RESEARCH REPORT

Institute of Transportation Studies | UNIVERSITY OF CALIFORNIA

Transit, Belabored: Issues and Futures for California's Frontline Transit Workforce

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16. Abstract
Frontline transit work can be satisfying and secure—but also stressful or unsafe. Many agencies across the state lacked transit operators in the wake of the pandemic, delaying service restoration. Interviews, wage data, and other sources demonstrate that these shortages were due to both compensation issues and longstanding issues of workforce safety, culture, and practices. Wages have stagnated over the past decade, though California operators earn more than their area's median incomes, trucking employees, and comparable transit jobs in other states. Workers have made notable gains in recent contract negotiations. Nonetheless, working conditions, which worsened during the pandemic, have driven away existing workers and potential recruits. While health and retirement benefits represent a significant perk of the job, operators face slow wage and seniority progression, two-tiered pensions, high housing costs, grueling schedules and overtime, and security and discipline concerns, atop daunting initial barriers to hiring. Raises alone are necessary but not sufficient: pay is generally lower than necessary to attract and retain needed employees—and recent increases in pay and hardships in other aspects of the job point to the importance of factors beyond wages alone. Agencies, advocates, and unions will need to rethink and expand transit operations funding, raise wages, and implement a variety of reforms: reducing hiring hurdles, expanding outreach, making scheduling fairer, improving facilities and support offerings, removing enforcement duties from operators, and creating career pathways for advancement. Ultimately, the pandemic underscored that transit workforce issues are transit rider issues.

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The California Resilient and Innovative Mobility Initiative

The California Resilient and Innovative Mobility Initiative (RIMI) serves as a living laboratory—bringing together university experts from across the four UC ITS campuses, policymakers, public agencies, industry stakeholders, and community leaders—to inform the state transportation system's immediate COVID-19 response and recovery needs, while establishing a long-term vision and pathway for directing innovative mobility to develop sustainable and resilient transportation in California. RIMI is organized around three core research pillars: Carbon Neutral Transportation, Emerging Transportation Technology, and Public Transit and Shared Mobility. Equity and high-road jobs serve as cross-cutting themes that are integrated across the three pillars.

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The UCLA Institute of Transportation Studies acknowledges the Gabrielino/Tongva peoples as the traditional land caretakers of Tovaangar (the Los Angeles basin and So. Channel Islands). As a land grant institution, we pay our respects to the Honuukvetam (Ancestors), 'Ahiihirom (Elders) and 'Eyoohiinkem (our relatives/relations) past, present and emerging.

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Introduction

Frontline Transit Work

Being a public transit operator is a complex job that requires more than just driving a vehicle. Operators must collect fares, answer questions, give directions, mind the safety of their passengers, help passengers with disabilities, keep order, de-escalate altercations, serve in place of a police officer or social worker when one is not available, monitor their surroundings while in motion, navigate stressful traffic, communicate with supervisors, make detours as needed, and much, much more. Jamaine Gibson, the Amalgamated Transit Union's (ATU) national Director of Apprenticeships and Workforce Development, characterized the work:

> *It is one of the most scary feelings in the world to operate a bus. Because if you think about it, you're driving a vehicle, looking this way, and behind you [are] people you'd never know....You never know who you're picking up.*

For all that, the work can be rewarding, satisfying, and secure. Frontline transit work offers a public service role with high unionization rates, a clear career progression, and the opportunity to see many places and interact with and help people. As one operator put it: "The benefits and the retirement and possibility for career advancement attracted me—and just to, for once in my life, have a job where people can't just decide to fire me on a whim." Because of both the stresses and benefits of the job, "the division becomes their family," explained Conan Cheung, Chief Operations Officer (COO) at Los Angeles Metro.

For some, transit operator and mechanic jobs also offer competitive pay for the work and qualifications. "For a blue-collar position, where you don't have to have a college education...the level of compensation that you're able to achieve—I do think it's pretty good," said one operator. But with working conditions difficult—especially since the pandemic—and inflation-adjusted median pay stagnant or even slightly declining, others have left the industry for sectors more lucrative or simply less demanding. Still others potential recruits have chosen not to start a career in transit in the first place.

It is this tension we explore in this report. We focus on transit operators[1]—the people who drive public transport buses and trains and shepherd their riders—but also touch on other frontline transit staff such as mechanics. We delve into trends in employee pay, workforce issues before and since the onset of the Coronavirus Disease 2019 (COVID-19) pandemic, and the shortage of workers that hit transit agencies in 2021 and 2022. We draw on quantitative and qualitative data, including wage data by agency and sector, contracts and agency documents, and interviews with union leaders, agency managers, and operators themselves.

1. Excluding paratransit operators.

Transit and the Operator Shortage

Californians made nearly 1.3 billion annual trips on public transit just before the pandemic (FTA, 2022). Transit provides mobility for a wide range of people and trip types, especially for low-income travelers across the state and for travelers of all incomes in dense business and housing districts (Garrett and Taylor, 1999 and Taylor and Morris, 2015). While ridership dropped precipitously at the start of the pandemic and has recovered sluggishly, it proved invaluable to the functioning of major metropolitan areas by carrying essential workers to in-person work (TransitCenter, 2020). All of these trips, pre-pandemic and since, rely on frontline transit workers. In particular, with only a few exceptions in North America, human operators are needed to drive transit vehicles, of all modes.

For years prior to but especially since the pandemic, needed frontline roles in the transit industry have sat vacant. More than nine in ten respondents reported shortages and/or difficulties hiring, among U.S. agencies in four surveys conducted in late 2021 or into 2022 (Wasserman et al., 2023; Dickens, 2022; Swiftly, 2023; and Foursquare Integrated Transportation Planning and EBP, 2022). In a survey by the UCLA Institute of Transportation Studies, 70 percent of respondents had “great difficulty” filling open positions (Wasserman et al., 2023). Three in ten respondents to Swiftly’s survey disclosed *severe* understaffing, with at least one third of positions vacant, and 83 percent expected shortages to continue for at least a year (Swiftly, 2023). The pandemic made problems with these jobs, such as scheduling, safety, and health, worse; led operators to revalue existing problems; and introduced new ones.

This crisis, both real and as perceived by decision-makers, the public, and workers themselves, has hindered transit operations. Vacancies have forced agencies to cut service or stalled planned service restoration (Wasserman et al., 2022a, 2023), leaving riders with less reliable, less frequent, and/or less extensive mobility options—or for some, no usable transit options at all. While shortages have eased at certain agencies in recent months (LA Metro, 2023), chronic issues (and still many vacancies) remain across the state’s transit systems. In this report, we explore not just the causes of such shortages but also wage trends and working conditions in the industry that contribute to shortages and otherwise shape these jobs.

Summary and Organization

In brief, we find that the operator shortage is due to both compensation and longstanding issues of workforce safety, culture, and practices. Transit frontline pay is lower than needed to fill these demanding, skilled, often vacant roles. But simultaneously, improvements won by workers in recent contract negotiations and a deterioration of the on-the-job experience during the pandemic together highlight the importance of ameliorating working conditions beyond pay alone.

This report begins by reviewing qualitative and quantitative data on pay for transit operators. We find, importantly, that wages overall have remained largely flat over the past decade when adjusted for inflation, with slight decreases in the first year of the pandemic on some systems, but vary widely by agency and across the state’s major regions. However, transit operators in California earn significantly more than their area’s median incomes and more than trucking industry jobs. We explore if and how pay and conditions have changed in the past few years and find that workers have made notable new gains in recent contract negotiations.

Next, we discuss major workforce issues in transit, both before and since the start of the pandemic. While health and retirement benefits represent a significant perk of the job, operators in California otherwise face slow wage and seniority progression, a two-tiered pension system, high housing costs, grueling schedules and overtime, and security and discipline concerns, atop high initial barriers to hiring. The pandemic exacerbated many of these issues and raised particular health and safety concerns for transit workers.

We also review data on the labor shortage in transit and how agencies are responding to it. Agencies faced persistent vacancies prior to the pandemic, worsened by hiring and pay freezes and pandemic working conditions. Pressures induced by the pandemic caused many workers to retire early, quit, or leave for work elsewhere. Agencies have since offered bonuses and other incentives, to mixed success.

We close with some reflections on the transit workforce and its future. As the workforce ages, agencies, advocates, and unions will need to rethink and expand transit operating funding, raise wages, and implement a variety of hiring and on-the-job reforms. Ultimately, policymakers’ response to transit workforce issues will heavily influence agencies’ ability to offer high-quality service and the industry’s ability to provide sustainable mobility to people and regions across the state.

Data Sources and Research Methods

Methodology Overview

Transit in California (and, indeed, the U.S.) is highly asymmetric: a few riders take most of the trips, a few systems carry most of the trips, and a few neighborhoods generate most of the trips (Manville, Taylor, and Blumenberg, 2018). On the labor front, a few agencies employ most of the operators as well. For this reason, we devised a sampling methodology that would capture data and perspectives representative of vehicle operators, ridership, and transit agencies, to a good degree each. From the Federal Transit Administration's (FTA) National Transit Database (NTD) (2022), we selected the 15 largest transit agencies in the state based on pre-pandemic boardings (NTD Fiscal Year 2019) and added five additional agencies, selected randomly from all other systems in the state (See **Table 1**). Collectively, these 20 agencies accounted for 86 percent of pre-pandemic boardings and 88 percent of pre-pandemic vehicle operators directly employed by agencies themselves. Because of the variety (and sometimes incompleteness) of the data sources used, different subsets of agencies in the sample appear in different analyses in this report. In figures, we order agencies by their pre-pandemic ridership (See **Table 1**).

Table 1. Sample of California Transit Agencies

Agency	Abbreviation	NTD Fiscal Year 2019 Boardings	All/Some Directly Hired Vehicle Operators?
Los Angeles County Metropolitan Transportation Authority	LA Metro	379,718,121	yes
San Francisco Municipal Transportation Agency	SFMTA	223,338,056	yes
San Francisco Bay Area Rapid Transit District	BART	128,217,031	yes
San Diego Metropolitan Transit System	MTS	85,357,495	yes
Alameda-Contra Costa Transit District	AC Transit	54,067,171	yes
Orange County Transportation Authority	OCTA	40,743,654	yes
Santa Clara Valley Transportation Authority	VTA	36,432,963	yes
Long Beach Transit	LBT	23,248,158	yes

Agency	Abbreviation	NTD Fiscal Year 2019 Boardings	All/Some Directly Hired Vehicle Operators?
Sacramento Regional Transit District	SacRT	19,989,131	yes
City of Los Angeles Department of Transportation	LADOT	19,292,677	no
Peninsula Corridor Joint Powers Board	Caltrain	18,179,876	no
Southern California Regional Rail Authority	Metrolink	12,824,059	no
City of Santa Monica (Big Blue Bus)	BBB	12,567,992	yes
Foothill Transit		12,053,307	no
San Mateo County Transit District	SamTrans	11,342,332	yes
Anaheim Transportation Network	ATN	9,448,810	no
Modesto Area Express[2]	MAX	2,265,448	no
Victor Valley Transit Authority	VVTA	2,240,374	no
Amador Regional Transit System	Amador Transit	65,662	yes
Los Angeles County Department of Public Works, East Valinda Shuttle	LACDPW East Valinda	47,394	no

Data source: FTA, 2022

From this sample, we conducted interviews with staff, operators, union leadership, and rider advocate groups; collected and examined contracts, documents, datasets, and reports; and analyzed quantitative wage data from a number of databases. We explain each of these methods below.

Interviews

To understand the key issues in the transit workforce today, we interviewed a range of stakeholders with a variety of perspectives on the issue. We conducted 19 interviews: seven with agency management staff, six with union leadership, four with vehicle operators, and two with representatives of rider advocate groups. Collectively, these interviews provided information on 10 of the 20 agencies in our sample. We obtained contact information for potential interviewees at or associated with agencies in our sample from industry

2. Merged into the Stanislaus Regional Transit Authority (StanRTA/"the S") in 2021 (StanRTA, n.d.).

group contact lists, online searches, referrals from staff and other interviewees, contacts from previous UCLA Institute of Transportation Studies research projects, and professional contacts of members of the research team. For the agency management and union interviewees, we attempted to reach a contact at every agency in the sample. For the vehicle operators and rider advocates, we approached a more limited set of interviewees, each working at a sample agency or in its service area, respectively, based on referrals/an informal snowball sample from other interviewees and from research team contacts.

Our standard set of interview questions covered working conditions, wages, benefits, hiring and retention, contract negotiations, union/agency relationships, general pain points, and the effects of the pandemic, among other topics. We directed specific questions or follow-up queries, in the interview or by e-mail, to certain interviewees with unique circumstances or to clarify earlier points they or other interviewees made. Interviews lasted around an hour on average and were conducted online via video conferencing software.

Contracts and Vacancy Data

We also obtained collective bargaining agreements and data on operator vacancies, hires, and/or separations from a number of agencies in our sample. These data came in various formats, collected and reported over different time periods. For hiring and separations, we took a 12-month rolling average (6 months before to 5 months after) for agencies that reported monthly data and divided totals by 12 for agencies that reported annual data.

Wage Data

Our primary source of quantitative wage data in this report was the California State Controller's Office (2023), which publishes information on pay for all public employees. The data is available by agency and includes details on position title, total wages, and benefits. Because this dataset provides individual-level wage data, it allows for more detailed analysis than aggregated sources (such as those described below). However, Controller's data is only available for agencies that directly hire operators (as opposed to those that contract out their operations). The online database provides records dating back to 2009, though some agencies are missing data for specific years (agencies are required to submit records, but many are listed as "out of compliance" for certain years).

To supplement the Controller's compensation database, we analyzed data from the Federal Transit Administration's (FTA) National Transit Database (NTD) (2022) and the U.S. Bureau of Labor Statistics (BLS) (2022b) Occupational Employment and Wage Statistics (OEWS). In all cases, we analyzed wage data exclusive of benefits, and all figures are in 2022 dollars (calculated using the Consumer Price Index from the BLS (2022a)).

Finally, we compared the top wages in January 2022 for senior transit operators in the Amalgamated Transit Union, the nation's largest transit union (ATU, 2023a), from a dataset compiled by ATU (2022). The tables include only the highest wages on the pay scale, for all U.S. ATU locals and for a select few locals of other unions.

Controller's Database

Public agencies provide wage data to the Controller's office based on income tax documents issued, meaning the information is a reflection of actual wages paid to all employees throughout the year (California State Controller, 2023). The dataset is not cleaned before publishing except to anonymize the observations, so we took a number of steps to clean and sort the data before analysis. We established the relevant roles in transit operations (generally bus operators and train operators, though each agency uses slightly different titles) for each agency with directly employed operators (11 of the 20 sample agencies). Observations were cleaned to ensure consistency in job title, consolidating or renaming where appropriate to correct for slight variations between years.

The dataset also contains a substantial number of partial-year employment records, as anyone who received any wages is included, regardless of whether they worked one day or the full year. While most agencies do include information about whether an employee was in a part-time or full-time role, they do not include information about length of employment. To correct for this, we removed any observations where the total annual wages were below the minimum allowable salary for the role, another data point published by the Controller's office (California State Controller, 2023). In cases where a role did not list a minimum allowable salary, we removed any observations below $20,000. This is an admittedly imperfect metric and likely leaves some partial-year employees in the data. However, we felt it was more important to capture potentially low wages for entry-level operators, so erred on the side of including rather than excluding observations.

Once cleaned, we calculated our main metrics: mean and median annual wages for each agency. Where relevant, we calculated mean and median disaggregated by mode (e.g., train operator versus bus operator within LA Metro). All figures from the Controller's database are by calendar year, to align with tax documents (California State Controller, 2023).

National Transit Database

The FTA's National Transit Database (2022) provides data on transit ridership, service, and labor, including employee counts and wages for operators, among recipients of federal transit funding (Wasserman and Taylor, 2021). However, the NTD presents similar challenges to the Controller's database: the mean hourly wage is calculated by dividing total operations payroll by total operations employee count (again, only for directly employed workers) and does not account for partial-year employment or part-time employment. Nonetheless, it offers a useful "check" on the Controller's database.

