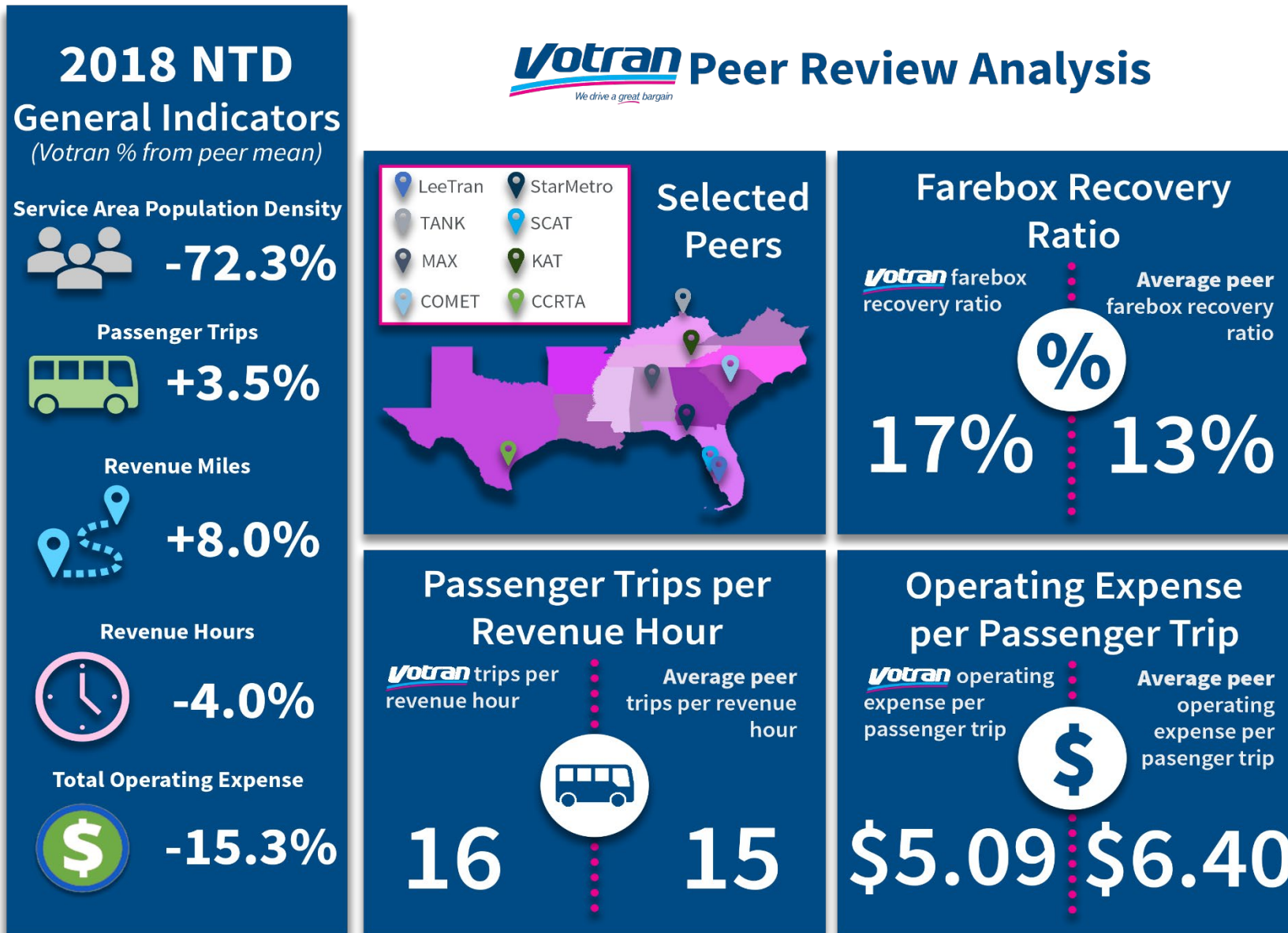


Table 3-7: Votran Peer Analysis Summary

Indicator/Measure	Votran % from Peer Mean
General Indicators	
Passenger Trips	3.5%
Service Area Population	39.7%
Service Area Density	-72.3%
Revenue Miles	8.0%
Revenue Hours	-4.0%
Total Operating Expense	-15.3%
Vehicles Operated in Maximum Service	1.3%
Effectiveness Measures	
Passenger Trips per Capita	-38.6%
Passenger Trips per Revenue Mile	-4.8%
Passenger Trips per Revenue Hour	8.1%
Average Age of Fleet (in years)	31.2%
Efficiency Measures	
Operating Expense per Capita	-48.0%
Operating Expense per Passenger Trip	-20.6%
Operating Expense per Revenue Mile	-21.5%
Operating Expense per Revenue Hour	-11.2%
Farebox Recovery (%)	23.2%
Average Fare	2.0%

Peer Review Analysis Summary

- **General Performance Indicators**

- Votran has performed well compared to its peers in most of the general performance indicators. It serves an area that is less dense at a lower cost with generally comparable service supply, but still was able to generate more ridership than the mean performance of its peers.
- Scoring 3.5 percent above the peer mean in passenger trips and 4 percent below the peer mean in revenue hours suggests that Votran is achieving better service productivity than its peers. Furthermore, Votran has 15.3 percent lower operating cost than the peer average while serving more passengers, suggesting that it is more efficient than its peers.

- **Effectiveness Measures**

- While trips per capita is lower than its peers and Votran has an older fleet with higher average age, Votran is still above the peer mean in passenger trips per revenue hour (8.1%). Performing better with passenger trips per revenue hour indicates that Votran is achieving more from its resources expended than its peers.

- Votran has an older fleet when its average age of fleet is compared to the mean of its peers' fleet age. However, as previously mentioned in the trend analysis, the average age of Votran fleet is still below the useful life thresholds per FTA guidelines.
- **Efficiency Measures**
 - Votran performed well on cost efficiency when compared with its peers, indicating that it is more efficient at controlling its costs. Scoring below the peer mean in all metrics related to operating expenses suggests that Votran is providing more service while spending less than its peers.
 - In terms of cost per trip and cost per revenue hour, two very important indicators for any agency to track, Votran has performed well in comparison to its peers.
 - Votran also has outperformed many of its peers in farebox recovery, the percent of fares paid by passengers covering the operating expenses. Overall, the data suggest that Votran is more fiscally efficient than its peers.

This analysis, combined with the trend analysis previously summarized, will be used to gain an understanding of Votran's performance over time and among other transit agencies with similar operating characteristics. These findings, together with the insights gathered from baseline conditions assessments presented previously, will be used in the subsequent steps of this TDP to develop a vision for an attractive and viable transit network for Volusia County and its immediate region.

Section 4. Public Involvement Summary

Conducting public outreach serves the important role of engaging the community and subsequently incorporating their opinions into the TDP planning process. This section summarizes the public involvement activities undertaken as part of the Votran 10-Year TDP and their findings.

One of the first activities for the Votran TDP was to prepare a Public Involvement Plan (PIP) that describes activities planned to be undertaken during the development of this TDP. The outreach activities included in the PIP provide numerous opportunities for involvement by the general public and representatives of local agencies and organizations. The PIP was prepared and submitted for FDOT review and approval prior to implementing the TDP outreach activities. A copy of the PIP approved by FDOT can be found in Appendix D.

COVID-19 Impact on Outreach Process

It should be noted that due to social distancing requirements resulting from the COVID-19-related public health crisis that was ongoing throughout TDP public involvement efforts, some outreach activities during the first phase of outreach, such as the discussion groups, stakeholder interviews, and the first two public workshops, were conducted virtually via internet-based meeting platforms and/or telephone. After discussion with and approval of Volusia County staff, the second phase of TDP public involvement efforts were delivered in-person. However, to expand the reach of the events and also to allow any member of the public who still would like to join virtually, the phase II outreach workshops were also offered in a virtual format as well. An array of printed media resources and electronic media platforms were used to ensure safe, easy, and equitable methods for reaching the public and obtaining their feedback during the pandemic.

Public Involvement Techniques

To engage a full range of community stakeholders and facilitate active participation for the Votran TDP development process, activities that can be categorized as direct or indirect were used. The direct and indirect public involvement techniques are described below.

- **Direct Involvement Techniques** - Activities that directly engage the public and stakeholders in workshops and/or discussions about the project in-person and/or virtually, such as general public workshops, key stakeholder interviews, small, targeted-group discussions, rider and non-rider surveys in printed and/or online media, and project presentations to elected officials/other interested groups.
- **Indirect Involvement Techniques** - The development and distribution of information materials and other related methods to inform the general public and stakeholders about the project, including use of social media outreach, website content, email blasts, and other materials such as fact sheets, fliers, and media releases.

The remainder of this section summarizes in detail the direct and indirect public involvement techniques implemented in the first phase of the TDP and their current findings.

Summary of Votran Public Involvement Activities

As mentioned previously, several direct and indirect public involvement activities were selected for use during the TDP process to ensure that adequate opportunities would be available for Votran’s riders, community stakeholders, and the general public to actively participate in the plan development process.

Figure 4-1 shows the major public involvement activities conducted as part of the Votran TDP process and Table 4-1 summarizes the scale and other details of the overall outreach efforts for the 10-year TDP to date.

Figure 4-1: Key Public Involvement Activities



Table 4-1: TDP Public Involvement Summary

Outreach Activity	Timeframe	Engaged
Review Committee Meetings		
TDP Review Committee Meetings	January-July 2021	17
Interviews		
Community Stakeholders	October 2020– February 2021	24
Bus Operator and Staff	December 2020	45
Transit Surveys		
Transit Needs Survey	November 2020–February 2021	374
Bus Rider Survey	January 2021	1,322
Transit Priorities Survey	May–June 2021	110
Discussion Groups		
Health and Social Services	December 2, 2020	9
Business and Education	December 2, 2020	12
Bus Rider	December 3, 2020	10
River to Sea TPO Committees	December 8, 2020	13
Grassroots Outreach Events		
Hotel and Lodging Association of Volusia County Board Meeting	December 9, 2020	150
Public Workshops		
Phase 1 Public Workshop #1	December 16, 2020	22
Phase 1 Public Workshop #2	December 17, 2020	9
Phase 2 Public Workshop #1	May 17, 2021	26
Phase 2 Public Workshop #2	May 20, 2021	12
Email/Web/Social Media Outreach		
Email	October 2020–June 2021	94
Website	November 2020–June 2021	3
Facebook	November 2020–June 2021	552
Twitter	November 2020–June 2021	845
Total Participants		3,649

Project Review Committee Meetings

One of the goals of Votran is to ensure that the TDP will be developed with necessary oversight, quality control, and transparency throughout the life of its planning process. To ensure that this is achieved, a project coordination schedule was developed that includes establishing a committee to guide and set the parameters of the TDP process, as well as accommodating several meetings and numerous as-needed conference calls to facilitate project coordination. A Project Review Committee (PRC) was established based on guidance from Volusia County and included representatives from Votran, FDOT District 5, River to Sea Transportation Planning Organization (R2CTPO), and CareerSource Flagler-Volusia.

Project coordination is important, not only to coordinate on the TDP, but also to ensure close coordination with the concurrent COA, which will result in operational changes that may impact the TDP, at least in the early years of its planning timeframe. Following is a summary of the key coordination activities completed.

- **Kick-off Meeting** – On October 13, 2020, a meeting was held as an in-person/virtual hybrid meeting with the PRC to discuss TDP goals and objectives, review project tasks and deliverables, discuss public involvement strategies, examine coordination with other local and regional planning efforts, and discuss the project schedule. The review committee also discussed how efforts from the COA, which is being conducted simultaneously, can help with the TDP and other planning efforts within the county.
- **Project Review Committee Meetings** – Three PRC meetings, including the kickoff are conducted for the TDP. After the in-person Kickoff Meeting with the PRC, another was held virtually on January 21, 2021, to review and discuss the TDP and COA progress. Key findings from data analyses and public outreach were presented followed by a discussion to help identify 10-Year TDP needs. The third PRC meeting was held virtually on May 13, 2021 to review the 10-year needs derived from quantitative analysis and public outreach.

Stakeholder Interviews

Understanding local conditions is an important part of the TDP and should include knowledge of the perceptions and attitudes of community decision-makers and leaders towards transit and its role in the community. To obtain this information, a total of 24 stakeholders were contacted for phone interviews as part of the public involvement process.

All interviews followed a similar format using an interview script that was developed with a list of questions and discussion topics to steer the discussions. The questionnaire that was used to guide the stakeholder interviews is located in Appendix E.

Stakeholders were advised that Votran is in the process of updating its TDP, a 10-year planning document that serves to guide investments, provide direction on future initiatives, and respond to community needs. Respondents were thanked for their participation and advised that, as Votran prepares to update its guidance documents, their participation would be critical to helping develop insights and identify trends. Each respondent was asked to provide their perspective and insights as a

stakeholder from their individual vantage point. Respondents were advised that the interview would ask for their thoughts on transit services and specifically on Votran, covering four major areas. The first area dealt with existing services and Votran’s current operations. The second area covered future planning and thoughts about the direction of transit in Volusia County. The third area focused on strategies needed to achieve that future and what specific elements would have to be in place for transit to be successful in Volusia County. The fourth and final area asked respondents, based on their insights, to prioritize next steps and identify one key area for discussion.

Table 4-2 provides a list of stakeholders contacted and/or interviewed as part of this particular outreach effort. Major themes were identified from the feedback received and are summarized in the following sections.

Table 4-2: Votran TDP Stakeholders

Name	Entity	Title
Lois Bollenback	R2CTPO	Executive Director
Tom Matthews	Council on Aging	Accounting Manager
Patricia Boswell	Volusia County Health Department	Administrator
Carrie Baird	One Voice Volusia	Executive Director
Courtney Edgecomb	United Way Volusia/Flagler	President
Doug Hall	TDLCB	Citizens Advocate
Marina Villena	TDLCB	Citizens Advocate
Michael Pleus	City of DeLand	City Manager
Khalid Resheidat	City of New Smyrna Beach	City Manager
Marc-Antonie Cooper	City of Deltona	Interim City Manager
Dale Arrington	City of Orange City	City Manager
Carmen Rosamonda	City of DeBary	City Manager
Lee Evett	City of Lake Helen	Interim City Administrator
Carmen Spelorzi	Town of Pierson	Town Clerk
Joyce Shanahan	City of Ormond Beach	City Manager
Joe Forte	City of Holly Hill	City Manager
Jim Chisholm	City of Daytona Beach	City Manager
Michael Booker	City of Daytona Beach Shores	City Manager
James Gillis, Jr.	City of South Daytona	City Manager
Glenn Irby	City of Edgewater	City Manager
Kohn Evans	City of Oak Hill	Town Clerk
George Recktenwald	Volusia County	County Manager
Barbara Girtman	Volusia County Council	District 1 Commissioner
Jason McGuirk	R2CTPO	TPO Chairperson

TDLCB - Transportation Disadvantaged Local Coordinating Board.

Transit Today

In general, all stakeholders responded positively to Votran, expressing support for its role in the community.

- **Awareness** – Respondents indicated that Votran’s role was important as a support service for the community, but that there is a lack of awareness of the benefits that Votran provides and where it provides service. It was noted that while the west side has less awareness on transit services, the whole county could use a marketing and education campaign. Overall, respondents felt that a good portion of people in the community knew about Votran, but still may not know of all the services it offers.
- **Perception** – Although it was agreed that there was a lack of the awareness of transit’s benefits, all respondents had positive comments for Votran’s role and perception in the community. Some respondents felt that the community viewed Votran as a service for tourists and those that do not have access to a car. Although Votran is committed to serving everyone in the community, it is still not seen as a service for most of the people who have a choice between driving and riding transit. Additionally, due to lack of education, people worry about the convenience and dependability of Votran. Furthermore, it was noted that there is a lack of accessibility with the current bus stop infrastructure that may contribute to the perception that the service is not comfortable or convenient to use.
- **Accessible Information** – Respondents agreed that the existing MyStop app is a great tool that helps riders anticipate their bus arriving and helps with trip planning. Although the tool was highly praised, it was mentioned by some that the resource may not be well-known. Additionally, there was concern expressed that those without access to smartphones or the internet would not know how to access the system and there should be traditional information pamphlets available. Some respondents also suggested including Votran information in local publications and circulars from social service agencies. The auditory announcements at stops were lauded as a great feature, but sometimes the sound of the buses are too loud, which can affect persons with disabilities receiving pertinent information.
- **Responsiveness** – Most respondents commented positively on the reputation that Votran has regarding its responsiveness to community’s transit needs over the years. Since the onset of the COVID-19 pandemic, too, respondents felt that Votran has done an outstanding job responding to the situation, handing out masks and providing hand sanitizer to protect the community.
- **Funding** – Overall, respondents felt funding was a barrier to expanding or enhancing services, improving frequency, and attracting “choice” riders. All respondents felt funding should be viewed as a community investment and some felt that local funding for transit was insufficient at current levels.
- **Tourism** – Respondents commented on how Votran does a great job supporting the tourism industry by helping service workers connect to jobs and also a mobility options for visitors.

Some respondents emphasized how much trolleys were used when there were special events in town or when people patronize restaurants in downtown Daytona Beach.

Where Do We Want to Go?

- **Focus on Core Service and Corridors** – There was consensus on the need for more frequent bus service, at least in the areas or corridors that have shown the need for it. The stakeholders expressed their appreciation for the services currently provided and would like to see more enhanced service with buses arriving at stops more frequently so that can lead to lower wait times and better total travel times that can be appealing to anyone not currently riding the bus.
- **Local Collaboration and Communication** – Respondents suggested greater collaboration and participation in municipal and county planning committees, community groups, and with development agencies and developers, citing the importance to educate decision-makers on the benefits of transit. Additionally, respondents agreed that Votran should be more involved in the plans/development approval process, which would create a more cohesive community.
- **On-Demand Transit in Less Populated Areas** - Implementing app-based MOD services in low-density areas/zones also was discussed. It was mentioned that trips in these specific zones could be subsidized so it would be affordable to all. Respondents thought that Votran should partner with Transportation Network Companies (TNCs) such as Uber/Lyft and similar providers to provide these as well as first-mile, last-mile services.
- **Impacts of Continued Growth** – All respondents felt population increases and continued residential and commercial development in Volusia County and surrounding areas will impact the quality of life and drive a need for more transit services. It was expressed that some of the higher density developments and those that cater to older adults may need more services. They also identified the need to coordinate transit capital needs with land development code requirements. It was discussed that, depending on the type and size of the development, there could be a mechanism that makes developers pay their fair share on transit bus stop infrastructure, thereby helping to increase transit access.
- **Funding** – The consensus was that more funding is needed, but increasing property taxes may not be welcomed in the community. However, the community may be willing to implement a penny sales tax for a fixed amount of time. Some stakeholders discussed the previous effort to increase the sales tax and lamented that it was a missed opportunity to enhance transit services. It was said that the support may not be there any longer as there is more of a willingness to fund road-related improvements. Some stakeholders suggested that municipalities that would like to have more transit access should contribute to the cost of services in their area. Additionally, it was agreed that increasing fares would be counterintuitive as it would possibly discourage people from using the service and would be unhelpful to current riders.
- **Improved Marketing and Education** – All respondents commented on the need to develop more ways to market the service and educate the public on the many benefits of using the

service. It was also recommended that Votran go into the community and educate residents on the services that are available to them. A respondent commented on the opportunity to create a theme or catchphrase that is visible on the bus as those are most visible to the public. It was said that Votran should focus more on explaining why people should use Votran.

- **Improved Infrastructure** – Stakeholders commented that accessible and enhanced bus stops would be great marketing tools for Votran as it is difficult to see a bus stop pole and is uncomfortable for older people and people with disabilities to wait at stops without benches. Furthermore, it is difficult to reach the bus stops as sometimes there are not sidewalks or they are adjacent to busy roadways. It was also commented that there was a need for more park-and-ride facilities as it is an effective way to connect employers and outlying communities. Stakeholders suggested Votran should partner with local high schools or other higher education centers to use their facilities as park-and-ride locations. Additionally, some stakeholders suggested bus pull-outs to increase safety measures for passenger boarding and traffic safety.

How Do We Get There?

- **More Frequent Service** – Stakeholders identified improving frequency to help increase ridership as a Votran key improvement for the next 10 years. Not only would this attract more discretionary riders, higher frequency at least on popular routes would also improve the service for current users. It was emphasized that the need for more frequency on existing routes is more important than adding any new routes or service types.
- **Direct Connections** – The discussion regarding more direct connections with possibly the use of smaller vehicles was discussed by some stakeholders. They also felt there was an opportunity to tailor services to show local character and goals and residents may use it the service more if it directly connects them to their local destinations. Destinations and attractions cited included shopping centers/health/recreation facilities and education centers. Stakeholders representing the west side of the county frequently mentioned needing more direct connections to employment hubs from their respective residential areas. One stakeholder suggested the previously implemented Ormond Beach Trolley should return as the density in the area and demand for trolley service from tourists have both increased.
- **More Service and Service Span Expansion** – All respondents agreed that there was a need to provide more service in West Volusia County. It was agreed that there is a mismatch with the growing area and less frequent service. Additionally, the demand for more night service and Sunday service was mentioned frequently. One respondent said Port Orange specifically needed more night service.
- **New Premium Service Types** – At the same time stakeholders emphasized the need for higher frequency on existing services, some respondents agreed that there is also a need for premium services such as Bus Rapid Transit (BRT) and rail. When asked where these services should be implemented, one respondent suggested International Speedway Boulevard, US 1, and A1A. Since visitors arriving by plane do not have a car, one respondent felt that the Daytona Beach Airport (DAB) should have better and enhanced connections to key locations.

Respondents discussed that premium transit services, such as BRT and rail, should be a future goal for transit. Rail was suggested to connect the two sides of the county so there would be alternative to driving on I-4.

- **Special Events** – Most agreed this is another area for transit to shine and felt Votran should participate and assist more with responding to special events to address congestion and parking, increase attendance, and connect popular destinations.
- **Regional Transit** – There was consensus on the need to be proactive and facilitate more connections regionally, especially by connecting with SunRail. It was acknowledged that the level of service to the DeBary station can be improved and there would need to be frequent service to a DeLand station when the planned rail line extension is implemented in 2024. There was agreement on interest in the SunRail extension to DeLand and some also discussed connecting to Flagler County and Orlando for medical and recreational trips.
- **Enhanced Infrastructure and Technology** – Respondents frequently cited the need for better bus stop infrastructure and increased accessibility to existing bus stops. Some felt that it is a serious safety issue to walk along busy roadways without sidewalks or to have to wait in an area with low visibility to oncoming traffic. One respondent thought Votran should research investing into electric buses and eventually on autonomous vehicles as their fleet needs replacement.

Changes and Vision

- **Need for Community Support** – Stakeholders indicated that Votran should continue to build support for transit, engaging decision-makers and the development community to accommodate future transit services. It was repeatedly noted how helpful and vital Votran can be when there is a major storm approaching to connect people to shelters.
- **Technology** – It was suggested that Votran should work to embrace more technology advancements with deployments of autonomous and connected vehicles. Stakeholders indicated that it would help make the service more efficient and possibly attract more riders.
- **Ongoing COVID-19 Pandemic Response** – Every respondent agreed that Votran was doing a great job keeping the community safe while providing service and should continue to enforce social distancing, mask wearing, and sanitization efforts.

Figure 4-2 shows selected stakeholder comments identifying some of the key themes/areas of focus.

Figure 4-2: Stakeholder General Comments



Discussion Group Workshops

Another outreach activity used for the Votran TDP was discussion group workshops in which smaller groups representing key focus areas for transit were invited to discuss transit-related topics. These discussion group workshops served as a virtual roundtable where all participants took part in assessing existing services and determining future transit needs using questions to motivate and inspire conversation about the transit development process.

The project team coordinated with the PRC to identify and invite potential participants to each workshop. Each PRC member was provided the opportunity to identify participants for the discussion groups. Thereafter, with the input received from the PRC members, including Votran staff, potential participants were contacted by the project management team via email and phone calls to invite them to their respective discussions.



The smaller group framework with guided discussions increased participant interest and engagement on key topics important for Volusia County and the region. This approach was used with four invitation-only sets of key groups, as summarized below. Due to aforementioned COVID-19 restrictions, these discussion groups were held virtually with a presentation to start the proceedings and a guided discussion that followed.

Healthcare/Social Services Discussion Group

The first discussion group workshop included representatives from healthcare and social service agencies who were invited to provide input on existing and future public transportation needs in Volusia County and the region. The workshop was held on December 2, 2020, from 10:00 AM –12:00 PM. Participating agencies included the following.

- Council on Aging in Volusia
- Easter Seals
- Advent Health in DeLand
- Advent Health in Daytona Beach
- Volusia/Flagler Coalition for Homeless
- Ocean Center
- Halifax Medical Center
- Mid Florida Community Services

Input from the group, obtained from a guided discussion, was categorized into key areas of focus and is summarized below.

Transit Today

- **Critical Need in the Community** – Participants perceive Votran as a critical need in the community. They mentioned how transit is vital for many in the community who have no other way to access services provided by social care and health care agencies. However, participants felt that the community at large views Votran as a service used primarily by those that do not have access to a vehicle. They also agreed that it is and should be looked at as an economic development tool that assists residents to reach jobs, services/resources, and shopping.
- **Lack of Awareness** – It was agreed that there was awareness in the community, but there could be more done to ensure people know specific information about the services and what is available near them. They indicated that many in the community do not know where the bus stops are located or where the routes run. Participants believe there is a need to better educate and inform the community about services available. It was noted that there is an even higher level of awareness in the older adult community due to word of mouth.
- **User-friendly and Easily Accessible Transit Information** – There was input on making bus system information easier to use/access. Participants expressed that those who have never used public transit before may find the route maps and scheduling intimidating and feel apprehensive to try transit as a result. All participants agreed that there needs to be more awareness about travel training and the bus tracking app that shows real-time information about fixed-route services. Furthermore, participants would like more outreach to social services, including marketing materials, and the possibility of pre-purchasing passes for clients.

Where We Want to Go

- **Adding More Service and Emphasis on Technological Solutions** – Discussion around future needs revolved around the need for more service supply and implementing technology-based solutions such as MOD. While better regular bus service is still seen as the better option in denser areas, MOD is seen by the group as a better solution for other areas due to its efficiency and, as it may be curb-to-curb, a more convenient option mimicking the conveniences of paratransit services. Participants thought that app-based services could also make transit riders transmit feedback in a rapid manner.
- **Funding** – Participants agreed that there needed to be a bigger investment in transit in the county, but did not feel that it was a priority for all Volusia County residents at this time. They agreed that, although a sales tax would be the best path for more funding and would allow tourists to help pay for the services, it was also agreed that it would probably not be supported by the majority of residents.
- **More Outreach and Marketing** – Throughout the discussion group, many agency representatives echoed that, while Votran offers great services, a lot of people do not know

about the agency. By connecting with social services and healthcare agencies, Votran could use them to spread the word and hand out marketing materials so their clients know about the benefits and why they should use the service.

How We Get There

- **More Service Coverage** – Participants agreed that there was more service supply needed in general, but thought coverage around the county was most important. New residents that move from areas with robust transit have trouble transitioning to living in areas that do not have access to transit services. Although it was agreed that Votran does a good job serving the county, the group agreed that the service should focus on the new developments, especially multi-family developments. Specific areas that need more service include DeLeon Springs, Pierson, and Osteen, while all of southeast Volusia County was cited as also being underserved. It was agreed that Votran’s services should always be evolving to match resident’s needs.
- **More Frequent Service and Rail** – Although more service coverage was cited as a need, participants also mentioned that more frequent service is as equally important. Some agency representatives reported that some clients miss the bus and then miss their appointments due to the lengthy wait for a connection/transfer. Additionally, they concurred that the lower frequency service could be a barrier that discourages new riders from trying the service. Premium transit types, such as rail, were desired to connect the east and west parts of Volusia County. It was agreed that there is a greater need for the west part of Volusia County to reach the eastern portion in a more convenient way.
- **More Weekend Service** – Although many of the agencies do not have activities or appointments available on Sundays, participants said that it was a common request heard from their clients and constituents. There is a direct impact from the limited Sunday fixed-route service on Gold Service as the ADA service area corresponds to the operating fixed-route services. In addition to lifeline trips, participants said that their constituents who use Votran services would like to attend religious and cultural events on Sunday.
- **Increased Regional Connections** – The proposed DeLand connection to SunRail was regarded as crucial as it will add more access to the region south of Volusia County. Regional connections mentioned that are needed include connections to Orlando/Orange County and Seminole County. Some healthcare representatives cited the need to connect to specialists outside of Volusia County that residents do not currently have access to due to lack of regional transportation options. Additionally, participants said that more connections to SunRail would give residents more access to recreational opportunities.

Business and Education Discussion Group

Another discussion group workshop was held with business and economic development leaders to gauge their input on existing and future public transportation needs in Volusia County on December 2, 2020, from 1:30 PM –3:00 PM. Representatives from the following organizations participated:

- Team Volusia Economic Development Corporation (EDC)
- Daytona State College
- Stetson University
- Volusia Mall
- Tanger Outlets
- Southeast Volusia Chamber of Commerce
- Daytona International Speedway
- Volusia Hispanic Chamber of Commerce
- Hometown News
- Holly Hill Chamber of Commerce
- Bethune Cookman University
- Lodging and Hospitality Association of Volusia County
- Daytona Regional Chamber of Commerce

After a presentation to set the foundation for a discussion on transit needs and vision, the attendees participated in a guided discussion. Input received and needs identified from workshop attendees include the following.

Transit Today

- **Votran Services are Needed** – Overall, participants perceived Votran as a vital community service that has become a convenient way for many people to get to and from shopping destinations and work. It was also noted that Votran has a great reputation and participants said that they have not heard any complaints about the service for many years. Participants from the hospitality and other major commerce groups also indicated that they are worried about the impacts of COVID-19 pandemic on their employees and think Votran services will be helpful to get the local economy to recover.
- **Awareness and Responsiveness** – Although Votran has a good reputation in the community, participants said that the awareness is somewhat low and the majority of those in the discussion group requested more information to pass along to clients, employees, and constituents. Representatives from major educational centers said that they are happy with the service for their campuses but would like to see the agency provide more services to their students and staff. Participants agreed that Votran was responsive when there was high demand for night and holiday service. Additionally, Votran was given accolades for their recent connection to the Tanger Outlets. Participants agreed that it was very important for the community and appreciated Votran understanding and being responsive to community's needs.

- **Tourism** – Although Votran service has a good reputation and is well-liked locally, it was said that most tourists are unaware of the service. Some tourists who arrive by plane and may not want to use/rent a car may not be aware that Votran is available for them or where it serves. It was suggested that Votran reach out and market more to tourists who could use the service, thereby, helping to mitigate traffic congestion or parking issues due to added rentals or taxis on local roads.

Where We Want to Go

- **Increased Service Supply** – It was noted that service jobs and other lifeline trips need to be made outside of hours that Votran operates, specifically at night. Participants agreed that there is a need for more routes to run earlier in the day, as well. Although new areas that may have demand were mentioned, participants agreed that the focus should be on enhancing the frequencies on existing services within the core, established areas such as Daytona Beach.
- **Access to Educational and Economic Opportunities** – Participants also discussed providing convenient access to the vocational programs provided by Daytona State College located at their campuses throughout the county. These classes help students learn a trade but, depending on the subject, sometimes the classes are not in the same location, making it tough for students to consistently reach the class. When discussing the future, some participants said that Volusia County may become more of an economic hub as more companies were opening locations and there are frequent requests for land. It was repeatedly noted that more transit meant more access to reach economic or educational opportunities.
- **Regional Connectivity** – Connecting with commercial and educational/training centers in the region also was discussed as important for the business and educational community. Although connecting to regional locations and other transit agencies was deemed important, participants also agreed that the main focus should be kept locally within the county.

How We Get There

- **Frequent and Direct Routes** – Participants agreed that they would like to see high frequency transit services in core areas and serving busy roadways. More direct routes with less deviations were also mentioned as a need by participants. MOD was a suggested solution that participants agreed could help connect people to these direct routes.
- **Supporting Communities** – Participants mentioned the potential need for more transit due to major growth planned on the west side of the county, specifically in DeLand. A participant commented that DeLand would like to be more pedestrian-friendly and keep cars out of the downtown area, creating an opportunity for transit use.
- **Funding** – When discussing how to fund the services needed, participants agreed that new local funding may be tough to obtain. Participants agreed that there should not be any new bed taxes, but could possibly add an additional fee to rental cars. It was mentioned that currently there is a fee from rental cars that supports roadways and this additional fee would be paid mostly visitors. Other ideas included advertisements on the buses, benches, and other infrastructure.

- **Marketing and Education** – The discussion group participants also provided their ideas to increase awareness and better educate the community on available transit services. New or an enhanced branding was suggested as well as directing more marketing towards tourists. Some participants also thought that Votran should expand its outreach to larger employers and local government/councils. When it came to the distribution of materials and information, participants agreed that there should be paper pamphlets available at key locations in addition to any information available on a phone app for equitable access. Additionally, some participants thought Votran should be seen as an ambassador to the county. To increase ridership some participants thought that Votran could create something more involved, such as a contest, to create more positive awareness.
- **More Services** – Participants agreed that Votran should run services during special events and holidays as catering to local events will build more dedicated ridership.
- **Regional Connectivity** – With the proposed SunRail extension to DeLand, participants agreed that there should be local connections with high-frequency service.

Bus Rider Discussion Group

The third discussion workshop was held with a group of bus riders to gauge their perceptions of current Votran services and what riders see as future needs for the service. Riders were identified by Votran staff with the help of bus operators and were contacted by phone and email to attend. The workshop was timed and formatted to ensure that it would be convenient for riders and was held virtually on December 4, 2020, from 4:00 PM –5:30 PM. Riders attended using a telephone, computer, or other personal electronic devices.

The same format and structure as the other discussion group workshops were used to provide information and gather input on current and future transit needs from the existing riders. In total, nine bus riders were involved in this discussion group and related follow-up efforts to ensure that all viewpoints were accommodated.

Following is a summary of the comments received at the bus rider discussion group about existing and future Votran services.

Transit Today

- **Awareness and Perception** – Participants agreed that the public is generally aware that Votran service exists, but are not aware of all the services that are available and what they entail. Some participants mentioned that it was mostly looked upon as a service for those with disabilities or no access to other transportation options.
- **Information** – Participants said that the public does not know how to get information from the website or are aware that there is a phone app. They agreed that the app and other avenues of information distribution, such as the website and phone access, were helpful. Word of mouth was described as a popular way of distributing information among bus riders and to those that are interested in the services.

- **Responsiveness** – Most participants agreed that Votran is responsive to all of their needs and requests. The two service requests that they would like to see that have not been adequately addressed yet include earlier morning service and Sunday service. They also mentioned that Votran has been great about proactively protecting the community during the pandemic by passing out masks and providing hand sanitizer, but that wearing masks on all Votran services should be enforced.

Where We Want to Go

- **More Service Supply** – Participants would like to see a system with a lot more service provided on existing routes and a system that runs all week. It was indicated that some participants like to take part in social and religious events on Sunday but have no way of reaching them due to lack of service. All participants echoed that this was the biggest immediate need for Votran services.
- **Premium Transit** – When discussing the types of services distributed throughout Volusia County, some participants commented that they would like a premium service to connect the east and west portions. Rail was seen as the preferred mode, but agreed that BRT would also be appropriate.
- **Extended Transit Access** – The importance of regional access using transit also was discussed. Participants said they would like regional connections to surrounding counties, specifically ones with their own transit systems to which they could connect. Although participants agreed it would be nice to have premium transit options to do it, they preferred focus go to more regional access regardless of the mode type.
- **Improved Technologies and Infrastructure** – Most participants commended Votran and its leadership on the availability of the bus app. On additional needs/enhancements, participants suggested adding/improving the announcement systems to inform riders about upcoming stops and what intersections the bus is passing. At this time, they saw the announcement system as a tool that could also be used to remind people about social distancing and the importance of wearing a mask.

How We Get There

- **Weekend and More Hours of Service** – A key need for most Votran riders is expanding weekend services, especially on Sundays. This may be due to the need to access service jobs and/or the desire to attend religious activities or connect with recreational or shopping centers. The drop in service availability on Sundays was seen as key issue for many. In addition, the need to have longer service hours, especially during the early part of the day, also was mentioned.
- **More Frequent Service** – In addition to participants wanting more weekend/expanded service spans, participants also mentioned higher frequency service as a key need. It was also agreed that this would help attract new riders to the service in addition to providing more convenient service to existing riders. When asked where higher frequency service should be distributed, it was agreed that the service should be in denser areas.

- **Marketing and Education** – Although participants acknowledged that Votran does a great job distributing its information on the website and app, participants suggested that Votran do more social media outreach. They thought that social media platforms could help spread awareness of the service while also helping educate the public on the benefits. In addition to more technological distribution methods, participants thought that Votran could also advertise on the radio or have a television commercial. Furthermore, participants said using bus wraps with eye catching advertisements about the service could help spread awareness. Other suggestions included partnering with large/new employer openings to hand out passes so that employees would try the service.
- **Funding** – Participants all agreed that they would happily pay extra sales tax to see better transit services. It was established that in order to have better services, there would need to be additional funding. The sales tax was popular amongst participants because tourists and other visitors would also contribute to the additional funding.

Regional Planning Agency Committees Discussion Group

Another discussion group was conducted with members from various R2CTPO committees. Total of 20 members were invited and 13 participated. These TPO committees serve Volusia County and parts of Flagler County and members consist of officials from city and county governments that are responsible for the urban transportation planning of the two-county planning area.

The meeting was conducted using the same format as the other three discussion groups and was held on December 8, 2020, from 1:30 PM–3:00 PM. The discussion group included TPO Board members and staff as well as members of the Bicycle/Pedestrian Advisory Committee (BPAC), Citizens Advisory Committee (CAC), Transportation Disadvantaged Local Coordinating Board (TDLCB), and Technical Coordinating Committee (TCC) for R2CTPO. The meeting included a project update and summary of findings from the existing conditions analysis and outreach efforts completed so far, including workshops and the online public input survey. Participants provided feedback at the meeting and also through follow-up emails. Input included the following.

Transit Today

- **Votran is a Key Part of the Community** – Participants agreed that Votran does a great job serving the community and is a necessary component and an asset to the community. Participants commented that the service was especially valuable transporting residents to shelters when major storms are projected to affect the community.
- **Awareness and Perception** – Participants agreed that the public is aware of Votran services, but the public sees it as a service for people that are disadvantaged or do not have any other transportation options. They indicated that many people who move to Volusia from northern states, especially older adults, like transit and would like to use it but may not use it as much locally because it is not at a level that appeals to them. Additionally, some participants mentioned safety as a concern as bus shelters and benches are sometimes used by people other than the riders as intended. Some participants indicated that lack of widespread availability of shelters/benches and other infrastructure may be making transit less convenient to current and potential riders, especially when waiting in inclement weather.

- **Responsiveness** – It was acknowledged that Votran does a great job responding to issues in the community even with its continued funding constraints. One participant said that, while they would like to see more infrastructure in their community, they also understand that neither the community nor Votran has the funds to get all they want. However, Votran was also lauded, as a good example of their responsiveness to community need, for their efforts connecting Votran to Tanger Outlets.
- **Accessibility of Information** – Participants said that the bus tracker phone app was a great feature, but may need to be more user friendly or accessible. One of the participants indicated that it can be challenging for a non-user to know how to access bus information on the app. Another participant discussed the need for faster and better ways to communicate up-to-date transit information to the community, citing that they were unaware that Votran had temporarily suspended fares at the onset of the COVID-19 pandemic.
- **COVID-19 Impact** – While Votran has done a great job protecting the community by continuing extra sanitization efforts and handing out masks, it was agreed that some riders are still hesitant to use the service. One participant indicated that some riders were not using the cheaper Votran services but were financially suffering from expensive point-to-point trips due to virus fears. Others indicated that riders were hesitant to use the service as some routes are very popular and would not have the space for proper social distancing. Votran staff updated the group on the ongoing efforts to keep the riders and employees safe, including sanitary and other efforts such bus wraps with information to keep the riding community safe.

Where We Want to Go

- **Increase Convenience and Appeal** – To make Votran an attractive and convenient service, participants agreed that there would need to be increased service supply with buses operating a lot more frequently, at least on major roads that connect key employment and population areas within and between the east and west sides of the county.
- **Make Transit a Tool that Supports Tourism/Economic Development** – Participants recognized transit as an important economic development tool that helps customers/employees and businesses connect. One participant indicated that rental car rates in the area are expensive at peak season, so tourists may use transit to patronize local businesses if it is available conveniently, at least for shorter trips. Transit would be a good alternative, but routes sometimes are not direct or there is a mismatch between the business locations and where the tourists are located. Additionally, participants thought transit could be used more to connect workers to businesses and other services. One participant added that transit tax credit benefits can help businesses promote transit to their employees. Some participants indicated that some businesses rely on transit to shuttle their employees to work and have indicated that they will not open a location if there are not any existing routes serving that location.
- **Serve Core Demand Areas** – Participants thought it was important to look at where transit demand is greatest and serve those areas. However, it also was suggested that it also is important that all areas have some type of service coverage. There was agreement that areas

with lower density/demand can be served with a lower cost options rather than with large buses.

- **Data Driven Decisions** – Participants emphasized the need to use data to make transit efficient, such as tracking data where lower ridership activity is and where operators may hear that additional services are needed. If there is enough demand, Votran should possibly look into serving that area.
- **Regional Access** – Participants agreed on the need to have a more connected region with a multi-agency transit network to allow seamless travel within the counties in the immediate region, especially with SunRail serving West Volusia. While connections to the south of the region is key, partnering with Flagler County should also be a priority to connect for education and workforce purposes. One participant expressed that as more residents from Brevard County work in Volusia County than the reverse, connecting to Brevard County should also be explored.
- **Direct Routes** – Another key suggestion highlighted by the participants was the need to connect people to their destination quickly. The circuitous nature of some routes was discussed by the participants as a possible disadvantage for this directness and the need to enhance the routes to serve their destinations more directly was emphasized.

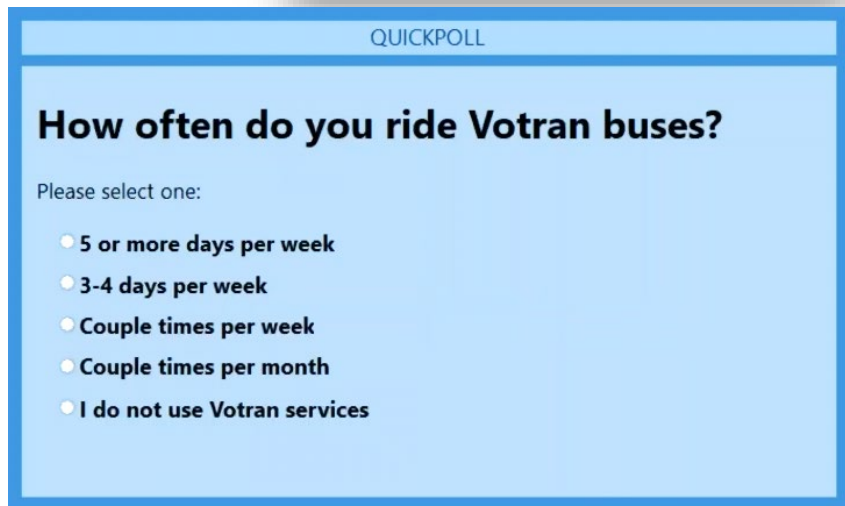
How We Get There

- **Increased Frequency on Core Corridors/Areas** – This was considered as an option to make transit more attractive to all segments of potential riders. As frequency improvements are expensive and may not even be needed in all areas, it was suggested to focus on key corridors and areas with demand.
- **New Service Types** – Instead of focusing on serving the entire county with regular fixed route service with large buses, participants suggested using different strategies that may suit the area and demand better. With a bus app already in place, participants discussed using app-based on-demand transit options as well as partnering with TNCs to provide rides where there may not be as much demand.
- **Regional Connections** – Expanding connectivity to key locations and the other transit networks in the region was emphasized as an important need and a way to expand Votran's reach. Connections to Brevard, Flagler, and Orange counties were mentioned as needs in the next 10 years.
- **Funding** – Opportunities for additional local funding were discussed and, while there was consensus on the need, there was also no consensus or direction on any specific source to pursue. Some suggested working with the municipalities and also exploring using community redevelopment funds.

Phase I Public Workshops

Two general public workshops were held in December 2020 to identify transit needs and assess existing perceptions in the community. The key focus was to gain an understanding of participants' views about utilizing Votran and identify what Volusia County can do going forward to make transit a more viable travel alternative.

These workshops were held virtually after input from PRC members and discussions with Volusia County/Votran staff on the appropriate format and platform to engage the public during the ongoing COVID-19 pandemic. The two virtual workshops were formatted to allow the project management team and Votran staff to engage with members of the public, who could listen to a presentation about the TDP and ask questions from a panel of project management team members, including project consultants and Votran and Volusia County staff.



Prior to the workshops, notices/flyers announcing them were distributed using websites, social media, and email. Volusia County staff also used its Public Information Officers (PIOs) as well as PIOs from a number of municipalities to help spread the word, while also participating in a local radio show to inform the public about upcoming outreach events.

To ensure equitable coverage and engage the public in a creative way, Votran used the Webinar format where up to 500 participants could join via internet or telephone and submit questions during the workshop sessions and participate in an open forum discussion and ask questions. In addition, live polling also was used during the workshops to engage the participants. Workshop materials used for these efforts are included in Appendix E.

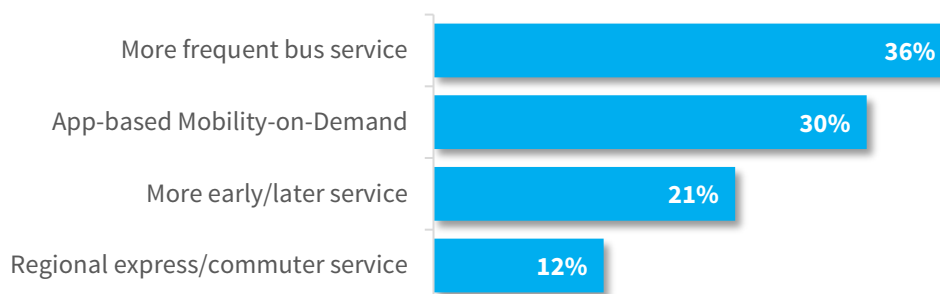
Public Workshop #1

The first virtual public workshop was hosted on December 16, 2020, from 5:30 PM to 7:00 PM, where 22 participants from the general public attended. After a detailed presentation, live polling exercises, and use of a chat feature that allowed participants to pre-submit questions, an open forum discussion was held where participants were able to ask questions in real-time and discuss answers with the workshop panel.

As might be expected for a general public workshop, the majority of participants reported that they did not use Votran. Although the majority of participants did not use Votran, approximately 80 percent agreed that there is a need for additional or improved transit services while the remaining said that they did not know if there was a need. If participants did use the service, over half said that they would go to social, religious, or recreational events while approximately one-third of respondents wanted to use the service for work. Most participants reported that transit is important as it provides a convenient and dependable source of transportation and can also provide better access to jobs. Furthermore, participants said a higher frequency service, such as one that came every 15-30 minutes would make transit more appealing. Additionally, participants said that they would like to receive their transit information from Votran’s MyStop bus tracking app and the Votran website.

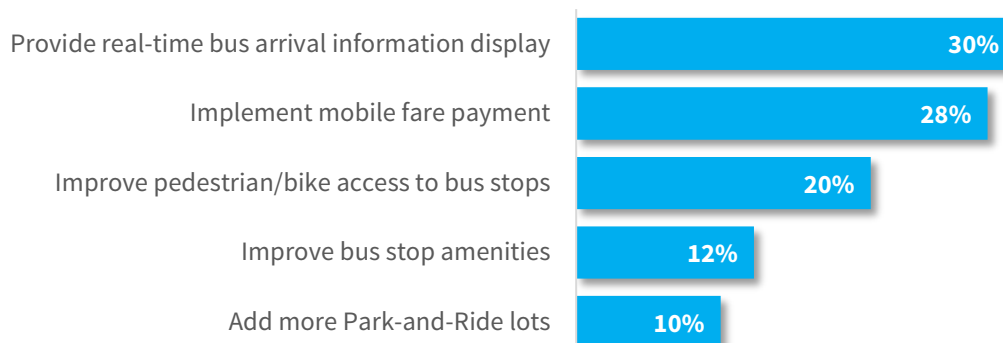
Figures 4-3 illustrates the input of future transit service needs from workshop participants. Approximately 36 percent of participants agreed that more frequent bus service should be the top priority over the next 10 years. Other options indicated include app-based MOD (30%), more early/late service (21%), and regional express/commuter service (12%).

Figure 4-3: What Should Volusia County Consider as Transit Improvement Priorities Over the Next 10 Years?



When asked about transit infrastructure and technology improvement needs, providing real-time bus arrival information displays (30%), implementing mobile fare payment (28%), and improving pedestrian/bike access to bus stops (20%) were the top three priorities for workshop participants. Improving bus stop amenities (12%) and adding more park-and-ride lots (10%) were also positively received as shown in Figure 4-4.

Figure 4-4: What Transit Infrastructure/Tech Improvements Should the County Consider in the Next 10 Years?



Public Workshop #2

Similar to the first workshop, the second one was also held in the virtual webinar format, but on December 17, 2020, from 5:30 PM to 7:00 PM. There were nine participants that answered live polling questions and submitted questions for the panel to answer.

Similar to the first workshop’s participants, the majority of those in the second workshop did not currently use Votran services, but did think that there is a need for additional or improved transit services in Volusia County. The top benefit of transit was also considered to be a convenient and dependable source of transportation, while all participants said that they would use Votran for social, religious, and recreational uses. As in the first public workshop, the vast majority of respondents think that the bus coming every 15-30 minutes would make transit services more appealing. Furthermore, participants indicated that they would like to receive their information via the MyStop app and the Votran website.

Participants agreed that more frequent bus service and premium transit options, such as rail and BRT, are equally important, 30 percent respectively. The remaining participants indicated that regional express/commuter services (20%), app-based MOD (10%), and more early/late service should be considered priorities (Figure 4-5).

Figure 4-5: What Should Volusia County Consider as Transit Improvement Priorities Over the Next 10 Years?

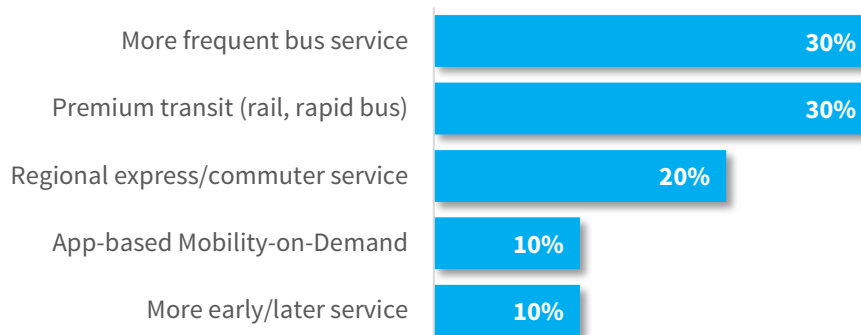
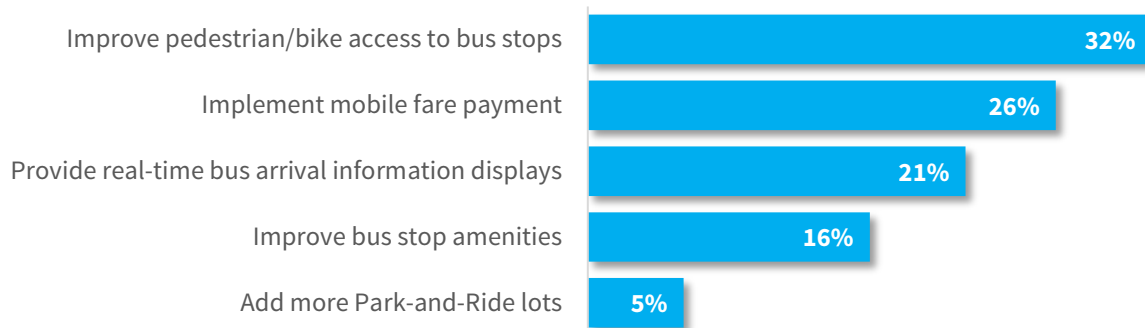


Figure 4-6 shows the infrastructure and technology improvements that were prioritized by the participants in the second workshop. Improving pedestrian/bike access to bus stops was considered a top priority while implementing mobile fare payments and providing real-time bus arrival information displays were also received favorably. Improving bus stop amenities and adding more park-and-ride lots were also indicated by some participants.

Figure 4-6: What Transit Infrastructure/Tech Improvements Should the County Consider in the Next 10 Years?



Public Input Survey

An online public input survey also was initiated in November 2020 and was made available via social media, email, and the Votran/R2CTPO/Volusia County websites. Due to the social distancing requirements, all promotion attempts for this TDP survey were made only via online platforms as well as phone calls.

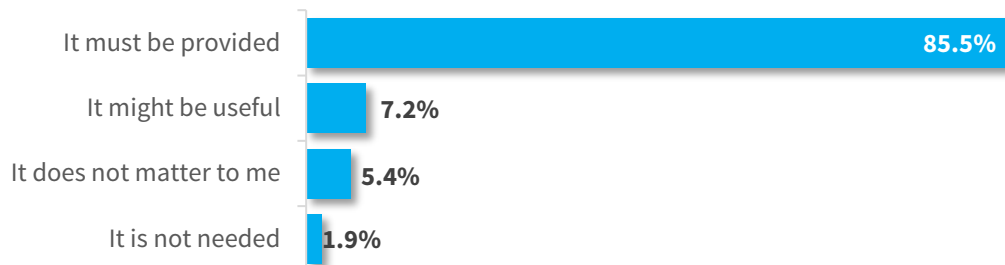


A number of questions were included in the survey to gather opinions about travel behaviors and the community’s transit needs. The survey was available in both English and Spanish languages and was designed to also to gather socio-demographic information of survey respondents. A total of 374 surveys were completed and the findings from the survey effort are summarized below. The survey instrument is included in Appendix E.

Survey Findings Summary

Respondents were asked how important providing transit services in Volusia County is. The majority responded that transit must be provided (85.5%). Figure 4-7 shows the remainder of responses range from might be useful (7.2%), it does not matter to me (5.4%), and it is not needed (1.9%).

Figure 4-7: How Important Is Providing Transit Services in Volusia County?



To accurately evaluate these survey results, it is important to gauge the amount of awareness and consumption of transit services in Volusia County. Over 85 percent of survey respondents agreed that transit must be provided and over half of the respondents (54.3%) indicated that a member of their household uses Votran. Figure 4-8 shows that the remaining responded that they had not used Votran (42.8%) or that they were not aware that public transit is available (2.9%). If the respondent indicated that they use Votran, they were asked which bus route they use most often. The top three routes mentioned were Routes 60, 20, and 6.

Figure 4-8: Have You or a Member of Your Household Used Votran?

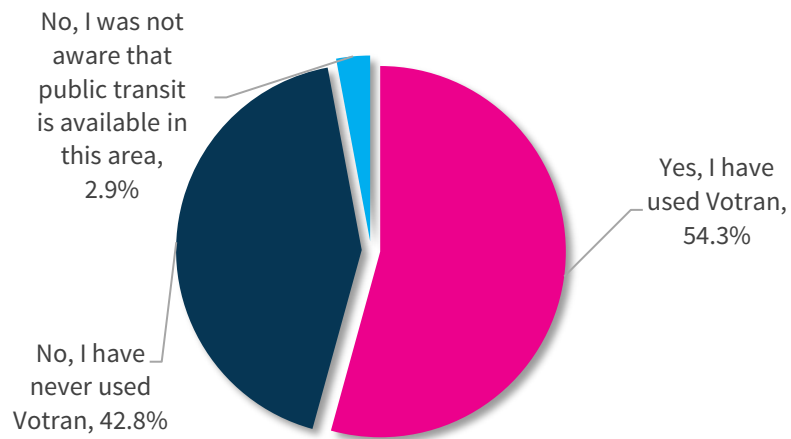
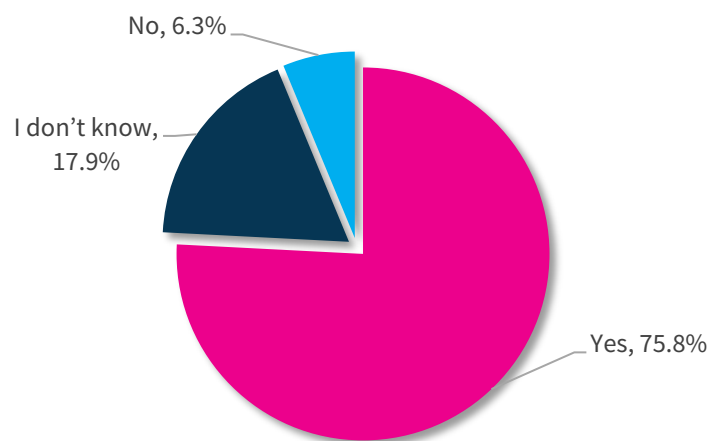


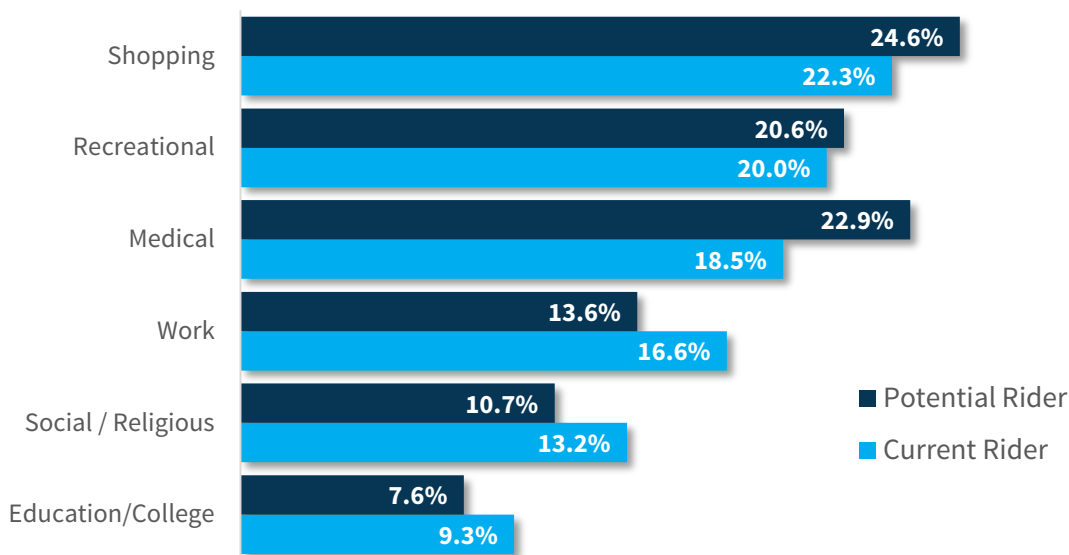
Figure 4-9 shows that the majority of respondents (75.8%) agreed that there is a need for additional or improved transit services in Volusia County. Other responses included “I don’t know” (17.9%) or the respondent did not think there was a need (6.3%).

Figure 4-9: Do You Think There Is a Need for Additional/Improved Transit Services in Volusia County?



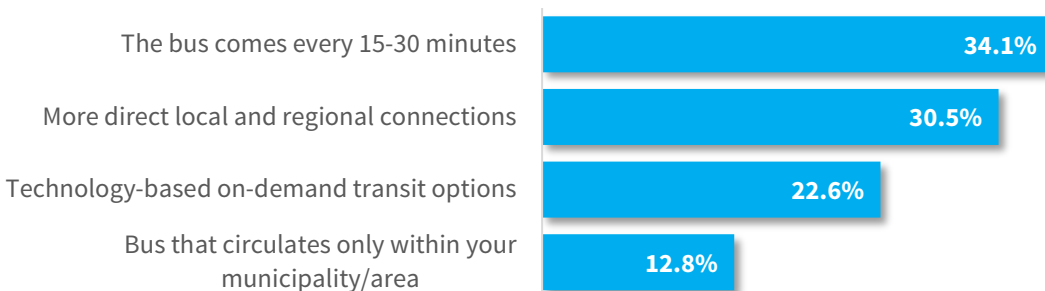
To assess whether service is meeting current or potential rider needs, respondents were asked to indicate where they go, or where they would go if they were to use Votran services. The most popular answer selected by current and potential riders was shopping, 24.6 percent and 22.3 percent, respectively. As shown in Figure 4-10, current and potential riders second and third choices were recreational and medical trips. More current riders prioritized work trips than potential riders, 16.6 percent and 13.6 percent, respectively. Social/religious trips were selected as destinations by 13.2 percent of current riders and 10.7 percent of potential riders. Education/college were the least selected option by both current riders (9.3%) and potential riders (7.6%).

Figure 4-10: If You Use Votran Services Now or Decide to Use Them in the Future, Where Would You Go Using It?



In order to attract more riders, it is important to understand what would encourage non-users to use Votran or use the service more. So, respondents were asked to indicate what would make transit services more appealing. The most popular responses were the bus coming every 15-30 minutes (34.1%) and the availability of more direct local and regional connections (30.5%). Other options, such as technology-based on-demand transit service (22.6%) or a bus that circulates only within a person’s municipality/area (12.8%) were also well-received as shown in Figure 4-11.

Figure 4-11: What Would Make Transit More Appealing for You to Use It, or Use It More?



Furthermore, respondents were asked to select the improvements that Volusia County should prioritize over the next 10 years. The top three improvements indicated were more frequent bus service (15.7%), more weekend service (13.1%), and more early/late service (11.8%), indicating that respondents would like more service supply.

Buses that circulate within various municipalities and regional express/commuter service were also well-received, with 11.0 percent and 9.7 percent support, respectively. Other choices included provision of rail transit (8.8%), app-based MOD (7.7%), expansion to new areas not currently served (6.9%), operating buses on dedicated lanes (6.3%), other (4.7%), and autonomous vehicles in city/town centers (4.2%), as shown in Figure 4-12. Respondents who selected “other” were asked to expound on this answer. Comments received included requests for additional service connections from Orange City to Daytona Beach, more services on US 17, direct connections from Edgewater to the Daytona Beach Airport, more service in West Volusia, and a bus connection to LYNX services in Orlando.

Capital improvements, such as infrastructure and technology, are needed to support and enhance the operational improvements. Respondents were asked to select infrastructure and technology improvements that they would like to see in conjunction with Votran service improvements. The top three selected improvements include providing real-time bus arrival information displays (24.2%), improving bus stop amenities (22.8%), and implementing mobile fare payment (21.4%). There was support for other improvements (13.0%), improving pedestrian/bicycle access to bus stops (11.8%), and adding more park-and-ride facilities (6.8%) as shown in Figure 4-13. Other improvement suggestions included more stops at the Tanger Outlet, ensuring that every bus stop has a shelter, and more options for purchasing fares.

Figure 4-12: What Should Volusia County Consider as Priority Public Transit Improvements Over the Next 10 Years?

