



Orange County Transportation Authority

Transit Committee Agenda

Thursday, December 8, 2022 at 9:00 a.m.

Board Room, 550 South Main Street, Orange, California

Committee Members

Steve Jones, Chairman

Tam Nguyen, Vice Chairman

Andrew Do

Patrick Harper

Fred Jung

Vicente Sarmiento

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

Agenda Descriptions

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.

Public Availability of Agenda Materials

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

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TRANSIT COMMITTEE MEETING AGENDA

Please complete a speaker's card and submit it to the Clerk of the Board (or notify the Clerk of the Board the item number on which you wish to speak). Speakers will be recognized by the Chairman at the time the agenda item is to be considered. A speaker's comments shall be limited to three minutes.

Written Comment

Written public comments may also be submitted by emailing them to ClerkOffice@octa.net, and must be sent by 5:00 p.m. the day prior to the meeting. If you wish to comment on a specific agenda item, please identify the item number in your email. All public comments that are timely received will be part of the public record and distributed to the Board. Public comments will be made available to the public upon request.

Call to Order

Pledge of Allegiance

Director Harper

Special Calendar

There are no Special Calendar matters.

Consent Calendar (Items 1 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.

1. Approval of Minutes - November 10, 2022

Recommendation

Approve the minutes of the November 10, 2022 Transit Committee meeting.

Attachments:

[Minutes](#)

2. Approval of Minutes - October 13, 2022

Recommendation

Approve the minutes of the October 13, 2022 Transit Committee meeting.

Attachments:

[Minutes](#)

TRANSIT COMMITTEE MEETING AGENDA

3. **Agreement for Installation of Battery-Electric Bus Chargers at Garden Grove Bus Base**

George Olivo/James G. Beil

Overview

On October 6, 2022, the Orange County Transportation Authority issued an invitation for bids for installation of battery-electric bus chargers at the Garden Grove Bus Base to support the pilot program for operation of OC Bus fixed-route service. Bids were received in accordance with Board of Directors-approved public works procurement procedures. Board of Directors' approval is requested to execute the agreement.

Recommendation

Authorize the Chief Executive Officer to negotiate and execute Agreement No. C-2-2853 between the Orange County Transportation Authority and Elegant Construction Inc., the lowest responsive, responsible bidder, in the amount of \$260,000, for the installation of battery-electric bus chargers at the Garden Grove Bus Base.

Attachments:

[Staff Report](#)

4. **Amendment to Agreement for On-Call Materials Testing and Inspection Services for Facilities Projects**

George Olivo/James G. Beil

Overview

On November 25, 2019, the Orange County Transportation Authority Board of Directors approved an agreement for on-call materials testing and inspection services for facilities projects for a term of three years, with one, two-year option term. An amendment to the existing agreement to execute the option term is requested for continued on-call materials testing and inspection services for facilities projects.

Recommendation

Authorize the Chief Executive Officer to negotiate and execute Amendment No. 2 to Agreement No. C-9-1356 between the Orange County Transportation Authority and Ninyo & Moore Geotechnical & Environmental Science Consultants, to exercise the two-year option term for continued on-call materials testing and inspection services for facilities projects, in the amount of \$331,420, and extend the term of the agreement through December 31, 2024. This will increase the maximum obligation of the agreement to a total contract value of \$861,885.

Attachments:

[Staff Report](#)

[Attachment A](#)

TRANSIT COMMITTEE MEETING AGENDA

5. February 2023 Bus Service Change

Jorge Duran/Kia Mortazavi

Overview

The proposed February 2023 bus service change consists of the implementation of the initial phase of the final service plan for the Making Better Connections Study, which was approved by the Board of Directors on October 24, 2022. This service change will restructure some OC Bus services and make minor schedule adjustments to improve service quality and reliability. The upcoming service change will set the stage for future improvements consistent with the Making Better Connections Service Plan.

Recommendation

Receive and file as an information item.

Attachments:

[Staff Report](#)

[Attachment A](#)

[Attachment B](#)

Regular Calendar

6. Zero-Emission Bus Pilot Update

Cliff Thorne/Johnny Dunning, Jr.

Overview

On October 8, 2020, the Orange County Transportation Authority Board of Directors approved the purchase of ten hydrogen fuel-cell electric buses and ten plug-in battery-electric buses to gain necessary operational and technological experience in preparation for transitioning the Orange County Transportation Authority's bus fleet to zero-emission technologies. This report provides an update on the zero-emission bus pilot performance and deployment efforts.

Recommendation

Receive and file as an information item.

Attachments:

[Staff Report](#)

[Presentation](#)

Discussion Items

7. OC Bus and OC ACCESS Services Update

Kim Tucker/Johnny Dunning, Jr.

Overview

Staff will provide an update on the OC Bus and OC ACCESS Services.

Attachments:

[Presentation](#)

TRANSIT COMMITTEE MEETING AGENDA

8. Public Comments

9. Chief Executive Officer's Report

10. Committee Members' Reports

11. Closed Session

There are no Closed Session items scheduled.

12. Adjournment

The next regularly scheduled meeting of this Committee will be held at 9:00 a.m. on Thursday, January 12, 2023, at the OCTA Headquarters, Board Room, 550 South Main Street, Orange, California.



Committee Members Present

Steve Jones, Chairman
Patrick Harper
Fred Jung

Committee Members Absent

Tam Nguyen, Vice Chairman
Andrew Do
Vicente Sarmiento

Staff Present

Darrell E. Johnson, Chief Executive Officer
Jennifer L. Bergener, Deputy Chief Executive Officer
Allison Cheshire, Clerk of the Board Specialist, Senior
Gina Ramirez, Clerk of the Board Specialist, Principal
James Donich, General Counsel
OCTA Staff

Call to Order

The November 10, 2022, regular meeting of the Transit Committee (Committee) was called to order by Committee Chairman Jones at 9:04 a.m.

Consent Calendar (Items 1 through 3)

1. Approval of Minutes

Due to a lack of quorum of the Members present, this item was deferred to the next regularly scheduled meeting of the Committee.

2. Agreement for Heating, Ventilation, and Air Conditioning Unit Replacement at Anaheim Bus Base Operations Building

Due to a lack of quorum of the Members present, this item was referred directly to the Board of Directors meeting on Monday, October 14, 2022.

3. Bus Operations Performance Measurements Report for the Fourth Quarter of Fiscal Year 2021-22

Due to a lack of quorum of the Members present, this item was referred directly to the Board of Directors meeting on Monday, October 14, 2022.

Discussion Items

4. OC Bus and OC ACCESS Services Update

Kim Tucker, Department Manager, Scheduling and Bus Operations Support, and Ryan Maloney, Section Manager, Marketing and Customer Service, provided a presentation on this item.

Director Jung requested customer complaint data regarding the recent labor strike be included in the next update.

Following the discussion, no action was taken on this item.



5. Public Comments

No public comments were received.

6. Chief Executive Officer's Report

Darrell E. Johnson, Chief Executive Officer, reported on the following:

- Labor Negotiations
- Metrolink Holiday Promotions

7. Committee Members' Reports

Director Harper reported that he recently toured the OC Streetcar project area.

8. Closed Session

A closed session was not scheduled for this meeting.

9. Adjournment

The meeting adjourned at 9:13 a.m.

The next regularly scheduled meeting of this Committee will be held at **9:00 a.m. on Thursday, December 8, 2022**, at the OCTA Headquarters, Board Room, 550 South Main Street, Orange, California.

ATTEST:

Allison Cheshire
Clerk of the Board Specialist, Senior



Committee Members Present

Steve Jones, Chairman
Tam Nguyen, Vice Chairman
Andrew Do
Patrick Harper
Fred Jung
Vicente Sarmiento

Staff Present

Darrell E. Johnson, Chief Executive Officer
Jennifer L. Bergener, Deputy Chief Executive Officer
Allison Cheshire, Clerk of the Board Specialist, Senior
Gina Ramirez, Clerk of the Board Specialist, Principal
James Donich, General Counsel
OCTA Staff

Committee Members Absent

None

Call to Order

The October 13, 2022, regular meeting of the Transit Committee (Committee) was called to order by Committee Chairman Jones at 9:02 a.m.

Consent Calendar (Items 1 through 4)

1. Approval of Minutes

A motion was made by Director Nguyen, seconded by Director Do, and declared passed by those present, to approve the minutes of the September 8, 2022, Transit Committee meeting.

Director Sarmiento was not present to vote on this item.

2. Metrolink Fiscal Year 2021 22 Performance Report

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

Director Sarmiento was not present to vote on this item.

3. Amendment to Agreement for Hydrogen Station Operation, Maintenance, and Fuel Delivery

A motion was made by Director Nguyen, seconded by Director Do, and declared passed by those present, to authorize the Chief Executive Officer to negotiate and execute Amendment No. 6 to Agreement No. C-7-1577 between the Orange County Transportation Authority and Trillium USA Company LLC, in the amount of \$351,720, to exercise the first option term of the agreement from January 1, 2023, through December 31, 2023, for continued hydrogen station operation, maintenance, and hydrogen fuel delivery. This will increase the maximum obligation of the agreement to a total contract value of \$7,967,912.

Director Sarmiento was not present to vote on this item.



4. Acceptance of Grant Award from Federal Transit Administration Low or No Emission Grant Program and Department of Homeland Security Transit Security Grant Program

A motion was made by Director Nguyen, seconded by Director Do, and declared passed by those present to:

- A. Authorize the Chief Executive Officer, or designee, to accept the award of \$2,507,895 in Federal Transit Administration Low or No Emission Grant program funding for the Orange County Zero-Emission Paratransit Bus Pilot, and to negotiate and execute grant related agreements and documents with the Federal Transit Administration.
- B. Authorize the Chief Executive Officer, or designee, to accept the award of \$36,635 in Federal Emergency Management Agency funding awarded by the Department of Homeland Security through the Transit Security Grant Program and execute grant-related agreements and documents with the Department of Homeland Security.
- C. Authorize staff to make all necessary amendments to the Federal Transportation Improvement Program, as well as execute any necessary agreements to facilitate the recommendation above.

