CITY OF LOS ANGELES

INTER-DEPARTMENTAL MEMORANDUM

Date: October 29, 2026

To: Honorable City Council
c/o City Clerk, Room 395
Attention: Honorable Heather Hutt
Chair, Transportation Committee

From: Laura Rubio-Cornejo, General Manager
Los Angeles Department of Transportation (LADOT)

Subject: **SMART LOADING ZONE PILOT PROGRAM**

SUMMARY

As directed by Council File (CF) 25-1232, this report gives an overview of how other municipalities have implemented Smart Loading Zones (SLZ), and the steps necessary for LADOT to initiate a pilot program to improve commercial loading and unloading access and short-term delivery parking.

RECOMMENDATION

That the City Council DIRECT LADOT to report to the Board of Transportation Commissioners with a proposed Commercial Loading Zone (CLZ) fee schedule and a plan to implement an SLZ pilot program.

BACKGROUND

Like many major United States (US) cities, the City of Los Angeles (City) faces intense competition for limited curb space, leading to potential safety risks resulting from double parking, blocked bus and bike lanes, and inefficient loading and unloading. Drivers and delivery companies compete for the City's limited curb space alongside other new transportation modes, such as bike lanes, micromobility, ride-hailing, electric vehicle (EV) charging, and autonomous vehicles (AV). Pandemic-era changes, such as online shopping deliveries, curbside pickup, Al Fresco dining, and delivery services, have further exacerbated congestion at the curb.

As demand for curb space in the City intensifies, the curb has evolved into premium urban real estate, requiring a sophisticated management approach beyond the scope of standard parking programs. Research from the University of Washington Urban Freight Lab shows the necessity for this shift and estimates that commercial drivers waste 28 percent of their total trip time searching for available parking (Goodchild, 2020). This inefficiency primarily contributes to congestion, emphasizing the need for a more dynamic approach to curbside management.

LADOT has tackled this challenge proactively. Following the launch of the nation's first enforceable Zero-Emissions Delivery Zone pilot in 2021, LADOT successfully scaled the program from a total of five sites in Downtown, Encino, and Koreatown to more than 30 locations (CF 21-0147). The City established a proven framework for specialized loading zones, providing dedicated curb access for electric vans, trucks, and cargo bikes.

To further optimize urban mobility, the City is now positioned to implement advanced CLZs, also referred to as SLZs, leveraging emerging technologies and data-driven systems. US cities have transitioned SLZs from pilot programs to proven tools in curb management. By deploying SLZs, LA can build upon its most recent successes and apply national best practices to improve traffic flow, enhance safety, and ensure more equitable access to the curb.

In December, 2025, Council instructed LADOT to report with implementation and outcomes of Smart Loading Zone or similar curb management programs in other municipalities, and the steps necessary to initiate an SLZ pilot program in the City to improve loading zone access and short-term delivery parking.

DISCUSSION

LADOT can enhance commercial loading access and short-term delivery parking by deploying SLZs, a technology-driven solution that transforms unmetered loading zones into revenue-generating managed assets. Video-imaging sensors and Automated License Plate Recognition (ALPR) technology monitor vehicle activity and track dwell times in real-time. Real-time management and robust enforcement of the SLZs can reduce illegal parking, increase curb turnover for local businesses, reduce emissions, as well as improve safety for pedestrians, cyclists, and drivers. As directed by Council, LADOT identified other major cities that established SLZ programs to assess best practices and determine the necessary steps to pilot SLZs in the City of Los Angeles.

Implementation and Outcomes of SLZs in Other US Cities

Major cities across the nation aim to enhance curbside management and improve commercial loading and delivery operations through SLZs. However, each city has adopted different methods to implement these programs. The following case studies highlight peer municipalities that have successfully established SLZs.

Pittsburgh, Pennsylvania: The City of Pittsburgh implemented an innovative approach to SLZs by installing automated camera sensors in 40 high-demand locations. The Pittsburgh Parking Authority (PPA) manages the SLZ program, which includes charging fees to fleet operators for participation, issuing permits, and utilizing ALPR technology to charge vehicles for the time spent in the zone. These sensors detect when vehicles arrive and leave the loading spaces, allowing the PPA to gather data on space occupancy. This information is used to charge for the use of each space. For registered vehicles, the system automatically generates invoices, while unregistered vehicles receive citations by mail based on license plate information captured by the sensors. This automated system streamlines the process for drivers, eliminating the need for a mobile app or additional manual steps to access designated zones.

