Los Angeles County
Metropolitan Transportation
Authority
One Gateway Plaza
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Los Angeles, CA

Metro

Board Report

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EXECUTIVE MANAGEMENT COMMITTEE
AUGUST 18, 2022

SUBJECT: SERVICE MONITORING RESULTS FOR TITLE VI PROGRAM UPDATE

ACTION: APPROVE RECOMMENDATION

RECOMMENDATION

ADOPT Service Monitoring Results for Title VI Program Update presented in Attachment A.

ISSUE

Title VI of the Civil Rights Act of 1964 (Title VI) prohibits discrimination on the basis of race, color, and national origin in programs that receive federal funding. The Federal Transportation Administration (FTA) requires transportation agencies to demonstrate their compliance with Title VI by ensuring compliance with FTA Circular 4702.1B "Title VI Requirements and Guidelines for Federal Transit Administration Recipients," issued October 1, 2012. FTA requires the Metro Board of Directors to review and approve the Metro Service Monitoring Results to be included in the Title VI Program Update due every three years.

BACKGROUND

Section 601 of Title VI of the Civil Rights Act of 1964 (Title VI) states the following:

> No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

FTA Circular 4702.1B, revised in 2012, requires transportation agencies to develop service standards and monitor the implementation of these standards. The results must be approved by the Metro Board every three years. The Metro Board last approved the monitoring results in September 2019.

DISCUSSION

Metro is required under FTA Circular 4702.1B to monitor the approved Service Standards and submit the results of the monitoring to the Board for approval. The monitoring results assist Metro in

ensuring the Service Standards are accurate in providing service.

Systemwide, bus service did not meet the on-time performance standard. The current standards define on-time as no more than one minute early or five minutes late when leaving a time point. The standard requires that at least 90% of lines be on-time 80% of the time. Based upon data from January through March 2022, bus service on-time performance was 69% on weekdays, 68% on Saturdays, and 74% on Sundays. This is largely attributed to the return of traffic on LA County roads to pre-COVID volumes in the second half of 2021 and into 2022. In June 2022, Metro revised over half its bus schedules to add time to mitigate the increased traffic impacts (previous schedules were based on lower traffic congestion). Initial results for the June changes show improvement, with performance hovering between 74%-78%. Further improvements are expected as a result of Metro's roll out of additional speed and reliability improvements such as new bus lanes, expanded all door boarding, and improved transit signal priority.

DETERMINATION OF SAFETY IMPACT

The requested action in this report will have no direct impact on the safety of Metro's employees or customers.

FINANCIAL IMPACT

Adoption of the Service Monitoring Results has no direct impact upon Metro's expenditures or revenues. Approval is consistent with the implementation of service included in the adopted FY2023 Budget. Failure to approve the Service Monitoring Results could result in an incomplete Title VI Program Update which could potentially result in the loss of federal funding.

EQUITY PLATFORM

Title VI sets the minimum federal requirements to prevent discrimination or benefits from being denied to federally protected groups, as noted above. The Monitoring of Transit Service for Title VI purposes meets the federal requirements, as it ensures that Metro's Service Standards are being applied consistently throughout the system. The monitoring also provides a means to measure and adjust for impacts and benefits to protected groups, which supports Metro's goal to ensure that impacts to marginalized groups are considered in transportation decisions and service delivery.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

The recommendation supports strategic plan goal # 5, "Provide responsive, accountable, and trustworthy governance within the Metro organization" by adhering to civil rights requirements mandated by Title VI of the Civil Rights Act of 1964.

ALTERNATIVES CONSIDERED

The alternative to not including Board approved Service Monitoring Results could have significant negative impacts on the agency. Failure to include Board approved Service Monitoring Results in the Title VI Program update may result in FTA not concurring with Metro's Title VI Program Update which may result in the suspension of federal grants by being non-compliant with Title VI requirements.

NEXT STEPS

The Title VI Program Update will be scheduled for Board approval at the September 22, 2022 Board of Directors meeting. Upon Board approval, Metro's Title VI Program Update will be submitted to FTA by the due date of October 1, 2022.

ATTACHMENTS

Attachment A - Metro Service Monitoring Results

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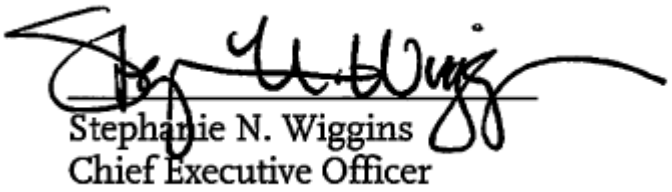

Stephanie N. Wiggins
Chief Executive Officer

Review of Service Policies and Standards FY2020 – FY2022

This is a review of Metro's compliance with specified service standards and policies under the requirements of FTA Circular 4702.1B, Chapter IV-9, Section 6. The review covers the period of FY2020 through FY2022.

