## Bus Operations

 Performance Measurements
## Report



## Second Quarter

Fiscal Year 2018-19

## About This Report

The Orange County Transportation Authority (OCTA) operates a countywide network of over 59 routes including local, community, rail connector, and express bus routes serving over 5,000 bus stops known as OC Bus. OCTA also operates paratransit service (OC ACCESS), a shared-ride program available for people unable to use the standard OC Bus service because of functional limitations. OC Bus service is provided through both direct operations by OCTA referred to as directly-operated fixed-route (DOFR) and contracted operations referred to as contracted fixed-route (CFR). The OC ACCESS service is a contract-operated demand-response service required by the Americans with Disabilities Act that is complementary to the fixed-route service and predominately accounts for the overall paratransit services operated by OCTA. These three services make up the bus transit system and are evaluated by the performance measurements summarized in this report.

This report tracks bus system safety, as measured by vehicle accidents; courtesy, as measured by customer complaints; and reliability, as measured by on-time performance (OTP) and miles between road calls (MBRC). Along with these metrics, industry-standard measurements are tracked to assess OCTA bus operations; these measurements include ridership, productivity, farebox recovery ratio (FRR), and cost per revenue vehicle hour (RVH). Graphs accompany the details of each indicator showing the standards or goals and the values for the current reporting period. The following sections provide performance information for OC Bus service, DOFR and CFR, and OC ACCESS service.

## Safety: Preventable Vehicle Accidents

OCTA is committed to the safe delivery of the OC Bus service. The safety standard for DOFR, CFR, and OC ACCESS services is no more than one preventable vehicle accident per 100,000 miles. Preventable vehicle accidents are defined as incidents when physical contact occurs between vehicles used for public transit and other vehicles, objects, or pedestrians, and where a coach operator failed to do everything reasonable to prevent the accident.

All modes of service exceeded the safety standard through the second quarter of fiscal year (FY) 2018-19 with less than one accident per 100,000 miles.


## Courtesy: Customer Complaints

OCTA strives to achieve the highest level of customer satisfaction in delivery of services. The performance standard for customer satisfaction is courtesy as measured by the number of complaints received. Customer complaints are counts of incidents when a rider reports dissatisfaction with the service. The standard adopted by OCTA for OC Bus service operated by OCTA is no more than one customer complaint per 20,000 boardings; the standard for contracted OC Bus service is no more than one complaint per 7,000 boardings; and the standard for OC ACCESS is no more than one complaint per 667 boardings.

Through the second quarter of FY 2018-19, all modes of service exceeded the courtesy standard with less than one complaint per 20,000, 7,000, and 667 boardings, respectively.


## Reliability: On-Time Performance

Reliability is vital to a successful transportation network. Reliability for OCTA is measured in part by OTP. OTP is a measure of performance which evaluates the schedule adherence of an OC bus operating in revenue service according to a published schedule. Schedule adherence is tracked by monitoring the departures of vehicles from time points, which are designated locations on a route used to control vehicle spacing as shown in the published schedule. For OC Bus service, a trip is considered on time if it departs the time point anywhere from zero minutes early to no more than five minutes late. OCTA's fixed-route system standard for OTP is 85 percent. For OC ACCESS service, OTP is a measure of performance evaluating a revenue vehicle's adherence to a scheduled pick-up time for transportation on a demand response trip. A trip is considered on-time if the vehicle arrives within a 30-minute window. The OC ACCESS OTP standard is 94 percent. Both OC Bus and OC ACCESS failed to meet the standard.


Through the second quarter of FY 2018-19, systemwide fixed-route OTP was 82.0 percent, 3.0 percent below the standard. This marks a 0.2 percent drop from the previous quarter and a 2.1 percent drop from the same quarter last year. The OTP for DOFR OC Bus service completed the second quarter at 82.9 percent, 1.7 percent lower than the same quarter last year which was 84.6 percent. The OTP for CFR OC Bus service fell by 0.4 percent compared to last quarter and fell by 2.7 percent compared to the same quarter last year.

In addition to the seasonal traffic patterns, major construction projects affecting local streets and roads (e.g., Interstate 405 Project - Bridge Demolition) played a role in the recent dip in OTP. Specifically, several routes had notable drops in OTP when compared to the same time last year. The table below lists several routes with notable OTP impacts and the associated construction projects.

| Route | $\begin{array}{r} \text { OTP } \\ \text { (FY2017-18) } \end{array}$ | $\begin{array}{r} \text { OTP } \\ \text { (FY2018-19) } \end{array}$ | Change | Construction Project |
| :---: | :---: | :---: | :---: | :---: |
| 47 - Fullerton - Balboa | 87.2\% | 81.7\% | -5.5\% | Superior Avenue/Hospital Road - Construction; <br> Fiber-optic work along Haster Street between Katella Avenue/Orangewood Avenue |
| 66 - Huntington Beach - Irvine | 88.8\% | 82.8\% | -6.0\% | I-405 Bridge demolition @ McFadden Avenue, lane reduction |
| 59-Anaheim - Irvine | 78.1\% | 73.8\% | -4.3\% | Orange Transportation Center Parking Structure Project |
| 50 - Long Beach - Orange | 86.8\% | 84.4\% | -2.4\% | Katella Avenue water main replacement project: Disneyland Drive - Haster Street; Anaheim Boulevard |
| 71 - Yorba Linda - Newport Beach | 81.2\% | 75.4\% | -5.9\% | Superior Avenue/Hospital Road - Construction |
| 178 - Huntington Beach - Irvine | 86.3\% | 79.0\% | -7.3\% | Garfield Street Closure: construction detour July/August $2018$ |

OCTA staff continues to coordinate with the various project teams to advise of the timeline for service changes and other service impacts during construction to minimize the effects on OTP.


The OTP for OC ACCESS service ended the quarter at 93.3 percent, 0.7 percent below the standard. The OC ACCESS OTP dropped by 0.8 percent from last quarter and one percent from the 94.3 percent reported during the same period last year.

During the second quarter, growing demand for OC ACCESS put increasing pressure on the contract operator to meet all trip requests, resulting in missed trips and lower OTP. Fortunately, additional capacity became available through the supplemental taxi provider, providing some relief for the growing demand and, as a result, in December, OTP improved. In addition, during the third quarter, the contract operator began to evaluate and optimize the routing on the subscription trips which will help improve OTP on this portion of the service. OCTA staff will continue to monitor service deployment in the third quarter to ensure contractor efforts are working to attain performance standards.

## Reliability: Miles Between Road Calls

MBRC is a vehicle reliability performance indicator that measures the average distance in miles that a transit vehicle travels before failure of a vital component forces removal of the vehicle from service. Valid mechanical road calls usually cause a delay or cancellation in service. OCTA has adopted standards for the MBRC for DOFR, CFR and OC ACCESS services. These standards vary to align with the specific type of service being provided and account for the variability inherent to each of these services, including the vehicles assigned. The specific standards as adopted by OCTA are 14,000 MBRC for DOFR OC Bus service; 12,000 MBRC for CFR OC Bus service; and 25,000 MBRC for OC ACCESS

Through the second quarter of FY 2018-19, OC Bus services continue to improve in this performance measure. DOFR OC Bus service performed above standard, averaging 16,365 vehicle MBRC, a 7.7 percent increase over last quarter and 27.2 percent increase over the second quarter of last year. The increase in MBRC can be partially credited to a midlife engine replacement campaign that was completed during the second quarter. In addition, the continued work with the vehicle manufacturer to address warranty-related failures and seasonal variations have helped reduce road calls.

MBRC for the CFR OC Bus service was below standard at $8,189 \mathrm{MBRC}$ through the second quarter of FY 2018-19. This marks a 9.5 percent improvement over the 7,477 MBRC reported last quarter. Efforts to improve MBRC are on-going and include the implementation of additional maintenance training, as well as a more rigorous quality control process to improve vehicle repair procedures. These actions, in addition to recent staff changes, corporate staff presence in the maintenance shop, and the completion of the 98 near-zero engine repowers in the second quarter of FY 2018-19, are expected to yield observable improvements in the contractor's MBRC in the third quarter of FY 2018-19.

The MBRC for OC ACCESS service exceeded the standard, with 35,328 miles between road calls.


## Ridership and Productivity - OC Bus

Ridership (or boardings) is the number of rides taken by passengers using public transit and is influenced by level of service provided, weather, economy, and seasonal variations in demand. Productivity is an industry measure that counts the average number of boardings for each RVH that is operated. An RVH is any 60-minute increment of time that a vehicle is available for passengers within the scheduled hours of service, excluding deadhead (a non-revenue movement of a transit vehicle to position it for service). Boardings per RVH ( $\mathrm{B} / \mathrm{RVH}$ ) is calculated by taking the boardings and dividing it by the number of RVH operated.

