

Memo

To: City of Alameda
From: Dixon Resources Unlimited
Date: April 9, 2026
Re: Clement Avenue Truck Route Parking Utilization Study

Executive Summary

The City of Alameda retained Dixon Resources Unlimited (DIXON) to evaluate parking demand and availability within the study area surrounding Clement Avenue in advance of a proposed truck route designation. The proposed change would remove 21 on-street parking spaces on the south side of Clement Avenue between Paru Street and Balsa Street.

Overall, the findings indicate that the study area has sufficient parking capacity to accommodate the anticipated changes. While localized increases in occupancy may occur during peak periods, particularly on Saturday's and evenings, parking conditions are expected to remain manageable without widespread constraints.

Introduction

This memo summarizes DIXON's evaluation of parking demand and availability within the area surrounding Clement Avenue, generally bounded by Entrance Road, Buena Vista Avenue, and Hibbard Street (Figure 1). The analysis was completed to understand the potential impacts of a proposed truck route designation on Clement Avenue, which would remove 21 on-street parking spaces on the south side of the street between Paru Street and Balsa Street. The study area currently contains 193 on-street parking spaces. If implemented, the proposed changes would also include restriping Buena Vista Avenue to create approximately 15 additional on-street parking spaces within the study area.

The analysis includes a review of existing parking conditions within the study area and evaluates whether nearby streets and driveways can accommodate potential displaced demand following the proposed parking removal. Parking data was collected on two Saturdays and three weekdays between January 27, 2026 and February 7, 2026 using vehicle-mounted LPR cameras operated by City staff at 9 a.m., 12 p.m., 3 p.m., and 6 p.m. City staff also manually counted vehicles parked in driveways. Figure 1 illustrates the study area and the segment of Clement Avenue proposed for truck route designation.

Figure 1. Study Area Map



Methodology

Data Collection

Curbside parking data was collected on two Saturdays and three weekdays between January 27, 2026 and February 7, 2026 to evaluate parking utilization. Street sweeping occurred on Monday, February 2, 2026, which may have influenced parking patterns on that day.

City staff used vehicle-mounted License Plate Recognition (LPR) cameras to capture parking conditions at 9 a.m., 12 p.m., 3 p.m., and 6 p.m. In addition, staff manually counted vehicles parked in driveways.

Inventory Collection

All parking spaces within the study area were unmarked. On-street inventory was calculated using the City's curb measurements, which were mapped to indicate where parking is allowed and prohibited. Space counts were derived using a standard length of 20 feet, or 18 feet where spaces are adjacent to driveways or other non-parking areas that provide additional room for maneuvering.

Driveways

Driveways were counted to compare against the number of vehicles parked in them. As driveway capacity varies and may include garage space, this does not represent total available parking but provides a general indication of potential capacity relative to observed demand.

Occupancy Calculations

Occupancy was calculated as vehicles parked on the curb divided by total on-street spaces. Projected occupancy applies the same vehicle counts to an adjusted supply, reflecting the removal of 21 spaces on Clement Avenue and the addition of 15 spaces on Buena Vista Avenue.

Length of Stay Calculations

Length of stay was calculated using the first time a vehicle was observed (Arrival) and an estimated departure time on each survey date. Departure was estimated as the midpoint between the last survey period in which the vehicle was observed and the next period in which it was no longer present (Figure 2).

Figure 2. Method for Calculating Estimated Time of Departure

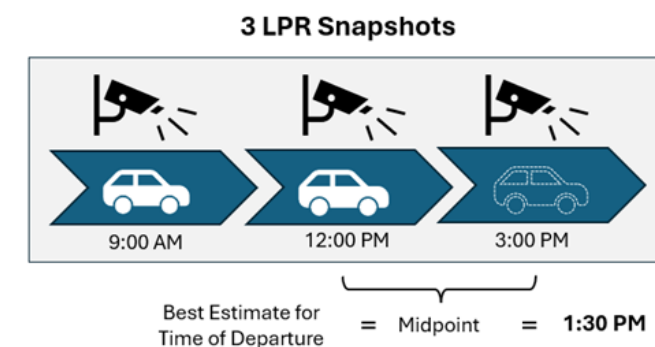


Figure 6 shows the percentage of cars staying either between 0-3 hours, 3-6 hours, 6-9 hours, or 9-12 hours. Length of stay by block face is shown in Figures 31 through 35.

