

OFFICE OF 
**TRANSPORTATION,
INFRASTRUCTURE
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MEMORANDUM

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Date: February 29, 2024
To: Kelley Yemen, Casey Ross
From: Andrew Simpson, Priyanshu Sharma
Re: Washington Avenue Post Installation Transit Analysis

This memo summarizes the transit analysis for Washington Avenue following the implementation of the road diet in the summer of 2023. The analysis compares two areas: East of Broad Street (from 13th to 4th Streets) where a road diet was implemented, and West of Broad Street (from 25th to 15th Streets), where no changes were made to the road diet.

Methodology:

This analysis presents "before" data from May 2022 and "after" data from May 2023. The analysis focuses on weekdays during the 7 am to 6 pm period. The primary data source is SEPTA's "Swiftly" Service, a cloud-based platform that processes real-time GPS data for analysis. Additionally, automated passenger count (APC) data is utilized to quantify passenger dwell times, measuring how long buses take to load and unload passengers.

Key Findings:

- **Buses remained reliable.** The project had no impact on bus reliability, as the corridor maintained a "good" reliability grade before and after implementation.
- **Little change in bus travel times:** Average bus travel time increased 5% on the section between 25th and 15th (no road diet) and 1% increase on the section between 13th and 4th (road diet) (*see Figure 1*).
- **Increased transit ridership across the network:** Between May 2022 and May 2023, ridership increased 17%, which generally would result in travel time increases. This was in line with increased ridership trends across the SEPTA network.
- **Delays were limited in scale and scope:** Bus speeds generally improved on the road-dieted corridor, except for the 1100 block (Eastbound) and the 500 block (Westbound). These delays are likely due to the large parking lots on these blocks, which see heavy unsignalized turn movements. However, this delay is mitigated by consistent improvements on other blocks (*see Figures 2 & 3*).

- **Bus dwell time improved at locations with boarding islands:** Bus dwell time is the time spent boarding and deboarding passengers. Dwell time per passenger decreased at bus stops with floating bus boarding islands, all stops between 11th and 4th Streets. (see *Figure 4*).

Conclusion:

The road diet changes between 13th and 4th Streets had no significant impact on bus travel time or reliability. The only notable delay occurred at the 1100 block (eastbound) and 500 block (westbound), likely due to large parking lots and heavy unsignalized turn movements. However, these delays were offset by consistent improvements on other blocks, likely due to reduced dwell times, improved signal timing/coordination, and updating parking regulations.

Appendix:

