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September 17, 2025 Project# 28476

To: Ozzy Arce, Senior Transportation Planner
City of Palo Alto, Office of Transportation

From: Kittelson & Associates, Inc.

CC: Sylvia Star-Lack, Transportation Planning Manager

RE: Bicycle and Pedestrian Transportation Plan (BPTP) Update – Bike Parking Data Collection Summary

BIKE PARKING DATA COLLECTION SUMMARY

Introduction

The City of Palo Alto (City) is in the process of updating the 2012 Bicycle and Pedestrian Transportation Plan. The Bicycle and Pedestrian Transportation Plan (BPTP) Update is intended to serve as a comprehensive action plan, aiming to enhance bicycle and pedestrian facilities for its residents, employees, and visitors. As part of this effort, a comprehensive inventory was created to capture the various bicycle parking options available within specific areas of the city. A data collection was conducted by the Consultant team to gather information about bicycle parking locations and types. This memo aims to provide a summary of the bike parking data collected during this period along with an overview and key statistics of the findings.

Data Collection Summary

The data collection was conducted on Thursday, December 14, 2023, from 10:00 am to 4:00 pm. The network covered included University Avenue, from the Caltrain station to Middlefield Rd., and incorporated parallel streets such as Hamilton Avenue and Lytton Avenue, as well as various side streets within the network. The Kittelson and Associates Inc. team was able to collect 142 data points at the study location. For each data point the following information was obtained:

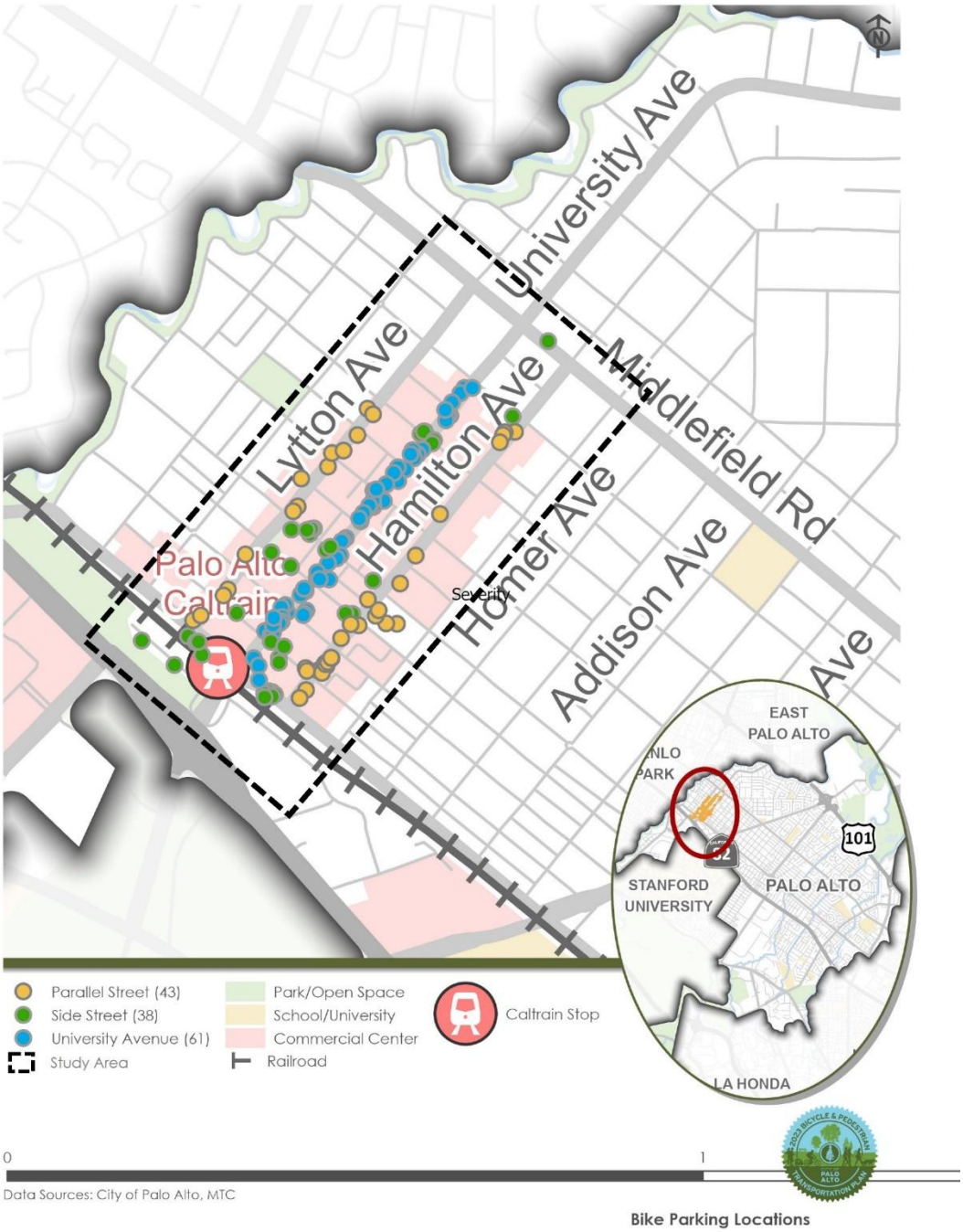
- Location of bike parking (University Avenue, Parallel Street, or Side Street)
- Latitude and Longitude of each data point
- Total number of bike parking spaces
- Number of bike parking spaces per rack
- Number of occupied bike parking spaces
- Type of bike rack (Inverted U, Series Inverted U, Wave, Locker, Elevated or Other)
- The presence of a bike corral (Yes/No)
- Location of bike rack/corral (on the sidewalk or on the street)
- Condition of bike rack
- Classification of bike parking as short-term or long-term
- For short-term parking, proximity to the front entrance of the building it serves (within 50ft or not, optional)
- Whether the bike parking is covered (Yes/No)
- Security level of the bike parking, specifically if it's secured to the ground
- Presence of signage and/or wayfinding information at the parking location (optional)

