



# **AGENDA**

## ***Transit Committee Meeting***

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### **Committee Members**

Andrew Do, Chairman  
Gregory T. Winterbottom, Vice Chairman  
Laurie Davies  
Steve Jones  
Jose F. Moreno  
Miguel Pulido  
Tim Shaw

Orange County Transportation Authority  
Headquarters  
550 South Main Street  
Board Room – Conf. Room 07  
Orange, California  
**Thursday, June 13, 2019 at 9:00 a.m.**

Any person with a disability who requires a modification or accommodation in order to participate in this meeting should contact the OCTA Clerk of the Board, telephone (714) 560-5676, no less than two (2) business days prior to this meeting to enable OCTA to make reasonable arrangements to assure accessibility to this meeting.

Agenda descriptions are intended to give members of the public a general summary of items of business to be transacted or discussed. The posting of the recommended actions does not indicate what action will be taken. The Committee may take any action which it deems to be appropriate on the agenda item and is not limited in any way by the notice of the recommended action.

All documents relative to the items referenced in this agenda are available for public inspection at [www.octa.net](http://www.octa.net) or through the Clerk of the Board's office at the OCTA Headquarters, 600 South Main Street, Orange, California.

## **Call to Order**

### **Pledge of Allegiance**

Director Jones

### **1. Public Comments**

## **Special Calendar**

There are no Special Calendar matters.



## **Consent Calendar (Items 2 through 5)**

All items on the Consent Calendar are to be approved in one motion unless a Committee Member or a member of the public requests separate action or discussion on a specific item.

### **2. Approval of Minutes**

Approval of the minutes of the Transit Committee meeting of May 9, 2019.

### **3. Agreement for Bus Hoist Replacement at the Santa Ana Bus Base** George Olivo/James G. Beil

#### **Overview**

The steam clean bus hoist at the Santa Ana Bus Base is in need of replacement. Bids were received in accordance with the Orange County Transportation Authority's public works projects. Board of Directors' approval is requested to execute the agreement.

#### **Recommendation**

Authorize the Chief Executive Officer to negotiate and execute Agreement No. C-9-1178 between the Orange County Transportation Authority and Autolift Services, Inc., the lowest responsive, responsible bidder, in the amount of \$149,300, for bus hoist replacement at the Santa Ana Bus Base.

### **4. Agreements for the Intelligent Transportation Management System Upgrade** Michael Beerer/Andrew Oftelie

#### **Overview**

Orange County Transportation Authority utilizes an Intelligent Transportation Management System to provide dispatch communications, vehicle locators, data interface, and other services for the countywide bus system. Some of the hardware and software components have reached the end of their useful life and need to be upgraded or replaced. Four new agreements are necessary to upgrade the system to ensure continued transit operations in the future.



## **4. (Continued)**

### **Recommendations**

- A. Authorize the Chief Executive Officer to negotiate and execute sole source Agreement No. C-9-1120 between the Orange County Transportation Authority and Conduent Transport Solutions, Inc., in the amount of \$985,733, to upgrade to the most current OrbCAD core build software and hardware.
- B. Authorize the Chief Executive Officer to negotiate and execute sole source Agreement No. C-9-1055 between the Orange County Transportation Authority and Conduent Transport Solutions, Inc., in the amount of \$137,056, to upgrade to the most current ArcGIS map version of the software.
- C. Authorize the Chief Executive Officer to negotiate and execute sole source Agreement No. C-9-1060 between the Orange County Transportation Authority and Aviat U.S., Inc., in the amount of \$68,898, for the purchase of equipment, licenses, and services to upgrade the microwave system.
- D. Authorize the Chief Executive Officer to negotiate and execute Agreement No. C-9-1104 between the Orange County Transportation Authority and Nth Generation Computing, Inc., the lowest responsive, responsible bidder, in the amount of \$388,062, for the purchase of computing hardware and computer storage equipment.

## **5. Measure M2 Project W Safe Transit Stops - 2019 Programming Recommendations**

Joseph Alcock/Kia Mortazavi

### **Overview**

In October 2018, the Orange County Transportation Authority Board of Directors authorized the issuance of a second Measure M2 Project W Safe Transit Stops Program call for projects. Application reviews are now complete and programming recommendations are presented for Board of Directors' approval.



**5. (Continued)**

**Recommendations**

- A. Approve the award of \$.987 million in 2019 Project W Safe Transit Stops Program funds to seven eligible local agencies and the Orange County Transportation Authority.
- B. Cancel the programming of \$.370 million in 2014 Measure M2 Project W Safe Transit Stops funds for Orange County Transportation Authority-initiated improvements.

**Regular Calendar**

**6. Bristol Street Transit Corridor Study - University of California, Irvine Connection Options**  
Eric Carlson/Kia Mortazavi

**Overview**

The Orange County Transportation Authority initiated the Bristol Street Transit Corridor Study in October 2018. During the Board of Directors update on April 22, 2019, staff was directed to develop options to evaluate connections to the University of California, Irvine campus and University of California, Irvine Research Park in the City of Irvine. This report outlines three options for evaluating connections to the University of California, Irvine area.

**Recommendation**

Provide direction to staff on study options.

**7. Bus Operations Performance Measurements Report for the Third Quarter of Fiscal Year 2018-19**  
Johnny Dunning, Jr./Jennifer L. Bergener

**Overview**

The Orange County Transportation Authority operates fixed-route bus and demand-response paratransit service throughout Orange County and into neighboring counties. This report summarizes the year-to-date performance of these services through the third quarter of fiscal year 2018-19. The established measures of performance assess the safety, courtesy, reliability, and overall quality of the public transit services provided.



**7. (Continued)**

**Recommendation**

Receive and file as an information item.

**Discussion Items**

**8. Chief Executive Officer's Report**

**9. Committee Members' Reports**

**10. Closed Session**

There are no Closed Session items scheduled.

**11. Adjournment**

The next regularly scheduled meeting of this Committee will be held at **9:00 a.m. on Thursday, July 11, 2019**, at the Orange County Transportation Authority Headquarters, 550 South Main Street, Board Room - Conference Room 07, Orange, California.



**Committee Members Present**

Andrew Do, Chairman  
Laurie Davies  
Steve Jones  
Jose F. Moreno  
Tim Shaw

**Staff Present**

Ken Phipps, Deputy Chief Executive Officer  
Laurena Weinert, Clerk of the Board  
Sara Meisenheimer, Deputy Clerk of the Board  
James Donich, General Counsel  
OCTA Staff and members of the General Public

**Committee Members Absent**

Gregory T. Winterbottom, Vice Chairman  
Miguel Pulido

**Call to Order**

The May 9, 2019 regular meeting of the Transit Committee was called to order by Committee Chairman Do at 9:01 a.m.

**Pledge of Allegiance**

Director Davies led in the Pledge of Allegiance.

**1. Public Comments**

No public comments were received.

**Special Calendar**

There were no Special Calendar matters.

**Consent Calendar (Items 2 through 11)**

**2. Approval of Minutes**

A motion was made by Director Davies, seconded by Director Jones, and declared passed by those present, to approve the minutes of the Transit Committee meeting of April 11, 2019.

Director Davies abstained from the vote due to not being present at the Transit Committee meeting on April 11, 2019.

**3. Agreement for Heating and Ventilation Unit Replacement at the Anaheim Bus Base Maintenance Building**

A motion was made by Director Davies, seconded by Director Jones, and declared passed by those present, to authorize the Chief Executive Officer to negotiate and execute Agreement No. C-9-1038 between the Orange County Transportation Authority and Golden Gate Steel, Inc., dba Golden Gate Construction, the lowest responsive, responsible bidder, in the amount of \$394,031, for heating and ventilation unit replacement at the Anaheim Bus Base maintenance building.

**4. Agreement for the Fullerton Transportation Center Revitalization**

A motion was made by Director Davies, seconded by Director Jones, and declared passed by those present, to authorize the Chief Executive Officer to negotiate and execute Agreement No. C-9-0961 between the Orange County Transportation Authority and Thomco Construction, Inc., the lowest responsive, responsible bidder, in the amount of \$759,245, for the Fullerton Transportation Center revitalization.

**5. Agreement for Restroom Repair at the Irvine Construction Circle Bus Base**

A motion was made by Director Davies, seconded by Director Jones, and declared passed by those present, to:

- A. Find Westside Builders Corporation, the apparent low bidder, as non-responsive for failure to meet the federal requirement for Disadvantaged Business Enterprise participation.
- B. Authorize the Chief Executive Officer to negotiate and execute Agreement No. C-8-2066 between the Orange County Transportation Authority and Reed Family Enterprises, Inc., the lowest responsive, responsible bidder, in the amount of \$210,000, for restroom repairs at the Irvine Construction Circle Bus Base.

**6. Agreement for Lower Roof Replacement at the Garden Grove Annex Building**

A motion was made by Director Davies, seconded by Director Jones, and declared passed by those present, to authorize the Chief Executive Officer to negotiate and execute Agreement No. C-9-0971 between the Orange County Transportation Authority and Commercial Roofing Systems, Inc., the lowest responsive, responsible bidder, in the amount of \$67,340, for lower roof replacement at the Garden Grove annex building.

**7. Agreement for On-Board Vehicle Video Surveillance Fleet Retrofit**

A motion was made by Director Davies, seconded by Director Jones, and declared passed by those present, to authorize the Chief Executive Officer to negotiate and execute sole source Agreement No. C-9-1140 between the Orange County Transportation Authority and March Networks Corporation, in the amount of \$1,739,921, for the retrofit of on-board video surveillance system for 295 fixed-route buses.

**8. Amendment to Cooperative Agreements with Non-Profit Agencies to Provide Senior Mobility Program Services**

A motion was made by Director Davies, seconded by Director Jones, and declared passed by those present, to:

- A. Authorize the Chief Executive Officer to negotiate and execute Amendment No. 6 to Cooperative Agreement No. C-1-2490 between the Orange County Transportation Authority and Abrazar, Inc., in the amount of \$89,745, to provide funding through June 30, 2020.
- B. Authorize the Chief Executive Officer to negotiate and execute Amendment No. 7 to Cooperative Agreement No. C-1-2491 between the Orange County Transportation Authority and Korean American Senior Association, in the amount of \$110,334, to provide funding through June 30, 2020.
- C. Authorize the Chief Executive Officer to negotiate and execute Amendment No. 5 to Cooperative Agreement No. C-1-2492 between the Orange County Transportation Authority and Southland Integrated Services, Inc., formerly doing business as Vietnamese Community of Orange County, in the amount of \$97,015, to provide funding through June 30, 2020.

**9. June 2019 Bus Service Change**

A motion was made by Director Davies, seconded by Director Jones, and declared passed by those present, to receive and file as an information item.



**10. Master Agreement for Transit and Intercity Rail Capital Program**

A motion was made by Director Davies, seconded by Director Jones, and declared passed by those present, to:

- A. Authorize the Chief Executive Officer to execute Master Agreement No. 64OCTA2015MA for the Transit and Intercity Rail Capital Program and all necessary program supplement agreements with the California Department of Transportation for the reimbursement of Transit and Intercity Rail Capital Program-funded projects.
- B. Approve Orange County Transportation Authority Resolution No. 2019-029, as required by the California Department of Transportation, to execute the above agreement and authorize the Chief Executive Officer, or his designee, to sign future program supplements.

**11. Sole Source Agreement for Motorola 800 Megahertz Non-Encrypted Handheld Radio Equipment**

A motion was made by Director Davies, seconded by Director Jones, and declared passed by those present, to authorize the Chief Executive Officer to negotiate and execute sole source Purchase Order No. C-9-1300 between the Orange County Transportation Authority and Motorola Solutions, Inc., in the amount of \$115,439, to purchase 27 APX 6000 700/800 Model III non-encrypted handheld radios and necessary accessories.

**Regular Calendar**

**12. Adopt the Mitigated Negative Declaration and Approve the Preliminary Engineering for the Transit Security and Operations Center**

James G. Beil, Executive Director of Capital Programs, introduced George Olivo, Program Manager of Facilities Engineering, who was available for questions, and Mr. Beil presented a PowerPoint presentation for this item as follows:

- Project Overview;
- Site Selection;
- Project Site and Building Information;
- Site Plan – Secure Access;
- Parking Plan;
- Front View – Building Main Entrance;
- Transit Police Entrance;
- Looking East;
- Building Section – Emergency Operations Center/Dispatch;

**12. (Continued)**

- Project Schedule; and
- Public Outreach.

A discussion ensued regarding:

- The Annex building at the Garden Grove base which is currently used for the Transit Security and Operations Center (TSOC) is seismicity deficient in a liquefaction zone and will be used for other purposes on the side.
- Liquefaction is a known concern in the City of Garden Grove and usually only comes up when dealing with buildings underground.
- The Federal Transit Administration will fund a maximum of 80 percent and the state funding will match the remaining amount for the new TSOC.
- Inquiries about the Orange County Transportation Authority (OCTA) working with the utilities department in the City of Anaheim (Anaheim) and to consider renewable energies.
- OCTA will likely have solar panels on the building's roof (as part of the California code), and there will be electric vehicle charging stations at the new TSOC facility.
- Director Moreno encouraged OCTA to go beyond the minimum requirements for utilities and to connect with Anaheim.
- Committee Chairman Do suggested that the solar panel could recharge a battery as a secondary power source in case of failure to the new TSOC facility.
- A communications study was conducted to address all the appropriate repeater sites for emergency services and communication with the County of Orange and there will also be a tower available to communicate with the OC Streetcar maintenance and storage facility and all OCTA bases.
- OCTA has an emergency operations plan, a Continuity of Operations Plan, and Katrina Faulkner, Department Manager of Security and Emergency Preparedness, is the contact person.
- Director Moreno suggested to provide opportunities for high school students to do internships once the TSOC facility is up and running.

A motion was made by Director Moreno, seconded by Director Davies, and declared passed by those present, to:

- A. Adopt Resolution No. 2019-035 to adopt the Mitigated Negative Declaration and Mitigation Monitoring Reporting Program, pursuant to the California Environmental Quality Act, for the Transit Security and Operations Center.

**12. (Continued)**

- B. Approve the Transit Security and Operations Center.

**13. OC Flex Microtransit Pilot Project: Six-Month Project Update**

Ken Phipps, Deputy Chief Executive Officer (DCEO), provided opening comments and introduced Johnny Dunning, Jr., Manager of Scheduling and Customer Advocacy, who co-presented a PowerPoint presentation with Ryan Maloney, Section Manager of Marketing and Customer Service, and Stella Lin, Department Manager of Marketing and Customer Service, as follows:

- Service Background;
- Pilot Zones;
- Service Characteristics;
- Fares;
- Board Adopted Goals/Measures;
- Boardings;
- Popular Origins/Destinations;
- Productivity;
- Cost Effectiveness;
- Trip Sharing;
- Connecting to Transit;
- Transfers in the Orange Zone;
- Customer Satisfaction;
- Performance Summary;
- Customer Feedback;
- Trip Purpose;
- Customer Demographics;
- Marketing Activities;
- Weekend Fare Promotion;
- Business 2 Business and Partnerships;
- Keeping it Flex-ible...; and
- Next Steps.

A discussion ensued regarding:

- An overview on the transfer trips to and from (as referenced on Slides 12 – 14 of the PowerPoint presentation).
- At the City of Brea (Brea) City Council meeting, it was mentioned that Brea is interested in having OC Flex come to their city.

## **13. (Continued)**

- Director Davies complimented OC Flex and had the following suggestions:
  - More outreach along Forbes Road (which leads to the Laguna Niguel/Mission Viejo Metrolink station) since many body shops are not aware of OC Flex.
  - Reach out to the students at Aliso Viejo and Dana Point High Schools to use the service during the summer.
  - Extend the service a mile and a half to Ocean Ranch Village in Laguna Niguel.
- 422 unique account holders were surveyed and 32 percent of them responded.
- Referenced Slide 15 of the PowerPoint presentation and summarized OC Flex's performance goals.
- Concerns with continuing OC Flex based on the percentage of transfer trips, the criteria, and its role.
- Clarification on Attachment C, Page 9, of the Staff Report as to why the percentages add up to more than 100 percent.
- Follow-up surveys will be conducted, and staff can modify the question, "Why do you take OC Flex?"
- The service was not meant just for transfers but to fill in the gaps for bus service in areas that were removed and that the numbers are doing what OCTA expected.
- Director Moreno referenced Slide 10 of the PowerPoint, questioned if the increase in ridership is only a trend, and recommended that the pilot program be extended to two years to collect accurate data.
- Concerns on OC Flex being a replacement for Uber and if not, how will it feed into OCTA's transit system.
- Director Davies appreciates OC Flex as a one-year pilot program because it is a more conservative approach and saves money. She also stated that mobility is important and there is a big difference in the safety of OC Flex drivers compared to Uber.
- A language preference and the passenger's occupation were not included in the marketing survey, and going forward, staff can make the survey more detailed.

A motion was made by Director Moreno, seconded by Director Davies, and declared passed by those present, to direct staff to complete the Board of Directors-approved one-year pilot of the OC Flex project and report back to the Board of Directors.

## **14. Innovation Update**

Kurt Brotcke, Director of Strategic Planning, provided a PowerPoint presentation for this item as follows:

- Overview;
- Framework and Key Questions;
- Innovation Goals;
- Industry Interviews Since November 2018;
- Trends to Watch (partial list);
- Monitor;
- Shape;
- Test (all underway); and
- Next Steps.

No action was taken on this receive and file information item.

## **15. Project V - Mission Viejo Route 182 Update**

Ken Phipps, DEO, provided opening comments and introduced Joe Alcock, Section Manager of Local Programs, who presented this item as follows:

- Background on Project V ridership report, how this item was provided at the Transit Committee on February 14, 2019, and how staff was directed to address the City of Mission Viejo's (City) concerns for not meeting the minimum performance.
- In February 2019, a formal response letter was issued to the City, and Darrell E. Johnson, Chief Executive Officer, and staff met with the City executives.
- In early April 2019, the City submitted a proposal to restructure the service; OCTA reviewed it, and if approved by the Board of Directors (Board), the proposal would implement several changes to the service starting in June 2019.
- Highlighted staff's recommendations.
- If the Board approves these recommendations, the existing cooperation agreement would need to be renegotiated.
- Staff will continue to provide regular scheduled ridership updates to the Transit Committee and if the City is successful, the service would be allowed to continue throughout fiscal year 2022-23.
- Mark Chagnon, Public Work Director, from the City was introduced and available for questions.

**15. (Continued)**

A discussion ensued regarding:

- The City's responsibilities will include: working with OCTA to come up with a Request for Proposals and having a third-party service provider take over operation of the service.
- The City's Public Works department will implement the changes, and the extra costs are yet to be determined.
- Director Davies thanked OCTA and the City staff for coming together on an extension for Project V funding.
- Director Moreno echoed Director Davie's remarks and asked if the data was clarified.
- The City's service had several moving parts including: incorporating changes to the routing, technical issues with the data and the Geographic Information System, driver shortage, and probing issues.
- The City is more comfortable with the data collection process since they will be responsible for working with the service provider on the ridership count.

A motion was made by Director Davies, seconded by Director Moreno, and declared passed by those present, to:

- A. Authorize an extension of Project V funding for the City of Mission Viejo's Route 182 service subject to meeting the required minimum service standard of ten boardings per revenue vehicle hour by June 30, 2020, and the City of Mission Viejo agreeing to take on operations and administration of the service starting by October 2019.
- B. Authorize the Chief Executive Officer to negotiate and execute a new cooperative agreement with the City of Mission of Viejo to implement these changes.
- C. Direct staff to continue reporting on the City of Mission Viejo's Route 182 performance as part of regularly scheduled Project V ridership updates.
- D. Cancel the funding extension, effective no later than August 15, 2020, if the City of Mission Viejo-led revised service fails to achieve the required minimum service standard by June 30, 2020.

## **Discussion Items**

### **16. Chief Executive Officer's Report**

Ken Phipps, DCEO, reported on the following:

- May is National Bike Month and next Thursday, May 16<sup>th</sup> is a three-mile bike ride and rally from the Orange Metrolink Station at 7:30 a.m. to the OCTA Headquarters.
- OCTA will host a series of community hearings to get input on the proposed bus service changes for October 2019 and February 2020, as a part of the OC Bus 360° plan. The community hearings will take place at the:
  - Brea Community Center on Tuesday, May 21<sup>st</sup> at 6:00 p.m.;
  - Santa Ana Senior Center on Wednesday, May 22<sup>nd</sup> at 5:30 p.m.; and
  - Irvine Lakeview Senior Center on Thursday, May 23<sup>rd</sup> at 6:00 p.m.

There will also be a public hearing at the Monday, June 10<sup>th</sup> Board meeting.

- This summer, there will be a promotional pass called the Sun & Fun Pass and it will cost \$49 for 30 days of travel on OC Bus. It is a 30 percent savings, available from June 1<sup>st</sup> through August 31<sup>st</sup>.
- The students at Fullerton College will be joining in the College Pass program and the students passed it by 89 percent. The College Pass is free for the first year and will be funded by student fees the following two years. The College Pass Program will begin in the fall.
- TSOC will have intern opportunities through OCTA's participation in the High School Internship Program with the City of Anaheim's Innovative Mentoring Experience.

### **17. Committee Members' Reports**

Director Davies requested that OCTA's outreach attend the summer concerts in Aliso Viejo, Laguna Niguel, and Mission Viejo to promote the OC Flex.

Director Shaw stated he will be in Washington, D.C., next week and Director Jones will chair the next Board meeting. He also encouraged OCTA to apply for any funding opportunities, in regards to President Trump and House Speaker Pelosi agreeing, in concept, to a \$2 trillion infrastructure package.



**18. Closed Session**

There were no Closed Session items scheduled.

**19. Adjournment**

The next regularly scheduled meeting of this Committee will be held at **9:00 a.m. on Thursday, June 13, 2019**, at the Orange County Transportation Authority Headquarters, 550 South Main Street, Board Room - Conference Room 07, Orange, California.

ATTEST

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Andrew Do  
Committee Chairman

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Sahara Meisenheimer  
Deputy Clerk of the Board





***June 13, 2019***

**To:** Transit Committee

**From:** Darrell E. Johnson, Chief Executive Officer 

**Subject:** Agreement for Bus Hoist Replacement at the Santa Ana Bus Base

***Overview***

The steam clean bus hoist at the Santa Ana Bus Base is in need of replacement. Bids were received in accordance with the Orange County Transportation Authority's public works projects. Board of Directors' approval is requested to execute the agreement.

***Recommendation***

Authorize the Chief Executive Officer to negotiate and execute Agreement No. C-9-1178 between the Orange County Transportation Authority and Autolift Services, Inc., the lowest responsive, responsible bidder, in the amount of \$149,300, for bus hoist replacement at the Santa Ana Bus Base.

***Discussion***

The Orange County Transportation Authority (OCTA) completed construction of the Santa Ana Bus Base in 2005. The bus hoist in the bus steam clean building has been taken out of service due to severe deterioration and is in need of replacement. The project consists of installation of a new heavy duty flush mount drive-on bus hoist, remote control panel with electric hydraulic power and control unit, and all related work to bring the bus steam clean facility into a state of good repair.

***Procurement Approach***

This procurement was handled in accordance with OCTA's Board of Directors-approved procedures for public works projects. These procedures, which conform to both federal and state requirements, require that contracts are awarded to the lowest responsive, responsible bidder after a sealed bidding process.

**Agreement for Bus Hoist Replacement at the Santa Ana Bus Base** *Page 2*

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Invitation for Bids (IFB) 9-1178 was released on April 8, 2019, through OCTA's CAMM NET system. The project was advertised on April 8 and April 15, 2019, in a newspaper of general circulation. A pre-bid conference was held on April 17, 2019, and was attended by six firms. Four addenda were issued to make available the pre-bid conference registration sheets and presentation, respond to approved equal requests, as well as issue clarifications related to the IFB. On May 8, 2019, four bids were received and publicly opened.

All bids were reviewed by staff from OCTA's Contracts Administration and Materials Management and Facilities Engineering departments to ensure compliance with the contract terms and conditions, and technical specifications. The list of bidders and bid amounts is presented below:

<u>Firm and Location</u>	<u>Bid Amount</u>
Autolift Services, Inc. Los Alamitos, California	\$149,300
Southwest Lift and Equipment, Inc. San Bernardino, California	\$170,941
Makai Solutions Gardena, California	\$197,365
Air and Lube Systems, Inc. Sacramento, California	\$245,610

The engineer's estimate for the project was \$300,000. The recommended firm's bid is about 50 percent lower than the engineer's estimate and is considered by staff to be fair and reasonable. The estimate included general conditions and safety requirements. The bidder is a vehicle lift installation company self-performing all work which eliminates subcontractor layered markups. All four bids were under the engineer's estimate, and the lowest bid is 14.5 percent below the second-lowest bid. The bidder is required to submit a performance bond prior to contract execution, guaranteeing contract performance. In addition, the bidder has high ratings from references for similar projects with local government agencies.

State law requires award to the lowest responsive, responsible bidder. As such, staff recommends award to Autolift Services, Inc., the lowest responsive, responsible bidder, in the amount of \$149,300, for bus hoist replacement at the Santa Ana Bus Base.

**Fiscal Impact**

The project is funded through local transportation funds and can be accommodated in OCTA's Fiscal Year 2018-19 Budget, Capital Programs Division, Account 1722-9022-D3126-KWH.

**Summary**

Based on the information provided, staff recommends the Board of Directors authorize the Chief Executive Officer to negotiate and execute Agreement No. C-9-1178 between the Orange County Transportation Authority and Autolift Services, Inc., the lowest responsive, responsible bidder, in the amount of \$149,300, for bus hoist replacement at the Santa Ana Bus Base.

**Attachment**

None.

**Prepared by:**



George Olivo, P.E.  
Program Manager  
(714) 560-5872

**Approved by:**



James G. Beil, P.E.  
Executive Director, Capital Programs  
(714) 560-5646



Virginia Abadessa  
Director, Contracts Administration and  
Materials Management  
(714) 560-5623



**June 13, 2019**

**To:** Transit Committee

**From:** Darrell E. Johnson, Chief Executive Officer

**Subject:** Agreements for the Intelligent Transportation Management System Upgrade

**Overview**

Orange County Transportation Authority utilizes an Intelligent Transportation Management System to provide dispatch communications, vehicle locators, data interface, and other services for the countywide bus system. Some of the hardware and software components have reached the end of their useful life and need to be upgraded or replaced. Four new agreements are necessary to upgrade the system to ensure continued transit operations in the future.

