



March 11, 2020

Mario Giuliani
Economic Development Manager
The City of Benicia
250 East L Street
Benicia, CA 94501

Re: Downtown Benicia Parking Study
Walker Project No. 33-2921

Dear Mr. Giuliani:

Walker is pleased to submit the following report of our parking study for Downtown Benicia. We appreciate the opportunity to be of service to you on this project. If you have any questions or comments, please do not hesitate to call.

Sincerely,

WALKER CONSULTANTS

A handwritten signature in cursive script that reads "Chrissy Mancini Nichols".

Chrissy Mancini Nichols
Planning and Policy Consultant

A handwritten signature in cursive script that reads "S. Edwin".

Shannon Edwin
Planning Analyst



Downtown Benicia Parking Study

City of Benicia, CA

March 11, 2020

Prepared for:

The City of Benicia



WALKER
CONSULTANTS

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Executive Summary

The City of Benicia engaged Walker Consultants to provide a comprehensive analysis of downtown parking. The intent of this study is to provide a summary of the existing parking conditions in downtown including the existing parking supply, weekday and weekend occupancy, existing regulations, and current parking management practices. The study also includes an analysis of the parking needs of potentially redeveloping the East E Street public parking lot into a hotel. The study also provides results of public outreach efforts including two online surveys and two community workshops.

The result of these activities is a list of recommended strategies in Section Five (5) of this report to assist the City in making improvements to downtown parking and plan for increased multi-modal activities downtown

Existing Conditions

Based on a review of the existing conditions analysis, major findings include:

- There are an estimated 1,706± parking spaces in the study area. This number includes 1,309± publicly available on-street spaces and 397± off-street spaces (166± public spaces and 231± private spaces).
- Peak parking demand occurred on a Saturday from 12:00 p.m. to 2:00 p.m. with 963± vehicles parked, 618± spaces available, and a utilization rate of 56% for all on and off-street parking surveyed.
- Tuesday peak parking demand also occurred from 12:00 p.m. to 2:00 p.m. with 924± parked vehicles, 782± spaces available, and a utilization rate of 54%.
- Off-street parking demand varied on both Saturday and Tuesday but was generally lower than on-street spaces.
- First Street experiences the highest parking demand with over 80% of spaces occupied throughout each analysis period on Saturday.
- During the Farmer's Market, in the E Street Public Lot, peak parking demand occurred at 6:00 p.m. with 107± vehicles parked.
- Turnover on First Street is relatively high, however, there are still a notable number of vehicles that are likely violating the 3-hour time limit (approximately 40 vehicles park for four or more hours on weekdays and weekends).
- Turnover on the lettered side streets varies with lower turnover in comparison to First Street.
- Parking on First Street is time limited to 3-hours, however, according to the City, parking regulations are currently not enforced. None of the parking spaces are metered or paid.
- Parking wayfinding is currently provided via directional signs indicating the direction of travel for public parking. Most signs are directing visitors to angled street parking, which may present some confusion if visitors anticipate a public lot. Signs also appear small and faded.

- Access to downtown is also provided via an existing bike route (indicated by shared lane markings on First Street) and limited Solano Transit service. Generally, downtown is most accessible by vehicle.
- There is a limited amount of ADA parking available downtown.
- When compared to the 2004 study, major findings were similar, with some increase in both parking supply and demand.

ES Table 1 provides a summary of the parking inventory and peak occupancy for both the weekend and weekday peak.

ES Table 1: Parking Inventory and Occupancy Summary

| | Inventory | Occupancy | | Utilization | | Availability | |
|-------------------|--------------|------------|------------|-------------|------------|--------------|------------|
| | | Sat | Tues | Sat | Tues | Sat | Tues |
| On-Street | 1,309 | 839 | 778 | 64% | 59% | 346 | 531 |
| Off-Street | 397 | 124 | 146 | 31% | 37% | 273 | 251 |
| Total | 1,706 | 963 | 924 | 56% | 54% | 619 | 782 |

Source: Walker Consultants, 2019

ES Figure 1 graphically shows the peak parking occupancy experienced on Saturday and ES Figure 2 shows the Tuesday peak.

ES Figure 1: Saturday Peak Utilization - Lunchtime



Source: Satellite image, Google Earth Professional, 2019; Graphics, Walker Consultants, 2019

ES Figure 2: Weekday Peak Utilization - Lunchtime



Source: Satellite image, Google Earth Professional, 2019; Graphics, Walker Consultants, 2019

Community Outreach

A series of public outreach and engagement efforts were designed to gather input on the views and needs of residents, business owners, employees, and visitors in regard to parking downtown. Two individual online surveys were issued, as well as two workshops, to gather information on the parking needs, issues, and challenges experienced by community members.

Online Surveys

A summary of major findings of the online surveys include:

- The majority of respondents visit a few times a week or every day and typically visit to dine, walk around, and shop, or a combination of these activities.
- Most respondents live within three miles of downtown or in downtown and 81% of respondents said they drive to access downtown.
- Most respondents reported being able to park within two blocks of their destination and indicated that they are able to find parking relatively quickly (immediately or within two to five minutes).
- The most important factor when choosing where to park in downtown was parking within one to two blocks of their destination. Secondly, finding parking quickly and easily, even if they have to park further away.
- The majority of respondents said they visit downtown for one to two hours and once parked, walk between destinations. Over 90% said that downtown has a comfortable and safe walking environment.
- The top three parking issues in downtown selected were: 1) Lack of public parking lots, 2) lack of on-street parking near or at a destination during peak hours, 3) lack of special event parking.
- Existing features that make parking easy and convenient to find include: 1) On a typical non-event day, parking is available downtown, sometimes a few blocks away from their destination, 2) plenty of available parking on side streets and off-street lots, 3) lack of meters make parking easier.
- When asked about the E Street Public Lot, results were evenly split with 50% of respondents saying that yes, they do park in this lot, and the other half indicating that they don't. Respondents noted they park there for special events, farmer's market, every time they visit downtown, certain restaurants, and when parking cannot be found in other locations.
- When asked what parking solutions they would support, the most selected options were: "Improve directional signage to available public parking", "I don't think parking is an issue in Downtown Benicia", "Create employee parking areas", "Share private parking lots with the public", and "create more accessible parking for people with disabilities."
- Other downtowns that respondents said they enjoy include: Yountville, Martinez, and Lafayette as well as Walnut Creek, Pleasant Hill, and Sonoma.
- Respondents were asked where they believed the best location would be for the flex space or parklet, over one-half said they would prefer not to have a flex space but rather maintain parking. For those supportive of potential flex space, they said on the ideal location is on First Street followed by Benicia Point.

- A summary of open-ended comments include:
 - Opposition to charging for parking.
 - Lack of parking for employees, long-term parkers, and too many spaces on First Street being used by these groups.
 - A desire for more parking enforcement.
 - Lack of sufficient ADA parking.
 - Desire for more parking in downtown and marking spaces on side streets or adding new angled parking.
 - Issues with commercial parking spilling over into residential parking.
 - There are no parking issues in downtown, the City should invest in road repairs and sidewalk/pedestrian improvements.
 - Paving existing public dirt lots.

Community Workshops

Walker, in partnership with the City, presented the existing conditions data collected and major findings, as well as general information on parklets and where available parking exists in Benicia. In order to gather perceptions of parking within downtown from the community, business owners and community members were given the opportunity to participate in multiple activities. There were two workshops for this study.

Community members were asked to share where they prefer to park, areas they avoid parking, and how far they would be willing to park and walk to First Street. In general, community members shared that they prefer to park on First Street and will avoid the unpaved public lot on East B Street due to its uneven terrain and dust.

In general, community members shared concerns about employees parking on First Street, not having enough parking in downtown, not enough ADA parking, and concern over the potential loss of the East B Street lot, especially during special events.

Future Parking Analysis

The City of Benicia owns approximately two acres at a site on East E Street and Second Street. The site currently serves as an unpaved parking lot primarily used for overflow parking during special events such as Farmer's Market Thursdays or Fourth of July. The lot is largely unused during typical weekdays and weekends (with the capacity to park approximately 118 vehicles).

On a typical Thursday Farmer's Market evening, the East E Street lot is approximately 90% utilized at the peak, with 107± vehicles parked.

Given that the site goes unused most of the year, the City has considered various development scenarios for the parcel. A Broker Opinion of Value Study conducted by Transwestern found the site has the potential for a hotel that could take advantage of business and tourism visitors.

The development assumptions for the hotel included 125 rooms (38 leisure guests and 87 business), 1,600 square feet of meeting space, and 1,000 square feet of restaurant/lounge space.

To determine how the potential development could impact parking in downtown and the need for parking a new use, Walker conducted an assessment of future demand. Walker utilized the Walker/Urban Land Institute’s (ULI) Shared Parking Model to project the recommended future supply for the hotel development.

Based on the Shared Parking methodology (details provided in the body of this report), the overall peak is expected to occur in April at 9:00 p.m., at which 117± parking spaces are recommended to serve the potential future uses. A summary of the weekday and weekend peaks are shown ES Table 2.

ES Table 2: Estimated Weekday and Weekend Parking Demand for Potential Hotel

| | Estimated Weekday Parking Demand | Estimated Weekend Parking Demand |
|--------------|----------------------------------|----------------------------------|
| Hotel Guests | 113 | 110 |
| Employees | 4 | 7 |
| Total | 117 | 117 |

Source: Walker Consultants, 2019

Recommendations

Based on the existing conditions analysis, review of public outreach results, and parking best practices, Walker developed the following near, mid, and long-term recommendations for parking and transportation improvements in downtown Benicia. These recommendations take a comprehensive and holistic approach to planning for parking and transportation in downtown Benicia.

Recommendations are categorized along the following timeline:

- **Near-Term:** Strategies that can be implemented in the next six months to one year.
- **Medium-Term:** Strategies and infrastructure that can be implemented within one to two years.
- **Long-Term:** Strategies and infrastructure that can be implemented over the next five years or more, some of which coincide with City development (for example developing the East E Street parking lot).

ES Table 3 provides a summary of recommendations presented in this report. Additional details for each recommendation are provided in the body of the report.