- Additional notes on observations (optional)
- Attached pictures for visual documentation

1. Bike Parking Location

Figure 1 depicts the distribution of bike parking locations along University Avenue, parallel streets (Hamilton Avenue and Lytton Avenue), and various side streets. It shows a total of 61 bike parking locations on University Avenue, 43 across both Hamilton and Lytton Avenues, and 38 additional data points on the surrounding side streets resulting in a total of 679 bike parking spaces in the survey area. University Avenue features 180 bike parking spaces, while Hamilton and Lytton Avenues combined offer 202 spaces, and the surrounding streets contribute an additional 297 spaces for bicycle parking including Caltrain station.

Figure 1. Bike Parking Locations



2. Bike Parking Utilization

Figure 2 displays the utilization categories for bike parking spaces, segmented into ranges of occupied spaces. The majority of parking spaces fall within the '1 - 2' utilization category, with 34 locations occupied. The '3 - 4' category has a moderate occupancy with 11 locations. There is a significant drop in utilization for the higher categories. Additionally, Figure 3 illustrates the occupancy levels of bike parking spaces. The use of varying sizes of orange circles denotes the intensity of bike parking utilization, with larger circles

indicating a higher number of bikes parked. The concentration of occupied bike parking spaces is notable near the Caltrain station and along University Avenue.

