LOS ANGELES FIRE DEPARTMENT

November 17, 2026

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FIRE CHIEF

November 2, 2026

BOARD OF FIRE COMMISSIONERS
FILE NO. 26-060

TO: Board of Fire Commissioners

FROM: Jaime E. Moore, Fire Chief

SUBJECT: UPDATE ON LAFD FLEET METRICS AND MICLA ALLOCATION

FINAL ACTION:	_____ Approved	_____ Approved w/Corrections	_____ Withdrawn
	_____ Denied	_____ Received & Filed	_____ Other

SUMMARY
In accordance with the directive of the Board of Fire Commissioners, the Los Angeles Fire Department (LAFD) submits this comprehensive status report regarding fleet performance metrics, repair-versus-replacement criteria, Municipal Improvement Corporation of Los Angeles (MICLA) funding allocations, and operational workload and staffing. This report provides the requested data and presents a formal assessment regarding the operational readiness and physical condition of the Department's fleet.

RECOMMENDATION
That the Board:
Receive and file.

FISCAL IMPACT
There is no fiscal impact associated with this report.

DISCUSSION
The National Fire Protection Association's (NFPA) recommended replacement life cycle for emergency response heavy apparatus is 15 years, structured around a service model where the first 10 years are generally dedicated to demanding frontline service and the remaining 5 years are served in a backup reserve capacity. To rigorously align with these industry guidelines, the LAFD Maintenance Section continuously monitors fleet resources and makes data-driven, strategic decisions using comprehensive fleet metrics derived primarily from its fleet maintenance management program. Key metrics evaluated to generate objective replacement recommendations include vehicle age, total cumulative engine hours, driven miles, the presence of up-to-date safety features, severe operating conditions, manufacturer support, and overall physical condition. When an apparatus reaches the end of its effective service life, its mileage and overall mechanical condition directly dictate its priority placement within the salvage process.

As of September 25, 2026, a comprehensive evaluation of the active LAFD fleet reveals that an average of 57% of LAFD aerial ladder trucks (33 out of 58 total) and 64% of LAFD triples/pumper apparatus (116 out of 182 total) have met or exceeded established replacement thresholds based on age, mileage, and overall physical condition. Additionally, 11% of the light vehicle fleet (83 out of 764 total) are currently due for full replacement under these same metrics.

The following table summarizes current replacement recommendations for LAFD vehicles that have reached or exceeded established operational thresholds based on age, mileage, and mechanical condition.

Fleet Replacement Recommendation Summary (as of 09/2026)				
Vehicle Type	Number in Fleet	Due for Replacement	Not Due for Replacement	Percentage due for replacement
Ambulance	204	21	183	10%
Triples	182	116	66	64%
Aerials	58	33	25	57%
Light Vehicles	764	83	681	11%

For daily apparatus fleet status and availability, the Department utilizes the Daily Progress Report. This report is a critical operational tracking tool to monitor apparatus availability cross-referenced by vehicle type. The information generated by this report is used to determine which apparatus are currently operational and available to augment frontline staffing during large-scale emergencies, or to serve as temporary, line-of-duty replacements for units that have been rendered out-of-service due to mechanical repairs or required maintenance. The report systematically categorizes and breaks down the total fleet inventory across frontline units, total reserve units, and immediately available reserves by specific vehicle classification. Frontline vehicles are primary apparatus assigned directly to Fire Stations that remain continuously staffed and available for immediate emergency response. Reserve vehicles serve as essential backup units to maintain operational coverage whenever frontline apparatus experience mechanical failures, routine service downtime, or accident damage. Meanwhile, ready reserve apparatus are fully equipped, high-readiness vehicles strategically designated to accommodate rapid staff augmentation whenever heightened incident activity or emergency operational needs arise. The calculated out-of-service percentage reflects

the proportion of reserve vehicles within a given vehicle category that are actively unavailable due to ongoing maintenance or shop repairs.

As of September 25, 2026, the Supply and Maintenance Division encountered a critical operational constraint, recording one reserve Triple and one reserve Aerial ladder trucks immediately available for deployment. Almost every available reserve apparatus across both categories was actively deployed in frontline field service to maintain continuous operational coverage while primary frontline units were down for mechanical repairs. While repair durations vary significantly based on component availability and job complexity—ranging from single-day turnarounds to extended shop overhauls—the Division successfully maintained all 9 designated ready reserve Triples fully equipped and in constant readiness for immediate deployment should emergency conditions require staffing augmentation.

Daily Progress Report 9/25/26					
Vehicle Type	Out of Service Percentage of Reserves	Available	Total in Fleet	Reserve Total	Assigned (Frontline)
Triple (TRP)	97%	1	182	33	140
Aerial (AER)	93%	1	58	15	43
RA	80%	8	204	40	154
TRP Ready Reserve	0%	9	9		

Apparatus Repair versus Replacement

The Department considers reaching the end of an apparatus's service life as the primary criterion for its permanent removal from frontline operations and eventual replacement. Service life is defined as the operational period during which an apparatus can fulfill its assigned emergency mission safely, reliably, and at a reasonable financial cost. This assessment thoroughly evaluates every critical component of the apparatus, including the structural integrity of its chassis, powertrain health, body durability, specialized emergency systems, and attached operational equipment.