Director Sarmiento was not present to vote on this item.

Regular Calendar

5. OC Streetcar Project Quarterly Update

Ross Lew, Project Manager, and Tresa Oliveri, Community Relations Principal, provided a report on this item.

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

6. Contract Change Orders for Construction of the OC Streetcar Project

A motion was made by Director Do, seconded by Director Sarmiento, and declared passed by those present to:

- A. Authorize the Chief Executive Officer to negotiate and execute Contract Change Order No. 150.1 to Agreement No. C-7-1904 with Walsh Construction Company II, LLC, in the amount of \$800,000, for Fourth Street extended work hours and public safety.



- B. Authorize the Chief Executive Officer to negotiate and execute Contract Change Order No. 183 to Agreement No. C-7-1904 with Walsh Construction Company II, LLC, in the amount of \$480,000, for track switch indication lights.
- C. Authorize the Chief Executive Officer to negotiate and execute Contract Change Order No. 185 to Agreement No. C-7-1904 with Walsh Construction Company II, LLC, in the amount of \$550,000, for additional Builder's Risk insurance.

7. Making Better Connections Study Final Service Plan

Kurt Brotcke, Director of Planning, and Dan Phu, Manager of Sustainability Planning, provided a presentation on this item.

Public comment was received via email from Roberto Caudillo on Wednesday, October 12, 2022 at 2:58 p.m. and provided to the Committee Members via email on Wednesday, October 12, 2022 at 5:49 p.m.

A motion was made by Director Jung, seconded by Director Do, and declared passed by those present to:

- A. Receive and file the final Public Involvement Plan.
- B. Approve the final service plan that reflects the public input process.
- C. Direct the Executive Director of Planning, or designee, to file a Notice of Exemption pursuant to the California Environmental Quality Act related to the bus service changes.
- D. Direct staff to begin implementation in 2023 and develop an implementation plan consistent with available labor resources.

Discussion Items

8. Public Comments

No public comments were received.

9. Chief Executive Officer's Report

Darrell E. Johnson, Chief Executive Officer, reported on the following:

- Labor negotiations
- Employee Rotation Program
- Roundtable discussion hosted by Antonio Villaraigosa



10. Committee Members' Reports

There were no Committee Members' Reports.

11. Closed Session

A Closed Session was not scheduled for this meeting.

12. Adjournment

The meeting adjourned at 10:19 a.m.

The next regularly scheduled meeting of this Committee will be held at **9:00 a.m. on Thursday, November 10, 2022**, at the OCTA Headquarters, Board Room, 550 South Main Street, Orange, California.

ATTEST:

Allison Cheshire
Clerk of the Board Specialist, Senior



December 8, 2022

To: Transit Committee

From: Darrell E. Johnson, Chief Executive Officer

Subject: Agreement for Installation of Battery-Electric Bus Chargers at Garden Grove Bus Base

A handwritten signature in blue ink, appearing to read "Darrell Johnson", is written over the "From:" line of the memo.

Overview

On October 6, 2022, the Orange County Transportation Authority issued an invitation for bids for installation of battery-electric bus chargers at the Garden Grove Bus Base to support the zero-emission bus pilot program OC Bus fixed-route service. Bids were received in accordance with Board of Directors-approved public works procurement procedures. Board of Directors' approval is requested to execute the agreement.

Recommendation

Authorize the Chief Executive Officer to negotiate and execute Agreement No. C-2-2853 between the Orange County Transportation Authority and Elegant Construction Inc., the lowest responsive, responsible bidder, in the amount of \$260,000, for the installation of battery-electric bus chargers at the Garden Grove Bus Base.

Discussion

The Orange County Transportation Authority (OCTA) initiated a pilot program to test zero-emission bus (ZEB) technology in order to obtain operational information to determine which ZEB technology best meets OCTA service requirements. The ZEB pilot was implemented in early 2020 with the introduction of ten hydrogen fuel-cell electric buses. The addition of ten battery-electric buses (BEB) to the pilot program will enable OCTA to gain operational experience for each ZEB type available to guide decisions on OCTA's ZEB fleet to meet service demands. The project will install ten 150 Kilowatt chargers at OCTA's Garden Grove Bus Base, including power cabinets, depot charge box dispensers, underground conduits, electrical conductors, pavement repairs, Fleetwatch receivers for OCTA's fuel management system, connection to the Southern California Edison infrastructure, safety compliance, and related work.

In coordination with operations maintenance and the equipment manufacturer, the project will energize and test the functionality of the BEB chargers for use.

Procurement Approach

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

Invitation for Bids (IFB) 2-2853 was released on October 6, 2022, through OCTA's CAMM NET system. The project was advertised on October 6 and October 10, 2022, in a newspaper of general circulation. A pre-bid conference was held on October 11, 2022 and was attended by eight firms. Four addenda were issued to provide the pre-bid conference registration sheets, respond to bidders' questions, and handle administrative issues related to the IFB. On October 26, 2022, eight bids were received and publicly opened.

All bids were reviewed by staff from the 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>
Elegant Construction Inc. Irvine, California	\$260,000
Elecnor Belco Electric, Inc. Chino, California	\$290,000
Pacific Lighting MGT Inc., doing business as PLEMCo Santa Ana, California	\$327,039
Inter-Pacific, Inc., doing business as Inter-Pacific Systems, Inc. Tustin, California	\$350,000
Global Diversified Voltage Services Van Nuys, California	\$370,000

Global Electric Anaheim, California	\$398,159
Kazoni Inc., doing business as Kazoni Construction Costa Mesa, California	\$497,303
Servitek Electric, Inc. Walnut, California	\$774,604

The OCTA engineer's estimate for this project was \$278,000. The recommended firm's bid is 6.5 percent below the OCTA engineer's estimate and is considered by staff to be fair and reasonable. Positive reference checks were received for projects completed by the bidder for similar work.

State law requires award to the lowest responsive, responsible bidder. As such, staff recommends award to Elegant Construction Inc., the lowest, responsive, responsible bidder, in the amount of \$260,000, for installation of battery-electric bus chargers at the Garden Grove Bus Base.

Fiscal Impact

The project was approved in OCTA's Fiscal Year 2022-23 Budget, Capital Programs Division, Account No. 1722-9022-D3122-CAC, and is funded through Local Transportation Funds.

Summary

Based on the information provided, staff recommends the Board of Directors authorize the Chief Executive Officer to negotiate and execute Agreement No. C-2-2853 between the Orange County Transportation Authority and Elegant Construction Inc., the lowest responsive, responsible bidder, in the amount of \$260,000, for the installation of battery-electric bus chargers at the Garden Grove 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



Pia Veessen
Director, Contracts Administration and
Materials Management
(714) 560-5619



December 8, 2022

To: Transit Committee

From: Darrell E. Johnson, Chief Executive Officer

Subject: Amendment to Agreement for On-Call Materials Testing and Inspection Services for Facilities Projects

A handwritten signature in blue ink, appearing to read "Darrell E. Johnson", is written over the "From:" line of the memo.

Overview

On November 25, 2019, the Orange County Transportation Authority Board of Directors approved an agreement for on-call materials testing and inspection services for facilities projects for a term of three years, with one, two-year option term. An amendment to the existing agreement to execute the option term is requested for continued on-call materials testing and inspection services for facilities projects.

Recommendation

Authorize the Chief Executive Officer to negotiate and execute Amendment No. 2 to Agreement No. C-9-1356 between the Orange County Transportation Authority and Ninyo & Moore Geotechnical & Environmental Science Consultants, to exercise the two-year option term for continued on-call materials testing and inspection services for facilities projects, in the amount of \$331,420, and extend the term of the agreement through December 31, 2024. This will increase the maximum obligation of the agreement to a total contract value of \$861,885.

Discussion

The Orange County Transportation Authority (OCTA) owns, operates, and maintains five maintenance and operations bus bases, two park-and-ride facilities, and five transportation centers. The facilities are comprised of 56 buildings and structures totaling over 400,000 square feet. The structures are situated on approximately 89 acres of property throughout Orange County. During execution of capital improvement, maintenance, and facility modification projects at OCTA's facilities, quality is managed through quality assurance activities, including routine materials testing and inspection and tasks to verify that deliverables meet specified project requirements. Typical inspection and testing

activities include performing testing of soils, aggregate base, concrete, asphalt concrete, masonry, structural steel, asbestos-containing materials, and lead-containing materials. In addition, special deputy inspection services are utilized for welding, reinforcing steel, masonry, roofing, concrete, and asphalt placement as required.

The initial term of the agreement ends December 31, 2022. The option term is necessary for continued on-call materials testing and inspection services for facilities projects. Typical facilities projects include replacement of mechanical units, building repairs, painting, pavement repairs and/or replacement, installation of electric chargers, security enhancements at maintenance and operations bus bases and transportation centers. Upcoming facilities projects include installation of battery-electric bus chargers at the Garden Grove Bus Base, replacement of a heating ventilation air conditioning unit at the Anaheim Bus Base operations building, replacement of mechanical units and bus wash building repairs at the Santa Ana Bus Base, concrete pavement repairs at the Irvine Sand Canyon Bus Base, pavement repairs and striping at the Irvine Construction Circle Bus Base, and concrete repairs at the Fullerton Park-and-Ride.

Procurement Approach

The original procurement was handled in accordance with OCTA's Board of Directors (Board)-approved procedures for professional services. On November 25, 2019, the Board approved the agreement with Ninyo & Moore Geotechnical & Environmental Science Consultants (Ninyo & Moore), for an initial term of three years, with one, two-year option term. The total maximum cumulative payment obligation of the initial term was \$461,465. The agreement has been previously amended as shown in Attachment A.