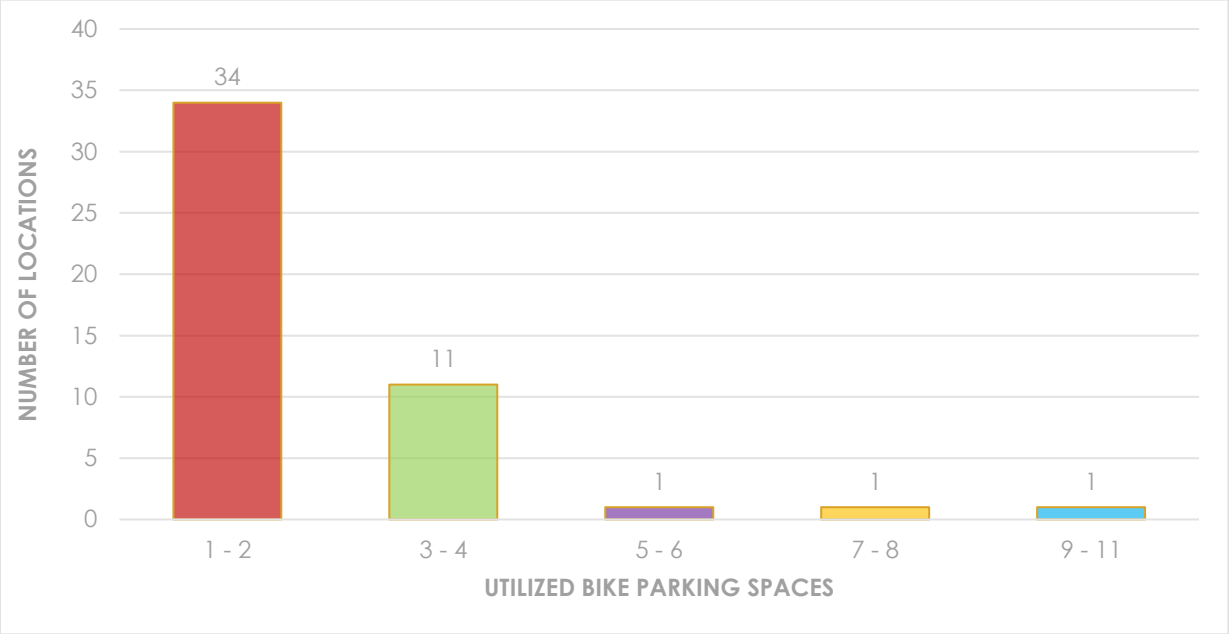


Figure 2. Bike Parking Utilization

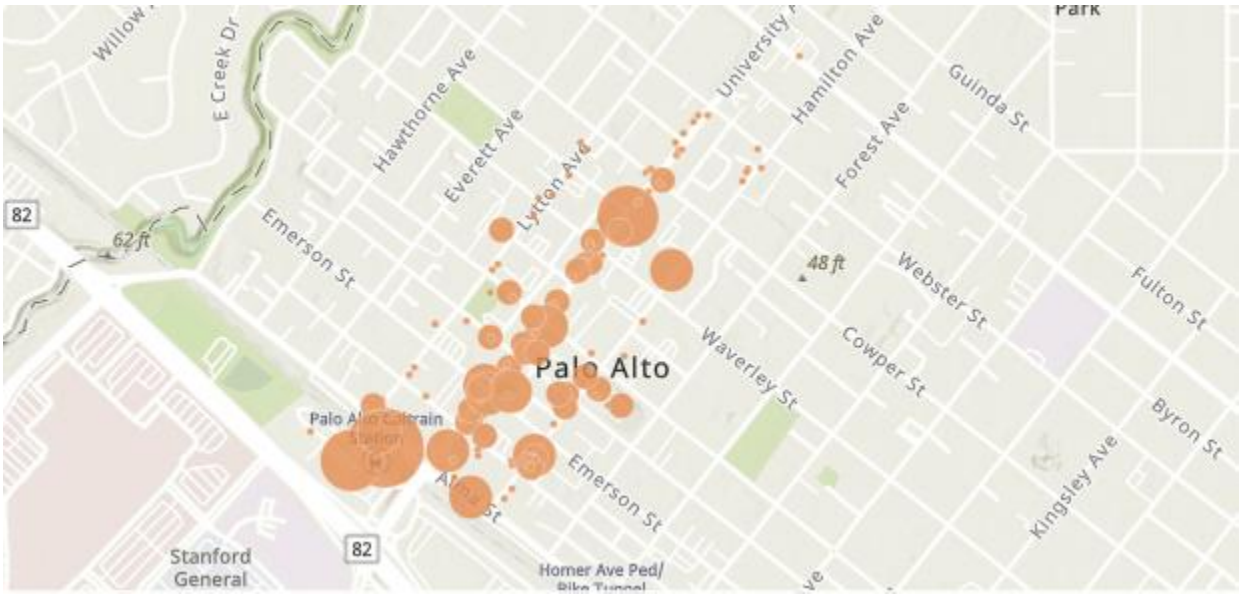


Figure 3. Occupied Bike Parking Locations

3. Bike Parking Type

Figure 4 illustrates an overview of the different bike parking types while Figure 5 shows the spatial distribution of various bike rack types across the data collection area. These types are categorized as Inverted U - Circular (14 instances), Inverted U - Rectangle (81), Series Inverted U (17), Elevated (18), Wave (4), Locker (2), and Other (6). The figure shows that the Inverted U - Rectangle is the predominant bike rack type,

especially along University Avenue. Additionally, Figure 6 shows the locations of the bike corrals across the data collection area.

