WETA WATER EMERGENCY TRANSPORTATION AUTHORITY

Members of the Board

James Wunderman, Chair
Monique Moyer, Vice Chair
Jessica Alba
Jeffrey DelBono
Anthony J. Intintoli, Jr.

SAN FRANCISCO BAY AREA
WATER EMERGENCY TRANSPORTATION AUTHORITY
BOARD OF DIRECTORS MEETING
Thursday, April 7, 2022 at 1:00 p.m.

WETA Ron Cowan Central Bay Operations & Maintenance Facility
670 W Hornet Ave
Alameda, CA 94501
Face masks required for in-person participation.
and
Videoconference
Join WETA BOD Zoom Meeting
https://us02web.zoom.us/j/89718217408

Meeting ID: 897 1821 7408
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The full agenda packet is available for download at weta.sanfranciscobayferry.com

AGENDA

1. CALL TO ORDER

2. ROLL CALL/PLEDGE OF ALLEGIANCE

3. REPORT OF BOARD CHAIR — ***Information***
   a. Chair's Verbal Report

4. REPORTS OF DIRECTORS — ***Information***
   Directors are limited to providing information, asking clarifying questions about matters not on the agenda, responding to public comment, referring matters to committee or staff for information, or requesting a report to be made at another meeting.

5. REPORTS OF STAFF — ***Information***
   a. Executive Director's Report on Agency Projects, Activities and Services
      i. Mask Mandate
      ii. Passenger Vessel Association Public Ferry Caucus
      iii. Employer Outreach
   b. Monthly Review of Financial Statements
   c. Federal Legislative Update
   d. State Legislative Update
   e. Monthly Ridership and Recovery Report

6. CONSENT CALENDAR ***Action***
   a. Adopt Resolution Regarding Remote Meetings Pursuant to Assembly Bill 361
   b. Board Meeting Minutes – March 3, 2022

7. APPROVE EXTENSION OF FISCAL YEAR 2022 PANDEMIC RECOVERY PROGRAM ***Action***

8. RECEIVE BERKELEY FERRY SERVICE BUSINESS PLAN ***Action***

9. SEA CHANGE HYDROGEN-POWERED VESSEL DEMONSTRATION PROJECT ***Information***

10. WETA 2050 SERVICE VISION & BUSINESS PLAN WORK PLAN ***Information***

11. PUBLIC COMMENTS FOR NON-AGENDA ITEMS

ADJOURNMENT

All items appearing on the agenda are subject to action by the Board of Directors. Staff recommendations are subject to action and change by the Board of Directors.

CHANGES RELATED TO COVID-19
Consistent with AB 361, codified in Government Code Section 54953, this meeting will be conducted through an internet-based service option. The public is invited to participate via the link provided at the top of this agenda.

PUBLIC COMMENTS WETA welcomes comments from the public.

If you know in advance that you would like to make a public comment during the videoconference, please email BoardOfDirectors@watertransit.org with your name and item number you would like to provide comment on no later than 15 minutes after the start of the meeting. Comments will also be accepted in real time. During the public comment period, speakers will be allotted no more than 3 minutes to speak and will be heard in the order of sign-up. Said time frames may be extended only upon approval of the Board of Directors.

Agenda Items: Speakers on individual agenda items will be called in order of sign-up after the discussion of each agenda item.

Non-Agenda Items: A 15-minute period of public comment for non-agenda items will be held at the end of the meeting. Please indicate on your speaker card that you wish to speak on a non-agenda item. No action can be taken on any matter raised during the public comment period.

Upon request, WETA will provide written agenda materials in appropriate alternative formats to individuals with disabilities. In addition, WETA will arrange for disability-related modifications or accommodations including auxiliary aids or services to enable individuals with disabilities to participate in public meetings. Please send an email with your request to: contactus@watertransit.org or by telephone: (415) 291-3377 as soon as possible and no later than 5 days prior to the meeting and we will work to accommodate access to the meeting.

AGENDA ITEM 1
CALL TO ORDER

AGENDA ITEM 2
ROLL CALL/PLEDGE OF ALLEGIANCE

AGENDA ITEM 3
REPORT OF BOARD CHAIR

AGENDA ITEM 4
REPORTS OF DIRECTORS

NO MATERIALS

WETA WATER EMERGENCY TRANSPORTATION AUTHORITY

Memorandum

TO: WETA Board Members

FROM: Seamus Murphy, Executive Director

DATE: April 7, 2022

RE: Executive Director's Report

PLANS, STUDIES & INITIATIVES

2050 WETA Service Vision and Business Plan

WETA is embarking on an effort to create a long-term plan for the expansion of regional ferry service and emergency water transportation response capabilities on San Francisco Bay. The plan will include definition of a 2050 service vision and corresponding business plan that will inform WETA planning, budget, and operational decisions as it is phased in over time. The plan will be developing work products in six focus areas shared with the Board at the December 2021 meeting. The business plan will be developed throughout the calendar year 2022 and is anticipated to be finalized in the first half of calendar year 2023.

April 2022 Update: The project team met with the Board Subcommittee in mid-February to discuss the schedule and approach to conduct analysis and share with community stakeholders. A summary of the detailed work program is included in the April 7 Board packet and will be presented at the April 7 meeting.

Redwood City Ferry Terminal Project

WETA is studying the feasibility and business case of developing a new ferry terminal at the Port of Redwood City in partnership with the City and Port of Redwood City. The Feasibility Study was concluded in 2021 and determined that the project is feasible and meets WETA Expansion criteria. The San Mateo Transportation Authority now requires completion of a Business Plan before the project can move to the Concept Design and Permitting phase.

April 2022 Update: The Business Plan has been presented to the WETA Board, the Redwood City Port Commission and the Redwood City Council. The final presentation – along with a request for funding of the Concept Engineering phase – is scheduled for May 5 at the San Mateo County Transportation Authority.

Berkeley Pier/Ferry Project

WETA has partnered with the City of Berkeley to explore the feasibility of developing a joint project that provides for a recreation pier and a WETA ferry terminal at the Berkeley Marina. The Feasibility Study was completed in 2021 and concluded that the project is feasible from an engineering and project cost effectiveness perspective. WETA is currently concluding a business plan that is examining operational costs, fare revenue, and an equity analysis.

April 2022 Update: The Berkeley Ferry Business Plan is concluding with the incorporation of input from staff from the City of Berkeley and WETA. A draft final will be presented to the WETA Board at the April 7 meeting.

Pandemic Recovery Fare Program Proposed Extension
The Pandemic Recovery Program was developed in spring of 2021 and became operational in July 2021. The program lowered fares across the WETA system and enhanced service during non-commute hours. The program was based on a set of core principles adopted by the Board in March 2021. The program was defined as a one-year pilot, requiring action by the WETA Board at the end of the pilot period.

April 2022 Update: After receiving authorization to conduct public outreach on a proposal to extend the Pandemic Recovery Fare Program, staff has been engaged in outreach tasks including an open house meeting via Zoom on February 16. A summary of input received through the outreach period and a recommendation for adoption is included in the April 7 WETA Board packet.

OTHER BUSINESS
Regional Measure 3
Following approval by the voters in June 2018, Regional Measure 3's (RM3) validity was challenged in two lawsuits filed in San Francisco Superior Court. After the courts at both the trial court and appellate court upheld the measure, the California Supreme Court granted review of the RM3 litigation on October 14, 2020. The Court then deferred any further action on the RM3 litigation pending disposition of another case it has also granted petition for review. That case, Zolly v. City of Oakland, presents a similar constitutional question to the one at issue in the RM3 litigation, namely, how to interpret an exception to the Constitutional definition of a tax for a charge imposed for entrance to or use of government property.

On January 1, 2019 BATA began collecting the first dollar of the approved toll increase. Toll revenues collected are being placed into an escrow account and will not be allocated to project sponsors until the lawsuits are settled. MTC staff has prepared general guidelines for RM3 program administration that the Commission adopted in December 2019.

April 2022 Update: As of May 2021, the Zolly matter was fully briefed. Amicus briefs were filed not only by BATA and the State legislature — with specific reference to the RM3 litigation—but also by MTC, the California League of Cities, and others. In November 2021, the Court issued a preliminary notice that the case would soon be set for oral argument. However, on March 11, 2022, the Court issued an order requesting supplemental briefing on Proposition 26. The parties are to file supplemental briefs simultaneously on April 4 and respond to each other's briefs within five days. Then, amici have five days to file supplemental briefs, and the parties have a further five days to respond to any such amicus briefs. After that, the Court will schedule the matter for oral argument, likely in the summer or fall of 2022, though there is no deadline for the Court to act. After oral argument, the Court has 90 days to issue an opinion. Once the Zolly opinion is issued, it is likely, though not guaranteed, that the Court would either set the RM3 matter for briefing or transfer the case back to the court of appeal for further consideration in light of the Zolly decision.

California Air Resources Board Commercial Harbor Craft Regulations
Over the last two years, the California Air Resources Board (CARB) has been working to develop revisions to regulations that are applicable to California commercial harbor craft, including ferry vessels. The proposed regulations include many new initiatives such as in-use and new vessel requirements mandating cleaner engines and the addition of emission reduction systems, a new zero-emission vessel requirement for short routes (less than 3 miles), new idling restrictions at terminals, new shore power requirements, new opacity testing requirements, new operating reporting requirements, and $1.9 million in new annual fees to be paid by the industry. Several of these new initiatives can be integrated into WETA's operations with relatively little effort; however, the in-use and new vessel requirements pose a significant challenge. For the last year WETA has worked with CARB staff to develop an Alternative Control of Emissions (ACE) plan for WETA to comply with the in-use and new vessel

requirements. As presented to the WETA board in April 2021, WETA's ACE plan commits to shifting 50% of its fleet to zero emission technology by 2035.

April 2022 Update: On March 24, the CARB Commission unanimously approved the amendments to the CHC regulations. WETA submitted comments prior to and during the March 24 meeting requesting CARB to address two relatively minor comments. CARB staff indicated that they have an opportunity to address these two comments through their final work on the regulatory language. The regulations become effective January 1, 2023, with staggered compliance dates for individual vessels based on the model year of the engines. CARB is not able to review or approve WETA's ACE plan until the regulations are written into law later this year.

Passenger Vessel Association Public Ferry Operator Committee
In early March, staff attended the Passenger Vessel Association (PVA) conference in Kentucky to moderate a session, along with PVA's Legislative Director, for public ferry operators to discuss topics specific to public ferry service including funding, federal requirements etc. While attendance at the conference was down 50%, staff from about 10 public ferry operators attended the session. It was decided at the session that it would be a great benefit to form a public ferry operators committee within PVA. WETA was designated to chair the committee. Staff will be working with PVA's Legislative Director to establish a quarterly committee meeting schedule in the coming weeks. This committee will provide WETA with a forum for information sharing and collaboration as we work to advocate for funding at the federal level.

Employer Outreach
On March 9, WETA staff participated in a panel with other regional transit agencies to provide information to more than 100 Wells Fargo employees about changes to local transit service as the company prepared to bring additional staff back to worksites. This panel was a major success, leading the Bay Area Council and SAMCEDA to host a similar panel on April 8 for the benefit of transportation demand managers at Bay Area employers. WETA will participate and expects several dozen employers to be represented.

Oracle Park Ferry Service
WETA will provide ferry service to and from Oracle Park for most San Francisco Giants home games in the 2022 season at similar service levels to the 2021 season. This includes direct service before and after evening weekend games for Vallejo, Oakland and Alameda; direct service after weeknight games for Vallejo, Oakland and Alameda; and the Ballpark Short Hop connecting the Downtown San Francisco Ferry Terminal and Oracle Park before and after weekend afternoon games. Consistent with 2021, no direct service connecting the East Bay to Oracle Park will be offered for day games. Many fans historically take regular ferries to Downtown San Francisco and walk or ride local transit to the ballpark for these games.

The only change to the service plan is the addition of pre-game service on weeknights from Oakland and Alameda to Oracle Park. This was added due to the success of pre-game direct service for Golden State Warriors home games and fits with existing crewing levels. Staff plans to assess ridership on all ballpark service types at the conclusion of the 2022 season to make adjustments for the 2023 season.

The Ballpark Short Hop will begin on Saturday, April 9. The first game with direct service is scheduled for Monday, April 11. Staff has begun selling special event tickets and marketing the service and will continue to do so throughout the season.

COVID-19 Protocols

The Transportation Security Administration's (TSA) initial face mask requirement went into effect on February 1, 2021, with an initial expiration date of May 11, 2021. It was then extended through September 13, 2021, then to January 18, 2022, and then to March 18, 2022.

April 2022 Update: The Transportation Security Administration (TSA) has extended the security directive requiring masks on public transportation conveyances and in public transportation hubs through April 18, 2022.

END

AGENDA ITEM 5b
MEETING: April 7, 2022

MEMORANDUM

TO: **Board Members**

FROM: **Seamus Murphy, Executive Director**
Erin McGrath, Chief Financial Officer

SUBJECT: **Review of FY 2021-22 Financial Statements Ending February 28, 2022**

Recommendation
There is no recommendation associated with this informational item.

Summary
With 67% of the year elapsed, WETA's two main challenges continue to be external forces impacting budget projections. First, staff continues to project that the vessel fuel budget will exceed expenditure authority by $2 million due to the ongoing global fuel crisis. Staff is exploring strategies to mitigate that cost and will bring a budget revision for Board consideration at a future meeting. Fare revenue for February is below projected amounts due to the lingering impacts of the Delta and Omicron variants, which interrupted otherwise steady ridership growth. Fortunately, ridership gains in March have been especially strong, with significant increases in peak-hour commute ridership. Overall in March, ridership exceeded 50% of pre-pandemic seasonal averages for the first time since the start of the pandemic. We will continue to monitor the ridership/revenue metrics and anticipate that announced return-to-office roll-outs from major employers, the start of the baseball season, and other positive developments will allow us to come as close as possible to budgeted levels.

Financial Statements Summary:
Below are high level summary charts of the information contained in the more detailed reports attached.

Operating Budget vs. Actual	Year - To - Date		Annual	
	FY2018-19 Actual	FY2021-22 Actual	FY2021-22 Approved Budget	% of FY 22 Approved Budget
	Prior YTD	Current YTD		
Revenue - Year To Date:				
Fare Revenue	$14,291,359	$4,645,943	$ 8,268,000	56%
Federal - COVID-19 Relief Funds	-	12,514,998	22,069,400	57%
State Operating Assistance	-	-	450,000	0%
Bridge Toll Revenues	12,152,190	10,368,222	15,555,000	67%
Contra Costa Measure J	416,466	2,550,602	3,651,300	70%
Other Revenue	6,750	69,170	-	0%
Total Operating Revenues	**$26,866,764**	**$30,148,936**	**$49,993,700**	**60%**
Expense - Year To Date:				
Ferry Services	$25,380,964	$ 28,791,096	$46,993,700	61%
Planning & Administration	1,485,800	1,357,840	3,000,000	45%
Total Operatings Expenses	**$26,866,764**	**30,148,936**	**$49,993,700**	**60%**
System-Wide Farebox Recovery %	**56%**	**16%**		

Capital Budget vs. Actual	FY2021-22 Actual Current YTD	FY2021-22 Approved Budget	% of FY 2021-22 Approved Budget
Revenue:			
Federal Funds	$1,510,812	$21,720,621	7%
State Funds	6,233,550	21,225,184	29%
Bridge Toll Revenues	191,116	2,894,082	7%
Other Revenues	359,947	1,711,502	21%
Total Capital Revenues	**$8,295,425**	**$47,551,389**	**17%**
Expense:			
Total Capital Expenses	**$8,295,425**	**$47,551,389**	**17%**

The two reports attached show operating, administrative, and capital activity for the month of February, year-to-date progress against budget for the fiscal year, and historical comparisons of operating expense.

Fiscal Impact

There is no fiscal impact associated with this informational item.

END

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San Francisco Bay Area Water Emergency Transportation Authority
FY 2021-22 Operating & Administration Revenues and Expenses
Through the Month Ending 2/28/2022

% of Year Elapsed *67%*

	Month	Year - To - Date		Total	
	Feb-22 Actual	FY2018-19 Actual	FY2021-22 Actual	FY2021-22 Budget	Total Budget
OPERATING EXPENSE					
FERRY OPERATIONS:					
Harbor Bay Ferry Service (AHBF)					
Vessel Crew Labor	$114,092		$1,024,306	$1,693,200	*60%*
Vessel Fuel	66,823		522,908	658,700	*79%*
Vessel Operations & Maintenance	49,533		250,503	673,400	*37%*
Facility Operations & Maintenance	41,532		318,347	758,600	*42%*
System Expense	54,340		430,498	897,500	*48%*
Total Harbor Bay	**$326,319**	**$2,476,398**	**$2,546,562**	**$4,681,400**	***54%***
Farebox Recovery - AHBF	***9%***	***45%***	***9%***	***15%***	
Alameda/Oakland Ferry Service (AOFS)					
Vessel Crew Labor	$273,821		$2,653,009	$3,777,800	*70%*
Vessel Fuel	180,560		1,545,061	2,032,900	*76%*
Vessel Operations & Maintenance	44,901		479,335	992,700	*48%*
Facility Operations & Maintenance	120,560		956,191	1,262,200	*76%*
System Expense	161,920		1,183,960	2,387,800	*50%*
Total Alameda/Oakland	**$781,762**	**$8,529,138**	**$6,817,555**	**$10,453,400**	***65%***
Farebox Recovery - AOFS	***19%***	***60%***	***21%***	***18%***	
Vallejo Ferry Service (Vallejo)					
Vessel Crew Labor	$308,048		$2,834,595	$4,427,100	*64%*
Vessel Fuel	452,181		3,782,259	$4,817,300	*79%*
Vessel Operations & Maintenance	72,251		615,360	$1,260,500	*49%*
Facility Operations & Maintenance	297,442		2,566,208	3,969,100	*65%*
System Expense	147,022		1,269,448	2,711,500	*47%*
Total Vallejo	**$1,276,945**	**$11,611,052**	**$11,067,871**	**$17,185,500**	***64%***
Farebox Recovery - Vallejo	***19%***	***63%***	***21%***	***23%***	
South San Francisco Ferry Service (SSF)					
Vessel Crew Labor	$91,274		$387,859	$1,018,700	*38%*
Vessel Fuel	52,395		176,153	385,000	*46%*
Vessel Operations & Maintenance	42,644		213,560	585,300	*36%*
Facility Operations & Maintenance	40,884		314,102	709,700	*44%*
System Expense	34,875		179,804	568,600	*32%*
Total South San Francisco	**$262,072**	**$2,218,550**	**$1,271,477**	**$3,267,300**	***39%***
Farebox Recovery - SSF	***3%***	***31%***	***3%***	***13%***	
Richmond Ferry Service (Richmond)					
Vessel Crew Labor	$228,184		$1,833,700	$2,755,300	*67%*
Vessel Fuel	139,629	*Service launched*	1,005,467	1,146,700	*88%*
Vessel Operations & Maintenance	64,170	*in January*	321,936	878,600	*37%*
Facility Operations & Maintenance	87,647	*2019*	645,211	1,164,400	*55%*
System Expense	72,239		534,035	1,108,800	*48%*
Total Richmond	**$591,870**	**$545,826**	**$4,340,350**	**$7,053,800**	***62%***
Farebox Recovery - Richmond	***7%***	***0%***	***8%***	***8%***	
Seaplane Lagoon Ferry Service (SPL)					
Vessel Crew Labor	$125,501		$1,060,671	$1,573,900	*67%*
Vessel Fuel	88,526	*Service launched*	608,558	596,400	*102%*
Vessel Operations & Maintenance	27,209	*in*	252,910	546,500	*46%*
Facility Operations & Maintenance	41,197	*July 2021*	314,904	618,300	*51%*
System Expense	60,253		510,238	1,017,200	*50%*
Total Seaplane Lagoon	**$342,686**	**$0**	**$2,747,281**	**$4,352,300**	***63%***
Farebox Recovery - SPL	***12%***	***0%***	***11%***	***19%***	
Sub-Total Ferry Operations	**$3,581,654**	**$25,380,964**	**$28,791,096**	**$46,993,700**	***61%***
FAREBOX RECOVERY - SYSTEMWIDE	***14%***	***56%***	***16%***	***18%***	

(continued on next page)

San Francisco Bay Area Water Emergency Transportation Authority
FY 2021-22 Operating & Administration Revenues and Expenses
Through the Month Ending 2/28/2022

% of Year Elapsed *67%*

	Month	Year - To - Date		Total	
	Feb-22 Actual	FY2018-19 Actual	FY2021-22 Actual	FY2021-22 Budget	Total Budget
OPERATING EXPENSE (continued)					
PLANNING & GENERAL ADMIN:					
Wages and Fringe Benefits	$131,458	$832,980	$1,147,773	$1,601,600	*72%*
Services	85,159	$664,325	641,938	2,054,200	*31%*
Materials and Supplies	1,214	$37,544	38,646	59,800	*65%*
Utilities	7,975	$29,154	21,545	43,800	*49%*
Insurance	1,307	$1,200	10,458	17,100	*61%*
Miscellaneous	939	$162,322	27,923	94,700	*29%*
Leases and Rentals	19,834	$254,382	157,668	326,400	*48%*
Admin Overhead Expense Transfer	(76,683)	(496,107)	(688,111)	(1,197,600)	*57%*
Sub-Total Planning & Gen Admin	**$171,204**	**$1,485,800**	**$1,357,840**	**$3,000,000**	***45%***
Total Operating Expense	**$3,752,858**	**$26,866,764**	**$30,148,936**	**$49,993,700**	***60%***
OPERATING REVENUE					
Fare Revenue	$507,113	$14,291,359	$4,645,943	$8,268,000	*56%*
Federal Operating Assistance	*1,448,871*	$0	12,514,998	22,069,400	*57%*
State Operating Assistance		$0	-	450,000	*0%*
Regional - Bridge Toll	1,213,534	$12,152,190	10,368,222	15,555,000	*67%*
Regional - Contra Costa Measure J	545,882	$416,466	2,550,602	3,651,300	*70%*
Other Revenue	37,458	$6,750	69,170	-	*0%*
Total Operating Revenue	**$3,752,858**	**$26,866,764**	**$30,148,936**	**$49,993,700**	***60%***

San Francisco Bay Area Water Emergency Transportation Authority
FY 2021-22 Capital Revenues and Expenses
Through the Month Ending 2/28/2022

Project Description	Feb-22 Total	Total Project Budget	Total Prior Expense	Total FY2021/22 Budget	YTD FY2021/22 Actual	Total Future Year	% of Total Project Budget Spent
CAPITAL EXPENSES:							
FACILITIES:							
Operations and Maintenance Facilities							
North Bay Facility Fuel System Improvement	$ 569	$ 530,450	$ 220,680	$ 309,770	$ 83,398	$ -	*57%*
Central Bay Facility Oil System Modification	5,763	650,000	-	650,000	267,843	-	*41%*
Terminal Improvement							
Terminal Rehabilitation - Alameda Main Street	212,146	6,127,700	21,269	2,429,831	366,604	3,676,600	*6%*
Shoreside Infrastructure for All-Electric Vessel	1,341	4,760,000	-	2,002,000	1,341	2,758,000	*0%*
Passenger Float Rehabiliation - South San Francisco		908,500	-	908,500	1,448	-	*0%*
Terminal Dredging - Vallejo		2,787,600	-	2,787,600	1,294,760	-	*46%*
FERRY VESSELS:							
Vessel Construction							
New Commuter Class High-Speed Vessels - 2 each	654,153	30,082,500	18,583,816	11,498,684	3,978,581	-	*75%*
New All-Electric Vessel		4,300,000	-	1,834,000	-	2,466,000	*0%*
Replacement Vessels - MV Bay Breeze and MV Solano	10,171	34,600,000	3,277,919	17,825,781	78,657	13,496,300	*10%*
Replacement Vessel - MV Intintoli	2,648	26,446,700	-	500,000	14,127	25,946,700	*0%*
Vessel Rehabilitation and Refurbishment							
Vessel Engines Conversion - Gemini Class Vessels	2,899	5,982,500	61,869	3,891,431	2,074,701	2,029,200	*36%*
Vessel Engines Overhaul - MV Argo and MV Carina		240,000	125,730	114,270	85,607	-	*88%*
Vessel Engines Overhaul - MV Cetus		419,100	-	419,100	-	-	*0%*
Vessel Engines Overhaul - MV Hydrus		419,100	-	419,100	-	-	*0%*
Vessel Reduction Gears Overhaul - MV Pisces		120,000	3,728	116,272	48,175	-	*43%*
Vessel Engines & Reduction Gears Overhaul - MV Bay Breeze		491,400	49	491,351	183	-	*0%*
Vessel Engines & Fuel Injectors Overhaul - MV Pyxis		613,200	-	613,200	-	-	*0%*
Vessel Engines & Fuel Injectors Overhaul - MV Vela		613,200	-	613,200	-	-	*0%*
Vessel Fuel Injectors Overhaul - MV Intintoli		127,300	-	127,300	-	-	*0%*
Total Capital Expenses	**$889,691**	**$120,219,250**	**$22,295,061**	**$47,551,389**	**$8,295,425**	**$50,372,800**	
CAPITAL REVENUES:							
Federal Funds	$179,974	$58,684,860	$2,725,949	$21,720,621	$1,510,812	$34,238,290	*7%*
State Funds	661,257	47,543,850	13,583,816	21,225,184	6,233,550	12,734,850	*42%*
Regional - Bridge Toll	2,115	9,078,490	5,298,448	2,894,082	191,116	885,960	*60%*
Regional - Alameda Sales Tax Measure B / BB	46,345	4,912,050	686,848	1,711,502	359,947	2,513,700	*21%*
Total Capital Revenues	**$889,691**	**$120,219,250**	**$22,295,061**	**$47,551,389**	**$8,295,425**	**$50,372,800**	

LINDSAY HART, LLP
FBB Federal Relations

Peter Friedmann
Ray Bucheger

1120 G Street, NW
Suite 1020
Washington, DC 20005
Tel: (202) 783-3333
Fax: (202) 783-4422

TO: **WETA Board Members**

FROM: **Peter Friedmann, WETA Federal Legislative Representative**
Ray Bucheger, WETA Federal Legislative Representative

SUBJECT: **WETA Federal Legislative Board Report – April 2022**

This report covers the following topics:

1. WETA Receives Additional ARPA Funding to Support Operations
2. Federal Appropriations Process – What it Means for WETA
3. WETA Delivers Thank You Letters to Bay Area Congressional Delegation for Supporting FTA Grant Application

WETA Receives Additional ARPA Funding to Support Operations

WETA was provided $26.1 million by the Federal Transit Administration (FTA) to maintain its current ferry operations and to avoid any reductions in personnel and service schedules during the pandemic. Altogether, the FTA awarded $2.2 billion to 35 recipients in 18 states through President Biden's American Rescue Plan Act (ARPA) to help public transportation agencies pay for day-to-day operations as they continue to provide essential service for frontline workers and keep employees on the payroll.

Additional ARPA funding was provided to transit agencies that demonstrated a need for additional financial support to cover expenses related to day-to-day operations, cleaning and sanitization, combating the spread of pathogens on transit systems, and retaining employees. Eligible applicants included eligible recipients of FTA Urbanized Area Formula funds or Rural Area Formula funds.

It should be noted that WETA's work to establish its Pandemic Recovery Program has attracted a lot of positive attention for the organization, including from the Bay Area Congressional delegation and the Chairman of the House Transportation and Infrastructure (T&I) Committee, who applauded WETA's efforts during a keynote speech at APTA's Transform Conference in November. As a result of WETA's good work in this area, Executive Director Seamus Murphy was also invited to testify in front of the House T&I Committee. All of this has served to raise awareness about WETA's leadership amongst transit agencies – we will be looking to leverage this attention in the coming weeks and months to seek to bring additional funds back to the Bay Area for ferry service.

Federal Appropriations Process – What it Means for WETA

After forcing federal government agencies to operate under the uncertainty of continuing resolutions (CRs) for the past six months, Congress finally took up and passed a full year spending bill for FY22 bill. Here are the highlights (and lowlights) for WETA:

- As a result of our lobbying, the omnibus includes an additional $6.5 million for the FTA 5307(h) Ferry Grant Program. We have been seeking to plus-up to this program in recent years through the appropriations process to supplement the $30 million in annual funding included in the surface transportation bill.

- Completion of the FY22 appropriations process will allow FTA to finally issue a Notice of Funding Opportunity (NOFO) for the low/no emission ferry grant program that was created by the Infrastructure Investment and Jobs Act (IIJA). The CRs that had previously been passed by Congress prevented federal government agencies from implementing many of the new programs funded through the IIJA. The IIJA includes $50 million per year FY22-FY26 ($250 million total) to establish a pilot program to provide grants for the purchase of electric or low-emitting (methanol, natural gas, liquified petroleum gas, hydrogen, coal-derived liquid fuels, biofuels) ferries.

- House Speaker Nancy Pelosi and Senate Majority Leader Chuck Schumer worked right up until a deal was announced on the omnibus to push for inclusion of the $1.25 billion for the FTA 5307(h) Ferry Grant Program that was supposed to be included in the IIJA but was omitted by a drafting error. Unfortunately, Republican leadership would not agree to including this funding, and Democratic leadership had to make a choice – keep fighting for this money in the FY22 omnibus, or risk having no omnibus at all (the bill can't pass the Senate without Republican votes).