ES Table 3: Summary of Recommendations

| Timeframe | Strategy | Implementation | Goals |
|-----------------------------------|---|--|--|
| Near-Term (6 months to 1 year) | Enforcement | Parking Ambassadors Program | Enforce 3-hr. time limit on First Street in a customer service-oriented manner, increase the turnover of spaces and parking capacity, deter long-term parkers from using customer spaces |
| | Regulations | Retain existing 3-hr. time limit | Provides sufficient time to accommodate the majority of downtown visitors' various activities, dining, shopping, and walking along the waterfront |
| | | Continue providing some short-term 30-minute spaces | Allow convenient parking for quick visits. There is currently an adequate number of these spaces |
| | Employee Parking Plan | Implement an employee parking program -Park employees in underutilized parking -Create an Employee Parking Management Plan | Preserves the most in-demand parking areas on First Street for customers and visitors |
| | Shared Parking | Public-private partnerships with private lots for employee and special event parking | Maximize all the space (public and private) dedicated to parking in downtown Benicia |
| | Wayfinding | Update parking signage and wayfinding with larger, more prominent signs | Directs visitors to available parking, increases parking ease and convenience, reduces circling |
| | New Mobility | Partner with Sol Trans or the Solano County Transportation Authority to implement docked bikeshare or dockless bike or scooter share program | Promote alternative modes of transportation and reduce the need for parking |
| | ADA Parking | Provide more ADA spaces on and near First Street | Provide adequate parking for all users |
| Parklets | Implement a parklet or flex space program | Create a comfortable pedestrian environment and encourage walking, promote economic development | |

| Timeframe | Strategy | Implementation | Goals |
|---------------------------------|----------------------------|---|--|
| | Pave existing parking lots | Pave existing parking lots to create a more comfortable environment for parkers -East B & East E Street Lots (if no development) | Encourage the utilization of existing parking facilities |
| Mid-term (1 to 2 years) | Additional parking | Create angled parking on East D, F, and H Streets (gain roughly 124± new parking spaces) | Create additional parking capacity |
| | Curb Management | Create pick-up and drop-off space for Transportation Network Companies (Uber and Lyft) when TNC activities increase | Promote safety |
| | Bicycle Infrastructure | Reconfigure First Street to include bike lanes | Promote alternative modes of transportation and reduce the need for parking |
| Long-term (3 to 5 years) | Event Parking | If the City develops the East E Street Lot, an event parking plan should be developed -Public-private partnerships to share parking with private facilities -Direct event parkers to underutilized streets and lots | Maximize all of the space (public and private) dedicated to parking in Downtown Benicia |
| | Back-in Angle Parking | Consider reconfiguring First Street to back-in angle parking with bike lanes | Provide more parking on First Street while improving bike and pedestrian friendliness and safety; encourage travel by other non-auto modes |

Source: Walker Consultants, 2019

Pilot Projects

One of the most effective methods of presenting new treatment options on the roadway is to organize a pilot program and test of the proposed changes, such as parklets and bike lanes. This would include a temporary installation of the proposed treatment.

Potential pilot projects include:

- Testing flex with businesses and other entities space for a six to nine-month trial.
- Setting temporary bike lanes using paint, traffic cones, and/or plastic removable bollards to evaluate needs, use, and any issues before permanent implementation.
- A one-year parking ambassador program to determine the effect in moving long-term parkers off of First Street.

Phasing an employee parking plan with ten businesses to understand where employees park and evaluate effect before rolling out downtown-wide

01 Introduction

Introduction

The City of Benicia engaged Walker Consultants (“Walker”) to conduct a comprehensive downtown parking study. This includes an overview of the existing parking conditions, future parking demand, and recommendations for improvements. This report outlines the recommended near, mid, and long-term strategies to create an efficient and convenient parking program as well as plan for future mobility improvements.

This report includes the following sections:

- Section 1: Introduction
- Section 2: Existing Conditions
- Section 3: Stakeholder Outreach
- Section 4: Future Demand Analysis
- Section 5: Recommendations

The combination of these sections provides an in-depth analysis of the existing parking system in Benicia, impacts of potential future development, and a detailed list of recommendations.

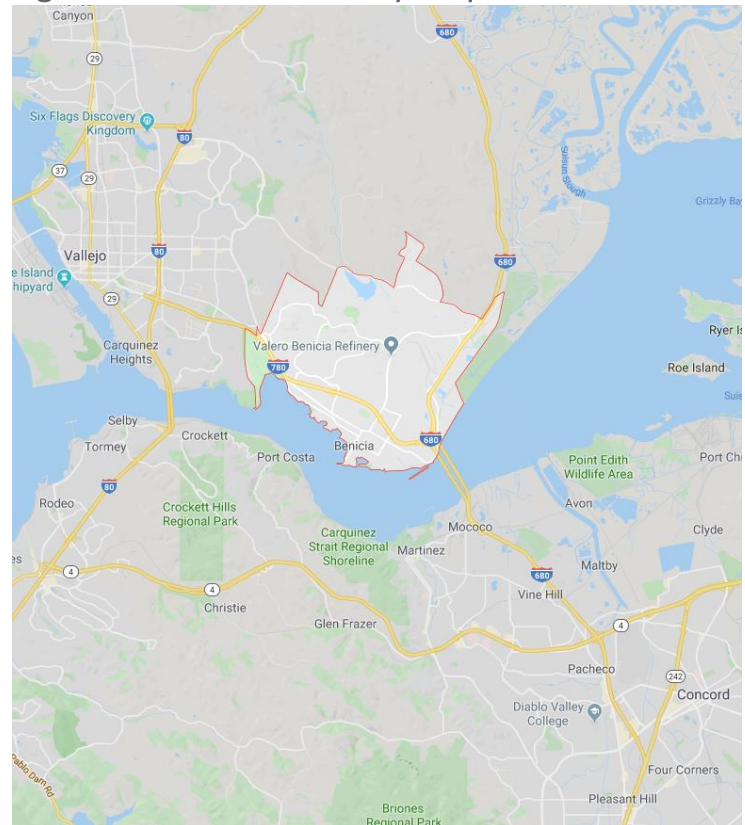
Setting

Benicia is a waterside city located in Solano County in the North Bay Area region of the San Francisco Bay Area. The City borders the Carquinez Strait, providing scenic ocean views along the coastal downtown. The City of Benicia has a total population of approximately 28,011.¹

Benicia has a rich history, having served briefly as California’s third state capital in the 1800s. Benicia hosts various community events for its visitors and residents, including holiday celebrations, plays at the local theatre, a Classic Car show, and a farmer’s market every Thursday evening. Additionally, within Benicia exists a vibrant art community, with hundreds of artists and studios all over the city.

As shown in Figure 1, Benicia is accessible from the I-680 to the south, and the I-780 from the north. The Amtrak runs through the city, and the nearest station is located in Martinez.

Figure 1: Benicia Proximity Map

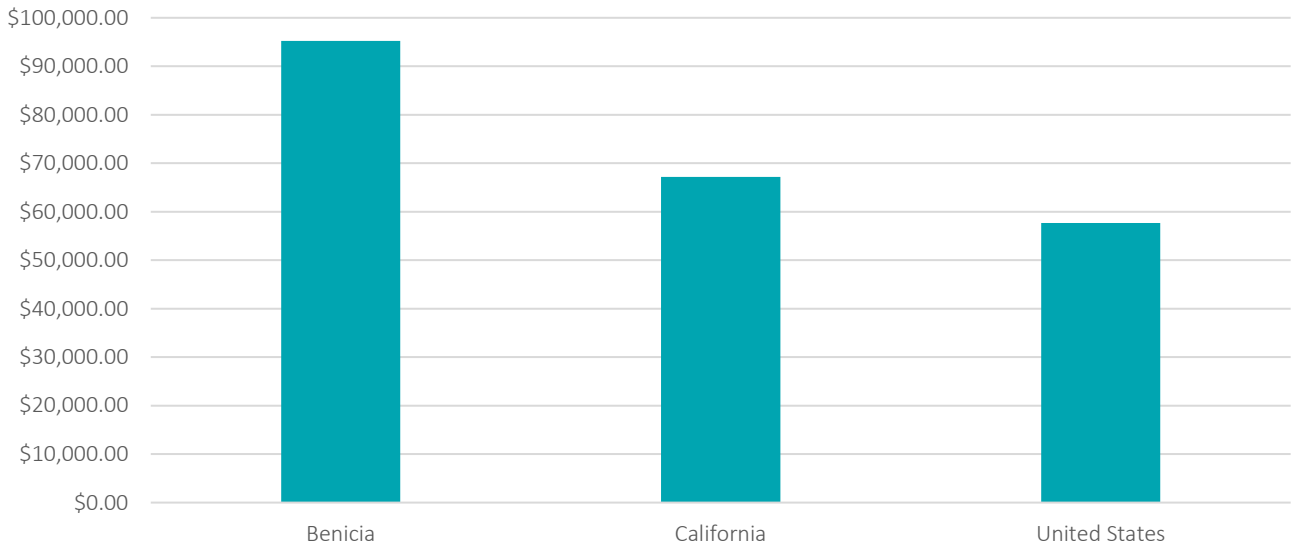


Source: Google Maps, 2019

¹ U.S. Census, American Community Survey 2017.

There are an estimated 11,186 households in the City of Benicia. The median household income is \$95,225. Benicia is relatively wealthy in comparison to the median household income in California, \$67,169 and in the United States, \$ 57,652, as shown below in Figure 2.

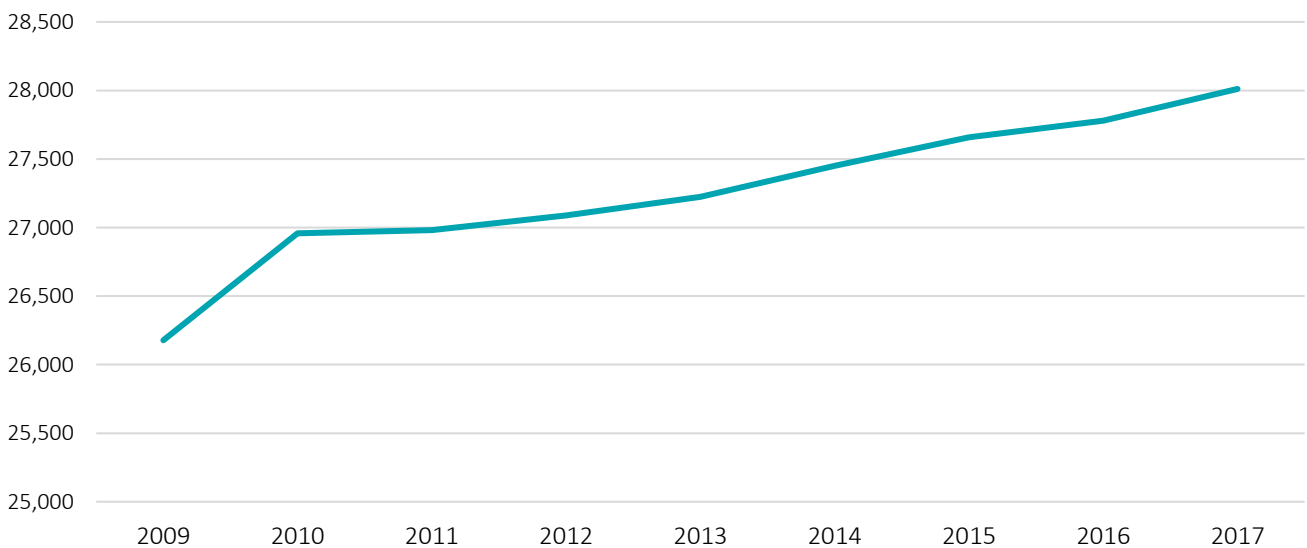
Figure 2: Benicia Median Household Income



Source: U.S. Census American Community Survey, 2017

As shown in Figure 3, Benicia has experienced a slight population increase in the recent decade. The city has experienced a population growth of seven percent since 2009.