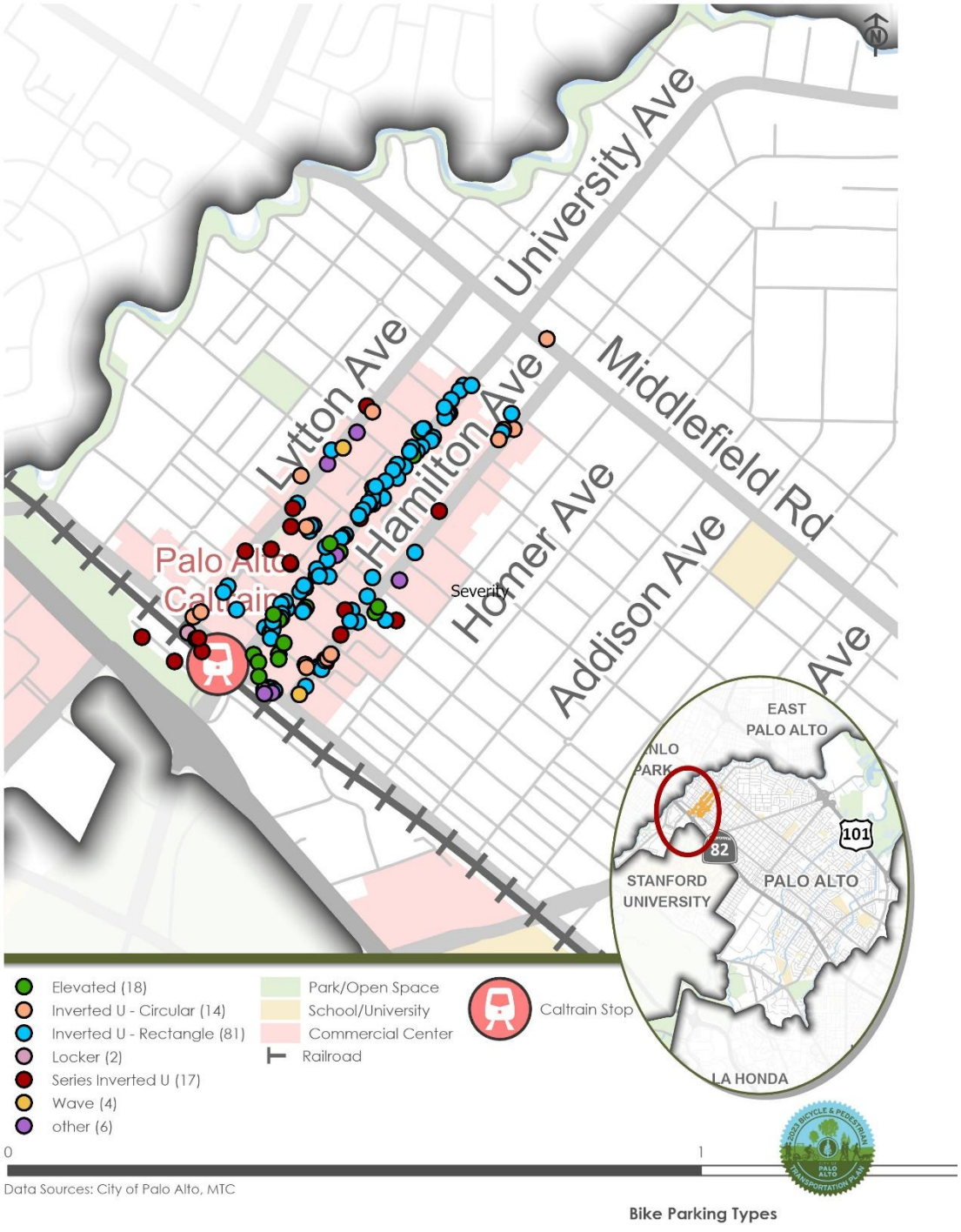


Figure 4. Bike Parking Types

Inverted U - Circular

Inverted U - Rectangle

Series Inverted U

Elevated

Wave

Locker

Figure 5. Bike Parking Types

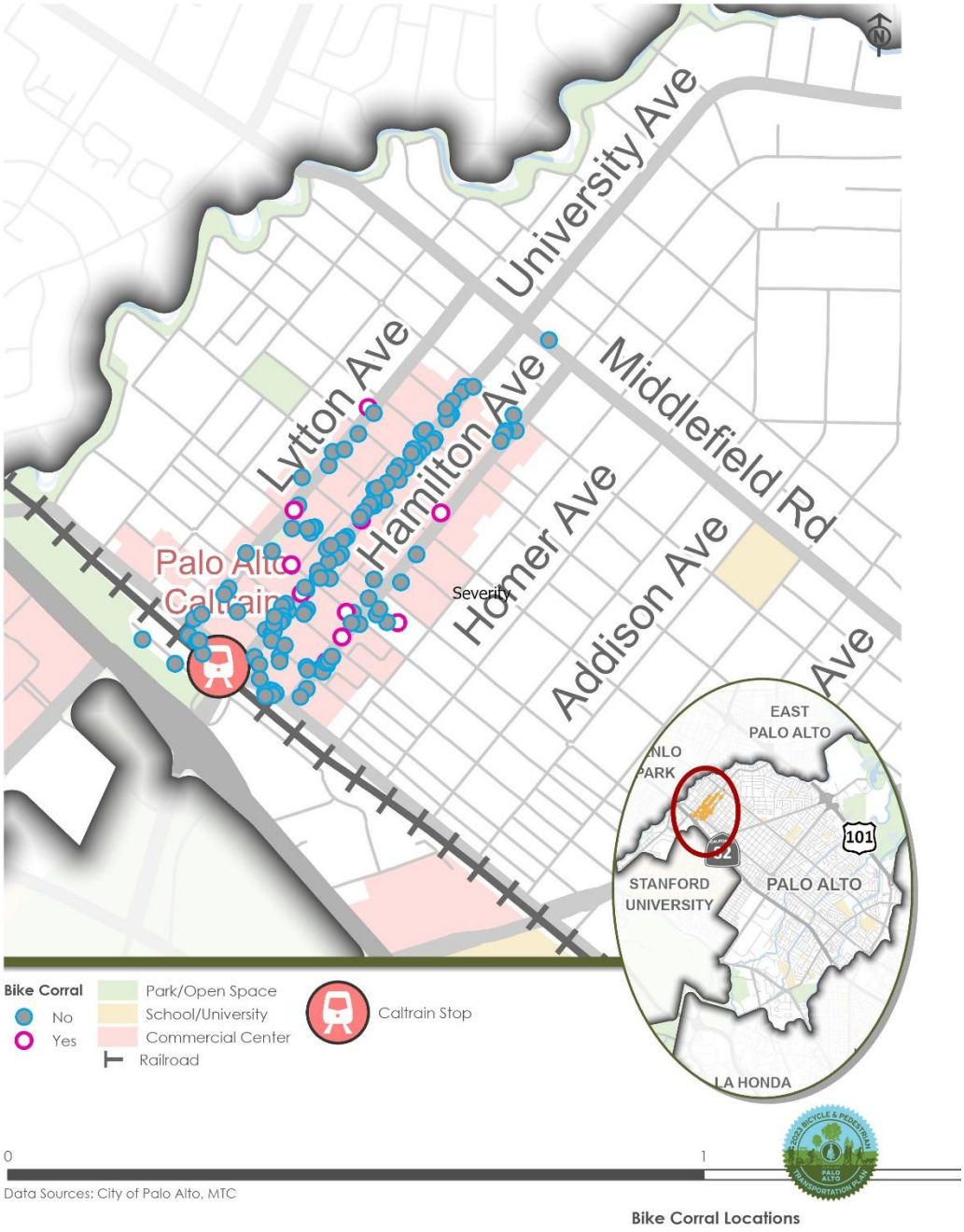


