



**Metro**

## Interoffice Memo

<b>Date</b>	April 21, 2015
<b>To</b>	Robert Holland, Interim Chief Operations Officer
<b>From</b>	Than Win, Senior Engineer, Project Engineering Facilities  Curtis Tran, Civil Engineer, Bureau of Engineering, City of Los Angeles  Patrick Preusser, Deputy Executive Officer, Rail Operations
<b>Subject</b>	Fare Gate Project: City of Los Angeles Review of At-Grade Rail Stations

**Summary:** This memorandum summarizes the feasibility review for fare gates at At-Grade Platforms along Expo Phase 1, as reviewed by City of Los Angeles Bureau of Engineering (LABOE) staff. The report concludes that Fare Gates are not feasible, as they conflict with existing design standards and policies adopted by LABOE.

**Existing Conditions:** Metro is currently undergoing feasibility studies of fare gates at LRT stations, in an effort to reduce fare evasion. There are already fare gates at Heavy Rail (Red and Purple Line) stations. As part of this effort, and LABOE has reviewed the feasibility of the fare gates and associated platform extensions along Expo Phase 1 at-grade stations, as they relate to the City's adopted design standards.

LABOE's Standard Street Dimensions (LABOE Standard Street Dimensions, Standard Plan S-470-0, May 1999) provide requirements for each roadway based on their designated classifications. Roadways along the Expo Phase 1 corridor are generally classified as Secondary Highways. The design standard for a Secondary Highway includes, at a minimum, the following roadway widths:

- 90' right-of-way
- 70' curb-to-curb
- 10' sidewalks

At the Pico Station, Flower Street is designated as a Downtown Street, which is designed as a modified one-way Secondary Highway. The design standard for Flower Street is a 105' right-of-way, including 70' curb-to-curb, and 15-20' sidewalks.

LABOE's Street Design Manual (Part E, September 1970, pp E 222.1) provides additional guidance for roadway design, stating that "on all other roads, including frontage roads, the clearances to the face of bridge piers, abutments, retaining walls, and other obstructions should be as follows... 2. One Way traffic: 4 ½ feet on the left and 6 feet on the right in the direction of traffic." To comply with

this portion of the Street Design Manual, there must be a 4 ½ foot gap between the outer edge of the platform and the curb face.

Furthermore, for ADA compliance, a 5 foot clearance from obstructions for pedestrian travel is now required.

**Assessment:** LABOE reviewed the proposed Metro concept drawings for the following at-grade stations along the Expo Phase 1 Light Rail corridor: Pico, Jefferson/USC, Expo Park/USC, Expo/Vermont, Expo/Western, and Expo/Crenshaw. Exhibit A provides concept designs and other documents presented by LABOE.

At the *Pico* station, the obstruction for the proposed Ticket Vending Machine (TVM) at the eastern platform would reduce the sidewalk below the minimum allowable width. The TVM would also present an obstruction, and would not be compliant with ADA requirements. Lastly, it is unclear whether the five (5) foot clearance would be met for ADA.

At the *Jefferson/USC* station, the addition of the platform extension would not allow for the required 4.5 foot clearance.

At the *Expo Park/USC* station, the platform extension would encroach into the travel lane. Furthermore, the required 4.5 foot clearance would not be met.

At the *Expo/Vermont* station, the clearance is already at the 4.5 foot minimum allowed. With the proposed platform extension, the clearance would not be compliant with the Street Design Manual (pp E 222.1).

At the *Expo/Western* station, the platform extension would allow for 4.5 foot clearances. LABOE, however, noted that it would be necessary for the extension to meet the visibility triangle. This is a feasible location.

At the *Expo/Crenshaw* station, the platform extension would not allow for the required 4.5 foot clearances.

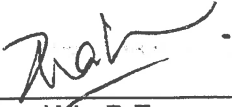
**Conclusion:** Metro prepared conceptual drawings to implement the minimum amount of fare gates that would be needed at Expo 1 at-grade stations. Due to spatial constraints, the station platforms and/or entrances required widening. LABOE reviewed Metro's conceptual drawings and determined that the concepts have a negative impact on safety and conflict with adopted design standards:

- Due to the constraint of a 4.5 foot obstruction clearance, only the Western Station East and West platform extensions may be feasible. The Jefferson/USC, Expo Park/USC, Expo/Vermont, and Expo/Crenshaw stations would not meet the City's obstruction clearance.
- Due to the site constraint and existing sidewalk width, the proposed TVMs and map cases on the sidewalk at the Pico station would not comply with the City of Los Angeles Downtown Street Standards (Flower Street – Modified 1-Way Secondary, 11<sup>th</sup> Street to I-10 Freeway) requirement to provide for a 15' sidewalk width.

**Recommendation:** Metro recommends not implementing fare gates at the Expo Phase 1 at-grade stations.

**Attachments:**

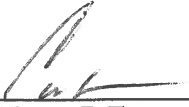
- A. City of Los Angeles Street Design Manual, page E-222
- B. City of Los Angeles Roadway Standard Plan S-470-0
- C. City of Los Angeles Comments on Metro Concept Plan
- D. Downtown Street Standards, Flower Street – Modified 1-Way Secondary, 11<sup>th</sup> Street to I-10 Freeway



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Than Win P.E.  
Senior Engineer, Project Engineering Facilities



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Curtis Tran, P.E.  
Civil Engineer, Bureau of Engineering, City of Los Angeles



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Patrick Preusser  
Deputy Executive Officer, Rail Operations