The FY 2018-19 approved budget was developed with the assumption that boardings would decrease by 2.3 percent from FY 2017-18 actuals. Through the second quarter of FY 2018-19, both ridership and productivity for OC Bus service are better than expected as performance exceeded the approved budgeted projections by 1.0 percent.


## Ridership and Productivity - OC ACCESS

(Primary Service Provider and Supplemental Taxi)
Through the second quarter of FY 2018-19, the ridership and productivity trends for OC ACCESS continue to indicate increasing demand for this service. Ridership and productivity for the quarter exceeded budgeted projections by 18.8 percent and 15.1 percent, respectively. This is consistent with the trend reported for the previous quarter.


## Contractor Performance: Fixed-Route

Per Agreement No. C-4-1737 between OCTA and First Transit, Inc. (First Transit), additional measures are tracked to ensure the CFR OC Bus service meets the standards for safety, customer service, and reliability. When the contractor's monthly or quarterly performance exceeds the standard as set forth in the agreement, financial incentives are paid to the contractor; conversely, when the monthly or quarterly performance of the contractor is below the standard as set forth in the agreement, penalties are assessed and must be paid to OCTA by the contractor.

Through the second quarter of FY 2018-19, the overall performance of the contracted OC Bus service as determined by the performance categories outlined in the contract was above standard for the measures of safety and courtesy; however, reliability was below standard.

Table 1 provides the penalties and incentives assessed to the contractor, by quarter, for FY 2018-19. The incentives paid to date, a total of $\$ 12,200$, reflect good performance related to courtesy. Through the second quarter, the total penalties assessed to the contractor total $\$ 430,724$, of which $\$ 168,683$ was assessed from October through December. These assessed penalties were largely due to poor performance in preventive maintenance ( $\$ 174,524$ to date) and missed trips ( $\$ 147,000$ to date).

| Table 1: | Performance Categories |  | FY19 Q1 |  | FY19 Q2 | FY19 Q3 | FY19 Q4 |  | FYTD 19 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Penalties | On-Time Performance | \$ | $(7,000)$ | \$ | $(9,000)$ |  |  | \$ | $(16,000)$ |
|  | Valid Complaints: Per 7,000 boardings | \$ | $(2,900)$ | \$ | - |  |  | \$ | $(2,900)$ |
|  | Unreported Accident | \$ | $(20,000)$ | \$ | $(20,000)$ |  |  | \$ | $(40,000)$ |
|  | Accident Frequency Ratio | \$ | - | \$ | - |  |  | \$ | - |
|  | Key Positions | \$ | - | \$ | $(29,000)$ |  |  | \$ | $(29,000)$ |
|  | CHP Terminal Inspections | \$ | - | \$ | - |  |  | \$ | - |
|  | Reports | \$ | - | \$ | - |  |  | \$ | - |
|  | Preventive Maintenance | \$ | $(137,841)$ | \$ | $(36,683)$ |  |  |  | $(174,524)$ |
|  | Road Calls | \$ | $(14,300)$ | \$ | $(7,000)$ |  |  | \$ | $(21,300)$ |
|  | Vehicle Damage: Per vehicle per day | \$ | - | \$ | - |  |  | \$ | - |
|  | Missed Trips | \$ | $(80,000)$ | \$ | $(67,000)$ |  |  |  | $(147,000)$ |
|  | Total | \$ | $(262,041)$ | \$ | $(168,683)$ |  |  |  | (430,724) |
| Incentives | On-Time Performance | \$ | - | \$ | - |  |  | \$ | - |
|  | Valid Complaints: Per 7,000 boardings | \$ | 3,200 | \$ | 9,000 |  |  | \$ | 12,200 |
|  | Accident Frequency Ratio | \$ | - | \$ | - |  |  | \$ | - |
|  | Total | \$ | 3,200 | \$ | 9,000 |  |  | \$ | 12,200 |
| Prior Periods Adjustment | Road Calls | \$ | (100) | \$ | - |  |  | \$ | \$ (100) |
|  | Key Position | \$ | - | \$ | 25,182 |  |  |  |  |
|  | Total | \$ | (100) | \$ | 25,182 |  |  | \$ | 25,082 |
| All | Total | \$ | $(258,941)$ | \$ | $(134,501)$ |  |  | \$ | $(393,442)$ |

## Contractor Performance: OC ACCESS

(Primary Service Provider and Supplemental Taxi)
Per Agreement No. C-2-1865 between OCTA and MV Transportation, Inc. (MV), additional measures are tracked to ensure the OC ACCESS meets the standards for safety, customer service, and reliability. When the contractor's monthly or quarterly performance exceeds the standard as set forth in the agreement, financial incentives are paid to the contractor; conversely, when the monthly or quarterly performance of the contractor is below the standard as set forth in the agreement, penalties are assessed and must be paid to OCTA by the contractor.

As presented in this report, the overall performance of the contractor providing OC ACCESS service through the second quarter of FY 2018-19 is above standard for all measures. Table 2 below lists, by quarter, the penalties and incentives assessed to the OC ACCESS contractor as established in the agreement. Through the second quarter, there were no incentives awarded to the contractor, but $\$ 183,525$ in penalties were assessed for call center hold times, excessively late trips, OTP, productivity, and missed trips.

| Table 2: | Performance Categories |  | FY19 Q1 |  | FY19 Q2 | FY19 Q3 | FY19 Q4 |  | FYTD 19 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Penalties | Passenger Productivity | \$ | - | \$ | $(10,000)$ |  |  | \$ | $(10,000)$ |
|  | On-Time Performance | \$ | $(10,000)$ | \$ | $(20,000)$ |  |  | \$ | $(30,000)$ |
|  | Customer Comments | \$ | - | \$ | $(3,800)$ |  |  | \$ | $(3,800)$ |
|  | Call Center Hold Times | \$ | $(33,000)$ | \$ | $(33,000)$ |  |  | \$ | $(66,000)$ |
|  | Excessively Late Trips | \$ | $(10,000)$ | \$ | $(30,000)$ |  |  | \$ | $(40,000)$ |
|  | Missed Trips | \$ | $(5,000)$ | \$ | $(10,000)$ |  |  | \$ | $(15,000)$ |
|  | Unreported Accident | \$ | - | \$ | $(5,000)$ |  |  | \$ | $(5,000)$ |
|  | Preventive Maintenance | \$ | $(13,725)$ | \$ | - |  |  | \$ | $(13,725)$ |
|  | Road calls | \$ | - | \$ | - |  |  | \$ | - |
|  | Reports | \$ | - | \$ | - |  |  | \$ | - |
|  | Key Positions | \$ | - | \$ | - |  |  | \$ | - |
|  | CHP Terminal Inspections | \$ | - | \$ | - |  |  |  |  |
|  | Vehicle Damage | \$ | - | \$ | - |  |  |  |  |
|  | Total | \$ | $(71,725)$ | \$ | $(111,800)$ |  |  | \$ | $(183,525)$ |
| Incentives | Passenger Productivity | \$ | - | \$ | - |  |  | \$ | - |
|  | On-Time Performance | \$ | - | \$ | - |  |  | \$ | - |
|  | Excessively Late Trips | \$ | - | \$ | - |  |  | \$ | - |
|  | Missed Trips | \$ | - | \$ | - |  |  | \$ | - |
|  | Total | \$ | - | \$ | - |  |  | \$ | - |
| Prior Periods Adjustment | Customer Comments | \$ | 1,100 | \$ | - |  |  | \$ | 1,100 |
|  | Total | \$ | 1,100 | \$ | - |  |  | \$ | 1,100 |
| All | Total | \$ | $(70,625)$ | \$ | $(111,800)$ |  |  | \$ | $(182,425)$ |

## Farebox Recovery Ratio

Farebox Recovery Ratio (FRR) is a measure of the proportion of operating costs recovered by passenger fares, calculated by dividing the farebox revenue by total operating expenses. A minimum FRR of 20 percent for all service is required by the Transportation Development Act in order for transit agencies to receive the state sales tax available for public transit purposes. In an effort to normalize seasonal fluctuations, data shown below reflects actuals over the last 12 months from January 2018 through December 2018.

FRR, based on the National Transit Database definition in which only passenger fares are included under revenue, did not meet the 20 percent goal. However, as a result of the passage of Senate Bill No. 508 (SB 508), OCTA was able to adjust the FRR to include local funds. SB 508 states, "If fare revenues are insufficient to meet the applicable ratio of fare revenues to operating cost required by this article, an operator may satisfy that requirement by supplementing its fare revenues with local funds. As used in this section, "local funds" are any non-federal or non-state grant funds or other revenue generated by, earned by, or distributed to an operator." After incorporating property tax revenue, advertising revenue, and Measure $M$ fare stabilization, the adjusted FRR was 23.9 percent, a drop of 0.7 percent from the previous quarter and a 1.5 percent drop from the same quarter last year.