Key Considerations

The parking industry considers the ideal target parking occupancy rate to be 85%, which roughly equates to one or two parking spaces available per block face, or an equivalent-sized parking area. This occupancy target ensures availability while maximizing the utilization of public parking assets. Areas that regularly exceed 85% occupancy are often perceived by the public as full and/or congested as motorists circle the area looking for an available space. Likewise, areas that regularly are well below 85% are considered underutilized.

When the length of stay is long, turnover is low. Conversely, shorter stays result in higher turnover. A high turnover rate maximizes the number of motorists utilizing available parking spaces, which is especially crucial in commercial areas where availability improves customer access to nearby businesses.

The goal of most municipal parking programs is to seek a balanced parking operation that actively works to maintain parking locations at or near the 85% target occupancy level, while understanding that there will be occasional outliers.

Definition of Terms

- Inventory: The number of spaces per on-street block face or off-street locations.
- Occupancy: The percentage of parking inventory that is occupied.
- Length of Stay: The amount of time a car remains in a given parking space.
- Block face: A single side of the street between two cross streets.

Results

Existing Occupancy

Based on data collected on two Saturdays and three weekdays between January 27 and February 7, 2026, on-street parking within the study area is generally well below capacity. Study area-wide occupancy does not exceed the industry standard threshold of 85% during any survey period, and the overall average occupancy across all days and times was 64% (Figure 4, Figure 8).

Parking occupancy along Clement Avenue itself averages less than 50% across all survey periods, resulting in limited current utilization of the spaces proposed for removal. Occupancy is generally highest during evening periods. The highest individual reading observed was 76% on Saturday, February 7, 2026 at 6 p.m., followed by 75% on Tuesday, February 3, 2026 at 6 p.m. Saturday, February 7 also had the highest daily average at 73%.

While study area-wide occupancy remains within acceptable levels, the occupancy maps in Appendix C reveal localized variation across individual block faces. Streets adjacent to Clement Avenue (including Entrance Road, Balsa Street, Sakas Street, and Ohlone Street) average over 70% occupancy, and individual block faces along these segments occasionally exceed 85% during peak periods. However, this fluctuates throughout the day, and nearby segments remain underutilized, indicating available capacity to absorb displaced demand.

Projected Occupancy

Under projected conditions, reflecting the removal of 21 spaces on Clement Avenue and the addition of 15 spaces on Buena Vista Avenue through restriping, the study area is expected to continue operating well within acceptable occupancy levels with a projected supply of 187 spaces (Figure 5). The overall average projected occupancy across all survey days and times is 66%. The only period approaching the 85% threshold occurs during Saturday, February 7, 2026 evening peak (78%), a slight increase from the existing 76%. All other periods remain comfortably below this level.

Driveway Utilization

Driveway utilization was evaluated to understand the potential for additional parking supply within the study area (Figure 6). Across all survey days and times, the number of driveways consistently exceeded the number of vehicles parked in them. While driveway capacity can vary and may include garage space, these findings indicate that driveway parking is not currently fully utilized and may offer some flexibility for residents if on-street parking becomes more constrained.

Length of Stay

Length of stay analysis indicates that the majority of vehicles (approximately 58% on average) park for three hours or less, while longer stays of nine hours or more account for approximately 17% (Figure 7, Figures 31-35). This pattern is consistent across all survey days and reflects typical residential parking activity.

Conclusion

The findings of this study indicate that the study area has sufficient parking capacity to accommodate the designation of Clement Avenue as a truck route. While the removal of 21 spaces on Clement Avenue will reduce on-street supply, this impact is partially offset by the proposed restriping of Buena Vista Avenue, which would add approximately 15 spaces.

Under projected conditions, study area-wide occupancy does not exceed the 85% threshold during any observed period. The highest projected reading occurs on Saturday, February 7, 2026 at 6 p.m. (78%), a slight increase from existing conditions. Some individual block faces adjacent to Clement Avenue may experience higher occupancy during peak periods, but nearby segments remain underutilized and can absorb displaced demand.

