2018

SRTA Year End Fixed Route Ridership Analysis: FY 2018

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I. Introduction

Presented here are the results of an in-depth analysis of ridership trends for the Southeastern Regional Transit Authority (SRTA) fixed route service for the entirety of fiscal year 2018 (FY18); FY18 began July 1, 2017 and ended June 30, 2018.

Ridership data is collected and reported by the Sheidt & Bachmann farebox system and stored in the Central Computing System (CCS). The farebox system records the details of each transaction at the fareboxes, ticket vending machines, and terminal ticket offices. The data is compiled through a series of reports available in the CCS. The data used to prepare this report was compiled from the "Route Ridership by Garage and Day of Week", the "Route Ridership by Garage and Time of Day", and the "Route Ridership by Garage and Product Type" reports.

Values for revenue miles and revenue hours are calculated using trips scheduled on the published timetables. Scheduled values are used because detailed operational data are not currently available from South Coast Transit Management (SCTM), the service operator for SRTA.

Tableau Desktop 10.4 was used to analyze ridership data and develop the tables and charts found in this report. Individual route profiles were excluded from this report, however are stored in Tableau Desktop 10.4.

A. Key Terms Used in this Report

Route is the path a vehicle will travel while operated in service which passengers are permitted to board after paying the appropriate fare.

Trip is a segment of time in which the vehicle will travel a route in a single direction from one end of the route to the other end of the route.

Ridership is the number of trips recorded by SRTA fixed route vehicles.

Revenue Miles is the measure of distance traveled by a fixed route vehicle operated along scheduled routes in which passengers are permitted to board after paying the appropriate fare.

Revenue Hours is the measure of time a fixed route vehicle is operated along scheduled routes in which passengers are permitted to board after paying the appropriate fare.

Passengers per Revenue Mile (PPRM) is the calculation of the number of passengers boarding a fixed route vehicle for each mile the vehicle operates revenue service.

Passengers per Revenue Hour (PPRH) is the calculation of the number of passengers boarding a fixed route vehicle for each hour the vehicle operates revenue service.

Passenger per Trip (PPT) is the calculation of the number of passengers boarding a fixed route vehicle for each trip the vehicle performs in revenue service.

II. Key Findings

A. Ridership

SRTA ridership trends appear to be reaching a leveling point; FY18 ridership was 2.63 million trips as compared with 2.68 million in FY17 and down from the five-year peak in FY16 of 2.74 million trips. The decrease from FY18 to FY17 was minimal, only 1.64% fewer trips. Total ridership for the previous five fiscal years is shown below in Figure 1.

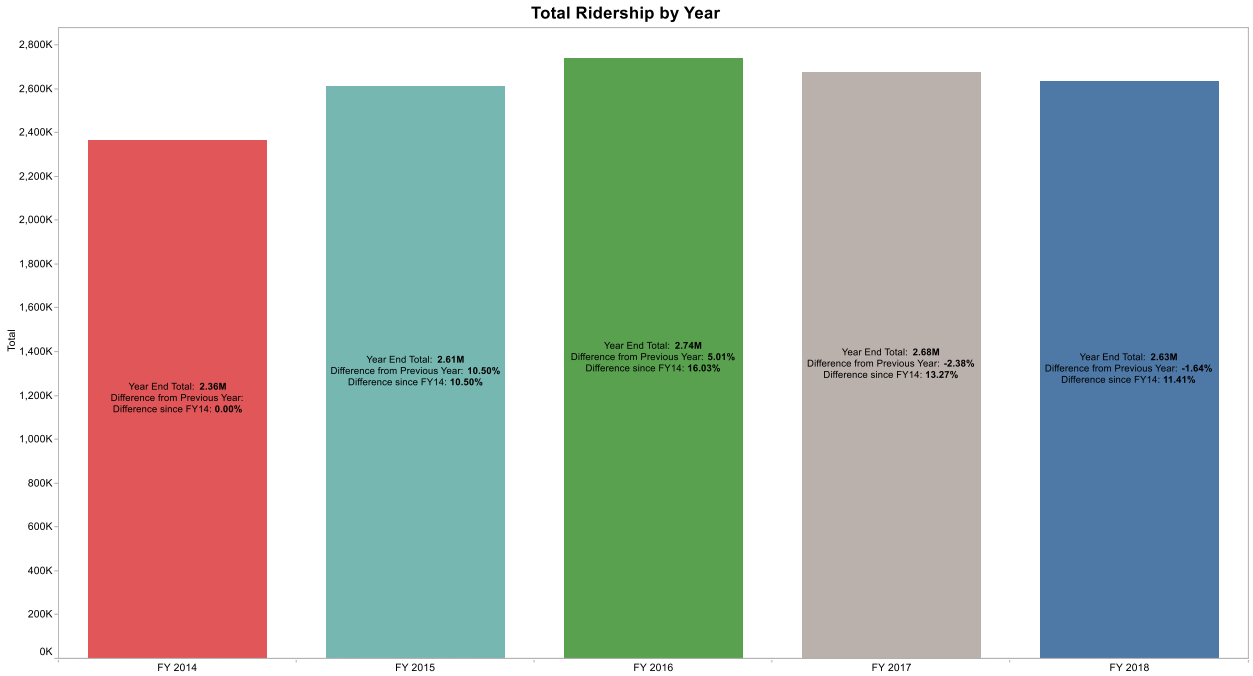

Figure 1: SRTA Total Ridership FY14-FY18

SRTA operates fixed route service out of two garages: Fall River and New Bedford. The service from each garage operates independent of the other with exception of the New Bedford Route 9 – Intercity (NB9), which provides a connection between New Bedford and Fall River. Ridership data for the NB9 is recorded such that boardings on the trips originating from New Bedford terminal are attributed to New Bedford garage and boardings on the trips originating from Fall River terminal are attributed to the Fall River garage.

The service in each city reflects the unique service demands for each city, and as a result the ridership trends vary between the two cities. Ridership in Fall River for FY18 was 1.27 million trips (48% of the systemwide total); New Bedford was 1.36 million trips (52% of the systemwide total). The ridership split between Fall River and New Bedford remained consistent (48/52) in both FY17 and FY18. The totals are shown below in Figure 2.

