FY 2018 Annual Bus Service Performance Report

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Regional Services Development

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Introduction

In September 2003, GoTriangle's Board of Trustees adopted the Regional Bus Service Standards to establish performance expectations for the agency's fixed-route services. The intent was to drive improvements in productivity by routinely and systematically evaluating bus service performance against quantifiable indicators. Since the adoption of the Standards, the annual performance reporting process has been incrementally adjusted to provide the most useful information about GoTriangle's bus service.

The GoTriangle performance indicators presented in this report are:

- **Daily Boardings** – how many people are using the service provided?
- **Boardings per Revenue Hour** – how cost-effective is this service compared to others?
- **On-Time Performance** – how well is the service meeting the expectations set by the schedule?

This report provides a summary of GoTriangle's regional bus service performance during Fiscal Year 2018, with comparisons to Fiscal Year 2017 and prior years in order to illustrate changes and trends in performance.

Key Findings

- Ridership on the GoTriangle system increased to 1,667,545 boardings in FY 2018 from 1,661,720 in FY 2017.

- Increased midday and weekend frequency has led to increased ridership at all off-peak times. Midday ridership is up 10%, weekday evening ridership is up 25%, Saturday ridership is up 11%, and Sunday ridership is up 15%.

- Productivity fell from 11.8 boardings per hour to 11.4 boardings per hour, a 4% drop. This is partly due to the introduction of increased midday and weekend frequency.

- GoTriangle met the agency goal for on-time performance with 88% of trips arriving on-time to end of line timepoints, up from 86% the previous year. However, several routes failed to meet the target on weekdays, with Routes 102, 305, DRX, and WRX having the lowest on-time performance.

What Changed in FY 2018

GoTriangle usually implements major service changes in August of each year. However, this year, there were three groups of service changes.

In July 2017, FHWA mitigation funding for the Fortify I-40/I-440 project ended. This funding had covered the operating costs of Routes FRX (Fuquay-Varina – Raleigh Express), CLX (Clayton – Raleigh Express), and JCX (Johnston County – Raleigh Express), as well as peak service on Route 300 between Raleigh and Cary.

The Wake County Transit Plan provided funding to continue Route FRX and the expanded Route 300 service. However, since Route FRX was not meeting performance standards, its service was reduced from 12 peak-direction trips to 6 peak-direction trips. Routes CLX and JCX were discontinued because they were not meeting performance standards and no funding was available from Johnston County.

In August 2017, funding from the Wake, Durham, and Orange County Transit Plans allowed service to be increased on the core routes. Routes 100 (Raleigh – Airport – RTC), 300 (Raleigh – Cary), 700 (Durham – RTC), and 800 (Chapel Hill – Southpoint – RTC) received additional midday and Saturday trips to raise frequency to every 30 minutes. Previously, the routes operated every 60 minutes from 9:30 AM – 3:30 PM on weekdays and 7:00 AM – 7:00 PM on Saturdays. Service levels on Route 400 (Durham – Patterson Place – Chapel Hill) had already been raised to this level in August 2016.

In addition, Route 300 (Raleigh – Cary – RTC) received hourly evening service until 10:00 PM on weekdays and Saturdays, and Sunday service to match the other core routes. Previously, Route 300 did not operate after 7:00 PM on weekdays and Saturdays, and it did not operate at all on Sundays.

Finally, in January 2018, the Research Triangle Park shuttles (Routes 42, 46, 47, and 49) were replaced with the Go OnDemand pilot service. Rather than operating on a fixed route, customers request a shuttle ride within the RTP area via phone, a Web site, or the TransLoc Rider smartphone app. Midday service was introduced as part of this project. The goal of the pilot was to either increase ridership within the RTP, or to serve the same ridership more cost-effectively.

Overall Performance

Across the system and including contracted services, GoTriangle had 1,667,545 customer boardings in FY18. This represents a nominal increase compared to FY17 (1,661,720 boardings).

GoTriangle increased the amount of service provided from 140,448 revenue hours in FY 2017 to 146,503 revenue hours in FY 2018. The increase in revenue hours mostly consisted of the additional midday and weekend services on the core routes. Productivity declined from 11.8 boardings per hour to 11.4, a decrease of 4%. This was expected, because it takes time for ridership increases to catch up with additional service offered.

System-wide on-time performance increased from 85% to 88%, meeting the GoTriangle goal of 85%.

Attachment C contains detailed ridership and productivity data for each route, and Attachment D contains data for each route's peak service, broken down by direction of travel. The following sections will discuss highlights from the ridership and productivity data.

Changes in Ridership by Route

Ridership on weekday peak services as a whole was slightly down in FY 2018. However, thanks to service increases funded by the County Transit Plans, all off-peak service categories show marked improvements in ridership.

Boardings Per Day	FY 2017	FY 2018	Change
Weekday Peak	4,869	4,782	-2%
Weekday Midday	981	1,078	10%
Weekday Evening	247	309	25%
Saturday	1,351	1,495	11%
Sunday	697	799	15%

* This table includes Route RSX (Robertson Scholars Express), but tables in the following subsections do not.

Peak Services

While the overall change in ridership on the peak services shows a slight decrease, there continues to be a large difference between each route and destination. The following analysis discusses ridership on peak services based on which regional destination each route serves: Chapel Hill, Durham, Raleigh, and the Regional Transit Center.

When a route connects two of these regional centers, ridership is split by direction. (For example, on Route DRX, AM trips from Raleigh to Durham and PM trips from Durham to Raleigh are reported in the "Peak Service to Durham" section.) This is marked by a "†" symbol in the tables.

To Raleigh

Unlike FY 2017, peak ridership to Raleigh increased by 4% in terms of daily boardings. Employment growth in downtown Raleigh is likely contributing, combined with intentional TDM efforts by downtown employers such as Red Hat.

Route DRX continues to be the highest-ridership route to Raleigh. It is followed by Route 300, which also posted the highest year-over-year increase: 33 boardings per day. (The August 2017 service changes to Route 300 did not add more peak service, but the increased off-peak service enables riders to take more trips at peak as well.)

Route	From	FY 17	FY 18	Δ
300	Cary †	157	190	21%
102	Garner	45	67	50%
DRX	Durham †	191	202	6%
105	Raleigh †	85	90	6%
ZWX	Zebulon/Wendell	56	61	9%
WRX	Wake Forest	47	51	9%
CRX	Chapel Hill †	154	157	2%
FRX	Fuquay-Varina	67	63	-6%
KRX	Knightdale	37	31	-16%
100	RTC/Airport †	92	86	-7%
301	Southeast Cary	130	124	-5%
305	Cary/Apex	111	95	-14%
Total Daily Boardings		1,172	1,217	4%

Route 102's ridership increased by 50%, but in absolute terms this is only 22 boardings per day. Ridership on Routes WRX and ZWX is slightly up as well. And while ridership on Route FRX is down by 6%, a full 48% of the route's service was discontinued at the beginning of the fiscal year. This suggests that the new service level (three peak direction trips per day) is more appropriate for the route.