Additionally, driveway parking in the study area is not currently fully utilized, providing a further buffer should on-street availability become more constrained.

Appendix A: Tables

Figure 3. Parking Inventory, Projected Inventory, and Driveways

Block Face, Street (From Street - To Street)	Inventory	Projected Inventory	Driveways
BALSA ST (CLEMENT AVE - BALSA ST END)	2	2	0
BUENA VISTA AVE (ARBOR ST - STANTON ST)	5	5	4
BUENA VISTA AVE (ENTRANCE RD - ARBOR ST)	1	1	0
BUENA VISTA AVE (OHLONE ST - PARU ST)	4	4	4
BUENA VISTA AVE (PARU ST - HIBBARD ST)	6	6	3
BUENA VISTA AVE (SAKAS ST - OHLONE ST)	5	5	3
BUENA VISTA AVE (STANTON ST - SAKAS ST)	5	5	3
CLEMENT AVE (BALSA ST - STANTON ST)	6	0	0
CLEMENT AVE (ENTRANCE RD - BALSA ST)	6	6	0
CLEMENT AVE (OHLONE ST - PARU ST)	6	0	0
CLEMENT AVE (PARU ST - HIBBARD ST)	4	4	3
CLEMENT AVE (SAKAS ST - OHLONE ST)	4	0	0
CLEMENT AVE (STANTON ST - SAKAS ST)	5	0	0
ENTRANCE RD (BUENA VISTA AVE - CLEMENT AVE)	13	13	0
ENTRANCE RD (CLEMENT AVE - BUENA VISTA AVE)	6	6	0
HIBBARD ST (EAGLE AVE - BUENA VISTA AVE)	4	4	7
HIBBARD ST (BUENA VISTA AVE - EAGLE AVE)	8	8	4
HIBBARD ST (WASHOE CT - EAGLE AVE)	4	4	2
HIBBARD ST (EAGLE AVE - WASHOE CT)	1	1	0
OHLONE ST (CLEMENT AVE - BUENA VISTA AVE)	12	12	11
OHLONE ST (BUENA VISTA AVE - CLEMENT AVE)	11	11	13
PARU ST (CLEMENT AVE - BUENA VISTA AVE)	15	15	13
PARU ST (BUENA VISTA AVE - CLEMENT AVE)	17	17	7
SAKAS ST (CLEMENT AVE - BUENA VISTA AVE)	10	10	9
SAKAS ST (BUENA VISTA AVE - CLEMENT AVE)	12	12	10
STANTON ST (CLEMENT AVE - BUENA VISTA AVE)	11	11	5
STANTON ST (BUENA VISTA AVE - CLEMENT AVE)	10	10	8
BUENA VISTA AVE (Restriping)	0	15	0
TOTAL (without Restriping)	193	172	109
TOTAL (with Restriping)	193	187	109

Figure 4. Average Occupancy between Tuesday, January 27, 2026 and Saturday, February 7, 2026

Date	9 a.m.	12 p.m.	3 p.m.	6 p.m.	Average
Tuesday, January 27, 2026	58%	58%	60%	68%	61%
Saturday, January 31, 2026	67%	63%	68%	66%	66%
Monday, February 2, 2026	58%	54%	50%	68%	58%
Tuesday, February 3, 2026	59%	60%	63%	75%	64%
Saturday, February 7, 2026	72%	71%	71%	76%	73%
Average	63%	61%	62%	71%	64%

Figure 4. Projected Average Occupancy (Parking Removed on Clement Ave between Paru Street and Balsa Street; 15 Spaces Added on Buena Vista Ave) between Tuesday, January 27, 2026 and Saturday, February 7, 2026

Date	9 a.m.	12 p.m.	3 p.m.	6 p.m.	Average
Tuesday, January 27, 2026	60%	60%	62%	70%	63%
Saturday, January 31, 2026	69%	65%	70%	68%	68%
Monday, February 2, 2026	60%	56%	52%	70%	60%
Tuesday, February 3, 2026	61%	62%	65%	77%	66%
Saturday, February 7, 2026	74%	73%	73%	78%	75%
Average	65%	63%	64%	73%	66%

