

**Board Report**

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**SYSTEM SAFETY, SECURITY AND OPERATIONS COMMITTEE  
AUGUST 18, 2016**

**SUBJECT: RESPONSE TO MOTION 31: ALL DOOR BOARDING ON LINE 744**

**ACTION: RECEIVE AND FILE**

**RECOMMENDATION**

RECEIVE AND FILE status report on the **costs and benefits of implementing All Door Boarding on Line 744 (Reseda/Ventura/Van Nuys Rapid)**.

**ISSUE**

In March 2016, the Board of Directors approved implementation of All Door Boarding (ADB) as a 6 month pilot project on the Silver Line, and passed Motion 31 on March 17, 2016 (Attachment A) to expand the pilot to Line 744 operating along Reseda, Ventura, and Van Nuys Blvd. This report provides the costs and benefits of ADB on Line 744.

**DISCUSSION**

The objective of the All-Door Boarding (ADB) pilot on the Silver Line is to reduce the variability and duration of dwell times at stops by allowing TAP enabled customers to board the bus through any door. Pursuant to this objective, the board has indicated interest in implementing ADB on Line 744. Staff was instructed to assess the feasibility of this direction and report back in 90 days to the Board.

ADB is most beneficial on lines with the following characteristics:

- High frequency;
- High volumes of boarding passengers, especially passengers needing assistance; and
- High volumes of cash paying passengers.

Benefits to a line could include reduced dwell time at stops as a result of more efficient boarding, a reduction in overall run time, improvements to on time performance, and resource savings derived from time savings, which may be reinvested into the line or back into the system. A line may also experience an increase in ridership as a result of the service being more attractive. However, if a line does not demonstrate the aforementioned base characteristics, it is not beneficial to implement ADB,

as neither resource savings nor customer benefits can be realized.

Findings

Line 744 (Reseda/Ventura/Van Nuys Rapid) carries about 10,000 average weekday boardings, with the Reseda Blvd segment representing about 30% of the ridership. Specific stops at CSUN Transit Center and Reseda/Nordhoff are greatest along this segment, carrying 4% and 3% of daily boardings, respectively. The line has a frequency of 20 minutes from the AM through the PM peak.

Table 1 shows a summary of the weekday analysis for the line for ADB.

Table 1  
Line 744 ADB Dwell Time and Bus Reduction

| LINE 744                                    | DIR | AM   | MID   | PM    | EVE  |  | DIR | AM   | MID   | PM    | EVE  |
|---|-----|------|-------|-------|------|--|-----|------|-------|-------|------|
| Average Headway                             | W   | 20   | 20    | 20    | 75   |  | E   | 23   | 20    | 20    | 33   |
| Boardings - Weekday                         | W   | 917  | 2,084 | 1,142 | 251  |  | E   | 690  | 2,044 | 1,490 | 688  |
| No. Of Trips                                | W   | 9    | 18    | 12    | 4    |  | E   | 8    | 18    | 12    | 9    |
| Dwell Time Reduction/Trip (Min) - Tap/Cash  | W   | 2.36 | 2.68  | 2.2   | 1.45 |  | E   | 2    | 2.63  | 2.88  | 1.77 |
| Dwell Time Reduction/Trip (Mins) - Tap Only | W   | 4.75 | 5.4   | 4.44  | 2.93 |  | E   | 4.03 | 5.3   | 5.79  | 3.57 |
| Change In Bus Requirement - DX - Tap/Cash   | W   | 0.1  | 0.1   | 0.1   | 0    |  | E   | 0.1  | 0.1   | 0.1   | 0.1  |
| Change In Bus Requirement - DX - Tap Only   | W   | 0.2  | 0.3   | 0.2   | 0    |  | E   | 0.2  | 0.3   | 0.3   | 0.1  |

Overall, the time savings generated from ADB for the 744 will not achieve resource savings primarily due to wide headways and lower average ridership compared to other ADB pilot lines such as Line 720 (Wilshire) and the Silver Line. The dwell time savings achieved from ADB will only result in a 2-5% reduction (2 ½ - 4 ½ mins) in the total one way trip time of 90 min, which will not reduce the bus requirement for this route. Additionally, the average distance travelled by each passenger for Line 744 is 4.1 miles, compared to 6.0 for Line 720 and 11.4 for the Silver Line. As such, these passengers will benefit less from the dwell time reduction as they are travelling shorter distances.

Line 744 operates along Reseda, Ventura, and Van Nuys Blvds. Implementing ADB on the Reseda Blvd segment alone could cause passenger confusion and operator confrontations as operators would open the rear doors for boarding only at stops along Reseda Blvd. If ADB is implemented along the entire line, but not on other Rapid Lines along Ventura (Line 750) and Van Nuys (Line 788), passengers may be equally confused as they use the Rapid services interchangeably along each corridor, but not all Rapid buses would allow ADB.

Since buses are not dedicated to specific lines, all 33 articulated Rapid buses at Division 15 would

need to be outfitted with bus mobile validators, while only 16 of those buses (including spares) are needed for Line 744 service. Not only does this increase the number of mobile validators required to support ADB on Line 744, it further adds to passenger confusion along Line 734 (Sepulveda Blvd) where the other Rapid articulated buses are assigned.