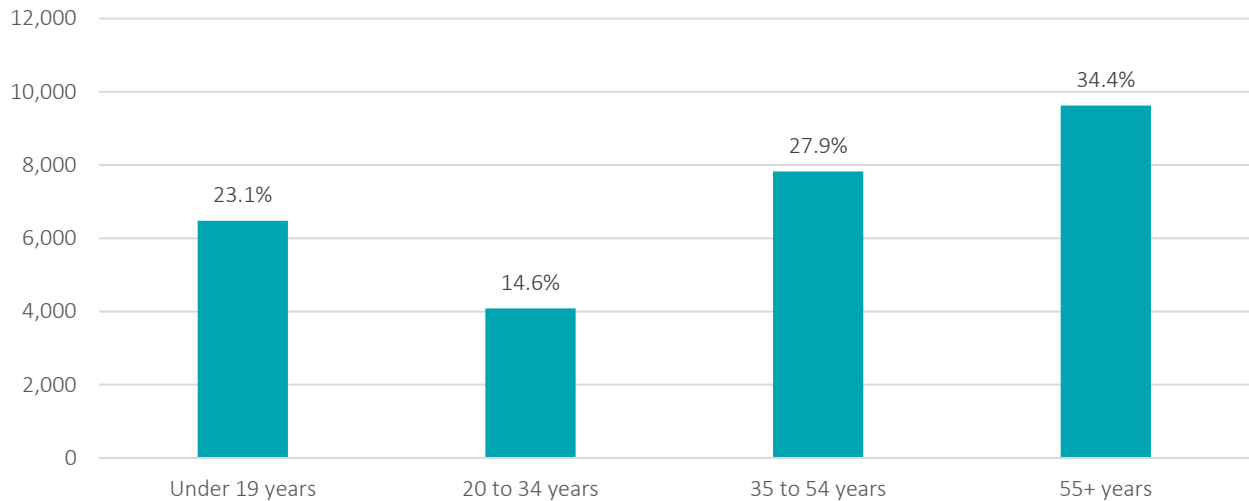
Figure 3: Benicia Population 2009-2017



Source: U.S. Census American Community Survey, 2017

Over 34% of the population of Benicia is over the age of 55, indicating a relatively older population. Figure 5 shows a breakdown of the age distribution in Benicia.

Figure 4: City of Benicia Population Age Distribution



Source: U.S. Census American Community Survey, 2017

Purpose of Study

The City of Benicia engaged Walker Consultants to provide a comprehensive analysis of their downtown parking. The intent of this study is to provide a summary of the existing parking conditions in downtown including the existing parking supply, weekday and weekend occupancy, existing regulations, and current parking management practices. The study also provides an analysis of the parking needs of potentially redeveloping the East E Street public parking lot into a hotel. The study also provides results of public outreach efforts including two online surveys and two community workshops.

The result of these activities is a list of recommended strategies in Section Five (5) of this report to assist the City in making improvements to downtown parking and plan for increased multi-modal activities downtown.

A previous study was conducted in 2004 by Fehr & Peers. This study serves as an update to the 2004 study and is based on the same study area to provide consistency.

02 Existing Conditions

Existing Conditions

Downtown Parking Supply

In downtown Benicia, there is an estimated supply of 1,706± parking spaces available to the general public. This includes 1,309± publicly available on-street spaces and 397± off-street spaces. These off-street spaces include 166± public spaces and 231± private spaces (i.e. customer or employee parking only).² It is noted that additional private off-street is available within the downtown area but was not included as part of this inventory. A visualization of this distribution is shown in Figure 5.

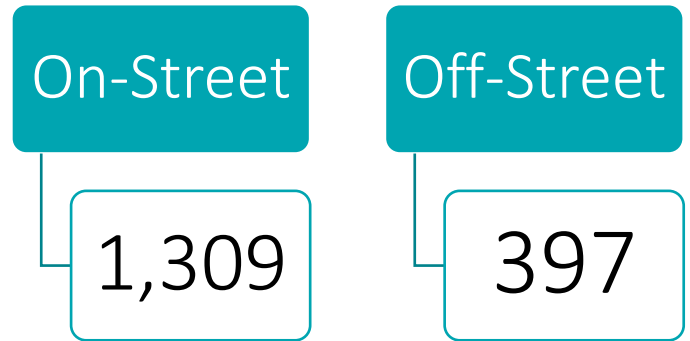
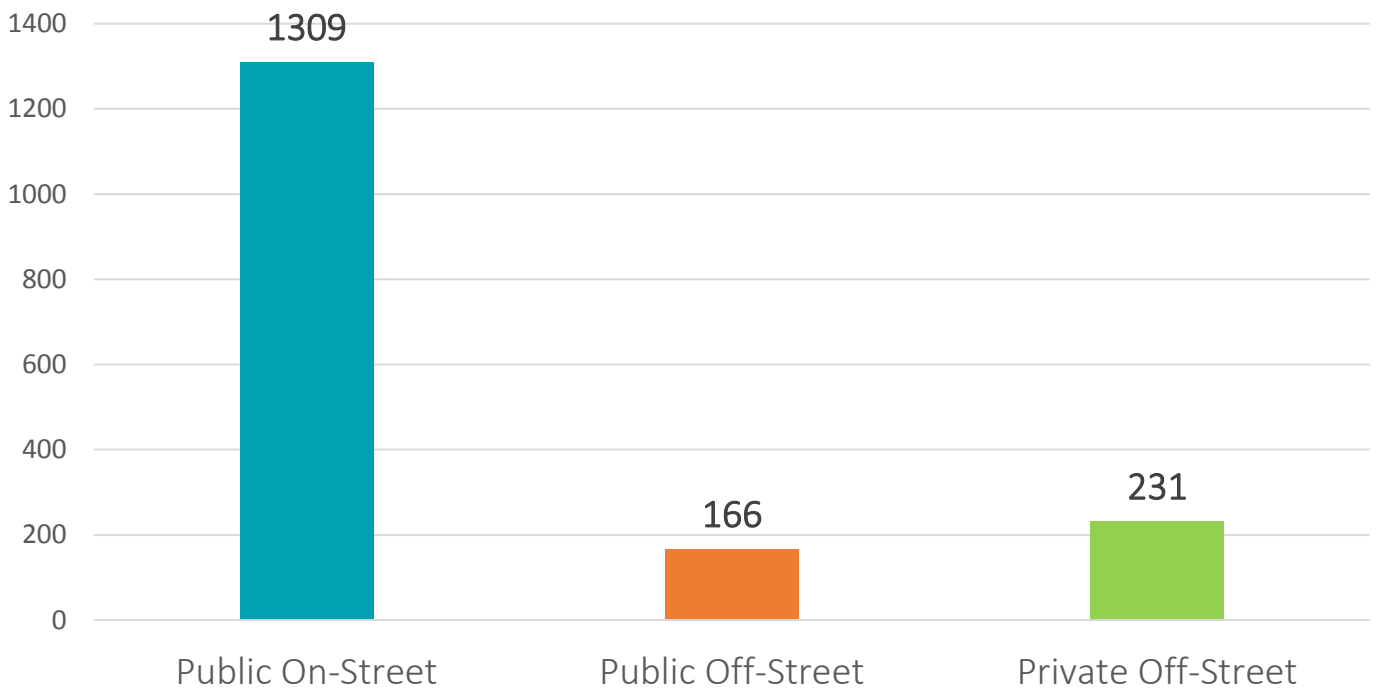


Figure 5: Distribution of Downtown Benicia Parking Supply



² To provide consistency between the two studies and have the opportunity to compare findings, the study area includes the same parking facilities studied in a 2004 parking study conducted by Fehr & Peers. Walker collected parking inventory data in the study area, including on-street spaces, public off-street, as well as some private off-street lots on June 22 and 25, 2019. Some private off-street lots were not included in the study.

A summary of the parking inventory collected is provided in Table 1.

Table 1: Parking Inventory Summary

| On-Street | Number of Spaces | Off-Street | Number of Spaces |
|-----------------------------|------------------|--------------------------------|------------------|
| First Street | 225 | (1) ¹ West I St Lot | 24 |
| First Street Pier | 65 | (2) West H St Lot | 29 |
| West 2 nd Street | 87 | (3) East H Lot | 13 |
| East 2 nd Street | 205 | (4) West F St North | 15 |
| West J St | 49 | (5) West F St Lot South | 21 |
| East J St | 44 | (6) West F St Customer Lot | 9 |
| West I St | 49 | (7) F St Lot Customer Only | 92 |
| East I St | 49 | (8) Public E Street Lot | 118 ² |
| West H St | 56 | (9) East D St Permit Lot | 27 |
| East H St | 46 | (10) Public East B St Lot | 51 ² |
| West G St | 52 | | |
| East G St | 49 | | |
| West F St | 73 | | |
| East F St | 68 | | |
| West E St | 29 | | |
| East E St | 25 | | |
| West D St | 29 | | |
| East D St | 55 | | |
| West C St | 19 | | |
| East B St | 35 | | |
| Subtotals | 1,309 | | |
| Total Supply | 1,706 | | |

¹Lots were numbered for data collection purposes. These are not City designated labels.

²These lots are unpaved and unmarked therefore supplies were estimated based on size of lot and occupancies observed.

The study area inventoried is shown in Figure 6.

Figure 6: Study Area

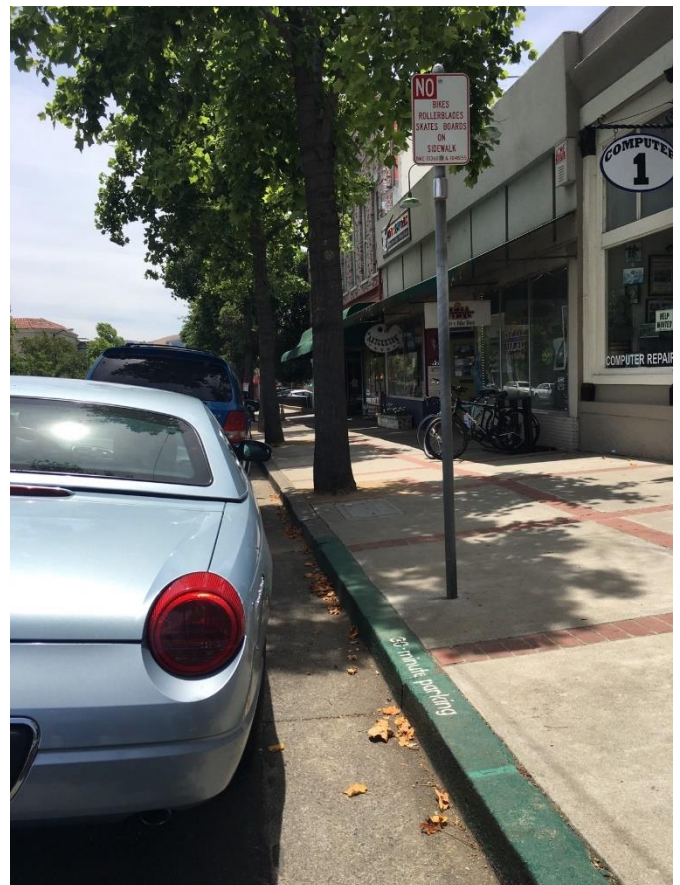


Source: Satellite image, Google Earth Professional, 2019; Graphics, Walker Consultants, 2019

Parking Restrictions and Enforcement

Currently, parking on First Street has a posted time-limit of three-hours from 9:00 a.m. to 6:00 p.m. Additionally, there are some 30-minute spaces marked on First Street. Lettered side-streets (e.g. East J Street, West E Street, etc.) and off-street public facilities are currently unrestricted. Based on conversations with the City, parking regulations are currently not enforced. An example of the three-hour and 30-minute parking limits on First Street are shown in Figure 7.

Figure 7: Parking Limits



Source: Walker Consultants, 2019

Existing Parking Demand

Walker evaluated parking demand in downtown Benicia by conducting weekend and weekday parking occupancy counts on Saturday, June 22, and Tuesday, June 25, 2019 from 10:00 a.m. to 8:00 p.m. The results of the occupancy counts revealed that peak parking demand occurred during lunch time, 12:00 p.m. to 2:00 p.m., on Saturday with 56% of spaces utilized. Weekday peak parking demand also occurred at lunchtime, between 12:00 p.m. and 2:00 p.m., with 54% of spaces occupied. Parking occupancy counts from each time period collected are provided in Appendix A. Table 2 provides a summary of the downtown parking supply and peak demand.