Bus Travel Time

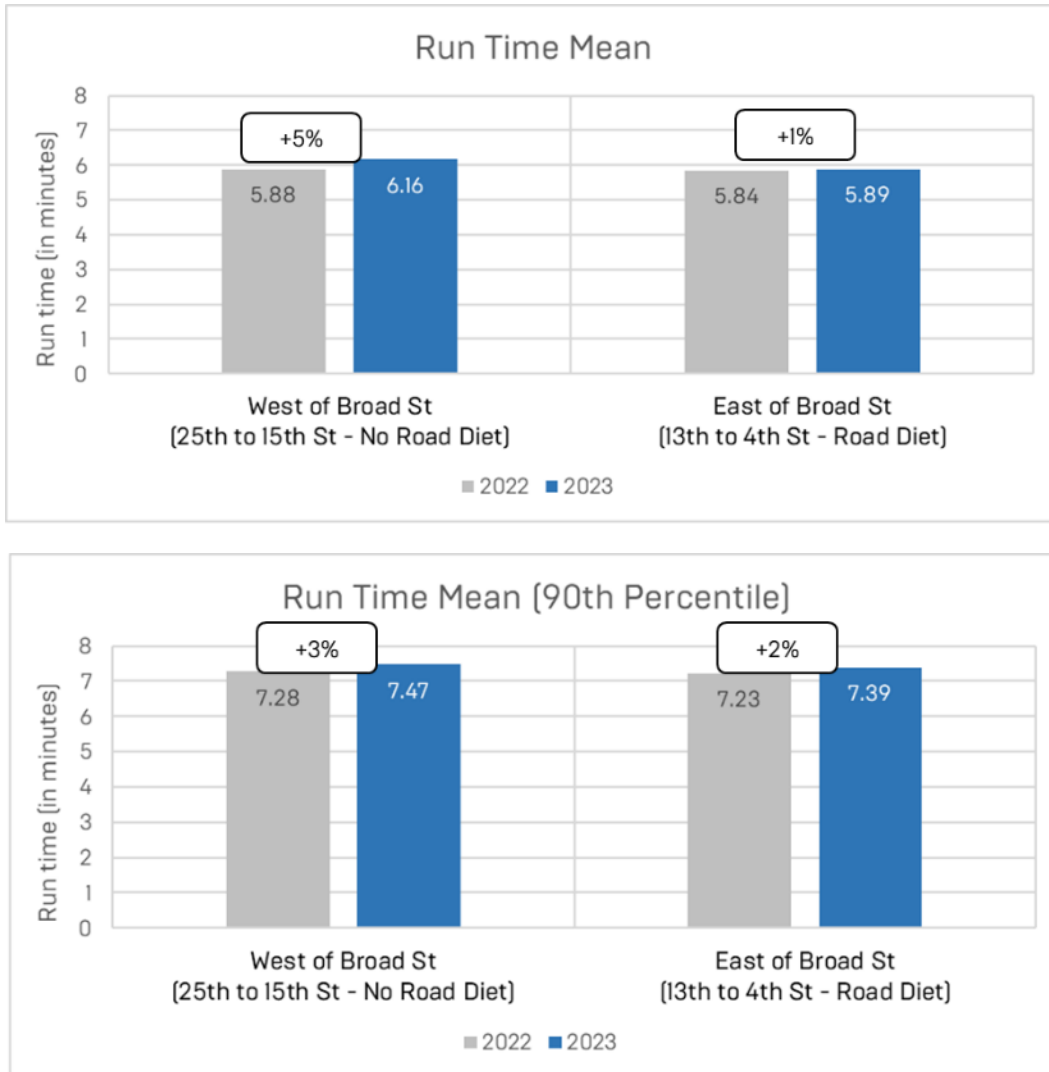


Figure 1: Bus Travel Time

Average Bus Speed

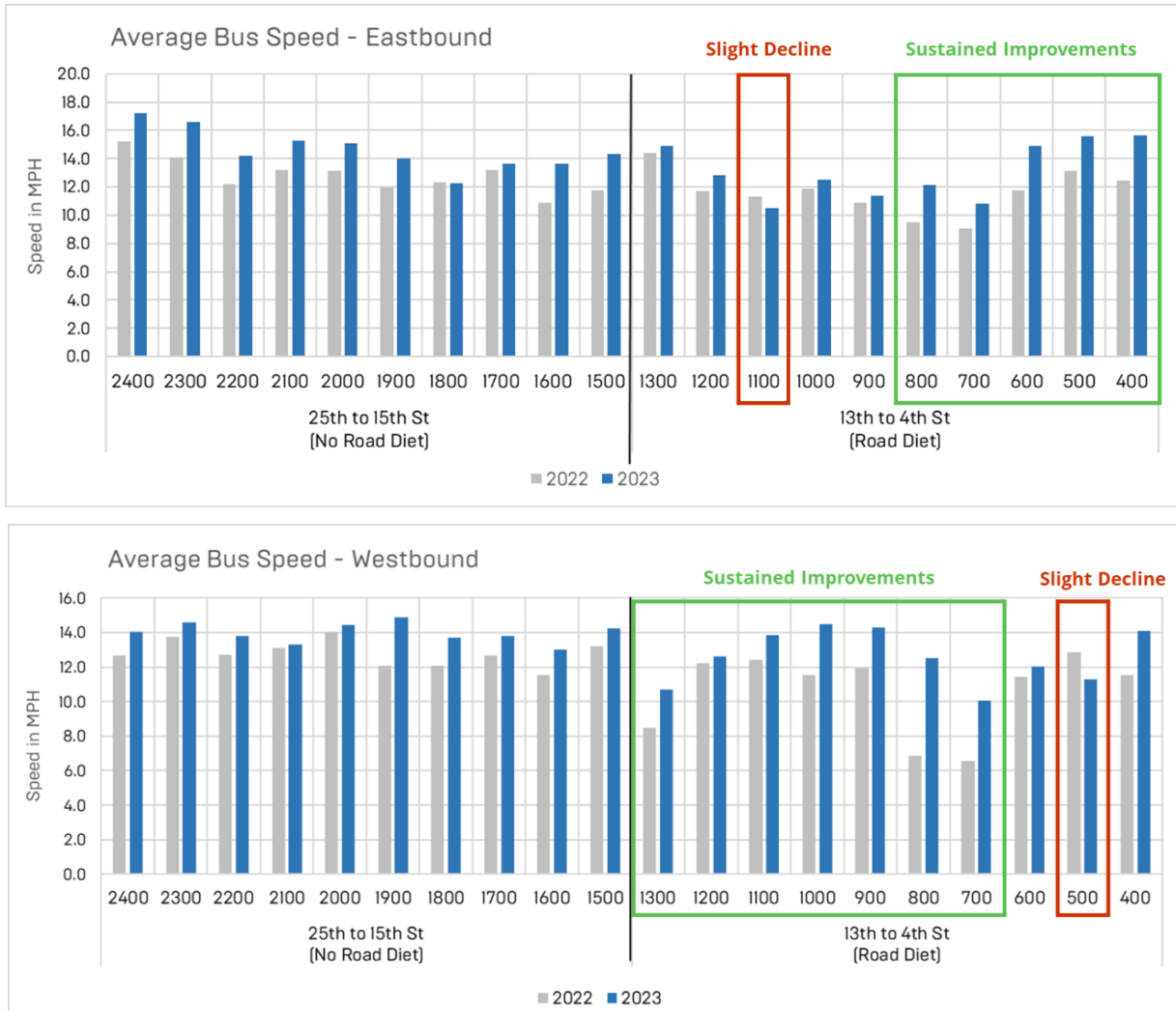


Figure 2: Average Bus Speed (Eastbound and Westbound)

Average Bus Speed – Noticeable delay (1100 block and 500 Block)