To align with budget cycles, data provided by the NTD are given by "report year," the aggregate of each agency's fiscal year. As almost all of these fiscal years run from July 1 of the calendar year prior to June 30 (e.g., Fiscal Year 2022 ran from July 1, 2021 to June 30, 2022), we refer to statistics from the NTD by fiscal year (FTA, 2022 and Wasserman and Taylor, 2021).

Occupational Employment and Wage Statistics

To provide comparisons with other industries, we relied on data from the BLS' Occupational Employment and Wage Statistics. OEWS is based on survey data collected from employers and provides occupation data by industry at a state level. (Occupation data at smaller geographies are not available due to the risk of providing firm-specific information.) BLS generates OEWS wage data estimates based on a sampling methodology involving collecting data over a three-year cycle and modeling to produce current-year estimates (BLS, 2022c). Unlike in the other data sources, we took statistics from OEWS for transit and transportation occupations across the state, not by agency in our sample, given that OEWS does not have data at the employer-level.

For transit operators, we analyzed data for two occupations: Bus Drivers, Transit and Intercity (53-3052) and Subway and Streetcar Operators (53-4041). To filter for operators working for public transit agencies (as opposed to private-sector transportation), we used the BLS industry categorization for "local government excluding schools and hospitals" (999300). Transit operator wages were compared to trucking, which OEWS divides into heavy- and light-trucking occupations (53-3032 and 53-3033, respectively). Because we were explicitly interested in making a comparison to trucking in all sectors, especially the private sector, all industries were considered. Unfortunately, OEWS only covers employees, not independent contractors; 29 percent of workers in the trucking industry, though, were classified (or misclassified) as independent contractors in 2016 (Day and Hait, 2022 and Wasserman et al., 2022b). OEWS provides mean and median hourly wages, though we primarily rely on median wages.

Findings: Wages

Our first goal was to understand transit worker pay: how much are operators making, and does it vary by agency or over time? At the highest level, we found no universal trendline in transit worker pay across the state. Both across and within agencies, pay has varied significantly over the last decade or more. What follows is some explanation of and effort to understand this variation and how it might impact the transit operator shortage or working conditions for existing operators.

This analysis comes with two broad caveats. First, trends in median wages do not describe each individual worker's experience: for a variety of reasons, a worker may find their real, inflation-adjusted wages declining, while agency-wide wages are stable. While we had individual observations from the Controller's database, they were anonymized and could not be tracked year to year without extensive public records requests and analysis beyond the scope of this report. Second, the wage data available cannot fully capture the structure of work for transit operators, discussed in more detail in our qualitative findings. Many transit agencies offer some level of voluntary and involuntary overtime, and working overtime is seen as a regular part of an operator's work experience. The data include overtime wages but do not include information about hours worked, so the reported wages likely reflect a significant amount of overtime throughout the year. Again, obtaining a breakdown of overtime versus regular wages would involve agency-specific data analysis, limiting the usefulness of the apples-to-apples comparisons below.

Transit Worker Pay

State of Wages

In 2021, the median wage for transit operators across the state was $78,684 (California State Controller, 2023 and BLS, 2022a). However, this statewide median belies significant variation between agencies (See **Figure 1**). The lowest annual median wage was San Diego MTS, at just under $56,000, and the highest was almost double that: the rail operators on BART earned an annual median wage of nearly $110,000.

The difference between MTS and BART encapsulates a relatively consistent regional divide. The 2021 median wage for agencies in our sample with data in the San Francisco Bay Area (SFMTA, BART, AC Transit, and SamTrans) was $95,760, whereas the agencies in our sample with data in the broader Southern California region (LA Metro, MTS, OCTA, LBT, and BBB) had a median of $68,260. The higher cost of living in the Bay Area may explain some of this difference, though the wage gap seems to outpace differences in housing prices: the median monthly housing cost in the San Francisco-Oakland-Berkeley metropolitan area was 25 percent higher than that in the Los Angeles-Long Beach-Anaheim metropolitan area (U.S. Census Bureau, 2021), but the median wages at the Bay Area agencies were 40 percent higher than those at Southern California agencies.

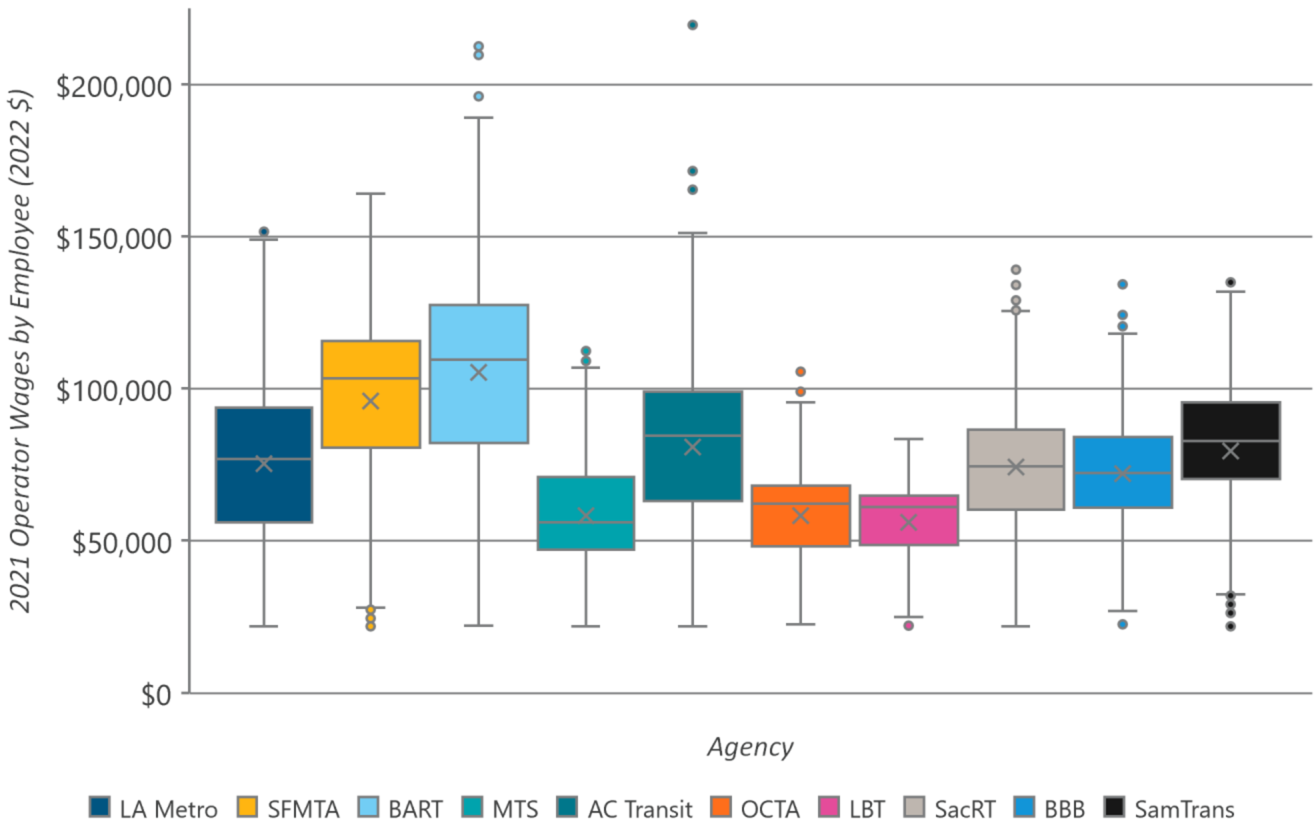

Figure 1. 2021 Wages by California Transit Agency

Data sources: California State Controller, 2023 and BLS, 2022a

Compared to unionized transit operators in the rest of the U.S., senior operators in California tend to make more per hour. We also find both a regional divide and a divide between operators directly employed by agencies and those working for private firms contracted by agencies. Among ATU locals, three Bay Area agencies in our sample (VTA, AC Transit, and SamTrans) placed in the top 20 out of 320, ranked by the top wage on their pay scale in January 2022 (See **Table 2**). Bus operators at SFMTA, unionized with Transport Workers Union (TWU) instead, would have placed between first and second among ATU locals. In Southern California, LBT, BBB, and MTS each ranked between 50th and 65th; LA Metro bus operators, unionized with the International Association of Sheet Metal, Air, Rail, and Transportation Workers (SMART), would have fallen between 27th and 28th. Unionized operators with private transit contractors ranked lower, and at SamTrans and MTS, the directly employed operators had a much higher top wage than their peers at contractors (ATU, 2022). **Table 2** only considers the top wages for the most senior operators, though; as shown in **Figure 1**, agencies vary in the range of annual pay between the highest- and lowest-paid workers.

Table 2. Top Hourly Wages for Transit Operators, January 2022

Agency	Union	Mode	Employer	Top Wage	Rank among ATU Locals (out of 320)[3]
SFMTA	TWU	bus	directly employed	$40.20	between 1st and 2nd
VTA	ATU	rail	directly employed	$38.86	tied for 3rd
		bus			
AC Transit	ATU	bus	directly employed	$34.50	14th
SamTrans	ATU	bus	directly employed	$34.01	16th
LA Metro	SMART	bus	directly employed	$33.21	between 27th and 28th
SacRT	ATU	rail	directly employed	$31.10	tied for 45th
		bus			
LBT	ATU	bus	directly employed	$30.77	52nd
BBB	SMART	bus	directly employed	$30.25	between 58th and 59th
MTS	ATU	bus	directly employed	$30.04	61st
Foothill Transit	ATU	bus	contracted out to Transdev	$27.16	110th
SamTrans	ATU	bus	contracted out to MV Transportation	$25.00	tied for 170th
MTS	ATU	bus	contracted out to Transdev	$21.69	tied for 248th

Data source: ATU, 2022

Long-term Trends

Adjusted for inflation, wages in each of the three datasets we analyzed fluctuated over the past decade, without clear evidence of consistent declines or increases.

The Controller's database showed the most fluctuation (California State Controller, 2023), likely due to the relatively "messy" nature of the dataset—if an agency had a higher than average number of workers who left mid-year, that could significantly skew its median annual wage, despite the steps described above taken to clean the data. **Figure 2** shows median wages per year from 2009 to 2021, without disaggregating agencies by mode.[4]

Stepping back from the many small year-to-year fluctuations in **Figure 2**, we can broadly sort the agencies by median pay. Over the years, very few of the agencies in **Figure 2** had dramatic shifts in their relative ranking. The lowest and highest paid agencies (MTS and BART, respectively) remained consistently in those spots, with

3. Bus and rail operators counted as separate entries.

4. In general, disaggregating agency wages by mode made little difference in our analysis; agencies with both bus and rail modes often had similar pay rates for each class of operators.

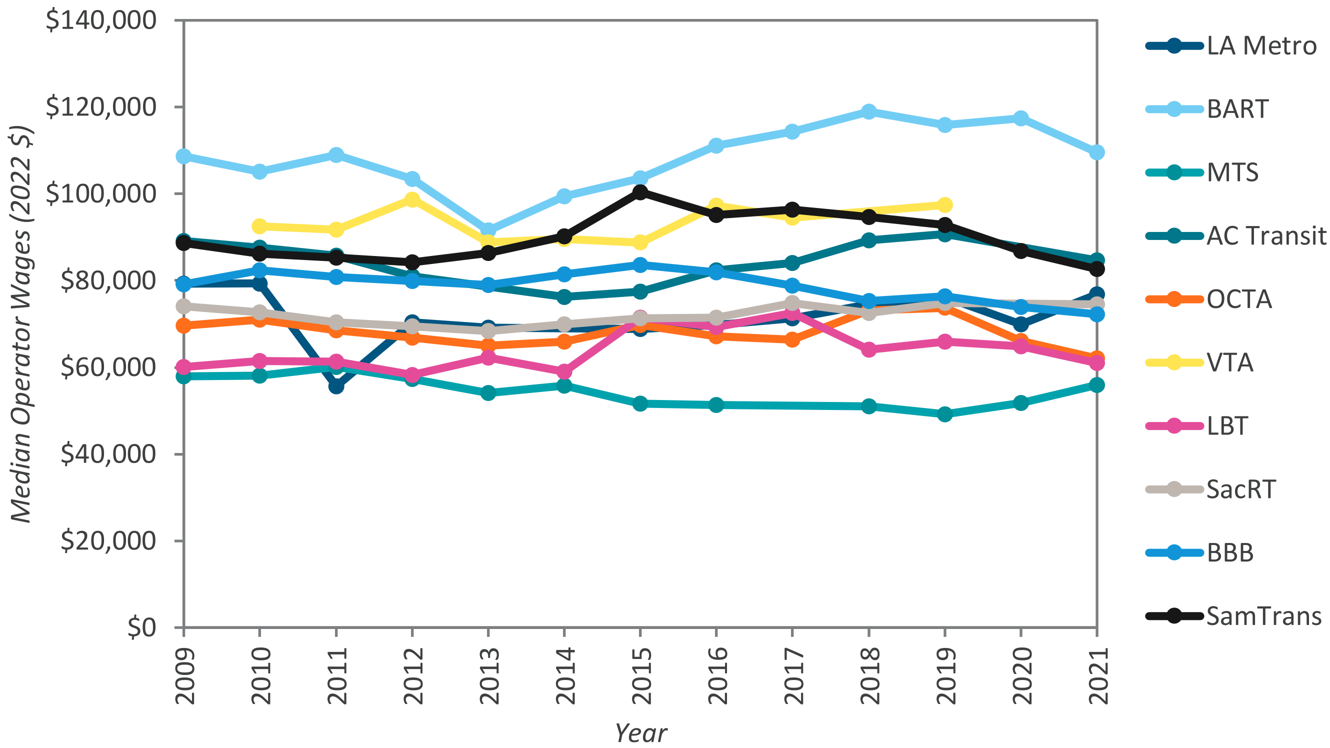

Figure 2. Median Operator Wages by California Transit Agency[5]

Data sources: California State Controller, 2023 and BLS, 2022a

only one year (a possible data anomaly) where LA Metro appears to have dipped below MTS before soon resuming its place in the middle. When agencies rose or fell in the rankings, the pattern usually reset quickly: SamTrans rose from fourth among agencies in **Figure 2** in 2010 to second in 2015, before falling back to fourth by 2021. Similarly, LBT rose from ninth in 2010 to sixth in 2015, before falling back to its original spot.

As in 2021 alone (See **Figure 1**), the trends over time reveal a geographic divide. Since 2009, Southern California agencies have consistently paid median operator wages towards the bottom of the agencies with data in **Figure 2**, whereas Bay Area agencies tended to offer higher median pay.

NTD wage data corroborate these findings, though mean wages in the NTD show less year-to-year variation. Once again, agencies stayed largely at the same relative rank over the time period analyzed, and again, BART and MTS occupied the highest and lowest spots, respectively (See **Figure 3**). The fact that the NTD reports wage data by fiscal year, unlike the Controller's database (See **Figure 2**), makes comparisons trickier. Nonetheless, both datasets show the same high-level trends: neither noticeable long-term declines nor gains,

5. SFMTA not shown, as data are only available for a small number of years for SFMTA in the Controller's database (California State Controller, 2023).

relatively consistent rankings of agencies by pay, and a strong regional divide between Southern California and the Bay Area.