Table 2: Downtown Parking Supply and Peak Demand Summary, 12:00 – 2:00 PM

| | Inventory | Occupancy | | Utilization | | Availability | |
|-------------------|--------------|------------|------------|-------------|------------|--------------|------------|
| | | Sat | Tues | Sat | Tues | Sat | Tues |
| On-Street | 1,309 | 839 | 778 | 64% | 59% | 346 | 531 |
| Off-Street | 397 | 124 | 146 | 31% | 37% | 273 | 251 |
| Total | 1,706 | 963 | 924 | 56% | 54% | 619 | 782 |

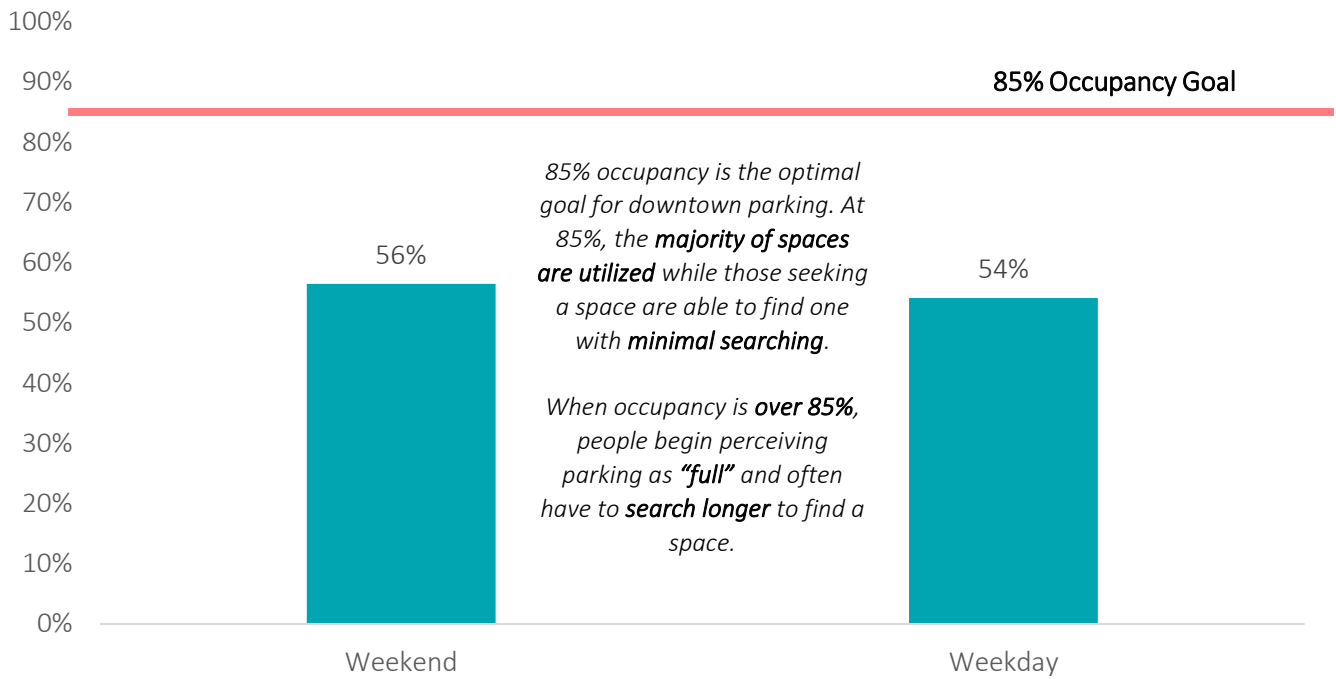
Note: "Sat" = Saturday, "Tues" = Tuesday

The overall downtown parking utilization would be considered relatively low in comparison to typical occupancy goals. An 85% utilization rate is the typical target for most parking systems in order to ensure the majority of spaces are being utilized while adequate availability remains for those seeking a space.

In general, when parking facilities experience occupancies greater than 85%, users begin to perceive parking as "full" and are likely to spend more time circling to find a space. At 85%, the majority of spaces are being utilized but those seeking a space are able to find one with minimal searching. Therefore, 85% is typically used as a target for optimal parking occupancy.

Figure 8 shows a summary of the peak weekend and weekday parking utilization.

Figure 8: Weekend and Weekday Parking Demand



Source: Walker Consultants, 2019

Details for both weekend and weekday demand are provided in the following sections.

Weekend Parking Occupancy

Weekend peak parking demand in the study area occurred from 12:00 p.m. to 2:00 p.m. with 963± vehicles parked, 743± spaces available, and a utilization rate of 56%.

- During the peak, 56% of the on-street spaces were utilized and 31% of the off-street spaces were occupied.
- First Street (excluding the spaces on the waterfront at Benicia Point) experienced the highest parking demand.
- During the overall peak:
 - First Street experienced an occupancy of 89%
 - The lettered side streets were 74% occupied
 - West Second Street was 21% occupied
 - East Second Street had an occupancy of 32%
 - The off-street parking supply was 31% occupied
 - Public off-street parking was 19% utilized and private was 40% utilized

First Street experienced a notably higher parking demand than other downtown areas. First Street, in general, was over 85% occupied throughout the day (10:00 a.m. to 8:00 p.m.,) with peak demand occurring from 6:00 p.m. to 8:00 p.m. when 93% of spaces were occupied. Additionally, at the time of counts, Lot G, a private lot located on East H St, was entirely occupied by an outdoor concert. The lot was counted as “full” to provide a more conservative estimate.

Figure 9: Weekend Peak Occupancy by Facility Type

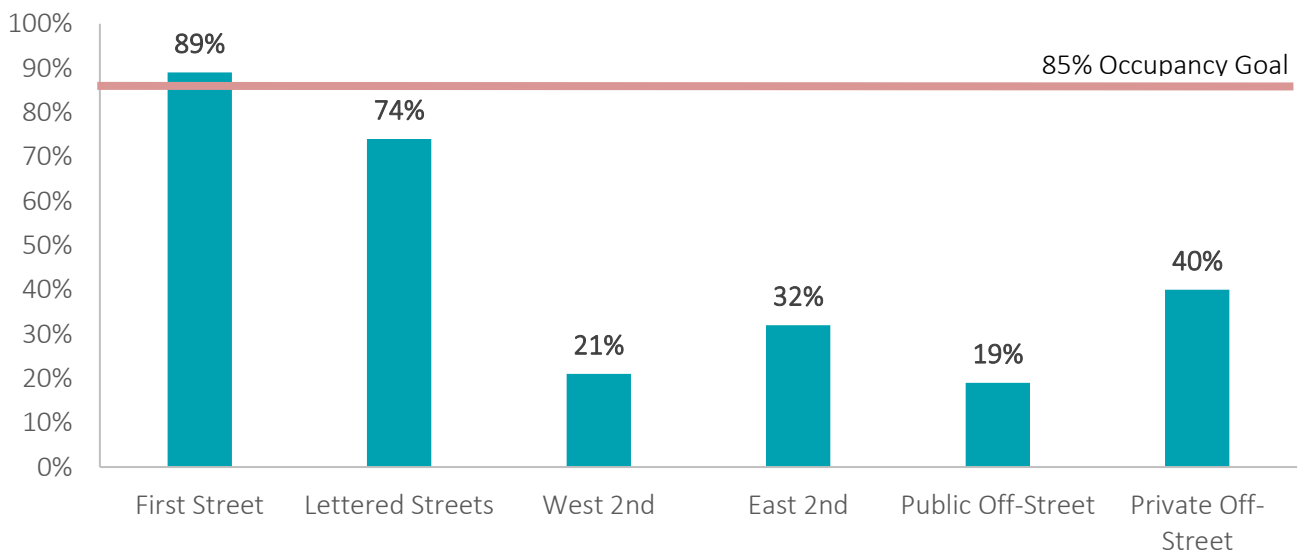


Figure 10 provides a map illustrating the parking occupancy experienced during the weekend peak hour.

Figure 10: Saturday Peak Utilization – Lunchtime



Source: Satellite image, Google Earth Professional, 2019; Graphics, Walker Consultants, 2019

Weekday Parking Occupancy

Weekday peak parking occupancy also occurred from 12:00 p.m. to 2:00 p.m. with 924± parked vehicles, 782± spaces available, and a utilization rate of 54%.

- First Street also experienced the highest parking occupancy on weekdays.
- During the peak:
 - First Street (excluding the waterfront spaces to the south, near Benicia Point) was 80% occupied
 - The lettered side streets were 68% occupied
 - West Second Street was 16% occupied
 - East Second Street was 37% occupied
 - Off-Street lots were 37% occupied
 - Public off-street parking was 20% utilized and private off-street parking was 48% utilized

Additionally, some spaces on the west side of First Street were blocked throughout the day by cones due to tree maintenance occurring on the day of counts. These spaces were considered to be full in order to provide a more conservative analysis.

Figure 11: Weekday Parking Utilization by Facility Type

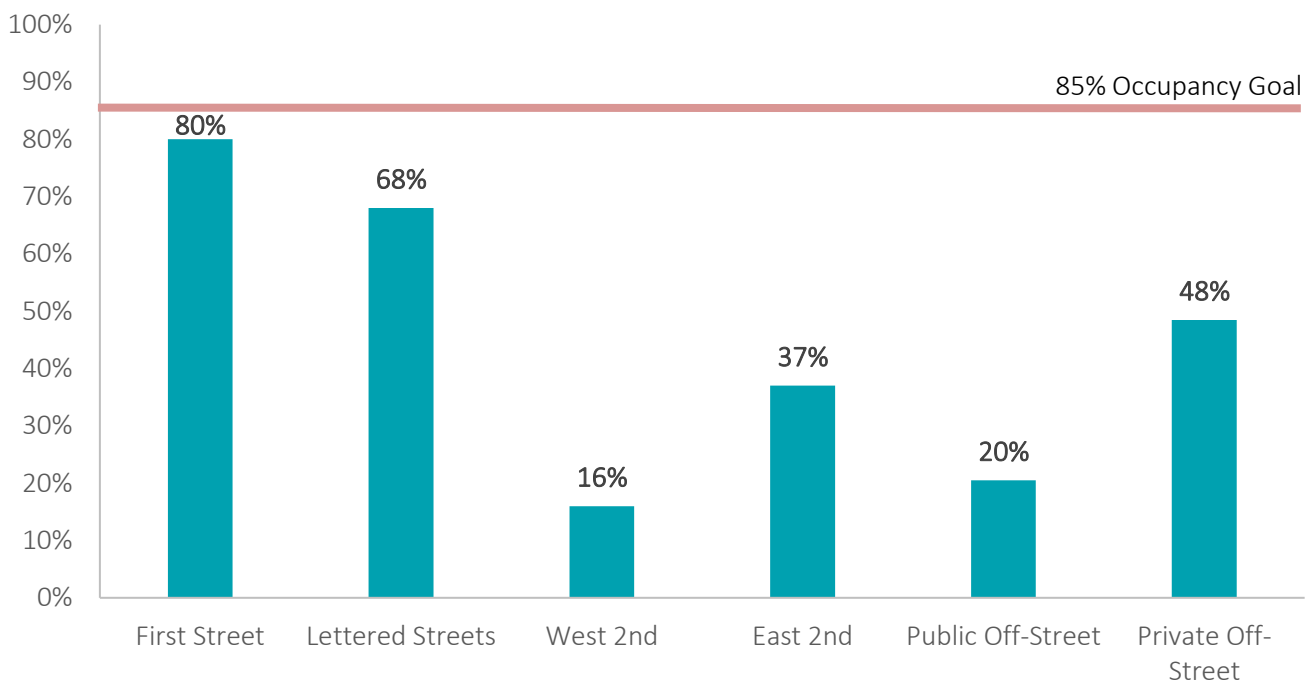


Figure 12 provides a map showing Tuesday parking utilization during peak parking demand.