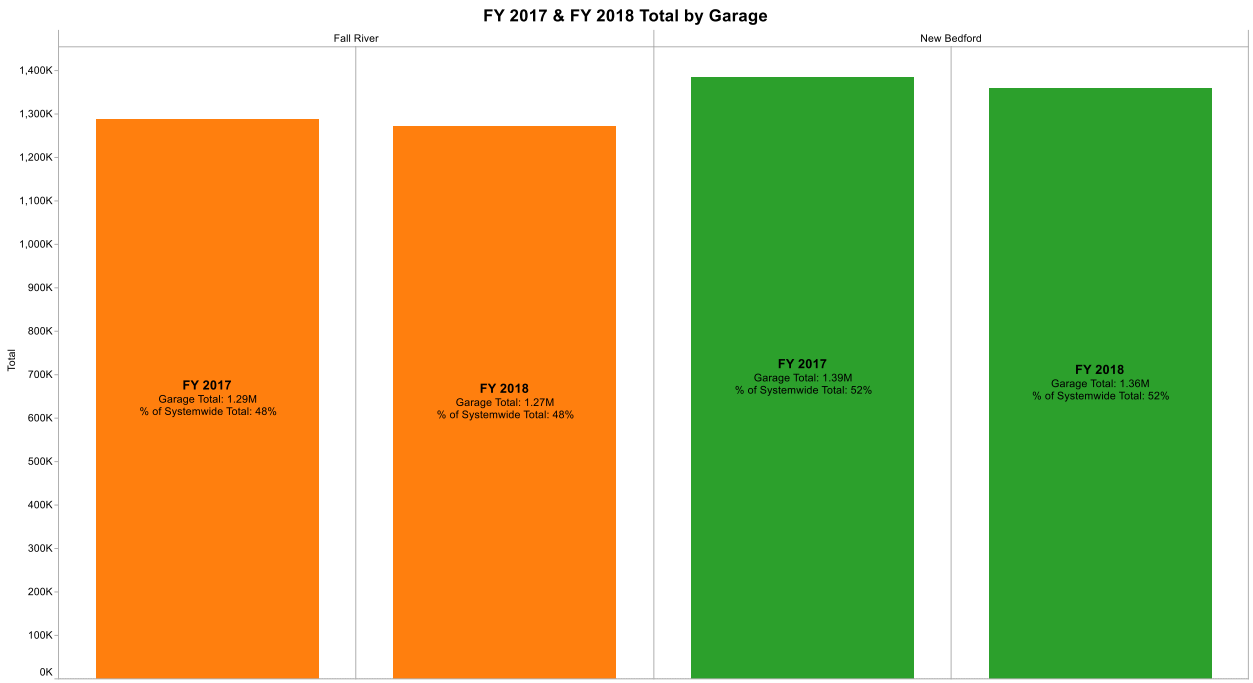

Figure 2: Total by Garage FY17 & FY18

SRTA operates three schedules for service: Weekday, Saturday, and Holiday. Weekday service operates Monday through Friday and provides the greatest span of service and the shortest headways of the three schedules. Saturday and Holiday service share the same schedule, which provides shorter span of service and longer headways than the Weekday schedule. The Saturday schedule is operated each Saturday, whereas Holiday service is operated on weekdays when a holiday is observed. Weekday service experienced the majority of trips on SRTA and was observed at 2.36 million for FY18, a decrease of 2% when compared with FY17. Saturday service followed with 240,000 trips, a 4% increase when compared with FY17, and lastly, Holiday service provided 30,000 trips, an 18% decrease from FY17. The decrease in Holiday service is largely attributed to one fewer holiday in FY18 as compared with FY17 due to the date that Christmas was observed. Traditionally, SRTA does not operate service on Christmas, however Holiday service was offered on Monday, December 26, 2016 despite Christmas holiday being observed that day. The full results are shown below in Figure 3.

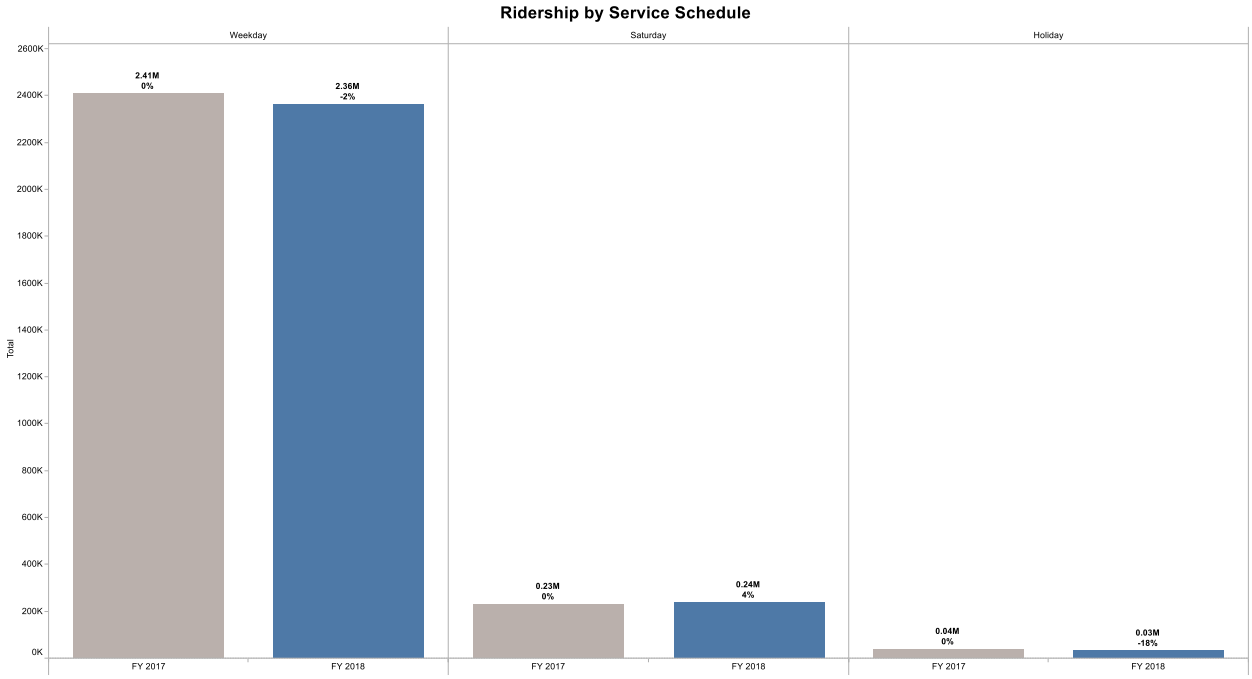

Figure 3: Ridership by Service Schedule

B. Fare Payment

In addition to recording boarding counts, the Sheidt & Bachmann fare collection system records detailed information regarding each transaction made when passengers board a bus. This information is useful to determine the method customers pay for their service and the extent that various pass products are used by SRTA customer. Historically, cash has been the predominant method of fare payment, and that remained true in FY18 with 1.31 million (43%) trips paid for with cash; multi-ride pass products (one day, seven-day, thirty-one day, and ten ride) accounted for 709,254 trips (27%); transfers accounted for 582,586 trips; and stored value accounted for 190,122 (7%) trips. The full results are shown below in Figure 4.