Note:

- National Transit Database (NTD) FRR consists of only passenger fares
- Transportation Development Act (TDA) FRR includes passenger fares, property tax revenue, advertising revenue and Measure $M$ fare stabilization


## Operating Cost per Revenue Vehicle Hour

Cost per RVH is one of the industry standards used to measure the cost efficiency of transit service. It is derived by dividing operating expenses by RVH. In order to provide a more comparable illustration, all metrics below are calculated based on direct operating cost, which excludes capital, general administrative, and other overhead costs.

Similar to the FRR, the statistics below depict actuals over the last 12 months. All modes operated at a higher cost per RVH than the same 12-month period of the prior year, with 2.3 percent increase in DOFR, 1.8 percent increase in CFR, and 5.7 percent increase in OC ACCESS. The increase in DOFR was primarily due to the execution of the new labor agreement for Coach Operators, including a signing bonus that was expensed in May 2018, along with a salary increase. The increases in CFR and OC ACCESS cost per RVH were primarily associated with the increase in the contracted rates as included in First Transit and MV agreements for each new fiscal year. Another factor that contributed to the increase in OC ACCESS cost is the increase in gasoline prices.


## Performance Evaluation by Route

Continuing efforts are underway to better understand, evaluate, and improve route performance. Performance evaluation is important because it provides:

- A better understanding of where resources are being applied;
- A measure of how well services are being delivered;
- A measure of how well these services are used; and
- An objective basis for decisions regarding future service changes and service deployment.

The tables on the following pages summarize route-level performance through the second quarter in FY 2018-19. The first three tables present the route-level performance sorted by routes with the highest net subsidy per boarding to routes with a lower net subsidy per boarding, and the remaining three tables present the same information sorted by routes that have the highest boardings to routes with a lower level of boardings.

A route guide listing all of the routes and their points of origins and destinations is provided after the route-level performance tables. Route types are grouped by route numbers as follows:

- Routes 1 to 99: Local routes
- Routes 100 to 199: Community routes
- Routes 200 to 299: Intra-county express routes
- Routes 400 to 499: Stationlink routes
- Routes 500 to 599: Bravo! routes
- Routes 600 to 699: Seasonal routes (these are not included on the following charts)
- Routes 700 to 799: Inter-county express routes
OCTA Operating Statistics By Route for Local and Community Services（Sorted by Subsidy per Boarding）

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|  |  |  |  |  | $\begin{array}{l\|l\|l\|l\|l\|l\|l\|l\|l\|} \substack{\sim \\ \underset{\sim}{2} \\ \underset{\sim}{0} \\ \hline} \\ \hline \end{array}$ |  |  | $\hat{C l}$ |  |  | $\stackrel{\sim}{\infty}$ | $\underset{\sim}{c}$ |  | OM |  | $\underset{\sim}{\sim}$ | $\mathbf{n}_{0}^{2}$ | $\begin{aligned} & \infty \\ & \infty \\ & \underset{\sim}{2} \\ & \hline \end{aligned}$ | $\circ$ |  | $\mathfrak{c}$ | $\dot{子}$ | $\left\|\begin{array}{l} \hat{0} \\ \dot{m} \\ m_{2} \end{array}\right\|$ | $\underset{i x}{\substack{i}}$ |  |  | $\begin{aligned} & 0 \\ & \substack{0 \\ \dot{\sim} \\ \hline} \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \\ & \dot{1} \\ & \hline \end{aligned}$ |  | O | $\stackrel{\circ}{\circ}$ | $\left\|\begin{array}{l} \stackrel{\leftrightarrow}{O} \\ \dot{子} \\ \hline \end{array}\right\|$ | \％ | － | － | ¢ | 아 | ¢ |  |  | ＋ |
|  | $\begin{aligned} & \text { @ } \\ & \text { 등 } \\ & \text { 흥 } \\ & \text {. } \end{aligned}$ |  |  |  |  | $\begin{array}{l\|l\|} \substack{N \\ 0 \\ 0 \\ 0 \\ 0} & \tilde{y} \\ \hline \end{array}$ |  | pron |  |  |  |  | 둥 | 웅 |  |  |  | 단 |  |  |  | $\underbrace{0}_{i}$ | $\left\|\begin{array}{c} \underset{\sim}{2} \\ \stackrel{n}{n} \\ \stackrel{n}{n} \end{array}\right\|$ |  |  |  | － | Po | $\bigcirc$ | － | － | $\left\lvert\, \begin{gathered} 0 \\ \underset{y}{0} \\ \underset{\sim}{2} \\ 0 \\ - \end{gathered}\right.$ | O | N－ | － |  | \％ |  | ［ | $\begin{aligned} & 1 \\ & 0 \\ & 8 \\ & 8 \\ & \end{aligned}$ |  |
|  |  | $\stackrel{-}{\stackrel{-}{\infty}} \underset{-}{\infty} \underset{-}{\infty}$ | $\left\lvert\, \begin{array}{c\|c} \infty \\ \hline-1 \\ \hline \end{array}\right.$ |  |  | $\stackrel{\text { ® }}{-} \mid \underset{\sim}{-}$ |  | $\therefore$ | $\stackrel{\sim}{\sim}$ | $\stackrel{O}{\underset{\sim}{\sim}} \underset{\sim}{\underset{\sim}{\sim}}$ | $\bigcirc$ |  | Co |  | $\stackrel{8}{-} \cdot \left\lvert\, \begin{gathered} \infty \\ \infty \\ 0 \end{gathered}\right.$ |  | $\stackrel{\rightharpoonup}{9} \underset{-}{-}$ |  |  | ¢ ${ }^{\circ}$ | $\dot{\sim}$ | $5$ | $\left\|\begin{array}{c} \odot \\ \circ \\ \dot{\circ} \end{array}\right\|$ | $\mathfrak{s}$ | $\stackrel{\circ}{-1} \underset{-}{\circ}$ |  | \％ | 8 | 8 | 5 | O | $\left\|\begin{array}{c} \circ \\ 0 \\ 0 \end{array}\right\|$ | 0 | O | $\stackrel{\circ}{\circ}$ | $\stackrel{\leftrightarrow}{\circ} \underset{\sim}{\circ}$ | ${ }_{\circ}^{\circ}$ |  | $\bigcirc$ |  |  |
|  |  |  |  |  | $$ |  |  | $\underbrace{0}_{0}$ | $\begin{array}{ccc} \substack{1 \\ \hline} & 0 \\ \vdots & 0 \\ \hline \end{array}$ | $8$ | $\stackrel{n}{n} 0$ | $0.0$ |  |  | $\stackrel{4}{4}$ | － | $\underset{\sim}{8} \underset{\sim}{2}$ | $0$ |  | $\stackrel{1}{0}$ | $\mathfrak{p}$ |  | $\stackrel{\substack{0 \\ 0 \\ \hline}}{ }$ | $\mathfrak{c}$ | $\begin{array}{\|c\|c} \infty \\ 0 \\ 0 \\ \hline \end{array}$ | $\bigcirc$ | $\stackrel{\sim}{\circ}$ | $\stackrel{\sim}{0}$ | N | U | $\bigcirc$ | ¢ | O | Ọ | O | N0N | O | O | \％ |  |  |
|  |  |  |  |  |  | $\begin{array}{c\|c} \stackrel{\rightharpoonup}{m} & \stackrel{0}{ल} \\ \end{array}$ |  | A |  | $\underset{\sim}{c} \mid \underset{\sim}{\circ}$ | $\underset{\sim}{c}$ | $\underset{\sim}{\mathrm{N}}$ |  | $\mathfrak{c}$ | Nิ\| | $\underset{\sim}{c}$ | － | $\underset{\sim}{\underset{N}{c}}$ | $\stackrel{\circ}{\mathrm{N}} \underset{\sim}{\sim}$ | $\stackrel{\sim}{\text { coue }}$ | $\stackrel{\rightharpoonup}{\mathrm{O}}_{\mathrm{i}}$ | ¢ | $\begin{array}{\|c} \underset{\sim}{\mathrm{N}} \\ \hline \end{array}$ | $j$ | ¢ | $\bigcirc \bigcirc$ | $\pm$ | $\stackrel{8}{6}$ | O | ¢ | － | $\stackrel{\text { ¢ }}{-}$ |  | \％ | － | $\stackrel{\sim}{n}$ | กิ | $\stackrel{\sim}{\sim}$ | へ | $\stackrel{\circ}{\circ}$ | 8 |
|  |  |  | $$ |  |  |  |  |  |  | $\stackrel{\infty}{\infty} \underset{\dot{\sim}}{\infty} \underset{\sim}{\square}$ | $\overline{\mathrm{F}} \underset{\mathrm{~F}}{\mathrm{c}} \mathrm{~N}$ | nic | Brec |  |  | $\stackrel{0}{\circ}$ | $\stackrel{\sim}{n} \mathbf{0}$ | $\begin{aligned} & N \\ & \sim \\ & \end{aligned}$ |  | $\stackrel{\sim}{\infty} \underset{\sim}{\sim}$ | $\begin{aligned} & S \\ & j \\ & \hline \end{aligned}$ | $\underset{\sim}{2} \underset{\sim}{\circ}$ |  | $j$ | ielos |  | N | － | $\begin{gathered} \sim \\ \sim \\ \sim \end{gathered}$ | f | N | N | N | N | J | $\stackrel{N}{N}$ | － | $\stackrel{\sim}{\infty}$ | $\stackrel{+}{+}$ | $\stackrel{\square}{+}$ | へ̣ |
|  |  | $\underset{\sim}{\sim}$ |  |  |  | $\stackrel{N}{\dot{\omega}}$ |  | $\mathfrak{N}$ | $\begin{array}{cc} \infty \\ \sim \\ \sim \end{array}$ | $\stackrel{\circ}{i} \underset{\sim}{\circ}$ |  | $0$ |  | $\mathfrak{c}$ | $\underset{\substack{* \\ \hline \\ \hline \\ \hline \\ \hline \\ \hline \\ \hline}}{ }$ | $\stackrel{\rightharpoonup}{\dot{c}} \underset{\substack{\infty \\ \infty \\ \hline}}{ }$ | $\begin{aligned} & 0 \\ & \hline 0 \\ & \hline \end{aligned}$ | $\begin{aligned} & \infty \\ & \substack{\infty \\ \\ \hline \\ \hline} \end{aligned}$ |  | － |  | $\stackrel{n}{0} \mathbf{C l}$ |  | $\stackrel{?}{2}$ |  | NiN | $\stackrel{\sim}{\sim}$ | $\xrightarrow[\sim]{\sim}$ |  | ¢ | $\stackrel{\square}{\square}$ | $\stackrel{\sim}{\sim}$ | ¢ | ¢ | － | $\underset{\sim}{\mathrm{N}} \mathrm{~N}$ | $\stackrel{p}{n}$ | $\stackrel{\text { çic }}{\text { ç }}$ | N0 |  | － |
|  |  | $\frac{\circ}{\circ} \stackrel{\circ}{\infty}$ | $\stackrel{\circ}{\circ}$ |  | $\stackrel{c}{\circ} \mathrm{Co}$ | $\begin{aligned} & \circ \\ & \stackrel{\circ}{\circ} \mathrm{O} \\ & \stackrel{\circ}{\circ} \\ & \stackrel{\circ}{\circ} \\ & \hline-1 \end{aligned}$ | $\begin{array}{c\|c} \circ \\ \stackrel{\circ}{\circ} \\ \stackrel{\circ}{\circ} \\ \stackrel{\circ}{\circ} \\ \hline 1 \end{array}$ | $\stackrel{\circ}{\circ}$ |  |  | $\stackrel{\circ}{\circ} \mathrm{O}$ |  | Sill | $\mathfrak{o l : c}$ | $\begin{array}{l\|l} \stackrel{\circ}{\circ} & \stackrel{\circ}{\circ} \\ \stackrel{\circ}{\dot{j}} & \underset{\sim}{c} \end{array}$ | 웅 | $\stackrel{N}{0}$ |  | $\begin{array}{rl} 0 \\ 0 \\ 0 \\ 0 \\ \hline 1 & 0 \\ \hline \end{array}$ |  |  | $\stackrel{\circ}{\circ}$ | $\mathfrak{c}$ |  | $\begin{aligned} & \circ \\ & \circ \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ | $\stackrel{\circ}{\circ} \stackrel{\circ}{\circ} \stackrel{\circ}{\circ}$ | $\begin{aligned} & \circ \\ & \stackrel{\circ}{\wedge} \\ & \stackrel{1}{2} \end{aligned}$ | $\stackrel{\circ}{\infty}$ | $\stackrel{\circ}{\circ}$ |  | ¢ |  | － | N | \％ |  | － | $\stackrel{\circ}{\circ} \stackrel{0}{\circ}$ |  | $\stackrel{\stackrel{\circ}{\text { c }} \text {＋}}{\text { d }}$ | \％ |
|  | N00 | zos | －s | －so | 0 z | 20 | － 0 | 0 | 00 | 00 | \％$z$ | $z o$ |  |  |  |  | \％ |  |  | ¢0 | z | 0 | 0 | z |  |  | $z$ | $z$ | 0 | $z 2$ | O | 0 | z 0 | 0 | z | 20 | z | 02 | 0 | 0 | 0 |
|  | $\begin{aligned} & \text { む̀ } \\ & \text { O} \end{aligned}$ | 등 | \％ | $\bigcirc{ }^{\circ}$ | ¢ | $\stackrel{\sim}{\sim}$ | $\stackrel{\infty}{\sim}$ | $20$ | O | ¢ | － | 엉ㅇㅇ | 앵 |  | 0 | \％ | O | $10$ | $\stackrel{\substack{0}}{\circ}$ | O200 | 哭 | 안 | $0$ | $\underset{y}{c}$ | तָis | ¢ | \％ | O | d | \％ | － | N | O | N | O | \％ | O |  |  | ¢ | － |

