



Board Report

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Agenda Number: 33.

OPERATIONS, SAFETY AND CUSTOMER EXPERIENCE COMMITTEE
FEBRUARY 20, 2025

SUBJECT: FAREGATE RETROFIT (PHASE 2) - UPGRADE EXISTING GATED STATIONS WITH TALLER GATES

ACTION: APPROVE RECOMMENDATION

RECOMMENDATION

AUTHORIZE the Chief Executive Officer to:

- A. ESTABLISH a Life-of-Project (LOP) budget for an amount not-to-exceed \$15.3 million for the implementation of taller faregates at 11 additional stations to provide safety, and security, and enhance access control;
- B. AMEND the FY25 budget to add three (3) Non-Contract Full-Time Equivalent (FTE) positions to manage the gating analyses and implementation of taller gates across the 11 additional stations and expansion of taller gates across the Metro Rail system and new stations from new rail lines and transition into operations and maintenance; and
- C. AUTHORIZE the Chief Executive Officer, or their designee, to negotiate and execute all necessary agreements, contracts, and contract modifications associated with the increased LOP budget.

ISSUE

At the July 2024 meeting, the Board approved several strategies to improve safety for Metro riders and employees (2024-0437). One key strategy was to replace some existing faregates with taller, robust structural and modernized designs that better meet today’s mobility needs. The current turnstile and leaf-style faregates are highly susceptible to fare evasion, whereas the taller fare gates directly improve passenger safety and security.

Taller faregates have features such as precise motion sensors that can accurately detect fare evasion behaviors, such as “tailgating,” crawling under, climbing over, as well as electromechanical locks to prevent forced entries, and paddle-style doors that improve accessibility for customers with bicycles, luggage, or other items. The taller faregates also have large, color-coded displays to alert authorized personnel of fare evasion attempts. These gates offer potential integration with third-party

advanced security solutions, such as enhanced camera detection for weapons or other threats.

BACKGROUND

Over the past six months, staff has focused on the procurement, integration, and planning for the installation of new taller gates to modernize Metro’s fare collection system, starting with LAX/Metro Transit Center Station. The design and integration efforts that have been developed for the taller gates at the LAX/Metro Transit Center Station can be leveraged for faregates at other stations across the system.

The original pilot was to implement taller faregates at LAX/Metro Transit Center Station, which is proceeding as planned. The pilot has since been modified to retrofit ten existing gated stations where fare evasion and misuse of the emergency swing gates have been prevalent. The faregates for LAX/Metro Transit Center Station were funded by the Project’s Life-of-Project (LOP) budget, and the previously approved funding of \$14.4m will be used for the ten stations. These ten stations are included in Phase 1 of this retrofit effort. Phase 1 installation will begin in March, a more detailed installation can be found in Attachment A.

Any new construction projects, such as Purple Line Extension Phases 1 and 2 and Foothill Phase 2B, will also incorporate taller faregates as part of their station designs, and be funded by existing Project LOPs.

Taller faregates will be implemented as follows:

Project	Description	Funding Source
Faregate pilot	LAX/Metro Transit Center Station	LAX/Metro Transit Center Project LOP
New construction projects	PLE Phases 1 and 2, Foothill Phase 2B	Respective Project LOPs
Phase 1	First 10 Metro Rail Stations ¹	\$14.4M (previously approved)
Phase 2	Next 11 Metro Rail Stations	\$15.3M (requested through this board report)

¹ Phase 1 stations are Lake, Firestone, Pershing Square, 7th Street/Metro Center, Westlake MacArthur Park, Wilshire/Vermont, Vermont/Santa Monica, Hollywood/Western, North Hollywood, and Willowbrook/Rosa Parks.

DISCUSSION

In Phase 2, the plan is to retrofit another 11 existing gated stations with taller gates. Staff from TAP, SSLE, and Station Experience collaborated closely with the LA Police Department and LA Sheriff’s Department to select these stations, which include Mariachi Plaza, Harbor Freeway, Aviation/LAX, Vermont/Athens, Del Amo, Civic Center, Compton, Slauson, Expo/LaBrea, Avalon, and Long Beach Blvd. These stations were chosen based on data showing they have experienced significant fare evasion and misuse of the emergency swing gates, and through feedback from stakeholders mentioned above. Attachment A provides data on unpaid entries and the percentage of fare evasion

for stations in Phase 1 and Phase 2.