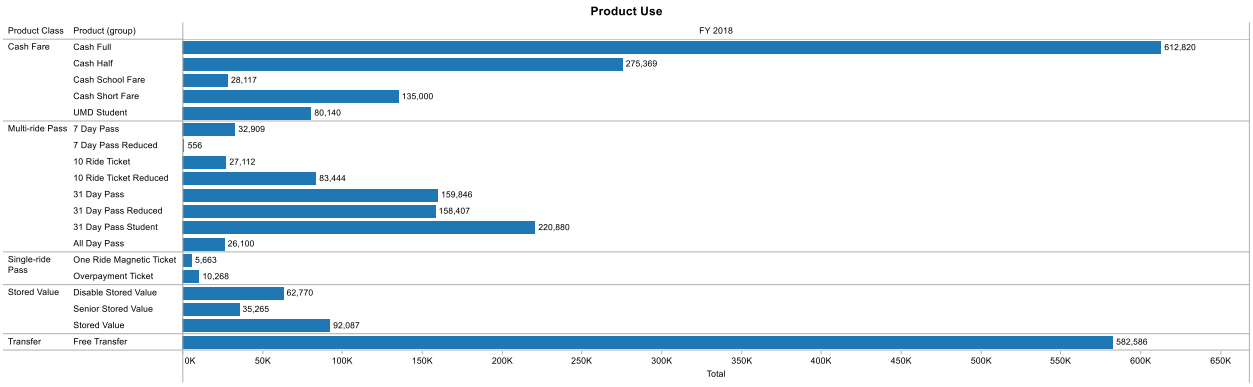

Figure 4: Fare Product Use

The use of fare media did change in FY18, generally shifting from the cash to multi-ride pass products. Cash remains the predominant method of payment, however in FY18 cash experienced a 5.54% (35,952 fewer payments) decrease from FY17. Thirty-one day pass products all increased their share of payment methods, with the largest increase observed in the

full price pass which increased 16.97% (23,188 additional trips) compared with FY17. The full results are shown below in Figure 5.

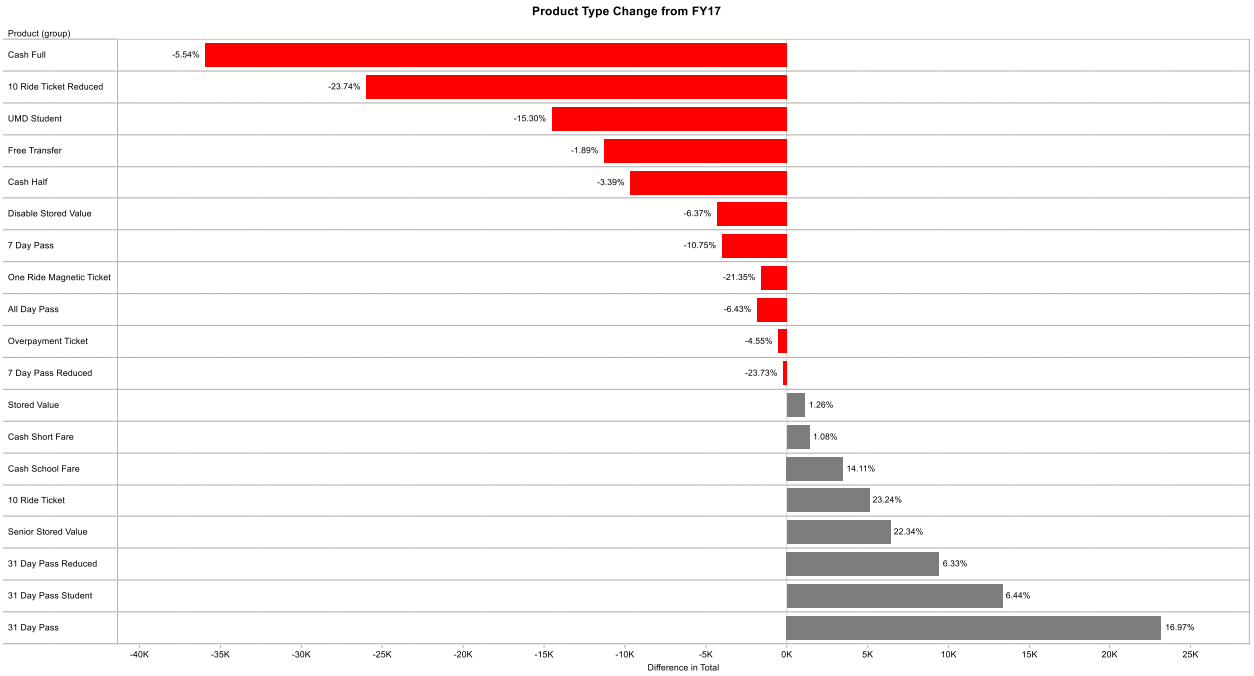

Figure 5: Change in Fare Product Use

III. Performance Analysis of Service

SRTA adopted performance standards to assess the productivity of service for each route relative to the whole system. The standards are quantitative indicators that measure route performance against a specific measure of productivity for the purpose of identifying routes that are underperforming expectations.

Route performance is measured against the systemwide average and falls in one of three categories: Pass – productivity measure is greater than 50% of the systemwide average and no corrective action is necessary; Monitor – productivity is less than 50% of the systemwide average but greater than 35% of the systemwide average, performance should be monitored a corrective plan should be developed; Fail – productivity is less than 35% of the systemwide average, the corrective plan should be implemented.

There are three indicators used in this report: passengers per revenue hour, passenger per revenue mile, and passengers per trip. The metrics each measure a different aspect of transit route productivity, each providing a slightly different insight in to how the service is being used by SRTA customers.