（1）Total bus count（426）is based on PM weekday equipment requirements．
（2）Bus count for routes $53 \mathrm{X}, 57 \mathrm{X}$ and 64 X are estimated based on total route 53,57 and 64 equipment requirements． （3）C under Zone is Central County， N is North County and S is South County．
VSH－vehicle service hour
CostVSH－cost per vehicle service hour

OCTA Operating Statistics By Route for Express Service (Sorted by Subsidy per Boarding)
Fiscal Year 2018-19 Through Q2

| OCTA |
| :--- |
| Route |
| Z Zone |

(1) Total bus count (426) is based on PM weekday equipment requirements.
(2) C under Zone is Central County, N is North County and S is South County
$\int_{\text {OCTA }} \begin{aligned} & \text { OCTA Operating Statistics By Route for Stationlink Service (Sorted by Subsidy per Boarding) } \\ & \text { Fiscal Year 2018-19 Through Q2 }\end{aligned}$

|  |  |  | Subsidy per Boarding |  | $\begin{aligned} & \text { Direct } \\ & \text { Subsidy } \end{aligned}$ | Indirect Subsidy | "Capital <br> Subsidy" <br> Per <br> Boarding |  | Revenue per Boarding |  | Boardings | CostVSH |  | Direct CostVSH |  | CostVSM |  | BoardVSH | VSH |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Route | Zone | Farebox |  |  | 40 FT |  |  |  | 32 FT | 60 FT |  |  |  |  |  |  |  |  |  |
| 463 | c | 4.1\% | \$ | 28.09 |  | \$ 11.80 | \$ 10.39 | \$ |  |  | 5.90 | \$ | 0.96 | 11,306 | \$ | 171.95 | \$ | 110.16 | \$ | 16.57 | 7.43 | 1,522 | 4 | - | - |
| 480 | C | 8.6\% |  | 12.52 | 5.33 | 4.70 |  | 2.49 |  | 0.94 | 13,383 |  | 172.03 |  | 110.36 |  | 14.76 | 15.68 | 854 | 2 | . | - |
| 453 | N | 8.6\% |  | 11.13 | 4.73 | 4.16 |  | 2.24 |  | 0.84 | 14,912 |  | 177.01 |  | 111.33 |  | 26.47 | 18.20 | 819 | 2 | . | . |
| 472 | C | 10.4\% |  | 10.84 | 4.09 | 3.60 |  | 3.15 |  | 0.89 | 18,498 |  | 165.17 |  | 108.61 |  | 13.80 | 19.24 | 962 | 4 | . | - |
| 473 | C | 12.4\% |  | 8.98 | 3.75 | 3.30 |  | 1.93 |  | 1.00 | 21,548 |  | 177.33 |  | 111.01 |  | 15.93 | 22.02 | 979 | 2 | - | . |
| 462 | C | 12.6\% |  | 7.72 | 3.63 | 3.20 |  | 0.89 |  | 0.98 | 18,673 |  | 159.99 |  | 106.97 |  | 23.01 | 20.48 | 912 | 1 | - | . |