Staff requested a cost proposal for the level of effort required for continued on-call testing and materials inspection services. Staff found Ninyo & Moore's cost proposal, in the amount of \$331,420, to be fair and reasonable relative to the independent cost estimate prepared by the OCTA project manager.

Proposed Amendment No. 2 to Agreement No, C-9-1356, in the amount of \$331,420, is to provide additional funding and to exercise the two-year option term of the agreement, effective January 1, 2023 through December 31, 2024. Amendment No. 2 will bring the total contract value to \$861,885.

Fiscal Impact

The project is included in OCTA's Fiscal Year 2022-23 Budget, Capital Programs Division, Account No. 1722-7629-D3107-2BW, and will be funded through local transportation funds.

Summary

Staff requests Board of Directors' authorization for the Chief Executive Officer to negotiate and execute Amendment No. 2 to Agreement No. C-9-1356 between the Orange County Transportation Authority and Ninyo & Moore Geotechnical & Environmental Science Consultants, in the amount of \$331,420, for continued on-call materials testing and inspection services for facilities projects and exercise the two-year option term and extend the term of the agreement through December 31, 2024. This will increase the maximum obligation of the agreement to a total contract value of \$861,885.

Attachment

- A. Ninyo & Moore Geotechnical & Environmental Science Consultants, Agreement No. C-9-1356 Fact Sheet

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



Pia Veasapen
Director, Contracts Administration and
Materials Management
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**Ninyo & Moore Geotechnical & Environmental Science Consultants
Agreement No. C-9-1356 Fact Sheet**

1. November 25, 2019, Agreement No. C-9-1356, \$461,465, approved by the Board of Directors (Board).
 - Agreement for consultant to provide on-call materials testing and inspection services for facilities projects.
 - Initial term of the agreement is effective January 16, 2020 through December 31, 2022, with a two-year option term.
2. April 29, 2022, Amendment No. 1 to Agreement No. C-9-1356, \$69,000, approved by the Contracts Administration and Materials Management Department.
 - Additional on-call materials testing and inspection services.
3. December 12, 2022, Amendment No. 2 to Agreement No. C-9-1356, \$331,420, pending approval by the Board.
 - To provide continued on-call materials testing and inspection services for facilities projects.
 - To exercise the two-year option term and extend the term of agreement by 24 months to December 31, 2024.

Total funds committed to Ninyo & Moore Geotechnical & Environmental Science Consultants, after approval of Amendment No. 2; \$861,885.



December 8, 2022

To: Transit Committee

A handwritten signature in blue ink, appearing to read "DEJ", with the word "For" written in smaller letters above the signature.

From: Darrell E. Johnson, Chief Executive Officer

Subject: February 2023 Bus Service Change

Overview

The proposed February 2023 bus service change consists of the implementation of the initial phase of the final service plan for the Making Better Connections Study, which was approved by the Board of Directors on October 24, 2022. This service change will restructure some OC Bus services and make minor schedule adjustments to improve service quality and reliability. The upcoming service change will set the stage for future improvements consistent with the Making Better Connections Service Plan.

Recommendation

Receive and file as an information item.

Background

The Orange County Transportation Authority (OCTA) generally implements regular schedule and route revisions to selected OC Bus routes three times a year, in February, June, and October. Beginning in 2023, schedule and route adjustments are anticipated to occur four times per year (February, May, August, and November). The proposed bus service changes discussed herein are scheduled for implementation on February 12, 2023.

OCTA completed a comprehensive study (known as the Making Better Connections Study {Study}) that assessed emerging travel trends and the optimal transit network to serve Orange County residents, workers, and visitors. Transit ridership has been declining over the past decade, mirroring regional and national trends due to higher vehicle ownership levels, demographic changes, and other external factors. Within the last two years, changes in ridership levels were primarily influenced by the coronavirus (COVID-19) stay-at-home orders

and dramatic changes in travel patterns. The Study aligns OC Bus service plans with emerging transit demand and travel patterns. Extensive public engagement to inform the development and evaluation of the final recommendations occurred between May and July 2022, culminating in a public hearing at the July 25, 2022, Board of Directors (Board) meeting. The final service plan (Plan) that emerged from the Study was approved by the Board on October 24, 2022. The Plan strives to improve bus service on high ridership routes, reduce the wait time, and simplify route structures. Staff will phase the deployment of Study recommendations over the next 24 months while monitoring bus service utilization rates and considers the availability of personnel to support the service.

Discussion

Since the initial state emergency declaration due to COVID-19 in March 2020, OCTA has made numerous adjustments to bus service. These changes have been implemented strategically to support ridership trends, requests from customers and coach operators, and changes in travel behavior and traffic conditions. OCTA incrementally restored bus service as the impacts of COVID-19 began to subside leading to a rise in economic activity and demand. The restored services; however, followed pre-COVID-19 service patterns. OCTA recognized that bus transit service must be aligned with the emerging travel patterns. The February 2023 bus service change shifts the focus of the improvements towards the Plan, which was approved by the Board in October 2022. In deploying the Plan, OCTA must be sensitive to the level of available coach operator resources as a controlling factor on how much bus service can be added during any service change. A relatively small increase of about 6,500 (.05 percent) annual revenue vehicle hours (RVH) are planned for February 2023.

The added service hours will help optimize the OC Bus system by providing frequency and span improvements, as well as route alignments, to maximize efficiency of the bus system. The proposed changes represent phase 1 of the Study implementation strategy and will set the stage for future phases. Other route changes include modifications to improve service quality and reliability to account for changes in traffic patterns. Staff used customer and coach operator input to develop the list of improvements

The proposed changes permanently discontinue one local bus route and one Stationlink route. Alternative bus routes are available for customers who use these routes. Further, some of the route alignment changes will have an impact on OC ACCESS service coverage. The changes affect an average of 15 daily trips which is considered minor and can be handled by the available same-day taxi. OCTA will communicate with the potentially affected riders in advance and provide the information on alternate transportation solutions. The recommendations are detailed in Attachment A and shown in Attachment B.

The proposed changes will keep bus service levels at 1.44 million annual RVH, but the goal is to work towards the recommendations of the Study and increase bus service to 1.625 million annual RVH. To reach this level of service, about 185,000 annual RVH will be added in phases over a period of 24 months, covering eight service changes or phases. The eight phases are anticipated to be grouped by logical geographic area (i.e., north, central, and south Orange County, etc.). The anticipated planned increases in service hours will be consistent with the availability of labor resources with an eye towards demand for ridership and productivity.

Following the implementation of the service improvements, staff will assess performance based on key variables, such as customer demand, on-time performance, and the latest developments regarding COVID-19. Additional adjustments can be made in future service changes, as necessary.

Title VI and Environmental Justice Analysis

Staff conducted a Title VI and Environmental Justice Analysis of the Making Better Connections Service Plan, per Federal Transit Administration requirements and consistent with OCTA policy. The February 2023 bus service changes were included in that analysis. The analysis accumulated the impacts to minority and low-income communities by comparing the transit service levels before and after the route changes. Based on this analysis, it has been determined that the proposed changes to the bus system, taken in their entirety, would not have a disparate impact on minority persons nor a disproportionate burden on low-income persons.

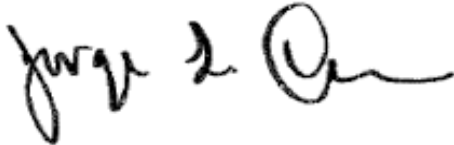
Summary

The proposed February 2023 bus service change will focus on the implementation of the first phase of the Making Better Connections Study and improvements to service quality and reliability. Customers will be notified of the changes three weeks prior to implementation.

Attachments

- A. February 2023 Bus Service Change: Bus Route Recommendations
- B. February 2023 Bus Service Change: Making Better Connections Phase 1, Routes with Changes

Prepared by:



Jorge Duran
Section Manager III
(714) 560-5765

Approved by:



Kia Mortazavi
Executive Director, Planning
(714) 560-5741

February 2023 Service Change: Bus Route Recommendations

Route	Route Description	CHANGE IN SERVICE LEVELS				
		WKD RVH	SAT RVH	SUN RVH	Annual RVH	Peak Vehicles
1	• Improve OTP on weekdays.	2.5	-	-	638	-
25	• Travel to FP&R via Orangethorpe Avenue by discontinuing out-of-direction service on Artesia Boulevard and to the Buena Park Metrolink Station; • Improve frequency all days and expand service hours on weekends.	(0.2)	10.4	10.4	1,086	-
26	• Improve OTP on weekdays; • Expand service hours on weekends.	(1.2)	7.1	7.1	467	-
35	• Travel to FP&R via Orangethorpe Avenue by discontinuing out-of-direction service on Commonwealth Avenue.	(4.3)	(0.9)	(0.9)	(1,201)	-
37	• Delete service on Ellis Avenue; • Increase frequency on weekends.	(0.1)	2.6	1.0	178	-
38	• Improve OTP on weekdays.	0.5	-	-	132	-
42	• Improve OTP on weekdays; • Add one trip to serve students.	3.8	-	-	973	4
43	• Improve OTP on weekdays; • Increase frequency on weekends.	(0.1)	65.3	84.2	8,264	-
47	• Terminate route at Newport Boulevard and 23rd Street; • Discontinue service on Victoria Street with all trips traveling on Wilson Street.	(0.1)	(7.7)	(7.7)	(854)	(1)
50	• Improve OTP on weekdays.	7.6	-	-	1,930	1
54	• Improve OTP on weekdays.	(4.0)	-	-	(1,020)	-
55	• Improve OTP on weekdays.	1.7	-	-	429	-
56	• Improve OTP on weekdays.	(0.1)	-	-	(21)	-
57	• Improve OTP on weekdays.	10.4	-	-	2,656	1
59	• Improve OTP on weekdays.	0.2	-	-	43	-
60	• All trips will operate between Larwin Square and CSU Long Beach; • More frequent service on weekends.	34.6	7.8	20.2	10,404	1
66	• Improve OTP on all days.	0.8	3.9	3.9	620	-
70	• More frequent service on weekdays; • Later service all days; • Operate every 20 minutes from Edinger Avenue and Harbor Boulevard to Tustin Metrolink Station and 40 minutes from Edinger Avenue and Harbor Boulevard to Pacific Coast Highway and Warner Avenue on weekdays; and 40 minutes on entire route on weekends.	5.4	(4.8)	(5.1)	837	2
71	• Improve OTP on weekdays.	0.3	-	-	77	-

