Smart Loading Zones
Initial Findings

PHILADELPHIA, PA

Philadelphia Parking Authority (PPA) is setting the stage for smarter, safer streets through its Smart Loading Zones program. This initiative leverages automated enforcement and dynamic curbside management to reduce congestion, improve safety, and support the needs of all curb users, including pedestrians, cyclists, drivers, commercial fleets, and local businesses.

PROJECT HIGHLIGHTS

CHALLENGES

- Increased commercial activity has led to rising congestion, double parking, and safety risks at the curb
- Lack of loading zone compliance

OBJECTIVES

- Safer Streets - managing urban streets to prevent injuries and fatalities
- Support local businesses with better turnover and delivery access
- Reduce congestion, improve curbside efficiency, and cut emissions
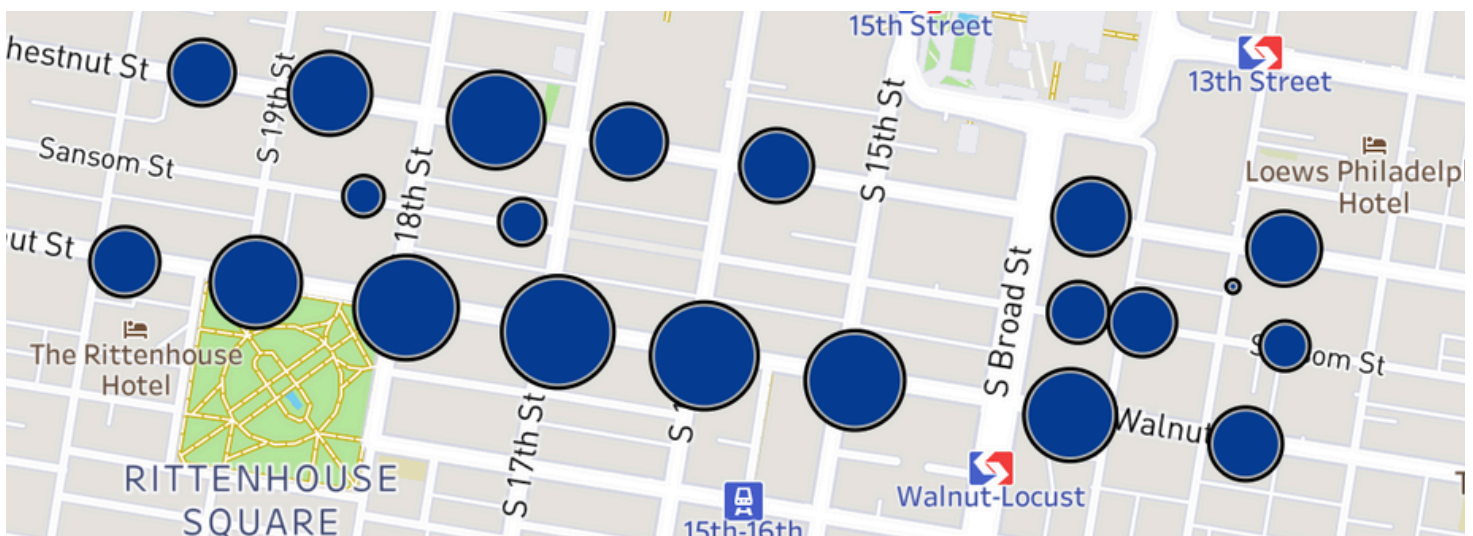
KEY RESULTS

82%
increase in commercial vehicles using loading zones

9.2%
registered use of Smart Loading Zones

>6,000
registered vehicles as of June 4, 2025

PHILADELPHIA Parking Authority

Automotus

AUTOMATED ENFORCEMENT: KEY TO SAFETY AND EFFICIENCY

Managing short-term violations like double parking, bike lane obstructions, and unauthorized loading zone use is nearly impossible with manual enforcement alone. Recognizing this, the Philadelphia Parking Authority saw automated enforcement - using cameras to capture violations and mail citations - as essential pairing to a Smart Loading Zone program.