Completion of the FY22 appropriations process allows Congress to move onto the FY23 appropriations process. We are working with WETA staff to prepare to a) seek additional funding increases for the FTA 5307(h) Ferry Grant Program, like what we did in FY21 and FY22; and b) submit a Congressionally Directed Spending request for FY23. Also, we spoke recently with staff for Speaker Pelosi about continuing to seek out opportunities to obtain the $1.25 billion for the FTA 5307(h) Ferry Grant Program, although it is not clear when that opportunity may present itself.

WETA Delivers Thank You Letters to Bay Area Congressional Delegation for Supporting FTA Grant Application

We worked with WETA staff to deliver thank you letters to members of the Bay Area Congressional delegation that supported WETA's application for funding from the Federal Transit Administration (FTA) 5307(h) ferry grant program. FTA awarded $3.4 million to WETA to build a zero-emission, electric ferry to connect San Francisco's growing Treasure Island and Mission Bay neighborhoods. This grant will support a new network of zero-emission, short-hop ferry services along San Francisco's waterfront. Thank you letters were delivered to House Speaker Nancy Pelosi, Senator Dianne Feinstein and members of the Bay Area Congressional delegation, including Representatives Jackie Speier, Mike Thompson, Anna Eshoo, John Garamendi, Mark DeSaulnier and Barbara Lee.

Respectfully Submitted,
Peter Friedmann and Ray Bucheger

NOSSAMAN LLP | Memorandum

TO: WETA Board of Directors

FROM: Nossaman LLP - Nate Solov
Jennifer M. Capitolo & Associates – Jennifer Capitolo

DATE: March 29, 2022

RE: March / April - Legislative Update

Legislative Update

Policy committees in the legislature are meeting throughout March and April to hear bills in advance of the April 29 deadline to send measures to the appropriations committee. Updates on bills of interest to WETA:

1. SB 922 (Wiener - CEQA streamlining for zero emission transit projects) includes shore-side charging infrastructure for ferries. This bill is an extension of SB 288 (2020).
    - We submitted a support letter highlighting the benefits this bill would have on streamlining our shore-side ZE charging infrastructure projects. Passed the Senate Environmental Quality Committee on March 28.
2. AB 2807 (Bonta) – Clarifies that ferries are eligible to apply to existing state programs providing funding for transit providers to transition their fleets from diesel to zero emission vehicles.
    - We met with the Assembly Transportation Committee consultants on March 28 and submitted our support letter on March 29. The bill will be heard in the Transportation Committee on April 18.

Governor's Free Transit Proposal

On March 23, Governor Newsom introduced a proposal to provide $750 million in incentive grants to transit agencies to provide free transit for Californians for 3 months. This funding level reflects fare revenues collected statewide over three months in 2019 plus a financial buffer to address the potential for induced demand of transit services and administrative costs. This relief would be presented, and later distributed, to transit agencies based on their contribution to the fare revenues collected statewide in 2019. Transit agencies would use their apportionments to design fare free or heavily discounted fare programs, with the goal of maintaining those programs for 3 months. Transit agencies would have discretion on developing their programs, though there will likely be statutory and/or programmatic guidance.

TIRCP Application

Nossaman helped write and finalize WETA's TIRCP application for a zero-emission ferry and shore-side charging infrastructure to support a zero-emissions ferry network connecting Mission Bay, Treasure Island and Downtown San Francisco. The application was submitted the first week in March. We also wrote and organized a legislative support letter for the TIRCP application and received signatures from: Becker, Cortese, Wieckowski, Wiener, Bonta, Grayson, Levine, Mullin, Quirk, Stone, Ting, and Wicks.

Budget Funding for WETA Priorities

Nossaman testified during legislative budget sub-committee hearings in the Senate and Assembly in support of the maximum amount of budget funding for transit agencies and transit infrastructure including the $37 million necessary to complete the Mission Bay Ferry Landing. We will continue to meet with legislative staff, administration staff and transit stakeholders regarding the inclusion of this funding in the 2022-2023 budget.

AGENDA ITEM 5e
MEETING: April 7, 2022

MEMORANDUM

TO: **Board Members**

FROM: **Seamus Murphy, Executive Director**
Kevin Connolly, Planning & Development Manager
Ossmand Ruano, Transportation Planning Intern

SUBJECT: **Monthly Ridership and Recovery Report**

Background

The WETA Pandemic Recovery Plan (Plan) began on July 1, 2021 with the enhancement of the Vallejo, Oakland & Alameda, and Richmond routes, the restart of the suspended Harbor Bay route, and the launch of the new Alameda Seaplane route. The following weekend also marked the relaunch of weekend service on the Vallejo, Oakland & Alameda, and Richmond routes. The South San Francisco service was relaunched in November 2021.

The Plan lowered fares across the WETA system. Future modifications in service will generally follow state guidelines for reopening the economy and subsequent changes in demand. The Plan calls for a monthly evaluation of ridership demand together with other measures relating to how the Bay Area is responding to the COVID-19 health crisis. The Monthly Ridership and Recovery Report presents a status report of the WETA system along with anticipated service adjustments for the upcoming weeks.

Discussion

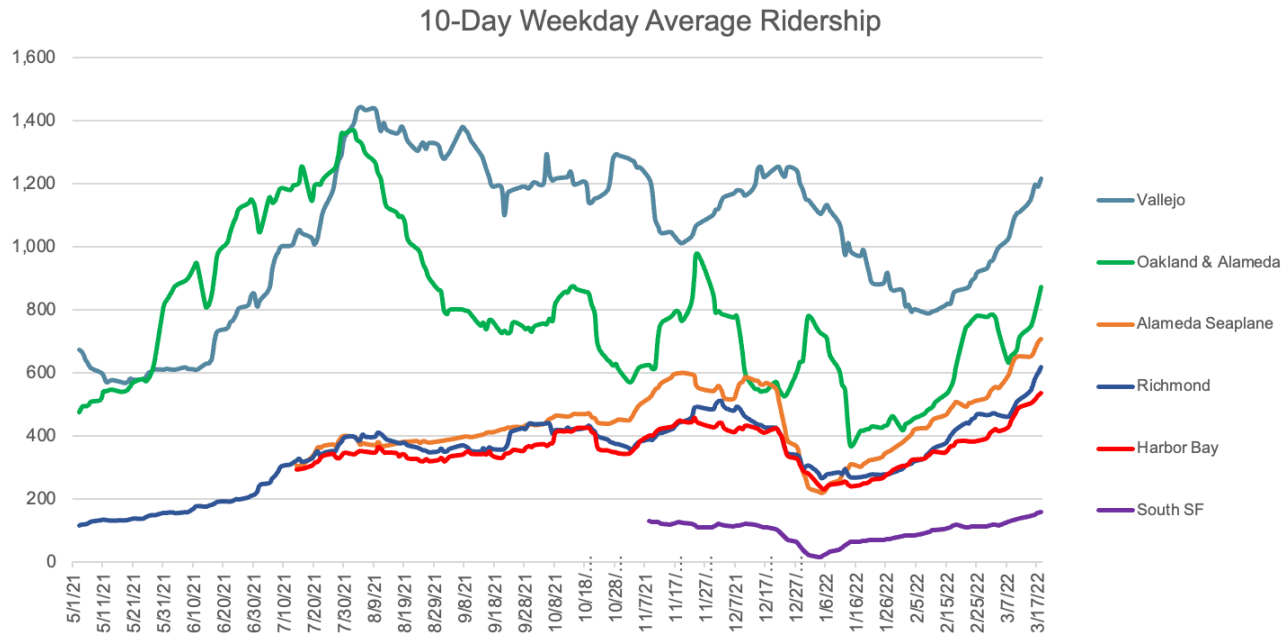
Systemwide ridership grew significantly in July as WETA launched the Plan. Ridership grew through October and November, dropping through December and January potentially due to the impact of COVID variants, inclement weather, and the holidays. Ridership numbers have seen steady growth through February and mid-March. Ridership fell below WETA's budget projections in the months of January and February but continue to compare favorably to other regional transit operators (measured as a percent of pre-pandemic ridership) who have recently seen similar declines in ridership. Beginning in March, the system saw the largest increases in ridership since the start of the pandemic thanks to significant increases in weekday peak-hour ridership as more employers began implementing return-to-office plans.

Highlights:

- Weekend ridership has remained a strong component of ridership through February. Average weekend ridership in February 2022 exceeded levels of weekend ridership in February 2019, continuing the trend of strong weekend ridership with the launch of the Plan.
- The South San Francisco route relaunched on Monday November 8 after nearly two years of suspension due to COVID. The route averaged approximately 120 boardings per day through November, seeing a decline in ridership in early January. The route has seen steady ridership growth through February and into mid-March.
- The Oakland & Alameda, Alameda Seaplane, Richmond, and Harbor Bay routes all saw ridership drop in December and January with significant growth through the months of February and March.
- The Vallejo route remains WETA's busiest route with an average of 1,000 daily weekday riders.
- Special event service to Chase Center from Oakland & Alameda averaged over 400 daily boardings on service days through February and early mid-March.

Recommendations

There are no proposed service adjustments at this time.


10-Day Weekday Average Ridership
1,600
1,400
1,200
1,000
800
600
400
200
0
5/1/21
5/11/21
5/21/21
5/31/21
6/10/21
6/20/21
6/30/21
7/10/21
7/20/21
7/30/21
8/9/21
8/19/21
8/29/21
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12/7/21
12/17/...
12/27/...
1/6/22
1/16/22
1/26/22
2/5/22
2/15/22
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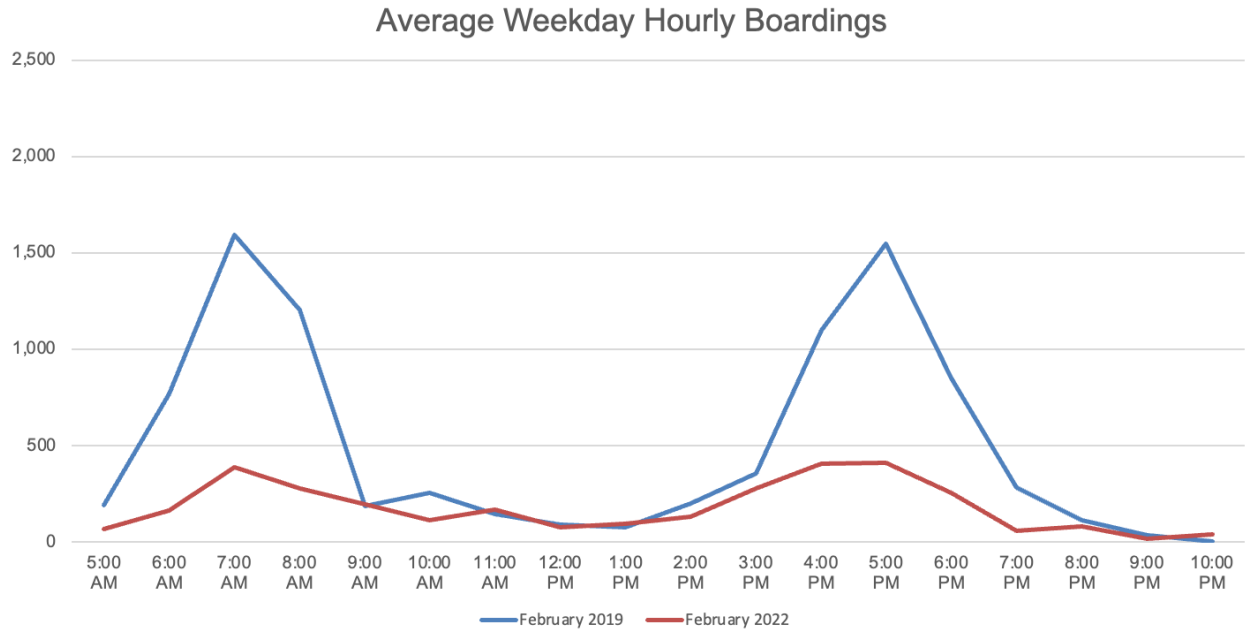
Vallejo
Oakland & Alameda
Alameda Seaplane
Richmond
Harbor Bay
South SF


Average Weekday Hourly Boardings
2,500
2,000
1,500
1,000
500
0
5:00 AM
6:00 AM
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
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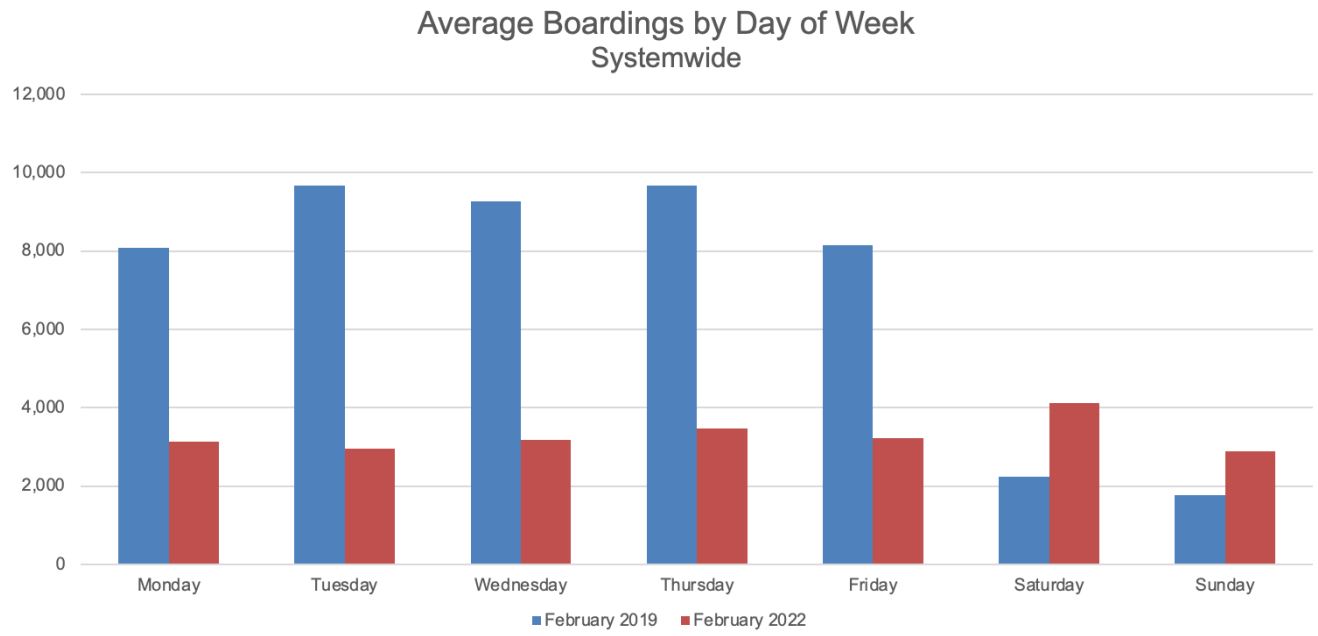
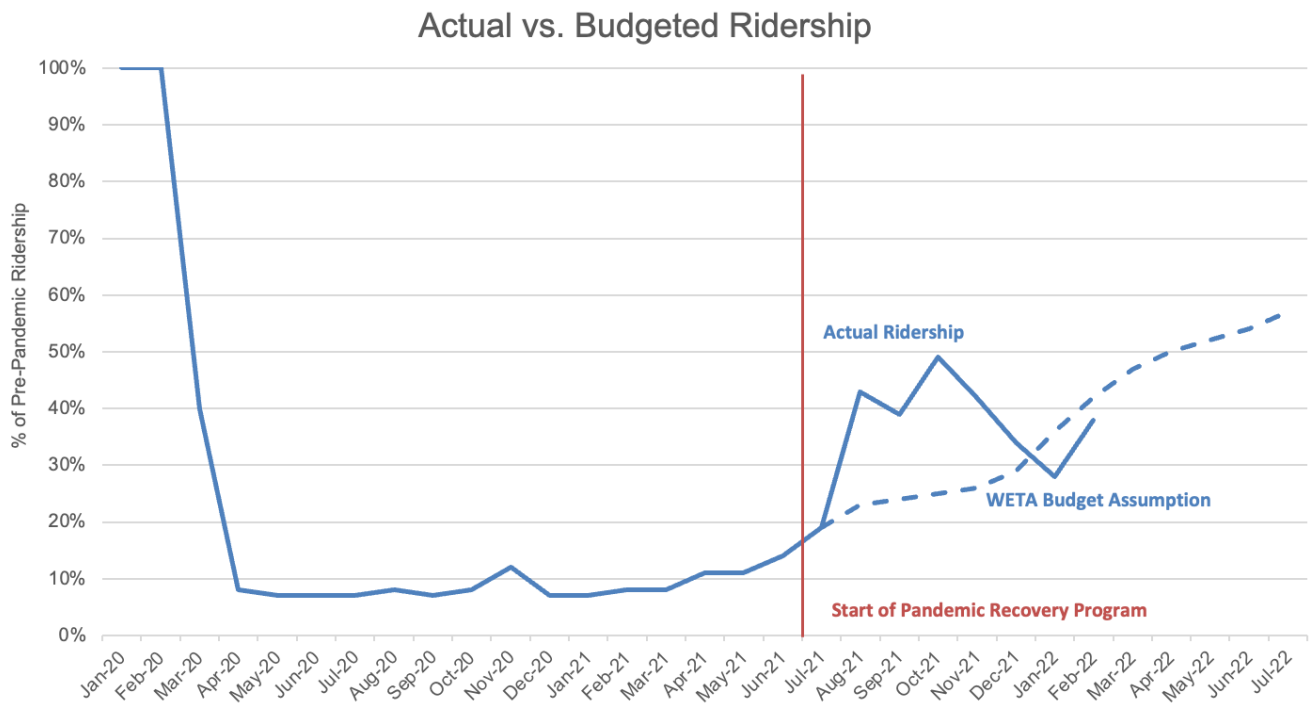
8:00 PM
9:00 PM
10:00 PM
February 2019
February 2022


Average Boardings by Day of Week
Systemwide
12,000
10,000
8,000
6,000
4,000
2,000
0
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday
February 2019
February 2022


Actual vs. Budgeted Ridership
% of Pre-Pandemic Ridership
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Actual Ridership
WETA Budget Assumption
Start of Pandemic Recovery Program
Jan-20
Feb-20
Mar-20
Apr-20
May-20
Jun-20
Jul-20
Aug-20
Sep-20
Oct-20
Nov-20
Dec-20
Jan-21
Feb-21
Mar-21
Apr-21
May-21
Jun-21
Jul-21
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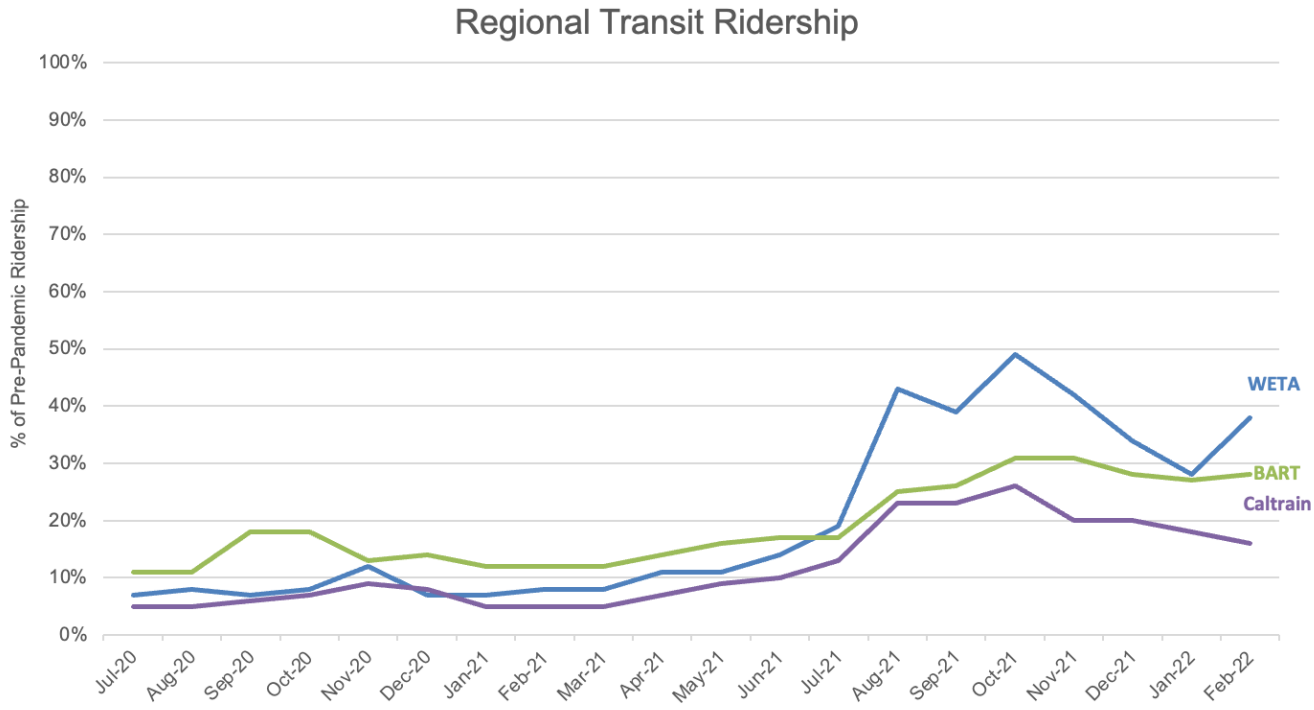
Jun-22
Jul-22


Regional Transit Ridership
% of Pre-Pandemic Ridership
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
WETA
BART
Caltrain
Jul-20
Aug-20
Sep-20
Oct-20
Nov-20
Dec-20
Jan-21
Feb-21
Mar-21
Apr-21
May-21
Jun-21
Jul-21
Aug-21
Sep-21
Oct-21
Nov-21
Dec-21
Jan-22
Feb-22

Monthly Operating Statistics Report

		February 2022	Oakland & Alameda*	Vallejo*	Richmond	Harbor Bay	Alameda Seaplane	South San Francisco**	Systemwide
Boardings	vs. last month	Total Passengers February 2022	30,123	29,509	10,771	7,393	9,873	2,187	91,839
		Total Passengers January 2022	20,782	22,231	7,458	5,679	7,117	1,494	68,023
		Percent change	44.95%	32.74%	44.42%	30.18%	38.72%		35.01%
	vs. same month last year	Total Passengers February 2022	30,123	29,509	10,771	7,393	9,873	2,187	89,856
		Total Passengers February 2021	5,545	8,067	1,387				14,999
		Percent change	443.25%	265.80%	676.57%	-	-		499.08%
	vs. prior FY to date	Total Passengers Current FY To Date	285,673	276,136	84,966	59,745	72,493	3,681	782,694
		Total Passengers Last FY To Date	40,269	42,791	11,435	-	-		94,495
		Percent change	609.41%	545.31%	643.03%	-	-		728.29%
		Avg Weekday Ridership February 2022	1,506	1,475	539	370	494		4,383
Ops Stats		Passengers Per Hour February 2022	72	45	34	40	57		49
		Revenue Hours February 2022	418	650	316	184	174	127	1,869
		Revenue Miles February 2022	5,869	17,674	5,663	3,759	2,860	2,200	38,025
		Farebox Recovery Year-To-Date	21%	21%	8%	9%	11%	3%	16%
		Peak hour utilization, AM – February 2022	5%	20%	18%	18%	15%	11%	15%
		Peak hour utilization, PM – February 2022	16%	26%	17%	20%	14%	9%	17%
Fuel		Fuel Used (gallons) – February 2022	48,276	120,900	37,333	17,866	23,669	14,009	262,053
		Avg Cost per gallon – February 2022	$3.74	$3.74	$3.74	$3.74	$3.74	$3.74	$3.74

** Includes special event ridership to/from Oracle Park and/or Chase Center*

*** Service suspended on the South San Francisco route until November 2021*

END

AGENDA ITEM 6a
MEETING: April 7, 2022

MEMORANDUM

TO: **Board Members**

FROM: **Seamus Murphy, Executive Director**

SUBJECT: **Adopt Resolution Regarding Remote Meetings Pursuant to Assembly Bill 361**

Recommendation
Adopt resolution authorizing the WETA Board to meet remotely pursuant to the provisions of AB 361.

Background/Discussion
In March 2020, the Governor of California issued several executive orders in response to the COVID-19 pandemic suspending portions of the Ralph M. Brown (Brown) Act to allow Board members to participate remotely in Board meetings without complying with the Brown Act's restrictions on such remote attendance. (Executive Order N-25-20 and N-29-20)

The Governor's executive order that specifically waived certain requirements of the Brown Act expired on September 30, 2021. On September 16, 2021, the Governor signed Assembly Bill (AB) 361 into law, effective on October 1, 2021. AB 361 amends the Brown Act to allow legislative bodies to meet remotely without complying with traditional teleconference meeting rules, provided there is a state of emergency and either (1) state or local officials have imposed or recommended measures to promote social distancing or (2) the legislative body determines by majority vote that meeting in person would present imminent risks to the health and safety of attendees.

The Governor-declared state of emergency continues to be in effect and both state and local officials continue to recommend measures to promote physical distancing. WETA's Board meetings therefore are in accordance with AB 361's requirements.

In order to qualify for AB 361, the Board must, within 30 days of its first meeting under AB 361, and every 30 days thereafter, make findings that it has reconsidered the circumstances of the state of emergency and that either or both (a) the state of emergency continues to directly impact the ability to meet safely in person and/or (b) state or local officials continue to impose or recommend measures to promote social distancing.

The Executive Director recommends that the Board adopt these findings with the understanding that the Board would need to approve a similar resolution every 30 days if it wishes to continue to meet under AB 361's requirements for teleconference Board meetings.

Fiscal Impact
There is no fiscal impact associated this recommendation.

END

SAN FRANCISCO BAY AREA WATER EMERGENCY TRANSPORTATION AUTHORITY

RESOLUTION NO. 2022-13

FINDINGS PURSUANT TO AB 361 TO CONTINUE REMOTE PUBLIC MEETINGS

WHEREAS, on March 4, 2020, Governor Gavin Newsom declared a State of Emergency to make additional resources available, formalize emergency actions already underway across multiple state agencies and departments, and help the State prepare for a broader spread of COVID-19; and

WHEREAS, the State of Emergency remains in effect; and

WHEREAS, the California Department of Public Health and the Department of Industrial Relations have imposed or recommended measures to promote social distancing, and the San Francisco Public Health Department continues to recommend measures to promote social distancing in combination with other safety precautions when activities occur in shared indoor spaces to mitigate the risk of COVID-19 transmission; and

WHEREAS, on September 16, 2021, the Governor signed Assembly Bill 361 into law as urgency legislation that went into effect on October 1, 2021, amending Government Code Section 54953 of the Brown Act to allow legislative bodies to continue to meet remotely without conforming to Brown Act teleconferencing rules if the legislative body holds a meeting during a proclaimed state of emergency, and if state or local officials have imposed or recommended measures to promote social distancing; now, therefore, be it

RESOLVED that the Board of Directors has considered the circumstances of the State of Emergency and finds that:

a. The factors triggering the State of Emergency continue to directly impact the ability of the members of the Board and members of the public to meet safely in person; and
b. state or local officials continue to recommend measures to promote social distancing; and be it further

RESOLVED, that the Board of Directors will reconsider the circumstances of the state of emergency and revisit the need to conduct meetings remotely within 30 days of the adoption of this resolution.

CERTIFICATION

The undersigned, Board Secretary, does hereby certify that the foregoing is a full, true and correct copy of a resolution duly and regularly adopted at a meeting of the San Francisco Bay Area Water Emergency Transportation Authority held on April 7, 2022.

YEA:
NAY:
ABSTAIN:
ABSENT:

_____

/s/ Board Secretary
2022-13
END

AGENDA ITEM 6b
MEETING: April 7, 2022

SAN FRANCISCO BAY AREA WATER EMERGENCY TRANSPORTATION AUTHORITY
MINUTES OF THE BOARD OF DIRECTORS MEETING

(March 3, 2022)

The Board of Directors of the San Francisco Bay Area Water Emergency Transportation Authority met in regular session at WETA Central Bay Operations & Maintenance Facility at 670 W Hornet Ave, Alameda, CA and via videoconference consistent with AB 361 as codified in Government Code Section 54953.

1. CALL TO ORDER

Chair James Wunderman called the meeting to order at 1:02 p.m.

2. ROLL CALL

Chair James Wunderman, Vice Chair Monique Moyer, Director Jessica Alba, Director Jeffrey DelBono, and Director Anthony Intintoli were in attendance.

Chair Wunderman led the Pledge of Allegiance. He welcomed directors, staff, and meeting guests and noted that the meeting was being conducted in person and by videoconference and was being recorded. He advised guests about offering public comment and how guests could sign up to speak throughout the meeting.

3. REPORT OF BOARD CHAIR

Chair Wunderman commented that he was seeing organized efforts of businesses committing to opening offices and expecting employees to return three days a week with more flexible, atypical schedules. He said that he had received a question from City of Richmond Mayor Tom Butt from a constituent about opening concessions on the boats and asked Executive Director Seamus Murphy to address boat concessions during his report.

Chair Wunderman was happy to report that California Governor Gavin Newsom reappointed him as Chair of WETA for another six years. He expressed his excitement in being able to continue the work with the support of a great Board and team and thanked everyone for their confidence in him.

4. REPORTS OF DIRECTORS

The Directors congratulated Chair Wunderman on his reappointment and commended him for his leadership.