Figure 12: Tuesday Peak Utilization - Lunchtime



Source: Satellite image, Google Earth Professional, 2019; Graphics, Walker Consultants, 2019

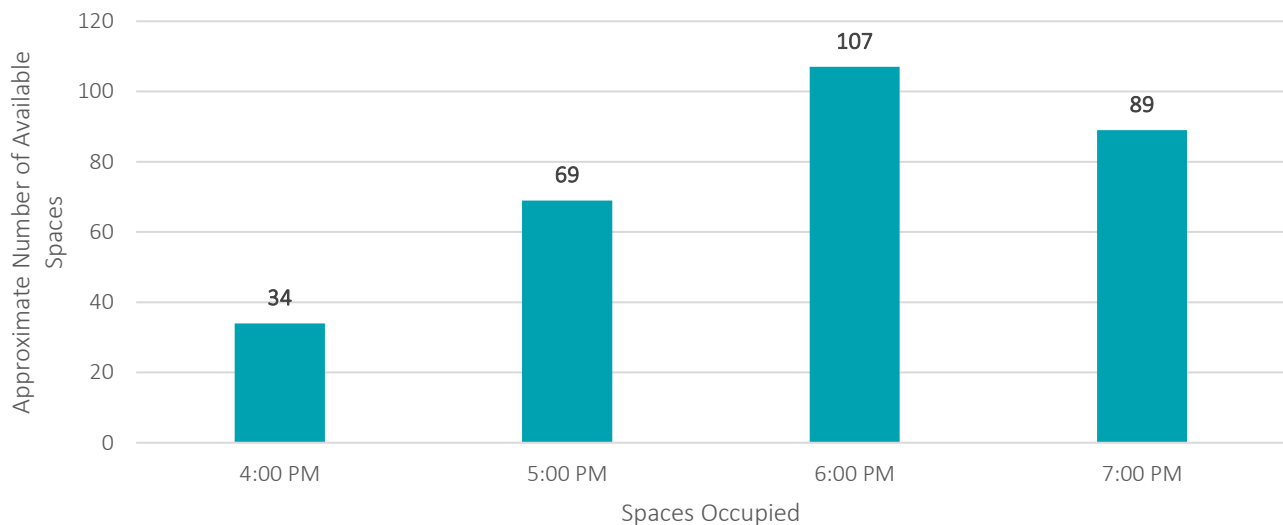
Farmers Market E Street Lot

Parking occupancy counts were also collected at the E Street Lot (Lot 8 on the map), which is heavily utilized during Thursday night Farmer’s Markets when a portion of First Street is blocked. Occupancy counts were collected every hour on June 27, 2019 from 4:00 p.m. to 7:00 p.m. Peak parking demand occurred at 6:00 p.m. with 107± vehicles parked. Since this lot is unpaved, the exact parking supply is unknown. Based on observations during occupancy counts, it appeared that the lot was at least 90% occupied at 6:00 p.m. during peak demand. Figure 13 shows the E Street lot during a Farmer’s Market Thursday and Figure 14 provides a summary of the parking occupancy counts collected.

Figure 13: E Street Lot - Farmer's Market Evening



Figure 14: Farmer's Market E Street Lot Occupancy

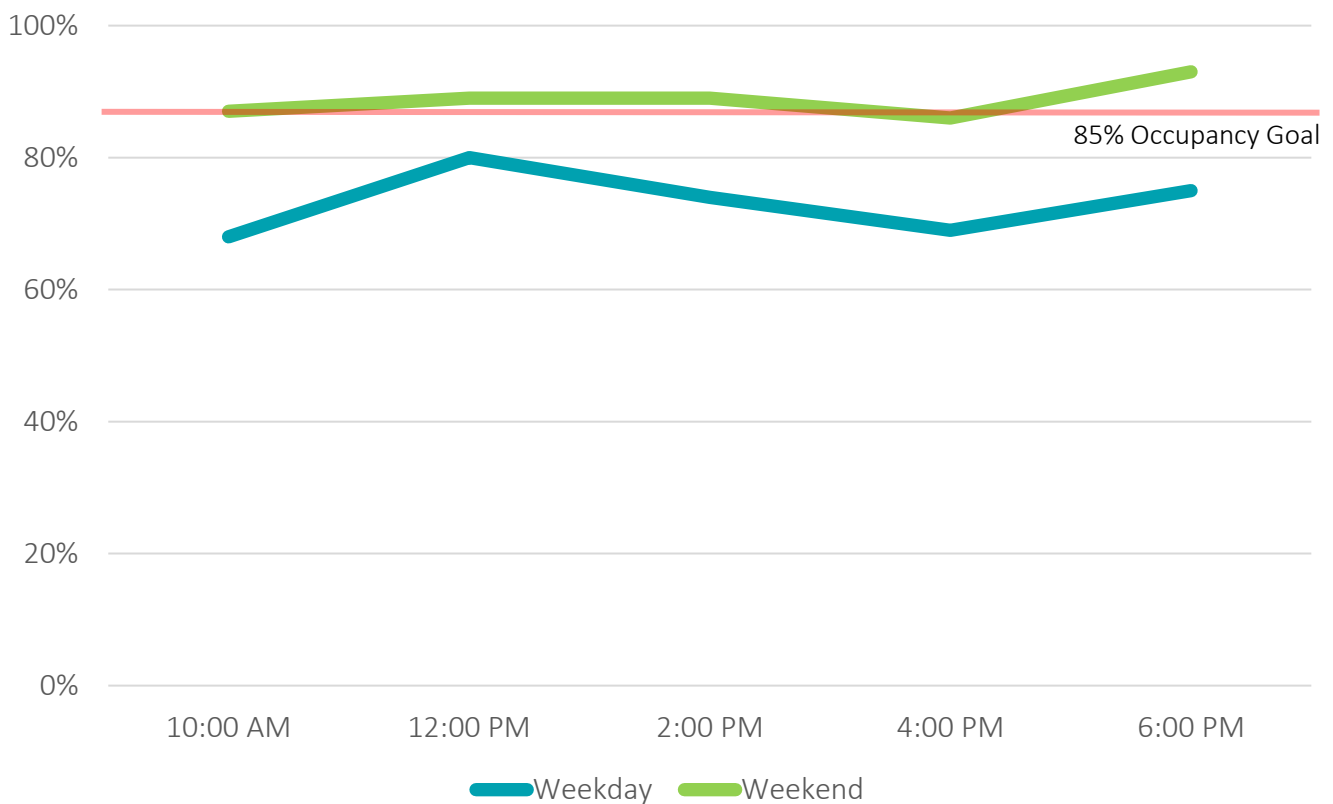


Where People Park

Overall, there is higher demand for parking downtown on the weekend than on the weekday, especially on First Street.

- On the weekend, First Street remained over 80% occupied through the entire analysis period but experienced some dips in utilization on the weekday. Figure 15 shows a comparison of the weekend and weekday parking utilization on First Street.

Figure 15: First Street Parking Utilization by Hour



- On both the weekend and weekday, peak parking demand occurred during lunch time between 12:00 p.m. and 2:00 p.m.
- The most public parking availability was on West Second Street and East Second Street as well as the public off-street lots (Lot 8 & 10) and near the waterfront towards Benicia Point.
- The private off-street lots also experienced lower occupancies.
- Most of the lettered side streets, primarily bordering residential land uses, experienced moderate to high occupancies on both the weekday and weekend, with overall utilization ranging from 60% to 75%. Some specific lettered streets experienced higher occupancies during the peak period.

How Long Do People Park?

Many of the on-street spaces in the study area have a three-hour time limit. Time limits are useful to ensure the most convenient on-street spaces are available for short term stays and turnover to allow more people to park throughout the day, increasing the capacity of the parking system, thereby increasing the convenience and access to First Street.

To understand how often parked cars leave a space, or, turnover, a license plate inventory (LPI) was collected in two-hour intervals from 10:00 a.m. to 8:00 p.m. (5 counts) on Saturday, June 22, and Tuesday, June 25, 2019, for all on-street spaces and public off-street spaces (Lot 8 & Lot 10). East and West Second Street were not included as occupancies were found to be consistently low throughout the analysis period. It is assumed that in general, the vehicles that do park on these perimeter streets are residents in the area and therefore parking spaces have lower turnover.

The LPI inventory was conducted by collecting the last four digits of any license plate within the study area. An LPI assists in understanding how long a vehicle is parked in a space, if there are areas with low turnover, and/or if cars are parked longer than the hourly time limits posted.

Over five counts, 2,035 unique license plates were collected on Saturday and 1,915 on Tuesday.

How Long Do People Park on First Street?

Since First Street has a posted time-limit of three hours, the parking turnover analysis reveals the number the vehicles violating the time limit. Vehicles present for one count were likely parked for one or two hours, while those parked for two counts were there from two to four hours. Those parking for more than two counts were likely parked in a space on First Street for over four hours.

Based on the LPI data collected:

- On both days, the majority of parkers were counted once, indicating they were parked in the space for only one to two hours (81% of vehicles on Saturday and 79% of vehicles on Tuesday were counted once).
- While the majority of vehicles parking on First Street only stay for an hour or two, there are still many vehicles violating the three-hour limit.
 - On Saturday there were 41_± vehicles parked for at least four or more hours (24 for three counts, 12 for four counts, and five for five counts).
 - On Saturday 40_± of the 225_± spaces or 18% were occupied for four or more hours.
 - On Tuesday, there were 37_± cars parked for at least four or more hours (21_± for three counts, 10_± for four counts, and 6_± for five counts).
 - On Tuesday 37_± of the 225_± spaces or 17% were occupied for four or more hours

- 108± vehicles were present for two counts on Saturday and 74± on Tuesday, indicating they were parked in the same space for two to four hours. While some may have left before the three-hour time limit was over, a portion was likely exceeding their stay by at least an hour.
- Parkers observed time limits in the 30-minute spaces on First Street. There were no vehicles parked in a 30-minute space that was counted more than once, indicating that those parking in 30-minute spaces were likely adhering to the limit.