**Recommendations**

- A. Authorize the Chief Executive Officer to negotiate and execute sole source Agreement No. C-9-1120 between the Orange County Transportation Authority and Conduent Transport Solutions, Inc., in the amount of \$985,733, to upgrade to the most current OrbCAD core build software and hardware.
- B. Authorize the Chief Executive Officer to negotiate and execute sole source Agreement No. C-9-1055 between the Orange County Transportation Authority and Conduent Transport Solutions, Inc., in the amount of \$137,056, to upgrade to the most current ArcGIS map version of the software.
- C. Authorize the Chief Executive Officer to negotiate and execute sole source Agreement No. C-9-1060 between the Orange County Transportation Authority and Aviat U.S., Inc., in the amount of \$68,898, for the purchase of equipment, licenses, and services to upgrade the microwave system.

- D. Authorize the Chief Executive Officer to negotiate and execute Agreement No. C-9-1104 between the Orange County Transportation Authority and Nth Generation Computing, Inc., the lowest responsive, responsible bidder, in the amount of \$388,062, for the purchase of computing hardware and computer storage equipment.

***Discussion***

In 2011, the Orange County Transportation Authority (OCTA) purchased the computing system hardware and software (OrbCAD and ArcGIS) and current communications hardware (Microwave) for the Intelligent Transportation Management System (ITMS) to support the ITMS computer-aided dispatch/automated vehicle location (CAD/AVL) systems. OCTA needs to upgrade the core software and hardware for the ITMS, as well as upgrade the current communications hardware and computing system hardware. All of these systems have reached their end of life and support, and an upgrade is required to maintain and support OCTA's transit systems for the future.

The OrbCAD software is the core program for the ITMS, and it needs to be upgraded to remain supportable. In addition, the upgrade of the OrbCAD software will allow the use of Voice over Internet Protocol (VOIP) technology to replace OCTA's existing radio system that has been discontinued by the manufacturer. The plan is for OCTA to move directly into a 12-vehicle pilot on the VOIP technology upon completion of the ITMS upgrade to enable a future migration of OCTA's existing radio system to VOIP technology for the entire fleet.

Used by dispatchers for both fixed-route and paratransit operations, the ArcGIS software provides a visual map of the County of Orange and surrounding areas. OCTA purchased the current ArcGIS map software as part of the ITMS in 2011, to support the radio communication systems. As part of the ITMS upgrade, OCTA is required to upgrade its current ArcGIS map software to the newest version as the current version has reached its end of life. The new version of the ArcGIS software will provide updated maps for dispatchers for fixed-route operations and paratransit operations, as well as updated maps used by paratransit drivers for turn-by-turn directions.

OCTA's microwave equipment is hosted at the County of Orange's Loma Ridge Station, which provides a connection to OCTA's Garden Grove and Construction Circle bases. OCTA is seeking to upgrade the microwave links between these three sites, which will deliver backbone connectivity that matches and/or exceeds the ethernet cable speed required between the three sites, as well as increases the reliability and maintainability of the current system infrastructure. This upgrade to OCTA's microwave equipment is a prerequisite requirement that

must be completed before the planned ITMS upgrade so that OCTA has the capacity to simultaneously support both the old and the new ITMS computing infrastructures.

OCTA originally purchased the current computing hardware and computer storage equipment for the ITMS in 2011 to support the CAD/AVL systems. As part of the ITMS upgrade, OCTA is required to purchase new computing hardware and computer storage equipment to replace existing equipment that has reached its end of life. OCTA will move to a more modern hyper-converged virtual environment, which increases the reliability and redundancy of the equipment.

These procurements are also a prerequisite for the OC Streetcar. A separate sole source procurement with Conduent Transport Solutions, Inc. (Conduent) for the OC Streetcar is in development, which will be presented at a future OCTA Board of Directors (Board) meeting. This separate sole source agreement will be for the integration and engineering of the Siemens streetcars with the Conduent provided CAD/AVL system along with providing the hardware and installation for eight streetcars. Implementing the Conduent system allows the OCTA to have one common CAD/AVL system across its entire fleet, both bus and streetcar.

### ***Procurement Approach***

The procurements for the upgrades to the OrbCAD, ArcGIS, and microwave equipment were handled in accordance with OCTA's Board-approved policies and procedures for a sole source procurement.

Conduent is the exclusive owner of the OrbCAD and ArcGIS software and Aviat U.S., Inc. (Aviat) is the exclusive owner of the microwave equipment. Conduent and Aviat have proprietary rights to their respective technologies and are the sole entities able to market and sell their proprietary technologies, as they do not have agreements that allow resale through other vendors. Therefore, Conduent and Aviat meet OCTA's criteria for a sole source procurement, and based on their technical ability and financial status, Conduent and Aviat are deemed responsible.

Conduent and Aviat's proposals were reviewed by staff from the Contracts Administration and Materials Management (CAMP) and Information Systems (IS) departments to ensure compliance with the contract terms and conditions, as well as the technical requirements.

In accordance with OCTA's sole source procurement procedures, a sole source over \$50,000 requires OCTA's Internal Audit Department to conduct a price review of the vendor's proposed pricing. Conduent and Aviat each provided detailed pricing breakdowns; however, as is common with these types of vendors, the firms were not able to provide detailed cost breakdowns in a format that would be required in order to perform a price review. As a result, staff used the information available to analyze the reasonableness of the quoted prices. Staff determined that quoted pricing from both firms is consistent with contract pricing and quotes with other government agencies for similar services, which are comparable in scope, requirements, and technical specifications. In addition, Aviat's proposed pricing is consistent with the pricing contained in the National Association of State Procurement Officers price listing. Furthermore, the quoted pricings are lower than the project manager's estimates for both projects. Therefore, management has concluded that the quoted prices from both Conduent and Aviat are deemed fair and reasonable.

The procurement for the purchase of computing hardware and computer storage equipment was handled in accordance with OCTA's Board-approved procedures for materials and equipment greater than \$50,000. These procedures, which conform to both federal and state requirements, require that contracts are awarded to the lowest responsive, responsible bidder after a sealed bidding process.

Invitation for Bids 9-1104 was released on March 13, 2019, through OCTA's CAMM NET system. The project was advertised on March 13 and 20, 2019, in a newspaper of general circulation. One addendum was issued to respond to written questions received. On April 3, 2019, two bids were received and publicly opened.

All bids were reviewed by staff from both CAMM and IS departments to ensure compliance with the contract terms and conditions, and technical specifications. The list of bidders and bid amounts is presented below:

<u>Firm and Location</u>	<u>Bid Amount</u>
Nth Generation Computing, Inc. San Diego, California	\$388,062.46
Consiliant Technologies LLC Irvine, California	\$463,754.52

The recommended firm's bid is approximately four percent lower than the OCTA project manager's estimate and is considered by staff to be fair and reasonable.

**Fiscal Impact**

The Orange County Transportation Authority's Fiscal Year 2018-19 Finance and Administration Budget can accommodate these projects, in account strings 1288-9028-D111-17X, 1288-7519-D1111-17Y, and 1288-7519-D1111-17Z.

***Summary***

Based on the information provided, staff recommends the Board authorize the Chief Executive Officer to negotiate and execute four agreements necessary to facilitate the upgrade of OCTA's ITMS. This upgrade is necessary as equipment has reached its end of life and will ensure effective communication for both bus and OC Streetcar operations into the future.

***Attachment***

None.

**Prepared by:**



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**Approved by:**



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Andrew Oftelie  
Chief Financial Officer  
Finance and Administration  
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Director, Contracts Administration and  
Materials Management  
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**June 13, 2019**

**To:** Transit Committee

**From:** Darrell E. Johnson, Chief Executive Officer

**Subject:** Measure M2 Project W Safe Transit Stops – 2019 Programming Recommendations

### **Overview**

In October 2018, the Orange County Transportation Authority Board of Directors authorized the issuance of a second Measure M2 Project W Safe Transit Stops Program call for projects. Application reviews are now complete and programming recommendations are presented for Board of Directors' approval.

### **Recommendations**

- A. Approve the award of \$.987 million in 2019 Project W Safe Transit Stops Program funds to seven eligible local agencies and the Orange County Transportation Authority.
- B. Cancel the programming of \$.370 million in 2014 Measure M2 Project W Safe Transit Stops funds for Orange County Transportation Authority-initiated improvements.

### **Background**

Within Measure M (M2), Project W provides funding for passenger amenity/safety improvements at the 100 busiest bus stops in Orange County. Project W's first call for projects (call) occurred in 2014 and, since that time, the program has provided bus stop amenity/safety improvements at 43 of the busiest bus stops in Orange County.

In 2018, the Orange County Transportation Authority's (OCTA) Board of Directors (Board) directed staff to evaluate the performance of Project W, determine eligible agencies' interest in participating in a second call, and review and modify, as appropriate, the Comprehensive Transportation Funding Programs (CTFP) Guidelines for Project W.

Based upon lessons learned from both the first call, as well as input provided by eligible local agencies, the CTFP Project W Guidelines were revised by the Board in October 2018. Key changes included updates to the eligibility list of the 100 busiest bus stops, allowing Project W to fund design work (with appropriate local match commitments), modifying the definition of high-load bus stops<sup>1</sup>, increasing the maximum funding cap (from \$30,000 up to \$35,000) for eligible high-load bus stops, and minor modifications to the list of eligible expenditures. As part of its approval of the revised CTFP Guidelines, the Board authorized the initiation of a 2019 call, making up to \$3 million available to eligible local agencies with the overall goal of improving the passenger experience with capital amenity/safety improvements at the 100 busiest bus stops (not previously improved through the 2014 call).

### ***Discussion***

The current 2019 Project W call was initiated on October 13, 2018, and the application period closed on December 21, 2018. In total, OCTA received 73 applications from nine local agencies including Anaheim, Costa Mesa, Fountain Valley, Laguna Hills, Mission Viejo, Orange, Santa Ana, Westminster, and OCTA. From January through May, staff reviewed each application and worked with local agencies, as necessary, to address technical issues, clarify scope descriptions, and refine final funding requests as appropriate.

This technical review process is now complete, and staff is recommending that a total of \$.987 million in M2 Project W funds be programmed to support bus stop amenity/safety improvements at 37 locations within seven eligible local agencies' and OCTA's jurisdiction (see below). Attachment A and Attachment B include stop-level details.

### **Summary of Programming Recommendations**

- Anaheim - \$480,000 at 18 stop locations;
- Costa Mesa - \$74,500 at three stop locations;
- Fountain Valley - \$35,000 at one stop location;
- Laguna Hills - \$35,000 at one stop location;
- Mission Viejo - \$34,500 at one stop location;
- Orange - \$98,300 at five stop locations;
- Westminster - \$100,000 at five stop locations, and
- OCTA – up to \$130,000 at three transportation centers with 19 stop locations.

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<sup>1</sup> Per CTFP Project W Guidelines, high-load bus stops are defined as "bus stops where eight or more passengers are waiting to board for an average of five minutes or more."

It also should also be noted that the City of Santa Ana (City) submitted 36 Project W funding request applications. However, based upon the Board's May 13, 2019 determination that the City is ineligible to receive net M2 revenues, these applications cannot be considered for funding at this time. The City will be able to compete for these funds in future calls. Additionally, receipt of M2 funds would depend upon reestablishment of City's eligibility to receive net M2 revenues.

Staff is also recommending that \$.370 million in Project W funds authorized during the 2014 Project W call be cancelled. These funds were originally programmed to support the regional "text4next" Program and were subsequently reprogrammed to support development of a mobile ticketing application. However, while completing this project, OCTA was able to secure other non-M2 grant sources, and the M2 Project W funds were never utilized. As a result, staff is requesting that these funds be returned to the Project W Program to support future calls.

#### Next Steps

If the Board approves these programming recommendations, staff will initiate execution of amendments to master funding agreements between OCTA and appropriate local agencies. As these projects advance, staff will monitor their status and project delivery through the semi-annual review process, which is reported to the Board on a biannual basis.

#### ***Summary***

Proposed programming recommendations for the 2019 Project W Safe Transit Stops call have been developed. Funding is recommended for seven eligible local agencies and OCTA, in an amount totaling \$.987 million, in M2 funds to support improvements at 37 of the busiest bus stops in Orange County. A previous 2014 call allocation of \$.370 million to OCTA is also requested to be canceled and returned to the program to support future calls.

***Attachments***

- A. 2019 Project W Programming Recommendations Listing
- B. 2019 Project W Programming Recommendations

**Prepared by:**



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**Approved by:**



Kia Mortazavi  
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## 2019 Project W Programming Recommendations Listing

	City	Stop ID Number	Project Location	Proposed Scope	Bus Stop Type (Normal Load/ High Load)
1	Anaheim	247	Harbor Boulevard/East Shuttle Area	Design, replace existing benches with alternative seating to accommodate up to 36 riders.	High Load
2	Anaheim	240	Harbor Boulevard/Lincoln Avenue	Design, install new bus shelter/shade structure, replace existing benches with alternative seating to accommodate up to 12 riders, and sidewalk improvements.	High Load
3	Anaheim	234	Harbor Boulevard/La Palma Avenue	Design, install new bus shelter/shade structure, replace existing benches with alternative seating to accommodate up to 8 riders.	High Load
4	Anaheim	486	Lincoln Avenue/State College Boulevard	Design, install new bus shelter/shade structure, replace existing benches with alternative seating to accommodate up to 12 riders.	High Load
5	Anaheim	667	State College Boulevard/La Palma Avenue	Design, replace existing benches with alternative seating to accommodate up to 12 riders.	Normal Load
6	Anaheim	218	Harbor Boulevard/East Shuttle Area	Design, install alternative seating to accommodate up to 12 riders.	High Load
7	Anaheim	670	State College Boulevard/Lincoln Avenue	Design, install bus shelter, replace existing benches with alternative seating to accommodate up to 8 riders.	Normal Load
8	Anaheim	216	Harbor Boulevard/Katella Avenue	Design, install alternative seating to accommodate up to 12 riders.	Normal Load
9	Anaheim	283	Katella Avenue/Harbor Boulevard	Design, install alternative seating to accommodate up to 12 riders.	High Load
10	Anaheim	402	La Palma Avenue/State College Boulevard	Design, install bus shelter/shade structure, replace existing benches with alternative seating to accommodate up to 12 riders.	High Load
11	Anaheim	225	Harbor Boulevard/Lincoln Avenue	Design, install bus shelter/shade structure, replace existing benches with alternative seating to accommodate up to 8 riders.	Normal Load
12	Anaheim	111	Beach Boulevard/Lincoln Avenue	Design, install bus shelter/shade structure, provide alternative seating to accommodate up to 6 riders, and install trash receptacle(s).	Normal Load
13	Anaheim	250	Harbor Boulevard/Katella Avenue	Design, provide alternative seating to accommodate up to 12 riders.	Normal Load
14	Anaheim	494	Lincoln Avenue/Harbor Boulevard	Design, install bus shelter/shade structure, replace existing benches with alternative seating to accommodate up to 12 riders, and minor sidewalk repairs.	High Load
15	Anaheim	212	Harbor Boulevard/Chapman Avenue	Design, replace existing benches with alternative seating to accommodate up to 12 riders.	Normal Load
16	Anaheim	328	La Palma Avenue/Euclid Street	Design, replace existing benches with alternative seating to accommodate up to 12 riders.	Normal Load

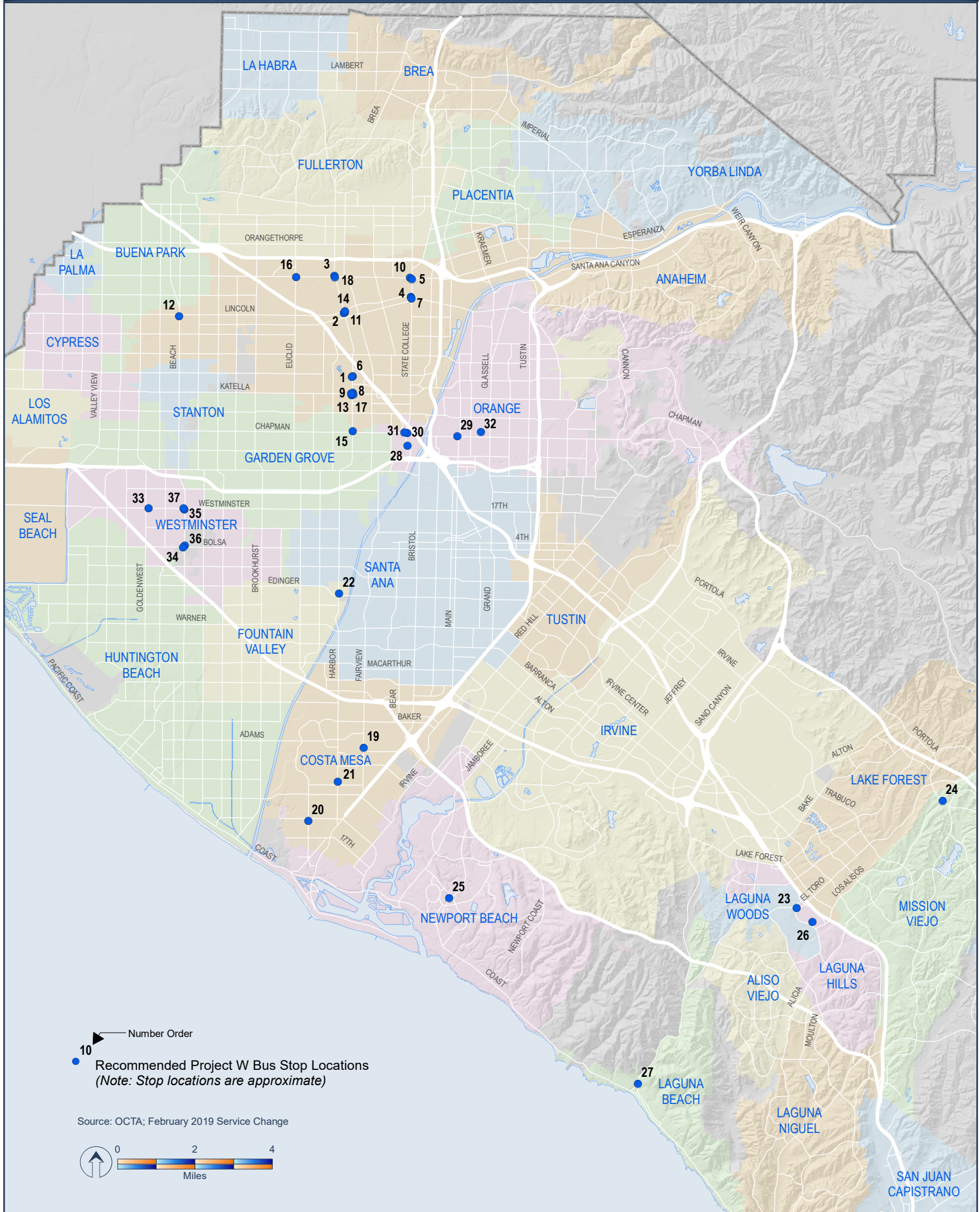
### 2019 Project W Programming Recommendations Listing

	City	Stop ID Number	Project Location	Proposed Scope	Bus Stop Type (Normal Load/ High Load)
17	Anaheim	268	Katella Avenue/Harbor Boulevard	Design, provide alternative seating to accommodate up to 12 riders.	Normal Load
18	Anaheim	332	La Palma Avenue/Harbor Boulevard	Design, replace existing benches with alternative seating to accommodate up to 12 riders.	Normal Load
19	Costa Mesa	1173	Fairview Road/Arlington Drive	Install 2 new shelters with 2 benches and 2 trash receptacles (per shelter), and minor sidewalk improvements.	High Load
20	Costa Mesa	1293	Placentia Avenue/West 19th Street	Install 1 new shelter with 2 new benches and 2 trash receptacles, and minor sidewalk improvements.	Normal Load
21	Costa Mesa	1196	Harbor Boulevard/Wilson Avenue	Install 1 new shelter with 2 new benches and 2 trash receptacles, and minor sidewalk improvements.	Normal Load
22	Fountain Valley	2071	Harbor Boulevard/Edinger Avenue	Replace existing shelter complete with new seating, waste receptacle, advertising displays, bus shelter lighting, and minor sidewalk improvements.	High Load
23	Laguna Hills	3910	El Toro Road/Paseo de Valencia	Replace shelter roof and provide solar-powered roof, replace existing benches with alternative seating features under and outside of the shelter, provide 1 handicap space with markings for a wheelchair, replace trash receptacles, replace 2 bike racks with more space efficient bike racks, and minor sidewalk improvements.	High Load
24	Mission Viejo	4816	Los Alisos Boulevard /Santa Margarita Parkway	Install second shelter with illuminated ad display, replace waste receptacles with new covered receptacles, sidewalk improvements to create second ADA boarding area.	High Load
25	OCTA	Newport Beach Transit Center	Newport Beach Transit Center	Replace existing signage with better wayfinding signage for nine bus docks.	High Load
26	OCTA	Laguna Hills Transit Center	Laguna Hills Transit Center	Replace existing signage with better wayfinding signage for seven bus docks.	High Load
27	OCTA	Laguna Beach Transit Center	Laguna Beach Transit Center	Install new bus shelter, seating, signage, and upgrade lighting in support of 3 bus docks (with 8 passenger waiting areas).	High Load
28	Orange	5601	Northbound The City Drive/Justice Center	Install solar powered shelter with 1 bench and 1 trash receptacle.	Normal Load
29	Orange	5362	Westbound Chapman Avenue/Main Street	Install solar powered shelter with 1 bench and 1 trash receptacle.	Normal Load
30	Orange	5314	Eastbound Chapman Avenue/The City Drive	Install solar powered shelter with 2 benches and 1 trash receptacle.	High Load
31	Orange	5366	Westbound Chapman Ave/The City Drive	Install solar powered shelter with 1 bench and 1 trash receptacle.	Normal Load
32	Orange	7947	Orange Transportation Center/Dock # 2	Install solar powered shelter with 2 benches and 1 trash receptacle.	High Load
33	Westminster	7509	Westminster Boulevard/Goldenwest Street	Install new shelter, new benches, one trash receptacle, solar panels, and minor concrete work	Normal Load

### 2019 Project W Programming Recommendations Listing

	City	Stop ID Number	Project Location	Proposed Scope	Bus Stop Type (Normal Load/ High Load)
34	Westminster	7343	Bolsa Avenue/Beach Boulevard	Install new shelter, new benches, 1 trash receptacle, solar panels, and ad kiosk	Normal Load
35	Westminster	7334	Beach Boulevard/Westminster Boulevard	Install new shelter, new benches, 1 trash receptacle, solar panels, and ad kiosk.	Normal Load
36	Westminster	7325	Beach Boulevard/Bolsa Avenue	Install 2 new shelters, new benches, and solar panels	Normal Load
37	Westminster	7523	Westminster Boulevard/Beach Boulevard	Install new shelter, new benches, 1 trash receptacle, solar panels, and ad kiosk	Normal Load









***June 13, 2019***

**To:** Transit Committee

**From:** Darrell E. Johnson, Chief Executive Officer

**Subject:** Bristol Street Transit Corridor Study – University of California, Irvine Connection Options

### ***Overview***

The Orange County Transportation Authority initiated the Bristol Street Transit Corridor Study in October 2018. During the Board of Directors update on April 22, 2019, staff was directed to develop options to evaluate connections to the University of California, Irvine campus and University of California, Irvine Research Park in the City of Irvine. This report outlines three options for evaluating connections to the University of California, Irvine area.

### ***Recommendation***

Provide direction to staff on study options.

### ***Discussion***

In July 2018, the Orange County Transportation Authority (OCTA) Board of Directors (Board) approved the consultant selection for the Bristol Street Transit Corridor Study, which was initiated in October 2018. The current study is focused on Bristol Street between 17<sup>th</sup> Street and Sunflower Avenue, with potential connections to John Wayne Airport. One of the primary tasks in the scope of work is to develop six conceptual transit alternatives aimed at improving mobility in the corridor. Study limits were developed based on the analyses completed for the OC Transit Vision, the 20-year Transit Master Plan, and with input from the OCTA Board.

In April 2019, an initial study update was provided to the Transit Committee and the Board regarding the corridor definition, mobility needs, and study goals. During these meetings, staff was asked to consider amending the study to include connections to the University of California, Irvine (UCI) campus and UCI Research Park.

Studying the UCI segment is identified in the OC Transit Vision Action Plan as a priority for the medium-term (2023-2032). This staff report outlines potential options for studying the UCI segment as part of the current study and identifies key considerations for study segment phasing.

#### Phasing Considerations

The OC Transit Vision identified 11 opportunity corridors for transit improvements and made recommendations about segmenting some of the busiest portions of these corridors into individual transit corridor studies. Key consideration was given to (1) operating segments that could provide the highest mobility benefits and have stand-alone utility, (2) project concepts that would be financially feasible with the funding sources available, and (3) developing consensus among local jurisdictions with regard to alignment and technology options. Key phasing considerations, as well as some trade-offs of selecting shorter versus longer segments, are provided in Attachment A. In general, longer study segments add complexity in achieving the objectives stated above due to expanded range of land uses.

#### Current Transit Service to UCI

Today, the largest number of transit trips to/from the UCI campus occur on the Anteater Express shuttle service and occur within a two-mile radius of campus. OCTA serves the campus with two local routes, two community routes, a Metrolink Stationlink route, and an express route. UCI Transportation Services also provides carpool and carshare options for students, and complementary shuttles to the airport during holidays. Uber and Lyft rideshare services are also available.

The largest number of boardings on OCTA-operated routes occur on Route 79 (operating between the cities of Newport Beach and Tustin) and Route 59 (operating between the cities of Anaheim and Irvine). Transit trips between UCI and the Bristol Street corridor currently require a transfer between bus routes.

#### Potential Options

In response to the Board's request, three potential options for addressing connections to the UCI campus area have been outlined.

Option 1: No change – Maintain the current Bristol Study scope of work and agree to study the UC Irvine segment at a later date as determined by the Board.

Option 2: Extend two alternatives to UCI – Maintain the current study area and continue to develop six alternatives but ensure that two of the six alternatives include extensions to the UCI campus area. The development of the longer alternatives would require additional analysis and evaluation efforts. The contract budget would need to be augmented to allow for the additional work.