Vice Chair Moyer acknowledged staff for reporting on the various emergency response exercises and for making the exercises a priority.

Director Alba thanked staff for putting together *The State of San Francisco Bay Ferry 2022* which summarizes the agency's accomplishments and outlook for the next year.

5. REPORTS OF STAFF

Mr. Murphy stated that the Port of Redwood City and the City of Redwood City Council had received the Redwood City Business Plan and that the San Mateo County Transportation Authority would be receiving the Plan in April and deciding on an allocation of funding for the environmental work.

Mr. Murphy reported that the Treasure Island Community Development Department had procured ferry service through Prop SF that launched March 1. He said that WETA was monitoring and coordinating with the operation and preparing to take over the service once the time was right.

Mr. Murphy said that WETA had received a Federal Transit Administration (FTA) grant for a second all-electric vessel that would serve Mission Bay and Treasure Island and that WETA would be applying for the Transit and Intercity Rail Capital Program (TIRCP) grant for a third vessel.

Mr. Murphy said that Speaker Nancy Pelosi had announced that FTA had awarded $575 million to Bay Area transit agencies and that WETA would be receiving $26 million.

With that news, Mr. Murphy turned it over to Chief Financial Officer Erin McGrath, who provided an update on the effect of fuel prices and ridership on the current fiscal year budget. Planning & Development Manager Kevin Connolly provided an up-to-date ridership report and forecast.

Mr. Murphy added that WETA was using the food and beverage concessions to the fullest extent to attract ridership but stated that the concessionaire was experiencing difficulty hiring sufficient staff to fully cover the concessions system wide. He said that WETA was prioritizing the routes and runs with the highest ridership to maximize the attraction. He noted that the Transit Security Administration mask mandate expires on March 18 and that it may not be extended.

Mr. Murphy reported on SB 917 (Becker) and noted that it would address the fare integration element that was developed from the Metropolitan Transportation Commission's (MTC) Blue Ribbon Transit Recovery Task Force and Fare Integration Task Force work, which was included in the Bay Area Transit Transformation Action Plan. He noted that transit agencies would be required to implement the fare integration program in order to be eligible for their share of State Transit Assistance (STA) funds. He said that there could be some amendments coming out of the Senate where the bill would be heard on April 12.

Mr. Murphy provided five written reports and offered to answer questions.

Chair Wunderman called for public comments, and there were none.

Chair Wunderman asked Mr. Murphy to reach out to Mayor Butt to talk about the concessions and congratulated WETA on its FTA award.

6. CONSENT CALENDAR

Chair Wunderman requested that Item 6e

e. Authorize Release of a Request for Proposals for Construction of the Alameda Main Street Ferry Terminal Refurbishment Project

be pulled from the Consent Calendar and asked if any Directors or members of the public had any other items to discuss.

Director DelBono made a motion to approve the remaining items on the consent calendar:

a. Adopt a Resolution Regarding Remote Meetings Pursuant to Assembly Bill 361
b. Board Meeting Minutes – February 3, 2022
c. Authorize Submission of an Allocation Request to the California Department of Transportation for FY 2021-22 Low Carbon Transit Operations Program Grant Funds
d. Approve Amendment to Clipper Memorandum of Understanding with the Metropolitan Transportation Commission and Bay Area Transit Operators

Chair Wunderman called for public comments on the consent calendar, and there were none.

Vice Chair Moyer seconded the motion, and the consent calendar carried unanimously.

Yeas: Alba, DelBono, Intintoli, Moyer, Wunderman. Nays: None. Absent: None.

In response to Chair Wunderman's question about the scoring system for the Alameda Main Street Ferry Terminal Refurbishment Project, Senior Planner/Project Manager Chad Mason explained that the procurement would be evaluated by a two-step best value approach in which competitive bidders are prequalified on technical requirements, and then the price proposals of those identified are opened.

Mr. Mason said the procurement included standard Disadvantaged Business Enterprise (DBE) goals and that there was opportunity for DBE participation in some of the specialty work in response to Director Alba.

Director Intintoli made a motion to approve Item 6e:

e. Authorize Release of a Request for Proposals for Construction of the Alameda Main Street Ferry Terminal Refurbishment Project

Chair Wunderman called for public comments on Item 6e, and there were none.

Director Alba seconded the motion, and Item 6e carried unanimously.

Yeas: Alba, DelBono, Intintoli, Moyer, Wunderman. Nays: None. Absent: None

Chair Wunderman stated that he thought it was WETA's practice to explain upfront the standard used for awarding a contract and asked that the scoring procedure be included in future procurement releases.

7. AWARD CONTRACT TO SWIFTLY, INC. FOR REAL-TIME TRANSIT INFORMATION SYSTEM

Principal Planner Michael Gougherty presented this item recommending approval of the following related actions for a contract award to implement and maintain a real-time transit information system:

1. Approve a contract award to Swiftly, Inc. for a contract amount not-to-exceed $212,659 for an operating term of 60 months; and
2. Authorize the Executive Director to negotiate and enter into a contract for this work and take any other related actions as may be necessary to support this work.

Mr. Gougherty explained that real time transit information is a data feed that provides three pieces of information: 1) location of the vessel, 2) predictions concerning the arrival and departure of a given trip, and 3) is used as a mechanism to push out service alerts about delays or other service impacts.

Mr. Gougherty stated that Swiftly, Inc. (Swiftly) is a San Francisco company with a lot of local and national experience providing real time transit information services. He added that Swiftly's proposal was very competitive and would not require any additional equipment to implement the system.

Mr. Gougherty invited Public Information & Marketing Manager Thomas Hall to discuss a few of the strategies that would be used with the system including real time information feeds to existing transit apps, WETA's website, and to terminal signage. He added that this system would streamline the alert system and could provide a live map of the location of all of WETA's ferries across the Bay.

The Directors expressed their excitement about the system, and Director Alba noted that the system could feed into the emergency response and situational awareness tools which are managed by the MTC and the California Offices of Emergency Services (Cal OES).

Director Intintoli made a motion to adopt Resolution No. 2022-11 approving this item.

Chair Wunderman called for public comments, and there were none.

Director DelBono seconded the motion, and the item passed unanimously.

Yeas: Alba, DelBono, Intintoli, Moyer, Wunderman. Nays: None. Absent: None.

8. AWARD CONTRACT TO ANCHOR OPERATING SYSTEM, LLC FOR AN INTEGRATED FARE TICKETING SYSTEM

Mr. Gougherty presented this item recommending approval of the following related actions for a contract award to implement and maintain an integrated fare ticketing system:

1. Approve a contract award to Anchor Operating System, LLC to implement an integrated fare ticketing system for an amount not-to-exceed $92,000 for implementation of the system and purchase of handheld and point-of-sale ticketing devices and printers, plus ongoing charges of a 7 percent ticketing fee on tickets purchased via web or mobile ticketing application and a 0.9 percent credit card processing fee on all credit card transactions; and,
2. Authorize the Executive Director to negotiate and enter into a contract for this work and take any other related actions as may be necessary to support this work.

Mr. Gougherty clarified that this system was about addressing the limitations to support the non-Clipper fare payments. He said the goal was to enhance and consolidate the many systems and offer a more seamless experience.

Mr. Gougherty said that Anchor Operating System, LLC (Anchor), a subsidiary of Hornblower was identified as the highest ranked proposer. He added that Anchor had the advantage of providing ticketing services for Hornblower and other external ferry operators. He noted that the Anchor app was highly customizable and could integrate with the real time transit feed and offer special event ticketing.

Director Alba made a motion to adopt Resolution No. 2022-12 approving this item.

Chair Wunderman called for public comments, and there were none.

Vice Chair Moyer seconded the motion, and the item passed unanimously.

Yeas: Alba, DelBono, Intintoli, Moyer, Wunderman. Nays: None. Absent: None

9. PUBLIC COMMENTS FOR NON-AGENDA ITEMS

No further public comments were shared.

With all business concluded, Chair Wunderman adjourned the meeting at 1:53 p.m.

- Board Secretary
END

AGENDA ITEM 7
MEETING: April 7, 2022

MEMORANDUM

TO: **Board Members**

FROM: **Seamus Murphy, Executive Director**
Kevin Connolly, Planning & Development Manager
Michael Gougherty, Principal Planner
Thomas Hall, Public Information & Marketing Manager

SUBJECT: **Approve Extension of Fiscal Year 2022 Pandemic Recovery Program**

Recommendation
Approve extension of the Fiscal Year 2022 Pandemic Recovery Program for up to one year through Fiscal Year 2023.

Background
In April 2021, the Board adopted the Fiscal Year (FY) 2022 Pandemic Recovery Program (Program). The Program was developed based on a set of 13 core principles focusing on:

- Incentivizing ridership return
- Enhancing equity and access to ferry service for transit-dependent riders
- Phasing in increased service levels and adjusting fares to align with comparable transit options
- Supporting the region's economic recovery

The Program included a service plan and fare structure specifically designed to stimulate ridership and broaden the appeal of the ferry to a more diverse Bay Area travel market. The service plan aimed to strike a balance between making the most efficient use of resources while expanding service outside of peak periods to meet demand for ferry service throughout the day. The fare structure reduced fares throughout the WETA system for a one-year period to generate new ridership and attract lapsed riders back to the ferry.

Initial results from the first six months of the Program have been encouraging but are incomplete. An opt-in passenger survey administered by WETA in October 2021 sought to identify impacts of lower fares on expanding access to ferry service for disadvantaged communities, one of the 13 core principles underpinning the Program. Based on responses received, the share of passengers with a household income of less than $50,000 increased from 6% in 2017 to 10% in 2021. An onboard survey will be conducted later this year to further analyze the impact of lower fares and less peak-focused schedules on ridership diversity.

In general, demand for midday and weekend services has responded positively to service levels and fares offered by the Program. For several weeks during the first six months of the Program, off-peak ridership has approached or even exceeded pre-COVID levels. Ridership during peak periods has been slower to recover, largely due to delayed return-to-work plans by many major Bay Area employers. Because of these delays, it is unlikely that a reliable assessment of the Program and accurate assumptions about the evolution of the system's fare and service plans can be made by the current sunset date of the Program.

Discussion

Several regional employers have recently announced plans to return-to-work in the coming weeks. In recognition that these return-to-work plans have been substantially delayed from their original start dates, staff has proposed extending the Program by up to one year through FY 2023. The proposed extension of the program would keep current fares unchanged, as indicated in ***Attachment A***. Current service levels would also remain in place and staff will continue to monitor ridership patterns and adjust service as needed to achieve the objectives of the Program.

In February 2022, the Board authorized staff to conduct outreach with riders and the public on a proposal to extend the FY 2022 Pandemic Recovery Program. WETA conducted a widespread public outreach process to ensure awareness of the proposed extension and its implications throughout the communities served by San Francisco Bay Ferry. Outreach methods included a virtual open house, two onboard outreach events, a digital survey, social media posts, website content and notices posted on each vessel in English, Spanish and Chinese.

The bulk of feedback was received via an opt-in digital survey that WETA ran between February 8 and March 3, 2022. WETA captured 893 responses in the survey, with 93 percent of participants supporting the extension of the fare program for another year. Five percent of respondents said they were not sure if they supported the extension, and 2 percent were opposed. When asked how important ticket prices were in making the decision to ride the ferry, 77 percent of respondents chose "important" or "very important." A summary matrix of the 325 total comments received by email, mail, open house events, and the digital survey is provided in ***Attachment B.***

Based on the outreach process, staff recommends that the Board approve the proposed extension of the Fiscal Year 2022 Pandemic Recovery Program for up to one year through FY 2023. Pending approval by the Board, WETA will incorporate information regarding the extended fare program in its marketing and outreach campaigns in Summer 2022 and beyond. The fare adjustments have been an integral part of WETA's messaging since implementing the Program in July 2021 and will continue to play a major role in WETA's campaigns to increase ridership.

Title VI Compliance

Development of the Program is consistent with Federal Transit Administration's (FTA) Circular 4702.1B, "Title VI Requirements and Guidelines for Federal Transit Administration Recipients." When conducting outreach to the public, WETA follows its Title VI Limited English Proficiency Plan, which identifies the languages of limited English proficient persons in WETA's service area, as well as the agency's process to solicit public comments. Consistent with these policies, information was provided to the public on February 3, 2022, in English, Spanish, and Chinese languages to ensure that public input was sought and considered from all people in WETA's service area.

Fiscal Impact

Due to the uncertain nature of ridership return, its difficult to estimate the impacts of a continuation of the Program. Based on modeling work during the creation of the fares, staff anticipates that continuation of the current Pandemic Recovery Program fares will result in fare revenue loss of $1.08 million in the coming year which is tied to a ridership increase of up to 170,000 for FY 2023. An updated and detailed estimate of FY 2023 ridership and fare revenues will be prepared and presented as part of the FY 2023 budget process.

END

Attachment A – Proposed Fares (no change from FY 2022 Pandemic Recovery Program)
Attachment B – Public Comments Summary

Attachment A
Route Specific Fare Structures

Oakland/Alameda - San Francisco Fare Structure

CURRENT FY2022		PROPOSED	
STANDARD FARES			
Between Alameda/Oakland and San Francisco			
Adult	$5.75	Adult	$5.75
Adult (Clipper Only)	$4.50	Adult (Clipper Only)	$4.50
Adult (Clipper START)	$2.25	Adult (Clipper START)	$2.25
Youth (5-18 years)	$2.75	Youth (5-18 years)	$2.75
Youth (5-18 years) (Clipper Only)	$2.25	Youth (5-18 years) (Clipper Only)	$2.25
Seniors (65+), Disabled	$2.75	Seniors (65+), Disabled	$2.75
Seniors (65+), Disabled (Clipper Only)	$2.25	Seniors (65+), Disabled (Clipper Only)	$2.25
Children under 5	FREE	Children under 5	FREE
DISCOUNT FARE PRODUCTS			
School groups*	$1.75	School groups*	$1.75

*School/Group Fares by Advanced Reservation only

Vallejo – San Francisco Ferry Building Fare Structure

CURRENT FY2022		PROPOSED	
STANDARD FARES			
Adult	$11.25	Adult	$11.25
Adult (Clipper Only)	$9.00	Adult (Clipper Only)	$9.00
Adult (Clipper START)	$4.50	Adult (Clipper START)	$4.50
Youth (5-18 years)	$5.50	Youth (5-18 years)	$5.50
Youth (5-18 years) (Clipper Only)	$4.50	Youth (5-18 years) (Clipper Only)	$4.50
Seniors (65+), Disabled	$5.50	Seniors (65+), Disabled	$5.50
Seniors (65+), Disabled (Clipper Only)	$4.50	Seniors (65+), Disabled (Clipper Only)	$4.50
Children under 5	FREE	Children under 5	FREE
DISCOUNT FARE PRODUCTS			
School groups*	$3.50	School groups*	$3.50

*School/Group Fares by Advanced Reservation only

Harbor Bay – San Francisco Ferry Building Fare Structure

CURRENT FY2022		PROPOSED	
STANDARD FARES			
Adult	$5.75	Adult	$5.75
Adult (Clipper Only)	$4.50	Adult (Clipper Only)	$4.50
Adult (Clipper START)	$2.25	Adult (Clipper START)	$2.25
Youth (5-18 years)	$2.75	Youth (5-18 years)	$2.75
Youth (5-18 years) (Clipper Only)	$2.25	Youth (5-18 years) (Clipper Only)	$2.25
Seniors (65+), Disabled	$2.75	Seniors (65+), Disabled	$2.75
Seniors (65+), Disabled (Clipper Only)	$2.25	Seniors (65+), Disabled (Clipper Only)	$2.25
Children under 5	FREE	Children under 5	FREE
DISCOUNT FARE PRODUCTS			
School groups*	$1.75	School groups*	$1.75

*School/Group Fares by Advanced Reservation only

South San Francisco - Alameda/Oakland Fare Structure

CURRENT FY2022		PROPOSED	
STANDARD FARES			
Adult	$8.50	Adult	$8.50
Adult (Clipper Only)	$6.75	Adult (Clipper Only)	$6.75
Adult (Clipper START)	$3.25	Adult (Clipper START)	$3.25
Youth (5-18 years)	$4.25	Youth (5-18 years)	$4.25
Youth (5-18 years) (Clipper Only)	$3.25	Youth (5-18 years) (Clipper Only)	$3.25
Seniors (65+), Disabled	$4.25	Seniors (65+), Disabled	$4.25
Seniors (65+), Disabled (Clipper Only)	$3.25	Seniors (65+), Disabled (Clipper Only)	$3.25
Children under 5	FREE	Children under 5	FREE
DISCOUNT FARE PRODUCTS			
School groups*	$2.75	School groups*	$2.75

*School/Group Fares by Advanced Reservation only

Richmond – San Francisco Ferry Building Fare Structure

CURRENT FY2022		PROPOSED	
STANDARD FARES			
Adult	$5.75	Adult	$5.75
Adult (Clipper Only)	$4.50	Adult (Clipper Only)	$4.50
Adult (Clipper START)	$2.25	Adult (Clipper START)	$2.25
Youth (5-18 years)	$2.75	Youth (5-18 years)	$2.75
Youth (5-18 years) (Clipper Only)	$2.25	Youth (5-18 years) (Clipper Only)	$2.25
Seniors (65+), Disabled	$2.75	Seniors (65+), Disabled	$2.75
Seniors (65+), Disabled (Clipper Only)	$2.25	Seniors (65+), Disabled (Clipper Only)	$2.25
Children under 5	FREE	Children under 5	FREE
DISCOUNT FARE PRODUCTS			
School groups*	$1.75	School groups*	$1.75

*School/Group Fares by Advanced Reservation only

Seaplane Lagoon – San Francisco Ferry Building Fare Structure

CURRENT FY2022		PROPOSED	
STANDARD FARES			
Adult	$5.75	Adult	$5.75
Adult (Clipper Only)	$4.50	Adult (Clipper Only)	$4.50
Adult (Clipper START)	$2.25	Adult (Clipper START)	$2.25
Youth (5-18 years)	$2.75	Youth (5-18 years)	$2.75
Youth (5-18 years) (Clipper Only)	$2.25	Youth (5-18 years) (Clipper Only)	$2.25
Seniors (65+), Disabled	$2.75	Seniors (65+), Disabled	$2.75
Seniors (65+), Disabled (Clipper Only)	$2.25	Seniors (65+), Disabled (Clipper Only)	$2.25
Children under 5	FREE	Children under 5	FREE
DISCOUNT FARE PRODUCTS			
School groups	$1.75	School groups*	$1.75

*School/Group Fares by Advanced Reservation only

Short Hop Fare Structure

CURRENT FY2022		PROPOSED	
STANDARD FARES			
Between Oakland and Alameda			
Adult	$1.25	Adult	$1.25
Adult (Clipper Only)	$1.00	Adult (Clipper Only)	$1.00
Adult (Clipper START)	$0.50	Adult (Clipper START)	$0.50
Youth (5-18 years)	$0.50	Youth (5-18 years)	$0.50
Youth (5-18 years) (Clipper Only)	$0.50	Youth (5-18 years) (Clipper Only)	$0.50
Seniors (65+), Disabled	$0.50	Seniors (65+), Disabled	$0.50
Seniors (65+), Disabled (Clipper Only)	$0.50	Seniors (65+), Disabled (Clipper Only)	$0.50
Between Vallejo and Mare Island			
Adult	$1.25	Adult	$1.25
Adult (Clipper Only)	$1.00	Adult (Clipper Only)	$1.00
Adult (Clipper START)	$0.50	Adult (Clipper START)	$0.50
Youth (5-18 years)	$0.50	Youth (5-18 years)	$0.50
Youth (5-18 years) (Clipper Only)	$0.50	Youth (5-18 years) (Clipper Only)	$0.50
Seniors (65+), Disabled	$0.50	Seniors (65+), Disabled	$0.50
Seniors (65+), Disabled (Clipper Only)	$0.50	Seniors (65+), Disabled (Clipper Only)	$0.50
Between San Francisco Ferry Building and Pier 41			
Adult	$1.25	Adult	$1.25
Adult (Clipper Only)	$1.00	Adult (Clipper Only)	$1.00
Adult (Clipper START)	$0.50	Adult (Clipper START)	$0.50
Youth (5-18 years)	$0.50	Youth (5-18 years)	$0.50
Youth (5-18 years) (Clipper Only)	$0.50	Youth (5-18 years) (Clipper Only)	$0.50
Seniors (65+), Disabled	$0.50	Seniors (65+), Disabled	$0.50
Seniors (65+), Disabled (Clipper Only)	$0.50	Seniors (65+), Disabled (Clipper Only)	$0.50

ATTACHMENT B
Public Comments Summary

The table below summarizes the 325 comments received from the public and WETA riders via email, mail, open house events and a digital survey on the proposal to extend the current FY 2022 Pandemic Recovery Program. These comments are in addition to the survey results discussed in the staff report for Item 7.

WETA did not specifically ask for feedback regarding service levels but did receive some comments on that topic and recorded them in this matrix. Comments that addressed multiple topics are tallied in each relevant category. Comments that did not specifically endorse or oppose fares or service level changes are not included in the matrix.

Table 1: Summary of Public Comments

Service	Support current fare extension	Oppose fare extension	Support instituting monthly pass	Support off-peak service	Support more peak period service
General	291	3	2	8	8
Oakland/Alameda	-	-	-		-
Seaplane	-	-	-	1	2
Harbor Bay	1	-	-	1	-
Vallejo	-	-	1	1	1
Pier 41	-	-	-	-	-
South San Francisco	1	-	-	-	-
Richmond	2	-	-	1	1
Special Events	-	-	-	-	-
TOTAL	**295**	**3**	**3**	**12**	**12**

SAN FRANCISCO BAY AREA WATER EMERGENCY TRANSPORTATION AUTHORITY

RESOLUTION NO. 2022-14

EXTEND FISCAL YEAR 2022 PANDEMIC RECOVERY PROGRAM FOR UP TO ONE YEAR

WHEREAS, in February 2021, the Board of Directors adopted a set of core principles to guide development of the Fiscal Year 2022 Pandemic Recovery Program (Program) to restart ferry service; and

WHEREAS, the Program includes a service plan accompanied by a fare structure that is specifically designed to appeal to a broader Bay Area travel market and incentivize increased ridership; and

WHEREAS, after public outreach and a public hearing, on April 1, 2021, the Board of Directors adopted the Program; and

WHEREAS, absent further action by the Board of Directors, the Program is set to expire on July 1, 2022; and

WHEREAS, on February 3, 2022 the Board of Directors authorized staff to seek public comments on a proposal to extend the Program for an additional year and authorized staff to schedule a public hearing on April 7, 2022; and

WHEREAS, a total of 893 comments were received on the Program extension during the public comment period, 93 percent of which were in favor of extending the Program's proposed service and fare structure; and

WHEREAS, the current fare structure for the Program will remain in place for a temporary amount of time, extending no later than June 30, 2023; and

WHEREAS, upon termination of the Program fare structure on June 30, 2023, the fare structure in effect prior to July 1, 2021 will be reinstated starting July 1, 2023 unless further action is taken by the Board of Directors; and

WHEREAS, on April 7, 2022, the Board of Directors held a public hearing to receive further in-person comments on the Program extension; now, therefore, be it

RESOLVED, that the Board of Directors hereby approves extending the Fiscal Year 2022 Pandemic Recovery Program for up to one year through Fiscal Year 2023, as set forth in the full Board report dated April 7, 2022.

CERTIFICATION

The undersigned, Board Secretary, does hereby certify that the foregoing is a full, true and correct copy of a resolution duly and regularly adopted at a meeting of the San Francisco Bay Area Water Emergency Transportation Authority held on April 7, 2022.

YEA:
NAY:
ABSTAIN:
ABSENT:

_____

/s/ Board Secretary
2022-14
END

AGENDA ITEM 8
MEETING: April 7, 2022

MEMORANDUM

TO: **Board Members**

FROM: **Seamus Murphy, Executive Director**
Kevin Connolly, Planning & Development Manager
Michael Gougherty, Principal Planner

SUBJECT: **Receive Berkeley Ferry Service Business Plan**

Recommendation
Receive the Berkeley Ferry Service Business Plan.

Background
In July 2020, WETA began work with consultants CDM Smith and Economic and Planning Services (EPS) to draft a Berkeley Ferry Service Business Plan. The Plan is designed to supplement the Pier/Ferry Study being prepared by the City of Berkeley in partnership with WETA that will consider the feasibility of a joint development project to build a dual-use ferry terminal and public access pier. The Business Plan specifically characterizes and analyzes operational components of the project, including ridership, service plans, terminal access, operating revenues and costs, equity, and economic development opportunities.

The development of project-specific business plans is necessary for WETA to ultimately assess whether a proposed project is consistent with its current strategic plan and system expansion policies. Such plans will be important to consider when potentially developing new policies as part of the on-going WETA Service Vision & Business Plan process. A similar document has been prepared and received by the WETA Board for the Redwood City Ferry Terminal project. A copy of the Berkeley Ferry Service Business Plan is provided as ***Attachment A***.

The Plan acknowledges the extensive previous planning work that has supported and endorsed the development of the proposed project. In 2016, WETA adopted its Strategic Plan that included Berkeley Ferry Service in its 20-year vision of potential expansion projects. In 2017, the project was also endorsed by the multi-agency Core Capacity Transit Study led by the Metropolitan Transportation Commission (MTC) as a key medium term regional project for enhancing transit capacity in the Bay Bridge corridor. In 2021, the final Plan Bay Area 2050 approved by MTC included Berkeley Ferry Service as part of its financially constrained long-range Regional Transportation Plan.

Discussion
The Berkeley Ferry Service Business Plan evaluates several operational and financial components of the proposed project and includes a financial feasibility assessment. Below is a summary of the major Business Plan components and recommendations:

Ridership. The ridership forecasts generated for the Plan indicate demand for weekday and weekend service between Berkeley and Downtown San Francisco and weekend service

between Berkeley and Larkspur. Table 1 provides a summary ridership forecast estimates, which are based on outputs from the Alameda Countywide Travel Model.

Table 1: Berkeley Ferry Service Busines Plan Ridership Forecasts

Destination	Weekday	Weekend Day	Special Events
2026	*Projected first year of service*		
San Francisco	1,910	1,367	209
Mission Bay [1]	2,106	1,503	209
Larkspur [2]	-	515	104
2035	*Estimated tenth year of service*		
San Francisco	2,036	1,457	222
Mission Bay	2,241	1,602	222
Larkspur	-	556	111

[1] Via transfer at San Francisco Ferry Terminal (ridership estimate includes passengers traveling between Berkeley and San Francisco)

[2] Weekend service only.

Source: CDM Smith

Service Plan. The Business Plan assumes operation of weekday and weekend round-trip service between the Downtown San Francisco Ferry Terminal and the Berkeley Marina with a one-way runtime of 25 minutes beginning in 2026. During weekdays, two vessels would be deployed with approximately 35-minute peak period headways. On weekends, one vessel will operate throughout the day with headways ranging from 70 to 110 minutes. The Plan also assumes operation of weekend round trip service between Berkeley and Larkspur with a one-way running time of approximately 35 minutes and headways ranging from 90 to 120 minutes. Special events at Oracle Park and Chase Center would be served via transfer to short-hop ferry shuttles at the Downtown San Francisco Terminal. Special event service via transfer is also assumed for other WETA services in future years. The Business Plan assumes that both vessels deployed for the service will be electric zero-emission vessels.

Terminal Access. The success of a ferry operating from the Berkeley Marina pier will be dependent on the availability of alternative transportation options to access the terminal. The Business Plan provides an estimate of access modes splits for the proposed services based on existing conditions, established access patterns for existing WETA services, and a limit of approximately 250 parking spaces available. The Plan identifies potential future improvements that will help to promote non-SOV access to the Berkeley terminal, including a transportation demand management (TDM) program that is being developed by the City of Berkeley. The Business Plan will be updated accordingly as these improvements and TDM program are finalized.

Operating Revenues & Costs. The financial model prepared for the Business Plan projects that new weekday and weekend ferry service between Berkeley and San Francisco would generate farebox revenue that covers up to 54 percent of operating costs in the tenth year of service, which meets WETA's minimum 40 percent farebox revenue recovery ratio requirement. The weekend service between Berkeley and Larkspur is also projected to meet WETA's minimum farebox requirement, as indicated in Table 2 below.

Table 2: Farebox Recovery Ratio for Berkeley Ferry Services

Service	Year 10 Farebox Recovery Ratio [1]	
	without Special Events	*with Special Events [2]*
San Francisco (Weekday)	48%	
San Francisco (Weekend)	69%	
San Francisco (All Days)	52%	54%
Larkspur (Weekend)	38%	40%
All Services	49%	

[1] Estimated for the tenth year of operation (2035), at 100 percent of estimated daily ridership
[2] Assumes 125 special events per year for the San Francisco service and 24 special events per year for the Larkspur service.

Equity Considerations. The Business Plan identifies potential opportunities for the proposed Berkeley ferry services to enhance transit access to jobs and recreational activities in San Francisco and the Peninsula, as well as transit access to recreational destinations in Marin for underserved residents near the Berkeley Marina. At the same time, ferry service could enable increased access to West Berkeley for job, education, or recreational purposes. The Business Plan assumes that fares for the proposed services would be consistent with WETA's current Pandemic Recovery Program, which is designed to promote equity and broaden the market appeal of WETA's services.