(1) Total bus count (426) is based on PM weekday equipment requirements.
(2) C under Zone is Central County, N is North County and S is South County.
／OCTA Operating Statistics By Route for Local and Community Services（Sorted by Boardings）

|  | $\begin{aligned} & \text { ㄴ } \\ & 8 \end{aligned}$ |  |  | $\stackrel{\square}{\square}$ |  |  |  |  |  | $\infty$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\left\|\begin{array}{l} 0 \\ 0 \\ 0 \\ 9 \end{array}\right\|$ | $\stackrel{\leftarrow}{N}$ |  |  |  |  |  |  | ＇ |  | ＇${ }^{\prime}$ |  | ＇ |  |  |  |  |  |  |  |  |  |  |  | ．${ }^{\text {．}}$ |  |  |  |  |  |  |  |  |  |  |  | $\sim$ |  |  | $\sim$ |  |
| ๓ | $\begin{aligned} & \text { 上 } \\ & \text { of } \end{aligned}$ |  |  |  |  | 으으 | M | $\cdots$ | N |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\bigcirc$ |  |  |  | $\sim$ | － |  |  |  |  |  |  |  |  |  |
|  | $\stackrel{\text { T }}{\text { ¢ }}$ |  |  |  |  | CiNos |  |  | N－ | 둗 | N్N |  |  |  | $0$ |  | N | $\begin{aligned} & \infty \\ & N \\ & N \end{aligned}$ |  | 웅각 | － | $\left\|\begin{array}{c} \underset{N}{N} \\ \underset{\sim}{v} \end{array}\right\|$ | 过 |  |  | － | O |  |  | $\stackrel{\sim}{2}$ | \％ | $\begin{gathered} 0 \\ \substack{2 \\ n \\ \hline} \end{gathered}$ |  | $\stackrel{8}{6}$ | $\begin{array}{\|c} \infty \\ \infty \\ \\ \hline \end{array}$ | $\left.\frac{N}{6} \right\rvert\,$ | $\frac{\mathrm{O}}{\mathrm{C}}$ | $\begin{array}{\|c\|} \hline 0 \\ \hline 0 \\ 子 \end{array}$ | g | － |
|  |  |  |  |  | $\begin{array}{c\|c} \infty \\ \infty \\ \dot{\sim} & \vdots \\ \vdots \\ \vdots \end{array}$ |  |  |  |  |  |  | : | $\begin{array}{\|c\|c} \infty \\ \underset{\sim}{\sim} & \stackrel{\rightharpoonup}{\sim} \\ \underset{\sim}{j} \end{array}$ | $\begin{gathered} \bar{\infty}_{\mathbf{N}}^{\sim} \\ \underset{\sim}{\sim} \\ \underset{\sim}{n} \end{gathered}$ |  | $\stackrel{(1}{\circ}$ | $\underset{\sim}{c} \underset{\sim}{\infty}$ | $\begin{gathered} N \\ \infty \\ \infty \\ \infty \end{gathered}$ |  | $\sim$ | ＋ | $\left.\begin{gathered} \underset{\sim}{\sim} \\ \infty \\ \infty \end{gathered} \right\rvert\,$ |  |  | － | $\stackrel{\sim}{\infty}$ | $\stackrel{6}{6}$ |  | $\underset{\substack{9}}{\substack{\infty}}$ |  | $\begin{gathered} \underset{\sim}{\sim} \\ \underset{\sim}{\infty} \end{gathered}$ | $\begin{array}{\|l\|} \hline \\ \underset{\sim}{m} \\ \end{array}$ |  | $\stackrel{\Gamma}{\circ}$ | $\begin{array}{\|l\|} \hline \stackrel{0}{2} \\ \stackrel{y}{2} \\ \hline \end{array}$ | $\|\underset{\sim}{\mathrm{i}}\|$ | $\left\lvert\, \begin{aligned} & \infty \\ & \stackrel{\infty}{\infty} \\ & \underset{\sim}{2} \end{aligned}\right.$ | $\left(\begin{array}{c} - \\ \infty \\ \infty \end{array}\right)$ | $\begin{aligned} & \infty \\ & \hline \\ & \hline \end{aligned}$ | $\stackrel{\square}{\square}$ |
|  | $\begin{aligned} & \sum_{n}^{5} \\ & \sum_{0}^{3} \\ & 0 \end{aligned}$ |  |  |  |  |  |  | $\dot{c}$ | $\underset{\sim}{\underset{\sim}{\mathrm{C}}} \underset{\sim}{\infty} \underset{\sim}{\infty}$ | N | $\stackrel{\stackrel{0}{0}}{\stackrel{+}{\dot{-}}}$ |  |  | $$ | $\underset{c}{o}$ |  | $\stackrel{\sim}{\sim}$ | $\begin{aligned} & \infty \\ & \infty \\ & \infty \\ & \infty \end{aligned}$ | $\stackrel{N}{N}$ | $\stackrel{0}{\circ}$ | $\stackrel{\square}{\square}$ | O |  | $\stackrel{N}{N}$ | $\stackrel{\sim}{0}$ | $\stackrel{\infty}{\infty}$ | \％ |  |  | $\left\lvert\, \begin{gathered} \bar{N} \\ \dot{\omega} \end{gathered}\right.$ | $\bigcirc$ | F. |  | $\mathfrak{n}$ | ne | 웅 | $\underset{\infty}{\hat{\infty}}$ |  | \％ | － |
|  |  |  |  |  |  | $\stackrel{s}{8}$ |  |  | Be: | － |  | $\dot{b}$ | $\begin{array}{\|c\|c} \infty & \infty \\ \infty \\ \infty \\ \infty & 0 \\ 0 \end{array}$ | $\begin{array}{c\|c} \infty \\ \infty & \infty \\ 0 \\ 0 & \stackrel{\infty}{\circ} \\ \hline \end{array}$ |  |  | $\stackrel{8}{\circ}$ |  |  | ¢ | $\stackrel{N}{\sim}$ | $\stackrel{\infty}{\infty}$ |  | $\stackrel{\underset{\sim}{\infty}}{\infty}$ |  | ¢ | $\stackrel{N}{N}$ |  |  |  | － | $9$ |  | $\stackrel{\leftrightarrow}{\circ}$ | $\begin{array}{\|c\|c\|} \substack{n \\ \vdots \\ \infty} \end{array}$ | ¢ | $\begin{aligned} & \infty \\ & \hline \end{aligned}$ | $\begin{array}{\|c} \infty \\ \infty \\ \underset{\sim}{\infty} \end{array}$ | $\begin{aligned} & 2 \\ & \substack{1 \\ \hline \\ \hline} \end{aligned}$ | － |
|  | $\begin{aligned} & \text { T } \\ & \stackrel{y}{\omega} \\ & \text { OB } \end{aligned}$ |  |  |  |  |  |  |  |  | $\xrightarrow{0}$ |  | $\mathfrak{c}$ |  |  | Sin |  | $\underset{\sim}{c} \underset{\sim}{c} \underset{\sim}{2}$ | $\begin{aligned} & \infty \\ & \substack{0 \\ \vdots \\ 1 \\ 1} \end{aligned}$ |  | ${ }^{\circ}$ | N | $\begin{aligned} & 0 \\ & \\ & \underset{\sim}{\circ} \\ & \hline \end{aligned}$ |  |  | O－ | 앙 | － |  |  | on | － | $\underset{\sim}{N}$ |  | M\|c|c | $\begin{array}{\|l\|l\|} \substack{\infty \\ \underset{\sim}{2} \\ \hline} \end{array}$ | － | $\stackrel{N}{N}$ | 字 |  |  |
|  |  |  |  |  |  |  |  |  | 앙 | － |  | 8 <br> 8 <br> 8 <br> 8 |  |  |  | Mon |  | len |  |  | $$ | $\square$ $\underset{\sim}{n}$ $\sim$ |  |  |  | \％ | $\stackrel{ \pm}{\text { ¢ }}$ |  |  |  | $\left\|\begin{array}{c} N \\ \hat{N} \\ 8 \end{array}\right\|$ | $\left\|\begin{array}{c} \mathbf{~} \\ 0 \\ \stackrel{N}{N} \end{array}\right\|$ |  |  |  | $\mid \vec{y}$ | $2$ | $\left\lvert\, \begin{aligned} & \substack{\infty \\ \infty \\ \infty \\ \hline \\ \hline} \\ & \hline \end{aligned}\right.$ | $\begin{aligned} & \dot{\vec{c}} \\ & \dot{e} \\ & \hline \end{aligned}$ |  |