GO Triangle

To Durham

Peak ridership to Durham decreased slightly in FY 2018. Route ODX's ridership increased from 93 daily boardings to 103, but Route 400's ridership decreased from 184 daily boardings to 162. (The decrease on Route 400 may be a continuing effect of the August 2016 service change, which reduced service on University Dr and Southwest Durham Dr to peak-only.) The other routes were generally flat, fluctuating by only a few daily boardings.

Route	From	FY 17	FY 18	Δ
ODX	Hillsborough/Mebane	93	103	10%
405	Chapel Hill/Carrboro †	203	209	3%
DRX	Raleigh †	269	269	0%
700	RTC †	98	96	-3%
400	Chapel Hill/South Sq. †	184	162	-12%
Total Daily Boardings		**848**	**837**	**-1%**

To Chapel Hill

Overall boardings to Chapel Hill had a nominal decrease of 2%, and in general ridership remained flat on individual routes. The only significant change was on Route 805, whose ridership decreased from 294 boardings per day to 277.

Route	From	FY 17	FY 18	Δ
400	Durham/Patterson Pl. †	285	287	1%
CRX	Raleigh †	238	237	0%
405	Durham †	287	285	-1%
800	RTC/Southpoint †	455	449	-1%
420	Hillsborough	180	173	-4%
805	RTC/Woodcroft †	294	277	-6%
Total Daily Boardings		**1,740**	**1,708**	**-2%**

To the Regional Transit Center

Boardings to the Regional Transit Center were down by 8% from last year, with across-the-board decreases. Due to the introduction of Go OnDemand, ridership on services within the Research Triangle Park decreased from 117 boardings per day to 104. (Go OnDemand is free during the pilot period, which suggests that ridership decreases would have been even greater if a fare had been charged.)

Route	From	FY 17	FY 18	Δ
300	Cary †	122	123	0%
311	Apex/Lake Pine	82	78	-5%
100	Raleigh/Airport †	118	113	-4%
805	Woodcroft †	112	103	-8%
105	Raleigh †	133	124	-7%
201	North Raleigh	60	50	-16%
700	Durham †	184	173	-6%
	Shuttles/Go OnDemand	117	104	-11%
800	Chapel Hill/Southpoint †	112	89	-20%
Total Daily Boardings		**1,038**	**956**	**-8%**

A more detailed analysis of Go OnDemand revealed that even though the ridership trend is only slightly down, the number of trips to and from the Regional Transit Center has decreased sharply, with their replacements taking trips directly from origin to destination within the RTP area. This suggests that fewer riders are connecting with GoTriangle fixed routes, which is probably contributing to the decrease in ridership on other routes serving the RTC.

Off-Peak Services

Midday Service	FY 17	FY 18	Δ	Evening Service	FY 17	FY 18	Δ
100 (Raleigh – Airport – RTC)	211	248	17%	100 (Raleigh – Airport – RTC)	69	77	11%
300 (Raleigh – Cary)	119	140	17%	300 (Raleigh – Cary)		25	new
400 (Durham – Chapel Hill)	253	260	3%	400 (Durham – Chapel Hill)	61	75	22%
700 (Durham – RTC)	136	150	10%	700 (Durham – RTC)	49	57	16%
800 (Chapel Hill – RTC)	206	223	9%	800 (Chapel Hill – RTC)	52	61	17%
Go OnDemand		14	new				
Total Daily Boardings	**926**	**1,035**	**12%**	**Total Daily Boardings**	**232**	**294**	**27%**

Saturday Service	FY 17	FY 18	Δ	Sunday Service	FY 17	FY 18	Δ
100 (Raleigh – Airport – RTC)	377	431	14%	100 (Raleigh – Airport – RTC)	223	238	7%
300 (Raleigh – Cary)	105	180	71%	300 (Raleigh – Cary)		78	new
400 (Durham – Chapel Hill)	343	340	-1%	400 (Durham – Chapel Hill)	185	184	0%
700 (Durham – RTC)	233	258	11%	700 (Durham – RTC)	128	151	18%
800 (Chapel Hill – RTC)	252	252	0%	800 (Chapel Hill – RTC)	131	117	-11%
Total Daily Boardings	**1,310**	**1,461**	**12%**	**Total Daily Boardings**	**666**	**767**	**15%**

The new off-peak service on Routes 100, 300, 700, and 800 resulted in noticeable ridership gains – especially on Route 300 (Raleigh – Cary), where evening and Sunday service was added for the first time. Route 400 is maintaining the additional ridership it gained in the August 2016 service change.

The expanded service was not well-received on Route 800 (Chapel Hill – RTC via Southpoint), where Saturday ridership remained flat despite a near-doubling of service, and Sunday ridership decreased. This continues a trend of declining weekend ridership that began in FY 2016. Additional analysis reveals that the decline in ridership has been mostly in trips from Chapel Hill to Southpoint – ridership to and from the RTC is essentially the same.

Staff suspects that the additional weekend service hasn't attracted new riders because Route 800 serves local stops on NC-54 off-peak, which makes trips from Chapel Hill to the RTC and points east very slow. Currently, a trip from UNC Chapel Hill to NC State at 2:00 PM on Saturday takes 1 hour 25 minutes by bus, while driving takes only 30-40 minutes. The Short-Range Transit Plan recommends realigning Route 800 to I-40 off-peak to provide more competitive travel times.

Robertson Scholars Express (RSX)

Route RSX (Robertson Scholars Express) is unique in that it is funded by the Robertson Scholars Foundation, which reimburses GoTriangle for the route's operating costs. It operates directly between the Duke Chapel and UNC Morehead Planetarium without making any stops in between, and provides service only during the academic year.

From FY 2017 to FY 2018, ridership decreased from 222 to 198 boardings per weekday, and decreased from 72 to 61 boardings per Saturday. Sunday ridership was essentially the same, with 53 daily boardings in FY 2018 compared to 51 daily boardings in FY 2017. This continues a trend of declining ridership that begin in FY 2015. GoTriangle has made suggestions to the Robertson Scholars Foundation for increasing the route's ridership, but the Foundation wants to keep the route design the same.

Productivity by Route

GoTriangle's Regional Bus Service Standards establish categories for routes, and compare routes to one another within each category. A route is considered "high performing" if its number of boardings per revenue hour is above 125% of the average for its service category, and "low performing" if its number of customer boardings per hour is below 75% of the average for its service category.

The Wake Transit Service Standards and Performance Measures set a different process for evaluating route performance, by comparing each route's productivity to a fixed target for the service category. For reference, GoTriangle routes are evaluated against the Wake Transit targets in Attachment F.

Peak Services

Peak services are divided into two categories: Regional and Express[1].