Economic Development Opportunities. A rebuilt pier can address dual transit and recreation objectives that support existing activities already occurring along the waterfront while also creating economic revitalization opportunities. Preliminary opportunities could include public event programming, a new hotel, new conference facilities, and food/retail offerings. The Business Plan provides a high-level assessment of how ferry service could facilitate access to these amenities and help establish the Marina as a destination for residents and visitors alike.

Capital Revenues & Costs. Implementation of new ferry transit services typically requires capital investments that cannot be funded with farebox revenue. Even very successful public transit services typically do not fully cover operating costs with fare revenue, much less, capital expenses. At present, the current capital expenses assumed for the project include $38.2m for vessels, $69.5m for the pier and ferry facilities, and $14m for landside improvements to support the larger dual ferry and recreational use project being jointly developed by WETA and the City of Berkeley. The two parties are currently in discussion concerning how capital costs will be split. The Business Plan identifies range of funding sources that may be available to help fund the capital costs associated with the project. Future versions of the Business Plan will be updated as more information is available about cost sharing arrangements and funding opportunities.

Feasibility Assessment. The Business Plan includes a Feasibility Assessment that is intended to guide future planning, investment priorities and funding efforts as may be conducted by the City, the individual destination cities for which the service is planned (e.g.,

Berkeley, Larkspur, San Francisco), WETA, and potentially private employers. Below are the recommendations proposed to further enhance feasibility of the project:

- Expansion of analysis to identify service efficiencies (e.g., interlining, sharing vessels, optimizing crew time).
- Further study of the operating costs and savings associated with transitioning to electric zero emission vessels.
- Further study of the potential emergency response role that ferries (through WETA or other providers) could fulfill in Berkeley.
- Other City efforts at obtaining capital or operating funding for the proposed ferry service, particularly from federal sources.
- Further planning and development of the ferry terminal areas in the respective cities.
- Local efforts to evaluate the benefits of ferry service and to develop sources of local funding including inclusion in cities' own capital improvement programs and creation of special funding sources.

Staff recommends that the Board receive this initial version of the Berkeley Ferry Service Business Plan. Key inputs of the Plan will be updated periodically as project assumptions change or new information becomes available that is relevant to the project. Regular updates to the Plan will help to ensure that WETA's long term planning and financial projections are based on the most current information available concerning the project. Major future updates to the Plan will be presented to the Board and key project stakeholders.

Fiscal Impact
There is no fiscal impact associated with this informational item.

END

***Attachment A*:** Berkeley Ferry Service Business Plan dated 3/17/2022

WETA Berkeley Ferry Service

Business Plan, Version 1.0

The Economics of Land Use

Prepared for:
WETA

Prepared by:
Economic & Planning Systems, Inc.

As a Subconsultant to:
CDM Smith

March 17, 2022

Economic & Planning Systems, Inc.
1330 Broadway
Suite 450
Oakland, CA 94612
510 841 9190 tel

Oakland
Sacramento
Denver
Los Angeles

www.epsys.com

EPS #211054

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Version History

Version	Submission Date	Author	Summary of Changes
1	03/17/2022	CDM Smith, Economic & Planning Systems	• Initial Release

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1. BUSINESS PLAN EXECUTIVE SUMMARY AND KEY FINDINGS

The San Francisco Bay Area Water Emergency Transportation Authority (WETA) is working with the City of Berkeley to explore the feasibility of constructing a new dual-purpose pier at the Berkeley waterfront. In July 2015, the Berkeley Municipal Pier was closed to the public due to significant structural problems that rendered the pier unsafe. A rebuilt pier would both augment the recreational waterfront experience at the Berkeley Marina and support ferry transit service. Through the preparation of the Berkeley Marina Area Specific Plan (BMASP) and the Municipal Pier Structural Assessment and Large-Scale Ferry Feasibility (Pier/Ferry) Study, the City of Berkeley is exploring the feasibility of such a pier from a design, engineering, and community/political support perspective. WETA has retained CDM Smith and Economic & Planning Systems, Inc. (EPS) to prepare a Business Plan for WETA to evaluate the proposed service.

The Business Plan evaluates new weekday, weekend, and special event ferry service between Berkeley and San Francisco and weekend and special event ferry service between Berkeley and Larkspur. The Plan describes how the routes were selected, the ridership projections, illustrative service plans, equity considerations, the economic development opportunities, the operational and financial feasibility of the service, and the estimated capital costs.

It is not yet known whether future service from Berkeley would include one or both routes or, if both routes are pursued, if they would start at the same time or be phased. The findings of the financial feasibility assessment can help frame these decisions by guiding future research, planning, investment priorities, and funding efforts as may be conducted by WETA, the City, other transit providers, or the associated destination cities for which the service is planned (i.e., San Francisco and Larkspur).

The Business Plan is intended to be a "living" document that will be updated as needed to respond to new information, new data, and emerging ideas. This version of the Business Plan is being prepared amidst the ongoing COVID-19 pandemic and in the context of emerging recovery trends. For example, the ridership projections are based upon pre-COVID assumptions but have been adjusted to reflect a "pandemic recovery" fare structure and changing commuter travel pattern trends and demand for weekend services. Changes in costs, service, or overall economic conditions would affect the assumptions, and therefore the assessment of feasibility, in this Plan. Therefore, it will continue to be revised up until the service is operational.

Approach

Preparation of this Plan included significant coordination with WETA and the City of Berkeley. CDM Smith developed 2020 and 2040 ridership projections. EPS and WETA determined the levels of service for each route and developed the operating cost assumptions. Fares are estimated based on WETA's current (FY 2022) Pandemic Recovery Program fares for existing, comparable services and adjusted each year, consistent with WETA's fare policies. For purposes of this Business Plan, WETA anticipates service from Berkeley beginning in 2026, so EPS' financial model estimates annual operating costs for the first ten years of operations (2026-2035) and

calculates the farebox revenue for each route (i.e., estimated ridership multiplied by estimated fares).[1]

"Financial feasibility" typically means that "revenues equal or exceed costs." However, in the case of public transit, where public policies support operational subsidies, feasibility must be recast to evaluate the farebox recovery ratios that may be attainable given ridership forecasts.[2] In the case of ferry services that may be operated by a public operator like WETA, the service routes are evaluated against WETA's minimum feasibility standard of 40 percent farebox revenue recovery ratio within the first ten years of operation.[3] The farebox revenue recovery ratio target is between 50 and 70 percent for mature services. While each service will require significant future capital investment, this financial feasibility assessment focuses on the operating costs of each of the proposed ferry lines.

The financial model is developed to run multiple operating scenarios as critical assumptions are refined or sensitivity testing is desired. The underlying assumptions are based on the ridership numbers as estimated by CDM Smith and the fare assumptions that underpin those ridership estimates. The scenario presented in the feasibility analysis is called the "Pandemic Recovery" scenario. In this scenario, a fare elasticity of demand ratio of -0.23 is used to adjust baseline ridership projections in response to changes in fares relative to the baseline scenario. This is WETA's historic estimate for fare elasticity and is within range of that used for other transit services. Operating costs may continue to fluctuate – particularly as WETA explores electric zero-emission vessels and learns more about the operating economics of this alternative vessel technology.

There are other considerations beyond financial feasibility to consider. For example, establishing additional ferry services and associated infrastructure would expand the potential for emergency response services to/from Berkeley, as the vessels and terminals used for transit services could be redeployed to provide emergency response services if needed. Potential emergency response services have not been studied or fully evaluated as part of this Plan. Further study of routes deemed feasible will be needed to properly evaluate the potential benefit and cost effectiveness of ferry-related emergency response capabilities. It is generally WETA's position that new ferry routes must meet acceptable farebox recovery thresholds so that any emergency benefits realized from new ferry services rest on solid financial feasibility grounds.

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1 Ridership is defined in terms of "boardings," which represents the number of times passengers board a ferry vessel and pay a fare. If daily boardings are 100, for example, and if every person who rides the ferry is making a round-trip, then the 100 boardings would represent 50 unique people. One-way trips would, of course, imply more unique passengers. The level of ferry service was estimated based on serving passengers between the respective cities.

2 The farebox recovery ratio is the projected revenue divided by the estimated operating costs.

3 See WETA System Expansion Policy, Adopted June 2015.

Key Findings

Key findings are summarized below and described in more detail throughout the Business Plan.

1. ***From an overall transit network planning perspective, the Metropolitan Transportation Commission (MTC) and WETA have long planned ferry service to and from Berkeley, as a way of enhancing commuter and visitor/recreational service in the East Bay as well as shoring up the Authority's emergency response preparedness.***

   A mutually beneficial partnership with the City of Berkeley that supports a new recreational pier to augment the City's waterfront and that also serves as a pier to support ferry transit is a potential opportunity to bring ferry service to the City. Areas of potential mutual benefit include planning, engineering, and permitting cost sharing, land-use and parking integration, and economic development synergies. With expansive shoreline, a resident population of nearly 125,000, a large public university, an emerging bio/medical industry, and numerous shops, restaurants, and offices, new ferry service to Berkeley has the potential to both support existing activities and attract new activities. The West Berkeley area, near the potential ferry terminal, is largely residential, but it also represents a significant and growing employment hub and travel destination in the Bay Area, with destinations like the Fourth Street retail and dining node, several breweries and restaurants, and employers like Bayer and Kaiser Permanente. More socio-economic and demographic information about the area surrounding the Marina is in **Chapter 6**.

2. ***The ridership forecasts indicate demand for weekday and weekend service between Berkeley and San Francisco and weekend service between Berkeley and Larkspur.***

   The determination of which routes to evaluate in this Study was guided by several factors: (1) broad commute pattern data to/from Berkeley and ridership potential; (2) primary markets served (e.g., commuter trips, recreational trips, special event trips); (3) operational considerations (e.g., length of travel time, number of vessels required); and (4) equity considerations (e.g., improving transit access and job access). Berkeley to San Francisco showed the best ridership potential, serves a diverse set of markets, and offers strong equity benefits. Enhancing the San Francisco service with a ferry connection to Mission Bay indicated additional demand and could occur in the future. Weekend service to Larkspur offers a special opportunity to link recreational assets in Marin to the East Bay. In general, since the pandemic, WETA's weekend ferry services have been experiencing higher patronage. The 2026 and 2035 ridership projections for each proposed service are summarized below in **Table 1**.

Table 1 2026 and 2035 Ridership Projections

Destination	Weekday	Weekend Day	Special Events
2026	*Projected first year of service*		
San Francisco	1,910	1,367	209
Mission Bay [1]	2,106	1,503	209
Larkspur [2]	-	515	104
2035	*Estimated tenth year of service*		
San Francisco	2,036	1,457	222
Mission Bay	2,241	1,602	222
Larkspur	-	556	111

[1] Via transfer at San Francisco Ferry Terminal (ridership estimate includes passengers traveling between Berkeley and San Francisco)

[2] Weekend service only.

Source: CDM Smith

3. Ridership forecasts and fare assumptions for new weekday and weekend ferry service between Berkeley and San Francisco generates farebox revenue that covers approximately 52 percent of operating costs in the tenth year of service, which meets WETA's minimum 40 percent farebox revenue recovery ratio that must be reached within ten years for new services. The weekend service between Berkeley and Larkspur generates farebox revenue that covers approximately 38 percent of operating costs in the tenth year of service, which is within 5 percent of WETA's minimum for a new service.

To evaluate financial feasibility for the Berkeley routes, WETA's standard feasibility metrics were used. Systemwide, for new services, WETA targets a minimum 40 percent farebox revenue recovery ratio that must be reached within ten years, acknowledging that additional funding is typically needed to support public transit and that new services need adequate time to develop ridership sufficient to reach financially sustainable levels. Under Pandemic Recovery fare assumptions, the Berkeley-San Francisco service meets the threshold and the Berkeley-Larkspur service is within 5 percent of the threshold. For both services, ridership in the early years of service will likely be lower than what has been projected based on WETA's past experience starting up new routes, as it takes time to change people's commute behavior and patterns. In WETA's experience, this "ramp up" period can take ten years or more. For the purposes of estimating feasibility, ridership numbers in the first year of operation (2026) are estimated to be 50 percent of the ridership projections, in acknowledgement of this "ramp up" period. This "service adoption factor" increases year-by-year in linear fashion until ridership numbers in the tenth year of operation are 100 percent of the 2036 ridership projections. **Table 2** demonstrates the calculated results for farebox recovery.

Table 2 Summary of Farebox Recovery Ratio for Berkeley Ferry Services

Service	Year 10 Farebox Recovery Ratio [1]	
	without Special Events	*with Special Events [2]*
San Francisco (Weekday)	48%	
San Francisco (Weekend)	69%	
San Francisco (All Days)	52%	54%
Larkspur (Weekend)	38%	40%
All Services	49%	

[1] Estimated for the tenth year of operation (2035), at 100 percent of estimated daily ridership
[2] Assumes 125 special events per year for the San Francisco service and 24 special events per year for the Larkspur service.

4. ***Including farebox revenue and costs associated with special event service improves the farebox recovery ratio of the San Francisco service to 54 percent in Year 10 and improves the Larkspur service farebox recovery ratio to 40 percent in Year 10.***

   Special event service may include service to sporting events (e.g., baseball and basketball games) or civic/cultural events in San Francisco or Cal games, concerts, and future events at the Marina in Berkeley. Assuming 125 special events per year, which is consistent with the number of special events served by the Oakland/Alameda service, increases the farebox recovery ratio of the San Francisco service to 54 percent in Year 10 of operations, as shown in **Table 2**. Assuming two special events per month, for a total of 24 special events annually, the farebox recovery ratio of the Larkspur service is improved to 40 percent in Year 10.

5. ***Two additional considerations for WETA are the economic development opportunities and the equity benefits that could arise from new ferry service to/from Berkeley.***

   The pier at the Berkeley Marina has been decommissioned and needs to be rebuilt. A rebuilt pier can address dual transit and recreation objectives that support existing activities already occurring along the waterfront while also creating economic revitalization opportunities. The City is currently engaging the community to help envision the future of the waterfront. Preliminary ideas could include public event programming, a new hotel, new conference facilities, and food/retail offerings. Ferry service would facilitate access to these amenities and help establish the Marina as a destination for residents and visitors alike. Furthermore, as West Berkeley currently is not well served by regional transit providers, introducing ferry service provides improved access to more jobs in San Francisco, expanding the economic opportunities available to residents.

6. ***If pursued, new service to Berkeley will require initial capital expenditures to construct the terminal, purchase vessels, and fund WETA's share of the pier, as well as future capital replacement and maintenance expenditures. Given the likelihood of operational subsidies for the foreseeable future, a variety of public and***

potentially private financial resources will need to be leveraged to fund vessel acquisition, terminal construction, and other facility costs.

As is usually the case for public transit, ferry services typically require capital investment that cannot be funded with farebox revenue, even for the most successful routes. Accordingly, if Berkeley ferry service emerges as a regional priority, successful project implementation will require leveraging a variety of public and private financial resources. Building the terminal and related facilities will require a significant capital investment, with current estimates ranging from approximately $84 million to $110 million depending on specific design parameters and the existing conditions encountered. This includes the landside ($14-$20 million) and waterside ($70-$90 million) portions of the terminal. Additionally, WETA's ferry fleet will need to be expanded. The Berkeley to San Francisco weekday route will use two vessels. On the weekends, the Berkeley to San Francisco route will use one vessel and the Berkeley to Larkspur route will use the second vessel. WETA intends that these vessels will be electric zero-emission vessels, which would eliminate fuel costs, reduce maintenance costs, and confer additional environmental benefits. Each new vessel is estimated to cost approximately $16 million, though may vary depending on the selected size and technology. Finally, terminal maintenance costs are estimated at $120,000 per year, and shuttle services (either publicly or privately funded) will be needed to support the first/last mile connections.

2. BACKGROUND AND BASIS FOR STUDY

WETA has responsibility for operating public ferry services in the Bay Area, planning new service routes, constructing new ferry facilities, and coordinating ferry transportation response to emergencies or disasters affecting the Bay Area transportation system. WETA currently operates six routes: Oakland & Alameda, Alameda Seaplane, Harbor Bay, South San Francisco, Richmond, and Vallejo. From an overall transit network planning perspective, the Metropolitan Transportation Commission (MTC) and WETA have long planned Berkeley ferry service to both enhance commuter and visitor/recreational service in the East Bay and shore up the Authority's emergency response preparedness.

A mutually beneficial partnership with the City of Berkeley accomplishes WETA's objectives to bring ferry service to the City and also supports a new recreational pier to augment the City's waterfront. Areas of potential mutual benefit include planning, engineering, and permitting cost sharing, land-use and parking integration, and economic development synergies. With expansive shoreline, a resident population of nearly 125,000, a large public university, an emerging bio/medical industry, and numerous shops, restaurants, and offices, new ferry service to Berkeley has the potential to both support existing activities and attract new activities. The West Berkeley area, near the potential ferry terminal, is largely residential, but it also represents a significant and growing employment hub and travel destination in the Bay Area, with destinations like the Fourth Street retail and dining node, several breweries and restaurants, and employers like Bayer and Kaiser Permanente.

City of Berkeley Guiding Planning Documents

The City of Berkeley's commitment to the project is driven by policy, as reflected in multiple City documents and studies.

- **General Plan (2001 update).** The City's General Plan is a comprehensive, and long-range statement of community priorities and values developed to guide public decision-making in future years. The Transportation Element establishes policies for the movement of people, goods, and vehicles through the city and includes a policy specifically focused on ferry service (T-9 Ferry Service) as well as several implementing actions.
- **Climate Action Plan.** The City's Climate Action Plan includes a chapter that is focused on sustainable transportation and land use and envisions a ferry system that is fully integrated into existing transit services. Key policies include implementing actions directly related to ferry service.
- **Berkeley Municipal Pier Structural Assessment.** This study involves a structural assessment of the existing pier to identify whether the existing pier structure meets seismic safety criteria. The existing structure was found to be unstable for earthquake levels and recommended to be either retrofitted or replaced. The assumption for the current study is that there will be a new pier, with capacity to support a ferry terminal.

- **Small-scale Ferry Transportation Feasibility Study on Waterside Improvements.** The small-scale study evaluated whether passenger ferry service might be feasible at a retrofitted or replaced pier and discussed options for waterside improvements. The report concluded that a new dual-purpose pier could provide both ferry service and public access. This conclusion is reflected in the City's proposed designs for the new pier. Additional economic development opportunities stemming from pier access and ferry service are discussed in **Chapter 5**.

The City is developing the Berkeley Marina Area Specific Plan (BMASP) and the Municipal Pier Structural Assessment and Large-Scale Ferry Feasibility Study is underway. The BMASP will guide the City's long-range efforts in redeveloping the Marina and surrounding area to balance transportation, recreation, and community needs. Several community workshops and focus group meetings were held in 2020 and 2021, with further refinement to take place at Community Workshop #2 later this year, and environmental review following in 2023. Simultaneously, the Large-Scale Ferry Feasibility study will select a preferred concept for a dual-purpose recreation and ferry pier for the Marina waterfront. A report on the preferred design was submitted to City Council in December 2021.

WETA Guiding Planning Documents

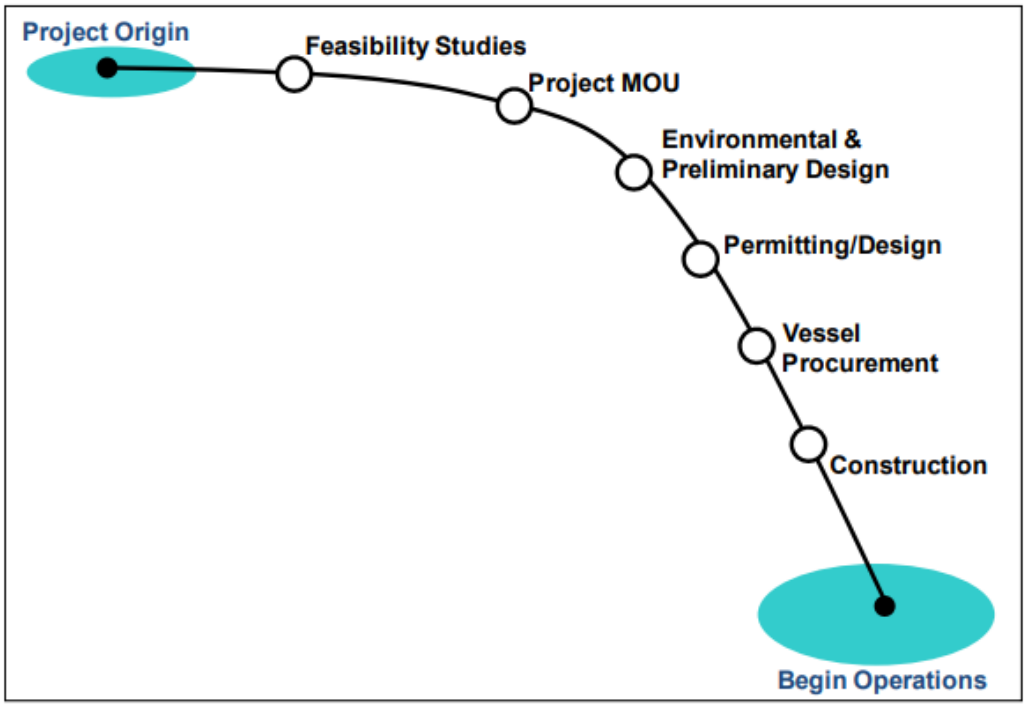
Development of Berkeley ferry service has been guided by a number of planning documents prepared for and adopted by the WETA Board of Directors. These documents include:

- **WETA Strategic Plan.** WETA's 2016 Strategic Plan outlines a vision for the San Francisco Bay Ferry system over the next 20 years that responds to passenger demand, makes critical infrastructure investments, and increases WETA's ability to respond to emergencies and system disruptions. With funding and environmental approvals, WETA's long-range plan calls for new terminals in several locations, including Berkeley, ultimately creating a robust 16-terminal regional network to meet the Bay Area's demand for a safe, sustainable, and environmentally responsible transportation alternative. The plan, adopted in 2016, envisions ferry service in Berkeley starting by 2026, including potentially using "green technology" vessels.

- **WETA's System Expansion Policy** guides implementation of WETA's 2016 Strategic Plan. The WETA expansion policy is intended to provide a framework for evaluating the feasibility of new ferry projects. The framework consists of policy statements that provide guidance for developing candidate project elements such as landside and waterside facilities, vessels, and service plans. In addition, a set of evaluation measures defines a range of productivity and efficiency metrics that inform the WETA Board and funding partners regarding a project's financial feasibility and sustainability. The assumptions articulated in the Policy are incorporated into the analyses in this Business Plan, including evaluation measures and targets for passengers per revenue hour and farebox recovery.

  The System Expansion Policy lays out a Project Implementation Process, as summarized below in **Figure 1**.

Figure 1 WETA Project Implementation Process



Source: WETA 2020 Short Range Transit Plan

- **WETA Short Range Transit Plan 2020 – 2029.** Federal statute requires MTC, in partnership with State and local agencies, to develop and periodically update a long-range RTP and a Transportation Improvement Program (TIP). The TIP implements the RTP by programming federal funds to transportation projects contained in the RTP. To effectively execute these planning and fund programming responsibilities, MTC, in cooperation with Region IX of the Federal Transit Administration (FTA), requires each transit operator receiving federal funding to prepare, adopt, and submit a *Short-Range Transit Plan* (SRTP).

  The SRTP has a ten-year horizon (2020 through 2029) and provides a forecast of operating expenses and revenues and capital expenditures and funding, as well as supporting information about WETA's operations and planning activities. The SRTP states WETA's plans for implementing ferry service in Berkeley within that time frame, notes the MOU executed between WETA and the City of Berkeley to begin planning phases for the project, and references the City's ferry feasibility studies.

- **Capital Improvement Program.** WETA included a 10-Year Capital Improvement Program (CIP) into the SRTP, as required. The CIP identifies $584.4 million worth of capital projects to be completed during the duration of the Plan (FY 2020 through FY 2029). These capital projects implement its regional program of public transit and emergency response ferry services. The CIP includes both one-time expansion and cyclical rehabilitation and replacement needs for the combined WETA capital assets. Identified among WETA's capital projects is the construction of the Berkeley terminal and purchase of vessels. It is assumed that Regional Measure 3 (RM3) would cover approximately 50 percent of the capital costs for this project, with the remainder covered by other local funding sources.

- **WETA Emergency Response Plan, 2016.** WETA's Emergency Response Plan describes the WETA's general strategy and guidance for emergency water transportation system management in response to a catastrophic incident affecting Bay Area regional transportation operations. In the event of such an event, an operational Berkeley ferry terminal could be used to coordinate emergency transport services.
- **Implementation & Operations Plan (IOP).** WETA prepared a guiding document called "A Strategy to Improve Public Transit with an Environmentally Friendly Ferry System – Final Implementation & Operations Plan," in July 2003, which included development of Berkeley ferry service as a potential project.

Other regional planning documents that guide WETA's investments and operations include MTC's Plan Bay Area and Core Capacity Transit Study.

- **MTC's Plan Bay Area.** Plan Bay Area 2050 is the region's long-range strategic plan focused on the interrelated elements of housing, the economy, transportation, and the environment. It was adopted by MTC in October 2021 along with an Implementation Plan that identifies the near-term steps necessary to accelerate Plan Bay Area 2050's long-term vision. Plan Bay Area 2050 includes Berkeley ferry service as a "Regionally Significant Project."
- **MTC's Core Capacity Transit Study (CCTS).** The CCTS was a collaborative effort to identify and prioritize investments to improve public transportation to and from the core of San Francisco. The CCTS was the first major study to bring Bay Area transit operators together to look at transportation solutions for the core of San Francisco. In the study, Berkeley ferry service was recognized as a vital to meet growing demand for transbay public transit.

3. ROUTE SELECTION AND RIDERSHIP ANALYSIS

The process of estimating ridership and developing a ferry service operations plan is an iterative one. Ridership is dependent on the quality and the amount of service provided; the ferry operations plan is usually based upon the level of expected ridership. Typically, an initial service plan is developed and used to forecast ridership, then the service plan is refined to match the estimated volume of passengers, which then requires a new forecast of ridership, and so on.

Ridership forecasting is essentially a prediction of future human behavior characteristics and as such it involves a high level of uncertainty. The most successful forecasts involve a validation process of comparing the forecast ridership levels with actual ridership counts on existing similar services. Examining past forecasts and evaluating how close they were to actual ridership counts is also helpful. This type of process was used in this planning effort. WETA intends to regularly update and validate ridership forecast assumptions as new information becomes available.

Determining Routes

In coordination with WETA, a number of potential routes to and from Berkeley were evaluated. Initially a list of potential route options was identified. These included the following routes and route variations:

- Berkeley-San Francisco
- Berkeley-South San Francisco
- Berkeley-Mission Bay
- Berkeley-Mission Bay via San Francisco (transfer to proposed Mission Bay service)
- Berkeley-Larkspur (weekday service)
- Berkeley-Larkspur (weekend service)
- Berkeley-Vallejo

A screening process was used to evaluate the above options as is summarized in **Table 3** on the next page. This screening took into account the following criteria:

- **Ridership Potential:** A qualitative assessment of potential ridership based on a review of past studies, and the density of population and employment around each pair of ferry terminals to be served.
- **Primary Markets Served:** Would the route be attractive to riders for commuting, recreational events and/or special events (the more markets served the greater the potential ridership and ferry utilization)?
- **Operations:** The one-way trip time was estimated for each route, where longer trip times can require more ferry vessels and crews and could be less cost-effective than shorter trips.
- **Equity Benefits**: Would the ferry service offer disadvantaged populations (low-income and minority) better transit access to jobs and/or to recreational opportunities)?
- **Observations:** A summary of key observations and considerations for each route.

Table 3 Initial Screening of Berkeley Ferry Route Options

Route (to/from Berkeley)	Ridership Potential	Primary Markets Served	Operations (One Way Trip Time)	Equity Benefits	Observations	Rating
San Francisco	High	• Commuter • Recreational • Special Event	25 minutes	Yes, links greater supply of housing to higher-paying jobs in SF	Proven market potential from other East Bay terminals.	**Recommended**
South San Francisco	Medium-Low	• Commuter	45 minutes	Yes, links greater supply of housing to higher-paying jobs in South SF	Ridership potential needs careful consideration.	Future Consideration
Mission Bay (direct)	Medium	• Commuter • Recreational • Special Event	30 minutes	Yes, links greater supply of housing to higher-paying jobs in Mission Bay	Shows promise but could be deferred until a connecting service from the SF Terminal is tested. Creates a capacity issue at the Mission Bay terminal.	Future Consideration
Mission Bay (indirect connection via San Francisco)	Medium	• Commuter • Recreational • Special Event	40 minutes	Yes, but reduced benefits relative to direct service	A connecting service between SF and Mission Bay would be a low-cost way to test the potential for future direct service.	**Recommended**
Larkspur (weekday)	Low	• Commuter	35 minutes	Yes, links East Bay residents with Marin County jobs	Bus service connections across the Richmond Bridge have never been successful. Creates a capacity issue at the Larkspur terminal.	Deferred
Larkspur (weekend)	Medium	• Recreational • Special Event	35 minutes	Yes, increased recreational access for East Bay residents	In general, weekend ferry services have been performing well since the pandemic.	**Recommended**
Vallejo	Low	• Commuter	55 minutes	Yes, links more affordable housing to jobs in Berkeley	The commuter market for this service is not strong compared to other options.	Deferred

Source: CDM Smith

Each of these factors was considered and then each of the alternatives was given an overall rating of either "recommended," "future consideration," or "deferred." Three options were rated as recommended. Weekday and weekend service between Berkeley and San Francisco showed the best ridership potential and serves a diverse set of markets as well as offering strong equity benefits. Future enhancement of service between Berkeley and San Francisco with a ferry connection to Mission Bay also showed strong performance. Weekend service to Larkspur was viewed as offering a special opportunity to link recreational assets in Marin to the East Bay and provide a connection from Marin to special events hosted in the Berkeley Marina. In general, WETA's weekend ferry services have been experiencing high patronage as ridership begins to recover from the impact of the COVID-19 pandemic.