Figure 6. Vehicles Parked in Driveways between Tuesday, January 27, 2026 and Saturday, February 7, 2026

Date	9 a.m.	12 p.m.	3 p.m.	6 p.m.	Average
Tuesday, January 27, 2026	64	50	62	63	60
Saturday, January 31, 2026	79	81	78	91	82
Monday, February 2, 2026	82	79	71	76	77
Tuesday, February 3, 2026	75	66	70	75	72
Saturday, February 7, 2026	92	75	77	81	81
Average	78	70	72	77	74

Figure 7. Average Length of Stay between Tuesday, January 27, 2026 and Saturday, February 7, 2026

Date	0-3 hrs	3-6 hrs	6-9 hrs	9-12 hrs
Tuesday, January 27, 2026	56%	15%	12%	17%
Saturday, January 31, 2026	55%	21%	8%	17%
Monday, February 2, 2026	59%	17%	7%	18%
Tuesday, February 3, 2026	60%	13%	10%	17%
Saturday, February 7, 2026	60%	17%	6%	17%
Average	58%	17%	8%	17%

Appendix B: Charts

Figure 8. Average Occupancy by Time and Date between Tuesday, January 27, 2026 and Saturday, February 7, 2026

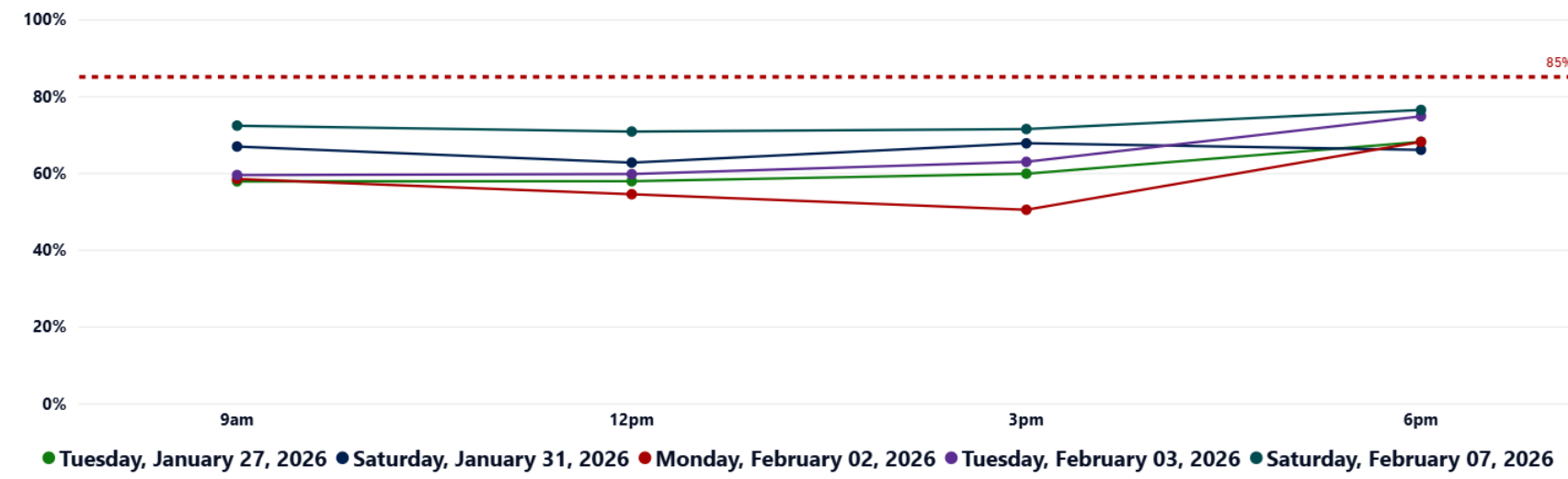
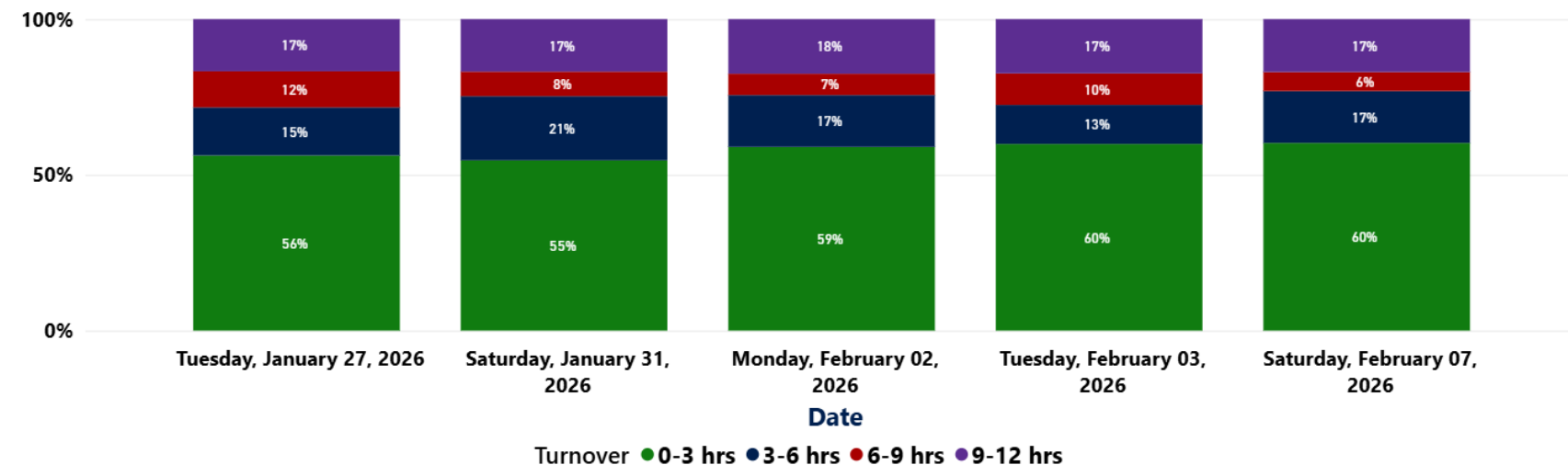


