



TransPro Short-Term Efficiencies and Long-Term Governing Model Report Analysis

Introduction

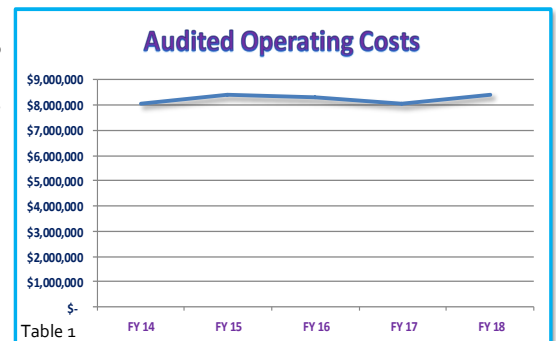
In 2018 the City of Wilmington and New Hanover County commissioned a study by TransPro of Tampa, Florida, to undertake a comprehensive independent review of the efficiencies of the operation of the Cape Fear Public Transportation Authority. An analysis of the regional governance model for transit in the Southeastern North Carolina was also evaluated. The efficiency study was undertaken in an effort to assess Wave Transit’s fixed route services in comparison to peer transit agencies. TransPro is recognized in the industry as a leader in efficiency evaluation and improvement and Wave Transit has realized value from the final report. The study was conducted simultaneously with the *Cape Fear Public Transportation Authority Short Range Transit Plan* which was used for comparison.

Short-Term Efficiencies Study Analysis

The efficiencies analysis provided a detailed overview of the operations of the Cape Fear Public Transportation Authority which is recognized as the Designated Recipient (DR) of federal transit funding apportioned to the region. The region is comprises the census defined Wilmington, NC urbanized area (UZA). The area includes all of New Hanover County and Northern Brunswick County. All jurisdictions in the UZA are eligible for FTA funding which is programmed by the Wilmington Metropolitan Planning Organization (WMPO). The short-term efficiency analysis compared Wave Transit with peers selected by the consultant. The methodology for peer group selection was consistent with TCRP Report 141 which is recognized as a best practice for transportation planning.

Transpro Findings - Financial Analysis

- **Wave Transit ranks below peer average in route productivity** - many factors affect the productivity metric including population density, transit dependency, traffic congestion, fuel cost, unemployment, resident vehicle ownership and transit frequency and coverage. Due to funding limitations, the Authority provides infrequent transit service and coverage is typically designed in looped routes to provide the maximum coverage area. New Hanover County ranks seventeenth of North Carolina’s 100 counties in per capita income.¹ Higher incomes typically relate to less transit dependency and usage in areas where public transportation is designed and funded to serve a primarily transit dependent population. Additionally, a significant amount of affordable housing was lost due to Hurricane Florence. These affordable housing areas displaced many residents who are transit dependent due to economic hardship. Historical peer comparison would be expected to demonstrate that the peer ranking is not an emerging trend.
- **Revenue Miles Between Vehicle Failures** - Wave Transit concurs with the finding which peaked in 2015. The Authority has worked with its vehicle maintenance contractor, making changes where necessary, to improve vehicle maintenance as emphasized in the study. The addition of several new vehicles has also stemmed the tide of low reliability due to underperforming vehicle maintenance.
- **Operating Expense Per Vehicle Hour** - TransPro determined that “Wave Transit’s fixed route operating costs are in line with those of it’s peer agencies.” The Authority constantly works to minimize subsidies from government partners and this metric is no exception. Efforts to improve this metric are ongoing.
- **Fund Balance** - Wave Transit has worked tirelessly to protect and increase the fund balance it was generously afforded by the City of Wilmington and New Hanover County in 2014. Upon establishment of the fund balance, non-budgeted revenues have grown from -3.1% to 6.8%. The Authority Board has set a minimum goal of 8% fund balance as recommended by the NC Local Government Commission, with a higher goal to follow. The fund balance is vital to cash flow and protects the Authority from revenue disruption as a result of natural disasters like hurricanes and unanticipated issues like a federal government shutdown. Unfortunately, the effort is in jeopardy without the realization of additional local funding or a dramatic decrease in service offerings.
- **Budget Adherence** - this metric should not be underestimated. As identified by TransPro, the Authority's fixed route “operating costs are increas-