Potential ridership for service to South San Francisco and Mission Bay (direct) was significantly lower than for service to San Francisco, so these options were slated for future consideration. Weekday service to Larkspur could be constrained by available berthing capacity at the Larkspur terminal and service to Vallejo would likely have low ridership, which resulted in a "deferred" rating for these options.

Ferry Ridership Projections

The most recent ridership forecasting effort for ferry service between Berkeley and San Francisco was the Hovercraft Feasibility Study which was completed in 2019 and updated by this plan.[4] That study used the Alameda Countywide Travel Model (2018) as provided by the Alameda County Transportation Commission (Alameda CTC). This model uses assumptions from the Plan Bay Area 2040 Regional Transportation Plan (adopted in 2017) as the basis for forecasting ridership.

The Ridership Forecasting and Model Update Report prepared for WETA in 2012, estimated a year 2015 daily ridership of 783 boardings, and 1,113 daily boardings in 2035 for a Berkeley/San Francisco route. The original forecast prepared in 2005 was 1,740 daily boardings in 2025. The Hovercraft Feasibility Study, prepared for WETA in 2019, estimated 4,250 daily boardings in the year 2020, the highest of all the estimates, but this demand was unconstrained by capacity. The assumptions that went into these estimates were carefully compared with the current assumptions that were used in this Plan, to facilitate a better understanding of the basis of the past forecasts in comparison with the current forecasts, and to help validate these forecasts.

Forecast Results

The Alameda CTC model forecast for a Berkeley-San Francisco ferry service was 4,250 daily boardings (one-way trips) in year 2020. This forecast represents the unconstrained demand for the ferry service. This means that the model assumed unlimited ferry capacity, terminal area parking capacity, and transit access capacity. A series of adjustments to the ridership forecast were made to better reflect the realities of ferry service and groundside access capacities. These included:

[4] Water Emergency Transportation Authority, *Hovercraft Feasibility Study*, November 30, 2020

- **Headways:** The Alameda CTC demand model runs assumed very short headways (times between ferry trips) for the ferry service, in the range of a ferry operation in each direction every five minutes during the peak hour. This high level of service frequency is not typical of passenger ferry operations. For example, WETA's current services tend to have peak hour headways more in the range of 30 to 60 minutes. The conceptual weekday operating plan for the Berkeley – San Francisco service calls for an average 35-minute peak headway. The unconstrained ridership numbers were adjusted downward to reflect this headway. Similarly, weekend service ridership was estimated assuming 70-minute average headways for the Berkeley – San Francisco services and 90-minute average headways for the Larkspur service.

- **Capacity:** The electric zero-emission vessels proposed for this service by WETA would have a passenger capacity of 250. An 80 percent load factor was assumed to calculate a practical service capacity, which was then used to calculate a peak hour capacity.

- **Directional Split:** Calculating the practical capacity of a ferry operation requires consideration of reverse direction travel during peak travel times. For example, in the weekday mornings, the predominant direction of travel for the Berkeley ferry will be west towards San Francisco. There will be heavy passenger demand in the AM westbound direction, and much lighter demand in the AM eastbound direction towards Berkeley. So, while there is capacity available in the AM eastbound direction there is little likelihood that this capacity will be fully utilized. The ridership demand and service capacity must be adjusted to discount this reverse direction travel in both the morning and afternoon. An 85/15 peak/off-peak directional split was assumed for all services to further adjust the capacity. Peak hour ridership was then adjusted to this capacity threshold.

- **Parking:** It is assumed that there would be approximately 250 parking spaces available at the Berkeley terminal. This is similar to the parking supply at the Richmond and Harbor Bay terminals. As part of the model validation process the forecast results for the Berkeley terminal were compared with actual pre-pandemic ridership counts for both the Richmond and Harbor Bay terminals, to assure that the Berkeley ridership estimates were reasonable consisting the limited parking supply. This comparison indicated that no adjustments for parking availability were needed.

- **Peak Versus All-Day Day Ridership:** The Alameda CTC model produces a peak hour ridership forecast. An adjustment factor is then used to expand the peak hour forecast to a daily forecast. The model assumed that the ratio of peak hour to daily boardings by direction was 57 percent. One of the impacts of COVID-19 has been a leveling of the distribution of ridership throughout the day. For example, the peak hour factor on the Harbor Bay-San Francisco service was 63 percent in 2019 (pre-pandemic) and 41 percent in 2021. The Richmond-San Francisco service showed a similar behavior shift. It appears this change in travel patterns is likely to continue as employers allow more flexible work schedules and remote working. For the Berkeley service a peak hour factor of 40 percent was assumed to reflect this current behavior pattern.

- **Weekend Ridership:** The demand for use of ferry services is sensitive to the level of service provided. The greater the headway, the lower the demand. The conceptual weekend service plan calls for seven ferry vessel trips in each direction operating at headways ranging between 70 to 110 minutes. The peak headway of 70 minutes was used to determine a

weekday ridership demand estimate for this level of service. This is double the average assumed weekday headway. Then the current observed relationship between average weekday ridership and average weekend day ridership was used to adjust the demand to represent weekend conditions. It was assumed that the average weekend ridership characteristics of the current WETA ferry routes providing weekend service would be similar to those of the new Berkeley – San Francisco service in terms of the ratio of weekend day boardings to weekday boarding. During a five-month period in 2021 (July – November) weekend day boardings were 152 percent of weekday boardings. This factor was applied to the average weekday ridership forecast (after it was adjusted downward to reflect a 70-minute peak headway).

The resulting ridership forecasts for the years 2020 and 2040 are shown in **Table 4**.

Table 4 Year 2020 and 2040 Ridership Projections – Average Daily Boardings

Destination	Weekday	Weekend Day	Special Events
2020	*First year in ridership model*		
San Francisco	1,830	1,310	200
Mission Bay [1]	2,020	1,440	200
Larkspur [2]	-	490	100
2026	*Projected first year of service*		
San Francisco	1,910	1,367	209
Mission Bay [1]	2,106	1,503	209
Larkspur [2]	-	515	104
2035	*Estimated tenth year of service*		
San Francisco	2,036	1,457	222
Mission Bay	2,241	1,602	222
Larkspur	-	556	111
2040	*Final year in ridership model*		
San Francisco	2,110	1,510	230
Mission Bay	2,320	1,660	230
Larkspur	-	580	115

[1] Via transfer at San Francisco Ferry Terminal (ridership estimate includes passengers traveling between Berkeley and San Francisco)

[2] Weekend service only.

Source: CDM Smith

For a Berkeley-San Francisco service consisting of two 250 passenger vessels operating at a peak headway of 35 minutes, year 2020 average weekday boardings were estimated as 1,830 one-way trips. Year 2020 weekend day boardings were estimated as 1,310 passengers for the Berkeley – San Francisco service. Boardings related to special events would average about 200 one-way trips per day. Special event service between Larkspur and Berkeley which would be envisioned to serve future events at the Berkeley Marina as well as other events in the East Bay would also be provided. As this service would be highly dependent on the ultimate future plan for

the Marina, a placeholder of 100 passengers per average event day, was used until better information becomes available.

Adding a connecting service between the San Francisco Ferry Terminal and Mission Bay would result in an increase in year 2020 daily boardings on the average weekday of 190 one-way trips, for a total of 2,020 daily boardings and an increase of 130 one-way trips on the average weekend for a total of 1,440 weekend day boardings.

Boardings for a weekend day Berkeley-Larkspur service were estimated by comparing current and past weekend usage of the existing ferry services with the population density of the areas surrounding the ferry terminals. The population of Marin County was compared with that of San Francisco County. Then the weekend demand for service to Larkspur was calculated by applying the ratio of the Marin population to the population of San Francisco County. This was 37 percent in 2020. This factor was applied to estimated weekday day ridership for San Francisco - Berkeley the result was the estimated weekend day ridership for a Larkspur – Berkeley service of 490 weekend day boardings in 2020.

Year 2040 ridership estimates were developed using the growth rate from the Alameda CTC model, which represents a 15 percent overall ridership growth between the years 2020 and 2040.

Forecast Validation

In order to gain a perspective on the reasonableness of the ridership forecasts, the forecast values were compared with the actual ridership observed on the existing ferry services in the year 2019 (pre-pandemic). This comparison is shown in **Table 5**, with forecast values shown in **bold**.

Table 5 Comparison of Year 2020 Forecast Daily Boardings with Actual Year 2019 Daily Boardings

Origin	Destination	Weekday	Weekend Day
Oakland/Alameda	San Francisco	5,047	4,120
Vallejo	San Francisco	4,081	1,983
Berkeley	**San Francisco**	**1,830**	**1,310**
Berkeley	**Mission Bay (with San Francisco transfer)**	**2,020**	**1,440**
Harbor Bay	San Francisco	1,417	-
Richmond	San Francisco	813	680
Oakland/Alameda	South San Francisco	601	-
Berkeley	**Larkspur (weekend only)**	**-**	**490**

Source: CDM Smith

As shown, the Berkeley-San Francisco services have forecast ridership values that fall well within the range of actual observed Transbay ridership in 2019 on the various existing ferry services.

Mode of Access

Another important consideration is the mode of access to the ferry terminal. The current planning for the Berkeley Marina area indicates that approximately 250 parking spaces would be available for use by ferry passengers. This amount of parking is similar to that currently available at the Richmond (319 spaces) and Harbor Bay (202 spaces) ferry terminals. **Table 6** presents the percentages by mode for access to all the East Bay and North Bay terminals as observed in the 2017 and 2019 (Richmond only) WETA on-board surveys. In many ways the Berkeley terminal will be similar to the Richmond Terminal in that walking to the terminal is impractical for most people, parking is constrained, current public transit is very limited, and bicycle access is good. Both the Richmond and the Harbor Bay terminals demonstrate that it is practical to operate a successful ferry operation with a limited supply of parking and a limited amount of public transit.

This information was used to estimate a mode of access distribution for the Berkeley terminal based on existing conditions for the first year of service operations. This is also shown in **Table 6**. It was assumed in making this estimate that for access to the Berkeley Terminal, the walk percentage would be similar to Vallejo, the drive-alone percentage would be similar to Harbor Bay, and the bike percentage would be high due to Berkeley's well-developed bike network (including the bike/pedestrian bridge access I-80, the Bay Trail, and the planned Marina bike/pedestrian trail alongside University Avenue west of I-80). Carpooling was estimated to be similar to Richmond and Kiss-and-Ride was estimated to be close to the average for all the existing terminals, as was transit access. The mode of access estimate for Berkeley does not include consideration of the access improvements which potentially could occur with the implementation of the Travel Demand Management (TDM) Plan which is currently being developed by the City of Berkeley as part of the BMASP. As a result, there is a potential for further reductions in access to the terminal by single occupant vehicles. As information about the measure in the TDM plan become available the mode share assumptions can be updated accordingly.

Table 6 Mode of Access to East and North Bay Ferry Terminals – Existing Conditions

Terminal	Walk	Drive Alone	Bike	Carpool	Public Transit	Kiss-and-Ride	TNCs	Employer Shuttle	Taxi	Other	Total
Alameda	12%	44%	9%	22%	0%	6%	5%	0%	1%	1%	100%
Oakland	24%	21%	6%	28%	6%	7%	6%	0%	0%	2%	100%
Harbor Bay	29%	31%	12%	8%	11%	7%	1%	0%	0%	1%	100%
Richmond	13%	41%	14%	14%	2%	10%	4%	0%	0%	2%	100%
Vallejo	7%	34%	4%	19%	2%	22%	8%	0%	0%	4%	100%
Estimated Mode of Access for Berkeley Ferry Terminal [1]											
Berkeley	8%	31%	16%	15%	5%	15%	7%	0%	1%	1%	100%

Source: Year 2017 and Year 2019 (Richmond only) WETA On-Board Surveys

[1] Estimate is based upon evaluation of the observed modal shares for the existing terminals with characteristics similar to the future Berkeley terminal for each access mode.

The mode of access information comes from the results of on-board surveys of WETA passengers, while the ridership forecasts were derived from the Alameda CTC's transportation

model. The correlation between these two data sources appears to be reasonable. For example, the forecast of ridership in 2020 for weekday service between Berkeley and San Francisco was 1,830 boardings. The on-board survey results for mode of access, when used to represent a Berkeley-San Francisco service, indicated a potential drive-alone mode share of 31 percent. Dividing 1,830 boardings by two to represent the trips departing Berkeley and applying an 85/15 directional split indicates the number of trips departing Berkeley in the AM. Then taking 31 percent of that number results in an estimate of about 241 drive-alone trips, which is close to the number of parking spaces available. Factors such as the amount of parking turnover (spaces used more than once per day) and implementation of the TDM plan would further reduce the estimated number of drive-alone trips.

4. DESCRIPTION OF PROPOSED FERRY SERVICES

The Business Plan evaluates new weekday, weekend, and special event ferry service between Berkeley and San Francisco and weekend and special event ferry service between Berkeley and Larkspur. In determining the level of service of the Berkeley to San Francisco weekday route, the objective is to meet at least the basic requirements of a transit service, while acknowledging the leveling of the distribution of ridership throughout the day that WETA is observing in its existing services and not planning for more trips than current ridership projections can justify.

In determining the level of service for the weekend routes between Berkeley and San Francisco and Berkeley and Larkspur, the schedule is constrained by trip length and the availability of a single vessel per route.

The general assumptions used to develop the service plans are:

- WETA would operate two 250-passenger electric zero-emission vessels on the weekday route between the Berkeley terminal and San Francisco.
- Weekend service will operate a single 250-passenger vessel for Larkspur and a single 250-passenger vessel for San Francisco.
- At least three round-trip services must be completed during peak hours for the Berkeley/San Francisco weekday service, per WETA Board-adopted standards.
- The Berkeley-San Francisco service travels 6.7 miles between the terminal at the Berkeley Marina and the San Francisco Ferry Terminal. The one-way travel time is 25 minutes. Weekday peak-direction headways are approximately 35 minutes between Berkeley and San Francisco. Weekend headways are 70 to 110 minutes, depending on the time of day.
- The Berkeley-Larkspur service travels 11.8 miles between the terminal at the Berkeley Marina and the Larkspur Ferry Terminal. The one-way travel time is 35 minutes. Weekend headways are 90 to 150 minutes, depending on the time of day.
- The ridership projections appear to support demand for a timed connection between the San Francisco Ferry Building and Mission Bay during the week. The operating economics of this connector service would accrue to the San Francisco Ferry Terminal / Mission Bay service and are not evaluated in this Business Plan.
- Special event service may operate between Berkeley and San Francisco or Mission Bay (e.g., for events at the Chase Center or Oracle Park or future events at the Berkeley Marina), as well as from Larkspur to Berkeley. Fares for special event services would be set to cover costs and are assumed to be cost-neutral for purposes of this Business Plan.

It is important to note that the precise schedule will be tailored to market needs if the project moves forward to implementation and will be continually adjusted based on actual operating conditions and rider demands. A refinement in the number of ferry trips may occur in the future, based on ridership experience.

Vessel Assumptions

WETA currently operates 15 high-speed passenger ferries carrying between 225 and 445 passengers each. WETA is presently researching the potential to deploy electric zero-emission vessels, which would eliminate fuel and lower maintenance costs, plus reduce air pollution and greenhouse gas emissions. For financial planning purposes, however, the Business Plan analysis assumes the Berkeley services will operate two 250-passenger, diesel-powered boats, as reliable cost information for electric zero-emission vessels is limited. The operating costs assumed in this analysis are based on the operating costs of WETA's current fleet and services. As more information is learned about the operating economics of electric zero-emission vessels, the analysis will be refined.

Fare Assumptions

EPS worked with WETA to develop fare assumptions for the proposed services, shown in **Table 7**. Assumptions are consistent with WETA's other services and are based on average fares, reflecting discounts for youth, seniors, school groups, Clipper adult, etc. Average fares are calculated as total revenue by service divided by total ridership by service, to reflect the relative number of each category of passenger.

WETA launched its Pandemic Recovery Program in July 2021 in response to declines in ridership caused by the ongoing COVID-19 pandemic. The program features lower fares and expanded schedules, and was approved to last one year but may be continued into the future. The current Clipper adult fares from the East Bay terminals of Oakland/Alameda, Harbor Bay, and Richmond to San Francisco are all $4.50 per trip ($5.75 without Clipper), a 17 to 36 percent decline from pre-pandemic fares.[5]

Because the ridership projections described in **Chapter 3** are based on fares and ridership data collected prior to the pandemic, the current "Pandemic Recovery" fares affect expected ridership. WETA's fare elasticity of demand value of -0.23 was used to update ridership projections in accordance with changes in fare. The Baseline (Pre-Pandemic) Berkeley-San Francisco fare, an average fare of $4.67 in 2020 dollars, is based on the estimate in WETA's 2020 Hovercraft Feasibility study. The Pandemic Recovery fare is $4.59 for the year 2022, based on the average fare of the similar Richmond service. Berkeley-Larkspur service is based on the current average fare for the Vallejo to San Francisco service, due to similar route lengths and estimated usage patterns. Fares are projected to increase each year by 3 percent based on WETA's systemwide fare policies. The Baseline scenario average adult fare is $4.95 for the Berkeley-San Francisco route for the year 2022, which is escalated from the model's baseline year of 2020, while the Pandemic Recovery scenario fare is $4.59. **Table 7** displays the fare assumptions for each scenario in 2022, 2026, and 2035. Because WETA intends to evaluate the feasibility of ongoing Pandemic Recovery fares, the feasibility analysis in **Chapter 7** is based on Pandemic Recovery Fares.

5 Prior to the pandemic, the Clipper adult fare was $5.40 ($7.20 without Clipper) from Alameda/Oakland, $5.60 ($7.50 without Clipper) from Harbor Bay, and $7.00 ($9.30 without Clipper) from Richmond to San Francisco Ferry Terminal.

Table 7 Fares for Prospective Routes: 2022, 2026 and 2035

Origin	Destination	2022 *Current fare estimate* Baseline Scenario	2022 *Current fare estimate* Pandemic Recovery	2026 *Year 1 of service* Baseline Scenario	2026 *Year 1 of service* Pandemic Recovery	2035 *Year 10 of service* Baseline Scenario	2035 *Year 10 of service* Pandemic Recovery
Berkeley	San Francisco	$4.95	$4.59	$5.41	$5.17	$7.28	$6.74
Berkeley	Larkspur	$11.30	$9.58	$12.72	$10.78	$16.59	$14.07

Note: No difference in fare between weekday and weekend service. The "Baseline Scenario" is based on pre-pandemic fares; "Pandemic Recovery" represents the current FY2022 fares.

Source: WETA, Economic & Planning Systems

Berkeley-San Francisco Service Design

Level of Service Evaluated

This route is envisioned as a weekday and weekend round-trip service between the San Francisco Ferry Terminal and the Berkeley Marina, with an approximate one-way runtime of 25 minutes. Weekday ridership patterns are expected to be similar to the current East Bay routes to San Francisco, with peak direction towards San Francisco in the mornings.

During the weekday, two ferry boats would be deployed for this service with eight peak-direction ferry trips in the morning (Berkeley to San Francisco) and six in the evening and eight peak-direction trips in the afternoon (San Francisco to Berkeley) and six in the morning. Two crews are required in the morning and two in the afternoon (four crews total) to provide this level of service.

On the weekend, one vessel will operate throughout the day, requiring two crews. Each direction has seven departures. The weekend service is more recreational and ridership is expected to be more spread out throughout the day and less directionally peaked.

An illustrative schedule of how the service could be operated is shown below in **Table 8**; **Figure 2** depicts this service route.

Table 8 Berkeley to San Francisco Service (Illustrative Only)

	Depart Berkeley	Arrive San Francisco	Depart San Francisco	Arrive Berkeley
Weekdays AM	6:30	6:55	7:05	7:30
	7:05	7:30	7:40	8:05
	7:40	8:05	8:15	8:40
	8:15	8:40	8:50	9:15
	8:50	9:15	10:05	10:30
	9:25	9:50	10:40	11:05
	10:40	11:05	15:30	15:55
	11:15	11:40	16:05	16:30
Weekdays PM	16:05	16:30	16:40	17:05
	16:40	17:05	17:15	17:40
	17:15	17:40	17:50	18:15
	17:50	18:15	18:25	18:50
	19:05	19:30	19:40	20:05
	19:40	20:05	20:15	20:40
Weekend AM	8:30	8:55	9:05	9:30
	9:40	10:05	10:15	10:40
	10:50	11:15	12:05	12:30
Weekend PM	12:40	13:05	13:30	13:55
	14:00	14:25	14:40	15:05
	15:10	15:35	15:45	16:10
	17:00	17:25	17:35	18:00

Source: Economic & Planning Systems

Figure 2 Berkeley to San Francisco Illustrative Route

Source: Economic & Planning Systems

Berkeley-Larkspur Service Design

Level of Service Evaluated

This route is a weekend round trip service between Berkeley and Larkspur. The one-way running time would be approximately 35 minutes. This scenario would provide six round trips between Berkeley and Larkspur throughout the day. Similar to the Berkeley-San Francisco weekend service, one boat would be deployed, with two crews in total to operate the full day.

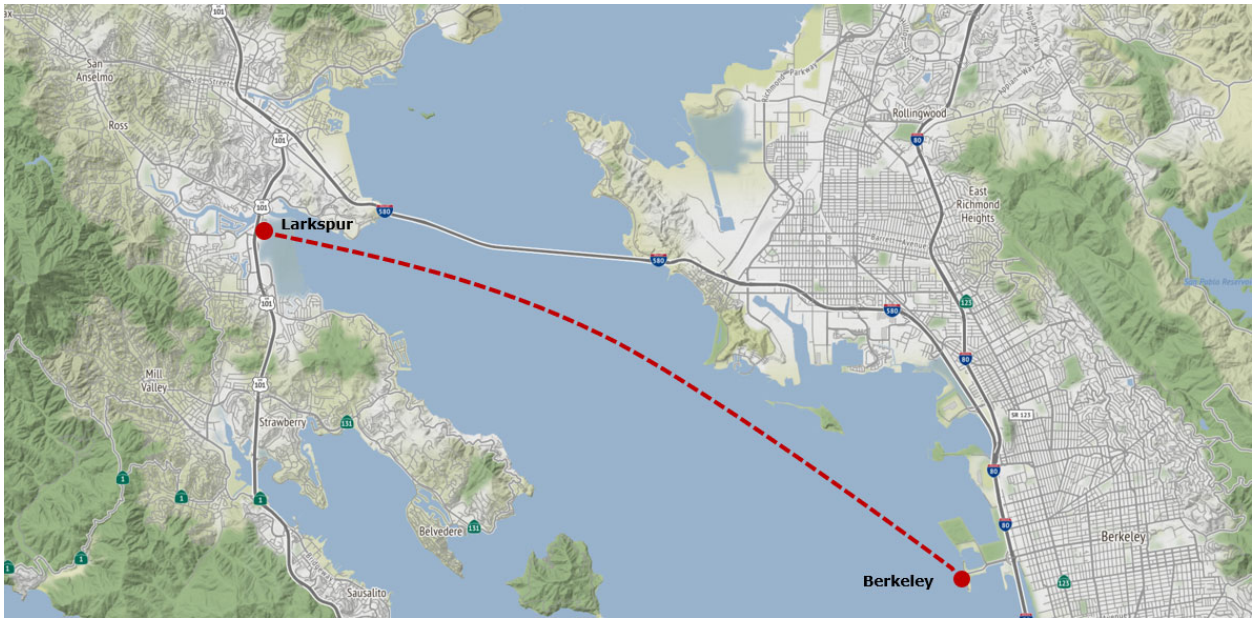
An illustrative schedule of how the service could be operated is shown below in **Table 9**; **Figure 3** illustrates this service route.

Table 9 Berkeley to Larkspur Service (Illustrative Only)

	Depart Berkeley	Arrive Larkspur	Depart Larkspur	Arrive Berkeley
Weekend AM	9:30	10:05	10:15	10:50
	11:00	11:35	11:45	12:20
Weekend PM	12:30	13:05	13:55	14:30
	15:00	15:35	15:45	16:20
	16:30	17:05	17:15	17:50
	18:40	19:15	19:25	20:00

Source: Economic & Planning Systems

Figure 3 Berkeley to Larkspur Illustrative Route



Source: Economic & Planning Systems

Table 10 summarizes the total annual operating hours and miles for each service. Revenue hours and miles are counted when the vessel is in motion, carrying passengers. Non-revenue

hours and miles are counted when traveling to and from the maintenance facility. The total annual operating miles and hours factor into the operating cost estimates (e.g., labor, fuel), which underpin the financial analysis.

Table 10 Summary of Proposed Services

	Weekday	Weekend	All Services
Days of Service	255	100	n/a
Annual Revenue Hours	3,154	1,418	4,572
Annual Non-Revenue Hours	918	393	1,311
Annual Operating Hours	**4,072**	**1,811**	**5,883**
Annual Revenue Miles	47,838	23,540	71,378
Annual Non-Revenue Miles	15,504	6,920	22,424
Annual Operating Miles	**63,342**	**30,640**	**93,982**

Sources: WETA; Economic & Planning Systems, Inc.

Berkeley-Mission Bay Service Design

Ridership estimates from Berkeley to Mission Bay via a timed-connection at San Francisco Ferry Terminal indicate demand for approximately 200 additional daily trips. The operating economics of this connector service would accrue to the San Francisco Ferry Terminal / Mission Bay service and are not evaluated in this Business Plan. As such, the service details of the connection to Mission Bay have not been explored in detail.

Special Event Service

Special events, including sports games (e.g., Warriors, Giants, Cal), concerts, and festivals will have unique ridership demand outside more predictable commute or weekend patterns. WETA plans to operate special event service to and from the Berkeley terminal on a cost-neutral basis, meaning that fares for special events will be set to fully cover operating covers. Currently, WETA offers special event service to Oracle Park and Chase Center originating from Oakland/Alameda and Vallejo.

5. ECONOMIC DEVELOPMENT OPPORTUNITIES

A mutually beneficial partnership with the City of Berkeley accomplishes WETA's objectives to bring ferry service to the City and also supports a new recreational pier to augment the City's waterfront. With expansive shoreline, a resident population of nearly 125,000, a large public university, an emerging bio/medical industry, and numerous shops, restaurants, and offices, new ferry service to Berkeley has the potential to both support existing activities and attract new activities. The West Berkeley area, near the potential ferry terminal, is largely residential, but it also represents a significant and growing employment hub and travel destination in the Bay Area, with destinations like the Fourth Street retail and dining node, several breweries and restaurants, and employers like Bayer and Kaiser Permanente.

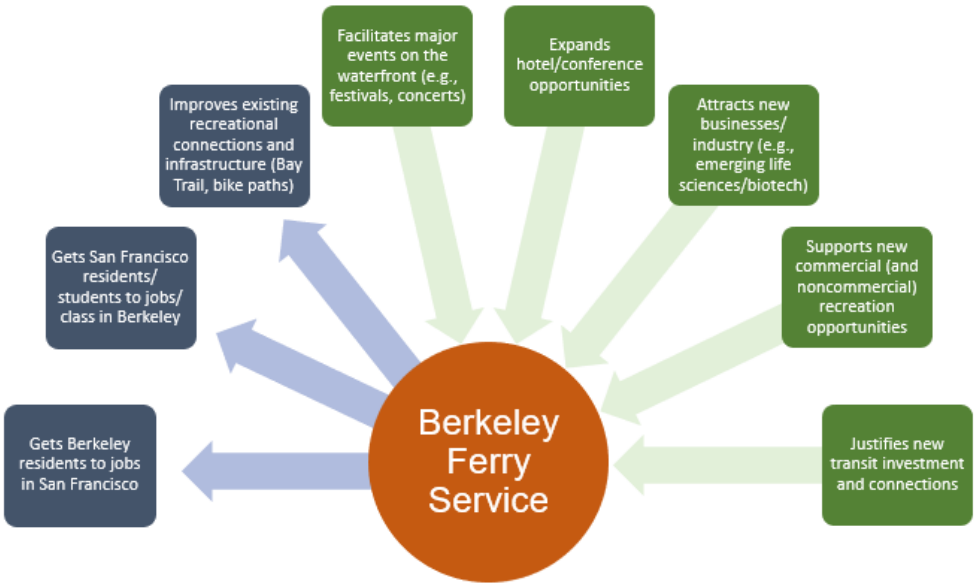
The City of Berkeley, through the BMASP, is examining potential economic development opportunities for the Berkeley Marina in general. This chapter is intended to support those efforts by identifying economic development opportunities that could be specifically leveraged by construction of a ferry terminal and implementation of the Berkeley ferry service.