Figure 3: Change in Average Bus Speed from 2022 to 2023 on 1100 and 500 Block

Percentage Change in Dwell time per passenger

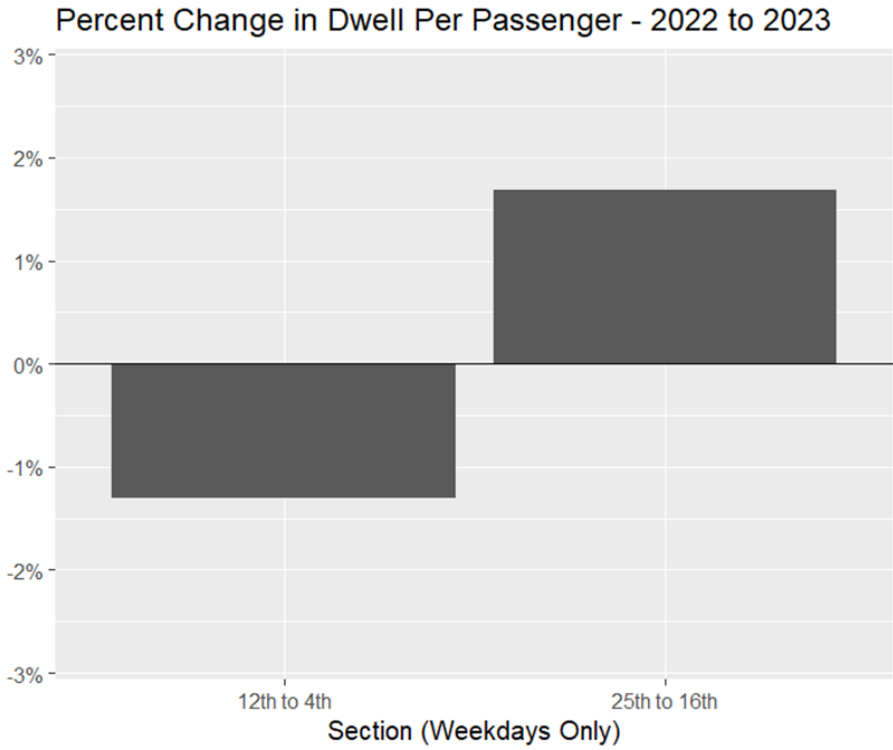


Figure 4: Percentage Change in Dwell time per passenger