Passengers per revenue hour measures the number of passengers boarding a route during an hour of service. It is reported as an average number based on the total number of hours a route is in service and the total passengers that boarded the route during a period of time. Passengers per revenue hour identifies productivity based on the amount of time a route is in service and is a way to determine if that time is being used as efficiently as possible. Routes

with a greater frequency of service tend to perform better over those with lower frequency as there are more opportunities in an hour for the route to board passengers.

Passengers per revenue mile measures the number of passengers boarding a route over the course of a mile of service. It is reported as an average number based on the total number of miles a route travels while in service and the total number of passengers that board the route while in service. Passengers per revenue mile identifies productivity based on the total distance a route travels and is a way to determine if the distance traveled by the route is being used as efficiently as possible. Routes that are shorter and serve more densely developed areas tend to perform better over those that are longer and serve less densely developed areas.

Passenger per trip measures the number of passengers that board a bus each time it travels the route. It is reported as an average number based on the total number of trips performed on a route and the total number of passengers that board the route during a trip. Passengers per trip identifies the number of passengers on board a vehicle for each trip and is a way to determine if the amount of service for a route is being allocated as efficiently as possible. This metric is as close to a combined metric of hours and miles, but tends to favor routes that serve more densely developed areas, as there is a greater potential to pick up passenger.

A. Passengers per Revenue Hour

The systemwide average for passengers per revenue hour was 22.07; the Monitor category was set at 11.03 and the Fail category was set at 7.72. Eleven of twenty-five routes were observed above the average of 11.03.

Two routes fell in the Monitor category: Fall River Route 14 – Swansea Mall (FR14) and New Bedford North End Shuttle (NBNES). The FR14 has been the subject of a service improvement plan that eliminates service along a sparsely developed corridor and shifts the alignment to serve destinations with a higher demand for service. A public hearing was held in May 2018, which revealed that several customers regularly use the route segment targeted for elimination, which caused a re-evaluation of the service plan. Alternative plans are in the development process, however plans to implement a service change have been placed on hold due to budgetary restrictions.

The New Bedford North End Shuttle is a perennial low-performer. A service evaluation was conducted in 2015 determined that retaining service on the busiest portions of the route would be costlier to extend existing routes than to retain the service in its current alignment and is not a priority route for service changes.

One route fell in the Fail category: New Bedford to Wareham (NBW). The NBW is operated in partnership with the Greater Attleboro Taunton Transit Authority (GATRA) and provides a connection between New Bedford and Wareham. SRTA serves as the operator for the route, providing a vehicle and operator, however it is funded through a grant the was received by GATRA. The partnership agreement allows SRTA to report ridership for the trips departing from New Bedford, whereas GATRA reports ridership for the trips departing from Wareham. Due to the partnership agreement, SRTA cannot implement service changes without the approval of the GATRA administrator.

The results of the Passengers per Revenue Hour analysis are shown below in Figure 6 and Figure 7.

Passengers per Revenue Hour

Routes	FY 2018 Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Year End Average
FR1	21.29	23.00	30.94	31.83	28.34	26.06	22.63	26.03	24.73	26.46	30.30	26.51	**26.51**
FR2	20.42	21.17	22.23	22.85	21.32	19.75	18.17	20.42	18.77	20.41	20.53	19.67	**20.48**
FR3	26.93	29.56	35.99	36.58	36.25	33.66	28.19	33.97	31.88	33.01	36.84	35.16	**33.17**
FR4	16.60	16.70	21.84	23.49	21.77	20.48	17.98	20.00	18.67	19.71	20.76	18.80	**19.73**
FR5	10.49	11.02	20.04	24.04	24.75	22.98	19.57	22.15	22.48	23.31	25.02	22.16	**20.67**
FR6	19.13	20.78	25.88	27.73	25.93	25.82	22.20	25.29	24.08	23.23	23.65	22.69	**23.87**
FR7	15.39	15.79	25.88	28.25	27.56	25.03	21.75	24.27	22.33	23.24	25.68	23.20	**23.20**
FR8	12.42	12.53	41.84	46.02	42.39	39.54	34.63	36.44	36.04	36.30	37.75	30.50	**33.87**
FR9	12.60	12.14	17.02	18.80	17.35	15.60	14.73	16.03	15.10	15.70	17.88	16.57	**15.79**
FR10	19.04	21.24	30.36	32.79	30.15	29.68	25.99	27.48	29.40	29.72	30.92	28.22	**27.92**
FR14	10.88	12.06	11.52	10.86	11.12	10.90	8.60	10.74	10.09	10.02	10.79	11.05	**10.72**
KEITH		11.00	21.65	20.98	20.44	24.13	21.03	19.97	20.43	24.13	24.66	22.69	**21.01**
NB1	31.52	33.20	35.12	36.08	34.05	29.99	27.49	32.71	31.40	34.24	35.81	34.93	**33.05**
NB2	30.02	30.66	31.00	29.62	29.75	28.87	26.32	30.84	28.98	31.10	33.44	32.50	**30.26**
NB3	15.68	16.20	15.75	16.61	16.08	15.16	12.70	15.26	14.71	14.24	15.18	15.02	**15.21**
NB4	30.93	34.11	35.48	35.74	33.63	29.91	26.58	31.38	28.79	29.84	32.00	30.02	**31.53**
NB5	15.56	15.67	17.27	17.45	17.80	16.05	15.13	16.76	14.83	17.14	17.16	16.39	**16.43**
NB6	14.00	13.93	14.59	14.94	13.50	13.09	10.77	13.31	11.80	13.09	14.26	13.43	**13.39**
NB8	37.02	39.61	38.17	41.67	39.96	37.46	30.43	37.46	34.27	36.90	40.59	39.77	**37.78**
NB9	25.04	26.19	29.85	28.81	27.55	25.64	20.85	26.37	23.41	25.89	25.47	25.19	**25.85**
NB10	21.45	21.86	22.25	22.60	22.12	20.57	17.33	21.78	19.14	21.00	23.12	21.25	**21.21**
NB11	16.36	17.72	17.42	17.29	17.89	17.71	13.86	16.99	15.84	17.26	19.30	19.40	**17.25**
NBHS		8.00	21.70	20.76	22.36	21.30	16.35	18.67	18.07	23.09	18.89	13.44	**18.42**
NBNES	7.73	6.83	7.61	8.10	8.42	8.81	7.02	9.08	8.14	8.41	9.40	8.79	**8.19**
NBW	3.37	3.69	3.62	3.55	3.04	2.71	2.66	4.09	3.37	3.33	3.87	3.24	**3.38**
Monthly Average	**18.86**	**18.99**	**23.80**	**24.70**	**23.74**	**22.44**	**19.32**	**22.30**	**21.07**	**22.43**	**23.73**	**22.02**	**21.97**