1. U.S. Bureau of Economic Analysis <https://www.bea.gov/data/income-saving/personal-income-county-metro-and-other-areas>



ing less rapidly than those of its peers.” A more detailed look at the operating costs of Wave Transit for the past five years is outlined in Table 1. The Authority has demonstrated efficiency in cost management by keeping the five year operating cost increase at a responsible 0.81% annually. Due to rising labor and health insurance costs, the ability to continue this trend is highly unlikely. Controlling budget increases has been accomplished by introducing and increasing efficiencies like compressed natural gas (CNG) vehicles, energy efficient facilities and wage and salary management and benefits control. CNG fuel has saved the Authority an average of .85 cents per gallon equivalent since its introduction in 2015. Over the past 24 months CNG savings over diesel is \$1.11 per gallon equivalent and increasing as rate decreases for natural gas are realized from additional vehicles (Table 2).

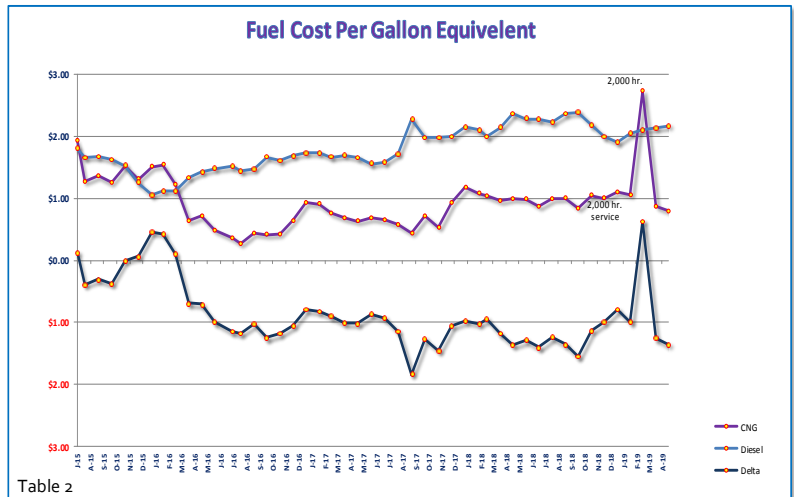


Table 2

- **Audit Results** - the Cape Fear Public Transportation Authority is required by 2 CFR part 200, subpart F to undertake an annual single audit. Since its inception in 2004, the Authority has not had deficiencies in its financial statements or material weaknesses in the award of federal or state funds.

TransPro Findings - Route and Trip Performance Analysis

- **Opportunity 1: Route 204 Brunswick Connector** - the TransPro recommendation to increase the subsidy paid by the Brunswick Consortium for Route 207 overlooks the revenue allocation model employed by the Authority regarding the distribution of FTA and NCDOT funding. The portion of Brunswick County in the UZA is eligible for FTA and NCDOT operating subsidies as programmed by the WMPO. A detailed effort, presumably by the WMPO, should be undertaken to determine if federal and state subsidies are equally allocated throughout the region. Elimination of Route 204 is not under the exclusive purview of the Authority. The decision requires input from the elected officials comprising the WMPO Board, WMPO staff and the Brunswick Consortium.
- **Opportunity 2: Route 107 College Road** - opportunity two should be evaluated in coordination with opportunity 4, Route 301 Pleasure Island, because the two routes are operated by a single vehicle. Route 301 is serviced by the Route 107 bus deviating from Monkey Junction four times daily with the exception of Sunday when the deviation occurs three times. Since Carolina Beach partially subsidizes the route, elimination of the route would require consultation with the elected officials comprising the WMPO Board, WMPO staff and officials from the Town of Carolina Beach.
- **Opportunity 3: Route 207 North** - Route 207 was in operation as a community transportation route prior to the creation of the Authority in 2004. In addition to the negative impact created by eliminating the route highlighted in the TransPro report, the route serves the Wilmington VA Clinic and Laney High School. Transit service to the VA Clinic was a requirement of the Veterans Administration when the clinic was constructed and they should be consulted prior to any modification of Route 207. Input from New Hanover County and the WMPO would also be necessary prior to initiating plans to eliminate the route.
- **Opportunity 4: Route 301 Pleasure Island** - see opportunity 2 above.
- **Opportunity 5: Route 705 Seahawk Shuttle** - UNCW routes are coordinated with input from the university to ensure that growth and student commuting patterns are serving the goal of safely transporting students, mitigating congestion and delivering quality service through the Seahawk Shuttle. Service to UNCW is valuable to the Authority as a portion of UNCW revenue is used as local matching funds which minimizes subsidies required from other Authority funding partners. The Seahawk Shuttle transports tens of thousand students monthly when school is in session which reduces traffic congestion and minimizes the need for the university to invest in parking facilities. The service is open to the public which also provides a benefit to the community. Any decision to modify the service without UNCW input is not recommended. If annual revenue hours to the university were to be reduced to decrease operating costs, FTA formula funding would decrease proportionally to the reduction in student passengers. Wave Transit has worked to provide a balance of services to the University and the community since its inception in order to provide the most efficient offerings possible while maintaining maximum leveraging from the agreement.
- **Opportunity 6: Route 712 Seahawk Shuttle** - see opportunity 5 above.