Between 2024 and 2025, PPA observed a 70 percent increase in loading zone turnover and a 95 percent decrease in double parking. These changes generated approximately $1.9 million in additional revenue during that time span. This revenue boost came from various sources: fees assessed to participating vehicles for using the designated zones, citations paid by drivers enrolled in the SLZ program for violating parking policies, and citations paid by drivers who haven't registered for the program.

Oakland, California: The City of Oakland implemented a pilot between October 2022 and October 2024 that converted approximately 380 traditional CLZs into digitally managed "Smart Zones" or SLZs. The program used geofencing and GPS-based technology to identify and manage vehicle activity within designated curb spaces without requiring additional on-street hardware.

This SLZ platform supports a digital permitting and payment model. Participating operators share vehicle location data with an authorized third-party platform to validate when and how long vehicles park within designated zones, and to process curb access payments.

Oakland successfully implemented this model with a permitted car-sharing operator by tying program participation directly to the operator's parking permit. The program identified enrolled vehicles by license plate and validated their parking authorization under applicable permit rules. The system calculates parking fees based on vehicle activity and permit requirements, streamlining payments and distinguishing authorized vehicles from non-compliant ones. In Oakland, the enforcement team used handheld devices connected to the platform, syncing license plates with their enforcement provider so officers automatically knew which vehicles held valid permits.

The broader SLZ model also supports voluntary participation by commercial fleet operators. Experience suggests that successful adoption relies on meaningful operator incentives, clear program requirements, and an effective compliance and enforcement framework. Tying participation to a permit or other authorization, and offering participating operators clear operational or enforcement-related benefits, allows the model to deliver a scalable approach for managing commercial and shared-mobility curb use.

Miami, Florida: The Miami Parking Authority implemented an SLZ program using the same platform as the one used in Pittsburgh. The Miami program demonstrated that SLZs can reduce illegal parking while generating revenue through sensor-based, pay-by-minute curb spaces. Early deployments across roughly 16 to 20 locations improved turnover and shortened dwell times, which can show reductions in double parking of up to 30 percent and increases in turnover by about 25 percent. Miami's approach is expected to deliver similar results to those experienced in Pittsburgh, along with improved traffic flow. Existing loading zone enforcement already generates around $190,000 annually, highlighting the strong revenue potential as Miami scales its smart curb management.

Steps Necessary to Initiate an SLZ Pilot Program

By actively monitoring designated CLZ spaces with advanced sensor and camera technologies, an effective SLZ solution will enable LADOT to enhance the management and optimization of curb space usage. This approach relies on collecting and analyzing real-time data, much like LADOT currently manages metered parking spaces through the LA Express Park program and its parking management system (CF 24-0061). This technology allows LADOT to evaluate occupancy at SLZs, helping to inform pricing and more effective enforcement strategies, which may facilitate limited pilots to test guided enforcement platforms. The City will actively evaluate SLZ technologies listed in this report during a one-year pilot program to assess their effectiveness and feasibility before selecting a final solution.

Existing/Potential Regulatory Framework

The City manages its curbside loading zones through a color-coded system that designates specific zones for commercial and passenger use. Under LAMC section 80.56 and California Vehicle Code (CVC) section 21458, yellow curbs serve as CLZs, permitting 30-minute loading and unloading for commercial vehicles between 7 AM and 6 PM (Monday through Saturday), while white curbs function as Passenger Loading Zones (PLZ), restricting turnover to up to five-minute intervals.

LAMC section 88.00.1 gives LADOT the authority to charge a fee for commercial loading and unloading that exceeds 30 minutes, similar to parking meter charges. However, this legislation, enacted in 1994, is outdated because it refers to "personal parking meters", an obsolete technology that the City tested and

subsequently abandoned many years ago. As a result, the current regulatory framework is inflexible, hindering LADOT's ability to effectively manage CLZs and apply its existing fee-collection authority in a digital environment. In addition, the LAMC fails to account for variables such as environmental profiles (i.e., zero-emission vehicles) and various delivery modes (e.g., vans, bicycles, and passenger cars).

To initiate an SLZ pilot program in Los Angeles, the City will need to amend the LAMC to authorize LADOT to meter CLZs and SLZs, and update enforceable parking time limits; and establish and/or update parking rates and fines at CLZs and SLZs.