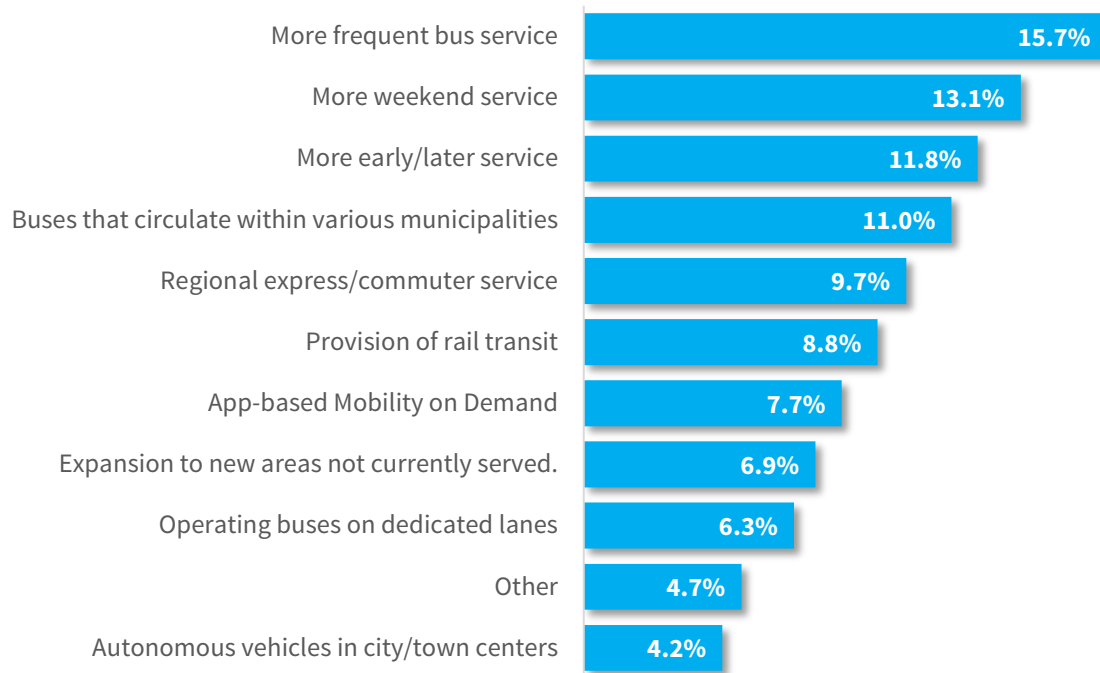
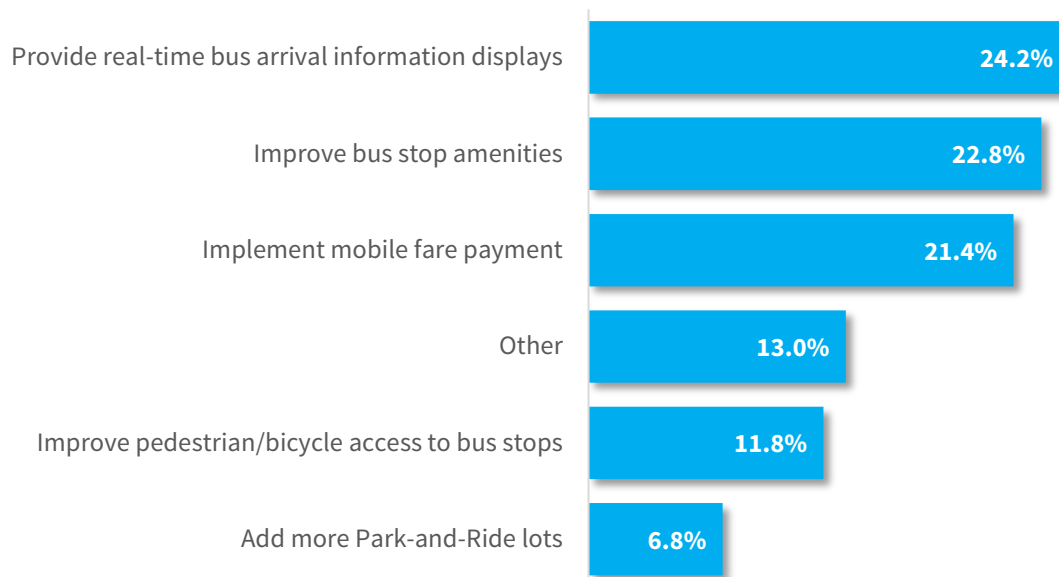
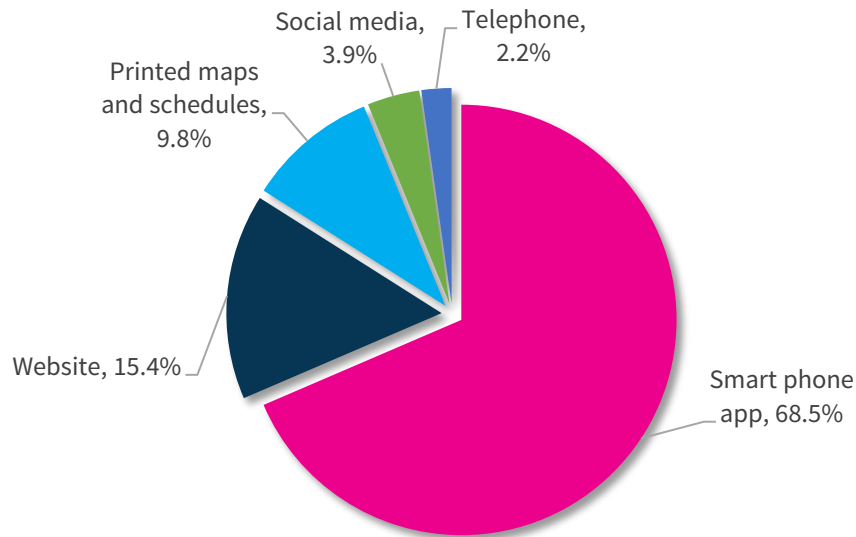


Figure 4-13: What Transit Infrastructure/Technology Improvements Should the County Consider Supporting in the Next 10 Years?



The provision of user-friendly public transit information is important for making service accessible and convenient to the public. Respondents were asked their preferred method of receiving transit information. As shown in Figure 4-14, the majority of the respondents selected smart phone app (68.5%). Other popular options selected were by website (15.4%) and printed maps and schedules (9.8%). There was comparatively less support garnered for social media (3.9%) or by telephone (2.2%).

Figure 4-14: How Would You Like to Have Access to Public Transit Information?



Survey Respondent Profile

To better understand the socio-economic and socio-demographic condition of survey participants, each respondent was asked a series of questions unrelated to bus services. These findings can help analyze the profile of the respondent and put the overall results in better context. The information requested included home and work locations (only the zip codes to protect privacy), race, ethnicity, age, vehicle access, gender, and income. Building a profile of the survey respondent can also help better understand the needs of the area.

To understand more about where the needs of respondents may be specifically located, they were asked to provide their home and work zip codes, as applicable. Figure 4-15 shows the geographic distribution of respondent home zip codes while Figure 4-16 shows the work zip codes. Approximately 345 respondents provided their home zip codes, but only 129 provided a work zip code as some responded that they were retired.

Figure 4-15: Responses by Home Zip Code

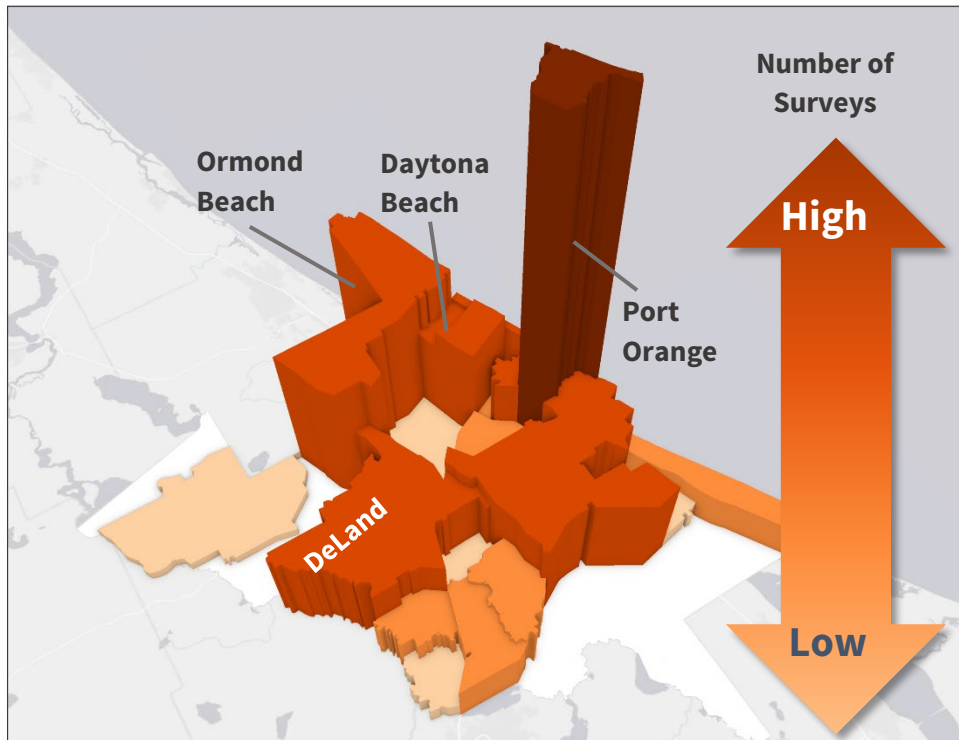
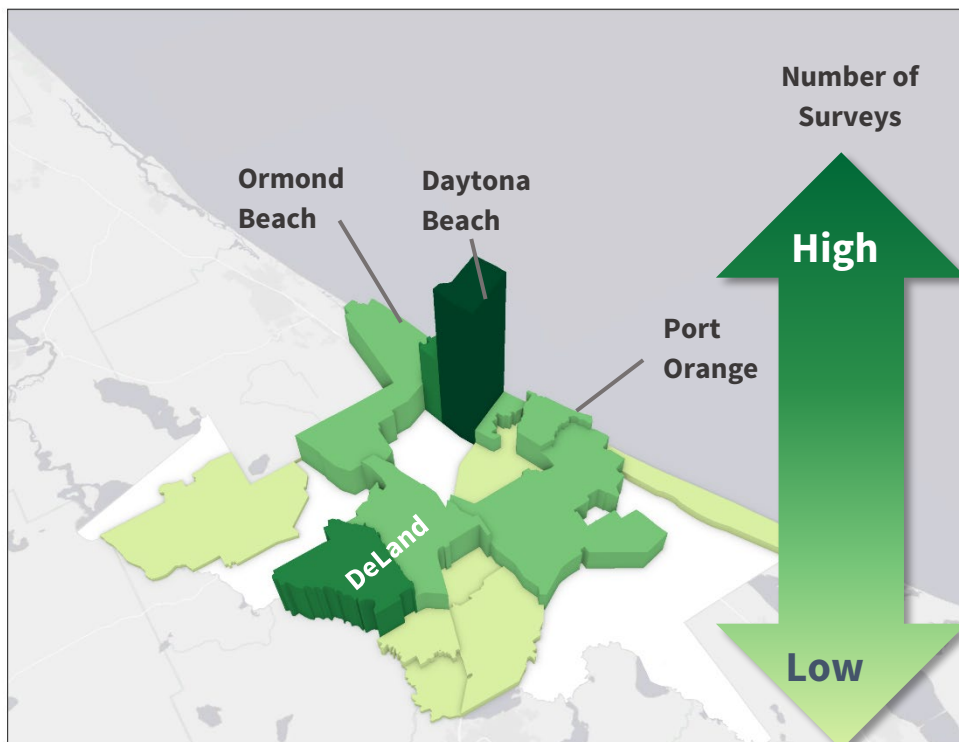
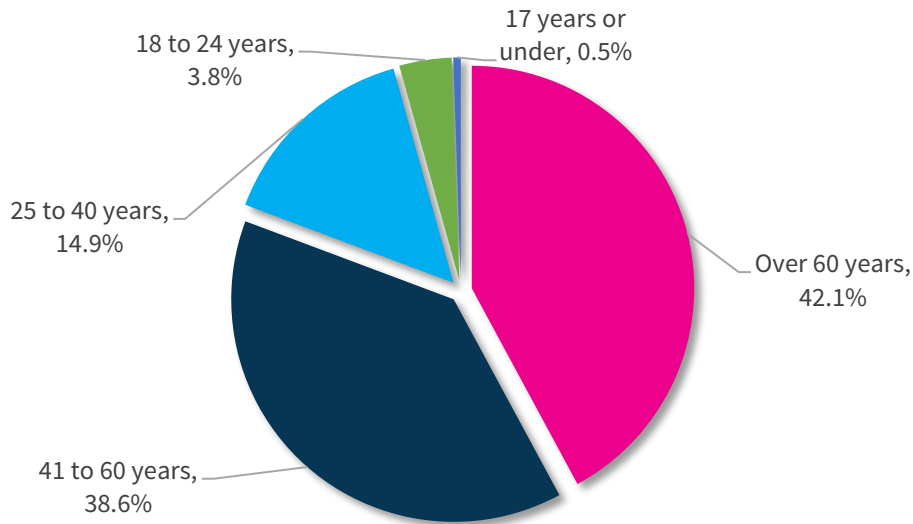


Figure 4-16: Responses by Work Zip Code



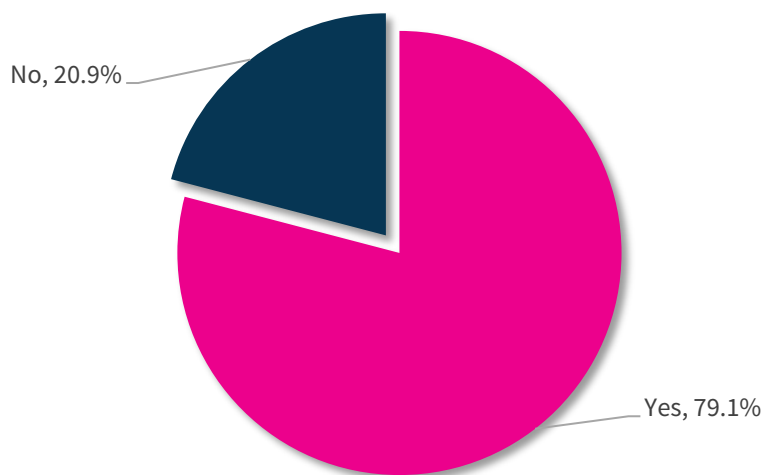
When asked about their age, just under half of respondents (42.1%) indicated that they are in the age range of 60 years and older, approximately 38.6 percent said they are between 41-60 years old, 14.9 percent indicated they are in the 25 to 40 years range, 3.8 percent fall into the 18-24 bracket, and less than one percent selected 17 years or under (Figure 4-17).

Figure 4-17: Age



Additionally, respondents were asked about access to a personal vehicle. Access to a personal vehicle can affect the propensity of the respondent to use transit services. When analyzed with other responses, this also can identify the attitudes on transit from respondents who own personal vehicles. Figure 4-18 shows that the majority of respondents, 79.1 percent, indicated that they have access to a vehicle, while 20.9 percent responded that they did not.

Figure 4-18: Vehicle Access



Survey respondents were asked about their race and ethnicity, as shown below. Figure 4-19 shows that approximately 86.4 percent of respondents identified as White. The remaining respondents indicated that they are either Black (6.3%), Other (5.7%), Asian (1.1%), or American Indian/Alaska Native (0.6%). The majority, 92.0 percent, of respondents identified as Non-Hispanic and 8.0 percent identified as Hispanic/Latino as shown in Figure 4-20.

Figure 4-19: Race

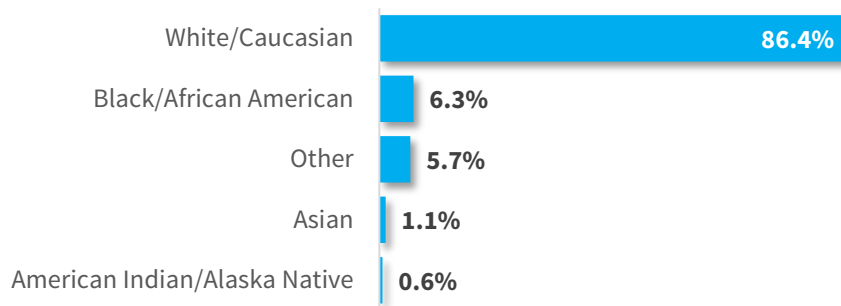
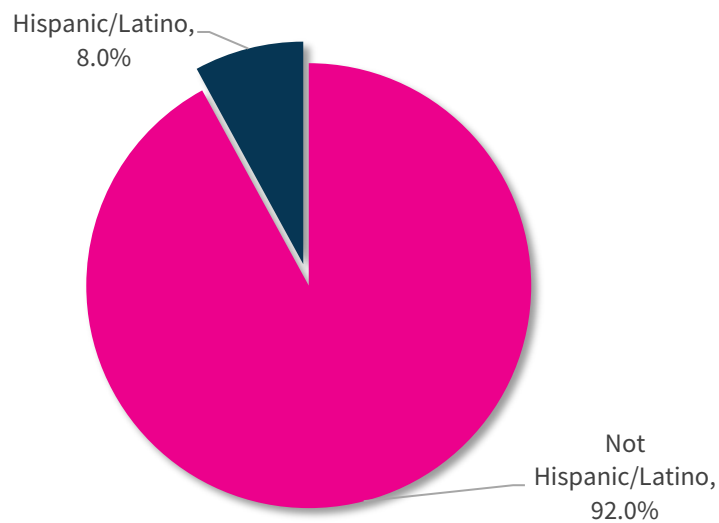
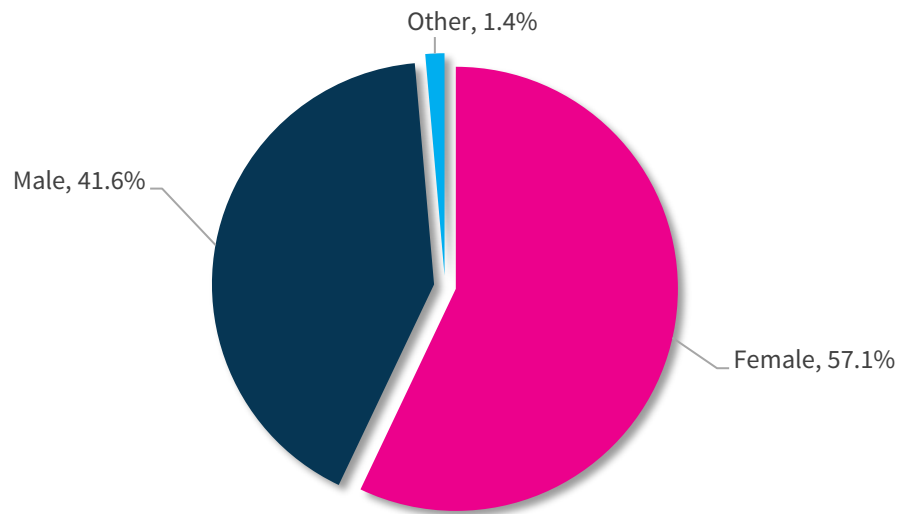


Figure 4-20: Ethnic Origin



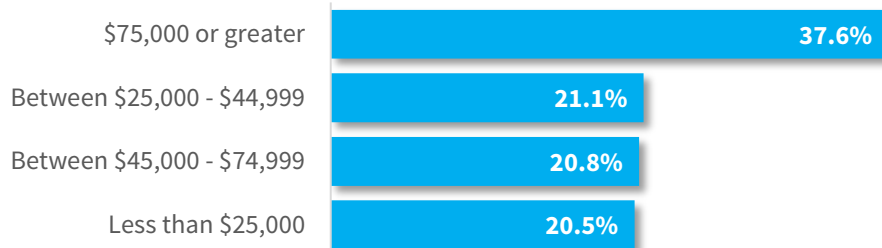
Additionally, respondents were asked to identify their gender as male, female, or other. The majority indicated that they identify as female (57.1%). The remaining identify as male (41.6%) or Other (1.4%), as shown in Figure 4-21.

Figure 4-21: Gender



As shown below in Figure 4-22, approximately 37.6 percent of survey respondents indicated their annual household income level as \$75,000 or greater. Other responses include \$25,000 to \$44,999 (21.1%), \$45,000 to \$74,999 (20.8%), and 20.5 percent indicated under \$25,000.

Figure 4-22: Income



Bus Rider Survey

This section summarizes the bus rider survey that was planned and conducted as part of the TDP public involvement process. It is presented in the following manner. First, a description of the survey sampling approach is provided, along with the survey instrument used, methodology/ procedures, and survey administration. Then the section provides details on survey weighting and expansion procedures, followed by a summary of the key results from the Votran 2021 bus rider survey. Where applicable, findings from Votran’s 2016 rider survey are also shown for comparison purposes.

Survey Sampling Plan

A sampling plan was developed prior to the data collection for the most appropriate sample distribution. The proposed sampling plan was based on three main factors, including the following.

- First, the plan ensured that the sample adequately met data needs at the regional level.
- Second, the plan ensured the collection of adequate samples at various times of day. Times of day (TOD) are defined as AM Peak, Midday, PM Peak, and Evening time periods.
- Third, the plan ensured the collection of adequate samples by day-of-week (DOW), which include weekday, Saturday, and Sunday.

The population ridership figures were gathered from periods meant to best approximate the expected ridership to be encountered during the field data collection. The survey team collected a 11.5 percent sample proportional to population ridership for weekday collection, a 3.5 percent sample for Saturday collection, and a 6 percent sample for Sunday collection. Ridership figures from October 2020 were used to create the sampling plan.

Interviewers were present to assist participants in completing the survey. To ensure representative results, half of the trained staff spoke Spanish, but all surveys were entered using the English survey. Approximately 1.5 percent of riders indicated that they could speak English less than “very well.” Overall, a total of 1,322 usable surveys were completed. Table 4-3 shows the surveys completed by day of the week.

Table 4-3: Bus Rider Survey Totals

Weekday	Saturday	Sunday	Total
985	253	84	1,322

Survey Instrument

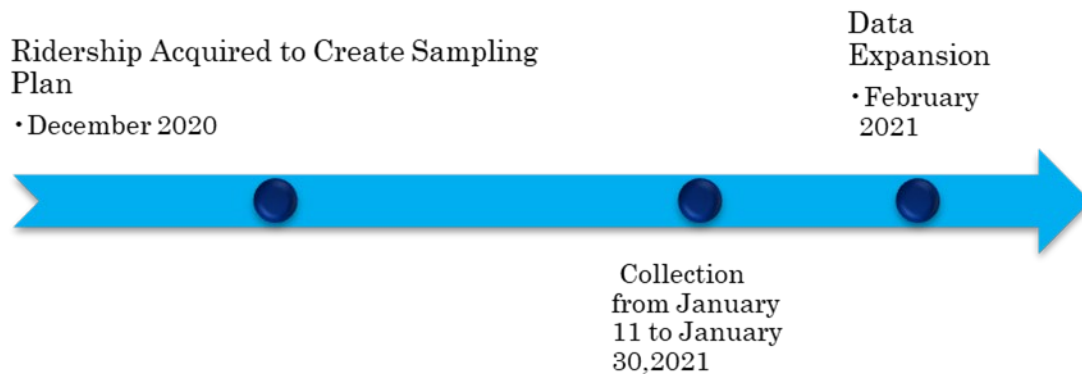
The survey instrument was designed based on the previous 2016 Votran rider survey, with input from Votran staff and the PRC, to obtain information in four major categories: origin-destination (OD) travel patterns, usage information, rider demographics, and rider satisfaction. Once the survey questionnaire was finalized, the project team designed a tablet-based personal interview survey as the primary survey medium. The survey instrument used for the data collection is included in Appendix E. Using this instrument, the tablet-based survey was made available in both English and Spanish languages.

Survey Administration

Data collection began with limited testing on Monday, January 11, 2021, and began fully on Tuesday, January 12, 2021. Data collection concluded January 30, 2021 (Figure 4-23).



Figure 4-23: Survey Process Timeline



Survey Administration Methodology

The collection was conducted with tablets in an intercept interview format with riders. The tablet program has on-screen mapping features that allow for real-time geocoding of addresses and places based off either address, intersection, or place searches using feedback from riders.

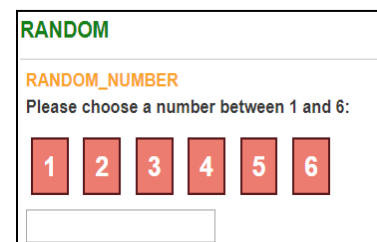
The riders could then confirm the geocoded location based on the on-screen map that displayed the searched address/location via a Google Map indicator icon. In addition to using the mapping feature to collect the global positioning system coordinates of major survey locations (home address, origin address, destination address, boarding location, and alighting location), the tablet also allowed the interviewer to walk through each question with the rider. This allowed the interviewer to answer any questions as well as to ensure the accuracy of the data collected. The rider could also select the answers to the questions directly on the tablet during the demographic section to allow for more privacy.

Survey Procedures and Selection of Participants

For survey administration, a random number generator (shown in Figure 4-24) was used to determine which riders were asked to participate in the survey after boarding a bus with active surveying bus.

If six people boarded a bus, the tablet randomly generated a number from 1 to 6. If the answer was 2, the second person who boarded the bus was asked to participate in the survey. If the answer was 1, the first person was asked to participate in the survey, and so forth. The selection was limited to the first six people who boarded a bus at any given stop to ensure the interviewer could keep track of the riders as they boarded. If the interview was refused by the randomly selected rider, then the rider who boarded before the rider selected would be attempted (after, if 1 was elected).

Figure 4-24: - Random Number Generator



OD Survey Procedure

All Votran routes were surveyed using the tablet method. Interviewers selected people for the survey in accordance with the sampling procedures. Once an interviewer had employed random sampling protocol to identify the rider to be surveyed, the interviewer:

- Approached the rider who was identified and asked him or her to participate in the survey.
- If the person refused, the interviewer ended the survey, excused themselves, and approached the next boarding rider after the first selected rider.
- If the person agreed to participate, the interviewer asked the rider whether he/she had at least 5 minutes to complete the survey and what their preferred language was, if applicable.

If the person did not have at least 5 minutes on the bus, the interviewer asked the person to provide his/her name and phone number for a later call back if they alighted prior to completing the survey. For riders providing a phone number, a phone interviewer from a designated call center contacted the rider and asked him/her to provide the information by phone. This methodology ensured that people who completed short trips on public transit were well represented. Most records were able to be completed on-board with only a minimal number of records completed by phone. If the person had at least 5 minutes on the bus, the interviewer began administering the survey to the rider as a face-to-face interview using a tablet.

COVID Safety Procedures

All surveyors wore masks throughout their survey day both at the transit centers and while on board the bus. Additionally, they washed their hands and used sanitizer throughout their shift. If any staff did not feel well, they would have been removed from the collection, but thankfully this did not occur.

In-Field Quality Assurance / Quality Control

The tablets used to collect the survey data contained an on-screen mapping feature that allowed for real-time geocoding of locations using address, intersection, or place name searches provided by riders. The riders then confirmed the geocoded location based on the on-screen map that showed the searched address/location via a Google Map indicator icon.

In-Field Quality Checks

The number of records completed by route, time period, and direction were reviewed daily, which supported the effective management of established sampling goals. This allowed the survey team to be provided immediate feedback over the course of the collection.

Survey Weighting and Expansion

Votran surveys were expanded by route and time-of-day. The following summary describes the methodology that was used to develop the unlinked expansion factors. An unlinked expansion factor is based on unlinked passenger trips, which counts each boarding as a separate trip regardless of transfers.

Data Expansion Overview

When survey quantity goals are created, they are typically based upon a percentage of the average weekday ridership for the routes in the system and desired confidence levels. These are further broken down by direction and time periods (route only for weekend ridership). The time periods that are created (e.g., 4 p.m. to 7 p.m.) are based on the specific needs of the Votran system. The purpose of developing survey quantity goals is to collect records proportional to the population ridership.

After the collection, these records were then expanded to represent the total average ridership. For weekday records, the records were expanded at the route, direction, and time-of-day level based on ridership provided by Votran. The directional component of the route was based on the boarding position of the rider. Routes that contained heavy ridership through the route’s terminus were converted to a “Loop” type route and the directional component was removed. These routes (18 Intl Speedway & 19 Granada) were expanded to the route and time-of-day level.

The weekend records were expanded at the route-only level based on the ridership provided by Votran. The ridership described previously was based on October 2020 ridership data.

Weekday Expansion Weight = Average Daily Ridership / Valid Surveys (By Route, Direction & Time of Day)

Weekend (Saturday and Sunday) Expansion Weight = Average Daily Ridership / Valid Surveys (By Route)

Linked Trip Expansion Factors for All Records

The linked-trip expansion factor helps to account for the number of transfers that were made by each passenger, so the linked expansion factors should better represent the overall system. Linked expansion factors are generated after the unlinked expansion factors are created. The equation that is used to calculate the linked trip multiplying factor is shown below:

$$\text{Linked Trip Multiplying Factor} = [1 / (1 + \# \text{ of system transfers})]$$

If a passenger did not make a system transfer the linked trip multiplying factor would be 1.0 because the person would have boarded only one vehicle. If a person made two system transfers, the linked trip expansion factor would be 0.33 because the person would have boarded three transit vehicles during his/her one-way trip. An example of how the linked trip expansion factors were calculated is provided in Figure 4-25.

Figure 4-25: Sample Calculations of Linked Trip Multiplying Factors

Number of Transfers	Calculation [1/(1+Number of Transfers)]	Linked Trip Multiplying Factor
0	[1/(1+0)]	1
1	[1/(1+1)]	0.5
2	[1/(1+2)]	0.33
3	[1/(1+3)]	0.25

Once the linked trip multiplier is created, it is multiplied by the unlinked expansion factor to create the linked expansion factor.

Survey Findings Summary

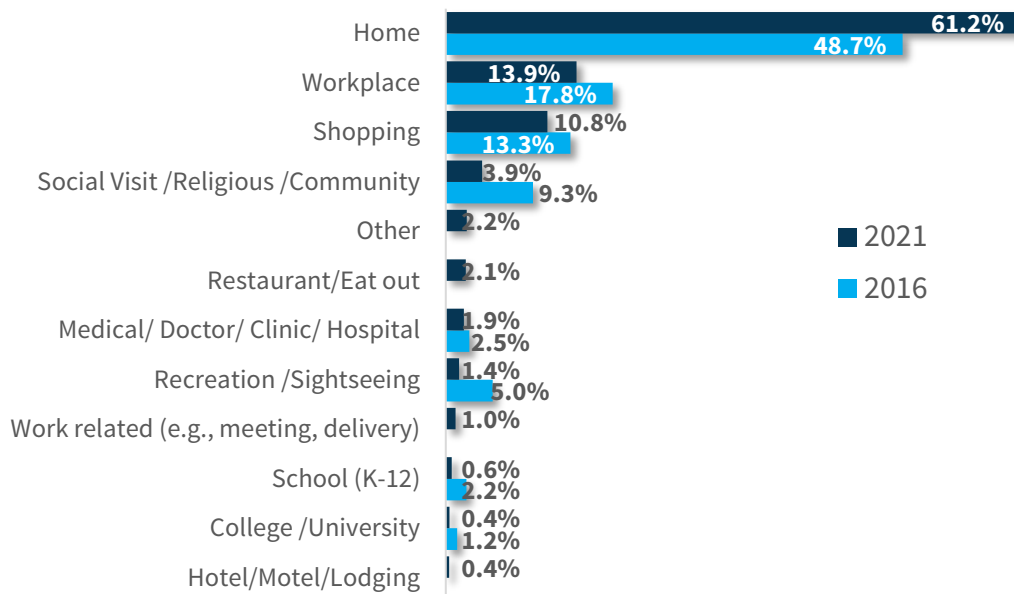
The fully weighted and expanded Votran survey data were used to create the following analyses, which includes trip analysis, demographic analysis, and satisfaction analysis. The results below group weekday, Saturday, and Sunday weighted surveys. Results are also compared to the 2016 survey results if applicable (if questions and responses are the same as the 2016 survey in comparison to the 2021 survey).

The key findings of Votran’s 2021 bus rider survey are summarized below.

Bus Rider Survey Summary

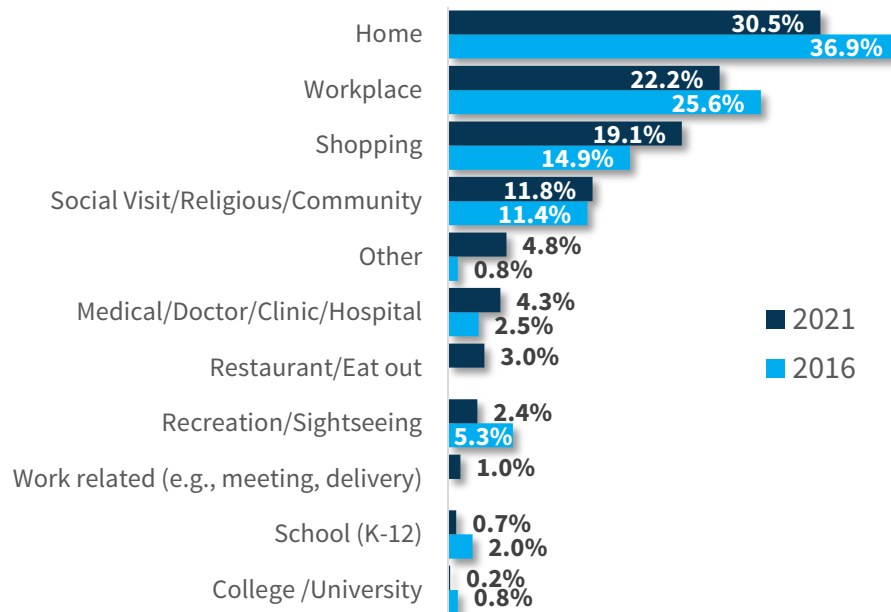
Riders were asked what type of place they were coming from (their trip origin). The top two starting points for riders are home and work for both the 2016 and the 2021 surveys. Home increased 12.5 percent from five years ago, which is the largest response difference. Trip origin locations are shown in Figure 4-26 below.

Figure 4-26: Trip Origin (2016 & 2021)



Riders were asked what type of place they were going to (their trip destination) and what mode they used to get to their final destination from their final bus stop. The top two destination types for riders are home and work for both the 2016 and the 2021 surveys with very small differences between the two surveys. Home destinations decreased by three percent and work decreased by five percent from 2021 to 2016. Figure 4-27 shows riders’ trip destinations.

Figure 4-27: Trip Destination (2016 & 2021)



Overall, over half (55%) of riders make at least one transfer during their one-way trip. Figure 4-28, below, displays the number of total transfers made by riders. Percentages are from the 2021 survey only.

Figure 4-28: Total Transfers Used (2021)

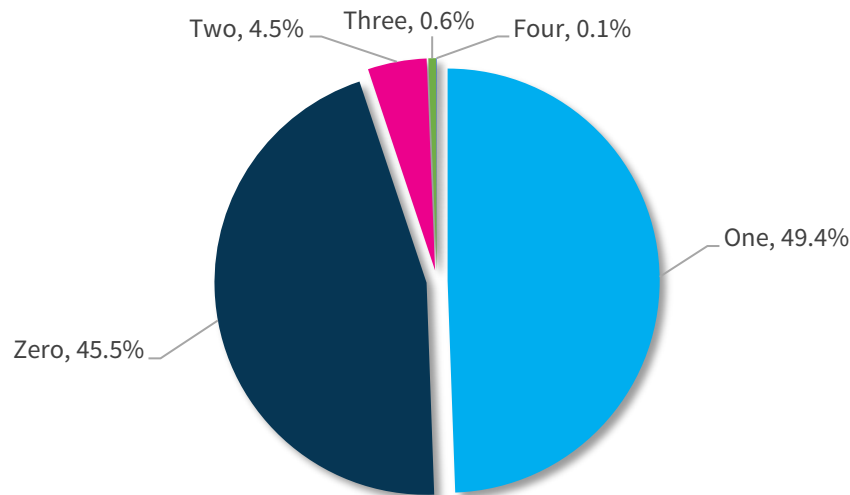
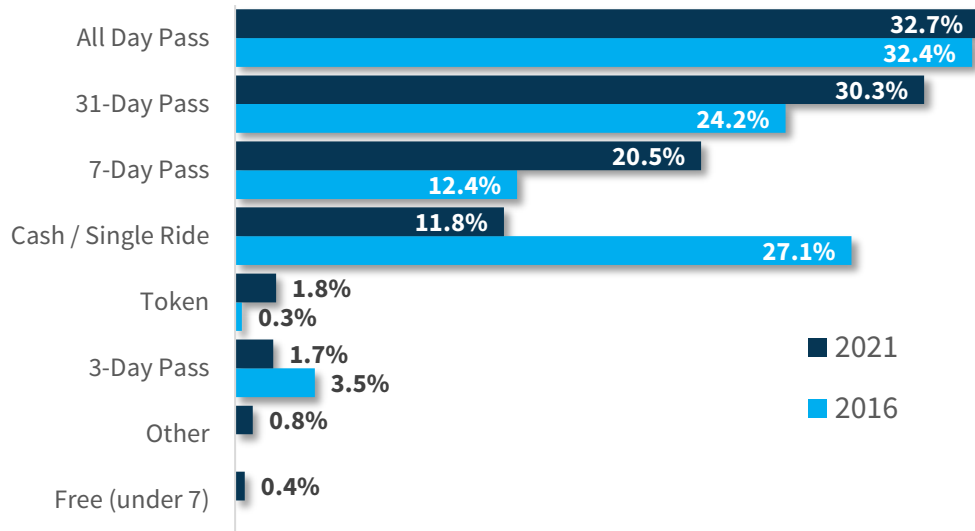


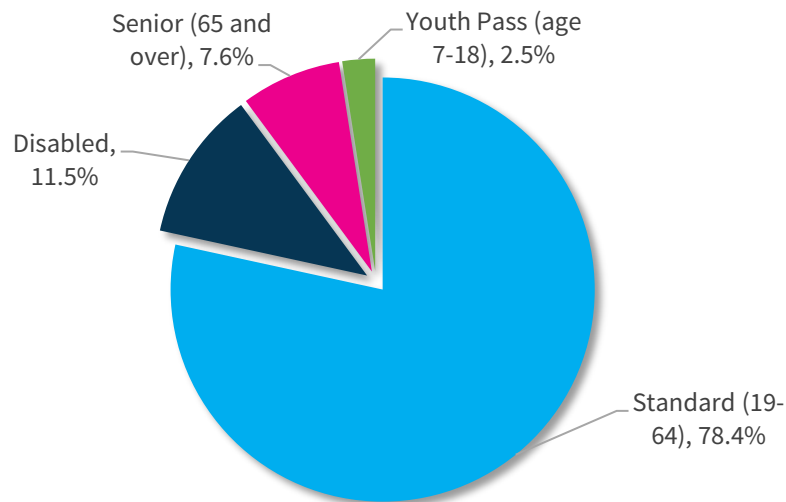
Figure 4-29 shows the fare method that riders used to pay for their trip. The 2016 survey recorded adult fare and discount fare, which were asked as a separate question (Fare Type) in 2021, but both are shown in the figure below. Thirty-two percent of riders use an all-day pass for their fare method both in 2016 (32.4%) and 2021 (32.7%). Nearly one-third (30.3%) of riders use a 31-day pass to ride, which is an increase of six percent from five years ago.

Figure 4-29: Method of Fare Payment (2016 & 2021)



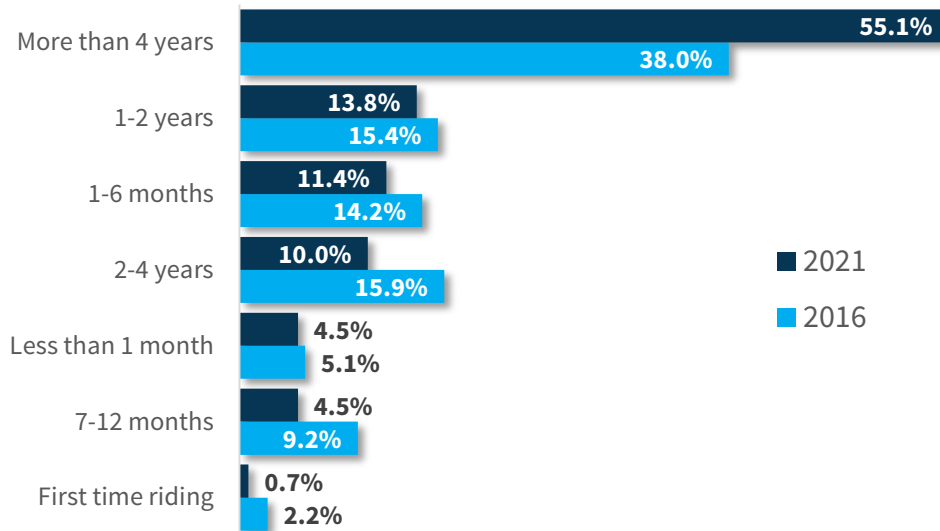
Riders were asked whether they paid a regular or discounted fare. Over three-quarters (78%) of riders paid the standard fare with no discounts. Figure 4-30, below, shows the fare types (regular or discount) that riders use. Percentages are from the 2021 survey only.

Figure 4-30: Fare Type (2021)



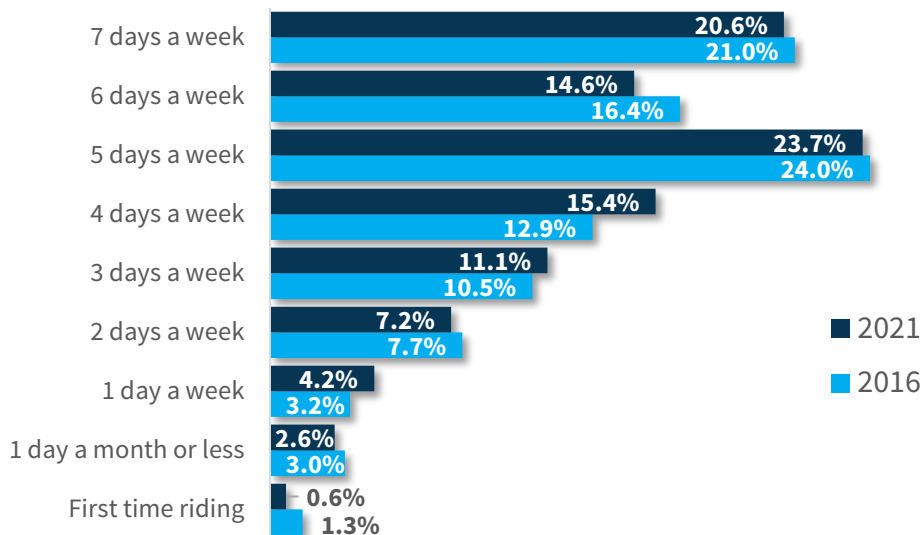
Riders were asked how long they have been using Votran. Over half (55.1%) of riders have been using Votran for over four years. This is an increase of 17 percent from the survey conducted in 2016. Figure 4-31 shows the length of use by Votran riders.

Figure 4-31: Length of Use (2016 & 2021)



Riders were asked how often they ride Votran. Fifty-nine percent of riders use Votran at least five days a week, which is a two percent decrease from 2016 (61%). Figure 4-32 below shows riders frequency of use.

Figure 4-32: Frequency of Use (2016 & 2021)



Riders were asked how they would make their trip that they were taking if Votran were not available. The top response both in 2016 (23.9%) and 2021 (29.2%) was that riders would not be able to make the trip. Figure 4-33, below, shows the alternative travel mode if Votran was unavailable.

Figure 4-33: Alternative Travel Mode (2016 & 2021)

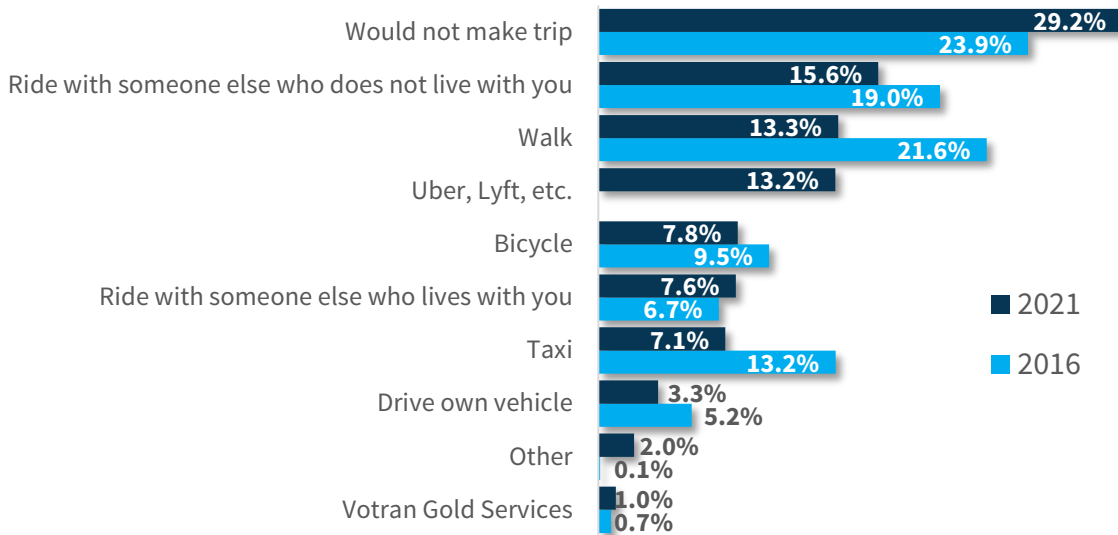
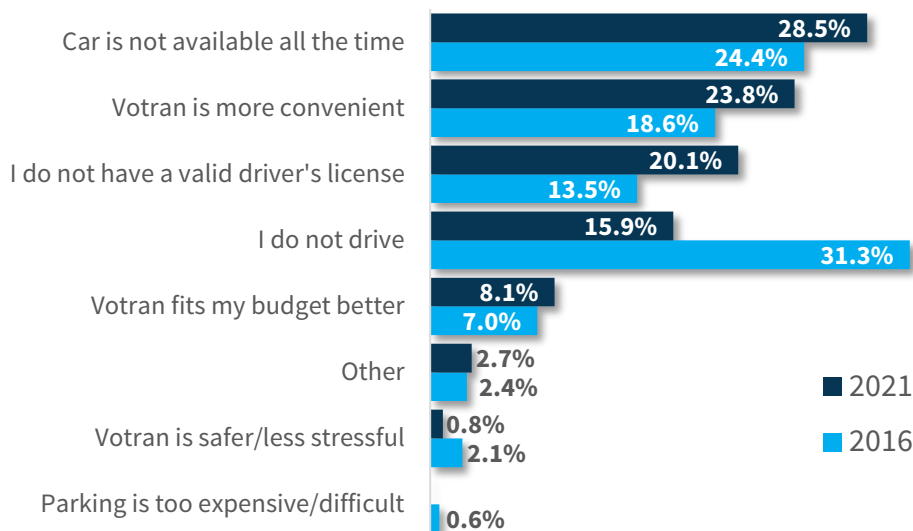


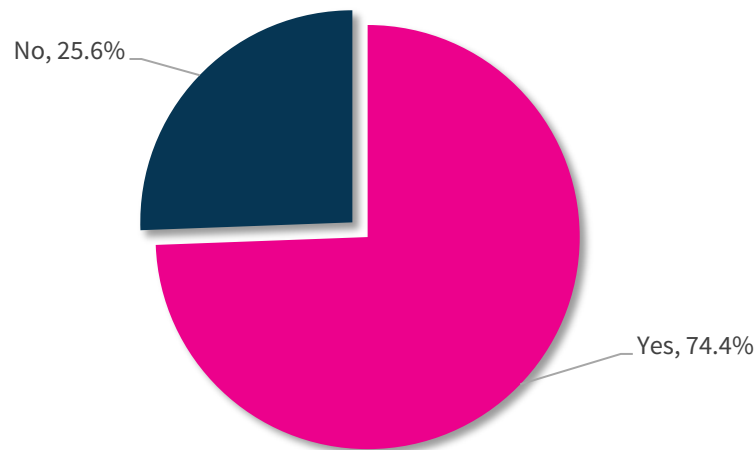
Figure 4-34 shows the reasons why riders use Votran. The key reasons that riders use Votran is auto access with 1) a car is not available all the time with 29 percent in 2021 and 24 percent in 2016, 2) riders do not drive with 16 percent in 2021 and 31 percent in 2016, and 3) riders do not have a valid driver’s license with 20 percent in 2021 and 14 percent in 2016.

Figure 4-34: Reason to Ride (2016 & 2021)



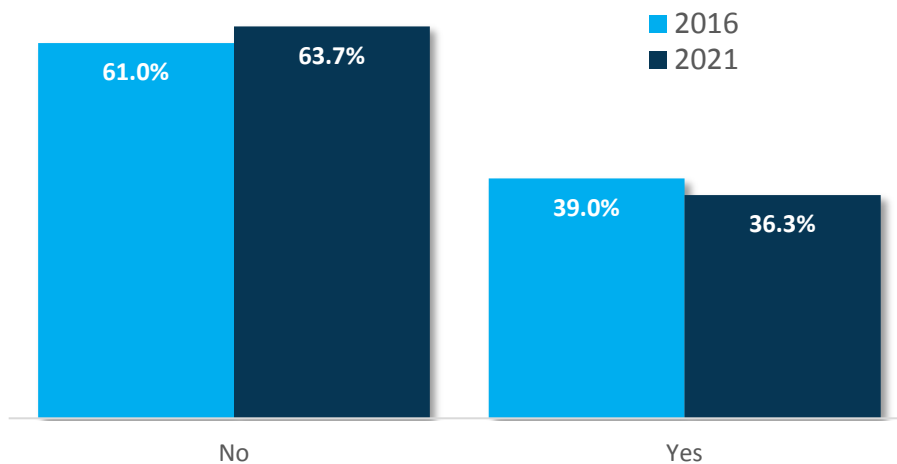
Nearly three-quarters (74.4%) of riders have a smartphone with data plan. Figure 4-35 below shows the number of riders that have smartphones. Percentages are from the 2021 survey only.

Figure 4-35: Smartphone with Data Plan (2021)



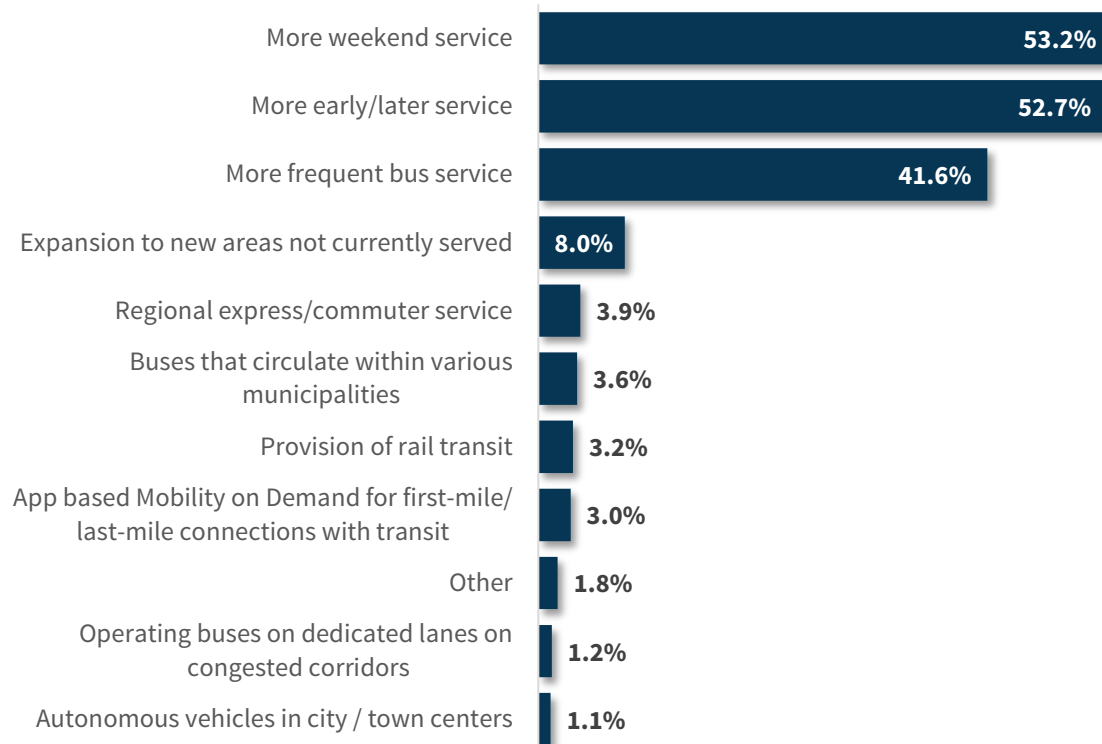
Sixty-four percent (63.7%) of riders do not have a valid drivers’ license. The 2016 survey only shows a three percent difference with 61 percent of riders not having a valid driver’s license. Figure 4-36 shows the comparisons for driver’s license status from the 2016 and 2021 surveys.

Figure 4-36: Driver’s License Status (2016 & 2021)



Riders were asked to select up to three service improvements that they feel would be useful for their purposes. Over half (53.2%) of riders would like more weekend services and (52.7%) service to run earlier and end later. Figure 4-37 displays what service improvements riders would like to see. Percentages are from the 2021 survey only.

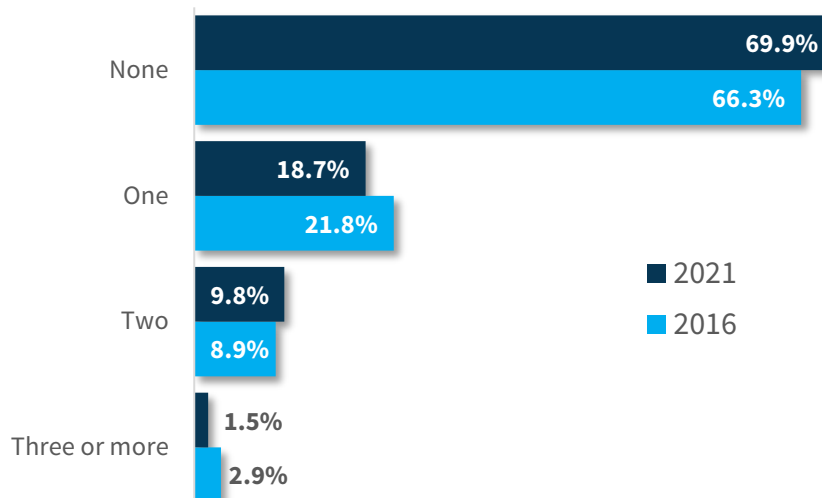
Figure 4-37: Most Desired Service Improvements (2021)



Note** Percentages total greater than 100% due to riders being able to select up to three choices.

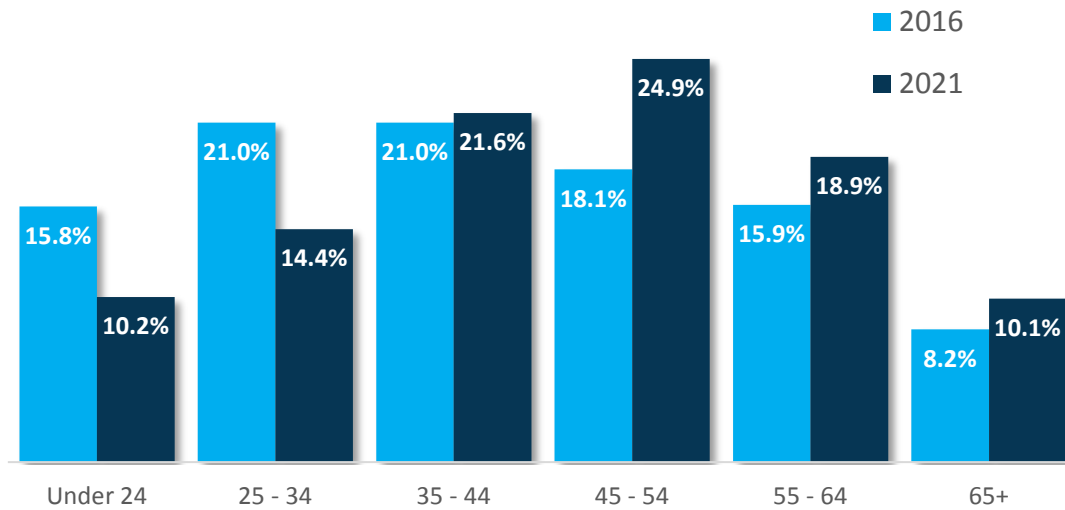
The majority of Votran users (66.3% in 2016 and 69.9% in 2021) do not have any working vehicles at their home. Eleven percent of riders both in 2016 and 2021 have two or more household vehicles. Figure 4-38, below, shows riders' household vehicle availability.

Figure 4-38: Household Vehicles (2016 & 2021)



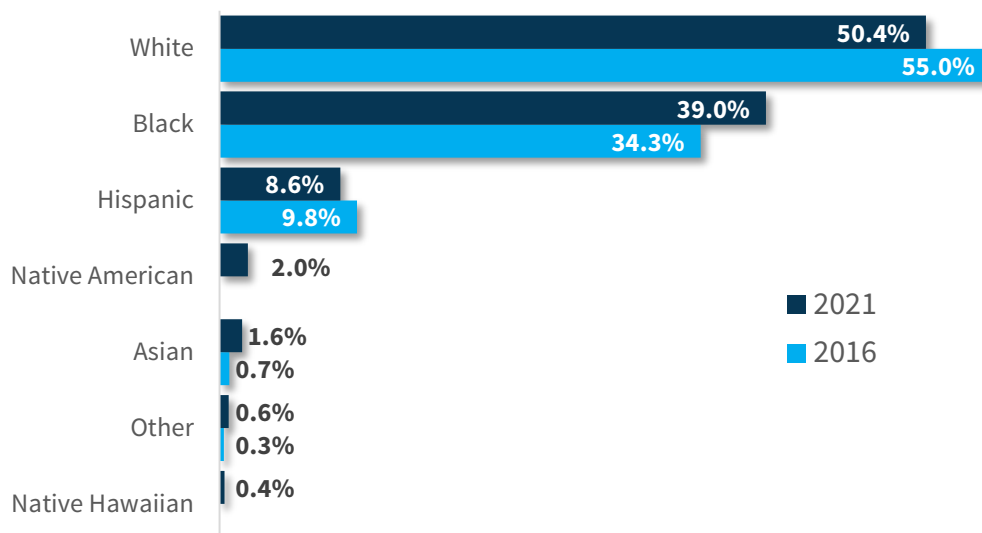
Almost one-quarter (24.9%) of riders are between the ages of 45 – 54, which is an increase of seven percent from five years ago. In 2016, there were seven percent more riders between the ages of 25 – 34. Figure 4-39 below shows the age ranges of Votran riders.

Figure 4-39: Age (2016 & 2021)



Over half (50.4%) of riders identify themselves as White/Caucasian, which is a five percent decrease from 2016. Thirty-nine percent of riders are Black/African American which is five percent increase from 2016. Figure 4-40, below, shows riders’ race.

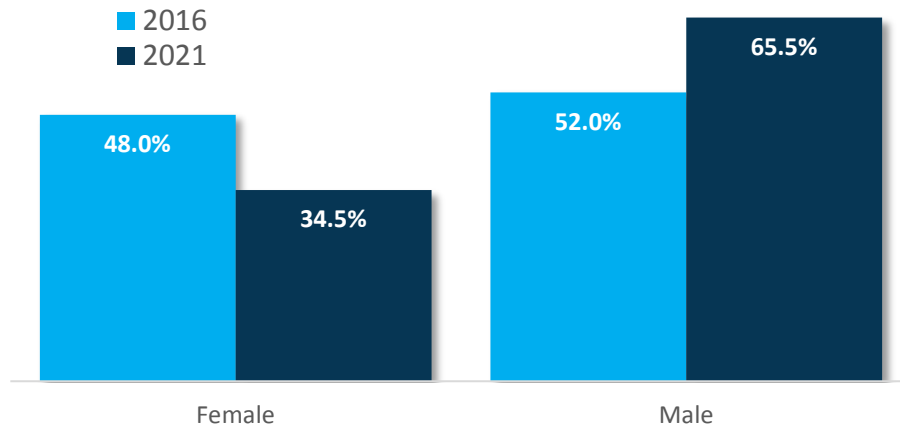
Figure 4-40: Race / Ethnicity (2016 & 2021)



Note** Percentages total greater than 100% due to multiple choice

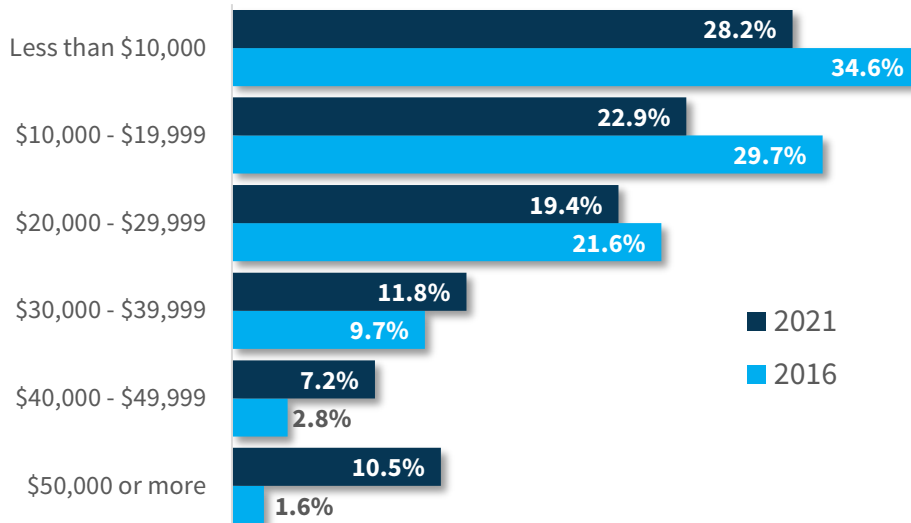
Nearly two-thirds (65.5%) of riders are male, which is an increase of 13 percent from the 2016 survey. Figure 4-41 shows and compares rider populations by gender.

Figure 4-41: Gender (2016 & 2021)



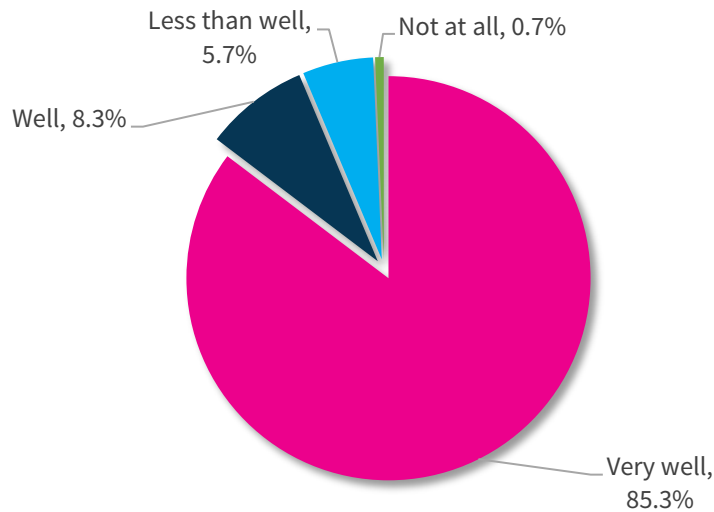
Over half (51%) of riders' household income is less than \$20,000 in comparison to 64.3% in 2016. Nine percent more riders have household incomes higher than \$50,000 compared to 2016. Figure 4-42, below, shows riders' annual household incomes.

Figure 4-42: Income (2016 & 2021)



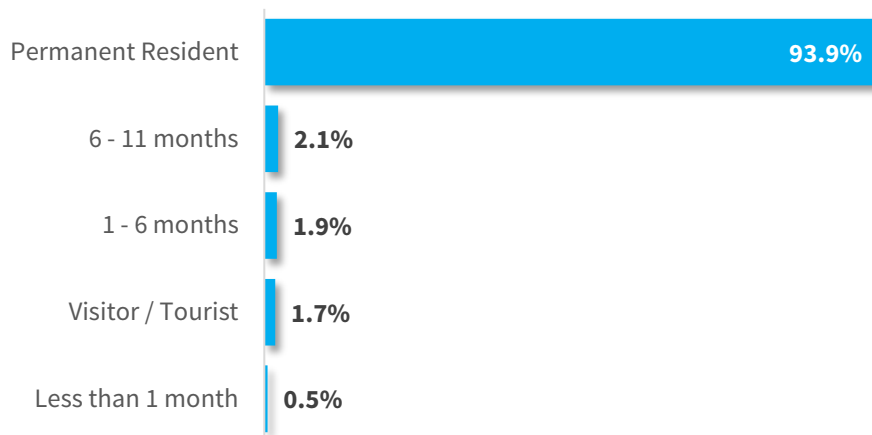
Out of those riders that speak another language at home, the majority (85.3%) speak English very well and less than one percent (0.7%) of those riders are not able to speak English at all. Figure 4-43 shows English proficiency percentages based on riders who spoke other languages at home. Percentages are from the 2021 survey only.

Figure 4-43: English Proficiency (2021)



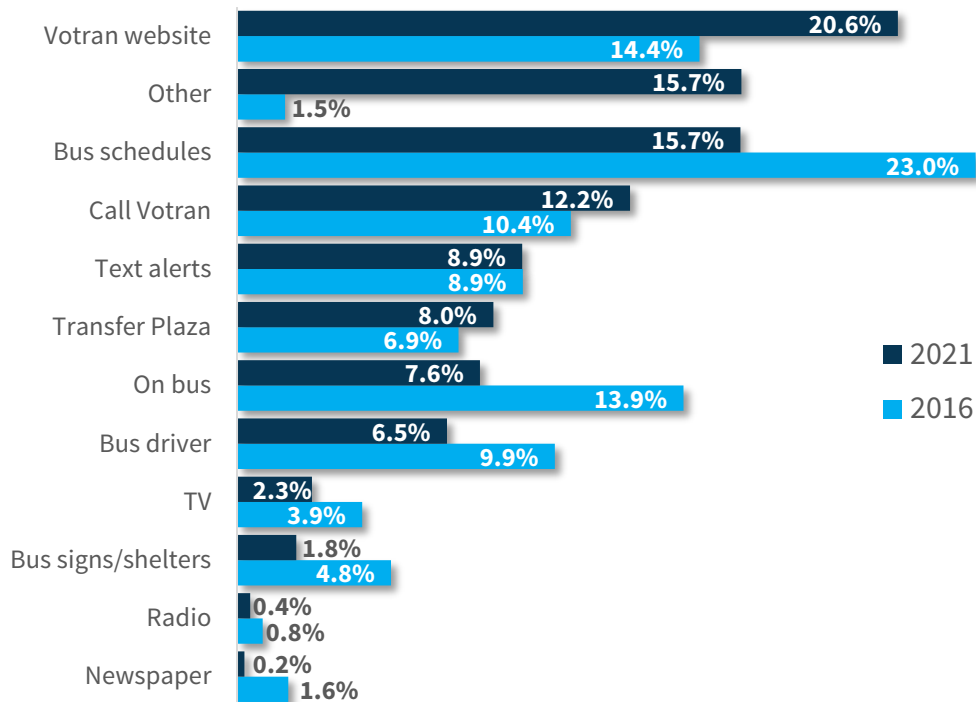
Nearly all (93.9%) riders are permanent residents in the Volusia county region. Nine percent of riders have lived in the region less than one year (Figure 4-44). Percentages are from the 2021 survey only.