As Metro continues to improve the station experience, taller faregates can be integrated into station redesigns, complementing current initiatives such as TAP-to-Exit, improved signage, and passenger flow enhancements. The faregates have been user tested in the TAP Lab to ensure functionality, ease of use, and compatibility with the existing fare collection system.

Taller faregates can improve safety and security for Metro customers and employees while encouraging fare compliance. Their robust structural design deters fare evasion by restricting unauthorized access through features such as motion sensors and electromechanical locks that prevent forced entries. Additionally, precise motion sensors can accurately detect and record fare evasion, providing data that SSLE can use to strategically assign staff at key stations. The taller gates have been installed at Bay Area Rapid Transit (BART) and Washington Metropolitan Area Transit Authority (WMATA). WMATA reported an 82% reduction in fare evasion after installing five-foot-tall gates and taller fences across all stations.

Phase 2 upgrades will tentatively begin as early as October 2025. Below is a timeline and schedule of the next steps.

Activity	Duration	Timeline
Solicitation	3 months	March to May 2025
Design, development, and testing	4 months	June to September 2025
Manufacturing	4 months	August to November 2025
Installation	2 months	October to December 2025

FTEs

To support the implementation of taller gates, expansion of taller gates across the Metro Rail system, and the gating evaluation, there is a need to add three FTEs:

- One (1) **Supervising Engineer** to manage and supervise staff on all faregate projects, prepare scopes of work, schedules and budgets, review complex schematic diagrams, oversee field work and inspections, and lead fare collection studies and evaluations for rail and bus systems.
- One (1) **Senior Engineer** to support the Supervising Engineer with reviewing engineering drawings, tracking scopes of work, schedules and budgets, preparing complex faregate designs layouts, conducting site visits and collaborating with construction crews.
- One (1) **Principal Software Engineer** to oversee and provide direction on faregate communication systems architecture design, faregate software integration, networking, PCI (payment card industry) compliance and security including firewall configuration, and third-party software assessments.

These positions will assist with the third-party integration of gates at new Metro Rail stations for rail line extensions. They will also support future projects such as East San Fernando Valley Light Rail

Transit Project, G Line Improvements Project, Sepulveda Transit Corridor Project, East Side Transit Corridor Phase 2, Vermont Bus Rapid Transit (BRT), North Hollywood to Pasadena BRT. Additionally, these roles will help transition these projects from construction to operations and maintenance.

The addition of three FTEs is crucial in ensuring the TAP Department can effectively collaborate with internal stakeholders in continued efforts and strategies to strengthen the fare barrier. This includes integrating and installing taller faregates at 20 Metro Rail stations, strategic fare barrier realignment, integration with third-party security systems such as weapons detection, supporting ongoing operation, and managing other gate-related projects such as TAP-to-Exit. TAP staff are also focused on the modernization of the TAP System to accept contactless debit and credit cards and preparing for an account-based system for Metro and 27 municipal operators, while supporting programs such as LIFE, GoPass, U-Pass, Mobility Wallet, and integrated event ticketing. As programs and projects grow, the existing staff cannot be reallocated to support new initiatives.

DETERMINATION OF SAFETY IMPACT

This initiative supports Metro's safety-related strategies by ensuring that the Metro system is solely used for its intended purpose of transportation, making station improvements to create safer environments, and enhancing Metro's current ability to detect and remove weapons from the system.

FINANCIAL IMPACT

Funding required for this project in the amount of \$15.3 million will be included in the FY26 Adopted Budget under Cost Center 3020. This could be a multi-year effort, and the Cost Center Manager and Project Manager will be responsible for budgeting costs, if needed in future fiscal years.

Impact to Budget

The funding source is Proposition C 40%. These funds are eligible for Metro and regional bus and rail operations and capital improvements.