Regional Routes	Productivity	Performance
405 (Durham – Chapel Hill/Carrboro)	20.6	High
700 (Durham – RTC)	20.1	High
800 (Chapel Hill – RTC via Southpoint)	17.9	High
400 (Durham – Chapel Hill via Patterson Place)	16.6	High
805 (Chapel Hill – RTC via Woodcroft)	14.0	Average
105 (Raleigh – RTC)	11.5	Average
102 (Raleigh – Garner)	11.2	Average
420 (Hillsborough – Chapel Hill)	12.7	Average
300 (Raleigh – Cary – RTC)	11.1	Average
100 (Raleigh – Airport – RTC)	8.5	Low
305 (Lake Pine – Cary – Raleigh)	8.1	Low
301 (SE Cary – Raleigh)	7.2	Low
201 (North Raleigh – RTC)	6.2	Low
311 (Apex – RTC – EPA)	5.3	Low
42-49 and Go OnDemand (RTP Shuttles)	5.1	Low
Category Average – FY 2018	12.5	
Category Average – FY 2017	13.0	

Routes 400, 405, 700, and 800 have been consistently high performing by this measure. Routes 201, 301, 305, and 311 have been consistently low performing, but the Wake Bus Plan includes proposals to address the productivity of each of these routes.

Route 100's low performing status is challenging to solve, because while it performs well off-peak, at peak it competes with Routes 105, CRX, and DRX for passengers. Similarly, it was hoped that Go OnDemand would have higher productivity than the previous fixed-route shuttles (which were very low performing when compared to other routes), but the productivity has actually declined. Staff is considering other options for GoTriangle service in the RTP and will present proposals in early 2019.

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[1] Because the previous shuttles were all combined into a single service (Go OnDemand) in the middle of the year, they have been moved into the Regional category for comparison purposes.

Express Routes	Productivity	Performance
DRX (Durham – Raleigh Express)	**18.2**	**High**
CRX (Chapel Hill – Raleigh Express)	13.5	Average
RSX (Robertson Scholars Express)	11.1	Average
ODX (Orange – Durham Express)	9.5	Average
FRX (Fuquay-Varina – Raleigh Express)	**8.7**	**Low**
ZWX (Zebulon – Wendell – Raleigh Express)	**8.6**	**Low**
KRX (Knightdale – Raleigh Express)	**5.5**	**Low**
WRX (Wake Forest – Raleigh Express)	**5.3**	**Low**
Category Average – FY 2018	**12.2**	
Category Average – FY 2017	**11.5**	

Route DRX has always been the highest-performing express route due to its strong bidirectional demand. To accommodate its growing passenger demand (which leads to consistent passenger overcrowding on some trips), GoTriangle added ten new daily trips in August 2018.

Route FRX is still classified as low performing, but its productivity has improved significantly thanks to the service changes in July 2017. Ridership growth over time, combined with future access to Wake Tech, should allow it to reach average. The Wake Bus Plan recommended finding a new Park-and-Ride for Route WRX, and converting Route KRX into a local route (which is a better fit for the travel market).

Off-Peak Services

Off-peak services are split into categories based the time of day: Midday, Evening, Saturday, and Sunday. High performing routes are highlighted in blue, and low performing routes in orange.

Route	Midday	Evening	Saturday	Sunday
100 (Raleigh – Airport – RTC)	12.3	10.8	8.4	9.9
300 (Raleigh – Cary)	10.7	7.8	7.6	7.1
400 (Durham – Chapel Hill)	10.8	9.5	6.5	8.0
700 (Durham – RTC)	13.2	**14.3**	**10.1**	**12.7**
800 (Chapel Hill – RTC via Southpoint)	10.0	8.1	**5.2**	**5.1**
RSX (Robertson Scholars Express)	**7.4**	**3.9**	**4.6**	**5.2**
Go OnDemand	**2.3**			
Category Average – FY 2018	**10.7**	**9.2**	**7.2**	**8.1**
Category Average – FY 2017	**15.2**	**8.7**	**9.1**	**7.8**

While the service added to Routes 100 and 700 has increased ridership, it has also pulled their productivity closer to the system average. (Both routes were previously high performing at midday, and Route 100 was also previously high performing on Saturday.) And since the service added to Route 800 on Saturday has not resulted in increased ridership, it is now low performing on Saturdays as well as Sundays.

Route 700 has been consistently high-performing by this measure since it has a shorter pattern than other off-peak routes, with high demand at both ends. Similarly, Route RSX has been consistently low-performing by this measure since its travel market is so limited, and staff's suggestions for expanding the market have not been accepted by the Robertson Scholars Foundation. Midday service for Go OnDemand is new, but due to the extremely low productivity, staff is proposing that it be discontinued so the resources can be used to improve the quality of peak service.

On-Time Performance

GoTriangle considers a trip on time if it arrives at its end-of-line timepoint no more than five minutes later than the scheduled time. The defined goal is for 85% of trips to arrive on time. For FY 2018, GoTriangle met this goal with 88% of trips arriving on time, up from 86% the previous year.

Despite the overall increase, some routes did not meet the 85% mark on weekdays. These routes are:

Route	FY 17	FY 18	Δ	Actions in FY 19
102 (Raleigh – Garner)	64%	77%	+13%	Changes proposed in Wake Bus Plan
305 (Raleigh – Cary- Lake Pine)	80%	80%	0%	Schedule adjusted January 2019
800 (Chapel Hill – RTC via Southpoint)	81%	84%	+3%	Changes proposed in SRTP
CRX (Chapel Hill – Raleigh Express)	70%	83%	+13%	Schedule adjusted August 2018
DRX (Durham – Raleigh Express)	78%	79%	+1%	Schedule adjusted August 2018
KRX (Knightdale – Raleigh Express)	84%	84%	0%	Changes proposed in Wake Bus Plan
WRX (Wake Forest – Raleigh Express)	83%	80%	-3%	Changes proposed in Wake Bus Plan

Save for the WRX, all routes not meeting the 85% in FY 2018 did improve from FY 2017. Similarly, Routes 105, 300, 805, FRX, and ZWX had not met the 85% standard in FY 2017, but did meet it in FY 2018. The increase in gas prices may have moderated the growth of regional traffic congestion. Key construction projects also completed during FY 18, including the renovation of GoRaleigh Station.

All routes met the 85% standard on weekends, except for Routes 300 (on both Saturdays and Sundays) and Route 400 (on Saturdays only).

A complete table with each route's on-time performance is included as Attachment E.