Figure 9. Length of Stay by Date between Tuesday, January 27, 2026 and Saturday, February 7, 2026



Appendix C: Maps

Figure 5. Average Occupancy All Times between Tuesday, January 27, 2026 and Saturday, February 7, 2026

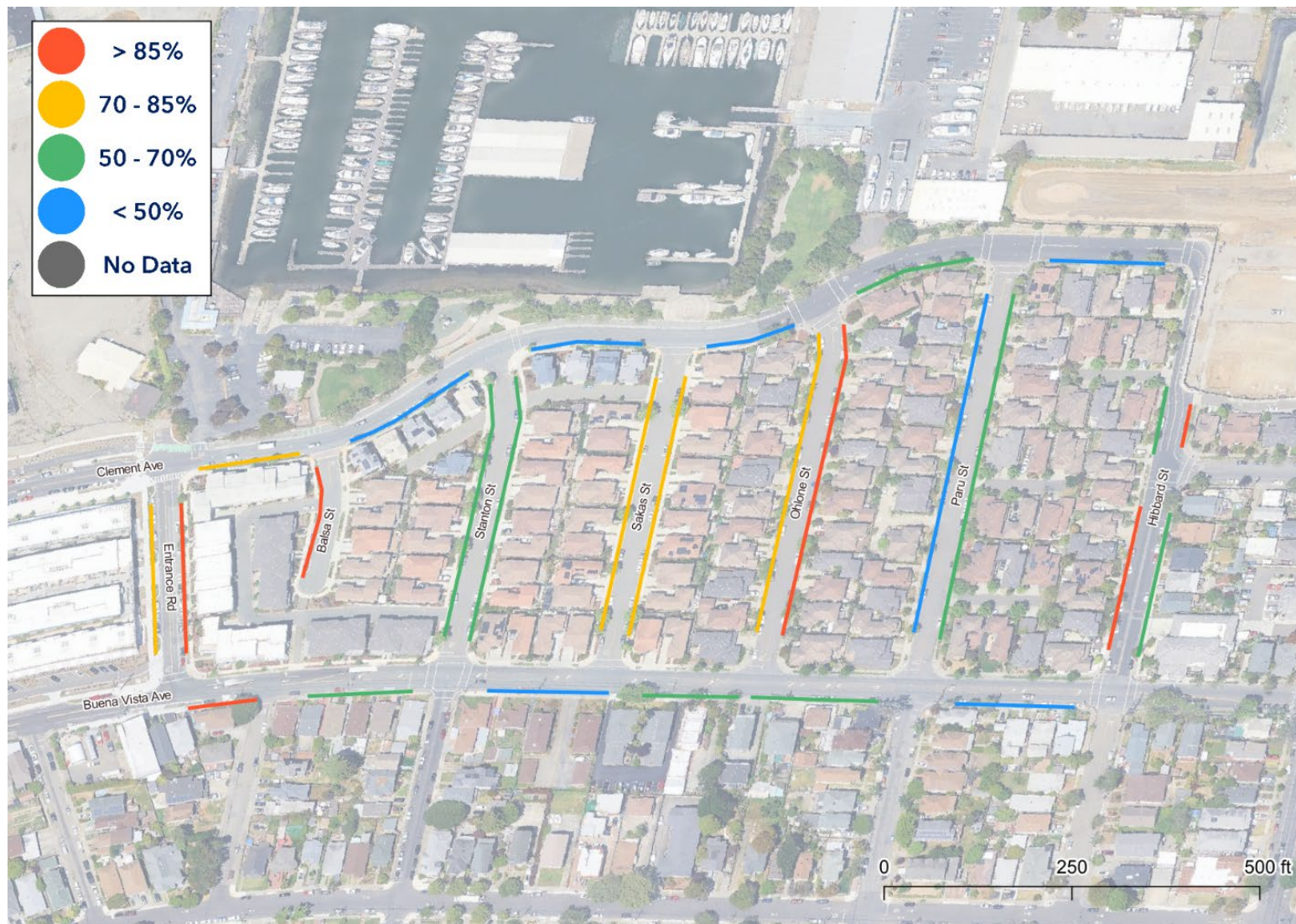


Figure 6. Tuesday, January 27, 2026 - Occupancy 9 a.m.



Figure 7. Tuesday, January 27, 2026 - Occupancy 12 p.m.



Figure 8. Tuesday, January 27, 2026 - Occupancy 3 p.m.



Figure 9. Tuesday, January 27, 2026 - Occupancy 6 p.m.



Figure 10. Saturday, January 31, 2026 - Occupancy 9 a.m.



Figure 11. Saturday, January 31, 2026 - Occupancy 12 p.m.



Figure 12. Saturday, January 31, 2026 - Occupancy 3 p.m.



Figure 13. Saturday, January 31, 2026 - Occupancy 6 p.m.



Figure 14. Monday, February 2, 2026 - Occupancy 9 a.m.



Figure 15. Monday, February 2, 2026 - Occupancy 12 p.m.



Figure 16. Monday, February 2, 2026 - Occupancy 3 p.m.



Figure 17. Monday, February 2, 2026 - Occupancy 6 p.m.



Figure 18. Tuesday, February 3, 2026 - Occupancy 9 a.m.



Figure 19. Tuesday, February 3, 2026 - Occupancy 12 p.m.



Figure 20. Tuesday, February 3, 2026 - Occupancy 3 p.m.



Figure 21. Tuesday, February 3, 2026 - Occupancy 6 p.m.



Figure 22. Saturday, February 7, 2026 - Occupancy 9 a.m.



Figure 23. Saturday, February 7, 2026 - Occupancy 12 p.m.



Figure 24. Saturday, February 7, 2026 - Occupancy 3 p.m.



Figure 25. Saturday, February 7, 2026 - Occupancy 6 p.m.



Figure 26. Tuesday, January 27, 2026 - Average Length of Stay



Figure 27. Saturday, January 31, 2026 - Average Length of Stay



Figure 28. Monday, February 2, 2026 - Average Length of Stay



Figure 29. Tuesday, February 3, 2026 - Average Length of Stay



Figure 30. Saturday, February 7, 2026 - Average Length of Stay