KEY DATES

✓ **December 2024:** Kick off Automotus/ PPA implementation meetings

✓ **February 6, 2025:** Camera installation begins

✓ **April 1, 2025:** Launch CurbPass and automated warnings for unregistered, over time, and double parked violations
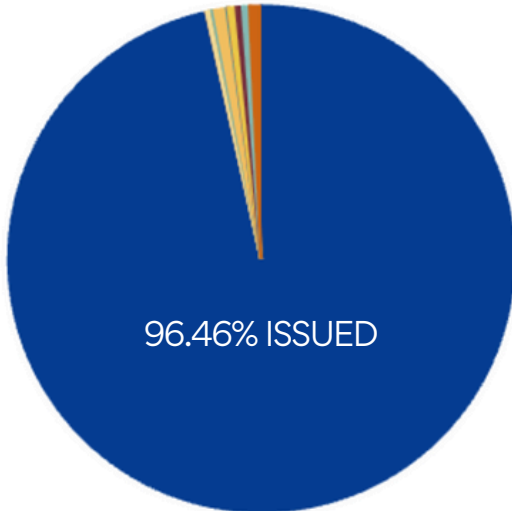
✓ **May 7, 2025:** Launch automated citations

PHILADELPHIA
Parking Authority

Aᴜtomotus

CITATION APPROVALS IN CURBSUITE

Violations Processed

96.46% ISSUED

< Notice Number: L15609564934   VOID   ISSUE

Park Start: 01:23 PM

Notice Details

Violation Date	Violation Time	Location	City
6/3/2025	01:28 PM	1800 Blk Chestnut St. N/S	Philadelphia, PA
Vehicle	Vehicle Make	Violation Code	Violation Type
PA LSJ4771 ✎	honda ✎	129233	Unregistered Vehicle

HOW DO SMART LOADING ZONES WORK?

Automated Smart Loading Zone Workflow

One-time registration → **Fully automated billing** → **Automated enforcement**

1HR PAID LOADING
MON - SAT | 5 AM - 9 PM
REGISTER HERE

- License plate number
- Digital wallet w/auto-reload

$0.00

- No driver action needed, like a toll road
- Billed for exact time used
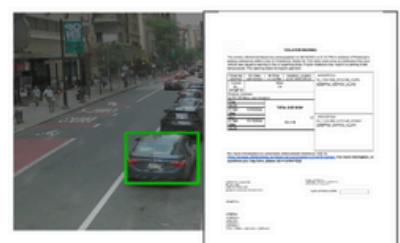
- Unregistered use, overtime, and double parks cited by mail