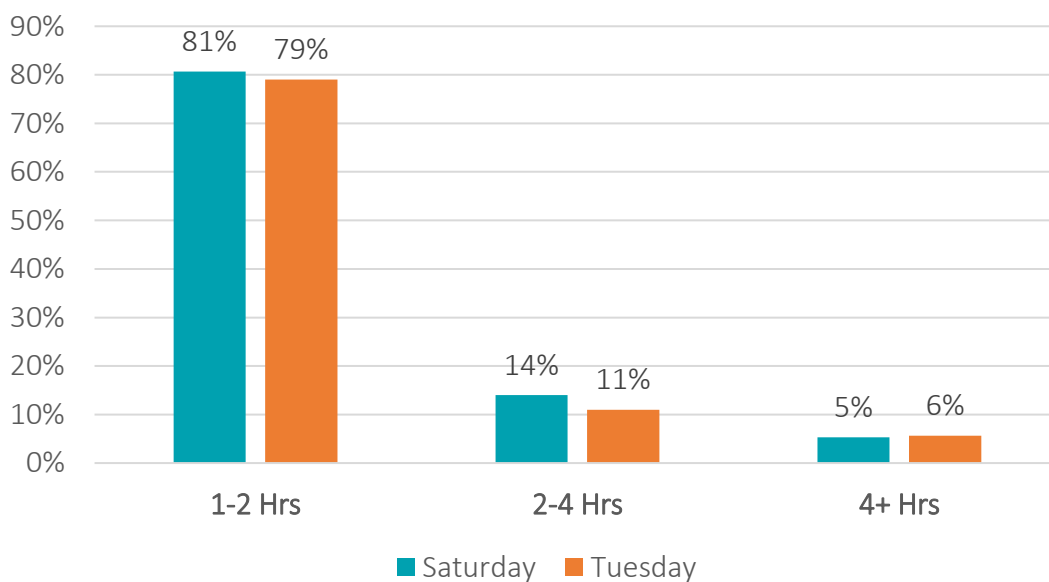
Table 3 provides a summary of the LPI data collected on First Street on Saturday and Sunday. Figure 16 shows the data graphically.

Table 3: First Street Parking Turnover Summary

| | 1 Count (1-2 Hours) | 2 Counts (2-4 Hours) | 3 Counts (4-6 Hours) | 4 Counts (6-8 Hours) | 5 Counts (8-10 Hours) | Total |
|------------------|------------------------|-------------------------|-------------------------|-------------------------|--------------------------|-------|
| SATURDAY | | | | | | |
| Number of Plates | 623 | 108 | 24 | 12 | 5 | 772 |
| Percent of Total | 81% | 14% | 3% | 2% | 1% | |
| TUESDAY | | | | | | |
| Number of Plates | 546 | 74 | 21 | 10 | 6 | 657 |
| Percent of Total | 79% | 11% | 3% | 1% | 1% | |

Note: Percentages rounded to the nearest whole number.
 Source: Walker Consultants, 2019

Figure 16: Percent of Vehicles Parked on First Street by Number of Hours



Source: Walker Consultants, 2019

Lettered Streets Parking Turnover

The side streets are unrestricted and in general, experienced lower turnover in comparison to First Street. On the lettered side streets, 54% were parked for one to two hours and the remaining for two or more hours. Table 4 provides a summary of the LPI data collected on Saturday.

Table 4: Lettered Streets Saturday Turnover

| | 1 Count (1-2 Hours) | 2 Counts (2-4 Hours) | 3 Counts (4-6 Hours) | 4 Counts (6-8 Hours) | 5 Counts (8-10 Hours) | Total |
|-------------------------|------------------------|-------------------------|-------------------------|-------------------------|--------------------------|--------------|
| East B St | 37 | 13 | 3 | 6 | 7 | 66 |
| East D St | 67 | 18 | 17 | 4 | 7 | 113 |
| East E St | 25 | 10 | 4 | 4 | 2 | 45 |
| East F St | 63 | 14 | 12 | 4 | 9 | 102 |
| East G St | 47 | 13 | 17 | 2 | 17 | 96 |
| East H St | 44 | 13 | 7 | 5 | 10 | 79 |
| East I St | 34 | 12 | 10 | 7 | 12 | 75 |
| East J St | 45 | 7 | 3 | 1 | 12 | 68 |
| West C St | 16 | 3 | 4 | 5 | 5 | 33 |
| West D St ¹ | 16 | 15 | 0 | 0 | 0 | 31 |
| West E St | 57 | 16 | 4 | 2 | 2 | 83 |
| West F St | 36 | 13 | 6 | 2 | 23 | 80 |
| West G St | 49 | 13 | 7 | 5 | 10 | 84 |
| West H St | 70 | 24 | 7 | 6 | 11 | 118 |
| West I St | 26 | 11 | 10 | 9 | 13 | 69 |
| West J St | 30 | 25 | 8 | 7 | 10 | 80 |
| Total | 662 | 220 | 119 | 69 | 150 | 1,222 |
| Percent of Total | 54% | 18% | 10% | 6% | 12% | |

¹Only two counts were collected for West D St so turnover may be lower than data indicates.

On Tuesday, turnover was slightly higher, with 60% of vehicles parked counted once, indicating that the car was parked for one or two hours. The remaining 40% of vehicles were parked for two or more hours. Table 5 provides a summary of the turnover data collected on the lettered streets on Tuesday.

Table 5: Lettered Streets Tuesday Turnover

| | 1 Count (1-2 Hours) | 2 Counts (2-4 Hours) | 3 Counts (4-6 Hours) | 4 Counts (6-8 Hours) | 5 Counts (8-10 Hours) | Total |
|------------------|------------------------|-------------------------|-------------------------|-------------------------|--------------------------|--------------|
| East B St | 37 | 10 | 6 | 3 | 4 | 60 |
| East D St | 33 | 15 | 15 | 4 | 6 | 73 |
| East E St | 23 | 6 | 7 | 2 | 3 | 40 |
| East F St | 78 | 20 | 11 | 5 | 5 | 119 |
| East G St | 44 | 13 | 5 | 7 | 12 | 81 |
| East H St | 39 | 4 | 5 | 14 | 6 | 68 |
| East I St | 49 | 19 | 13 | 8 | 7 | 96 |
| East J St | 78 | 11 | 5 | 1 | 7 | 102 |
| West C St | 13 | 4 | 4 | 2 | 7 | 30 |
| West D St | 36 | 9 | 6 | 4 | 5 | 60 |
| West E St | 21 | 3 | 2 | 0 | 2 | 28 |
| West F St | 39 | 10 | 4 | 7 | 15 | 75 |
| West G St | 49 | 4 | 7 | 5 | 8 | 73 |
| West H St | 69 | 10 | 6 | 8 | 7 | 100 |
| West I St | 36 | 12 | 6 | 7 | 10 | 71 |
| West J St | 47 | 15 | 2 | 5 | 12 | 81 |
| Total | 691 | 165 | 104 | 82 | 116 | 1,157 |
| Percent of Total | 60% | 14% | 9% | 7% | 10% | |

Parking Wayfinding

How people experience parking in Downtown Benicia is determined by a combination of the number of parking spaces, parking time limits, and directions on how and where to park.

Downtown has some signage directing visitors to public parking. These signs are located on a few light poles with small white text. These types of signs are typically used to direct visitors to off-street lots, however, in downtown Benicia, it appears that most of these signs are directing visitors to public on-street parking as well as the public off-street lots. This may present some confusion if visitors see a sign and proceed in that direction never to find an off-street parking facility. Additionally, due to the color, fading, and size of the text on the signs, they may be easily missed or overlooked as people search for a parking space. Figure 17 shows an example of the existing wayfinding signage in downtown.

Figure 17: Existing Parking Wayfinding



Overall Downtown Access

Downtown Benicia provides a comfortable walking environment for pedestrians with wide sidewalks, crosswalks at most intersections, walking paths along the water, and multiple outdoor dining locations. Once a visitor arrives in downtown and parks, it is reasonable to assume that they could walk around downtown and visit several locations without having to move their vehicle.

Figure 18: Shared Lane Marking on First St



However, there are limited options in terms of driving alternatives providing access to downtown. Based on conversations with the City, while Transportation Network Companies (e.g. Uber and Lyft) are available in downtown, they are limited in service. There are also no marked pickup/drop-off zones available for these types of services.

Additionally, while a Class III bike route, marked with shared lanes markings (also known as bike sharrows), exists on First Street, there are no bike rentals, bike share systems, or dockless vehicles (bikes or scooters), available for public use in the area. There is some available bike parking in the form of bike racks, however, no bikes were parked at the time of counts.

Limited transit service is provided via SolTrans' Regional Yellow Line with a stop at Military and First Streets. However, the route does not go south of Military to serve downtown.

There are a limited number of ADA spaces available, including on the corner of several lettered streets and First Street and in front of Benicia Capitol State Historic Park. Figure 19 shows some of the types of ADA spaces available in downtown.

Figure 19: Example of ADA Spaces in Downtown Benicia



Source: Walker Consultants, 2019

2004 Study Comparison

In comparing this study with the one conducted in 2004, we have found an increase in both parking supply and demand.

- Overall, the downtown parking supply has increased 254± spaces, from 1,452± to 1,706± since 2004. This is likely due to striping several lettered streets with angled parking as well as some variations in data collection between the two studies.
- The peak parking demand has increased by 217 vehicles since 2004.
 - In the 2004 study, peak parking demand occurred on Thursday Farmer's Market, with 870 spaces occupied within the entire study area.
 - In this analysis, 963± vehicles parked during peak parking demand on a Saturday between 12:00 p.m. and 2:00 p.m.
 - Also in this analysis, during weekday counts on a Tuesday, there were 924± parked vehicles. This is higher than the occupancy counted during the 2004 peak parking demand, which occurred during Farmer's Market night.
- First Street experiences a similar turnover rate in 2019, as it did in 2004. Similar results were found for the lettered side streets, with varying rates of turnover.
 - In 2004, 12% of vehicles were parked on First Street for three or more hours.
 - In this study, 6% of vehicles were parked for four or more hours and 14% were parked between two and four hours.

In general, the major findings from the 2004 study are consistent with what was found in this analysis, these findings include the following from the 2004 study:

- *Overall, there is sufficient parking in the downtown area for the mix of existing uses.*
- *The parking demand is heaviest on First Street, which creates "hot-spots" or areas where it is difficult to find a parking space.*
- *The parking demand is also heavy on some of the side streets. This demand is generated by a variety of commercial and residential uses. The turnover on these streets is less, which is reflective of the residential nature of many of these streets.*
- *The use of off-street lots varies with several lots being heavily used and other lots with little or no use. The majority of off-street parking areas, especially the city-owned lots, appear to be underutilized.*

03 Community Outreach

Community Outreach

Community outreach is a vital component to understanding parking and transportation in an area. To gain a better understanding of the perspective of community members in Benicia on downtown parking, a series of public outreach and engagement efforts were designed to gather input on the views and needs of residents, business owners, employees, and visitors. Two individual online surveys were issued, as well as two workshops, to gather information on the parking needs, issues, and challenges experienced by community members. A description of each outreach strategy with key findings is provided below.

Online Survey One

Walker and the City issued a twenty-question online survey on July 25, 2019, and received 435 responses. The following section summarizes the key findings of the survey. A full summary of results is provided in Appendix B.