Implementation Framework

The following steps provide a framework for LADOT to launch an SLZ pilot program:

1. Board of Transportation Commissioners Approval
    a. Obtain the Board's approval of the plan to meter commercial loading zones and establish the rates for the zones through an ordinance. Per the Los Angeles Administrative Code (LAAC) Chapter 20, Article 5, Section 22.484, the Board has the control of, and responsibility for, the Special Parking Revenue Fund (SPRF). Also, per the LAAC, no ordinance regulating the manner and use of public streets shall be adopted unless it has first been submitted to and approved by the Transportation Commission; except if adopted by a vote of at least two-thirds of the members of City Council.
2. Modify Municipal Codes and Policies
    a. Amend the Los Angeles Municipal Code (LAMC) to authorize metering in commercial loading zones, establish rates, and authorize LADOT to collect and deposit revenue into the SPRF.
3. Strategic Planning and Site Selection
    a. Identify high-conflict curb zones and prioritize commercial corridors with high demand.
    b. Look for opportunities to use existing street infrastructure, to the extent possible, such as streetlights and traffic signal poles, to mount sensor equipment and reduce the need for new infrastructure.
4. Develop Enforcement Policies and Framework
    a. Establish clear and effective curb regulations that define how drivers may use SLZs.
    b. Set specific time-limit restrictions and develop enforcement policies.
5. Procurement and Pilot Launch Considerations
    a. Identify funding and initiate a formal competitive procurement process to select qualified and responsive vendors with expertise in digital curb management systems.
    b. Partner with selected vendor(s) to provide a real-time monitoring system platform that complies with Curb Data Specifications (CDS), integrates with LADOT's existing parking management systems, and strictly adheres to LADOT's ALPR Use Policy.
    c. Develop a dedicated fleet program that allows major delivery companies and high-volume carriers to participate, enabling automated billing. Fleet companies interested in participation in the program would register with LADOT or its designated vendor allowing the automatic billing.
    d. Engage stakeholders, test the system, and launch the pilot program.
6. Evaluation and Long-Term Expansion
    a. Evaluate the pilot using key performance metrics, including:
        i. Reductions in parking dwell time and double-parking incidents
        ii. Payment compliance rates
        iii. Vehicular turnover and occupancy rates

iv. Revenue generation

b. Report back to the City Council summarizing pilot outcomes and key findings.
c. Based on the results, determine whether the City should make the program permanent, expand, or reduce the program.

Contracting Options

There are multiple options for contracting with potential vendors for this pilot program as described below. LADOT will prepare a report to Council recommending the preferred option to amend the current Mobility Hub contract (CF 26-0002-S20, Contract No. 0150-12200-0001) to pilot various technology systems.

OPTION A: EXISTING CITY CONTRACT

The most expedient contracting approach is to use an existing City contract or existing bench list. Current contracts should include the use of curbside technology, or specifically ALPR camera technology, within their scope of work. This potential contracting option offers several benefits, including expedited procurement processes, pre-negotiated terms, and an established working relationship where both parties are already familiar with LADOT's systems. LADOT can amend the existing Mobility Hub contract (No. 0150-12200-0001) to allow for the evaluation of various technology systems by the contractor entering into agreements with multiple subcontractors.

OPTION B: PIGGYBACK CONTRACT

LADOT could "piggyback" off one or more existing contracts with other cities or agencies, if suitable contracts are found. In this scenario, LADOT would seek approval to piggyback on these contracts, making necessary updates to pricing and other standard contract terms. In our research we found potential contracts include the City of Oakland's program, which provides the opportunity to establish direct relationships with delivery companies to pre-register their vehicles and uses GPS to permit participating vehicles at designated zones; or the City of Minneapolis's contract, which enables the improvement of curb management by implementing geofencing zones and utilizing meter-mounted vehicle detection sensors that track parking duration and vehicle type; or if the City of Los Angeles approves automated invoicing, the City of Pittsburgh's contract could provide another solution worth considering. This option would require approval from the Mayor, City Council, and City Attorney to ensure legality. Although piggybacking offers a faster and a more streamlined alternative to issuing a new Request for Proposal, it limits the City to the original contract's scope and terms. This approach may necessitate entering into multiple piggyback contracts to test a variety of technology systems; whereas using an existing contractor through a contract amendment would allow them to contract more efficiently with various technology providers.

OPTION C: REQUEST FOR PROPOSALS (RFP)

Issuing an RFP will start a competitive bidding process, allowing vendors to submit detailed proposals that outline their technical solutions, pricing, and implementation strategies. The RFP will specify the required equipment and software capabilities, performance metrics, and any integration needs with existing LADOT systems. This approach, which typically takes 18-24 months to complete, encourages competition, and can lead to cost-effective and innovative solutions. This approach could outline a one-year pilot scope of work with an option to extend the contract for up to five years, pending approval from LADOT's General Manager and the City Council based on the pilot's success.