Specifically, an apparatus reaches the end of its viable service life when cumulative structural deterioration, recurring system failures, excessive ongoing operating and repair costs, inadequate operational performance, technological obsolescence, or a complete loss of manufacturer support renders continued service unacceptable. Mechanical repairability alone is insufficient to establish an apparatus's ongoing suitability for emergency response; severe safety deficiencies demand immediate removal from service regardless of vehicle age or the current availability of replacement funding.

These are the four primary factors used to determine if an apparatus should be repaired or replaced:

1. Age and Service Lifecycle (NFPA Standards)
   - 10–15 Years (Frontline Retirement): Primary engines in high-volume or urban stations generally reach the end of their frontline life at 10 to 15 years. At this point, they are typically shifted to Reserve / Backup status

2. Mechanical & Usage Metrics
   - Engine and Pump Hours: High engine hours (from long idling times on scenes) and high pump hours degrade major components far faster than road mileage alone.
   - Corrosion & Structural Damage: Severe frame or subframe rust (especially in salt-belt regions or coastal areas) compromises structural integrity and crash safety, often rendering repairs unviable.
   - Failed Annual Certifications: Repeatedly failing mandatory annual tests—such as the pump test, aerial ladder load test, or brake/steering integrity inspections—is a primary trigger for retirement.

3. Financial Tipping Points
   - The 10–15% Annual Repair Rule: If annual maintenance and repair costs exceed 10% to 15% of the cost of a new replacement vehicle, the engine is a candidate for retirement.
   - The 50% Resale Value Rule: If a single repair estimate (e.g., a blown engine or major transmission failure) exceeds 50% of the vehicle's current market value, it is generally salvaged or scrapped.
   - Parts Obsolescence: If the manufacturer goes out of business or stops producing replacement parts (chassis, pumps, electrical modules), maintaining the vehicle becomes impossible or unsafe.

4. Modern Safety & Compliance Gaps
   - Missing Crew Protection: Older trucks lack rollover protection, side-curtain airbags, Electronic Stability Control (ESC), or modern seatbelt sensors.
   - Outdated Ergonomics: Modern apparatus feature lower hose beds and enclosed crew cabs to reduce firefighter injuries.
   - Emissions & Environmental Rules: Older diesel engines may fail to comply with modern clean-air regulations or local municipal mandates.

Municipal Improvement Corporation of Los Angeles (MICLA) Allocations

The Municipal Improvement Corporation of Los Angeles is a non-profit special purpose entity formed by the City of Los Angeles to finance public capital projects and equipment acquisitions. Rather than disbursing upfront capital from the General Fund, the City utilizes MICLA to issue lease revenue bonds and commercial paper to fund essential capital assets—such as fire apparatus, real estate, and station improvements—which are subsequently leased back to the City over time. Program

administration and debt management are overseen by the City Administrative Officer (CAO), while accounting functions are performed by the Office of the City Controller, and procurement is managed by the Department of General Services. To comply with tax-exempt debt regulations, MICLA funding is restricted to high-priority capital assets with a minimum unit cost of $250,000 and an expected useful life of at least six years, with preference to assets lasting 10 or more years.

The Los Angeles City Council determines departmental MICLA funding allocations through a structured administrative process. Funding requests are evaluated by the CAO against a useful life assessment to verify that an asset's economic lifespan matches or exceeds its debt repayment schedule, thereby excluding operational expenditures, salaries, and routine maintenance.

During annual budget preparation, departments submit capital requests to the CAO and the Mayor. The Mayor evaluates these submissions against strategic city priorities and issues the Proposed Budget, which establishes baseline MICLA allocation caps for each department. The budget is then reviewed by the City Council's Budget and Finance Committee, where council members analyze CAO impact reports regarding proposed funding adjustments. Additionally, the City Council enforces a Three-Year Spending Policy under which unencumbered funds after 18 months or unspent funds after three years may revert to the City, allowing Council to reallocate idle capacity during mid-year budget adjustments.

Final departmental allocations are subject to a statutory debt ceiling. Total departmental MICLA allocations, combined with the City's other non-voter-approved debt service, cannot exceed 6% of total General Fund revenues. If committee adjustments cause debt service to exceed this threshold, allocations must be adjusted accordingly to ensure compliance.

The Department has received the following MICLA Fleet Replacement Funding:

- 2018 $815,000
- 2019 $5.74M
- 2020 $6.28M
- 2021 $3.06M
- 2022 $17.33M
- 2023 $20.27M
- 2024 $26.67M
- 2025 $53.36M
- 2026 $81.6M (includes $21.8M for a helicopter)
- 2027 $56.2M (includes $23.7M for a helicopter)

For reference, the established contract unit pricing stands at $1.8 million for a Triple Apparatus, $3.0 million for an Aerial Apparatus, and $450,000 for a Rescue unit. This reflects a contractual cost increase of approximately 85% since 2019. Current apparatus delivery schedules extend to 24 months for Triples and range from 40 to 48 months for Aerials, subject to manufacturer specifications and requirements.