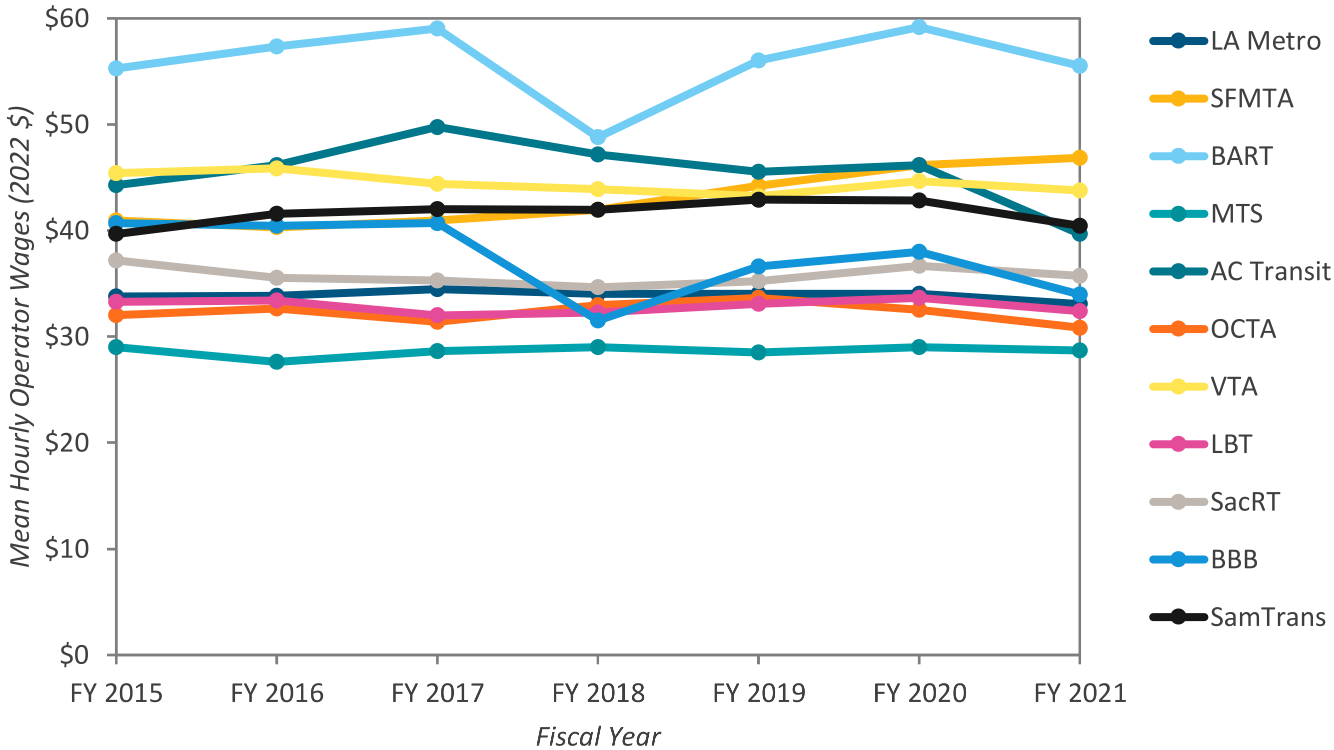

Figure 3. Mean Hourly Operator Wages by California Transit Agency

Data sources: FTA, 2022 and BLS, 2022a

As discussed above, these conclusions do not necessarily reflect the progression of an individual worker's inflation-adjusted wages over the years. A flat median wage for the agency overall may reflect a balance of existing workers moving up the pay scale with time, longer-tenured, higher-paid workers retiring, and entry-level workers coming in. Meanwhile, if a given worker does not receive a raise or promotion or receives a relatively small cost-of-living increase in a given year, their wages may fail to keep pace with inflation (especially in recent years) and thereby will decline in real terms.

Trends during the Pandemic

Analyzing in greater detail the most recent three years of data provides some insight into wage trends leading up to and during the COVID-19 pandemic. Many agencies saw declines in median wages from either 2019 to 2020 or 2020 to 2021, and some had declines in both periods. **Figure 4** shows median wages in recent years for each agency, disaggregated by mode where relevant (where an agency is missing a year of data, no bar appears). Six of eight agencies/modes with data saw declines in 2020—all but one in Southern California. While LA Metro rebounded in 2021 to 2019 wage levels, the others that fell in 2020 saw further declines in 2021, and BART, AC Transit, and SacRT bus operators showed new declines that year as well. MTS in San Diego increased modestly over these recent years but was so far below other agencies in median pay that even with steady increases, the system has not caught up to the next-lowest-paying agency. SFMTA also saw modest increases in 2021.

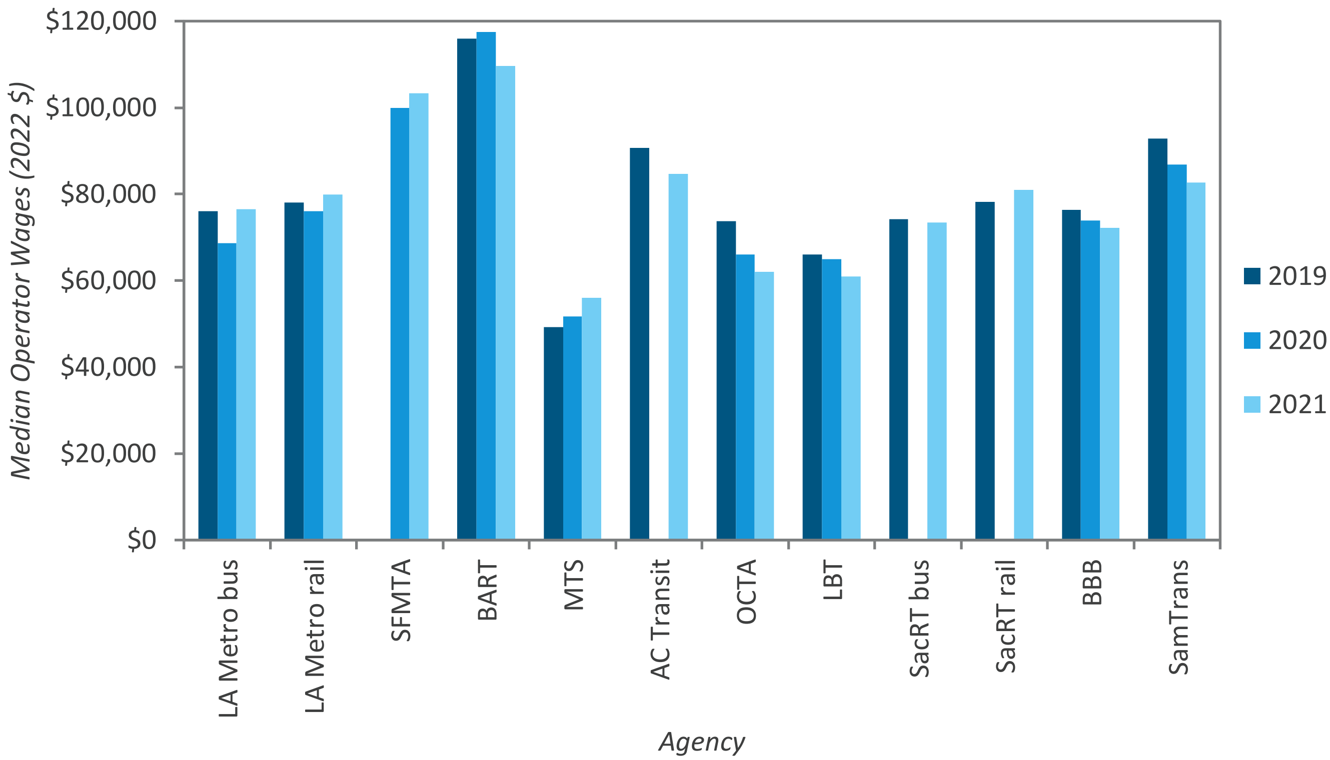

Figure 4. Recent Trends in Median Operator Wages[6]

Data sources: California State Controller, 2023 and BLS, 2022a

As the NTD uses fiscal years rather than calendar years, the full impact of the pandemic only shows up in Fiscal Year 2021. Accounting for this difference in timeline, the NTD data show a similar story: wages at all but one agency declined from Fiscal Year 2020 to Fiscal Year 2021 (See **Figure 5**).

These trends may show the effects of wage freezes at many agencies during the early phases of the pandemic, with nominal salaries held flat and therefore inflation-adjusted pay decreasing. Alternatively or additionally, the findings also lend support to the idea that higher-paid operators with more years of experience chose to retire during the pandemic and were backfilled by lower-paid new employees, a story we heard in interviews.

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6. VTA not shown, as data for VTA for 2020 and 2021 were not available as of writing in the Controller's database (California State Controller, 2023).

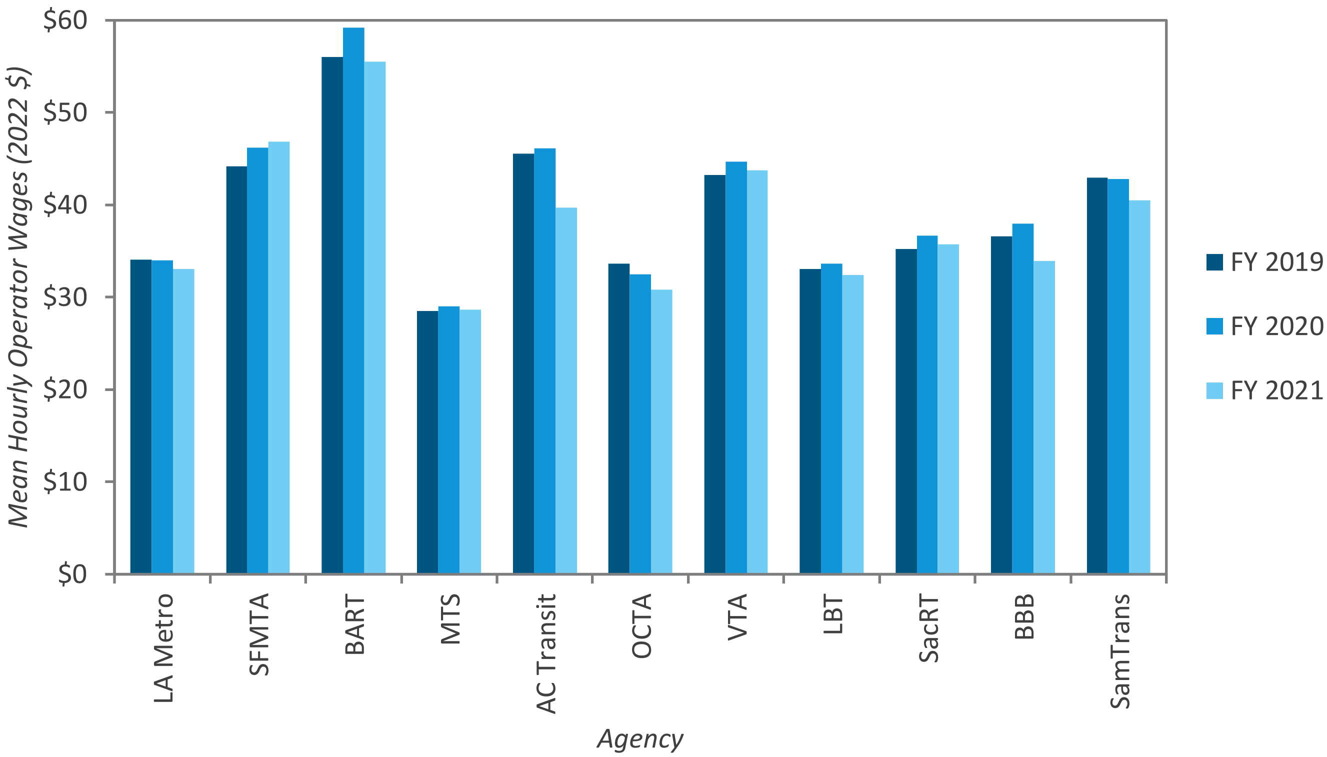

Figure 5. Recent Trends in Mean Hourly Operator Wages

Data sources: FTA, 2022 and BLS, 2022a

Wage Comparisons

Transit Workers Compared to All Workers

Despite these recent changes, transit operators tend to earn more than the average worker. The 2021 median wage for transit operators across the state, $78,684 in inflation-adjusted dollars, was higher than the median of $52,061 for workers across all occupations[7] (BLS, 2022a, 2022b). This is not to say that transit operators' wages are or are not commensurate with the skills required and working conditions (discussed further below) but rather only that the pay is more than the majority of U.S. workers.

The same is true by agency and metropolitan area. **Figure 6** compares the 2021 median wage of each agency/mode to the median wage for the surrounding Census-Bureau-defined metropolitan statistical area. While the gaps vary, the median wages for transit operators are consistently higher than the overall median.[8]

7. Annualized from the hourly, inflation-adjusted median of $25.03 per hour from OEWS data (BLS, 2022a, 2022b).

8. Operator wages are provided as annual figures, from the Controller's database. The metropolitan area annual median wages were calculated by multiplying hourly medians by 2,080 hours per year, reflecting the equivalent of 40-hour weeks for 52 weeks.

The smallest gap was in San Diego, where transit operators for MTS make just seven percent more than the San Diego-Chula Vista-Carlsbad area median wage. At the opposite end of the spectrum, the median wages for LA Metro, SFMTA, and BART are all more than 50 percent higher than their area median—the first particularly caused by relatively low wages (for California) in the Los Angeles-Long Beach-Anaheim area overall; the latter two driven by high wages at those agencies.

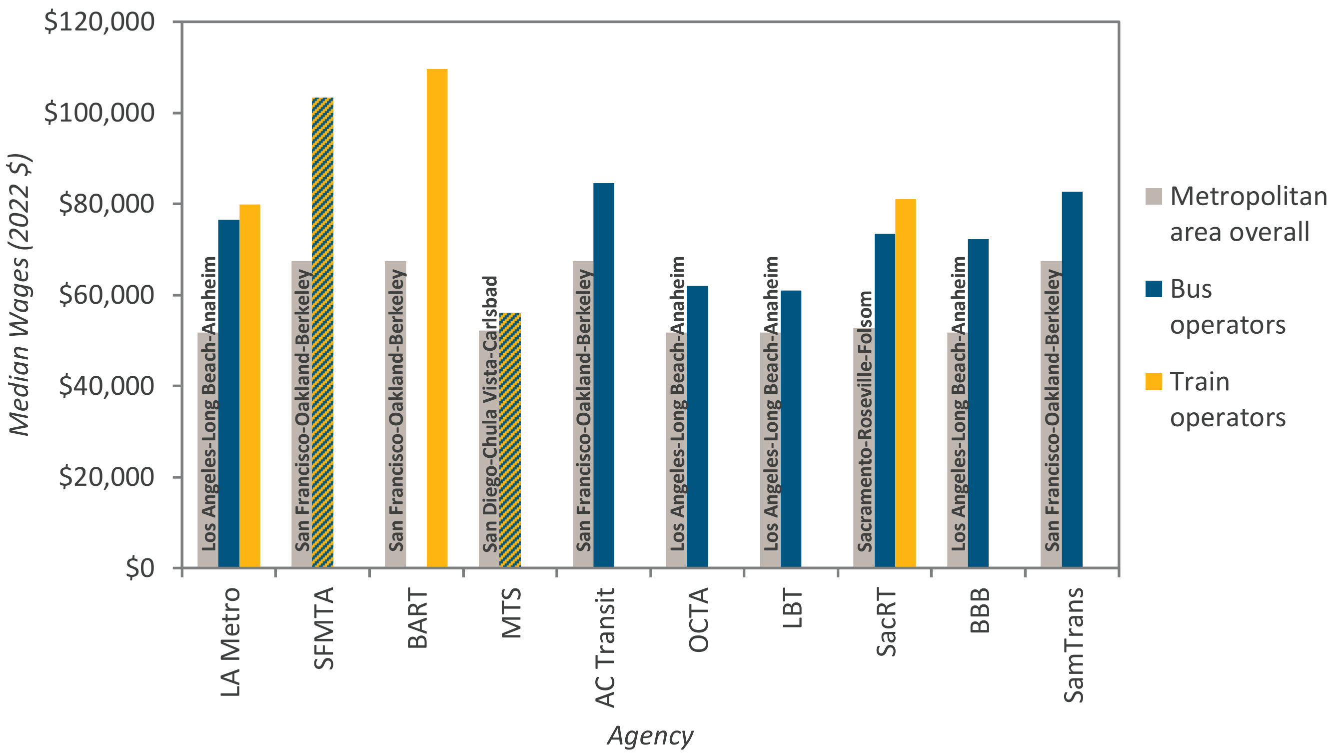

Figure 6. Transit Operator Wages Compared to Metropolitan Area Median

Data sources: California State Controller, 2023 and BLS, 2022a, 2022b

This comparison, though, comes with the caveat that metropolitan areas comprise a wide range of more and less costly sub-areas; for instance, central Los Angeles, Long Beach, and Santa Monica are all in the same metropolitan area but differ in their cost of living. Therefore, while it might appear that the median BBB operator in Santa Monica is earning more than the median LBT operator in Long Beach relative to the area median income, the higher cost of living in parts of Greater Los Angeles such as Santa Monica may negate these benefits. This point was also reflected in the interviews, discussed below: operators at agencies in expensive markets like Greater Los Angeles and the Bay Area often make long commutes to get to work, because high housing prices make the communities in which they work too expensive for them to live in.