EQUITY PLATFORM

As the agency implements new technology and equipment upgrades, such as taller faregates, to enhance safety, protect Metro riders and employees, and improve the overall rider experience, it is important to assess how these efforts impact Black, Indigenous, and other People of Color (BIPOC) and marginalized groups who rely on the Metro Rail system. For instance, the current faregates are most misused in stations located in communities where people heavily rely on transit, disproportionately affecting those Metro customers. Taller faregates are expected to improve safety and enhance security, ensuring customers at stations like Westlake MacArthur Park, Hollywood/Western, or Wilshire/Vermont experience the same secure and welcoming environment as those at other stations throughout the system.

Staff will engage Metro advisory groups to provide education on the implementation plans, gather feedback and concerns, and ensure a transparent road map outlining the gates' capabilities, installation timeline, and location deployment strategies. Staff is prepared to initiate outreach efforts,

such as distributing multilingual materials at selected stations, posting on social media, representing Metro at public events, and partnering with community organizations to inform riders about the changes.

VEHICLE MILES TRAVELED OUTCOME

VMT and VMT per capita in Los Angeles County are lower than national averages, the lowest in the SCAG region, and on the lower end of VMT per capita statewide, with these declining VMT trends due in part to Metro's significant investment in rail and bus transit.* Metro's Board-adopted VMT reduction targets align with California's statewide climate goals, including achieving carbon neutrality by 2045. To ensure continued progress, all Board items are assessed for their potential impact on VMT.

This item supports Metro's systemwide strategy to reduce VMT through planning and equipment purchase activities of taller faregates that will improve and further encourage transit ridership, ridesharing, and active transportation by improving passenger safety and security. Metro's Board-adopted VMT reduction targets were designed to build on the success of existing investments, and this item aligns with those objectives.

*Based on population estimates from the United States Census and VMT estimates from Caltrans' Highway Performance Monitoring System (HPMS) data between 2001-2019.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

The recommendation supports:

- Strategic Plan Goal #2.1: Deliver outstanding trip experiences for all users of the transportation system; Metro is committed to improving security;
- Strategic Plan Goal #5.6: Provide responsive, accountable, and trustworthy governance within the Metro organization; Metro will foster and maintain a strong safety culture.

ALTERNATIVES CONSIDERED

The Board could opt not to expand or implement Phase 2 of this faregate retrofit. However, this is not recommended because the current faregates have a legacy design where fare evaders can easily enter the Metro Rail system. The current gates have not been effective at addressing security concerns. The taller gates have demonstrated to be more effective at improving safety and deterring fare evasion at other transit agencies.

NEXT STEPS

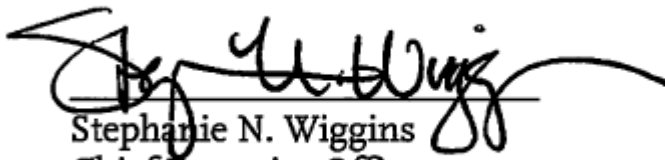
Following Board approval, staff will initiate a competitive procurement process to select a faregate vendor for the implementation of the Phase 2 retrofit at existing gated stations. Staff will perform site visits to the Phase 2 stations to assess station entrances, update station drawings, and confirm station readiness for faregate retrofit.

ATTACHMENTS

Attachment A - Data on Fare Evasion and Faregate Installation Schedule

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Stephanie N. Wiggins
Chief Executive Officer

Fare Evasion between June 01 to September 30, 2024

No.	Station	Unpaid Entries¹	Paid Entries	Total Entries	% Fare Evasion	Tentative Installation Date
Phase 1						
1	Lake	18,788	53,961	72,749	26%	March 2025
2	Firestone	103,044	37,585	140,629	73%	March 2025
3	Vermont/Santa Monica	126,150	138,850	265,000	48%	April - June 2025
4	Hollywood/Western	157,059	161,452	318,511	49%	April - June 2025
5	Wilshire/Vermont	253,772	250,247	504,019	50%	April - June 2025
6	North Hollywood	103,278	1,187,343	1,290,621	8%	July 2025
7	7th St/Metro Center	240,720	1,000,924	1,241,644	19%	July 2025
8	Pershing Square	219,687	240,783	460,470	48%	July 2025
9	Westlake/MacArthur Park	292,970	276,852	569,822	51%	July 2025
10	Willowbrook/Rosa Parks	236,273	215,302	451,575	52%	July 2025
Phase 2						
1	Mariachi Plaza	6,766	53,962	60,728	11%	October 2025
2	Slauson	73,241	23,242	96,483	76%	October 2025
3	Avalon	98,146	31,332	129,478	76%	October 2025
4	Harbor Freeway	116,753	53,963	170,716	68%	October 2025
5	Long Beach Blvd	73,614	38,522	112,136	66%	October 2025
6	Compton	76,856	50,496	127,352	60%	November 2025