February 2023 Service Change: Bus Route Recommendations

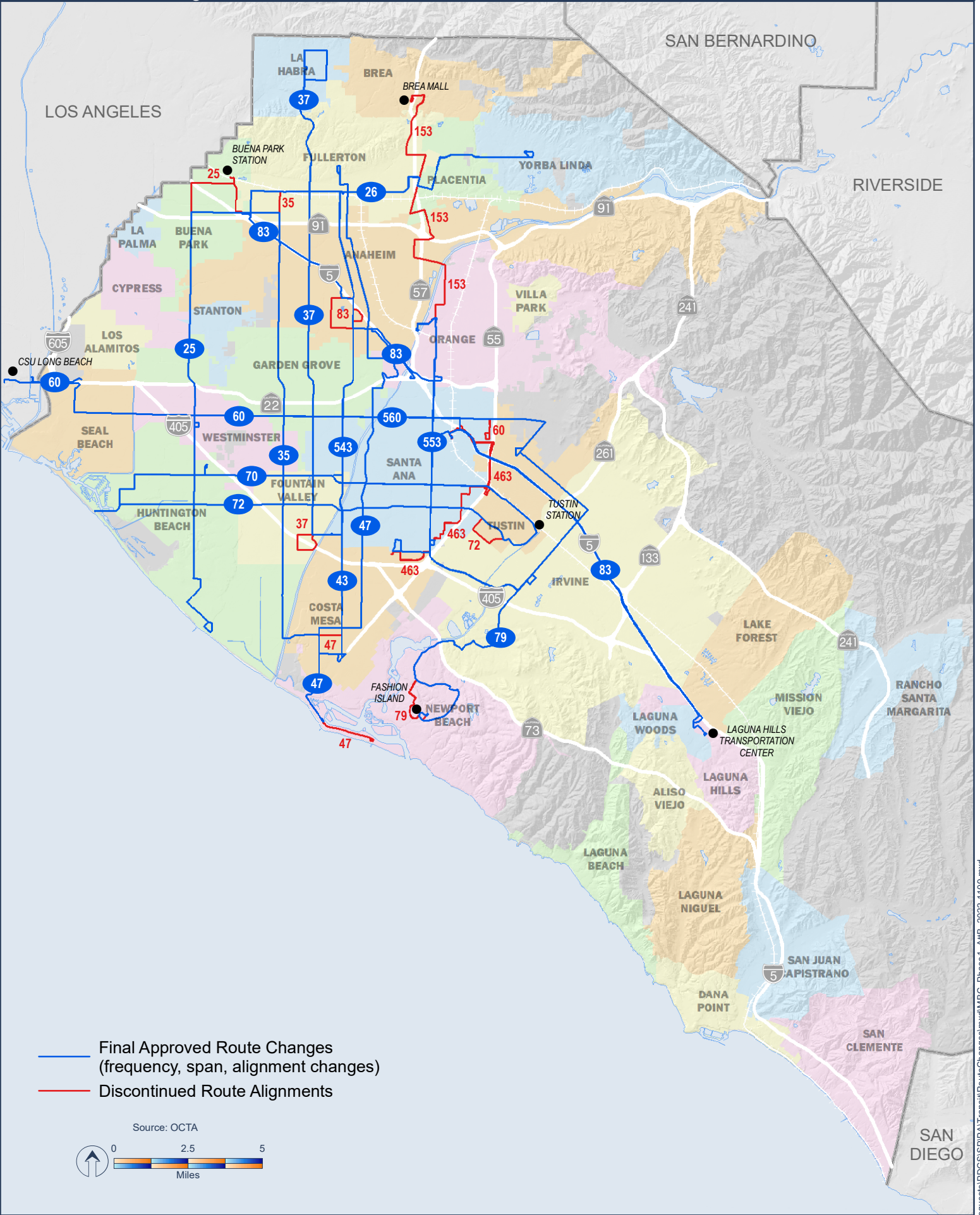
Route	Route Description	CHANGE IN SERVICE LEVELS				
		WKD RVH	SAT RVH	SUN RVH	Annual RVH	Peak Vehicles
72	<ul style="list-style-type: none"> Extend route to Tustin Metrolink Station; More frequent service on weekdays; Less frequent service on weekends. 	14.6	0.0	0.8	3,772	1
79	<ul style="list-style-type: none"> All trips will use current alternate routing Ford Road and San Miguel Drive to NTC; Discontinue segment on Jamboree Road and Ford Road to NTC. 	3.5	0.1	0.1	903	1
82	<ul style="list-style-type: none"> Add one trip for school. 	0.3	-	-	85	-
83	<ul style="list-style-type: none"> Extend route to FP&R via Interstate 5. 	10.5	17.2	10.1	4,143	-
86	<ul style="list-style-type: none"> Improve OTP on weekdays. 	0.1	-	-	17	-
90	<ul style="list-style-type: none"> Add one trip for school. 	0.7	-	-	166	1
123	<ul style="list-style-type: none"> Transition route to contractor. 	-	-	-	-	-
129	<ul style="list-style-type: none"> Increase frequency on weekdays; Improve OTP on weekdays. 	4.6	-	-	1,173	-
143	<ul style="list-style-type: none"> Increase frequency on weekdays; Improve OTP on Saturdays. 	0.8	0.2	-	220	-
153	<ul style="list-style-type: none"> Discontinue route; Riders can use routes 50, 57, and 59 to connect to ARTIC from the Brea Mall. 	(31.4)	(27.4)	(25.4)	(10,914)	(2)
463	<ul style="list-style-type: none"> Discontinue route; Riders can use route 862 at SARTC and routes 53 and 553 on Main Street. 	(10.8)	-	-	(2,763)	(4)
543	<ul style="list-style-type: none"> Discontinue service on weekends; Improve OTP on weekdays. 	(10.3)	(60.3)	(61.4)	(9,310)	(1)
553	<ul style="list-style-type: none"> Extend route to South Coast Plaza. 	9.8	-	-	2,491	-
560	<ul style="list-style-type: none"> Operate between SARTC and Westminster Avenue and Goldenwest Street; Service to CSU Long Beach will be provided all day by Route 60. 	(36.4)	-	-	(9,269)	(3)
Total		13.6	13.6	37.4	6,349	1

Acronyms

ARTIC - Anaheim Regional Intermodal Transportation Center / CSU - California State University / FP&R - Fullerton Park-and-Ride / NTC - Newport Transportation Center / OTP - On-time performance / RVH - Revenue vehicle hours / SARTC - Santa Ana Regional Transportation Center / SAT - Saturday / SUN - Sunday / WKD - Weekend

February 2023 Bus Service Change: Making Better Connections Phase 1

Routes with Changes





December 8, 2022

To: Transit Committee
From: Darrell E. Johnson, Chief Executive Officer
Subject: Zero-Emission Bus Pilot Update

Overview

On October 8, 2020, the Orange County Transportation Authority Board of Directors approved the purchase of ten hydrogen fuel-cell electric buses and ten plug-in battery-electric buses to gain necessary operational and technological experience in preparation for transitioning the Orange County Transportation Authority's bus fleet to zero-emission technologies. This report provides an update on the zero-emission bus pilot performance and deployment efforts.

Recommendation

Receive and file as an information item.

Background

In 2018, the California Air Resources Board (CARB) passed the Innovative Clean Transit (ICT) rule requiring all public transit agencies to transition their bus fleets to zero-emission technologies by the year 2040. Transit agencies were required to develop and submit a rollout plan that describes how the agency will transition to a zero-emission bus (ZEB) fleet by 2040, with purchasing requirements beginning in 2023. On June 22, 2020, the Orange County Transportation Authority (OCTA) Board of Directors (Board) approved the OCTA ZEB Rollout Plan, which included the deployment of a mix of hydrogen fuel-cell electric buses (FCEB) and plug-in battery-electric buses (BEB) to prepare for compliance with the ICT rule.

In anticipation of the ICT rule, OCTA developed a strategy to pilot both FCEB and BEB technologies using available grant funding. Piloting both technologies will allow OCTA to gain direct experience with operational effectiveness, maintenance, and cost. OCTA has initiated both pilots as outlined in this report. In 2017, OCTA entered into an agreement to utilize grants provided by CARB and the South Coast Air Quality Management District to purchase ten FCEBs in lieu

of compressed natural gas (CNG)-powered buses to replace buses that had reached their useful life. The grant also funded the required supporting infrastructure, such as the hydrogen fueling station and maintenance shop upgrades.

On February 9, 2020, OCTA initiated the FCEB pilot, which included ten, 40-foot FCEBs operating in OC Bus fixed-route service, and a hydrogen fueling station capable of fueling up to 50 buses per day.

On October 12, 2020, the Board approved the purchase of ten plug-in BEBs as a pilot for operation in OC Bus fixed-route service. To support the charging of these vehicles, OCTA is partnering with Southern California Edison (SCE) and the Charge Ready Transport Program to provide electrical infrastructure at the Garden Grove Bus Base. In addition to the equipment being provided by SCE, OCTA is required to provide the BEB charging stations.