Berkeley Landside Planning and Preparations

The City of Berkeley is currently engaged in the preparation of the Berkeley Marina Area Specific Plan (BMASP). The BMASP is intended to provide a path for achieving a financially self-sustaining, publicly-owned marina that preserves and enhances infrastructure to support current and future community needs, while adapting to climate changes and promoting environmental stewardship. Complementary to the BMASP is the City's Pier/Ferry study, which evaluates how the pier could be rebuilt to support new ferry service in addition to public recreation opportunities. Future activities within the BMASP will need to be consistent with the California State Lands Commission tidelands restrictions, which are intended to protect opportunities for public access of the State's waterfront.

Figure 4 illustrates some of the key activities that new ferry service may support and attract.

Figure 4 Economic Development Opportunities of New Ferry Service



Source: Economic & Planning Systems

Support for Existing Activities

Ferry service to/from Berkeley will help get Berkeley area residents to jobs in San Francisco and the Peninsula (assuming connections in San Francisco to Caltrain) and will help get San Francisco area residents to jobs or classes in Berkeley. Recreational opportunities are enhanced with better connections to the East Bay waterfront and East Bay segments of the Bay Trail. These opportunities are shown in blue in **Figure 4**.

Attracting Future Activities

Just as ferry service will support existing activities, it will also enable future activities, as shown in green in **Figure 4**. For example, new ferry service can facilitate events at the waterfront, including concerts and festivals that are currently hampered by landside access constraints. New ferry service also enhances connections between Berkeley and San Francisco, making Berkeley even more viable for hotel and conference facilities and may serve to attract new businesses that see enhanced San Francisco/East Bay connectivity as a locational advantage in terms of workforce availability. New commercial and non-commercial recreational opportunities to engage with the waterfront and the Bay will emerge, supported by ferry access.

First Mile, Last Mile Connections

The success of a ferry operating from the Berkeley Marina pier will be very dependent on the availability of alternative transportation options for the portion of the trip occurring from East Bay origins to the Berkeley Ferry Terminal, and for trips from the terminal to East Bay destinations. These types of trips are known as first mile/last mile connections (even though in this case the vast majority of these trips will be more than one mile). The important thing is the provision of viable connections to origins and destinations in the East Bay.

It is known that the amount of parking available for ferry patrons in the terminal area will likely be limited to about 250 spaces. Also, the location of the ferry terminal would be approximately one mile from the east side of Interstate 80, where the populated area of Berkeley begins. Because of this, walking to or from the terminal will be impractical for many trips. The Berkeley terminal will have similarities to the Vallejo terminal in terms of walking distances and mode share. The pedestrian mode share for Vallejo was 7 percent as reported in the 2017 on-board passenger survey, much lower than the other ferry terminals. Bicycling to and from the ferry will be practical via the existing bicycle pedestrian bridge across I-80 and connections to the San Francisco Bay Trail, and a well-developed bicycle friendly network in the City of Berkeley.

As discussed in **Chapter 3**, the existing Richmond and Harbor Bay ferry terminals are examples of terminals with limited parking and in the case of Richmond, limited pedestrian connections to developed areas. This amount of parking proposed for use by the Berkeley terminal, 250 spaces, is similar to that currently available at the Richmond (319 spaces) and Harbor Bay (202 spaces) ferry terminals. These terminals have proven ridership attraction even though they have limited parking. The limitations on parking resulted in 41 percent of the access trips to the Richmond Terminal (2019 passenger survey) being drive alone trips and 34 percent of the access trips to the Harbor Bay Terminal were drive alone in the 2017 survey. In the case of the Richmond Terminal another 28 percent of the ferry riders carpool, are dropped off, or use taxis/TNC vehicles such as Uber and Lyft. That leaves 31 percent of the ferry riders arriving by modes other than an automobile. It is likely that the Berkeley Ferry Terminal will have similar characteristics.

The Harbor Bay ferry terminal at one time had more than ample parking as ferry users were able to park on-street in the adjacent resident areas when the ferry parking lot was full. However, the residents were unhappy about the ferry parking spilling into their neighborhoods and succeeded in getting a residential parking permit system imposed in 2018. It was expected that ferry ridership would decline as a result of the loss of available parking. However, ferry ridership actually increased during this period and continued to grow until the pandemic occurred in 2020, demonstrating that riders are willing to use other available modes to access ferry terminals when parking is constrained.

The conclusion of this is that while parking is an importation component of ferry access, provisions for first mile/last mile access and for passenger drop-offs are also a key element of a successful ferry operation.

Existing Transit Services

Bus & Rail

- The Alameda Contra Costa Transit District (AC Transit) provides public bus service to the Berkeley Marina, connecting the Marina with downtown Berkeley, the University of California, Berkeley, and the Rockridge BART Station via University Avenue. This AC Transit Line 51B operates seven day a week and provides weekday service to the Marina at 24-minute headways. However, only about half of the bus trips go all the way to the Marina, the other half turn around at the Amtrak station.
- The North Berkeley BART Station is 2.5 miles from the Marina. Both the BART Station and downtown Berkeley are important nodes for AC Transit bus services offering connection opportunities to Line 51B.

- The Berkeley Amtrak Station is 1.3 miles from the Marina, offering connections to the Capitol Corridor and San Joaquin intercity rail services.

Shuttles

There are also various shuttle services operating in the area:

- The West Berkeley Shuttle is a free shuttle service funded through the Berkeley Gateway Transportation Management Association by Bayer HealthCare and Wareham Development, to provide a "last mile" transit connection from the Ashby BART Station to business establishments throughout the West Berkeley Area. The closest stop to the Marina is 1.7 miles away at Dwight Way and Seventh Street.
- The Emery Go-Round is another free shuttle service, provided by the Emeryville Transportation Management Association, that operates throughout Emeryville with some extensions into South Berkeley.
- The University of California, Berkeley operates a free shuttle system known as Bear Transit. There is one route that connects the North Berkeley BART Station with a University facility located at Gilman Avenue and Fourth Street, which is 2.0 miles from the Marina.
- Lawrence Berkeley National Lab also operates a shuttle that primarily circulates around the UC Berkeley campus.

At present none of these shuttle operations provides service to the Marina.

Potential Future Access Enhancements

While this version of the Business Plan is not scoped to include development of a formal first mile/last mile plan for the Berkeley Ferry Terminal, the review of existing conditions and the experiences at other WETA ferry terminals suggest certain considerations for the Berkeley terminal.

Terminal Design

To enhance the potential for convenient multi-modal travel, the layout of the terminal should include facilities for an AC Transit bus stop, a bus stop for private shuttles, a zone for passenger drop-off and pick-up, a waiting area for taxis, and TNC vehicles, and secure bicycle storage as wells as space for e-bikes and scooters. A kiosk with a map of the area and transit information should be provided.

Parking management measures can secure parking for ferry passengers (about 250 spaces), along with measures to discourage ferry passengers from parking outside of the area's designated for ferry use. A parking management plan that is being developed as part of the BMASP and the Pier/Ferry Study is considering how to manage parking on the weekends, when the demands for recreational use and for ferry terminal parking will both be at high levels, potential creating competition for use of a limited supply. Ease of terminal access for bicyclists and pedestrian access include ADA provisions that will be included as part of an overall Travel Demand Management (TDM) Plan that is part of this ongoing effort.

Transit

Coordination with AC Transit may explore ways in which Line 51B services could be modified to improve connectivity with the ferry. Initial discussions indicate that AC Transit would increase the number of Line 51B trips that go all the way to the Marina when ferry service is implemented. More specifically, long-range plans for AC transit include service levels that would be adequate to time connections to arriving and departing ferry on the headways anticipated in the service plan.

Shuttles

Efforts to improve shuttle services may include:

- Coordination with the University of California, Berkeley to determine if Bear Transit services could be modified or a new route provided to connect the University with the ferry.
- Coordination with the Berkeley Gateway Transportation Management Association to see if their shuttle services could be modified to provide ferry access.
- Other public and private partnerships to potentially develop new shuttle services.

It is important to note that the planning of shuttles so far in advance of the start-up of the ferry service is difficult. The existing shuttle services may change or may not even exist by that time, and new services may be implemented. Shuttle planning is an ongoing effort that should intensify as the start-up date for the ferry service approaches.

Bicycle/Pedestrian Access

Implementation of the University Avenue Lane Reconfiguration Project would include a separate pedestrian/bicycle path running parallel to University Avenue in the Marina as part of the Bay Trail. This would improve the accessibility and safety of pedestrians and bicyclists at the Marina.

6. EQUITY CONSIDERATIONS

Equity in transportation planning is focused on the fair distribution of transportation resources to improve access to safe and affordable transit, thus enhancing mobility and access to desired destinations. An equity lens enables transportation planners and system designers to enhance accessibility for everyone, including seniors, people with disabilities and lower-income people living in underserved areas. Kittelson & Associates writes, "Increasing accessibility and right-sizing resources has ripple effects throughout a community. It improves dignity in the transit-user experience, reduces pedestrian and bicyclist injuries and fatalities, and encourages healthier lifestyles." Ferry service has the potential to address a range of transportation equity considerations by improving access for East Bay residents and employees.

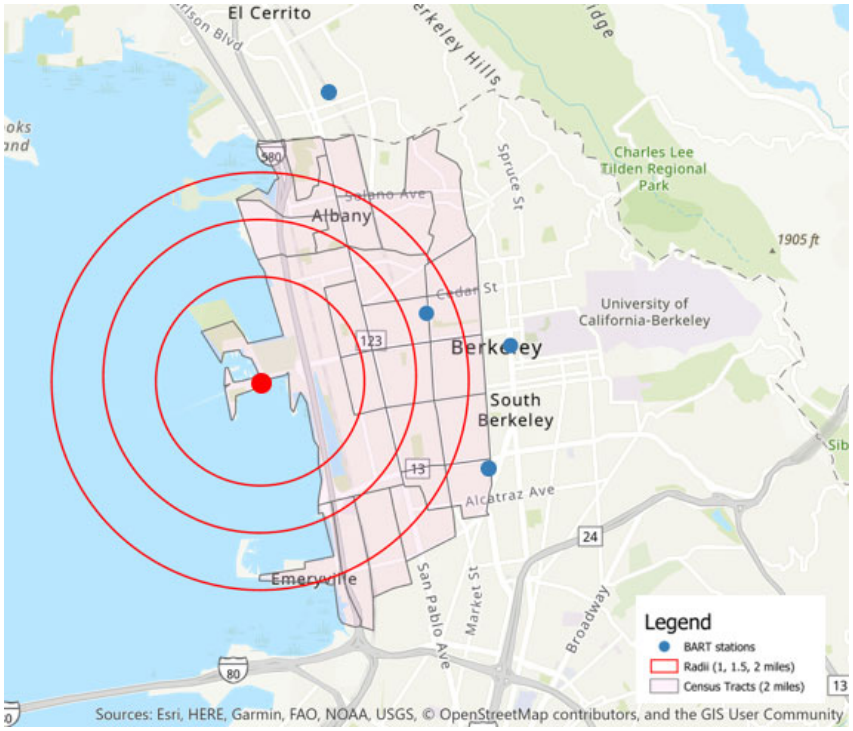
Geographic Radii for Analysis

To better understand the socio-economic and demographic characteristics of potential users and beneficiaries of the Berkeley service, a range of Census data is presented for five different "catchment" areas:

1. Radial area of 1 mile from the Berkeley Marina.
2. Radial area of 1.5 miles from the Berkeley Marina.
3. Radial area of 2 miles from the Berkeley Marina.
4. City of Berkeley.
5. Combined geographic area of Albany, Berkeley, and Emeryville.

Figure 5 displays the radial distances, plus the Census tracts counted in the analysis.

Figure 5 Catchment Areas around Berkeley Marina



These radii also provide a framework for evaluating the proximity of key employers and job nodes in the City. For example, the Bayer campus is located within 1-mile of the Marina, as is the Fourth Street retail node. University Village and Kaiser's new facility, as well as a portion of the San Pablo corridor, are captured within the 1.5-mile radius. At two miles from the Marina, more of the City's residential neighborhoods are included, plus Shattuck Avenue and the North Berkeley BART station. University Avenue runs directly from the Marina east to campus. The core of the UC Berkeley campus is approximately three miles away from the Marina, while Lawrence Berkeley National Laboratory is approximately four miles from the Marina.

Demographic Profile

Ferry service can enhance transit access to jobs and recreational activities in San Francisco and the Peninsula as well as to recreational destinations in Marin for underserved residents near the terminal/Marina. **Table 11** presents key socio-economic and demographic data, comparing the area near the Marina with the City of Berkeley as a whole and the greater Albany-Berkeley-Emeryville region.

Within the 1-mile radius, there is a more balanced distribution of jobs (approximately 9,000) and residents (approximately 10,000) than compared with the other areas. Residents within the 1-mile radius have lower median household incomes, higher unemployment rates, and a higher non-white population relative to the other geographies. In addition, residents within 1-mile of the Marina are less likely to use public transit as their primary commute mode, reflecting West Berkeley's more limited options for public transit than other areas of the City.

Table 11 Socio-economic and Demographic Characteristics in Surrounding Areas

Geography	Jobs	% public transit commute	Median Household Income	Unemployment Rate	Race/Ethnicity: % non-white	Population
1 mile radius	8,980	20.3%	$81,575	5.0%	56.7%	9,889
1.5 mile radius	18,163	26.1%	$84,850	3.9%	53.8%	30,804
2 mile radius	31,487	27.8%	$95,890	4.3%	56.7%	81,701
City of Berkeley	43,575	25.9%	$85,530	5.3%	46.7%	124,321
Albany-Berkeley-Emeryville combined area	68,533	26.4%	$88,670	4.8%	48.9%	157,497

Source: U.S. Census Bureau, American Community Survey 5-Year (2019)

Access to Jobs

Ferry service enables people to reach jobs in San Francisco from the Albany-Berkeley-Emeryville area. There are more jobs in San Francisco and San Mateo counties than in Alameda and Contra Costa counties and those jobs, on average, command higher salaries, as shown on **Table 12**. **Table 12** compares the average salaries between Alameda and Contra Costa counties in the East Bay with San Francisco and San Mateo counties. Across all categories, the salary premium is 21 percent, suggesting that jobs in SF/Peninsula pay 21 percent more on average than similar jobs in Alameda and Contra Costa counties. Sales, Transportation, and Legal occupations demonstrate the highest individual salary premiums.

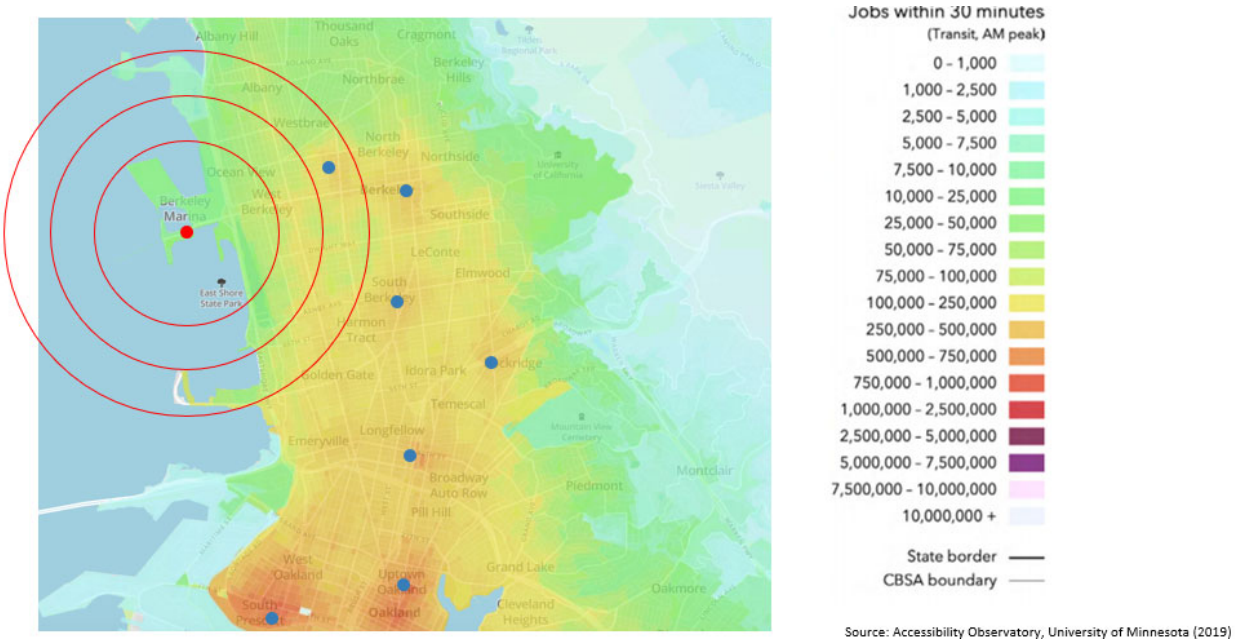
Table 12 Job and Salary Comparison

Occupation Category	Number of Jobs		Average Salary		SF/Peninsula Salary Premium
	Alameda & Contra Costa Counties	San Francisco & San Mateo Counties	Alameda & Contra Costa Counties	San Francisco & San Mateo Counties	
Sales and Related	92,830	85,820	$59,555	$75,536	27%
Transportation and Material Moving	91,020	73,080	$48,835	$57,693	18%
Legal	8,230	16,550	$146,544	$170,127	16%
Arts, Design, Entertainment, Sports, and Media	15,660	27,310	$77,908	$88,915	14%
Management	80,010	120,720	$158,446	$178,918	13%
Healthcare Practitioners and Technical	59,740	44,680	$121,183	$136,604	13%
Life, Physical, and Social Science	16,390	22,600	$103,059	$114,978	12%
Healthcare Support	67,840	39,070	$40,799	$44,667	9%
Educational Instruction and Library	63,590	68,860	$70,691	$77,070	9%
Computer and Mathematical	49,800	104,440	$124,151	$134,685	8%
Business and Financial Operations	70,620	113,810	$97,088	$105,269	8%
Food Preparation and Serving Related	74,170	87,930	$38,872	$42,055	8%
Office and Administrative Support	126,760	128,100	$55,056	$59,109	7%
Installation, Maintenance, and Repair	38,500	26,380	$67,785	$71,961	6%
Construction and Extraction	53,840	34,820	$79,163	$83,856	6%
Community and Social Service	18,020	17,770	$68,136	$71,869	5%
Personal Care and Service	20,450	20,180	$42,532	$44,579	5%
Protective Service	19,730	23,390	$71,366	$73,578	3%
Architecture and Engineering	32,010	20,760	$109,102	$107,962	-1%
Farming, Fishing, and Forestry	1,090	980	$42,154	$41,526	-1%
Production	59,920	21,750	$51,926	$50,461	-3%
Building and Grounds Cleaning and Maintenance	23,080	34,550	$48,311	$45,980	-5%
Total Jobs/Average Salary	**1,083,290**	**1,133,530**	**$76,328**	**$92,619**	**21%**

Source: California Employment Development Department, Occupational Employment Statistics and Wages by Metropolitan Division, 2021

Ferry service between Berkeley and San Francisco would increase access to these higher-paying jobs, allowing workers to live in East Bay while working in San Francisco. **Figure 6** illustrates the number of jobs that are accessible from an origin block within 30 minutes of peak AM transit travel. This shows that in Berkeley and Oakland, blocks near BART stations have greater accessibility to jobs; by contrast, West Berkeley currently reaches a lower number of jobs via transit. This shows the potential to increase accessibility to jobs by adding a commute ferry service.

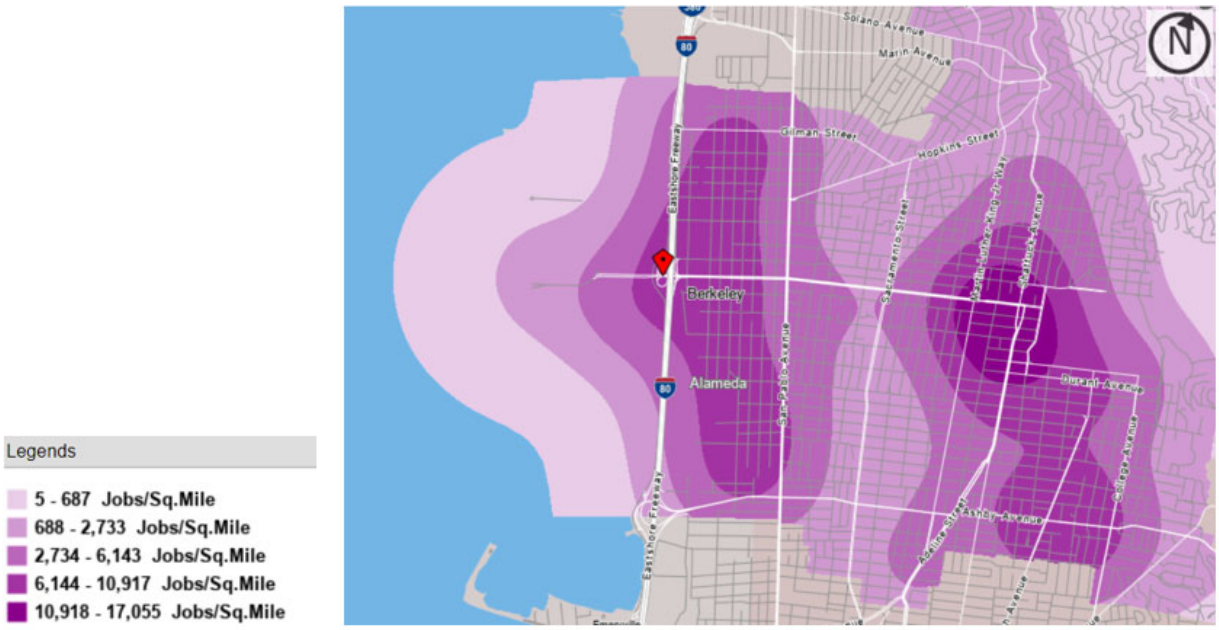
Figure 6 Access to Jobs within 30 Minutes



Source: Accessibility Observatory, University of Minnesota (2019)

At the same time, ferry service enables increased access to West Berkeley as well as the rest of Berkeley for job, education, or recreational purposes. **Figure 7** shows employment density, in jobs per square mile, for the City of Berkeley. Several neighborhoods in proximity of the terminal show high job densities, notably at the Bayer campus and UC Berkeley. Therefore, the ferry service also has potential to facilitate travel to the East Bay and the jobs available in the catchment area. This has the added benefit of expanding the labor pool for major employers in Berkeley. Coordinating last-mile transit between the terminal and these job sites will enable students and workers to live and work between both sides of the San Francisco Bay.

Figure 7 Employment Density in Berkeley



7. FEASIBILITY OF PROPOSED FERRY SERVICES

The purpose of the financial feasibility evaluation is to identify financial feasibility issues that may exist with the new ferry service routes, to explore potential causes and how these issues can be addressed, thus improving the feasibility of operating the proposed service. This chapter describes in detail the technical approach to this evaluation and the most critical assumptions affecting the results.

Defining "Financial Feasibility"

Simply defined, "financial feasibility" means that "revenues equal or exceed costs." However, in the case of public transit, where public policies support operational subsidies, feasibility must be recast to evaluate the farebox recovery ratios that may be attainable given ridership forecasts. In the case of ferry services that may be operated by a public operator like WETA, the service routes are evaluated according to their potential farebox revenue recovery ratio (i.e., revenues from ticket sales as a percentage of operating costs) against WETA's minimum feasibility standard of 40 percent farebox revenue recovery ratio within the first ten years of operation.[6] The farebox revenue recovery ratio target is between 50 and 70 percent for mature services. This definition of financial feasibility does not directly include equity considerations, local economic development potential, or the value of the individual proposed terminals related to providing emergency services.

Determining the revenue to cost balance prospectively, given uncertainties regarding future costs, revenues, performance, etc. is always challenging. The COVID-19 pandemic's disruptions to commute patterns, ridership, and fares add to the uncertainties. WETA has extensive ferry operating cost data derived from its existing service routes. There has also been considerable effort placed on estimating potential ridership for all potential routes. Key factors influencing feasibility include capital costs and funding, operating costs, market performance, and the sources and availability of non-farebox operating funding.

Other Metrics of Feasibility

Beyond "financial feasibility," WETA developed performance evaluation measures (**Figure 8**), which are intended to evaluate the competitiveness and fiscal sustainability of both existing and new WETA ferry services. The measures are expressed in three ways: *minimum*, *target*, and *maximum* (as applicable). Minimum levels are what will be required after the initial 10 years of operation. Target levels are consistent with expected performance of mature services such as Alameda/Oakland, Vallejo, and Harbor Bay. When a particular service achieves maximum levels, this indicates that a service enhancement or increase may be justified.

6 For purposes of this analysis, the farebox recovery ratio is calculated in Year 10, or 2035.

Figure 8 WETA Performance Measures and Standards

Measure	Standard
Passengers per Revenue Hour (Commute-only services)	Minimum: 100 Target: 150 Maximum: 250
Passengers per Revenue Hour (All-day services)	Minimum: 100 Target: 125 Maximum: 250
Farebox Recovery	Minimum: 40% Target: 50-70% Maximum: 100%
Peak Hour Occupancy	Minimum: 50% Target: 60-75% Maximum: 80%

Source: WETA 2020 Short Range Transit Plan

Financial Feasibility Model Assumptions for Berkeley Services

The financial feasibility analysis combines ridership estimates, fare assumptions, service plans, and operating cost estimates, and calculates the *farebox recovery percentage*, or the ratio of projected farebox revenues to total operating costs. In addition, the *operating gap*, the amount of funding required in addition to farebox revenue, is also calculated. If there is not an operating gap, the difference would be shown as an operating surplus.

The *10-year net present value* calculation supports an analysis in 2022 dollars that accounts for increases in ridership over time, changes in fares, and changes in operating cost assumptions during a 10-year period. The net present value calculation uses a 3.0 percent discount rate. The detailed calculations for each service route are provided in **Appendix A**.

Operating Costs

WETA developed an operating cost model that evaluates systemwide operating costs on a per operating-mile and per operating-hour basis, assumptions which were then applied to the proposed service plan for the Berkeley routes. The operating costs were prepared by WETA (in 2022 dollars) based upon WETA's existing operating experience with the existing ferry routes and were escalated based on WETA's standard assumptions for annual cost increases. Costs escalate 3 percent annually, consistent with WETA's historic data. As such, there is a high degree of confidence in the cost assumptions. However, a variety of circumstances could affect service costs in unforeseen ways including any required changes in service configuration requiring additional labor hours and expenses. A planned shift from diesel- to electric zero-emission vessels will affect operating costs, eliminating fuel and reducing maintenance costs but incurring new electricity costs.

Ferry service operating cost items consist of the following broad categories of costs: Vessel Expenses (Crew Labor, Fuel/Electricity, O&M), Terminal and Facility O&M Expenses, and System Expenses.

A summary of the operating costs estimated for each of the routes is provided in **Table 13**. Costs vary across each route depending on the trip distance, revenue-hours, and crew requirements; where the San Francisco route has higher costs, it is attributable to two vessels and four crew operating more trips, and more days of service. The Larkspur weekend service has a higher operating cost than the San Francisco weekend service due to a longer route, requiring greater vessel costs and incurring higher facility expenses.[7] Annual costs in the initial year of service and a net present value of costs during a ten-year operating period (2026 – 2035) are presented.

Vessel Expenses

Vessel expenses are the largest cost component of operating a ferry service and includes Crew Labor, Fuel/Electricity, and Operations and Maintenance (O&M). The variability across the services occurs within this category based on crew requirements.

Crew Labor

Labor represents a significant cost item that is affected by required minimum shift lengths and the number of vessels required by the service. Estimated trip length determines how many round-trip trips can be served by a single vessel within a shift period. Crew shifts are 8 hours per labor requirements. Even if the actual shift is shorter, crews are paid for an 8-hour shift. The estimated number of crew hours is multiplied by a standard hourly rate consistent with current labor contracts. Four crew members are required per each 250-passenger vessel, for a total annual cost of $4 million.

Fuel/Electricity

Fuel is a costly component of ferry service operations and is affected by the type of the vessel, the length of the trip (distance and time), and channel wake or speed restrictions. It is also the least certain as fuel expenses can vary significantly depending on energy market conditions. The fuel assumption is based on the estimated nautical miles of each service, multiplied by the fuel needed per mile (gallons per mile), multiplied by the forecasted cost per gallon. Although WETA anticipates using electric zero-emission vessels for the Berkeley service, WETA does not currently have sufficient information to model operating costs for electric zero-emission vessels. Thus, fuel costs using fleet assumptions from similar existing services for a diesel-powered vessel were used. The total annual fuel costs for Berkeley service routes are estimated at $1.2 million. However, the operating costs of an electric zero-emission vessel would likely be less, as the cost of electricity is less than that of diesel fuel. This assumption will need to be updated in future versions of this Business Plan as WETA's plan for using electric zero-emission vessels comes into focus.

[7] Maintenance expenses at the Central Bay Maintenance Facility are calculated based on the operating-hours of the vessel and route.