External Trends

Gas prices rose during FY 2017, from $2.18 in June 2017 to $2.71 in June 2018. This may explain why the previous trend of decreasing ridership has slowed. However, gas prices are still nowhere near the high levels that characterized the period of high ridership growth from FY 2012 – 2014. The relationship between GoTriangle's ridership and gas prices can be seen in the below chart.
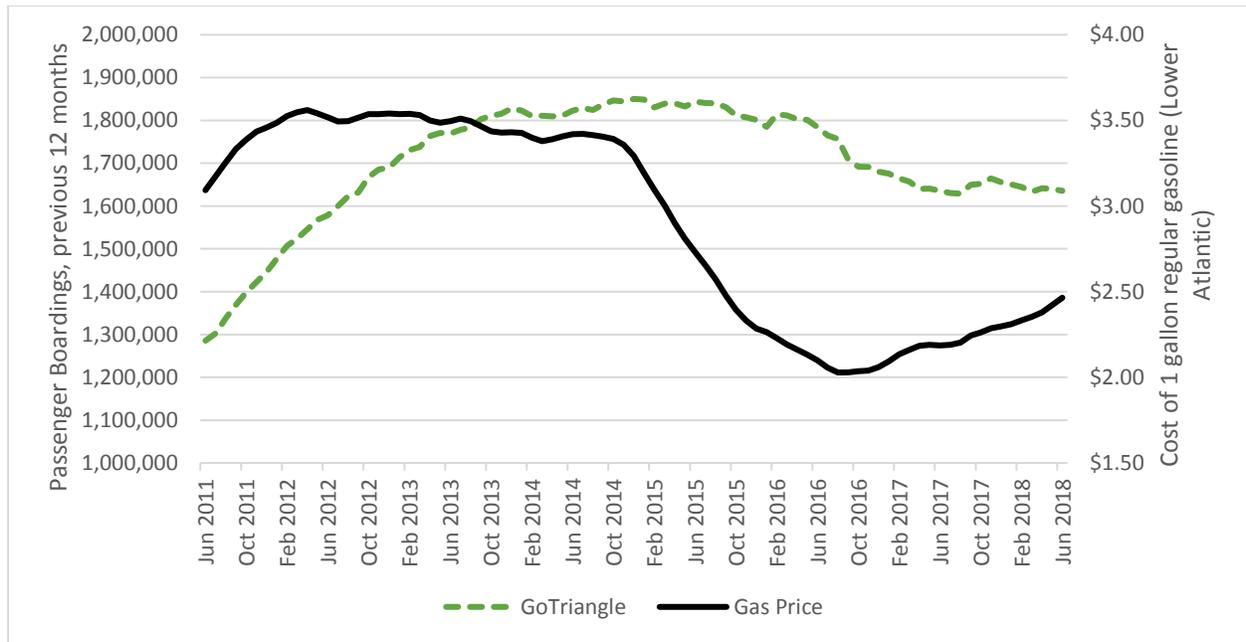
Similarly, the period of increasing ridership in FY 2012 – 2014 was characterized by a noticeable decline in car ownership in GoTriangle's service area, but currently the rate of car ownership has remained the same since FY 2015.
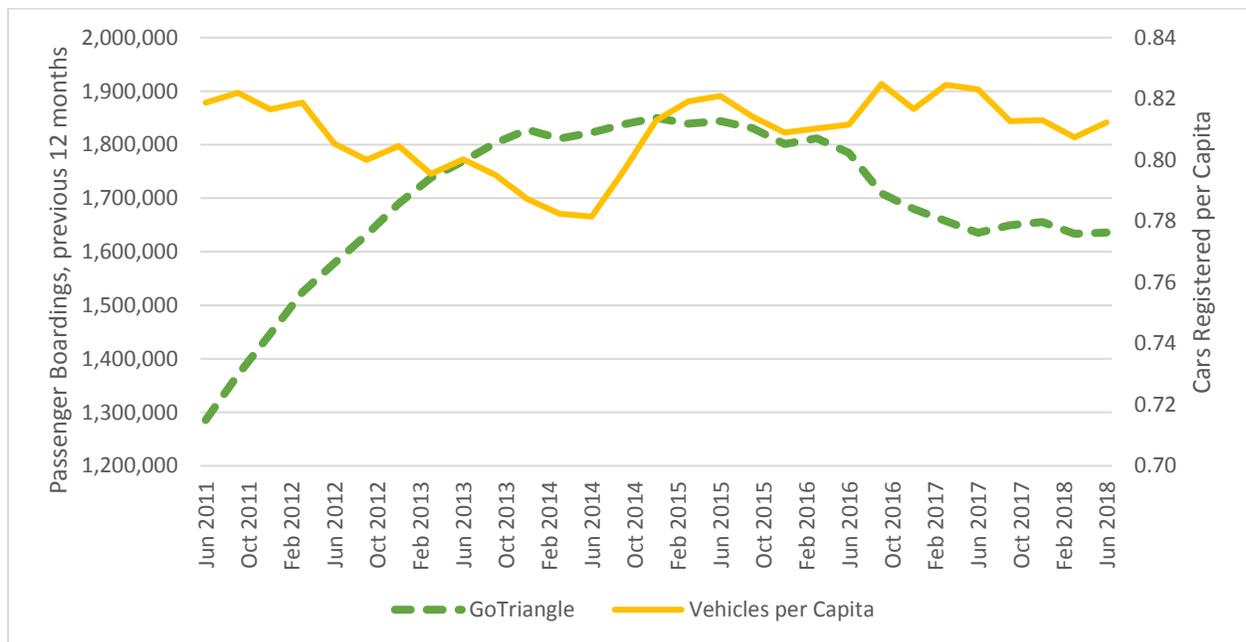
Peer Comparison

Other transit systems in the United States have been experiencing a trend of decreasing ridership and productivity over the past few years. This chart shows productivity (in terms of boardings per revenue hour) for other transit agencies which have been identified as GoTriangle's peers.

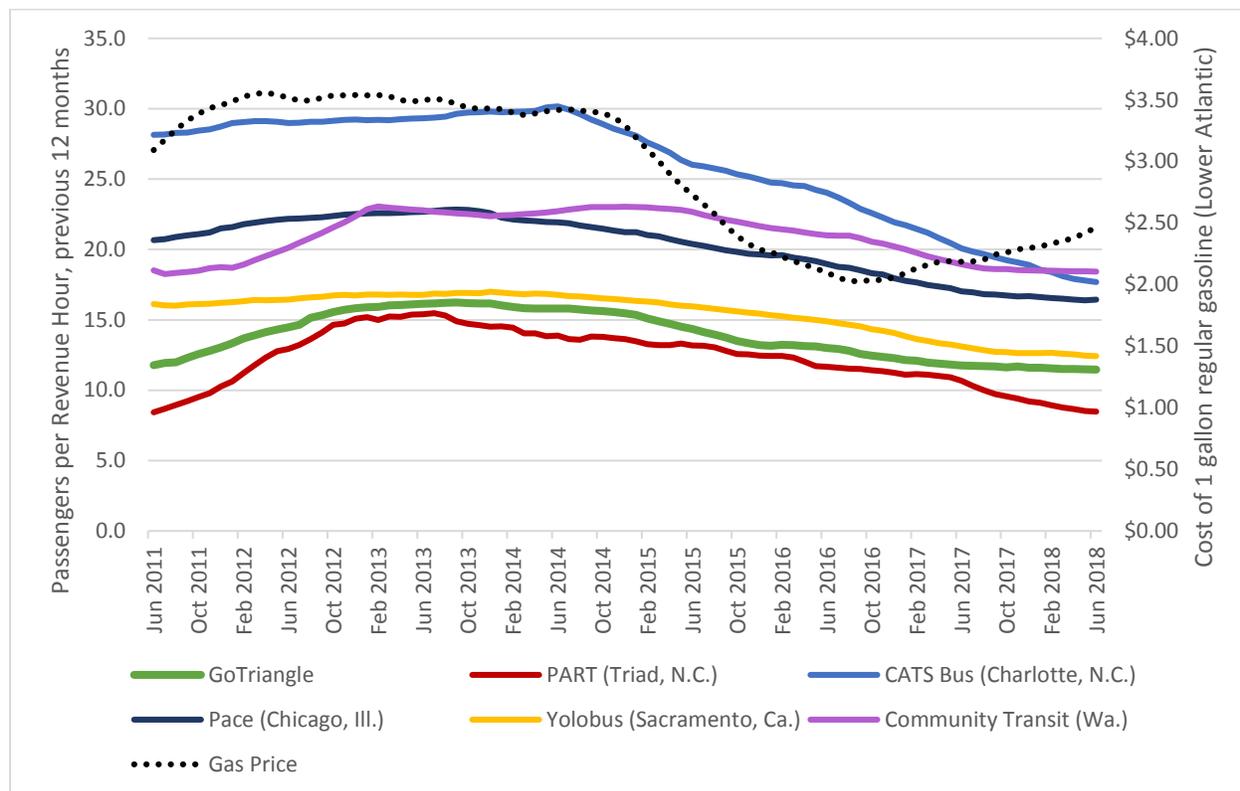While none of the peers have a trend of increasing productivity, there is less of a downward trend for GoTriangle and our out-of-state peers. GoTriangle had the lowest year-to-year decrease in productivity, followed by Community Transit – another agency which is expanding service through voter-approved funding. By contrast, our North Carolina peers have continued to see sharp declines. CATS' is a continuation of a trend which has been ongoing since 2014, while PART's ridership is still recovering from a revenue-neutral restructure (implemented in July 2017) which discontinued several routes.