|  |  |  | $0$ |  | $\begin{array}{\|c\|c\|c} \infty & \infty \\ \infty & \infty \\ 0 \end{array}$ |  |  |  | $\bigcirc$ |  | $\begin{gathered} 5 \\ 0 \\ \hline \end{gathered}$ | $5$ |  | $\begin{array}{c\|c} \infty \\ 0 & 0 \\ 0 & 0 \\ \hline \end{array}$ |  | O-C | $\bigcirc$ | $\mathfrak{O}$ | $\bigcirc$ | 8 | $\bigcirc$ | $\stackrel{8}{\circ}$ |  | $\hat{\infty}$ | $\stackrel{N}{\mp}$ | － | $\stackrel{-}{+}$ |  | ô | Oo | ¢ | \％ |  | ¢ | $\left\|\begin{array}{\|c\|} \hline 8 \\ \hline 0 \end{array}\right\|$ | $\stackrel{\text { m }}{\square}$ | $\underset{\sim}{m}$ | $\infty$ |  | $\stackrel{-}{-}$ |
|  |  | $0$ | $\mathfrak{O}$ | $\mathfrak{O}$ | OM |  | $\begin{array}{c\|c\|c} N & \sim \\ \hline & N \\ O \\ \hline \end{array}$ |  | $\%^{\circ}$ |  | $\stackrel{\circ}{\circ}$ | $$ |  | $\begin{array}{l\|l\|l\|l\|l\|l\|l\|l\|l\|l\|l\|l\|l\|l\|l\|l\|l\|l\|l\|l\|l\|l\|l\|l\|l\|l\|l\|l\|} \hline \end{array}$ | $\stackrel{?}{2}$ |  | $\stackrel{\sim}{0}$ | $0$ | $\bigcirc{ }_{0}^{\circ}$ | $\bigcirc$ | ¢ | － | － | － |  | N | $\stackrel{5}{0}$ |  | $!$ | 0 | N | ¢ |  |  | $\begin{array}{\|c\|} \hline N \\ \\ \hline \end{array}$ | $\bigcirc$ | ก | on |  | 8 |
|  |  | $\begin{array}{\|c} \stackrel{\oplus}{\odot} \\ \stackrel{\leftrightarrow}{\bullet} \\ \hline \end{array}$ | $\mathfrak{n}$ |  | $\underset{\sim}{\underset{\sim}{~}} \underset{\sim}{c}$ | $\stackrel{\sim}{\sim}$ | $\stackrel{\sim}{\sim}$ |  | － | No | 8 | \％ | 守 | $\stackrel{\stackrel{\rightharpoonup}{-}}{\sim}$ |  | － | $\stackrel{\sim}{\sim}$ | － | － | O | N | $\stackrel{\square}{\bullet}$ | N | $\stackrel{\sim}{\sim}$ | $\stackrel{\text { ¢ }}{\text { NT }}$ | － | － |  |  | $\stackrel{0}{\mathrm{~N}} \stackrel{\sim}{n}^{\circ}$ | $\stackrel{\sim}{0}$ | $\stackrel{\sim}{2}$ |  | $\oplus$ | $\begin{aligned} & \infty \\ & \infty \\ & n \\ & m \end{aligned}$ | $\stackrel{\text { d }}{\substack{\text { d } \\ \text {－} \\ \hline}}$ | $\stackrel{\text { ¢ }}{\text { ¢ }}$ | $\frac{m}{\dot{q}}$ | $\begin{aligned} & \infty \\ & \infty \\ & m \end{aligned}$ | ¢ |
|  |  |  | $\underset{\sim}{N}$ |  |  | $\stackrel{\sim}{*} \stackrel{0}{\bullet} \sim$ | $\stackrel{\sim}{\infty} \stackrel{\sim}{\sim}$ | $\overline{\mathrm{v}} \underset{\sim}{\sim} \underset{\sim}{\sim} \underset{\sim}{\sim}$ | ¢ | $\stackrel{\otimes}{\circ} \mathrm{O}$ | $\begin{array}{\|c\|} \hline \stackrel{\rightharpoonup}{\sim} \\ \hline \end{array}$ |  |  |  |  | Bloc | $\stackrel{\sim}{N}$ | $\stackrel{-}{+}$ | $\stackrel{\sim}{\square}$ | ¢ | $\stackrel{N}{\text { ले }}$ | \％ |  | ¢ | $\stackrel{\sim}{\square}$ | ¢ | $\stackrel{\sim}{\sim}$ |  | $\underset{子}{O}$ | ¢ | ¢ | $\stackrel{\circ}{+}$ |  | $\widehat{6}$ |  | $\xrightarrow{\substack{\text { ¢ }}}$ | $\underset{\substack{\circ \\ \hline \\ \hline}}{ }$ | $\begin{gathered} N \\ \vdots \\ \hline \end{gathered}$ | $\underset{\substack{0 \\ 0}}{ }$ | $\stackrel{\square}{\circ}$ |
|  |  | $\begin{array}{\|c\|} \hline \dot{q} \\ \dot{子} \\ \dot{\infty} \\ \hline \end{array}$ | $\underset{\sim}{N}$ |  | $\begin{array}{ll} \substack{\infty \\ 子 \\ 子 \\ \hline} \\ \hline \end{array}$ |  |  |  | － | $\underset{\sim}{\text { mon }}$ |  | STM |  |  |  |  |  | $\stackrel{\substack{\mathrm{S}\\}}{\substack{2}}$ | $\stackrel{9}{4}$ | －8 | － | N | N | $\stackrel{ \pm}{\dot{\circ}}$ | ¢ | － | $\stackrel{\sim}{\circ}$ | － | O | － | 8 | $\stackrel{\sim}{\circ}$ |  | \％ | $\left.\begin{array}{\|c\|} \hline 8 \\ \dot{\sigma} \end{array} \right\rvert\,$ | N | O |  |  |  |
|  |  |  |  | Collo | $0$ |  |  |  | $\stackrel{\circ}{\circ}$ |  | $\begin{gathered} \circ \\ \vdots \end{gathered}$ | $\stackrel{\circ}{\circ}$ | $\stackrel{\stackrel{\rightharpoonup}{\circ}}{\substack{2}}$ |  |  | $\stackrel{\circ}{\circ} \stackrel{\circ}{\circ}$ |  | $\mathfrak{c}$ | $\begin{array}{\|c} \stackrel{\circ}{\circ} \\ \stackrel{N}{\mathrm{~N}} \\ \hline \end{array}$ | $\stackrel{\circ}{\circ} \stackrel{0}{\circ}$ | － | $\begin{aligned} & \stackrel{\circ}{0} \\ & \stackrel{1}{0} \\ & \stackrel{1}{2} \end{aligned}$ | $\begin{aligned} & \stackrel{0}{0} \\ & \dot{j} \\ & \hline \end{aligned}$ |  |  | － | $\stackrel{\odot}{\circ}$ | $\bigcirc$ | \％ |  | $\stackrel{\square}{\circ}$ | $\begin{gathered} \stackrel{\circ}{\circ} \\ \stackrel{\rightharpoonup}{9} \end{gathered}$ |  |  | $\left.\begin{array}{\|c\|} \hline \stackrel{0}{\circ} \\ \dot{\circ} \end{array} \right\rvert\,$ | ¢ | $\begin{gathered} 0 \\ \hline 0 \\ \hline 0 \\ \hline \end{gathered}$ | O. | $\infty_{0}^{\circ}$ | ${ }^{\circ}$ |
|  | ※ֻ̃ | 0 | zo | 002 | z 0 | 002 | 20 | 02 z | $z 2$ |  | $z$ | z |  | 20 | z | $z$ | 02 | 0 | 0 | 0 | 0 | z | 0 | $z$ | ¢ $z$ | $z$ | $\infty$ | $\infty$ | 0 | $z 2$ | 0 | 0 |  | z 0 | 0 | － | ¢ | $\omega$ | $\infty$ | $z$ |
|  |  | ¢ | ¢ | ¢ ¢ ㅅㅇㅇ융 | N |  | \％ | 给误 | ） | x | 人 | $3$ | 잉 | \％ | $0$ | Cop | x | $\mathfrak{\infty}$ | $\left\lvert\, \begin{aligned} & x \\ & \hline 8 \\ & \hline \end{aligned}\right.$ | 8 | N | O | $\stackrel{8}{0}$ | 앵 | － | กูู | O |  | $\bigcirc$ | $\stackrel{\sim}{\sim}$ ¢ | 운 | \％ |  | $\stackrel{\sim}{\sim}$ | $0$ | $\stackrel{ }{ }$ | 0 | － | O | － |