Authority Response - Financial Analysis

Route productivity and revenue miles between vehicle failures were also highlighted in the TransPro report. Route productivity is evaluated by the Authority on an ongoing basis. Community input and surveys are undertaken every five years with the aid of

a professional consultant as part of the short range planning effort. Routes have been developed using this methodology since the Authority was created in 2004. This led to a significant route restructuring in 2007. Prior to that effort, substantial route restructuring had not occurred in over 33 years. Public transportation routes and services are also evaluated on a five year basis as part of the WMPO long range transportation planning effort. The WMPO is the lead planning agency for transportation planning to the region including public transportation. Changing demographic and commuting patterns have led to minor modifications in the routes of the Authority since 2007. Major route modification undertaken regularly can lead to confusion among transit customers which jeopardizes trust in transit offerings. Wave customers must be confident that transit options are consistent when they choose housing, employment and educational opportunities. Following a debrief with TransPro, the Authority is preparing to implement internal passenger surveying on a more frequent basis to improve efficiency.

The Authority has implemented staff changes and increased vehicle maintenance supervision and reporting which are showing positive results as highlighted on page 17 of the TransPro report. Wave Transit will continue to monitor these efforts to ensure maximum efficiency in the area of vehicle maintenance. The Authority will also continue its ongoing efforts to monitor industry trends and best practices to ensure the highest value for taxpayer investment in the public transportation program. The most impactful vehicle maintenance improvement has been from the addition of twelve new buses and nine new shuttles since the issue peaked in 2015. Improved maintenance software has also been introduced to increase vehicle maintenance efficiency.

Authority Response - Route and Trip Performance Analysis

As quantified in the TransPro report, route performance is highly subjective. Quantification of route performance benchmarking was not clearly defined by the consultant. Routes appeared to be classified low performing based on their comparison to other routes. A metric endorsed by the community detailing route efficiency and performance would lead to less subjectivity when evaluating routes for effectiveness and efficiency. Also not clear from the study is commuting patterns relative to route productivity and efficiency. Wave Transit routes serving the area around the New Hanover Regional Medical Center experience high ridership due to transit customer patronization of the services offered in the area. If however, routes which deliver passengers to the hospital area are eliminated, ridership around NHRMC will also be negatively impacted. The suggestion to employ a coverage vs. a convenience model when planning routes is a very worthy recommendation.

Opportunities for efficiency in route offerings detailed by TransPro is exclusively limited to reduction of routes. The routes were carefully planned based on sound planning principles and elimination of routes should be undertaken only as a last resort. Typically, should routes return following a period of suspension, erosion of trust by passengers who have made arrangements based on transit offerings is jeopardized and the effect on passengers is often significant. Wave Transit routes are not necessarily structured exclusively to drive ridership but also to provide transit services to economically challenged areas, regions of the community with high areas of physically and mentally challenged residents, and areas of substantial affordable housing units.

The report mentions that the “full financial impact” of its recommendations depends on how any reallocated services are attributed. If efficiency efforts in the form of route reductions are implemented, the goal of the Authority would be to reallocate this funding to offset operating budget deficits. This would significantly reduce the TransPro estimated financial impact due to less overhead allocation among the routes and other revenue apportionment that is shared by all routes.