- Contract amendments that are less than 15 percent of the original contract value can be processed without Board approval. This could potentially be processed on a parallel timeline with current study efforts, limiting the schedule delays up to four months.
- Extending alternatives to the UCI campus area would extend the length of alternatives from seven to 8.6 miles to approximately 11 miles.
- Option 2 would add fewer work elements to the scope than Option 3, and would cost less and potentially have less schedule delays.
- Option 2 would not afford the Irvine area the full depth or benefits of a focused transit study as envisioned for in the Transit Master Plan.

Option 3: Amend study area and extend the timeline – Amend the Bristol Street Transit Corridor Study scope to extend the study area to include the UCI campus and other relevant locations, add three additional alternatives for development and evaluation, add six months of additional study time, including additional project development team meetings and additional outreach needs focused on the new study area.

- Requires Board approval for the scope amendment and would extend the study length by up to ten months (after allowing time for the contract amendment process), and potentially increases the contract cost by an estimated 30 percent, from \$538,158 to approximately \$700,000. There will need to be some work suspension while the amendment is processed.
- Study end date would be extended from June 2020 to spring 2021.
- Option 3 would provide the most comprehensive analysis of the John Wayne Airport to UCI segment.

Lastly, for Option 2 and Option 3, it will be important to understand the City of Irvine's level of interest in evaluating transit connections to the UCI campus area.

### Next Steps

Contingent on the Board's direction, staff will take appropriate steps to amend the scope of work or proceed with the current study scope. Should the Board choose to amend the study scope, and the amendment exceeds 15 percent of the original contract value, then staff will aim to return to the Board in August for approval.

***Summary***

OCTA initiated the Bristol Street Transit Corridor Study in October 2018. This report outlines three potential options for amending the study scope to evaluate a connection to the UCI campus area. Contingent on the Board's direction, staff will take appropriate steps to amend the study or proceed with the current study scope.

***Attachment***

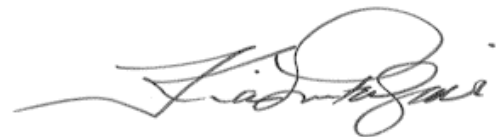
- A. Bristol Street Transit Corridor Study – Phasing Considerations

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**Approved by:**



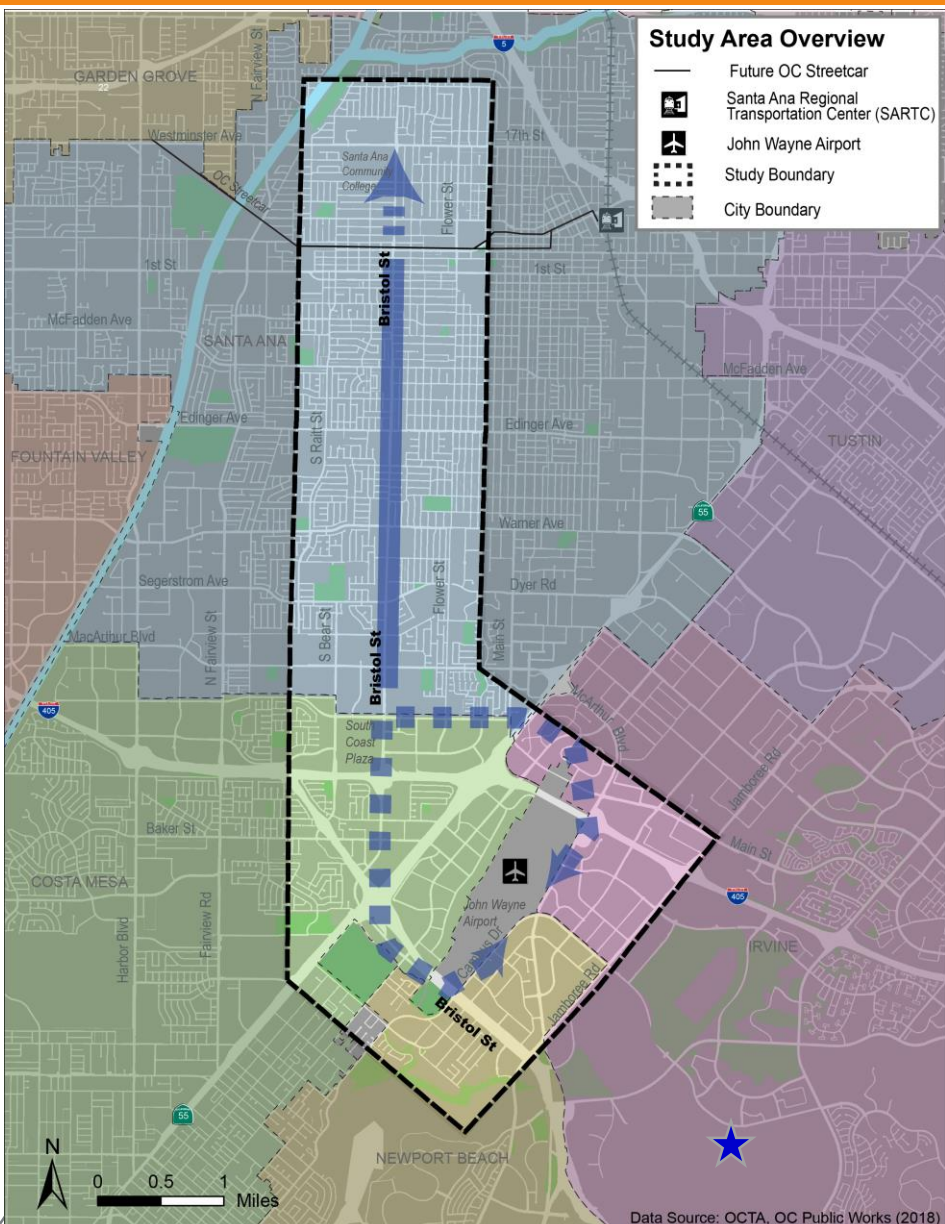
Kia Mortazavi  
Executive Director, Planning  
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## Bristol Street Transit Corridor Study – Phasing Considerations

Consideration	Shorter Segments	Longer Segments
<b>Project Benefits</b>	Focus benefits on area with highest transit needs first. Strong project has higher chance of receiving grant funding.	Longer segments may bring benefits to more people sooner. But project benefits and competitiveness may be diluted if some sections of routing are not strong.
<b>Project Costs/Constructability</b>	Smaller projects have more options for funding including the Federal Transit Administration Small Starts process.	Expensive alternatives could exceed capacity of current OC Go funding. Project would compete for funding with larger federal transit projects.
<b>Political Support</b>	Need to develop consensus among local jurisdictions on alignment and technology options.	Can be more difficult to develop consensus as the length and complexity of alternatives is increased.
<b>Stakeholder/Public Support</b>	Focused outreach and stakeholder meetings on a few alignments and technology options.	Additional stakeholders and more alternatives can make developing consensus around one alternative more difficult.

# Bristol Street Transit Corridor Study – University of California, Irvine Connection Options

# Background

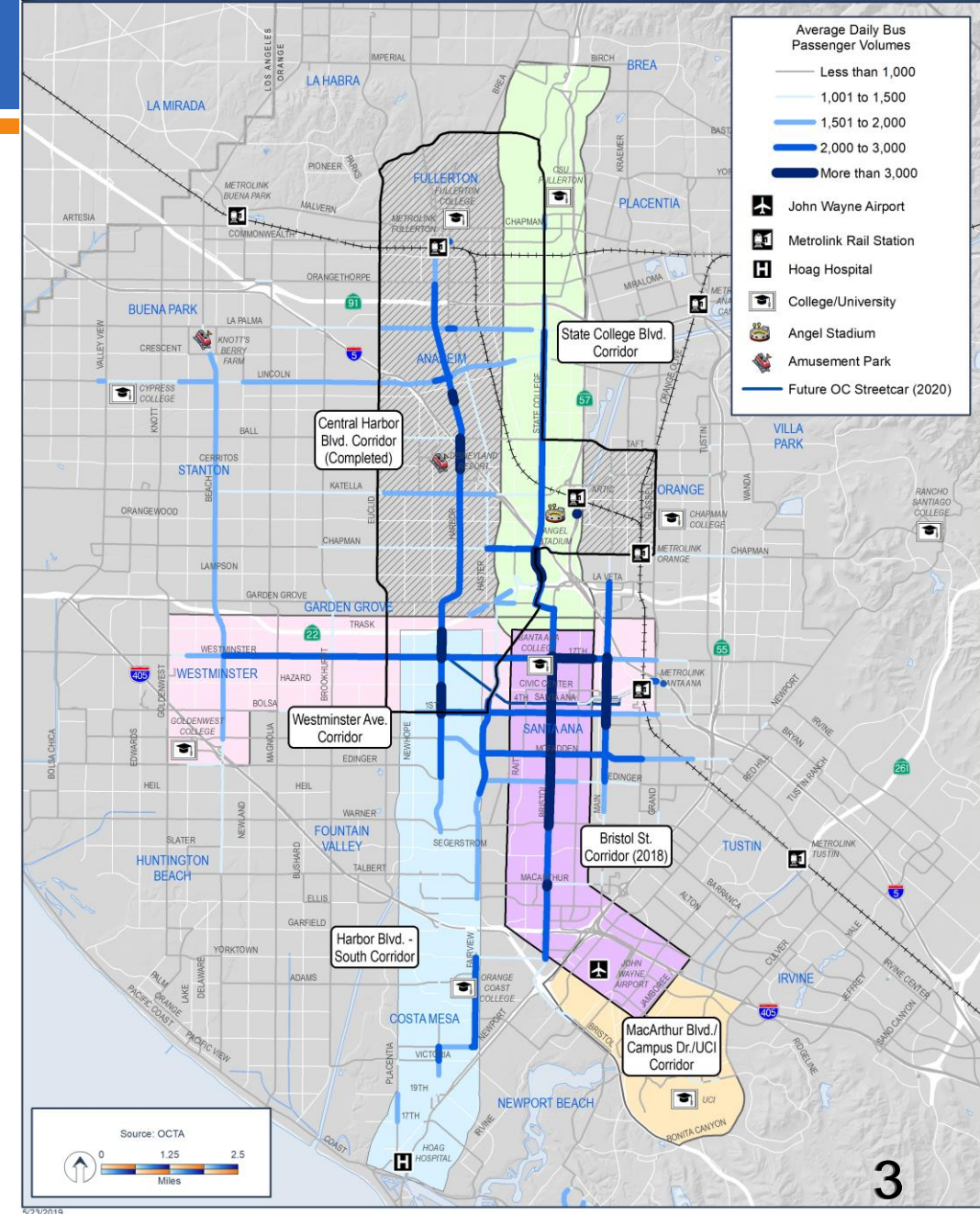
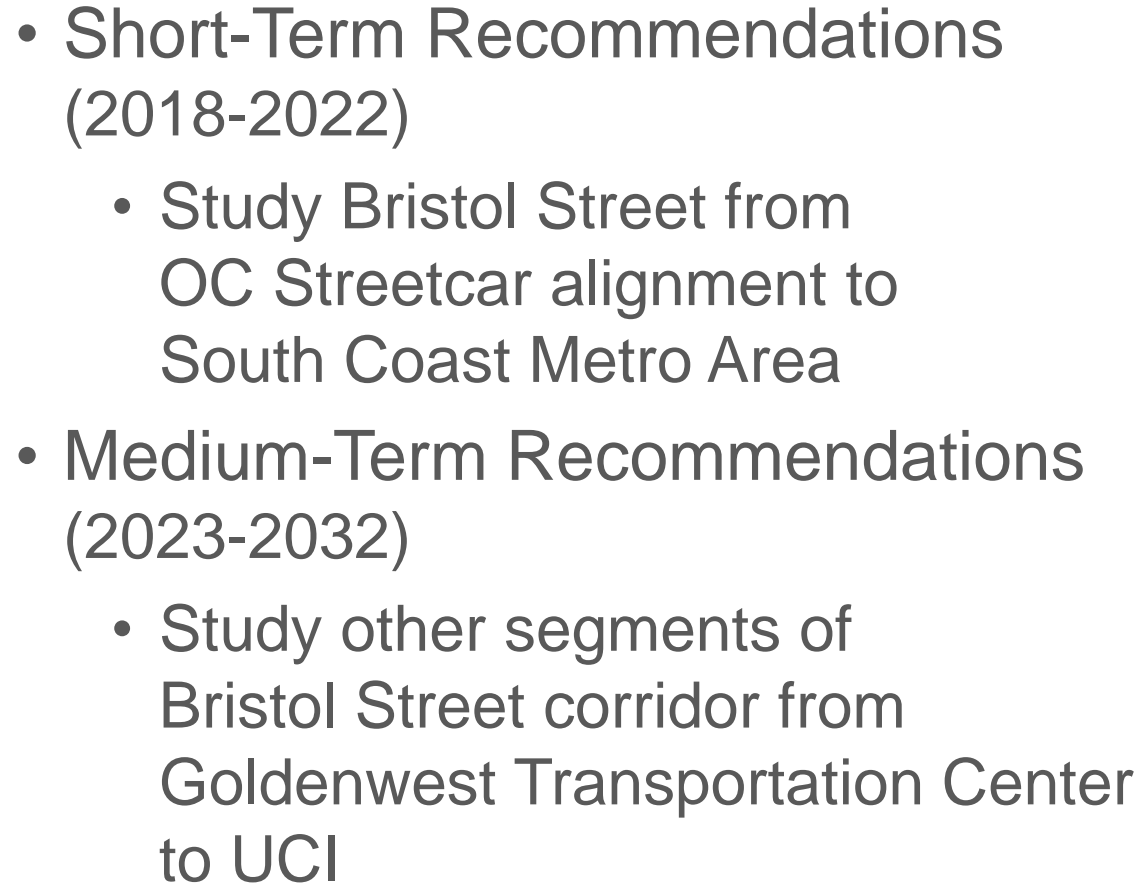


- Consultant selection approved in July 2018
- Study segment selected based on OC Transit Vision analysis and with input from Board
- Current limits focus on busiest five-mile segment of Bristol Street and connections to John Wayne Airport
- Board request: provide options for including a connection to UCI and UCI Research Park

Board – Board of Directors  
UCI – University of California, Irvine



## Current and Future Transit Corridor Studies





# Phasing Considerations

Consideration	Shorter Segments	Longer Segments
<b>Project Benefits</b>	Focus benefits on area with highest transit needs first. Strong project has higher chance of receiving grant funding.	Longer segments may bring benefits to more people sooner. But project benefits and competitiveness may be diluted if some sections of routing are not strong.
<b>Project Costs/ Constructability</b>	Smaller projects have more options for funding including the Federal Transit Administration Small Starts process.	Expensive alternatives could exceed capacity of current OC Go funding. Project would compete for funding with larger federal transit projects.
<b>Political Support</b>	Need to develop consensus among local jurisdictions on alignment and technology options.	Can be more difficult to develop consensus as the length and complexity of alternatives is increased.
<b>Stakeholder/ Public Support</b>	Focused outreach and stakeholder meetings on a few alignments and technology options.	Additional stakeholders and more alternatives can make developing consensus around one alternative more difficult.

# Existing Service to UCI Area



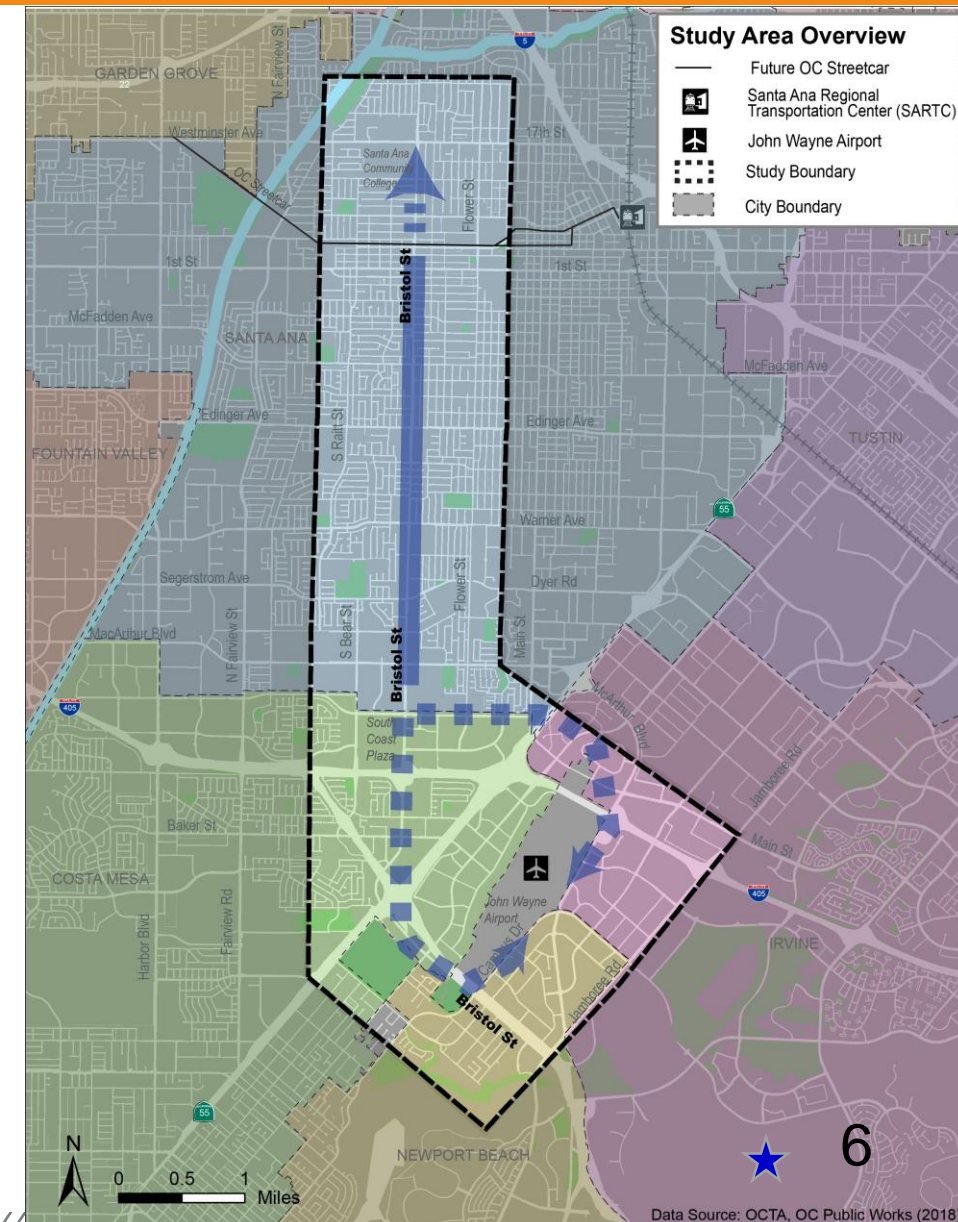
## Existing Routes

- Local: 59 & 79 (20 minutes)
  - Community: 167 & 178 (60 minutes)
  - OC Express: 213 (4 directional trips)
  - Metrolink: 473 (6-8 direction trips)
- 
- Anteater Express
  - Holiday shuttles
  - Uber/Lyft
  - Zip Car
  - Waze Carpool
  - Zim ride

# Options for Studying a UCI Connection

## Option 1: No change

- Maintain current study area and scope.
- Conduct a separate UCI corridor study at a later date in the medium-term, or at the Board's discretion.
- Estimated cost for separate UCI study: \$200,000 - \$250,000

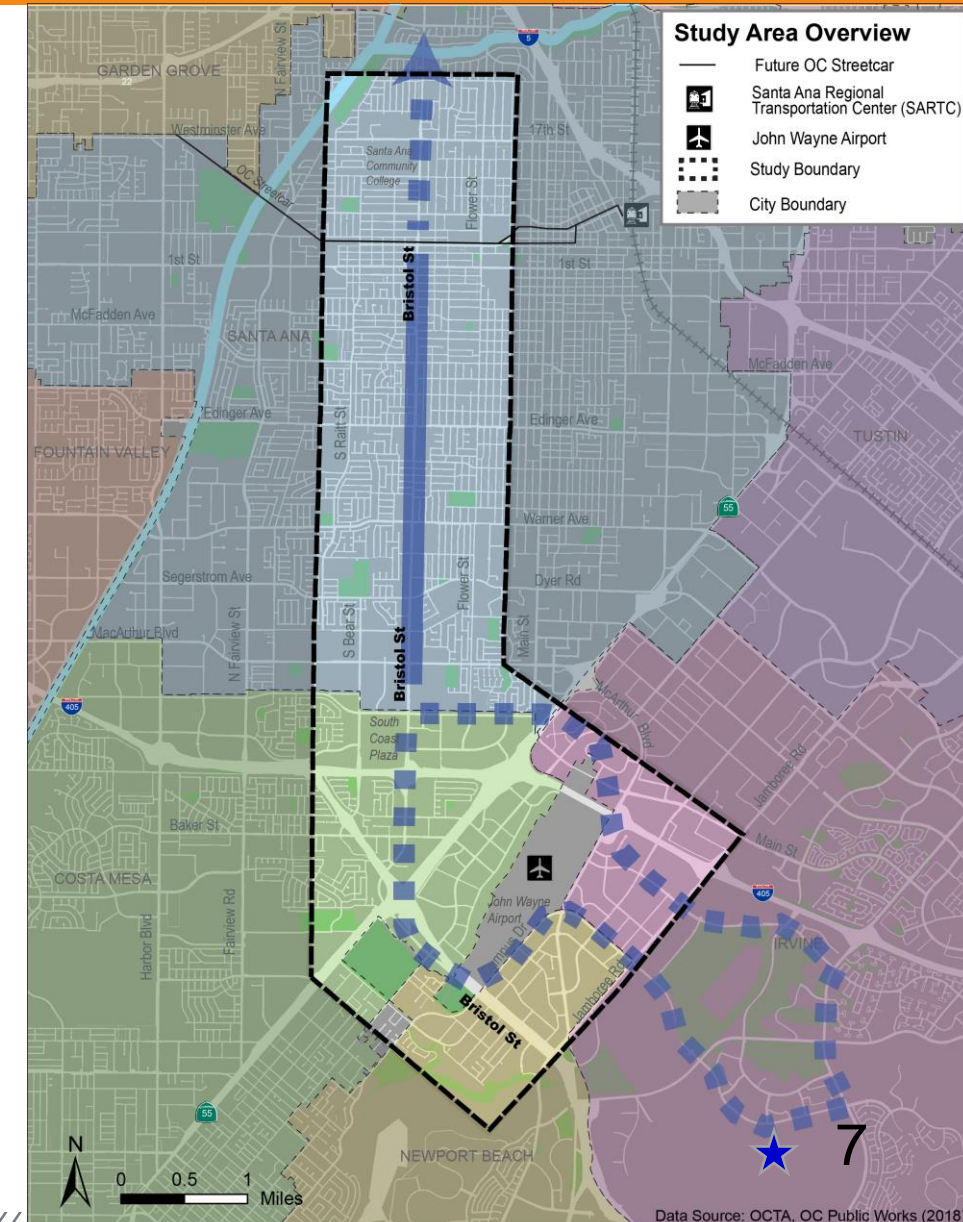




# Options for Studying a UCI Connection

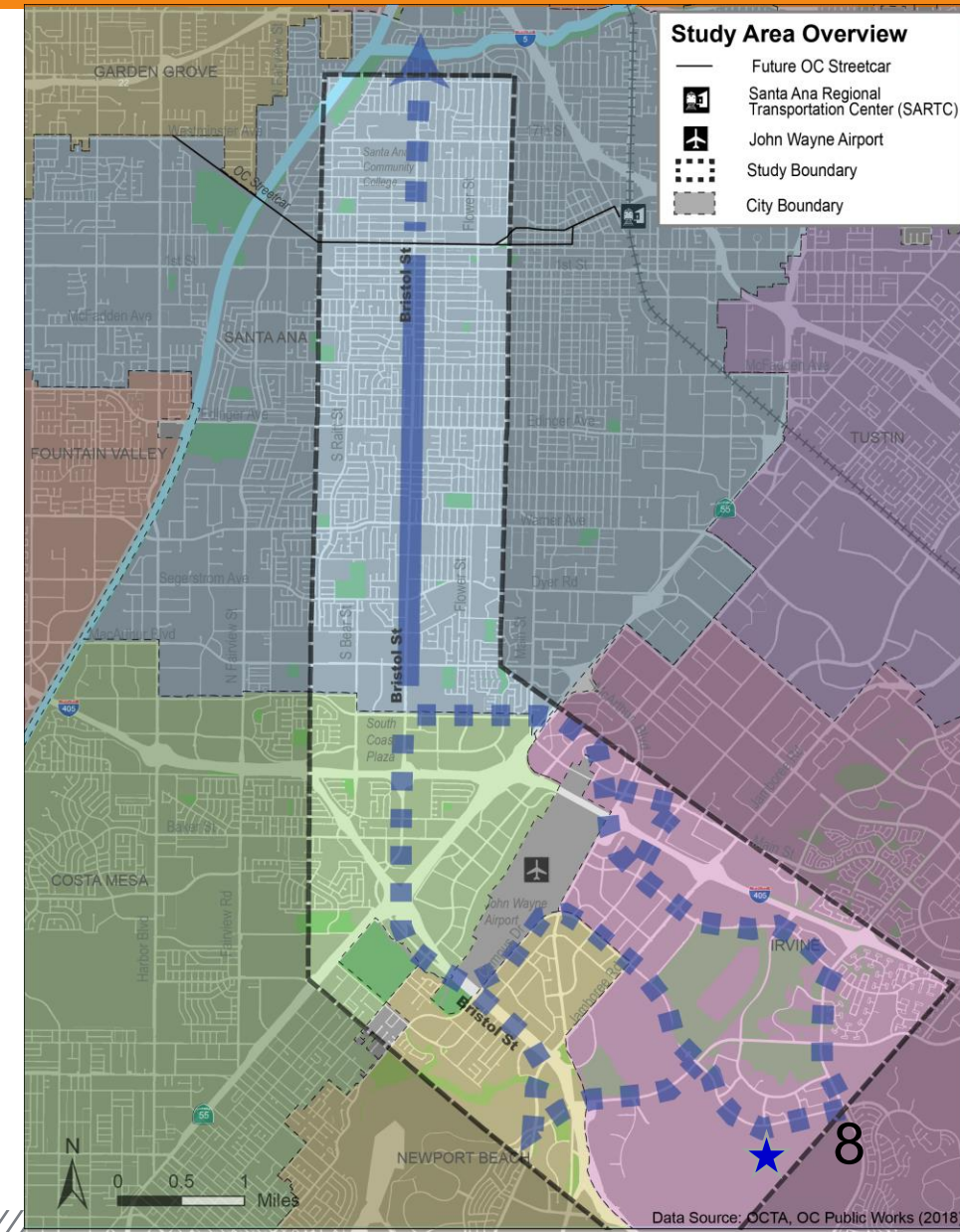
## Option 2: Extend two alternatives to UCI

- Maintain the current study area but develop two of the six alternatives with connections to UCI area
- Amend the contract as needed
- Limit schedule delays to 2-4 months
- Less comprehensive than Option 3, provides two alternatives with connections to UCI while limiting schedule delays and cost increase



# Options for Studying a UCI Connection

- Option 3: Amend study area and extend timeline
  - Amend study area to include UCI campus and nearby relevant locations
  - Add three additional alternatives
  - Extend study timeline by ten months
  - Additional PDT meetings and outreach activities
  - Requires Board approval for scope amendment
- Provides comprehensive evaluation of UCI area but increases budget by 30 percent, extends study timeline, and increases the effort needed to develop consensus



# Next Steps

- Contingent on the Board's direction, staff will take appropriate steps to amend the study or proceed with the current study scope
- Scope amendments that are greater than 15 percent of original contract value require Board approval
  - If needed, staff would return to the Board in August requesting approval for an amendment



***June 13, 2019***

**To:** Transit Committee

**From:** Darrell E. Johnson, Chief Executive Officer

**Subject:** Bus Operations Performance Measurements Report for the Third Quarter of Fiscal Year 2018-19

### ***Overview***

The Orange County Transportation Authority operates fixed-route bus and demand-response paratransit service throughout Orange County and into neighboring counties. This report summarizes the year-to-date performance of these services through the third quarter of fiscal year 2018-19. The established measures of performance assess the safety, courtesy, reliability, and overall quality of the public transit services provided.