ATTACHMENT A

No.	Station	Unpaid Entries¹	Paid Entries	Total Entries	% Fare Evasion	Tentative Installation Date
7	Del Amo	73,893	51,816	125,709	59%	November 2025
8	Vermont/Athens	40,986	30,445	71,431	57%	November 2025
9	Civic Center	101,658	129,152	230,810	44%	December 2025
10	Expo/La Brea	39,637	57,080	96,717	41%	December 2025
11	Aviation/LAX	95,072	93,243	188,315	50%	December 2025

¹ "Unpaid entries" is the sum of emergency swing gate openings and forced entries on the ADA gate

Faregate Retrofit (Phase 2)

Upgrade Existing Gated Stations With Taller Gates

Operations, Safety, and Customer Experience Committee

February 20, 2025



Metro

File ID 2024-1126

Recommendation

- A. ESTABLISH a Life-of-Project (LOP) budget for an amount not-to-exceed \$15.3 million for the implementation of taller faregates at 11 additional stations to provide safety, security, and enhance access control;
- B. AMEND the FY25 budget to add three (3) Non-Contract Full-Time Equivalent (FTE) positions to manage the gating analyses and implementation of taller gates across the 11 additional stations and expansion of taller gates across the Metro Rail system and new stations from new rail lines and transition into operations and maintenance;
- C. AUTHORIZE the Chief Executive Officer, or their designee, to negotiate and execute all necessary agreements, contracts, and contract modifications associated with the increased LOP budget.

Context

- The Board approved **Motion 34.1 in April 2024** directed staff to research faregate hardening at heavy and light rail stations.
- Research suggests taller faregates may improve feelings of safety and security.
- BART completed 18 stations and are installing these faregates at 15 more stations.
- WMATA have installed taller faregates at all 98 stations, and WMATA has reported an 82% reduction in fare evasion.

- **Original Pilot Plan (from July 2024 Motion Response):** Install taller faregates at LAX/Metro Transit Center Station and two other locations.
- **Updated Pilot Plan:** Retrofit ten existing gated stations included in Phase 1. These stations were selected based on collaboration between TAP, SSLE, and Station Experience, with LA Police Department and LA Sheriff's Department.