The following topics are addressed:

1. Service Availability
2. Classification of Services
3. Headway Standards
4. Loading Standards
5. On-Time Performance Standards
6. Stop Spacing Standards
7. Passenger Amenities Standards
8. Vehicle Assignment Standards

All reviews assess whether Metro has complied with its policies and standards, and whether any non-compliance is biased toward minority population (disparate impact) or low-income household in poverty (disproportionate burden).

1. Service Availability

The adopted service availability standard is:

> At least 99% of all Census tracts within Metro's service area having at least 3 HH/acre and/or 4 jobs/acre shall be within one quarter mile of fixed route service (a bus stop or rail station).
>
> Fixed route service provided by other operators may be used to meet this standard. The use of other operator services to meet this standard ensures maximum availability without unnecessary duplication of service.

There are 2,022 tracts within Metro's service area that meet the above thresholds of 3 HH/acre and/or 4 jobs/acre. Only 14 of these tracts are not within one-quarter mile of fixed route service. This is a service availability of 99.3% which meets the standard.

Service Area Demographics – Minority Population

	Service Area	Tracts Not Served
Population	8,185,999	56,157
Minority Population	6,086,572	32,674

Minority Share	74.4%	58.2%

Service Area Demographics – Low Income Households

	Service Area	Tracts Not Served
Households	2,737,823	18,643
Low Income Households	1,055,231	5,663
Low Income Share	38.5%	30.4%

Both the minority population share, and low-income household share of the unserved tracts are less than the service area minority population and low-income household shares. Therefore, there is no disparate impact or disproportionate burden created by the unserved areas.

2. Classification of Services

The review of service policies and standards requires determination of Minority routes (and Low-income routes) so that a comparison of compliance between Minority (or Low-income) routes and all routes may be made. If the share of Minority routes meeting a standard is an absolute 5% or more less than the share of all routes meeting a standard, then a disparate impact on Minority routes has occurred. If the share of Low-routes meeting a standard is an absolute 5% or more less than the share of all routes meeting a standard, then a disproportionate burden on Low-income routes has occurred.

FTA has defined a Minority route as having one-third or more of its revenue miles operated in census areas that exceed the service area minority share of population. By extension, a Low-income route will have one-third or more of its revenue miles operated in census areas that exceed the service area poverty share of population.

There are 112 fixed route bus lines operated by Metro. It was determined that 96 of these are Minority lines (85.7%), and 97 of these are Low-income lines (86.7%). Both Heavy Rail lines are Minority and Low-income lines. All four Light Rail lines are Minority lines and Low-income lines.

These definitions were used to stratify compliance levels in the subsequent evaluations.

3. Headway Standards

Current service standards were last adopted in FY19. The adopted headway standards follow:

Rail Headway Standards

Mode	Peak Max. (in min)	Off-Peak Max (in min)
Heavy Rail	10	20

Light Rail	12	20

Not to be exceeded for at least 90% of all hourly periods

Bus Headway Standards

Service Type	Peak Max. (in min)	Off-Peak Max (in min)
Local	60	60
Limited	30	60
Express	60	60
Shuttle	60	60
Rapid	20	30
BRT	12	30

Not to be exceeded for at least 90% of all hourly periods

Compliance determination used service in effect as of December 19, 2021, which represents full implementation of the NextGen Service Plan in terms of scheduled service. Service Plans implemented on February 20 and June 26, 2022, were not used since they utilized temporarily reduced schedules due to bus operator shortage. All bus and rail lines were in full compliance with the adopted standards for weekdays, Saturdays, Sundays, and Holidays.