PPRH Performance
Fail
Monitor
Pass

Figure 6: FY18 Passengers per Revenue Hour Table

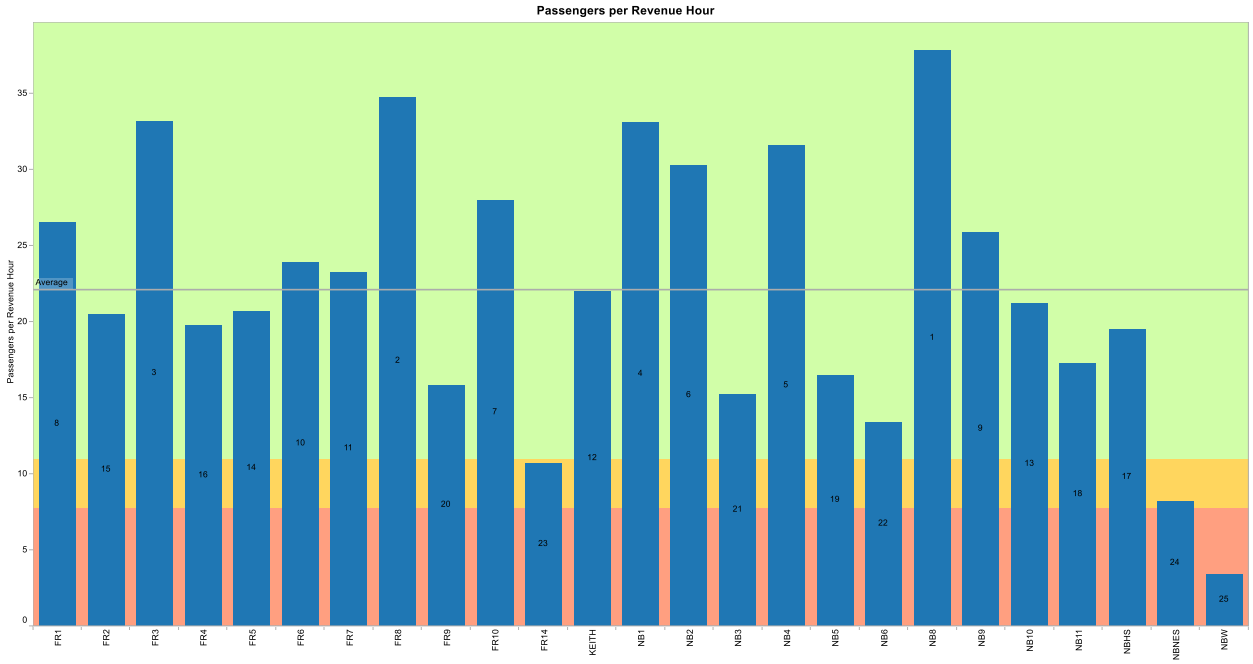

Figure 7: FY18 Passengers per Revenue Hour Chart

B. Passengers per Revenue Mile

The systemwide average for passengers per revenue mile was 1.77; the Monitor category was set at 0.88 and the Fail category was set at 0.62. Thirteen of twenty-five routes were observed above the average of 1.77.

One route fell in the Monitor category: New Bedford Route 6 – Shawmut/Rockdale (NB6) with an observed passengers per revenue mile of 0.723. The NB6 has not previously been identified as an underperforming route and no service improvement plans have been developed for the route. The route performance will be monitored to determine whether a service improvement plan is appropriate.

Three routes fell in the Fail category: FR14, NBNES, and NBW. The FR14 had previously been in the Monitor category, however a 12.4% decrease in ridership from FY17 resulted in its position in the Fail category. The NBNES is a perennial low-performing route for this category and as mentioned previously, it has been determined that no corrective action is necessary. The NBW is likely in this category due to the length of the route, however because of the partnership agreement between SRTA and GATRA no corrective action will be pursued.

The results of the Passengers per Revenue Mile analysis are shown below in Figure 8 and Figure 9.

Passengers per Revenue Mile Scorecard

FY 2018

Routes	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Year End Average
NB8	2.92	3.13	3.01	3.29	3.15	2.96	2.40	2.96	2.70	2.91	3.20	3.14	**2.98**
NB1	2.70	2.85	3.01	3.09	2.92	2.57	2.36	2.80	2.69	2.94	3.07	2.99	**2.83**
FR3	2.37	2.60	3.17	3.22	3.19	2.96	2.48	2.99	2.81	2.91	3.24	3.10	**2.92**
NB2	2.17	2.21	2.24	2.14	2.15	2.08	1.90	2.23	2.09	2.25	2.41	2.35	**2.18**
NB4	1.86	2.07	2.14	2.15	2.02	1.80	1.60	1.89	1.73	1.79	1.92	1.80	**1.90**
FR1	1.84	1.99	2.67	2.75	2.45	2.25	1.95	2.25	2.14	2.28	2.62	2.29	**2.29**
FR6	1.64	1.77	2.22	2.37	2.22	2.21	1.90	2.16	2.06	1.99	2.02	1.94	**2.04**
FR10	1.57	1.75	2.50	2.71	2.49	2.45	2.14	2.27	2.43	2.45	2.55	2.33	**2.30**
NB10	1.50	1.53	1.56	1.58	1.55	1.44	1.21	1.53	1.34	1.47	1.62	1.49	**1.48**
FR7	1.48	1.52	2.50	2.73	2.66	2.41	2.10	2.34	2.15	2.24	2.48	2.24	**2.24**
NB9	1.48	1.55	1.77	1.70	1.63	1.52	1.23	1.56	1.39	1.53	1.51	1.49	**1.53**
NB3	1.44	1.48	1.44	1.52	1.47	1.39	1.16	1.40	1.35	1.30	1.39	1.38	**1.39**
FR4	1.31	1.32	1.73	1.86	1.72	1.62	1.42	1.58	1.48	1.56	1.64	1.49	**1.56**
NB5	1.27	1.28	1.41	1.42	1.45	1.31	1.23	1.37	1.21	1.40	1.40	1.34	**1.34**
NB11	1.20	1.30	1.28	1.27	1.31	1.30	1.02	1.25	1.16	1.27	1.42	1.42	**1.27**
FR8	1.08	1.09	3.64	4.00	3.68	3.44	3.01	3.17	3.13	3.15	3.28	2.65	**3.02**
FR9	1.07	1.03	1.44	1.59	1.47	1.32	1.25	1.36	1.28	1.33	1.52	1.41	**1.34**
FR2	1.05	1.09	1.15	1.18	1.10	1.02	0.94	1.06	0.97	1.05	1.06	1.02	**1.06**
FR5	0.91	0.96	1.74	2.09	2.15	2.00	1.70	1.92	1.95	2.02	2.17	1.93	**1.80**
NB6	0.76	0.75	0.79	0.81	0.73	0.71	0.58	0.72	0.64	0.71	0.77	0.73	**0.72**
FR14	0.55	0.61	0.59	0.55	0.57	0.55	0.44	0.55	0.51	0.51	0.55	0.56	**0.54**
NBNES	0.32	0.28	0.31	0.33	0.35	0.36	0.29	0.37	0.33	0.34	0.39	0.36	**0.34**
NBW	0.14	0.15	0.15	0.15	0.13	0.11	0.11	0.17	0.14	0.14	0.16	0.13	**0.14**
KEITH		1.42	2.80	2.71	2.64	3.12	2.72	2.58	2.64	3.12	3.19	2.93	**2.83**
NBHS		0.89	2.41	2.31	2.48	2.37	1.82	2.07	2.01	2.57	2.10	1.49	**2.15**
Monthly Average	**1.46**	**1.53**	**1.83**	**1.89**	**1.81**	**1.69**	**1.45**	**1.69**	**1.60**	**1.69**	**1.79**	**1.68**	**1.67**