Background: Phase 1 - S-Traffic Faregates

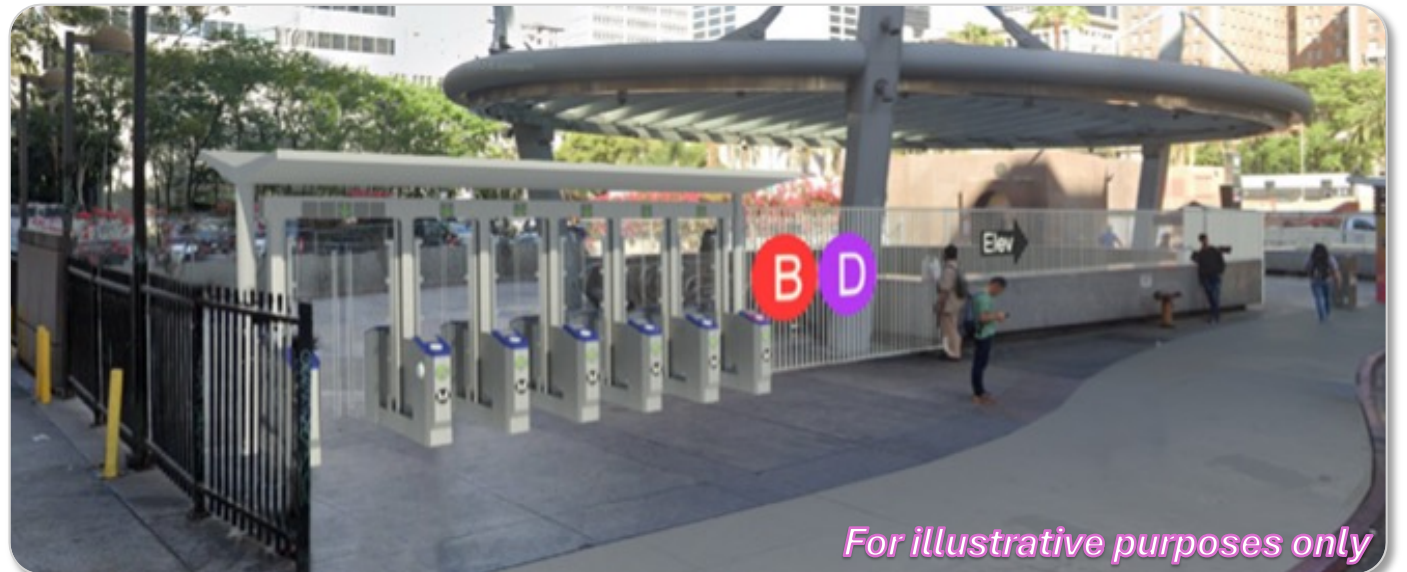
Installations expected to start

March 2025

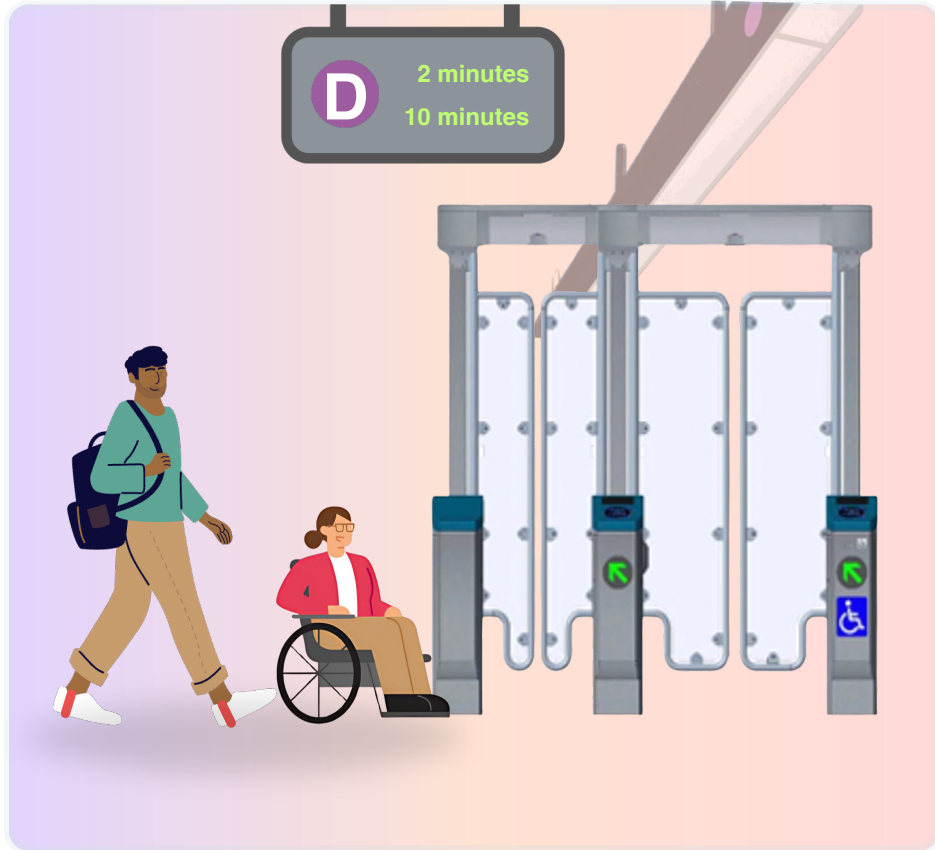


Existing Stations for S-Traffic Faregates

- Lake
- Firestone
- Pershing Square
- 7th Street/Metro Center
- Westlake MacArthur Park
- Wilshire/Vermont
- Vermont/Santa Monica
- Hollywood/Western
- North Hollywood
- Willowbrook/Rosa Parks



Improve Safety with Taller Faregates



Precise motion sensors

- Improves safety and prevents “tailgating” fare evasion
- Includes AI camera for accurate detection
- More sensors than on current gates for more accurate reporting