Weekday Headway Compliance - 112 of Bus Lines

	All Lines	Minority Lines Only	Low Income Lines Only	All Compliance	Minority Compliance	Low Income Compliance
Meets Standard	112	96	97	100%	100%	100%
Exceeds Standard	0	0	0			

Saturday Headway Compliance - 107 of Bus Lines

	All Lines	Minority Lines Only	Low Income Lines Only	All Compliance	Minority Compliance	Low Income Compliance
Meets Standard	107	91	93	100%	100%	100%
Exceeds Standard	0	0	0			

Sunday & Holiday Compliance -107 of Bus Lines

	All Lines	Minority Lines Only	Poverty Low Income Only	All Compliance	Minority Compliance	Low Income Compliance
Meets Standard	107	91	93	100%	100%	100%
Exceeds Standard	0	0	0			

4. Loading Standards

Current service standards were adopted in FY19. The adopted passenger loading standards follow:

Rail Passenger Loading Standards

Mode	Peak Psgrs/Seat	Off-Peak Psgrs/Seat
Heavy Rail	2.30	2.30
Light Rail	1.75	1.75

Not to be exceeded for at least 95% of all hourly periods

Bus Passenger Loading Standards

Service Type	Peak Psgrs/Seat	Off-Peak Psgrs/Seat
BRT	1.30	1.30
Rapid	1.30	1.30
Express	1.30	1.30
Limited	1.30	1.30
Local	1.30	1.30

Not to be exceeded for at least 95% of all hourly periods

Although a headway of greater than 60 minutes would be an exception to the headway standards a loading standard is provided for such services when they occur.

Heavy rail is based on trip samples collected by scheduled checkers. Checkers ride randomly selected cars on randomly selected trips recording data for Ons and Offs by station. Over a six-month sliding time frame this data is aggregated to build a profile of rail ridership and is the primary source for ridership estimation by day type and line. While only one car is monitored on any given sample trip, whether that car meets the

loading standard is a surrogate for whether trains are meeting the standard. Light rail loading based on using Automated Passenger Counters (APC).

Loading on the bus system is monitored every six months using quarterly APC data for max loads at time points. Since the most recent bus load standard evaluation was performed using January through March 2022 data, the samples collected from rail ride checks were compiled for the same three months.

Each rail ride check record was processed using Line # (determines mode and applicable # of seats), day type, trip start time (used to categorize weekday trips as peak or off peak), and max accumulated load (calculated from the observations in each check).

Since the light rail system is now equipped with APCs on its rail cars, the loading standards is based on APC data.

A rail mode is assumed to comply with the loading standards if 95% of all monitored trips conform to the standards. Data is from the period January through March 2022 which is the same time frame used for bus monitoring.

Weekday Rail Load Standard Monitoring

	Weekdays		
	# Of Checks/Trips	Within Standard	% Compliance
Heavy Rail	1,071	1,071	100%
Light Rail	68,559	68,545	100%

Weekend Rail Load Standard Monitoring

	Saturday			Sundays & Holidays		
	# Of Checks/Trips	Within Standard	% Compliance	# Of Checks/Trips	Within Standard	% Compliance
Heavy Rail	931	931	100%	931	931	100%
Light Rail	10,329	10,328	100%	12,234	12,230	100%

Both modes met the standard at least 95% of the time, and each line was always found in compliance, as well.

Bus monitoring is more extensive as all buses are equipped with APC’s, and data is available for all time points along each bus route for observed max loads by trip. Every

six months the most recent quarterly data is evaluated to determine adherence with the adopted standards. The most recent evaluation used January through March 2022 data.

Bus Load Standard Monitoring

Day Type	# Trips	Within Standard	% Compliance
Weekdays	580,775	568,490	97.9%
Saturdays	81,650	80,934	99.1%
Sundays/Holidays	86,429	85,823	99.3%

In reviewing the data, Lines 45, 51, 108, and 603 failed to meet the standard on weekdays while Line 16 did not meet the standard throughout the week. Other than these exceptions, the rest of the bus system was in conformance with the adopted loading standards.

5. On-Time Performance Standards

The current on-time performance standards for the system define on-time as no more than one minute early or five minutes late when leaving a time point. In the currently adopted standard both rail and bus have the same objective: 80% on-time on at least 90% of lines at least 90% of the time at the terminal.

Rail is currently monitored using Hastus. Since bus is evaluated every six months using quarterly data this evaluation was performed on the same basis. Data for the months of January through March 2022 was compiled.

Weekday Rail On-Time Performance

Mode	# of Time Point Observations	# of On-Time Observations	On-Time Percentage
Heavy Rail	25,340	25,213	99.5%
Light Rail	69,308	68,564	98.3%

Saturday Rail On-Time Performance

Mode	# of Time Point Observations	# of On-Time Observations	On-Time Percentage
Heavy Rail	4,188	4,171	99.6%
Light Rail	9,060	9,009	99.4%

Sundays & Holidays Rail On-Time Performance

Mode	# of Time Point Observations	# of On-Time Observations	On-Time Percentage

Heavy Rail	4,592	4,559	99.3%
Light Rail	10,192	10,138	99.5%

We find that on-time performance for both heavy and light rail is very good and consistently exceeds the standard.