[^0]$\int_{\text {OCTA }} \begin{aligned} & \text { OCTA Operating Statistics By Route for Express Service (Sorted by Boardings) } \\ & \text { Fiscal Year 2018-19 Through Q2 }\end{aligned}$

| A |  |  |  |  | Direct Subsidy |  | Indirect Subsidy |  | "Capital Subsidy" Per Boarding |  |  |  | Boardings |  |  | Direct CostVSH |  |  |  | BoardVSH | VSH | Bus Count |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Route | Zone | Farebox | Subsidy per Boarding |  |  |  | Revenue per Boarding | CostVSH |  | CostVSM |  | 40 FT |  | 32 FT | 60 FT |  |  |  |  |
| 794 | C | 22.5\% | \$ | 24.71 | \$ | 11.60 |  |  | \$ | 9.10 | \$ | 4.01 | \$ | 6.02 | 16,632 | \$ | 222.72 | \$ | 156.10 | \$ | 8.34 | 8.33 | 1,996 | 4 | - | - |
| 701 | C | 8.0\% |  | 30.48 |  | 16.33 |  | 9.84 |  |  |  | 4.31 |  | 2.26 | 11,588 |  | 259.82 |  | 166.59 |  | 10.81 | 9.14 | 1,268 | 3 | - | - |
| 721 | N | 4.8\% |  | 41.40 |  | 23.03 |  | 13.88 |  | 4.49 |  | 1.86 | 11,127 |  | 226.47 |  | 145.42 |  | 8.81 | 5.84 | 1,905 | 3 | - | - |
| 211 | C | 2.0\% |  | 59.11 |  | 29.04 |  | 22.79 |  | 7.28 |  | 1.04 | 7,845 |  | 146.02 |  | 99.79 |  | 8.57 | 2.76 | 2,841 | - | 4 | - |
| 213 | N | 2.3\% |  | 48.78 |  | 22.79 |  | 17.89 |  | 8.10 |  | 0.95 | 7,059 |  | 165.85 |  | 105.48 |  | 9.63 | 3.98 | 1,772 | - | 4 | - |
| 206 | C | 4.1\% |  | 29.69 |  | 12.89 |  | 10.12 |  | 6.68 |  | 0.99 | 6,420 |  | 177.13 |  | 114.96 |  | 9.29 | 7.38 | 870 | - | 3 | - |

(2) $C$ under Zone is Central County, $N$ is North County and $S$ is South County.
$\int_{\text {OCTA }} \begin{aligned} & \text { OCTA Operating Statistics By Route for Stationlink Service (Sorted by Boardings) } \\ & \text { Fiscal Year 2018-19 Through Q2 }\end{aligned}$

| Route | Zone | Farebox | Subsidy per Boarding |  | Direct Subsidy |  | Indirect <br> Subsidy |  | "Capital Subsidy" Per Boarding |  | Revenue per Boarding |  | Boardings | CostVSH |  | Direct CostVSH |  | CostVSM |  | BoardVSH | VSH |  | us Coun |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 40 FT | 32 FT |  |  | 60 FT |  |  |  |  |  |  |  |  |  |  |  |
| 473 | C | 12.4\% | \$ | 8.98 |  |  | \$ | 3.75 |  |  | \$ | 3.30 | \$ | 1.93 | \$ | 1.00 | 21,548 | \$ | 177.33 | \$ | 111.01 | \$ | 15.93 | 22.02 | 979 | 2 | - | - |
| 462 | C | 12.6\% |  | 7.72 |  | 3.63 |  | 3.20 |  | 0.89 |  | 0.98 | 18,673 |  | 159.99 |  | 106.97 |  | 23.01 | 20.48 | 912 | 1 | - | - |
| 472 | C | 10.4\% |  | 10.84 |  | 4.09 |  | 3.60 |  | 3.15 |  | 0.89 | 18,498 |  | 165.17 |  | 108.61 |  | 13.80 | 19.24 | 962 | 4 | - | - |
| 453 | N | 8.6\% |  | 11.13 |  | 4.73 |  | 4.16 |  | 2.24 |  | 0.84 | 14,912 |  | 177.01 |  | 111.33 |  | 26.47 | 18.20 | 819 | 2 | - | - |
| 480 | C | 8.6\% |  | 12.52 |  | 5.33 |  | 4.70 |  | 2.49 |  | 0.94 | 13,383 |  | 172.03 |  | 110.36 |  | 14.76 | 15.68 | 854 | 2 | - | - |
| 463 | C | 4.1\% |  | 28.09 |  | 11.80 |  | 10.39 |  | 5.90 |  | 0.96 | 11,306 |  | 171.95 |  | 110.16 |  | 16.57 | 7.43 | 1,522 | 4 | - | - |

(2) $C$ under Zone is Central County, $N$ is North County and $S$ is South County.

## Route Reference Table

| Route | Route Description | Main Street | Route Category |
| :---: | :---: | :---: | :---: |
| 1 | Long Beach - San Clemente | via Pacific Coast Hwy | LOCAL |
| 21 | Buena Park - Sunset Beach | via Valley View St/ Bolsa Chica Rd | LOCAL |
| 24 | Buena Park - Orange | via Malvern Ave/ Chapman Ave/ Tustin Ave | LOCAL |
| 25 | Fullerton - Huntington Beach | via Knott Ave/ Goldenwest St | LOCAL |
| 26 | Fullerton - Placentia | via Commonwealth Ave/ Yorba Linda Blvd | LOCAL |
| 29 | La Habra - Huntington Beach | via Beach Blvd | LOCAL |
| 30 | Cerritos - Anaheim | via Orangethorpe Ave | LOCAL |
| 33 | Fullerton - Huntington Beach | via Magnolia St | LOCAL |
| 35 | Fullerton - Costa Mesa | via Brookhurst St | LOCAL |
| 37 | La Habra - Fountain Valley | via Euclid St | LOCAL |
| 38 | Lakewood - Anaheim Hills | via Del Amo Blvd/ La Palma Ave | LOCAL |
| 42 | Seal Beach - Orange | via Seal Beach Blvd/ Los Alamitos Blvd/ Lincoln Ave | LOCAL |
| 43 | Fullerton - Costa Mesa | via Harbor Blvd | LOCAL |
| 46 | Los Alamitos - Orange | via Ball Road/ Taft Ave | LOCAL |
| 47 | Fullerton - Balboa | via Anaheim Blvd/ Fairview St | LOCAL |
| 50 | Long Beach - Orange | via Katella Ave | LOCAL |
| 53/53X | Anaheim - Irvine | via Main St | LOCAL |
| 54 | Garden Grove - Orange | via Chapman Ave | LOCAL |
| 55 | Santa Ana - Newport Beach | via Standard Ave/ Bristol St/ Fairview St/ 17th St | LOCAL |
| 56 | Garden Grove - Orange | via Garden Grove Blvd | LOCAL |
| 57/57X | Brea - Newport Beach | via State College Blvd/ Bristol St | LOCAL |
| 59 | Anaheim - Irvine | via Kraemer Blvd/ Glassell St/ Grand Ave/ Von Karman Ave | LOCAL |
| 60 | Long Beach - Tustin | via Westminster Ave/ 17th St | LOCAL |
| 64/64X | Huntington Beach - Tustin | via Bolsa Ave/ 1st St | LOCAL |
| 66 | Huntington Beach - Irvine | via McFadden Ave/ Walnut Ave | LOCAL |
| 70 | Sunset Beach - Tustin | via Edinger Ave | LOCAL |
| 71 | Yorba Linda - Newport Beach | via Tustin Ave/ Red Hill Ave/ Newport Blvd | LOCAL |
| 72 | Sunset Beach - Tustin | via Warner Ave | LOCAL |
| 76 | Huntington Beach - John Wayne Airport | via Talbert Ave/ MacArthur Blvd | LOCAL |
| 79 | Tustin - Newport Beach | via Bryan Ave/ Culver Dr/ University Ave | LOCAL |
| 82 | Foothill Ranch - Rancho Santa Margarita | via Portola Pkwy/ Santa Margarita Pkwy | LOCAL |
| 83 | Anaheim - Laguna Hills | via 5 Fwy/ Main St | LOCAL |
| 85 | Mission Viejo - Laguna Niguel | via Marguerite Pkwy/ Crown Valley Pkwy | LOCAL |
| 86 | Costa Mesa - Mission Viejo | via Alton Pkwy/ Jeronimo Rd | LOCAL |
| 87 | Rancho Santa Margarita - Laguna Niguel | via Alicia Pkwy | LOCAL |
| 89 | Mission Viejo - Laguna Beach | via El Toro Rd/ Laguna Canyon Rd | LOCAL |
| 90 | Tustin - Dana Point | via Irvine Center Dr/ Moulton Pkwy/ Golden Lantern St | LOCAL |
| 91 | Laguna Hills - San Clemente | via Paseo de Valencia/ Camino Capistrano/ Del Obispo St | LOCAL |
| 129 | La Habra - Anaheim | via La Habra Blvd/ Brea Blvd/ Birch St/ Kraemer Blvd | COMMUNITY |
| 143 | La Habra - Brea | via Whittier Blvd/ Harbor Blvd/ Brea Blvd/ Birch St | COMMUNITY |
| 150 | Santa Ana - Costa Mesa | via Fairview St/ Flower St | COMMUNITY |
| 153 | Brea - Anaheim | via Placentia Ave | COMMUNITY |
| 167 | Orange - Irvine | via Irvine Ave/ Hewes St/ Jeffrey Rd | COMMUNITY |
| 177 | Foothill Ranch - Laguna Hills | via Lake Forest Dr/ Muirlands Blvd/ Los Alisos Blvd | COMMUNITY |
| 178 | Huntington Beach - Irvine | via Adams Ave/ Birch St/ Campus Dr | COMMUNITY |
| 206 | Santa Ana - Lake Forest Express | via 5 Fwy | EXPRESS BUS |
| 211 | Huntington Beach - Irvine Express | via 405 Fwy | EXPRESS BUS |
| 213 | Brea - Irvine Express | via 55 Fwy | EXPRESS BUS |
| 453 | Orange Transportation Center - St. Joseph's Hospital | via Chapman Ave/ Main St/ La Veta Ave | STATIONLINK |
| 462 | Santa Ana Regional transportation Center - Civic Center | via Santa Ana Blvd/ Civic Center Dr | STATIONLINK |
| 463 | Santa Ana Regional transportation Center - Hutton Centre | via Grand Ave | STATIONLINK |
| 472 | Tustin Metrolink Station - Irvine Business Complex | via Edinger Ave/ Red Hill Ave/ Campus Dr/ Jamboree Rd | STATIONLINK |
| 473 | Tustin Metrolink Station - U.C.I. | via Edinger Ave/ Harvard Ave | STATIONLINK |
| 480 | Irvine Metrolink Station - Lake Forest | via Alton Pkwy/ Bake Pkwy/ Lake Forest Dr | STATIONLINK |
| 543 | Fullerton Transportation Center - Santa Ana | via Harbor Blvd | BRAVO |
| 560 | Santa Ana - Long Beach | via 17th St/ Wesminster Blvd | BRAVO |
| 701 | Huntington Beach - Los Angeles Express | via 405 Fwy/ 605 Fwy/ 105 Fwy/ 110 Fwy | EXPRESS BUS |
| 721 | Fullerton - Los Angeles Express | via $110 \mathrm{Fwy} / 91 \mathrm{Fwy}$ | EXPRESS BUS |
| 794 | Riverside / Corona - South Coast Metro Express | via 91 Fwy/ 55 Fwy | EXPRESS BUS |