GoTriangle's relative position within the peer group has not changed. PART and Yolobus are our closest peers: they are the only other transit systems in the United States which provide regional express bus as their basic service type, operate in regions without a single dominant city, coordinate with multiple municipal transit systems, and do not operate rail service. Accordingly, GoTriangle's productivity is comparable to those systems. If we are able to further increase productivity through investments identified in the SRTP, we may overtake Yolobus.

While CATS, Community Transit, and Pace serve entire regions and operate express service, their basic service type is urban (or suburban) local bus service, which tends to have higher productivity on the basis of boardings per hour, and their express bus service has a single regional CBD on which to focus. Accordingly, their productivity is much higher than GoTriangle's. These systems are included as aspirational peers.

What's Next?

Several service changes have already been implemented in August 2018.

- Sunday service on Routes 100, 300, 400, 700, and 800 was extended by two hours to match the span of the local systems, funded by the Wake, Durham, and Orange County Transit Plans.
- Route CRX's schedule was adjusted to utilize a new vehicle funded by the Wake County Transit Plan.
- Route DRX received a major investment from both the Wake and Durham County Transit Plans, with ten new daily trips added in the AM and PM peak.
- Service was added on previously unserved holidays (Memorial Day, Independence Day, Labor Day, Christmas Eve, and New Year's Day).

More service changes are scheduled for January 2019.

- Midday Go OnDemand service will be discontinued due to low ridership, and the resources will be reinvested in improving the service's reliability during peak hours.
- Minor schedule changes will be made to Routes 100, 105, 300, and 305.

Also in FY 2019, the Wake Bus Plan and the GoTriangle Short-Range Transit Plan (which incorporates GoTriangle's route changes from the Wake Bus Plan) were completed by staff and approved by the GoTriangle Board of Trustees. The Short-Range Transit Plan was focused on three key improvements to the regional transit network, which are cited by both customers and non-customers as reasons to take transit more often:

- Make service faster and more time-competitive
- Provide more frequent service
- Provide more all-day service

The plan provides a blueprint for how the agency will develop and implement regional bus service through FY 2027. Changes to many routes are proposed for implementation in FY 2020 and FY 2021, but coordination with other agencies may affect the alignments of these new routes and the timing of their implementation.

- Route 102 will be replaced with an all-day GoRaleigh local service to Garner.
- Route 201 will be converted into an express route between Triangle Town Center and the RTC.
- Route 300's service between Cary and the RTC will be split into a new Route 310, which will serve the Wake Tech RTP campus and key destinations in Morrisville all day.
- Route 305 will be upgraded to run all day, seven days a week.
- Routes 400 and 405 will be realigned to provide service every 15 minutes between Durham and Chapel Hill during peak.
- Route 800 will be streamlined to use I-40 at all times rather than providing local service along NC-54 off-peak, which will provide faster travel times between Chapel Hill and points east.
- Route FRX will begin serving Wake Technical Community College's Main Campus. (Wake Tech is designating a Park-and-Ride on campus for Route FRX.)
- Route KRX will be replaced with an all-day GoRaleigh local service to Knightdale.

- Route ODX will be streamlined to focus on the high-ridership stops (Mebane Cone Health Park-and-Ride, Durham Tech OCC Park-and-Ride, and in the future, the North Hillsborough Park-and-Ride), providing higher frequency.
- Route WRX will begin serving a new Park-and-Ride which will be convenient for more area residents.

As a follow-up to the Short-Range Transit Plan, Service Planning staff will develop updated service standards and performance measures for GoTriangle bus service. These will be presented to the Board of Trustees later in FY 2019, and if approved, the FY 2019 annual bus service performance report will evaluate service according to the new standards.

The Wake Bus Plan was accompanied by a regional fare study, whose results are currently being presented to the governing boards of GoTriangle, GoDurham, GoRaleigh, and GoCary. If the study results are received favorably by the governing boards, staff would like to implement the new regional fare structure for FY 2020. Already, the transit agencies have implemented a new Youth GoPass, which allows youth ages 13 – 18 to ride transit for free.

GO Triangle	Attachment B: System Statistics								
	Daily Boardings			**Daily Revenue Hours**			**Boardings per Hour**		
	FY 2017	**FY 2018**	**Δ**	**FY 2017**	**FY 2018**	**Δ**	**FY 2017**	**FY 2018**	**Δ**
System							**11.8**	**11.4**	**-4%**
Weekday	**6,097**	**6,169**	**1%**	**494.3**	**543.4**	**10%**	**12.7**	**11.9**	**-6%**
Regional Peak	3,528	3,442	-2%	262.5	264.9	1%	13.5	13.1	-3%
Express	1,224	1,236	1%	111.1	106.1	-5%	11.5	12.2	7%
Shuttles	117	104	-11%	19.0	22.5	19%	6.2	5.1	-17%
Regional Midday	981	1,078	10%	70.9	115.5	63%	15.2	10.7	-30%
Regional Night	247	309	25%	30.9	34.4	11%	8.7	9.2	6%
Saturday	**1,351**	**1,495**	**11%**	**156.3**	**222.3**	**42%**	**9.1**	**7.2**	**-21%**
Sunday	**697**	**799**	**15%**	**93.5**	**104.4**	**12%**	**7.8**	**8.1**	**4%**