Figure 6. Bike Corral

4. Further Statistical Insights

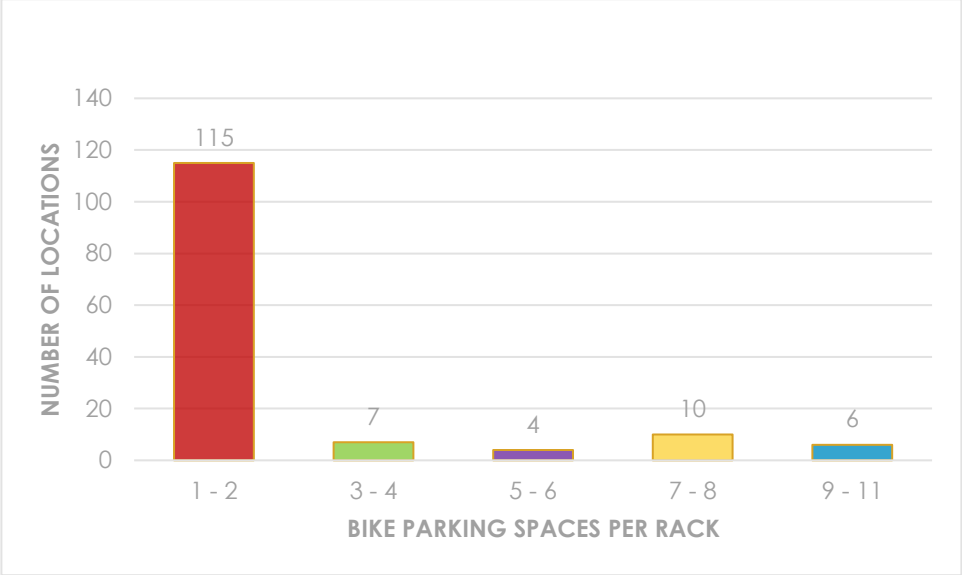


Figure 7. Number of Bike Parking Spaces per Rack

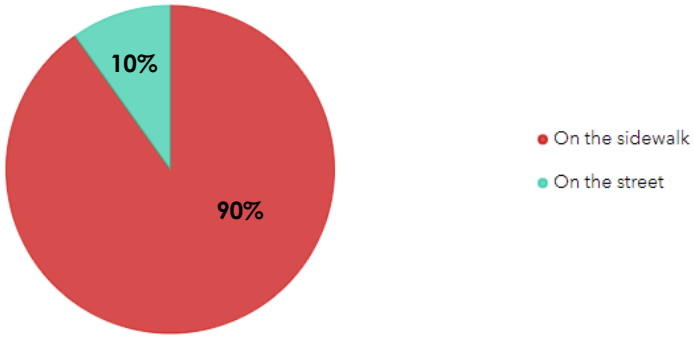