Figure 4-44: Residency



Riders were asked how they prefer to receive information about Votran services, schedules, and changes. The top three methods in 2021 are using the Votran website (20.6%), Bus schedules (15.7%), and other means (15.7%). In 2016, the top three sources for receiving information were Bus schedules (23%), using the Votran website (14.4%), and on the bus (13.9%). Figure 4-45 shows the methods of how riders prefer to receive information.

Figure 4-45: Method of Getting Votran Information (2016 & 2021)

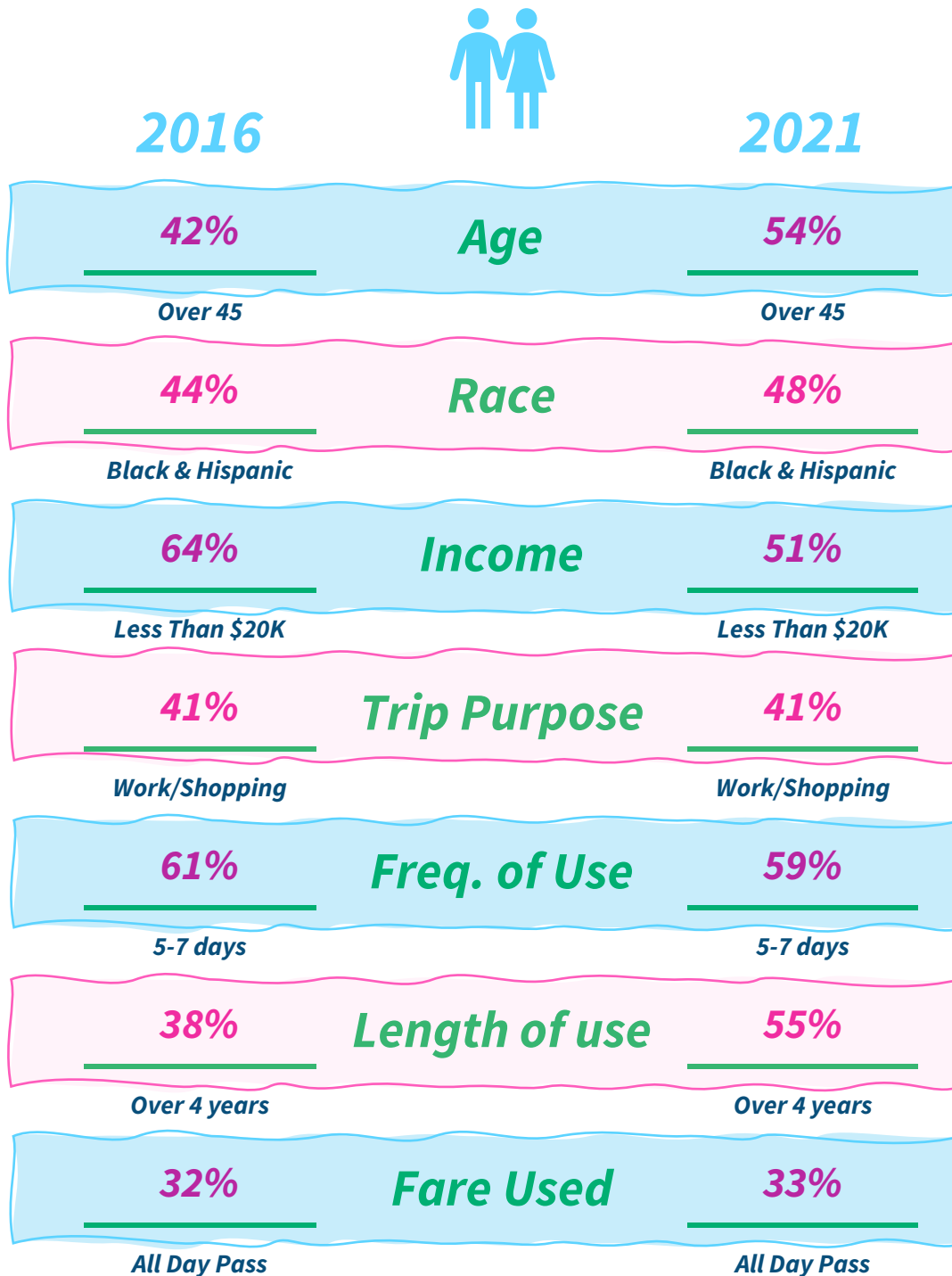


On-Board Survey General Conclusions

Conclusions drawn from the on-board survey analysis are summarized below.

- The profile of a typical rider in 2016 and 2021 is shown in Figure 4-46. As shown, most riders are over the age of 45, which has increased since 2016. The proportion of minorities riding Votran also has increased, with 48 percent of the ridership in 2021 being either black or Hispanic. While the percentage of low-income riders decreased overtime, a majority of riders still make less than \$20,000 annually. Over 40 percent of the riders use Votran to go to work or shopping, which has stayed steady since 2016. In both 2016 and 2021, a majority of riders utilized Votran at least five days a week and reported that they would not make their trip if Votran were not available. Furthermore, the number of first-time riders has decreased and the number of riders that have used Votran for more than four years has increased from 2016 to 2021, suggesting that Votran continues to have a dedicated rider base.
- Riders mainly walk to and from their first and last bus stops when traveling. Ninety-four percent of riders walk to their first bus stop and from their last bus stop, which is an increase of nine percent for access mode and a five percent increase for egress mode in comparison to 2016.
- More than half of Votran riders make at least one transfer during their one-way trip.
- Over 75 percent of Votran riders have a smart phone with a data plan meaning that they can access the internet on their phones and therefore Votran’s bus app.

Figure 4-46: Typical Votran Rider Profile (2016 & 2021)



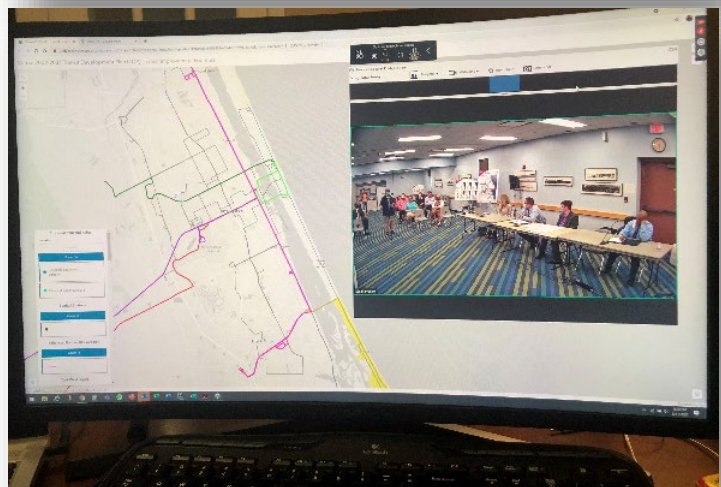
- At this time, 70 percent of riders do not have a vehicle available for use at their household and out of those riders that have one or more vehicles at their household, 65 percent could not have used one of those vehicles on their current trip. In 2016, 66 percent of riders did not have a vehicle available at their household and out of the riders that had a household vehicle, 77

percent did not have access to the vehicle. A lack of access to a working vehicle or valid driver's license are the key reasons why many riders use Votran.

- Overall, most Votran riders responded that they are “Very Satisfied” with various aspects of the transit service being provided.

Phase II Public Workshops

Two Phase II TDP public workshops were held and conducted in the traditional in-person format. However, since the COVID-19 pandemic was still ongoing, both workshops were also made available for anyone wanting to participate virtually. The two workshops were conducted in May 2021. A pre-recorded video presentation, including results of the Phase I public involvement and proposed short- and mid-term transit needs, was shown to those participating in-person and virtually. To ensure that virtual participants received an equitable experience, the project team used the same Go-To-Webinar format from the first phase of public workshops, which allows up to 500 participants and options to join via internet or using a telephone. The ability to ask questions and/or provide comments in an open forum discussion was available to both online and in-person participants. After the presentation was shown, in-person and virtual participants engaged in asking questions and/or sharing their comments with the project team and Votran staff. During the in-person public workshops, Votran staff and the project team were also available to guide the public through a number of display boards and a feedback station. The primary goal of these workshops was to present the transit operating and capital needs identified for the next 10-years and to obtain public input on them to help Votran set its priorities. Workshop materials used for these efforts are included in Appendix E.



Prior to the workshops, notices announcing them were distributed using websites, social media, and email. The PRC members, including FDOT, the regional workforce development agency, and the TPO, also were notified. In addition, the project team contacted over 75 stakeholders associated with the TDP preparation process to encourage them to attend the workshop and also disperse the information to their clients, customers, and constituents. Volusia County staff also used its Public Information Officers (PIOs) as well as PIOs from a number of municipalities to help spread the word.



Phase II Public Workshop #1



The first public workshop was held at the Daytona Beach Regional Library. It was conducted by Votran staff, County staff, and the TDP project team from 5:30–7:00 PM on May 17, 2021. The workshop was attended by 26 virtual and in-person participants who asked questions and provided input. The participants who attended in person also viewed the display boards and materials showing existing service information, short- and mid-term transit needs, and transit accessibility. Fact sheets and information about Votran services also were available. Surveys were also available in printed and tablet formats to safely allow the provision of feedback.

As this event was hosted in Daytona Beach, there was more focus and discussion on the needs of residents and visitors in the eastern portion of the County. The majority of attendees reported that they are Votran riders. A summary of the priorities expressed at this

workshop is as follows:

- After reviewing the 10-year needs, participants prioritized the East-West Rapid, the Downtown-Beach Connector, and the Daytona-Deltona Commuter Express as the top three Votran needs in East Volusia County.
- Additionally, the Volusia-LYNX Commuter Express and the North DeLand Circulator were indicated by participants as the top priorities in the western portion of the County for the next decade.

- Capital, technology, and other improvements included improving transit infrastructure (especially implementing more benches and shelters) and accessibility, adding the DeLand SunRail station, and implementing a transit marketing/awareness campaign.
- Overall, comments from the workshop indicated that most participants desired upgraded bus stop infrastructure and more emphasis on capital improvements.

Phase II Public Workshop #2

On May 20, 2021, the second Phase II public workshop was held at the Thomas C. Kelly Administration Building in DeLand from 5:30–7:00 PM. The workshop was attended by 12 virtual and in-person participants who interacted and provided valuable feedback.

Similar to the first public workshop, the display boards with project information were available, as were fact sheets, printed and tablet surveys, and information for those who were interested in learning more about Votran’s current services. Like the first workshop, the majority of participants identified themselves as current Votran riders.

Following the same format as the first workshop, after viewing the presentation and reviewing the workshop material, including display boards, the following feedback was received:

- MOD zones in South DeLand and throughout Deltona were ranked as the highest priority in West Volusia County. The Orange City Connector and Volusia-LYNX Commuter Express were also received favorably.
- All services in East Volusia County were considered agreeable to participants.
- Establishing new park-and-ride facilities, improving transit infrastructure and accessibility, and adding Transit Signal Priority (TSP)/Queue Jumps on US 92 were the top three capital, technology, and other needs selected by participants at the second workshop.
- Other comments made by participants that attended the workshop included remarks on the redesigned short-term network, security improvements on the buses, and excitement about the possible addition of electric buses.

Transit Priorities Survey

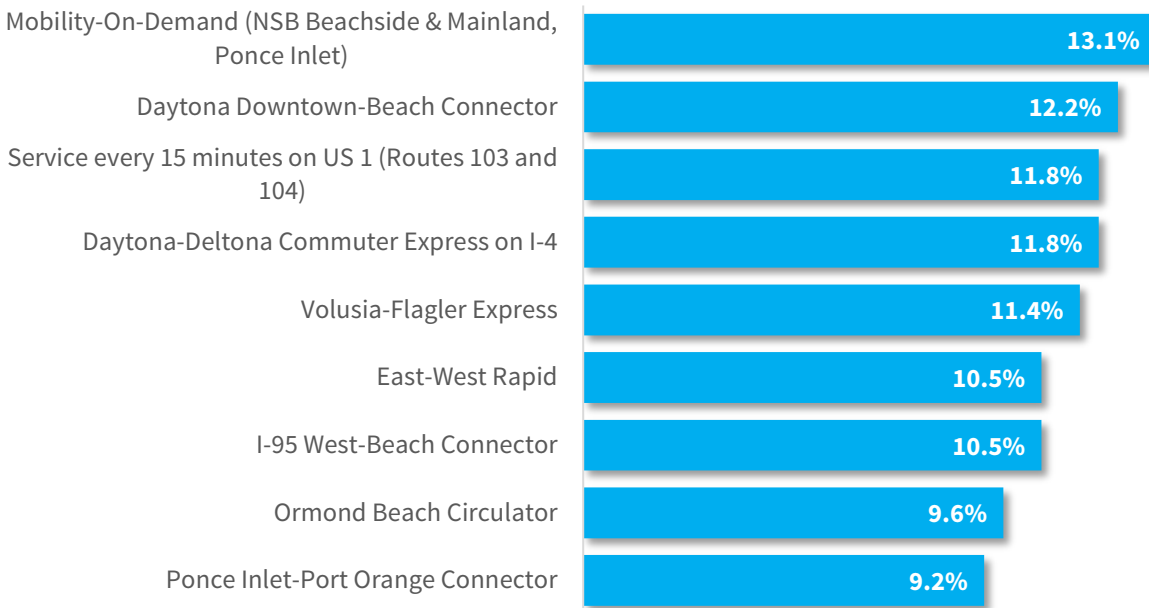
Beginning in May 2021, a second TDP survey was made available online to the general public to provide their input on the recommended transit priorities. The survey was promoted on virtual platforms such as the Votran and R2CTPO websites, emails to stakeholders, and on social media; it also was made available at all in-person public workshops. In total, 110 surveys were completed; a copy of the survey instrument is provided in Appendix E.

Several questions were asked on the survey to determine support for potential service alternatives and capital improvements. The survey was presented with an interactive map online and multiple display boards at the in-person workshops.

The first question asked survey participants to rank their support for the proposed service alternatives in East Volusia County. The top-rated service alternative was MOD zones in New Smyrna Beach and

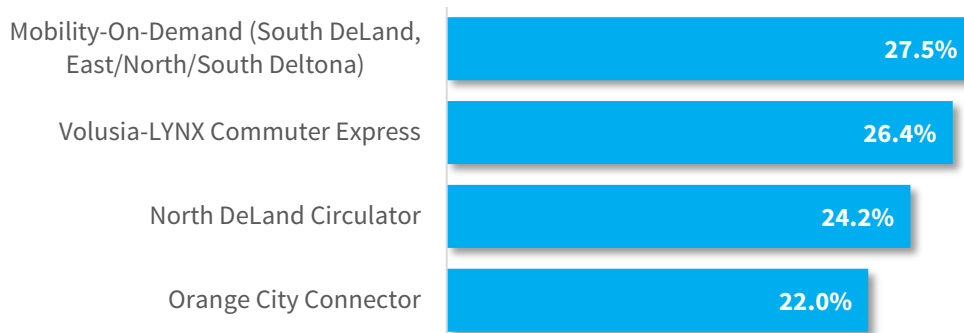
Ponce Inlet (13.1%), followed by a Daytona Downtown-Beach Connector (12.2%), and then service every 15-minutes on US 1 via Routes 103 and 104 (11.8%). All suggested service alternatives were received favorably, with “strongly agree” being the most frequently selected for each option proposed. Figure 4-47 shows all East Volusia service improvements ranked.

Figure 4-47: East Volusia Transit Service Priorities



The next question asked participants to rank service alternatives for West Volusia County. Similarly, MOD was ranked the highest among the options (27.5%), followed by the Volusia-LYNX Commuter Express (26.4%), North DeLand Circulator (24.2%), and the Orange City Connector (22.0%) (Figure 4-48). Like the East Volusia service alternatives, most participants often selected “strongly agree” when ranking the options.

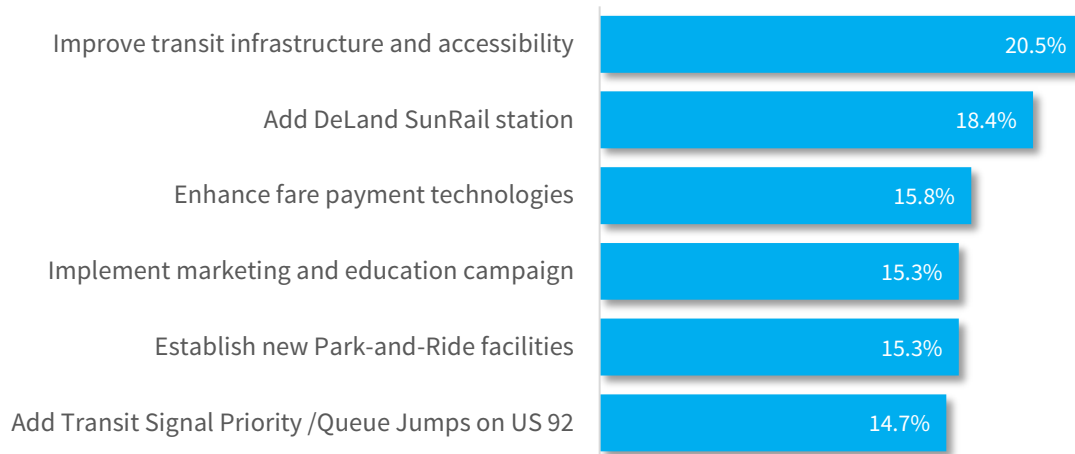
Figure 4-48: West Volusia Transit Service Priorities



The last question asked participants to rank their agreement with capital, technology, and other improvements to support the new service alternatives. The top three capital and technology priorities

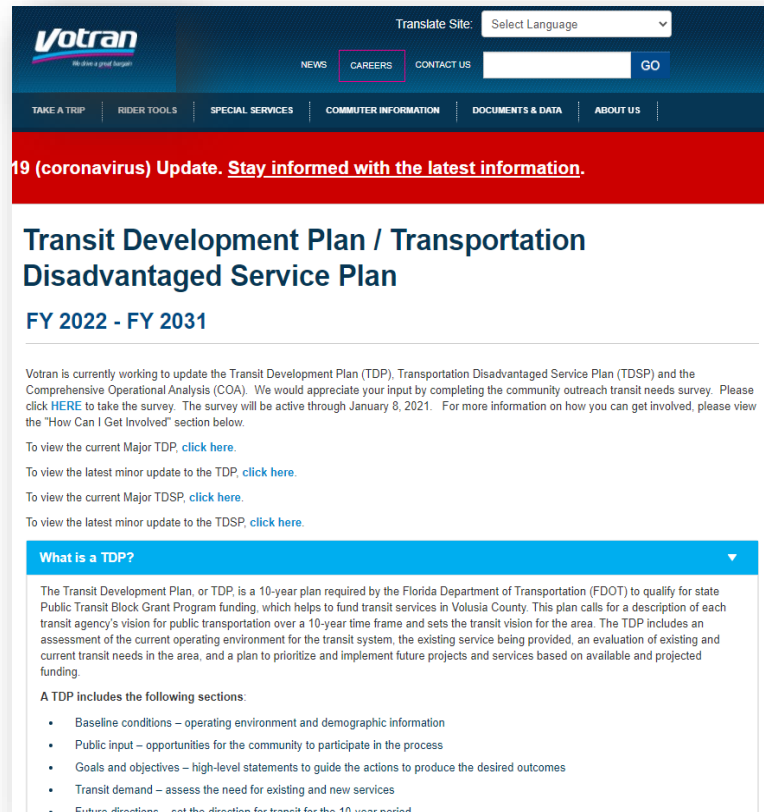
were transit infrastructure and accessibility (20.5%), adding the DeLand SunRail station (18.4%), and enhancing fare payment technologies (15.8%). Implementing marketing and education campaigns (15.3%), establishing new Park-and-Ride facilities (15.3%), and adding TSP/Queue Jumps on US 92 (14.7%) were also positively received by participants, as shown in Figure 4-49.

Figure 4-49: Capital and Technology Priorities



Web/Email/Social Media Outreach

Several additional outreach methods also were used to educate and inform the public of the TDP process and findings. The Votran and R2CTPO websites include information and links for those seeking information on the current stage of the study, process, surveys, and how to provide input or obtain more information. Emails were sent to stakeholders/riders/members of the general public to engage the community and seek opinions, ideas, and relevant information. Emails and reminders also were sent to promote upcoming workshops and provide links to complete the TDP survey. Any available social media channels also were used to inform and educate the public about TDP efforts and encourage participation in upcoming public workshops and to take the survey. The R2CTPO Facebook and Twitter pages also were used to encourage citizens to take the survey and attend the latest public workshops.



Web

Votran operates and maintains a website that provides information on its transit services, which includes route information, fares, a bus locator tool, and other relevant information. Throughout the TDP public involvement process, the website included a page dedicated to keeping the public updated on the latest TDP outreach events and updates. Additionally, those who visited the website were encouraged to sign up and attend the latest public workshops. Following both sets of public workshops, to engage those that could not attend, a recording of the presentation was posted on the R2CTPO website for the public to review.

Email

Numerous emails with information on the project surveys, upcoming workshops, and the TDP were used to engage and encourage public participation. Project stakeholders, as well as members from the social service/health, business/economic, R2CTPO Board/committee, and bus rider discussion groups, were informed and were regularly reminded on the events using email. Each transmitted email also encouraged those receiving the email to forward it and redistribute the information, which

has resulted in additional people being engaged in the process but that cannot, unfortunately, be quantified.

Social Media

Currently, Votran does not actively maintain any social media accounts. However, the TDP project team, in coordination with Volusia County and R2CTPO staff, utilized the County and R2CTPO social media accounts, including Facebook and Twitter, to promote the TDP and share information on outreach events. With multiple Facebook posts on R2CTPO as well as other community/city channels, social media was used as another platform to allow the general public to engage in the process, especially at this time of the ongoing pandemic.



Other Outreach Efforts

Bus Operator/Staff Interviews

As part of efforts made for the COA for Votran, discussions were held with Votran staff and bus operators to gauge their opinions on existing services, future improvements, safety issues, and rider remarks. Bus operators have the ability to offer route-level needs/issues and unmet transit needs based on their own experience as well as input they hear from their frequent interactions with bus riders, making their input critical for the short-term COA planning effort as well as for identifying mid-term TDP needs. While Votran staff may not have as much interaction with the riders, they, too, are familiar based on their day-to-day work in operations and can provide insight and suggestions to enhance the service. A total of 45 bus operators and staff provided their input.

In addition to safety and other operations issues/opportunities, Votran bus operators and staff provided their perspective on transit needs, as highlighted below.

- **Expand Existing Services**
 - Expand night service south of International Speedway Boulevard.
 - Route 5 needs more weekend service.

- Route 44 should expand to connect New Smyrna Beach to DeLand.
 - More Sunday service on existing routes.
 - Most requests for earlier service pertain to Route 60.
 - Increase frequency on existing routes.
 - Extend Route 23 to SunRail.
 - Route 5 is needed as it helps connect low-income and minority neighborhoods to surrounding schools.
 - Route 23 should be a standalone circulator that serves the SunRail station.
- **Add New Services**
 - Add an exclusive route for Nova Road.
 - Add service to Flagler County.
 - Route 44 has low ridership and may be able to be replaced with other types of transit services.

Grassroots Outreach

In addition to the planned events, Volusia County/Votran staff also participated in the Hotel and Lodging Association of Volusia County Board Meeting on December 9, 2020, to promote the TDP. Staff raised awareness about the first public input survey, public

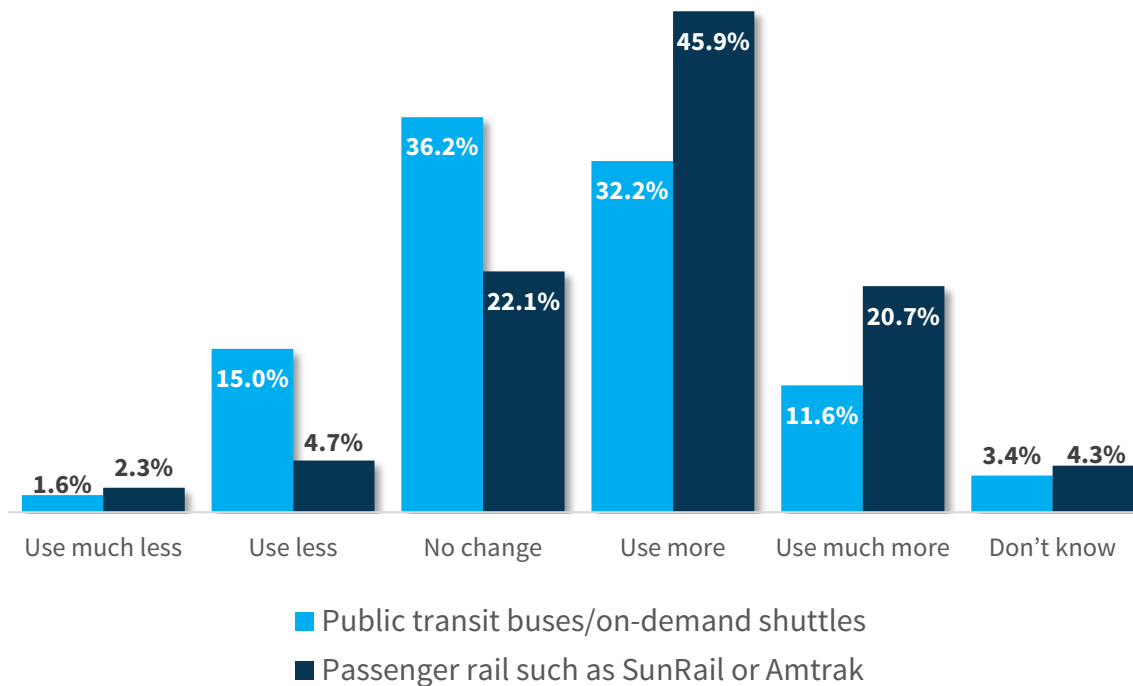


workshops, and other TDP efforts, while also attempting to obtain input from those attending. In addition, a table was set up with promotional materials such as transit information to spread awareness of the service. Through their time at the meeting, staff engaged with 150 people and provided information on the efforts.

Public Input from R2CTPO Connect 2045 Survey

Prior to launching this TDP and its public outreach efforts, the R2CTPO’s Connect 2045 Long Range Transportation Plan (LRTP) conducted outreach efforts to determine long-term transit needs for Volusia County as part of the LRTP. The Connect 2045 Survey provided an opportunity for the community to review a list of transportation modes that the public may use in the next 25 years. Participants were asked to select whether those modes would be used and to what level or extent based on a specific scale. Figure 4-47 shows the findings from this survey pertaining to transit.

Figure 4-50: Connect 2045 LRTP Survey – Transit Input



Most participants agreed that people will use public transit buses/on-demand shuttles and passenger rail more in the next 25 years. Approximately 46 percent of participants agreed that passenger rail would be used more while 32 percent selected the same choice for public transit buses/on-demand shuttles. Public transit buses/on-demand shuttles and passenger rail were thought to be used much more in the future by 11.6 percent and 20.7 percent of participants, respectively. Approximately 36.2 percent thought that there would not be a change in use for public transit buses/on-demand shuttles. Overall, participants agreed that they would like a variety of transit modes.

Section 5. Situation Appraisal

A TDP is a strategic planning document that includes an appraisal of factors within and outside a service area that affect the provision of transit service. Conducting a situation appraisal is a key requirement under the current TDP Rule and helps a transit agency examine its strengths and weaknesses as well as any existing challenges and opportunities for the provision of its services.

The following section synthesizes the efforts in the TDP towards this appraisal to develop an assessment of the operating environment relevant to Votran. This assessment supports the examination of the existing system and the development of future transit needs for the community.

Prior to this appraisal is a review of locally, regionally, and federally approved plans and studies to ensure consistency between the 10-year transit plan goals and initiatives with other government policies and planning efforts. The current planning initiatives/policy guidance from these plans were reviewed to better understand the policy context under which transit operates in Volusia County and the region.

Thereafter, the situation appraisal is provided for Votran's operating environment so the agency can develop a more in-depth understanding of the various opportunities and potential constraints related to the provision of transit in Volusia County and, thus, better help guide the TDP development process. The appraisal includes reviews of existing socioeconomic trends, land use, community feedback, technology, organizational issues, and funding, and all are summarized in this report.

Review of Plans and Studies

At the local and regional levels, various agencies and organizations conduct studies to produce plans and policies for addressing local and regional transportation issues and intermodalism that may impact Votran's bus services. In addition, certain federal and state plans and regulations also may impact the provision of the transit services locally.

Due to these potential impacts, this plans and policy review helps Votran understand and support its navigation of the existing local goals framework while concurrently pursuing its own goals for creating a viable and accessible transit system in Volusia County. Relevant transportation planning and programming documents are summarized, with an emphasis on those elements having implications for Votran services.

Figure 5-1 shows the local, regional, state, and federal plans and studies that were reviewed to understand current transit policies and plans with potential implications for Votran service:

Figure 5-1: List of Local, Regional, State, and Federal Plans Reviewed

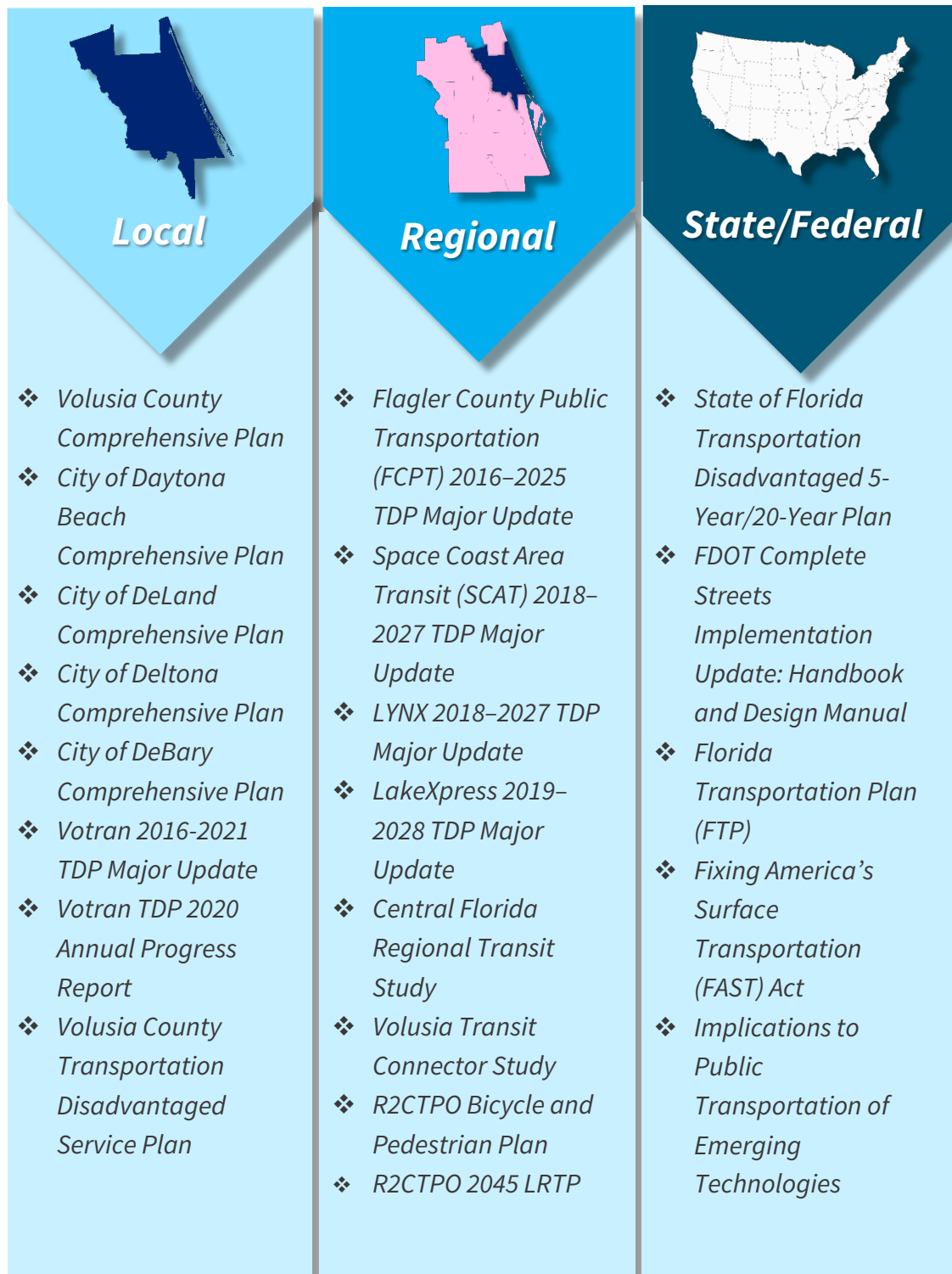


Table 5-1: Local Plans

Plan Title	Geographic Applicability	Most Recent Update	Responsible Agency	Plan/Program Overview	Key Considerations/Implications for TDP
City of Daytona Beach Comprehensive Plan	City of Daytona Beach	2020	City of Daytona Beach	Primary policy document that addresses land use, transportation, capital projects, public facilities, recreation, government coordination, conservation, and development goals, among others, for the city.	Provides goals for a quality transportation system, encouraging transit trips within the city. The plan promotes trolley service along A1A and maintaining the bus terminals to encourage multimodal use. Key strategy identified is to increase transit service and reduce headways in areas with demonstrated need, such as areas with high density. In addition to supporting Votran, some policies are set to support the objective of strengthening the entire multimodal network such as: <ul style="list-style-type: none"> Supporting state efforts to develop a regional commuter rail system with a station in Daytona Beach. Encouraging additional mass transit services during special events or tourist season. Encouraging Votran to provide benches where there is demand.
City of DeLand Comprehensive Plan	City of DeLand	2020	City of DeLand	Primary policy document that addresses land use, transportation, capital projects, public facilities, recreation, government coordination, conservation, and development goals, among others, for the city.	Supports policies to encourage transit services in the city and to keep up with demand. Encourages development of transit services with supportive land use policies and encourages efficient multimodal use. Other policies and actions mentioned to aid Votran growth include: <ul style="list-style-type: none"> Improvement of pedestrian circulation in downtown DeLand. Coordination of satellite park-and-ride locations. Development of an incentive program that discourages reliance on single-occupant vehicles while supporting multimodal transportation options. Support for bicycle and pedestrian infrastructure along with commuter rail efforts. By 2035, achievement of 15-30 minute headways on all transit routes.
City of Deltona Comprehensive Plan	City of Deltona	2018	City of Deltona	Primary policy document that addresses land use, transportation, capital projects, public facilities, recreation, government coordination, conservation, and development goals, among others, for the city.	Encourages alternative transportation options to alleviate traffic along major roadways. Goals relevant to Votran growth include: <ul style="list-style-type: none"> Provide incentives for compact multimodal oriented urban development. Develop and improve bicycle and pedestrian access. Consider provision of mass transit in lieu of or as part of highway construction. Ensure efficient mass transit availability by lowering headways in peak hours, evaluation of routes, and reorganization based on performance measures. Require that projects include supporting infrastructure, such as bicycles, sidewalks, and passenger shelters.
City of DeBary Comprehensive Plan	City of DeBary	2019	City of DeBary	Primary policy document that addresses land use, transportation, capital projects, public facilities, recreation, government coordination, conservation, and development goals, among others, for the city.	Emphasizes the need for coordination between the transportation system and land use patterns. Policies that are supportive of transit include: <ul style="list-style-type: none"> Consider new transit facilities based on new developments and support of the development of facilities through the land development review process. Encourage the private sector to provide services to the DeBary SunRail Station. Maintain communication with transit providers and maintain an active role in the TPO process. Support the expansion of the SunRail commuter rail system and encourage travel via SunRail. Support the expansion of bus routes and park-and-ride facilities. Develop bicycle and pedestrian pathways to connect transit to transit oriented developments (TOD), mixed use areas, and village center areas.

Table 5-1: Local Plans (continued)

Plan Title	Geographic Applicability	Most Recent Update	Responsible Agency	Plan/Program Overview	Key Considerations/Implications for TDP
Volusia County Comprehensive Plan	Volusia County	2020	Volusia County	Primary policy document that addresses land use, transportation, capital projects, public facilities, and economic development goals, among others, for the county.	<p>Discusses Votran as a necessary service that provides both fixed route and paratransit services. Prescribes several transit-supportive goals, objectives, and policies, such as the need to coordinate with other local and regional transit agencies to meet regional mobility needs. Policies that are supportive of Votran growth include:</p> <ul style="list-style-type: none"> • Coordinate with the County, TPO, and Daytona Beach International Airport to provide efficient public transportation services. • Coordinate with the Transit Development Design Guidelines to establish land use, site, and building design guidelines to assure accessibility to Votran services by new developments. • Direct municipalities to provide passenger amenities as outlined by Votran’s latest TDP. • Consider public transportation as a part of major construction projects. • Provide convenient access between SunRail stations and downtown DeLand. • Encourage office and job centers to provide passenger amenities and encourage the transit pass program.
Votran 2016-2025 TDP Major Update	Volusia County	2016	Votran	The State of Florida Public Transit Block Grant (PTBG) Program, enacted by the Florida Legislature to provide a stable source of funding for public transit, requires public transit service providers to develop and adopt a 10-Year TDP per FDOT requirements. Major updates must be completed every five years and include an assessment of baseline conditions, a public involvement plan, and ridership estimates.	<p>The Votran network currently has 27 routes. Transit alternatives proposed include:</p> <ul style="list-style-type: none"> • Increase frequency on Routes 1, 3A, 7 10s, 11, 17b, 17s, 20, 21, 22, 23, 32, 33, and Route 60. • Extend service hours on Routes 4, 5, 10, 12, 18, 19, 22, 23, 32, and 33. • Add a SunRail limited stop express from Saxon Park-and-Ride to DeBary SunRail station. • Add the Lake Helen Connector from Ohio Avenue to Southpointe Commons in DeLand. • Add route from Saxon Park-and-Ride to Elkcam Boulevard. • Implement ISB Trolley along Nova Road with 15-minute frequencies. • Provide service on A1A via the New Smyrna Beach Trolley. • Add the Ormond Beach Trolley via Granada Boulevard, Beach Street, Oakridge, and A1A. • Supply service to Downtown DeLand via the DeLand Downtown Circulator on New York Avenue and Jacobs Road. • Provide service on US 1 in Edgewater with the Edgewater Circulator. • Add service between Howland, Elkcam, and Providence Boulevard via the Deltona Circulator.
R2CTPO Bicycle and Pedestrian Plan	Volusia County	2018	R2CTPO	Master plan establishing network of bicycle and pedestrian facilities in Volusia County on major roads. This plan addresses connectivity issues and prioritizes improvements through the existing and future network.	<p>Establishes the bicycle and pedestrian needs. Additionally, visions, goals, and objectives are discussed. Relevant goals, public input, and implications to the future of Votran include:</p> <ul style="list-style-type: none"> • Stresses coordination with Votran to enhance multimodal participation. • Discusses Complete Streets and the coordination with transit. • Indicates that public involvement shows the community would like to invest in multimodal transportation options as they are satisfied with existing roads and highways. • Highlights that the majority, almost 80 percent of participants, supported a dedicated funding source for public transit.

Table 5-1: Local Plans (continued)

Plan Title	Geographic Applicability	Most Recent Update	Responsible Agency	Plan/Program Overview	Key Considerations/Implications for TDP
R2CTPO 2045 Long Range Transportation Plan (LRTP)	Volusia County	2020	R2CTPO	The LRTP is the 25-year vision for Volusia County's transportation needs updated every five years. The LRTP responds to trends that the TPO and community have been discussing for several years.	<p>Transit needs are based on input/analysis from public outreach, recent study efforts, transit markets, and regional coordination. Due to funding limitations, the plan does not assume any new routes or services. However, the plan does not rule out the opportunity to advance any projects identified in the needs plan if funds become available. Discussion relevant to Votran includes:</p> <ul style="list-style-type: none"> • Votran's need to increase frequency, maintain SunRail feeder bus services, and express routes serving DeBary. • Implement Automated, Connected, Electric, and Shared-Use (ACES) Vehicles that will affect later transportation goals. • Projected reduction in revenues. • Extension of SunRail from DeBary to DeLand. • Increase frequency on Routes 1, 3a, 4, 5, 10, 10s, 12, 17s, 17b, 18, 19, 20, 21, 22, 23, 32, 33, 60. • Add Lake Helen Connector from Lake Helen to DeLand. • Add Route from Saxon Park and Ride to Howland Boulevard. • Add trolley from ISB Boulevard along Nova Road to Beville Road. • Add New Smyrna Beach Trolley via A1A from Atlantic Avenue to Flagler Avenue. • Add Ormond Beach Trolley beachside via Grenada Boulevard. • Add Downtown Circulator via New York Avenue. • Add service on US 1 in Edgewater.
Volusia County Transportation Disadvantaged Service Plan (TDSP)	Volusia County	2017	Votran	The Volusia County TDSP addresses the needs of elderly, disabled, or economically disadvantaged people within the county and reflects a careful review of various data, travel patterns, policies, agency responsibilities, and funding to define a five-year detailed implementation plan (which is updated annually) to help meet those needs.	<p>Anticipates the need for an increasing number of people who will be considered Transportation Disadvantaged (TD) such as people with disabilities, elderly, and low-income. Goals in the document include the following:</p> <ul style="list-style-type: none"> • Maximize coordination with public and private agencies to ensure the most cost-effective service. • Provide service with the focus on major attractors. • Explore group trips to areas with major attractions. • Ensure fixed-route and paratransit systems provide adequate capacity and are responsive to the TD community. • Review qualifications of customers every three years to ensure eligibility. • Promote new and existing transit services in Volusia County. • Disseminate information through the Votran website, MyStop app, and Vo-to-Go text system. • Encourage land use patterns that support transit services. • Provide opportunities for ADA and TD passengers to access multimodal transportation options. • Provide fixed-route training for TD riders that want to use fixed-route services. • Coordinate with County to secure a dedicated funding source.

Table 5-1: Local Plans (continued)

Plan Title	Geographic Applicability	Most Recent Update	Responsible Agency	Plan/Program Overview	Key Considerations/Implications for TDP
Votran TDP 2020 Annual Update	Volusia County	2020	Votran	TDP Annual Progress Report, provides status report on transit improvements identified in 2016 Major TDP update.	<p>Provides updates on variety of service and capital projects:</p> <ul style="list-style-type: none"> • For service projects, Votran implemented Routes 11b and 25. Route 11b connects to the Tanger Outlets in Daytona Beach and Route 25 mainly serves Howland Boulevard in Deltona. • Expresses the need for other services, such as night service on Route 11, despite a lack of funding due to the COVID-19 pandemic. • Discusses unmet needs conferred at Volusia County Council meeting, including night service in West Volusia County (Routes 20 and 60) and Sunday service in West Volusia County (Routes 20 and 60), and service to Daytona State College campus in DeLand, Volusia County Fairgrounds, and the Victoria Park area. • For capital projects, Votran purchased new buses to increase the efficiency of its fleet. • Examines the marketing and branding efforts to advertise new routes and services. • Reviews needs for regional mobile fare payment with LYNX. • Reviews public involvement efforts in which Votran participated.
Volusia Transit Connector Study	Volusia County	2017	Votran	Evaluates options for Votran to provide premium transit options between major activity centers on the east and west parts of Volusia County.	<p>Discusses the results of the evaluation for the proposed premium transit options. The study considered a SunRail extension, automated people mover, express bus, light rail transit, monorail, local bus enhancements, streetcar, and Bus Rapid Transit (BRT). Criteria used to screen for initial results included consistency, flexibility, availability, maturity, expandability, appropriateness, and the impact. The following examines the different scenarios:</p> <ul style="list-style-type: none"> • Express Bus to Orlando and DeLand • I-4 Commuter Rail from DeBary Station • I-4 Express Bus from DeBary Station • US 17/92 and DeLand Station BRT • I-4 Commuter Rail via SR 472 • I-4 Express Bus via SR 472 • US 92 Commuter Rail <p>Overall, BRT on US 17/92 with transit priority treatments was the highest scoring alternative.</p>

Table 5-2: Regional Plans

Plan Title	Geographic Applicability	Most Recent Update	Responsible Agency	Plan/Program Overview	Key Considerations/Implications for TDP
Flagler County Public Transportation (FCPT) 2016–2025 TDP Major Update	Flagler County	2016	Flagler County Public Transportation	The State of Florida Public Transit Block Grant (PTBG) Program, enacted by the Florida Legislature to provide a stable source of funding for public transit, requires public transit service providers to develop and adopt a 10-Year TDP per FDOT requirements. Major updates must be completed every five years and include an assessment of baseline conditions, a public involvement plan, and ridership estimates.	Flagler County Public Transportation does not currently provide service to Volusia County. The TDP does not identify planned service needs that connect to Volusia County. The TDP, however, reviews major service changes, including the addition of fixed-route service along with point-to-point services. Key transit alternatives proposed include: <ul style="list-style-type: none"> • Six fixed routes serving major roadways on the eastern portion of the county. • Point-to-point service to compliment the fixed-route services with first mile and last mile connectivity. • Expanding vehicle fleet to include fixed-route vehicles. • Adding extra demand response vehicles to provide supportive point-to-point services.
Space Coast Area Transit (SCAT) 2018–2027 TDP Major Update	Brevard County	2018	Space Coast TPO	The State of Florida Public Transit Block Grant (PTBG) Program, enacted by the Florida Legislature to provide a stable source of funding for public transit, requires public transit service providers to develop and adopt a 10-Year TDP per FDOT requirements. Major updates must be completed every five years and include an assessment of baseline conditions, a public involvement plan, and ridership estimates.	Space Coast Area Transit services do not currently serve or connect to Volusia County. Currently, there are no planned services to connect to Volusia County, with planned services focusing on enhancing current services and connection of surrounding neighborhoods within Brevard County. Other key alternatives include: <ul style="list-style-type: none"> • Implementing extended services and Sunday service on all routes. • Increasing frequency on all existing routes. • Adding flex route services in rural areas. • Adding circulators to connect municipalities.
LYNX 2018–2027 TDP Major Update	Seminole and Orange Counties	2018	Central Florida Regional Transportation Authority's (CFRTA)	The State of Florida Public Transit Block Grant (PTBG) Program, enacted by the Florida Legislature to provide a stable source of funding for public transit, requires public transit service providers to develop and adopt a 10-Year TDP per FDOT requirements. Major updates must be completed every five years and include an assessment of baseline conditions, a public involvement plan, and ridership estimates.	Currently, there are not any connections to Volusia County or plans to connect with Votran. Currently there is fixed-route service that connect Seminole and Orange counties. There is an emphasized need for enhancing current service by increasing frequency, adding new fixed-route services, and increasing hours of service on existing routes. New services were recommended on Goldenrod Road, SR 423, SR 463, Orange Avenue, in Kissimmee, Lake Nona, Apopka, Orlovista, and additional connections to Sea World and UCF. Premium services, such as Bus Rapid Transit (BRT), on Kirkman Road, US 192, and SR 50 are also recommended.
LakeXpress 2019–2028 TDP Major Update	Lake County	2019	LakeXpress	The State of Florida Public Transit Block Grant (PTBG) Program, enacted by the Florida Legislature to provide a stable source of funding for public transit, requires public transit service providers to develop and adopt a 10-Year TDP per FDOT requirements. Major updates must be completed every five years and include an assessment of baseline conditions, a public involvement plan, and ridership estimates.	LakeXpress does not currently provide service to Volusia County. Update acknowledges need for regional connection, but does not identify any planned service needs that would connect to Volusia County. Reviews major service changes, including enhancing services and reducing headways. Key transit alternatives proposed include: <ul style="list-style-type: none"> • Adding regional connections to Orange and Marion Counties. • Adding 30-minute service on Routes 1, 1A, 2, and 3. • Extending service span until 9:00 pm on Routes 1, 1A, 2, and 3. • Adding limited Saturday service on Routes 1, 1A, 2, and 3.
Central Florida Regional Transit Study	Brevard, Flagler, Lake, Marion, Orange, Osceola, Polk, Seminole, Sumter, and Volusia Counties	2018	Central Florida MPO Alliance	The study provides assistance for the analysis and decision-making of technical staff and policy makers regarding potential cross-jurisdictional transit projects. The study will help support transit agencies, MPO / TPOs, and FDOT with the coordination of transit planning efforts and to support long range transportation plan (LRTP) development.	The regional transit vision identifies high priority transit investment for 2040 and 2060. The study outlines both operational and capital needs in the ten-county area. The following suggested improvements relevant to Votran are: <ul style="list-style-type: none"> • Extension of SunRail to DeLand in the Phase II North plan. • Express bus route from DeLand SunRail station to Daytona Beach. • Capital investment in an intermodal facility/park-and-ride in Daytona Beach. • Intercity bus route from Daytona Beach via I-4 through Orlando to Lakeland in 2040. • Express bus from Daytona Beach via I-4 to Orange County in 2060. • Additional intermodal facilities and park-and-rides in central Volusia County and Deltona.

Table 5-3: State and Federal Plans

Plan Title	Geographic Applicability	Most Recent Update	Responsible Agency	Plan/Program Overview	Key Considerations/Implications for TDP
State of Florida Transportation Disadvantaged 5-Year/20-Year Plan	Florida	2007	Florida Commission for the Transportation Disadvantaged (FCTD)	Purpose is to accomplish cost-effective, efficient, unduplicated, and cohesive transportation disadvantaged services within its service area.	Develop and field-test model community transportation system for persons who are transportation disadvantaged; create strategy for FCTD to support development of universal transportation system.
FDOT Complete Streets Implementation Update: Handbook and Design Manual	Florida	2018	FDOT	Developed as way to create alternative transportation systems to facilitate “Complete Streets” focused design.	Plan includes: <ul style="list-style-type: none"> Revising guidance, standards, manuals, policies, and other documents. Updating how decision-making is processed. Modifying evaluation of performance. Managing communication between agencies. Updating training and education in agencies.
Florida Transportation Plan (FTP)	Florida	2020	FDOT	Serves as guide as Florida’s long-range transportation plan, as required by State and Federal law.	Supports development of state, regional, and local transit services through series of related goals and objectives, emphasizing new and innovative approaches by all modes to meet needs today and in the future. Most recent update emphasizes: <ul style="list-style-type: none"> Safety and security for Florida’s residents, visitors, and businesses. Resilient and quality infrastructure. Connected, efficient, and reliable mobility for people and freight. Transportation choices that improve equity and accessibility. Transportation solutions that strengthens Florida’s economy. Mobility solutions that enhance Florida’s communities. Transportation systems that enhance Florida’s environment.
Fixing America’s Surface Transportation (FAST) Act	National	2015	114 th US Congress	Enacts five years of funding for nation’s surface transportation infrastructure, including transit systems and rail transportation network. Provides long-term certainty and more flexibility for states and local governments, streamlines project approval processes, and maintains strong commitment to safety.	<ul style="list-style-type: none"> Increases dedicated bus funding by 89% over life of bill. Provides stable formula funding and competitive grant program to address bus and bus facility needs. Reforms public transportation procurement to make Federal investment more cost effective and competitive. Consolidates and refocuses transit research activities to increase efficiency and accountability. Establishes pilot program for communities to expand transit through use of public-private partnerships. Provides flexibility for recipients to use Federal funds to meet their state of good repair needs. Provides for coordination of public transportation services with other federally-assisted transportation services to aid in mobility of older adults and individuals with disabilities.
Implications to Public Transportation of Emerging Technologies	National	2016	Research Report	National Center for Transit Research	White paper that explores possible consequences for public transportation as a result of introduction of new technologies such as autonomous vehicles, connected vehicles, and other innovations that impact efficiency, cost-effectiveness, and overall demand for transportation.

Situation Appraisal

Transit systems function best when they understand all of the local and regional factors that impact their ability to provide service daily in an effective and efficient manner. To help identify and quantify/qualify such factors, a “situation appraisal” is an assessment process that is specifically infused with a strategic planning focus.

This section summarizes the situation appraisal conducted to document pertinent factors for Votran so that its staff, stakeholders, and other constituents will better understand the system’s local operating

environment and its various impacts on transit. However, prior to developing this situation appraisal, the findings from the technical analysis previously conducted for the TDP was reviewed, together with direction from the public outreach efforts and relevant plans review summarized previously.

As previously indicated, Votran’s situation appraisal assesses and documents the key aspects of the transit agency’s operating environment (Figure 5-2). It involves examining the strengths and weaknesses of the system, as well as any existing barriers or threats to the provision of service in the county and key opportunities for addressing threats and/or enhancing the transit-friendliness of the operating environment, as summarized in the remainder of this section.

Socioeconomic Trends

It is important to understand the trends and markets that could be affected or may benefit from public transportation services when assessing the impact of the growth in population and the evolution of its key demographic characteristics that result from that growth. Key findings from the assessment of socioeconomic trends are summarized as follows:

- Volusia County is projected to have over 644,000 residents by 2045, a moderate 18 percent increase over the next 25 years.
- DeLand, the county seat, has experienced the most population growth since 2010 (32.3%), although Deltona has the largest population of all of the urbanized areas with over 91,000 residents in 2019. Daytona Beach Shores continues to be the densest incorporated area with over 4,600 people per square mile.
- Employment growth is expected to outpace population growth, with an expected 34 percent increase by 2045. Employment in Volusia County is densest in the Daytona Beach area between Clyde Morris Boulevard and the Halifax River, along US 1. In addition, DeLand and

Figure 5-2: Situation Appraisal Elements



some areas along US 17 on the west side of Volusia County have pockets of high-density employment.

- Employment will continue to be densest in existing employment centers in downtown Daytona Beach, in pockets along US 1, downtown DeLand, and in Orange City between US 17 and I-4. Areas where employment growth will be the most noticeable include along I-95 adjacent to LPGA Boulevard, in downtown DeLand, and adjacent to I-4 near Saxon Boulevard. Daytona Beach and DeLand are home to major universities and tourist attractions.
- Approximately 20.5 percent of households earn less than \$25,000 annually. The percent of households in poverty has fluctuated since 2000. Overall, the County's poverty rate increased from approximately 11.6 percent to 12.7 percent, slightly higher than that for Florida.
- Volusia County's population over age 60 is expected to grow to approximately 33 percent of total by 2045. Simultaneously, the number of working aged adults, i.e., the 20-44 age cohort, will remain steady while the 45-59 age group will decrease. Most transit users in Volusia County are between 25 to 44 years old.
- The number of minorities within Volusia County has increased; the number of Hispanics increased the most, 8.1 percent, expanding from 6.9 percent in 2010 to 15.0 percent in 2019. There are clusters of high minority populations in downtown Daytona Beach and west of US 17 in DeLand.
- In addition, approximately 1.5 percent of households in Volusia County speaks English less than "very well."
- Volusia County has a lower percentage of "zero-vehicle households" than Florida's average, 5.8 percent versus 6.6 percent, respectively.
- In 2018, Daytona Beach welcomed 10.2 million tourists. In 2019, Daytona Beach Airport (DAB) welcomed over 700,000 passengers with March to August as the busiest months.

Implications

Volusia County has continued to grow in population and employment, creating more demand for alternative modes of transportation such as transit. Furthermore, the growth of jobs is projected to outpace the growth in population. Although population will increase in established areas, growth in unincorporated areas may lead to challenges and inefficiencies in providing fixed-route transit service; therefore, innovative techniques such as MOD or partnerships with Uber/Lyft type providers may be required to serve any low density but growing areas.

As population continues to grow, the older adult population, which has a higher tendency to use transit, is projected to grow more rapidly and eventually compose approximately one third of the population by 2045. Although the older adult age cohort is increasing, the largest age cohort in Volusia County is still 25-44 (40.7%), which is the age segment that includes millennials, who also, based on recent data, have shown an interest in riding transit for environmental and other reasons. There are also 13 higher education centers in Volusia County, which presents an opportunity to

promote transit if they are conveniently connected to key population hubs. In addition to research that has indicated that younger generations are looking for alternative transit options, the same age range is the largest age group that uses transit in Volusia County.

Approximately one in every five households in Volusia County are considered low-income (household income of less than \$25,000 annually), which typically are considered to be more inclined to use transit, highlighting the need and an opportunity for Votran to improve its services to access jobs and services locally and regionally. In addition, the number of residents who are minorities, a population segment that is also typically more transit dependent also is steadily increasing, providing another sector of population for Votran to tap into to promote transit.

While traditional rider needs should be a key focus for serving, Votran should also aim to attract more discretionary riders, or riders who have the choice of riding or driving their own vehicle. Key considerations for Votran include enhancing mobility options and promoting more efficient use of commute times for these potential riders with high frequency and more direct routes as well as heightened awareness of those services.

As funding is an ongoing issue when it comes to operating budgets with most if not all Florida transit properties, Votran may need to prepare for challenges when seeking to provide enhanced/additional services. As funding will continue to be a challenge locally, especially due to uncertainties resulting from the COVID-19 pandemic, Votran should continue to focus on efficiency savings and protecting its key ridership base/corridors until the ‘new normal’ for transit funding is clear. Reconfiguring services and introducing non-traditional service concepts such as MOD zones in areas with lower population density/low service demand may be a cost-effective way to aid those who need access to transit. The savings from such efforts then can be used to fund enhancements in high demand areas to help attract more discretionary riders.

Travel Patterns and Trends

It is important to understand existing and expected local and regional travel patterns and trends to identify possible implications and impacts on transit. Several key findings are summarized below based on the data analyzed previously:

- When typical travel behaviors are considered, approximately 78 percent of commuters drove alone, which has decreased from 84 percent in 2010. However, the segment of people taking transit to work, one percent in 2010, did not increase during that time but rather stayed the same at that level. Carpooling, walking, and other forms of commuting have, however, decreased while working from home has increased.
- Approximately 37 percent of commuters spent 30 minutes or more traveling to work.
- Over 70 percent of Volusia County’s employed residents lived and worked within the county, indicating approximately 30 percent of commuters travel out of the county for work on a daily basis.
- The top three regional commuter flows are to and from Orange, Seminole, and Flagler counties, as shown in Table 5-4.

- More than four times as many commuters leave Volusia County to work each day in Orange County than those who leave Orange County to work in Volusia County.
- Similar to the Orange County commute flows, more than three times the number of workers leave Volusia County daily to work in Seminole County than commute to Volusia County from Seminole County each day.
- Approximately half the number of commuters travel to work from Volusia County to Flagler County than the number of Flagler County residents that commute to Volusia County each day.

Table 5-4: Top Regional Commuter Inflows/Outflows

County	Inflow (to Volusia County)	Outflow (from Volusia County)
Orange County	7,119	28,403
Seminole County	6,303	22,630
Flagler County	6,401	3,260

Source: Census “OnTheMap” 2017 Estimates.

Implications

Votran should continue to pursue service improvements that will help attract more commuters and capture a larger share of daily regional travel to use transit. For Votran to provide an alternative to the single-occupant vehicle and market transit as a viable option, modes such as rail, BRT, and express bus service can significantly help due to the perception they have regarding convenience and speed.

Any transit agency is in a challenging position when having to serve a county with two distinct parts, with a more populated east part and a fast-growing west part separated by a green belt. With the current ridership data on Route 60 connecting the two sides already showing a high demand for service, Votran must prepare for the additional demand that will be generated with the new DeLand SunRail station after 2024. A faster east-west local connection, or multiple local connections, may be warranted to bring commuters and other travelers between the two sides of the county. If the services are provided on non-limited access facilities, such as US 92, on which Route 60 operates at this time, TSP treatments may be necessary, at least on the congested parts of the routes.

With SunRail coming farther into Volusia County, this also provides another opportunity for Votran to closely coordinate and partner with LYNX, as it is in the best interest of both Votran and LYNX that SunRail reaches and exceeds its ridership goals as a regional service. Votran should also consider connecting with Flagler County, which currently does not have fixed-route bus transit, but has been considering it for the last several years. With more commuters driving from Flagler to Volusia County to work, such a connection, at least during peak tourist season, can have economic benefits shuttling visitors and workers to the County’s beach areas.

While the real effects of the COVID-19 pandemic are still not clear, every indication is that the percentage of people working from home would increase. If more people work from home and some decide to forgo their personal vehicles or not use them due to the burden of carrying insurance, that may provide an opportunity for Votran to fill that gap to connect them to goods and services.

Land Use and Urban Design Efforts

Effective local land use and development policies, from simple local policies to larger initiatives such as Complete Streets, can help transit thrive. Implementing land uses that promote high density residential and employment centers helps create an environment that is walkable and supports multimodal alternatives like transit. Additionally, implementing transit supportive urban design patterns, such as TOD, helps complement and encourage transit use.

To identify current and future land uses and any planned urban design projects and assess the impact of local land use policies on Votran, it is important to first identify current and future areas of the county that may benefit the most from Votran services.

Key findings from a review of current and future land use conditions throughout Volusia County are as follows:

- Future land uses, such as Urban High Intensity land uses in Volusia County, suggest that parts of the county are transitioning to a denser land pattern. Urban High Intensity land uses allow densities up to 20 dwelling units per acre and have at least 8 dwelling units per acre.
- Although some areas of Volusia County are transitioning to more transit supportive land uses, the land use pattern in most of Volusia County is still and will continue to be predominantly low-density residential.
- Residential land uses, located along major roads, are dedicated to have higher densities and intense uses in the City of Daytona Beach. Currently, the standard density allows up to 40 dwelling units per acre.
- DeLand is the fastest growing city in Volusia County and TOD plans for downtown DeLand will allow up to 16 residential units per acre. Mixed Use land uses allow up to 12 dwelling units per acre and are located north of downtown DeLand. Adjacent to downtown DeLand, a TOD centered around the anticipated DeLand SunRail station also is planned, as shown in Figure 5-3.
- The City of DeBary has implemented a TOD overlay that encapsulates US 17 and the DeBary SunRail station. The TOD zone promotes compact land uses that support multimodal transit use and aims to encourage transit use. Within the TOD zone, there will be up to 32 dwelling units per acre allowed. The TOD standard implements its highest densities to be concentrated within $\frac{1}{4}$ of a mile of the train station.

Figure 5-3: DeLand TOD



Implications

As in most areas in Florida, Volusia County’s land-use decisions also have mostly favored the automobile for a very long time. However sustained growth in both residential and commercial sectors, political will/direction of cities and the County, and a push for a connection with a growing region are changing land use and development decisions in Volusia County.

Votran should take advantage of this opportunity to continue to be involved and support changes in Volusia County that would result in transit supportive higher-density/intensity developments and/or TODs. However, low-density residential land uses/development, mostly in unincorporated Volusia County, will continue to be a challenging environment in which to provide efficient transit services. Votran should continue to monitor route performance and adjust it as needed to respond to changing land use as Volusia County continues to develop.

Votran should continue to work with municipalities and the County on strengthening its Land Development Codes with development requirements that are supportive of transit. Votran is highly regarded by its stakeholders and viewed as an asset and that good reputation in the community may also help such coordination. As the communities and developers seek to improve livability and walkability, Votran has an opportunity to recommend the inclusion of transit-friendly design and amenities. Votran should coordinate with the County and local municipalities to focus on bike and pedestrian accessibility to transit stops. This effort should include building transit stops that are directly accessible from the respective destination. Votran should refer to FDOT’s Accessing Transit Handbook for guidelines that can be incorporated in designing proper transit access. Access to transit can spur real estate investment and also provide benefits such as reduced parking needs, multimodal pedestrian-friendly environments, and support for a greater mix of land uses.

Community Feedback

A review of public feedback on transit is an important addition to the situation appraisal as it reflects the community’s vision for the future of transit. Many public involvement activities were conducted to gather feedback on transit needs from the general public, including transit users and non-users in the first phase of public outreach. Major efforts completed include public workshops, stakeholder interviews, a public input survey, and discussion groups. These outreach events are critical to developing the TDP. They provided an opportunity for Votran to better understand latent needs as they engaged the community and, at the same time, promoted and raised awareness about Votran services.

These activities generated an opportunity to gather input from a wide spectrum of interested parties on existing services and potential future transit enhancements. However, participants at all the events overwhelmingly agreed that Votran is an asset to the community and services must be provided and improved. Figure 5-4 shows the four key needs identified across the events and how participants in each of the major events ranked them.

Figure 5-4: Top Transit Service Needs

Improvement	Health/Social Services Discussion Group	Business/Education Discussion Group	Bus Rider Discussion Group	TPO Committees Discussion Group	Public Workshops	Stakeholders Interviews	Public Input Survey	Project Review Committee	Overall
Increased Frequency	1	1	1	1	1	1	1	1	1
More Weekend Service	2	4	2	3	4	3	2	2	2
Express/Regional Service	3	3	3	2	2	4	4	4	3
Early/Later Service	4	2	4	4	3	2	3	3	4

Overall, several key themes emerged from the TDP public outreach, including the following:

- **More frequent service** – The public feedback at all events, from riders to non-riders to stakeholders to the general public, emphasized the need for more frequency, at least in core areas.
- **Sunday Service** – There also was a strong desire for services to be provided on Sundays. Without Sunday service, many riders said they are unable to get service industry jobs or attend religion/recreational activities.

