

THIS PRINT COVERS CALENDAR ITEM NO. : 14

**SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY**

DIVISION: Finance and Information Technology

BRIEF DESCRIPTION:

On July 1, 2012, the SFMTA became the first multimodal transit operator in North America to implement “All-Door Boarding” system-wide. To help reduce boarding times, customers with valid proof-of-payment may enter through any door of Muni buses, historic streetcars and light rail vehicles. The “All-Door Boarding Evaluation Final Report” discusses the rationale for the policy, implementation and major findings relating to dwell times, transit speeds and fare compliance. Based on a two-year post-implementation evaluation, staff recommends that the Board receive this report as an informational item

SUMMARY:

- Legalizing “All-Door Boarding” has encouraged customers to distribute themselves more evenly between the front and rear doors, reducing average dwell times.
- Pre- and post-implementation surveys at busy Muni stops found the greatest time savings on two-door buses and streetcars, where per-person dwell times have dropped by 38% (from 4.3 to 2.7 seconds) on high-floor models.
- Bus system speeds have slightly improved from 8.41 to 8.56 mph (+2%) over a three-year period. “All-Door Boarding” appears to have helped maintain surface transit speeds in an environment of increasing population, employment, ridership and motor vehicle registrations.
- “All-Door Boarding” alone cannot significantly reduce travel times without strategies such exclusive transit lanes, transit signal priority and parking management.
- Based on a series of fare surveys, the estimated fare evasion rate has decreased from 9.5% to 7.9% over five years and associated uncaptured fare revenue has dropped from \$19.2 million to \$17.1 million.

ENCLOSURES:

1. All-Door Boarding Evaluation Final Report
2. Power Point Presentation: All-Door Boarding Evaluation

APPROVALS:

DATE

DIRECTOR _____ 11/20/14

SECRETARY _____ 11/20/14

ASSIGNED SFMTAB CALENDAR DATE: December 2, 2014

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PURPOSE

On May 1, 2012, the SFMTA Board of Directors approved system-wide “All-Door Boarding” and adopted a resolution recommending the Board of Supervisors amend San Francisco Transportation Code, Division I, Article 7 (Transit Violations) to facilitate the policy. The Board of Supervisors approved those amendments on May 15, 2012, enabling “All-Door Boarding” to take effect on July 1, 2012. At that time, staff presented to the Board of Directors the status of implementation efforts and explained the methodology to evaluate the policy. Now that sufficient time has elapsed following implementation, this report provides a comprehensive operational and financial long-term analysis of the policy’s impacts.

GOAL

“All-Door Boarding” addresses the following SFMTA Strategic Goal and Objectives:

Goal 2: Make transit, walking, bicycling, taxi, ridesharing and carsharing the preferred means of travel

Objective 2.2: Improve transit performance.

Goal 3: Improve the environment and quality of life in San Francisco

Objective 3.4: Deliver services efficiently.

DESCRIPTION

On July 1, 2012, the SFMTA became the first multimodal transit operator in North America to implement “All-Door Boarding” system-wide. Expanding a policy already available on its light rail system, the SFMTA began permitting customers with valid proof-of-payment to enter through any door of Muni buses (motor coaches and electric trolley coaches) and streetcars – legalizing an informal practice that had developed organically in response to front-door queues, crowding and slow service.

Unlike other transit operators with “Proof-of-Payment” systems, the SFMTA still allows customers to pay cash on-board vehicles at surface stops, thus avoiding the expense of wayside ticket vending machines at every stop. With the nation’s second-densest service area population and crowded transit vehicles largely operating in mixed traffic and limited resources, the SFMTA must make efficient use of every minute in revenue service.

With “All-Door Boarding”, the SFMTA hoped to achieve several service quality and financial goals. Specifically, the program aimed to (a) speed the boarding process and consequently improve service quality, and (b) maintain or improve fare compliance. In certain circumstances, faster service may permit a transit operator to assign fewer vehicles to a route and still maintain headways. Given pre-existing crowding and schedule adherence issues, however, this was not a

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program objective.