### ***Recommendation***

Receive and file as an information item.

### ***Background***

The Orange County Transportation Authority (OCTA) operates a countywide network of local, community, rail connector, and express bus routes serving over 5,000 bus stops. Fixed-route bus (OC Bus) service operates in a 798 square-mile area, serving more than three million residents in 34 cities and unincorporated areas, with connections to transit services in Orange, Los Angeles, and Riverside counties. OC Bus service operated by OCTA is referred to as directly-operated fixed-route service (DOFR), while routes operated under contract are referred to as contracted fixed-route service (CFR). Using a contract operator, OCTA also provides OC ACCESS, a federally-mandated paratransit service, which is a shared-ride program available for people unable to use the OC Bus service because of functional limitations. Performance measures for both, OC Bus and OC ACCESS services, are summarized and reported quarterly.



### ***Discussion***

The report provides an update on the performance of the OC Bus and OC ACCESS services by presenting the current trends and comparisons with OCTA-established performance standards for transit system safety, courtesy, and reliability. OCTA counts preventable vehicle accidents to evaluate system safety, customer complaints to assess courtesy, and uses both on-time performance and miles between road calls (MBRC) to measure service reliability. The report includes year-to-date performance through the third quarter, January, February, March, of fiscal year (FY) 2018-19.

- Safety – Both OC Bus service and OC ACCESS continue to exhibit strong performance in this area, exceeding the accident frequency standard of no more than one accident per 100,000 miles traveled.
- Customer Service – Customer service is measured by evaluating the number of valid customer complaints received. During this quarter, DOFR and OC ACCESS services both performed above the standards of no more than one complaint per 20,000 riders and for every 667 riders carried, respectively. CFR service did not meet the standard for this reporting period. The rise in valid complaints on CFR service is directly attributed to the loss of service (driver shortage) related to the implementation of the February 2019 Service Bid.
- Reliability – On-time performance (OTP) for OC Bus and OC ACCESS services was below target. Fixed-route OTP rates can be attributed to several factors including vehicle reliability, driver behavior, high passenger loads, construction, and dynamic traffic conditions. Each service change provides staff with an opportunity to address changes in traffic patterns and impacts to service created by long-term construction projects through the scheduling process. To address other elements impacting OTP, corrective actions implemented to date include conducting route-level analyses to identify specific trouble points, conducting on-board evaluations, conducting on-site timepoint observations, communicating with drivers on problem routes, and coordinating with the various construction project teams as needed to identify impacts to OTP and minimize them during construction.

MBRC for OC ACCESS service exceeded the standard while OC Bus service operated below standard. The completion of the 98 near-zero engine repowers at the end of the second quarter of FY 2018-19 has helped vehicle reliability for both DOFR and CFR. Efforts to address vehicle reliability for CFR have continued, including the implementation of



additional maintenance training and the use of a more rigorous quality control process to improve vehicle repair procedures. The positive trend for MBRC for CFR OC Bus service is expected to continue through the fourth quarter with the continued corporate staff presence in the maintenance shop, and the recent hire of a new maintenance manager.

This report also reflects the impact of service delivery issues associated with the implementation of the February 2019 Bus Service Change. As previously reported, the contract fixed-route operator, First Transit, Inc. (First Transit), changed the way in which it schedules and deploys its drivers. In doing so, there was an increase in the number of operator assignments needed to deliver service assigned to the contractor. That coupled with an existing labor shortage, which is being experienced industry-wide, severely impacted First Transit's ability to deliver service. First Transit has been responsive to this issue, implementing several corrective actions which OCTA staff continue to monitor.

The report also includes:

- An assessment of the efficiency of OCTA transit operations based on industry standards for ridership, productivity, farebox recovery, and cost per revenue vehicle hour;
- A review of contractor performance for CFR and OC ACCESS services;
- A route-level performance evaluation that includes subsidy per boarding, revenue per boarding, and resource allocation (buses); and
- A status report on the service adjustments and strategies implemented under the OC Bus 360° Program, including OC Flex and the College Pass Program.

### ***Summary***

Through the third quarter of FY 2018-19, the performance of the OC ACCESS program exceeded the performance in the areas of safety, courtesy, and reliability (MBRC), but was below the standard for OTP. The performance of OC Bus service exceeded the safety standard but fell below the performance standard for courtesy (CFR) and reliability. OCTA staff continues to focus on continuous quality improvement in courtesy and reliability as detailed in the report. Service efficiency and route performance remain stable as OC Bus 360° implementation continues. In addition to tracking the established key performance indicators, staff will continue to manage the service contracts pursuant to contract requirements, and work to identify other strategies to improve overall system performance.

***Attachment***

- A. Bus Operations Performance Measurements Report, Third Quarter,  
Fiscal Year 2018-19

**Prepared by:**



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# Bus Operations Performance Measurements Report



Third Quarter  
Fiscal Year 2018-19

# About This Report

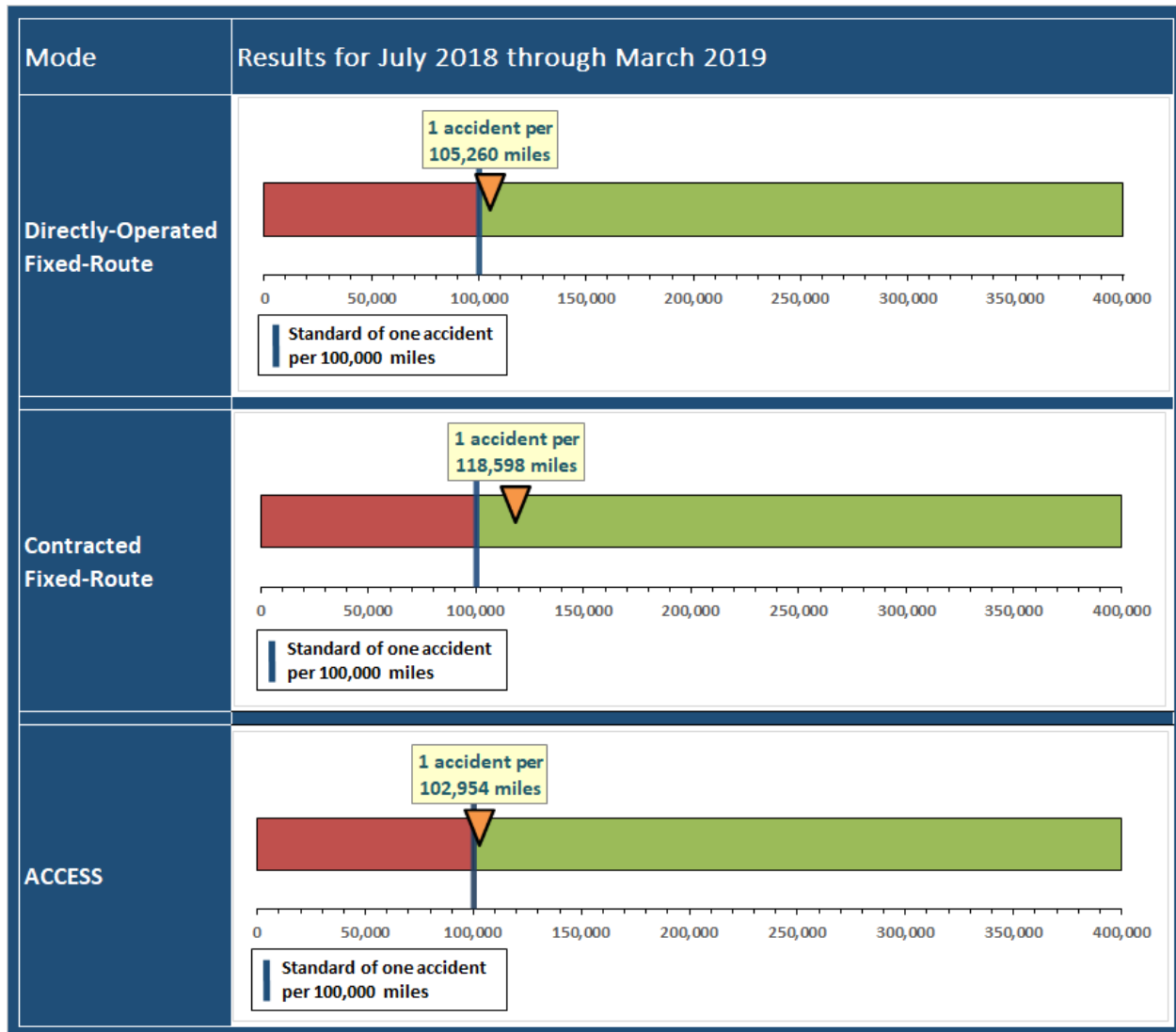
The Orange County Transportation Authority (OCTA) operates a countywide network of over 60 routes including local, community, rail connector, and express bus routes serving over 5,000 bus stops known as OC Bus. OCTA also operates paratransit service (OC ACCESS), a shared-ride program available for people 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 vehicle accident per 100,000 miles. Preventable vehicle accidents are defined as the number of 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.

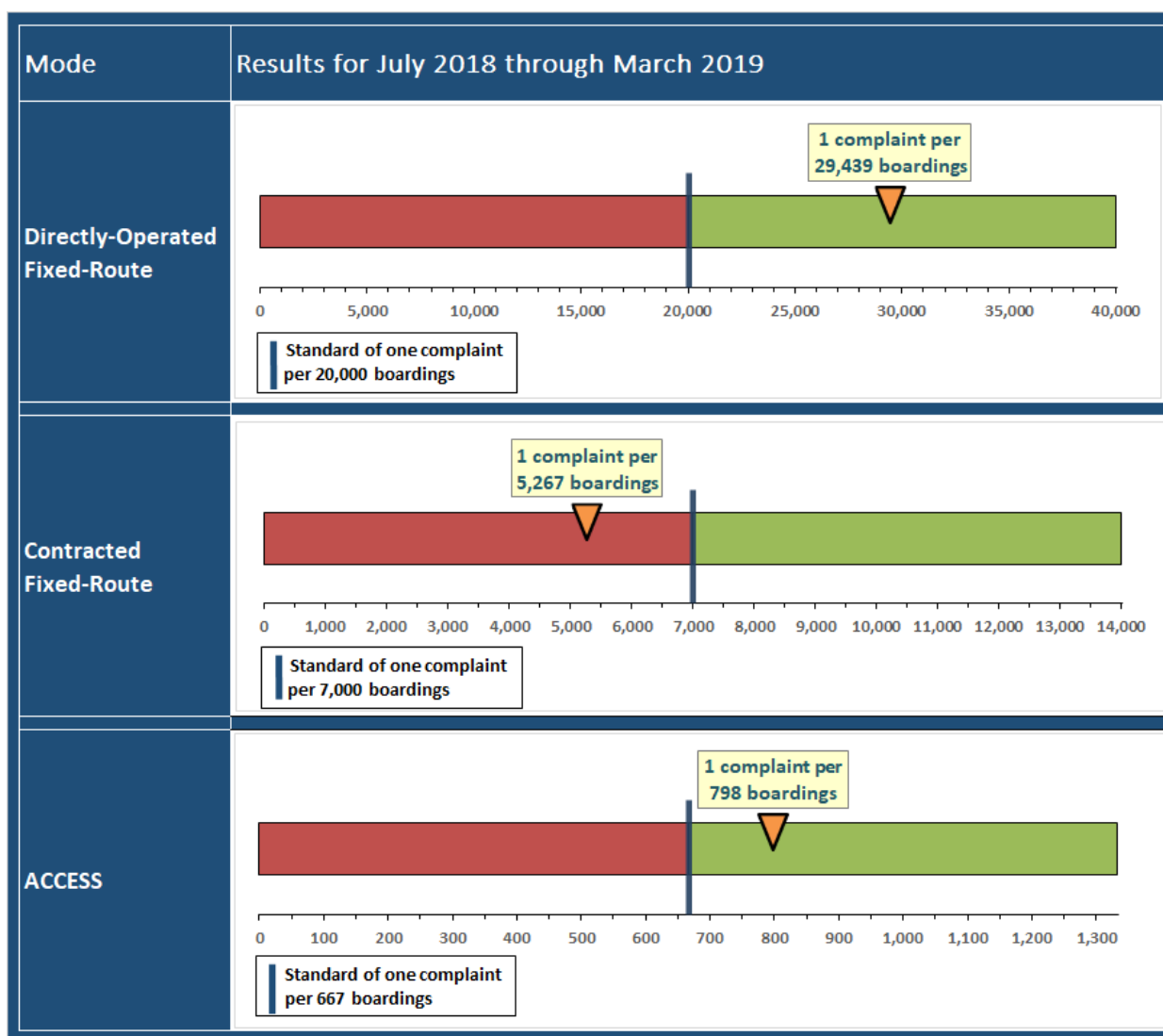
All modes of service exceeded the safety standard through the third quarter of fiscal year (FY) 2018-19 with less than one accident per 100,000 miles.



## Courtesy: Customer Complaints

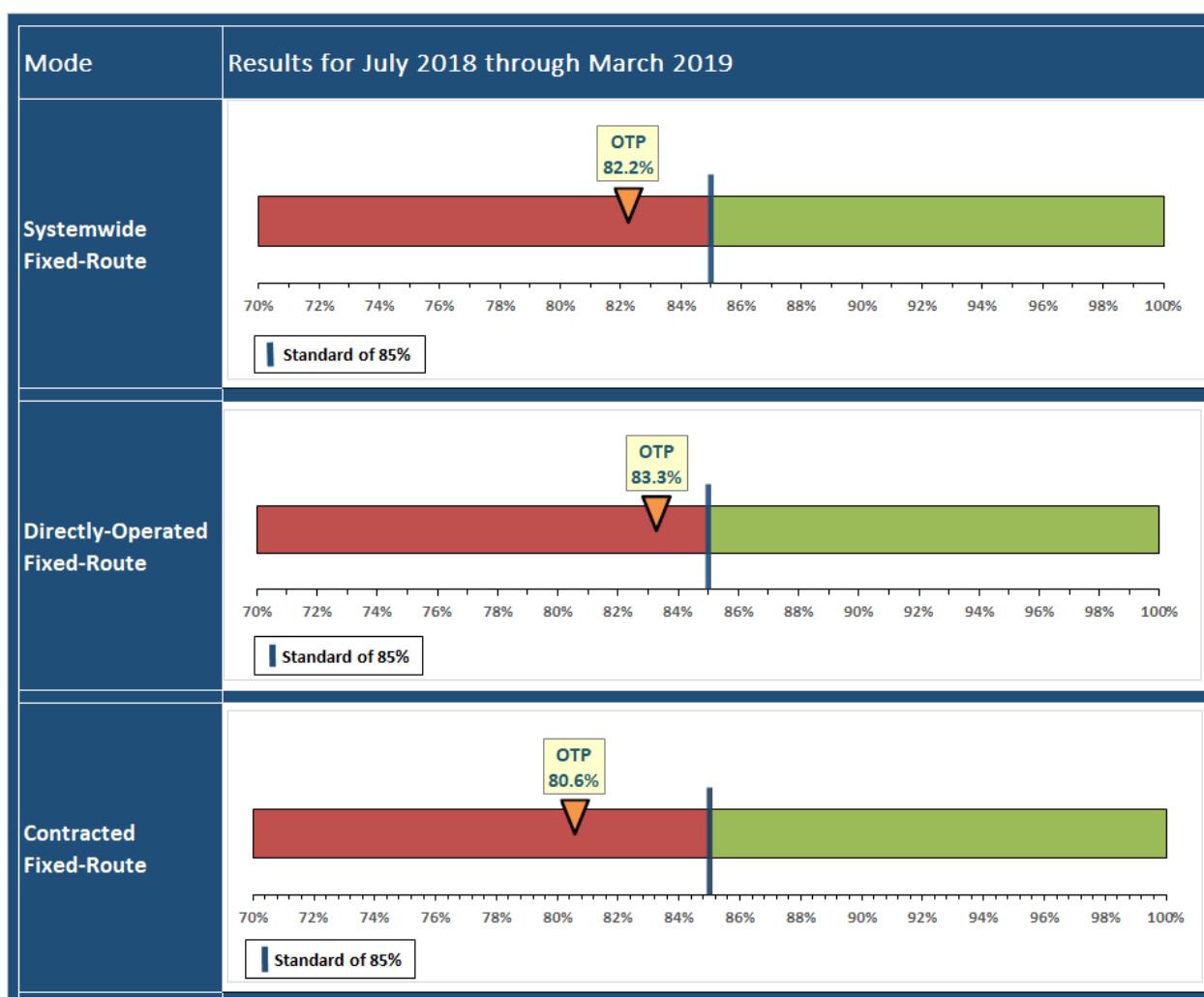
OCTA strives to achieve the highest level of customer satisfaction in delivery of the OC Bus services. The performance standard for customer satisfaction is courtesy as measured by the number of valid complaints received. Customer complaints are counts of incidents when a rider reports dissatisfaction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

Through the third quarter of FY 2018-19, DOFR OC Bus service and OC ACCESS service exceeded the courtesy standard with less than one complaint per 20,000, and 667 boardings, respectively. The number of valid complaints received for CFR OC Bus service exceeded the one complaint allowed per 7,000 boardings. The rise in valid complaints is directly attributed to the loss of service (driver shortage) related to the implementation of the February 2019 Service Bid.



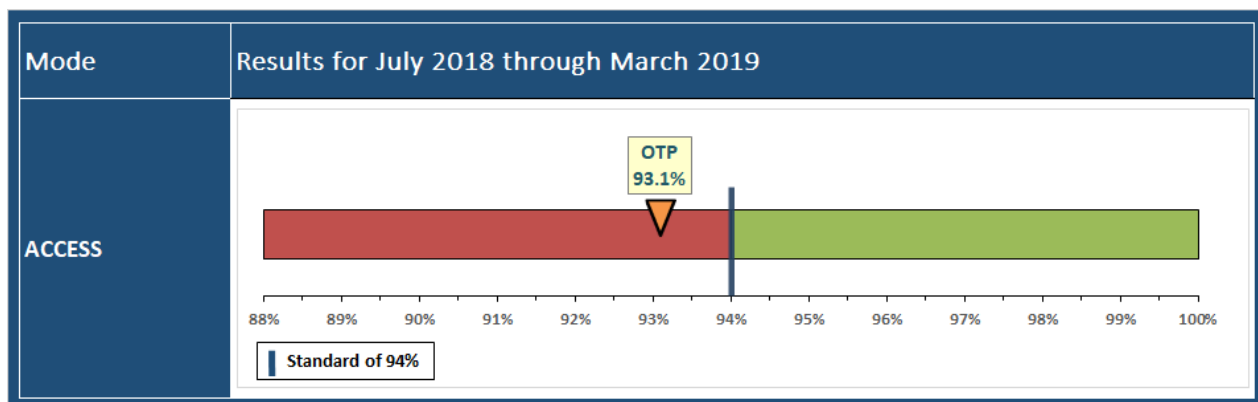
## Reliability: On-Time Performance

Reliability is vital to a successful transportation network. Reliability for OCTA is measured in part by on-time performance (OTP). OTP is a measure of performance which evaluates the schedule adherence of a 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 third quarter of FY 2018-19, systemwide fixed-route OTP was 82.2 percent, 2.8 percent below the standard. This marks a 0.2 percent increase from the previous quarter and a 2.3 percent drop from the same quarter last year. OTP for the DOFR OC Bus service completed the third quarter at 83.3 percent, 0.4 percent higher than last quarter and 1.8 percent lower than the same quarter last year.

The OTP for the CFR OC Bus service slightly dropped by 0.1 percent compared to last quarter and fell by 3.0 percent compared the same quarter last year. The OTP for CFR did not improve at the same rate as DOFR, likely due to the cascading impacts of the lost service resulting from the February 2019 Service Change. During the third quarter of FY 2018-19, before the service change, the OTP for CFR was 82.7 percent, 2.0 percent higher than reported last quarter. After the February 2019 Service Change through the remainder of the quarter, the OTP dropped to 78.5 percent.



The OTP for OC ACCESS service ended the quarter at 93.1 percent, 0.9 percent below the standard. The OC ACCESS OTP dropped by 0.2 percent from last quarter and 1.2 percent from the 94.3 percent reported during the same period last year.

During the third quarter, the contract operator experienced higher than normal absenteeism and operator shortage. Corrective actions to address these issues include:

- Continuing working with contractor on routing improvements to/from high trip generators
- Work to improve trip negotiations to address overbooking at certain times of the day (i.e. top of the hour has most trips)
- Contractor has hired a Dedicated Recruiter to help stimulate operator hiring

OCTA staff will continue to monitor service deployment to ensure contractor efforts are working to attain performance standards.



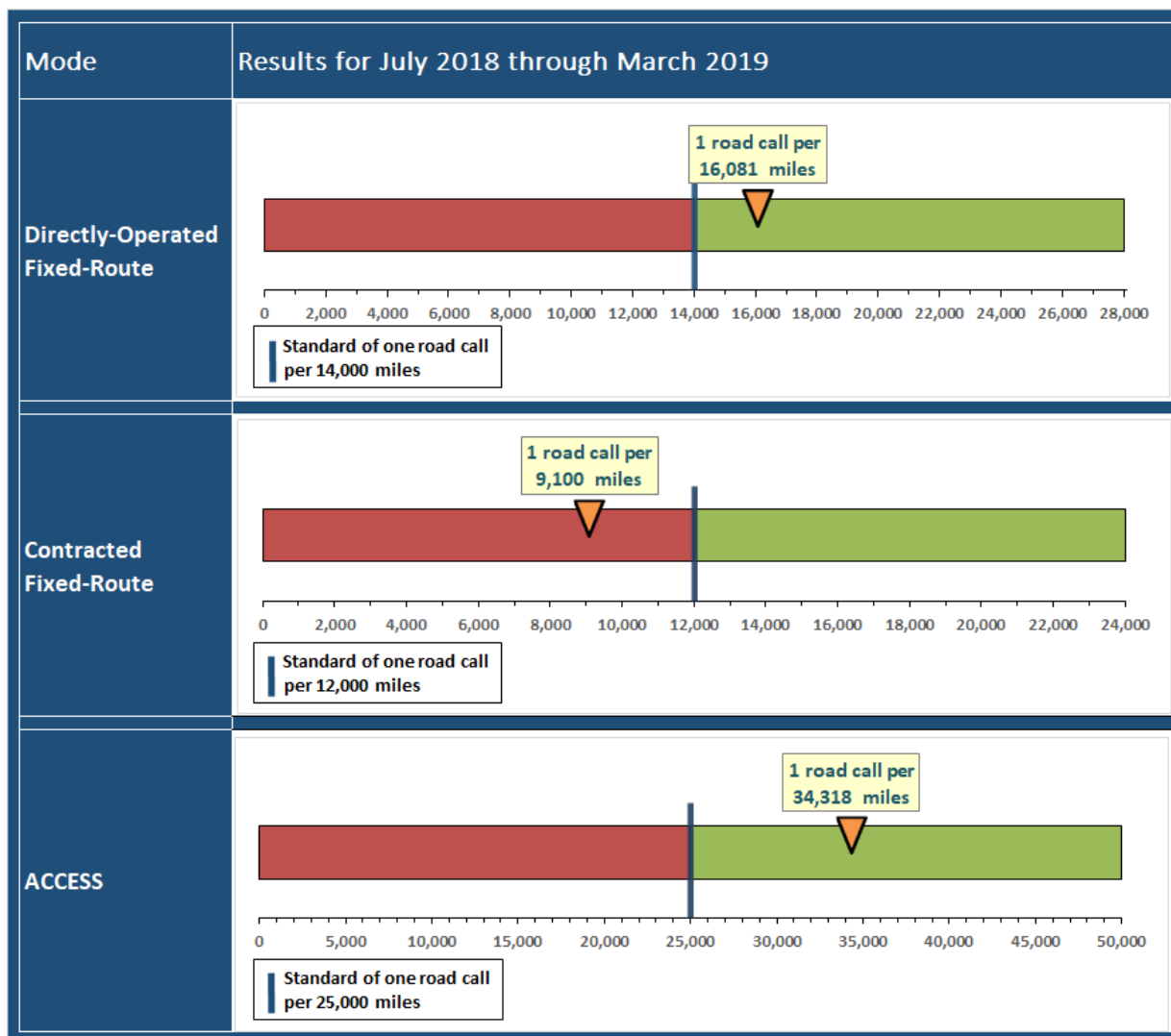
## **Reliability: Miles Between Road Calls**

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 third quarter of FY 2018-19, OC Bus services showed steady performance in this measure. DOFR OC Bus service performed above standard, averaging 16,081 vehicle MBRC, a drop of 1.7 percent from last quarter, but a 19.6 percent increase over the third quarter of last year. The increase in MBRC is credited partially to a midlife engine replacement campaign that was completed in December 2018. In addition, the continued work with the vehicle manufacturer to address warranty-related failures continues to help reduce road calls.