Table 13 Summary of Ferry Service Operating Costs by Route (Annual and Ten-Year Net Present Value, Rounded)

Item	Berkeley Routes				
	San Francisco *Weekday*	**San Francisco** *Weekend*	**Larkspur** *Weekend*	**San Francisco** *All Days*	**All** *All Services*
Service Assumptions					
AM Trips (Peak Direction/ Reverse)	8/6	3/2	2/2	n/a	n/a
PM Trips (Peak Direction/ Reverse)	6/8	4/5	4/4	n/a	n/a
Trip Time (Minutes)	25	25	35	n/a	n/a
Total Daily Crews	4	2	2	n/a	n/a
Number of Vessels	2	1	1	n/a	n/a
Annual Operating Expenses in Year 1 of Service [1]					
1. Vessel Crew Labor	$2,721,000	$534,000	$775,000	$3,255,000	$4,030,000
2. Vessel Fuel/Electricity	$805,000	$158,000	$229,000	$963,000	$1,192,000
3. Vessel O&M	$612,000	$120,000	$174,000	$732,000	$906,000
4. Facility Operation & Maintenance	$589,000	$115,000	$168,000	$704,000	$872,000
4.1. Terminal	$91,000	$18,000	$26,000	$109,000	$135,000
4.2. Facility	$498,000	$98,000	$142,000	$596,000	$738,000
5. System Expenses	$943,000	$185,000	$269,000	$1,128,000	$1,397,000
Total	**$5,671,000**	**$1,112,000**	**$1,615,000**	**$6,783,000**	**$8,398,000**
Operating Expenses (10-Year NPV, 2026-2035) [2]					
1. Vessel Crew Labor	$24,179,000	$4,741,000	$6,886,000	$28,920,000	$35,806,000
2. Vessel Fuel/Electricity	$7,151,000	$1,402,000	$2,037,000	$8,553,000	$10,590,000
3. Vessel O&M	$5,441,000	$1,067,000	$1,550,000	$6,508,000	$8,058,000
4. Facility Operation & Maintenance	$5,230,000	$1,025,000	$1,489,000	$6,255,000	$7,744,000
4.1. Terminal	$807,000	$158,000	$230,000	$965,000	$1,195,000
4.2. Facility	$4,423,000	$867,000	$1,260,000	$5,290,000	$6,550,000
5. System Expenses	$8,382,000	$1,644,000	$2,387,000	$10,026,000	$12,413,000
Total	**$50,384,000**	**$9,879,000**	**$14,349,000**	**$60,263,000**	**$74,612,000**

[1] First year of service is estimated to be 2026.

[2] Presented in 2022 dollars.

Sources: WETA; Economic & Planning Systems, Inc.

Operations and Maintenance

Maintenance costs are estimated to be $872,000 annually for all vessels operating Berkeley routes, including a pro rata share of a spare vessel. Maintenance expenses include costs for vessel repair, vessel-related materials and supplies, and urea.[8] New services are assumed to need a spare vessel, and maintenance expenses apply to the spare vessel as well. This estimate is modeled based on current WETA assumptions and vessels but will be updated as WETA plans for electric zero-emission vessel usage.

Facility Operations and Maintenance

Facility operations and maintenance expenses include the respective share of operations and maintenance expenses for exclusive or shared use terminal and maintenance facilities used to support a service. This estimate is modeled based on current WETA assumptions.

Terminal Expenses

Terminal expenses refer to the costs that each service route pays towards maintenance and usage of the terminals at Berkeley, San Francisco, and Larkspur. These expenses are estimated to be $135,000 annually. The capital costs of constructing the Berkeley terminal are not incorporated in these estimates but discussed in **Chapter 8**.

Facility Expenses

Each service route is charged facility O&M expenses at Central Bay based on the service's operating time (revenue-hours). This is estimated to be $738,000 annually for all Berkeley service routes.

System Expenses

System Expenses include docking fees, advertising and marketing, consultant services, wireless services on the vessels, Clipper card-related technology maintenance, and WETA administration. Other fixed expenses also include wages and benefits for dispatch and supervision staff and administration staff. Insurance deductibles are also included in this category. Assumptions are provided by WETA based on current operations.

Operating Revenue (Fares)

Operating revenue is derived from the fares passengers pay to ride the ferry. The feasibility model uses the same "Pandemic Recovery" fare assumptions that were used to generate the ridership forecasts, based on existing services between Richmond, Vallejo, and San Francisco and the average fares for those routes. Fare assumptions are described further in **Chapter 4**.

Feasibility Model Results and Implications

Financial feasibility in the model is evaluated in terms of the farebox recovery ratio among other metrics. The analysis uses a ten-year period from 2026 to 2035. Ridership projections in the Pandemic Recovery scenario use WETA's estimated fare elasticity of demand ratio of -0.23 to

[8] Urea is a chemical that is injected into the fuel system to help control emissions. Standard costs for urea are assumed.

adjust the baseline ridership projections in response to changes in fares.[9] Weekday ridership numbers are multiplied by 255 days, consistent with WETA's total days of operation in FY2019, to estimate annual ridership. Weekend ridership assumes 100 days of service, for a total of 355 days of service annually. Annual ridership is multiplied by the average fare to calculate annual farebox revenue, which can then be compared with annual operating costs.

Assuming Pandemic Recovery fares, the Berkeley-San Francisco route generates sufficient ridership such that farebox recovery addresses 52 percent of operating costs after the first ten years of operation, on a net present value basis, while the Berkeley-Larkspur route achieves a farebox revenue recovery ratio of 38 percent of operating costs after the first ten years of operation, in 2035. This demonstrates that despite the lower fares, the service continues to be feasible, showing potential for WETA to implement affordable fares beyond the Pandemic Recovery period.

WETA's farebox recovery ratio target is between 50 and 70 percent for mature services.[10] The model results are summarized below in **Table 14**. A summary of feasibility metrics is presented in **Table 15**. The detailed calculations by route are provided in **Appendix B** for both the Baseline and Pandemic Recovery scenarios and show the farebox recovery ratios for each year during the first ten years of operation.

Other Ongoing Operational Costs

Beyond the operating costs of the ferry service itself, there are other operating costs to be considered. If implemented, the Berkeley service is expected to require shuttle services (either publicly or privately funded) to support the first/last mile connections. Additional study will be needed to define the service and identify potential partners.

9 With a lower fare, ridership is expected to increase. For example, baseline ridership was 1,910 in 2026, adjusted to 1,942 with the fare elasticity of demand. This represents a 1.7 percent increase.

10 As reference points, WETA's 2020 Short Range Transit Plan indicates that the systemwide farebox recovery ratio is 56.8 percent as of FY 2018/19. The Alameda/Oakland route has a farebox recovery ratio of 58.3 percent; the Harbor Bay route has a ratio of 45.6 percent; and the Vallejo/San Francisco routes has a 65 percent ratio.

Table 14 Summary of Operating Expenses and Farebox Recovery Ratios by Route (Pandemic Recovery Scenario) ($2022)

Item	Berkeley Routes				
	San Francisco *Weekday*	San Francisco *Weekend*	Larkspur *Weekend*	San Francisco *All Days*	All *All Services*
10-Year (2026-2035) NPV of Annual Operating Expenses	$50,383,520	$9,879,122	$14,349,384	$60,262,642	$74,612,026
Analysis of Operating Gap or Surplus given Ridership Projections					
10-Year (2026-2035) Ridership [3]	3,852,789	1,081,397	417,827	4,934,186	5,352,013
10-Year (2026-2035) NPV of Fare Revenue [4]	$17,684,302	$4,963,611	$4,002,786	$22,647,913	$26,650,699
2035 Farebox Recovery [5]	48%	69%	38%	52%	49%
Operating Expense Gap in Year 10 of Service (Variance from Estimated Operating Expenses)					
Amount in 2035	($3,839,835)	($451,858)	($1,297,594)	($4,291,693)	($5,589,288)
Operating Expense Gap per Boarding in 2035	($7.27)	($3.05)	($22.55)	($6.35)	($7.62)

[1] NPV calculation uses an annual discount rate of 3%.

[2] Required number of one-way trips during the 10-year period to fully fund operating expenses.

[3] Daily commuter ridership is based on CDM Smith's 2020 and 2040 ridership projections. The annual estimate assumes 255 days of weekday service and 100 days of weekend service per year, consistent with WETA's total days of operation in FY2019. Special event ridership is not included in this analysis.

[4] Fare revenue is number of trips multiplied by the ticket price. Average one-way ticket prices are provided by WETA in 2022 nominal dollars and inflated by an assumed inflation rate of

[5] Farebox recovery is defined as the ratio between operating revenues and operating expenses. WETA assesses feasibility using the farebox recovery ratio at year 10 of service. The ratios presented here do not reflect special event service.

Sources: WETA; CDM Smith; Economic & Planning Systems, Inc.

Table 15 Estimated Feasibility Metrics by Route

Metric	Standard	Pandemic Recovery Service Estimates				
		San Francisco *Weekday*	**San Francisco** *Weekend*	**Larkspur** *Weekend*	**San Francisco** *All Days*	**All** *All Services*
Passengers per Revenue-Hour (Commute-only services)	Minimum: 100 Target: 150 Maximum: 250	n/a	n/a	n/a	n/a	n/a
Passengers per Revenue-Hour [1] (All-day services)	Minimum: 100 Target: 125 Maximum: 250	167	240	72	179	189
Farebox Recovery Ratio [1]	Minimum: 40% Target: 50-70% Maximum: 100%	48%	69%	38%	52%	49%
Peak Hour Occupancy [2]	Minimum: 50% Target: 60-75% Maximum: 80%	59%	55%	41%	58%	54%

[1] Estimated for the tenth year of operation (2035), at 100 percent of estimated daily ridership.

[2] Estimated for the tenth year of operation (2035) assuming a 250-passenger vessel and a 25 percent peak hour factor.

Source: WETA; CDM Smith; Economic & Planning Systems

Non-Farebox Operating Funding

Public transit ferry operations typically require subsidy to offset the portion of operating costs not covered by fares. While the mix of funding sources has not been determined, potential sources include Regional Measure 3 (RM3) and/or private funding from major employers in Berkeley. In the absence of another regional bond measure or an additional countywide sales tax measure, Regional Measure 3 is WETA's most viable source of funding for capital costs and operational subsidies, providing $300 million for capital projects and up to $35 million in annual operating funds for expansion.

Regional Measure 3

The Metropolitan Transportation Commission (MTC) is the transportation planning, financing and coordinating agency for the nine-county San Francisco Bay Area and the agency that administers Regional Measure 3 Program revenue. Regional Measure 3 is a plan to build major roadway and public transit improvements via an increase in bridge tolls on all Bay Area toll bridges except the Golden Gate Bridge. The Regional Measure 3 Expenditure Plan includes funding for ferry operations that ramps up to $35 million over five years. If the Regional Measure 3 operating revenue is not needed in full, the balance can be used for capital expenses.

Final certified Regional Measure 3 election results were released in July 2018 and confirmed that 55 percent of Bay Area voters supported the measure. However Regional Measure 3's validity was challenged in two lawsuits. After the courts at both the trial court and appellate court upheld the measure, the California Supreme Court granted review of the RM3 litigation on October 14, 2020. The Court then deferred any further action on the RM3 litigation pending disposition of another case it has also granted petition for review. That case, *Zolly v. City of Oakland*, presents a similar constitutional question to the one at issue in the RM3 litigation, namely, how to interpret an exception to the Constitutional definition of a tax for a charge imposed for entrance to or use of government property.

On January 1, 2019, the Bay Area Toll Authority (BATA) began collecting the first dollar of the approved toll increase. Toll revenues collected are being placed into an escrow account and will not be allocated to project sponsors until the lawsuits are settled. MTC staff has prepared general guidelines for Regional Measure 3 program administration that the Commission adopted in December 2019.

Private Partnerships

At the local level, and in partnership with local employers and developers, the City of Berkeley can incorporate funding for ferry operations or shuttle services in future Transportation Demand Management plans. Private funding from local developers or employers through Transportation Demand Management agreements and plans can be negotiated and may generate operating subsidies. Private financial support can be especially important in the early years of operating a new ferry service as ridership is established.

8. CAPITAL COSTS AND FUNDING

Implementation of new ferry transit services typically requires capital investments that cannot be funded with farebox revenue. Even very successful public transit services typically do not fully cover operating costs with fare revenue, much less, capital expenses. However, there is a range of funding sources that may be available to help fund the capital costs associated with new service to Berkeley, if this project moves forward through implementation. The ridership analysis, the financial feasibility analysis, and the economic development and equity considerations each cast a different light on the question of whether the Berkeley service is feasible and a cost-effective investment of public resources. It should also be noted that these capital investments need to be considered in the context of their useful life. For planning purposes, the pier is estimated to have a useful life of 75 years; the float is estimated to have a useful life of 25 years, and each vessel is expected to have a 25-year useful life.

Capital Costs

Vessel Acquisition

WETA's ferry fleet will need to be expanded with two vessels. WETA is planning to deploy electric zero emission vessels for this service at an estimated cost of $16 million per vessel. This cost could vary depending on the selected technology and the dynamic state of the zero-emission ship building industry. The respective share of vessel costs borne by WETA and the City of Berkeley will be determined at a future date and this Plan will be updated accordingly.

Waterside

The costs will vary depending on the design of the pier and terminal and the existing conditions encountered. The preferred waterside concept, as shown in **Figure 9**, is a "sword" design costing approximately $70 million. This includes the portion of the pier that extends beyond the ferry berthing facility for recreational purposes. The respective share of these costs borne by WETA and the City of Berkeley for this dual-purpose facility will be determined at a future date and this Plan will be updated accordingly.

Figure 9 Estimated Waterside Terminal Construction Costs

Source: City of Berkeley

Landside

The City of Berkeley's current estimates on the landside portion of the terminal is approximately $14 million (**Figure 10**). This is based on the preferred landside concept which will cluster parking east of the pier and include restroom facilities and an event stage. The respective share of these costs borne by WETA and the City of Berkeley for the landside improvements supporting the new pier will be determined at a future date and this Plan will be updated accordingly.

Figure 10 Estimated Landside Terminal Construction Costs

Source: City of Berkeley

Figure 11 Estimated Terminal Construction Costs for Preferred Concept in Berkeley

Source: City of Berkeley

Capital Funding Sources

Historically, existing WETA ferry terminals have been funded by bridge toll funding revenues, federal grants, County Congestion Management Agency (CMA) funding, and other local sources. The most recent terminals constructed, South San Francisco and Richmond, were funded through bridge toll revenue, and FTA (federal) grant revenue, a State of California Proposition 1B grant, and regional funding. In addition, with so many prominent employers located in proximity to the Berkely Marina, the private sector may emerge as an important funding partner.

Following is a list of potential capital funding sources available to or accessible by WETA:

Regional Measure 3

Regional Measure 3 is discussed in detail in the prior chapter as an important source of non-farebox operating revenue, but it is also a critical capital funding source. Regional Measure 3 will provide WETA with $300 million for capital projects. In addition, if there is any portion of the operating funds that are not needed, the balance can be reallocated towards capital needs.

Measure BB

Measure BB is a voter-approved measure that sustained a 1 percent sales tax in Alameda County, with revenue directed towards improving countywide transportation systems, including for public transit services. The measure required a two-thirds vote to pass; 70 percent of voters approved the measure. The Alameda County Transportation Commission (Alameda CTC) is the regional agency that manages tax revenue.

Caltrans, Active Transportation Program

The Active Transportation Program provides statewide funding to encourage active transportation in cities. It involves a statewide grant funding opportunity, plus disbursements to Metropolitan Planning Organizations (MPOs), to increase the proportion of trips completed through biking and walking. The program is operated by Caltrans and the California Transportation Commission.

Ferry Boat and Terminal Facilities Construction Program

This program provides federal aid to local agencies operating ferry services and/or ferry terminal facilities. Funding is allocated based on Ferry Operator Census Data and administered by Caltrans, the state's transportation agency.

Passenger Ferry Grant Program

This is a federal program that supplies competitive grant funding for passenger ferry systems. This funding originates from the Infrastructure Investment and Jobs Act and is administered by the Federal Transit Administration.

Local Funding

It is not expected that the City of Berkeley will subsidize operations of the ferry services from its General Fund. However, local (City) funding sources may also be established, similar to the

funding provided by a local property tax charged in Bay Farm Island[11] or a portion of Contra Costa County sales tax revenue for the Richmond service[12] to provide an operating subsidy. One option could include a Transient Occupancy Tax surcharge on hotel night stays in the Marina that would reinvest revenue in the Berkeley waterfront and support maintenance of the pier and shared parking facilities.

Steps to Improving Feasibility

The findings of the financial feasibility assessment are intended to guide future planning, investment priorities and funding efforts as may be conducted by the City, the individual destination cities for which the service is planned (e.g., Berkeley, Larkspur, San Francisco), WETA, and, potentially, private employers. Key follow-up efforts may include:

- Expansion of analysis to identify service efficiencies (e.g., interlining, sharing vessels, optimizing crew time).
- Further study of the operating costs and savings associated with transitioning to electric zero-emission vessels.
- Further study of the potential emergency response role that ferries (through WETA or other providers) could fulfill in Berkeley.
- Other City efforts at obtaining capital or operating funding for the proposed ferry service, particularly from federal sources.
- Further planning and development of the ferry terminal areas in the respective cities.
- Local efforts to evaluate the benefits of ferry service and to develop sources of local funding including inclusion in cities' own capital improvement programs and creation of special funding sources.

11 The City of Alameda contributes funds from its property tax assessments, a total of $0.7 million over the 10-year planning period, to support operation of the Alameda Harbor Bay service.

12 On November 2, 2004, Contra Costa voters approved Measure J, which extended the half percent cent local transportation sales tax first established by Measure C in 1988 for another 25 years, in order to provide funding for continued and new transportation projects in the county. This program included $45 million to support capital development or transit operations for new ferry services to Richmond and Hercules. Approximately $27.8 million will be provided to support Richmond ferry operations from FY2019-20 through FY2028-29, per agreement between WETA and the CCTA.

APPENDIX A:

Detailed Operating Costs for Berkeley Routes

Appendix A, Table 1 *Pandemic Recovery Scenario*

Berkeley - San Francisco (Weekday) Ferry Service Operating Costs

Berkeley Ferry Feasibility Study; EPS #211054

Item	Assumptions	10-Year Net Present Value [1]	Year 1 2026	Year 2 2027	Year 3 2028	Year 4 2029	Year 5 2030	Year 6 2031	Year 7 2032	Year 8 2033	Year 9 2034	Year 10 2035
Service Assumptions												
AM Trips (Peak Direction/ Reverse)	8/6											
PM Trips (Peak Direction/ Reverse)	6/8											
Trip Time (Minutes)	25											
Total Daily Crews	4											
Number of Vessels	2											
Ridership [2]			971	1,087	1,204	1,323	1,443	1,565	1,689	1,815	1,942	2,071
Operating Expenses [3]												
1. Vessel Crew Labor	3.0% per year	$24,179,232	$2,721,394	$2,803,036	$2,887,127	$2,973,741	$3,062,953	$3,154,841	$3,249,487	$3,346,971	$3,447,380	$3,550,802
2. Vessel Fuel/Electricity	3.0% per year	$7,150,943	$804,845	$828,990	$853,860	$879,476	$905,860	$933,036	$961,027	$989,858	$1,019,554	$1,050,140
3. Vessel O&M	3.0% per year	$5,440,999	$612,389	$630,761	$649,684	$669,174	$689,249	$709,927	$731,225	$753,162	$775,756	$799,029
4. Facility Operation & Maintenance	3.0% per year	$5,229,885	$588,628	$606,287	$624,476	$643,210	$662,506	$682,381	$702,853	$723,938	$745,657	$768,026
4.1. Terminal	3.0% per year	$807,238	$90,855	$93,581	$96,388	$99,280	$102,259	$105,326	$108,486	$111,741	$115,093	$118,546
4.2. Facility	3.0% per year	$4,422,647	$497,773	$512,706	$528,087	$543,930	$560,248	$577,055	$594,367	$612,198	$630,564	$649,481
5. System Expenses	3.0% per year	$8,382,461	$943,453	$971,757	$1,000,910	$1,030,937	$1,061,865	$1,093,721	$1,126,533	$1,160,329	$1,195,138	$1,230,993
Total, Operating Expenses		**$50,383,520**	**$5,670,710**	**$5,840,831**	**$6,016,056**	**$6,196,537**	**$6,382,434**	**$6,573,907**	**$6,771,124**	**$6,974,257**	**$7,183,485**	**$7,398,990**

[1] NPV calculation uses an annual discount rate of 3%, presented in 2022 dollars.

[2] Ridership forecasts provided by CDM Smith. Includes a factor to account for ramp-up adoption of ridership service.

[3] 2022 operating expenses and annual rates of inflation provided by WETA based on analysis of current operations.

Appendix A, Table 2 *Pandemic Recovery Scenario*

Berkeley - San Francisco (Weekend) Ferry Service Operating Costs

Berkeley Ferry Feasibility Study; EPS #211054

Item	Assumptions	10-Year Net Present Value [1]	Year 1 2026	Year 2 2027	Year 3 2028	Year 4 2029	Year 5 2030	Year 6 2031	Year 7 2032	Year 8 2033	Year 9 2034	Year 10 2035
Service Assumptions												
AM Trips (Peak Direction/ Reverse)	3/2											
PM Trips (Peak Direction/ Reverse)	4/5											
Trip Time (Minutes)	25											
Total Daily Crews	2											
Number of Vessels	1											
Ridership [2]			695	778	862	947	1,033	1,120	1,209	1,299	1,390	1,482
Operating Expenses [3]												
1. Vessel Crew Labor	3.0% per year	$4,741,026	$533,607	$549,615	$566,103	$583,086	$600,579	$618,596	$637,154	$656,269	$675,957	$696,236
2. Vessel Fuel/Electricity	3.0% per year	$1,402,146	$157,813	$162,547	$167,424	$172,446	$177,620	$182,948	$188,437	$194,090	$199,912	$205,910
3. Vessel O&M	3.0% per year	$1,066,863	$120,076	$123,679	$127,389	$131,211	$135,147	$139,201	$143,377	$147,679	$152,109	$156,672
4. Facility Operation & Maintenance	3.0% per year	$1,025,468	$115,417	$118,880	$122,446	$126,120	$129,903	$133,800	$137,814	$141,949	$146,207	$150,593
4.1. Terminal	3.0% per year	$158,282	$17,815	$18,349	$18,900	$19,467	$20,051	$20,652	$21,272	$21,910	$22,567	$23,244
4.2. Facility	3.0% per year	$867,186	$97,603	$100,531	$103,546	$106,653	$109,852	$113,148	$116,542	$120,039	$123,640	$127,349
5. System Expenses	3.0% per year	$1,643,620	$184,991	$190,541	$196,257	$202,144	$208,209	$214,455	$220,889	$227,515	$234,341	$241,371
Total, Operating Expenses		**$9,879,122**	**$1,111,904**	**$1,145,261**	**$1,179,619**	**$1,215,007**	**$1,251,458**	**$1,289,001**	**$1,327,671**	**$1,367,501**	**$1,408,527**	**$1,450,782**

[1] NPV calculation uses an annual discount rate of 3%, presented in 2022 dollars.

[2] Ridership forecasts provided by CDM Smith. Includes a factor to account for ramp-up adoption of ridership service.

[3] 2022 operating expenses and annual rates of inflation provided by WETA based on analysis of current operations.

Appendix A, Table 3 *Pandemic Recovery Scenario*
Berkeley - Larkspur (Weekend) Ferry Service Operating Costs
Berkeley Ferry Feasibility Study; EPS #211054

Item	Assumptions	10-Year Net Present Value [1]	Year 1 2026	Year 2 2027	Year 3 2028	Year 4 2029	Year 5 2030	Year 6 2031	Year 7 2032	Year 8 2033	Year 9 2034	Year 10 2035
Service Assumptions												
AM Trips (Peak Direction/ Reverse)	2/2											
PM Trips (Peak Direction/ Reverse)	4/4											
Trip Time (Minutes)	35											
Total Daily Crews	2											
Number of Vessels	1											
Ridership [2]			267	299	332	365	398	433	468	503	539	576
Operating Expenses [3]												
1. Vessel Crew Labor	3.0% per year	$6,886,321	$775,062	$798,313	$822,263	$846,931	$872,339	$898,509	$925,464	$953,228	$981,825	$1,011,279
2. Vessel Fuel/Electricity	3.0% per year	$2,036,611	$229,222	$236,099	$243,182	$250,477	$257,992	$265,732	$273,703	$281,915	$290,372	$299,083
3. Vessel O&M	3.0% per year	$1,549,614	$174,410	$179,643	$185,032	$190,583	$196,300	$202,189	$208,255	$214,503	$220,938	$227,566
4. Facility Operation & Maintenance	3.0% per year	$1,489,488	$167,643	$172,672	$177,853	$183,188	$188,684	$194,344	$200,175	$206,180	$212,365	$218,736
4.1. Terminal	3.0% per year	$229,904	$25,876	$26,652	$27,452	$28,275	$29,124	$29,997	$30,897	$31,824	$32,779	$33,762
4.2. Facility	3.0% per year	$1,259,584	$141,767	$146,020	$150,401	$154,913	$159,560	$164,347	$169,278	$174,356	$179,587	$184,974
5. System Expenses	3.0% per year	$2,387,351	$268,698	$276,759	$285,062	$293,614	$302,422	$311,495	$320,840	$330,465	$340,379	$350,591
Total, Operating Expenses		**$14,349,384**	**$1,615,036**	**$1,663,487**	**$1,713,392**	**$1,764,793**	**$1,817,737**	**$1,872,269**	**$1,928,437**	**$1,986,290**	**$2,045,879**	**$2,107,255**

[1] NPV calculation uses an annual discount rate of 3%, presented in 2022 dollars.

[2] Ridership forecasts provided by CDM Smith. Includes a factor to account for ramp-up adoption of ridership service.

[3] 2022 operating expenses and annual rates of inflation provided by WETA based on analysis of current operations.

APPENDIX B:

Financial Feasibility for Berkeley Routes

Appendix B, Table 1 *Base Scenario*
Berkeley - San Francisco (Weekday) Ferry Operating Costs and Farebox Revenues
Berkeley Ferry Feasibility Study; EPS #211054

Item	Assumptions	10-Year Net Present Value [1]	Year 1 2026	Year 2 2027	Year 3 2028	Year 4 2029	Year 5 2030	Year 6 2031	Year 7 2032	Year 8 2033	Year 9 2034	Year 10 2035	Years 1 - 10 10-Year Total
Service Assumptions													
AM Trips (Peak Direction/ Reverse)	8/6												
PM Trips (Peak Direction/ Reverse)	6/8												
Trip Time (Minutes)	25												
Total Daily Crews	4												
Number of Vessels	2												
Total Annual Operating Expenses (see Appendix A)		**$50,383,520**	**$5,670,710**	**$5,840,831**	**$6,016,056**	**$6,196,537**	**$6,382,434**	**$6,573,907**	**$6,771,124**	**$6,974,257**	**$7,183,485**	**$7,398,990**	**$65,008,330**
Fare Assumptions													
Base - Average One-Way Ticket Price [2]	3% annual fare increase		$5.58	$5.74	$5.92	$6.09	$6.28	$6.46	$6.66	$6.86	$7.06	$7.28	
Target Ridership													
Required Annual Number of One-Way Trips to Fund Operating Expenses			1,016,944	1,016,944	1,016,944	1,016,944	1,016,944	1,016,944	1,016,944	1,016,944	1,016,944	1,016,944	10,169,443
Ridership													
Daily, Weekday Ridership			955	1,069	1,184	1,301	1,419	1,539	1,661	1,784	1,909	2,036	14,858
Annual Ridership (Assumes 255 Days of Service per Year) [3]			243,507	272,496	301,887	331,684	361,891	392,513	423,554	455,019	486,911	519,236	3,788,696
Annual Fare Revenue		**$18,770,729**	$1,357,847	$1,565,082	$1,785,906	$2,021,045	$2,271,260	$2,537,350	$2,820,151	$3,120,541	$3,439,439	$3,777,809	$24,696,433
Farebox Recovery Percentage		37%	24%	27%	30%	33%	36%	39%	42%	45%	48%	51%	38%
Operating Expense Gap (Variance from Estimated Operating Expenses)													
Amount		**$31,612,791**	$4,312,862	$4,275,748	$4,230,149	$4,175,492	$4,111,173	$4,036,556	$3,950,972	$3,853,716	$3,744,046	$3,621,180	$40,311,897
Percent		63%	76%	73%	70%	67%	64%	61%	58%	55%	52%	49%	62%

[1] NPV calculation uses an annual discount rate of 3% and is presented in 2022 dollars.
[2] Average one-way fares assume "average" fares weighted by ridership, thereby accounting for discounted fares for seniors, youth, etc. Fares are escalated by 3% per year consistent with WETA's adopted fare structure policies.
[3] The annual estimate assumes 255 days of service per year, consistent with WETA's total days of operation in FY2019.

Sources: CDM Smith; WETA; Economic & Planning Systems, Inc.