Transit Workers Compared to Truckers

One of the consistent narratives in other studies of the current labor shortage (Van Eyken, 2022 and Foursquare Integrated Transportation Planning and EBP, 2023) and in our interviews (discussed below) is that transit agencies were losing workers to other industries—particularly those where employees could put their commercial driver's license (CDL) to use, such as trucking. Just 36 percent of transit workers surveyed by the American Public Transportation Association (APTA) believed their pay was competitive with similar jobs, while 44 percent disagreed (Foursquare Integrated Transportation Planning and EBP, 2023).

We do not have the data for this study to tell or quantify the type of jobs for which transit workers quit. Nonetheless—and while the full set of factors that would make an individual operator leave transit for trucking is difficult to capture—we sought to understand one element of this story by comparing wages in the two industries. We compared the wages of bus and subway operators working for local governments to the wages of heavy- and light-truck driver employees in all industries. As discussed above, OEWS data on occupations within an industry (e.g., bus operators within local government) are only available statewide and only available for employees, not independent contractors.

Across California, public sector transit operators earn significantly more on an hourly basis than truck drivers (See **Figure 7**). During the first years of the pandemic, many trucking companies incentivized new hires with significant one-time bonuses (Garsten, 2021; Moore, 2022; Reuter, 2021; and Swisher, 2021), not captured in this dataset. Nonetheless, this finding warrants further study. While at first glance surprising, given reports of operators leaving for the trucking sector, this finding highlights the importance of working conditions on public transit. Though trucking is not an industry known for good working conditions, it is possible that some transit workers felt trucking offered advantages compared to a customer-facing public transportation role: less risk of illness during the pandemic, no contentious interactions with riders (which may have escalated since the onset of the pandemic), no need to police rider behavior, lower risk of violence, etc. (Wasserman et al., 2022a, 2023). The trucking industry sells itself in popular culture on the freedom it offers drivers (Pride Transport, 2023), a lore that stands in contrast to the service requirements and constraints of transit operators—regardless of the actual, harsh economic and social realities of long-haul trucking. If workers are indeed leaving for trucking, then working conditions may be driving such moves more than raw differences in pay. To be clear, increases in transit wages might very well slow or reverse these movements; the wage comparison here only suggests that the differences in wages between transit and trucking may not be sufficient currently to compensate for differences in working conditions.

It is also of course possible that anecdotal reports of shifts to trucking do not reflect a large-scale pattern—another avenue for future research. In their survey, APTA found that 22 percent of former transit operations workers left for non-transit jobs in transportation (such as trucking), and 19 and 18 percent of current workers and transit agencies, respectively, reported their peers/employees leaving for such jobs. Though higher than exits to other transit jobs, this is less than the 27 to 28 percent reported for jobs outside the transportation sector altogether (Foursquare Integrated Transportation Planning and EBP, 2023). Thus, while trucking certainly competes with transit for workers, it may not be the primary driver of recent departures. Rather, this

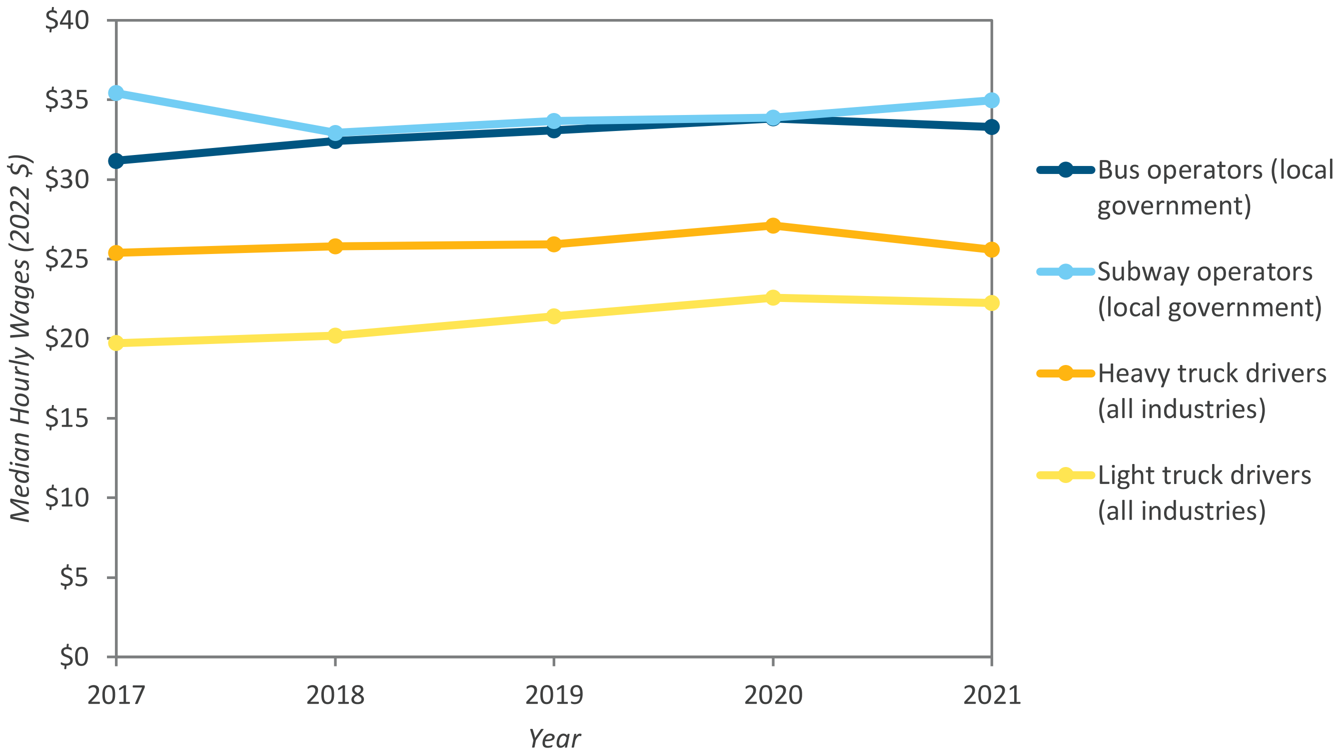

Figure 7. Median Hourly Wages in California: Transit versus Trucking Comparison

Data sources: BLS, 2022a, 2022b

shift may be part of a broader movement across the lower end and middle of the labor market during the pandemic.

Wages from Interviewees' Perspectives

Our interviews with management, union leadership, workers, and advocates confirm two experiences reflected in the data above: 1) pay for transit frontline workers is generally lower than what is necessary to attract and retain the number of needed employees, given the skills required, working conditions of their particular roles, and high costs of living in California, and 2) recent increases in pay and new and continued hardships in other aspects of the job point to the importance of factors beyond wages alone. Indeed, compensation, scheduling, and other working conditions ranked as the top three reasons, respectively, for quitting among current transit workers surveyed by APTA (Foursquare Integrated Transportation Planning and EBP, 2023).

Unionized public transit workers often see incremental raises at each new contract, with bargaining occurring every two or three years. They may also receive annual cost-of-living increases during the term of the contract, as defined in their collective bargaining agreement (CBA). Especially among relatively junior workers, however, these increases have proven relatively small—not to mention potential applicants judging the job based on the lowest rung of the wage scale. But according to our interviews, the dam really burst during the pandemic. With the more straining working conditions the pandemic engendered and the subsequent spike in inflation, compensation has become a particular issue, per management, unions, and workers interviewed. During the pandemic, these factors led to early retirements and workers leaving for other sectors, especially at agencies that instituted temporary hiring or wage freezes. Despite pay raises, the pandemic perhaps served as a moment of release for pent-up desires to leave and for frustrations at existing aspects of the work.

For the transit industry in California in particular, the cost of living for operators working in major metropolitan areas is a major concern. One bus operator summed up the dilemma for transit operations in high-cost-of-living areas: "I think our compensation is decent—it's okay. The only problem that I have with our compensation is that...our wages haven't kept up with inflation. It's not keeping up with cost of living." Below, we discuss further how this situation interacts with California's housing crisis. Meanwhile, more rural agencies may have less cost-of-living pressure but may also offer lower wages, per our interviews.

Recent Salary Changes

The pandemic and labor shortage upended the ordinary dynamics of salary negotiations and offers. Union leadership claimed that "the agency always has the upper hand" in pre-pandemic negotiations. At the least, management and union leadership came into negotiations pushing in different directions, with varying degrees of cooperation and opposition. Past pay increases often came with other concessions, including lengthening the time to advance through the full pay progression tiers, increased medical premiums, etc.

But since 2020, transit agencies have taken steps to increase pay. There have been a number of off-cycle pay increases, pandemic appreciation bonuses, signing bonuses, etc. Of course, these still came about through demands from workers and give and take between their unions and management. But the labor shortage forced transit agencies to offer more, simply in order to stay staffed. For this reason, atop off-cycle changes, unions gained negotiating leverage in recent contracts and have won pay and other improvements they characterize as more significant than in the past, largely without threatening or conducting strikes.

Bonuses and Off-cycle Pay Increases

One common pay measure taken to retain operators was offering bonuses. At a number of agencies in the sample, operators received bonuses, either as a lump sum to all operators on staff at the time or prorated based on time worked during the pandemic. At VTA, for instance, operators received $3,500 each in "pandemic appreciation" pay, approved as part of their new contract. SacRT paid two "pandemic resilience" bonuses totaling a little less, AC Transit operators got a prorated "appreciation" bonus of up to $4,000 each, and LA Metro operators received a "retention bonus" of up to $2,500. Much earlier, in the first months of the pandemic, MTS workers got a $1,000 bonus (Kamisher, 2022; *Majority*, 2022; LA Metro, 2023; Page, 2020; and Do, 2023). Even Amador Transit, a much smaller, more rural operator, gave operators $2,000.

But the terminology mattered. “Nobody wanted to call it ‘hazard pay,’” observed Jeff Shaffer, President of ATU Local 1277, representing mechanics at LA Metro and frontline workers at a number of other agencies in the Los Angeles area. Indeed, no agency in our interview sample called these bonuses “hazard pay,” the term used in other sectors before and during the pandemic and for which unions advocated. For many agencies across the U.S., the term “hazard pay” would represent an admission that the job was in fact hazardous, a move that agencies wished to avoid for both legal and public relations reasons (Do, 2023). Management at SacRT believed “hazard pay” meant a retroactive increase in the hourly wage during the first two years of the pandemic, which they believed to be a request not lawful under labor law, per David Topaz, Vice President of Employee Development and Engagement. Despite advocating for a “hazard pay” classification, John Courtney, president of ATU Local 265 that represents VTA operators, also noted the complications that might come with workers potentially being asked to prove they were in harm’s way or got sick in order to qualify.

While agencies offered these bonuses to retain workers at a time when they were severely short, workers ultimately organized for them. “We had to fight for it,” recalled Courtney. During the height of the pandemic, workers in Los Angeles protested for hazard pay in front of LA Metro headquarters. In the Bay Area, a coordinated effort for hazard pay across the region led to rallies and shows of rider and public support in 2021 and 2022. This organizing between riders, elected officials, and operators did much to raise public consciousness of the issue and put pressure on agencies to deliver pandemic bonuses (Nelson, 2020; Herrera, 2021; Kessler and Marcantonio, 2022; *Majority*, 2022; and Do, 2023). Management, as might be expected, characterized the process differently. “It was a mutual idea,” said Maggie Amarant, General Manager of Amador Transit—one especially spurred on after local press reported on a pandemic-related raise the county Board of Supervisors gave themselves.

Beyond bonuses, a few agencies offered off-cycle salary changes during the term of an existing contract. LA Metro, for one, increased the starting wage for bus operators entering training from $17.75 to $19.12 per hour in January 2022; this was structured as a six-month pilot. But by April 2022, LA Metro went ahead and raised the starting wage again to $20.49 per hour (Linton, 2022b; *Los Angeles Times*, 2022; and Wasserman et al., 2022a, 2023). These were not, though, adjustments to the contract itself (nor did veteran operators see a pay increase). Rather, LA Metro just began hiring operators at the second and then third step of pay progression established in the contract, instead of the first. According to ATU’s Gibson, opening up contracts between cycles of bargaining raises a host of issues that both management and unions generally prefer to avoid. Legal limits make doing so difficult or impossible. Unions may also worry that offers of mid-cycle pay increases will come with strings attached, such as concessions in other parts of the contract or the expectation of concessions in the next round of bargaining. Both sides usually prefer to keep their powder dry until the scheduled end of the contract. Thus, while the pandemic did lead to a large, potentially unprecedented number of mid-contract changes to pay and working conditions, these usually came in the form of side agreements and memoranda of understanding, rather than modifications to underlying contracts. BART proved the exception: management opened up its contracts with its unions mid-cycle in mid-2022 and approved an across-the-board raise of over ten percent (BART, 2022). In part, this was driven by the fact that the contracts otherwise included no cost-of-living increases or annual raises through 2024.

Recent Contract Negotiations

Because of labor shortages described in the introduction and below, transit workers gained significant leverage in recent contract negotiations. Workers won significant victories across the state: at LA Metro, the contract raised the starting hourly wage for operators to $23.00 per hour (Jager, 2022) and gave all operators who worked through the pandemic a bonus; at SFMTA, atop significant base wage increases, premiums given for longevity, working special jobs such as on cable cars, etc. were also beneficially converted from fixed dollar amounts to percentages of base pay. In some cases, unions strategically dropped demands for hazard pay in favor of pushing for base pay increases.

When we asked union leaders about current contracts, we received a number of answers praising them, or at least lauding large parts of them. Instead of focusing on ways they fell short in terms of pay and working conditions—as a rallying point for future action—union interviewees often placed more emphasis on the positives of the most recent round of negotiations than the negatives. Roger Marenco, then-president of SFMTA's TWU Local 250A, gave the following assessment:

> *This current round of negotiations, [in] July 2022, that we just finished, I'm calling* that *one the best contracts that TWU Local 250A has ever had, because we were able to receive the largest base wage increase, thanks to organized labor, the San Francisco Labor Council, the Public Employees Committee coming together and having us fight as one group, as one union, as one entity. So, is it more fair? I would say yes. Is it a little more equitable? I would say yes.*

A few factors may be at play in these contract improvements for workers. To some degree, workers gained leverage in these negotiations due to the severity of the labor shortage. Agencies needed to take action to retain and attract workers and thus were more willing to accept union offers, or at least put up less of a fight against them.

But atop that, workers seized the moment to organize, pressuring union bargaining teams from within to demand more and pressuring agencies to offer more. The political moment was ripe, as operators' role as essential workers during the pandemic generated public support. As discussed above, workers in the Bay Area launched a coordinated effort around hazard pay, and they also backed sympathetic political candidates. Likewise, the three federal stimulus bills, discussed further below, provided agencies with an influx of flexible funds. Union negotiators again had an opportunity. Nate Fairman, Business Manager and Financial Secretary at International Brotherhood of Electrical Workers (IBEW) Local 465, which represents mechanics, cleaners, and safety staff at MTS, said:

> *Historically, the negotiations have been challenging....But the recent negotiations went probably more smoothly than ones in the past, because the agency couldn't hide from the fact that they got $500 million from the federal government and $100 million from the State of California....MTS had the bargaining chip of being a fluttering agency lack[ing] investment for decades. Now, they can't necessarily use that. It's actually flipped in our favor, 180 degrees, because now that's* our *biggest bargaining chip. We know you have hundreds of millions of dollars. And we know you've neglected investments in workers and training and retirement benefits. And now it's time to*

> *make those investments, because you've neglected them in the past. So,* their *biggest bargaining chip has now, in the last three or four years, turned into* our *biggest bargaining chip.*

Finally, we note that union interviewees' characterizations may have been shaped by the internal dynamics of their own organizations. Union leaders, up for election among their own membership and proud of their own record, may consciously or unconsciously characterize the results of their negotiations as positive. "I would like to take some bragging rights to say it's because of the work that I have been able to do with the TWU Local 250A team," Marenco said.