MBRC for the CFR OC Bus service was below standard at 9,100 MBRC through the third quarter of FY 2018-19. This is an 11.1 percent improvement compared to the 8,189 MBRC reported last quarter and 7.1 percent higher than the same quarter last year. Key drivers for the improvement included the implementation of additional maintenance training and the use of a more rigorous quality control process to improve vehicle repair procedures. The positive trend for MBRC for CFR OC Bus service is expected to continue through the fourth quarter with the continued corporate staff presence in the maintenance shop, and the recent hire of a maintenance manager.

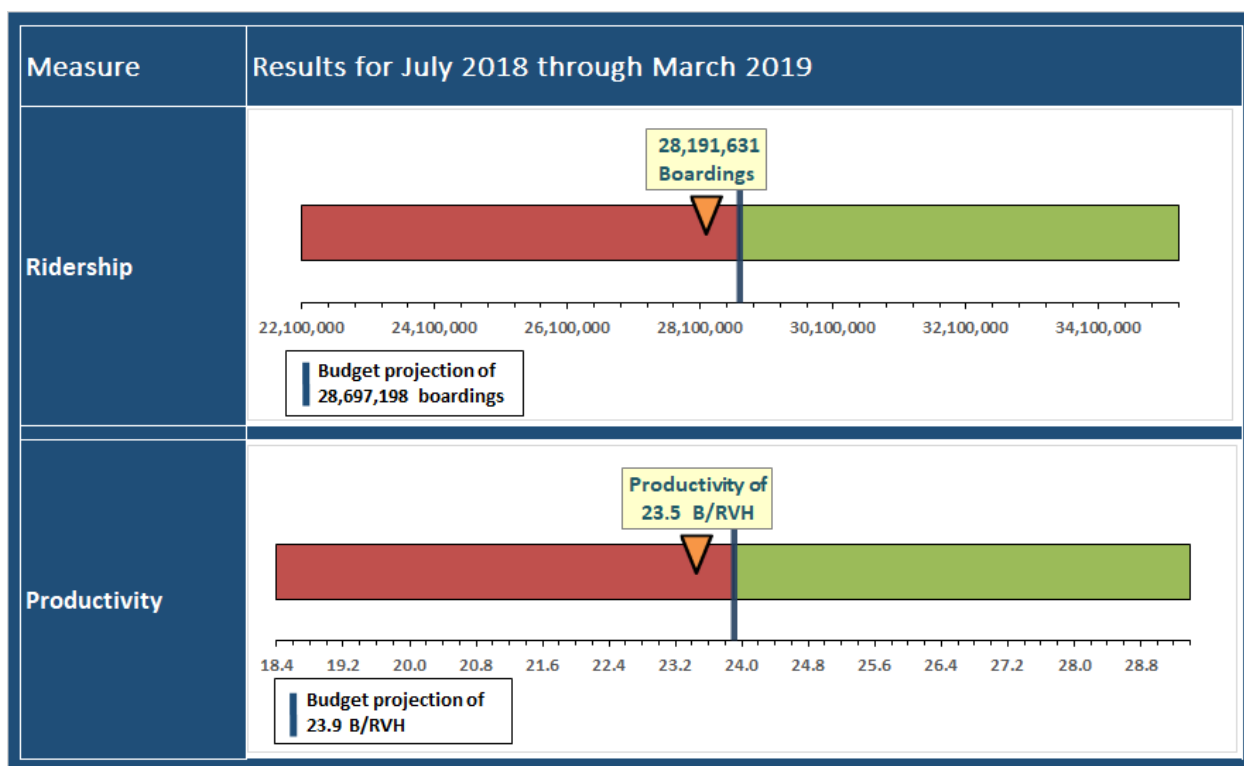
The MBRC for OC ACCESS service exceeded the standard, with 34,318 miles between road calls.



## 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. 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 (B/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 third quarter of FY 2018-19, both ridership and productivity for OC Bus service was lower than expected. The drop in ridership during the third quarter is largely attributed to two factors, rain and lost service.



Daily ridership data and research have shown that adverse weather conditions, such as rain, have a negative impact on transit ridership. “Rain” days are designated as such depending on the amount of rainfall (exceeding one-tenth of an inch), the time (morning, afternoon, night), and the duration. During the third quarter of FY 2018-19, there were 22 days of rain. During the third quarter of last year, there were only 14 days. On rainy weekdays during the third quarter of FY 2018-19, ridership was down by 15.6 percent compared to non-rainy days. On rainy weekdays during the same quarter last year, the difference was only 5.1 percent. The table below includes a comparison of the rain impact on average daily ridership based by day type (e.g., weekday).

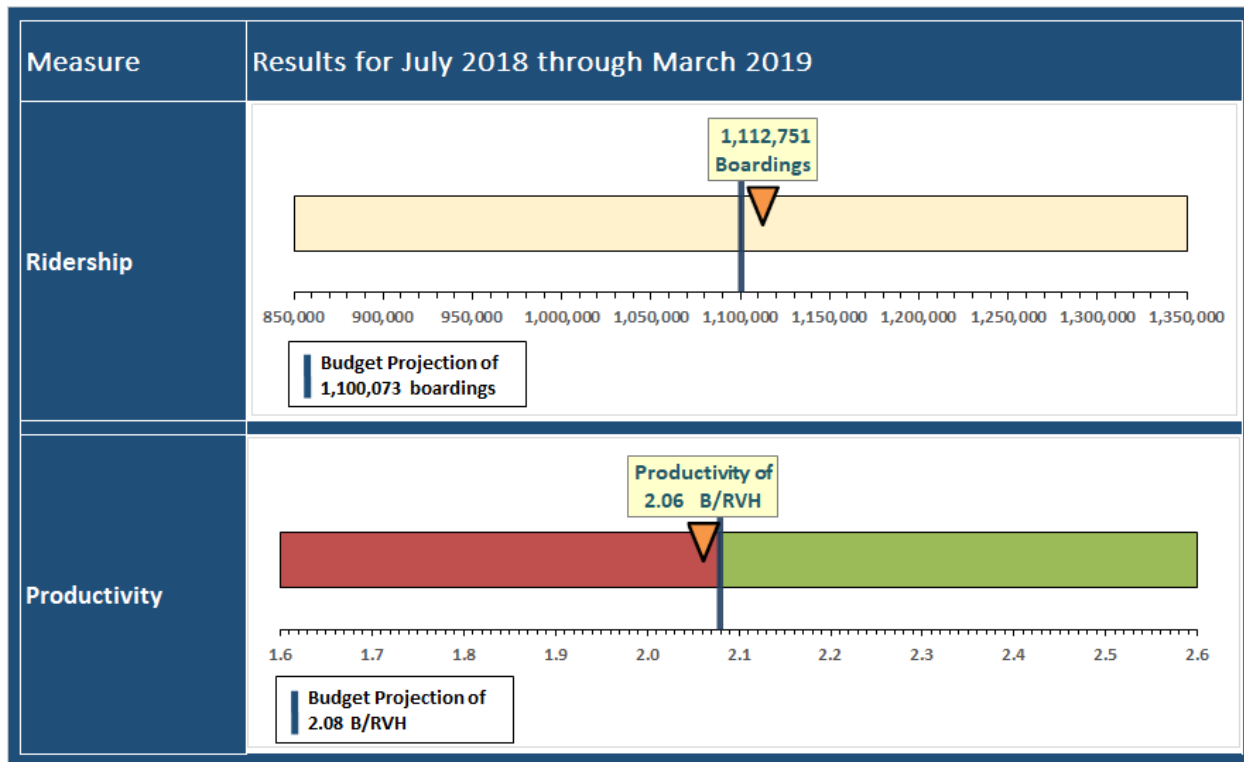
Day of Week	Quarter 3 - FY 2018-19			Quarter 3 - FY 2017-18		
	Average "Rain" Day	Average "Non-Rain" Day	Δ (%)	Average "Rain" Day	Average "Non-Rain" Day	Δ (%)
Weekday	100,587	119,127	<b>-15.6%</b>	117,366	123,648	<b>-5.1%</b>
Saturday	50,666	69,009	<b>-26.6%</b>	62,874	69,432	<b>-9.4%</b>
Sunday	45,910	53,239	<b>-13.8%</b>	46,746	55,707	<b>-16.1%</b>

On February 10, 2019, the second of three bus service changes occurring each fiscal year was implemented. OC Bus schedules and routes are adjusted at that time. This is also an opportunity for drivers to change the routes that they drive. For the February 2019 Bus Service Change, First Transit, Inc. (First Transit), the contracted fixed-route provider, changed the way in which it scheduled and deployed its drivers. This change increased the number of coach operator assignments that needed to be filled. This, coupled with a labor shortage, resulted in a significant number of missed trips and the loss of the daily ridership on those missed trips.

## Ridership and Productivity – OC ACCESS

(Primary Service Provider and Supplemental Taxi)

Through the third quarter of FY 2018-19, the ridership and productivity trends for OC ACCESS continue to indicate increasing demand for this service. Ridership for the quarter exceeded budgeted projections by 1.2 percent. Productivity is 1 percent below the budgeted projection.



## Contractor Performance: Fixed-Route

Per Agreement No. C-4-1737 between OCTA and First Transit, additional measures are tracked to ensure the CFR OC Bus service meets standards for safety, customer service, and reliability. When the contractor's monthly performance exceeds the standard as set forth in the agreement, financial incentives are paid to the contractor; conversely, when the monthly 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 third 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 measure of safety; however, courtesy and reliability were below standard.

Table 1 provides the penalties and incentives assessed to the contractor, by quarter, for FY 2018-19. The incentives earned through the third quarter total \$16,500 and reflect good performance related to courtesy. Through the third quarter of FY 2018-19, the total penalties assessed to the contractor total \$2,548,190, of which \$2,117,466 was assessed from January through March. These assessed penalties, particularly for the missed trips, were largely due to the changes implemented by First Transit for the February 2019 Service Change.

<b>Table 1:</b>	<b>Performance Categories</b>	<b>FY19 Q1</b>	<b>FY19 Q2</b>	<b>FY19 Q3</b>	<b>FY19 Q4</b>	<b>FYTD 19</b>
<b>Penalties</b>	On-Time Performance	\$ (7,000)	\$ (9,000)	\$ (9,000)		\$ (25,000)
	Valid Complaints: Per 7,000 boardings	\$ (2,900)	\$ -	\$ (54,400)		\$ (57,300)
	Unreported Accident	\$ (20,000)	\$ (20,000)	\$ (110,000)		\$ (150,000)
	Accident Frequency Ratio	\$ -	\$ -	\$ (5,000)		\$ (5,000)
	Key Positions	\$ -	\$ (29,000)	\$ -		\$ (29,000)
	CHP Terminal Inspections	\$ -	\$ -	\$ -		\$ -
	Reports	\$ -	\$ -	\$ -		\$ -
	Preventive Maintenance	\$ (137,841)	\$ (36,683)	\$ (16,766)		\$ (191,290)
	Road Calls	\$ (14,300)	\$ (7,000)	\$ (300)		\$ (21,600)
	Vehicle Damage: Per vehicle per day	\$ -	\$ -	\$ -		\$ -
	Missed Trips	\$ (80,000)	\$ (67,000)	\$ (1,922,000)		\$ (2,069,000)
	<b>Total</b>	<b>\$ (262,041)</b>	<b>\$ (168,683)</b>	<b>\$ (2,117,466)</b>		<b>\$ (2,548,190)</b>
<b>Incentives</b>	On-Time Performance	\$ -	\$ -	\$ -		\$ -
	Valid Complaints: Per 7,000 boardings	\$ 3,200	\$ 9,000	\$ 4,300		\$ 16,500
	Accident Frequency Ratio	\$ -	\$ -	\$ -		\$ -
	<b>Total</b>	<b>\$ 3,200</b>	<b>\$ 9,000</b>	<b>\$ 4,300</b>		<b>\$ 16,500</b>
<b>Prior Periods Adjustment</b>	Road Calls	\$ (100)	\$ -	\$ -		\$ (100)
	Key Position	\$ -	\$ 25,182	\$ -		\$ 25,182
	<b>Total</b>	<b>\$ (100)</b>	<b>\$ 25,182</b>	<b>\$ -</b>		<b>\$ 25,082</b>
<b>All</b>	<b>Total</b>	<b>\$ (258,941)</b>	<b>\$ (134,501)</b>	<b>\$ (2,113,166)</b>		<b>\$ (2,506,608)</b>

## 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 performance exceeds the standard as set forth in the agreement, financial incentives are paid to the contractor; conversely, when the monthly 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.

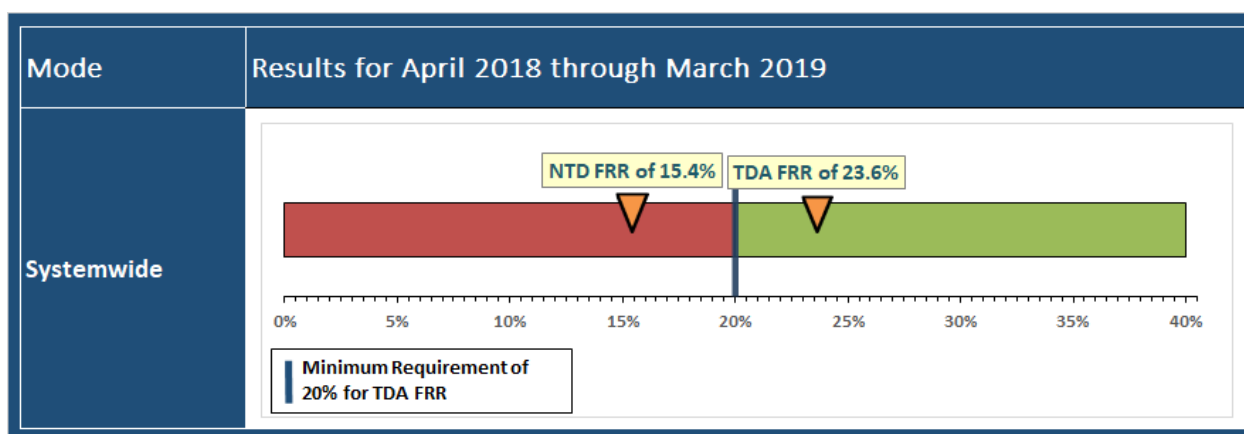
As presented in this report, the overall performance of the contractor providing OC ACCESS service through the third quarter of FY 2018-19 is above standard for all measures except OTP. Table 2 below lists, by quarter, the penalties and incentives assessed to the OC ACCESS contractor as established in the agreement. Through the third quarter, there were no incentives awarded to the contractor, but \$260,825 in penalties were assessed. Since the last reporting period, penalties were assessed for OTP, customer comments, call center hold times, excessively late trips, and missed trips.

<b>Table 2: Performance Categories</b>		<b>FY19 Q1</b>	<b>FY19 Q2</b>	<b>FY19 Q3</b>	<b>FY19 Q4</b>	<b>FYTD 19</b>
<b>Penalties</b>	Passenger Productivity	\$ -	\$ (10,000)	\$ -		\$ (10,000)
	On-Time Performance	\$ (10,000)	\$ (20,000)	\$ (10,000)		\$ (40,000)
	Customer Comments	\$ -	\$ (3,800)	\$ (300)		\$ (4,100)
	Call Center Hold Times	\$ (33,000)	\$ (33,000)	\$ (32,000)		\$ (98,000)
	Excessively Late Trips	\$ (10,000)	\$ (30,000)	\$ (30,000)		\$ (70,000)
	Missed Trips	\$ (5,000)	\$ (10,000)	\$ (5,000)		\$ (20,000)
	Unreported Accident	\$ -	\$ (5,000)	\$ -		\$ (5,000)
	Preventive Maintenance	\$ (13,725)	\$ -	\$ -		\$ (13,725)
	Road calls	\$ -	\$ -	\$ -		\$ -
	Reports	\$ -	\$ -	\$ -		\$ -
	Key Positions	\$ -	\$ -	\$ -		\$ -
	CHP Terminal Inspections	\$ -	\$ -	\$ -		\$ -
	Vehicle Damage	\$ -	\$ -	\$ -		\$ -
	<b>Total</b>	<b>\$ (71,725)</b>	<b>\$ (111,800)</b>	<b>\$ (77,300)</b>		<b>\$ (260,825)</b>
<b>Incentives</b>	Passenger Productivity	\$ -	\$ -	\$ -		\$ -
	On-Time Performance	\$ -	\$ -	\$ -		\$ -
	Excessively Late Trips	\$ -	\$ -	\$ -		\$ -
	Missed Trips	\$ -	\$ -	\$ -		\$ -
	<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>		<b>\$ -</b>
<b>Prior Periods</b>	Customer Comments	\$ 1,100	\$ -	\$ -		\$ 1,100
<b>Adjustment</b>	<b>Total</b>	<b>\$ 1,100</b>	<b>\$ -</b>	<b>\$ -</b>		<b>\$ 1,100</b>
<b>All</b>	<b>Total</b>	<b>\$ (70,625)</b>	<b>\$ (111,800)</b>	<b>\$ (77,300)</b>		<b>\$ (259,725)</b>

## 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 April 2018 through March 2019.

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 is 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 23.6 percent, a drop of 0.3 percent from the previous quarter and a 1.9 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



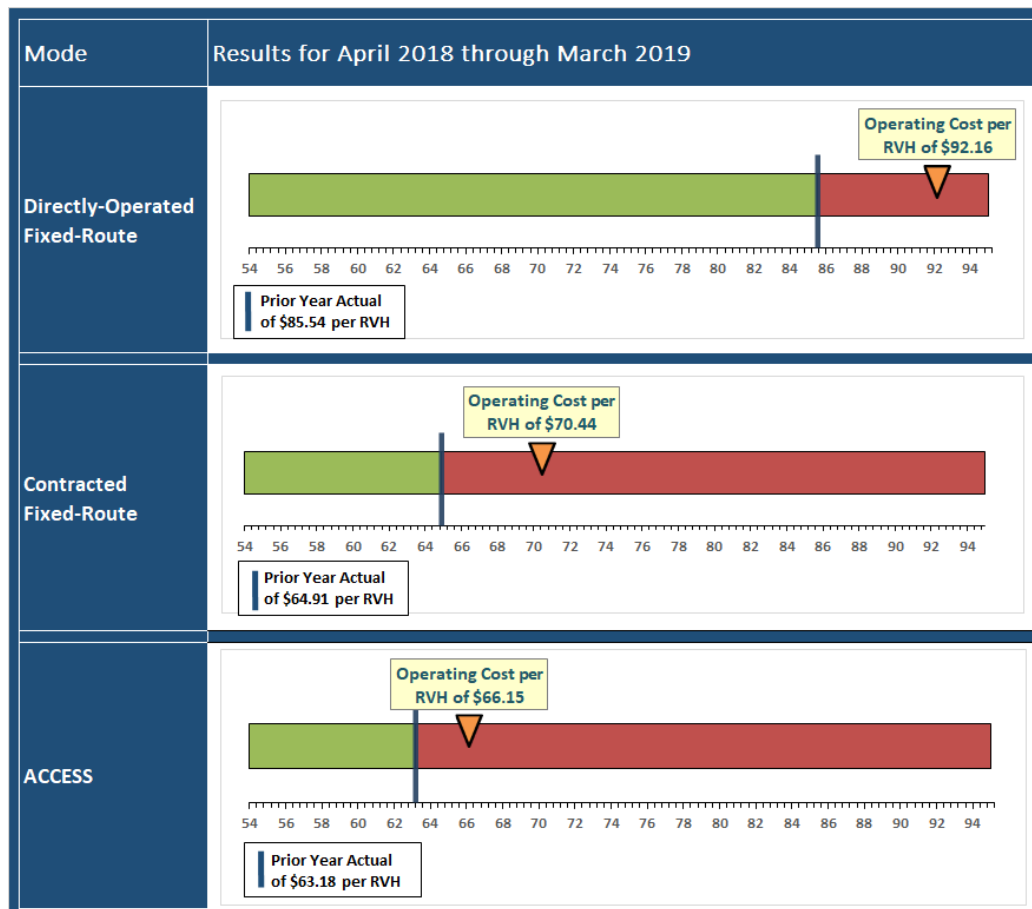
## Operating Cost per Revenue Vehicle Hour

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 a 7.7 percent increase in DOFR, an 8.5 percent increase in CFR, and a 4.7 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. In addition, costs were impacted by:

- A 44.8 percent of the total increase in DOFR cost and a 61.8 percent of the total increase in CFR cost were associated with a higher than expected compressed natural gas rate since July 2018.
- The receipt of Alternative Fuel Tax Credit in March 2018, but not received in March 2019 which lowered costs by 2.1 percent in 2018.

Other factors that contributed to the increase in CFR and OC ACCESS cost per RVH included the increase in the contracted rates as included in First Transit and MV agreements for each new fiscal year. An increase in gasoline prices also contributed to the increase in OC ACCESS cost.



## 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 third 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 include two sub categories:
  - **Major:** These routes operate as frequent as every 15 minutes during peak times. Major routes operate seven days a week throughout the day. Together, the Major routes form a grid on arterial streets throughout the highest transit propensity portions of the OC Bus service area, primarily in northern parts of the county.
  - **Local:** These routes operate on arterials within the grid created by the Major routes, but at lower frequencies. Local routes also operate in parts of Orange County with lower transit demand. Most Local routes operate seven days per week, however some operate on weekdays only.
- **Routes 100 to 199:** Community routes to connect pockets of transit demand with major destinations and offer local circulation. Routes tend to be less direct than Local routes, serving neighborhoods and destinations off the arterial grid. Approximately half of Community routes operate seven days per week.
- **Routes 200 to 299:** Intra-county express routes that operates on weekdays only at peak times and connect riders over long distances to destinations within Orange County, using freeways to access destinations.
- **Routes 400 to 499:** Stationlink routes are rail feeder services designed to connect Metrolink stations to nearby employment destinations. These routes have relatively short alignments, with schedules tied to Metrolink arrivals and departures. They operate during weekday peak hours only, in the peak direction, from the station to destinations in the morning and the reverse in the evening.
- **Routes 500 to 599:** Bravo! routes are limited-stop services operated with branded vehicles.
- **Routes 600 to 699:** Seasonal routes (*these are not included on the following charts*) such as OC Fair Express.
- **Routes 700 to 799:** Inter-county Express bus service that operates on weekdays only at peak times and connects riders over long distances to destinations outside of Orange County, often using freeways to access destinations.