Since 2011 the Authority has undertaken three multimillion facility projects. It has also invested heavily in rolling stock and alternative fuels to benefit the region. These projects have improved efficiency and reliability, reduced congestion, enriched air quality and provided numerous construction jobs. Our ability to undertake these efforts have been funded through highly successful grant awards. Wave Transit prides itself on its ability to leverage federal and state funds to keep local subsidies at a minimum. A majority of the grant awards have been from discretionary funding at the federal level where available funds are highly competitive. Unlike infrastructure investments, operating funding outside the formula program are typically regarded by congress as a local option, leaving local communities responsible for the funding the operation of their local transit program.

The Authority has implemented fiscal efficiencies over the past several years including: advertising on buses; contracting with Greyhound to provide support for intercity bus travel; and ongoing contract evaluation with UNCW and other partners to ensure value for the Authority. The Authority has also worked closely with the WMPO which generously awards annual highway funding to the Authority for preventive maintenance and Americans with Disability compliance.

The Authority is prepared to recommend service reductions to the WMPO and funding partners in accordance with the recommendations of the TransPro report in order to ensure budget compliance should additional revenues fail to be identified. It should be noted that this would have a significant impact on our customers. It would also impact employers who rely on Wave Transit to provide transportation to their workers as well as vulnerable customers who utilize transit for critical services. Wave Transit’s ability to maintain pace with the growth of the region continues to be challenged by limited local operating funding.

Long-Term Governing Model Analysis

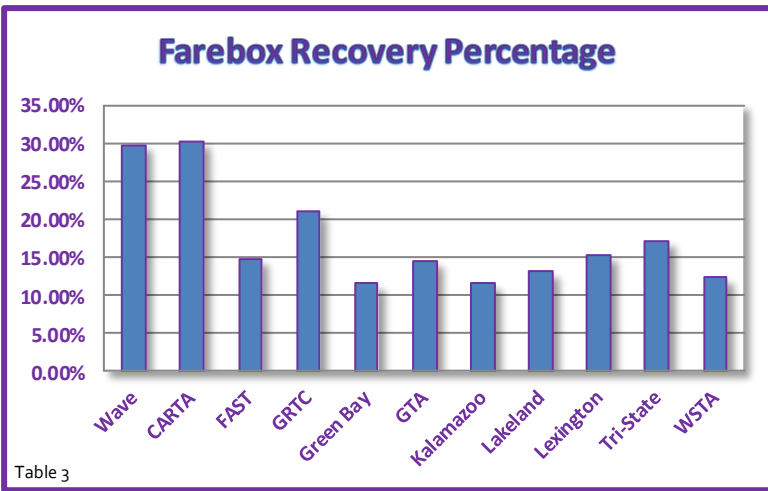
Recommendations from TransPro regarding the governing model are primarily aimed at the region’s policy makers and Wave Transit supports many of the suggestions detailed in the study. The Authority and TransPro have discussed improvements in governance efficiency and accountability as detailed. Wave Transit agrees that while transparency is at an acceptable level, improvements from a strategic plan and outcomes based metrics, including more detailed analytical reporting, would be a valuable

initiative. Funding for a strategic plan has not been identified.

New revenue sources identified in the sufficient and sustainable revenue recommendation is intriguing. The Authority would welcome documented local formula funding as recommended, which would make the annual budget process more predictable. Local and dedicated funding pursuant to NCGS §105 Article 52 would also substantially improve the fiscal health of the Authority and allow for improved offerings. Value capture around the WMMTC also warrants further study.

Additional Efficiency Analysis

The effort undertaken by TransPro on behalf of the City of Wilmington and New Hanover County was extensive and thorough although additional analysis is worth evaluation. Wave Transit used data from the FTA National Transit Database (NTD), which serves as the clearinghouse for transit data, to compare farebox recovery, local funding percentage and federal funding percentage. State and “other” revenue were also analyzed. State funding for transit operations varies greatly between states and since peer agencies were not limited to North Carolina, comparison was difficult. The Authority works closely with NCDOT-PTD and the local delegation to the NC General Assembly to educate officials of the value of transit and ensure that state funding is consistent and appropriate to meet the needs of Wave Transit. “Other” funding is listed in the NTD data but is not defined which could result in ambiguous analysis. To ensure accurate comparison of operational costs, the data analyzed is exclusively for funding of the operation of the transit systems and does not include capital costs. The datasets are available at <https://www.transit.dot.gov/ntd/transit-agency-profiles>.