Regardless, unions had more leverage than in the past. As a result, strikes were generally not on the table. "We haven't really threatened a strike or a work stoppage," said Fairman. Management's memory of and desire not to repeat past labor actions and their negative press may have also contributed. Instead, both union and management interviewees mentioned increased use of joint, cooperative committees to work on ongoing workforce issues. OCTA's mechanics proved an exception, launching a strike in late 2022, which ended in short order around Election Day to transport voters (City News Service, 2022); more recently, contracted Santa Clarita Transit workers (not in our sample) went on strike (Morán Pérez, 2023 and City News Service, 2023). Some operators our research team interviewed expressed frustration with their unions' relative lack of militancy in recent negotiations, arguing that while raises were decent, inflation and the high cost of living in the state make them inadequate. The particular circumstances of the pandemic may have led workers to vote to ratify contracts rather than risk the uncertainty of a possible labor action. Nevertheless, whether or not the concessions were all that workers wanted (or organized for), most recent negotiations came with less friction and more concessions than prior negotiations.

Findings: Workforce Issues

Workforce Issues before the Pandemic

Frontline work in transit can prove difficult or uncertain for many reasons, some shared by other blue-collar occupations and some unique to the industry. “The typical shift is unpredictable,” said one operator interviewed. Below, we describe and analyze some of the major issues (and, in some cases, advantages) of working as an operator or in related roles. First, we discuss key issues in compensation beyond the wage data examined above: progression and pay scales, benefits and pensions, overtime, and costs of living. Then, we explore other aspects of transit working conditions, including scheduling, safety, onboarding requirements, and discipline.

Wage Progression, Pensions, and Seniority

The transit workforce is highly structured around seniority. While operators do tend to receive wage increases through cost-of-living adjustments built into contracts and through contract negotiations, operators receive significant raises at most agencies simply through length of time on the job. Wages are structured into scales or steps; operators gain a step upon reaching a certain milestone of service in months or years. At LA Metro, for instance, in recent CBAs, the increase between steps within a given year is more than the increase within a step from one year to the next. All told, the most senior operators under LA Metro’s most recent contract earn nearly twice what the least senior operators do.

Many agencies in our sample have scales that take four or five years to summit. Pushed to raise wages overall in contract negotiations, transit agencies have historically responded by lengthening the progression time to earn top wages, to blunt the overall financial impact, according to the ATU’s Gibson. In turn, some unions, like VTA’s, have advocated successfully to shorten progression times.

On one hand, this system provides opportunities for advancement and incentives to stay at a given agency. On the other, it can cause ill feelings among junior operators being paid much less for the same work. Especially when the wage scale can take many years to climb, this system serves as a significant deterrent for new operators. “It doesn’t make sense,” argued Gibson. “We can’t keep people long enough…that [they] want to be here for six years, [that they are] willing to wait six years.”

Likewise, operators usually choose their routes and runs by seniority. Per an APTA report, unions view this longstanding practice of seniority dictating run choice as “an important way to recognize and reward the contributions of long-serving operators” (Foursquare Integrated Transportation Planning and EBP, 2023, p. 24). But when operators start and into their first few years, they are left with the least desirable routes, schedules, and runs. “Whether it’s unionized or non-unionized, you’re gonna start at the bottom in picking runs,” observed Gibson. Junior operators select from the runs left over by more senior operators, with the newest classified as “extraboard” operators with completely contingent schedules. As one operator with just under five years of experience recalled:

> *When you start out, when you come fresh out of training, you are...most likely going to be what we call an ‘extraboard’ worker, where you literally find out what your assignment is by 2:00 P.M. [the day before]....You are just as likely just to be told to report at a certain time the next day, and you sit and wait until you get an assignment—or you don’t. And even if they don’t have anything to give you, they can keep you like ten hours.*

The resulting schedules vary widely by day and between operators. This results in unpredictable work schedules that imperil work-life balance and in new workers taking runs perceived as more dangerous and working nights, weekends, and holidays (Foursquare Integrated Transportation Planning and EBP, 2023). Perversely, the least experienced workers often end up taking on the trickiest runs. This system deters new hires and pushes out operators in their early years. As that operator continued:

> *Literally, you have no control over what your schedule is. And, I just remember so many times getting off at like, 2:00 A.M., 3:00 A.M. in the morning. And then, I still had to report the next day by 2:00 P.M., and you barely have time to sleep, let alone actually do normal life things.*

We discuss in the conclusion scheduling reforms to improve these conditions.

On the other hand, the pension and benefits provided to transit employees is among the key benefits and draws of the work. Along with health (and dental and vision) insurance and other benefits, workers are enrolled in pension plans. These provide employees with payments after they retire, from a formula whose eligibility and benefits are based on the amount earned while working, length of service, and age. Operators at many agencies also may continue to receive health insurance coverage after they retire.

Broadly speaking, workers and their union representatives praised their benefits and pension plans. Gibson argued:

> *Transit has great benefits: pension, medical. [In] my local, we don’t pay anything for medical....I don’t pay a co-payment. I don’t pay anything. So, when you talk about making the job attractive, that benefit piece is a big part.*

Operators we interviewed nearly uniformly described their benefits in positive, often glowing terms. There were, to be fair, exceptions: a dispute over the comparative costs of health plans offered by OCTA versus the Teamsters represented a significant sticking point that led to the brief mechanics strike in late 2022 (City News Service, 2022 and Newberry and Hernandez, 2022). But on the whole, workers appreciated the stability their benefits provided and their affordability.

Likewise, veteran operators praised their pension plans and described them as a significant reason for taking and remaining on the job. But a split between older and newer employees’ pensions, however, has undercut some of their monetary and recruitment/retention value. Enacted in 2013, the Public Employees’ Pension Reform Act (PEPRA) changed the way public pensions in the state operate. Instead of employee and employer pension contributions and pension benefit formulas being subject to collective bargaining, in general, public employees hired after PEPRA's enactment were required to contribute to their pensions at set percentages of their pay. Moreover, in a significant change that our operator and union interviewees particularly disliked, overtime at most agencies would no longer count as part of their pay in determining pension benefits (CalPERS, 2022, 2023a, 2023b; Costa Mesa Pension Oversight Committee, 2014; and Nava and Christensen, 2015). A good proportion of the transit workforce utilizes overtime to earn a higher overall salary, so PEPRA represented a large cut to their future pensions.

The Department of Labor under the Obama Administration objected to PEPRA as applied to transit workers, claiming it infringed on rights guaranteed under the Urban Mass Transportation Act of 1964. The subsequent court case delayed PEPRA implementation in the transit sector across the state for two years, and court cases at particular agencies not part of the California Public Employees' Retirement System (CalPERS) delayed implementation there even longer. While courts ruled for the state, in 2021, the Department of Labor under the Biden Administration raised the same objection and attempted to block billions of dollars of infrastructure appropriations for California transit as a result. Again, the state prevailed in court (De Frank, 2013; Washington, 2019; Atkinson, Andelson, Loya, Ruud, and Romo, 2020; Auerbach, 2021; Venteicher and Lightman, 2021; Venteicher, 2021; Walters, 2021; Masson and Boyette, 2023; and CalPERS, 2023a, 2023b).

As a result, transit workers in the state face what one operator termed a "two-tier system." Senior operators enjoy "classic" pension benefits, with overtime counted towards the benefit formula and often with no employee contribution; as long as they were hired before PEPRA implementation, they get a "classic" pension no matter when they retire. But employees hired since then get PEPRA pension benefits (CalPERS, 2023a, 2023b). According to one operator, this will breed resentment and drive away operators in the long term. When asked if the pension changes are deterring new hires, he responded:

> *Currently? No....I think what will happen in five to 15 years is the new employees will feel that they were slighted because the old folks have a better pension plan than the new folks.*

SacRT, one of the few systems outside of CalPERS (CalPERS, 2023c), still counts overtime towards pension benefits. This, however, may create a disincentive to offer employees overtime, especially in their final years on the job, from which their pension benefits are calculated.

Housing Costs

In California in particular, housing costs burden transit workers. By nature of urban geography, transit systems—and hence jobs—are concentrated in more central parts of metropolitan areas. These parts of California, though, are among the most unaffordable to buy or rent housing in the country. While transit worker pay may be above area medians (See **Figure 6**), it is generally not enough to afford housing close to the depots where operators start and end their workdays. This situation pushes existing transit workers into long commutes from comparatively more affordable housing farther away. It also deters new hires, including people who would have to give up their existing housing to move closer to transit jobs, potentially into less spacious and more expensive units. As Courtney, president of VTA's operator union, observed, "We have a situation where folks are literally living two, 2.5 hours away from work. And housing is probably the number one reason why we can't get people to apply."

These commutes, atop workdays that can run 13 hours or more (discussed below), take their toll. As observed by interviewed managers, hours-long commutes increase burnout and separations and cause safety concerns on the job, due to fatigue. Marenco painted the following picture:

> *Think of the health and safety aspect that that takes on you physically and mentally, in terms of you driving into work an hour and a half, and then you drive 12 hours...on the clock...at work, [and] then after that, you have to drive back to your place, which takes another two to three hours. So, just think of the difficulty that that takes on you—the toll physically on your body, mentally, the fatigue, the drowsiness that you might have after your shift. And driving that distance adds up real quick when you have to cross two or three bridges—and then gas prices constantly increasing, [and] then having to deal with parking or a lack thereof.*

Ironically, housing issues in the transit workforce have created a transportation problem for those very workers. As one bus operator recounted:

> *Because most of our members can't even afford to live in the area, and they have an hour, sometimes a two-hour commute away, we had respectfully asked that they could have...a ride-sharing program, where we would actually have operators, meet at certain locations....Their full-time job would just to be to pick up other operators and bring them to their divisions.*

His agency did not implement the idea. Another interviewee recounted instead colleagues sleeping at friends' houses or other makeshift accommodations during the workweek.

VTA gave some operators a stopgap solution to the housing crisis: for decades, VTA issued permits for operators to sleep in RVs or cars in agency parking lots. These operators tended to have permanent housing elsewhere but slept in the lots on weekdays. As telling a sign of the housing crisis' severity as this program was, workers and union leadership praised it. Courtney particularly highlighted the safety benefits—operators could arrive on the job well-rested and alert. Operators with "split shifts," described below, could also spend the time between their runs in their vehicles in the VTA lots. In the late 2010s, VTA started discontinuing the program, not issuing new permits but allowing operators with issued permits to continue, amidst plans to redevelop some of VTA's parking lots (Lee, 2018; KTVU FOX 2, 2018; and Howey, 2022a). Courtney advocated an expansion of the program, and he also pushed for VTA employees to be allocated reserved units at discounted rents in transit-oriented development projects on public land near VTA stations. Given that housing is not covered in the collective bargaining agreement, though, the union had little bargaining power, and neither proposal was adopted.

Overtime and Scheduling

Atop the unpredictability and seniority-dependence of run selection at most agencies, transit operator schedules more broadly are among the more difficult aspects of the work. Days are long, and breaks are short.

Interviewees complained of schedule adherence being a key metric by which operators and the system overall are evaluated, despite often being out of operators' control. Agencies also employ run-cutting software that optimizes operator deployment but also, according to operator and union interviewees, stretches workers thin. "It separates the runs into a monetary value rather than figuring out that it's a human being driving the bus," Shaffer pointedly expressed.

Transit operators often work overtime, which comes with both benefits and pressures of its own. On many agencies, planned runs and sets of runs may include scheduled overtime. This predictable form of overtime allows operators to earn more and represents a perk of the job for many new or potential employees. Charles Johnson, a business agent in Teamsters Local 952 at OCTA, estimated that around half of operators want or seek out overtime. Courtney surmised that some people choose to be an operator instead of a mechanic or move to the former from the latter because of the much greater opportunity to earn overtime.

But recent labor shortages have increased the rate of unscheduled overtime, when agencies have operators work longer hours to fill gaps in service left by understaffing or unexpected events. Large-scale issues like vacancies and illnesses during the pandemic led to unscheduled overtime day-of, but it can occur at small scales and even more suddenly: operators at a number of agencies must continue their runs in progress for up to two or three hours if their replacement does not show up, according to an interviewee. Moreover, even with scheduled overtime, when senior operators leave overtime-heavy runs unclaimed, junior operators also may take on unwanted overtime. Atop the problem of undesired overtime, operators may seek out overtime but only to raise their pay to meet living standards. Operators described sometimes taking on overtime not just to earn a nice bonus but to meet their cost of living when their base pay proved not enough.

Both issues create a culture of exhaustion, burnout, and physical injuries. OCTA management described a vicious cycle, common to transit agencies, of fewer operators necessitating more unscheduled overtime, in the long run driving away operators and worsening the problem. While the pandemic may have accelerated this cycle even more, one operator noted a countervailing force: some workers shifted their personal priorities to caring for loved ones and children, instead of doing overtime.

The most severe form of overtime are "ordered call-backs" (OCBs). While much overtime is voluntary—if perhaps socially expected or financially necessitated—OCBs force operators to work on scheduled days off, at short notice. While some contracts contain this provision, LA Metro was the only operator in our sample that used it extensively (after asking for voluntary overtime first). In 2021 and 2022, a significant rise in OCBs to cover for shortages led to intense worker frustration and low morale (Linton, 2022a). At agencies across the country, newer operators are the first to get called back for such mandatory overtime (Van Eyken, 2022).

Meanwhile, split shifts present unique issues for transit operators. Because demand for transit tends to be higher at traditional weekday peak hours—as is, cyclically, transit service offered—the need for operators varies throughout the day. Responding to this, agencies offer split shifts: operators do a morning half-shift, then have time off midday, then return for an evening half-shift (say, four hours on, four hours off, and then four hours on). The break time in the middle of the day is generally not compensated or only partially compensated. As a result, operators working split shifts have, in many ways, 12- or 13-hour workdays. Their middays are free, but their "spread"—the time between when they show up to the depot, often far from home, and when they leave for the day—adds up to that long.

Some senior operators appreciate the time off during business hours to run errands, work out, etc. and have fought to maintain such an opportunity, according to Courtney. But again, junior operators end up with more of these assignments, which, per our interviewees, they may not understand fully at first. As one operator argued:

> *Newer operators are just undervalued. They do the split shifts....It's basically like a hazing for new operators, where you're put in your place and [told]...'You belong to us. This is what we're going to do with your time.'*

As a result, split shifts and scheduling practices overall strongly contribute to burnout and departures. Gibson commented:

> *How do you tell somebody that's coming in? 'Oh, by the way, you're going to have a four-hour split, and I'm not going to pay you for it, but you're still tied to me.' Who would take that job?*

Union leaders and operators interviewed criticized split shifts as examples of over-optimizing schedules at the cost of worker welfare, especially among newer workers. Management interviewees in turn did acknowledge split shifts make hiring and retention more difficult. "One of the things that we have to work on as management in transit agencies [is] to find a way to make the schedules more enticing," said Topaz of SacRT.

Because of the intense scheduling, operators often have little or no time to take breaks, use the bathroom, eat, and drink. One operator noted the discrepancy between the ample break time promised in training and the on-the-ground reality of quick turnarounds between runs. Run-cutting software has also allegedly shortened breaks. Restrooms at layover points are either dirty or nonexistent, and other facilities are usually lacking or unsafe. Supporting these observations from our operator and advocate interviewees, a 2019 ATU survey found that around eight in ten operators do not have time enough in schedules to use the bathroom, and three in ten reported fairly severe health problems as a result (Richardson, 2019 and Van Eyken, 2022). Agencies like AC Transit have deployed portable toilets, but an interviewee remarked on how frequently they are filthy or broken into. Lack of restrooms and short breaks in general contribute to workers taking off more for disability or sick leave, which in turn lessens any cost and workforce savings of break-reducing scheduling.

Safety

Operators risk assaults and harassment on their routes. Assaults may escalate from fare disputes, may be perpetrated by people with mental illnesses, may be born of biases, and/or may be seemingly random acts of aggression. Our interviewees in management, in union leadership, and driving vehicles themselves reported harassment and assault as problems for operators, and data analysis from TransitCenter confirms a fourfold increase in operator assaults per passenger boarding from 2009 to 2020 (Van Eyken, 2022). A female operator in particular reported being punched, spit, and swung at, and her peers have been stalked for months and attacked with weapons. Even quoting the fare to boarding passengers, which was agency policy at the time, increased risk of an incident, observed another operator. “Drivers are scared,” said Johnson. Younger workers, in particular, may be overwhelmed by risky situations, according to an operator interviewee. All of this, per Gibson, contributes to operators leaving and potential recruits deciding against a perceived unsafe job.