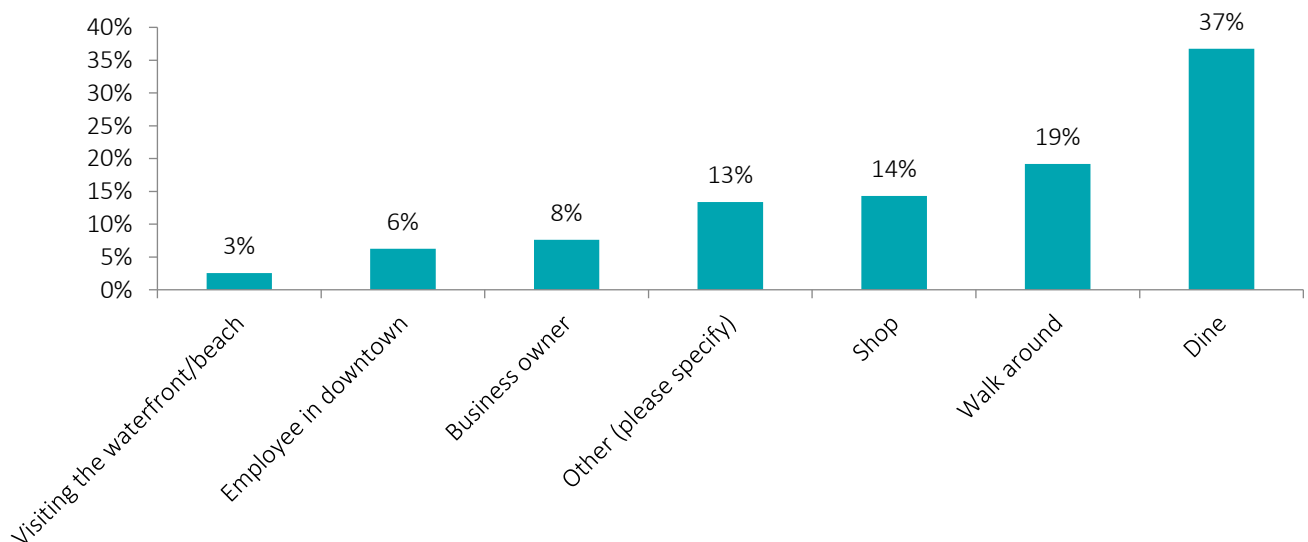


Purpose and Frequency of Downtown Visits

A majority of survey respondents visit Downtown Benicia at least a few times per week with 52% reporting “a few times per week” and 29% reporting “every day”.

When respondents were asked why they visit downtown, the **majority said to “dine” with 37% of the responses, “walk-around”, with 19% of responses, and “shop” with 14% of responses.** There were also 13% of respondents who reported “other” and wrote-in a response. Of those written in responses, several survey participants said they live downtown or that they visit for a combination of activities (e.g. go for walk, get lunch, and shop). These responses are shown in Figure 20

Figure 20: Why Respondents Visit Downtown



Traveling to Downtown Benicia

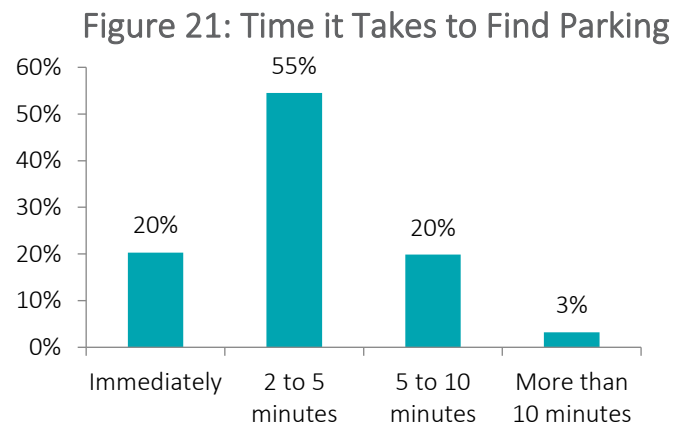
When respondents were asked how far they live from downtown, the majority of respondents reported that they either live downtown (21%) or are within three miles of downtown (50%). When asked what mode of travel they use to access downtown, most respondents reported that they drive downtown (81%), and some walk (17%). Very few ride their bike to downtown (1%).



Parking Downtown

Survey participants were asked how they would describe parking in downtown. Of those that responded, 65% said they are at least “somewhat satisfied” with parking in downtown. **Most respondents reported being able to park within two blocks of their destination.**

In general, the majority of responses indicated that downtown visitors are able to find parking relatively quickly. Based on survey responses, 20% of respondents indicated that they are able to find parking immediately when visiting downtown and 55% can find parking within two to five minutes. These results are shown in Figure 21.



When survey participants were asked if they ever leave or decide not to visit downtown Benicia due to lack of available/convenient parking, 36% of respondents said “yes.” Additionally, **over one-half (53%) of respondents also indicated that they do not believe there is enough parking in downtown.**

When asked what the most important factor was when choosing where to park in downtown, **over one-half (53%) of respondents reported that parking within one to two blocks of their destination is the most important.** Finding parking quickly and easily, even if they have to park further away, was reported as the most important factor for 31% of respondents.

Most important factors when choosing where to park in downtown:



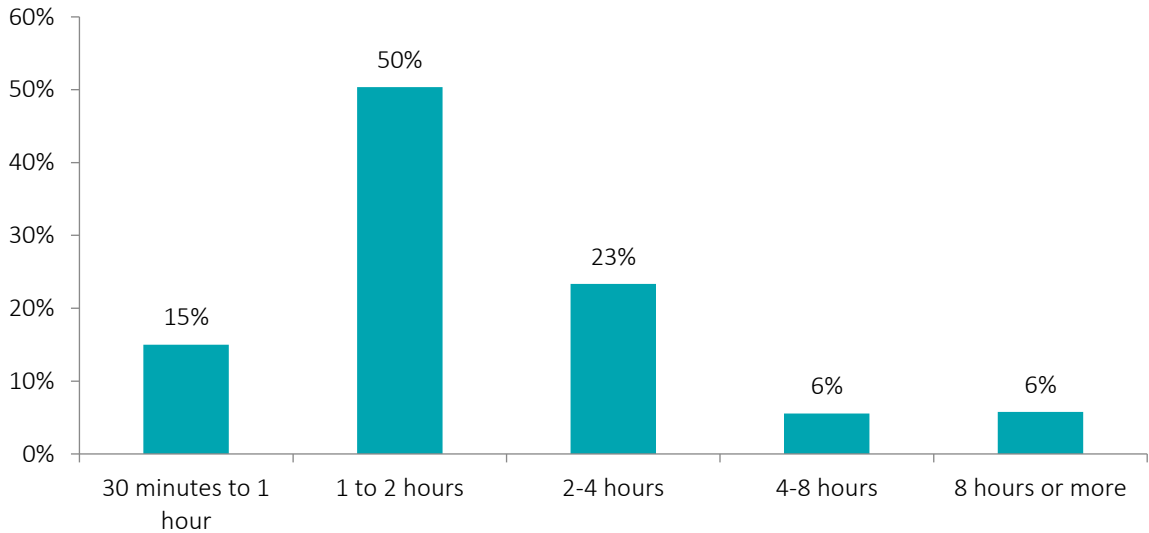
1) Parking within one to two blocks of their destination

2) Finding parking quickly and easily, even if they have to park further away

Experience Once Parked Downtown

Survey participants were asked how long they typically stay once they are parked. One-half (50%) said they stay one to two hours and 23% said they stay for two to four hours, which is consistent with parking turnover findings. Few people indicated that they stay for four or more hours. These results are shown in Figure 22.

Figure 22: Time Spent in Downtown Once Parked



Most respondents reported that they enjoyed visiting multiple locations in one outing and **93% walk between their destinations once parked**. The majority of respondents (93%) also reported that downtown has a safe and comfortable walking environment. The most popular outing reported were meals (86%), visiting a bakery (65%), and visiting a coffee shop (56%).

For those who have parked a few blocks from their destination, most respondents (89%) **would prefer to walk from destination to destination in an interesting, comfortable, and safe environment**.

Comparisons to Other Downtowns in the Region

Survey respondents were asked which other small downtown they enjoy visiting that has a great mix of retail and entertainment with convenient parking and walkability. **Yountville, Martinez, and Lafayette** were the most selected of the provided options. Survey participants also had the opportunity to write-in downtown communities that they enjoy. Communities mentioned the most often were **Walnut Creek, Pleasant Hill, and Sonoma**.

When asked if they enjoy walking between destinations in these communities, 88% said they do.

Flex Spaces/Parklets

Survey respondents were asked about flex spaces or parklets. A Parklet is an extension of the sidewalk over an on-street parking space that serves as a small public park. Because streets often make up the greatest amount of public space, parklets take a small amount of that space to create public areas for people to gather or relax and enhance the pedestrian experience. Respondents were asked where they believed the best location would be for the flex space or parklet, over one-half, **61%, said they would prefer not to have a flex space but rather maintain parking.** For those who were supportive of potential flex space, **15% said on the ideal location is on First Street followed by Benicia Point.** While some respondents commented that they would prefer to maintain parking over building flex spaces, there is potential to both add additional parking capacity and create flex spaces in downtown Benicia. See page 63 for opportunities to add additional parking.

Open-Ended Comments

The last question of the survey asked respondents to include anything else regarding parking and access in Downtown Benicia. The following summarizes the key findings that emerged from Walker's reviews of these responses:

- Respondents commented on whether to install parking meters (or charge for parking). A majority of respondents who commented on this were opposed to charging for parking, citing reasons such as a reduced number of visitors and less convenience. Those that supported charging for parking cited the fee as a strategy to reduce the parking issues in Downtown Benicia.
- Respondents mentioned a lack of parking for employees and other long-term parkers.
- There are long-term parkers on First Street occupying customer spaces.
- Most respondents who mentioned parking enforcement indicated that more enforcement is needed of the time-restricted spaces, to discourage long-term parking.
- A lack of ADA parking was frequently mentioned in the open-ended question by survey respondents.
- Several respondents suggested paving and striping the existing gravel lots.
- Several respondents suggested adding diagonal parking or adding a parking structure for additional parking capacity.
- Several respondents suggested striping the on-street parking on side streets, similar to First Street, to reduce mis-parking.
- Some respondents suggested that there are no parking issues in Downtown Benicia, and suggested the City instead invest in road repairs and sidewalk improvements.
- Some respondents mentioned an issue of commercial parking spilling over onto residential streets.

These open-ended responses are also reflected visually in Figure 23. The larger the font size, the more the word was cited in responses.

Figure 23: Summary of Survey 1 Open-Ended Responses



Online Survey Two

Walker and the City issued a second survey (10 questions) designed to gather additional input from the public. The survey was issued on September 4, 2019 and received 169 responses. The following summarizes key findings from the survey issued. The full summary of results is provided in Appendix A.



Parking Issues

Survey participants were asked if they believe parking is an issue in downtown. Results were almost evenly split with just over one-half responding “yes” (52%) and 49% responding “no”. The top three concerns regarding parking that were reported include:

1. **Lack of public parking lots (59%)**
2. **Lack of on-street parking near or at a destination during peak hours (44%)**
3. **Lack of special event parking (40%)**

Survey participants were also given the opportunity to write-in a response to share their concerns in regard to parking. Other concerns regarding parking included:

- Lack of accessible parking for persons with disabilities
- Lack of any on-street parking during peak hours (12:00 PM to 2:00 PM)
- Lack of enforcement of existing parking regulations
- Lack of parking in front of residential uses
- Lack of painted lines on parking side streets
- Lack of parking in the late afternoon (around 6:00 PM)

For those that believed parking was not an issue in downtown, survey participants were asked what existing features made parking easy and convenient to find. Respondents identified the following features:

- On a typical non-event day, parking is available downtown, sometimes a few blocks away from their destination
- Plenty of available parking on side streets and off-street lots
- Lack of meters make parking easier

52% of respondents believe parking is an issue in downtown. At the same time, about one-half of respondents are satisfied with parking in downtown.