Figure 8. Location of Bike Rack/Corral

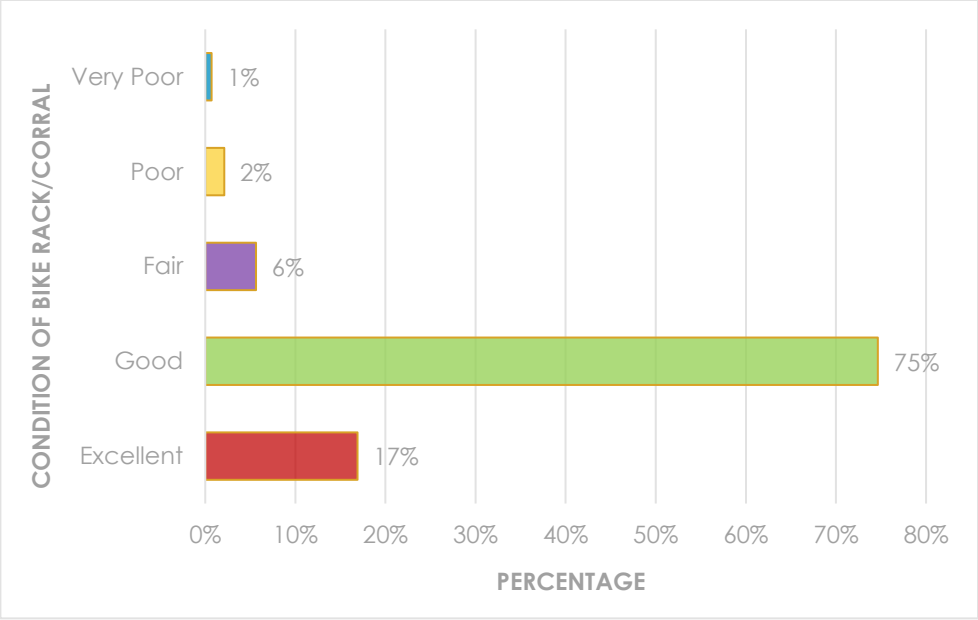


Figure 9. Condition of Bike Rack/Corral

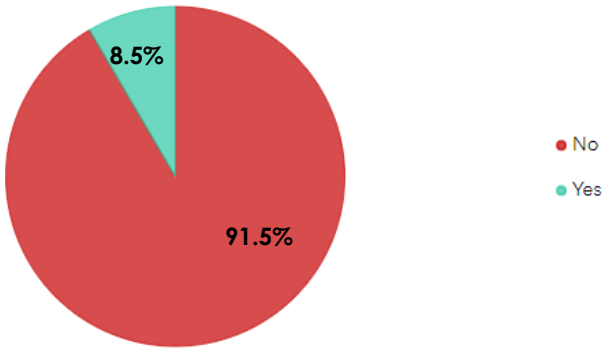


Figure 10. Covered Bike Parking

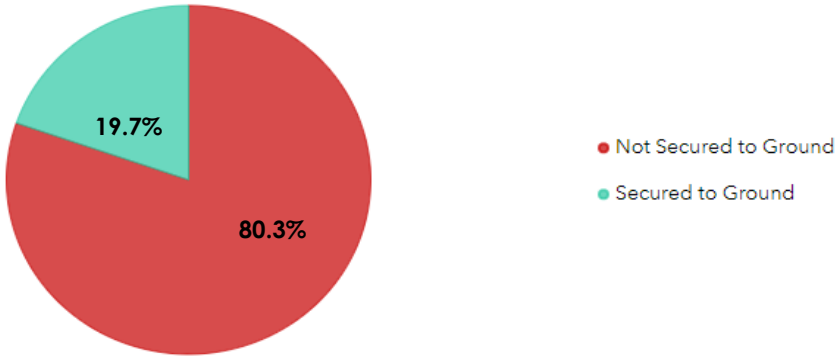


Figure 11. Security Level of Bike Parking

A. Secured to Ground

B. Not Secured to Ground

Figure 12. Security Level Examples

5. Notes from the Field

Figure 13 shows racks classified as "Other" in the rack type category.