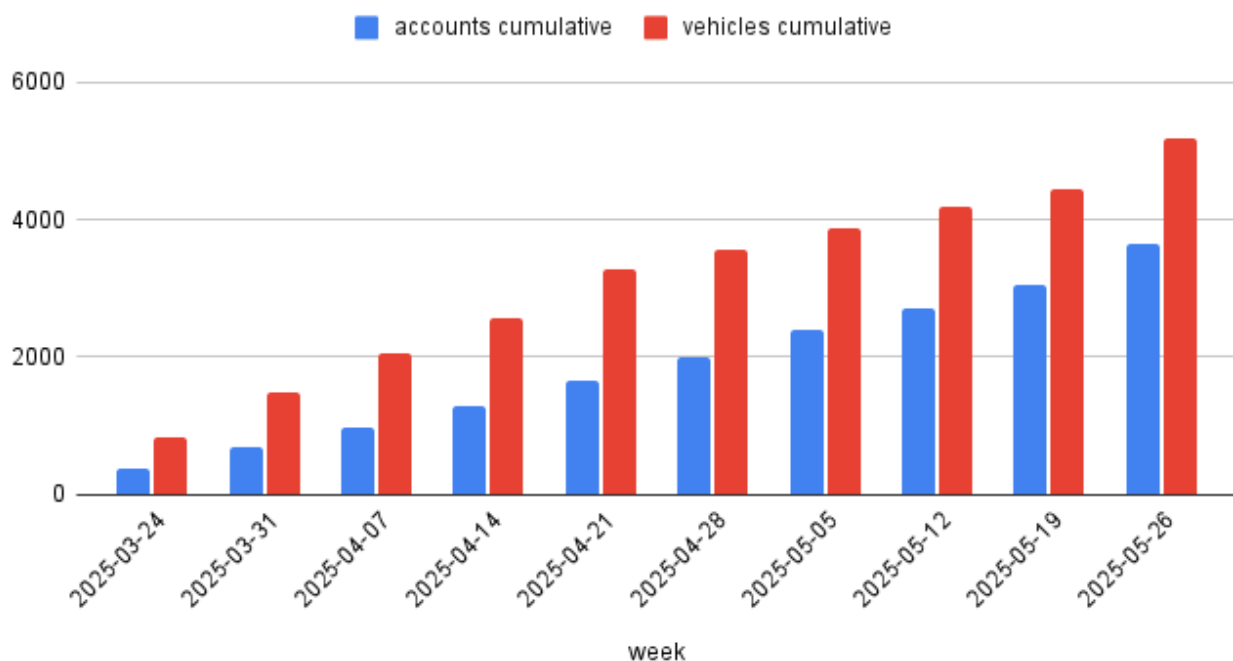PHILADELPHIA Parking Authority

Automotus

KEY RESULTS AND INSIGHTS

The program is showcasing strong indicators of achieving of project goals:

- **Increased Use by Commercial Vehicles:** delivery van activity has increased by over 50%, while freight use has doubled since March 2025. In total, commercial vehicle activity has increased over 80%.
- **Improved Traffic Flow**: traffic speeds have increased on Walnut, Chestnut, and Sansom by 18-52% compared to their average over the last 12 months

- **Strong Early Adoption:** the program has seen tremendous uptake, thanks to successful marketing and communication efforts by the PPA. In just two months, over 6,000 vehicles and 4,000 CurbPass accounts have been created.
- **Meaningful Revenue Increase:** more than 8,000 citations have been issued, with an outstanding balance totaling over $450,000 in less than a month.
- **Strong Initial Compliance:** already, more than 9% of loading zone use comes from CurbPass-registered users; a very encouraging sign at this early stage of the program.

Cumulative Vehicles/Accounts Registered by Week

Legend: accounts cumulative (blue), vehicles cumulative (red)

x-axis (week): 2025-03-24, 2025-03-31, 2025-04-07, 2025-04-14, 2025-04-21, 2025-04-28, 2025-05-05, 2025-05-12, 2025-05-19, 2025-05-26

MODALITY SHIFTS

From March 2025 through early June 2025, we are seeing an increase in delivery modes (delivery vans and freight vehicles) utilizing the Smart Loading Zones. **For all zones during policy hours, delivery vans have increased by over 50% and freight use by 100% since data collection started.** These changes vary by corridor with Sansom seeing the most significant shift since the beginning of the program.
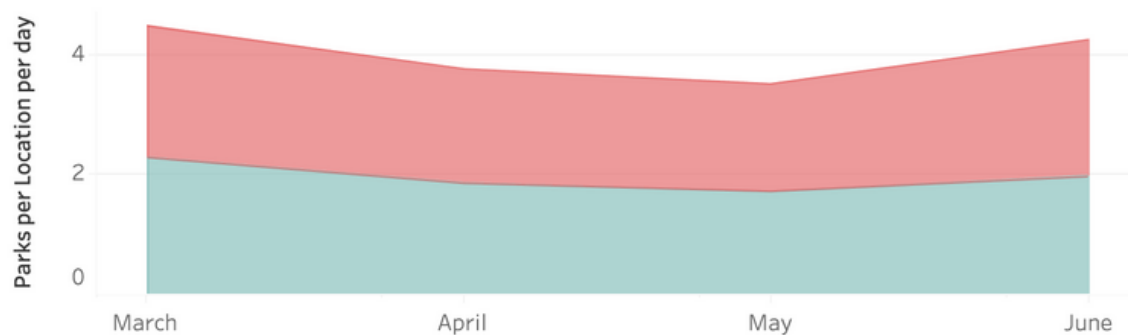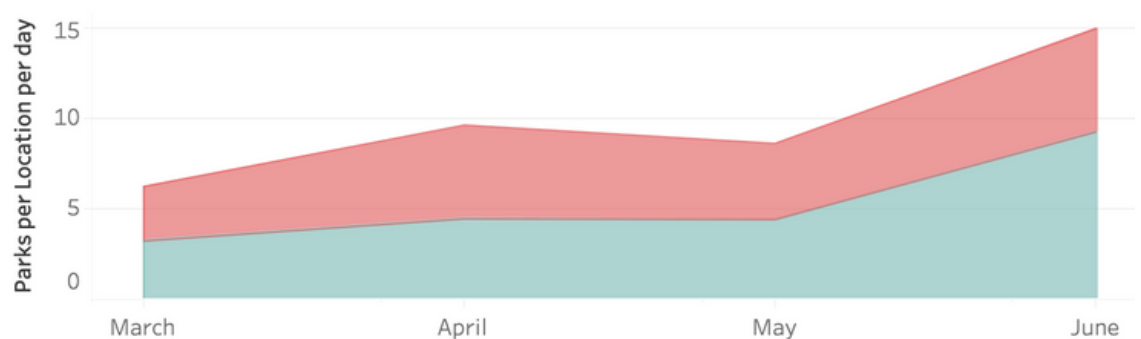
Delivery vans ⬤   Freight ⬤