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Farebox Recovery Percentage

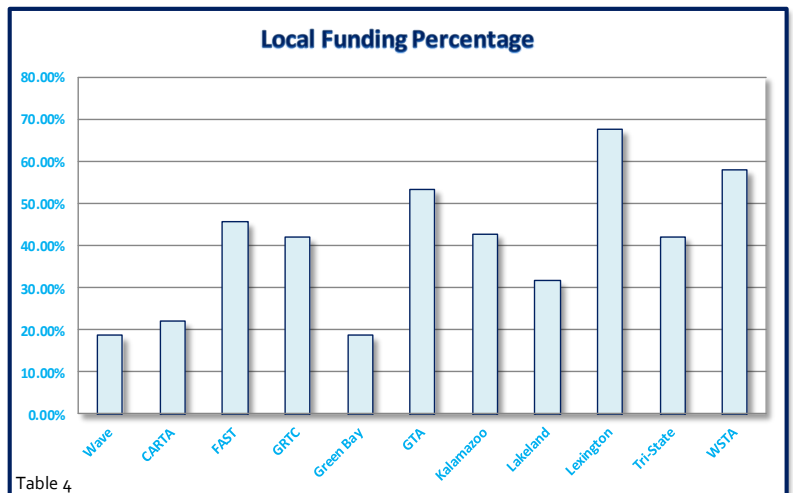
Farebox recovery is defined by FTA as the fraction of operating expenses which are met by the fares paid by passengers. It is computed by dividing the system's total fare revenue by its total operating expenses. The ratio is valuable in determining the amount paid by customers receiving the service and the cost of subsidy (and other revenue) per passenger. NTD data for 2017 illustrates that Wave Transit has the second highest farebox recovery ratio among peers identified in the TransPro report. In fact, Wave Transit recovery ratio is nearly twice as efficient in end user payment as most peer agencies. The downside of high fare recovery is that it is typically driven

by higher than average passenger fares. Wave Transit has the highest fare for bus transportation in the state due to the fact that fares are the only method of significant revenue available to the Authority Board. While higher fares can positively impact the bottom line, it also can significantly impact economically disadvantaged transit patrons which could inhibit transit usage and value. Fare policy is a difficult and challenging decision for transit policymakers.

Local Funding Percentage

Another efficiency metric not included in the TransPro Report is a transit agency's ability to leverage funding. The current methodology employed by the Authority in funding allocation is to maximize federal, state and other operating revenues. This approach will in turn minimize local taxpayer subsidies for the operation of Wave Transit. Table 4 illustrates the efficiency of the Authority and supports this funding policy hypothesis.

Wave Transit requires the least amount of local funding for its operation compared to its peers, save for one. Additional comparison to North Carolina peers demonstrates that Wave Transit requires over 20% less local subsidy than its nearest NC peer. Wave Transit is fortunate to have multiple local funding partners who share the local matching requirements for federal and state transit funding. The Authority constantly evaluates its financial and reporting policies and procedures to maximize efficiency through leveraging.