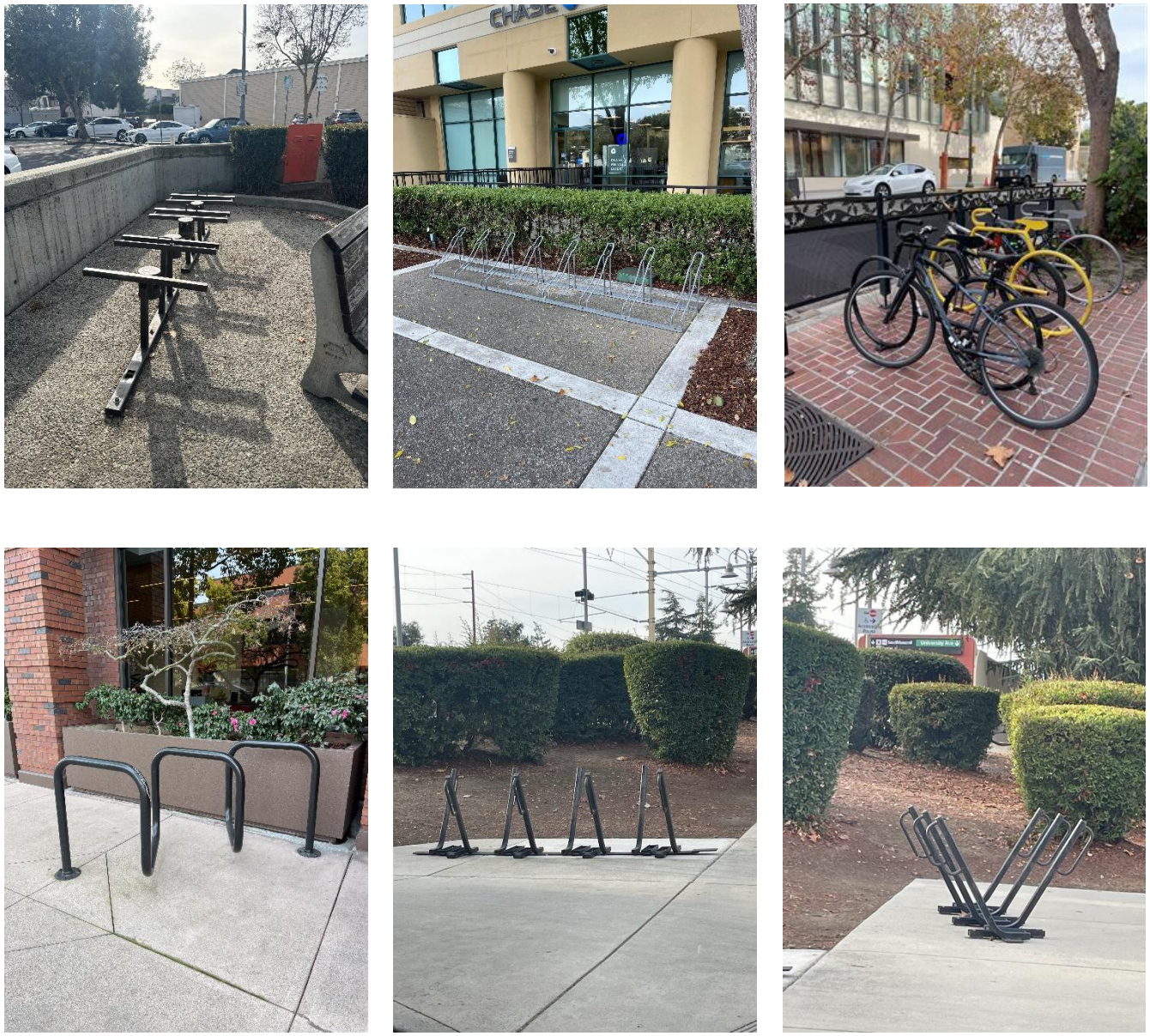


Figure 13. Rack Types Classified as "Other"

From the field visit, it was noticed that some individuals opt to secure their bicycles to sign poles or trees, as depicted in Figure 14. This indicates there may be a mismatch between bicycle parking demand and the location of bicycle racks/corrals.

Figure 14. Bicycles Locked to Poles or Trees

Key Takeaways:

- High utilization of bike racks particularly on University Avenue and near the Caltrain station
- Diversity in bike rack types, with inverted U-racks (circular, rectangular, and series) being predominant
- Most bike parking racks are designed for single or double spaces
- Approximately 90% of bike racks are located on sidewalks
- The majority of bike racks are in good condition
- Individuals often opt for the closest parking option to their destination. They use trees or sign poles when no bike rack is available
- Concerns raised by a cyclist regarding high driveway lips, posing safety hazards for cyclists navigating sidewalks