WALNUT

Occupancy per Location *over time*
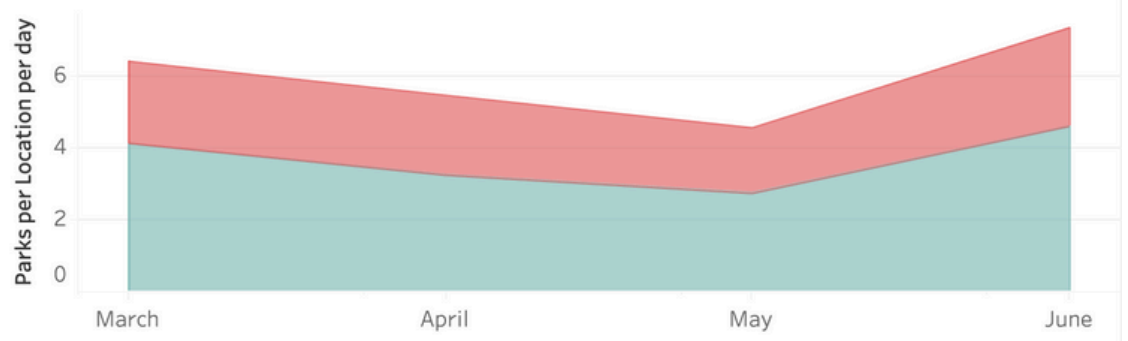
CHESTNUT

Occupancy per Location *over time*

SANSOM

Occupancy per Location *over time*

COMPLIANT PARKING

We are seeing a steady increase of the number of compliant parks during policy hours. Below, the graph shows that registered parks make up a little over 9% of parks during policy hours, while about 1-2% of those registered park get dwell time violations. We will continue to track these metrics to better understand how these vehicles are using the spaces to inform policy.

Percent of Compliant & Registered Parks During Policy Hours

— Compliant Parks   — Registered Parks
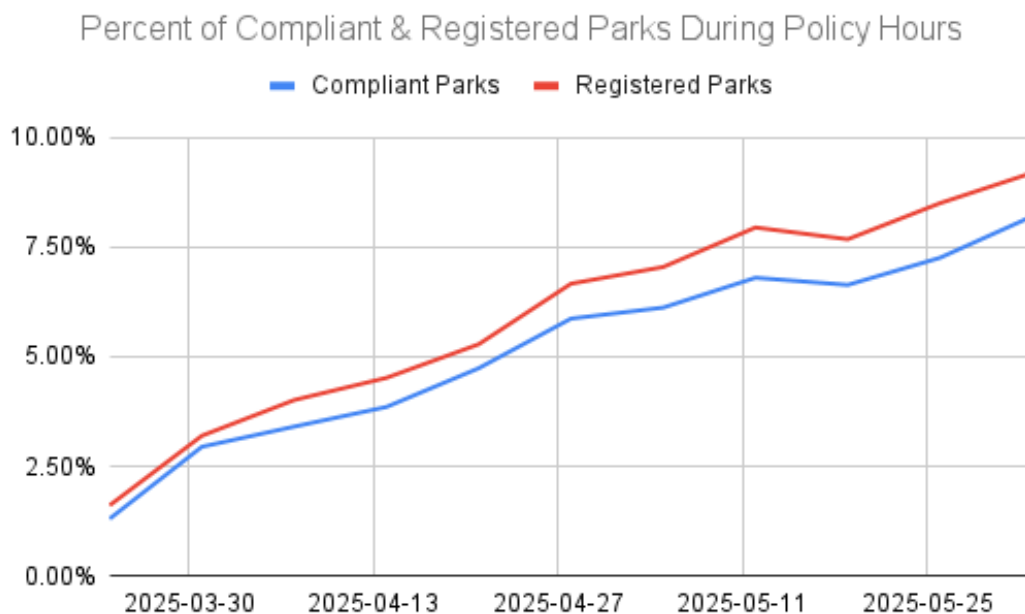
COMPLIANT CITATION PAYMENT