On June 14, 2021, the Board approved the purchase of ten, 150-kilowatt (kW) BEB charging stations that will provide power to ten depot charging stations. The chargers can supply power evenly or sequentially to the charging stations. This allows buses to be intelligently charged in a manner tailored to the power and logistical needs of each bus. BEBs can be fully charged in less than four hours.

The first two BEBs arrived in December 2021. After acceptance testing and working through supply chain issues, the buses went into OC Bus fixed-route service in July 2022. The remaining eight buses are arriving between October and December 2022. Delays in receiving the remaining eight BEBs are related to electronic parts shortages and other supply chain issues. The performance of the two BEBs is provided below.

The BEB charging stations have arrived and will be installed following the completion of infrastructures upgrades being made by SCE. The charging stations are expected to be installed and operational by January 2023. In the interim, the BEBs are being charged using the pay-per-use level III charging stations installed at both directly-operated bus bases.

On August 16, 2022, the Federal Transit Administration (FTA) awarded OCTA \$2.5 million in federal funding toward the purchase of ten battery-electric buses that will replace ten gasoline OC ACCESS buses. OCTA applied for and was awarded this funding through a competitive FTA grant program.

Discussion

The FCEBs have been in service for 33 months. The performance data included in this report will cover 32 months of operation from February 2020 through October 2022. The two BEBs have been in service for five months and their performance will be through October 2022. The BEB data is only informational and will not be comparative until all ten buses are fully deployed into service, which is expected to occur in January 2023. The performance of the ten FCEBs and two BEBs is measured against the performance of ten CNG buses that were selected at the onset of the pilot to provide comparative performance analytics. General vehicle information on all three bus types is provided in the following chart.

Vehicle Information	FCEB	BEB	CNG Bus
Number of Buses	10	10	10
Manufacturer/Model	New Flyer Xcelsior	New Flyer Xcelsior	New Flyer Xcelsior
Model Year	2018	2020	2016
Bus Cost Each	\$1.3M	\$1.1M	\$580,000
Length	40 feet	40 feet	40 feet
Curb Weight	33,560 pounds	33,500 pounds	30,000 pounds
Propulsion System	Ballard Fuel Cell 85 kW	Siemens Electric Motor 210 kW	Cummins CNG Engine 280 hp
	Siemens Electric Motor 210 kW		Allison Transmission
Energy Storage	Five Composite Fuel Cylinders		Six Composite Fuel Cylinders
	Lithium-Ion Batteries 100 kW	Lithium-Ion Batteries 440kW	
Operating Range	300 miles	200 miles	350 miles

The key performance indicators include bus availability, miles between road calls (MBRC), fuel economy, and cost per mile (CPM).

Bus availability, which is a measure of reliability, is the percentage of days the buses are actually available compared to the total number of days that the buses are planned for revenue service. Buses available for service may be used in revenue service, training, special events, or they may be available but just not used. Buses unavailable for service may have had mechanical issues with the propulsion system (fuel-cell system, electric drive system, engine), regular scheduled maintenance, or required unscheduled repairs.

The OCTA performance standard for bus availability is 80 percent; however, for new bus technology, especially during the onset of a pilot, availability can be challenging as the system issues are analyzed and buses are out of service for a longer period. Both the ten FCEBs and the ten CNG buses fell below the target.

Bus availability can fluctuate for a variety of reasons and lengths of time due to the nature of repairs or scheduled service, eventually averaging out to meet the goal. However, due to the coronavirus pandemic, the drop in ridership, and subsequent drop in bus usage led to holding operational buses from service in order to rotate fleet usage. As a result, the availability for CNG buses was skewed. The CNG buses selected for this comparison achieved a 77 percent availability. Had the CNG buses not been held artificially, the goal would have been met.

Unlike the CNG buses, the FCEBs did not achieve the goal for a variety of mechanical and electrical issues. The FCEBs dropped slightly from 59 percent availability in 2021 to 57 percent availability in 2022. Considering this is new technology and buses may be placed out of service for longer periods of time as issues are analyzed and often require factory support, the expectation is that availability will improve as experience with the technology grows. Another contributing factor to availability was supply chain issues. In one example, two FCEBs were out of service for more than two months waiting for parts.

The two BEBs achieved 76 percent availability within five months of operation.

MBRC is a measurement of bus reliability. A road call is defined as a revenue vehicle mechanical or system failure that causes the bus to be replaced on a route or causes a significant delay in the route schedule.

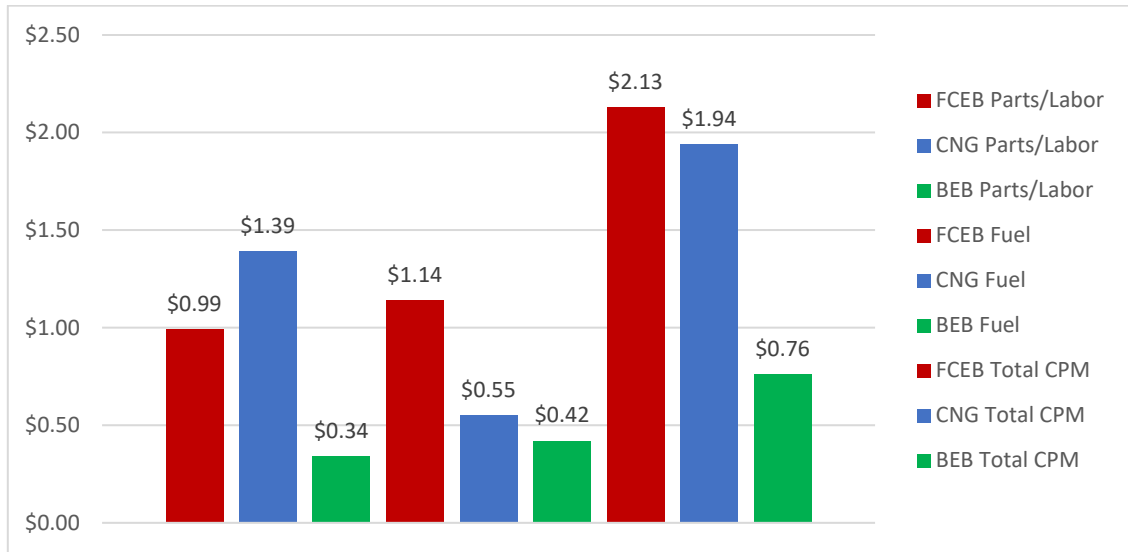
The OCTA performance standard for MBRC is 14,000 miles. The CNG buses regularly exceeded the standard achieving a total of 29,316 MBRC over the last 32 months.

The FCEBs are not meeting the standard, achieving only 5,254 MBRC. The FCEBs only met the MBRC standard in five of the 32 months. Taking into consideration that this is new technology and only 30 FCEBs were built by this manufacturer at the time of delivery, peak performance may be delayed compared to a conventional transit bus. In the early months there were a variety of issues including software and calibration issues, but more recently most of the road calls are related to electrical components. In terms of the fuel cell performance, it is performing at parity with the CNG engine.

Fuel economy is a measurement of how efficiently the fuel is being used by the propulsion system. Because CNG is measured in Therms, hydrogen is measured in kilograms, and battery power in kW, fuel types are converted to a common measurement. In this case, all three technologies are measured in miles per diesel gallon equivalent (mpdge). CNG buses have consistently averaged 4.14 mpdge, while FCEBs have more than doubled that with an average of 9.63 mpdge. FCEB fuel economy is 2.3 times greater than a CNG bus. The higher fuel economy on the FCEB helps offset the higher cost of hydrogen fuel. The current CPM for hydrogen fuel is \$1.14 compared to the CNG fuel at \$0.55. The two BEBs in service have measured at \$0.42 CPM. However, it is important to note that with electricity, cost is based on kW usage and due to current rate structures, as that usage increases the cost per kW also increases, which will increase the CPM.. The BEB fuel CPM is expected to increase when all ten buses are in service.

OCTA calculates total CPM for each technology by tracking parts and labor cost and fuel cost. Maintenance cost is categorized by each bus system to understand which components are the highest cost drivers.

As illustrated in the following chart, the parts and labor CPM for FCEBs is lower than CNG buses by approximately 28 percent. The parts and labor CPM for FCEBs is currently \$0.99, compared to \$1.39 for CNG buses. Adding fuel cost to parts and labor costs results in the FCEB total CPM exceeding the CNG bus total cost per mile by nine percent. The FCEB total CPM is \$2.13, compared to the CNG buses at \$1.93. Fuel cost is the highest cost driver for the FCEB. Preliminary CPM calculations show the BEB parts and labor cost at \$.34 and fuel cost at \$.042, for a total of \$.076. Since BEBs share many of the same components with the FCEBs and as noted above electricity rates increase with usage and will therefore increase costs, the BEB CPM is expected to increase.



Hydrogen Fueling Station Update

In the first months of operation, the hydrogen fueling station experienced a variety of issues resulting in the station shutting down during operation. These issues were resolved with software updates while some issues required engineering reconfiguration. For the last year, the hydrogen fueling station has performed consistently well, matching the performance of the CNG fueling station. Monthly meetings with the fuel station provider are held to ensure incidents are discussed and resolved immediately. Although the hydrogen fueling station is performing well, there are times when the station is out of service resulting in buses not being fueled and not deployed into service. The CNG fueling station also goes down at times; however, fueling can be accomplished by sending buses to another base. Currently there is no backup fueling infrastructure, public or private, available for hydrogen.

Summary

After 33 months, much has been gained in terms of knowledge and experience from the ZEB pilot program. Although the performance of the FCEB is not yet meeting the OCTA standards in availability and MBRC, there is a greater understanding of the differences between the technologies, what components need improvement to improve reliability, and where training can be developed to help mitigate issues. Understanding the various costs to operate and maintain ZEBs helps drive financial planning and advocacy for funding and lowering costs, such as the need to find solutions to lower the cost of hydrogen fuel. As the ZEB pilot program continues with the addition of ten BEBs and ten battery-electric cutaway buses for paratransit services, OCTA will continue to gain necessary

operational and technological experience for each ZEB type available to shape and define the fleet mix required to meet the service demands of Orange County when utilizing ZEBs. Staff will keep the Board apprised of any changes in the ZEB Program and provide performance updates annually.