Though management interviewees noted that severe assaults were rare and not a common cause of operators being out of work, they noted a number of steps taken in response: cooperation with law enforcement for ride-alongs on vehicles, de-escalation training for operators, state laws with higher penalties for attacking transit workers, increased insurance against assaults, and physical barriers (the last discussed further below). An operator, though, noted that de-escalation training came as a result of worker pressure and contract negotiations at his agency.

Job Requirements and Discipline

Finally, to even start the job of transit operator, there are a variety of unique and/or rigorous requirements. “Transit is one of the few jobs where we…give you a whole bunch of homework before you actually start the job,” said Gibson. “And so, what we saw was we were losing people in that piece.” Over a third of workers, as reported by management respondents to APTA’s survey, left during the training or probationary periods, which has worsened in recent years (Foursquare Integrated Transportation Planning and EBP, 2022, 2023).

For one, bus operators need a commercial/Class A driver’s license with passenger endorsements (Van Eyken, 2022 and Foursquare Integrated Transportation Planning and EBP, 2023). This is sometimes acquired during training; others already hold a CDL when hired. Because of the many steps—a commercial learner’s permit, medical and driving record checks, certified trainings and fees, and written and driving tests (Van Eyken, 2022)—a third of agencies surveyed by APTA identified the CDL process as a barrier to retention and hiring (Foursquare Integrated Transportation Planning and EBP, 2023). Either as a needed step to take the CDL tests or as an agency requirement, operators at many agencies also need to be proficient in English.

As part of federal requirements, agencies make employment offers contingent on drug testing. They also regularly test their operators for drug use, with tests that catch use up to two months prior (Van Eyken, 2022; Foursquare Integrated Transportation Planning and EBP, 2023; and Brey, 2023). Interviewees strongly agreed that inebriated operators are dangerous; one operator also noted that operators need to stay clean themselves to fairly expect their patrons to not use drugs on their vehicles. But the stringency of drug testing, especially in a state like California where recreational marijuana use is legal, may deter applicants (Brey, 2023). Almost half of APTA-surveyed agencies mentioned drug testing policies as a barrier to retention and hiring (Foursquare Integrated Transportation Planning and EBP, 2023). Indeed, labor shortages before and during the pandemic were worsened by operators failing drug tests and being dismissed.

For all types of infractions, discipline can be strict in the transit sector. While this varied by agency, union and operator interviewees noted a culture of tight rule enforcement. During an employee’s training and probationary period, even a minor infraction can spark termination.

Workforce Issues during the Pandemic

Health Issues

The pandemic both exacerbated existing issues and created a host of new ones for transit operators. Most immediately, of course, was the risk of catching COVID-19 itself, especially prior to the rollout of vaccinations in 2021. Rail and bus industry workers, according to a study from the California Department of Public Health, were twice as likely to die of COVID-19 than the workforce overall (Rong and Money, 2022). Not only was the job of transit operators—suddenly termed "essential" in the popular consciousness—more dangerous than non-essential jobs that could be worked from home, it also posed more risk than in-person but not customer-facing jobs, such as trucking. Courtney summed up the life-threatening dangers and fears:

> *We showed up during the pandemic. And people were dying, and we showed up. We lost two frontline workers, from COVID, directly related to their work, and so many others: we lost some good folks who quit, because they were afraid.*

At one interviewed operator's agency, almost 1,000 cases of COVID-19 had been reported as of our interview. Around half a dozen OCTA operators died from COVID-19, per Johnson of the Teamsters. As union leadership at IBEW Local 465 noted, workers also had to call out when their families tested positive, both to care for them (with childcare often unavailable) and because of quarantine/exposure protocols.

Workers fell sick prior to the COVID-19 pandemic, to be sure, and transit operator scheduling has long suffered from last-minute changes and short notices. But this level of illness wreaked havoc with scheduling and operations, according to our interviews. On top of that, it also disrupted the regular rhythms of operators who became sick and those of operators who had to cover their shifts. For instance, an interviewee described how a missed run or two on a line would lead to overcrowding on the next bus, as the accumulated waiting passengers all boarded it. These crowds elevated health risks, the potential for rider frustration and confrontations, and stress on the vehicle operator. Illness also disrupted chains of scheduled runs that relied on passing buses from one operator to another. And we heard in our interviews of agencies that sped up schedules in the early moments of the pandemic, when traffic briefly lightened, but failed to restore them thereafter, adding pressure on later operator schedules.

During the pandemic, there were some moments of solidarity between management, supervisors, and operators, working together to deliver service in extraordinary circumstances. An operator described how a few managers came to work on site and "put their own life at risk to help other people that they work with. Then all of us in the union, all of us were really working together as a team, because this was unprecedented. No one had ever felt or experienced anything like this." Agencies distributed personal protective equipment and arranged additional and deeper cleanings of vehicles between runs.

But in a number of other cases, the pandemic strained relations between frontline workers, their supervisors, and agency leadership. Workers disabled by COVID-19 or the families of those who died from it sometimes fought with agencies to establish their cases as covered under workers' compensation. Unions raised grievances and launched public campaigns around public health protocols, resulting in changes to agencies' plans to loosen distancing requirements on vehicles, restore fare collection, and remove all-door boarding (*Labor Notes*, 2021 and Marcantonio, 2021a, 2021b). Labor leaders and outside advocates across the state recalled battles to secure and distribute personal protective equipment, including masks and gloves, in a timely manner. Tensions rose as this equipment and ventilation fixes were slow to arrive, while workers were still expected to continue their shifts as usual in the meantime. Union leaders interviewed decried management changing health guidelines frequently without worker and union consultation.

Two key public health measures, mask and vaccine mandates, cause their own disruptions for transit workers. Raul "Kiko" Diaz, Senior Assistant Business Manager with IBEW Local 465 at MTS, claimed and appreciated that the industry was an early adopter of mask mandates. But while supervisors and law enforcement could be called as back-up, mask mandates usually fell to operators themselves to enforce, putting them in awkward or even dangerous situations. One operator recalled trying in vain to get a (fare-evading) passenger to wear a mask, feeling deeply unsafe and having to call in a supervisor. She worried that she might have been reprimanded if she had stopped driving in this situation. As vaccines against COVID-19 first became available, agencies and unions fought to get frontline transit workers early vaccinations, after state health authorities left them off the list of emergency and essential personnel first eligible (Savidge, 2021). Later, agencies began to adopt vaccination mandates for their workforce. Generally, compliance was high. Despite initial threats, management did not end up disciplining or firing most workers at most agencies who did not getting vaccinated (BART proved an exception, with almost 100 workers dismissed (CBS San Francisco, 2022), contributing to operations worker shortages, per interviewees). Unions in some cases filed grievances or steered the holdouts towards their agency's exemption processes. Union interviewees expressed some ambivalence in our interviews, both touting their vaccination rates while deeming the mandates put on workers overly political or beyond contractual rules.

Safety and Enforcement Issues

Many transit agencies suspended fares or fare enforcement during the pandemic, to limit contact between operators and passengers, among queuing passengers, and in the handling of cash and fare media. Some of these temporary fare suspensions were formal; others turned fare payment into an honor system. Operators expressed mixed feelings about fareless vehicles. A number related the deep poverty of many of the riders they interact with and care about. For this reason and for environmental purposes, they applauded fare suspensions as just; some hoped for full fare-free transit someday. More cynically, Marenco quipped, "Everybody already is getting a free ride…nobody's paying. So what if you're gonna make it official?" But other operators and managers overseeing them noted the risks of fare-free transit. Without fares, operators lose a means of controlling who can and cannot be on their vehicle. Richard Marcantonio, Managing Attorney at Public Advocates working on transit justice issues, recalled a divided organizing meeting on the issue, in which a representative of younger, female operators expressed their safety fears without fare control. Whether related to the issue of fare suspensions or broader societal forces during the pandemic, interviewees also perceived a rise in unhoused people using transit as shelter. This increasingly put operators into unwanted, untrained roles as social workers or otherwise made them feel less safe or comfortable.

Meanwhile, the pandemic has elevated the issue of operator assaults and harassment. Our interviews do not speak to assault numbers. As an anecdote, one operator interviewed faced five attempted assaults since the pandemic versus none before. A manager at OCTA pointed out, however, that the issues behind assaults are "not pandemic-related" and existed on transit well beforehand. Regardless, with perceptions of safety lower on emptier vehicles during the pandemic, agencies have taken steps to protect against both violence and disease spread. In particular, a number of agencies in our sample have installed barriers on buses around operators, physically separating them from passengers. While better understanding of COVID-19 has called into question their effectiveness at stopping viral transmission, these barriers do help prevent unwanted passenger contact and access to operators. Some agencies had planned or piloted barriers prior to the pandemic; others installed them quickly during it. Compared to doors and walls around train cabs, though, these barriers offer incomplete protection; they also may cause glare that interferes with operators' driving (Godfrey et al., 2022), may be hard to open if needed, and may hinder helpful communication between operators and riders. Engineers at LA Metro, for one, are refining improved designs for larger barriers.

The worst violence against transit workers during the pandemic was the horrific mass shooting at VTA's Guadalupe railyard on May 26, 2021. In the early morning, a disgruntled employee opened fire in a break room and then a nearby building, killing nine employees, before killing himself. Courtney himself, as he recounted in raw terms to us and in news interviews, was in the break room, yelled at the shooter to stop, and attributed his being spared to mediating past issues between the employee and management (Kamisher, 2021). The deadliest shooting ever in the San Francisco Bay Area (Flores, 2021), likely deadlier than each terrorist attack on transit in the U.S. since 9/11 (Jenkins and Butterworth, 2022 and Simko-Bednarski, 2023), the shooting left the agency shattered and a workforce and their families reeling.

While mass shootings and gun violence represent societal issues far beyond the remit of transit agencies and the scope of this report, the attack did raise issues of agency organizational culture, security procedures, and the effects of the pandemic on transit workers. In the wake of the shooting, reports of abusive conduct and hostile work environments surfaced at VTA (Wolfe, 2022). Per interviews, pandemic procedures and mandates at VTA and other agencies created strain between workers and managers, all underlined by differences in who worked in person versus at home. As for the shooting itself, an external report commissioned by VTA concluded the agency had no advance warning nor sufficient cause for dismissal of the shooter beforehand (Jacob, 2022 and VTA, 2022). Courtney and other workers excoriated the findings (ATU, 2023b and Howey, 2022b) for letting the agency "off the hook" (ATU, 2023b) and for attempting to help the agency avoid liability in potential lawsuits.

Regardless, both the shooting and the more regular assaults against operators across the state highlight the importance of mental health services for transit workers. Courtney took a leave to seek treatment for post-traumatic symptoms, and his peers continue to suffer a profound psychological toll from the tragedy (Kamisher, 2021 and Wolfe, 2021). An operator at another agency said, "A lot of what gets sort of ignored is just the stress of literally working in crisis from the beginning of the pandemic." In the wake of the shooting, state Senate Bill 129 provided funding to VTA for mental health services for workers; Senate Bill 1294 later expanded upon that and tasked the state and its partners with developing a replicable wellness center model for transit agencies across the state. But in practice, low trust between some employees and management has undermined the resources offered, as workers do not always trust the confidentiality of employee-sponsored counseling. After the death of a VTA worker and shooting survivor by suicide, leadership of the international ATU union again condemned VTA's mental health response, while the agency in turn rebuked the union for what it claimed were false allegations. Around California, unions have also fought for more sick time specifically for mental health leave and for stress management classes. Finally, at VTA, the particular small building where the shooting began is being demolished, as survivors, who could not return there without distress, had sought (Sreekrishnan, 2021; Office of Dave Cortese, 2022; Ferrannini, 2022; DiMaggio, 2021; Gonzalez, 2023; Wolfe, 2021; and Rubin, 2022).

Findings: Labor Shortage

Interviewee Observations

As the pandemic put stress on the transit workforce, our interviewees all agreed that transit faced a shortage of frontline workers in 2021 and 2022. These vacancies delayed service restoration and ultimately hurt the mobility of travelers in the areas these agencies serve, as we describe in the conclusion. Below, we discuss this labor shortage, including nuances in how different agencies fared and the degree to which the pandemic worsened a preexisting situation.

On one hand, the three federal stimulus bills in 2020 and 2021, designed to keep people employed across the U.S. economy, proved a godsend for transit. Transit agencies in California primarily used these flexible, generous funds on operations and wages. Even as systems cut service in early 2020, they largely avoided layoffs that the initial pandemic recession otherwise threatened. Agencies paid operators even when some had no runs to do, reassigning them to additional training or other tasks. This helped retain workers through the pandemic, blunted later labor shortages to at least some degree, and earned praise from union leadership in the process. Stimulus funds also minimized furloughs (Wasserman et al., 2022a, 2023).

However, in 2020, a number of agencies implemented formal or informal freezes on hiring, promotions, raises, and/or cost-of-living increases, as well as buyouts and other incentives for early retirement. In the early days of the pandemic, the financial outlook for transit was uncertain, with revenue forecasts bleak and a prolonged recession possible. This situation drove freezes at transit agencies. However, these freezes and other measures hindered transit's later pandemic recovery and contributed to later workforce shortages. According to operator and agency interviewees, in this and prior research, freezes on promotions and raises and early retirement incentives pushed operators out, exacerbating a labor shortage that already existed before the pandemic. Hiring freezes in turn prolonged those shortages and put agencies in a deep deficit of workers even after they were lifted (Wasserman et al., 2022a, 2023).

Every interviewee we interviewed agreed that there was a labor shortage, in many cases severe. Even smaller agencies such as Amador Transit had significant vacancies that hampered service delivery, though in absolute numbers, their shortage was only a few operators. This finding reflects a nationwide phenomenon, as described in the introduction.

The pandemic prompted many veteran workers to leave. As a bus operator poignantly observed, "When the pandemic hit, afterwards, we had a lot of people that could retire [who] said, 'You know what, this is not worth my life.' A lot of people just left." Seventy percent of agencies reported falling morale in Swiftly's 2022 survey, up 15 percentage points from 2021 (Swiftly, 2023). Likewise, interviewees observed potential replacements dropping out at all stages of the hiring and training processes. While, as of our interviews, new operator classes were slightly increasing at many agencies, challenges remain.

The pandemic worsened the shortage, but transit agencies were already lacking frontline workers. Interviewees again agreed on this point. At SacRT, for instance, Vice President Topaz estimated that the agency was short eight to ten percent on all positions, not just operators, for years prior. “We’ve always been in a constant struggle for not having all of our positions filled,” echoed Alaric Degrafinried, BART’s Assistant General Manager for Administration, “but I’d say it’s probably gotten worse over the last several years as a result of COVID.”

The reasons for the shortage given span the issues described above. In particular, though, management interviewees themselves cited pay and the time to advance up the pay scale as a problem preventing attracting new workers. Among existing workers, COO Cheung at LA Metro gave three key factors behind the shortage: “Some of the pain points that I hear from the operators: #1: wage; #2: security issues from the customers—they don’t feel safe operating the bus; #3: fatigue [from ordered call-backs].” Operators with CDLs have a valuable asset that may draw them to work for trucking and delivery firms instead, competitive options that do not require often stressful customer interactions (Van Eyken, 2022; Foursquare Integrated Transportation Planning and EBP, 2023; and Wasserman et al., 2022a, 2023). And atop these reasons, interviewees at many transit agencies again particularly blamed pandemic hiring freezes, from which systems were still recovering.

Trends in Vacancies and Hiring

While, as our interviews indicate, attracting and retaining enough workers has long proven an issue for transit agencies, the pandemic has worsened this problem. However, specific trends varied across the agencies from which we were able to obtain data on vacancies, hiring, and/or separations. As **Figure 8** shows, major systems such as SFMTA, OCTA, and SacRT experienced a significant drop in net operator hiring minus separations after the start of the pandemic. The former two were still losing more workers than they brought on in the most recent data we analyzed. SacRT did see an uptick in mid-2022; MTS, though, saw relatively constant hiring throughout the period of available data.