Resources Needed for a Pilot Program

The City can fund a 50-zone SLZ pilot program using the SPRF. Table 1 (below) summarizes the projected annual costs for the first five years for personnel, equipment, signage, licenses, training, and other fees associated with the deployment of various SLZ solutions for 50 zones. Even though the pilot is projected for one year, the five-year costs are provided to differentiate the true costs between potential solutions. These potential solutions include variations using parking meter equipment, ALPR hardware and technology using mounted sensors, and/or guided enforcement by Traffic Officers. Table 1 outlines the costs detailed in the tables in Attachment A, which provide examples of solutions implemented by peer municipalities, as well as other potential programs that could utilize mounted ALPR solutions.

Table 1 - SLZ Program Options: Five-Year Cost for 50 Zones

Option	Program Description	First Year Cost	Five-Year Cost
1	Parking Meter Equipment (Enforcement completed through existing staffing)	$174,650	$205,050
2	Streetlight-Mounted Low-Resolution Video Imaging Sensors (Guided enforcement)	$389,250	$1,333,450
3	Vehicle-Mounted ALPR Sensors	$454,976	$1,344,000
4	Oakland-CA SLZ Program (GPS-Based Automated Transactions)	$520,140	$1,414,420
5	Pittsburgh-PA & Miami-FL SLZ Program (Automated Invoices)	$482,800	$2,376,400

The estimated initial costs for outfitting 50 zones with smart parking meters equipped with meter-mounted occupancy sensors will reach approximately $174,650 in the first year, totaling about $205,050 over the first five years for Option 1. In contrast, a fully automated program using camera sensors and invoicing by mail, as shown for Option 5, will incur a first-year cost of $482,800 with an estimated five-year expense of around $2,376,400. Only Options 2-4 require additional parking enforcement staff, as shown in Attachment A. Option 1 will rely on existing staff for enforcement, while Option 5 operates fully automated.

LADOT estimates each CLZ in Downtown LA experiences eight loading/unloading events daily, as outlined in the Southern California Association of Governments' (SCAG) *Last-Mile Freight Delivery Study* from October 2020. The City of Philadelphia completed a pilot in April 2023 consisting of 22 SLZ locations similar to Pittsburgh's program. During the pilot, Philadelphia was only authorized to issue automated invoices instead of citations, which resulted in the collection of just 22 percent of the total invoiced amount. As a result of the pilot's success, Philadelphia initiated its official program in May 2025 with the initial 22 SLZ locations, including authority for automated citation processing. The program has generated nearly $3.84 million in gross revenue from citations alone during the first year, which translates to roughly $175,000 per zone per year. For illustrative purposes, applying Philadelphia's reported citation revenue total per zone to the proposed 50-zone Downtown Los Angeles pilot would result in approximately $8.75 million in potential gross citation revenue. In August 2026, Philadelphia

was authorized to expand its SLZ program from 22 zones to 52 zones due to its overall success, including the improvement of roadway safety by significantly reducing double-parking.

Table 2 displays a sample of SLZ rates established in other US cities that have deployed tiered pricing models, as well as fines for overstaying in a SLZ. LADOT recommends the SLZ rates and fines listed in Table 2.

Table 2 - Proposed SLZ Rates

Rates Comparison and Proposed Rates for Los Angeles									
Philadelphia, PA		Oakland, CA		Miami, FL		Pittsburgh, PA		Los Angeles, CA (Proposed)	
Pricing Tiers in minutes	**Rate per Hour**	**Pricing Tiers in minutes**	**Rate per Hour**	**Pricing Tiers in minutes**	**Rate per Hour**	**Pricing Tiers in minutes**	**Rate per Hour**	**Pricing Tiers in minutes**	**Rate per Hour**
1-60	$6.00	1-60	$2.00	1-5	$0.00	1-15	$0.00	1-5	$0.00
				6-15	$3.00	16-30	$4.00	6-30	$6.00
				16-30	$9.60	31-60	$8.00	31-60	$12.00
						61-120	$12.00	61-120	$18.00
60 min+	$51 fine	60 min+	$100 fine	30 min+	$46 fine	120 min+	$40 fine	120 min+	$68 fine

LADOT recommends a thorough review of available technologies for implementing a 50 SLZ pilot program. If LADOT determines that the options in Table 1 are not suitable as stand-alone solutions, it can implement elements of these non-mutually exclusive options together to combine various technologies. This program could utilize a combination of existing parking meter systems alongside ALPR systems. By pursuing this strategy, LADOT can explore cost-effective solutions while deploying current parking enforcement staff to patrol and enforce the SLZs. This approach will allow for an evaluation of the pilot's effectiveness and provide insights on whether to continue, scale, or adjust the program.