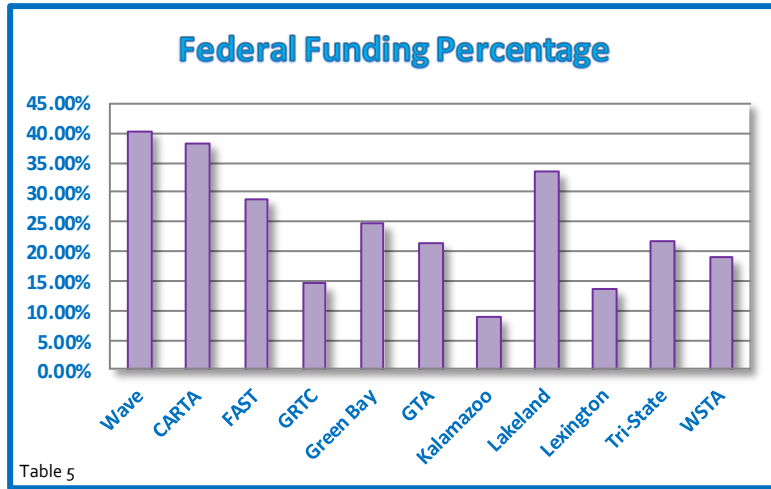


Federal Funding Percentage

Federal Transit law is consistently evolving to meet the goals of elected officials in Washington. For example, in 2012 Moving Ahead for Progress in the 21st Century Act (MAP-21) allowed systems in Transportation Management Areas (TMA) which are

defined as UZA's over 200,000 population, to use a portion of FTA formula funding for transit operations. Prior to MAP-21, TMA's were required to fund transit operations without federal assistance. This change was timely given the 2010 census classified the Wilmington UZA as a TMA.

The Authority exceeded all of its peers in leveraging FTA funding for the operation of Wave Transit in 2017. This metric



demonstrates the highest efficiency possible in leveraging federal funding (Table 5). Conversely, this methodology does have repercussions. Since formula funding is allocated to UZA's for operating and capital assistance, Wave Transit is consistently searching for discretionary funding to meet its capital needs, which can be significant. A single transit bus is over \$500,000 and competing for limited capital funding has led to operating rolling stock assets well past their useful life. This increases maintenance costs and decreases reliability. The Authority's three facilities exceeded \$25,000,000 in construction costs. Fortunately, successful discretionary and formula grant funding has been secured over the past four years for two facilities, fifteen large buses, two trolleybuses, seven shuttle buses and seventeen paratransit vehicles. Substantial assistance from the

WMPO was also secured to construct the WMPTC and purchase two large buses.

Leveraging operating revenues using this methodology also minimizes the value of federal funding. FTA operating assistance requires a 50% local match while capital assistance requires only a 20% local match. If formula funding were utilized for capital acquisition, the Authority would realize an additional 30% value from federal assistance. This would require identification of significant local funding resources and would possibly lead to a surplus in capital funding. This type of leveraging requires careful planning and balanced implementation to be successful.

Conclusions

The TransPro report and additional funding analysis undertaken by the Authority demonstrate a very high level of efficiency in the operation of Wave Transit. The report identified very few opportunities for increased efficiency. Additional analysis to quantify monetary savings should be undertaken to ensure that should the recommendations be implemented, expectations for financial savings are accurate and responsible. Staffing levels, purchasing policies and procedures, and other efficiencies were not identified in the report. In fact, Wave Transit's efficiency was so high that the only method for realizing significant savings was to make dramatic reductions in the service offerings of the Authority. The TransPro Report demonstrates that the Board of the Authority is diligent in its responsibility for the oversight of operation of Wave Transit.

To demonstrate Wave Transit's level of commitment to efficiency, in 2004 the Authority adopted a Mission and Goals Statement that highlight the important responsibility of providing efficiency in its service offerings. The first four of six adopted goals of the Authority are directly related to efficiency.

1. Provide cost effective transportation services which optimize the utilization of personnel, vehicles, and other resources and which are operated with a minimum of public subsidy.
2. Provide transportation services which meet the mobility needs of the community, within available financial resources.
3. Develop funding options which assure the continued stable operation of transportation services at a public subsidy level acceptable to the community.
4. Develop policies which assure, as much as possible, that transit services are designed and operated to encourage maximum utilization by the community. Service should be provided first in areas where the greatest potential for use exists.

The Authority Board and staff appreciate the opportunity to provide feedback regarding the TransPro report. The independent nature of the study should assure the community that Wave Transit takes its responsibility to provide efficient public transportation with the highest regard. We value the taxpayer investment in our service and continually strive to meet our fiduciary accountability to the region. Wave Transit is hopeful of working with our funding partners to define more detailed budgeting security and realize how the long term plans of the region are realized from a strong public transportation network. Transit service in the region provides tremendous economic and transportation value and we look forward to our continued relationship with community leaders to improve our services in the most efficient and responsible manner.