PPRM Performance: Fail, Monitor, Pass

Figure 8: FY18 Passengers per Revenue Mile Table

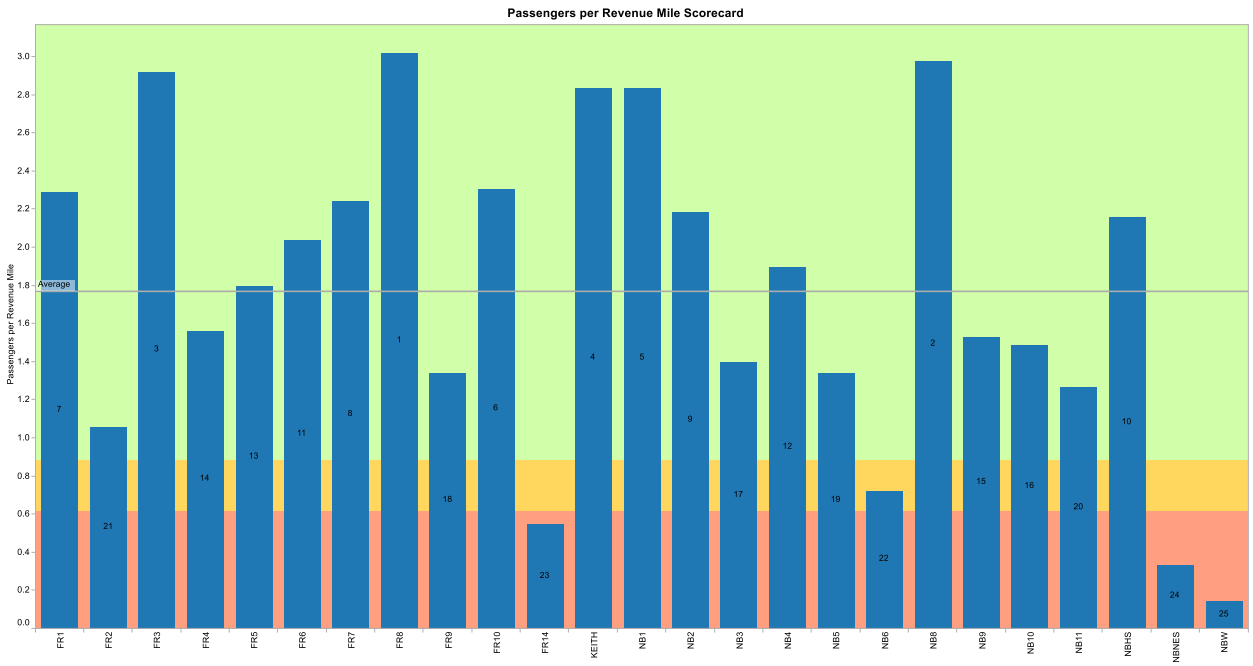

Figure 9: FY18 Passengers per Revenue Mile Chart

C. Passengers per Trip

The systemwide average for passengers per revenue mile was 8.48; the Monitor category was set at 4.24 and the Fail category was set at 2.97. Eleven of twenty-five routes were observed above the average of 8.48.

Three routes fell in the Monitor category: New Bedford Route 5 – Rivet Street (NB5), NBNES, NBW. The NB5 has been a route targeted for service improvements due to ridership that has been steadily declining for several years. The route serves a portion of New Bedford's industrial waterfront, an alignment that was intended to expand access to jobs in the fish processing facilities. The demand for service on the waterfront has proven to be lower than initially thought, and is likely due to an incompatible span of service compared against the employer work shift schedules. A service improvement plan has been developed for the route, however no action has been taken due to budgetary constraints.

The NBNES and NBW fall in the Monitor category due to the limited number of trips operated daily. As mentioned previously, corrective action is not be pursued for these routes. The full results of the analysis are shown below in Figure 10 and Figure 11.