As of early June, over 8,000 citations have been issued totaling $450,000. Roughly 22% of those have been paid, representing $55,000 in collected revenue. We anticipate compliance will rise to ~70% over the next six months. Expected program income should lead to a **5-6X annual ROI** (return on investment).
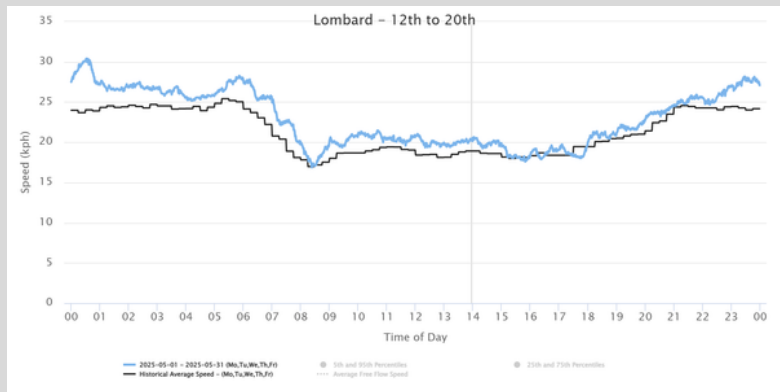
IMPACT ON CONGESTION

In May 2025, on Chestnut, Sanson, and Walnut **traffic speeds increased ~5KPH throughout the day** compared to control streets.

SMART ZONE STREETS
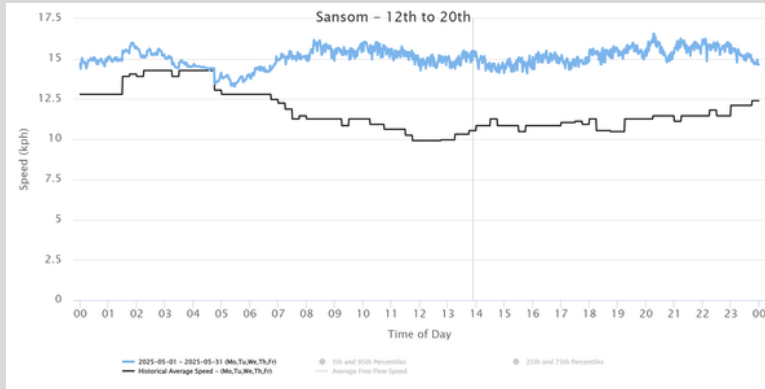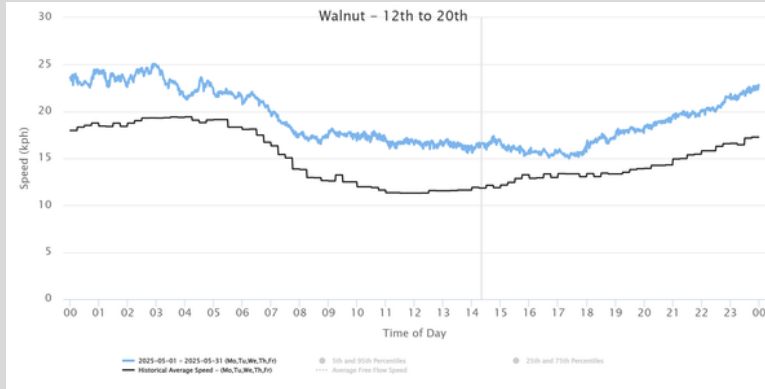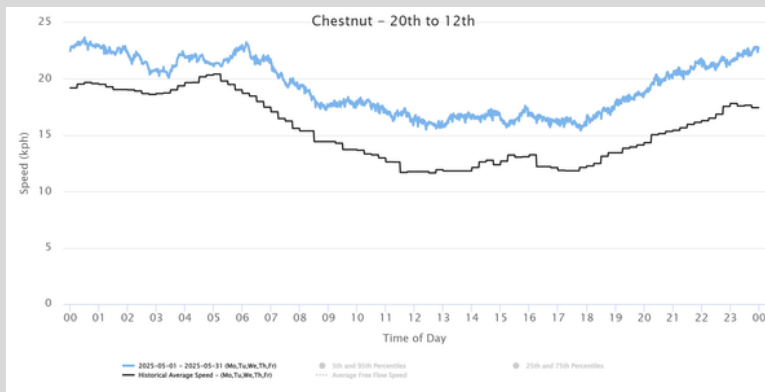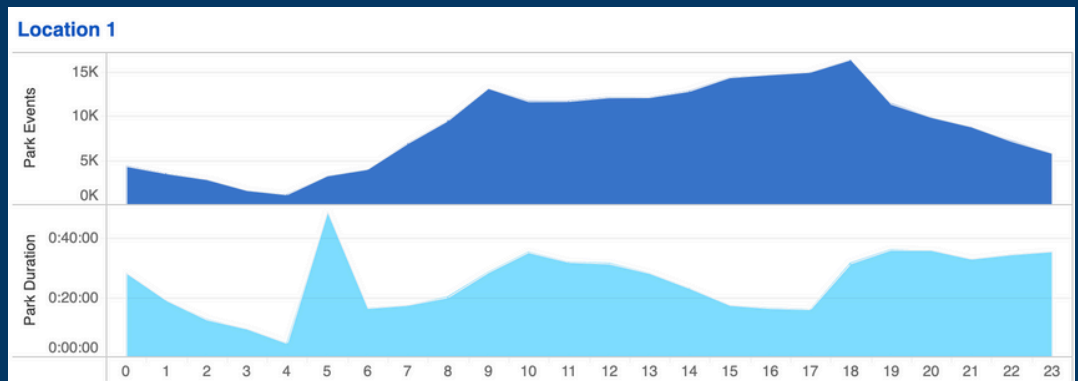