**OCTA Operating Statistics By Route for Local and Community Services (Sorted by Subsidy per Boarding)**  
Fiscal Year 2018-19 Through Q3

Route	Zone	Farebox	Subsidy per Boarding	Direct Subsidy	Indirect Subsidy	"Capital Subsidy" Per Boarding	Revenue per Boarding	Boardings	CostVSH	Direct CostVSH	CostVSM	BoardVSH	VSH	Bus Count			
														40 FT	32 FT	60 FT	60 FT
021	N	7.8%	\$ 13.32	\$ 7.53	\$ 4.62	\$ 1.17	\$ 1.03	48,001	\$ 113.97	\$ 70.95	\$ 8.51	8.65	5,550	1	2	-	-
529	C	8.1%	12.66	7.09	4.51	1.06	1.02	41,123	150.11	97.23	13.03	11.89	3,457	6	4	-	-
085	S	8.9%	12.30	7.02	4.31	0.97	1.11	51,800	106.09	68.78	8.64	8.53	6,075	2	-	-	-
087	S	8.6%	11.49	6.58	4.04	0.87	1.00	49,529	111.81	70.46	7.45	9.63	5,146	-	2	-	-
001	S	7.8%	11.35	6.63	4.22	0.50	0.92	416,854	151.05	96.67	9.22	12.84	32,469	6	-	-	-
076	C	9.7%	10.21	5.77	3.67	0.77	1.01	64,766	137.78	87.16	11.74	13.18	4,915	2	-	-	-
153	N	10.3%	10.15	5.98	3.59	0.58	1.10	86,493	104.92	86.49	8.58	9.82	8,805	2	-	-	-
178	C	11.1%	9.53	5.49	3.30	0.74	1.10	67,662	105.44	68.61	8.49	10.66	6,346	2	-	-	-
177	S	13.1%	8.45	4.86	2.92	0.67	1.17	63,533	105.12	68.59	8.16	11.75	5,408	-	2	-	-
083	C	11.8%	7.67	4.35	2.77	0.55	0.96	485,932	146.06	93.35	8.07	18.10	25,747	10	-	-	-
086	C	13.2%	7.66	4.31	2.65	0.70	1.05	107,298	105.54	68.69	8.15	13.17	8,148	3	-	-	-
091	S	14.5%	7.38	4.19	2.57	0.62	1.15	294,325	107.00	69.20	7.43	13.53	21,755	8	-	-	-
167	C	14.2%	7.21	4.09	2.46	0.66	1.08	151,385	105.17	68.51	8.86	13.78	10,983	4	-	-	-
024	N	15.8%	6.83	3.74	2.30	0.79	1.14	95,541	105.26	68.60	8.22	14.66	6,517	3	-	-	-
090	S	15.9%	6.75	3.72	2.28	0.75	1.13	245,944	109.80	69.88	7.33	15.38	15,991	6	-	-	-
129	N	15.6%	6.51	3.74	2.25	0.52	1.11	144,579	106.71	68.89	8.84	15.04	9,613	2	-	-	-
050	N	12.9%	6.30	3.61	2.29	0.40	0.88	911,318	153.55	97.38	13.21	22.65	40,227	11	-	-	-
143	N	15.3%	6.28	3.70	2.22	0.36	1.07	137,869	104.93	68.43	9.28	15.01	9,183	2	-	-	-
056	N	13.2%	6.25	3.64	2.32	0.29	0.90	311,420	141.64	89.56	13.43	20.63	15,093	4	-	-	-
079	C	15.5%	6.22	3.57	2.19	0.46	1.05	329,207	105.20	68.49	9.27	15.43	21,331	6	-	-	-
089	S	15.7%	6.06	3.44	2.11	0.51	1.03	260,285	105.60	68.67	8.49	16.02	16,245	5	-	-	-
082	S	19.7%	6.05	3.00	1.84	0.21	1.19	62,063	119.02	72.20	8.42	19.76	3,141	3	-	-	-
059	C	16.2%	6.03	3.36	2.06	0.61	1.04	412,988	109.14	69.46	9.72	16.89	24,449	11	-	-	-
560	C	15.0%	5.99	3.33	2.12	0.54	0.96	581,906	147.55	93.49	12.74	23.04	25,257	6	7	-	-
055	C	16.6%	5.84	3.31	2.11	0.42	1.08	960,332	143.95	91.11	12.85	22.16	43,344	18	-	-	-
054	N	15.6%	5.69	3.19	2.03	0.47	0.96	896,235	143.31	90.73	12.94	23.19	38,655	17	-	-	-
150	C	18.6%	5.68	3.08	1.85	0.75	1.13	132,991	108.80	69.22	10.73	17.94	7,413	4	-	-	-
072	C	15.9%	5.67	3.22	2.05	0.40	1.00	373,686	138.42	87.73	11.18	22.11	16,899	6	-	-	-
025	N	17.0%	5.63	3.17	1.95	0.51	1.05	277,116	106.41	68.86	8.84	17.25	16,065	5	-	-	-
071	N	16.8%	5.47	3.15	1.93	0.39	1.03	516,277	105.79	68.76	8.45	17.32	29,802	8	-	-	-
037	N	15.9%	5.41	3.07	1.95	0.39	0.95	812,982	144.60	91.61	11.76	24.22	33,563	14	-	-	-
026	N	17.1%	5.21	3.02	1.86	0.33	1.01	332,272	106.85	68.78	10.52	18.15	18,303	4	-	-	-
029	N	16.8%	4.96	2.86	1.82	0.28	0.95	1,419,505	143.83	91.12	12.35	25.57	55,511	5	-	-	7
030	N	17.9%	4.62	2.65	1.63	0.34	0.93	486,112	105.24	68.64	8.13	20.19	24,078	6	-	-	-
047	C	19.7%	4.59	2.62	1.66	0.31	1.05	1,561,032	143.03	90.50	12.78	26.83	58,175	20	-	-	-
035	N	18.6%	4.51	2.48	1.52	0.51	0.92	600,386	108.62	69.32	9.49	22.08	27,195	12	-	-	-
543	N	19.1%	4.39	2.48	1.57	0.34	0.96	717,851	144.95	91.80	13.07	28.93	24,811	6	4	-	-
070	C	20.5%	4.37	2.44	1.50	0.43	1.01	693,580	110.52	69.96	9.00	22.35	31,039	12	-	-	-
033	N	18.4%	4.34	2.49	1.53	0.32	0.91	282,492	105.61	68.65	8.56	21.47	13,160	4	-	-	-
057	C	20.2%	4.23	2.39	1.52	0.32	0.99	1,475,067	150.07	95.04	14.10	30.58	48,236	8	-	-	4
060	C	19.5%	4.06	2.34	1.49	0.23	0.93	1,423,189	143.47	90.93	12.43	30.19	47,147	16	-	-	-
046	N	22.1%	3.93	2.20	1.35	0.38	1.01	477,819	105.92	68.71	9.17	23.23	20,567	7	-	-	-
053X	C	21.4%	3.92	2.22	1.41	0.29	0.99	489,585	130.34	82.24	12.66	28.19	17,369	6	-	-	-
038	N	21.1%	3.83	2.13	1.31	0.39	0.92	806,877	108.26	69.30	8.87	24.90	32,404	14	-	-	-
053	C	21.0%	3.81	2.18	1.38	0.25	0.95	1,055,662	146.96	92.83	15.71	32.59	32,390	10	-	-	-
043	N	22.0%	3.77	2.16	1.37	0.24	1.00	1,569,211	140.22	88.53	14.02	30.98	50,658	13	-	-	-
057X	C	25.0%	3.43	1.91	1.21	0.31	1.04	834,269	130.45	82.36	12.29	31.37	26,595	5	-	-	2
066	C	24.4%	3.31	1.90	1.21	0.20	1.00	1,514,939	141.42	89.35	14.02	34.41	44,030	12	-	-	-
042	N	23.0%	3.28	1.86	1.14	0.28	0.89	1,142,729	106.90	68.93	9.60	27.49	41,575	13	-	-	-
064	C	24.5%	2.97	1.71	1.09	0.17	0.91	1,151,068	142.32	89.90	14.69	38.48	29,913	7	-	-	-
064X	C	26.6%	2.72	1.55	0.99	0.18	0.92	462,038	130.41	82.30	12.43	37.70	12,255	3	-	-	-

(1) Total bus count (429) is based on PM weekday equipment requirements.

(2) Bus count for routes 53X, 57X and 64X 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.



**OCTA Operating Statistics By Route for Express Service (Sorted by Subsidy per Boarding)**  
Fiscal Year 2018-19 Through Q3

Route	Zone	Farebox	Subsidy per Boarding	Direct Subsidy	Indirect Subsidy	"Capital Subsidy" Per Boarding	Revenue per Boarding	Boardings	CostVSH	Direct CostVSH	CostVSM	BoardVSH	VSH	Bus Count		
														40 FT	32 FT	60 FT
211	C	1.9%	\$ 64.30	\$ 31.52	\$ 24.74	\$ 8.04	\$ 1.10	10,657	\$ 143.84	\$ 97.88	\$ 8.46	2.51	4,250	-	4	-
213	N	2.5%	47.23	21.99	17.26	7.98	1.00	10,737	163.43	103.42	9.54	4.06	2,644	-	4	-
721	N	4.7%	42.08	23.40	14.10	4.58	1.86	16,376	226.16	146.46	8.79	5.75	2,850	3	-	-
701	C	7.6%	30.60	16.39	9.88	4.33	2.16	17,338	259.91	168.06	10.83	9.14	1,897	3	-	-
206	C	4.3%	29.44	12.74	10.00	6.70	1.02	9,590	175.06	113.33	9.18	7.37	1,302	-	3	-
794	C	21.6%	25.92	12.16	9.54	4.22	5.98	23,719	219.86	153.60	8.23	7.94	2,986	4	-	-

(1) Total bus count (429) 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 Stationlink Service (Sorted by Subsidy per Boarding)**  
Fiscal Year 2018-19 Through Q3

Route	Zone	Farebox	Subsidy per Boarding	Direct Subsidy	Indirect Subsidy	"Capital Subsidy" Per Boarding	Revenue per Boarding	Boardings	CostVSH	Direct CostVSH	CostVSM	BoardVSH	VSH	Bus Count		
														40 FT	32 FT	60 FT
463	C	4.0%	28.56	\$ 11.99	\$ 10.56	\$ 6.01	\$ 0.95	16,640	\$ 171.52	\$ 110.64	\$ 16.55	7.30	2,280	4	-	-
480	C	8.6%	12.34	5.25	4.63	2.46	0.93	20,316	172.25	111.01	14.76	15.94	1,275	2	-	-
472	C	10.3%	11.17	4.27	3.77	3.13	0.93	26,609	164.14	108.85	13.86	18.30	1,454	3	-	-
453	N	8.6%	11.13	4.73	4.16	2.24	0.84	22,370	176.66	111.88	16.57	18.15	1,233	2	-	-
473	C	13.4%	8.35	3.52	3.10	1.73	1.02	33,641	178.29	111.83	15.78	23.30	1,444	2	-	-
462	C	12.8%	7.61	3.57	3.14	0.90	0.99	27,927	159.74	107.34	22.66	20.76	1,346	1	-	-

(1) Total bus count (429) 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)**  
Fiscal Year 2018-19 Through Q3

Route	Zone	Farebox	Subsidy per Boarding	Direct Subsidy	Indirect Subsidy	"Capital Subsidy" Per Boarding	Revenue per Boarding	Boardings	Cost/VSH	Direct Cost/VSH	Cost/VSM	Board/VSH	VSH	Bus Count		
														40 FT	32 FT	60 FT
043	N	22.0%	\$ 3.77	\$ 2.16	\$ 1.37	\$ 0.24	\$ 1.00	1,569,211	\$ 140.22	\$ 88.53	\$ 14.02	30.98	50,658	13	-	-
047	C	19.7%	4.59	2.62	1.66	0.31	1.05	1,561,032	143.03	90.50	12.78	26.83	58,175	20	-	-
066	C	24.4%	3.31	1.90	1.21	0.20	1.00	1,514,939	141.42	89.35	14.02	34.41	44,030	12	-	-
067	C	20.2%	4.23	2.39	1.52	0.32	0.99	1,475,067	150.07	95.04	14.10	30.58	48,236	8	-	4
060	C	19.5%	4.06	2.34	1.49	0.23	0.93	1,423,189	143.47	90.93	12.43	30.19	47,147	16	-	-
029	N	16.8%	4.96	2.86	1.82	0.28	0.95	1,419,505	143.83	91.12	12.35	25.57	55,511	5	-	7
064	C	24.5%	2.97	1.71	1.09	0.17	0.91	1,151,068	142.32	89.90	14.69	38.48	29,913	7	-	-
042	N	23.0%	3.28	1.86	1.14	0.28	0.89	1,142,729	106.90	68.93	9.60	27.49	41,575	13	-	-
053	C	21.0%	3.81	2.18	1.38	0.25	0.95	1,055,662	146.96	92.83	15.71	32.59	32,390	10	-	-
065	C	16.6%	5.84	3.31	2.11	0.42	1.08	960,332	143.95	91.11	12.85	22.16	43,344	18	-	-
050	N	12.9%	6.30	3.61	2.29	0.40	0.88	911,318	153.55	97.38	13.21	22.65	40,227	11	-	-
054	N	15.6%	5.69	3.19	2.03	0.47	0.96	896,235	143.31	90.73	12.94	23.19	38,655	17	-	-
057X	C	25.0%	3.43	1.91	1.21	0.31	1.04	834,269	130.45	82.36	12.29	31.37	26,595	5	-	2
037	N	15.9%	5.41	3.07	1.95	0.39	0.95	812,982	144.60	91.61	11.76	24.22	33,563	14	-	-
038	N	21.1%	3.83	2.13	1.31	0.39	0.92	806,877	108.26	69.30	8.87	24.90	32,404	14	-	-
543	N	19.1%	4.39	2.48	1.57	0.34	0.96	717,851	144.95	91.80	13.07	28.93	24,811	6	4	-
070	C	20.5%	4.37	2.44	1.50	0.43	1.01	693,580	110.52	69.96	9.00	22.35	31,039	12	-	-
035	N	18.6%	4.51	2.48	1.52	0.51	0.92	600,386	108.62	69.32	9.49	22.08	27,195	12	-	-
560	C	15.0%	5.99	3.33	2.12	0.54	0.96	581,906	147.55	93.49	12.74	23.04	25,257	6	7	-
071	N	16.8%	5.47	3.15	1.93	0.39	1.03	516,277	105.79	68.76	8.45	17.32	29,802	8	-	-
053X	C	21.4%	3.92	2.22	1.41	0.29	0.99	489,585	130.34	82.24	12.66	28.19	17,369	6	-	-
030	N	17.9%	4.62	2.65	1.63	0.34	0.93	486,112	105.92	68.64	8.13	20.19	24,078	6	-	-
046	N	22.1%	3.93	2.20	1.35	0.38	1.01	477,819	105.94	68.71	9.17	23.23	20,567	7	-	-
083	C	11.8%	7.67	4.35	2.77	0.55	0.96	465,932	146.06	93.35	8.07	18.10	25,747	10	-	-
064X	C	26.6%	2.72	1.55	0.99	0.18	0.92	462,038	130.41	82.30	12.43	37.70	12,255	3	-	-
001	S	7.8%	11.35	6.63	4.22	0.50	1.05	416,854	151.05	96.67	9.22	12.84	32,469	6	-	-
059	C	16.2%	6.03	3.36	2.06	0.61	1.04	412,988	109.14	69.46	9.72	16.89	24,449	11	-	-
072	C	15.9%	5.67	3.22	2.05	0.40	1.00	373,686	138.42	87.73	11.18	22.11	16,899	6	-	-
026	N	17.1%	5.21	3.02	1.86	0.33	1.01	332,272	106.85	68.78	10.52	18.15	18,303	4	-	-
079	C	15.5%	6.22	3.57	2.19	0.46	1.05	329,207	105.20	68.49	9.27	15.43	21,331	6	-	-
056	N	13.2%	6.25	3.64	2.32	0.29	0.90	311,420	141.64	89.56	13.43	20.63	15,093	4	-	-
081	S	14.5%	7.38	4.19	2.57	0.62	1.15	294,325	107.00	69.20	7.43	13.53	21,755	8	-	-
033	N	18.4%	4.34	2.49	1.53	0.32	0.91	282,492	105.61	68.65	8.56	21.47	13,160	4	-	-
025	N	17.0%	5.63	3.17	1.95	0.51	1.05	277,116	106.41	68.86	8.84	17.25	16,065	5	-	-
089	S	15.7%	6.06	3.44	2.11	0.51	1.03	260,285	105.60	68.67	8.49	16.02	16,245	5	-	-
090	S	15.9%	6.75	3.72	2.28	0.75	1.13	245,944	109.80	69.88	7.33	15.38	15,991	6	-	-
167	C	14.2%	7.21	4.09	2.46	0.66	1.08	151,385	105.17	68.51	8.86	13.78	10,983	4	-	-
129	N	15.6%	6.51	3.74	2.25	0.52	1.11	144,579	106.71	68.89	8.84	15.04	9,613	2	-	-
143	N	15.3%	6.28	3.70	2.22	0.36	1.07	137,869	104.93	68.43	9.28	15.01	9,183	2	-	-
150	C	18.6%	5.68	3.08	1.85	0.75	1.13	132,991	108.80	69.22	10.73	17.94	7,413	4	-	-
086	C	13.2%	7.66	4.31	2.65	0.70	1.05	107,298	105.54	68.69	8.15	13.17	8,148	3	-	-
024	N	15.8%	6.83	3.74	2.30	0.79	1.14	95,541	105.26	68.60	8.22	14.66	6,517	3	-	-
153	N	10.3%	10.15	5.98	3.59	0.58	1.10	86,493	104.92	68.49	8.58	9.82	8,805	2	-	-
178	C	11.1%	9.53	5.49	3.30	0.74	1.10	67,662	105.44	68.61	8.49	10.66	6,346	2	-	-
076	C	9.7%	10.21	5.77	3.67	0.77	1.01	64,766	137.78	87.16	11.74	13.18	4,915	2	-	-
177	S	13.1%	8.45	4.86	2.92	0.67	1.17	63,533	105.12	68.59	8.16	11.75	5,408	-	2	-
082	S	19.7%	6.05	3.00	1.84	1.21	1.19	62,063	119.02	72.20	8.42	19.76	3,141	3	-	-
085	S	8.9%	12.30	7.02	4.31	0.97	1.11	51,800	106.09	68.78	8.64	8.53	6,075	2	-	-
087	S	8.6%	11.49	6.58	4.04	0.87	1.00	49,529	111.81	70.46	7.45	9.63	5,146	-	2	-
021	N	7.8%	13.32	7.53	4.62	1.17	1.03	48,001	113.97	70.95	8.51	8.65	5,550	1	2	-
529	C	8.1%	12.66	7.09	4.51	1.06	1.02	41,123	150.11	97.23	13.03	11.89	3,457	6	4	-

(1) Total bus count (429) is based on PM weekday equipment requirements.

(2) Bus count for routes 53X, 57X and 64X 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.



**OCTA Operating Statistics By Route for Express Service (Sorted by Boardings)**  
Fiscal Year 2018-19 Through Q3

Route	Zone	Farebox	Subsidy per Boarding	Direct Subsidy	Indirect Subsidy	"Capital Subsidy" Per Boarding	Revenue per Boarding	Boardings	CostVSH	Direct CostVSH	CostVSM	BoardVSH	VSH	Bus Count		
														40 FT	32 FT	60 FT
794	C	21.6%	\$ 25.92	\$ 12.16	\$ 9.54	\$ 4.22	\$ 5.98	23,719	\$ 219.86	\$ 153.60	\$ 8.23	7.94	2,986	4	-	-
701	C	7.6%	30.60	16.39	9.88	4.33	2.16	17,338	259.91	168.06	10.83	9.14	1,897	3	-	-
721	N	4.7%	42.08	23.40	14.10	4.58	1.86	16,376	226.16	146.46	8.79	5.75	2,850	3	-	-
213	N	2.5%	47.23	21.99	17.26	7.98	1.00	10,737	163.43	103.42	9.54	4.06	2,644	-	4	-
211	C	1.9%	64.30	31.52	24.74	8.04	1.10	10,657	143.84	97.88	8.46	2.51	4,250	-	4	-
206	C	4.3%	29.44	12.74	10.00	6.70	1.02	9,590	175.06	113.33	9.18	7.37	1,302	-	3	-

(1) Total bus count (429) 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 Stationlink Service (Sorted by Boardings)**  
Fiscal Year 2018-19 Through Q3

Route	Zone	Farebox	Subsidy per Boarding	Direct Subsidy	Indirect Subsidy	"Capital Subsidy" Per Boarding	Revenue per Boarding	Boardings	CostVSH	Direct CostVSH	CostVSM	BoardVSH	VSH	Bus Count		
														40 FT	32 FT	60 FT
473	C	13.4%	8.35	3.52	3.10	1.73	1.02	33,641	\$ 178.29	\$ 111.83	\$ 15.78	23.30	1,444	2	-	-
462	C	12.8%	7.61	3.57	3.14	0.90	0.99	27,927	159.74	107.34	22.66	20.76	1,346	1	-	-
472	C	10.3%	11.17	4.27	3.77	3.13	0.93	26,609	164.14	108.85	13.86	18.30	1,454	3	-	-
453	N	8.6%	11.13	4.73	4.16	2.24	0.84	22,370	176.66	111.88	26.57	18.15	1,233	2	-	-
480	C	8.6%	12.34	5.25	4.63	2.46	0.93	20,316	172.25	111.01	14.76	15.94	1,275	2	-	-
463	C	4.0%	28.56	11.99	10.56	6.01	0.95	16,640	171.52	110.64	16.55	7.30	2,280	4	-	-

(1) Total bus count (429) is based on PM weekday equipment requirements.

(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	Long Beach - 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
529	Fullerton - Huntington Beach	via Beach Blvd	BRAVO
543	Fullerton Transportation Center - Santa Ana	via Harbor Blvd	BRAVO
560	Santa Ana - Long Beach	via 17th St/ Westminster 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 Fwy/ 91 Fwy	EXPRESS BUS
794	Riverside / Corona - South Coast Metro Express	via 91 Fwy/ 55 Fwy	EXPRESS BUS

## OC Bus 360° Plan: Performance to Date

To address declining bus ridership, the OCTA Board of Directors (Board) endorsed a comprehensive action plan, known as the OC Bus 360° 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 the passenger experience, and pricing, as well as other revenue changes to stimulate ridership and provide new funding.

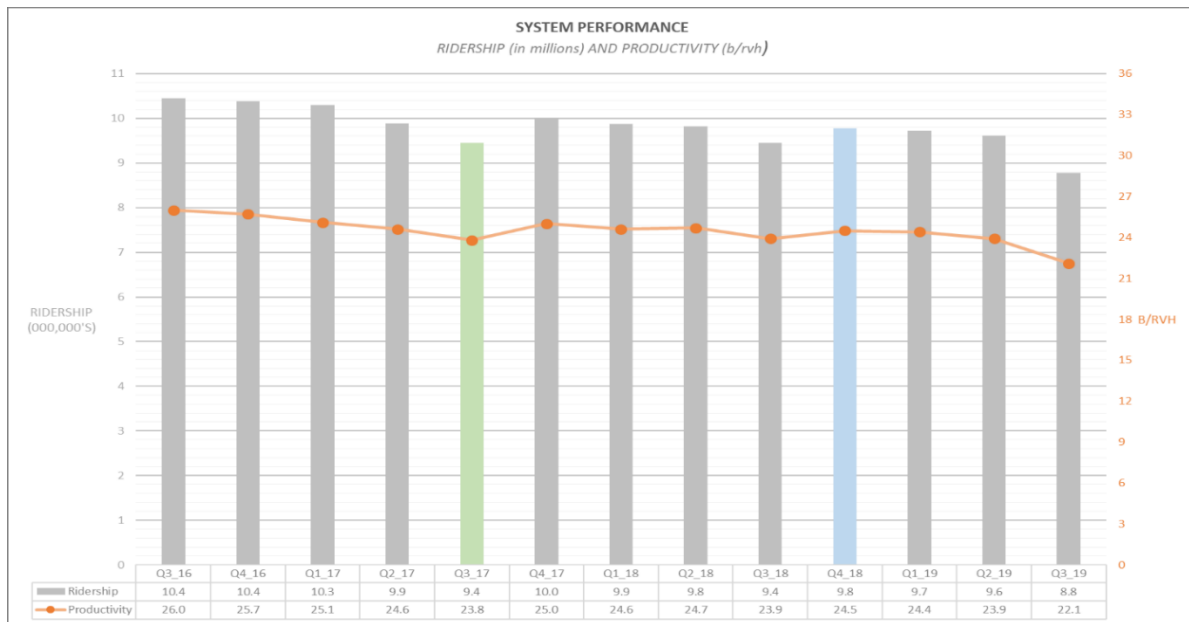
Extensive work was invested by OCTA to implement the OC Bus 360° plan. These efforts included:

- 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° Plan, the changes implemented in October 2016 and February 2018 were the most significant; these have been tracked for overall OC Bus 360° 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° plan. The trend of overall system ridership and productivity is provided on the following chart.

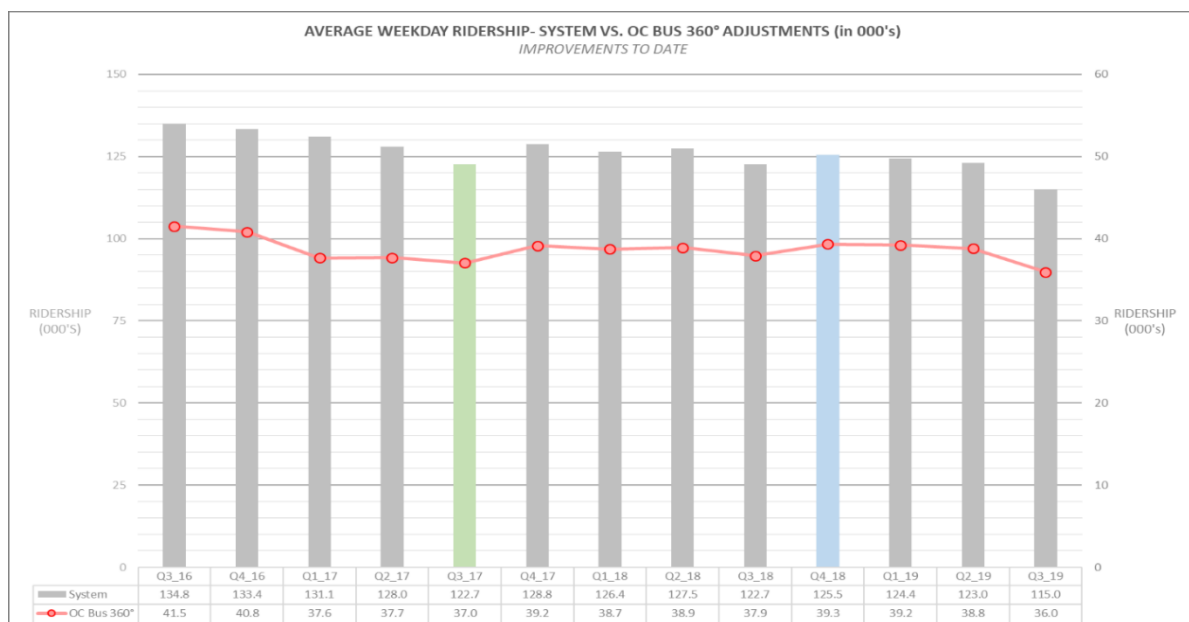




Through the third quarter of FY 2018-19, ridership and productivity are down compared to last quarter and with respect to the quarterly trend since the October 2016 service change. Rain and lost service operated by the contractor were the primary factors for the drop in systemwide performance.

- Ridership was 8.3 percent lower than the previous quarter, and 6.3 percent lower than the same quarter last year.
- Productivity over the third quarter fell by 7.5 percent from last quarter and the same quarter last year.

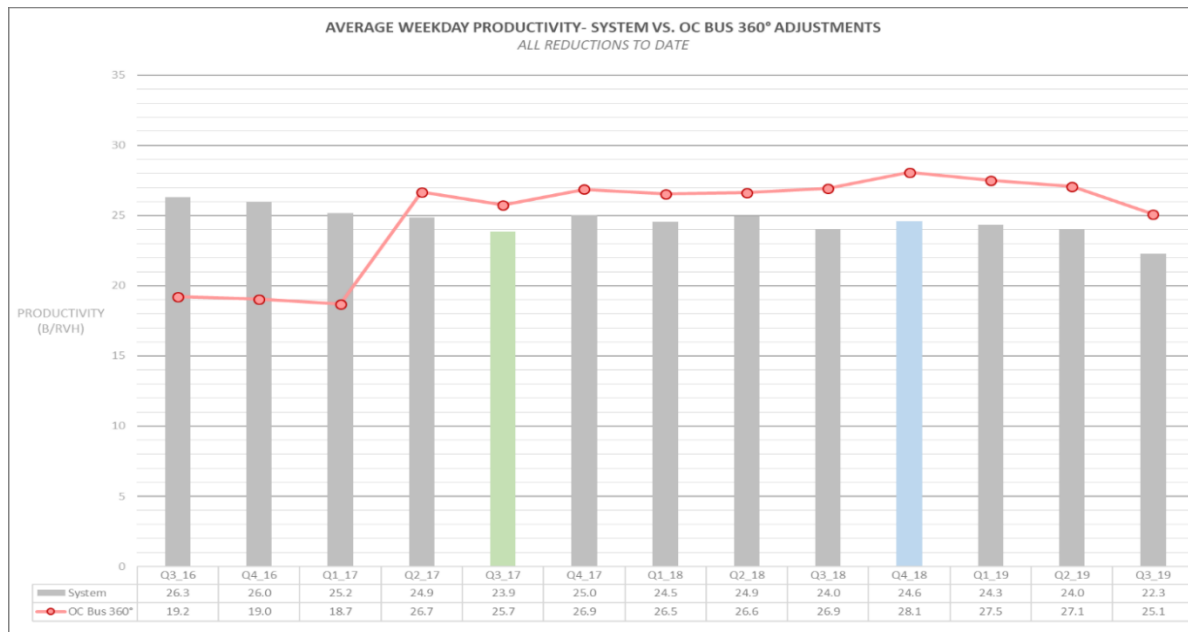
The impacts of the adjustments implemented under the OC Bus 360° plan are consistent with the systemwide trend. The following chart compares the system trend against the group of routes improved under the OC Bus 360° plan.