The Equipment Engineering Unit strategically prioritizes the Department's allocated MICLA funding to advance its primary operational mission. Capital allocations are systematically evaluated based on key parameters, including vehicle age, projected service life, procurement lead times, and specialized operational demands. Although triple combination pumpers, aerial ladder trucks, and heavy apparatus represent the largest share of capital expenditure—followed by rescue ambulances and light fleet vehicles—recent Federal Aviation Administration (FAA) regulatory mandates have additionally necessitated the procurement and replacement of three medium-duty helicopters across the preceding three budget cycles.

Workload and Staffing

As the Department is constantly changing to meet the diverse needs of the City of Los Angeles, so does the fleet size and diversity of apparatus. In an effort to keep pace with the increased maintenance demands, the Supply and Maintenance Division tracks workload indicators to determine labor needs. Workload indicators include the number of pending service requests and historical projections for routine repairs and mechanical failures. The total labor hours required for these tasks determine the workforce necessary to maintain fleet readiness.

For calendar year 2026, 5,357 unassigned work requests are queued across all vehicle classes. While the Maintenance Section does not maintain a fixed target for queued requests, mission-critical and safety-related repairs are prioritized immediately to maximize apparatus availability.

The following table summarizes LAFD fleet work requests for calendar years 2025 and 2026:

Work Request Statistics				
Period	Total Number of Work Requests	Priority No. 1 Work Request	Completed Work Requests	Completion Rate YTD
2025	6299	1616	5282	83%
2026	5357	2041	3382	55%

The year-to-date completion rate of 55% in 2026, compared to 83% in 2025, reflects an increased prevalence of extensive and complex repair requirements, including major component overhauls and collision repairs. These advanced service procedures demand a higher expenditure of labor hours and frequently necessitate specialized disciplines, such as certified welding and custom component fabrication. This operational impact is further compounded by the aging vehicle fleet, where replacement parts are increasingly obsolete or necessitate specialized custom manufacturing.

Fleet maintenance workload and corresponding staffing requirements are quantified using Maintenance Repair Units (MRUs). One (1) MRU represents the baseline labor hours executed by a Journey Level Mechanic to fulfill total annual maintenance and repair requirements for a single standard fleet vehicle. Within the LAFD, one (1) MRU corresponds to 14 labor hours, reflecting the current annual average required to maintain a single sedan. Aggregate labor hours for the entire fleet or a designated subset are calculated and subsequently divided by 14 hours to determine total required MRUs. Correspondingly, total available personnel labor hours are divided by 14 hours to derive the net available labor capacity in MRUs.

A comparative analysis of required Maintenance Repair Units (MRUs) against available labor capacity establishes a standardized metric for evaluating workload and personnel requirements across diverse vehicle classifications. The accompanying data delineates the required versus available MRUs for the Department's current fleet maintenance workforce. The findings indicate that the aggregate required MRUs for the fleet exceed total operational labor capacity, even with overtime, by 318 MRUs, representing a deficit of 4,452 labor hours. Furthermore, as the fleet continues to age, the required MRU expenditure per vehicle escalates proportionally.

The analysis presented in the chart does not account for operational disparities among specialized repair classifications. For instance, in scenarios involving collision damage, the limited staffing of auto body builders (5), fabricators (1), and welders (1) relative to heavy-duty equipment mechanics (29) can induce extended service delays due to accumulated backlogs. Consequently, mechanical repairs are completed more expeditiously than body restoration, thereby prolonging vehicle downtime. Achieving an optimal distribution across labor categories requires balancing preventative maintenance and repair demands based on empirical data and historical operational experience.

Labor Requirements		**Labor Available**	
Vehicle Type	Yearly MRU Requirements	Journey Level Mechanics/Techs	Positions Filled
Aerial Ladder Trucks	1188	Senior Mechanics	3
Fire Engines (Triples)	2266	Heavy Duty Equipment Mechanic	29
Ambulances	1258	Equipment Mechanics	18
Sedans	152	Auto Body Builders	5
LSP & SUV	445	Mechanical Repairers	2
Pick-up Trucks	133		
Vans	40		
Airport Crash Rigs	159		
Fire Boats	211	Total Staffed Positions	57
Patient Gurneys	200		
Heavy Special Vehicles	291		

Breathing Air Compressors	70	Additional Overtime equivalent	8
Earth Moving Equipment	129		
Trailers	32	Total Available	65
Generators	17		
Forklifts	32	Yearly MRU's Produced per Journey Level Position	100
Command Vehicles	196		
Total LAFD Fleet MRU Required	6818	Total Annual MRU's	6500
Workload/Staffing Summary: **= 6818 MRU's - Staffing = 6500 potential MRU's**			**Workload**

CONCLUSION

The Fire Department fleet is distinct in that operational readiness requires continuous availability regardless of active unit utilization. All emergency apparatus, whether in frontline or reserve status, must remain fully functional and prepared for immediate deployment. The Maintenance Section remains committed to delivering a safe, reliable, and operational fleet in support of the LAFD mission to preserve life and property.
Board report prepared by Peter Hsiao, Assistant Chief, Supply and Maintenance Division.