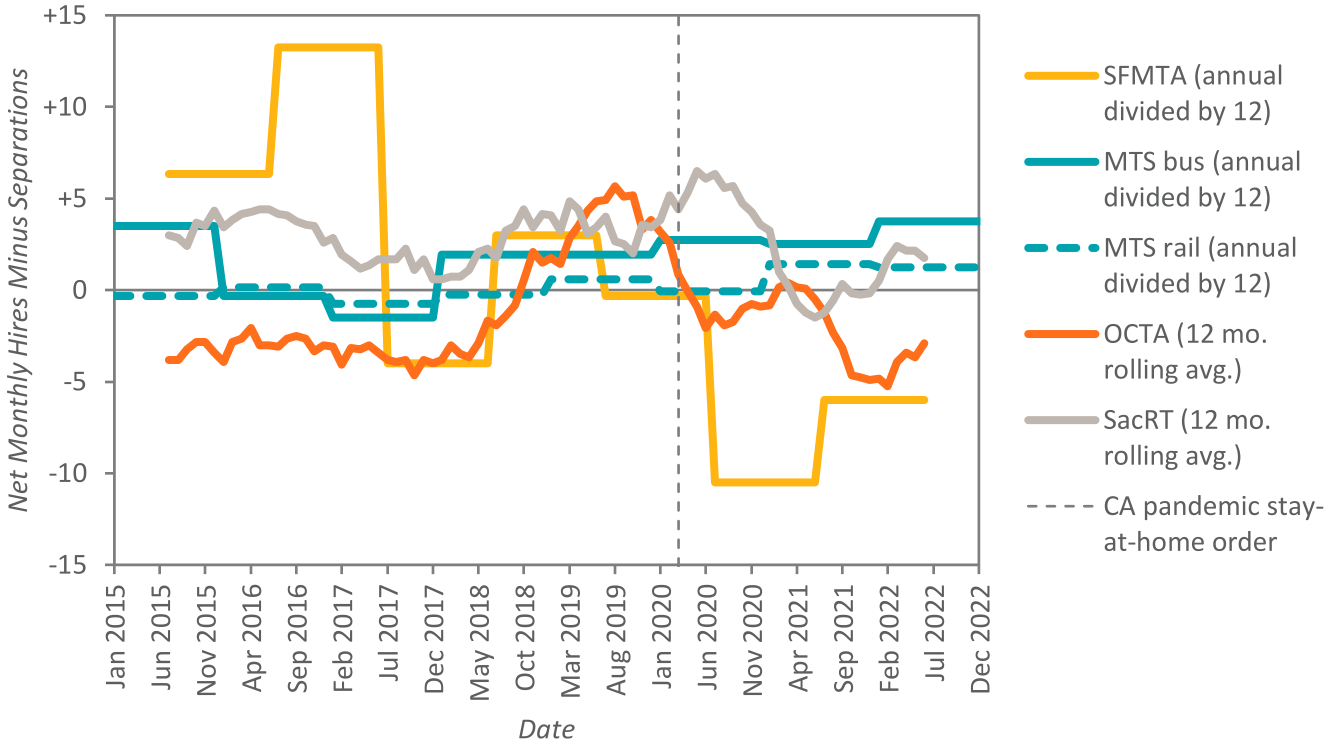

Figure 8. Hiring and Separation Trends

Supplemental data source: Office of Governor Gavin Newsom, 2020

The effect of these trends on vacancies lagged slightly at some agencies (See **Figure 9**). SFMTA saw vacancies rise from late 2020 to mid-2022, with over 330 openings then. LA Metro categorized vacancies relative to their service pattern, so when they cut service at the beginning of the pandemic, they ended up with more operators than required for their service. Thus in **Figure 9**, LA Metro's vacancy counts fell into the negatives in the first year of the pandemic. But as the agency restored service and as operators left, vacancies skyrocketed to 578 across bus and rail in January 2022. This huge gap prevented them from restoring service at the time to planned levels (Fonseca, 2022; Linton, 2022b; and Uranga, 2022). Since then, vacancies dropped somewhat but remained high among bus operators. However, note that vacancies in late 2022 were roughly on par with vacancies in 2017 through 2019.

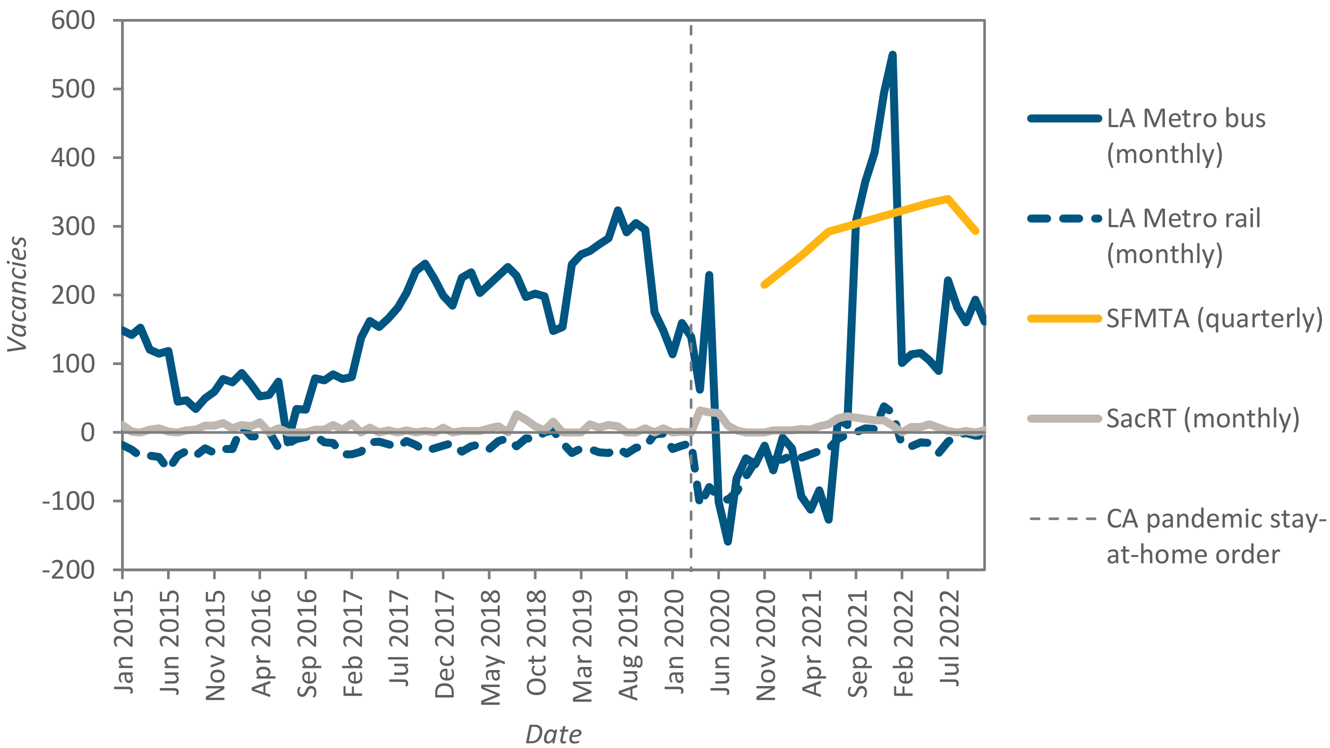

Figure 9. Vacancy Trends

Supplemental data source: Office of Governor Gavin Newsom, 2020

Agency Responses

Agencies have responded in a number of ways to labor shortages. One significant move has been to offer bonuses, raises, and other financial incentives. Above, we discuss how recent contract negotiations have resulted in notable raises and retention bonuses at agencies around the state, achieved through worker pressure but also as a needed response to worker shortages. Beyond these, agencies have also begun to offer other bonuses. MTS offered a temporary $5,000 hiring bonus for new operators and a $1,000 bonus for new bus cleaners (Olson, 2022); SacRT offered a hiring bonus of $1,000 and then raised it to $2,000; and OCTA gave a hiring bonus of $3,000, to name a few. A few agencies also offered referral bonuses, where current operators would receive a bonus if they successfully referred someone else they knew to become an operator.

Implementing such incentives and responses, though, has met resistance at some agencies. According to union president Marenco, SFMTA did not offer any bonuses, and the union eventually dropped them as a demand in favor of wage increases. And at Amador Transit, the board did not approve hiring bonuses.

On other fronts, agencies have taken steps to speed up the hiring process, to better advertise open positions, and to adapt to the pandemic recovery world. Cheung at LA Metro recounted how potential operators often drop out of the hiring pipeline through its many steps, including background and medical checks and CDL training and testing. In response, LA Metro now runs "one-stop shop[s]" at job fairs, where applicants can apply, get interviewed and fingerprinted, schedule their medical check, and even conduct a bus agility test on a bus outside. In a few hours, a successful applicant can receive a conditional job offer and a start date for training. And later, for those who fail their first attempt at the CDL test, LA Metro offers further training to keep interested trainees on the path to retaking and passing the test. Meanwhile, BART and OCTA interviewees discussed new video and social media advertisements or an overall increase in the advertising budget. Agencies have made particular efforts to reach out to potentially receptive groups that previously had not been the targets of much outreach. OCTA sends recruiters to Employment Development Department offices where unemployed Californians apply for benefits, and the agency has also sought out veterans to apply. Under the *Bienvenidos a Metro* program, LA Metro has translated trainings and materials into Spanish and partnered with community college English-as-a-second-language programs, hiring over 100 bilingual operators—on a system almost half of whose riders speak Spanish at home (LA Metro, 2023). LA Metro has also made a point of resuming in-person celebrations and events for frontline workers, who, despite working on site for the entire pandemic, may have missed group camaraderie. Finally, LA Metro has been working to increase security staffing on buses, to keep operators safer.

These responses have met with mixed success. Much of agencies' energy has gone towards improving hiring, but these efforts may not be relevant for retention of operators once fully on the job. Kenneth McDonald, president and chief executive officer of LBT, observed that "incentive[s have] attracted people, not necessarily kept them on the job." To spread out the bonus longer, he structured LBT's hiring incentive as a pay increase for trainees over the course of their training, instead of a one-off stipend. Other agencies like OCTA (2023) have divided up hiring bonuses over various milestones during employees' first year. Yet through a combination of outreach and pay increases, LA Metro hired 1,000 new operators between February 2022 and May 2023 and was able to restore previously cut service (LA Metro, 2023).

Reflections and Conclusions

While the labor shortage may be easing at some—but not all—California agencies, the underlying issues described in this report continue to beleaguer the transit industry. We close first with reflections on the current state of the transit workforce and the relationship between transit labor, budgets, and politics. In that light, we offer recommendations for improvements in the transit sector, including the need to both raise wages and make non-monetary changes to working conditions, given the necessity of the transit workforce to metropolitan mobility.

Because of our informal snowball sample, the vehicle operators we interviewed do not represent a statistically rigorously representative sample of transit workers in the state, nor were we able to interview as many as our other major categories of interviewees. While we believe their insights and perspectives shed light on the conditions and challenges of working in transit, we hope future research can sample transit operators, in a larger set of interviews or focus groups or in a survey, building on surveys like APTA's (Foursquare Integrated Transportation Planning and EBP, 2023).

A Changing Workforce

Transit's workforce is aging (Shared-use Mobility Center, 2021; Foursquare Integrated Transportation Planning and EBP, 2022; and Van Eyken, 2022). The median worker in the U.S. transit industry in 2020 was 52 years old, compared to just 43 in all industries. Also that year, 42 percent of U.S. workers in transit were over 55 years old, 12 percentage points higher than a decade prior and 18 percentage points higher than all U.S. workers in 2020 (Shared-use Mobility Center, 2021). We heard similar sentiments from interviewees at all levels. At OCTA, for instance, operators with at least 25 years of service are far from uncommon, and the average age of a new hire in recent years was 42 years old.

This "silver tsunami" phenomenon has already contributed to present shortages and threatens to worsen them in the future (Van Eyken, 2022). In ATU's Gibson's experience as a former operator and current national labor leader, the pandemic accelerated this trend. Older workers, more vulnerable to COVID-19, retired faster, while younger workers were already hard to attract. Interviewees speculated reasons for the latter, some drawing on employee survey results. Atop broader issues of harder working conditions, stagnant pay, and seniority ladders, younger generations may potentially be less amenable to the strictures of a frontline transit job, may want a better work-life balance, may see the job of operator as less respectable than in the past, or may learn to drive later in life and desire to drive less.

Today, agencies compete with each other and with other sectors for employees in a hot, relatively worker-friendly labor market. The old model of a worker loyally staying in the same role with the same employer for decades is fading, across the economy. Instead, operators transfer between different agencies and sectors. Some potential workers are unwilling to wait for seniority and raises, while others seek not just progression within the operator wage scale but promotions into managerial and administrative roles. Yet almost as many workers surveyed by APTA disagreed (35%) as agreed (39%) that they had a clear path to promotion (Foursquare Integrated Transportation Planning and EBP, 2023). Agencies will need to create more defined career pathways to attract younger workers and counteract the "silver tsunami" that has begun to break.

Budgets and Politics

In the 21st century, spending on U.S. transit has increased substantially. Adjusted for inflation, public transit expenses in California rose 39 percent between 2008 and 2018, due to both expansion and rising costs for existing operations (Taylor et al., 2020). This stands in stark contrast to the relatively flat median operator wages in **Figure 7**. As shown in **Figure 10**, state spending on transit has outpaced inflation-adjusted wage growth at almost all sample agencies in recent years. Advocates and workers pointed out this discrepancy. At

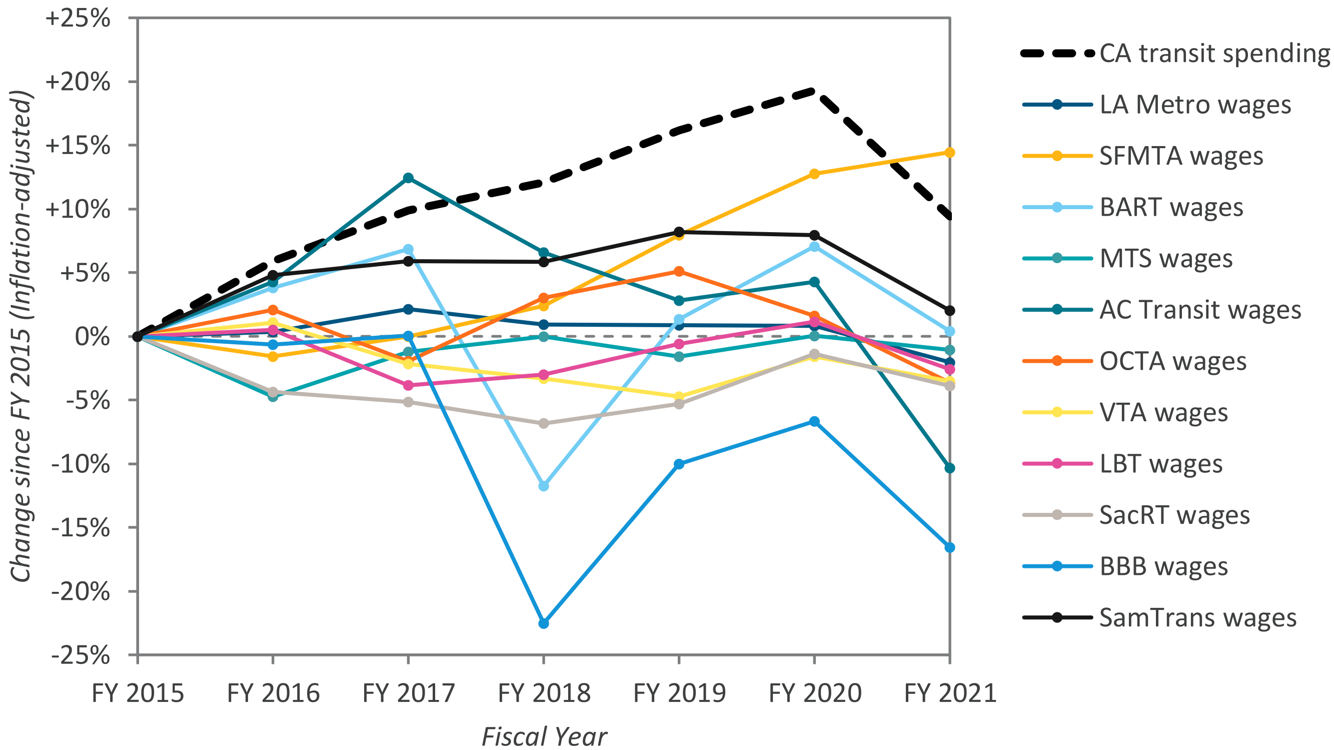

Figure 10. Change in Mean Operator Wages by California Transit Agency and Total California Spending on Transit[9]

Data sources: FTA, 2022 and BLS, 2022a

9. Operating expenses plus a ten-year rolling average of capital expenses (five years prior to four years forward)—the latter to account for larger year-to-year variation in capital expenses as major projects start and conclude.

the same time, transit is labor-intensive. Sixty-two percent of transit operating spending goes to labor costs such as wages and benefits (Dickens, 2023).