Comparing the results of the third quarter of FY 2018-19 with the third quarter of FY 2017-18, systemwide average weekday ridership fell by 6.5 percent, while the improved routes dropped more than 7.4 percent.

Improved system and route productivity are the goals for services that are *reduced* or *eliminated* under the OC Bus 360° 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 third quarter of FY 2018-19, productivity for the collective reductions remain above the system average, by 12.6 percent, but is trending similar to ridership, falling by 7.3 percent compared to last quarter and by 6.7 compared to the same quarter last year.

### Other OC Bus 360° Initiatives

#### **OC Flex Pilot Program**

Through the first six months of operation, October 15, 2018 through March 31, 2019, the performance of the OC Flex microtransit pilot is favorable. Of the five Board-approved performance metrics, two have reached the respective targets, another is close to meeting the target, and the remaining two, though below their respective targets, are trending favorably (see chart below). The OC Flex team remains flexible to adjust the service as needed to meet the established performance targets, comprehensively evaluate the service concept along with meeting customer needs for the development of feasible recommendations as appropriate and look to attract new and existing transit riders.

Board Adopted Goals / Measures		Performance*	Goal Met?
<b>Productivity</b> <i>Boardings per Revenue Vehicle Hour</i>	6	1.7	X
<b>Cost Effectiveness</b> <i>Subsidy per Boarding</i>	\$9.00	\$41.12	X
<b>Shared Rides</b> <i>% of Bookings sharing a vehicle, including groups</i>	25%	23.2%	—
<b>Connecting Transit Trips</b> <i>% of transfer trips</i>	25%	29%	✓
<b>Customer Satisfaction</b> <i>% “likely”/“very likely” to recommend service</i>	85%	89%	✓

#### 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 has been very successful and popular among students and colleges. OCTA continues to work with other colleges to expand the College Pass program using available Low Carbon Transit Operations Program (LCTOP) and Mobile Source Air Pollution Reduction (MSRC) grant funds, along with college-provided funding or student fees.

As of March 31, 2019, the College Pass Program has reported 1.89 million boardings with 10,939 unique participating students among participating colleges since August 2017. Ridership trends for the College Pass are generally positive, however, during Q3 ridership decreased for several months during this period – likely due to inclement weather, loss of service, and college spring break schedules.

Fullerton College is expected to join the college pass program in August 2019. During a recent Fullerton College election – with an unusually high turnout due to program’s presence on the ballot – 89 percent of student voters approved a three-year program that is free to students for the first year (paid by LCTOP and MSRC grants) and funded by low student fees the second and third year.

In May 2019, the student council government for Golden West College approved funds for the second and third years of the three-year college pass program, with the first year funding provided by LCTOP.

Implementation of the College Pass at Fullerton and Golden West colleges will begin this fall.

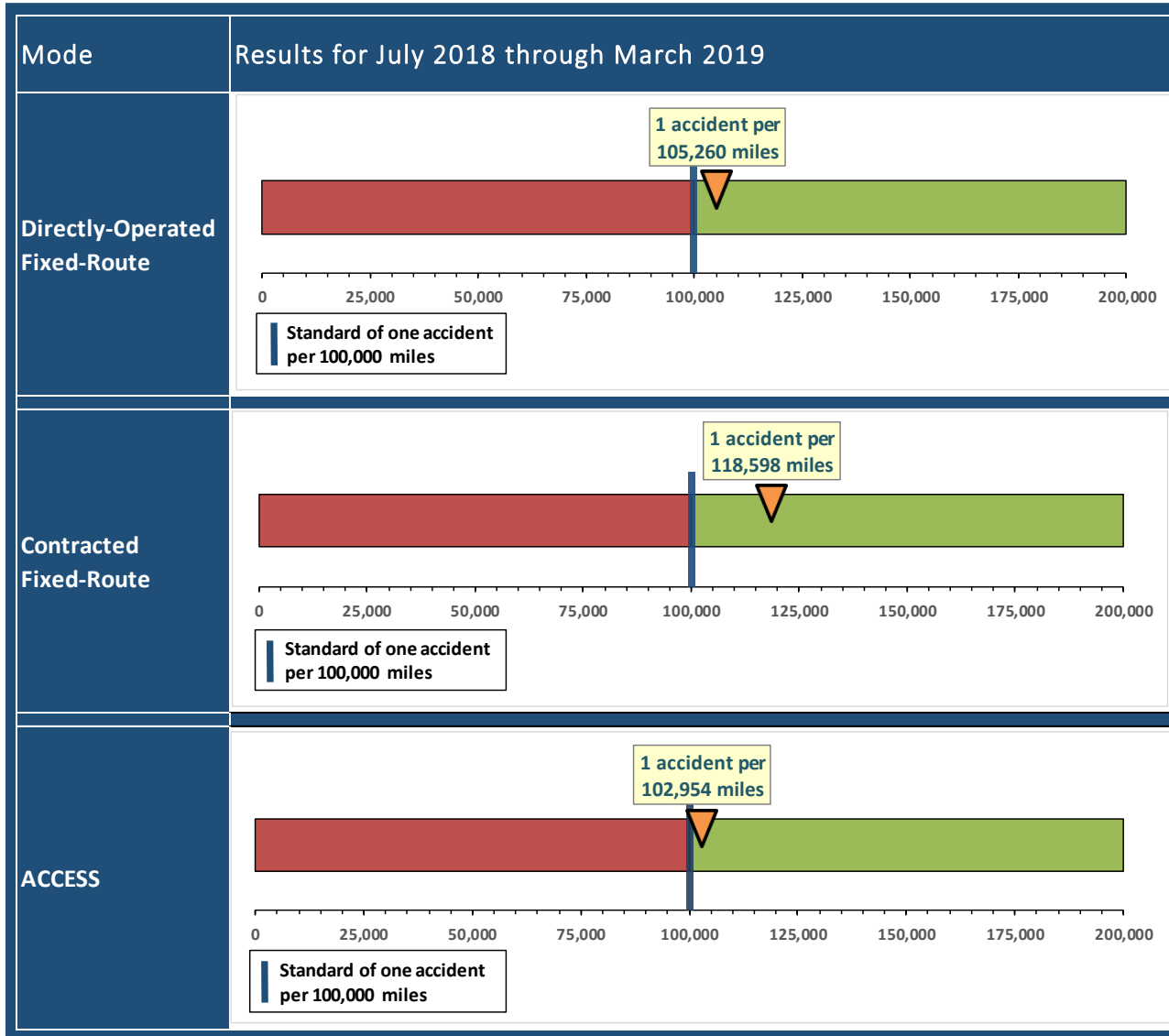
# **BUS OPERATIONS PERFORMANCE MEASUREMENTS REPORT**

**For the Third Quarter of  
Fiscal Year 2018-19**

# Performance Measurements

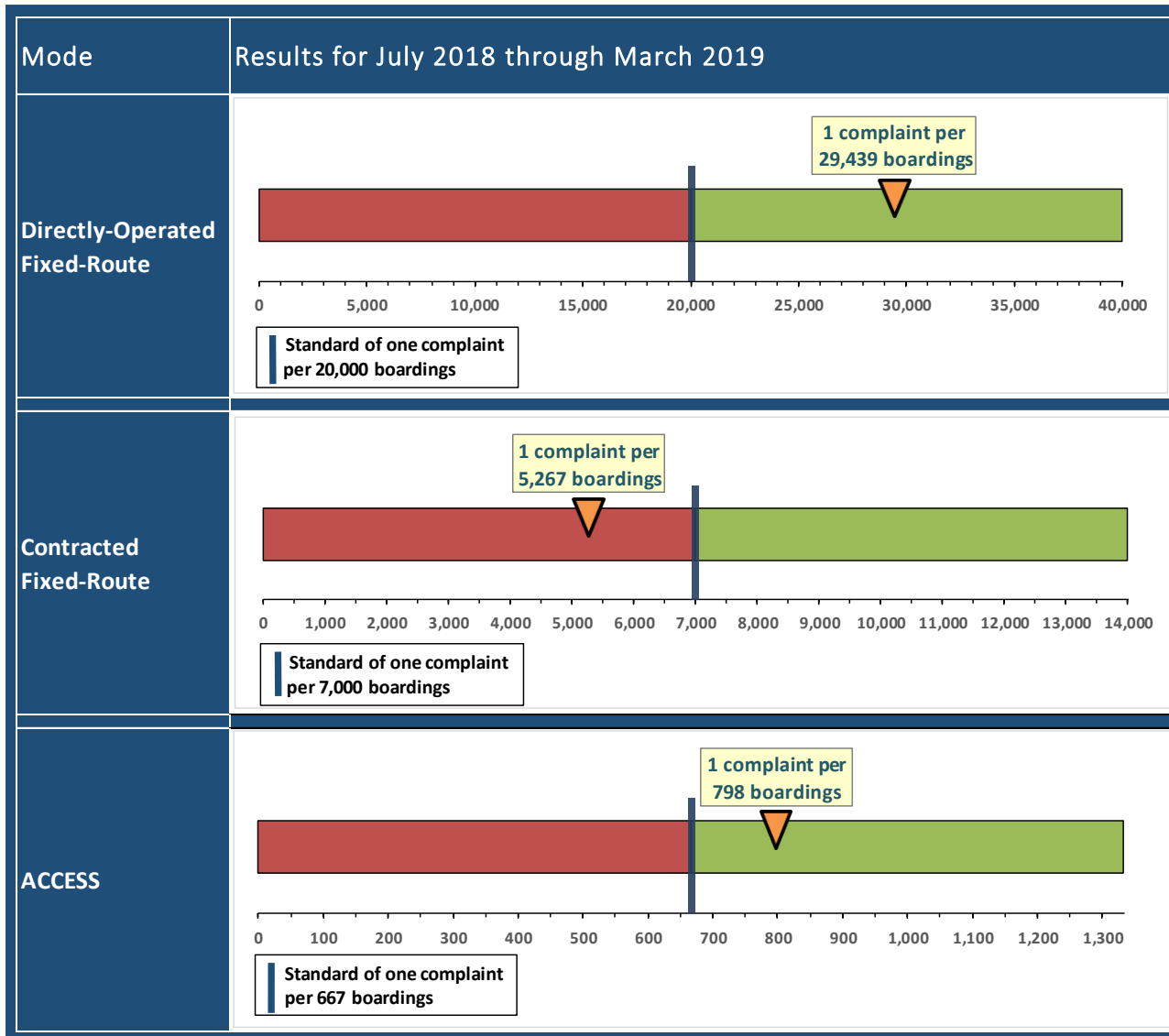
- Safety – Preventable Vehicle Accidents
- Courtesy – Customer Complaints
- Reliability – On-Time Performance (OTP) and Miles Between Road Calls (MBRC)
- Ridership and Productivity
- Farebox Recovery Ratio (FRR)
- Operating Cost per Revenue Vehicle Hour (RVH)
- Performance by Route

# Safety



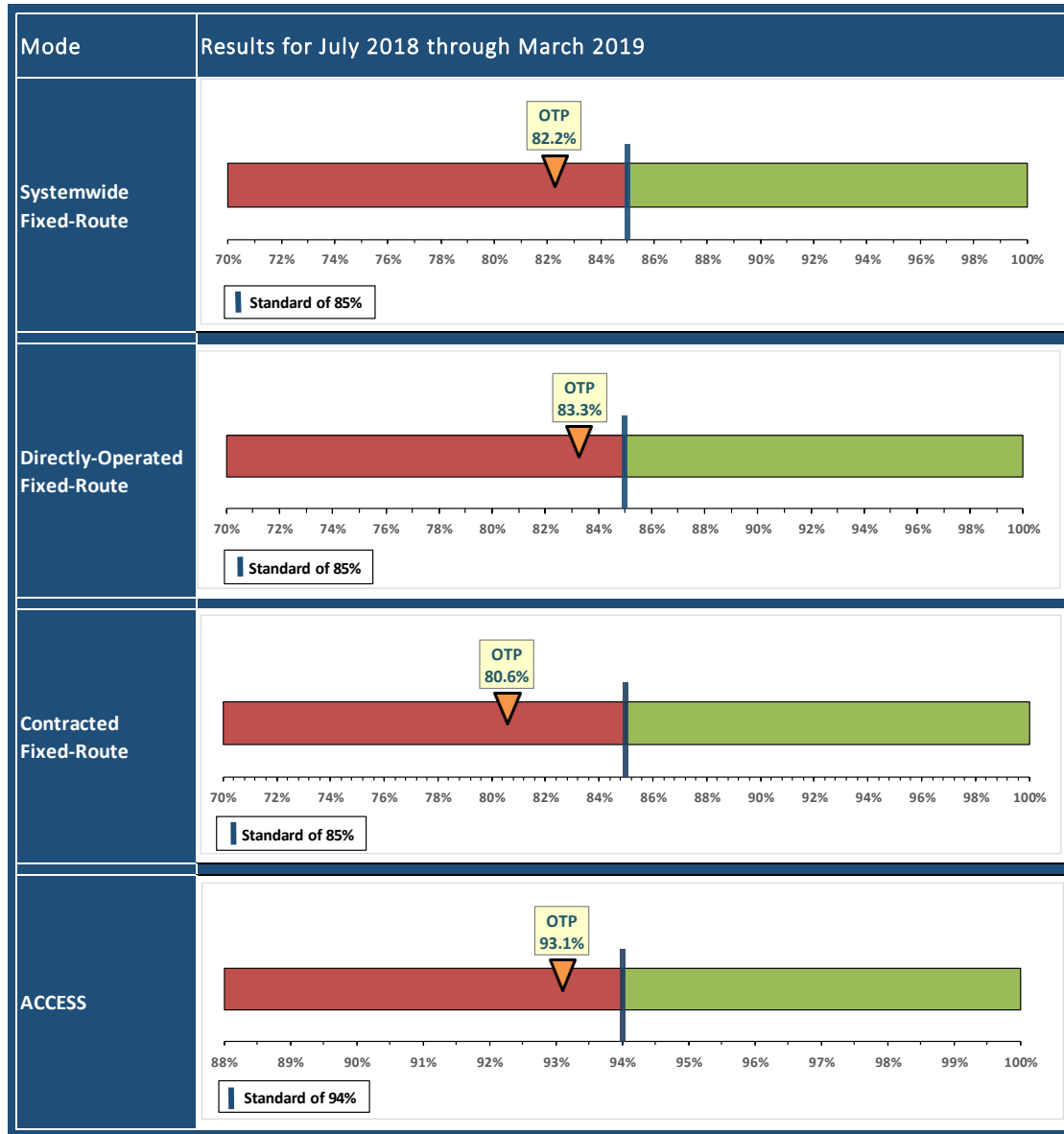
- All three modes of service exceeded the safety standard

# Courtesy



- Directly-operated fixed-route (DOFR) and OC ACCESS exceeded the courtesy standard
- Contracted fixed-route (CFR) was 2.5 percent below the standard.

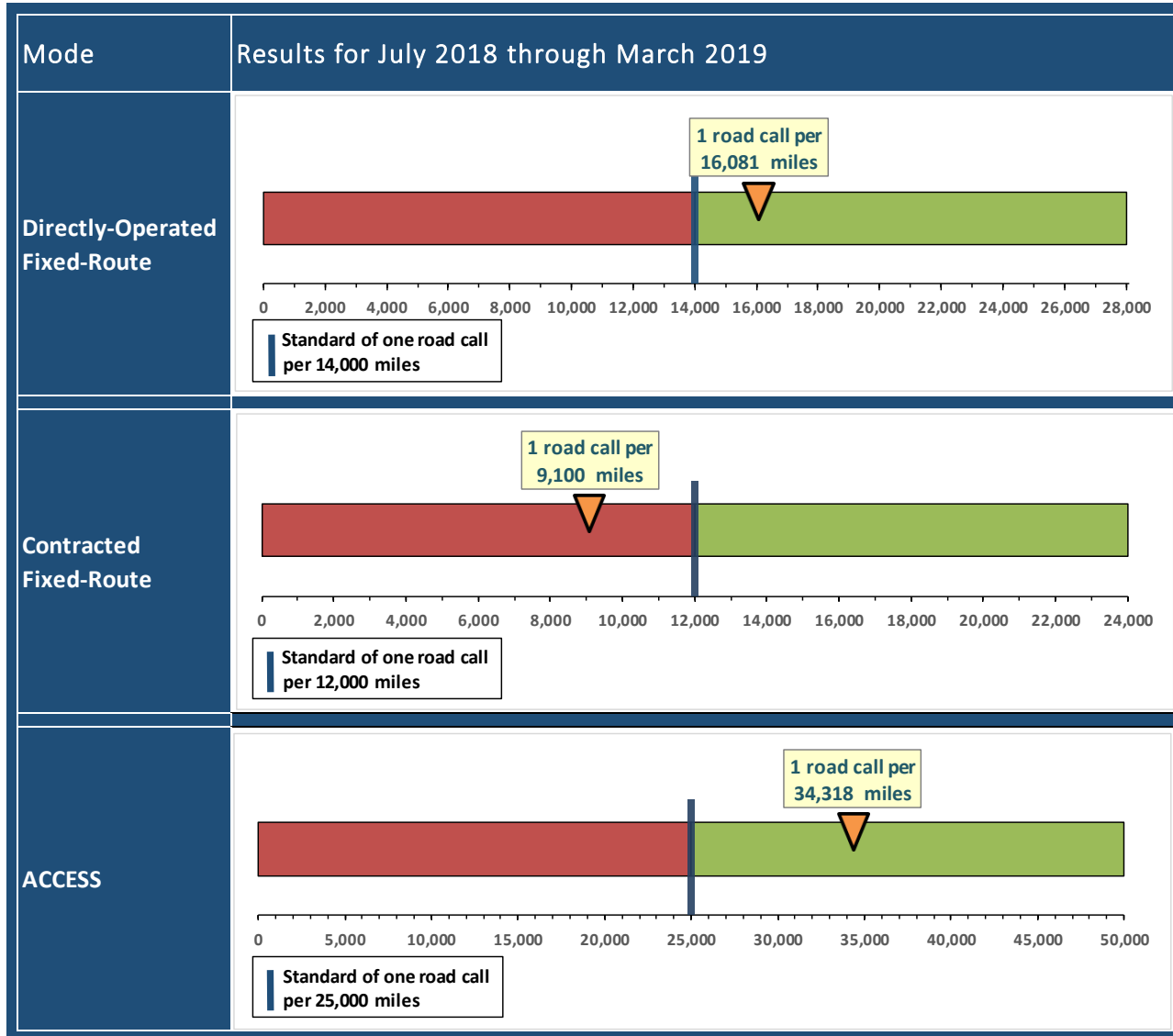
# Reliability-OTP



- Systemwide fixed-route service was 2.8 percent below the standard
- DOFR service was 1.7 percent below the standard
- CFR service was within 4.4 percent below the standard
- OC ACCESS service was 0.9 percent below the standard

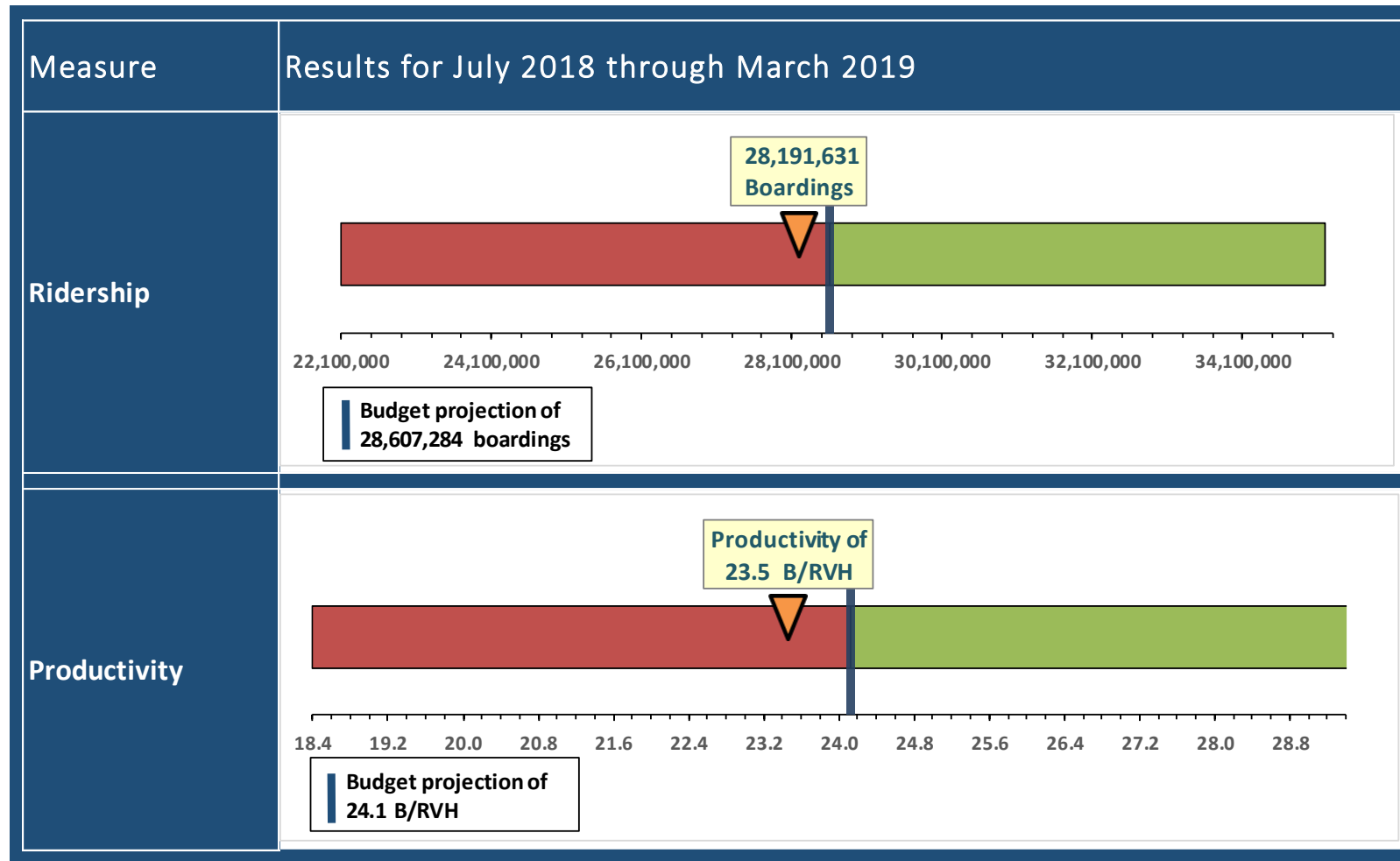


# Reliability-MBRC



- DOFR and OC ACCESS services exceeded the MBRC standard
- CFR did not meet the standard
- Continued to focus on vehicle reliability:
  - Provided additional maintenance training
  - Implemented more rigorous quality control processes to improve vehicle repair procedures
  - Maintained corporate support and presence in maintenance shop

# Fixed-Route-Ridership and Productivity



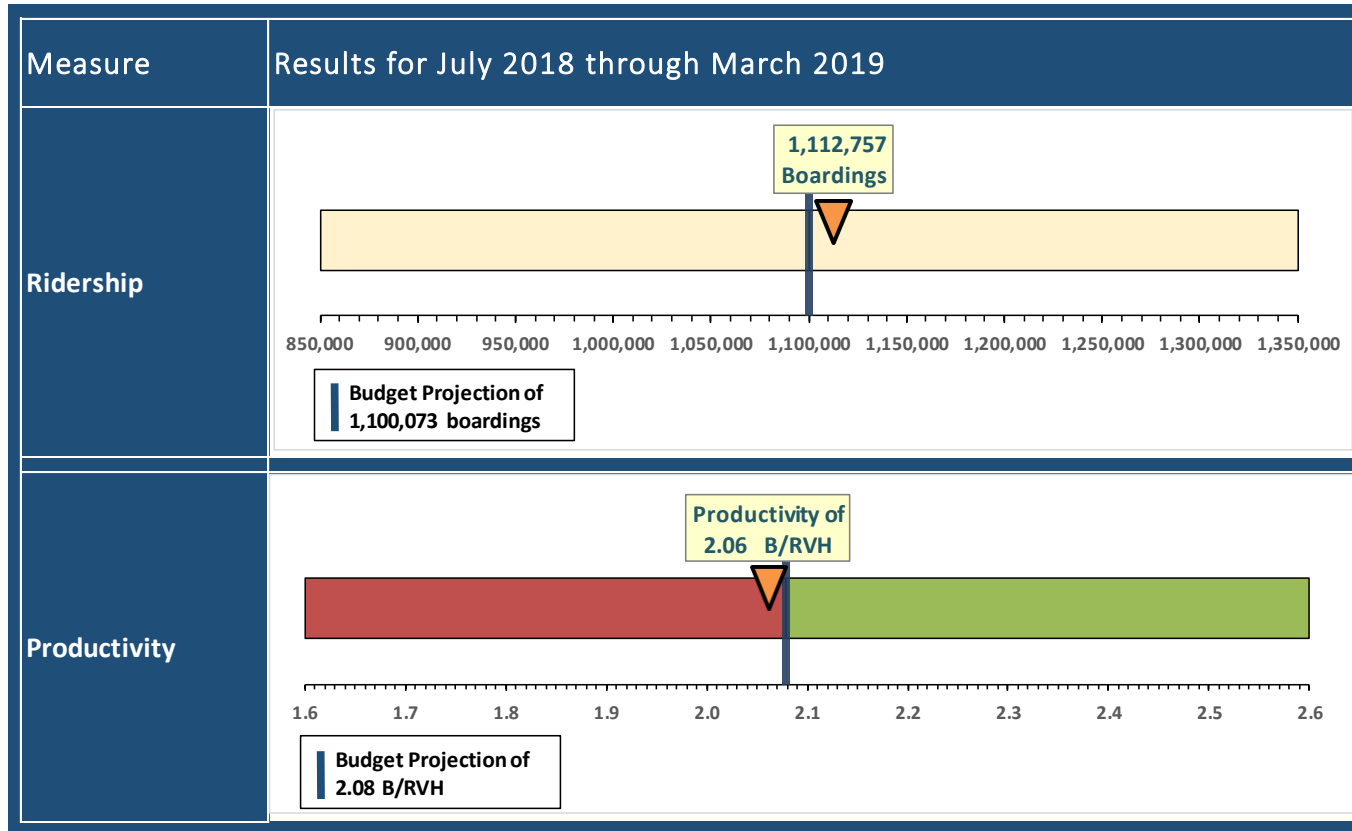
- Fixed-route service was below the budget projection for ridership and productivity