	Annual Boardings			**Revenue Hours**			**Revenue Miles**		
	FY 2017	**FY 2018**		**FY 2017**	**FY 2018**		**FY 2017**	**FY 2018**	
System	1,661,720	1,667,545		140,448	146,503		2,819,922	2,892,938	
Weekday	**1,530,270**	**1,542,263**		**120,708**	**129,667**		**2,454,113**	**2,602,845**	
Regional Peak	885,618	860,383		65,778	65,759		1,225,176	1,231,297	
Express	307,262	309,040		26,823	25,269		701,719	652,476	
Shuttles	29,272	26,053		4,751	5,066		96,401	119,716	
Regional Midday	246,191	269,483		16,226	25,206		289,600	447,168	
Regional Night	61,927	77,304		7,131	8,368		141,217	152,188	
Saturday	**74,287**	**83,718**		**8,160**	**11,697**		**143,847**	**197,317**	
Sunday	**35,554**	**41,564**		**4,551**	**5,139**		**81,001**	**92,776**	

Attachment C: Route Statistics	Boardings	Days	Daily Boardings			Daily Revenue Hours			Boardings per Hour		
Route	FY 2018		FY 17	FY 18	Δ	FY 17	FY 18	Δ	FY 17	FY 18	Δ
System Total	1,667,545	358							11.8	11.4	-4%
Weekday System Total	1,542,263	250	6,097	6,169	1%	494.3	543.4	10%	12.7	11.9	-6%
Weekday Peak Services	1,195,476	250	4,869	4,782	-2%	392.5	393.5	0%	12.6	12.4	-1%
Weekday Peak - Regional Routes	860,383	250	3,528	3,442	-2%	262.5	264.9	1%	13.5	13.1	-3%
100 Raleigh-Airport-RTC	49,686	250	210	199	-5%	23.3	23.3	0%	9.0	8.5	-6%
102 Raleigh-Garner	16,763	250	45	67	50%	6.0	6.0	0%	7.4	11.2	51%
105 Raleigh-RTC	53,490	250	217	214	-2%	18.3	18.7	2%	11.9	11.5	-3%
201 North Raleigh-RTC	12,497	250	60	50	-16%	8.0	8.2	2%	7.4	6.2	-17%
300 Raleigh-Cary-RTC	78,190	250	280	313	12%	26.1	26.1	0%	10.7	11.1	4%
301 Raleigh-Southeast Cary	30,886	250	130	124	-5%	17.0	17.2	1%	7.6	7.2	-5%
305 Raleigh-Cary-Lake Pine	23,749	250	111	95	-14%	11.8	11.8	0%	9.4	8.1	-14%
311 Apex-Lake Pine-RTC-EPA	19,472	250	82	78	-5%	14.8	14.8	0%	5.5	5.3	-4%
400 Durham-Patterson Place-Chapel Hill	112,222	250	469	449	-4%	29.5	29.5	0%	15.9	16.6	5%
405 Durham-Chapel Hill/Carrboro	123,455	250	490	494	1%	23.4	24.2	3%	21.1	20.6	-2%
420 Hillsborough-Chapel Hill	43,315	250	180	173	-4%	13.7	13.7	0%	13.5	12.7	-6%
700 Durham-RTC	67,022	250	282	268	-5%	13.2	13.2	0%	21.3	20.1	-6%
800 Chapel Hill-Southpoint-RTC	134,709	250	568	539	-5%	30.8	30.8	0%	18.5	17.9	-3%
805 Chapel Hill-Woodcroft-RTC	94,927	250	406	380	-6%	26.6	27.6	3%	15.3	14.0	-8%
Weekday Peak - Express Routes	309,040	250	1,224	1,236	1%	111.1	106.1	-5%	11.5	12.2	7%
CRX Chapel Hill-Raleigh Express	98,565	250	392	394	1%	28.3	29.4	4%	13.9	13.5	-3%
DRX Durham-Raleigh Express	117,576	250	460	470	2%	25.5	26.0	2%	18.1	18.2	1%
FRX Fuquay-Varina-Raleigh Express	15,695	250	67	63	-6%	13.8	7.3	-48%	4.8	8.7	80%
KRX Knightdale-Raleigh Express	7,695	250	37	31	-16%	5.6	5.6	0%	6.5	5.5	-15%
ODX Orange-Durham Express	25,662	250	93	103	10%	10.9	10.8	-1%	8.5	9.5	12%
RSX Robertson Scholars Express	15,644	161	112	97	-13%	10.0	10.0	0%	12.3	11.1	-10%
WRX Wake Forest-Raleigh Express	12,852	250	47	51	9%	9.8	9.8	0%	4.8	5.3	9%
ZWX Zebulon-Wendell-Raleigh Express	15,351	250	56	61	9%	7.2	7.2	0%	7.9	8.6	9%
Weekday Peak - RTP Shuttle Service	26,053	250	117	104	-11%	19.0	22.5	19%	6.2	5.1	-17%
Weekday Midday	269,483	250	981	1,078	10%	70.9	115.5	63%	15.2	10.7	-30%
100 Raleigh-Airport-RTC	61,939	250	211	248	17%	11.0	22.0	100%	19.2	12.3	-36%
300 Raleigh-Cary	34,950	250	119	140	17%	7.0	16.2	131%	17.0	10.7	-37%
400 Durham-Patterson Place-Chapel Hill	65,100	250	253	260	3%	22.9	23.1	1%	11.7	10.8	-8%
700 Durham-RTC	37,462	250	136	150	10%	6.1	12.3	101%	22.4	13.2	-41%
800 Chapel Hill-Southpoint-RTC	55,753	250	206	223	9%	11.9	24.1	103%	17.3	10.0	-42%
RSX Robertson Scholars Express	12,539	161	86	78	-10%	12.0	12.0	0%	7.9	7.4	-6%
RTP OnDemand (Midday)	1,740	125		14	new		6.0	new		2.3	new
Weekday Evening	77,304	250	247	309	25%	30.9	34.4	11%	8.7	9.2	6%
100 Raleigh-Airport-RTC	19,267	250	69	77	11%	6.8	6.8	0%	10.2	10.8	6%
300 Raleigh-Cary	6,161	250		25	new		3.5	new		7.8	new
400 Durham-Patterson Place-Chapel Hill	18,692	250	61	75	22%	6.8	6.8	0%	8.8	9.5	8%
700 Durham-RTC	14,203	250	49	57	16%	4.0	4.0	0%	12.2	14.3	17%
800 Chapel Hill-Southpoint-RTC	15,273	250	52	61	17%	6.8	6.8	0%	7.7	8.1	4%
RSX Robertson Scholars Express	3,708	161	24	23	-4%	6.5	6.5	0%	3.8	3.9	2%
Saturday	83,718	56	1,351	1,495	11%	156.3	222.3	42%	9.1	7.2	-21%
100 Raleigh-Airport-RTC	24,128	56	377	431	14%	32.1	53.4	66%	11.7	8.4	-28%
300 Raleigh-Cary	10,068	56	105	180	71%	11.9	25.8	117%	8.8	7.6	-14%
400 Durham-Patterson Place-Chapel Hill	19,036	56	343	340	-1%	52.3	52.3	0%	6.9	6.5	-5%
700 Durham-RTC	14,468	56	233	258	11%	15.8	26.7	68%	14.7	10.1	-31%
800 Chapel Hill-Southpoint-RTC	14,119	56	252	252	0%	31.2	51.1	64%	8.1	5.2	-36%
RSX Robertson Scholars Express	1,899	31	72	61	-15%	13.0	13.0	0%	5.5	4.6	-18%
Sunday	41,564	52	697	799	15%	93.5	104.4	12%	7.8	8.1	4%
100 Raleigh-Airport-RTC	12,361	52	223	238	7%	24.1	24.1	0%	9.2	9.9	7%
300 Raleigh-Cary	4,050	52		78	new		11.9	new		7.1	new
400 Durham-Patterson Place-Chapel Hill	9,572	52	185	184	0%	23.4	22.9	-2%	7.9	8.0	1%
700 Durham-RTC	7,837	52	128	151	18%	11.8	11.8	0%	10.8	12.7	18%
800 Chapel Hill-Southpoint-RTC	6,088	52	131	117	-11%	23.2	22.7	-2%	5.7	5.1	-9%
RSX Robertson Scholars Express	1,656	31	51	53	6%	11.0	11.0	0%	4.6	5.2	13%