CONTROL STREET

18-52%

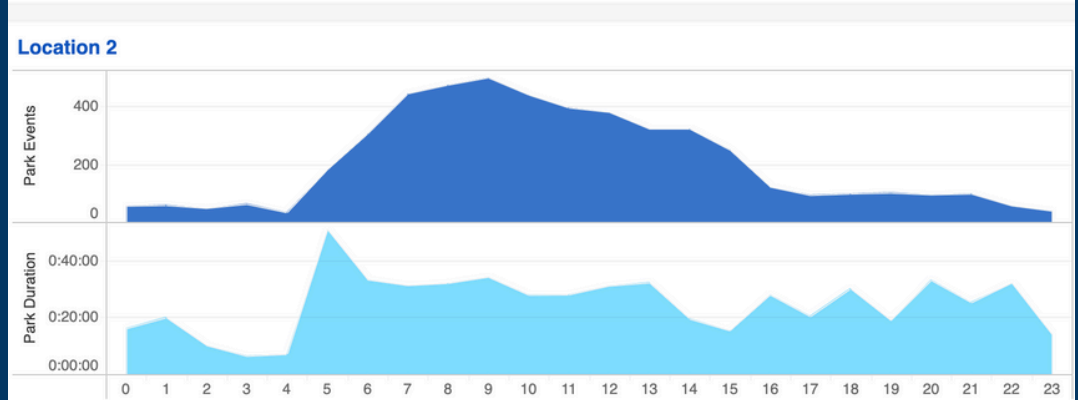**Increase in speed of traffic on Smart Zone streets compared to last 12 months average**