# Ridership and Rain

- Daily ridership data and research have shown that rain has a negative impact on ridership
- OCTA counts “rain” days as those days where rainfall exceeds one inch
- During the third quarter of FY 2018-19, there were 22 days of rain vs 14 days during the third quarter of last year

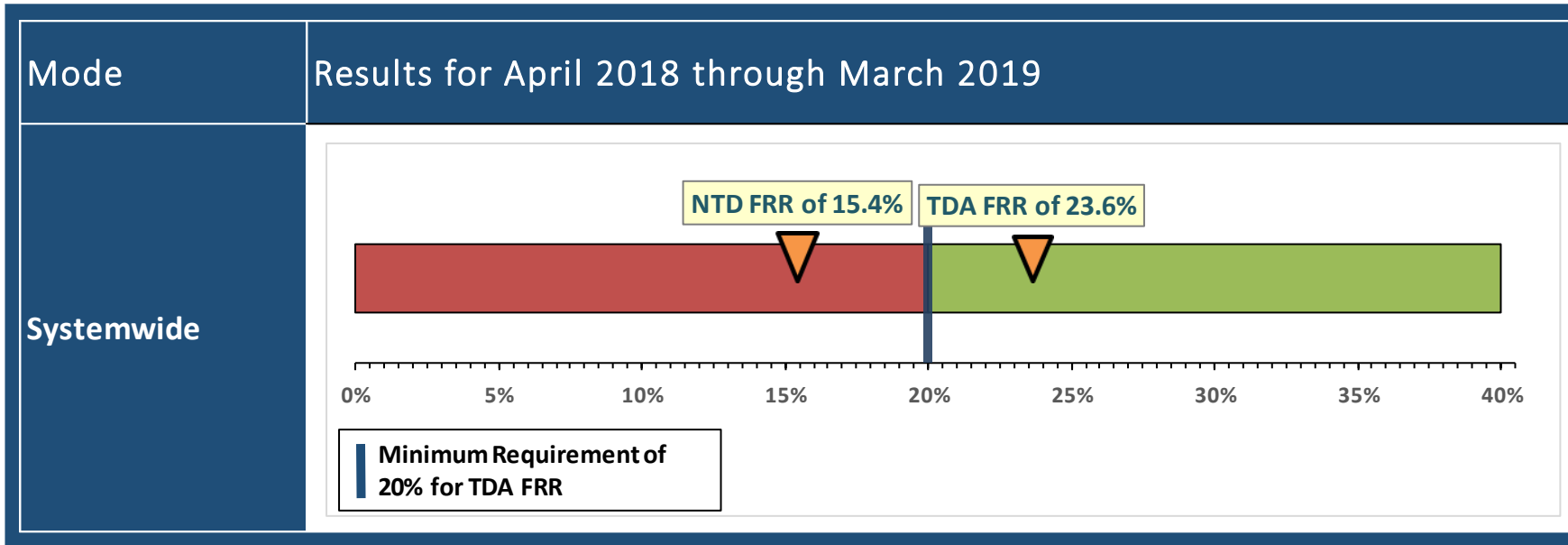
Day of Week	Quarter 3 - FY 2018-19			Quarter 3 - FY 2017-18		
	Average "Rain" Day	Average "Non-Rain" Day	Δ (%)	Average "Rain" Day	Average "Non-Rain" Day	Δ (%)
Weekday	100,587	119,127	-15.6%	117,366	123,648	-5.1%
Saturday	50,666	69,009	-26.6%	62,874	69,432	-9.4%
Sunday	45,910	53,239	-13.8%	46,746	55,707	-16.1%

# OC ACCESS-Ridership and Productivity



- OC ACCESS service exceeded budget projection for ridership.
- Productivity is one percent below the budgeted projections.

# Farebox Recovery Ratio

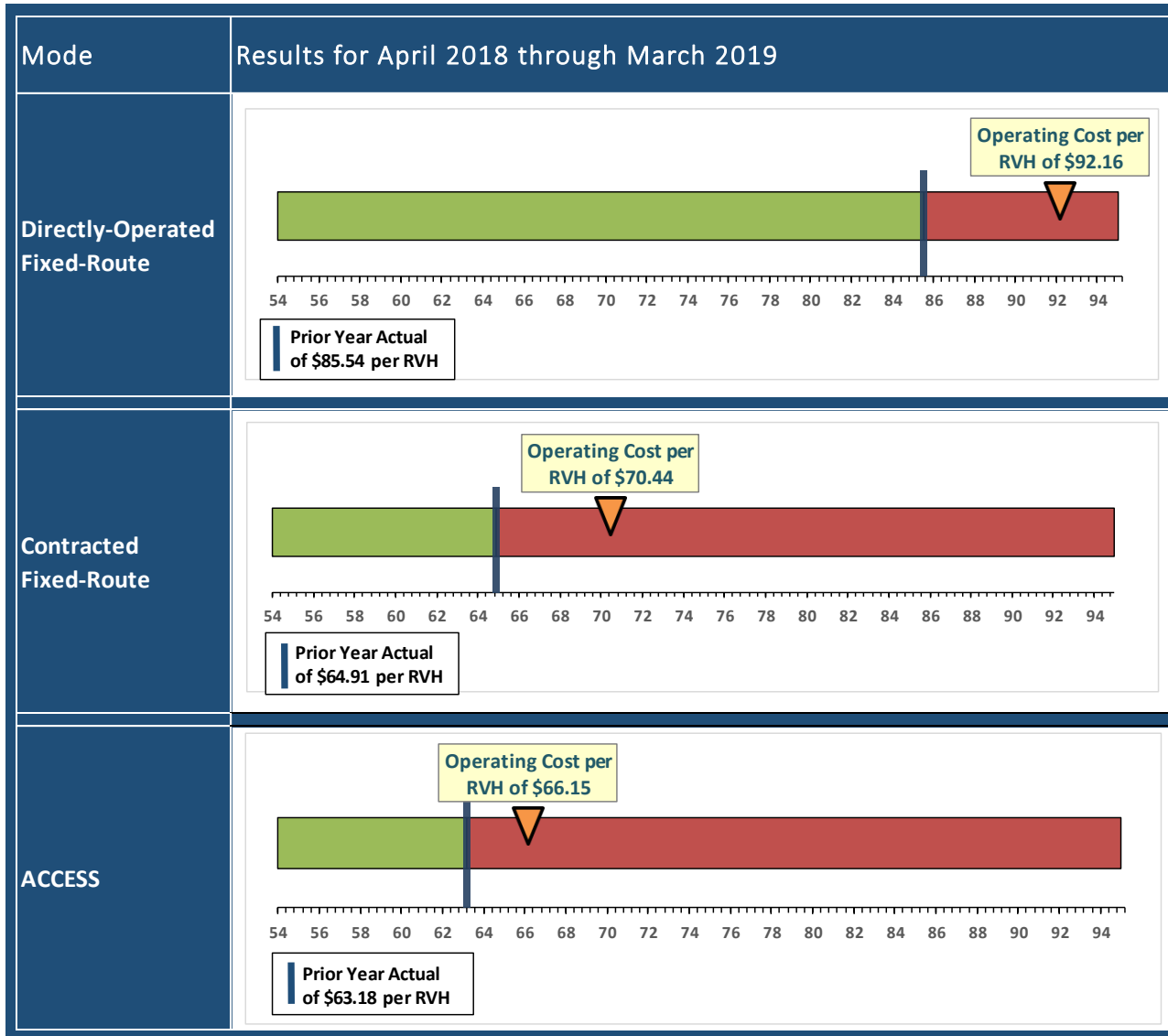


**Note:**

- 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

- NTD FRR was 4.6 percent under the standard, and
- TDA FRR exceeded the standard by 3.6 percent

# Cost per RVH



- DOFR operating cost increased 7.7 percent from the prior year actuals
- CFR operating cost increased 8.5 percent from the prior year actuals
- OC ACCESS operating cost increased 4.7 percent from the prior year actuals

# Performance: Local Routes

Route	Farebox	Subsidy per Boarding	Boardings	BoardVSH	VSH	40 FT	32 FT	60 FT
021	7.8%	\$ 13.32	48,001	8.65	5,550	1	2	-
529	8.1%	12.66	41,123	11.89	3,457	6	4	-
085	8.9%	12.30	51,800	8.53	6,075	2	-	-
087	8.6%	11.49	49,529	9.63	5,146	-	2	-
001	7.8%	11.35	416,854	12.84	32,469	6	-	-
076	9.7%	10.21	64,766	13.18	4,915	2	-	-
083	11.8%	7.67	465,932	18.10	25,747	10	-	-
086	13.2%	7.66	107,298	13.17	8,148	3	-	-
091	14.5%	7.38	294,325	13.53	21,755	8	-	-
024	15.8%	6.83	95,541	14.66	6,517	3	-	-
090	15.9%	6.75	245,944	15.38	15,991	6	-	-
050	12.9%	6.30	911,318	22.65	40,227	11	-	-
056	13.2%	6.25	311,420	20.63	15,093	4	-	-
079	15.5%	6.22	329,207	15.43	21,331	6	-	-
089	15.7%	6.06	260,285	16.02	16,245	5	-	-
082	19.7%	6.05	62,063	19.76	3,141	3	-	-
059	16.2%	6.03	412,988	16.89	24,449	11	-	-
560	15.0%	5.99	581,906	23.04	25,257	6	7	-
055	16.6%	5.84	960,332	22.16	43,344	18	-	-
054	15.6%	5.69	896,235	23.19	38,655	17	-	-
072	15.9%	5.67	373,686	22.11	16,899	6	-	-
025	17.0%	5.63	277,116	17.25	16,065	5	-	-

VSH - vehicle service hour

BoardVSH - boardings per vehicle service hour

Route	Farebox	Subsidy per Boarding	Boardings	BoardVSH	VSH	40 FT	32 FT	60 FT
071	16.8%	\$ 5.47	516,277	17.32	29,802	8	-	-
037	15.9%	\$ 5.41	812,982	24.22	33,563	14	-	-
026	17.1%	\$ 5.21	332,272	18.15	18,303	4	-	-
029	16.8%	\$ 4.96	1,419,505	25.57	55,511	5	-	7
030	17.9%	\$ 4.62	486,112	20.19	24,078	6	-	-
047	19.7%	\$ 4.59	1,561,032	26.83	58,175	20	-	-
035	18.6%	\$ 4.51	600,386	22.08	27,195	12	-	-
543	19.1%	\$ 4.39	717,851	28.93	24,811	6	4	-
070	20.5%	\$ 4.37	693,580	22.35	31,039	12	-	-
033	18.4%	\$ 4.34	282,492	21.47	13,160	4	-	-
057	20.2%	\$ 4.23	1,475,067	30.58	48,236	8	-	4
060	19.5%	\$ 4.06	1,423,189	30.19	47,147	16	-	-
046	22.1%	\$ 3.93	477,819	23.23	20,567	7	-	-
053X	21.4%	\$ 3.92	489,585	28.19	17,369	6	-	-
038	21.1%	\$ 3.83	806,877	24.90	32,404	14	-	-
053	21.0%	\$ 3.81	1,055,662	32.59	32,390	10	-	-
043	22.0%	\$ 3.77	1,569,211	30.98	50,658	13	-	-
057X	25.0%	\$ 3.43	834,269	31.37	26,595	5	-	2
066	24.4%	\$ 3.31	1,514,939	34.41	44,030	12	-	-
042	23.0%	\$ 3.28	1,142,729	27.49	41,575	13	-	-
064	24.5%	\$ 2.97	1,151,068	38.48	29,913	7	-	-
064X	26.6%	\$ 2.72	462,038	37.70	12,255	3	-	-

# Performance: Community Routes

Route	Farebox	Subsidy per Boarding	Boardings	BoardVSH	VSH	40 FT	32 FT	60 FT
153	10.3%	\$ 10.15	86,493	9.82	8,805	2	-	-
178	11.1%	9.53	67,662	10.66	6,346	2	-	-
177	13.1%	8.45	63,533	11.75	5,408	-	2	-
167	14.2%	7.21	151,385	13.78	10,983	4	-	-
129	15.6%	6.51	144,579	15.04	9,613	2	-	-
143	15.3%	6.28	137,869	15.01	9,183	2	-	-
150	18.6%	5.68	132,991	17.94	7,413	4	-	-



# Performance: Express/Stationlink Routes

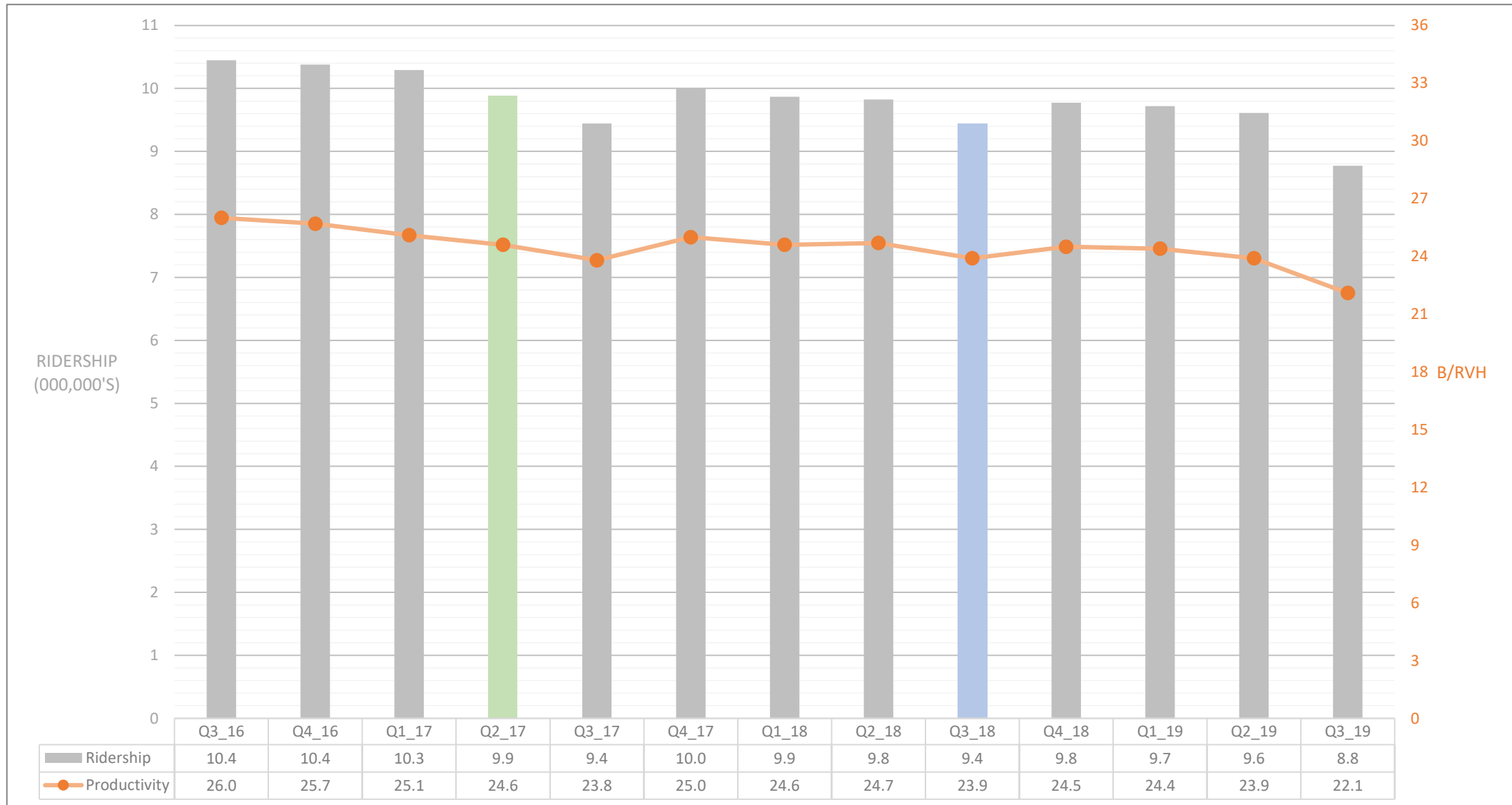
Route	Farebox	Subsidy per Boarding	Boardings	BoardVSH	VSH	40 FT	32 FT	60 FT
211	1.9%	\$ 64.30	10,657	2.51	4,250	-	4	-
213	2.5%	47.23	10,737	4.06	2,644	-	4	-
721	4.7%	42.08	16,376	5.75	2,850	3	-	-
701	7.6%	30.60	17,338	9.14	1,897	3	-	-
206	4.3%	29.44	9,590	7.37	1,302	-	3	-
794	21.6%	25.92	23,719	7.94	2,986	4	-	-

Route	Farebox	Subsidy per Boarding	Boardings	BoardVSH	VSH	40 FT	32 FT	60 FT
463	4.0%	\$ 28.56	16,640	7.30	2,280	4	-	-
480	8.6%	12.34	20,316	15.94	1,275	2	-	-
472	10.3%	11.17	26,609	18.30	1,454	3	-	-
453	8.6%	11.13	22,370	18.15	1,233	2	-	-
473	13.4%	8.35	33,641	23.30	1,444	2	-	-
462	12.8%	7.61	27,927	20.76	1,346	1	-	-

# **BUS OPERATIONS PERFORMANCE AND OC BUS 360°**

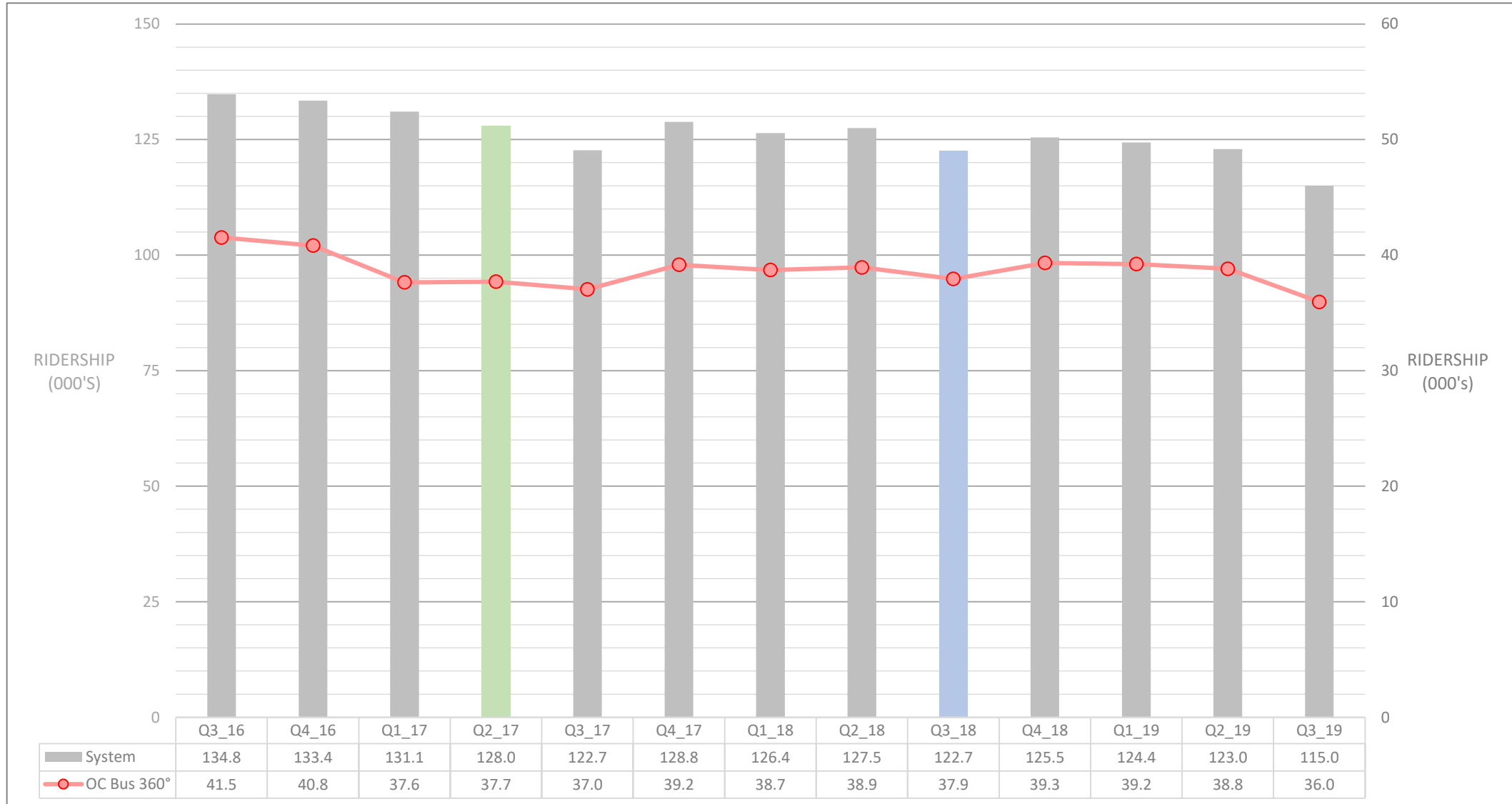
# Performance: System-wide Trends

*RIDERSHIP and PRODUCTIVITY: 13-Quarter Trend*



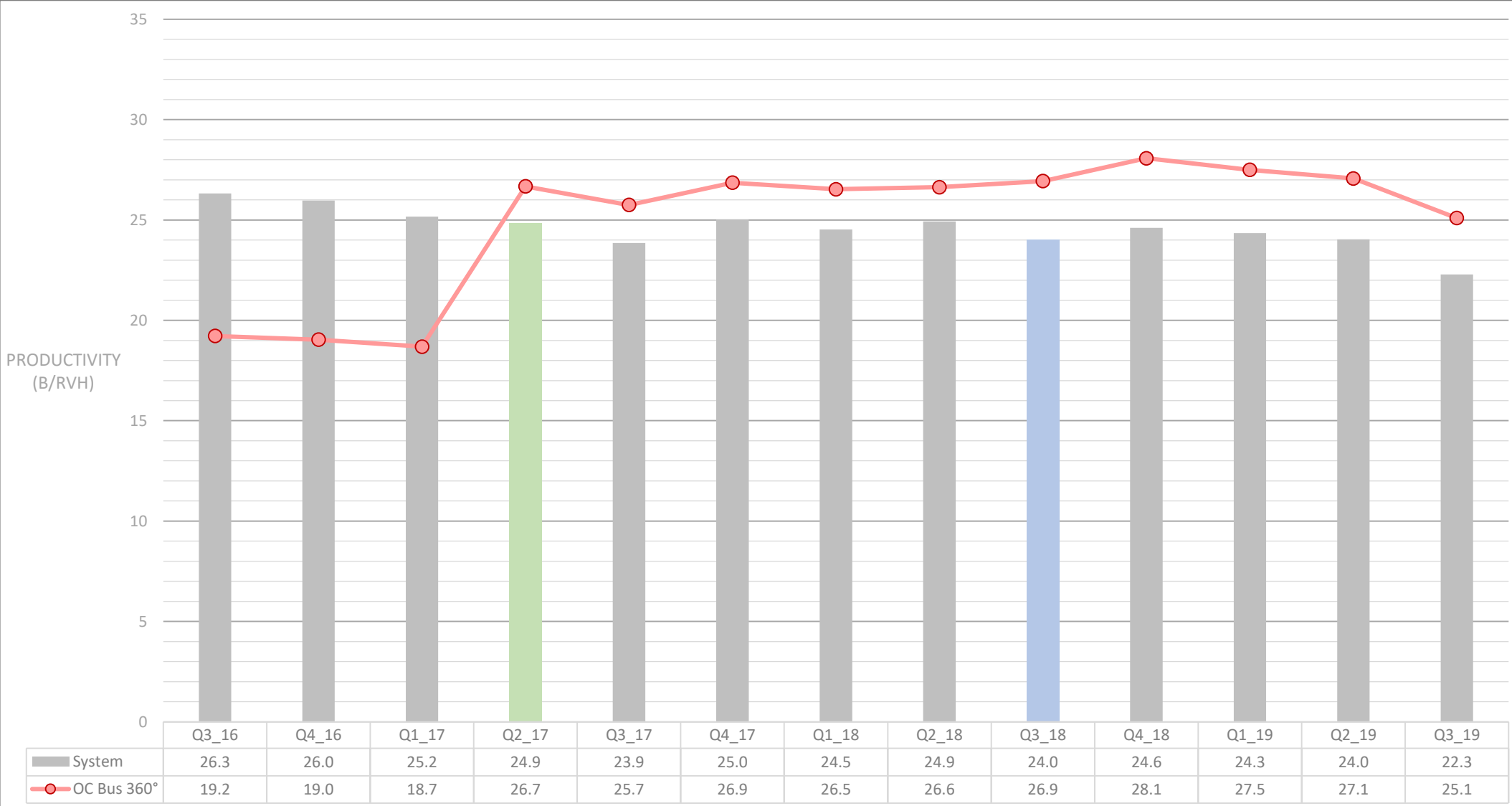
# Performance: OC Bus 360° Improvements

*Average Weekday RIDERSHIP – System vs. OC Bus 360° Route Improvements To Date*



# Performance: OC Bus 360° Reductions

Average Weekday PRODUCTIVITY – System vs. OC Bus 360° Route Reductions/Eliminations To Date



# Future Reports

October 10, 2019, Transit Committee

Fourth Quarter Bus Operations Performance Measurements Report