However, the bus on-time performance is consistently short of the 80% objective. The following observations are based upon three months of data from January through March 2022.

Bus Weekday On-Time Performance

	All Lines	Minority Lines	Low Income Lines
Avg On-Time %	69.0%	69.7%	69.1%
Lines Meeting Std	8	7	6
Lines Failing Std	104	89	91
% Meeting Std	7.1%	7.3%	6.1%

Bus Saturday On-Time Performance

	All Lines	Minority Lines	Low Income Lines
Avg On-Time %	68.4%	68.4%	68.1%
Lines Meeting Std	11	10	10
Lines Failing Std	96	81	83
% Meeting Std	10.3%	11.0%	10.8%

Bus Sunday & Holiday On-Time Performance

	All Lines	Minority Lines	Low Income Lines
Avg On-Time %	74.5%	74.6%	74.4%
Lines Meeting Std	21	19	19
Lines Failing Std	86	72	74
% Meeting Std	19.6%	20.9%	20.4%

On any given day type non-Minority, non-Poverty, Minority, and Poverty bus lines exhibit similar on-time percentages. Unfortunately, only handful of bus lines achieve the 80% on-time standard with lowest percentages on Weekdays where there is more

congestion and the highest on Sundays and Holidays where congestion is the lowest. Systemwide, bus service does not meet the standard whether it is all the lines, minority lines or low-income lines. But since most of the system are both minority and low-income lines, the percentages that achieve the standard are all within one percent of each other for weekdays, Saturdays, and Sunday/Holidays. Consequently, there are no observations of disparate impacts on minorities and disproportionate burdens on low-incomes lines since everything is less than the five percent threshold.

Please note, a significant reason for the low rates of on-time performance has to do with the route running time used for scheduling. During the beginning of the COVID-19 pandemic in 2020, traffic congestion dropped significantly. Accordingly, running time was reduced systemwide. Now that congestion has returned to roughly pre COVID-19, the running time used for scheduling was no longer adequate and was addressed in the June 26, 2022, Service Change. With this change along with the implementing more projects to speed up bus service as part the NextGen Bus program, on-time performance for bus services should improve significantly systemwide.

6. Stop Spacing Standards

Stop spacing standards were incorporated with the FY19 Metro Service Policy update. It states the average stop/station spacing by service type in miles where the average spacing should fall within 0.1 miles of the specified average at least 90% of the time.

Average Stop/Station Spacing Standards

Service Type	**Average Stop Spacing**
Heavy Rail	1.50
Light Rail	1.50
BRT	1.25
Rapid	0.75
Express	1.25
Local	0.30

Transit Line Average Stop/Station Spacing

Service Type	**No. of Lines Meeting the Standard**	**No. of Lines Not Meeting the Standard**	**Service Type Average**
Heavy Rail	2		0.8 miles
Light Rail	4		1.1 miles
BRT	2		1.1 miles
Rapid	3		0.6 miles
Express	4	1	1.5 miles
Local	102		0.2 miles

As shown above, only one transit line does not meet the standard – Express Line 577 which has an average stop spacing of 4.8 miles. Even though it exceeds the standard,

the spacing is appropriate due to the travel market for the corridor. Since this is only one line out of 116 transit lines, Metro's Transit System meets the standard overall.

7. Passenger Amenities Standards

With the FY19 update of Metro's Service Policies a set of passenger amenities standards were incorporated. Those standards are presented here.

Heavy Rail Passenger Amenities Standards

Amenity	**Allocation**
Seating	At least 12 seats
Info Displays	At least 12
LED Displays	At least 8 Arrival/Departure screens
TVM's	At least 2
Elevators	At least 2
Escalators	At least 4 (2 Up / 2 Down)
Trash Receptacles	At least 6

Applies to each station

Light Rail Passenger Amenities Standards

Amenity	**Allocation**
Shelters	At least 80 linear feet per bay
Seating	At least 10 seats
Info Displays	At least 10
TVM's	At least 2
Elevators	At least 1 for elevated / underground
Trash Receptacles	At least 2

Applies to each station

Bus Passenger Amenities Standards

Amenity	**Allocation**
Shelters	At least 6 linear feet per bay
Seating	At least 3 seats per bay
Info Displays	At least 3
Elevators	At least 1 for multi-level terminals
Trash Receptacles	At least 1 per 3 bays / 2 minimum

Applies to off-street bus facilities serving 4 or more bus lines

There are no standards for bus stops because apart from painting the curb Red and erecting bus stop signage Metro has no jurisdiction over street furniture or other appurtenances. The latter are controlled by individual cities and often contracted to third parties who support their costs through advertising revenues.