Assuming three mobile validators per bus (front, middle, and rear doors), the number of mobile validators needed for ADB on Line 744 is 119 (99 plus 20 spares). Therefore, the approximate cost to implement this project is \$ 500,000. There will be additional cost considerations for signage and ongoing operational support.

### Considerations

Given the minimal benefit, potential for customer confusion, and costs associated with ADB on Line 744, it is not recommended to extend the ADB pilot to Line 744. However, several other efforts have been and are currently underway to improve transit service in and around California State University, Northridge (CSUN). Collectively, these efforts are designed to improve transit service to and from the campus as well as ease of use through improved information and fare payment, including:

- Service Improvements in effect June 26, 2016 - To ensure transit service is available to students after their last classes, Metro staff partnered up with CSUN to identify evening class dismissal times with consideration for walk time to bus stops. As a result, eight total additional trips have been added to Lines 239 (Zelzah/White Oak) and 744 (Reseda/Ventura/Van Nuys) in the evening hours. Furthermore, schedule times for other lines serving the campus such as Line 166 (Nordhoff) were adjusted to provide an improved connection with evening class dismissal times.
- Nordhoff/Osbourne Rapid Bus Study - Metro Operations is currently studying the feasibility of a new Rapid service on Nordhoff/Osbourne Streets. It is proposed that any new Nordhoff/Osborne Metro Rapid should operate along the same streets as Line 166. Generally, these types of new services would initially operate weekdays only, with service every 15 minutes in the peaks and every 20 minutes in the off peak periods. While service changes can be implemented relatively quickly, assuming resources are available, any capital investment to support the service, such as signal priority and new buses, would be on a longer timeframe and require additional capital funding. In relations to this, the Board passed Motion 49.2 in July 2016 which includes the “North San Fernando Valley Bus Rapid Transit Improvements” as a System Connectivity (“sc”) sub-regional category project in the Los Angeles County’s Traffic Improvement Plan.
- CSUN U-PASS - Metro is partnering with CSUN and other colleges to pilot a new U-PASS program for students taking 8 units or greater for a period of three consecutive months or greater. The benefits of the new U-PASS program are to expedite processing of

the college pass to students by providing an option to purchase the pass as part of their school registration, providing an adhesive chip to participants so a student's school ID can be used as their TAP card, and capping the cost of the pass at \$43 per month, but often lower with contributions from the university. The new U-PASS, coupled with improved transit service, makes public transit a much more viable and attractive option for CSUN students

- Stand Alone Validators (SAV) - In addition, to help expedite fare payment and boarding at the CSUN transit center, two SAVs have been installed to support Line 744 (Reseda/Ventura/Van Nuys). These SAVs will provide priority boarding by allowing passengers to TAP before boarding and board at any door at the station.
- Transit Information Dissemination - To complement all improvements mentioned, Metro has an ongoing outreach effort promoting new and existing services available to CSUN students and staff. Metro's online guide dedicated to serving the CSUN campus has been updated with new student pass and transit information; the link has been shared with the college to be used in their web page. A pocket guide with a full color map of all bus lines serving CSUN as well as local hotspots is regularly updated and printed then shared with the college as well. Due to CSUN's pioneering role in Metro's U-Pass program, staff has scheduled future visits to the campus to answer student's questions and promote the use of transit. Future coordination meetings with CSUN staff have also been scheduled to continue sharing updates.
- Next Bus Arrival - As part of the commitment to improve service and encourage ridership at CSUN, Metro completed installation of an electronic bus arrival sign at the CSUN Transit Center. Metro bus patrons can now easily see which bus is arriving next and follow a countdown in minutes to its arrival. This is part of an overall strategy to expand electronic arrival signage at bus shelter throughout the County in order to expand ridership and improve the customer experience.

## **FINANCIAL IMPACT**

Implementing ADB on Line 744 would require \$500,000 in implementation cost and additional costs associated with ongoing maintenance of the mobile validators. In addition, there are no anticipated savings in annual revenue service hours (RSH) since the dwell time reduction would not be sufficient to achieve bus efficiencies (lower bus requirement).

## **ALTERNATIVES CONSIDERED**

The alternative to staff recommendation is to implement ADB on Line 744. However, this is not recommended given the minimal benefit, potential for customer confusion, and implementation costs

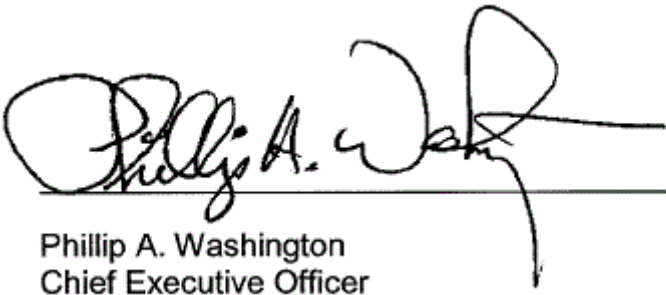
of \$500,000 associated with ADB on Line 744.

**ATTACHMENTS**

Attachment A - Motion 31 (March 17, 2016)

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