- **Technology Upgrades** – A need to introduce technology-based innovative transit service options also was highlighted by many. Interest in the use of technology to get bus route and service change information and/or pay bus fares was expressed and was also seen as a way to attract more riders.
- **Infrastructure Improvements** – Recurring themes in both the on-board survey and the public input survey included adding more amenities such as benches and shelters at bus stops. There also was an emphasis for the need to improve the safety and accessibility of bus stops throughout the county.

Implications

Input from the community made it clear that the Votran system is an asset and an integral part of Volusia County. Based on the feedback received, all participants want to continue to improve transit services for both residents and visitors. Increased service supply like more frequent services, earlier/late hours, and weekend services may be needed to help current riders use Votran more and attract potential new riders. These also would be critical enhancements if the County desires to grow transit to truly become a viable option of travel. The continued success depends on the ability of Votran to tailor services that will expand its rider base and capture new transit markets and riders.

As shown previously, the top transit improvement indicated by both the general public and riders was frequency improvements. Although this improvement was the most desired, it is also the costliest to implement across the board. However, increasing frequency on higher-performing routes or on major transit supportive corridors should still be pursued to generate more ridership and increase awareness within the community, helping also to attract discretionary ridership. The potential benefits of increasing discretionary ridership include reduced traffic congestion, reduced need for parking, and increased farebox revenue. Additionally, both discretionary riders and traditional riders benefit from frequent services.

With the concurrent COA and the interruptions/slowdowns due to the COVID-19 pandemic, Votran has a unique opportunity to use this public input to reimagine various aspects of its network and “start fresh” with the TDP. The input directs to a more strengthened core network (as the public understands that high frequency systemwide, while needed, may not be financially feasible any time soon), better connectivity between east and west locally and to south and north regionally, a network that is available all days and incorporates advances of new technology, and upgraded accessible bus stop infrastructure. Balancing these needs with financial resources is a significant challenge for Votran, especially in the next 1-3 years due to post-pandemic revenue uncertainties. However, the TDP is a vision plan and should still provide a strategic blueprint that Votran needs to make transit work for its community and the region in the next 10 years.

Technology/Innovation

Votran has continued to use state-of-the-art technological advancements to enhance the quality of its service delivery. The MyStop app offers service information to passengers, including real-time bus information. Additionally, it also provides an enhanced bus tracker tool on the Votran website. Its route and bus stop information are also available on Google Trip Planner, where riders can input their preferred arrival or departure time and the application will advise them when to leave and what route

to use. Votran also offers bus stop information via text message. Patrons text their stop ID to a preset number and it returns the next time a bus will be at that location. In addition to more visible technological upgrades, Votran updated its Avail system for more efficient dispatching and to better manage the system.

Furthermore, Votran plans to add more advanced technology to help maintain its facilities and increase service efficiency. In 2021, Votran is expected to purchase new computer hardware and add new servers for the AVL system. In 2022, Votran plans to add a public announcement system to the Votran Transfer Facility and may upgrade the Eastside Maintenance Facility in 2023.

The additional technological and innovative upgrades that Votran should explore include the following:

- *Automated Fare Payment* – Votran should continue to investigate upgrading its fare collection system. The traditional farebox system can slow down patrons boarding the bus, ultimately affecting travel time and service efficiency. The new fare technologies combine traditional fare media with emerging technology, providing the flexibility to expand as new technology becomes available. In addition to traditional bills, coins, and tokens, these systems can accept smart cards, magnetics, and barcodes. This allows riders the option of account-linked tags, key chains, fobs, and stickers. Mobile ticketing may also allow connection to smartwatches and smartphones, which can display ticket information for scanning. Magnetic cards, such as those common in university systems, can also be used to link to Votran passes. Additionally, Votran should work with LYNX on a regional mobile pay project, PawPass. The app would facilitate payment for various LYNX transit passes and also allow other regional transit agency services, such as Votran’s, to connect with their payment systems.
- *Wi-Fi* – While most phones now have data plans, Wi-Fi still can provide a convenience to riders and incentive to use transit when offered to patrons at major transfer locations. Providing Wi-Fi on buses also can help improve the quality of the rider’s experience and may help sell commuter type bus services.
- *Electric Vehicles* – Currently, Votran operates a fleet of 70 vehicles and approximately 25 percent of the vehicles are hybrids, while the rest is still fueled by diesel. Replacing those diesel buses with electric can help decrease carbon emissions and improve the image of Votran in the community while also saving on fuel costs. Votran should explore investing in electric vehicles when retiring those that are past the FTA useful life benchmarks. Studies show that, while initial investment of electric buses can be expensive, there are long-term savings on fuel and maintenance costs. Purchasing electric vehicles may allow Votran attract more younger generation riders that are environmentally conscious and currently see driving as the only option to travel.
- *Autonomous Vehicles (AV)* – AV use for transit is becoming more popular because of potential operating cost savings and the appeal it has as a cutting edge and futuristic mode that makes it more desirable than the typical bus. AV is already operating in pilot format in some smaller communities in Florida and adding it in a more compact and densely populated environment,

such as downtown Daytona Beach, may help improve walkability and encourage discretionary ridership.

- *Transit Signal Priority/Queue Jumps* – With potential implementation of premium transit such as BRT, TSP²/queue jumps³ along major corridors at congested intersections could help reduce bus run time delays.

Implications

Votran should continue to invest in new and emerging technologies to ensure the quality and accessibility of its services as it strives to expand its user base. Votran has continued to use technology as a tool to improve the rider experience and to streamline its processes, such as performance monitoring and fleet maintenance.

However, some technologies offered to riders may need more awareness on what is available before making additional upgrades. The MyStop live bus tracker app makes services much easier to access and use, but public input has shown that awareness of the app is low.

With social distancing behaviors introduced during the COVID-19 pandemic having a long-lasting impact going forward on how people interact, touchless fare payment will also be highly desired in the future. Implementing automated and mobile fare payment systems may attract discretionary riders while also elevating the quality and level of service for traditional riders. An upgraded fare system will improve the passenger's overall riding experience while also helping Votran with more accurate and efficient reporting of fare data for necessary analyses/service decisions.

Furthermore, investing in all-electric buses at the time of current diesel bus replacements (if not sooner) may be part of a good strategy to attract discretionary riders and have the community identify Votran as a partner in its environmental goals/values. Converting most of its fleet to electric may take time and require more resources and facilities but can be initiated with smaller scale efforts such as providing MOD in local communities with smaller electric buses/vans.

While implementing such app-based MOD in low-density areas with electric vehicles, Votran also should consider driverless AV in high-density areas within the next 10 years. While it is still at the pilot project stage in most communities where AV currently is in place, AV in mass transit is clearly a desired goal for the industry and should be explored to improve the attractiveness of transit. Additionally, these new technologies are eligible for a number of new federal grants.

Votran should coordinate with FDOT on bus preferential treatments such as transit signal prioritization. Implementation of this technology could be coordinated with lane features such as queue jumps that allow transit vehicles operating in traffic to advance before queued traffic.

² Transit Signal Priority utilizes vehicle location and wireless communication technologies to extend the green phase or shorten the red phase of a traffic signal to allow buses to reduce their delay at intersections. This helps reduce overall travel times and ensure on-time arrivals.

³ When combined with Transit Signal Priority, Queue Jump lanes at intersections, which are usually implemented with right-turn lanes, provide buses a head-start over other queued vehicles, letting buses merge into the regular travel lanes immediately beyond the signal.

Organizational Issues and Funding

Votran has been a part of Volusia County government since the service was established in 1975, and has continued to be staffed and operated by a contracted service provider, which currently is First Transit. The contract with the provider is reviewed from time to time, most recently in early 2020, and the Volusia County Council selected First Transit as its provider for Votran.

Votran currently operates using funds from federal grants, state revenues, Volusia County's general fund, and other revenues. Other revenues include farebox, advertising, and return on investments. The most recent operating budget for Votran (FY 2020/21) is funded 13 percent by passenger fares, 18 percent by the Volusia County General Fund contribution, and the rest, 69 percent, by federal and state grants.

In March 2020, the Coronavirus Aid Relief and Economic Security (CARES) Act was passed by Congress to assist agencies with operational and administrative costs. Current Votran funding includes \$22 million in Federal CARES Act funds for this fiscal year. Additional funds are derived from bus advertising and charges for services. The General Fund contribution is evaluated each year and the fiscal year 2020/21 contribution is \$5 million.

The Federal CARES Act funding, a source of revenues to assist transit agencies during the pandemic, that has been allocated for Votran is being utilized to offset operating costs normally subsidized by the General Fund. Funding was partially spent in FY 2019/20, and the balance is expected to be used by Votran over the next two fiscal years.

Votran's capital projects require no local funding and are appropriated when the grant funds are awarded. These funds are used to purchase buses, vans, office equipment, and complete any scheduled construction.

As the pandemic continues to affect ridership, another relief fund, the Coronavirus Response and Relief Supplemental Appropriations (CRRSA) Act, worth \$14 billion, was signed in December 2020. Votran may receive more federal assistance in the near future from the CRRSA Act and/or another new bill that was recommended by the House Committee on Transportation and Infrastructure. That bill proposes another \$30 billion in aid, of which \$27 billion would be dedicated to agencies like Votran.

Implications

Votran continues to operate successfully with the current organizational structure, as part of the Community Services Department within Volusia County. While an evaluation of the organizational framework is beyond the scope of a TDP, a cursory look at the data, including Votran maintaining its ridership steady for the last few years in an industry that is losing ridership, input from stakeholders and the general public on service provisions, and Votran's place/reputation in the community all indicate that Volusia County should maintain Votran's current organizational structure going forward, as well.

As funding is limited and continues to tighten, Votran has stayed true to its mission of providing mobility for both fixed-route and Gold Service users. Securing new sources and bolstering existing dedicated local funding should be a priority for Votran. As improved transit services may attract more visitors and can bolster economic development by connecting workers to jobs, municipalities such as

Daytona Beach may be open to dedicating a portion of their local funds to Votran as an investment/fair share allocation beyond that which comes from General Funds. Cities with high tourism may also consider using parking revenues as a way to contribute to transit.

Furthermore, as Volusia County is home to a number of higher education centers, Votran should explore the possibility of them becoming funding partners through dedicated student pass programs in exchange for a more enhanced and structured service to their staff and students. Such agreements may translate to less parking needs on the campuses, thereby reducing costs for students and increasing expansion space for the colleges.

Section 6. Goals, Objectives, and Policies

By providing the policy direction to achieve the community’s vision of making transit a truly viable option, its mission, goals, and objectives play an integral part of Votran’s TDP. The goals, objectives, and the policy initiatives presented in this section were prepared based on guidance/findings from a number of sources, as discussed below.

Goals and Objectives Update Guidance

The following sources were used to guide the update of the Votran goals and objectives for the next 10 years:

- Goals and objectives from the last TDP and progress on its 10-year implementation plan.
- Findings from the Situation Appraisal that identified key issues affecting Votran today and over the next decade.
- Input received from the public, stakeholders, Votran, and Volusia County on the needs and direction of transit in Volusia County and the immediate region.
- Findings from plan and policy reviews based on recommendations, goals, and objectives included in other agency plans to ensure consistency with other planning efforts at the local, regional, and national levels.

Following the statements of the transit agency’s mission, this section presents the updated goals, objectives, and policy initiatives to support the community’s vision for transit services over the next 10 years.

Mission

Identify and safely meet the mobility needs of Volusia County. This mission will be accomplished through a courteous, dependable and an environmentally-sound team commitment to quality service.

Goals and Objectives

The updated goals, objectives and policy initiatives recommended for the 2022-2031 Votran TDP Major Update are presented below.

Goal 1: Provide an effective and efficient transit service in a fiscally responsible and environmentally-friendly method.

Objective 1.1: Monitor service quality and maintain minimum performance standards.

Initiative: Annually complete performance monitoring based on the performance standards for fixed-route and paratransit services.

Initiative: Conduct an on-board survey at least every 5 years as part of the major TDP update to monitor changes in user demographics, travel behavior characteristics, and user satisfaction, as well as maintain compliance with FTA Title VI Circular 4702.1B.

Initiative: In coordination with Transit Asset Management (TAM) planning, develop and review/update a system of asset performance measures.

Initiative: Maintain APC system for tracking ridership, on-time performance, and bus stop utilization data.

Objective 1.2: Improve frequency on high performing routes to at least 30 minutes.

Objective 1.3: Increase service delivery to include expanded weekend and weekday service spans based on transit demand.

Initiative: Expand opportunities for multimodal travel, including premium and express bus services, park-and-ride facilities, and improved bicycle and pedestrian access by implementing the adopted 10-Year Transit Development Plan's service and capital improvements.

Initiative: Continue to pursue additional funding opportunities to increase frequencies on high performing routes or expand service to new areas with the county based on the priorities identified in the adopted 10-Year Transit Development Plan.

Initiative: Implement service efficiency adjustments and system redesign recommendations from the 2021 Votran COA.

Initiative: Routinely assess operations to ensure the system eliminates excessive wait times or multiple transfers, as feasible.

Initiative: Develop a process to obtain financial support from applicable municipalities in Volusia County on an ongoing/annual basis.

Initiative: Engage municipalities and higher education centers on discussions of service enhancements and promoting use of transit.

Objective 1.4: Improve and maintain the Votran fleet.

Initiative: Maintain transit assets in a State of Good Repair (SGR) as defined by FTA.

Initiative: Review and update Votran's sustainability plan and design standards every three-years to incorporate advancements in environmental materials and policies that aim to reduce energy demand through increasing fleet fuel efficiency, optimize facility energy efficiency and clean energy generation, and advance sustainability in early planning and design.

Objective 1.5: Provide connectivity between the east and west parts of the county and to the immediate region with a focus on transit generators and other modal options.

Initiative: Provide fast, adequate, and convenient access to existing and planned SunRail stations.

Initiative: Coordinate with regional transit systems, such as LYNX, Lake Xpress, Flagler County Public Transportation (FCPT), and Space Coast Area Transit (SCAT), on service connection enhancements and regional fare payment options for faster and seamless county-to-county travel.

Initiative: Continue coordination with Rethink commuter services for the implementation of additional commuter programs.

Objective 1.6: Ensure capable staff are available to lead the agency and deploy the best possible service.

Initiative: Retain and recruit transit professionals with expertise to deliver service.
Initiative: Ensure staff training opportunities keep pace with industry standards.
Initiative: Annually review policies and procedures to ensure they provide the oversight and guidance to promote a healthy work environment.

Goal 2: Provide a transit experience that is pleasing to the customer and encourages additional use.

Objective 2.1: Make safety a primary element in the development, operation, and maintenance of the transit system.

Initiative: Maximize customer comfort and safety while waiting for and riding Votran vehicles.
Initiative: Coordinate with local agencies to ensure that all bus stops are ADA accessible and develop an ADA Transition Plan to bring non-compliant stops into compliance.
Initiative: Coordinate with local agencies to review and strengthen policies that maximize pedestrian safety and access to transit stops.

Objective 2.2: Expand transit marketing and awareness campaigns and continue to develop Votran's service branding throughout Volusia County.

Initiative: Develop marketing program and provide educational opportunities for customers and the general public to learn about and use transit.
Initiative: Continue to increase public awareness of the Votran service planning effort by branding the next major update of the 10-year Transit Development Plan to provide more targeted platform to educate and engage stakeholders and citizens.
Initiative: Expand marketing campaigns to colleges/universities, developing targeted materials and strengthening partnerships.
Initiative: Develop internship opportunities with local colleges in service planning, operations, finance, and management to develop talent, create a test bed for hiring, and foster positive transit perspectives.

Objective 2.3: Increase avenues for customers to access information on transit service.

Initiative: Provide educational opportunities for customers and the general public to learn about transit operations and participate in evaluating and developing services.
Initiative: Continue to provide customer service and sensitivity training to all new employees and contractors to ensure that all customers are treated with respect.

Objective 2.4: Make improvements to fare collection methods to facilitate boarding and streamline fare handling (reloadable cards, mobile ticketing, and tap cards).

Initiative: Implement touchless fare payment systems and mobile fare payment methods.
Initiative: Continue to coordinate with LYNX to offer regional fares.

Objective 2.5: Develop strategies to track public comments, customer feedback, complaints, and compliments, creating a feedback program that encourages excellent service and accountability.

Initiative: Continue to provide customer service and sensitivity training to all new employees and contractors to ensure that all customers are treated with respect.

Initiative: Periodically review reoccurring customer suggestions and complaints.

Goal 3: Utilize the best technologies and innovations available that offer both enhanced systems and positive return on investment.

Objective 3.1: Expand Intelligent Transportation System (ITS) improvements.

Initiative: Periodically evaluate existing and potential customer information systems (Votran website, MyStop application, email distribution, etc.) to make the system more attractive to a greater number of existing and potential customers.

Initiative: Continue to upgrade existing technologies (fareboxes, video surveillance, software, etc.) to maintain efficiency of operations and maximize safety.

Initiative: Maintain an ITS plan that includes evaluation criteria for potential and proposed ITS projects.

Initiative: Coordinate with FDOT on TSP and queue jumps along major transit corridors, specifically US 92.

Objective 3.2: Explore applicability of microtransit and AV transit and the feasibility of replacing at least part of transit fleet with electric vehicles as existing vehicles reach their useful life benchmark.

Initiative: Evaluate the fuel and maintenance cost of the existing fleet and compare to projected costs of electric vehicle capital and maintenance cost.

Initiative: Explore federal grants to fund fleet replacement with electric vehicles.

Initiative: Implement technology-based on-demand travel options in low-density areas to connect locally and/or as first-mile/last-mile access options.

Initiative: Explore applicability and suitability of implementing an AV transit pilot project in a high-demand/high-density area.

Objective 3.2: Assess all major capital purchases prior to initiating for value to the agency, capacity to deploy successfully, and cost-benefit to the community.

Initiative: Explore new technology applications, such as Wi-Fi on buses, ticket vending machines real-time bus arrival information, and transit signal priority on key transit routes to enhance operations and/or the rider's experience.

Goal 4: Encourage a connected, sustainable, and efficient multimodal transportation system throughout Volusia County's urban service area.

Objective 4.1: Increase local knowledge of transit's financial impact on Volusia County and the potential benefits of improvement to the transit system.

Initiative: Coordinate with local agencies to improve local knowledge of the benefits of transit-friendly land uses and land use patterns consistent with the Transit Development Design Guidelines.

Initiative: Coordinate with local agencies to review proposed development projects anticipated to impact the public transportation system and work to identify mitigation strategies in accordance with the adopted Transportation Impact Analysis Guidelines and county development review processes.

Initiative: Coordinate with local agencies concerning opportunities to improve connectivity of public transportation to other multimodal transportation options, such as biking and walking.

Initiative: Coordinate with local agencies concerning opportunities to improve transit-supportive infrastructure along existing and future public transportation corridors.

Object 4.2: Educate community partners on improving planning activities for existing and future transit service.

Initiative: Assist education and coordination activities that encourage investment in transit service and infrastructure.

Initiative: Support local and regional connectivity of transit service and infrastructure with available rail service options.

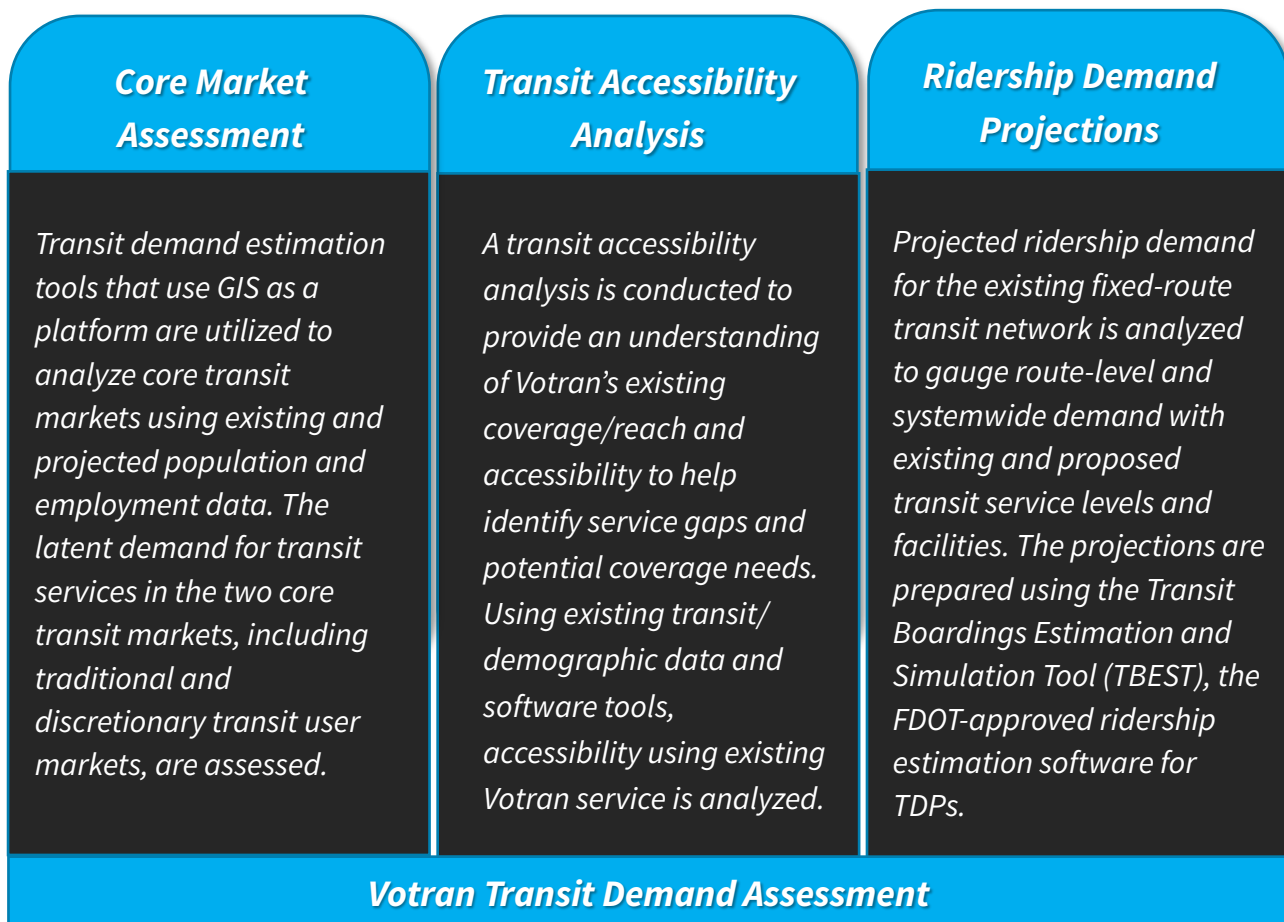
Initiative: Coordinate connection to SunRail stations and with LYNX.

Section 7. Transit Demand Assessment

An assessment of transit demand was conducted using a set of tools and methodologies to gain an understanding of existing and potential travel needs locally and regionally for Volusia County (Figure 7-1). These types of latent demand assessments are a key component of TDPs and yield the building blocks for determining the transit needs for the community when their results are combined with findings from the other efforts in the TDP, such as the baseline conditions assessment, public outreach, and relevant plan reviews.

The purpose of this section is to summarize the demand and mobility needs assessment conducted as part of the Votran 10-year TDP.

Figure 7-1: Demand Assessment Methodologies/Tools



These analysis tools/methodologies and results of each of these technical analyses used to assess the demand for transit in Volusia County are summarized in the remainder of this section.

Core Market Assessment

Two demand estimation tools that use GIS as a platform were utilized to analyze core transit markets using existing and projected population and employment data. One tool measures the levels of transit dependency within a particular geographical area to help assess existing transit coverage in comparison to areas with population that have a propensity for transit use. The other supplements these findings by illustrating the relationship between the discretionary market (i.e., persons living in higher-density areas of the region who can drive and have access to an available vehicle, but may be a potential transit rider because of some willingness to use alternative modes for travel) and the use of transit as a commuting alternative.

The tools include a Density Threshold Assessment (DTA) to analyze the discretionary rider market and a Transit Orientation Index (TOI) to analyze traditional rider markets, such as older adults, youth, and low-income/no vehicle households, all of which have a higher propensity for transit use. The core transit markets investigated and the corresponding market assessment tool used to measure each are described below.

Discretionary Rider Markets

As previously noted, the discretionary market consists of potential riders residing in higher-density areas of Volusia County that may choose to use transit as a commuting or transportation alternative. The analysis was conducted using industry-standard density thresholds to identify the areas in Volusia County that exhibit transit-supportive residential and employee density levels today as well as in the future. Socioeconomic data for Volusia County, including dwelling unit and employment data based on information developed for the R2CTPO's 2045 LRTP, were used to develop the DTA for 2022 and 2031.

Three density thresholds, developed based on industry standards/research, were used to indicate whether an area contains sufficient density to sustain some level of fixed-route transit operations:

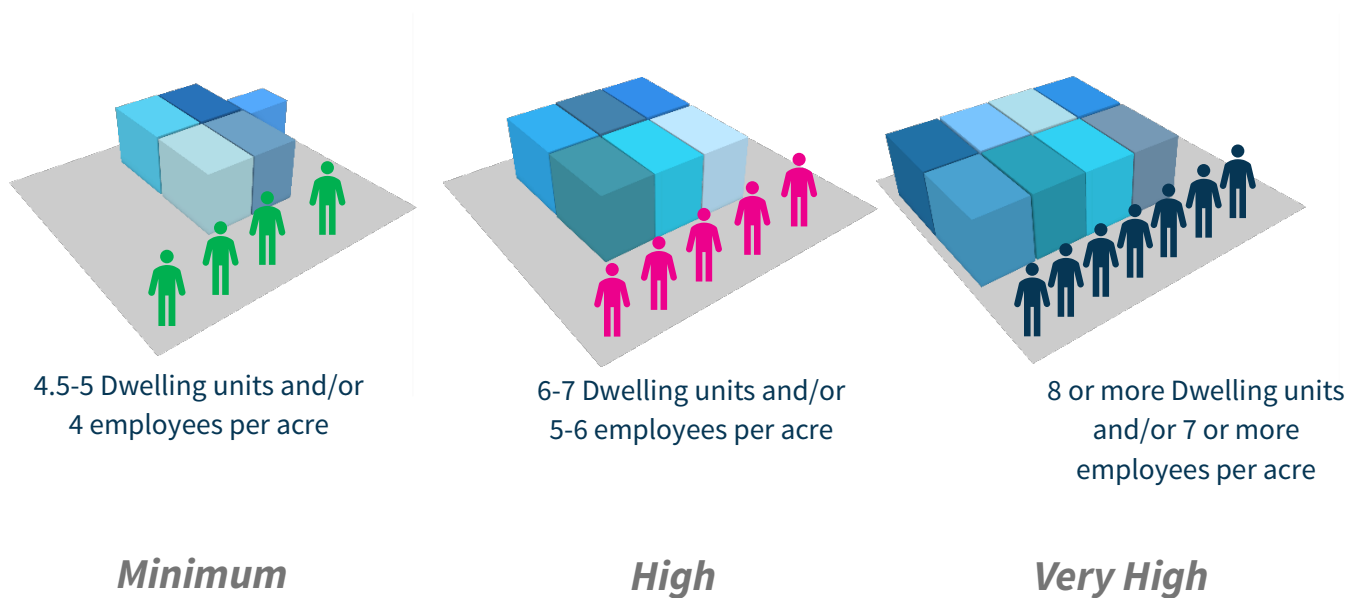
- Minimum Investment – reflects minimum dwelling unit or employment densities to consider basic fixed-route transit services (i.e., local fixed-route bus service).
- High Investment – reflects increased dwelling unit or employment densities that may be able to support higher levels of transit investment (i.e., more frequent service, longer service span, etc.) than areas meeting only the minimum density threshold.
- Very High Investment – reflects very high dwelling unit or employment densities that may be able to support more significant levels of transit investment (i.e., very frequent services, later service hours, weekend service, premium modes, etc.) than areas meeting the minimum or high-density thresholds.

Table 7-1 presents the dwelling unit and employment density thresholds associated with each level of transit investment described above. Figure 7-2 shows a visual of the dwelling units and employment densities associated with the respective thresholds.

Table 7-1: Transit Service Density Thresholds

Level of Transit Investment	Dwelling Unit Density Threshold ¹	Employment Density Threshold ²
Minimum Investment	4.5–5 dwelling units/acre	4 employees/acre
High Investment	6–7 dwelling units/acre	5–6 employees/acre
Very High Investment	≥8 dwelling units/acre	≥7 employees/acre

Figure 7-2: Transit Service Density Thresholds

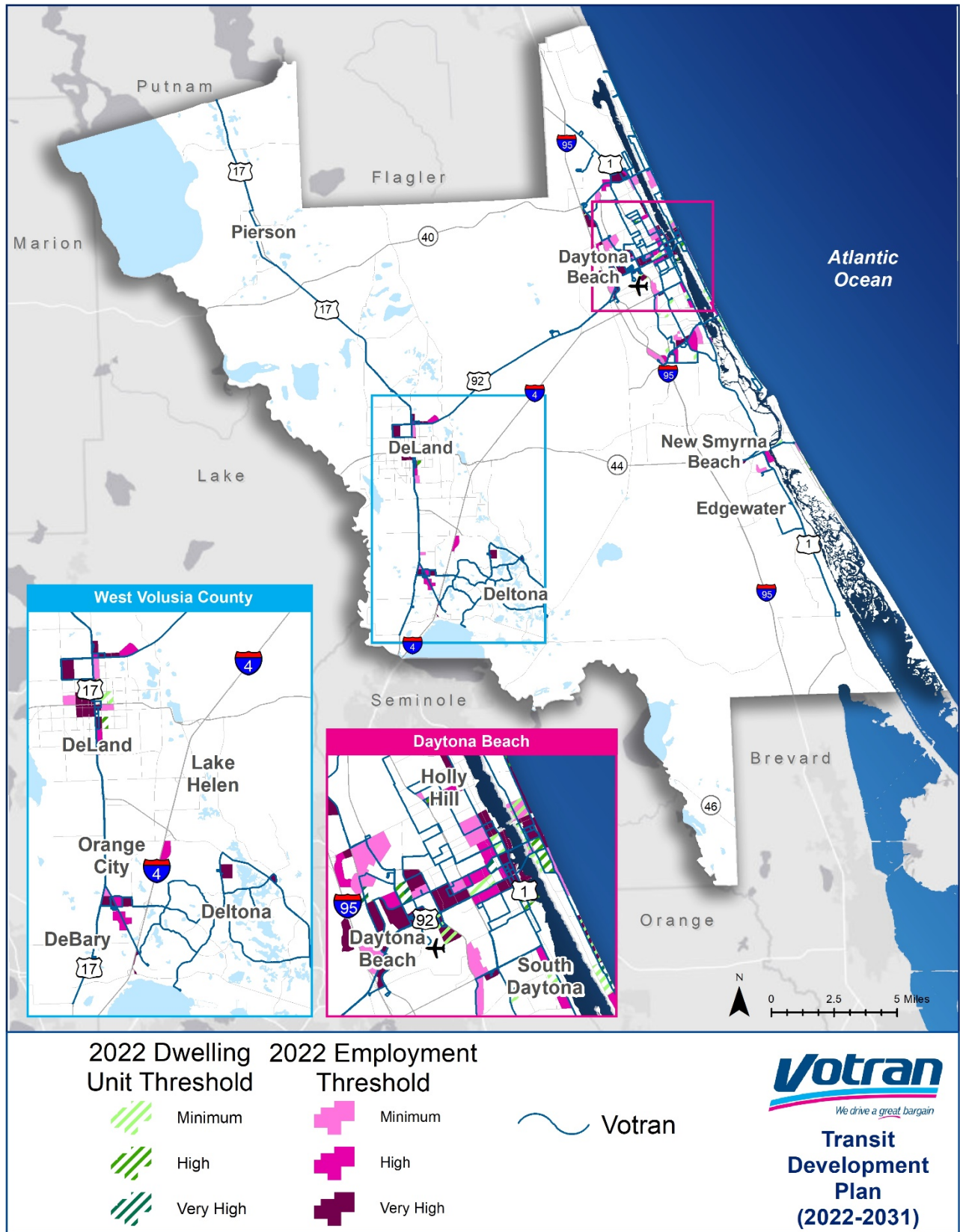


As density increases, areas generally become more transit-supportive; the DTA assists in determining the presence of optimal conditions for varying levels of fixed-route transit service. The results of these analyses are used in the assessment of transit needs and demand.

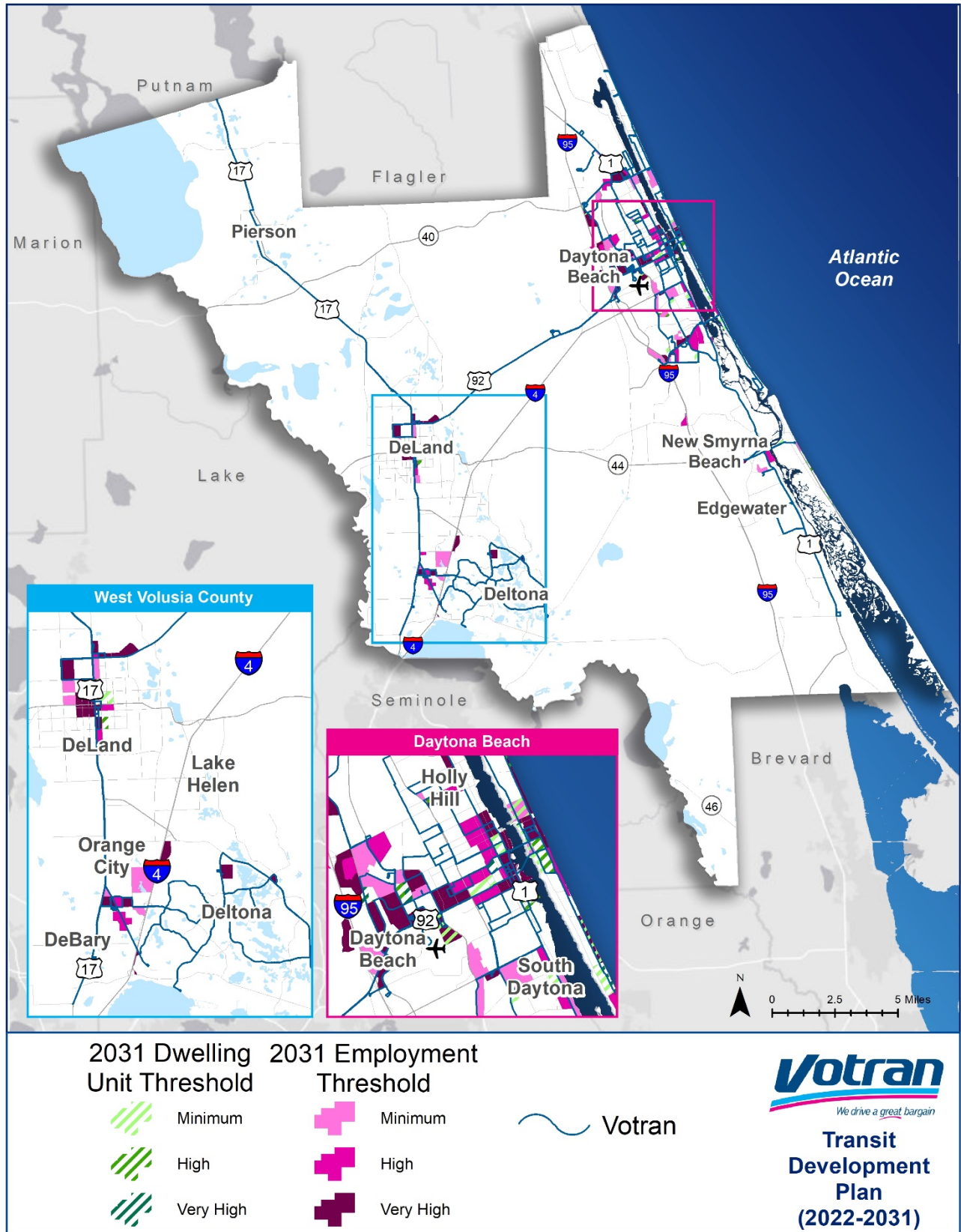
Maps 7-1 and 7-2 illustrate the results of the 2022 and 2031 DTA analyses conducted for Volusia County, identifying areas that support different levels of transit investment in those time frames, based on existing and future dwelling unit and employment densities.

These maps also include an overlay of the existing Votran route network to gauge how well the current transit network covers the areas of Volusia County that are considered supportive of at least a minimum level of transit investment.

Map 7-1: Density Threshold Analysis, 2022



Map 7-2: Density Threshold Analysis, 2031



DTA Summary of Findings

The 2022 DTA analysis indicates that the discretionary transit markets are derived mainly from employment densities rather than from dwelling unit densities and can be summarized as follows:

- Minimum employment densities are located on both sides of the county, primarily located along major corridors such as US 1, I-95, US 92, and I-4.
- The majority of the areas with minimum dwelling unit densities are located near the coast in the eastern portion of Volusia County in Ormond Beach, Holly Hill, Daytona Beach, Daytona Beach Shores, South Daytona, Port Orange, Ponce Inlet, New Smyrna Beach, and Edgewater; whereas, all areas in the western area with at least minimum dwelling unit densities are in DeLand.
- All areas that are considered to meet the “very high” dwelling unit thresholds for transit investment areas are in the east and are located along the coast in Ormond Beach between Sandra Drive and Palm Drive, along Williamson Boulevard between Dunn Avenue and Valor Boulevard, east of Bill France Boulevard between Dunn Avenue and Mason Avenue, between George W Engram Boulevard and Dr. Mary McLeod Bethune Boulevard along North Lincoln Street, along the Halifax River between Seabreeze Boulevard and Oakridge Boulevard in Daytona Beach, in Daytona Beach Shores between Thames Avenue and Dunlawton Avenue along the coast, and in Edgewater along the coast and Atlantic Avenue.
- All areas that meet the “high” dwelling unit thresholds for transit investment areas are located in the following areas:
 - Along Garfield Avenue between Euclid Avenue and Beresford Avenue in DeLand.
 - North of Dunn Avenue along Williamson Boulevard and Bill France Boulevard adjacent to “very high” dwelling unit density areas along Williamson Boulevard.
 - In Holly Hill along A1A west of the coast and along LPGA Boulevard adjacent to Nova Road.
 - In Daytona Beach between Main Street and Silver Beach Avenue along A1A and between the Halifax River and US 1.
 - Between the coast and Atlantic Avenue in Edgewater.
- Areas that meet the “high” or “very high” thresholds for employment in Volusia County are located:
 - West of US 1 along Granada Boulevard to Old Tomoka Road and between Williamson Boulevard and I-95 in Ormond Beach.
 - In Holly Hill west of US 1 adjacent to LPGA Boulevard to Nova Road and between Cardinal Drive and International Speedway Boulevard along the coast.
 - Along the Halifax River from 6th Street to Orange Avenue adjacent to US 1.

- Adjacent to Daytona Beach International Airport (DAB) in clusters from Clyde Morris Boulevard to Bellevue Avenue.
- In Daytona Beach Shores from Bonner Avenue to Dunlawton Avenue along the coast.
- In Port Orange from I-95 to US 1 adjacent to Dunlawton Avenue.
- Between the North Causeway to 6th Street along the Halifax River and between Canal Street and Paige Avenue along Turnbull Creek in New Smyrna Beach.
- In the western portion in central DeLand along US 17 from Mercers Fernery Road to US 92 and from Plymouth Avenue to New Hampshire Avenue in pockets.
- From International Speedway Boulevard to Plymouth Avenue adjacent to Spring Garden Avenue.
- From US 17 to Langley Avenue along International Speedway Boulevard in DeLand.
- Between US 17 and Veterans Memorial Parkway along Saxon Boulevard and adjacent to Enterprise Road south of Saxon Boulevard in Orange City.
- In Deltona, along I-4 from DeBary Avenue to Enterprise Road and from Graves Avenue to north of South Avenue. Additionally, areas between Providence Boulevard and Adelia Boulevard and adjacent to Elkcam Boulevard and Howland Boulevard.
- The majority of areas that meet at least the minimum DTA thresholds are currently served by Votran.
- Based on the 2031 DTA analysis, all areas in the 2022 DTA that meet the “high” or “very high” thresholds for dwelling units and/or employment will remain. Some of the new areas that meet the “minimum” requirement will be adjacent to established areas in the following areas:
 - In Orange City, west of I-4 adjacent to Veterans Memorial Parkway.
 - South of Saxon Boulevard adjacent to I-4 in Orange City.
 - In Deltona, south of Plymouth Avenue adjacent to Spring Garden Avenue.
 - Adjacent to I-95 along Williamson Boulevard south of LPGA Boulevard and south of Mason Avenue along Bill France Boulevard.

Traditional Rider Markets

A traditional rider market refers to population segments that historically have had a higher propensity to use transit or are dependent on public transit for their transportation needs. Traditional transit users include the following:

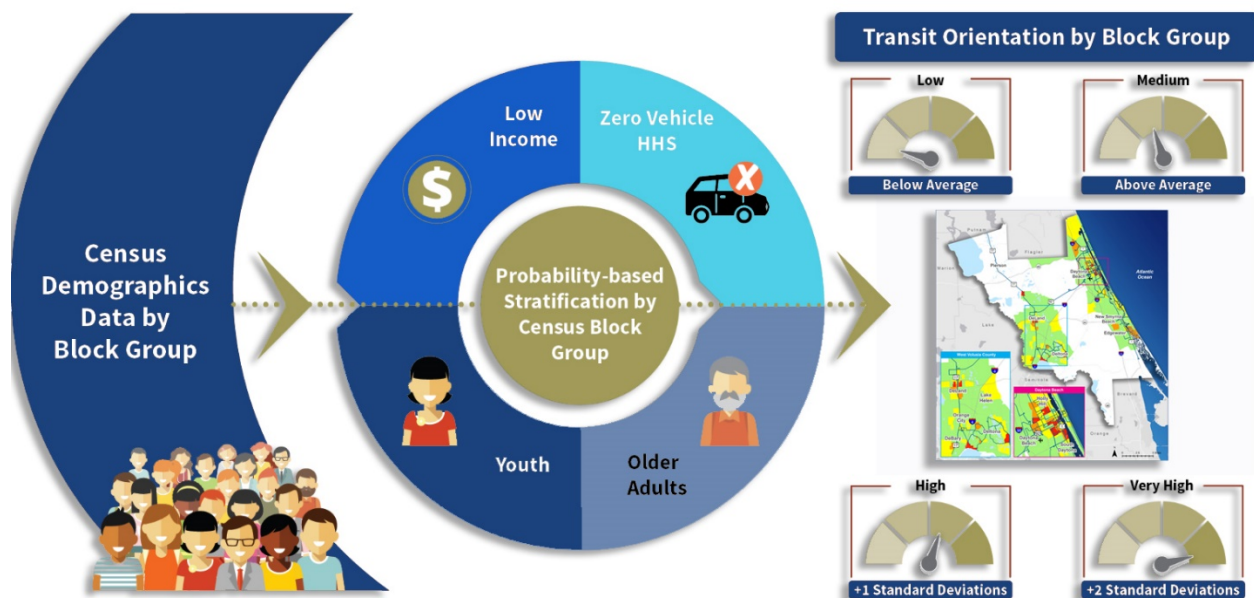
- Older adults, including people that are 65 and older
- Youth, including people aged 10-15 years old

- Low-income households, with homes that have an annual household income of \$25,000 or less
- Zero vehicle households, including homes that do not have an operable vehicle

For some individuals, the ability to drive is greatly diminished with age, so they must rely on others for their transportation needs. Likewise, younger persons not yet of driving age but who need to travel to school, to employment, or for leisure may rely more on public transportation until they reach driving age. For lower-income households, such as those with no private vehicle, transportation costs are particularly burdensome. These households tend to spend a greater portion of income on transportation-related expenses than higher-income households do; therefore, they typically have an increasing reliance on public transportation for their mobility needs.

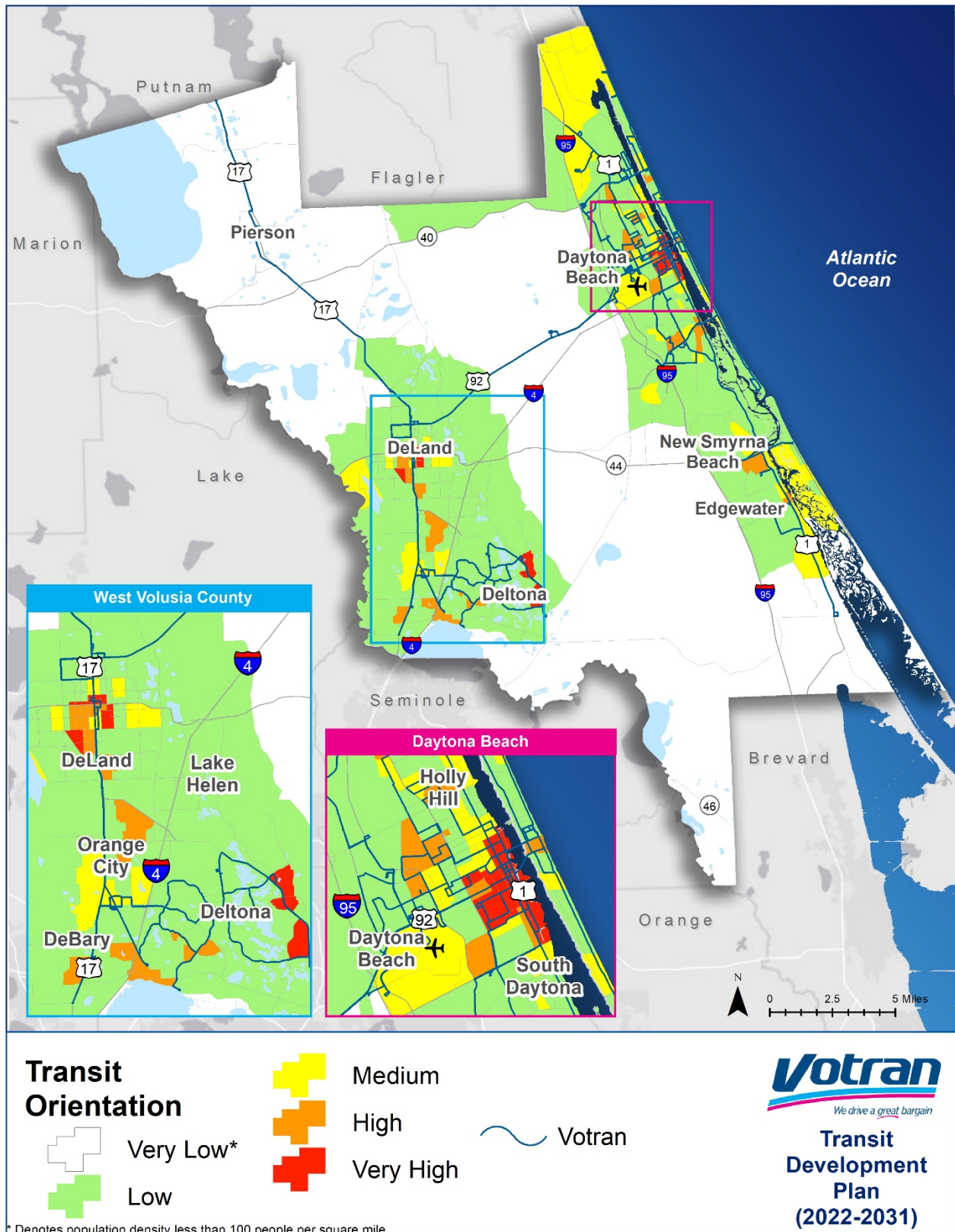
The TOI was developed to assist in identifying areas of the county where these traditional rider markets exist. To create the TOI for this analysis, demographic data from the 2020 ACS with 5-Year Estimates (2015-2019) were analyzed at the block group level for the demographic and economic variables. Using data for these characteristics and developing a composite ranking for each census block group, each area was ranked as “Very High,” “High,” “Medium,” or “Low” in their respective levels of transit orientation. The methodology and benchmarks are shown in Figure 7-3.

Figure 7-3: Transit Orientation Index Methodology



Map 7-3 illustrates the 2020 TOI, reflecting areas throughout the county with varying traditional market potential. The existing transit route network overlay shows the extent to which Votran currently covers those areas.

Map 7-3: Transit Orientation Index, 2020



TOI Summary of Findings

- The majority of areas that exhibit “high” or “very high” orientation towards transit are concentrated in incorporated areas in both the east and west parts of the county, including Daytona Beach, New Smyrna Beach, Edgewater, DeLand, DeBary, and Deltona.
- Areas exhibiting a “very high” orientation towards transit are clustered in the eastern portion of the county in Daytona Beach south of Mason Avenue and east of Nova Road along the Halifax River. Most areas are contiguous south of George W Engram Boulevard and north of Bellevue Avenue. Additionally, there are areas between the Halifax River and US 1 between Bellevue Avenue and Beville Road.
- Areas exhibiting a “very high” orientation towards transit in the western portion of Volusia County include areas in Deltona bordering Howland Boulevard adjacent to Elkcarn Boulevard, contiguous across Newmark Drive. Additionally, there is an adjacent area located in Deltona west of Howland Boulevard between Courtland Boulevard and Fort Smith Boulevard with a “very high” orientation towards transit. In DeLand, there are clusters of areas with a “very high” orientation towards transit near US 17 and Stetson University along New York Avenue from Stone Avenue to Garfield Avenue. Other areas include south of New York Avenue between Boston Avenue and Amelia Avenue, and north of Beresford Avenue. In Southeast DeLand, there are block groups along Taylor Road south of Beresford Avenue and west of Adelle Avenue.
- Areas considered to have a “high” orientation are located north of Daytona Beach between Jimmy Ann Drive and Nova Road, in the Daytona Beach area between Clyde Morris Boulevard and Nova Road adjacent to DAB, clustered near areas with “very high” orientation toward transit east of Nova Road, between the Halifax River and the coastline south of Main Street and along International Speedway Boulevard. “High” orientation areas are located in Holly Hill north of LPGA Boulevard along Nova Road, in Ormond Beach south of Grenada Boulevard west of Nova Road, and between the Halifax River and the coastline near Ormond Parkway. Other areas include Port Orange east of Clyde Morris Road between Dunlawton Avenue and Nova Road, and clusters along the Halifax River east of Spruce Creek Road along Dunlawton Avenue.
- In Southeast Volusia County, areas considered to have a “high” orientation are found in New Smyrna Beach south of SR 44, north of 10th Street to the Canal Street. Additionally, pockets of “high” orientation areas are found in Edgewater along the coastline adjacent to Atlantic Avenue from Indian River Boulevard and Turgot Avenue.
- In West Volusia County, in Deltona, there are contiguous areas with a “high” orientation towards transit that are adjacent to Normandy Boulevard and Providence Boulevard, along Monroe Lake south of Enterprise Road between I-4 and Providence Boulevard. In DeBary, there are areas west of I-4, south of Highbanks Road, and along US 17 south of Lake Drive. In Orange City, areas south of SR 472, west of Veterans Memorial Parkway, and north of Rhode Island Avenue are also considered to have a “high” orientation toward transit. In DeLand, there are clusters of block groups that exhibit a “high” orientation toward transit, from New

York Avenue to Taylor Road from Boundary Avenue along US 17. To the east of US 17, other areas are located south of New York Avenue, north of Euclid Avenue, and west of Garfield Avenue.

- Areas that are considered to have “medium” orientation are found clustered along the coastline bordering Flagler County. Additionally, other areas are located in Daytona Beach adjacent to areas with “high” or “very high” transit orientations, along the Halifax River in Holly Hill, bordering other “high” orientation areas in Port Orange, in New Smyrna Beach clustered along the coastline, and in Edgewater fringing US 1. In the western portion of the county, they are also found in contiguous clusters between I-4 and Dutchmans Bend Road from Highbanks Road to Blue Springs Avenue in Orange City. In DeLand, there are areas adjacent to the Lake County border and south of New York Avenue adjacent to areas that have a “high” or “very high” orientation toward transit along Spring Garden Avenue and Beresford Avenue east of Kepler Road.
- The majority of areas that have a “medium” or higher orientation to transit are adjacent to a transit route.

Transit Accessibility Analysis

An analysis also was conducted to identify the degree of accessibility from key transfer hubs and park-and-rides via the current Votran system. The extent to which a given major transfer hub, which typically is located at a major destination, is accessible via transit can provide valuable information on how the current system may impact travel patterns of current and potential Votran riders.

Votran Existing Network Accessibility Methodology

Using population and service area data and functionalities from FDOT’s ridership demand estimation software, TBEST, a travel time analysis for current and potential Votran users was conducted. The analysis examines the percent of the county’s areas/population that is within a gradient of travel sheds ranging from zero minutes up to 90 minutes in travel time.

The following existing Votran transfer locations were selected for this accessibility analysis.

- Amelia Super Stop
- Beachside ITF
- DeLand ITF
- Julia and Sams Super Stop
- Market Place Super Stop
- Swallowtail Connection Point
- Votran Transfer Facility

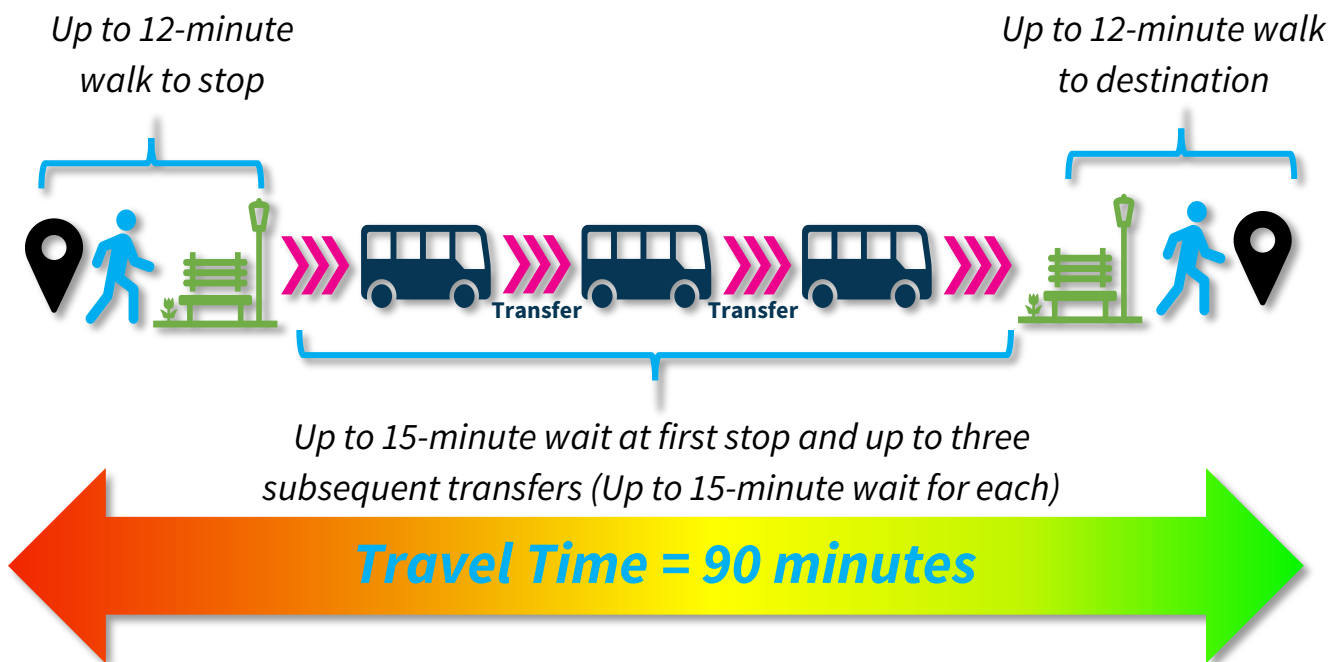
For the aforementioned locations, accessibility was measured for the weekday in the AM peak time period with a ¼-mile walk access to transit.

Network Accessibility Analysis Summary

As shown in Figure 7-4, the total travel time to access any of the locations includes not just the time on-board the bus (or the travel time), but also wait time to board the first bus, other wait times (if and as necessary), as well as walk times. For example, it considers whether a transfer is needed after the first bus to reach the destination, the walk time after getting off the first bus and walking to a transfer stop; and whether an additional transfer is needed thereafter to reach the destination, along with the wait time(s) to transfer to any other buses; and then the walk time to the final destination.

The accessibility/travel patterns analysis is summarized below and in Figures 7-5 through 7-11. The maps in the following sections include the existing route network as well as other key interstates and roadways. For any areas not colored according to the legend, it can be inferred that they are beyond the 90-minute travel time shed.

Figure 7-4: Components of the 90-Minute Bus Trip



Beachside ITF

The Beachside ITF is close to the coastline in the popular Daytona Beach area where many Votran routes connect. As shown in Figure 7-5, accessibility to the beaches and surrounding areas north and south of Earl Street is high, but there is no accessibility within 90-minutes to the majority of West Volusia County, New Smyrna Beach, and Edgewater. Approximately 15 percent (83,968 people) of the county's population can access the transfer center within 60 minutes, and 28 percent (154,996 people) can access within 90 minutes. Approximately 36 percent (81,583 jobs) and 53 percent (120,823 jobs) of the county's jobs can also be accessed within 60 minutes and 90 minutes using transit from the Beachside ITF, respectively.

Votran Transfer Facility

The Votran Transfer Facility is in the downtown area of the City of Daytona Beach where many Votran routes connect. Overall, accessibility to the areas surrounding the Votran Transfer Facility is highest within the city and on US 1 and US 92. However, riders originating from the Votran Transfer Facility can reach the majority of the eastern side of Volusia County within 90 minutes. Approximately 25 percent (135,922 people) of the county's population can access the transfer center within 60 minutes, and 32 percent (175,603 people) can access within 90 minutes (Figure 7-6). Approximately 49 percent (112,240 jobs) and 63 percent (145,480 jobs) of the county's jobs can also be accessed within 60 minutes and 90 minutes using transit from the Votran Transfer Facility in downtown Daytona Beach, respectively.

Swallowtail Connection Point

The Swallowtail Connection Point is located west of downtown Port Orange, adjacent to the Countryside Shopping Center on Swallow Drive between Dunlawton Avenue and South Nova Road. Overall, accessibility to the areas surrounding the connection point is highest on the Nova Road corridor, all on the eastern side, as shown in Figure 7-7. However, there is no accessibility to the west side of Volusia County within 90 minutes. Approximately 14 percent (75,325 people) of the county's population can access the transfer center within 60 minutes, and 25 percent (134,775 people) can access within 90 minutes. Approximately 22 percent (51,250 jobs) and 46 percent (106,530 jobs) of the county's jobs can also be accessed within 60 minutes and 90 minutes using transit from this connection point in Port Orange, respectively.

Julia and Sams Super Stop

The Julia and Sams Super Stop is located in downtown New Smyrna Beach. Overall, accessibility to the areas surrounding the mobility hub is greatest within the major corridors in New Smyrna Beach and parts of Edgewater (Figure 7-8). Approximately 6 percent (33,854 people) of the county's population can access the transfer center within 60 minutes, and 15 percent (81,712 people) can access within 90 minutes. Approximately 13 percent (29,691 jobs) and 24 percent (54,487 jobs) of the county's jobs can also be accessed within 60 minutes and 90 minutes using transit from the downtown New Smyrna Beach Super Stop, respectively.

Amelia Super Stop

The Amelia Super Stop is located in North DeLand, where many Votran routes link for convenient transfers for riders. Overall, accessibility to the areas surrounding the Amelia Super Stop is highest on the west side on US 17 and west US 92. While accessibility is highest in the southwest area of the county, riders can reach nearly all areas except Northwest and Southeast Volusia County within 90 minutes. Approximately 6 percent (32,441 people) of the county's population can access the transfer center within 60 minutes, and 13 percent (69,506 people) can access within 90 minutes (Figure 7-9). Approximately 22 percent (51,540 jobs) and 40 percent (91,833 jobs) of the county's jobs can also be accessed within 60 minutes and 90 minutes using transit from this Super Stop in North DeLand, respectively.

DeLand ITF

The centrally located connection point and park-and-ride, the DeLand ITF, is located near downtown DeLand. Overall, accessibility to the areas surrounding the DeLand ITF is highest on the US 17 corridor, all on the eastern side. As shown in Figure 7-10, there is no accessibility to the east side of Volusia County within 90 minutes. Approximately six percent (30,191 people) of the county's population can access the ITF within 60 minutes, and 11 percent (61,337 people) can access within 90 minutes. Approximately 18 percent (40,168 jobs) and 27 percent (62,460 jobs) of the county's jobs can also be accessed within 60 minutes and 90 minutes using transit from the downtown DeLand ITF, respectively.

Market Place Super Stop

The Market Place Super Stop is in Orange City and serves as the main connection point for Orange City and Deltona. Accessibility to the areas surrounding the Market Place Super Stop is highest within the Orange City area and on US 17. Figure 7-11 shows that riders in or around Orange City can reach Northern DeLand, Eastern Deltona, and the DeBary SunRail station within 90 minutes. Approximately 11 percent (59,951 people) of the county's population can access the transfer center within 60 minutes, and 15 percent (83,145 people) can access within 90 minutes. Approximately 17 percent (40,021 jobs) and 20 percent (48,755 jobs) of the county's jobs can also be accessed within 60 minutes and 90 minutes using transit from the Super Stop in Orange City, respectively.