Appendix B, Table 2 *Pandemic Recovery Scenario*
Berkeley - San Francisco (Weekday) Ferry Operating Costs and Farebox Revenues
Berkeley Ferry Feasibility Study; EPS #211054

Item	Assumptions	10-Year Net Present Value [1]	Year 1 2026	Year 2 2027	Year 3 2028	Year 4 2029	Year 5 2030	Year 6 2031	Year 7 2032	Year 8 2033	Year 9 2034	Year 10 2035	Years 1 - 10 10-Year Total
Service Assumptions													
AM Trips (Peak Direction/ Reverse)	8/6												
PM Trips (Peak Direction/ Reverse)	6/8												
Trip Time (Minutes)	25												
Total Daily Crews	4												
Number of Vessels	2												
Total Annual Operating Expenses (see Appendix A)		**$50,383,520**	**$5,670,710**	**$5,840,831**	**$6,016,056**	**$6,196,537**	**$6,382,434**	**$6,573,907**	**$6,771,124**	**$6,974,257**	**$7,183,485**	**$7,398,990**	**$65,008,330**
Fare Assumptions													
Alternative - Average One-Way Ticket Price [2]	3% annual fare increase		$5.17	$5.32	$5.48	$5.65	$5.81	$5.99	$6.17	$6.35	$6.54	$6.74	
Target Ridership													
Required Annual Number of One-Way Trips to Fund Operating Expenses			1,097,680	1,097,680	1,097,680	1,097,680	1,097,680	1,097,680	1,097,680	1,097,680	1,097,680	1,097,680	10,976,802
Ridership													
Daily, Weekday Ridership			971	1,087	1,204	1,323	1,443	1,565	1,689	1,815	1,942	2,071	15,109
Annual Ridership (Assumes 255 Days of Service per Year) [3]			247,626	277,106	306,994	337,295	368,013	399,153	430,719	462,716	495,148	528,020	3,852,789
Annual Fare Revenue		**$17,684,302**	$1,279,257	$1,474,497	$1,682,540	$1,904,070	$2,139,803	$2,390,491	$2,656,924	$2,939,928	$3,240,369	$3,559,154	$23,267,034
Farebox Recovery Percentage		35%	23%	25%	28%	31%	34%	36%	39%	42%	45%	48%	36%
Operating Expense Gap (Variance from Estimated Operating Expenses)													
Amount		**$32,699,218**	$4,391,453	$4,366,334	$4,333,516	$4,292,468	$4,242,631	$4,183,415	$4,114,199	$4,034,329	$3,943,116	$3,839,835	$41,741,297
Percent		65%	77%	75%	72%	69%	66%	64%	61%	58%	55%	52%	64%

[1] NPV calculation uses an annual discount rate of 3% and is presented in 2022 dollars.
[2] Average one-way fares assume "average" fares weighted by ridership, thereby accounting for discounted fares for seniors, youth, etc. Fares are escalated by 3% per year consistent with WETA's adopted fare structure policies.
[3] The annual estimate assumes 255 days of service per year, consistent with WETA's total days of operation in FY2019.

Sources: CDM Smith; WETA; Economic & Planning Systems, Inc.

Appendix B, Table 3 *Base Scenario*
Berkeley - San Francisco (Weekend) Ferry Operating Costs and Farebox Revenues
Berkeley Ferry Feasibility Study; EPS #211054

Item	Assumptions	10-Year Net Present Value [1]	Year 1 2026	Year 2 2027	Year 3 2028	Year 4 2029	Year 5 2030	Year 6 2031	Year 7 2032	Year 8 2033	Year 9 2034	Year 10 2035	Years 1 - 10 10-Year Total
Service Assumptions													
AM Trips (Peak Direction/ Reverse)	3/2												
PM Trips (Peak Direction/ Reverse)	4/5												
Trip Time (Minutes)	25												
Total Daily Crews	2												
Number of Vessels	1												
Total Annual Operating Expenses (see Appendix A)		**$9,879,122**	**$1,111,904**	**$1,145,261**	**$1,179,619**	**$1,215,007**	**$1,251,458**	**$1,289,001**	**$1,327,671**	**$1,367,501**	**$1,408,527**	**$1,450,782**	**$12,746,731**
Fare Assumptions													
Base - Average One-Way Ticket Price [2]	3% annual fare increase		$5.58	$5.74	$5.92	$6.09	$6.28	$6.46	$6.66	$6.86	$7.06	$7.28	
Target Ridership													
Required Annual Number of One-Way Trips to Fund Operating Expenses			199,401	199,401	199,401	199,401	199,401	199,401	199,401	199,401	199,401	199,401	1,994,008
Ridership													
Daily, Weekday Ridership			684	765	847	931	1,016	1,102	1,189	1,277	1,367	1,457	10,634
Annual Ridership (Assumes 100 Days of Service per Year) [3]			68,352	76,488	84,737	93,100	101,577	110,170	118,881	127,711	136,660	145,731	1,063,407
Annual Fare Revenue		**$5,268,548**	$381,148	$439,312	$501,289	$567,283	$637,506	$712,182	$791,548	$875,847	$965,339	$1,060,293	$6,931,746
Farebox Recovery Percentage		53%	34%	38%	42%	47%	51%	55%	60%	64%	69%	73%	54%
Operating Expense Gap (Variance from Estimated Operating Expenses)													
Amount		**$4,610,573**	$730,756	$705,949	$678,330	$647,725	$613,952	$576,819	$536,124	$491,654	$443,188	$390,490	$5,814,986
Percent		47%	66%	62%	58%	53%	49%	45%	40%	36%	31%	27%	46%

[1] NPV calculation uses an annual discount rate of 3% and is presented in 2022 dollars.
[2] Average one-way fares assume "average" fares weighted by ridership, thereby accounting for discounted fares for seniors, youth, etc. Fares are escalated by 3% per year consistent with WETA's adopted fare structure policies.
[3] The annual estimate assumes 255 days of service per year, consistent with WETA's total days of operation in FY2019.

Sources: CDM Smith; WETA; Economic & Planning Systems, Inc.

Appendix B, Table 4 *Pandemic Recovery Scenario*
Berkeley - San Francisco (Weekend) Ferry Operating Costs and Farebox Revenues
Berkeley Ferry Feasibility Study; EPS #211054

Item	Assumptions	10-Year Net Present Value [1]	Year 1 2026	Year 2 2027	Year 3 2028	Year 4 2029	Year 5 2030	Year 6 2031	Year 7 2032	Year 8 2033	Year 9 2034	Year 10 2035	Years 1 - 10 10-Year Total
Service Assumptions													
AM Trips (Peak Direction/ Reverse)	3/2												
PM Trips (Peak Direction/ Reverse)	4/5												
Trip Time (Minutes)	25												
Total Daily Crews	2												
Number of Vessels	1												
Total Annual Operating Expenses (see Appendix A)		**$9,879,122**	**$1,111,904**	**$1,145,261**	**$1,179,619**	**$1,215,007**	**$1,251,458**	**$1,289,001**	**$1,327,671**	**$1,367,501**	**$1,408,527**	**$1,450,782**	**$12,746,731**
Fare Assumptions													
Alternative - Average One-Way Ticket Price [2]	3% annual fare increase		$5.17	$5.32	$5.48	$5.65	$5.81	$5.99	$6.17	$6.35	$6.54	$6.74	
Target Ridership													
Required Annual Number of One-Way Trips to Fund Operating Expenses			215,231	215,231	215,231	215,231	215,231	215,231	215,231	215,231	215,231	215,231	2,152,314
Ridership													
Daily, Weekday Ridership			695	778	862	947	1,033	1,120	1,209	1,299	1,390	1,482	10,814
Annual Ridership (Assumes 100 Days of Service per Year) [3]	100		69,509	77,782	86,171	94,674	103,295	112,034	120,892	129,871	138,972	148,196	1,081,397
Annual Fare Revenue		**$4,963,611**	$359,087	$413,885	$472,275	$534,449	$600,608	$670,962	$745,734	$825,154	$909,466	$998,924	$6,530,545
Farebox Recovery Percentage		50%	32%	36%	40%	44%	48%	52%	56%	60%	65%	69%	51%
Operating Expense Gap (Variance from Estimated Operating Expenses)													
Amount		**$4,915,510**	$752,817	$731,376	$707,344	$680,558	$650,850	$618,039	$581,938	$542,347	$499,060	$451,858	$6,216,187
Percent		50%	68%	64%	60%	56%	52%	48%	44%	40%	35%	31%	49%

[1] NPV calculation uses an annual discount rate of 3% and is presented in 2022 dollars.
[2] Average one-way fares assume "average" fares weighted by ridership, thereby accounting for discounted fares for seniors, youth, etc. Fares are escalated by 3% per year consistent with WETA's adopted fare structure policies.
[3] The annual estimate assumes 255 days of service per year, consistent with WETA's total days of operation in FY2019.

Sources: CDM Smith; WETA; Economic & Planning Systems, Inc.

Appendix B, Table 5 *Base Scenario*
Berkeley - Larkspur (Weekend) Ferry Operating Costs and Farebox Revenues
Berkeley Ferry Feasibility Study; EPS #211054

Item	Assumptions	10-Year Net Present Value [1]	Year 1 2026	Year 2 2027	Year 3 2028	Year 4 2029	Year 5 2030	Year 6 2031	Year 7 2032	Year 8 2033	Year 9 2034	Year 10 2035	Years 1 - 10 10-Year Total
Service Assumptions													
AM Trips (Peak Direction/ Reverse)	2/2												
PM Trips (Peak Direction/ Reverse)	4/4												
Trip Time (Minutes)	35												
Total Daily Crews	2												
Number of Vessels	1												
Total Annual Operating Expenses (see Appendix A)		**$14,349,384**	**$1,615,036**	**$1,663,487**	**$1,713,392**	**$1,764,793**	**$1,817,737**	**$1,872,269**	**$1,928,437**	**$1,986,290**	**$2,045,879**	**$2,107,255**	**$18,514,576**
Fare Assumptions													
Base - Average One-Way Ticket Price [2]	3% annual fare increase		$12.72	$13.10	$13.49	$13.90	$14.31	$14.74	$15.18	$15.64	$16.11	$16.59	
Target Ridership													
Required Annual Number of One-Way Trips to Fund Operating Expenses			127,002	127,002	127,002	127,002	127,002	127,002	127,002	127,002	127,002	127,002	1,270,016
Ridership													
Daily, Weekday Ridership			258	289	320	352	385	418	452	486	521	556	4,037
Annual Ridership (Assumes 100 Days of Service per Year) [3]	100		25,771	28,877	32,034	35,242	38,502	41,815	45,181	48,601	52,076	55,606	403,704
Annual Fare Revenue		**$4,561,284**	$327,724	$378,238	$432,172	$489,715	$551,067	$616,436	$686,041	$760,112	$838,891	$922,631	$6,003,029
Farebox Recovery Percentage		32%	20%	23%	25%	28%	30%	33%	36%	38%	41%	44%	32%
Operating Expense Gap (Variance from Estimated Operating Expenses)													
Amount		**$9,788,100**	$1,287,312	$1,285,249	$1,281,220	$1,275,078	$1,266,670	$1,255,833	$1,242,396	$1,226,178	$1,206,988	$1,184,625	$12,511,547
Percent		68%	80%	77%	75%	72%	70%	67%	64%	62%	59%	56%	68%

[1] NPV calculation uses an annual discount rate of 3% and is presented in 2022 dollars.
[2] Average one-way fares assume "average" fares weighted by ridership, thereby accounting for discounted fares for seniors, youth, etc. Fares are escalated by 3% per year consistent with WETA's adopted fare structure policies.
[3] The annual estimate assumes 255 days of service per year, consistent with WETA's total days of operation in FY2019.

Sources: CDM Smith; WETA; Economic & Planning Systems, Inc.

Appendix B, Table 6
Berkeley - Larkspur (Weekend) Ferry Operating Costs and Farebox Revenues
Berkeley Ferry Feasibility Study; EPS #211054

Pandemic Recovery Scenario

Item	Assumptions	10-Year Net Present Value [1]	2022	Year 1 2026	Year 2 2027	Year 3 2028	Year 4 2029	Year 5 2030	Year 6 2031	Year 7 2032	Year 8 2033	Year 9 2034	Year 10 2035	Years 1 - 10 10-Year Total
Service Assumptions														
AM Trips (Peak Direction/ Reverse)	2/2													
PM Trips (Peak Direction/ Reverse)	4/4													
Trip Time (Minutes)	35													
Total Daily Crews	2													
Number of Vessels	1													
Total Annual Operating Expenses (see Appendix A)		**$14,349,384**	**$1,434,938**	**$1,615,036**	**$1,663,487**	**$1,713,392**	**$1,764,793**	**$1,817,737**	**$1,872,269**	**$1,928,437**	**$1,986,290**	**$2,045,879**	**$2,107,255**	**$18,514,576**
Fare Assumptions														
Alternative - Average One-Way Ticket Price [2]	3% annual fare increase		$9.58	$10.78	$11.11	$11.44	$11.78	$12.14	$12.50	$12.87	$13.26	$13.66	$14.07	
Target Ridership														
Required Annual Number of One-Way Trips to Fund Operating Expenses			149,785	149,785	149,785	149,785	149,785	149,785	149,785	149,785	149,785	149,785	149,785	1,497,848
Ridership														
Daily, Weekday Ridership				267	299	332	365	398	433	468	503	539	576	4,178
Annual Ridership (Assumes 100 Days of Service per Year) [3]	100			26,673	29,887	33,155	36,475	39,849	43,278	46,761	50,301	53,898	57,551	417,827
Annual Fare Revenue		**$4,002,786**	$0	$287,597	$331,925	$379,255	$429,753	$483,593	$540,958	$602,040	$667,042	$736,175	$809,661	$5,267,999
Farebox Recovery Percentage		28%		18%	20%	22%	24%	27%	29%	31%	34%	36%	38%	28%
Operating Expense Gap (Variance from Estimated Operating Expenses)														
Amount		**$10,346,598**		$1,327,439	$1,331,562	$1,334,136	$1,335,040	$1,334,144	$1,331,311	$1,326,397	$1,319,249	$1,309,704	$1,297,594	$13,246,577
Percent		72%		82%	80%	78%	76%	73%	71%	69%	66%	64%	62%	72%

[1] NPV calculation uses an annual discount rate of 3% and is presented in 2022 dollars.
[2] Average one-way fares assume "average" fares weighted by ridership, thereby accounting for discounted fares for seniors, youth, etc. Fares are escalated by 3% per year consistent with WETA's adopted fare structure policies.
[3] The annual estimate assumes 255 days of service per year, consistent with WETA's total days of operation in FY2019.

Sources: CDM Smith; WETA; Economic & Planning Systems, Inc.

SAN FRANCISCO BAY AREA WATER EMERGENCY TRANSPORTATION AUTHORITY

RESOLUTION NO. 2022-15

RECEIVE BERKELEY FERRY SERVICE BUSINESS PLAN

WHEREAS, the Berkeley Ferry Service is identified in WETA's 2016 Strategic Plan, and was endorsed by the multi-agency Core Capacity Transit Study led by the Metropolitan Transportation Commission as a key medium term regional project for enhancing transit capacity in the Bay Bridge corridor, and included in the final Plan Bay Area 2050 approved by MTC in 2021;

WHEREAS, in July 2020, WETA began work with consultants CDM Smith and Economic and Planning Services (EPS) to draft a Berkeley Ferry Service Business Plan, to supplement the Pier/Ferry Study prepared by the City of Berkeley in partnership with WETA to consider the feasibility of a joint development project to build a dual-use ferry terminal and public access pier;

WHEREAS, the Berkeley Ferry Service Business Plan evaluates several operational and financial components of the proposed project, as summarized in the staff report, including consideration of ridership forecasts, service plan, terminal access, operating revenues and costs, equity considerations, economic development opportunities, capital revenues and costs, and feasibility assessment, to guide future planning, investment and funding efforts; and

WHEREAS WETA staff recommends that the Board receive the Berkeley Ferry Service Business Plan as presented during its regular meeting of April 7, 2022; now, therefore, be it

RESOLVED, that the Board of Directors hereby receives the initial version of the Berkeley Ferry Service Business Plan presented by staff, with the understanding that major updates to the Plan will be presented to the Board and key project stakeholders, as project assumptions change, or new information becomes available relevant to the project.

CERTIFICATION

The undersigned, Board Secretary, does hereby certify that the foregoing is a full, true and correct copy of a resolution duly and regularly adopted at a meeting of the San Francisco Bay Area Water Emergency Transportation Authority held on April 7, 2022.

YEA:
NAY:
ABSTAIN:
ABSENT:

/s/ Board Secretary
2022-15

END

AGENDA ITEM 9
MEETING: April 7, 2021

MEMORANDUM

TO: **Board Members**

FROM: **Seamus Murphy, Executive Director**
Kevin Connolly, Planning & Development Manager
Tim Hanners, Operations & Engineering Manager
Erin McGrath, Chief Financial Officer

SUBJECT: **Sea Change Hydrogen-powered Vessel Demonstration Project**

Recommendation
There is no recommendation with this information item.

Staff is seeking input from the Board for a future action item that will seek authorization to implement a pilot or demonstration service, possibly outside of the traditional WETA service delivery model. Staff is continuing to explore possible funding sources for such a service. The future action will be informed by Board input and refinement of funding opportunities.

Background
SWITCH Maritime is a private equity firm based in New York that builds and leases zero-emission vessels, in an effort to ultimately replace carbon-intensive maritime fleets. The Sea Change is the first vessel funded by SWITCH. Construction of the vessel was recently completed and it is being prepared for transit to the Bay Area. WETA staff has been in conversation with SWITCH officials, exploring the possibility of deploying Sea Change in WETA service.

The Sea Change vessel recently completed sea trials in the Seattle area, the last step in the construction process. The vessel is expected to be delivered to the Bay Area by the end of April. Sea Change is powered by hydrogen fuel cell batteries, a proven technology in other modes but untested for ferry vessels in the United States. Sea Change was funded through private equity financing along with public sources such as the Bay Area Air Quality Management District (BAAQMD), the California Air Resources Board (CARB) and loan guarantees from the Nor-Cal Financial Development Corporation. As a condition of its funding, the vessel must provide data for its first three months of operations.

While the Sea Change vessel was designed for passenger ferry operations, passenger capacity and operational constraints make it challenging to deploy in many parts of the WETA system.

- **Limited passenger capacity of 70** – Virtually all of WETA's services even in today's environment with ridership at 50 percent of pre-pandemic levels require per trip capacity above 150 passengers. The only exception is the existing South San Francisco service from the east bay.
- **Maximum speed of 11 knots** – WETA services require a minimum speed of 28 knots, the typical speed in central bay services. In Vallejo, vessels ideally have a minimum speed of 34 knots. Sea Change travel times would be up to twice as long if it were deployed on an existing service in the WETA network.

- **8-hour recharging requirement** – WETA vessels typically operate for 16-hour days, many with minimal downtime between crew shifts. While it would be possible to operate Sea Change in only one of a vessel's required two daily shifts, this places significant pressure on WETA's spare capacity.
- **Unproven technology –** Sea Change is a new vessel operating with a new propulsion system, creating a higher risk of service outages due to unforeseen mechanical or operational disruptions.
- **Cost –** Sea Change is expensive to deploy in WETA service due to its lease requirement. SWITCH is offering Sea Change under a "bare boat" lease that must produce a return for private investors. To place Sea Change into WETA operations, Blue & Gold crews will man the vessel and must be trained on a new, unique operational environment. These factors combine to create a much higher expense than a comparable service that utilized an existing WETA vessel, or one provided by a private operator.

Discussion

Despite the challenges in deploying Sea Change into WETA service, staff have worked with SWITCH officials to develop a service concept that would effectively test the technology while also supplementing WETA ferry service. Because the technology is new, service concept options were evaluated through operational and service models. SWITCH officials received a mock service schedule from WETA staff and forecasted the speed, fuel burn and maintenance characteristics to better understand operational costs. WETA staff, in turn, used SWITCH data to refine service schedules to develop an efficient and effective service proposal.

The service concept eventually developed by WETA staff proposes to operate the SWITCH vessel in afternoon service as a "short-hop" connection between Downtown San Francisco Ferry Building and Pier 41. The service would be deployed on both weekends and weekdays during the summer months. Service to special events at either Chase Center or Oracle Park would also be incorporated into weeknight operations, providing an option for people heading to events from Downtown San Francisco.

This service would supplement existing trips between points on the San Francisco waterfront to meet travel demands and avoid service disruptions during WETA's peak season. Service along the San Francisco waterfront does not require top speeds and is generally patronized by recreational passengers less concerned with travel time.

The total estimated expense for a six-month demonstration project utilizing Sea Change for the service described above is $1,689,060. This estimate assumes $417,400 for hydrogen fuel. Given the volatility of all fuel prices, this assumption is subject to change. The expense is summarized in Table 1.0 below.

Table 1.0
Summary of Expenses, Sea Change Vessel Demonstration Project

Sea Change Bareboat Lease	$785,000
Maintenance	$37,500
Berthing	$8,700
Fueling	$417,400
Blue & Gold Crew	$440,460
Total Expenses	$1,689,060

Due to ongoing pandemic impacts, fare revenue is unknown and staff is not prepared to estimate ridership or fare revenues given the uncertainties and schedule. The proposed fare will be WETA's standard Clipper short-hop fare of $1.00.

Next Steps

Staff will continue working with SWITCH to develop the terms and conditions under which a demonstration project could take place in WETA service and will continue working to develop certainty around the funding options. Staff will bring back a proposed program for Board approval at a future Board meeting.

Fiscal Impact

The cost of the service is currently projected to be $1,689,060, as stated above. Staff is still evaluating the cost estimates and there may be changes to those estimates prior to any action authorizing it. The fiscal impact on each Fiscal Year would depend on the start date for the service but would likely be split between the current Fiscal Year 2021-22 and next year, Fiscal Year 2022-23. Staff has reached out to several funding sources to support this effort, including MTC, private sector partners, and state and regional air quality, energy, and economic development agencies. The result of these efforts is still pending. Without additional outside funding, staff anticipates working to ensure this expense is eligible for FTA COVID-relief funds, which would reduce the amount of those funds available for regular service.

END

AGENDA ITEM 10
MEETING: April 7, 2022

MEMORANDUM

TO: **Board Members**

FROM: **Seamus Murphy, Executive Director**
Kevin Connolly, Planning & Development Manager
Michael Gougherty, Principal Planner

SUBJECT: **WETA 2050 Service Vision & Business Plan Work Plan**

Recommendation
There is no action requested by this informational item.

Background/Discussion
The WETA 2050 Service Vision & Business Plan is being developed to define a long-term service vision based on input from agency stakeholders, the public, and other parties with an interest in the future of the agency. Ultimately, the Business Plan will put forth a comprehensive set of implementation strategies and policies for achieving a service vision that is vetted by stakeholders and presented to the Board for consideration. The description below describes the progress made to date on the Business Plan (Phase 0 & Phase 1), as well as work anticipated to occur in subsequent Phase 2 and Phase 3 work. The work plan has been developed based on feedback from the Ad-hoc Board Advisory Committee and input from the consultant team that will support the work.

Notes from Phase 0 & 1 have been synthesized and summarized in a Summary Report dated December 9, 2021 that is available at: https://weta.sanfranciscobayferry.com/2050-service-vision.

Phase 0: Stakeholder Discovery - Complete

The discovery phase was the first step in defining a 2050 Service Vision for WETA and involved identifying key stakeholders, especially historically underrepresented groups. WETA's facilitator (CivicMakers) led the discovery phase and gathered initial ideas for the 2050 Service Vision through one-on-one stakeholder interviews (15), focus groups (5), and an online questionnaire (77 responses). In total, over 100 individual stakeholders were engaged throughout the process.

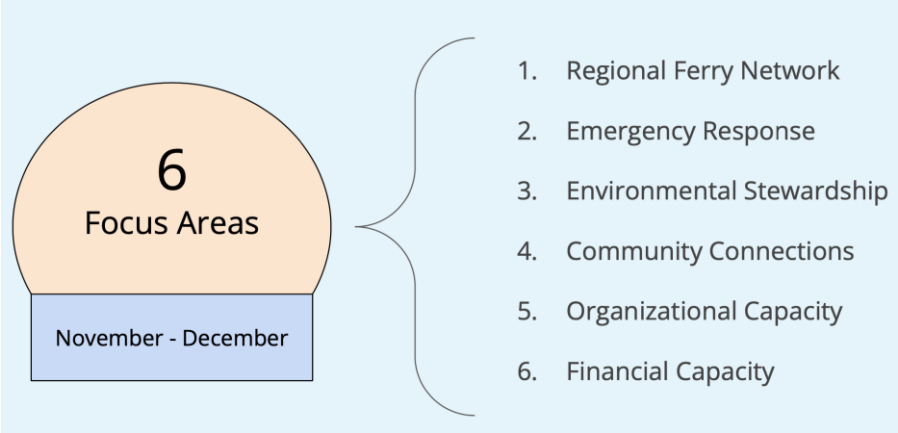
Phase 1: Stakeholder Workshop - Complete

A virtual workshop was hosted in October 2021 that harnessed relevant insights from Phase 0 interviews, focus groups, and an online survey of key staff, partners and community representatives. During the workshop, participants took part in four breakout group exercises designed to move from more general, aspirational visioning statements to a more targeted exploration of the resources, research and considerations needed to achieve their vision. CivicMakers facilitators used Google Jamboards, written notes, and/or the Otter.ai transcription service to capture participant comments and ideas from the three-hour workshop, as described in the Summary Report.

Phase 2: Service Vision Development – March 2022 through January 2023

This phase will incorporate the feedback received from Phase 0 & 1, as captured in the six Focus Areas that were proposed by staff and presented to the WETA Board in December 2021, to ultimately develop a recommended 2050 Service Vision.

Figure 1: WETA 2050 Service Vision & Business Plan Focus Areas



In lieu of a traditional alternatives analysis, the WETA business plan effort will undertake a scenario and resiliency analysis that ultimately identifies a preferred service vision after careful consideration of a range of future options. This analysis will consider up to four "Service Concepts" that will be defined by external factors that capture the range of uncertainties inherent in long range planning. Potential factors include permanent COVID-related shifts in commute patterns, increased land-use density along the San Francisco Bay shoreline, terminal access & constraints, sea-level rise, and other potential themes identified by WETA stakeholders. The analysis will also identify up to four "Network Concepts" that will be paired with the Service Concepts to characterize internal factors such as routes, frequency, service delivery approach, fares, or other themes identified by WETA stakeholders. Each combination of network and service concepts would form a potential scenario to evaluate, as shown in example form below:

Figure 2: Example Scenario & Resiliency Analysis Matrix

Network Concept	Service Concept/Future			
	Substantial Growth	Business As Usual	New Normal	Backbone Transit
Core	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Plan Bay Area Expansion	Scenario 5	Scenario 6	Scenario 7	Scenario 8
Incremental Expansion	Scenario 9	Scenario 10	Scenario 11	Scenario 12
Full Buildout	Scenario 13	Scenario 14	Scenario 15	Scenario 16

After a matrix of future network and service concepts is finalized, WETA's consultant team will generate ridership estimates for as many as 16 distinct scenarios. Each scenario will be

analyzed based on the six Focus Areas identified in Phase 1 of the Business Plan effort. Additional consultants will be engaged to evaluate other Focus Areas such as Naval Architecture, Emergency Response, Financial, and Organizational Management. The Phase 2 effort will also be facilitated by CivicMakers to continue the stakeholder dialogue that was initiated in the fall. Based on the results of the evaluation, WETA will develop a preferred service vision that blends a set of routes and operating characteristics that optimize performance against the Focus Area descriptions and/or is most resilient. The following describes subtasks of Phase 2 in greater detail:

Scenario/Network Development: Engage stakeholders to develop Service Concept and Network Concept options for the scenario and resiliency analysis. The consultant team will assist in pre-screening options that have potentially fatal environmental flaws (Focus Area 3). Stakeholders will have multiple options for providing input during this phase of the effort, including a digital engagement platform, transportation public agency partner meetings, a business advisory group, a community advisory group plus one-on-one meetings with select or hard-to-reach stakeholders.

Scenario/Network Definition: Present a proposed matrix of scenarios based on selected Service Concepts and Network Concepts. The results of this subtask will be reviewed during the first WETA Board Workshop anticipated planned for July 2022. The matrix will also be shared with the business and community advisory groups, as well as transportation public agency partners.

Scenario/Network Analysis: Present initial evaluations for each scenario, focusing on transportation results, including ridership forecasts (Focus Area 1) and Community Connections (Focus Area 4). This task will seek out input from targeted stakeholders and a digital engagement platform with support from WETA's facilitator.

Independent Focus Areas: Staff and its technical consultant team will undertake in depth work to develop analyses of Emergency Response (Focus Area 2), Organizational (Focus Area 5), and Service and Enhancement (Focus Area 1) policies. This task will seek out input from targeted stakeholders and a digital engagement platform with support from WETA's facilitator.

Vessel, Climate Strategy: Staff and its technical consultant team will undertake in depth work to develop analysis of Fleet Options and Plans (Focus Area 3). This task will seek out input from targeted stakeholders and a digital engagement platform with support from WETA's facilitator.

Integration: The Scenario/Network Analysis, Independent Focus Areas, and Vessel/Climate Strategy will be integrated with the rest of the Phase 2 work to ultimately recommend a preferred 2050 WETA Service Vision. A full financial analysis (Focus Area 6) will be performed and the results of this subtask will be presented as part of a second workshop with the WETA Board planned for November 2022.

Phase 3 – Business Plan Development – January 2023 through June 2023

Working with the preferred 2050 Service Vision identified in Phase 2, WETA will draft a Business Plan detailing short, medium, and long-term strategies for implementing the Service Vision. A third WETA Board workshop will be held prior to release of the draft Plan.

Following a final round of stakeholder outreach, a final version of the WETA 2050 Service Vision & Business Plan will be presented to the Board for adoption.

Fiscal Impact

There is no direct fiscal impact associated with this informational item. The total budget required for developing the WETA 2050 Service Vision & Business Plan is $850,000. The FY 2022 Budget includes $200,000 for this project, of which approximately $65,000 has been expended to date. Staff anticipates spending the remaining budget available for FY 2022 to proceed with the proposed work plan. An additional amount of $650,000 will be required to support completion of the proposed work plan, which staff anticipates requesting as part of the FY 2023 Planning & Administration Budget.

END