Attachment D: Commute Market Statistics	Daily Boardings			Daily Revenue Hours			Boardings per Hour		
Route Origin	FY 17	FY 18	Δ	FY 17	FY 18	Δ	FY 17	FY 18	Δ
To Raleigh	1,172	1,217	4%	130.3	123.8	-5%	9.0	9.7	7%
100 ∗ From RTC/Airport	92	86	-7%	11.4	11.4	0%	8.1	7.2	-11%
102　From Garner	45	67	50%	6.0	6.0	0%	7.4	11.2	51%
105　From RTC	85	90	6%	8.3	8.6	4%	10.2	10.6	4%
300　From Cary **(2015)**	157	190	21%	13.7	13.7	0%	11.4	11.9	4%
301 ∗ From Southeast Cary	130	124	-5%	17.0	17.2	1%	7.6	7.2	-5%
305 ∗ From Cary/Apex	111	95	-14%	11.8	11.8	0%	9.4	8.1	-14%
CRX　From Chapel Hill	154	157	2%	13.0	13.3	3%	11.9	12.0	1%
DRX　From Durham	191	202	6%	12.6	11.8	-6%	15.2	17.2	13%
FRX　From Fuquay-Varina **(2015)**	67	63	-6%	13.8	7.3	-48%	4.8	8.7	80%
KRX　From Knightdale	37	31	-16%	5.6	5.6	0%	6.5	5.5	-15%
WRX　From Wake Forest	47	51	9%	9.8	9.8	0%	4.8	5.3	9%
ZWX　From Zebulon/Wendell	56	61	9%	7.2	7.2	0%	7.9	8.6	9%
To Durham	848	837	-1%	56.5	58.1	3%	15.0	15.2	1%
400 ∗ From Chapel Hill	184	162	-12%	13.6	13.6	0%	13.5	13.0	-4%
405　From Chapel Hill/Carrboro **(2016)**	203	209	3%	12.1	12.5	4%	16.9	18.1	7%
700 ∗ From RTC	98	96	-3%	7.0	7.0	0%	14.0	14.8	6%
DRX　From Raleigh	269	269	0%	12.9	14.2	10%	20.8	19.1	-8%
ODX　From Hillsborough/Mebane **(2014)**	93	103	10%	10.9	10.8	-1%	8.5	9.5	12%
To Chapel Hill	1,740	1,708	-2%	89.4	91.1	2%	19.5	19.4	-1%
400　From Durham/Patterson Place	285	287	1%	15.9	15.9	0%	17.9	19.7	10%
405　From Durham	287	285	-1%	11.4	11.7	3%	25.4	23.0	-10%
420　From Hillsborough	180	173	-4%	13.7	13.7	0%	13.5	12.7	-6%
800 ∗ From RTC/Southpoint	455	449	-1%	18.4	18.4	0%	24.8	28.0	13%
805　From RTC/Woodcroft	294	277	-6%	14.9	15.5	4%	19.8	18.1	-8%
CRX　From Raleigh	238	237	0%	15.3	16.1	5%	15.6	14.8	-5%
To RTC	1,038	956	-8%	106.4	110.5	4%	9.8	8.7	-11%
100 ∗ From Raleigh/Airport	118	113	-4%	11.8	11.8	0%	9.9	9.8	-1%
105　From Raleigh	133	124	-7%	10.0	10.1	1%	13.2	12.3	-7%
201　From North Raleigh	60	50	-16%	8.0	8.2	2%	7.4	6.2	-17%
300 ∗ From Cary	122	123	0%	12.4	12.4	0%	9.9	10.0	1%
311　From Apex/Lake Pine	82	78	-5%	14.8	14.8	0%	5.5	5.3	-4%
700 ∗ From Durham	184	173	-6%	6.2	6.2	0%	29.6	25.0	-16%
800 ∗ From Chapel Hill/Southpoint	112	89	-20%	12.4	12.4	0%	9.1	6.4	-30%
805　From Woodcroft	112	103	-8%	11.7	12.1	3%	9.5	8.7	-9%
RTP Service (42/46/47/49/OnDemand)	117	104	-11%	19.0	22.5	19%	6.2	5.1	-17%