## OC Bus $360^{\circ}$ Plan: Performance to Date

To address declining bus ridership, the OCTA Board of Directors (Board) endorsed a comprehensive action plan known as OC Bus $360^{\circ}$ plan in 2015. This effort included a comprehensive review of current and former rider perceptions, a peer review panel that reviewed OCTA's performance and plans, new branding and marketing tactics tied to rider needs, upgraded bus routes and services to better match demand and capacity, technology solutions to improve passenger experience, and pricing, as well as other revenue changes to stimulate ridership and provide new funding.

Extensive work was invested by OCTA divisions to implement the OC Bus 360 plan ${ }^{\circ}$. These efforts included:

- Implementation of new and faster bus routes;
- Redeployment of services in June 2016, October 2016, October 2017, and February 2018, to improve efficiencies and build ridership;
- Competitively-awarded grants to local agencies through Project V for transit services tailored to community needs;
- Implementation of a promotional fare and college pass program;
- Rollout of new technologies, such as mobile ticketing, real-time bus arrival information, a microtransit service; and
- Extensive marketing, public outreach, and promotional campaigns.


## Impact of the Service Changes

Of the series of approved bus service changes under the OC Bus $360^{\circ}$ Plan, the changes implemented in October 2016 and February 2018 were the most significant and tracked for overall OC Bus $360^{\circ}$ plan impact. Provided below is a series of charts that show overall system performance over the last 13 quarters and the impact of these route adjustments (October 2016 marked by green bar; February 2018 marked by blue bar). In this review, performance is measured by change in average weekday boardings for routes that were improved and average B/RVH for routes that were reduced. This analysis is necessary and on-going to gauge the effectiveness of the recommended changes and the overall OC Bus $360^{\circ}$ plan. The trend of overall system ridership and productivity is provided on the following chart.


Through the second quarter of FY 2018-19, ridership and productivity are down compared to last quarter, but constant with respect to the quarterly trend over the past two years since the October 2016 service change.

- Ridership was 1.1 percent lower than the previous quarter, and 2.2 percent lower than the same quarter last year.
- $\quad$ Productivity over the second quarter fell by 1.8 percent from last quarter and was 3.1 percent lower than the same quarter last year.

The impacts of the adjustments implemented under the OC Bus $360^{\circ}$ plan remain steady. The following chart compares the system trend against the group of routes improved under the OC Bus $360^{\circ}$ plan.


Comparing the results of the second quarter of FY 2018-19 with the second quarter of FY 2017-18, systemwide average weekday ridership fell by 3.6 percent, while the improved routes dropped slightly by 0.3 percent.

Improved system and route productivity are the goals for services that are reduced or eliminated under the OC Bus $360^{\circ}$ Plan - making low performing routes more productive.

The following chart compares the system productivity trend against the productivity of the group of routes that were reduced/eliminated in October 2016 and February 2018.


During the second quarter of FY 2018-19, productivity for the collective reductions continue to trend above the system average. The system average for weekday productivity was $24.0 \mathrm{~B} / \mathrm{RVH}$, while the productivity for the reduced services was 27.1 , a difference of 12.6 percent

## Other OC Bus $360^{\circ}$ Initiatives

## OC Flex Pilot Program

OC Flex is an on-demand, curb-to-curb service that began in October 2018 as a one-year pilot. The OC Flex pilot was implemented in two specific areas that, to date, have been unable to productively support fixedroute bus service. One zone includes parts of Huntington Beach and Westminster, while the other zone includes parts of Aliso Viejo, Laguna Niguel, and Mission Viejo. The service is provided through a contract with Keolis. The service introduces a new vehicle type and is consistent with the OC Bus 360 Program as it will test new rider markets while matching resources with demand. Rides are primarily booked using a mobile app on a smart phone, but trips may also be booked by phone through the Keolis reservation center. Inside each OC Flex zone, riders are able to take unlimited rides to work, school, for recreation, entertainment, or other purposes for $\$ 4.50$ per day using the OC Flex mobile app, or $\$ 5.00$ per day if paying cash onboard. Riders are also able to transfer between OC Flex and OC Bus to create a first mile
and last mile service connection to regional OC Bus service, as well as Metrolink commuter rail service. Over the course of the pilot, OCTA staff will be tracking ridership, productivity, average wait times, shared rides, and customer satisfaction. Staff will provide the Board with an update after six months of service and an annual report after completion of the pilot project. The evaluation after one year of operation will help determine if one or both pilot zones should continue to operate and if this service model should be considered for additional areas.

Through the second quarter, OC Flex showed weekly incremental growth in ridership. Staff is currently evaluating rider trends, potential adjustments, and promotional opportunities to increase demand and attract new rider markets.

## College Pass Program

The College Pass Program started in August 2017, with students from Santa Ana College and continuing education students from Santa Ana College and Santiago Canyon College. In August 2018, the program expanded to include all students from Santiago Canyon College. The College Pass Program uses a shared cost strategy where all students pay a transportation fee, whether they ride or not. These fees are collected by the colleges after students voted to support the fees. Starting in August 2018, students are able to participate in the program by using the OC Bus mobile app, as an alternative to their student ID.

Since the program started, from August 2017 to December 31, 2018, the College Pass Program has reported 1.7 million boardings with 9,920 unique participating students. In the Fall 2018 semester reporting period, Santa Ana College student boardings increased by 10.2 percent from the Fall 2017 semester, along with a 21.2 percent increase in the number of Santa Ana College students participating in the program.

The college pass program has stabilized the ridership on the routes that directly serve Santa Ana College and Santiago Canyon College, and other routes that connect students from across the county. A survey will be conducted at a later date to continue to evaluate the program and determine new riders from participating colleges.

## College Pass Program Statistics:

- Fall 2017 Semester (August - Feb) SAC Boardings 334,224
- Fall 2018 Semester (August - Feb) SAC Boardings 368,252
- Fall 2017 SAC Participating* students 3,366
- Fall 2018 SAC Participating* students 4,079
*Participating means that the student has used their pass during the term


[^0]:    （2）Bus count for routes $53 \mathrm{X}, 57 \mathrm{X}$ and 64 X are estimated based on total route 53,57 and 64 equipment requirements
    （3） C under Zone is Central County， N is North County and S is South County．