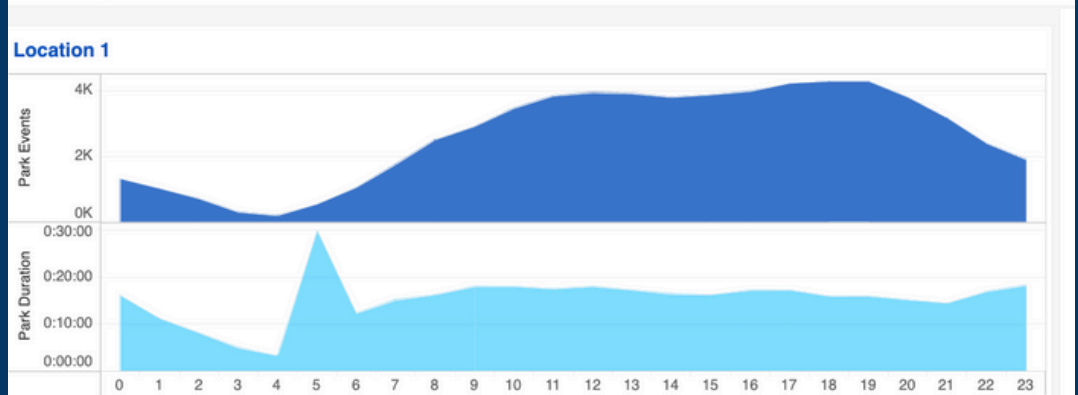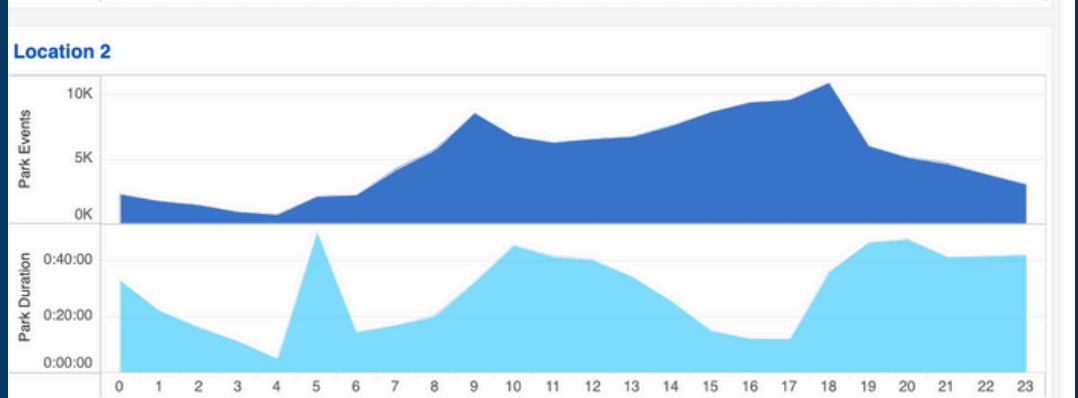**data provided by**

CORRIDOR COMPARISONS - ALL MODES
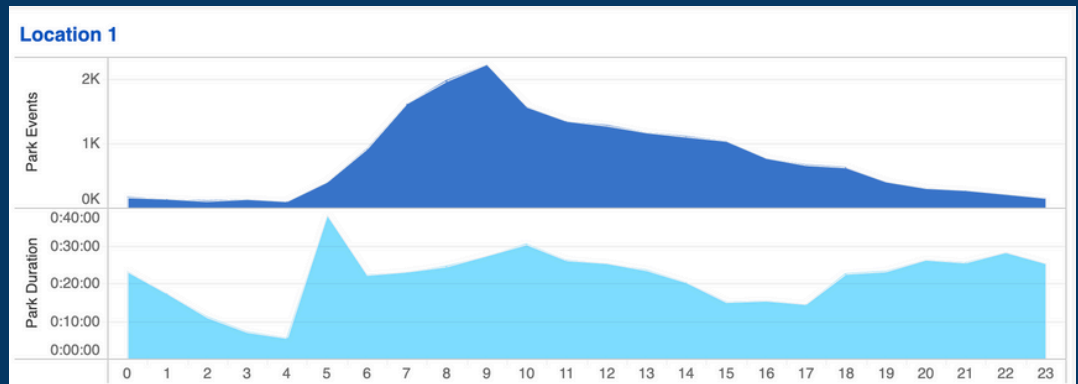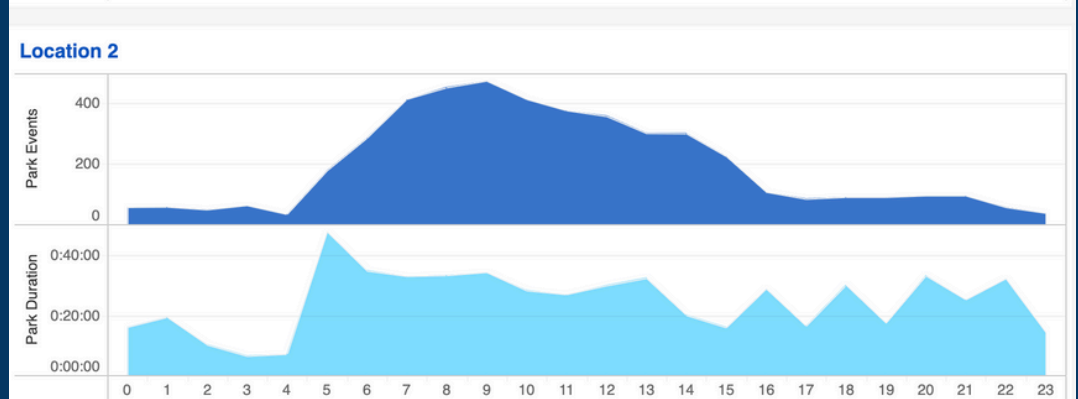
ALL

