



Metro

January 28, 2015

TO: BOARD OF DIRECTORS

THROUGH: ARTHUR T. LEAHY 
CHIEF EXECUTIVE OFFICER

FROM: BRYAN PENNINGTON, EXECUTIVE DIRECTOR ENGINEERING AND CONSTRUCTION 

SUBJECT: METRO RED LINE ESCALATOR (5) REPLACEMENT AND CANOPY INSTALLATION (1) AT PERSHING SQUARE ITEM 54

ISSUE

The Construction Committee at the meeting held on January 15, 2015 had questions and concerns related to the above subject matter and forwarded Item 54 without recommendation to the January 29, 2015 Board Meeting for further discussion.

Subject to Board deliberations, staff recommends proceeding with the escalator replacement and canopy installation and provide additional information herein in response to concerns raised by the Board.

DISCUSSION

Design Criteria

Over the years, Metro has adopted a system-wide initiative to progressively replace all escalators as they come to the end of their useful lifecycle, with heavy duty escalators that meet the design guidelines developed by the American Public Transportation Association (APTA). Also, all new expansion projects include the requirement to utilize APTA heavy duty guidelines.

One of the key factors in this board item is the past adoption of the APTA heavy duty design criteria used by Metro which, in turn, influences the number of escalator suppliers eligible to bid on our contracts. The heavy duty escalators are designed to cater to the high loadings experienced in transit usage. There are a variety of key differences between an APTA escalator and typical commercial equipment. One example is the loading capacity; the approximate load requirement on a heavy duty step is approximately 320 lbs. versus a commercial grade which is approximately 196 lbs. This is more than a 60% increase in loading capacity. Consequently, the APTA standards are used widely across the transit industry and Metro staff continues to recommend adhering to the APTA standards.

Procurement Matters

Metro has prequalified 4 escalator suppliers as being able to meet the requirements of the APTA standard. Staff recommends adhering to these standards for safety and reliability. However, each solicitation related to escalators allows contractors to propose other suppliers with equivalent-approved alternate escalators as part of the procurement process. To date no contractor/supplier has formally proposed such an alternative within the parameters of the specification. They must receive approval 14 days prior to bid deadline.

As part of the replacement program, in June 2014, Metro issued Invitation for Bids for the replacement of five mezzanine-to-surface escalators originally installed in 1992 and the provision of an additional state-mandated canopy at the Metro Red Line Pershing Square station. An extensive communication campaign was undertaken to raise interest in the procurement. In September 2014, Metro received bids from two general contractors both exceeding the remaining Life of Project budget (LOP).

Life of Project Budget

The LOP was established in early 2012 for the replacement of the Pershing Square escalators based on data obtained from the Civic Center Escalator Replacement project completed in 2011 and the separate canopy replacement project, before design and planning work commenced for the Pershing Square station project. The project was approved in the FY12 budget process as a design/build project.

In retrospect, the original estimate developed in 2012, did not take full account of the degree of difficulty associated with installing the escalators beneath the existing canopies and the related increase in the duration of the installation process. Also, the contract duration developed early in the design development process increased due to the necessity of maintaining continual availability of an operating rail station during the construction at three portals, more so than had been originally considered. This impacted the contractor's costs and Metro's estimates.

Cost Drivers

In addition to the increased costs related to the degree of difficulty, there are other cost drivers as follows; the rapid inflation in general contractors bids since 2011, arising from the rebound from the 2008/2009 market conditions and the inflation in escalator supply contracts arising from large orders of escalators in Asia. Staff held discussions with the escalator suppliers over the apparent lack of interest in this procurement. The response from the escalator suppliers was that the relatively small scope of the Metro project in relation to their large orders in other market areas was the key factor in the general lack of interest. The suppliers also stated that they are not interested in providing lesser quality, non-compliant escalators; therefore, competition would not have been better if the standards were reduced.

Two of the four prequalified escalator manufacturers provided prices to the bidders, however both general contractors adopted the lowest price they were offered and each included the price from the same escalator supplier. So, two bids were received from two

general contractors but using escalator prices from one supplier. This relative lack of competition will likely have contributed towards the bid prices being higher than expected.

Based on the above, the revised Engineers Estimate for the construction component was \$13,407,999. The lowest contractor bid was \$15,949,076, which is \$2,086,077 (15.6%) more than the Engineers Estimate. The second bid was \$18,996,735 which is approximately \$3.5m above the low bid price and 41.7% greater than the revised Engineers Estimate.

As a combined result of the above considerations, and an increase in soft costs, an increase of \$8,256,000 is required to the LOP budget for Escalator Replacement/Modernization at Metro Red Line Pershing Square Station, from \$12,500,000 to \$20,756,000 in order to award the construction contract to the lowest responsible and responsive bidder and to provide the necessary construction management support for a period of 28 months until final acceptance, including professional services and agency costs.

NEXT STEPS

There are three possible options available to the Board:

1. Increase the LOP as requested by staff at the January Board meeting, allowing staff to award the escalator contract before February 6, 2015 when the bid validity period expires. At the same time, direct staff to undertake a comprehensive review of the remaining escalator replacement program with the intent to obtain more competitive pricing for future procurements.

Staff recommends this option.

2. Direct staff to cancel the present procurement and immediately rebid.

Staff does not recommend this option as we do not anticipate any better pricing in the short term – in fact there are indications that the price would increase.

3. Direct staff to cancel the present procurement and undertake a comprehensive review of the remaining escalator replacement program before rebidding this contract and all other escalator replacement contracts with the intent to obtain more competitive pricing.

Staff does not recommend this option. The five mezzanine-to-surface escalators at Pershing Square are among the oldest in the system and are exposed to high patron demand, crush loading at peak ridership periods, adverse weather (canopies were not installed over 2 portals until 2012) and periodic misuse. All of which lead to staff's recommendation that the five mezzanine-to-surface Pershing escalators be replaced as soon as possible.