Passengers per Trip by Route

Routes	FY 2018 Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Year End Average
FR1	5.11	5.52	7.42	7.64	6.80	6.25	5.43	6.25	5.94	6.35	7.27	6.36	**6.36**
FR10	4.48	5.00	7.16	7.74	7.11	7.00	6.13	6.48	6.94	7.01	7.30	6.66	**6.58**
FR14	5.44	6.03	5.76	5.43	5.56	5.45	4.30	5.37	5.05	5.01	5.39	5.52	**5.36**
FR2	10.17	10.54	11.07	11.38	10.62	9.83	9.05	10.17	9.35	10.16	10.23	9.80	**10.20**
FR3	6.73	7.39	9.00	9.15	9.06	8.42	7.05	8.49	7.97	8.25	9.21	8.79	**8.29**
FR4	5.48	5.51	7.21	7.75	7.19	6.76	5.93	6.60	6.16	6.50	6.85	6.20	**6.51**
FR5	3.46	3.64	6.61	7.93	8.17	7.58	6.46	7.31	7.42	7.69	8.26	7.31	**6.82**
FR6	5.67	6.30	7.70	8.34	7.78	7.74	6.62	7.57	7.25	6.96	7.12	6.82	**7.16**
FR7	5.08	5.21	8.54	9.32	9.10	8.26	7.18	8.01	7.37	7.67	8.47	7.66	**7.66**
FR8	4.10	4.13	13.81	15.19	13.99	13.05	11.43	12.02	11.89	11.98	12.46	10.06	**11.18**
FR9	3.84	3.70	5.19	5.73	5.29	4.76	4.49	4.89	4.61	4.79	5.46	5.06	**4.82**
KEITH		5.50	10.83	10.49	10.22	12.07	10.51	9.98	10.21	12.06	12.33	11.34	**10.50**
NB1	10.40	10.96	11.59	11.91	11.24	9.90	9.07	10.80	10.36	11.30	11.82	11.53	**10.91**
NB10	10.73	10.93	11.12	11.30	11.06	10.28	8.67	10.89	9.57	10.50	11.56	10.62	**10.60**
NB11	8.18	8.86	8.71	8.64	8.95	8.85	6.93	8.50	7.92	8.63	9.65	9.70	**8.63**
NB2	9.91	10.12	10.23	9.78	9.82	9.53	8.69	10.18	9.56	10.26	11.04	10.72	**9.99**
NB3	6.93	7.16	6.96	7.34	7.10	6.70	5.61	6.74	6.50	6.29	6.71	6.64	**6.72**
NB4	10.41	11.44	11.94	12.03	11.32	10.07	8.95	10.56	9.69	10.05	10.77	10.11	**10.61**
NB5	3.89	3.92	4.32	4.36	4.45	4.01	3.78	4.19	3.71	4.29	4.29	4.10	**4.11**
NB6	5.32	5.29	5.54	5.68	5.13	4.98	4.09	5.06	4.48	4.97	5.42	5.10	**5.09**
NB8	10.18	10.89	10.50	11.46	10.99	10.30	8.37	10.30	9.42	10.15	11.16	10.94	**10.39**
NB9	25.04	26.19	29.85	28.81	27.55	25.64	20.85	26.37	23.41	25.89	25.47	25.19	**25.85**
NBHS		4.00	10.85	10.38	11.18	10.65	8.18	9.33	9.04	11.55	9.44	6.72	**9.21**
NBNES	3.87	3.42	3.80	4.05	4.21	4.40	3.51	4.54	4.07	4.20	4.70	4.40	**4.10**
NBW	3.13	3.43	3.36	3.30	2.83	2.52	2.48	3.80	3.14	3.10	3.60	3.01	**3.14**
Monthly Average	**7.28**	**7.40**	**9.16**	**9.41**	**9.07**	**8.60**	**7.35**	**8.58**	**8.04**	**8.62**	**9.04**	**8.41**	**8.42**

Figure 10: FY18 Passengers per Trip Table

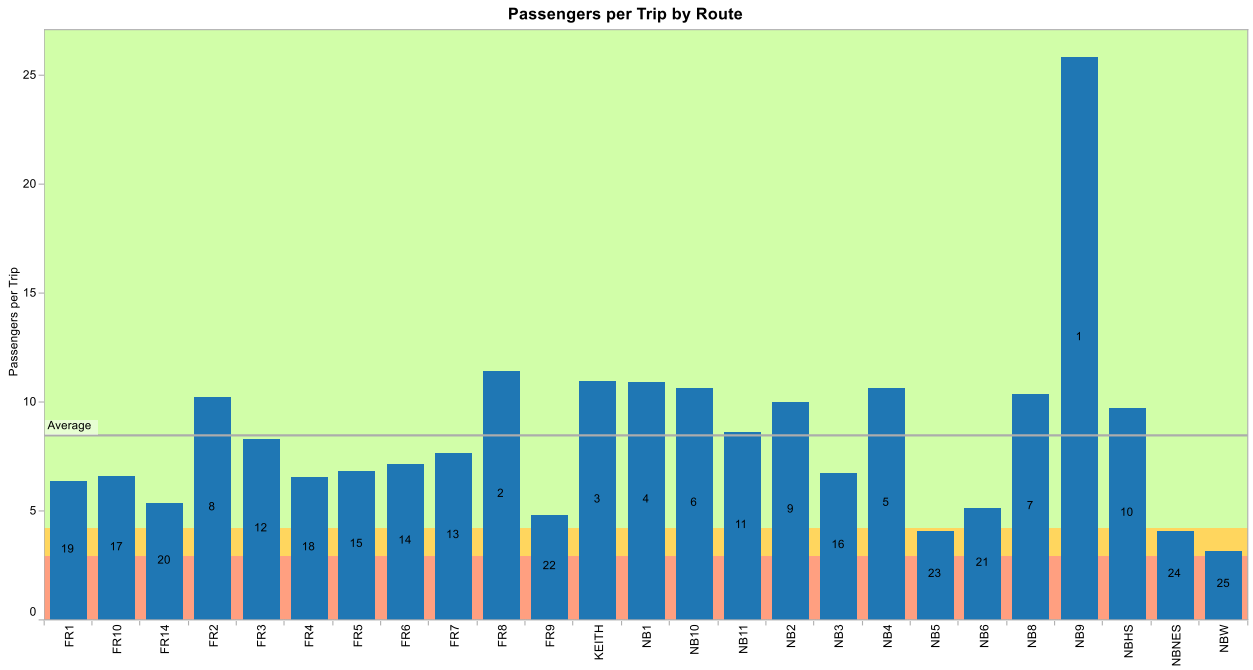

Figure 11: Passengers per Trip Chart

D. Significant changes in Route Ridership

The above section identified route performance relative to the standards SRTA uses to evaluate performance. The analysis is intended to identify underperforming routes for corrective actions, and because the standards are established relative to the systemwide performance, there are routes that experienced significant changes in ridership that did not affect the position relative to the whole.

Significant changes in ridership were identified based on the average change in ridership for all routes and the standard deviation from that average. Any route where the change was greater than 1.65 standard deviations from the average was identified as a significant change. The significant change threshold of 1.65 standard deviations was used because it includes a range of values that represent 90% of the entire dataset. Any change in ridership that is greater than or less than 1.65 standard deviations of the average represents 10% of the total change and warrants further analysis to determine if corrective action is necessary to maintain an acceptable route performance.