FISCAL IMPACT STATEMENT

There is no fiscal impact to the General Fund as this report is informational.

LRC:DC:KH:JH:gr

Attachment:

A - Estimated Costs for Five-Year SLZ Programs - 50 Zones

ATTACHMENT A

Estimated Costs for SLZ Program Options Over Five Years with 50 Zones

Option 1: Parking Meter Equipment Cost
(Enforcement completed through existing staffing)

Item	Frequency	Quantity	Cost	Total Cost
Parking Meter Equipment w/ Sensor	One-Time	50	$2,175	$108,750
Parking Signs & Markings	One-Time	50	$1,166	$58,300
Associated Meter & Sensor Fees	Annually	50	$152	$7,600
Program Total for Year 1		1	$174,650	$174,650
Program Total for Years 2-5		4	$7,600	$30,400
Five Year Program Total				**$205,050**

Option 2: Staff and Equipment Costs with Streetlight-Mounted Low-Resolution Sensors

Item	Frequency	Quantity	Cost	Total Cost
Traffic Officer II - FTE	Annually	2	$100,000	$200,000
Annual ALPR Subscription Fee	Annually	50	$250	$12,500
Annual ALPR Sensor License	Annually	50	$400	$20,000
Parking Meter Equipment w/o Sensor	One-Time	50	$1,898	$94,900
Parking Signs & Markings	One-Time	50	$1,166	$58,300
Associated Meter Fees	Annually	50	$71	$3,550
Program Total for Year 1		1	$389,250	$389,250
Program Total for Years 2-5		4	$236,050	$944,200
Five Year Program Total				**$1,333,450**

Option 3: Staff and Equipment Costs with Vehicle-Mounted Sensors

Item	Frequency	Quantity	Cost	Total Cost
Traffic Officer II - FTE	Annually	2	$100,000	$200,000
One-Time Software License	One-Time	1	$1,520	$1,520
Annual Account Software License	Annually	2	$7,400	$14,800
One-Time LPR Unit Cost	One-Time	2	$39,000	$78,000
Annual per-LPR Unit Software License	Annually	2	$585	$1,170
Guided Enforcement	Annually	2	$1,368	$2,736
Parking Meter Equipment w/o Sensor	One-Time	50	$1,898	$94,900
Parking Signs & Markings	One-Time	50	$1,166	$58,300
Associated Meter Fees	Annually	50	$71	$3,550
Program Total for Year 1		1	$454,976	$454,976
Program Total for Years 2-5		4	$222,256	$889,024
Five Year Program Total				**$1,344,000**

Option 4: Oakland, CA SLZ Program Costs (Parking Meters, Sensors, and ALPR units added for LA)

Item	Frequency	Quantity	Cost	Total Cost
Traffic Officer II - FTE	Annually	2	$100,000	$200,000
Platform Fee	One-Time	1	$50,000	$50,000
One-Time Software License	One-Time	1	$1,520	$1,520
Annual Account Software License	Annually	2	$7,400	$14,800
One-Time LPR Unit Cost	One-Time	2	$39,000	$78,000
Annual per-LPR Unit Software License	Annually	2	$585	$1,170
Parking Meter Equipment w/ Sensor	One-Time	50	$2,175	$108,750
Parking Signs & Markings	One-Time	50	$1,166	$58,300
Meter & Sensor Associated Fees	Annually	50	$152	$7,600
Program Total for Year 1		1	$520,140	$520,140
Program Total for Years 2-5		4	$223,570	$894,280
Five Year Program Total				**$1,414,420**

Option 5: Automated SLZ Enforcement Program Costs
(Similar to Pittsburgh, PA and Miami, FL programs)

Item	Frequency	Quantity	Cost	Total Cost
Platform Fee	One-Time	1	$49,500	$49,500
Annual ALPR Sensor Fee	Annually	50	$600	$30,000
Annual ALPR Subscription Fee	Annually	50	$7,500	$375,000
Guided Enforcement Fee	Annually	50	$1,368	$68,400
Parking Signs & Markings	One-Time	50	$1,166	$58,300
Program Total for Year 1		1	$482,800	$482,800
Program Total for Years 2-5		4	$473,400	$1,893,600
Five Year Program Total				**$2,376,400**