Electromechanical locks

- Difficult to force through
- Will be integrated to allow quick unlocking for special events or in emergencies

ADA-compliant

- Sensor technology to ensure “equitable accessibility” for customers using wheelchairs
- Paddle-style doors improve accessibility for customers with bicycles, luggage, or other bulky items

Advanced security solutions via APIs*

- Real-time assistance: Instant reporting allowing staff to provide on-the-spot customer support at faregates
- Can potentially integrate with third-party security solutions

* API = **Application Programming Interface** allowing communication and integration with third-party services

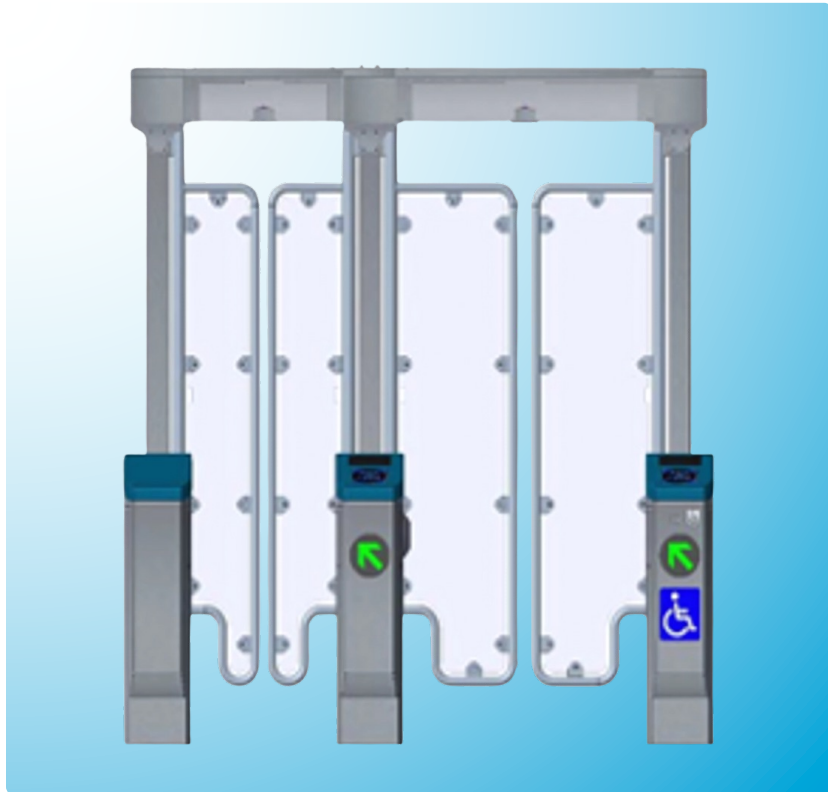
Emergency Swing Gate Hardening

- Emergency swing gates (ESG) at **Westlake/MacArthur Park Station** raised to six feet with added perforated metal panels.
- The enhancement is meant to deter reaching the panic bar for unauthorized access.
- Phase 2 Retrofit: Requirement includes height modifications to the ESG to prevent reach-arounds.
- The picket fence across the entire fare barrier will also be raised to six feet for uniformity and deter jumping over.



Discussion: Phase 2 – RFP for Taller Faregates

Phase 2 to tentatively begin as early as *October 2025*



Stations for Phase 2 Retrofit

- Aviation/LAX
- Vermont/Athens
- Del Amo
- Civic Center
- Compton
- Harbor Freeway
- Mariachi Plaza
- Slauson
- Expo/LaBrea
- Avalon
- Long Beach Blvd



Phase 2 Cost Estimate

\$15.3 million

Next Steps

- Following Board approval, staff will initiate a competitive procurement process to select a faregate vendor for the implementation of the Phase 2 retrofit at existing gated stations.
- Phase 2 installation is scheduled to begin in October 2025, with a targeted completion as early as December 2025.
- Staff will provide updates and report progress periodically.

Activity

Solicitation

Design, development, and testing

Manufacturing

Installation

Duration

3 months

4 months

4 months

2 months

Timeline

March to May 2025

June to September 2025

August to November 2025

October to December 2025