Part of the reason for this seeming discrepancy is the line between capital and operating budgets. Capital funds pay for new or replacement infrastructure, vehicles, large equipment, etc., while operating funds pay for routine costs of service, upkeep, and maintenance, including operator and mechanic pay, fuel, etc. To be sure, capital funds pay for labor too, but for construction workers, project management, etc., not for operators and mechanics. Federal and state guidelines generally forbid capital funds from being used on operating expenses. Indeed, the limited federal support for operations is largely confined to small, rural systems (Wasserman et al., 2022a, 2023). Transit advocate Marcantonio characterized the motivation for this:

> *What we heard back during the Great Recession, in Obama's first term, when we were in D.C. advocating for transit operating funding in the stimulus at that time, was 'Oh, you're not going to get anywhere with that, because the view is that the greedy unions will just eat all eat up all that money.' So, that's why we don't give money to transit operations federally.*

This hard division prevents capital dollars from going towards operator wages. Management staff pointed out as much in interviews, and union representatives also acknowledged the divide.

However, the line between operating and capital dollars is not quite so clean. For one, the federal pandemic stimulus bills provided a lot of highly flexible dollars to transit agencies, with the unprecedented and explicit aim of supporting and maintaining transit employment (Wasserman et al., 2022a, 2023). Agency leadership disputed that these funds should be used for raises at a time of financial uncertainty; Topaz at SacRT asserted, "There's a lot of the unions whose perspective is that that money that the feds came up with is all meant to go to them. That's not true." Even so, most stimulus funds went to operations expenses, with only a smattering to capital projects (Wasserman et al., 2022a, 2023).

Second, capital grants from federal and state sources tend to require local match commitments. Agencies therefore commit sometimes more flexible funds as a match for capital projects. Whether this is justified project by project is a political and planning decision beyond this report's scope, but it is nonetheless a choice within agencies' control. In many cases, though, even local funds come with capital-versus-operating restrictions.

To take a step back, the designated split of funds in the ballot measures that authorize local transportation taxes and bonds is also a choice. Proponents and designers of transit funding measures in California have included organized labor and contractor coalitions enthusiastic about construction jobs (Manville, 2019), but funds for ongoing operations have received less of a share and less institutional backing. Flexible funds and funds dedicated to transit operations are much rarer among local option sales taxes for transportation than funds dedicated to a particular list of capital projects—let alone the division between transit and roadway expenses (Wachs et al., 2020; Lederman et al., 2021; and Manville, 2019). In fact, backers of Measure RR, a 2016 bond to fund BART rehabilitation, stressed that the funds would not go to operating costs at all, in the face of criticism from opponents asserting that worker contracts would eat up the funds (NBC Bay Area and Bay City News, 2016 and Brekke, 2016).

All of these examples demonstrate the importance of politics and organizing to transit labor and funding outcomes. Advocates in the Bay Area have recently organized to protect transit operations funding in the face of a "fiscal cliff." This cliff, the gap between stimulus funding being spent down and fare revenues and ridership only sluggishly returning, threatens fare-dependent agencies like rail systems in particular. Marcantonio and Amy Thompson, Transportation Policy and Programs Manager at TransForm, described building coalitions between riders and operators and, unlike the Measure RR campaign, embracing a call for operations funding. Their groups have attempted to link operations funding, transit's labor shortage, service, and ridership in the public consciousness; they argue that reducing operator shortages is key to restoring ridership and preventing service cuts that would harm transit users. They have pushed their metropolitan planning organization, the regional body that distributes federal transportation funds, for more operating support and are planning a ballot measure to more stably fund transit operations.

As operating funds are more often locally supplied and dependent to various degrees on fare revenues, fights over operating dollars are not easy. Thus, at AC Transit and BART, whose boards are elected, unions heavily organize for and support favored candidates. Even as interviewees who worked on these campaigns acknowledged that union-backed candidates, once elected, took seriously their fiduciary responsibilities to the agency, the ease of contract negotiations varied based on the balance of power on these boards (as on other boards selected indirectly).

Beyond contract negotiations, lasting improvements to pay and benefits will rely on expanding the pie rather than fighting over the size of workers' slice—that is, expanding and securing the amount and sources of funds for transit operations. Dedicated operations funding from local, state, and federal sources could go a long way toward putting transit on the high road, thus helping to alleviate its labor shortage.

Automation looms in the background of these political and budgetary discussions. In the short term, advances in connected vehicle technology and driver assistance could make some of the work of operators safer and easier—though worker complaints about run-cutting software suggest analogous caution here. In the long term, driverless trains and buses threaten to eliminate the need for vehicle operators, at least as defined today (Wilson, 2022a; Ramey, 2023; Rudick, 2017; and Martelaro et al., 2022). Driverless rail systems have 30 percent fewer staff per asset (stations plus vehicles) than systems with operators (Cohen et al., 2015 and Jaffe, 2015). How soon this change will come is still very much an open question—one subject to political and funding pressures from unions, technology firms, and others. Automating grade-separated subway systems (as cities in other parts of the world have done) will likely prove easier than automating buses in mixed traffic. As automation proceeds, though, researchers have argued that transit jobs need not be lost. Operators could transition into "captain" or "pilot" roles, more focused on still necessary, non-driving customer service tasks. And as the airline industry demonstrates, heavily but not completely automated transportation systems especially require trained human vehicle operators for the most dangerous of situations. Agencies and unions should anticipate and plan for these changes ahead of time (Wilson, 2022a; Ramey, 2023; Rudick, 2017;

Ferenstein, 2013; and Martelaro et al., 2022), to provide transition for existing workers while remaining realistic about the timeline, safety, and capabilities of oft-overhyped automation technologies. While it will require funding and sophisticated planning, policymakers should seek to do automation in a way that supports workers and communities, just as they plan for transit itself in a way that supports workers and communities.

Raises and Improvements to Working Conditions

During the pandemic recovery, from 2021 onward, frontline transit workers have won notable increases in pay. In the decade prior, as shown in **Figures 2** and **3**, inflation-adjusted wages had remained flat or even declined at some agencies. Recent contract negotiations, though, have resulted in raises larger than in previous contracts, per interviewees at a number of agencies. The dynamics of wage negotiations shifted, with unions and workers gaining new leverage and management seeing the need to offer concessions to fill vacancies. At some agencies, the resulting wages are drawing in more workers. As one headline from beyond California cheekily described the effect of a starting pay raise, "Boston's transit agency used one weird trick to increase bus driver job applications by 356 percent: it's a lesson for employers everywhere" (Toussaint, 2023).

And yet, these raises may not prove enough to alleviate shortages, given rising costs of living, competition from other sectors, and years of prior wage stagnation. As our interviewees discussed, operators in California especially face long commutes and difficulty living affordably close to work. Moreover, our interviews reveal a myriad of non-monetary problems as well. Asked whether LA Metro's recent operator contract would successfully fight shortages, Cheung replied, "No, but it's one thing that will move us in the right direction." Gibson noted that the transit agency in Jacksonville, Florida has offered hiring bonuses of up to $15,000 (Bennett, 2021), far more than any system in our sample, and yet still had difficulty hiring.

In other words, pay raises alone are necessary but not sufficient to attract and retain operators. Workers surveyed by APTA ranked "increasing pay" as their most preferred strategy to increase retention, but scheduling, safety, and other reforms also placed highly (Foursquare Integrated Transportation Planning and EBP, 2023). As our comparison to the trucking sector found, hard working conditions on transit push people away and out, even when pay and benefits in transit may be better. As one operator summed up, "A lot of us are working six, seven days a week. [For] a lot of us, [it presents] strain…on our family life. And I've seen an uptick in personnel taking out their frustrations on each other. Because they just feel hopeless."

To combat that sentiment, our interviewees and other recent studies suggest a number of improvements atop pay raises that could make transit a safer, fairer, and easier place to work. Below is a selection.

Hiring

Wider outreach: To address shortages and to otherwise be more equitable in their hiring, agencies can conduct greater outreach to populations previously unrepresented among operators or that face barriers to employment. LA Metro's *Bienvenidos a Metro* program, discussed above, is one example of how systems can build pipelines to hire multilingual operators (which will ultimately result in better service for systems' multilingual riders). Other agencies have made efforts to hire veterans and to create pipelines from community college, trade school, and/or apprenticeship programs. TransitCenter also profiles work to train and hire formerly incarcerated individuals as bus mechanics (Van Eyken, 2022).

Streamlining the hiring process: Agencies can improve their hiring processes simply by being more responsive more quickly to applications, including people denied further consideration (Van Eyken, 2022), and by consolidating and speeding up hiring, including through mass hiring events at job fairs. In terms of attracting more applicants, interviewees mentioned improving the way they communicate about the health and pension benefits of the job. Priced out, these benefits add much to operators' pay, along with providing stability and peace of mind, all of which could be part of agency messaging.

Training

Licensing reforms: Agencies and federal and state governments can make reforms to keep new hires in the workforce until fully trained. To start, agencies that currently only accept applicants who already have a CDL should look to add in-house or contracted CDL training programs to expand their pool of potential operators and could cover as much of the CDL application cost for trainees as possible. As trainees without a CDL prepare to get one, agencies might allow them to drive smaller vehicles in service. Agencies should be more reciprocal in accepting external CDL medical certifications, while state governments could reduce waiting periods and appointment delays in scheduling CDL tests (Foursquare Integrated Transportation Planning and EBP, 2023 and Van Eyken, 2022).

Revamping drug testing and other requirements: Meanwhile, under a pending new rule approved by the U.S. Department of Transportation but still awaiting lab certifications from the U.S. Department of Health and Human Services, agencies could use oral tests detecting marijuana use in the past day instead of urine tests detecting use over the past months (Brey, 2023 and Van Eyken, 2022). Agencies could at least reexamine the specifics of their other hiring requirements, including background checks and drug policies, and communicate about them to applicants clearly and up front (Foursquare Integrated Transportation Planning and EBP, 2023).

Scheduling

Rostering and premiums: On the job, scheduling and workload arose in our interviews as a significant contributor to dissatisfaction, burnout, and departures. While tricky given seniority rules and traditions, agencies and unions could work together on a "rostering" system for runs: instead of each run being chosen by seniority, a bucket of runs—grouped to be somewhat more balanced in difficulty, time of day, length, etc.—could be chosen instead. Some agencies also offer premium pay for runs at less desirable times (Foursquare Integrated Transportation Planning and EBP, 2023 and Van Eyken, 2022).

More adaptable scheduling: Scheduling flexibility during prolonged times of reduced operator availability, such as the COVID-19 pandemic, can be key to improving working conditions for all operators. Rather than attempting to maximize adherence to a pre-existing schedule, with the inevitable missed runs, delayed buses, and lack of opportunity for operator breaks, agencies can dynamically create a schedule and cut runs that best utilize the operators and vehicles available to the agency that day. This would minimize ordered call-backs, a source of low morale. Unions may wish to see dynamically generated runs constrained to include similar routes and shift times to an operator's chosen runs. Real-time passenger information systems available via the Internet and at stops could communicate the new, more reliable scheduling information for the day.

Expanded work assignments: Agency efforts to create optional work assignments for those working extraboard or split shifts could mitigate the wage and boredom impacts facing early-career operators who are not compensated between assignments. Creative options that utilize operators' existing skill sets could include customer service functions or performing outreach or engagement tasks for the transit agency or a local government. Likewise, as the COVID-19 emergency fades and a "new normal" of (somewhat) decreased nine-to-five office work in central business districts sets in, many agencies are reevaluating their service patterns and spreading service more evenly beyond traditional peak periods. In doing so, agencies can reduce split shifts and move towards more full-time, standard shifts.

Safety and Health

Giving operators safety and health support and facilities: Agencies can also make operators safer and healthier on the job. For one, operators should not have to serve as law enforcement and social workers all at once. This could start with removing the expectation that operators enforce fare collection when busy driving their vehicle and with providing operators de-escalation training. Agencies could install or improve physical barriers around operators and could deploy ambassadors on vehicles regularly to address code of conduct violations and trained outreach workers to work with unhoused riders. Operators should also have faster, easier means of reporting threats and getting security personnel on hand. Agencies could also improve operator facilities and, crucially, add more bathrooms along routes and better maintain existing ones (as well as allowing adequate break time to use them, built into schedules) (Foursquare Integrated Transportation Planning and EBP, 2023 and Wilson, 2022b). As made painfully evident in the wake of the shooting at VTA's Guadalupe railyard, mental health care available to frontline transit workers needs improvement and expansion, to provide operators accessible, confidential, and low- or no-cost services.

Housing and Childcare

Career benefits to offset high costs of living: To improve operators' work-life balance and ability to make their job a career, agencies and unions can support housing and childcare initiatives. Beyond the permits VTA offered to operators to sleep in agency parking lots, agencies might work with unions and municipalities to connect operators to affordable housing and even subsidize or reserve housing for them in agency transit-oriented developments if possible. Along with pay increases, housing efforts would reduce the punishing commutes made daily by many operators. Some agencies elsewhere in the U.S. also provide on-site childcare, while other agencies or unions subsidize or reimburse nearby off-site childcare, both efforts to enable people with young kids to work in transit. Lastly, AC Transit and other agencies provide tuition support for further education for their workers, facilitating career advancement and professional development.

Riders and Mobility

Transit workforce issues are ultimately transit rider issues. While remedying the issues identified in this report will help the thousands of frontline transit workers in California, decision-makers in the transit industry can also aid their existing riders and attract new ones by doing so. A fully staffed workforce, with less turnover and more job satisfaction, will allow agencies to better deploy and expand transit service, to the ultimate benefit of the mobility of the state's travelers, particularly those who rely on transit.

Since 2020, labor shortages have disrupted transit service (Wasserman et al., 2022a, 2023). In early 2022, LA Metro canceled ten to 15 percent of its runs daily, compared to just one to two percent before the pandemic (Cheung, 2022). Due to vacancies and continued illness, LA Metro and MTS each delayed planned service restorations in 2022 as well (Fonseca, 2022; Linton, 2022b; Uranga, 2022; and Little, 2022). Nationally, two surveys each found that 71 percent of U.S. agencies cut service or delayed planned increases in 2022 due to lack of workers, up seven percentage points from 2021 (Dickens, 2022 and Swiftly, 2023); APTA found an even higher figure of 83 percent of agencies where shortages were affecting service (Foursquare Integrated Transportation Planning and EBP, 2022).

Even when agencies did succeed in bringing back service, doing so only increased the need for operators. Marcantonio described the toll at an individual level: people showing up to their regular bus stop but waiting in vain for a bus that was canceled without adequate announcement. Riders missed work, appointments, and other travel needs. Repeated enough times, Marcantonio reasoned, and travelers will switch to other modes of travel if possible.

Interviewees from management, in union leadership, and among operators all reflected on the relationships between riders and workers, from daily interactions with regulars on the bus to larger-scale ridership implications of scheduling and staffing reforms. Indeed, the pandemic has helped prove that policymakers can help both groups at the same time. Before the pandemic, demands for transit worker raises were sometimes characterized in zero-sum or even hostile terms, with contract concessions from a fixed agency budget framed as necessitating service cuts (Jensen, 2010). But the pandemic, the worker shortage it deepened, changes for transit workers it engendered, and federal stimulus support it occasioned have together demonstrated that better working conditions and pay leads to better service, and the opposite. A high-road attitude towards transit treats effective spending on labor as an investment rather than a cost. Labor decisions in transit of course still involve many tradeoffs, as do other service planning and operational choices. But the pandemic showed that the pie of operations funds is not nearly so fixed—in either direction—and that transit relies on a workforce paid and treated competitively in order to fulfill its core functions.

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