Attachment

None.

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Zero-Emission Bus Pilot Update





OCTA ZEB PILOT DETAILS

- Fuel Cell Electric Bus (FCEB) Pilot – Initiated February 2020, included ten 40-foot FCEBs, a hydrogen fueling station, shop upgrades
 - Grant Funded \$13.2M - California Air Resources Board and South Coast Air Quality Management District
- Battery-Electric Bus (BEB) Pilot – Partially initiated July 2022 with two BEBs, remaining eight buses arriving by December 2022
 - Grant Funded \$10.3M - California Transportation Commission Solutions for Congested Corridors Program (SCCP) under SB 1 (Chapter 5, Statutes of 2017) and the Low Carbon Transit Operations Program (LCTOP)
- Battery-Electric Cutaway Bus Pilot – Federal Transit Administration awarded \$2.5M for ten battery-electric paratransit buses and infrastructure
 - Grant Funded \$2.5M - FTA's Buses and Bus Facilities, and Low and No Emissions Vehicle programs

OCTA ZEB PILOT UPDATE - BEB

- The first two BEBs in service July 2022
 - Third bus arrived in October 2022, first BRAVO! branded bus
 - Remaining seven will arrive by the end of December 2022
 - Performance measured against ten compressed natural gas-powered (CNG) buses and ten FCEBs
 - Charging stations have arrived and will be installed in January 2023
 - 10 - 150 kW Chargers
 - Full charge in four hours
- kW – kilowatt

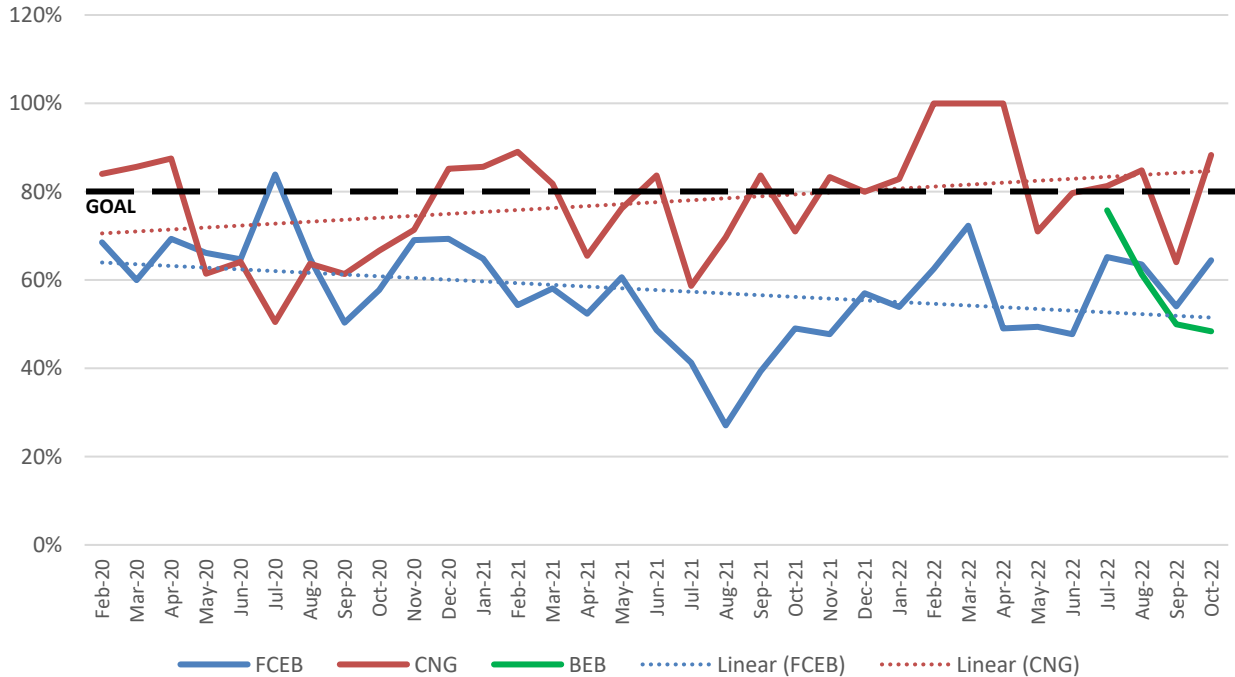


OCTA ZEB PILOT UPDATE – FCEB

- In Service 33 months
- Performance Data for 32 months
February 2020 – October 2022
- Performance measured against of ten
CNG buses and ten BEBs
- Life to Date Miles - 898,964 miles
- Key Performance Indicators
 - Bus Availability
 - Miles Between Road Calls (MBRC)
 - Fuel Economy
 - Cost Per Mile



BUS AVAILABILITY



OCTA Standard 80%

CNG – 77%

- Skewed Data due to Rotating Fleet

FCEB – 57%

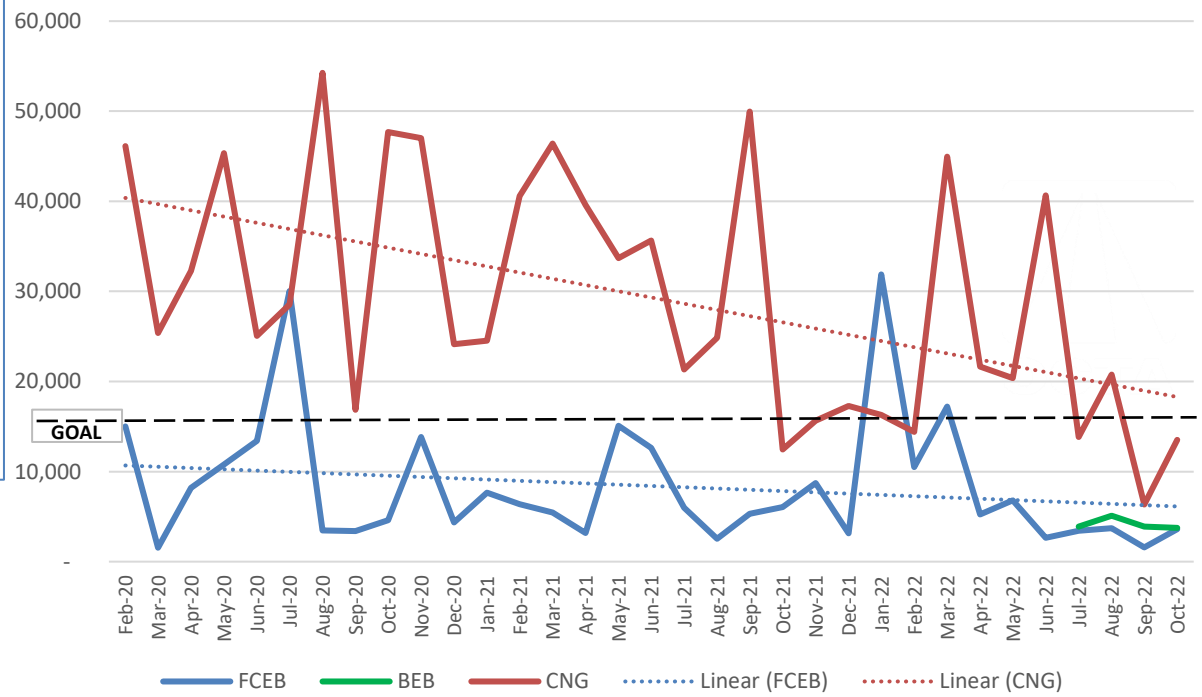
- Supply Chain Issues, long wait time for parts

BEB – 76%

- Only two buses, in service July 2022

MILES BETWEEN ROAD CALLS

- OCTA performance standard is 14,000 MBRC
 - CNG: 29,316 MBRC ▲
 - FCEB: 5,254 MBRC ▼
 - BEB*: 19,412 MBRC ▲
- * Only one road call since July 2022*



FUEL ECONOMY

- FCEB fuel economy is 2.3 times greater than the CNG bus
- BEB fuel economy is 3.5 times greater than the CNG bus and 1.5 times greater than the FCEB

Fuel Cost Per Mile

- FCEB - \$1.14
- CNG - \$0.55
- BEB - \$0.42

Measurement	CNG	FCEB	BEB
Miles per gasoline gallon equivalent	3.70	8.37	13.38
Miles per diesel gallon equivalent	4.14	9.63	14.87
Miles per kilogram equivalent	3.77	8.53	13.63
Miles per kilowatt(kW)	0.11	0.26	0.40