	Attachment E: On-Time Performance		Did not meet target (85%) in FY 2017 or 2018			
	Percent of trips on time at end of route		Met target FY 2017, but not FY 2018			
	(no more than five minutes behind schedule)		Did not meet target in FY 2017, but did in FY 2018			
Route	**Description**	**Hours of Operation**	**FY 2017**	**FY 2018**		**Δ**
Weekdays						
100	Raleigh-Airport-RTC	6:40 AM - 11:25 PM	87%	92%	⬆	6 pt
102	Raleigh-Garner	*Peak only*	64%	**77%**	⬆	13 pt
105	Raleigh-RTC	*Peak only*	85%	**90%**	⬆	5 pt
201	North Raleigh-RTC	*Peak only*	89%	89%		--
300	Raleigh-Cary-RTC	6:00 AM - 10:25 PM	83%	**88%**	⬆	5 pt
301	Raleigh-SW Cary	*Peak only*	88%	90%		2 pt
305	Raleigh-Cary-Lake Pine	*Peak only*	80%	**80%**		--
311	Apex-Lake Pine-RTC-EPA	*Peak only*	88%	91%		3 pt
400	Durham-Patterson Place-Chapel Hill	6:15 AM - 10:55 PM	88%	89%		1 pt
405	Durham-Chapel Hill	*Peak only*	86%	85%		-1 pt
420	Hillsborough-Chapel Hill	*Peak only*	86%	92%	⬆	6 pt
700	Durham-RTC	6:00 AM - 10:55 PM	96%	96%		--
800	Chapel Hill-Southpoint-RTC	6:00 AM - 11:10 PM	81%	**84%**		3 pt
805	Chapel Hill-Woodcroft-RTC	*Peak only*	80%	**90%**	⬆	11 pt
CRX	Chapel Hill-Raleigh Express	*Peak only*	70%	**83%**	⬆	13 pt
DRX	Durham-Raleigh Express	*Peak only*	78%	**79%**		2 pt
FRX	Fuquay-Varina-Raleigh Express	*Peak only*	80%	**86%**	⬆	7 pt
KRX	Knightdale-Raleigh Express	*Peak only*	84%	**84%**		--
ODX	Orange-Durham Express	*Peak only*	91%	94%		2 pt
RSX	Robertson Scholars Express	7:30 AM - 11:28 PM	94%	92%		-2 pt
WRX	Wake Forest-Raleigh Express	*Peak only*	83%	**80%**		-3 pt
ZWX	Zebulon-Wendell-Raleigh Express	*Peak only*	77%	**88%**	⬆	12 pt
Saturday						
100	Raleigh-Airport-RTC	6:40 AM - 11:12 PM	89%	95%	⬆	6 pt
300	Raleigh-Cary	7:00 AM - 9:55 PM	n/a	**72%**		
400	Durham-Patterson Place-Chapel Hill	7:00 AM - 10:55 PM	85%	**81%**	⬇	-5 pt
700	Durham-RTC	7:00 AM - 10:55 PM	100%	99%		--
800	Chapel Hill-Southpoint-RTC	6:45 AM - 11:20 PM	88%	86%		-1 pt
RSX	Robertson Scholars Express	12:00 PM - 12:28 AM	90%	88%		-2 pt
Sunday						
100	Raleigh-Airport-RTC	6:40 AM - 9:12 PM	96%	97%		1 pt
300	Raleigh-Cary	7:00 AM - 8:55 PM	n/a	**79%**		
400	Durham-Patterson Place-Chapel Hill	7:00 AM - 8:55 PM	96%	91%	⬇	-5 pt
700	Durham-RTC	7:00 AM - 8:55 PM	100%	100%		--
800	Chapel Hill-Southpoint-RTC	6:45 AM - 9:20 PM	96%	91%	⬇	-4 pt
RSX	Robertson Scholars Express	12:00 PM - 10:28 PM	91%	97%	⬆	6 pt
Weekday Total			85%	88%		3 pt
Saturday Total			90%	87%		-3 pt
Sunday Total			96%	92%	⬇	-4 pt
System Total			86%	88%		3 pt

Attachment F: Wake Transit Service Standards Analysis	Boardings per Revenue Trip	Op. Cost per Boarding	Farebox Recovery	On-Time Performance
Regional Core Routes - Weekdays				
100 Raleigh-Airport-RTC	10.3 ✗	$11.83 ✗	7.8% ✗	92% ✓
300 Raleigh-Cary-RTC	10.7 ✗	$11.36 ✗	8.2% ✗	88% ✓
400 Durham-Patterson Place-Chapel Hill	13.3 ✗	$9.19 ✗	11.2% ✗	89% ✓
700 Durham-RTC	16.5 ✓*	$7.38 ✗	12.6% ✗	96% ✓
800 Chapel Hill-Southpoint-RTC	13.7 ✗	$8.88 ✗	12.2% ✗	84% ✗
Current Standard, through FY 2021	16.0	$7.20	16.0% **	85%
Eventual Standard, FY 2027 and beyond	20.0	$6.00	20.0% **	85%
Regional Core Routes - Saturdays				
100 Raleigh-Airport-RTC	8.4 ✗	$14.48 ✗	6.4% ✗	95% ✓
300 Raleigh-Cary-RTC	7.6 ✗	$9.67 ✗	9.6% ✗	72% ✗
400 Durham-Patterson Place-Chapel Hill	6.5 ✗	$18.75 ✗	5.5% ✗	81% ✗
700 Durham-RTC	10.1 ✗	$12.05 ✗	7.7% ✗	99% ✓
800 Chapel Hill-Southpoint-RTC	5.2 ✗	$23.68 ✗	4.6% ✗	86% ✓
Current Standard, through FY 2021	12.0	$7.20	16.0% **	85%
Eventual Standard, FY 2027 and beyond	15.0	$6.00	20.0% **	85%
Regional Core Routes - Sundays				
100 Raleigh-Airport-RTC	9.9 ✓*	$12.37 ✗	7.5% ✗	97% ✓
300 Raleigh-Cary-RTC	7.1 ✗	$9.82 ✗	9.5% ✗	79% ✗
400 Durham-Patterson Place-Chapel Hill	8.0 ✓*	$15.25 ✗	6.7% ✗	91% ✓
700 Durham-RTC	12.7 ✓	$9.58 ✗	9.7% ✗	100% ✓
800 Chapel Hill-Southpoint-RTC	5.1 ✗	$23.70 ✗	4.6% ✗	91% ✓
Current Standard, through FY 2021	8.0	$7.20	16.0% **	85%
Eventual Standard, FY 2027 and beyond	10.0	$6.00	20.0% **	85%
Express Routes*				
102 Raleigh-Garner	11.2 ✓	$9.40 ✓	10.5% ✗	77% ✗
105 Raleigh-RTC	11.5 ✓	$10.56 ✓*	9.0% ✗	90% ✓
201 North Raleigh-RTC	6.2 ✗	$19.72 ✗	4.5% ✗	89% ✓
301 Raleigh-SW Cary	7.2 ✗	$16.86 ✗	5.6% ✗	90% ✓
305 Raleigh-Cary-Lake Pine	8.1 ✓*	$15.11 ✗	6.6% ✗	80% ✗
311 Apex-Lake Pine-RTC-EPA	5.3 ✗	$23.09 ✗	3.9% ✗	91% ✓
CRX Chapel Hill-Raleigh Express	13.5 ✓	$9.01 ✓	16.1% ✓	83% ✗
DRX Durham-Raleigh Express	18.2 ✓	$6.69 ✓	20.8% ✓	79% ✗
FRX Fuquay-Varina-Raleigh Express	8.7 ✓*	$13.40 ✗	11.3% ✗	86% ✓
KRX Knightdale-Raleigh Express	5.5 ✗	$20.91 ✗	6.6% ✗	84% ✗
WRX Wake Forest-Raleigh Express	5.3 ✗	$20.10 ✗	7.3% ✗	80% ✗
ZWX Zebulon-Wendell-Raleigh Express	8.6 ✓*	$13.38 ✗	10.3% ✗	88% ✓
405 Durham-Chapel Hill/Carrboro	20.6 ✓	$5.91 ✓	18.2% ✓	85% ✓
420 Hillsborough-Chapel Hill	12.7 ✓	$8.75 ✓	8.9% ✗	92% ✓
805 Chapel Hill-Woodcroft-RTC	14.0 ✓	$8.72 ✓	11.8% ✗	90% ✓
ODX Orange-Durham Express	9.5 ✓*	$12.81 ✗	11.5% ✗	94% ✓
Current Standard, through FY 2021	8.0	$12.00	12.0% **	85%
Eventual Standard, FY 2027 and beyond	10.0	$10.00	15.0% **	85%

* Meets the standard currently in force, but would not meet the eventual standard (FY 2027 and beyond).

** Standards for farebox recovery are not final - this value was included as a proposal in an earlier draft.

*** All regional peak-only routes are classified as "Express" by the Wake Transit Service Standards.