Figure 7-5: Accessibility from the Beachside ITF

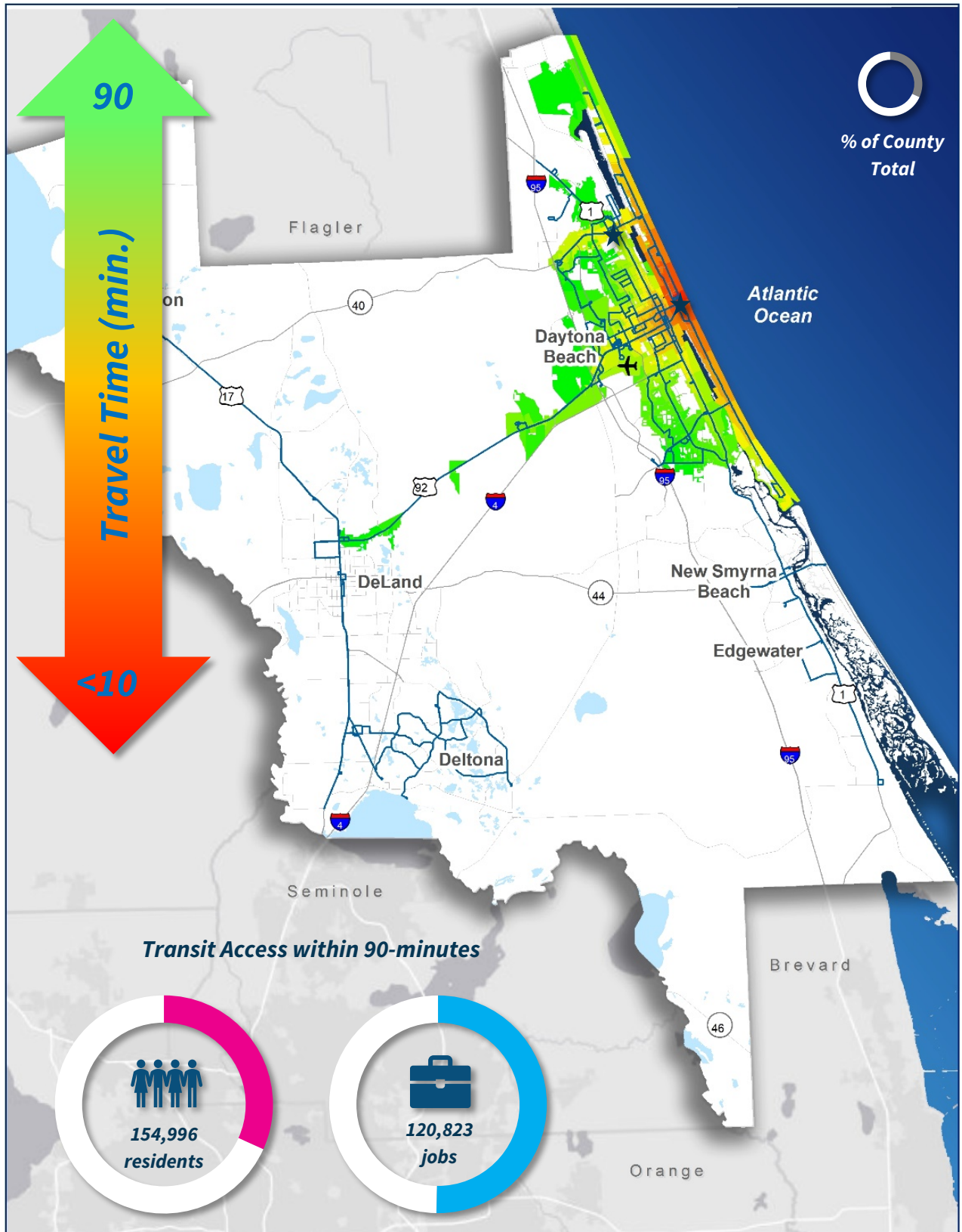


Figure 7-6: Accessibility from the Votran Transfer Facility

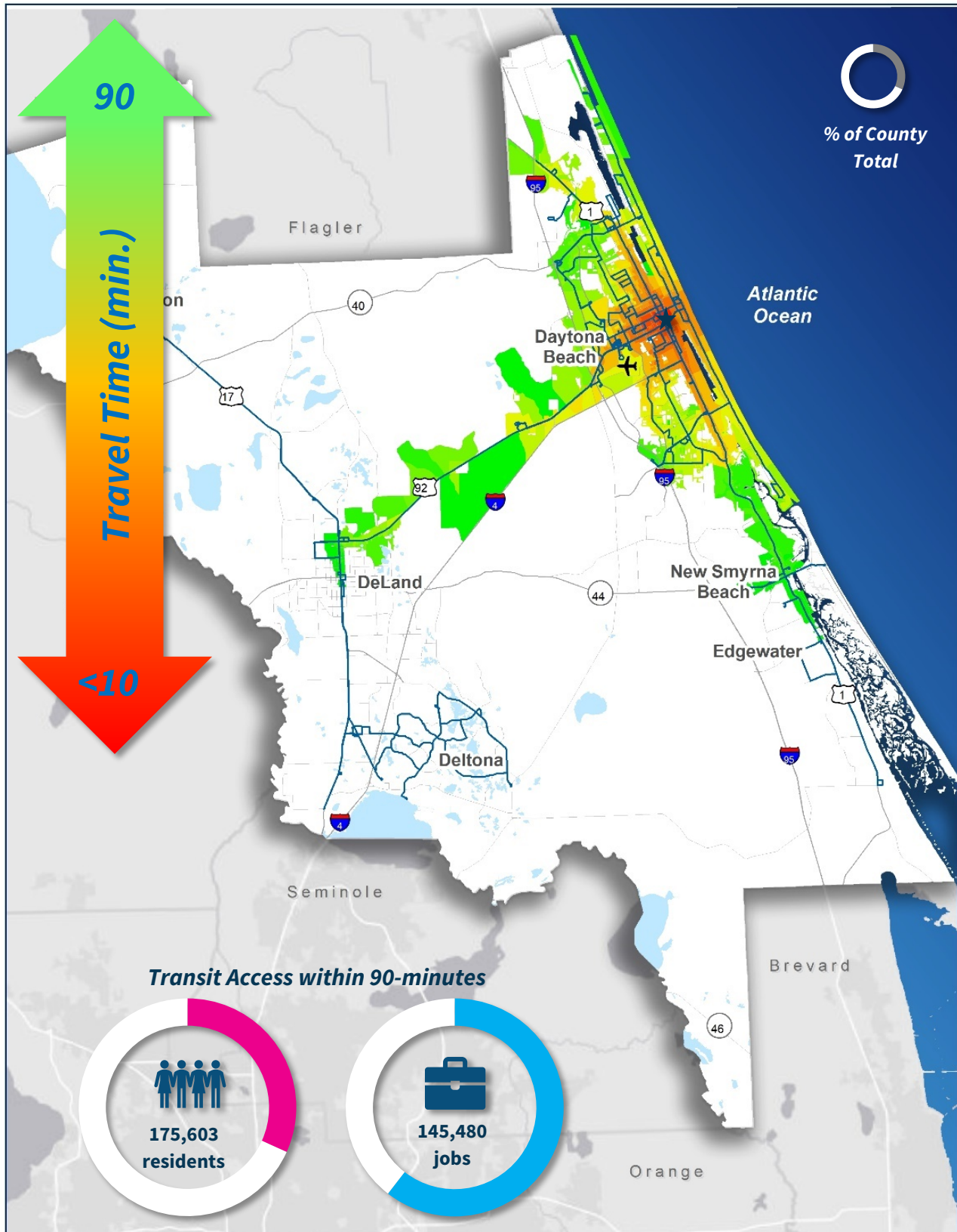


Figure 7-7: Accessibility from the Swallowtail Connection Point

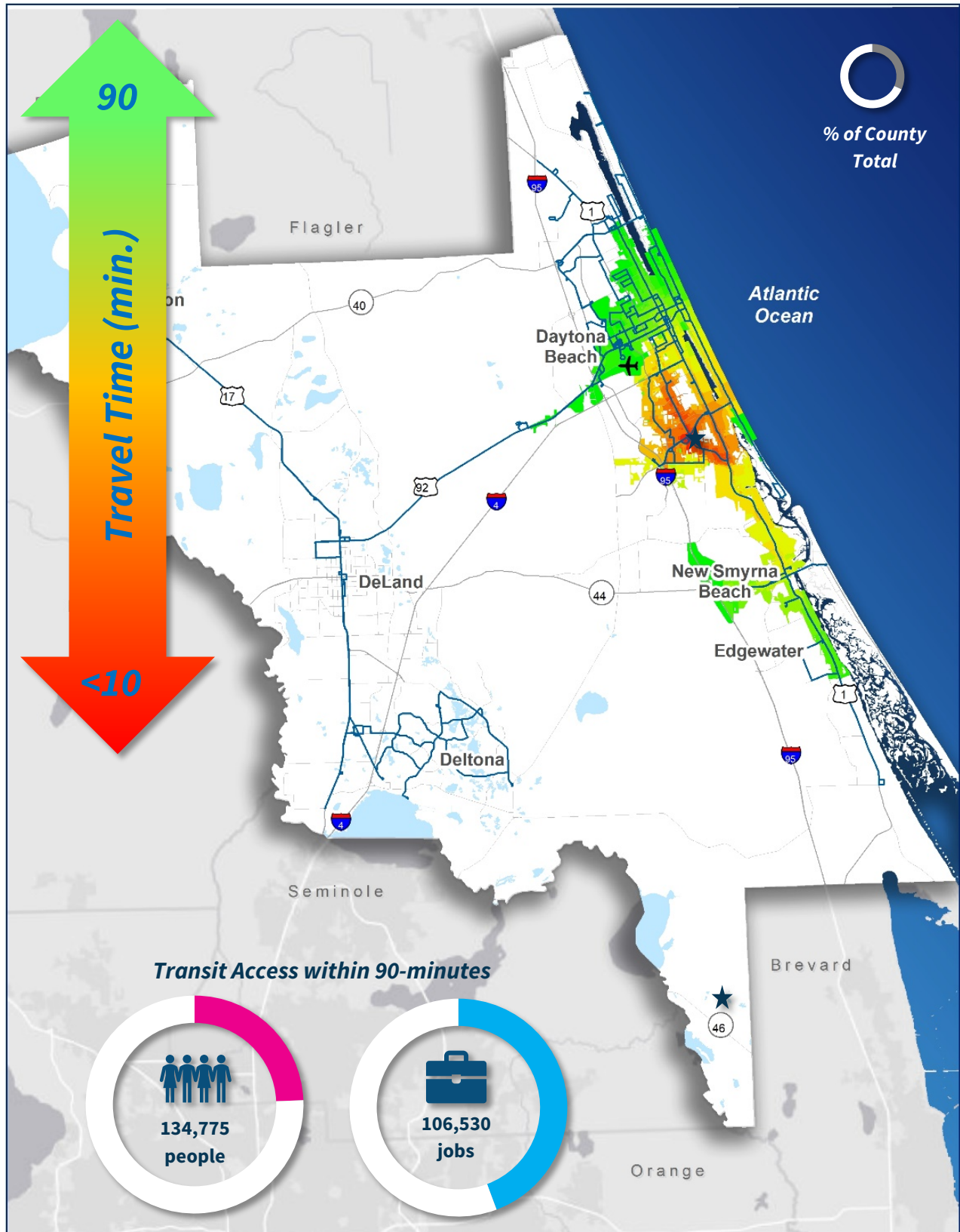


Figure 7-8: Accessibility from the Julia and Sams Super Stop

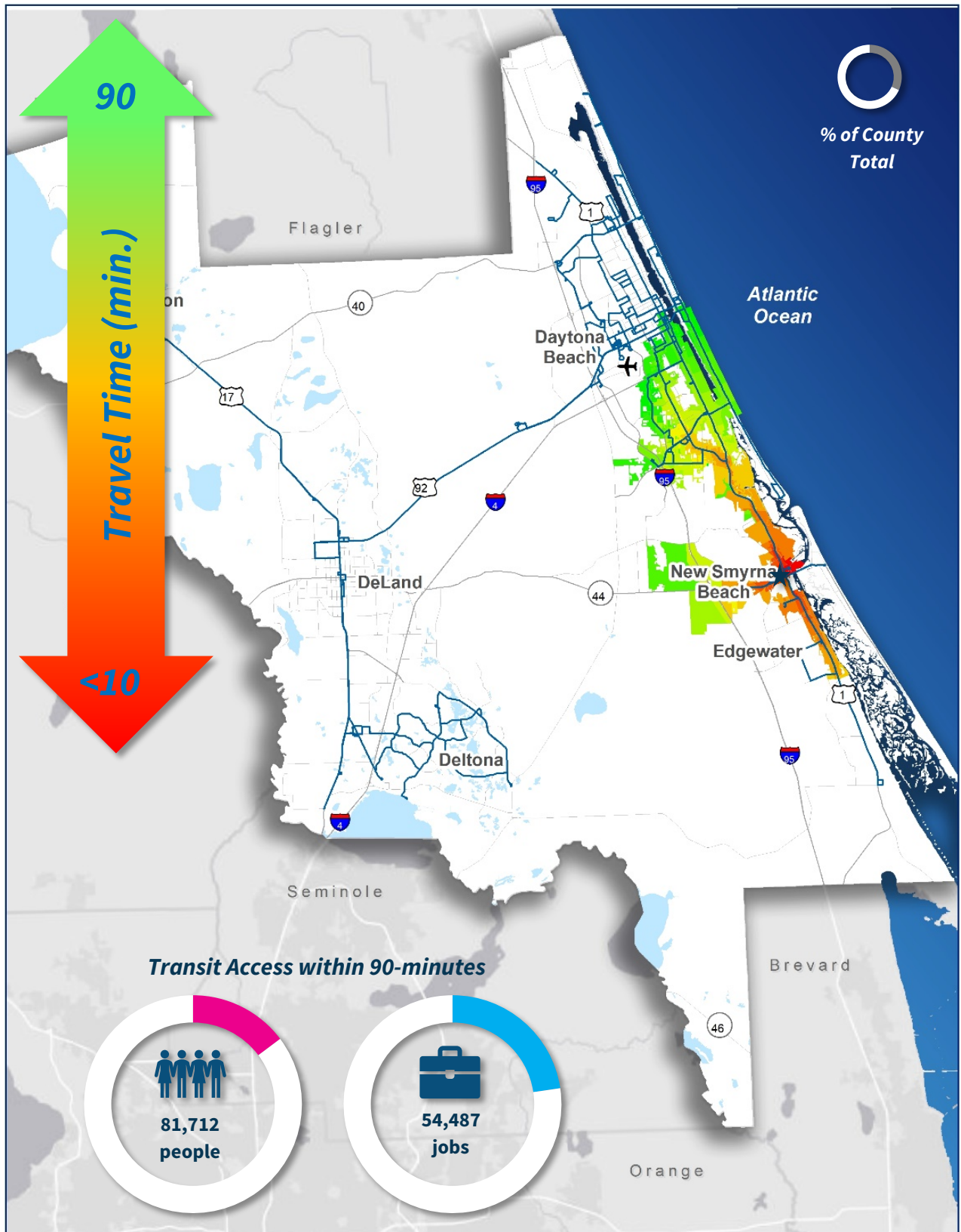


Figure 7-9: Accessibility from the Amelia Super Stop

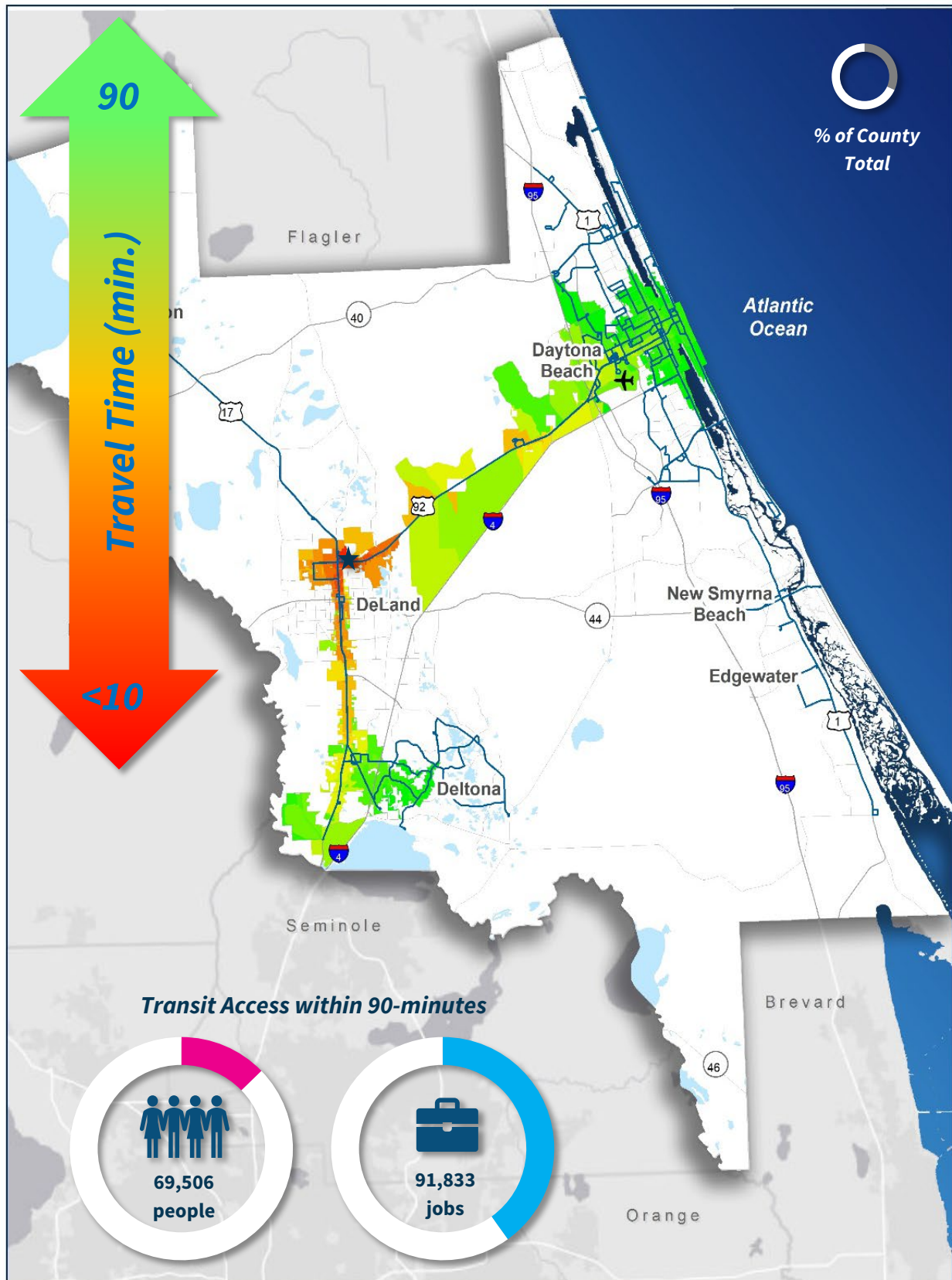


Figure 7-10: Accessibility from the DeLand ITF

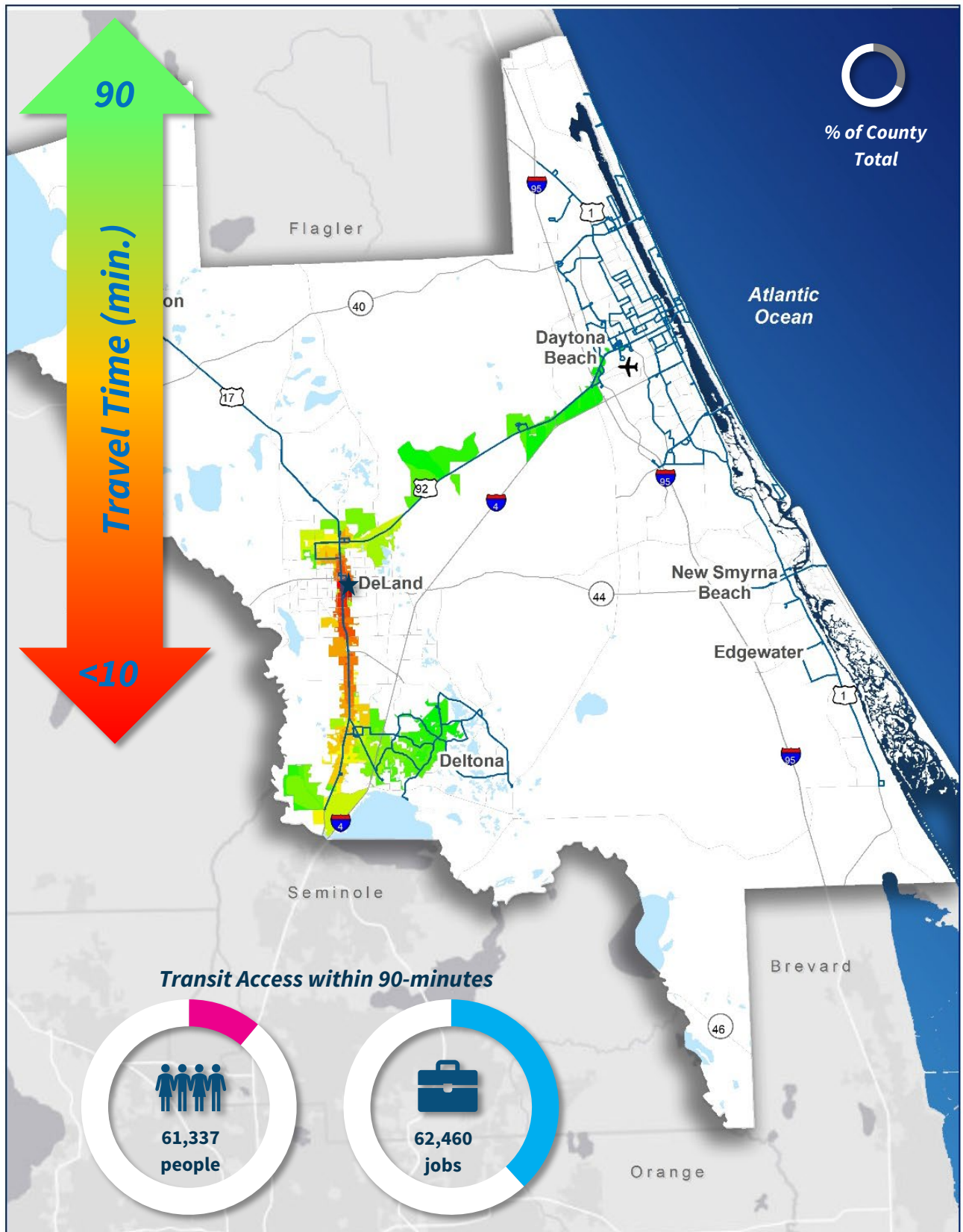
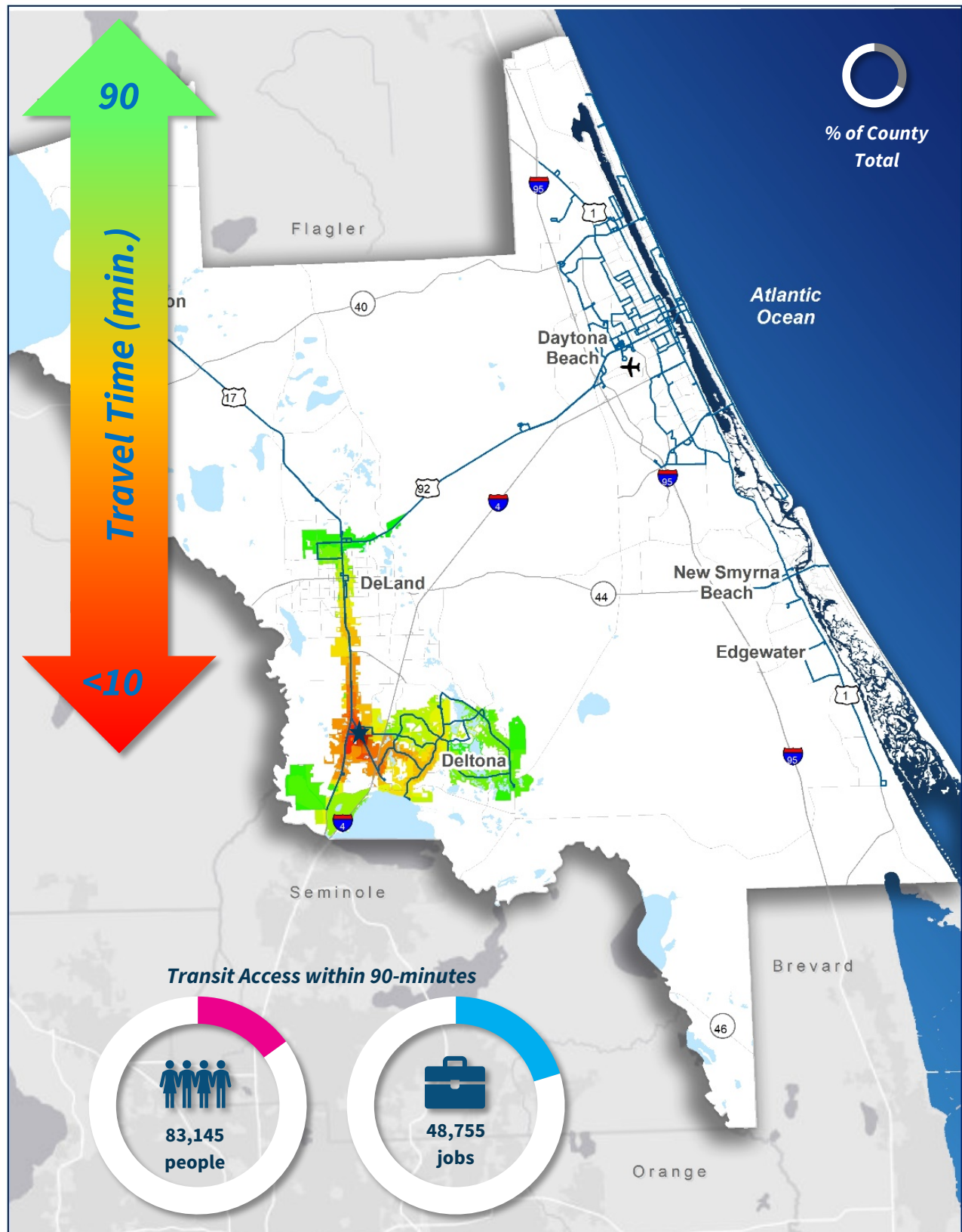


Figure 7-11: Accessibility from the Market Place Super Stop



Ridership Demand Projections

As another component of the transit demand assessment, forecast transit ridership demand projections for the existing and proposed fixed-route transit networks were analyzed using the ridership forecast data from TBEST, the FDOT-approved ridership estimation software for TDPs. This analysis was completed to gauge the route-level and system-wide demand, assuming the maintenance of existing transit service and implementation of the potential improvements proposed by the TDP.

TBEST is a comprehensive transit analysis and ridership-forecasting model that can simulate travel demand at the individual route level. The software was designed to provide near- and mid-term forecasts of transit ridership consistent with the needs of transit operational planning and TDP development. In producing model outputs, TBEST also considers the following:

- Transit network connectivity – The level of connectivity between routes within a bus network; the greater the connectivity between bus routes, the more efficient the bus service becomes.
- Spatial and temporal accessibility – Service frequency and distance between stops; the larger the physical distance between potential bus riders and bus stops, the lower the level of service utilization. Similarly, less frequent service is perceived as less reliable and, in turn, utilization decreases.
- Time-of-day variations – Peak-period travel patterns are accommodated by rewarding peak service periods with greater service utilization forecasts.
- Route competition and route complementarities – Competition between routes is considered. Routes connecting to the same destinations or anchor points or that travel on common corridors experience decreases in service utilization. Conversely, routes that are synchronized and support each other in terms of service to major destinations or transfer locations and schedule benefit from that complementary relationship.

The following sections outline the model inputs and assumptions, describe the TBEST scenario performed using the model, and summarize the ridership forecasts produced by TBEST.

Model Inputs / Assumptions and Limitations

TBEST uses various demographic and transit network data as model inputs. The inputs and the assumptions made in modeling the Votran system in TBEST are presented below. The model used the recently-released TBEST Land Use Model structure (TBEST Land Use Model 2018), which is supported by parcel-level data developed from the Florida Department of Revenue (DOR) statewide tax database. The DOR parcel data contain land use designations and supporting attributes that allow the application of Institute of Transportation Engineers (ITE)-based trip generation rates at the parcel level as an indicator of travel activity.

It should be noted, however, that the model is not interactive with roadway network conditions. Therefore, ridership forecasts will not show direct sensitivity to changes in roadway traffic conditions, speeds, or roadway connectivity.

Transit Network

The transit route network for all existing Votran routes was created to reflect 2019 conditions, the validation year for the model. General Transit Feed Specification (GTFS) data as of January 2020 were obtained from Votran to provide the input for the base transit system. Data include:

- Route alignments
- Route patterns
- Bus stop locations
- Service spans
- Existing headways during peak and off-peak periods (frequency at which a bus arrives at a stop—e.g., 1 bus every 60 minutes)

The GTFS data were verified to ensure the most recent bus service spans and headways; edits were made as needed. Transfer locations were manually coded in the network properties.

Socioeconomic Data

The socioeconomic data used as the base input for the TBEST model were derived from 2018 ACS Five-Year Estimates, the Bureau of Labor Statistics, the Bureau of Economic Analysis, 2015 InfoUSA employment data, and 2018 parcel-level land use data from the Florida DOR. Using these data inputs, the model captures market demand (population, demographics, employment, and land use characteristics) within ¼-mile of each stop.

TBEST uses a socioeconomic data growth function to project population and employment data. Using ACS socioeconomic data, population and employment growth rates were calculated. Population and employment data are hard-coded into the model and cannot be modified by end-users. As applied, the growth rates do not reflect fluctuating economic conditions as experienced in real time.

Special Generators

Special generators were identified and coded into TBEST to evaluate the opportunity for generating high ridership. Votran special generators include the following:

- Universities – Advanced Technology College, Bethune-Cookman University, Daytona State College campuses, Embry-Riddle Aeronautical University, Florida Technical College, Keiser College, Palmer College of Chiropractic, Stetson University, and University of Central Florida-Daytona Beach Campus
- Transfer Hubs – Amelia Super Stop, Beachside ITF, DeLand ITF, and Votran Transfer Plaza
- Major Rail Stations- DeBary Rail Station and future DeLand Rail Station
- Park-and-Rides – Saxon Park-and-Ride
- Shopping Malls – Volusia Mall, Tanger Outlets, and The Pavilion at Port Orange
- Hospitals – Advent Health Facilities and Halifax Health Facilities

- Airports – Daytona Beach International Airport (DAB)

T-BEST Model Limitations

It has long been a desire of FDOT to have a standard modeling tool for transit demand that could be standardized across the state, similar to the Florida Standard Urban Transportation Model Structure (FSUTMS) model used by MPOs in developing long range transportation plans (LRTPs). However, whereas TBEST is an important tool for evaluating improvements to existing and future transit services, model outputs do not account for latent demand for transit that could yield significantly higher ridership. In addition, TBEST cannot display sensitivities to external factors such as an improved marketing and advertising program, changes in fare service for customers, fuel prices, parking supply, walkability, and other local conditions and, correspondingly, model outputs may over-estimate demand in isolated cases.

Although TBEST provides ridership projections at the route and bus stop levels, its strength lies more in its ability to facilitate relative comparisons of ridership productivity. As a result, model outputs are not absolute ridership projections, but, rather, are comparative for evaluation in actual service implementation decisions. TBEST has generated interest from departments of transportation in other states and continues to be a work in progress that will become more useful as its capabilities are enhanced in future updates to the model. Consequently, it is important for Votran to integrate sound planning judgment and experience when interpreting TBEST results.

Ridership Forecasts

Using these inputs, assumptions, and route-level ridership data obtained from Votran, the TBEST model was validated for year 2019. Using the validation model as the base 2019 model, the following model scenarios and ridership forecasts were developed for this TDP major update:

- 2022 Existing Network Scenario – Assumes no change will be implemented to the existing route network.
- 2022 TDP Base Year Redesigned Network Scenario – Assumes implementation of the redesigned network, developed by Votran as a result of the COA, in 2022.
- 2031 TDP Needs Network Scenario – Assumes maintaining the redesigned COA network and adding the TDP Needs network in the next 10 years.

Table 7-2 shows the projected ridership for the 2022 Existing Network Scenario and 2022 Redesigned Network Scenario. It shows ridership at route and system levels if either scenario is implemented in 2022 and the ridership gain or loss as projected by the TBEST model. Figure 7-12 shows the projected 2022 ridership by the respective 2022 scenarios.

In addition, Table 7-3 shows comparative ridership projections for the redesigned COA network for 2022 and 2031, as well as for the 2031 TDP needs network.

Table 7-2: 2022 Existing and Redesigned Votran Network Scenarios TBEST Ridership Estimates*

Current Route	Projected 2022 Ridership with Current Network	Redesigned Network Route	Projected 2022 Ridership with Redesigned Network	Potential Ridership Gain with Redesigned Network
1 (all variations)	212,367	101	223,592	11,225
3 (all variations)	267,051	102, 103	271,650**	4,599
4 (all variations)	302,216	104	320,533	18,317
5	40,924	105	46,068	5,144
6	113,945	106	114,754	809
7	281,719	107	317,187	35,468
8	86,823	108	108,098	21,275
10 (all variations)	208,912	110	214,480	5,568
11 (all variations)	208,344	111	251,164	42,820
12	153,997	112	305,992	151,995
15 (all variations)	150,519	-	-	-
17 (all variations)	313,405	117	332,455	19,050
18	109,747	-	-	-
19	136,869	119	248,250	111,381
20	192,282	120	193,750	1,468
21	38,161	-	-	-
22	35,686	122	85,732	50,046
23	33,251	-	-	-
24	10,020	-	-	-
31	35,530	131	35,970	440
32	8,237	132	8,430	193
33	9,897	133	12,814	2,917
40	48,170	140	56,825	8,655
41	30,733	141	79,357	48,624
44	26,691	-	-	-
60	289,306	160	323,826	34,520
Total	3,344,802	-	3,550,927	206,125

* Based on T-BEST model

**Redesigned Network includes new Route 102

Figure 7-12: Votran TBEST Ridership – Comparison of 2022 Network Scenarios

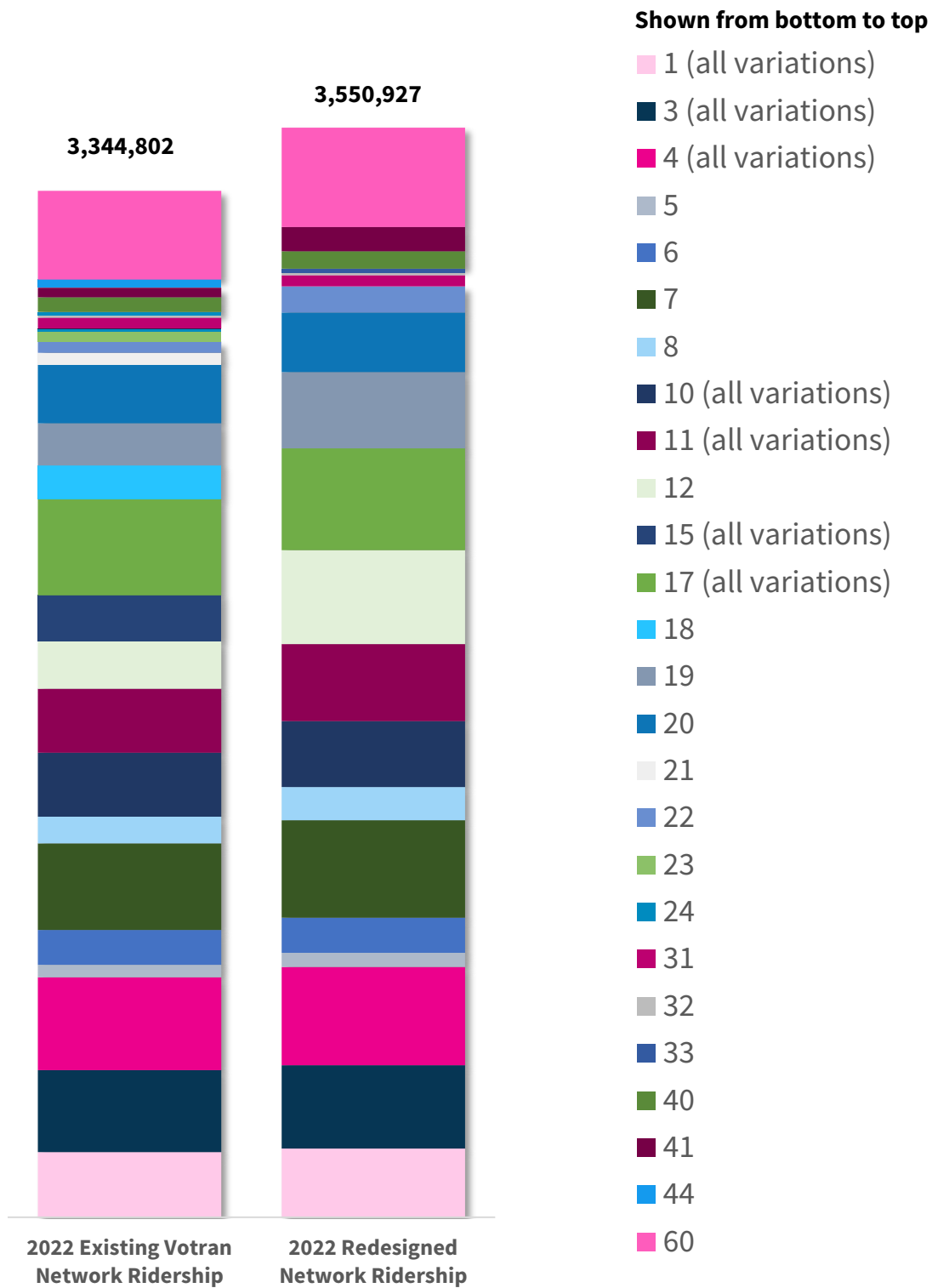


Table 7-3: 2022 and 2031 Redesigned Votran Network TBEST Ridership Projections*

Route	2022 Redesigned Network Ridership	2031 Redesigned Network Ridership	2031 TDP Needs Network Ridership	2022 - 2031 Redesigned Network Ridership Growth (% Change)	2022-2031 TDP Needs Network Ridership Growth (% Change)
101	223,592	324,177	349,743	45%	56%
102	18,736	22,701	26,807	21%	43%
103	252,914	320,499	353,333	27%	40%
104	320,533	425,947	518,145	33%	62%
105	46,068	56,740	59,739	23%	30%
106	114,754	140,297	144,128	22%	26%
107	317,187	422,269	467,462	33%	47%
108	108,098	145,289	152,089	34%	41%
110	214,480	286,405	336,114	34%	57%
111	251,164	326,178	360,225	30%	43%
112	305,992	385,158	414,679	26%	36%
117	332,455	421,428	460,071	27%	38%
119	248,250	328,128	366,147	32%	47%
120	193,750	237,058	238,237	22%	23%
122	85,732	103,996	104,233	21%	22%
131	35,970	41,968	42,610	17%	18%
132	8,430	10,131	11,332	20%	34%
133	12,814	15,674	16,725	22%	31%
140	56,825	69,798	70,008	23%	23%
141	79,357	140,865	140,865	78%	78%
160**	323,826	414,316	636,752	28%	97%
Downtown-Beach Connector	-	-	368,826	-	-
Daytona-Deltona Commuter Express	-	-	120,928	-	-
I-95 West-Beach Connector	-	-	313,685	-	-
North DeLand Circulator	-	-	52,636	-	-
Orange City Connector	-	-	67,503	-	-
Ormond Beach Circulator	-	-	241,209	-	-
Ponce Inlet-Port Orange Connector	-	-	44,962	-	-
Volusia-Flagler Express	-	-	61,488	-	-
Volusia-LYNX Commuter Express	-	-	90,509	-	-
Total	3,550,927	4,639,022	6,631,190	31%	87%

* Based on T-BEST model

** Becomes East-West Rapid

Forecast Ridership Analysis

Based on the TBEST model projections, implementing the redesigned Votran network may result in a ridership increase for all redesigned routes in 2022. Furthermore, implementing the TDP Needs network is projected to grow the overall annual ridership by 87 percent by 2031. The following describes additional details for this ridership analysis:

- The redesigned network is projected to add approximately 200,000 riders to Votran in 2022, an increase of nearly 6 percent more riders than maintaining the current network.
- The model results show that the most ridership growth in the TDP Needs network scenario will occur on the East-West Rapid (formerly Route 160), Route 141, and Route 104.
- If the TDP Needs network is implemented, the annual ridership would exceed 6.6 million by 2031, over 8 percent growth per year.

Based on these projections, implementing the financially unconstrained TDP Needs network yields the largest ridership growth, as expected, while maintaining the redesigned network proposed by Votran's recent COA would yield about one-third of that growth in the next 10 years.

Section 8. 10-Year Transit Needs Development and Evaluation

This section summarizes the development of potential transit improvements for Votran’s 10-year TDP. The needed improvements, referred to also as alternatives, represent the potential transit needs for the next 10 years. It should be noted that these needs were developed without any consideration for funding constraints to reflect the true needs of the community. The needs were developed based on information gathered through various data collection, analytical, and outreach efforts conducted for the TDP. The identified service alternatives were then prioritized. The prioritized list of improvements is used thereafter to develop the 10-year implementation and financial plans.

Development of Transit Needs

The 2022–2031 TDP transit needs consist of improvements that enhance existing Votran services and expand transit service to new areas. The improvements reflect the transit needs for the next decade and have been developed based on information gathered through the following methods:



Community Needs & Vision

Multiple direct and indirect outreach techniques were used to obtain substantive public input on transit needs throughout the Votran TDP planning process. An on-board bus rider survey, stakeholder interviews, several discussion group workshops, and public workshops were conducted to gather input from the selected stakeholders and the community regarding what improvements should be considered for the next 10 years.



Situation Appraisal

Votran’s 10-year TDP is required by state law to include a situation appraisal of the environment in which the transit agency operates. This helps to develop an understanding of Votran’s operating environment in the context of key elements as specified in the TDP Rule. The implications from the situation appraisal findings were considered in identifying potential transit alternatives.



Goals & Objectives

Votran’s goals and objectives updated as part of this 10-year TDP re-emphasize many of the agency’s existing priorities, as well as outline new priorities for improvements based on transit needs. The objectives and policies often provide insight into transit needs within the community and the potential means with which to meet them.



Transit Demand Assessment

As presented previously in this report, an assessment of transit demand and needs also was conducted for Volusia County. The assessment included the use of various GIS-based analysis and FDOT-approved demand estimation tools. These technical analyses, together with the baseline

conditions assessment and performance reviews previously conducted for the TDP, were used to help identify areas with transit-supportive characteristics when developing the 10-year transit needs.

10-Year Transit Needs

Based on the aforementioned methods, service, capital/infrastructure, technology, and policy improvements were identified, as summarized in the remainder of this section.

Service improvements include strengthening the current system as well as expanding its reach and availability. Improvements to existing Votran service include enhancements to route frequencies, hours/days of service, and realignments/repurposing of routes to maximize their usefulness to the riding community. The service needs also include expansions to the current service, including adding new routes and new modes of transit.

The remainder of this section presents these service needs, starting with the recommended short-term (defined as 1-3 years) improvements and listing the recommendations for the mid-term (4-10 years) alternatives. The service recommendations are followed by the capital/infrastructure, technology, and policy improvements that are recommended to be in place to support the needed service recommendations.

Short-Term Service Needs (1-3 Years)

Improvements identified in the short-term begin to lay the foundation for enhancing transit services in Volusia County. It begins with a redesigned network that includes recommended route realignments and repurposing within the next 1-3 years to help Votran provide the best and most efficient service to its community locally and regionally. Typically, “Short-Term” is defined as 1-2 years, but due to the ongoing COVID-19 pandemic and the funding and/or lifestyle uncertainties that may result from it, the timeline for Short-Term implementation is adjusted to 1 to 3 years. The timeline adjustment will allow Votran additional time to implement any of the related recommendations if funding associated with these projects is delayed or the “new normal” ends up warranting more preparation time prior to any of the implementation.

The redesigned Short-Term network was developed based on the recommendations from the COA that was conducted for Votran simultaneously with the TDP. The Votran COA was an in-depth route-by-route analysis that included review of various service data, field observations, and close coordination with Votran’s planning and operations staff. Historical data (with less emphasis on 2020 data due to pandemic-related service interruptions) on route-level on-time performance, ridership, productivity, bus stop activity, and costs were analyzed. Findings from those efforts were combined also with rider and non-rider input to redesign the current network to become more efficient and useful for the riders.

In addition to the designing of an improved network, the routes were re-numbered/rebranded for the purpose of easy comparison with the current network. That is, to help differentiate the new routing from the existing, each route number was modified by adding 100 to the existing number. For example, existing Route 1 was rebranded as Route 101. While keeping this renumbering is recommended, it is not a requirement to implement the plan described below.

These Short-Term improvements include the following:

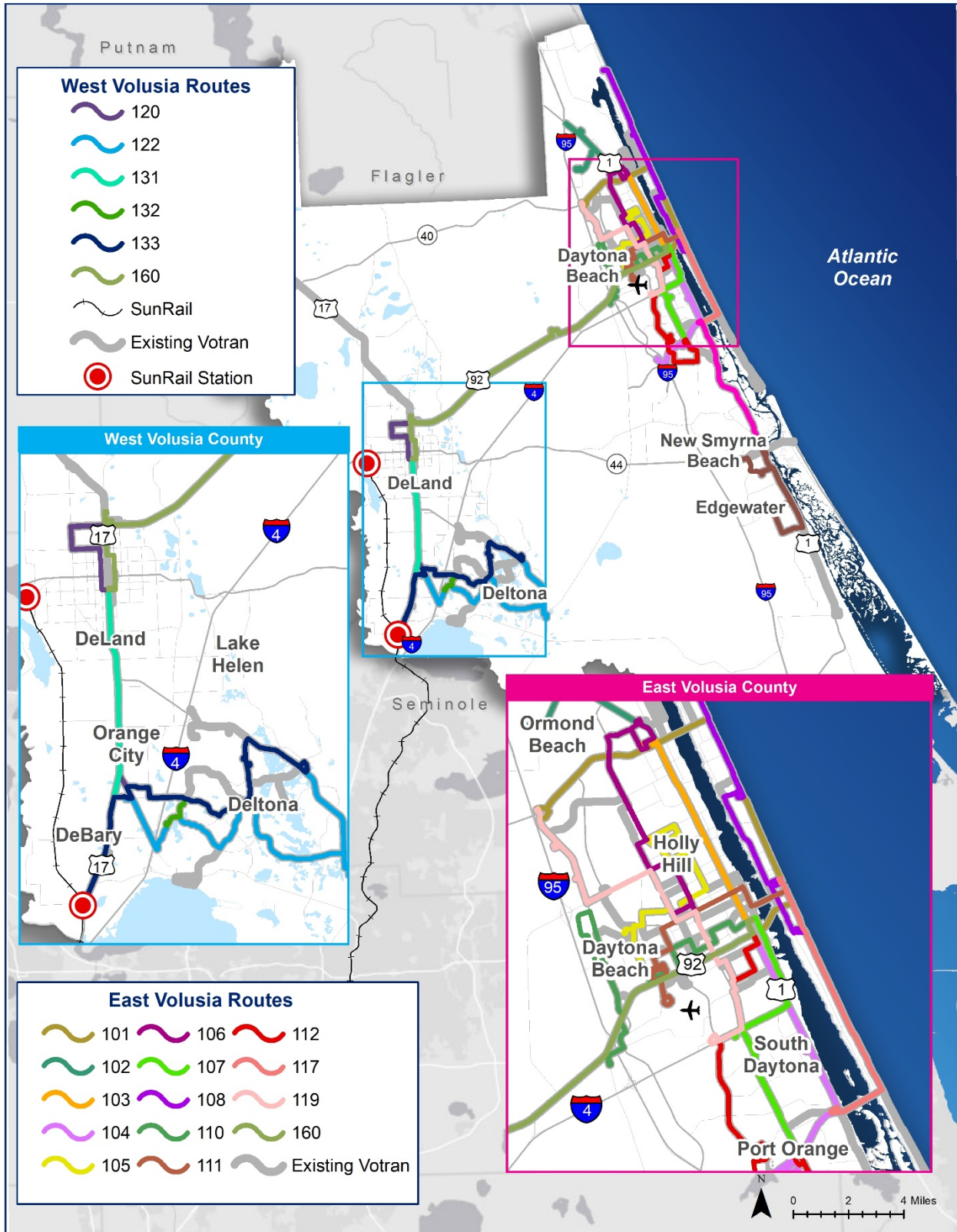
- Realigned and Repurposed Routes: Existing Routes 1 (all variations), 3 (all variations), 4 (all variations), 5, 6, 7, 8, 10 (all variations), 11 (all variations), 12, 15 (all variations), 17 (all variations), 18, 19, 20, 21, 22, 23, 24, 31, 40, 41, and 60.
- Increased Frequency: Routes 101 and 112
- Extended Span: Routes 103, 104, 106, 107, 110, 111, 112, 117, 119, and 133
- Additional Days of Service: Routes 105, 107, 111, 112, and 160

Table 8-1 summarizes the Short-Term network while Map 8-1 shows the redesigned Votran network for implementation in the next 1-3 years.

Table 8-1: Votran Short-Term Network by Route Frequency

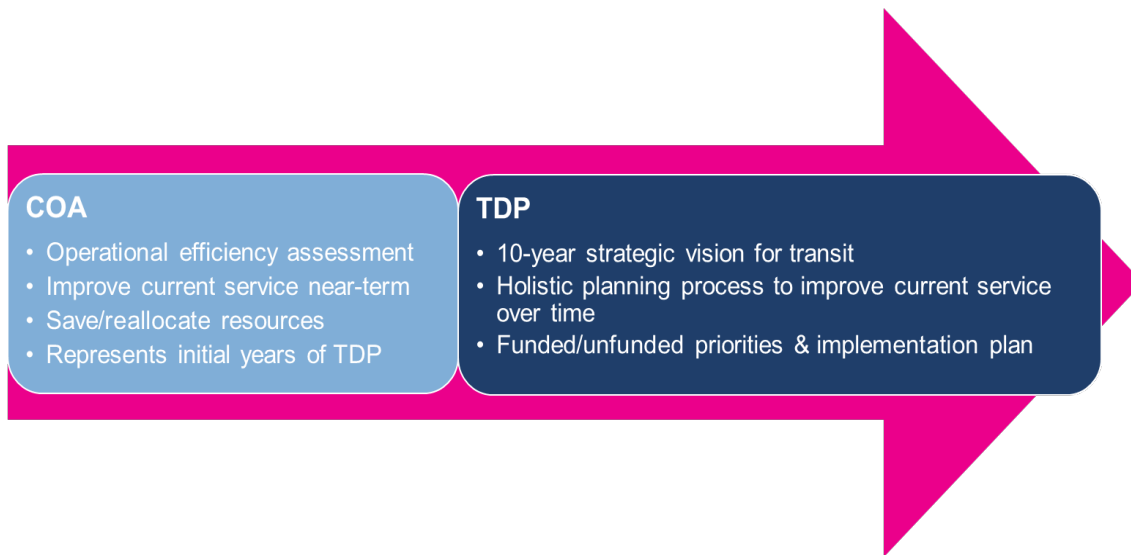
Route	Service Area	Type of Redesign	2021 Peak Weekday Frequency	2022 Peak Weekday Frequency
101	N. Atlantic Ave. / Granada Blvd.	Realigned Route 1	60	30
102	N. Ridgewood Ave. Commuter	New Route	-	45
103	N. Ridgewood Ave.	Realigned Route 3 (all variations)	30	30
104	S. Ridgewood/ Dunlawton Ave.	Realigned Route 4 (all variations)	30	30
105	Bill France Blvd./ Center Ave.	Realigned Route 5	60	60
106	N. Nova Rd.	Realigned Route 6	60	60
107	S. Nova Rd.	Realigned Route 7	30	30
108	Halifax Ave./Ormond-by-the-Sea	Realigned Route 8	60	60
110	Williamson Blvd. /Tanger Outlets	Realigned Route 10	30	30
111	Mason Ave.	Realigned Route 11	30	30
112	Taylor Rd./Clyde Morris Blvd.	Realigned Route 12	60	30
115	-	Repurposed	30	-
117	S. Atlantic Ave.	Realigned Route 17 (all variations)	30	30
118	-	Repurposed	60	-
119	Nova Rd./ Williamson Blvd.	Realigned Route 19	60	60
120	Enterprise Rd./ US 17	Realigned Route 20	30	60
121	-	Repurposed	120	-
122	Howland Blvd./Enterprise Rd.	Realigned Route 22	120	120
123	-	Repurposed	60	-
124	-	Repurposed	120	-
131	SunRail to DeLand ITF	Realigned Route 31	30	30
132	SunRail to Deltona Plaza	None, same as Route 32	60	60
133	SunRail to Dupont Lakes	None, same as Route 33	60	60
140	New Smyrna Beach/Port Orange	Realigned Route 40	60	60
141	New Smyrna Beach/Edgewater	Realigned Route 41	60	60
144	-	Repurposed	120	-
160	International Speedway Blvd	Realigned Route 60	30	30

Map 8-1: Votran Short-Term Network (2022-2024)



Mid-Term Service Needs (4-10 Years)

Within the next 4 to 10 years, again, defined as Mid-Term for the purposes of this TDP, Votran’s goal is to enhance its services further to develop a well-connected and more useful transit network. The TDP Mid-Term will build on the efficient network improvements derived from the 2021 Votran COA. Map 8-2 shows the 2031 Votran Mid-Term Needs Plan.

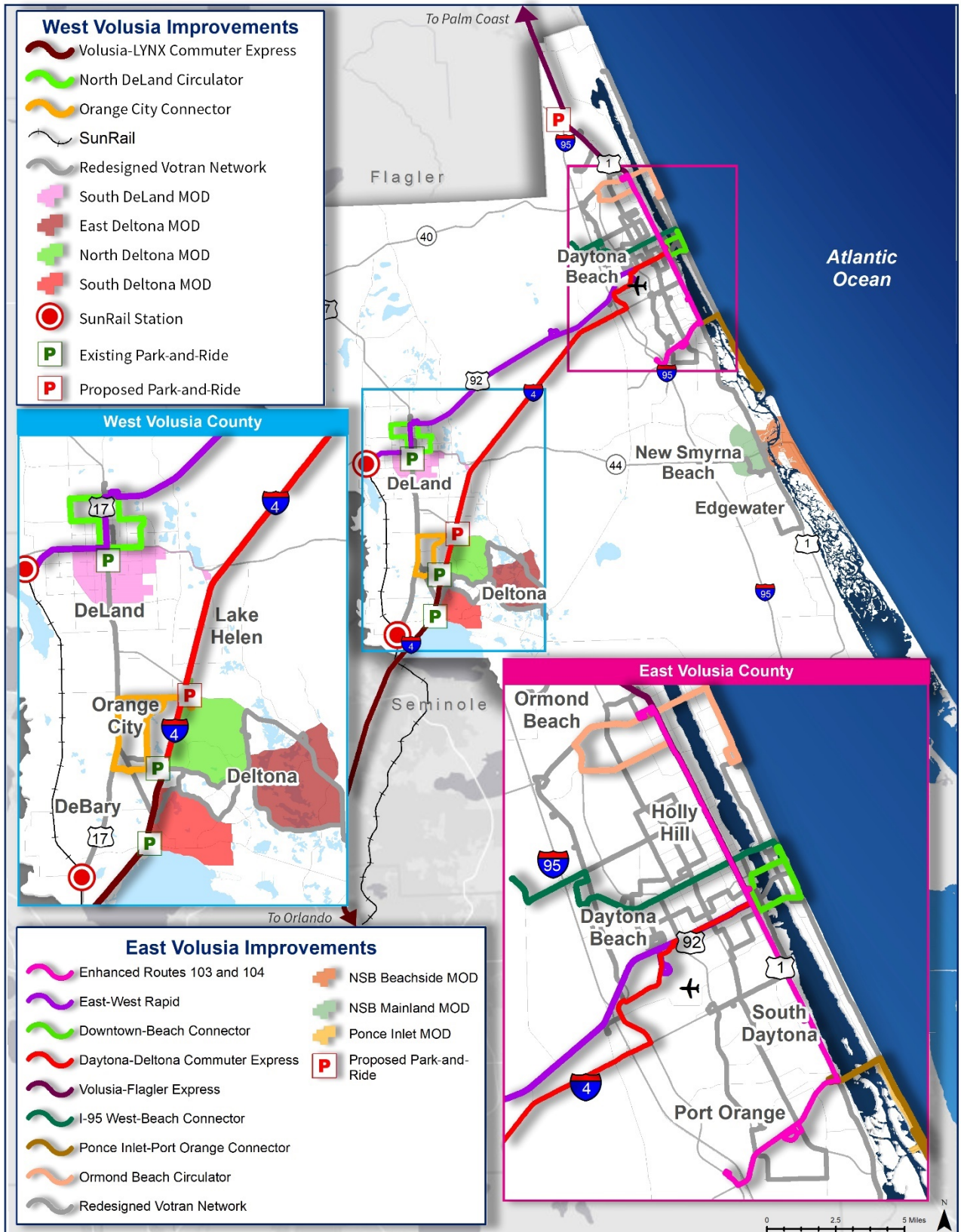


Integrating the specific operational improvements proposed for the near-term with the TDP’s larger strategic vision for transit, the Mid-Term network was designed with the following tenets guiding the process.

- Strengthen the base/Short-Term efficient network
- Add technology-based mobility solutions to create a spectrum of travel/connectivity options
- Expand transit to become a truly viable option for travel locally and regionally

As previously mentioned, the Mid-Term service needs are the result of considering the existing and projected conditions of Volusia County, community involvement, input from elected officials and other stakeholders, the situation appraisal, and demand modeling, thereby resulting in the Mid-Term transit network. This network enhances the redesigned Short-Term needs network while also incorporating improvements such as the improvement of existing routes with the highest ridership and forward-thinking, technology-based options that will help make Votran a practical travel alternative to more people locally and regionally.

Map 8-2: Votran Mid-Term Network (2025-2031)



High Frequency Core Network

With direction and support from local and regional stakeholders and the community for increasing service frequency on high demand corridors/areas over an expansive service area, this TDP recommends creating a high-frequency east-west and north-south network on specific Votran route corridors in the next 10 years. Enhancing frequencies can help attract new discretionary riders for Votran as well as improve the quality of service for current riders using the system. These routes will build a high-frequency, high-ridership core for Votran's fixed-route network that will help improve the quality and appeal of transit to visitors and residents alike. The following alternative improvements are recommended for consideration:

- **15-Minute Peak Frequency North-South (on Routes 103 and 104)** – To help reach the high frequency network over time that the community desires for Votran, the Mid-Term network would increase the operating frequency on two highly productive existing routes, Routes 3 and 4. This enhancement would increase the service frequency primarily on US 1 to a bus every 15 minutes from the recommended Short-Term frequency of bus service every 30 minutes. These two routes would decrease wait times and quickly connect residents and visitors to economic opportunities, shopping, and other activities, acting as a north-south horizontal elevator. They will also connect with other Votran routes at the downtown transfer plaza, extending its reach.
- **East-West Rapid (15-Minute Peak Frequency on Route 160)** – Input from the community and stakeholders as well as the data analyses indicated that there is a strong demand to quickly connect both sides of the county. To address this need, service and technology enhancements are recommended for the current Route 60, which connects the Daytona Beach area to DeLand and rest of West Volusia from there. The frequency is recommended to increase to a bus every 15 minutes during peak hours in the morning and afternoon. During off-peak (mid-day, evenings, nights, and weekends) the route will maintain the current 30-minute frequency. The service upgrade will also be combined with technology upgrades, including transit preferential treatment technologies like TSP and Queue Jumps (see descriptions of these strategies later in the section on capital needs). While higher frequency would reduce wait times, these technologies would help ensure that the buses move through busy intersections quickly to stay on schedule. Some intersections on the east side of US 92, especially closer to the I-95 interchange, can get congested, requiring preferential treatments to keep on schedule. This route will also connect with DAB, a need identified based on input from public outreach.

The Volusia Connector Study conducted by FDOT in 2017 identifies Bus Rapid Transit (BRT) as the highest ranked mode alternative for the US 92 corridor to connect the east and west sides of the county. While this TDP does not recommend BRT at this time due to potential additional costs and lack of demand that would warrant BRT, the recommended east-west service enhancement may work as a precursor to such investment, if Volusia County decides to implement BRT in the future.

However, it may still help if the route develops its own identity as a fast and convenient east-west link as desired by the community and local and regional stakeholders. It is recommended that Votran brand the improved Route 60 as East-West Rapid or with some similar type of identity/brand so the purpose of the route is clear and may help Votran achieve the full potential of this additional investment. Such branding, which can also be extended to bus stops at minimal additional cost, will also make it stand out from the rest of the network and may make it more attractive to commuters.

This service enhancement, however, is not recommended until the proposed new SunRail Station in DeLand is operational. Once it is operational, this route would replace the current Route 60 and instead of serving the DeLand ITF on US 17 in DeLand, the service would access the DeLand SunRail station, thus providing a quick one-seat ride from Daytona Beach to DeLand and the regional rail station there.

- ***Downtown-Beach Connector (15-minute service)*** – To meet the need of quickly and efficiently connecting key locations within the beach and downtown in the City of Daytona Beach, a Downtown-Beach Connector is recommended. The service is recommended to operate every 15 minutes during most of the day for six days and with limited hours on Sundays. The service would extend the proposed high frequency core network within downtown Daytona Beach and to the beach, also shuttling residents and visitors from the downtown Votran Transfer Plaza to the Beachside ITF.

Votran Regional Transit Express (Vortex) Network

Express services were indicated as another need during the public involvement process in the rider and general public surveys and by stakeholders. While it may not be an immediate priority, fast and convenient connections between key points locally and regionally were highlighted as a need going forward. There was consensus among the key stakeholders that such services may also help bolster economic development, quickly connecting growth centers and jobs to people locally and regionally. The following improvements were identified to address this need.

- ***Daytona-Deltona Commuter Express*** – This route would provide an express service to connect Deltona to key employment and activity centers in the eastern part of the county, providing a one-seat express route from the Saxon Park-and-Ride to the Votran Transfer Plaza in downtown Daytona Beach. This route, which will operate mostly on I-4, also was previously studied by FDOT as an alternative to connect East to West Volusia, as part of the 2017 Volusia Connector Study. Currently not directly connected with Daytona Beach, this route would provide a direct and faster connection between Deltona and Daytona Beach. However, the Daytona-Deltona Express would only operate as a commuter express, during morning and afternoon peak hours as demand may not warrant an all-day service recommendation at this time. The route would stop only at a few key locations along the route, including the Votran Transfer Plaza in downtown, DAB, and Howland Boulevard (SR 472) until it reaches the Saxon Park-and-Ride.
- ***Votran-LYNX Commuter Express*** – Based on the Census commute flow data for 2017, Orange County was the top area that residents and workers connect to and from Volusia County,

highlighting the potential demand for additional mode/service options. This would provide another commuter connection south, in addition to SunRail. Once connected with the proposed Daytona-DeLtona Commuter Express discussed above, this peak-hour only regional commuter express would connect commuters from the east and west sides of Volusia County to the Orlando area. This route would travel on general purpose lanes on I-4 and then on the I-4 Ultimate Express Lanes, linking Votran to the Central LYNX Transfer Center in Orlando. This route would begin at the Saxon Park-and-Ride, providing connections from local and regional Votran services at that location.

However, since most of this route would be outside of Volusia County, a regional partnership with LYNX for funding and/or operations may be necessary to implement this regional bus service. If and when implemented, the timing and branding of this service should be done to ensure this is not competing with SunRail but rather complementing it, as success of SunRail is crucial for a strong regional transit network.

- **Volusia-Flagler Express** – A regional connection to link the populated areas of Daytona Beach to Palm Coast in Flagler County via I-95 also is recommended. The regional travel flow data as well as public input has pointed to a connection with Flagler County, making this connection a regional need. This connection at Palm Coast Parkway Shopping Center would connect all of Flagler’s planned mobility network to Votran. The adopted Flagler County TDP recommends six fixed routes and accompanying on-demand zones that serve Flagler County to connect riders throughout the area. However, while the connection is supported by public input and data, this route may not warrant an all-day service either and, hence, is proposed as a morning and afternoon peak-hour only service. A regional partnership with Flagler County for funding and/or operations may be necessary to implement the Volusia-Flagler Express.

Enhanced Local Connectivity Network

Direction from the stakeholders and data analyses point to a need for the following additional local connections.

- **North DeLand Circulator** – A local connector in DeLand, especially on the north side, was frequently mentioned as a need by stakeholders and members of the general public. The future population and employment density data may also indicate support for other potential options for connectivity than the automobile. In addition, the proposed SunRail station, which will be on the far west side of the city, will also add another location that needs to be connected to the rest of the community. Therefore, a local circulator is proposed that connects the future DeLand SunRail station to other areas on both sides of US 17 in DeLand. Until DeLand’s SunRail station is operational, this route will operate on the north side of DeLand connecting the local neighborhoods to city destinations and to Votran’s DeLand ITF. Once the SunRail station is in service, the route would be realigned to add the station, too. This route would operate every hour.
- **Orange City Connector** – Currently there is no local transit connector in Orange City and it may not be warranted it at this time, either, due to low population or job densities. However, the data have shown that the city will increase in population and jobs in the next 10 years, in

addition to having pockets of areas with traditional transit rider markets. In addition, stakeholders also have identified an increased need for local transit in the city in the coming years. Responding to this need, this local route would connect Orange City to the Market Place Super Stop in Deltona and also to the new Amazon Warehouse and Epic Theatres Shopping Center just east of I-4. This route would operate every hour and mostly on US 17, Graves Avenue, and Veterans Memorial Parkway. It would connect to Routes 120, 122, 131, 132, and 133.

- ***I-95 West & Beach Connector*** – With the anticipated growth in population west of I-95 and input from the public, this future route would provide another east-west connection on the east side of the county. Traveling primarily on LPGA Boulevard and Mason Avenue, this route would connect areas west of I-95 to the commercial/retail activity around the I-95 interchange (including Tanger Outlets) and to Votran’s Beachside ITF every hour.
- ***Ponce Inlet-Port Orange Connector*** – While on-demand transit is recommended for replacing the traditional transit service south of Dunlawton Avenue in Port Orange (as described later in this section) in the Short-Term, a traditional fixed-route circulator is recommended for serving the Ponce Inlet area in the Mid-Term. This circulator would connect riders east of the Halifax River in Ponce Inlet to the East Port Orange area. The service will begin in Port Orange, crossing the bridge to operate mainly along Atlantic Avenue, and connect to Lighthouse Point Park. The route would operate every hour providing opportunities to transfer to the rebranded Routes 104 and 140, connecting residents to Daytona Beach and New Smyrna Beach.
- ***Ormond Beach Circulator*** – Input from stakeholders and the general public has pointed to a local connection between the city and the beach area and reestablishing the beach circulator that was discontinued several years ago. Input from the City points to a stronger need now with a lot more economic activity and growth on both sides of the river than it was when the beach circulator previously operated. This proposed service would be a more expanded service than the previous version and would connect hotels and recreation on the beach to the west side of the city up to Clyde Morris Boulevard. The route would also reestablish service on some City of Ormond Beach road segments that may lose service due to the 2021 Votran system COA redesign (previously shown under Short-Term) while also serving additional areas in the city, connecting the riders from a larger area of the city to the beaches and other Votran routes.

Technology-based On-Demand Transit Network

To provide transit service in areas or time periods that may not have sufficient demand to justify traditional fixed-route bus services, a technology-based on-demand transit network is recommended. This network would include the following components:

- Spatial – Includes identifying areas/zones for implementing on-demand transit service.
- Temporal – Includes time periods of the day with much lower demand that may be served with on-demand type services.

The two types of on-demand recommendations for the Mid-Term are summarized below in detail.

Spatial (location-based) On-Demand Services

This service would provide app-based and phone-enabled on-demand transit (referred to as MOD) using Votran vehicles and purchased rider and driver apps/software. The recommended on-demand mobility model is a SaaS (Software as a Service) model, where Votran contracts a provider for the software platform and relevant application support, but Votran directly operates the vehicles. The service would use current ADA vehicles or even smaller wheelchair accessible vehicles where riders can quickly request a ride using an app or a phone number.