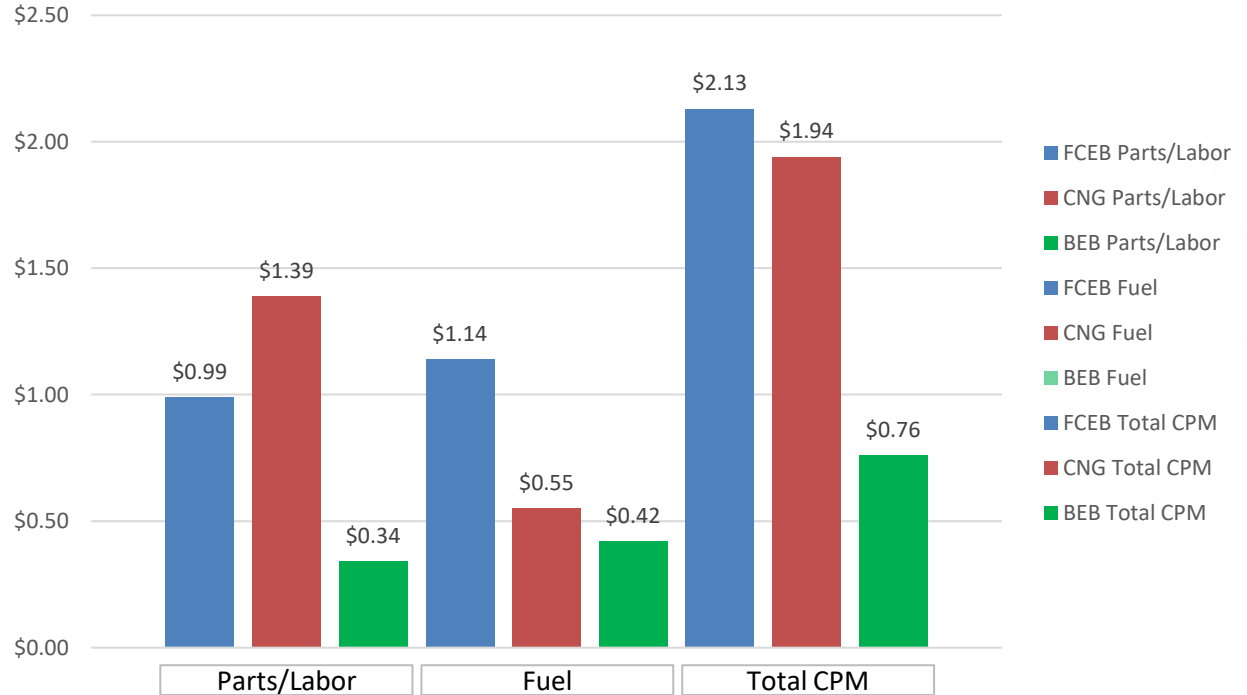
COST PER MILE (CPM)

Parts and Labor for FCEB is 28 percent lower than CNG

- FCEB = \$0.99
- CNG = \$1.39

Total CPM, includes fuel cost, FCEB is 9% higher than CNG

- FCEB = \$2.13
- CNG = \$1.94



HYDROGEN FUELING STATION UPDATE



- Early months – variety of issues resulting in station shutdowns. Issues have been resolved
- Availability has improved, matching the performance of the CNG fueling station

Next Steps

- Deploy Remaining BEBs
- Procure Ten Battery-Electric Cutaway Buses

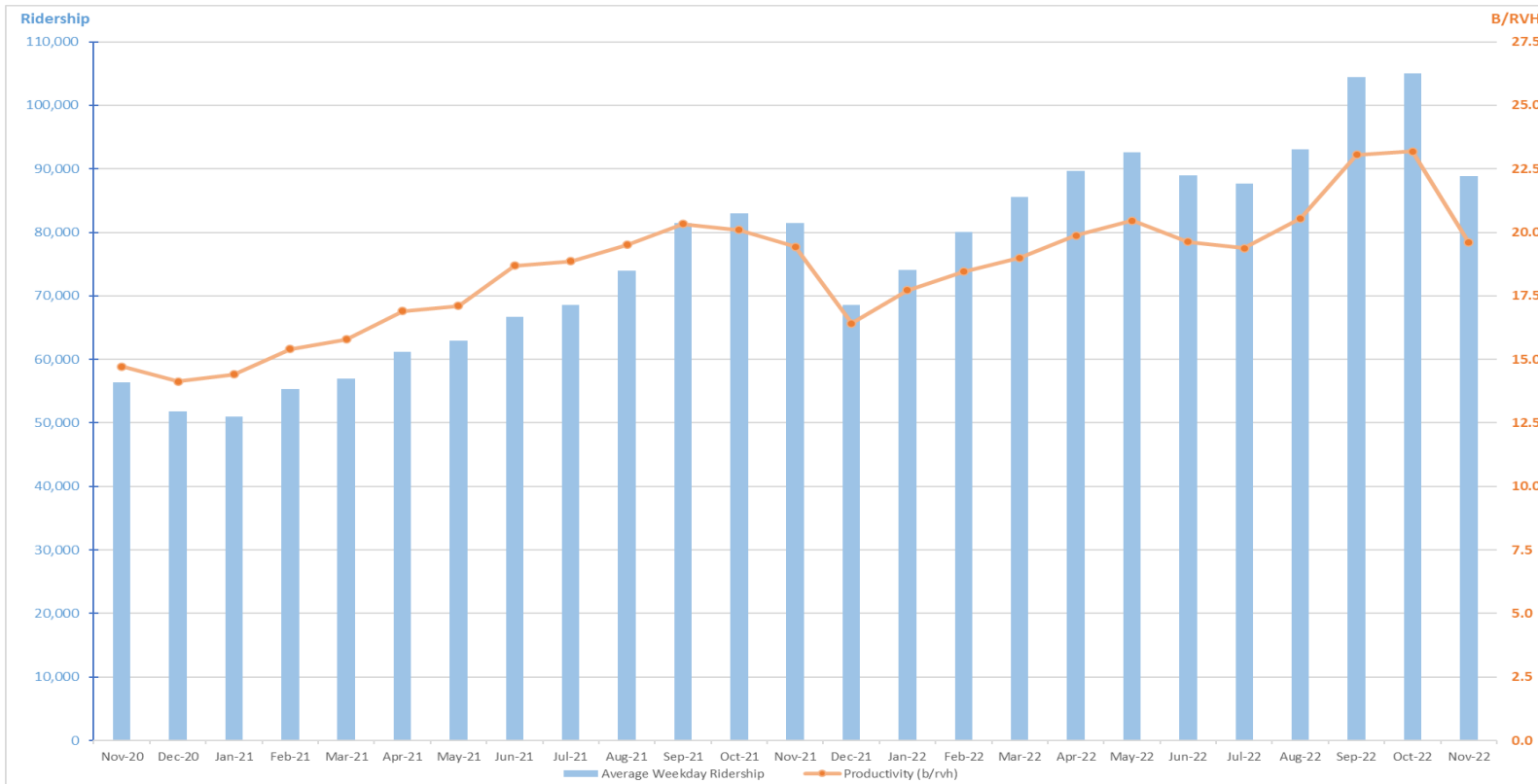


OC Bus and OC ACCESS Services Update

- **Ridership**
 - Average weekday boardings and productivity as measured by boardings per revenue vehicle hour (B/RVH)
- **On-Time Performance**
 - Measuring service quality
- **Customer Comments**
 - Trends, feedback, and issues reported

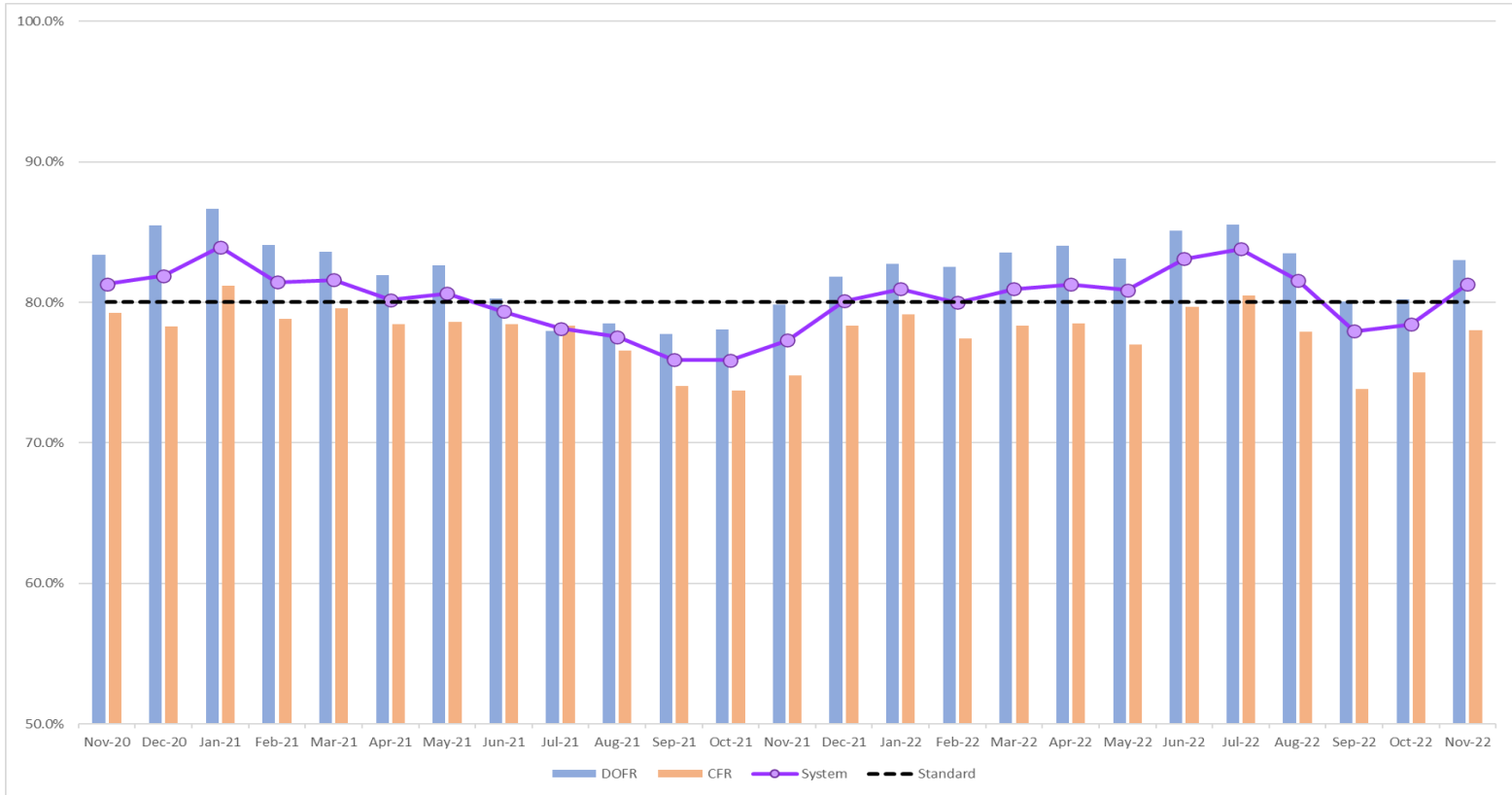
OC BUS RIDERSHIP AND PRODUCTIVITY

(AVERAGE WEEKDAY – LAST 2 YEARS)