The average change in ridership across all routes was -1,745; an increase of more than 10,760 represented 1.65 standard deviation above the average, where as a decrease of more than 14,250 represented 1.65 standard deviation below the average. Three routes experienced a significant change in ridership: the New Bedford Route 2 – Lund's Corner (NB2), the New Bedford Route 9 – Intercity (NB9), and the Fall River Route 5 – Stafford Road (FR5).

The FR5 saw a significant increase in ridership, gaining 21,603 additional trips as compared with FY17. The increase in ridership is largely due to the opening of the South Coast Marketplace, a redesigned and redeveloped shopping center on the site of the New Harbour Mall in Fall River. The South Coast Marketplace opened in October 2017 and ridership steadily increased since the opening.

The NB2 experienced the most significant decrease in ridership of any route, losing 18,268 trips as compared with FY17. The decrease in ridership is likely caused by the end of a long-term detour which realigned the route from its historic alignment on Acushnet Avenue between Hillman Street and Logan Street to Purchase Street. Purchase Street is a much more developed commercial corridor abutting a densely developed residential neighborhood as compared with the parallel segment of Acushnet Avenue which is a sparsely developed industrial corridor.

The NB9 experienced a significant decrease in ridership, losing 16,882 trips as compared with FY17. The cause of the decline is attributed to a decline in UMass Student trips on the SRTA system. The NB9 serves the UMass Dartmouth (UMD) campus, and in FY17 a partnership program was initiated between SRTA and UMD that allows students to board SRTA buses at no cost to the student with UMD paying the student cash fare rate of $0.75. The partnership garnered 94,611 trips in FY17, but only 80,140 trips in FY18. The cause of the student decrease is difficult to identify, however over the course of the 2017/2018 academic year, UMD reconfigured the campus shuttle system to serve the Hidden Brook Apartments, an apartment complex popular with students, which was not previously served. It is suspected that changes and improvements to the UMD campus shuttles lead to the decline in UMD student boardings on SRTA routes.

The results of the route ridership change analysis are shown below in Figure 12.

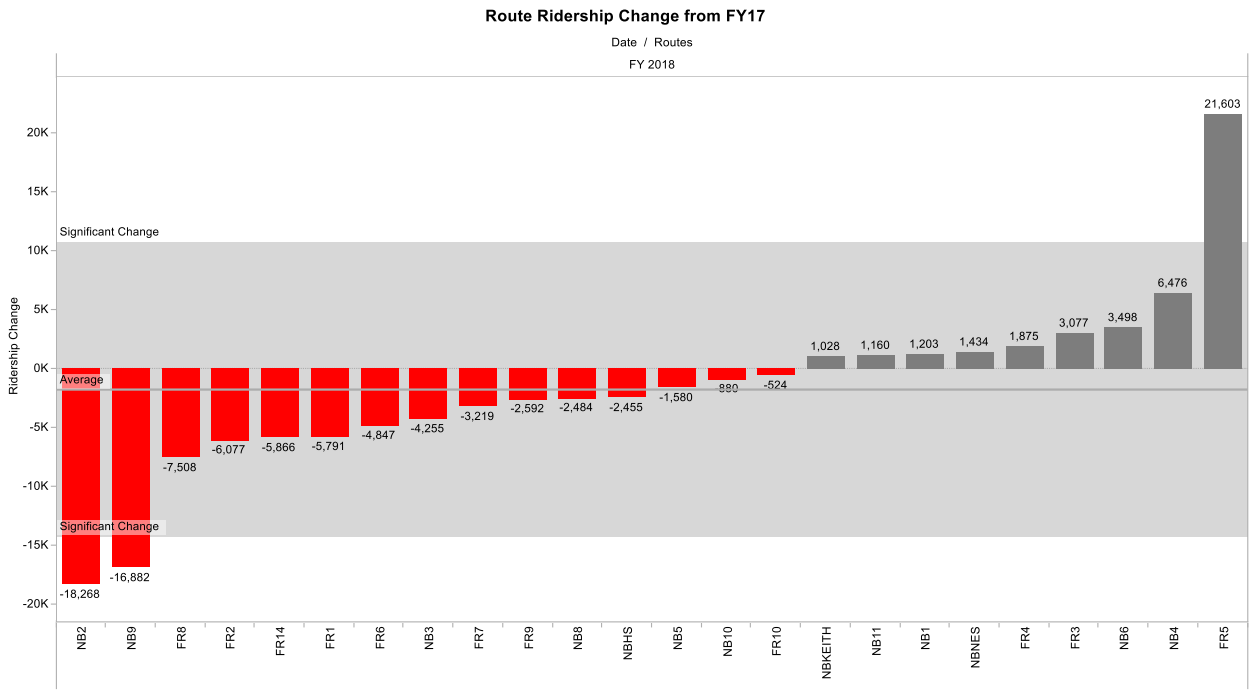

Figure 12: Route Ridership Change from FY17

IV. Recommendations

Cash remains the most prevalent form of payment, despite the availability of a stored value payment card system. Cash can never be removed from the system completely, however efforts should be made to transition regular and frequent riders from using cash to using stored value or the appropriate pass product. There are many advantages to reducing cash as a fare payment method, namely, decreased boarding times, especially at congested boarding locations such as the terminals, Dartmouth Mall, and New Bedford Market Basket. The benefit to the customer by using stored value or pass products is a savings per trip (stored value fare is $1.40 per ride compared with $1.50 per ride with cash).

The Fall River Route 14 service improvements should be implemented as they have the potential to increase operating efficiency of the route and increase ridership. The challenges of eliminating a segment of the route should not be overlooked or understated, however creative partnerships with local taxi companies or transportation network companies and limited service offering along the corridor may mitigate the effects of the decrease or elimination of service.

The New Bedford Route 2 should be examined for a re-alignment from Acushnet Avenue to Purchase Street. The decrease in ridership is substantial and demonstrates that there is a demand for service along Purchase Street beyond the current offering of the New Bedford Route 4. The New Bedford Career Center is the only stop of significance along Acushnet Avenue and is expected to be relocated to Purchase Street. Once the Career Center is moved, there will be very little demand for service on Acushnet Avenue. It is unclear whether the trend of declining ridership will continue or if the decrease was a reflective of the change in alignment.

The Fall River Route 5 span of service should be extended to 9 PM on weekdays. The growth in ridership since the opening of the South Coast Marketplace demonstrates that a demand for

service exists, and it should be expected to continue to grow with more service available to the shopping center.