At implementation, the service would be operated with current diesel-powered Votran paratransit vehicles, but, as they are retired, Votran could potentially replace these with electric vehicles. Utilizing electric vehicles can help enhance Votran's image, attract riders that are environmentally conscious, and may also provide cost savings. With the introduction of electric vehicles to the MOD services, there is the potential to rebrand the service (for example, as VOLT - Votran On-demand Local Transit) and thereby highlighting the efforts by Volusia County to stay current with industry-wide efforts to reduce carbon emissions and make transit attractive to all age groups. The proposed service would be a curb-to-curb type service and the reservation/wait times would be determined by demand, but is expected to be much shorter than the two-hour call ahead window that is available with Votran Flex services at this time.

The following MOD zones have been identified for the TDP Mid-Term:

- *New Smyrna Beach* – The two current flex transit zones (FLEX 42 & 43) in New Smyrna Beach are recommended to be converted to technology-based MOD services. Residents and visitors using the current Flex services would benefit from quicker access to their rides and more convenient ways to book a trip than just phone access. Due to these zones already being served on-demand, this improvement would be the most convenient to implement and may also serve as the initial MOD pilot for Votran.
- *Ponce Inlet* – With the potential repurposing of current Route 17 south of Dunlawton Avenue as part of the Votran 2021 system COA redesign, service would be reestablished as on-demand transit in this area. This zone would connect riders from the beachside across the Halifax River to a bus stop on US 1. This zone encompasses households and attractions between Atlantic Avenue and Peninsula Drive. However, as demand for transit is already relatively high in this area and if this new on-demand service further increases that demand, the Ponce Inlet-Port Orange Connector, presented previously, should be considered for replacing this service in the Mid-Term.
- *South DeLand* – This service would provide on-demand coverage to neighborhoods and businesses in south DeLand along with the Daytona State College campus adjacent to I-4 in DeLand. While data have shown a potential ridership demand, especially from traditional rider markets, currently there is no local neighborhood service in the area other than on and around the US 17 corridor. This zone would span as far north as New York Avenue and as far

south as Taylor Road. To the east, the zone would stretch to Blue Lake Avenue, and to the west, to Spring Garden Avenue.

- *North Deltona* – This zone expands the reach of Votran in Deltona and reestablishes connectivity to current riders who may lose service due to the Votran 2021 system COA redesign. It encompasses the area between I-4, Providence Road, Saxon Boulevard, and Howland Boulevard while also serving the Advent Health location in Deltona.
- *South Deltona* – As another zone that expands the reach of Votran in Deltona and reestablishes connectivity to current riders who may lose service due to the Votran 2021 system COA redesign, this zone spans west of I-4, north of Monroe Lake, and east of Providence Boulevard. The traditional transit market segments and residents/workers in this zone who are without easy access to Votran services will be connected to locations in the zone and to rebranded Routes 122, 132, and 133.
- *East Deltona* – To further expand the reach of Votran and to cover areas that may lose service due to the Votran 2021 system COA redesign, this zone covers Elkcam Boulevard, Fort Smith Boulevard, and on both sides of Howland Boulevard.

Temporal (time-based) On-Demand Service

The existing as well as and proposed redesigned Votran networks both have varying end times for routes in East and West Volusia County. Key routes in the east, where most demand for Votran services are presently located, terminate later than western routes, around midnight, while others end sooner. On the west side, services end much sooner. Not having consistent end times or routes ending early can affect access to economic and other opportunities for traditional riders and may discourage discretionary riders from using the service. Table 8-2 shows the start and stop time for Votran’s weekday service with the proposed Short-Term network. Services that end early are highlighted.

Table 8-2: Votran Transit Proposed Short-Term Route Spans

Route	Location	Weekday Start	Weekday End
101	East	5:30 AM	12:00 AM
102	East	6:00 AM	5:00 PM
103	East	5:30 AM	12:00 AM
104	East	5:30 AM	12:00 AM
105	East	6:30 AM	6:30 PM
106	East	6:30 AM	7:00 PM
107	East	5:30 AM	12:00 AM
108	East	6:30 AM	7:00 PM
110	East	5:30 AM	12:00 AM
111	East	5:30 AM	10:00 PM
112	East	5:30 AM	12:00 AM
117	East	5:30 AM	12:00 AM
119	East	6:30 AM	9:30 PM
120	West	6:30 AM	7:00 PM
122	West	6:30 AM	7:00 PM
131	West	4:30 AM	8:30 PM
132	West	5:30 AM	7:30 PM
133	West	5:00 AM	7:00 PM
140	East	6:30 AM	7:00 PM
141	East	6:30 AM	7:00 PM
160	East-West	6:00 AM	7:00 PM

Cell phone data, analyzed to identify travel density and patterns by hour and geographic location, also indicated that there may be a demand for connectivity after Votran ceases to operate, at least for a few more hours. Therefore, to extend the time-reach of Votran’s services and provide a more uniform systemwide service end time, a subsidized after-hours on-demand transit program is recommended. The program recommended is a voucher program for using ride-hailing services from Transportation Network Companies (TNCs) such as Uber or Lyft to get around when regular service is not available at night, on weekdays, and on Saturdays. This improvement would establish a voucher-based subsidized ride program for travel after regular bus services end on some routes, expanding the availability of Votran services. As Votran serves two distinct markets on east and west where service demand and needs can vary, the following is recommended (Table 8-3).

Table 8-3: After Hours On-Demand Transit

Service Area	Time
East Volusia County	7:00 PM-12:00 AM
West Volusia County	7:00 PM-10:00 PM

The program would subsidize the first \$3.00 of a trip for eligible riders (people who use Votran for some part of their trip) under the program. For example, an after-hours rider taking an \$8.00 Uber ride would be charged only \$5.00 under this program, and the program would cover the remainder of the cost up to \$3.00. This cost per trip would still be less expensive than providing a fixed-route bus trip, which currently costs an average of \$5.52 per trip, based on 2019 NTD data for Votran.

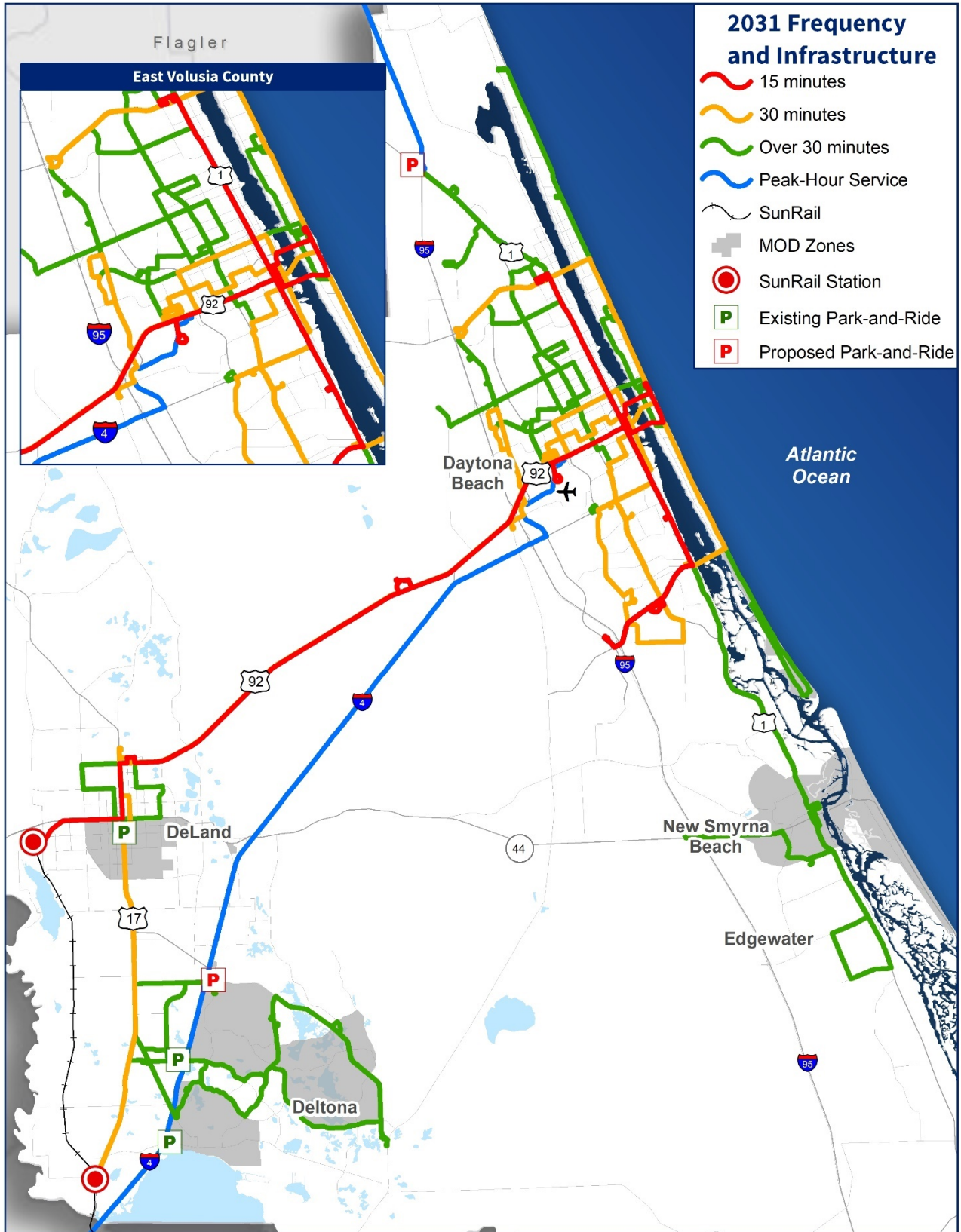
Votran 2031 Transit Needs Network by Frequency

Including the needed improvements previously described, Map 8-3 shows the 2031 TDP Needs Plan, based on service frequencies. As previously mentioned, building a high frequency core network, specifically to connect the north-south and east-west portions of Volusia, was a key focus of the Mid-Term plan based on direction from the data and the community. That core is then supported by a feeder network of arterial and community circulators and a network of on-demand services. The map shows the following by route frequency.

- 15-minute – Routes 103, 104, East-West Rapid, and Downtown-Beach Connector
- 30-minute – Routes 101, 107, 110, 111, 112, 117, 131, and 160
- Over 30-minute – Routes 102, 105, 106, 108, 119, 120, 122, 132, 133, 140, 141, North DeLand Circulator, Orange City Connector, West Grenada-Beach Connector, Ponce Inlet-Port Orange Connector, and Ormond Beach Circulator
- Peak-Hour Only - Daytona Beach-Deltona Express, Volusia-Flagler Regional Express, and Volusia-LYNX Regional Express

The map provides a frequency-based snapshot of the service needs identified for Volusia County for the next 10 years. While implementing all of these needs requires significant additional resources that Volusia County may not have at this time, it provides a strategic vision and a list of potential future projects to make transit more attractive and a more viable option for travel locally and regionally.

Map 8-3: 2031 Votran Frequency Needs Plan



Capital Needs

Implementation of all the aforementioned transit services should be supported by necessary capital infrastructure and technology improvements to ensure an enhanced experience for Votran users. The following improvements are identified to support the operational investments summarized previously.

New Transit Facilities

A number of new and enhanced capital facilities, including a rail station, park-and-ride lots, an operations and maintenance facility, and bus stops are included for the 10-year transit plan. The following facilities, which are either planned already or newly proposed, are included.

DeLand SunRail Station

With SunRail’s plan to extend farther northward in the region, its next station is anticipated to become operational in 2024 in DeLand. The new station will be located on Old New York Avenue, east of Lakeview Avenue adjacent to the Lake County boundary (Figure 8-1). With the proposed TDP needs plan, the new DeLand station would connect to Votran with the proposed East-West Rapid and North DeLand Circulator services.

Figure 8-1: Proposed DeLand SunRail Station



Source: SunRail

Park-and-Ride Facilities

To support the proposed express/regional services connecting Volusia County, park-and-ride facilities are also proposed. Park-and-ride facilities allow car-riding commuters who wish to avoid getting stuck in traffic an option to catch a transit ride as part of their journey to work. Currently, there are

three park-and-ride facilities in Volusia County, located in south Deltona, adjacent to I-4 on Saxon Boulevard, and in downtown DeLand. The downtown DeLand location is also one of Votran's major transfer facilities, the DeLand ITF.

In addition, the following park-and-ride facilities are also identified as needed to support the enhanced Votran route network.

- At I-95 and US 1 – This location is adjacent to I-95's Exit 273 on US 1 in Ormond Beach, near a new planned residential development. This new park-and-ride facility would allow commuters to catch the proposed Route 102 and the Volusia-Flagler Regional Express.
- I-4 and Howland Boulevard – This location is adjacent to the Advent Health in Deltona and I-4's Exit 114. This location will be a collection point for the North Deltona MOD service and other regional routes, such as the Daytona-Deltona Express, to facilitate transfers to those who need to connect to and from the area.

It should be noted that these facilities are recommended as shared-use facilities.

Transit Infrastructure and Accessibility

The current program that Votran has to purchase and install bus shelters, benches, bike racks, and other amenities should continue, with plans to invest in additional infrastructure to support the proposed routes with new bus stops. Also, installing the right level of amenities at bus stops may help attract more discretionary riders and provide Votran's current riders with a comfortable and safe experience at its bus stops to the maximum extent possible. In addition, Votran should also consider developing a Bus Stop ADA Accessibility Transition Plan to streamline its continuing investment in making its bus stops accessible to all bus riders.

Fleet Replacement and Acquisition Program

With various frequency and new services identified in the Mid-Term, vehicle replacements and acquisitions are important components of this 10-year TDP. A crucial part of Votran's capital plan, the fleet replacement and acquisition program, can affect system effectiveness and quality of service in a significant way when programmed in a timely fashion.

Electric Vehicles

As Votran continues to replace its fleet and add new vehicles to provide service improvements, especially with the proposed on-demand services, it is recommended that Votran consider acquiring all-electric buses as replacements, when possible. This may not only attract discretionary riders, but also help Votran's overall marketing strategy and image building.

Infrastructure and Equipment for Continued COVID-19 Safety

As the COVID-19 pandemic continues to unfold, Votran has been lauded by the community for its swift response to strengthen sanitation protocols and limit exposure for its staff and riders, some of whom are essential workers using public transit to support frontline efforts. Votran should continue purchasing and deploying necessary infrastructure for safety of its workforce and riders in an effort to make riders more comfortable. Votran should consider purchasing large sprayers to disinfect the bus

every trip. Riders seeing the efforts in place to combat the pandemic and keep them safe may translate to a solidification of its loyal rider base over time.

Transit Technology Improvements

Increased traffic on key corridors, such as US 92, directly impacts the travel time of current and any new transit services operating in mixed traffic, possibly making them unattractive to potential riders and unreliable for current riders. Bus preferential treatments such as TSP and/or queue jumps may help Votran in this regard as such measures have been used elsewhere to expedite the movement of transit services at intersections where traffic is backed up at peak travel times.

For the successful implementation of the East-West Rapid service, for example, TSP and/or queue jumps are recommended for selected intersections that are most optimal for supporting enhanced transit services. This should help buses adhere to their schedules and improve their appeal over driving an automobile on the same corridor. Figure 8-2 shows how TSP and queue jumps prioritize transit movement at an intersection.

While identifying which intersections should deploy these measures may need a separate feasibility study, a review of available data and studies has indicated few candidate intersection locations for TSP. Table 8-4 shows the intersections for TSP technologies on US 92 recommended by the 2017 Transit Connector Study. Votran should, however, review these locations again and possibly conduct further analysis to identify congestion levels and intersection volumes to narrow down the list of intersections on US 92 that may best support both TSP and/or queue jump technologies.

Table 8-4: Initial Recommendations on Intersections for Deploying TSP Technology

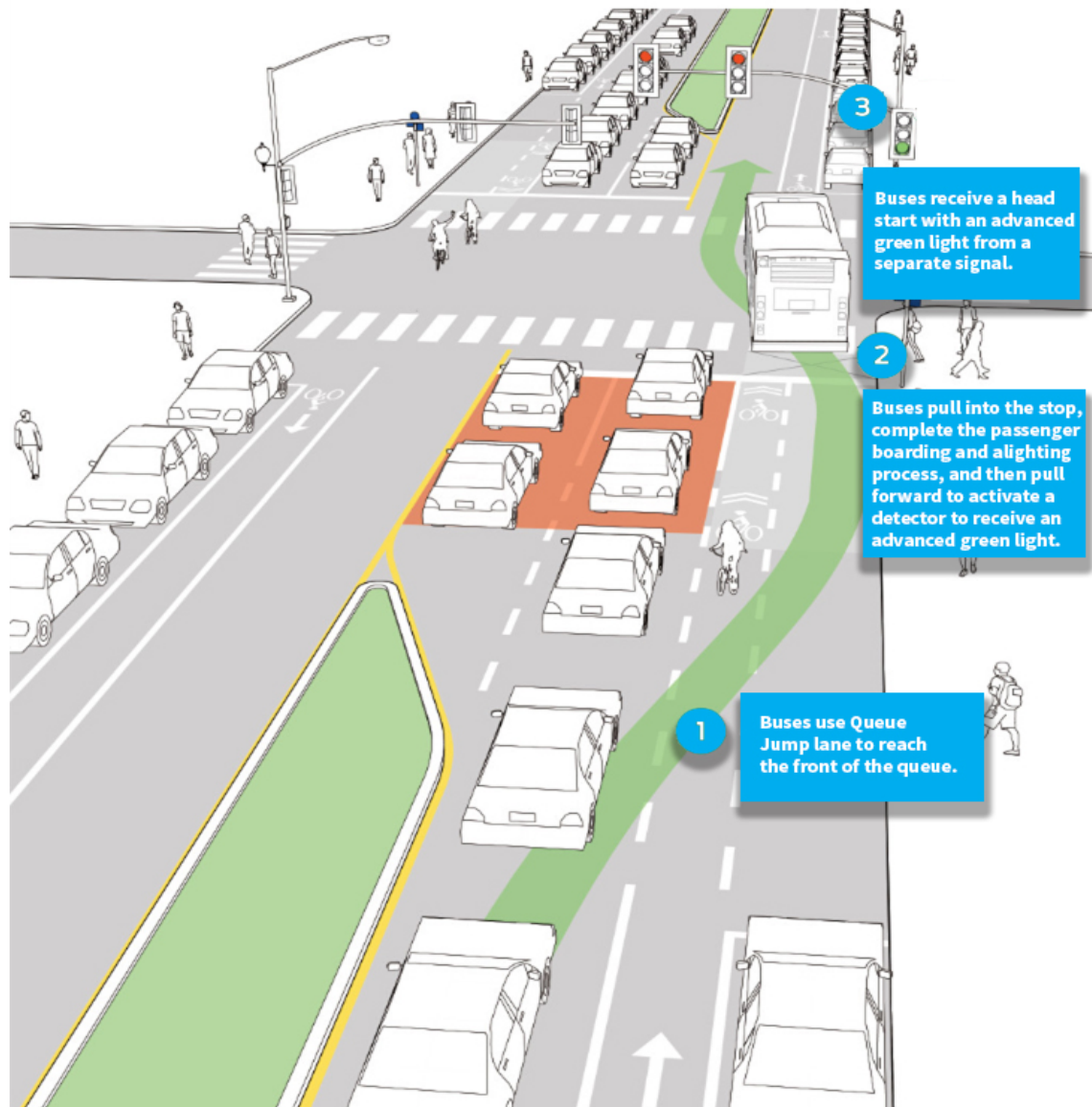
On Street	Cross Street
US 92	I-95 Exit 260C Off-Ramp
	Fentress Boulevard
	Industrial Parkway
	Midway Avenue
	Seneca Street
	US 1

In addition to adding transit preferential treatments to US 92 to ensure the proposed East-West Rapid performs on-time, Votran may also deploy TSP and/or queue jumps on other corridors, such as US 1 and ISB. Again, additional analyses may be necessary to ensure where and to what extent such treatments may be useful. Votran should coordinate with regional partner, FDOT, on planning and implementing TSP and queue jumps along major transit corridors.

Improved Fare Payment System

Votran should consider upgrading its fare payment system to improve customer experience and service efficiency. The Central Florida Regional Transportation Authority (LYNX), just south of Votran, has already implemented a mobile ticketing app called LYNX PawPass and Votran should coordinate with LYNX on implementing a similar mobile fare app for riders in Volusia County. The mobile payment app allow riders to pay their bus fare directly from a smartphone.

Figure 8-2: TSP with Queue Jump Lanes for US 92



Sources: NACTO and Tindale Oliver.

Votran has already identified making improvements to fare collection methods as one of its TDP objectives for the next 10 years, including implementing a touchless fare payment system and mobile fare payment methods. Input from TDP public outreach efforts also has indicated the need to make the system easier to use, both to benefit existing riders as well as to attract discretionary riders.

Policy/Other Needs

Transit Marketing and Education Campaign

Votran should expand its marketing efforts with the launch of the redesigned route network. The redesign effort combined with the interruption or “pause” resulting from the pandemic provides Votran an opportunity to do things differently with its marketing and, if resources are available, to

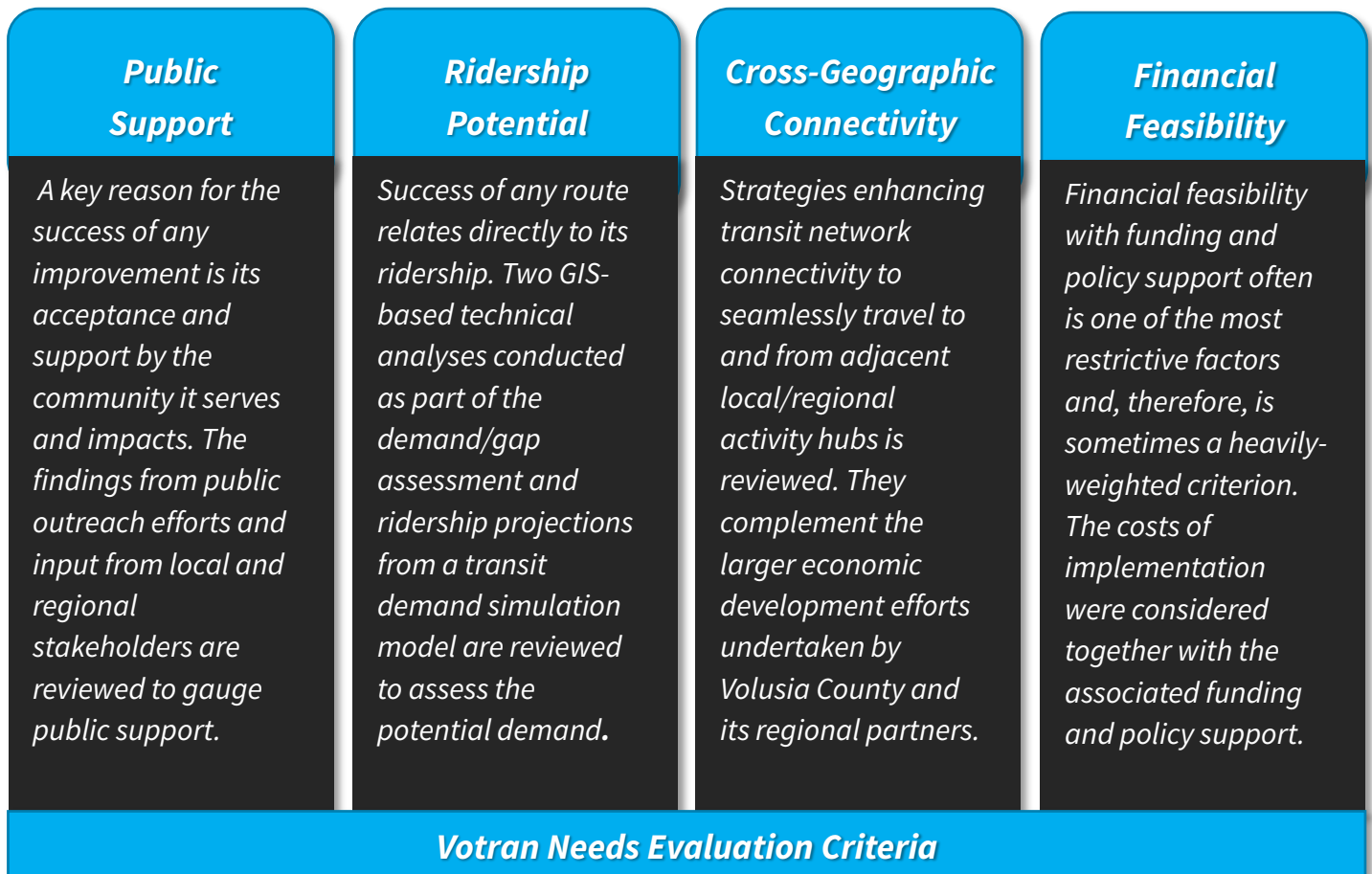
rebrand some of its services. In addition, more public education on the benefits of transit and use of social media campaigns for targeted audiences are recommended. Furthermore, avenues to access transit information should be expanded, including promoting the existing MyStop real-time bus information app.

Evaluation of Alternatives

This section presents the evaluation process and methodology for the 10-year transit needs previously identified in this report. After the TDP service alternatives were developed, an evaluation framework also was developed to assess the potential strategies and help Votran set priorities for the next 10 years. The evaluation process is structured to cover a wide spectrum of factors that are qualitative and quantitative to ensure it is complete as well as comprehensive.

As mentioned, a quantitative-qualitative hybrid methodology was used to evaluate and prioritize the transit needs. By conducting this evaluation, Votran can meaningfully prioritize projects and allocate funding using an objective process. The four evaluation categories identified in Figure 8-3 below and the category weights discussed next were used to rank the TDP service needs.

Figure 8-3: Transit Service Needs Evaluation Criteria



The prioritization of transit service alternatives using the project evaluation process assisted in determining the service priorities and implementation schedule for any improvements expected to be funded. Once the service priorities were developed, operating and capital revenues projected based on various assumptions were compared with estimated operating and capital costs to develop a funded (i.e., cost-feasible) transit plan for the next 10 years.

Table 8-5 lists the evaluation criteria and their associated measures of effectiveness. In addition, each measure and criterion were assigned a weight. Weighting the criteria affords the opportunity to measure the relative importance of each among the group of criteria to be applied. A description of the elements is included, as well.

Table 8-5: 10-Year TDP Service Needs Evaluation Factors and Weights

Criteria	Measure	Measure Description	Measure Weight	Criteria Weight
Public Support	Survey Results	Level of interest in specific alternatives (Very High, High, Moderate, None), as indicated by Transit Priorities Survey	20%	40%
	Public Input	Level of interest in specific improvements (Very High, High, Moderate, None), as gathered from overall public input	20%	
Ridership Potential	Traditional Market Coverage	Percent coverage of traditional markets (areas with “High” or “Very High” rating from Transit Orientation Index)	10%	30%
	Discretionary Market Coverage	Percent coverage of discretionary markets (Density Threshold Assessment areas with 4 or more jobs or dwelling units per acre)	10%	
	Ridership Productivity	TBEST demand model trips per hour simulated 2031 ridership	10%	
Cross-Geographic Connectivity	Connections to Local/Regional Hubs	Seamless local and regional connections to adjacent local and regional hubs	10%	10%
Financial Feasibility	Cost Efficiency	Operating cost per trip	20%	20%
Total	-	-	-	100%

A detailed summary of various measures used in the evaluation, as well as the alternatives scoring thresholds, are presented next.

Public Outreach

An extensive public outreach process was conducted for this TDP and resulted in numerous opinions and suggestions on transit services from transit users and non-users and local/regional stakeholders. In addition, a public input survey also was distributed to the general public via various media platforms to gauge their views on what transit services should look like in the next 10 years. Based on an in-depth review of input received, interest in a particular route or type of service was categorized as “None,” “Moderate,” “High,” or “Very High” in the alternatives evaluation process.

Ridership Potential

For the evaluation of alternatives, three transit markets were identified:

- Traditional Market – existing population segments that historically have had a higher propensity to use transit and/or are dependent on public transit for their transportation needs. For the alternatives evaluation, the proportion of each corridor operating within a “High” or “Very High” transit-oriented area was calculated.
- Discretionary Market – potential riders living in higher-density areas of the county that may choose to use transit as a commuting or transportation alternative. The proportion of each corridor meeting at least the “Minimum” dwelling unit or employment density threshold for transit investment was used for the alternatives evaluation.
- Ridership Productivity – measured in terms of annual passenger trips per revenue hour of service. To provide for a relative comparison between alternatives, passenger trips and revenue hours of service were generated using output from the FDOT-approved ridership demand modeling software, TBEST.

Cross-Geographic Connectivity

Each potential route was assessed for potential local/regional connectivity as routes connecting to key hubs and areas within and outside of the county can strengthen the overall regional network and make Votran attractive to additional segments of riders. Inner- and inter-county routes with connections to key activity centers (existing and future) or hubs were be scored higher than those not serving such locations. Based on conclusions drawn from public involvement input, quick and convenient connectivity between major activity centers is a desired attribute for future Votran routes.

Financial Feasibility

Productivity is generally measured using cost-efficiency and is used by transit agencies to gauge how well they use resources. Ensuring cost-efficiency is critical to the success of the agency, and services projected to perform well in terms of their efficiency should receive a higher priority. Forecasts of ridership and operating costs for each individual alternative were used in this evaluation process.

- Cost efficiency – evaluated for each alternative using a transit industry standard efficiency measure, operating cost per passenger trip, which uses Votran performance data and TBEST 2031 ridership data. A higher cost efficiency may also mean better funding and policy support for the project.

Improvement Scoring Thresholds

For each transit alternative, a score was determined either through the computation of the selected measure or through professional judgment based on qualitative data reviewed. Scores for the more qualitative criteria (i.e., public input) were assigned based on a relative comparison of each transit alternative with other transit alternatives. A higher score is consistent with a higher ranking for a given alternative for the criterion being evaluated.

The thresholds for computation-based criteria (traditional market, choice market, trips per hour, and operating cost per trip) were determined using the average of the entire data set and one standard deviation above or below the average.

Table 8-6 shows the thresholds and scoring for each criterion used in the alternatives evaluation.

Table 8-6: 10- Year Needs Evaluation – Scoring Thresholds

Criteria	Range	Score
Survey Results – Transit Priorities Survey	Less than (Average – 1 SD)	1
	Between (Average – 1 SD) to Average	3
	More than Average to (Average + 1 SD)	5
	More than (Average + 1 SD)	7
Public Input – General Observations	None	1
	Moderate	3
	High	5
	Very High	7
Traditional Market Potential (% Serving Traditional Market)	Less than (Average – 1 SD)	1
	Between (Average – 1 SD) to Average	3
	More than Average to (Average + 1 SD)	5
	More than (Average + 1 SD)	7
Discretionary Market Potential (% Serving Choice Market)	Less than (Average – 1 SD)	1
	Between (Average – 1 SD) to Average	3
	More than Average to (Average + 1 SD)	5
	More than (Average + 1 SD)	7
Trips per Hour	Less than (Average – 1 SD)	1
	Between (Average – 1 SD) to Average	3
	More than Average to (Average + 1 SD)	5
	More than (Average + 1 SD)	7
Cross-Geographic Connectivity	None	1
	Moderate	3
	High	5
	Very High	7
Operating Cost per Trip	Less than (Average – 1 SD)	1
	Between (Average – 1 SD) to Average	3
	More than Average to (Average + 1 SD)	5
	More than (Average + 1 SD)	7

Note: SD = statistical Standard Deviation

Alternatives Evaluation Results

The 10-year transit service alternative priority rankings resulting from the previously described evaluation process are presented below. As previously indicated, these transit alternatives were derived without consideration for the realities of impending financial constraints to realize the community’s desired vision within the plan timeframe. Each alternative received a score by using the process summarized previously. The alternatives were then ranked based on their respective scores. Priority rank order and resulting scores from the evaluation are presented in Table 8-7.

When developing a TDP implementation plan, as presented in the subsequent section, these priorities are balanced with funding realities to determine to what degree that the community’s vision can be realized over the next decade.

Table 8-7: 10-Year Transit Needs Ranking

Rank	Proposed Improvement
1	High frequency bus service on US 1 - Enhanced Routes 103 and 104
2	High frequency bus service with TSP/Queue Jumps on US 92 - East-West Rapid
3	MOD in Deltona - West MOD Zones
4	Downtown-Beach Connector
5	Volusia-Flagler Express
6	Daytona-Deltona Commuter Express
7	Volusia-LYNX Commuter Express
8	Ormond Beach Circulator
9	I-95 West-Beach Connector
10	North DeLand Circulator
11	East MOD Zones
12	Orange City Connector
13	Ponce Inlet-Port Orange Connector

Section 9. 10-Year Transit Plan

This section presents the recommended 10-year transit plan, including the financial and implementation plans for Votran. The recommended transit service, capital/infrastructure, technology, and policy alternatives are presented and summarized. The development of the capital and operating costs and revenues used to finalize the funded and unfunded needs is summarized before presenting the financial plan for the 10-year period. Subsequently, the proposed 10-year implementation program is established for the Votran TDP.

This 10-year plan also considers the impacts of the ongoing public health crisis due to COVID-19. Although the County is returning to some form of normalcy, the impact on transit ridership industry-wide is assumed to last longer, as transit inherently does not accommodate social distancing easily, which is still preferred by many regardless of their vaccination status.

Recommended 10-Year Transit Plan

After carefully reviewing the needs presented previously, identifying the projected funding sources that are assumed to be available in the next 10 years for Votran services, and discussing with County and Votran staff the direction of the service provision, the recommended transit alternatives included in the 10-Year TDP are presented below. The recommended alternatives are identified under each of the major improvement categories, including service, capital/infrastructure, and policy.

Service Alternatives

Implement Short-Term Network (2022-2024)

The short-term network, which is the redesigned COA network, is recommended for implementation in two phases to ensure an orderly and smooth transition from the current Votran network to the new.

- *Implement Phase I of the Short-Term Redesigned COA Network (2022)*
 - Implement Routes 101, 104, 105, 107, 108, 110, 111, 112, 119, 120, 122, and 133.
 - Maintain existing Routes 3 (all variations), 6, 15 (all variations), 17 (all variations), 31, 40, 41, and 60.
 - Adjust NSB Flex Zones to include the New Smyrna Beach Walmart.
- *Implement Phase II of the Short-Term Redesigned COA Network (2023-2024)*
 - Implement Routes 102, 103, 106, 117, 131, 132, 140, 141, and 160.
 - *Add Technology-based On-Demand Transit* – Convert NSB Mainland and Beachside Flex zones to app- and phone-based MOD zones.

Table 9-1 shows the phased implementation of the short-term redesigned COA network.

Table 9-1: Short-Term Phased Implementation Plan

Route/Service	Implementation Year		
	2022	2023	2024
101	✓		
102		✓	
103		✓	
104	✓		
105	✓		
106		✓	
107	✓		
108	✓		
110	✓		
111	✓		
112	✓		
117		✓	
119	✓		
120	✓		
122	✓		
131		✓	
132			✓
133	✓		
140		✓	
141		✓	
160		✓	
NSB Beachside MOD		✓	
NSB Mainland MOD		✓	

Implement Mid-Term Network (2025-2031)

- *East-West Rapid* – Enhance Route 160 to operate at every 15 minutes during most of the day, connecting Daytona Beach to the DeLand SunRail station.
- *North DeLand Circulator* – Connect the new DeLand SunRail station to the City of DeLand and Votran’s DeLand ITF at every 60 minutes.
- *Volusia-Flagler Express* – Connect Volusia and Flagler counties with transit service with a peak-hour only route from Votran’s Downtown Transfer Plaza to Palm Coast in Flagler County.
- *Technology-based On-Demand Transit* – Add MOD services in Deltona and South DeLand.
- *Vanpool Program* – Maintain and subsidize current vanpool program for commuters.

For additional details on each of the previous short- and mid-term network improvements, please refer to Section 8 of this report. Table 9-2 shows the recommended 10-year transit service plan for Votran by service frequency. In addition, Map 9-1 shows the proposed route network for the 10-year plan.

Table 9-2: Recommended Votran 10-Year Service Plan

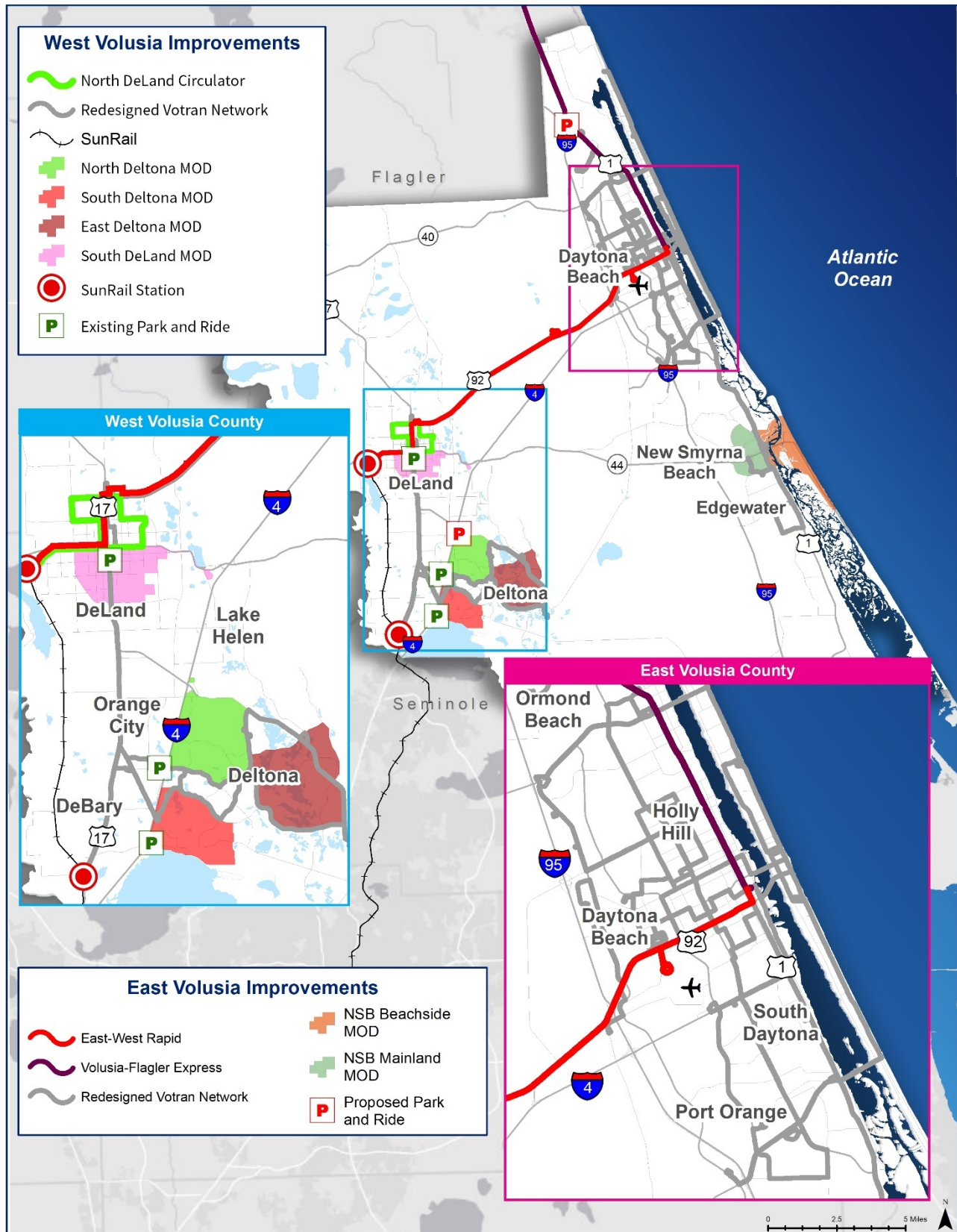
Route/Service	Service Area	2022 Peak Weekday Frequency	2031 Peak Weekday Frequency
Fixed-Route Network			
101	N. Atlantic Ave. / Granada Blvd.	30	30
102	N. Ridgewood Ave. Commuter	45	45
103	N. Ridgewood Ave.	30	30
104	S. Ridgewood/ Dunlawton Ave.	30	30
105	Bill France Blvd./ Center Ave.	60	60
106	N. Nova Rd.	60	60
107	S. Nova Rd.	30	30
108	Halifax Ave./Ormond-by-the-Sea	60	60
110	Williamson Blvd./Tanger Outlets	30	30
111	Mason Ave.	30	30
112	Taylor Rd./Clyde Morris Blvd.	30	30
117	S. Atlantic Ave.	30	30
119	Nova Rd./ Williamson Blvd.	60	60
120	Enterprise Rd./ US 17	60	60
122	Howland Blvd./Enterprise Rd.	120	120
131	SunRail to DeLand ITF	30	30
132	SunRail to Deltona Plaza	60	60
133	SunRail to Dupont Lakes	60	60
140	New Smyrna Beach/Port Orange	60	60
141	New Smyrna Beach/Edgewater	60	60
East-West Rapid*	International Speedway Blvd. (ISB)	30	15
North DeLand Circulator	ISB/New York Ave./SunRail	-	60
Volusia-Flagler Express	US 1 and I-95	-	Peak Hours
Mobility-on-Demand			
East Deltona	Elkcam Blvd./Fort Smith Blvd.	-	On-demand
North Deltona	Howland Blvd./Saxon Blvd.	-	On-demand
South Deltona	Normandy Blvd./Debary Ave.	-	On-demand
South DeLand	New York Ave./Taylor Rd.	-	On-demand
NSB Beachside	US 1/Canal St.	On-demand	On-demand
NSB Mainland	US 1/S. Atlantic Ave.	On-demand	On-demand
Other Services			
Paratransit**	Volusia County	On-demand	On-demand
Vanpool***	Volusia County	Scheduled	Scheduled

*Short-Term Route 160 becomes East-West Rapid in the Mid-Term.

**Votran’s complementary paratransit services will continue and expand as needed.

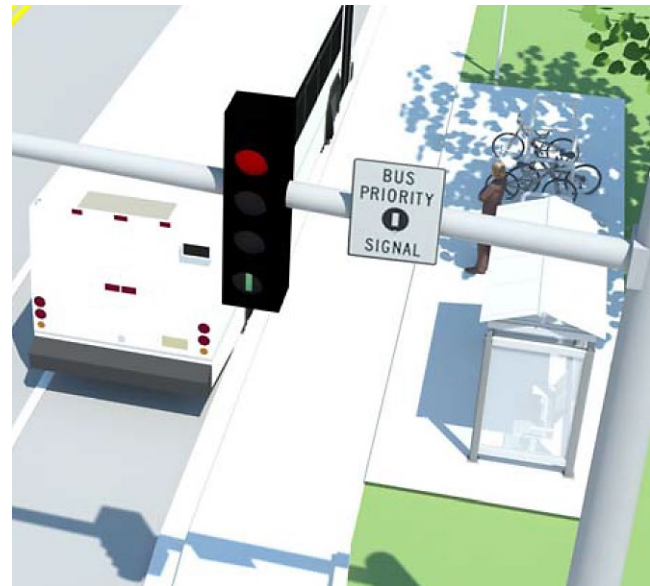
***The current Vanpool program is expected to continue.

Map 9-1: Votran 10-Year Plan



Capital and Policy Alternatives

- *Deploy TSP and Queue Jumps on US 92* – Deploy TSP technologies and add Queue Jumps on up to six applicable intersections on US 92 as part of implementing the *East-West Rapid* service.
- *Improve Fare Payment Technologies* – Improve fare payment methodologies to include a touchless fare payment system and mobile fare payment methods. Votran should work closely with FDOT in identifying potential funding sources and mechanisms to implement new fare technologies.



- *Continue Transit Infrastructure and Accessibility Program* – Continue Votran’s transit infrastructure and accessibility program. Also, Votran should develop a Bus Stop ADA Accessibility Transition Plan to streamline the investment of making bus stops convenient, safe, and accessible to all bus riders. The agency should explore additional funding opportunities, such as partnering with cities and private businesses, to improve the convenience of using transit facilities.



- *Establish Park-and-Ride Facilities* – Establish a shared park-and-ride facility in the general area of US 1 and I-95 to help commuters use the Volusia-Flagler Express to connect to Daytona Beach or Flagler County. The facility is assumed as a shared lot through an agreement with a land/property owner so no capital cost is assumed. The exact location adjacent to US 1 and I-95 will be determined later after a closer review of feasibility and parking space availability.
- *Continue Fleet Replacement and Acquisition Program* – Continue vehicle replacements and acquisitions to maintain the redesigned network and add any new services needing additional vehicles.

- *Expand Transit Marketing and Education Campaign* – Expand marketing efforts with the launch of redesigned route network and, if resources are available, rebrand key connectors such as the enhanced service on US 92. In addition, explore low-cost or cost neutral opportunities for more public education on the benefits of transit as well as on services already offered by Votran, such as the MyStop real-time bus app.
- *Enhanced Performance Monitoring Program* – Enhance the existing performance monitoring of Votran’s services. A sample performance monitoring program is included in Appendix F for Votran’s consideration. A performance monitoring program tracks the performance and efficiency of routes and the system as a whole and provides a convenient tool for ensuring the provision of efficient and effective transit service.

10-Year TDP Financial Plan

A financial plan was developed to help program and facilitate the implementation of TDP alternatives in the next 10 years. First, cost and revenue assumptions used to develop the financial plan are presented below. That is followed by a summary of cost and revenue projections for Votran’s 10-year TDP. The summary includes annual costs for service and capital/infrastructure/technology/policy improvements that are programmed for implementation within the next 10 years, together with supporting revenues that are reasonably expected to be available to fund the implementation.

Operating Cost Assumptions

Numerous assumptions were made to forecast transit-operating costs from 2022 through 2031. These assumptions are based on a variety of factors, including service performance data from Votran, discussions with and input from Votran staff, the most recent Votran Cost Allocation Model (CAM) data, as well as validated NTD data and other transit industry data. The key operating cost assumptions are summarized below.

- Based on the Consumer Price Index (CPI) data for the last 10 years (from 2011 to 2020), an average annual inflation rate of 1.7 percent is used for all operating cost projections.
- Annual operating costs for fixed-route services were developed based on 2019 data from Votran’s CAM and NTD reporting. Out of an abundance of caution due to the uncertainties still unfolding from the pandemic, a cautious approach was taken to estimating the cost per revenue hour. Therefore, the average of the fully-allocated cost per revenue hour resulting from the most recent CAM model, \$78.80, and the 2019 cost per revenue hour as reported in Votran’s NTD data, \$86.00, was used. The cost also was adjusted for two years of inflation using the CPI-based annual inflation rate. Based on the methodology described, the unit cost for projecting future operating costs was assumed at \$84.75 (2021\$) per revenue service hour.
- The revenue hour estimates for the Short-Term TDP alternatives were based on input from the 2021 Votran COA.
- The cost projections for paratransit services are also based on data from Votran CAM and NTD data. A similar methodology to that for fixed-route services was used in developing the paratransit cost per revenue hour for projecting those costs for the next 10 years. The 2019

costs from the CAM (\$58.40) and NTD data (\$52.99) were averaged and adjusted for two years of inflation, resulting in a cost of \$57.64 per revenue service hour.

- The proposed new on-demand transit services are assumed to be operated by Votran with its paratransit vehicles. Due to this, the cost of operating the MOD services were calculated using the same unit costs as paratransit services, at \$57.64 per revenue service hour.
- Maintaining the current vanpool service program was assumed. The cost for the program is based on FY 2019 NTD and CPI-based inflation adjustments.

Capital Cost Assumptions

A number of assumptions also were developed to project costs for capital/infrastructure/technology needs to support implementation of the service alternatives described previously. These capital cost assumptions are summarized as follows.

- An annual growth rate of 3 percent was used for the capital cost projections based on information from Votran staff and other recent Florida TDPs.
- The cost of deploying TSP at an intersection is assumed at \$22,000 (2021\$) and converting two already existing right turn lanes to Queue Jump lanes at an intersection is assumed at \$136,000 (2021\$) per intersection. These assumptions are based on recent data from studies from southeast region in the US.
- Software costs, including rider and driver apps and dashboards, to support implementing MOD services are assumed at \$25,000 per zone. This cost assumption is based on similar MOD implementation cost estimates from other studies/MOD service providers.
- The cost of upgrading the existing fare payment system is assumed to be \$500,000. This is an approximate cost and the actual cost should be determined after an analysis of various options available.
- The bus stop infrastructure and accessibility program costs were also assumed for the next 10 years. Initially, with the associated costs that may result from implementation of the redesigned network, a total of \$150,000 was assumed for 2022. Subsequently, a total of \$75,000 was assumed annually.
- The development of a Bus Stop ADA Accessibility Transition Plan at a cost of \$300,000 also was assumed to ensure Votran stays compliant with federal and State accessibility requirements at bus stops, providing safe and convenient access to Votran's riders.

Vehicle Replacement

The vehicle replacement plan is a critical component of the financial plan and Table 9-3 shows the total replacement and new vehicles by year for the TDP. The FTA-standard rate of 20-percent spare vehicle ratio was assumed for any new vehicle purchases.

- Vehicle life cycle assumptions are based on guidelines from FTA. A fixed-route bus is assumed to have a useful life of 14 years and a demand response vehicle is assumed to have a useful life of 10 years.
- Replacement vehicles planned to be purchased include those necessary to replace vehicles within the existing fleet that will reach the end of their useful life within the TDP planning period. The cost of a diesel bus is assumed at \$500,000 and a hybrid bus is assumed to cost \$565,000. A demand response vehicle, used to serve ADA paratransit services and MOD services, is assumed at \$107,000. These vehicle costs were derived from the TAM plan and discussion with Votran staff.

Table 9-3: 10-Year Vehicle Replacement Plan

Year	Redesigned Votran Network		New Services	
	Fixed-Route Buses	Paratransit Vehicles	Fixed-Route Buses	MOD Vehicles
2022	3	0	0	0
2023	4	10	0	0
2024	3	2	2	4
2025	3	8	0	0
2026	1	1	5	0
2027	6	2	0	0
2028	2	15	6	0
2029	2	7	2	0
2030	5	3	0	0
2031	5	0	0	0
Total	34	48	15	4

- Due to funding constraints projected at this time, replacement of some of the vehicles that are scheduled for replacement in the last few years of the TDP will be delayed. That includes 12 fixed-route and 26 paratransit vehicles that will delay their replacement beyond the 10-year TDP horizon. However, if additional federal capital funding becomes available, the vehicles should be moved back when TDP implementation progress is updated in the coming years.
- As previously mentioned, an annual growth rate of 3 percent was used for the capital cost projections, including the vehicles, to adjust for inflationary pressures in the future.

Other Cost Assumptions

When developing capital or operational improvements, it is important to anticipate supporting services such as additional planning resources and educational/marketing campaign costs.

- An expanded transit marketing and education campaign is assumed to be \$50,000 per year.

Revenue Assumptions

Several revenue-related assumptions were also used to project streams of revenue to support the 10-year TDP implementation. Revenue assumptions and projections for Votran are based on data from and discussions with Volusia County and Votran staff, historical farebox performance data, and

information on transit industry/FDOT funding programs. The basic structure/composition of Votran's mix of funding sources today, including federal, state, local, and agency-generated revenues (farebox, marketing), is expected to continue for the next 10 years.

The following additional key assumptions were used to project Votran TDP revenues.

- Based on the most recent Votran farebox recovery data from NTD, a farebox recovery ratio of 15 percent was used to determine the fare revenues for the fixed-route network.
- Revenues projections from federal sources, including annual FTA formula grant funds and short-term grants such as CARES Act and American Rescue Plan Act (ARPA) funding are based on information from Votran.
- Projections for existing funds from FDOT, including SunRail support, Corridor, Service Development, and Block Grant funding, are assumed to continue, as also provided by Votran.
- Existing revenues from the Florida Commission of Transportation Disadvantaged are assumed at \$647,000 per year (2021\$).
- Based on information from Votran, the contribution from the Volusia County General Fund for FY 2022 is \$5.0 million.
- Other local sources of funding include monies from advertising revenues and interest on investments, service contracts, and miscellaneous revenue at \$751,000 (in 2022\$).
- This plan also assumes the following additional new FDOT funding to assist with the implementation of regional and key local projects to improve the attractiveness of transit for discretionary riders and increase the quality of service for existing riders locally and regionally.
 - New FDOT Service Development grant to cover 50 percent of the annual cost for the Deltona and South DeLand MOD zones for three years.
 - Additional FDOT contribution to 100 percent fund the cost of the North DeLand Circulator for new DeLand SunRail station connection.
 - Additional FDOT Urban Corridor funds to 100 percent support the incremental cost of the East-West Rapid and the Volusia-Flagler Express.

10-Year Cost/Revenue Summary

The annual operating and capital costs and supporting revenues for Votran are summarized in Table 9-4. As shown, it would cost \$319.9 million to operate the redesigned Votran network in the next 10 years with another \$38.5 million in capital costs to support the necessary fleet and capital infrastructure. The operating costs would continue to be funded mainly with a mix of local, state, and federal sources and fare revenues generated by existing and new transit services.

Figure 9-1 shows the annual operating and capital costs for the TDP implementation plan, and Figure 9-2 shows the total costs and revenues by year to support it.

Figure 9-1: Total Operating and Capital Costs

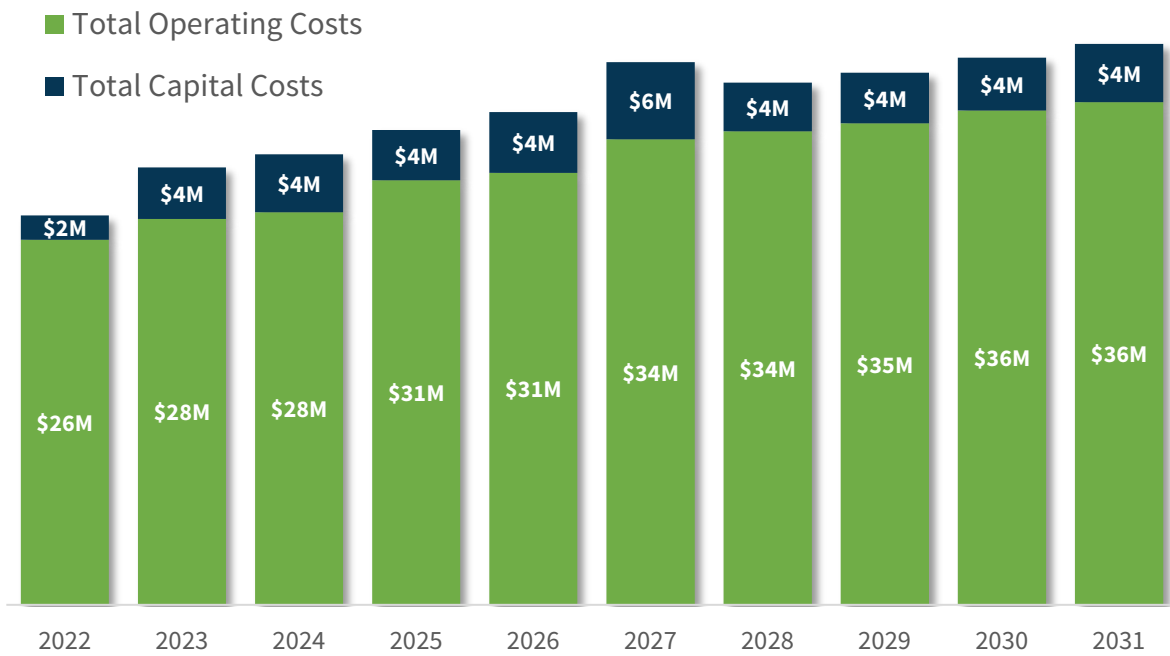


Figure 9-2: Total Costs and Revenues

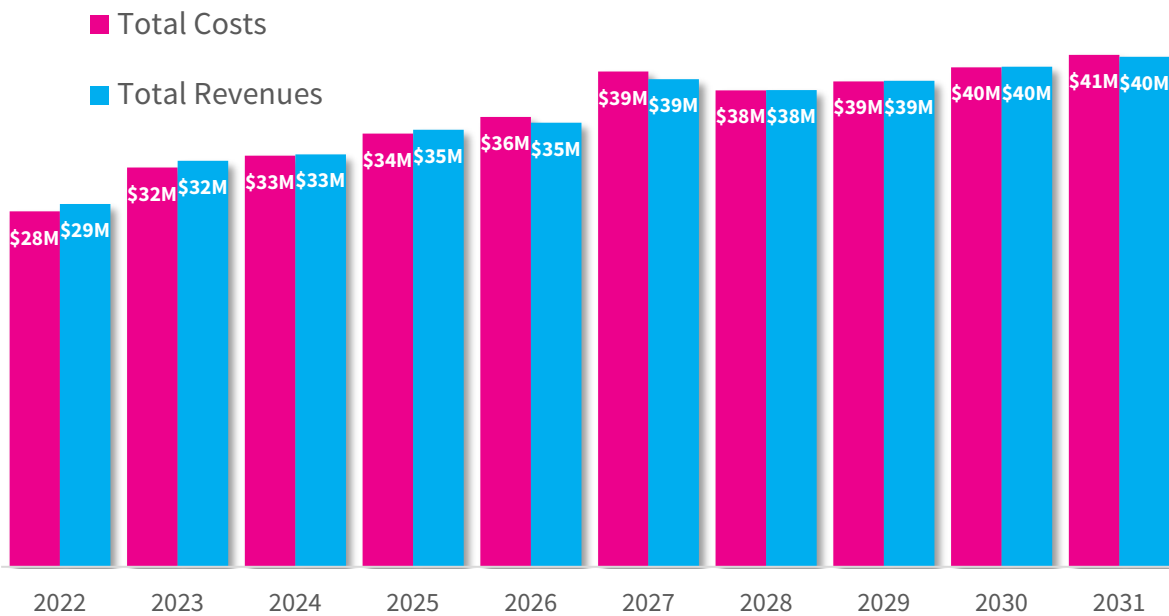


Table 9-4: Votran 10-Year TDP – Costs and Revenue

Cost/Revenue	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	10-Year Total
Operating Costs											
Votran	\$16,589,918	\$17,928,774	\$18,239,480	\$20,051,990	\$20,399,491	\$22,628,670	\$23,020,825	\$23,419,776	\$24,128,355	\$24,546,500	\$210,953,779
Paratransit Services	\$9,684,099	\$9,851,924	\$10,022,658	\$10,520,668	\$10,702,991	\$10,888,474	\$11,077,171	\$11,269,139	\$11,464,433	\$11,663,111	\$107,144,668
Vanpool Program	\$162,642	\$165,460	\$168,328	\$171,245	\$174,212	\$177,231	\$180,303	\$183,428	\$186,606	\$189,840	\$1,759,295
Total Operating Costs	\$26,436,658	\$27,946,159	\$28,430,466	\$30,743,903	\$31,276,695	\$33,694,375	\$34,278,299	\$34,872,342	\$35,779,394	\$36,399,451	\$319,857,741
Capital Costs											
Vehicles	\$1,545,000	\$3,532,797	\$3,763,352	\$2,871,173	\$4,256,854	\$4,303,364	\$3,363,705	\$3,482,351	\$3,680,765	\$4,031,749	\$34,831,111
Maintain Existing Fleet	\$1,545,000	\$3,532,797	\$2,086,016	\$2,871,173	\$779,032	\$4,303,364	\$3,363,705	\$2,215,581	\$3,680,765	\$3,359,791	\$27,737,224
Additional Vehicles for New Services	\$0	\$0	\$1,677,336	\$0	\$3,477,822	\$0	\$0	\$1,266,770	\$0	\$671,958	\$7,093,886
Other Capital and Policy	\$201,500	\$185,658	\$436,591	\$753,239	\$144,909	\$1,281,218	\$153,734	\$158,346	\$163,097	\$167,990	\$3,646,282
TSP/Queue Jumps for East-West Rapid	\$0	\$0	\$0	\$0	\$0	\$1,131,962	\$0	\$0	\$0	\$0	\$1,131,962
Expand Transit Marketing/Education Program	\$51,500	\$53,045	\$54,636	\$56,275	\$57,964	\$59,703	\$61,494	\$63,339	\$65,239	\$67,196	\$590,390
Initial MOD Software Cost	\$0	\$53,045	\$0	\$112,551	\$0	\$0	\$0	\$0	\$0	\$0	\$165,596
Bus Stop Infrastructure & Accessibility Program	\$150,000	\$79,568	\$81,955	\$84,413	\$86,946	\$89,554	\$92,241	\$95,008	\$97,858	\$100,794	\$958,335
Bus Stop ADA Accessibility Transition Plan	\$0	\$0	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300,000
New Fare Collection Systems	\$0	\$0	\$0	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$500,000
Total Capital Costs	\$1,746,500	\$3,718,455	\$4,199,943	\$3,624,412	\$4,401,764	\$5,584,583	\$3,517,439	\$3,640,697	\$3,843,862	\$4,199,739	\$38,477,393
Operating Revenues											
Federal											
Section 5307 for Operating	\$7,940,000	\$8,290,000	\$8,290,000	\$8,290,000	\$8,430,930	\$8,574,256	\$8,720,018	\$8,868,258	\$9,019,019	\$9,172,342	\$85,594,823
Section 5307 for CARES	\$3,445,033	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,445,033
Section 5307 for ARPA	\$816,967	\$4,262,000	\$4,262,000	\$407,000	\$413,919	\$0	\$0	\$0	\$0	\$0	\$10,161,886
Section 5311	\$0	\$431,992	\$453,592	\$462,664	\$470,529	\$481,355	\$490,983	\$500,802	\$510,818	\$519,670	\$4,322,405
Section 5311 CARES	\$691,615	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$691,615
DU Funds for Planning Studies	\$0	\$0	\$0	\$0	\$400,000	\$0	\$0	\$0	\$0	\$0	\$400,000
State											
FDOT State Block Grants	\$2,084,654	\$2,331,874	\$2,388,957	\$2,449,575	\$2,491,218	\$2,533,568	\$2,576,639	\$2,620,442	\$2,664,990	\$2,710,294	\$24,852,211
FDOT - Corridor Route 31&33 and 3,4,7 and 11	\$860,680	\$951,124	\$975,338	\$994,845	\$1,011,757	\$1,028,957	\$1,046,450	\$1,064,239	\$1,082,331	\$1,100,731	\$10,116,452
FDOT - SunRail Route 32	\$81,600	\$83,232	\$84,897	\$86,595	\$88,067	\$89,564	\$91,087	\$92,635	\$94,210	\$95,812	\$887,699
New FDOT SunRail funding-North DeLand Circulator	\$0	\$0	\$0	\$612,239	\$622,849	\$633,643	\$644,624	\$655,796	\$667,160	\$678,722	\$4,515,034
New FDOT-Urban Corridor Grant- East-West Rapid	\$0	\$0	\$0	\$0	\$0	\$1,875,655	\$1,908,160	\$1,941,229	\$1,974,870	\$2,009,095	\$9,709,009
New FDOT-Urban Corridor Grant- Volusia-Flagler Express	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$302,715	\$307,961	\$610,676
New FDOT Service Development - 50% New MOD Zones	\$0	\$0	\$0	\$442,091	\$449,752	\$457,546	\$0	\$0	\$0	\$0	\$1,349,389
State - TD Commission Funds	\$647,066	\$677,770	\$694,808	\$712,985	\$725,106	\$737,433	\$749,969	\$762,718	\$775,685	\$788,871	\$7,272,410
County											
Existing County General Funds	\$5,000,000	\$7,500,000	\$7,500,000	\$11,193,496	\$11,417,366	\$11,645,713	\$11,878,628	\$12,116,200	\$12,358,524	\$12,605,695	\$103,215,621
Other											
Farebox Revenues	\$2,867,629	\$3,206,500	\$3,481,500	\$3,706,500	\$3,780,630	\$3,856,243	\$3,933,367	\$4,012,035	\$4,092,275	\$4,174,121	\$37,110,800
Farebox Revenues from New Services	\$0	\$0	\$0	\$90,338	\$91,904	\$647,019	\$658,231	\$669,638	\$725,910	\$738,490	\$3,621,531
Advertising Revenues	\$420,000	\$426,564	\$435,095	\$443,797	\$452,673	\$461,727	\$470,961	\$480,380	\$489,988	\$498,479	\$4,579,664
Interest on Investments, Service Contracts & Misc Revenue	\$331,533	\$334,848	\$338,196	\$341,578	\$344,994	\$348,444	\$351,928	\$355,448	\$359,002	\$365,224	\$3,471,195
Capital Revenues											
Federal											
Federal 5307	\$750,000	\$772,500	\$795,675	\$819,545	\$844,132	\$869,456	\$895,539	\$922,405	\$950,078	\$978,580	\$8,597,909
XU/SU	\$1,326,000	\$1,365,780	\$1,406,753	\$1,448,956	\$1,492,425	\$1,537,197	\$1,583,313	\$1,630,813	\$1,679,737	\$1,730,129	\$15,201,104
5339 - Large/small	\$929,220	\$957,097	\$985,809	\$1,015,384	\$1,045,845	\$1,077,221	\$1,109,537	\$1,142,823	\$1,177,108	\$1,212,421	\$10,652,466
5310 - State pass thru	\$469,140	\$483,214	\$497,711	\$512,642	\$528,021	\$543,862	\$560,178	\$576,983	\$594,293	\$612,121	\$5,378,164
5339 Rural - State pass thru	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
State	\$58,643	\$60,402	\$62,214	\$64,081	\$66,003	\$67,983	\$70,023	\$72,123	\$74,287	\$76,516	\$672,276
New FDOT funding for TSP/Queue Jumps & Fare Technologies	\$0	\$0	\$0	\$500,000	\$0	\$1,131,962	\$0	\$0	\$0	\$0	\$1,631,962
Local	\$58,643	\$60,402	\$62,214	\$64,081	\$66,003	\$67,983	\$70,023	\$72,123	\$74,287	\$76,516	\$672,276
Total Revenues	\$28,778,423	\$32,195,299	\$32,714,760	\$34,658,392	\$35,234,124	\$38,666,787	\$37,809,658	\$38,557,092	\$39,667,288	\$40,451,791	\$358,733,614
10-Year Cost & Revenue Summary											
Total Revenues	\$28,778,423	\$32,195,299	\$32,714,760	\$34,658,392	\$35,234,124	\$38,666,787	\$37,809,658	\$38,557,092	\$39,667,288	\$40,451,791	\$358,733,614
Total Costs	\$28,183,158	\$31,664,613	\$32,630,408	\$34,368,316	\$35,678,459	\$39,278,958	\$37,795,738	\$38,513,039	\$39,623,256	\$40,599,190	\$358,335,134
Revenues Minus Costs	\$595,265	\$530,686	\$84,352	\$290,076	(\$444,335)	(\$612,171)	\$13,921	\$44,054	\$44,031	(\$147,399)	
Rollover from Prev. Year	\$0	\$595,265	\$1,125,951	\$1,210,303	\$1,500,379	\$1,056,044	\$443,874	\$457,794	\$501,848	\$545,879	
Surplus/Shortfall	\$595,265	\$1,125,951	\$1,210,303	\$1,500,379	\$1,056,044	\$443,874	\$457,794	\$501,848	\$545,879	\$398,480	\$398,480

10-Year TDP Implementation Plan

The implementation plan presented in Table 9-4 outlines improvements that are funded in the 10-Year TDP, as well as unfunded needs. The implementation timeline for key service improvements is also shown in Figure 9-3.