All applicable facilities comply, and none have opened since the last review.

8. Vehicle Assignment Standards

Adopted vehicle assignment standards include:

Heavy Rail Maintained at a single facility

Light Rail Primarily assigned based on compatibility of vehicle controllers and rail car weight with rail line(s) served. Wherever possible, no more than two vehicle types at each facility.

Bus Assigned to meet vehicle seating requirements for lines served from each facility.

While these standards are consistently applied, we have historically looked at the average age of vehicles assigned to each facility to ensure that there are no extremes serving any area. This is most applicable to the bus system, but we provide the data for rail here also.

Heavy Rail – Vehicle Age by Facility

Facility	**Model**	**# Active**	**Average Age (years)**
Div. 20 – Los Angeles	Breda A650 Base	26	29.3
	Breda A650 Option	74	23.6
		100	**25.1**

Light Rail – Vehicle Age by Facility

Facility	**Model**	**# Active**	**Average Age (years)**
Div. 11 – Long Beach	Siemens 2000 GE/ATP	23	19.4
	Kinkisharyo P3010	57	4.4
		80	**8.7**
Div. 14 – Santa Monica	AnseldoBreda2550Base	2	13.3
	Kinkisharyo P3010	56	5.6
		58	**5.9**
Div. 21 – Los Angeles	AnseldoBreda2550Base	14	12.4
	Kinkisharyo P3010	10	4.6
		24	**9.1**
Div. 22 - Lawndale	Siemens 2000 Base	29	20.9
	Kinkisharyo P3010	25	3.3
		54	**12.8**
Div. 24 - Monrovia	AnseldoBreda2550Base	34	12.6
	Kinkisharyo P3010	39	4.1
		73	**8.1**

Note: As of June 26, 2022

A couple of constraints apply to the light rail assignments. The Siemens 2000 Base vehicles may only operate from Div. 22 (C Line) because their controller package is not compatible with other lines. This will no longer be an issue once they undergo their mid-life overhaul/modernization program which is expected be completed toward the beginning of FY24. The Anseldo Breda 2550 Base vehicles may not be operated from Div. 22 as they are too heavy for the C Line. This sub-fleet is also beginning their mid-life overhaul/modernization program.

Each light rail facility's average vehicle age is between 6 and 13 years which is consistently young to medium for vehicles that should have a 30-year life span. Meanwhile Breda A650 option heavy rail cars are nearly at the end of their useful life and will be replaced once the new HR4000 vehicles start arriving in the second half of FY23. Meanwhile the Breda A650 option vehicles are currently undergoing a mid-life overhaul/modernization program which is expected to extend the life of these vehicles at least five more years.

Bus – Vehicle Age by Facility – Directly Operated

Division	32-foot	40-foot	45-foot	60-foot	# of Buses	Avg. Age
1		164	8	24	196	4.5
2		181			181	6.9
3		139	30			5.0
5		120		45	165	9.5
7		112	77	25	214	8.3
8		127	33	40	200	4.9
9		172	52		224	6.1
13		53	60	69	182	7.9
15		144	42	43	229	5.6
18		121	102	24	247	6.5

Note: As of June 26, 2022

Bus – Vehicle Age by Facility – Purchased

Division	32-foot	40-foot	45-foot	60-foot	# of Buses	Avg. Age
95	11	22	4		37	9.7
97		70			70	3.3
98	18	23	8		49	9.9

Note: As of June 26, 2022

Bus – Vehicle Age Summary

	32-foot	40-foot	45-foot	60-foot	# of Buses	Avg. Age
	29	**1448**	**416**	**269**	**2,162**	**6.5**

Note: As of June 26, 2022

The average fleet age by Division ranges from 3.3 years for contract Division 97 to 9.5 years for directly operated Division 5. All these average ages are within 3 years for the system average. The useful life for a bus, ranges from 12 – 15 years. So, the average age of each division fleet is well within this range. In the last review, Division 97 had the oldest average fleet. Consequently, it now has the youngest feet since it was next in line to have its fleet replaced. Within the next few years, the 32-foot and 45-foot buses will be phased out and then during the next decade, the entire bust fleet will be converted over to battery electric buses.

Conclusion

In conclusion, the results of the service monitoring indicate that the adopted systemwide standards are set properly. However, Metro needs to significantly improve the systemwide bus service on time performance. Much of this should be remedied with the running time adjustments made for the June 26, 2022 service change and future NextGen capital improvement projects designed to speed up service.