SANSOM

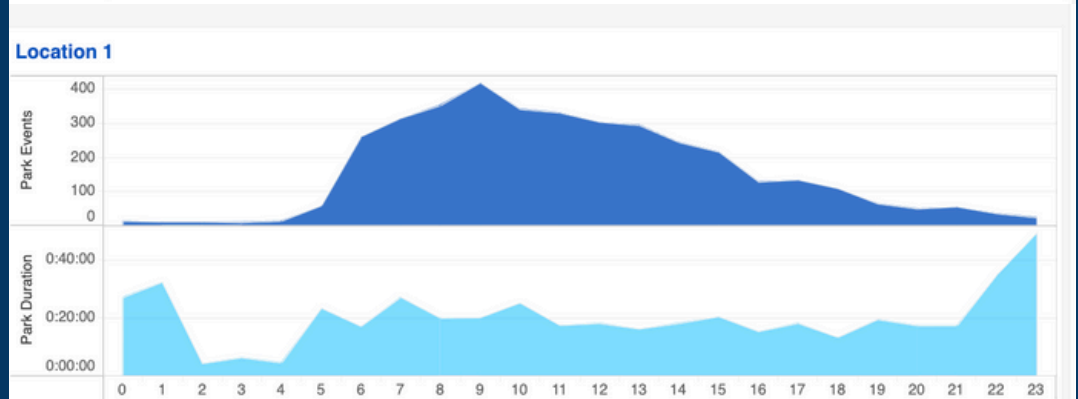CHESTNUT
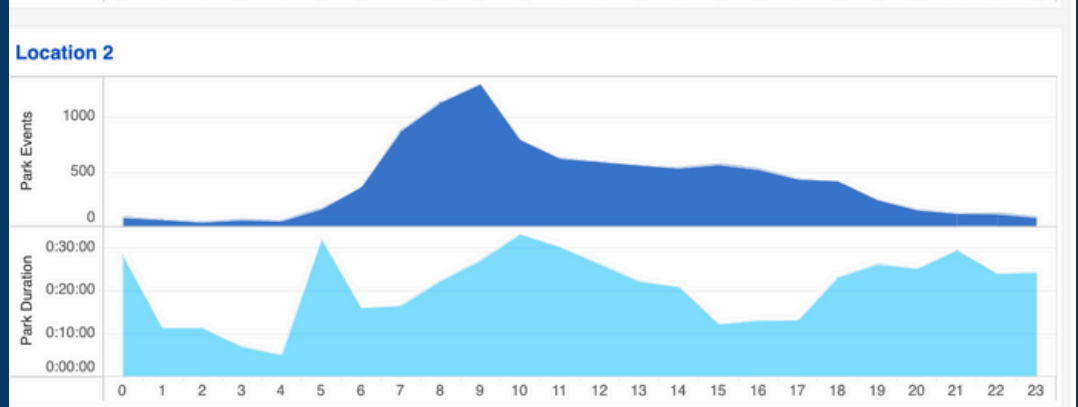
WALNUT

CORRIDOR COMPARISONS - DELIVERY MODES ONLY

ALL

SANSOM

CHESTNUT

WALNUT

THANK YOU FOR YOUR
PARTNERSHIP!

PHILADELPHIA
Parking Authority

Automotus