The table also shows the implementation years, operating and capital costs associated with the improvements, and type of anticipated funding sources for the plan.

It should be noted that the schedule shown in the table does not preclude the opportunity to delay or advance any projects. As priorities change, funding assumptions do not materialize, and/or more funding becomes available, this project implementation schedule can and should be adjusted.

Figure 9-3: 10-Year TDP Implementation Plan



Table 9-5: 10-Year TDP Implementation Plan and Unfunded Needs

TDP Improvements	Implementation Year	Annual Operating Cost (2021\$)	Total Capital Cost (2021\$)	Potential Revenue Source	TDP Goal Accomplished
Service Improvements					
Short-Term Redesigned Network	2022 -2024	\$16,307,312	\$150,000	Local	① ② ③ ④
North DeLand Circulator	2025	\$571,576	\$1,000,000	FDOT SunRail	① ② ③
South DeLand MOD	2025	\$206,364	\$110,000	FDOT Serv. Dev./Local	① ② ③
East Deltona MOD	2025	\$206,364	\$110,000	Local	① ② ③
North Deltona MOD	2025	\$206,364	\$110,000	Local	① ② ③
South Deltona MOD	2025	\$206,364	\$110,000	Local	① ② ③
East-West Rapid	2027	\$1,691,928	\$2,500,000	FDOT Urban Corridor	① ② ③ ④
Volusia-Flagler Express	2030	\$259,345	\$1,000,000	FDOT Urban Corridor	① ②
15-minute service on Routes 103 and 104	Unfunded	\$2,554,800	\$3,000,000	-	① ② ④
Daytona-Deltona Commuter Express	Unfunded	\$259,345	\$1,000,000	-	① ② ④
Downtown-Beach Connector	Unfunded	\$946,354	\$1,000,000	-	① ② ④
I-95 West-Beach Connector	Unfunded	\$694,976	\$1,000,000	-	① ② ④
Orange City Connector	Unfunded	\$303,416	\$500,000	-	① ② ④
Ormond Beach Circulator	Unfunded	\$347,488	\$500,000	-	① ② ④
Ponce Inlet-Port Orange Connector	Unfunded	\$303,416	\$500,000	-	① ② ④
Ponce Inlet MOD	Unfunded	\$206,364	\$110,000	-	① ② ③
Volusia-LYNX Commuter Express	Unfunded	\$259,345	\$1,000,000	-	① ②
Capital/Infrastructure/Technology Improvements					
Bus Stop ADA Access. Transition Plan	2024	-	\$275,000	Existing Revenues	②
New Fare Payment System	2024	-	\$500,000	FDOT	② ③
TSP/Queue Jumps for East-West Rapid*	2026	-	\$158,000	FDOT	① ② ③
Park-and-Ride for Volusia-Flagler Express	2030	-	-	FDOT	②
Bus Stop Infra. & Accessibility Program**	2022-31	-	\$75,000 (annually)	Existing Revenues	② ③
Transit Marketing/Education Program	2022-31	-	\$50,000 (annually)	Existing Revenues	④
Initial MOD Software Cost per MOD Zone	2023-25	-	\$25,000	Existing Revenues	① ② ③

*Note: Queue Jumps include up to six intersections and may need additional study.

**Note: 2022 allocates \$150,000 to support Redesigned Network.

Section 10. Plan Implementation and Coordination

The continued success of the Votran TDP is based on maneuvering through technical and funding challenges. This hinges on obtaining the support of decisionmakers who approve Votran’s budget, which is required to implement the TDP. This section provides key elements to consider as Votran implements its plan to successfully grow the system into the vision that is outlined in this TDP.

Plan Implementation - Action Items

Sudden changes in the operating environment can occur at varying degrees, as seen with the COVID-19 pandemic, thus demonstrating that the TDP adoption does not ensure that implementation will go according to the recommended schedule. The following action items listed below should be carefully considered and followed through to ensure that public support and funding and operational support are preserved until the next major TDP update.



Develop a Plan for Operational Support

Utilizing the operational data and phasing developed as part of the COA as a starting point, develop a plan to determine how the recommended service and capital alternatives will be incorporated operationally into the existing Votran network.



Engage FDOT and TPO as Partners

Votran’s active coordination with regional representatives during the development of this plan has put the transit agency on a strong foundation for obtaining support from its regional partners, especially FDOT. Continuing to coordinate with FDOT District Five transit staff is a key as both Votran and FDOT have a lot of shared goals pertaining to making Votran a truly viable and attractive alternative mobility option.

With the addition of the DeLand SunRail station in 2024, Votran and FDOT should especially continue to be partners to ensure the success of transit locally and regionally. With this TDP, Votran has identified multiple service and technology alternatives that may need funding support and/or cooperation from FDOT and the River to Sea TPO to help ensure a well-connected regional network.



Secure Funding for the Plan

Making sure the necessary funding is available each year to maintain and add any new services or facilities programmed in the TDP implementation plan is key to the success of this transit plan. While the TDP implementation schedule does not preclude Votran the opportunity to delay or advance any projects, Votran should put its best efforts into staying on schedule.

FDOT has expressed its support for Votran’s efforts in connecting East Volusia with West Volusia, as well as establishing cross jurisdictional/regional connections with Orange and Flagler counties. FDOT’s commitment to enhancing mobility strategies to develop major connected corridors with transit operations, transforming passenger terminals into mobility hubs with a wide range of modal options and first/last mile connections, and integrating next generation payment systems allows Votran an opportunity to partner with FDOT to secure state and federal funds to help support similar strategies in its TDP.



Maximize the Use of TDP

Use the adopted TDP, as approved by the Volusia County Council, as a tool to substantiate and explain the reasons for continued investments in transit services and capital needs. Votran has put in a major effort to develop the TDP and the return on investment from conducting this planning effort should span at least over the next four years, until the next major update is undertaken. Votran should capitalize on and continue to maximize the community-supported and elected officials-approved strategic blueprint whenever possible to realize the recommended implementation plan.



Motivate Using TDP Annual Progress Report

The TDP Annual Progress Report (APR) is another tool to help keep the TDP major update a “living document.” As it is an FDOT requirement, an APR can be used for each of the next four years to keep this TDP alive and provide the needed motivation to reiterate the benefits of the recommended alternatives.

Continuing Public Outreach

During the TDP process, Votran has conducted extensive public outreach as part of its public involvement component that can be leveraged and expanded to market other planning efforts, such as service initiation efforts, marketing programs and campaigns, and budget plans. A carefully crafted plan to promote the TDP after adoption will improve the likelihood of achieving the implementation plan.

TDP Executive Summary as an Engaging Tool

The Votran TDP Executive Summary, a concise report that will be developed post-TDP adoption, should be used as a promotional tool and an effective medium to continue generating support for the TDP’s recommendations. This user-friendly summary document with key information from the TDP may work better than distributing a large report with technical details when soliciting support from the general public and/or stakeholders.

Fostering TDP Efforts/Relationships

Throughout the robust TDP public involvement process, many stakeholders were identified and relationships with the general public were formed and fostered. The selected stakeholders and the

involved general public may serve as facilitators for a “grassroots” outreach program or could become transit supporters that can provide a basis for the success of future outreach efforts, especially at a time that Votran is launching the redesigned network. These future efforts can build upon the tools and lessons afforded by the TDP and aid in prioritizing specific target markets to engage.

Plan Coordination/Integration - Next Steps

Volusia County’s decision to conduct a COA at the same time as its major TDP update provides an excellent example of plan coordination and integration as it allowed Votran to feed the findings of its efficiency assessment to its 10-year TDP without delay. Volusia County should continue such practices of plan coordination in the future as well to get the best “bang for the buck” with its planning efforts:

Coordinate with Other Plans

Ensuring consistency with key state, regional, and local plan priorities should continue to be a primary focus of Votran. Coordinating the timing of the TDP with the new TAM plan requirement should also be considered, as both plans are designed to govern investment strategies based on needs.

Inform Other Plans

The analyses completed during the TDP can be used to help update required plans for ADA access and Title VI service provisions, as it documents how the system will serve older adults, persons with disabilities, and populations that fall under Title VI protections. The adopted TDP can also be useful for other entities with subsequent planning efforts, such as local comprehensive plans, area redevelopment plans, plans to develop affordable housing, and Florida’s SIS Needs Plan.

Assess Periodically for Efficiency

While Votran may have just completed a COA, with potential implementation of a redesigned network, it is recommended that Votran consider another service efficiency assessment in three to five years after the new system launch and repeat it at least every five years to maintain operational health.

Appendix A: Other Transportation Providers

VOLUSIA COUNTY TRANSPORTATION SERVICE PROVIDER SURVEY

Volusia County Transit (Votran) is in the process of developing its ten-year Transit Development Plan (TDP) major update, in accordance with the Florida Administrative Code (FAC) Rule 14-73.001 for the Florida Department of Transportation (FDOT). Votran is also updating the Transportation Disadvantaged Service Plan (TDSP), a requirement of the Florida Commission for the Transportation Disadvantaged. The State of Florida requires that Votran list all of the transportation providers within its geographic service area within these documents. **Please take the time to fill out this survey and assist Votran in providing better transportation to all of Volusia County’s residents.**

1. What is the name of your company? _____
2. What type of service do you provide? (e.g., bus, vanpool, taxi, demand response, charter)

3. Does your service have any restrictions related to clients, trip purpose, or destination?

4. What are the boundaries of your service area? _____
5. What are your hours of operation? _____
6. What is your service frequency? _____
7. What is your average annual ridership? _____
8. What is your fare per trip? _____
9. What are your primary destinations? _____
10. Please list the location of your facilities:

Name (e.g., dispatch)	Location
_____	_____
_____	_____
_____	_____
11. Please list your vehicles

Type (e.g., car, van, bus)	Age	Number of Units	Special Accessories
_____	_____	_____	_____
_____	_____	_____	_____

12. Please list any other equipment used to perform daily operations (e.g., automotive repair)

Type	Age	Number of Units	Condition (please circle one)
_____	_____	_____	Excellent Good Fair Poor
_____	_____	_____	Excellent Good Fair Poor
_____	_____	_____	Excellent Good Fair Poor

13. Please list any affiliations with groups or programs involved with public transit:

Thank you for taking the time to complete this survey. You may provide additional information regarding your transportation services in the blank space below or by attaching it to your response. Please return the completed survey to Tindale Oliver, 1000 N Ashley Drive #400 Tampa, Florida 33602, or fax to (813) 226-2106, or email kburrows@tindaleoliver.com. If the information is available in another format, please mail, fax, or e-mail the existing format without completing this questionnaire.

All agencies that complete and send this form will be included in the Votran TDP transportation provider inventory.

Table A-1: Other Transportation Providers

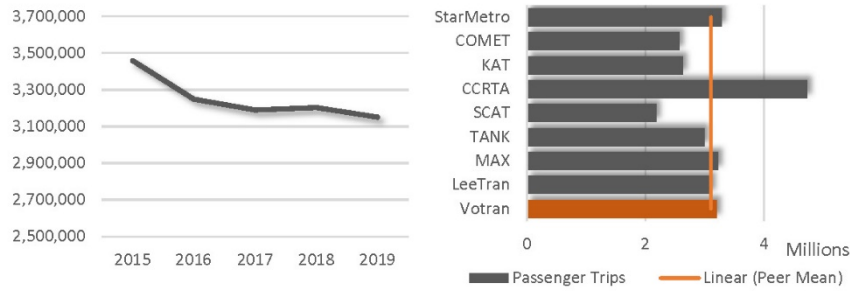
Provider	Types of Services Provided			Levels of Service		Fare Structure	Types of Vehicles	Phone	Email
	General Service Area (Counties)	Eligible Purposes	Eligible Riders	Days	Hours				
All Volusia Transport, LLC	Volusia County	Medical	Americans with Disabilities Act Eligible, Disabled, Elderly, Private Pay Consumer, Transportation Disadvantaged	Mon-Sat	7:00 AM - 6:00 PM	Wheelchair Van, within 10 miles, \$35.00 one way; Stretcher Van, within 10 miles, \$55.00 one way; 7-10 passenger HandiVan, \$15.00 one way, within 10 miles	Non-Emergency Stretcher Van, Wheelchair Van	386-801-8156	allvolusiatransp@hotmail.com
Med One Shuttle, Inc.	Volusia County	Medical	All	Mon-Sun	24/7	Varies	Wheelchair Van, Ambulatory Van, Stretcher Van	386-255-8525	medoneshuttle@bellsouth.net
Yellow Cab (Kings Trans. Group)	Volusia County	All, Recreation	All	Mon-Sun	24/7	Varies	Sedan, Taxi, Limousine	386-255-5555	yellowcabking@msn.com
American Cancer Society Transportation Program	Florida	Medical	Cancer Patient	Mon-Fri	8:00 AM - 6:00 PM	Varies	Car, Taxi	800-227-2345	-
Mobility Works-Wheelchair Accessible Van Rentals	Florida	All, Recreation	Disabled	Mon-Fri	8:00 AM - 6:00 PM	Varies	Wheelchair Van	877-275-4915	-
4 Leaf Clover	Volusia County	All, Recreation	All	Mon-Sun	24/7	Varies	Taxi	386-252-9999	peterson812@hotmail.com
American Taxi	Volusia County	All, Recreation	All	Mon-Sun	24/7	Varies	Taxi	386-253-0303	
Tri-Star Taxi	Volusia County	All, Recreation	All	Mon-Sun	24/7	Varies	Van/taxi	386-310-7945	tristarstaxi@yahoo.com

Table A-1: Other Transportation Providers (continued)

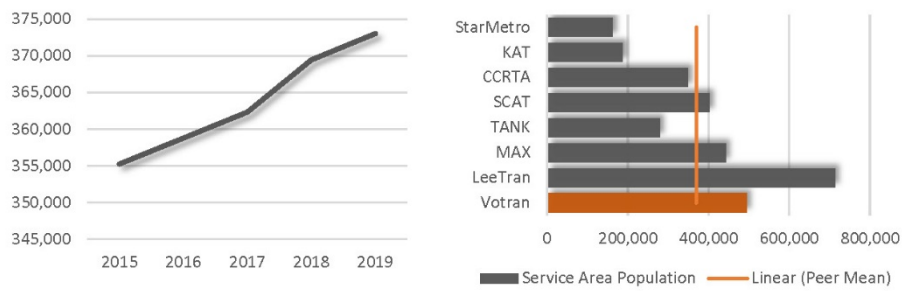
Provider	Types of Services Provided			Levels of Service		Fare Structure	Types of Vehicles	Phone	Email
	General Service Area (Counties)	Eligible Purposes	Eligible Riders	Days	Hours				
Tropical Transportation	US	All, Recreation	All	Mon-Sun	24/7	Varies	Van/sedan	386-281-3260	gotropicalshuttle@gmail.com
Classi Taxi and Shuttle	Orlando, Sanford, Daytona Beach, Jacksonville	All, Recreation	All	Mon-Sun	24/7	Varies	Van/sedan	386-255-8000	nsbcab@gmail.com

Appendix B: Trend and Peer Analysis

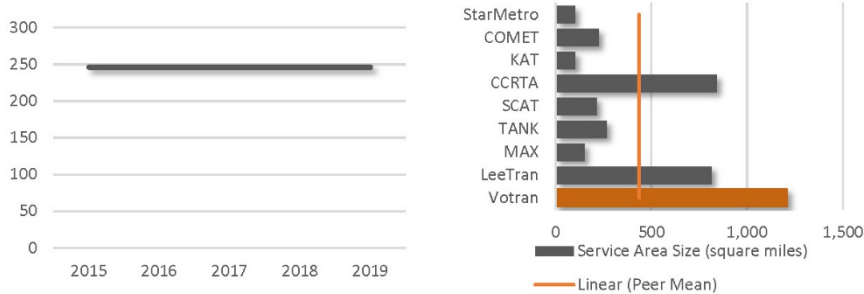
Passenger Trips



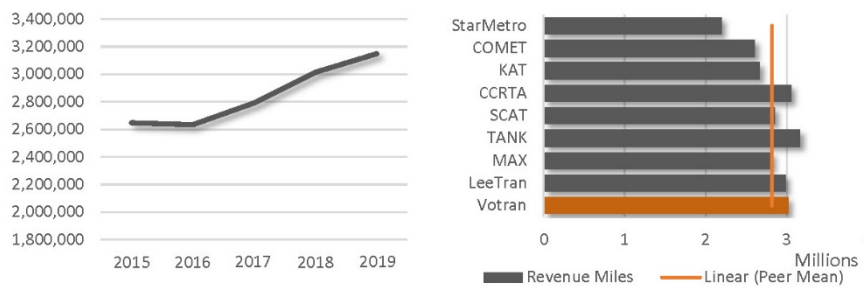
Service Area Population



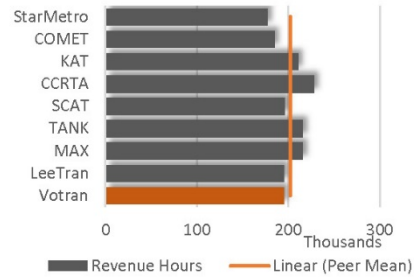
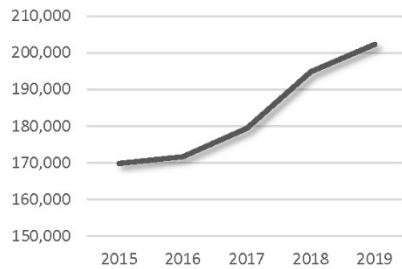
Service Area Size



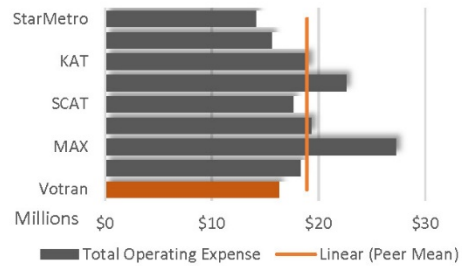
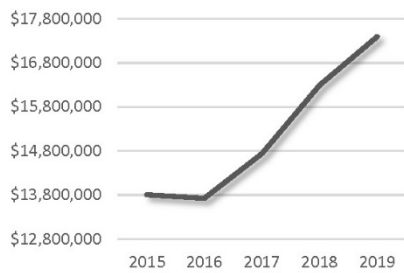
Revenue Miles



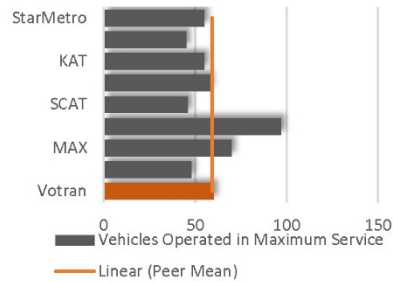
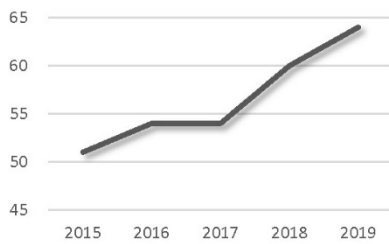
Revenue Hours



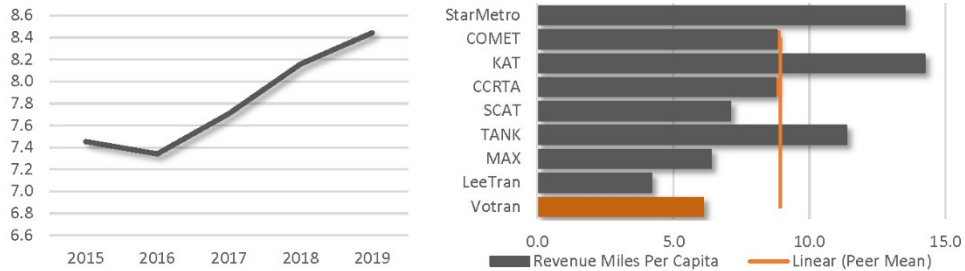
Total Operating Expense



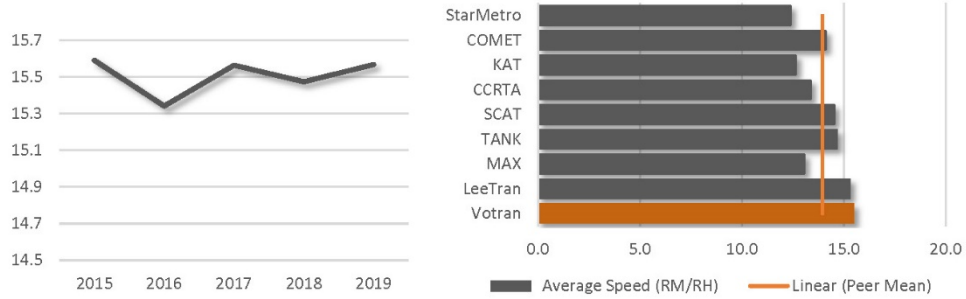
Vehicles Operated in Maximum Service



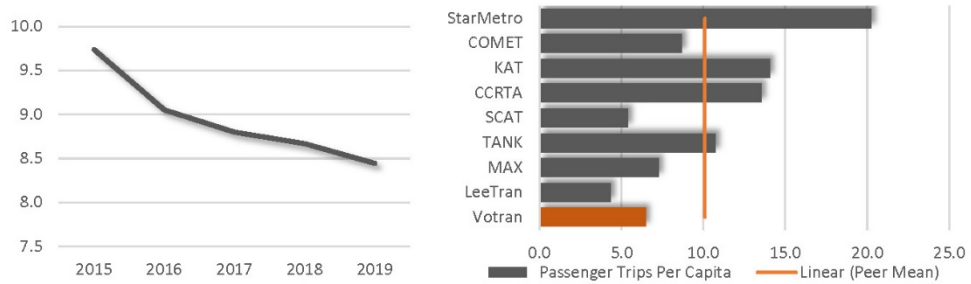
Revenue Miles per Capita



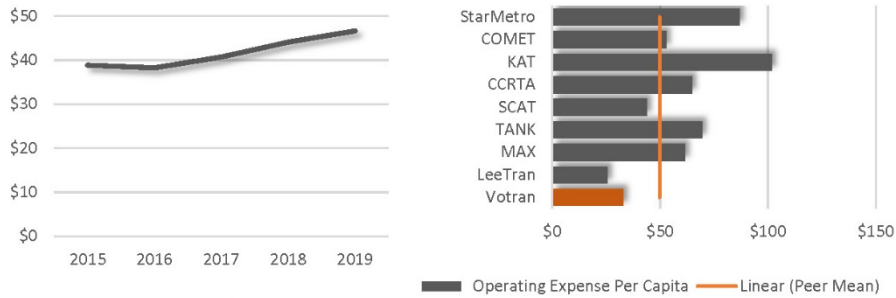
Revenue Miles per Revenue Hour



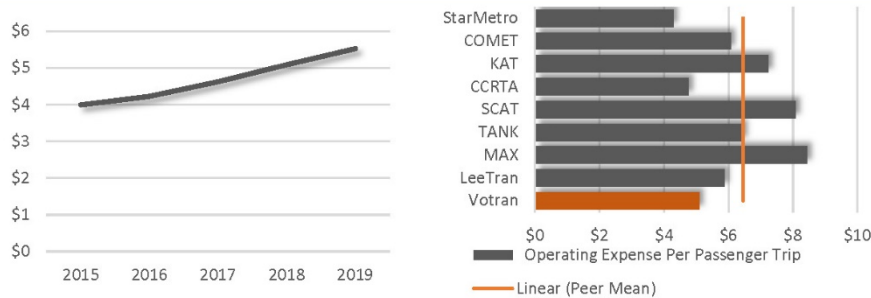
Passenger Trips per Capita



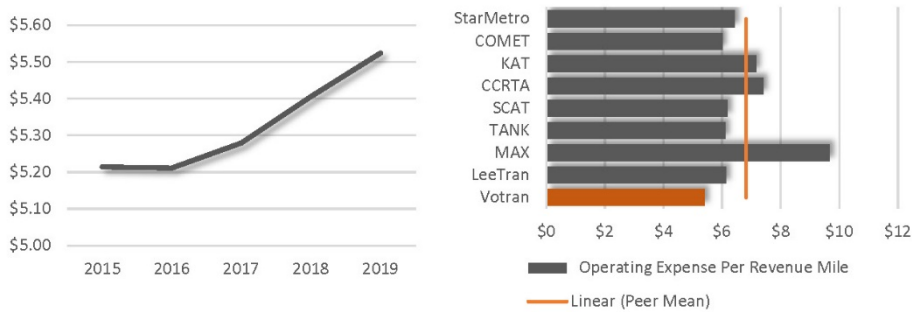
Operating Expense per Capita



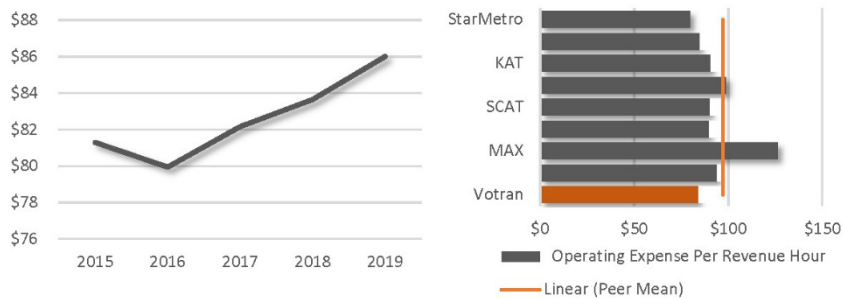
Operating Expense per Passenger Trip



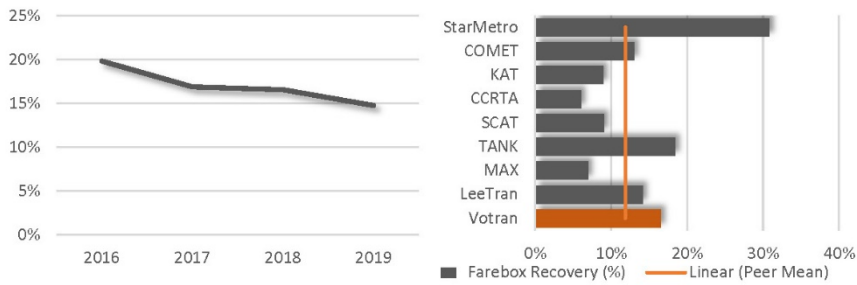
Operating Expense per Revenue Mile



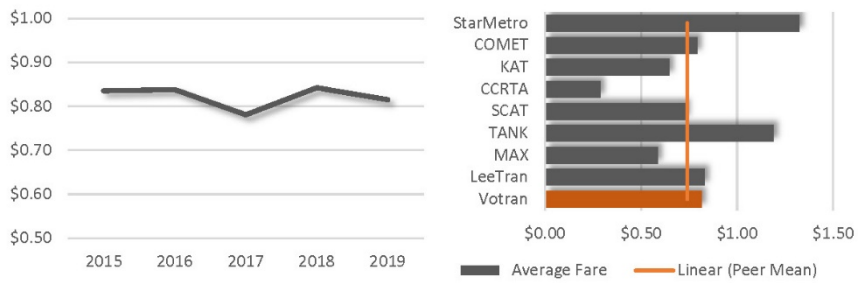
Operating Expense per Revenue Hour



Farebox Recovery (%)



Average Fare



Appendix C: Farebox Recovery Report

VOTRAN ANNUAL FAREBOX RECOVERY REPORT
SOUTH DAYTONA, FLORIDA
January 2021

CURRENT FAREBOX RECOVERY RATIO

The farebox recovery ratio (FRR) for Votran, the public transportation provider for Volusia County, was 14.8 percent for all fixed-route services in fiscal year (FY) 2019. This number reflects a 29.5 percent decrease over the five-year period from FY 2015 to FY 2019.

PRIOR YEAR FARE STUDIES AND CHANGES

The last Votran fare change was implemented in FY 2015. As a result, the current full fare on the fixed-route system is \$1.75, and \$0.85 for the reduced fare.

STRATEGIES THAT WILL AFFECT THE FAREBOX RECOVERY RATIO

The 2022-2031 Transit Development Plan (TDP) Major Update identifies strategies that will be used to maintain or increase the farebox recovery ratio, including the following:

- Consider replacing outdated farebox equipment and installing smartcard technology and initiating mobile fare payment to help enhance the fare collection process, shorten bus travel times, and minimize cash handling.
- Monitor key performance measures for individual fixed-routes.
- Ensure that transit serves major activity centers, potentially increasing the effectiveness of service.
- Continue to transition Transportation Disadvantaged (TD) and ADA passengers to fixed-route services, as feasible, to increase ridership.
- Increase ridership through enhanced marketing and community relations activities.
- Provide local employers with incentives for transit use.
- Provide convenient locations for bus passes to be purchased.
- Monitor opportunities to secure additional funding to improve frequencies on existing routes to make service more attractive to new riders.
- Conduct on-board surveys at least every four years to gather information on how to make services more convenient and useful to patrons.
- Complete ongoing preventative maintenance activities and repair/replace fareboxes as needed to ensure the fare collection equipment is performing at optimum capacity.
- Seek to review and update the current fare structure and available fare media given that it has been five years since the last fare structure review and inflationary factors continue to impact ongoing operating costs.
- Coordinate with SunRail to implement regional fares.

Appendix D: Public Involvement Plan



Volusia County Transit Development Plan

Public Involvement Plan

February 2021



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1. Introduction

Votran, the transit agency serving Volusia County, is preparing its 10-year Transit Development Plan (TDP), which will provide a guide for development of the transit system over the next decade. As required by State statute, this is a major update to its TDP, which is required every five years. This update covers Fiscal Years (FYs) 2022 through 2031.

The TDP Public Involvement Plan (PIP) provides an overview of the public outreach activities that will be undertaken as part of the Votran TDP update process. The PIP is designed to comply with TDP State statutory requirements and is consistent with the River to Sea Transportation Planning Organization (R2CTPO) Public Participation Plan (PPP).

Rule 14-73.001 requires that the TDP preparation include the following activities:

- A PIP approved by the Florida Department of Transportation (FDOT) or the local TPO's PPP, approved by both the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA).
- Description of the process used and the public involvement activities undertaken.
- Solicitation of comments from FDOT, the TPO, and the regional Workforce Development Board (i.e., CareerSource Flagler/Volusia) on the mission, goals, objectives, alternatives, and 10-year implementation program.
- Notification of all public meetings at which the TDP is presented to or discussed with FDOT, the TPO, and the regional Workforce Development Board.

To ensure that Votran meets these requirements, the PIP will facilitate a public involvement process for the TDP effort that will encompass a range of activities that provide ample opportunity for participation by the required, and other interested, entities.

It should be noted that the PIP is written such as to match the scope of services and to provide the greatest flexibility possible as the TDP is being developed. While the activities are set, the exact time frame and types or number of activities are subject to change in order for the local agency to accomplish the best results with the resources made available for this aspect of the update process.

Furthermore, Votran as a public transit agency and recipient of federal and state funding, is required to adhere to federal non-discrimination regulations, including those outlined in Title VI. Volusia County has developed and maintains a Title VI Plan, outlining the policies, procedures, services, and steps that will guide the public involvement activities outlined in this PIP to ensure inclusive and representative participation, including those with disabilities, limited English proficiency (LEP), and/or other factors that may limit their participation. By reference, this PIP integrates the policies and procedures of the Title VI Plan into the programs, activities, and services of this PIP.

2. TDP Public Involvement Process

A variety of public involvement techniques were selected for inclusion in the PIP to ensure the active participation of citizens in the community. Table 2-1 presents the types of activities that will be completed for the TDP and the tools associated with each type of activity.

Table 2-1: TDP Public Involvement Activities

Public Involvement Activity		Votran TDP PIP
Collateral Materials and Visual Aids	Fact sheets, flyers, and other informational items	✓
	Web outreach	✓
	Social media and email outreach	✓
Community Engagement, Review, and Comment	Online surveys	✓
	Bus passenger survey	✓
	Public workshops	✓
	Stakeholder interviews	✓
	Discussion group workshops	✓
	Email, in-person, and telephone comments	✓
Agency Coordination	Steering/review committee	✓
	Regional coordination	✓
	Federal, state, and local officials	✓

The remainder of this section summarizes these activities in detail, using direct and direct public involvement techniques to ensure active participation from the community.

Efforts will also be made to gather input from individuals with limited English proficiency in Volusia County. To the extent possible, the project team will make Spanish-speaking individuals available to assist with public outreach events and/or provide pertinent materials such as surveys and workshop flyers in Spanish.

Impacts of COVID-19 Health Guidelines on the PIP

It should be noted that, due to social distancing requirements and safety precautions resulting from the COVID-19-related public health crisis unfolding at this time, some outreach activities may be conducted virtually via the internet and/or phone. However, the ongoing need for such outreach strategies will be reassessed over time and efforts will be made to ensure the use of an array of online platforms that will provide easy and equitable methods for reaching all segments of the population and receiving feedback.

3. TDP Public Involvement Activities

Table 3-1 provides a list of planned outreach activities for this TDP Major Update. Each activity is described in detail thereafter.

Table 3-1: Public Involvement Activities

Type of Outreach Activity	Phase I (October 2020–January 2021)	Phase II (February–August 2021)
Review Committee Meetings	✓	✓
Stakeholder Interviews	✓	
Bus Passenger Survey	✓	
Online Surveys	✓	✓
Discussion Group Workshops	✓	
Public Workshops	✓	✓
Web/Email/Social and Printed Media	✓	✓

Project Review Committee Meetings

As one of the initial outreach tasks for the TDP, a Project Review Committee (PRC) was assembled. The PRC will support and help guide the overall TDP effort, including serving as a technical resource for data and information. Members include representatives from Volusia County/Votran, FDOT District 5, R2CTPO, and CareerSource Flagler/Volusia, which is the Workforce Development Board of Flagler and Volusia counties. Table 3-2 presents a list of the PRC members and their affiliations and contact information.

Immediately after convening the group, an initial project kick-off meeting was hosted in October 2020 to set the overall scope, goals and objectives, and desired deliverables for the TDP process. Up to three additional meetings with the PRC are envisioned at key technical milestones, as follows:

- January 2021 – Provide initial outreach findings and conduct a transit needs discussion
- March 2021 – Present Draft COA and TDP Needs Plan
- Jun/July 2021 – Present Draft TDP and TDSP



Table 3-2: Project Review Committee Members

PRC Member	Organization	Contact Information
Bobbie King	Volusia County	bgking@volusia.org
Dona Butler	Volusia County	DDbutler@volusia.org
Suzanne Konchan	Volusia County	skonchan@volusia.org
Roger Wittenberg	Volusia County	rwittenberg@volusia.org
Matthew Minaberry	Votran	mminaberry@volusia.org
Kelvin Miller	Votran	kmiller@volusia.org
Jacob Lunceford	Votran	jlunceford@volusia.org
Elizabeth Suchsland	Votran	esuchsland@volusia.org
Stephan Harris	R2CTPO	SHarris@r2ctpo.org
Diane Poitras	FDOT District 5	Diane.poitras@dot.state.fl.us
Carlos Colon	FDOT District 5	carlos.colon@dot.state.fl.us
Kathy Spencer	Career Source Flagler Volusia	kathyspencer@careersourcefv.com

Stakeholder Interviews

Since the understanding of local conditions should include knowledge of the perceptions and attitudes of community decision-makers and leaders towards transit, up to 15 stakeholder interviews will be conducted as part of the public involvement process. Stakeholders will be identified with input and guidance from the PRC. Interviews will then be scheduled and conducted using an interview script that was developed and submitted to the PRC for review at the project kickoff. Unless requested to be in-person, these stakeholder interviews will be conducted virtually via online meeting platforms or via telephone. Organizations associated with the selected stakeholders are listed in Table 3-3.



Table 3-3: Stakeholder Organizations

Organization	Stakeholder Category
River to Sea Transportation Planning Organization	Regional Planning Agency
Transportation Disadvantaged Local Coordinating Board	Local Board
Volusia County Council	County Department
Volusia County Health Department	
Volusia County Administration	
Council on Aging	Social Service Agency
One Voice Volusia	
United Way Volusia/Flagler	
Town of Pierson	City/Municipality
City of Daytona Beach	
City of Daytona Beach Shores	
City of DeBary	
City of DeLand	
City of Deltona	
City of Edgewater	
City of Holly Hill	
City of Lake Helen	
City of New Smyrna Beach	
City of Oak Hill	
City of Orange City	
City of Ormond Beach	
City of South Daytona	

Bus Passenger Survey

A bus passenger survey of Votran’s scheduled fixed-route bus trips will also be conducted to obtain information related to the attitudes, preferences, and habits of current riders. The bus passenger survey methodology and implementation will be coordinated closely with Votran staff to ensure that study objectives are met and data collection efforts are efficiently integrated with Votran operations. In addition, the survey form will be developed in conjunction with the PRC and will draw on Votran’s most recent survey questionnaire to promote consistency of questions and response cohorts. This will facilitate subsequent comparative analysis of results over time. Prior to beginning the bus passenger survey process, a meeting with Votran operations staff will be held to ensure a clear understanding of the methodology, process, and timeframe. Survey notices will be provided for Votran to distribute to its bus operators and on board its buses to notify patrons of the survey.

The project team will use electronic tablets to facilitate the collection of data during a survey interview process on board the vehicles. Once approved, the questionnaire will be programmed as an easy-to-use survey application and will step the patron through the questions with directed branching

geared to account for prior responses. Collection of origin-destination information through the electronic tablets and interview process will increase the number of valid, accurate, and geocodable responses from bus riders.

The bus passenger survey is expected to cover a sample of all routes and runs for all times of day for a representative weekday, Saturday, and Sunday of service. The surveys will be scheduled in January 2021 to ensure that school is in session and traffic levels and patterns are typical (to the extent that can be expected given the ongoing pandemic). The survey process will accommodate both English and Spanish language needs, as necessary.

The project team will recruit and train survey personnel and assign them to survey runs during the course of an expected two-week period for survey distribution. In addition, project team members will be present on-site during the survey process to work with Votran operations staff to ensure the orderly placement of survey personnel on buses and deal with any issues that may arise during the effort. The trained surveyors will approach riders once they board to request a survey interview. All bus riders will have an equal chance of being interviewed, as all candidates will be randomly selected to be interviewed once they alight.

All completed survey entries will be downloaded and prepared for data processing and analysis. The draft response database then will be cleaned to ensure accuracy, consistency, and appropriateness of response cohorts for each question. Additional geocoding also may be required at this stage. Once cleaned, data analysis will be performed to create selected cross-tabulations and statistics consistent with previous bus passenger data collection efforts and to reflect input from the PRC. The project team will be responsible for quality control and accuracy throughout the data entry and analysis process, and also will seek to include any pertinent information, as available, from previous bus passenger surveys.



Online Surveys

To understand the needs and concerns of persons who cannot participate in other outreach events, two online surveys of the general public will be conducted. Development of the surveys will be coordinated with the PRC and will be implemented in phases. The first survey will be conducted in the first phase of TDP outreach (Phase I) to seek public input on needs and obtain information related to attitudes, latent demand, and general support of the community related to public transit services while augmenting findings of the passenger survey.

The Phase II survey will be conducted after the development of potential service alternatives for the TDP and focus on public reaction to proposed recommendations. The online surveys will be posted on the Votran website and distributed via current email and social media outlets available to the agency. As is feasible, each survey link also will be made available via other available County websites. In addition, participants attending the planned public workshops and discussion group workshops will be invited to disseminate the survey links. Survey responses will be compiled and all comments will be included in the final results summary available on a TDP-specific website, and a tablet-based and/or hard copy version of the survey will be provided at planned public meetings and discussion groups and to partnering agencies to help enhance the level of response.



Discussion Group Workshops

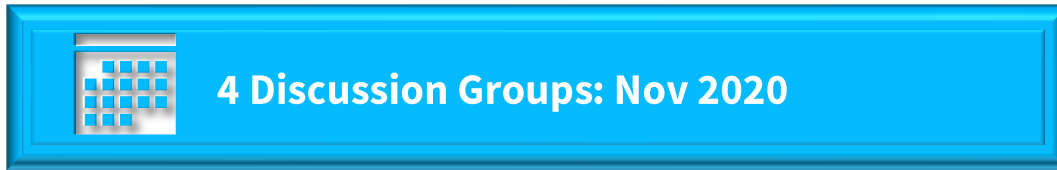
Up to four invitation-based discussion group workshops will also be conducted. Each will involve a smaller group of participants (8–12 persons) in an intimate meeting setting that promotes more in-depth, open-ended discussion about issues, needs, and opportunities from the perspectives of users and non-users. The project team will coordinate with the PRC to identify and invite potential participants to each workshop. Each discussion group will be attended by participants of similar backgrounds to provide for more robust discussion.

The following four groups have been identified for the discussion group workshops:

- **Business Community Discussion** – Business, health, chambers of commerce, Hotel/Motel Association, International Speedway Boulevard Coalition, Team Volusia
- **Social Services and Workforce Discussion** – Social service agencies and workforce development board
- **Education and Active Stakeholder Discussion** – Colleges and active stakeholder groups, such as Association for Responsible Development and bike/ped community
- **Transit User Discussion** – Current bus riders

At the workshops, a variety of techniques will be used to encourage participation and elicit perceptions, ideas, preferences, and other input that is important to inform the TDP process.

A key focus for each of the workshops will be on getting input from the participants on the effectiveness and adequacy of the transportation options in the area/region, as well as what they perceive the community's expectations are regarding both public and private transportation providers.



Public Workshops

Transit workshops designed to inform and engage the general public should be a key part of any TDP outreach effort. Up to four general public workshops will be conducted to further support the Votran TDP public participation process, as summarized below.

- **Phase I Workshops** – Two public workshops will be hosted to solicit feedback regarding transit needs and vision during Phase I outreach. These workshops may most probably be held virtually to provide a more safe and attractive option to an in-person event option due to the ongoing COVID-19 related health/exposure concerns. If provided virtually, multiple online avenues will be provided for participation and for anyone without internet facilities, an option to join by telephone will also be provided. However, the final format of the workshop has not yet been determined and will be decided based on input from the PRC.
- **Phase II Workshops** – Two additional public workshops will be hosted to solicit feedback regarding TDP alternatives and priorities during the later stages of the TDP process with Phase II outreach. Depending on the health and safety guidelines and attendance potential at that time, these workshops may be held virtually or as standalone events at different locations. This set of workshops will provide an opportunity to offer input on the effectiveness of the proposed service concepts to meet the transit needs of the communities Votran serves.



Collateral Materials and Public Notification

To support the outreach events included as part of this PIP, flyers, fact sheets, PowerPoint presentations, media/press releases, and other materials will also be developed. Using web, email, social and printed media, these materials, as summarized below, will be developed and/or distributed to inform about public outreach activities and TDP's purpose and goals. As feasible, the materials also will be made available on a TDP-specific website linked to the existing Votran website.

- **Fact Sheets** – to distribute information to the public and stakeholders that offer an overview of the TDP and goals while promoting the value and importance of public involvement; will direct and encourage the public to reach out to Votran and project team to share questions and concerns.
- **Flyers** – to share information with the public on upcoming events and educate the public on the public involvement process and the value of their participation; will direct the public to visit the Votran website to stay involved and informed with the development of the TDP.
- **Project Presentation** – a user-friendly, graphical PowerPoint presentation to support the communication and adoption of the TDP; will be available for use by Volusia County/Votran staff beyond the adoption of the TDP.
- **Media/Press Releases** – to promote the PIP and its activities, including the opportunity to participate in public input surveys, promote attendance at virtual or in-person public workshops, and amplify efforts to involve the public in the prioritization of goals for the TDP and the future development of Votran services. This information will be provided to Votran’s public relations staff and/or Volusia County communications team for review prior to their release to the media.

4. Public Involvement Activity Schedule

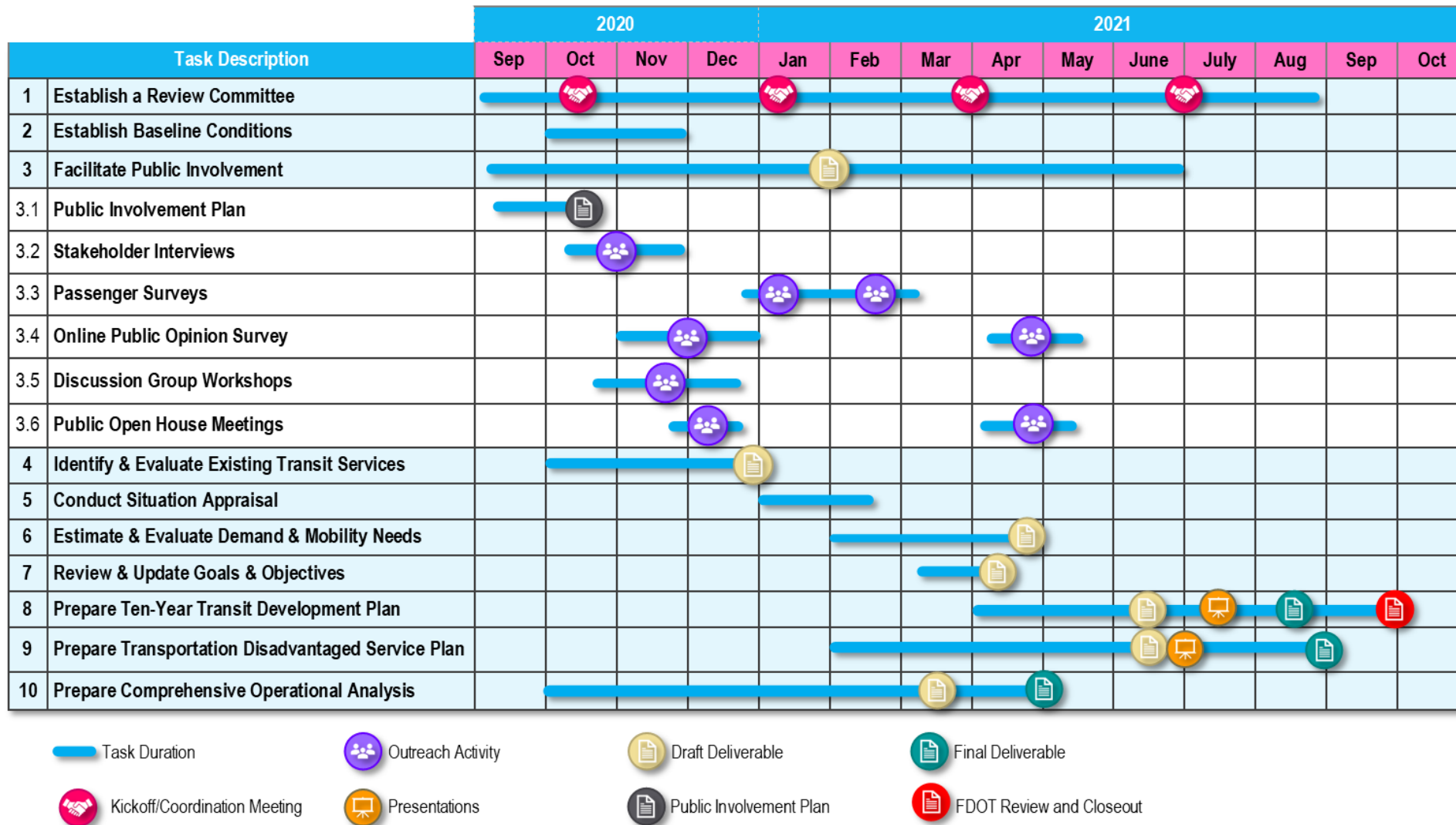
A public outreach schedule has been developed to ensure completion and approval of the TDP by Volusia County by September 1, 2021. Table 4-1 presents the tentative schedule for the public outreach activities included in the Volusia County TDP.

The overall schedule for the TDP, which shows the timeline for outreach activities as well as other components of the TDP, is shown in Figure 4-1.

Table 4-1: Tentative TDP Public Involvement Activity Schedule

TDP Outreach Activity	Timeline
Project Review Committee Meetings	October 2020 – August 2021
Stakeholder Interviews	October – November 2020
Discussion Group Workshops	November 2020
Phase I – Online Survey	November – December 2020
Phase I – Public Workshops	December 2020
Bus Passenger Survey	January 2021
Phase II – Online Survey	April – May 2021
Phase II – Public Workshops	April – May 2021

Figure 4-1: Votran TDP Major Update – Overall Schedule



Appendix E: Public Involvement Material



Stakeholder Interview Guide

Ten-Year TDP Major Update

A. Today

- 1) How much awareness of and support for transit is there in the community? Have the levels of awareness and support changed in recent years?
- 2) What is your perception of Votran's transit's role in the community? (transport workers, elderly, low income, individuals with disabilities, tourists, attracting choice riders, to prevent congestion, to reduce emissions, to create economic opportunities)?
- 3) Is the transit system responsive to community needs? How are those needs communicated to the transit systems?
- 4) Is information on transit readily available in the community? If not, where should transit information be available in the community
- 5) Is Votran taking adequate steps to reduce the spread of COVID-19? If not, what additional steps should be taken?

B. Where We Want to Go

- 6) What goals have the community and elected officials voiced for transit?
- 7) What do you see as appropriate goals for the transit system in the next 5 to 10 years?
- 8) What is happening in the County in terms of growth and development? Where? How can transit best respond to these trends?
- 9) Should Votran be looking at new markets for transit service, or should it concentrate on its existing markets?
- 10) Is there a need for premium transit (such as bus rapid transit or rail) within the County?
- 11) Is more regional transportation needed to connect Volusia County with surrounding areas (Flagler, Brevard, Seminole, Lake, Putnam, and Marion counties)?
- 12) Is there demand for a SunRail connection to DeLand to connect the region? If so, is there a demand for a Votran connection to the proposed DeLand SunRail station?



- 13) Is there a willingness in the community to consider additional local funding for transit? If so, what type of local funding (increased Votran fares, sales tax, property tax, etc.)?

C. How We Get There

- 14) What improvements are needed in the transit system in the next 10-years to attract more riders?
- 15) Is there a need for more park and ride lots, possibly in conjunction with more express or limited-stop bus services to local and regional destinations?
- 16) Are there areas currently not served or underserved by transit that should receive a higher priority?
- 17) Do you believe further branding is needed? If so, what do you think the community would like to see?
- 18) Are there other policies that should be changed to help the transit system reach its goals?

D. Final Thoughts

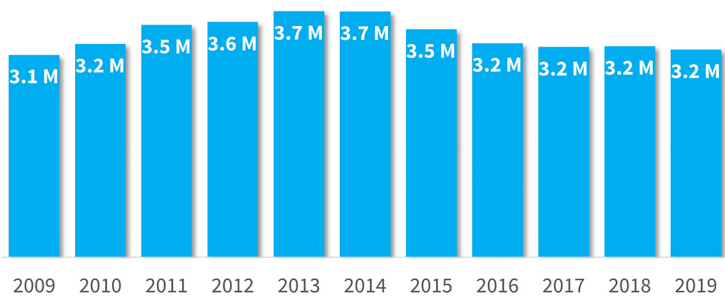
- 19) What are the major strengths and accomplishments of existing transit services?
- 20) What are the weaknesses, if any, of existing transit services?
- 21) If you could pick one thing to change about the transit system, what would it be?
- 22) What is your vision for transit in the next 5 to 10 years? Next 20 years?
- 23) What are your thoughts on the current paratransit services available in Volusia County?

Votran Transit Development Plan FACT SHEET

What is Votran?

Votran provides fixed-route bus transit services in east and west Volusia County. Regular service includes 26 routes and 2 flex zones—18 in East Volusia, 7 in West Volusia, and 1 cross-county connecting DeLand and Daytona Beach. Services are also available for persons unable to access fixed-route transit because of a disability or other eligible reasons. Most routes operate 6:00 AM to 7:30 PM on weekdays and Saturdays with 30- to 60-minute frequency. The regular cash fare is \$1.75, with discounts offered for youths (ages 7–18), older adults, individuals with disabilities, and Medicare card holders. Although transit ridership has declined industrywide in the last few years, Votran has maintained its ridership, serving 3.2 million trips in 2019.

Votran Ridership (2009–2019)



What is the Votran TDP?

The Votran Transit Development Plan is the agency's strategic planning document and also is a requirement of the Florida Department of Transportation for transit funding. A major update to the TDP is due every five years. This 2021 Votran TDP Major Update is being developed by the Volusia County Council in coordination with Votran to serve as a guide for the future of public transportation in Volusia County; it will represent the transit agency's vision to promote transit growth over the next decade.

Why Do We Need Your Input?

Public participation is an important part of developing the Votran TDP, and numerous public outreach activities have been completed or ongoing to support the plan, including stakeholder interviews, discussion groups, rider and non-rider surveys, and public workshops. **Your participation and input are needed so we can learn more about the public transportation needs and issues of the people and organizations you represent in Volusia County and the region.**



For more information, visit votran.org or contact Votran at (386) 756-7496.



Take the Transit Survey!
Scan here using your phone



Or go to
surveymonkey.com/r/VotranPhaseII/TDP

NEEDS YOUR INPUT!

Public Transit Workshops

Help Us Improve Transit Services in Volusia County!

Votran is updating its Transit Development Plan (TDP) for future transit services in Volusia County. Please join one of the following virtual public meetings to provide your feedback to develop a successful plan that will meet the community's transit needs in the next 10 years.

Virtual Public Workshop #1

- **When:** Wednesday, December 16, 5:30—7:00 PM
- **Sign up to attend:** <https://attendee.gotowebinar.com/register/2040171724212622860>

Virtual Public Workshop #2

- **When:** Thursday, December 17, 5:30—7:00 PM
- **Sign up to attend:** <https://attendee.gotowebinar.com/register/8058663079170090252>

Once you have signed up, you will receive an invitation email with a unique link to participate in this virtual public workshop. This invitation email is unique to each attendee and should not be shared with others.

In accordance with the Americans with Disabilities Act, Volusia County will not discriminate against qualified individuals with disabilities in its services, programs, or activities. To request an auxiliary aid or service for effective communication or a reasonable modification to participate, contact Michelle Leigh via phone (386) 248-1760, access@volusia.org, or call the Florida Relay Service 711. Accommodation will be provided at no cost to the requestor. Requests should be made no later than two business days before the scheduled event.

For questions on the Transit Development Plan project and public workshop, please contact Votran project manager, Bobbie King, at (386) 943-7029 or bgking@volusia.org.

¡NECESITA TU AYUDA!

Talleres de Transporte Público

¡Ayúdenos a Mejorar los Servicios de Transito en el Condado de Volusia!

Votran esta actualizando su Plan de Desarrollo de Transito (TDP) para futuros servicios de transito en el condado de Volusia. Únase a uno de los siguientes talleres públicos virtuales para brindar sus comentarios y desarrollar un plan exitoso que satisfaga las necesidades de transito de la comunidad en los próximos 10 anos.

Taller Publico Virtual #1

- **Cuando:** Miércoles, Diciembre 16, 5:30—7:00 PM
- **Regístrese para asistir:** <https://attendee.gotowebinar.com/register/2040171724212622860>

Taller Publico Virtual #2

- **Cuando:** Jueves, Diciembre 17, 5:30—7:00 PM
- **Regístrese para asistir:** <https://attendee.gotowebinar.com/register/8058663079170090252>

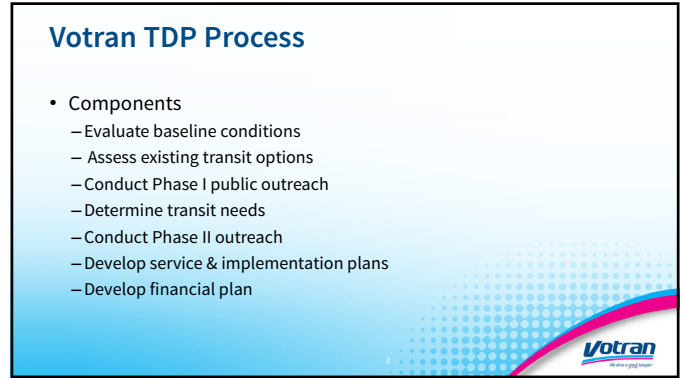
Una vez que se haya registrado, recibirá una invitación por correo electrónico con un enlace único para participar en el taller publico. La invitación que recibirá es única para cada asistente y no debe compartirse con otros.

De acuerdo con la ley de Americans with Disabilities Act, el condado de Volusia no discriminara a las personas calificadas con discapacidades en sus servicios, programas o actividades. Para solicitar ayuda o servicio auxiliar para una comunicación eficaz o una modificación razonable para participar, comuníquese con Michelle Leigh por teléfono (386) 248-1760, access@volusia.org, o llame a Florida Relay Service 711. El alojamiento se proporcionara sin costo para el solicitante. Las solicitudes deben realizarse a mas tardar dos días hábiles antes del evento programado.

Si tiene preguntas sobre el proyecto, comuníquese con el gerente del proyecto de Votran, Bobbie King, al (386) 943-7029 o bgking@volusia.org.



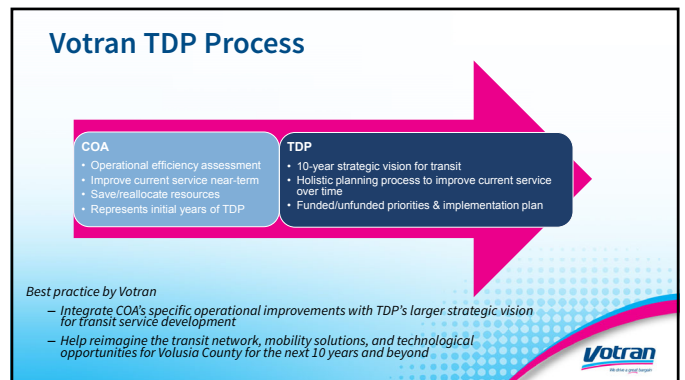
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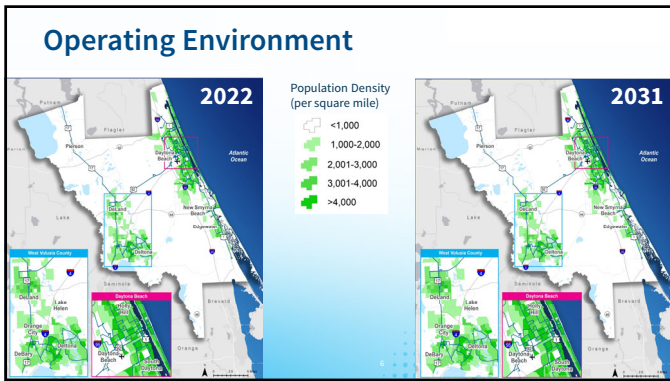
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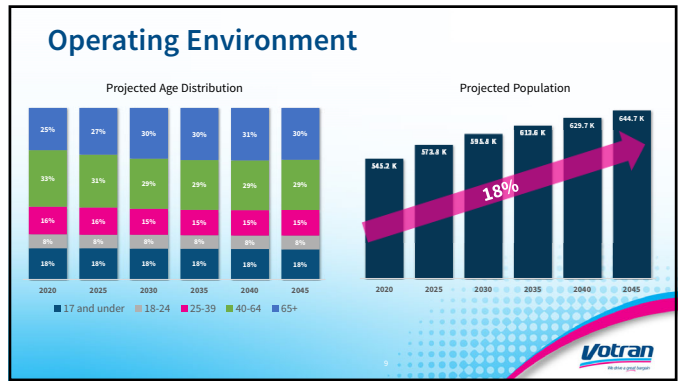
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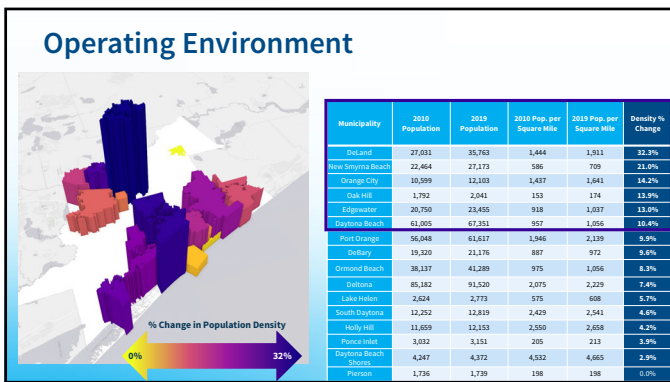
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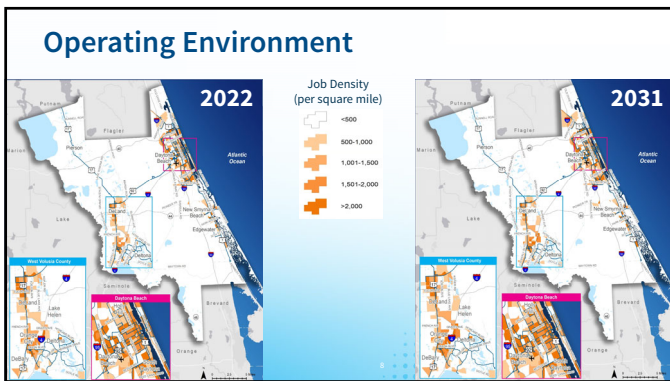
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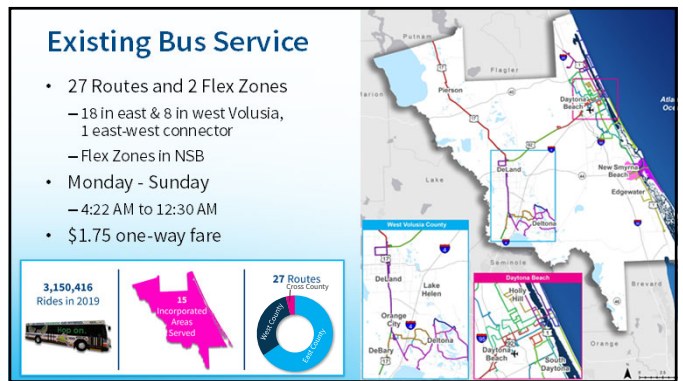
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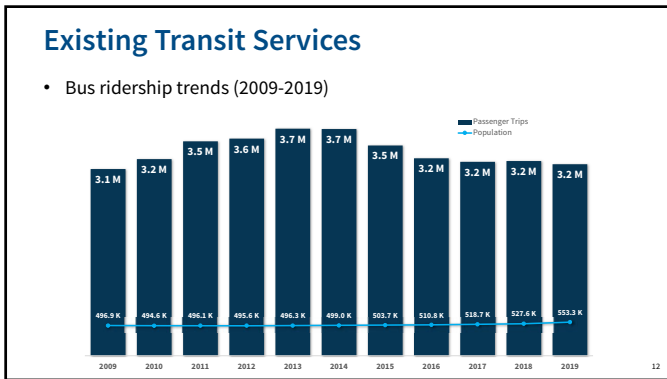
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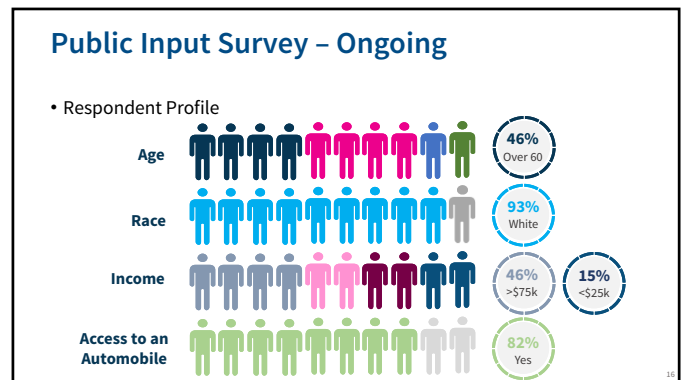
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Paratransit Service

Votran Gold Service

- Eligibility criteria
 - Have a disability or unable to transport themselves & cannot use fixed-route services
- 24-hour advance reservation
- \$3 one-way fare

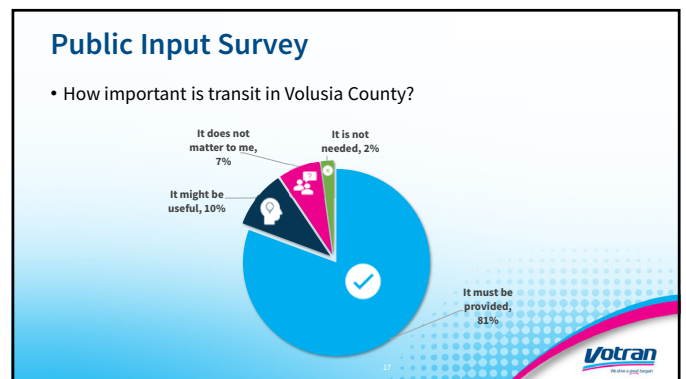
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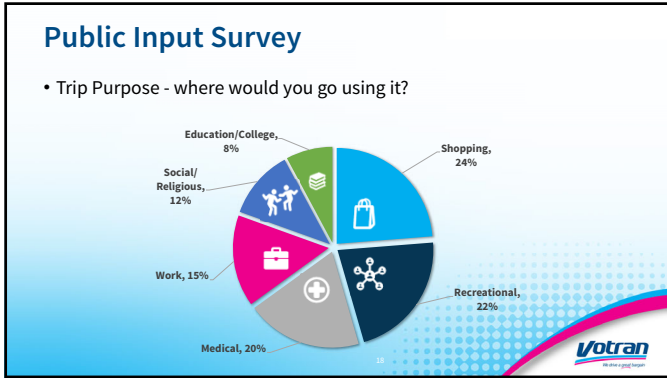
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Comments/Questions

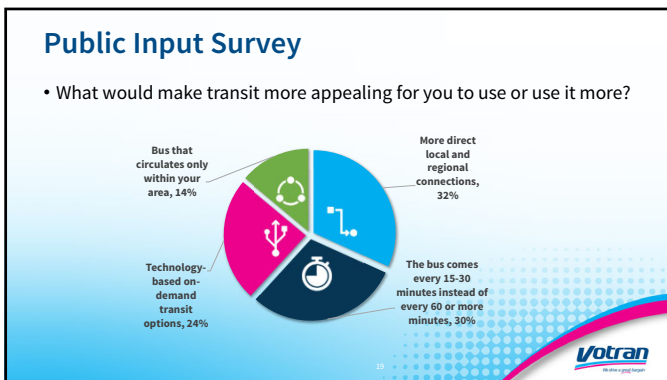
We Need Your Help!