OC BUS ON-TIME PERFORMANCE

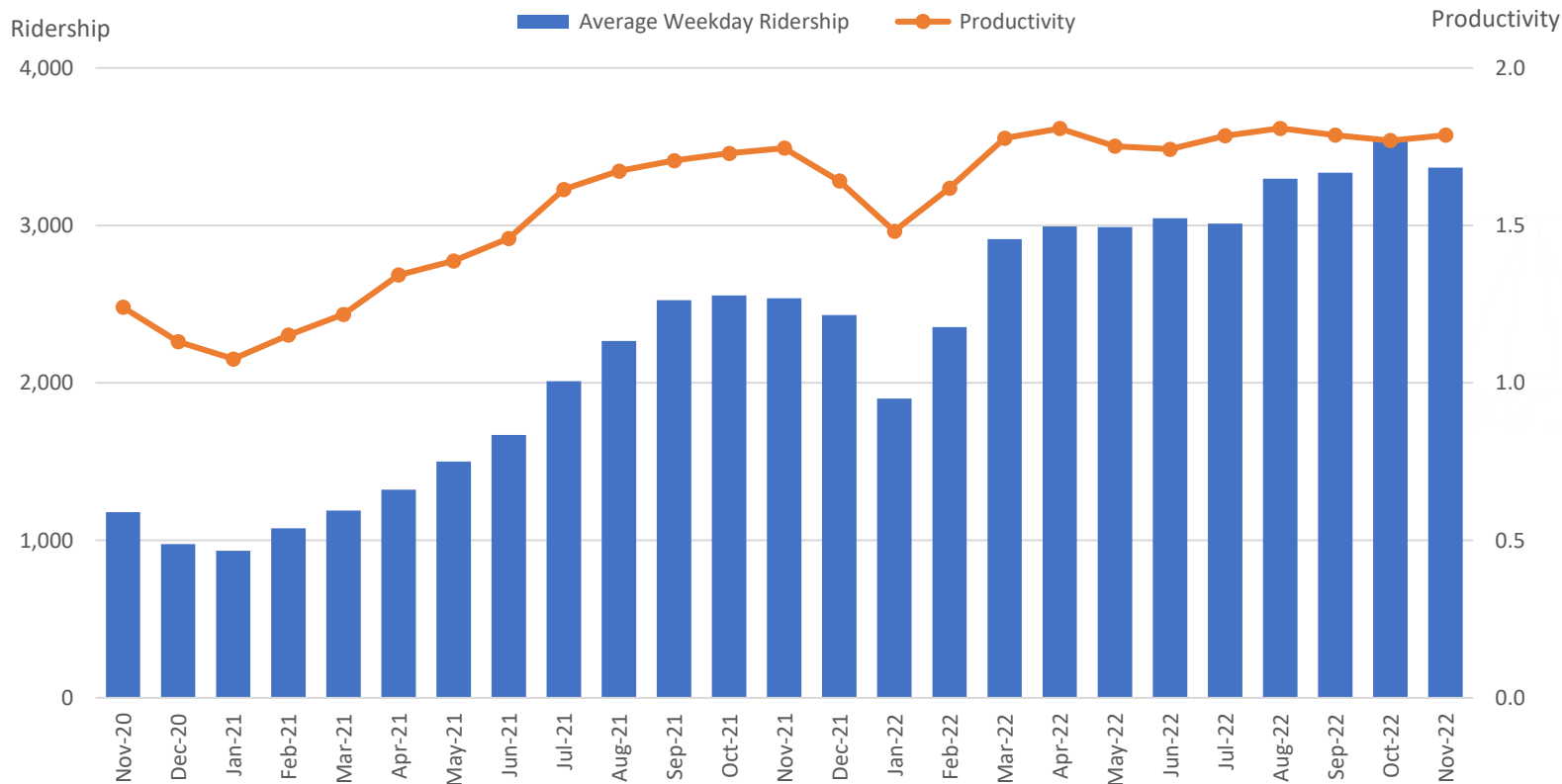
(AVERAGE WEEKDAY)



OC ACCESS RIDERSHIP AND PRODUCTIVITY

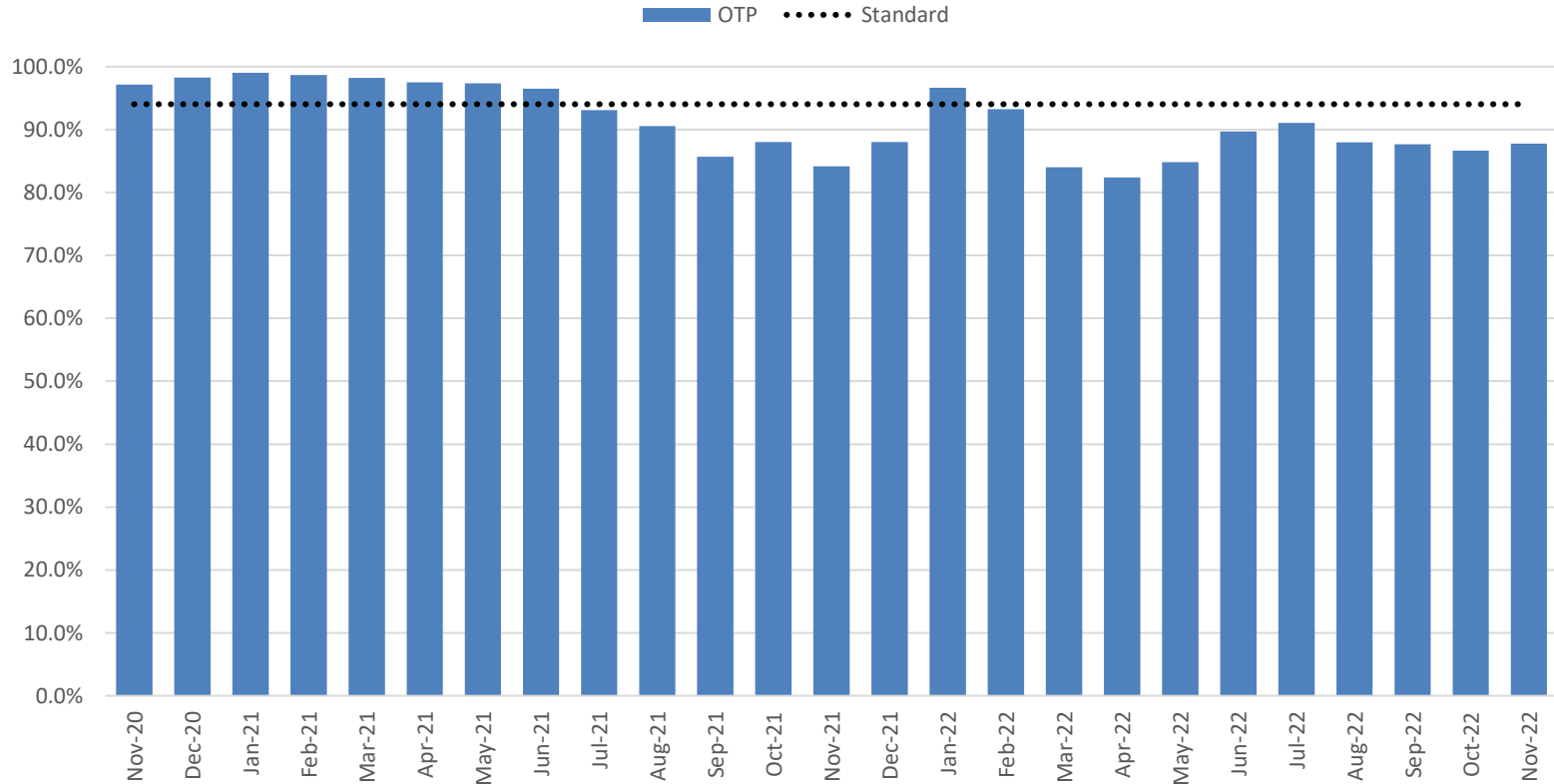


(AVERAGE WEEKDAY)



OC ACCESS ON-TIME PERFORMANCE

(AVERAGE WEEKDAY)



CUSTOMER COMMUNICATION AND FEEDBACK

Marketing and Customer Communications

Customer Communications

- Provided service disruption information using website, email, social media and other digital communications, recorded announcements, and stop signage. During November:
 - More than 186,000 website visits
 - More than 13,000 customer calls
- Promoted pilot of free onboard Wi-Fi for Bravo! 553 service



OC TA was notified this afternoon that its maintenance employees intend to go on strike. There may be a significant reduction in OC Bus service as soon as 4 p.m. today, Wednesday, November 2, and NO OC BUS SERVICE tomorrow, Thursday, November 3 at least through Sunday, November 6. Riders should plan alternate ways to travel and check www.ocba.net for the latest information.

We know this service interruption impacts passengers who rely on us, and OC TA is ready and willing to continue negotiating with the union that called the strike to reach a successful resolution and restore bus service as soon as possible.



Customer Comments

Bus Pass-bys

- Complaints on pass-bys decreased to a weekly average of six complaints in the first four weeks of November compared to nine complaints per week in September.

No Shows

- Customer complaints for “no show” routes decreased to a weekly average of 1.25 complaints in the first four weeks of November, compared to 2.5 complaints per week in October.



NEXT STEPS

- Continue to Track Service Performance
 - Ridership trends
 - On-time performance
- Upcoming Service Changes
 - February 12, 2023