Two years after implementation, “All-Door Boarding” impacts include:

- Dwell Times – “All-Door Boarding” has encouraged customers to distribute themselves more evenly between the front and rear doors, thereby reducing average dwell times. Pre- and post-implementation surveys at busy Muni stops have found the greatest time savings on two-door buses and streetcars, where per-person dwell times have dropped by 38% (from 4.3 to 2.7 seconds) on high-floor models. “All-Door Boarding” also has reduced dwell time variability.
- System Speed – From FY 2011 through FY 2014, average bus system speeds modestly improved from 8.41 to 8.56 mph (+2%), against trends that have increased demand and congestion on San Francisco’s transportation system. Population, employment, bus ridership and motor vehicle registrations grew 4.0%, 12.6%, 4.8% and 3.2%, respectively, during this period. With four-fifths of vehicle travel time spent between stops, other strategies such as exclusive transit lanes, transit signal priority and parking management must accompany “All-Door Boarding” in order to reduce travel times substantially.
- Fare Compliance – Comprehensive fare surveys in 2009 and 2014 and interim surveys in 2010 and 2012 reveal that fare compliance continues to improve slightly. The fare evasion rate has decreased from 9.5% to 7.9% over five years and the estimated uncaptured revenue due to fare evasion has dropped from \$19.2 million to \$17.1 million even after inflation-indexed fare increases.

In addition to this report, the SFMTA’s Transit Services Division prepared a preliminary evaluation of the dwell time impacts of “All-Door Boarding” one month into implementation. It concluded that customers were taking advantage of the policy, dwell times had fallen overall and that the greater the increase in the percent of passengers boarding through the rear doors on a given route, the greater the drop in dwell times.

The methodology of this report and preliminary evaluation differ in several ways. For this report, staff physically observed boarding and alighting customers to validate ridership, particularly on crowded buses and streetcars. The preliminary evaluation relied on adjusted ridership data generated by Automatic Passenger Counter (APC) sensors. To focus on heavy ridership stops and avoid potential situations when bus doors were open but no customer activity was taking place, the analysis removed all APC records with fewer than 10 boardings, dwell times greater than 90 seconds and near-side stops (where feasible) given that a vehicle might hold for a red light. Finally, because APC reports do not include alightings by door, the preliminary evaluation modeled dwell time impacts of boardings only.

The success of “All-Door Boarding” in San Francisco’s operating environment demonstrates the potential benefits of this policy in a wider context as other large metropolitan areas are exploring cost-effective opportunities to speed up transit.

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ALTERNATIVES CONSIDERED

The SFMTA Board of Directors may choose to rescind or modify the “All-Door Boarding” Policy. Based on the results of the comprehensive review, the policy is meeting operational and financial goals. Thus, rescinding or modifying the policy would not likely yield substantive benefits for customers or the agency.

FUNDING IMPACT

As part of the “All-Door Boarding” evaluation, the SFMTA hired a market research firm (Corey, Canapary and Galanis) to conduct a fare study with Transit Fare Inspectors to assess system-wide fare compliance levels. In the unlikely scenario that every customer had a valid fare, the survey results suggest that uncaptured fare revenues due to non-compliance total about \$17.1 million annually. Because some customers would probably continue to avoiding fare payment regardless of the existence of an “All-Door Boarding” Policy, it is unrealistic to expect that the SFMTA could recuperate all \$17.1 million even with greatly expanded enforcement resources.

To estimate uncaptured fare revenue, the baseline 2009 study and the follow-up 2014 study assumed an average fare loss per customer based on the type of fare evasion and the applicable age/fare category. Reflecting the decline in the overall fare evasion rate from 9.5% to 7.9%, the \$17.1 million estimate is also down from the \$19.2 million estimate from 2009. The uncaptured revenue decline has not been proportional to the decrease in the fare evasion rate, however, largely because inflation-indexed fare increases have occurred in the intervening years per SFMTA Board policy.

Between FY 2012 and FY 2013, immediately before and after implementation, non-cable car fare revenues grew by \$7.5 million (+4.4%). During the last four months of FY 2013, the SFMTA also launched the “Free Muni for Youth” Program to provide students from low- and moderate-income households with complimentary transit passes. Adjusting for funding received to defray the cost of these passes, the fare revenue change would be \$8.2 million (+4.8%) based on Budget and Legislative Analyst’s Office estimates. By comparison, adult monthly passes increased by \$2 (+3.1%) while cash fares stayed constant and ridership remained steady. Thus, uncaptured fare revenue estimates and actual fare revenue collected suggest that “All-Door Boarding” has not impacted SFMTA’s finances negatively.

OTHER APPROVALS RECEIVED OR STILL REQUIRED

None

RECOMMENDATION

Staff recommends that the Board of Directors receive the report.