- What are your needs & vision for transit?
 - Let us know today!
 - Complete/share online survey!
 - Scan QR Code



- Use link <https://www.surveymonkey.com/r/VotranPhaseI>
- Go to Votran or R2CTPO websites or Facebook
- Email additional comments to bkking@volusia.org

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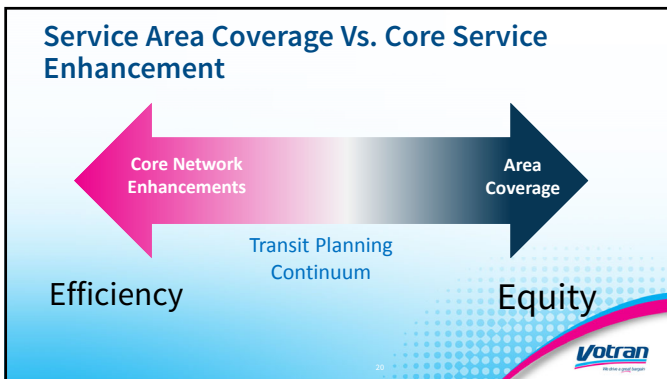
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What is Next?

- Review and incorporate your input
- Continue phase I public outreach
 - ✓ 4 Discussion Groups
 - 2 Public Workshops
 - Transit Needs Survey
- Conduct situation appraisal and assess demand
- Develop 10-year transit needs
- Prepare TDP Draft Report



22



20

Votran Transit Development Plan- 2022-2031 Major Update

Phase I Public Workshops Question & Answers

December 2020

Question: *What is being done to improve medical transport and long waits for patients after appointments? Also, some patients miss appointments as they can't afford transportation. Is there any free transportation for those that need access to medical appointments?*

Answer: Votran's paratransit system is designed and operated by the TDLCB user guide standards. When the user is not ready at their assigned return time, they are put on the will call status. The time allotted is two hours. This is due to the current budget and could be amended if there was more funding. Currently, Votran does not have a program that would allow users to ride Votran for free due to funding and budget constraints. There are some social service agencies that sponsor free trips, but this is independent of the transit agency.

Question: *There is a lot of development in Volusia County. There is not any transit access to some of these new developments. What is Votran going to do about that? When will Votran transition to electric buses?*

Answer: Sometimes developers pick sites due to the price of the land that are not near established areas or adjacent to current services. Votran cannot always create a new route to connect these new residential or commercial development to accommodate the development due to funding constraints. Votran makes sure they are aware of and a part of the review process for the new developments. Votran makes sure they communicate to the developer existing services and what accommodations can be made to serve it. Votran is in the initial research stage of looking at electric buses and the associated infrastructure. At this time, Votran does not have any plans to buy electric buses.

Question: *What is the chance of Votran announcing many more stops for people who are visually impaired so we know where in the route we are/we know when to get off the bus? Additionally, Volusia County does a great job with ADA compliant lifts on the bus.*

Answer: Votran is currently coordinating with their vendor to add the announcement of each bus stop to their bus stop announcement system. Votran will need to compile a list of their stops and use their current AVL technology to do this. Additionally, during some of the focus groups the announcement of street intersections was suggested.

Question: *What peer systems is Votran being compared to? When will the results of this comparison be available?*

Answer: The peer selection process is underway and will be conferred with staff. Once the peers have been selected, it will be included in a technical memorandum associated with the TDP. The selection process involves an extensive evaluation done with

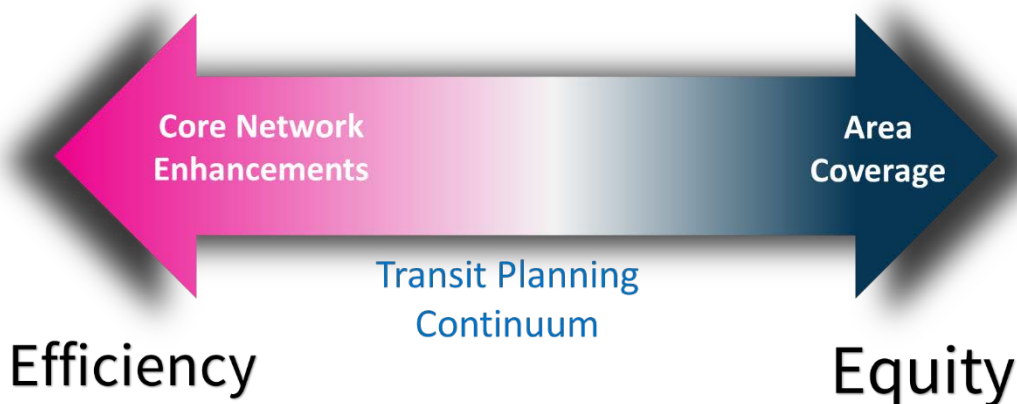
peers from Florida and the surrounding southeast region. The selection process is conducted using validated data from the National Transit Database (NTD) with multiple variables.

Question: *I ride the bus at least five times a week and use paratransit on the weekends. I have recently moved to an area outside of the paratransit access area on Sunday and cannot get to church. Others cannot get to church or other lifeline trips on Sunday. What can we do about this?*

Answer: A common complaint is that there is not service to those outside of the service area on Sunday. The ADA boundary, a ¾ mile buffer around Votran services, is derived from a federal definition. Ultimately, this is a funding issue as Votran does not have room in the budget to expand their boundary to accommodate everyone. Generally, paratransit services are more expensive than fixed-route services so it is difficult to expand the boundaries. If more funding revenues become available, this issue could be revisited.

Question: *Where is Votran on the Efficiency - Equity continuum today?*

Answer: Votran considers themselves to be in the middle of the continuum, but would like to be a little more to the left (more core network enhancements/efficiency). Votran would like to focus more on the core network, but be cognizant of the area coverage. In essence, the service would provide more enhanced services in the core while still serving the areas that need coverage. Previously, Votran focused more on equitable area coverage while today, in some parts, there is more focus on the core network. On the west side of Volusia County, there is more equitable area coverage while the eastern side leans more towards more frequent service in more dense areas. Overall, Votran finds its services in the middle on the transit efficiency-equity continuum. The COA will be doing more in-depth analysis to assess the inefficient routes' resources that could be reallocated to other routes with higher demand.



Question: *The County does a great job with making sure the bus stops are ADA compliant. Is there any way to get the cities, through grants or other means, involved to ensure bus stops are ADA compliant?*

Answer: Votran staff is always looking to improve and ensure that all bus stops are compliant. The process to transition the stops to ADA requirements is lengthy and is difficult to maintain an inventory. Votran has an infrastructure guidelines manual to transition bus stops and ensure ADA standards are being met. Votran keeps in close contact with municipalities to make sure that all bus stops are continuing to be improved. It is necessary to make sure all cities are on board. Deltona, Ponce Inlet, and Daytona Beach Shores have researched their funding and continue to improve their bus stops. Volusia County has two stops that are not ADA compliant and they will be brought up to standard after December 2020.

Question: *Which stakeholders will participate in Situation Appraisal?*

Answer: The Situation Appraisal is an analytical tool. The public outreach conducted is a component of it, but there is not any stakeholder outreach associated with the Situation Appraisal. Each analytical component is examined holistically. An example of this is the assessment of the operating environment, all components are examined to see what the study area needs, how the current and projected circumstances will dictate the improvements, or any changes that need to be made to the service. Additionally, the evaluation of existing services will be examined, and due to the COA, it will be expanded. Questions that are derived from the COA process include,

- What does the COA suggest we need to do to improve the system?
- What is needed to make the system more effective and more efficient? Are there parts of the system that need tweaks?
- Are there services that have resources that can be reallocated?

When the Situation Appraisal is conducted, all of the information and analysis is reviewed, but it is focused on the next steps. It is not just a summary pertaining to what was learned from the operating area analysis or existing services, but also what the actions necessary to make the system better are or to make the suggested improvements a reality. Staff will also be involved in this process. Once it is documented, the review committee established for the TDP will be provided the technical memorandum produced and can provide feedback. As part of the TDP rule, the River to Sea TPO will be coordinated with and the document will be reviewed by them, as well. Additionally, Career Source Volusia-Flagler and FDOT District 5 will be a part of the review team.

Question: *Transit would help environmental concerns and efforts in Volusia County. The trolley was a fun experience from Daytona Beach to Ormond Beach. It would be fun to see something like that on local roads while also helping the traffic congestion. Rail is also a nice way of transport that most people feel safe and secure on. Are there any thoughts on these modes?*

Answer:

Implementing rail may not be immediate although there is the SunRail in DeBary. There is a delay of the SunRail extension to DeLand, but it may still be extended. Due to the delay in the extension, there has been some studies conducted to evaluate connecting the east and west parts of Volusia County. The study found there will not be high enough demand to warrant rail for the next few decades, but Bus Rapid Transit (BRT) was recommended. Volusia County is very forward thinking and is invested in bettering the community. The trolleys were big tourist attractions and assisted them in going out to the local restaurants. It is expensive for a system to have multiple modes covering the same service area. Due to budget constraints, transit agencies will typically keep one type of service. Traveling to bigger cities such as Washington, D.C. and New York are great since there are transit services available, but Florida is a state that was developed later. Additionally, it is more auto-centric in development patterns. Developers should continue to create higher density developments and develop in the core of Volusia County so services can be more efficient. For example, when looking for a place to put an outlet mall, if you are thinking about transit use it would be placed in the core areas where services are present. Typically, developers choose less expensive land that is not in the core and may not have any existing services reaching it. Core areas, such as downtown Port Orange, downtown Daytona Beach, and South Daytona, which are places that are already developed, already have existing infrastructure and services. If developers pick a place without existing services, it can potentially create a connectivity issue and put more stress on the existing services.

Votran Transit Development Plan – Transit Needs Survey

Votran is updating its plan for future transit services in Volusia County and wants your input!

Our Transit Today

1. How important is providing transit services in Volusia County?

- It must be provided
- It might be useful
- It does not matter to me
- It is not needed

2. Have you or a member of your household used Votran?

- Yes, I have used Votran
- No, I have never used Votran
- No, I was not aware that public transit is available in this area

3. If you use Votran, which bus route do you use most often? (Leave blank if you are not a transit rider.)

Votran Route:

Where We Want to Go

4. Do you think there is a need for additional/improved transit services in Volusia County?

- Yes
- No
- I don't know

5. If you use Votran services now or decide to use them in the future, where would you go using it? Please check all that apply.

- Work
- Shopping
- Education/College
- Medical
- Social / Religious
- Recreational

6. What would make transit more appealing for you to use it, or use it more? Please check all that apply.

- The bus comes every 15-30 minutes instead of every 60 or more minutes
- Bus that circulates only within your municipality/area
- More direct local and regional connections
- Technology-based on-demand transit options

How Do We Get There

7. What should Volusia County consider as priority public transit improvements over the next 10 years? Please check all that apply.

- More frequent bus service
- Regional express/commuter service
- Buses that circulate within various municipalities
- Operating buses on dedicated lanes on congested corridors
- More weekend service
- More early/late service
- Provision of rail transit
- Autonomous vehicles in city/town centers
- App-based Mobility on Demand for first-mile/last-mile connections with transit
- Expansion to new areas not currently served.
Tell us where in the comments box.
- Other. Tell us more in the comments box.

Other

8. What transit infrastructure/technology improvements should the County consider supporting in the next 10 years?

- Provide real-time bus arrival information displays
- Implement mobile fare payment
- Add more Park-and-Ride lots
- Improve bus stop amenities (shelters, bike storage, etc.)
- Improve pedestrian/bicycle access to bus stops
- Other (please specify)

9. How would you like to have access to public transit information?

- Smart phone app
- Website
- Printed maps and schedules
- Social media (Facebook and Twitter)
- Telephone

About Yourself

10. My age is...

- 17 years or under
- 18 to 24 years
- 25 to 40 years
- 41 to 60 years
- Over 60 years

11. Zip code of my...

Residence is

Work/School (if applicable)

12. I have access to a personal vehicle...

- Yes
- No

13. My race/ethnic group is...

American Indian/Alaska Native

Asian

Black/African American

White/Caucasian

Other (please specify)

14. I am...

Not Hispanic/Latino

Hispanic/Latino

15. I am...

Female

Male

Other (please specify)

16. My total household income for 2019 was...

- Less than \$25,000
- Between \$25,000 - \$44,999
- Between \$45,000 - \$74,999
- \$75,000 or greater

Plan de Desarrollo de Tránsito de Votran - Encuesta sobre necesidades de tránsito

¡Votran está actualizando su plan para futuros servicios de tránsito en el condado de Volusia y necesita su opinión!

Nuestro Tránsito Hoy

1. ¿Qué importancia tiene brindar servicios de tránsito en el condado de Volusia?

- Debe ser proporcionado
- Puede ser útil
- No es importante
- No es necesario

2. ¿Usted o algún miembro de su hogar ha usado Votran?

- Sí, he usado Votran
- No, nunca he usado Votran
- No, no sabía que el transporte público está disponible en esta área

3. Si usa Votran, ¿qué ruta de autobús usa con más frecuencia? (Déjelo en blanco si no es un pasajero de tránsito).

Ruta de Votran:

A Donde Queremos Ir

4. ¿Cree que se necesitan servicios de tránsito adicionales o mejorados en el condado de Volusia?

- Sí
- No
- No lo sé

5. Si usa los servicios de Votran ahora o decide usarlos en el futuro, ¿adónde iría a usarlos? Por favor marque todos los que apliquen.

- Trabajo
- Compras
- Educación / Universidad
- Médico
- Social / Religioso
- Recreación

6. ¿Qué haría que el tránsito fuera más atractivo para usarlo o usarlo más? Por favor marque todos los que apliquen.

- El autobús pasa cada 15-30 minutos en lugar de cada 60 minutos o más
- Autobús que circula solo dentro de su municipio / zona
- Conexiones locales y regionales más directas
- Opciones de tránsito bajo demanda basadas en tecnología

Como Podemos Llegar Ahí

7. ¿Qué debería considerar el condado de Volusia como mejoras prioritarias del transporte público durante los próximos 10 años? Por favor marque todos los que apliquen.

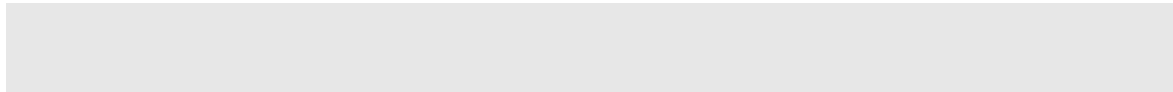
- Servicio de autobús más frecuente
- Servicio regional expreso / de cercanías
- Autobuses que circulan dentro de varios municipios
- Operación de autobuses en carriles exclusivos en corredores congestionados
- Más servicio de fin de semana
- Servicio más temprano / más tarde
- Provisión de tránsito ferroviario
- Vehículos autónomos en el centro de la ciudad

- Aplicaciones basadas en Mobility on Demand para conexiones de primera y última milla con tránsito

- Expansión a nuevas áreas no atendidas actualmente. Díganos dónde en la sección de comentarios.

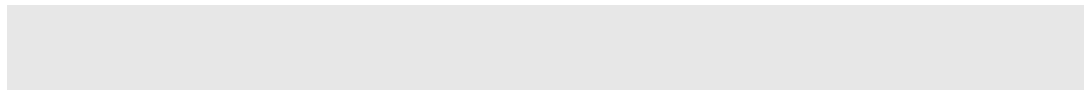
- Otro. Díganos más en la sección de comentarios.

Comentarios



8. ¿Qué mejoras de infraestructura / tecnología de tránsito debería considerar apoyar el Condado en los próximos 10 años?

- Proporcionar pantallas de información de llegada de autobuses en tiempo real
- Implementar el pago de tarifas móviles
- Agregar más lotes de Park-and-Ride
- Mejorar las comodidades de las paradas de autobús (refugios, almacenamiento de bicicletas, etc.)
- Mejorar el acceso de peatones / bicicletas a las paradas de autobús
- Otra (especifique)



9. ¿Cómo le gustaría tener acceso a la información del transporte público?

- Aplicación del teléfono inteligente
- Sitio web
- Mapas y horarios impresos
- Redes sociales (Facebook y Twitter)
- Teléfono

Cuéntanos Acerca De Ti

10. Mi edad es...

- 17 años o menor
- 18 a 24 años
- 25 a 40 años
- 41 a 60 años
- Mayor de 60 años

11. Código postal de mi...

Residencia es

Trabajo /Escuela es (si es aplicable)

12. Tengo acceso a un vehículo personal

- Sí
- No

13. Mi raza / grupo étnico es...

Nativo Americano / Nativo de Alaska

Asiático

Afroamericano

Blanco / Caucásico

Otra (especifique)

14. Yo soy...

No Hispano / Latino

Hispano / Latino

15. Mi genero es...

Femenino

Masculino

Otra (especifique)

16. Mi ingreso total para el 2019 fue...

Menos de \$25,000

Entre \$25,000 - \$44,999

Entre \$45,000 - \$74,999

\$75,000 o mas

Volusia 2021 Transit On Board Survey

Please take a few minutes to be counted as we plan the future of your transit system.

All personal information will be kept strictly confidential and **WILL NOT** be shared or sold.

What is your HOME ADDRESS (please be specific, ex: 123 W. Main St):
 (If you are visiting the Volusia County area, please list the **hotel name** or address where you are staying)

Street Address _____

City _____

State _____

Zip Code _____

COMING FROM?

1. What type of place are you **COMING FROM NOW?**

(the starting place for your one-way trip)

- Work
- Work related
- College / University (students only)
- School K-12 (students only)
- Medical / Doctor / Clinic / Hospital (non-work)
- Shopping
- Restaurant / Eat out
- Recreation / Sightseeing
- Social Visit / Religious / Community
- Airport (passengers only)
- Sporting or Special Event
- Your **HOME** → Go to Question #4
- Other: _____

2. What is the **NAME** of the place you are coming from now?

3. What is the **EXACT ADDRESS** of this place? (OR Intersection if you do not know the exact address:)

City: _____ State: _____ Zip: _____

4. How did you **GET FROM** your origin (the place in Question #1) **TO THE VERY FIRST** bus you used for this one-way trip?

- Walk Wheelchair
- Bike
- Was dropped off by someone
- Drove alone and parked
- Drove or rode with others and parked
- E-scooter (Go X, etc.)
- Rideshare (Uber, Lyft, etc.)
- Taxi
- Other _____

4a. Where did you board the **first** bus / you used for this one-way trip (Nearest intersection / Park-n-Ride lot):

5. Where did you get **ON this bus?** Please provide the nearest intersection / Park-n-Ride lot:

GOING TO?

6. What type of place are you **GOING TO NOW?**

(the ending place for your one-way trip)

- Work
- Work related
- College / University (students only)
- School K-12 (students only)
- Medical / Doctor / Clinic / Hospital (non-work)
- Shopping
- Restaurant / Eat out
- Recreation / Sightseeing
- Social Visit / Religious / Community
- Airport (passengers only)
- Sporting or Special Event
- Your **HOME** → Go to Question #9
- Other: _____

7. What is the **NAME** of the place you are going to now?

8. What is the **EXACT ADDRESS** of this place? (OR Intersection if you do not know the exact address:)

City: _____ State: _____ Zip: _____

9. How will you **GET TO** your destination (listed in Question #6) after you get off the **LAST** bus you will use for this one-way trip?

- Walk Wheelchair
- Bike
- Be picked up by someone
- Get in a parked vehicle & drive alone
- Get in a parked vehicle & drive/ride w/others
- E-scooter (Go X, etc.)
- Rideshare (Uber, Lyft, etc.)
- Taxi
- Other _____

9a. Where will you get off the **last** bus you are using for this one-way trip (Nearest intersection / Park-n-Ride lot):

10. Where will you get **OFF this bus?** Please provide the nearest intersection / Park-n-Ride lot:

11a. Did you transfer FROM another bus **BEFORE** getting on this bus?

Yes No

11b. Will you transfer TO another bus **AFTER** getting off this bus?

Yes No

11c. Please list the **BUS ROUTES** in the exact order you use them for this one-way trip

START → → → → → **END**

1st Route 2nd Route 3rd Route 4th Route

Continue

OTHER INFORMATION ABOUT THIS TRIP

12. Will you (or did you) make this same trip in exactly the opposite direction today?
 No Yes - At what time did / will you leave for this trip in the opposite direction? _____:_____ am/pm (circle one)
13. What fare payment methods were used for this one-way trip? (select one only)
 Cash/Single Ride Token All Day Pass 3 Day Pass 7 Day Pass
 31 Day Pass Free (Under 7) Other _____
14. What type of fare was this?
 Standard (age 19-64) Disabled Senior (age 65 & over) Youth Pass (age 7-18)
15. How long have you been using VOTRAN bus service?
 First time riding 1-6 months 1-2 years More than 4 years
 Less than 1 month 7-12 months 2-4 years
16. On average how often do you use VOTRAN bus services?
 7 days a week 5 days a week 3 days a week 1 day a week 1 day a month or less
 6 days a week 4 days a week 2 days a week First time riding
17. How would you have made this trip if VOTRAN were not available?
 Walk Bicycle Drive own vehicle Ride with someone else who lives with you
 Taxi Uber/Lyft Would not make trip Ride with someone else who does not live with you
 VOTRAN Gold Services Other _____
18. What is the most important reason you ride VOTRAN? (select one only)
 I do not have a valid driver's license I do not drive VOTRAN is safer/less stressful
 Car is not available all the time VOTRAN is more convenient Other: _____
 Parking is too expensive/difficult VOTRAN fits my budget better _____
19. Do you have a smartphone with a data plan (e.g. iPhone, Android / Windows Phone, etc.)? Yes No
20. What three SERVICE IMPROVEMENTS would make VOTRAN better for you? (Please select up to three)
 More frequent bus service Regional express/commuter service More weekend service
 Buses that circulate within various municipalities More early/late service Provision of rail transit
 Operating buses on dedicated lanes on congested corridors Autonomous vehicles in city/town centers
 App-based Mobility on Demand for first-mile/last-mile connections with transit
 Expansion to new areas not currently served. Where? _____
 Other _____

ABOUT YOU AND YOUR HOUSEHOLD

21. How many vehicles (cars, trucks, or motorcycles) are available to your household? _____ vehicles
21a. [If #21 is more than NONE] Could you have used one of these vehicles for this trip? Yes No
22. Including YOU, how many people live in your household? _____ people
23. Including YOU, how many people (over age 15) in your household are employed full/part-time? _____ people
24. What is your employment status? (check the one response that BEST describes you)
 Employed full-time Not currently employed – seeking work Retired
 Employed part-time Not currently employed – not seeking work Homemaker or caregiver
25. What is your student status? (check the one response that BEST describes you)
 Not a student Yes – College / University / Community College
 Yes – K - 12th grade Yes – Vocational / Technical / Trade school / Other
26. Do you have a valid driver's license? Yes No
27. What is your AGE? Under 16 25-34 45-54 65-74
 16-24 35-44 55-64 75 and over
28. What is your race / ethnicity? (check all that apply)
 American Indian/Alaska Native Asian Black/African/African American Hispanic/Latino
 Native Hawaiian/Pacific Islander White Other: _____
29. What is your gender? Male Female Other
30. Which of the following BEST describes your TOTAL ANNUAL HOUSEHOLD INCOME in 2020?
 Less than \$10,000 \$20,000 - \$29,999 \$40,000 - \$49,999 \$75,000 - \$99,999
 \$10,000 - \$19,999 \$30,000 - \$39,999 \$50,000 - \$74,999 \$100,000 or more
31. Do you speak a language other than English at home? No Yes - Which language? _____
31a. [If #31 is Yes] How well do you speak English? Very Well Well Less than well Not at all
32. How many months out of the year do you reside in Volusia County?
 Visitor / Tourist Less than 1 month 1-6 months 6-11 months Permanent Resident
33. How do you prefer to receive information about VOTRAN service, schedules, and changes?
 VOTRAN website Bus schedules On bus Newspaper Bus driver Transfer Plaza
 Bus signs/shelters Call VOTRAN Radio TV Text alerts Other _____
34. What is your overall satisfaction level with VOTRAN?
 Very Satisfied Somewhat Satisfied Neutral Somewhat Unsatisfied Very Unsatisfied

Thank you for your help!



We drive a great bargain

Public Transit Workshops

Help us improve transit services in Volusia County!

Votran is updating its Transit Development Plan (TDP) for future transit services in Volusia County. Please join one of the following public workshops to provide your feedback to develop a successful plan that will meet the community's transit needs in the next 10 years.

Public Workshop #1

- **When:** Monday, May 17, 5:30—7:00 PM
- **Attend in person:** Daytona Beach Regional Library
105 E. Magnolia Ave., Daytona Beach, FL 32114
- **Sign up to attend online:** <https://attendee.gotowebinar.com/register/7375394671399596043>

Public Workshop #2

- **When:** Thursday, May 20, 5:30—7:00 PM
- **Attend in person:** The Frank T. Bruno, Jr., County Council Chambers, Room 204, Thomas C. Kelly Administration Center
123 W. Indiana Ave., DeLand, FL 32720
- **Sign up to attend online:** <https://attendee.gotowebinar.com/register/4534977904854253067>

If you attend online, you will receive an invitation email with a unique link to participate in this virtual public workshop. This invitation email is unique to each attendee and should not be shared with others.

In accordance with the Americans with Disabilities Act, Volusia County will not discriminate against qualified individuals with disabilities in its services, programs, or activities. To request an auxiliary aid or service for effective communication or a reasonable modification to participate, contact Michelle Leigh via phone (386) 248-1760, access@volusia.org, or call the Florida Relay Service 711. Accommodation will be provided at no cost to the requestor. Requests should be made no later than two business days before the scheduled event.

For questions on the Transit Development Plan project or public workshops, please contact the project manager, Bobbie King, at (386) 943-7029 or bgking@volusia.org.





We drive a great bargain

Talleres de Transporte Público

¡Ayúdenos a Mejorar los Servicios de Transito en el Condado de Volusia!

Votran esta actualizando su Plan de Desarrollo de Transito (TDP) para futuros servicios de transito en el condado de Volusia. Únase a uno de los siguientes talleres públicos para brindar sus comentarios y desarrollar un plan exitoso que satisfaga las necesidades de transito de la comunidad en los próximos 10 años.

Taller Publico #1

- **Cuando:** Lunes, 17 de mayo, 5:30—7:00 PM
- **Asistir en persona:** Biblioteca Regional de Daytona Beach
105 E. Magnolia Ave., Daytona Beach, FL 32114
- **Regístrese para asistir virtualmente:** <https://attendee.gotowebinar.com/register/7375394671399596043>

Taller Publico #2

- **Cuando:** Jueves, 20 de mayo, 5:30—7:00 PM
- **Asistir en persona:** Las Cámaras del Consejo del Condado de Frank T. Bruno, Jr., Sala 204, Centro de administración Thomas C. Kelly
123 W. Indiana Ave., DeLand, FL 32720
- **Regístrese para asistir virtualmente:** <https://attendee.gotowebinar.com/register/4534977904854253067>

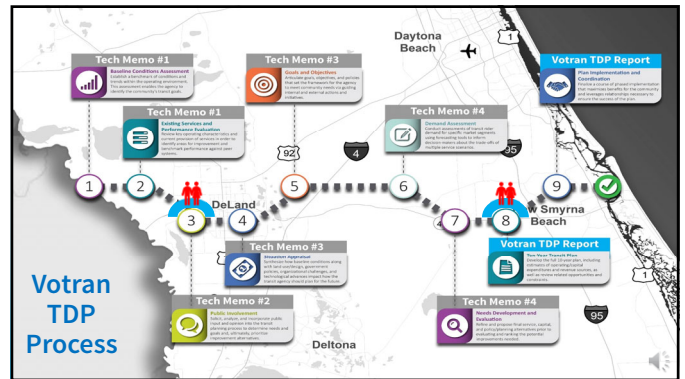
Una vez que se haya registrado, recibirá una invitación por correo electrónico con un enlace único para participar en el taller publico. La invitación que recibirá es única para cada asistente y no debe compartirse con otros.

De acuerdo con la ley de Americans with Disabilities Act, el condado de Volusia no discriminara a las personas calificadas con discapacidades en sus servicios, programas o actividades. Para solicitar ayuda o servicio auxiliar para una comunicación eficaz o una modificación razonable para participar, comuníquese con Michelle Leigh por teléfono (386) 248-1760, access@volusia.org, o llame a Florida Relay Service 711. El alojamiento se proporcionara sin costo para el solicitante. Las solicitudes deben realizarse a mas tardar dos días hábiles antes del evento programado. Si tiene preguntas sobre el proyecto, comuníquese con el gerente del proyecto de Votran, Bobbie King, al (386) 943-7029 o bgking@volusia.org.





0



3

Today's Workshop

- What is a TDP?
- Votran TDP Process
- Public Involvement Update
- Direction from the Community
- 10-Year Transit Needs Development
- Financially Unconstrained Needs
- Next Steps

Votran
We don't just begin.

1

Votran TDP Process

Votran 2021 Comprehensive Operational Analysis (COA) & 2022-2031 TDP Major Update

COA

- Operational efficiency assessment
- Improve current service near-term
- Save/reallocate resources
- Represents initial years of TDP

TDP

- 10-year strategic vision for transit
- Holistic planning process to improve current service over time
- Funded/unfunded priorities & implementation plan

Best practice by Votran

- Integrate COA's specific operational improvements with TDP's larger strategic vision for transit service development
- Help reimagine the transit network, mobility solutions, and technological opportunities for Volusia County for the next 10 years and beyond

Votran
We don't just begin.

4

What is a TDP?

- 10-year strategic plan for transit
 - Evaluates existing conditions
 - Determines future needs
 - Outlines phased service & implementation plans
 - Includes funded & unfunded priorities
 - Updated every 5 years
- FDOT requirement for funding
 - Due September 1, 2021
- What a TDP is not:
 - Not a budget
 - Not a binding agreement

Votran
We don't just begin.

2

TDP Public Involvement


Stakeholder Interviews	Public Workshops	Surveys (1 Rider & 2 General Public)	Group Discussions	Web/Email Social Media Outreach
24	4	3	4	Many
Complete	Ongoing	Ongoing	Complete	Ongoing

Votran
We don't just begin.

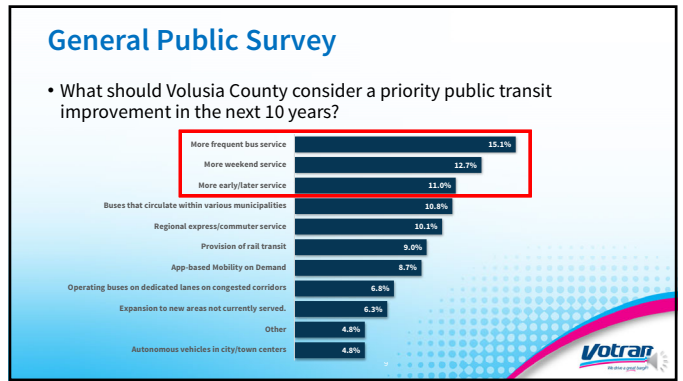
5

TDP Public Involvement

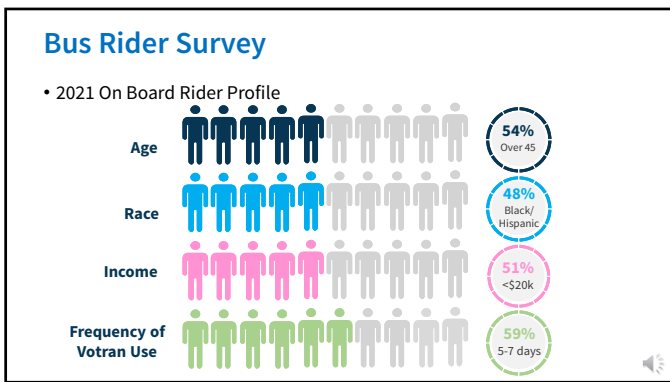
Outreach Activity	Engaged
Stakeholder Interviews	24
Bus Operator & Staff Interviews	45
Rider and Non-Rider Surveys	1,696
Discussion Groups	44
Grassroots Outreach	150
Public Workshops	31
Email/Web/Social Media	1,494
Total Participants	3,484



6




9



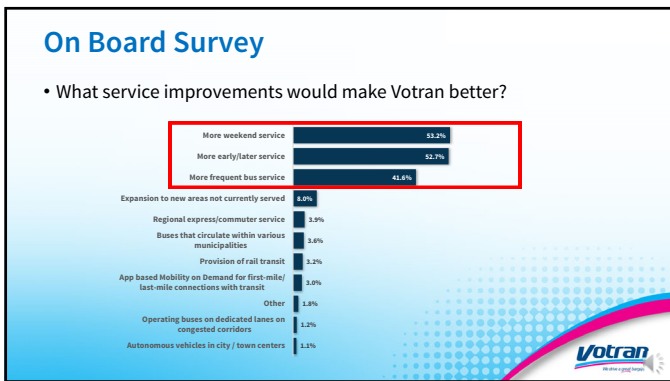
7

Direction from the Community


Improvement	Health/Social Services Discussion Group	Business/Education Discussion Group	Bus Rider Discussion Group	TPO Committees Discussion Group	Public Workshops	Stakeholders Interviews	Rider & Non-Rider Surveys	Project Review Committee	Overall
Increased Frequency	1	1	1	1	1	1	1	1	1
More Weekend Service	2	4	2	3	4	3	2	2	2
Express/Regional Service	3	3	3	2	2	4	4	3	3
Early/Late Service	4	2	4	4	3	2	3	4	4



10




8

- ### 10-Year Needs Development
- Two phases of improvements
 - Short-Term focus:
 - Redesigned COA network serves as a foundation for the TDP's larger strategic vision to enhance transit services
 - Mid-Term focus:
 - Strengthen the base network
 - Expand tech-based mobility solutions to create a mix of travel/connectivity options
 - Enhance transit to become a truly viable option for travel locally and regionally
- 

11

10-Year Needs Development

- Short-Term (1-3 years)
 - Efficiency & connectivity
 - Cost savings to address funding limitations
 - Delayed implementation possible due to COVID-19 uncertainties
- Mid-Term (4-10 years)
 - Strengthen Short-Term network
 - Enhance frequency on key corridors
 - Quick east-west and north-south transit access
 - Regional connections
 - Broad spectrum of travel options – traditional and on-demand



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Short-Term Needs

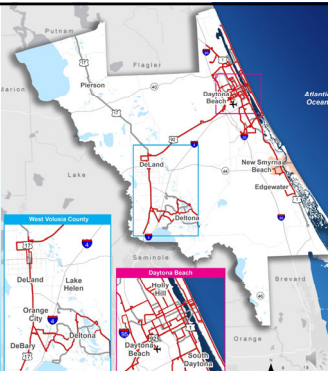
- Southeast Volusia Routes
 - Realigned
 - 4, 7, 12, 17, 40 & 41
 - Repurposed
 - 44
 - Added hours of service
 - 104, 107, 112 & 117
 - Added days of service
 - 107 & 112
 - NSB Mainland & Beachside MOD



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Short-Term Needs (1-3 Years)

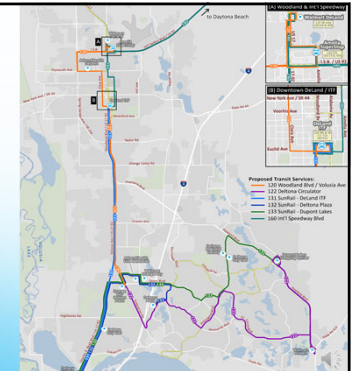
- 18 routes realigned
- 6 routes repurposed
- 2 routes with increased frequency
- 10 routes with longer hours
- 5 routes run additional days
- Technology-based Mobility-On-Demand



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Short-Term Needs


- West Volusia Routes
 - Realigned
 - 20, 21, 22, 23, 24 & 31
 - Repurposed
 - 21, 23 & 24
 - Added hours of service
 - 133



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Short-Term Needs

- East Volusia Routes
 - Realigned
 - 1, 3, 4, 5, 6, 7, 8, 10, 11, 12, 17, 19 & 60
 - Repurposed
 - 15 & 18
 - Added hours of service
 - 103, 104, 106, 107, 110, 111, 112, 117 & 119
 - Added days of service
 - 105, 107, 111, 112 & 160



14

Short-Term Needs

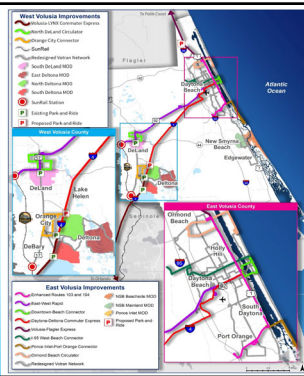
- Increase frequency on 2 routes
- Maintain same frequency on 17 routes
- **Total annual savings**
 - Bus operating costs = \$467k
 - ADA paratransit costs = \$477k
 - **Total cost savings = \$944K**

Route	Existing Frequency	Short-Term Frequency
101	60	30
103	30	30
104	30	30
105	60	60
106	60	60
107	30	30
108	60	60
110	30	30
111	30	30
112	60	30
117	30	30
119	60	60
120	30	60
122	120	120
131	30	30
132	60	60
133	60	60
140	60	60
141	60	60
160	30	30

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Mid-Term Needs (4-10 Years)

- East Volusia
 - More north-south services
 - Faster connection to west
 - Quick downtown-beach link
 - Commuter express on I-4
 - Connection to Flagler
 - More service in Ormond Beach
- West Volusia
 - More service in DeLand
 - Faster connections to east Volusia
 - More efficient, hybrid service model in Deltona
 - Connections to Deland SunRail Station



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Frequency Snapshot

Route	Existing Frequency (min.)	TDP	
		Short-term Frequency (min.)	Mid-term Frequency (min.)
103	30	30	15
104	30	30	15
East-West Rapid (Route 160)	30	30	15
Daytona Beach Connector			15
North DeLand Circulator			60
Orange City Connector			60
I-95 West-Beach Connector			60
Ponce Inlet-Port Orange Connector			60
Ormond Beach Circulator			60
Daytona-Deltona Commuter Express			Peak Only
Volusia-Flagler Express			Peak Only
Volusia-LYNX Commuter Express			Peak Only

New services added

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Mid-Term Needs - East Volusia

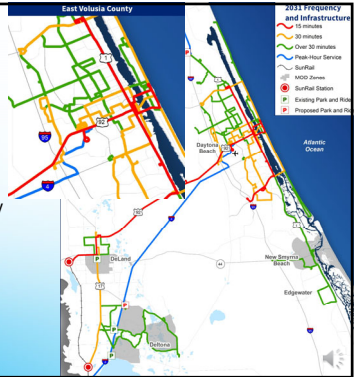
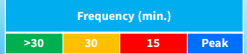
- High frequency on Routes 103, 104
- East-West Rapid (former Route 160)
- Downtown-Beach Connector
- Daytona-Deltona Commuter Express
- Volusia-Flagler Express
- I-95 West-Beach Connector
- Ormond Beach Circulator
- Ponce Inlet MOD
- Ponce Inlet-Port Orange Connector



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Frequency Snapshot

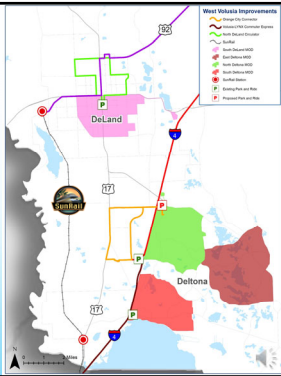
- High frequency network on priority corridors such as US 1 and US 92
- Frequent connection to DeLand SunRail station
- MOD zones improve connectivity to larger network
- Two new regional connections



22

Mid-Term Needs - West Volusia

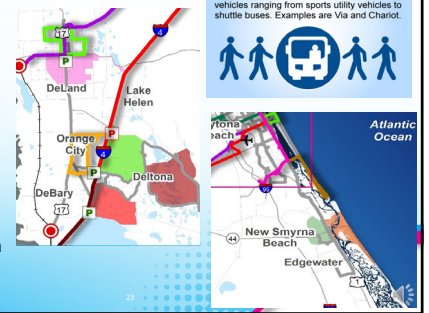
- North DeLand Circulator
- South DeLand MOD
- Deltona MOD
 - East
 - North
 - South
- Orange City Connector
- Volusia-LYNX Commuter Express



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Mobility-on-Demand

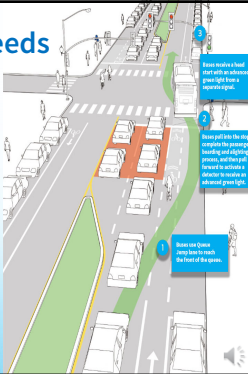
- West Volusia
 - South DeLand
 - East, North & South Deltona
- East Volusia
 - NSB Beachside
 - NSB Mainland
 - Ponce Inlet
- App- and phone-based
- Curb-to-curb service
- Vendor software, Votran operates service



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Capital/Technology/Other Needs


- DeLand SunRail station (2024)
- Two new park-and-ride facilities
 - East @ US 1 and I-95 in Destination Daytona
 - West @ I-4 and Howland Blvd. in Deltona
- Bus stop infrastructure and accessibility
- Electric and autonomous bus vehicles
- Transit signal priority/queue jumps
- Enhanced fare payment technologies
- Marketing and education campaign



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What's Next?

- Complete TDP Phase II public outreach
- TDP 10-year needs evaluation



The flowchart illustrates the 'Needs Evaluation Process' leading to 'Priority Ranking of Improvements'. It starts with 'Operating Environment', 'Public Involvement', and 'Transit Demand Assessment' leading to a '30-Year Transit Needs' box. This leads to a 'Project Review Committee' and 'Situation Appraisal'. The 'Needs Evaluation Process' includes 'Public Support', 'Ridership Potential', 'Cross-Geographic Connections', and 'Financial Feasibility'. The final step is 'Priority Ranking of Improvements'.

- Financial and implementation plans
- TDP Draft Report
- Plan adoption in July/August




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Comments/Questions

We Need Your Help!

- Complete & share online survey!
 - Use the link <https://www.surveymonkey.com/r/VotranPhaseIIDTP>
 - Or Scan QR Code



- For additional information, email bkking@volusia.org



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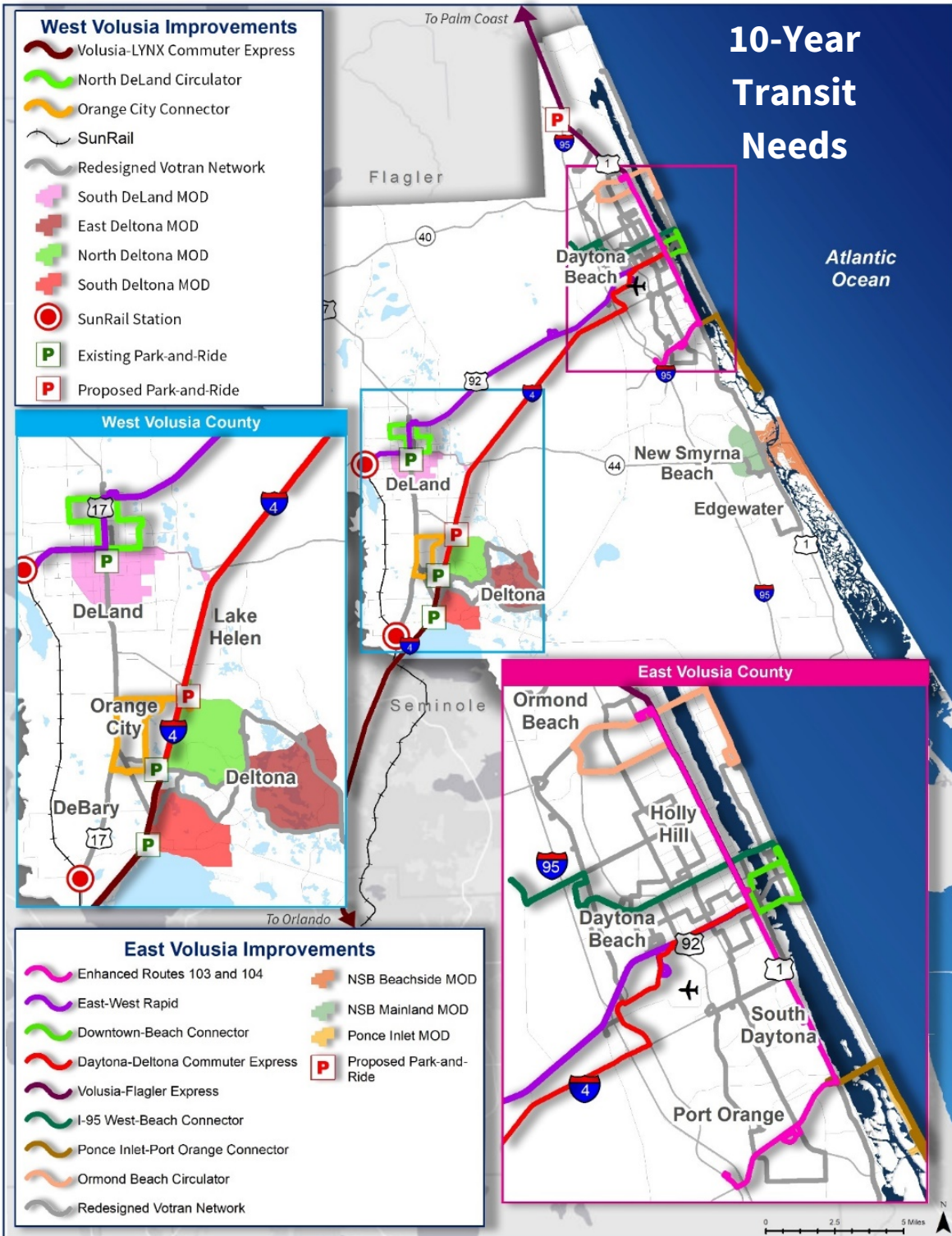
Votran is conducting a public input survey for the 10- Year Transit Development Plan (TDP) Major Update. Please answer the following questions to help us understand how we can better meet the County’s transit needs in the next 10 years!

1. Have you or member of your household used Votran?

- Yes, I have used Votran
- No, I have never used Votran
- No, I was not aware that public transit is available in this area

2. Please review the 10-Year Transit Needs map and indicate **your level of agreement** with the following potential service improvements.

Service Recommendations	Strongly Agree	Neutral	Disagree		
East Volusia					
Service every 15 minutes on US 1 (Routes 103 and 104)	5	4	3	2	1
East West Rapid on US 92 (every 15 minutes)	5	4	3	2	1
Daytona Downtown-Beach Connector (every 15 minutes)	5	4	3	2	1
Daytona-Deltona Commuter Express on I-4 (peak hours only)	5	4	3	2	1
Volusia-Flagler Express (peak hours only)	5	4	3	2	1
I-95 West-Beach Connector (every 60 minutes)	5	4	3	2	1
Ponce Inlet-Port Orange Connector (every 60 minutes)	5	4	3	2	1
Ormond Beach Circulator (every 60 minutes)	5	4	3	2	1
Mobility-On-Demand*(NSB Beachside & Mainland, Ponce Inlet)	5	4	3	2	1
West Volusia					
Volusia-LYNX Commuter Express (peak hours only)	5	4	3	2	1
North DeLand Circulator (every 60 minutes)	5	4	3	2	1
Orange City Connector (every 60 minutes)	5	4	3	2	1
Mobility-On-Demand*(South DeLand, East/North/South Deltona)	5	4	3	2	1
Capital/Technology/Other					
Add DeLand SunRail station	5	4	3	2	1
Establish new Park-and-Ride facilities	5	4	3	2	1
Improve transit infrastructure and accessibility	5	4	3	2	1
Add Transit Signal Priority /Queue Jumps on US 92**	5	4	3	2	1
Enhance fare payment technologies	5	4	3	2	1
Implement marketing and education campaign	5	4	3	2	1



***Mobility-On-Demand (MOD) services would work as follows:** Point-to-point trip within a zone, connections can be made between a point within a zone and nearby fixed route. The fixed route can connect you further to another zone or other destination on the route. Service by request using a mobile phone application or by calling a contact center. All service is ADA accessible – vehicles and the process to request your ride. For example, if you live in one of the MOD zones, you could schedule a trip to a bus stop in the zone and then take the regular fixed route to a destination along the route, such as downtown.

****Transit Signal Priority (TSP) utilizes vehicle location and wireless communication technologies to advance or extend the green light of a traffic signal to allow a bus to continue through an intersection, which helps reduce travel times and ensure on-time arrivals. When combined with TSP, Queue Jump lanes (usually right-turn lanes) at intersections provide buses a head-start over other queued vehicles, letting buses merge into the regular travel lanes immediately beyond the signal.**

If you have any comments, please use the space below.

Thank you for participating!



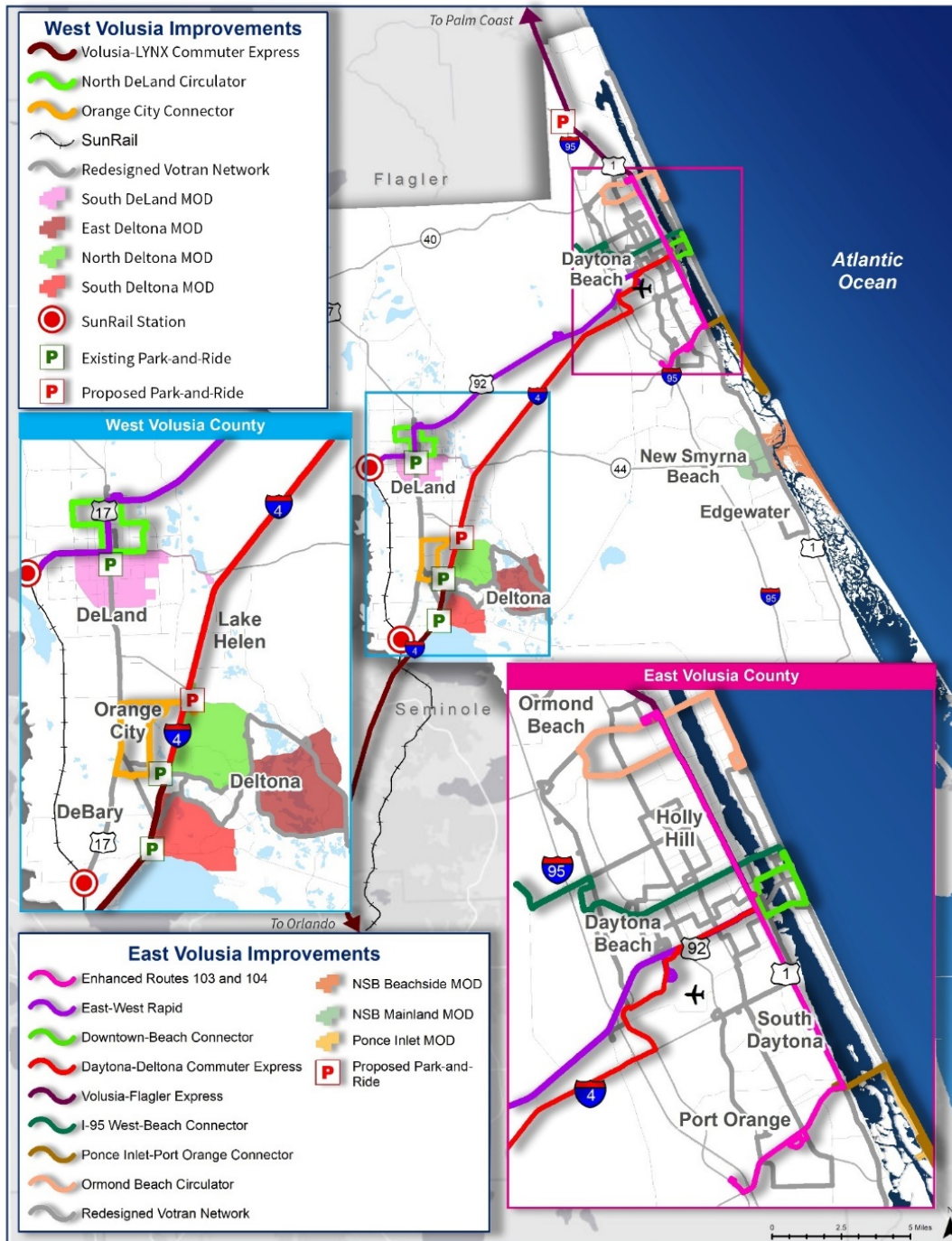
Votran está realizando una encuesta de opinión pública para la actualización principal del Plan de Desarrollo de Transito de 10 años (TDP). Responda las siguientes preguntas para ayudarnos a comprender como podemos satisfacer mejor las necesidades de transito del condado en los próximos 10 años.

1. ¿Usted o algún miembro de su hogar ha usado Votran?

- Si, he usado Votran.
 No, nunca he usado Votran.
 No, no sabía que hay transporte publico disponible en esta área.

2. Indique su **nivel de acuerdo** con las siguientes posibles mejoras del servicio.

Recomendaciones de Servicio	Totalmente de Acuerdo	Neutral	Desacuerdo		
Volusia Este					
Servicio cada 15 minutos en la US 1 (Rutas 103 y 104)	5	4	3	2	1
East West Rapid en la US 92 (cada 15 minutos)	5	4	3	2	1
Conector Daytona Downtown-Beach (cada 15 minutos)	5	4	3	2	1
Daytona-Deltona Commuter Express en la I-4 (solo horas pico)	5	4	3	2	1
Volusia-Flagler Express (solo horas pico)	5	4	3	2	1
Conector I-95 West-Beach (cada 60 minutos)	5	4	3	2	1
Conector Ponce Inlet- Port Orange (cada 60 minutos)	5	4	3	2	1
Circulador Ormond Beach (cada 60 minutos)	5	4	3	2	1
Mobility-On-Demand*(NSB Beachside & Mainland, Ponce Inlet)	5	4	3	2	1
Volusia Oeste					
Volusia-LYNX Commuter Express (solo horas pico)	5	4	3	2	1
Circulador North DeLand (cada 60 minutos)	5	4	3	2	1
Conector de Orange City (cada 60 minutos)	5	4	3	2	1
Mobility-On-Demand*(South DeLand, East/North/South Deltona)	5	4	3	2	1
Capital / Tecnología / Otro					
Agregar estación DeLand SunRail	5	4	3	2	1
Establecer nuevas instalaciones de Park-and-Ride	5	4	3	2	1
Mejorar la infraestructura de tránsito y la accesibilidad	5	4	3	2	1
Agregar prioridad de señal de transito/saltos de línea en US 92**	5	4	3	2	1
Mejorar las tecnologías de pago de tarifa	5	4	3	2	1
Implementar campañas de marketing y educación	5	4	3	2	1



*Los servicios de **Mobility-On-Demand (MOD)** funcionarían de la siguiente manera: Viaje de punto a punto dentro de una zona, se pueden establecer conexiones entre un punto dentro de una zona y una ruta fija cercana. La ruta fija puede conectarlo con otra zona u otro destino en la ruta. Servicio mediante solicitud mediante una aplicación de teléfono móvil o llamando a un centro de contacto. Todos los servicios son accesibles según la ADA: vehículos y el proceso para solicitar su viaje. Por ejemplo, si vive en una de las zonas MOD, puede programar un viaje a una parada de autobús en la zona y luego tomar la ruta fija regular a un destino a lo largo de la ruta, como el centro.

La **prioridad de Señal de Transito (TSP) utiliza la ubicación del vehículo y las tecnologías de comunicación inalámbricas para adelantar o extender la luz verde de una señal de tráfico para permitir que un autobús continúe a través de una intersección, lo que ayuda a reducir los tiempos de viaje y garantizar las llegadas a tiempo. Cuando se combinan con TSP, los carriles de **salto de línea** (generalmente carriles para dar vuelta a la derecha) en las intersecciones brindan a los autobuses una ventaja sobre vehículos en línea, lo que permite que los autobuses se incorporen a los carriles de circulación normales inmediatamente después de la señal.

Si tiene algún comentario, utilice el espacio a continuación.

¡Gracias por participar!

WELCOME!

Votran Transit Development Plan

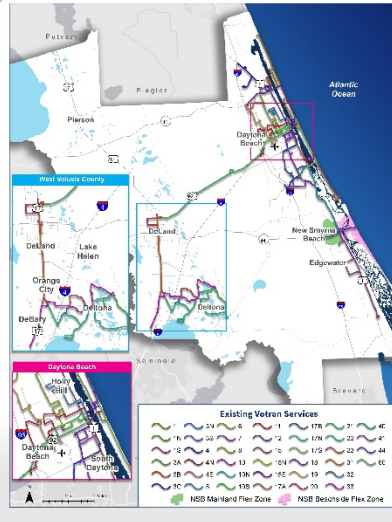
TODAY'S WORKSHOP

- Review Display Boards
- Discuss/Ask Questions
- Provide Input/Feedback
- Complete Transit Survey



EXISTING SERVICES

Votran Transit Development Plan

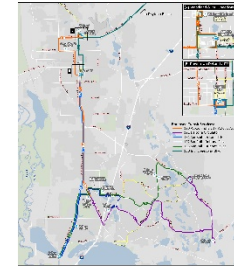


SHORT-TERM NEEDS

East Volusia County



West Volusia County



Southeast Volusia County

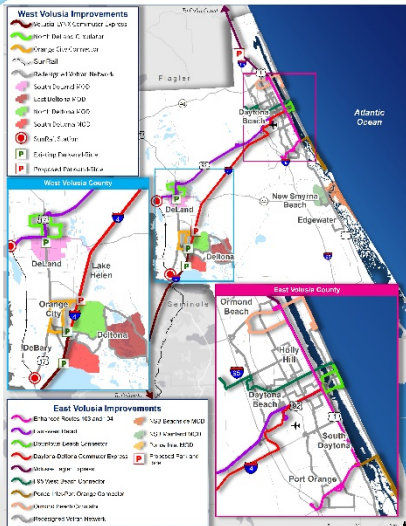


Votran Transit Development Plan

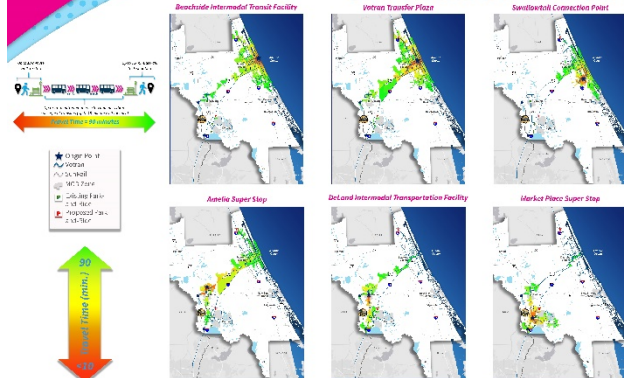


10-YEAR TRANSIT NEEDS

Votran Transit Development Plan



HOW LONG WILL IT TAKE TO GET THERE BY TRANSIT?



Votran Transit Development Plan



GIVE US YOUR FEEDBACK!

Scan it



Use a tablet



Fill it out



Votran Transit Development Plan



SIGN-IN SHEET
Public Workshop, Votran 2022-2031 TDP
Daytona Beach Regional Library
Monday, May 17, 2021

Please note that any information you elect to provide will remain strictly confidential and will not be distributed in any way. Please write legibly.

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SIGN-IN SHEET

Public Workshop, Votran 2022-2031 TDP

Daytona Beach Regional Library

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SIGN-IN SHEET

Public Workshop, Votran 2022-2031 TDP
The Frank T. Bruno, Jr., County Council Chambers,
Room 204, Thomas C. Kelly Administration Center
Thursday, May 20, 2021

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Appendix F: Performance Monitoring Program

Performance Monitoring Program

Performance Measures and Indicators

Once the proposed transit services are implemented, the following performance indicators and measures should be monitored by Votran on a quarterly basis for its fixed-route services as part of the recommended performance-monitoring program:

- **Passenger Trips** – Annual number of passenger boardings on the transit vehicles.
- **Revenue Hours** – Number of annual hours of vehicle operation while in active service (available to pick up revenue passengers).
- **Revenue Miles** – Number of annual miles of vehicle operation while in active service (available to pick up revenue passengers).
- **Passenger Trips per Revenue Hour** – Ratio of passenger trips to revenue hours of operation.

However, as fixed-route-type services typically take up to three years to become established and productive, the performance data up to that point should be reviewed and interpreted cautiously. Although adjustments/modifications are encouraged, outright discontinuations based on performance monitoring data alone are discouraged.

Evaluation, Methodology, and Process

This process is based on two measures, trips per mile and trips per hour, which are weighted equally to derive an overall route score. An individual route's score for a particular measure is based on a comparison of the measure as a percentage of the system average for that particular measure. These individual measure scores are added together and divided by two to get a final aggregate score. This final composite performance score is an indication of a route's performance for the two measures when compared to the system average for those measures. A higher score represents better overall performance when compared to other routes.

The noted comparative performance evaluation can be beneficial, but caution should be exercised when using the final scores and rankings, because these figures are comparing routes to one another and may not reflect the specific goals established for a particular route (i.e., geographic coverage vs. ridership performance). The process is particularly useful, however, in highlighting those routes that may have comparative performance-related issues. These routes can then be singled out for closer observation in future quarters or years to determine specific changes that may help mitigate any performance issues.

Once a route score is determined, routes can be ranked to show the highest performing and lowest performing routes. The rankings are a useful proxy for determining the comparative performance of any route, as well as highlighting changes in performance over time. To track the performance variation over time, three performance levels have been developed:

- **Level I – Good ($\geq 75\%$)** – Transit routes in this category are performing efficiently compared with the average level of all the agency’s routes.
- **Level II – Monitor (30–74%)** – Routes in this category exhibit varying levels of performance problems and require more detailed analysis (e.g., ride checks, on-board surveys, increased marketing efforts, etc.) to aid in identifying specific changes that can be made to help improve the route’s performance.
- **Level III – Requires Attention ($\leq 29\%$)** – Routes in this category exhibit poor performance and low efficiency. Recommendations for these routes may include truncation of the route, reduction in the route’s number of revenue hours, or discontinuation of the route.

Figure F-1 illustrates the three evaluation levels and notes the recommended thresholds for each level.

Figure F-1: Votran Route Performance Monitoring Evaluation