Parking Lot at East E and East 2nd Street

Survey participants were asked if they park in the lot at East E Street and East 2nd Street. **Results were evenly split with 50% of respondents saying that yes, they do park in this lot, and the other half indicating that they don't.**

When asked when they do park in this lot, respondents indicated the following times:

- Special events (84%)
- Farmer's Market (62%)
- Every time I visit Downtown Benicia (9%)
- Other reasons (25%), such as:
 - To park for certain restaurants downtown
 - When parking cannot be found in other locations



Parking Solutions

Respondents were asked what types of parking solutions they would most support. The top three selected options for this question were "Improve directional signage to available public parking" (49%), "I don't think parking is an issue in Downtown Benicia" (35%), and "Create employee parking areas" (34%). Both "Share private parking lots with the public" and "create more accessible parking for people with disabilities" received similar results with 33% of responses. Figure 24 shows a summary of the responses.

Parking solutions survey participants would be most supportive of:



1. Improve directional signage to available public parking
 2. Create employee parking areas
 3. Share private lots with the public
 4. Create more accessible parking for people with disabilities
-

Figure 24: Support of Parking Solutions



Open-Ended Comments

The last question of the survey asked respondents to include anything else regarding parking in Downtown Benicia. The following summarizes the key findings that emerged from Walker’s reviews of these responses:

- Respondents commented on whether to install parking meters (or charge for parking). Almost all respondents who commented on this were opposed to charging for parking, citing reasons such as a reduced number of visitors and less convenience.
- Respondents who commented on pedestrian safety mentioned the need for safe pedestrian crossing and lighting.
- Several respondents suggested paving the existing surface parking lots as a way to encourage their use and efficiency, as well as mitigate dust.
- Several respondents suggested adding diagonal parking as a way to increase parking capacity.
- Several respondents cited a lack of ADA accessible parking in Downtown Benicia.

- A few respondents indicated that parking time limits were not being adequately enforced.
- A few respondents suggested satisfying event parking demand by utilizing shuttles from off-site facilities to event locations.

A summary of the key themes found in these open-ended responses are shown in Figure 25. The larger the font size, the more the word was cited in responses.

Figure 25: Summary of Survey 2 Open-Ended Responses



Community Workshops



The first community workshop was held on August 20, 2019, in the morning, at the Veteran’s Hall in downtown. This meeting was intended to primarily gather information from downtown business owners as well as general public feedback. A second workshop was held in the same location on September 16, 2019. The second workshop was held in the evening in order to provide members of the public an additional opportunity to attend.

At these meetings, Walker, in partnership with the City, presented the existing conditions data collected and major findings, as well as general information on parklets and where available parking exists in Benicia.

In order to gather perceptions of parking within downtown from the community, business owners and community members were given the opportunity to participate in multiple activities.



Community members were asked to share, with stickers on a map, where they prefer to park, areas they avoid parking, and how far they would be willing to walk to First Street. In general, community members shared that they prefer to park on First Street and will avoid the unpaved public lot on East B Street due to its uneven terrain and dust. The results of this exercise are shown in Figure 26.

Figure 26: Where People Prefer to Park

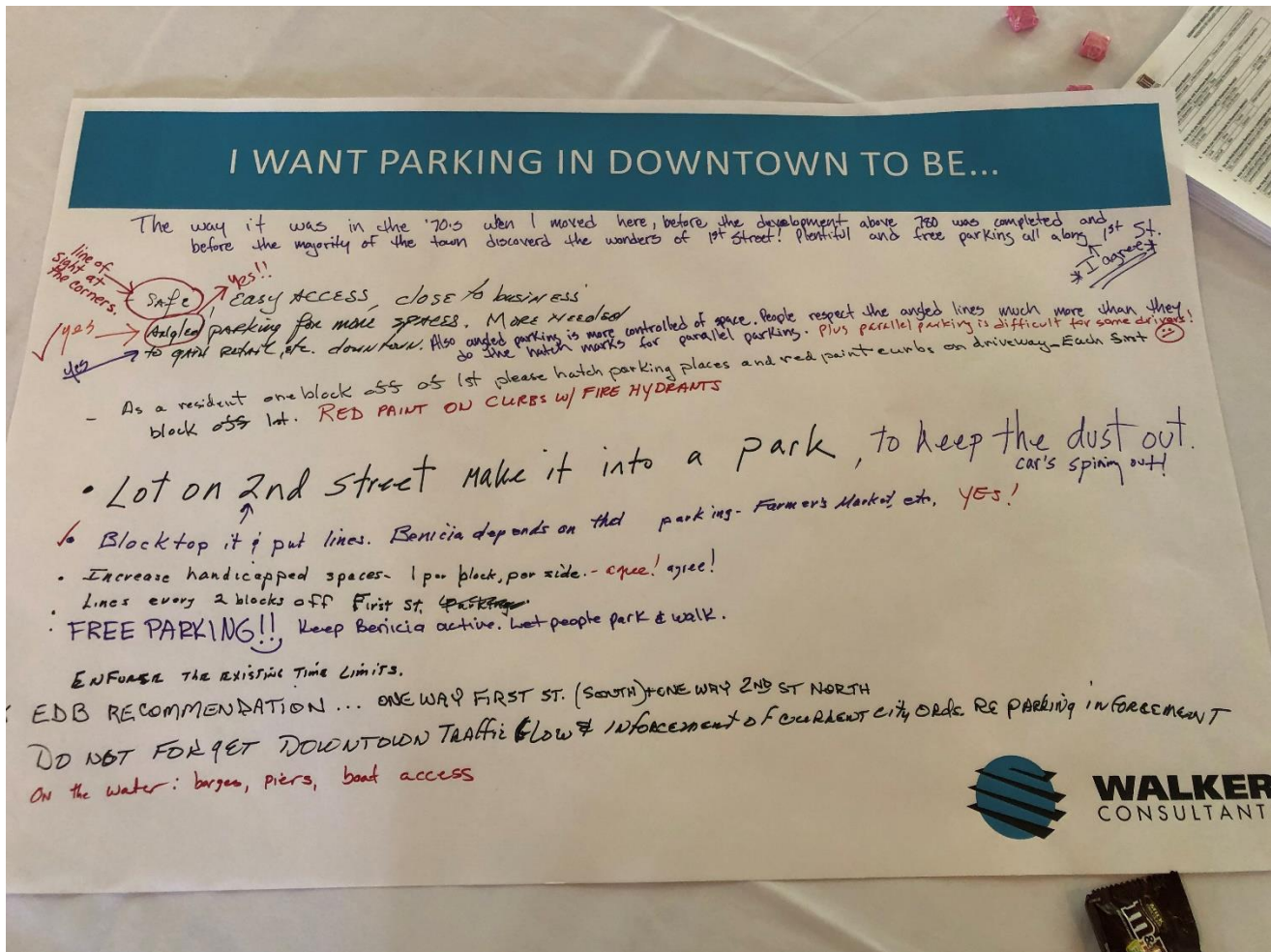


Those who attended the workshops were then asked what they want downtown parking to be. The purpose of this was to provide an opportunity for workshop attendees to vision their optimal downtown parking environment.

The results of this exercise are shown in Figure 27.

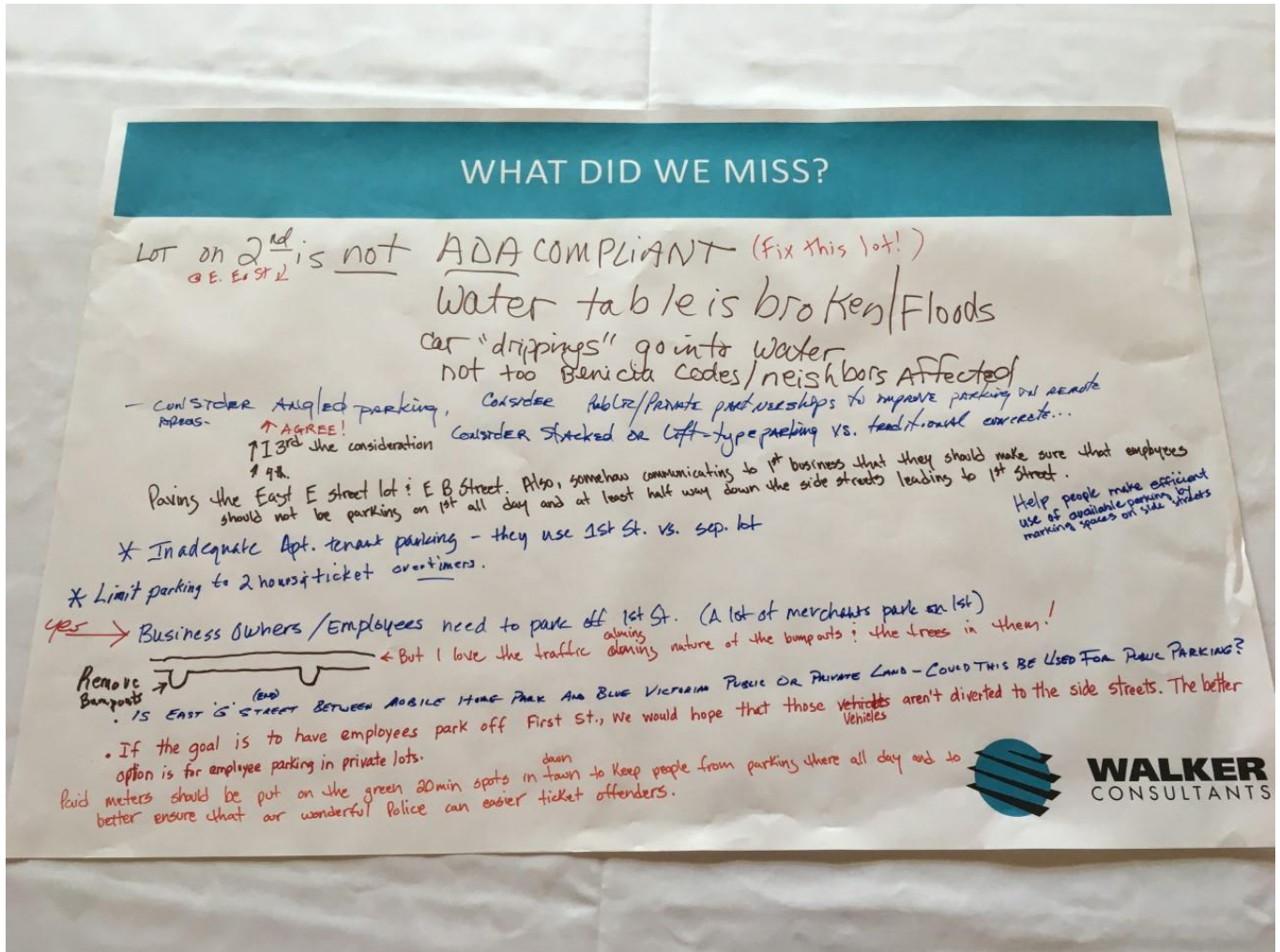


Figure 27: "I Want Downtown Parking to Be" Exercise Results



Community members were also given the opportunity to share any comments they would like on a comment titled "What did we miss?" The results of this are shown in Figure 28.

Figure 28: "What Did We Miss?" Exercise



In general, community members shared concerns about employees parking on First Street, not having enough parking in downtown, not enough ADA parking, and concern over the potential loss of the East B Street lot, especially during special events.

04 Future Parking Analysis

Future Parking Analysis

The City of Benicia owns approximately two acres at a site on East E Street and Second Street. The site currently serves as an unpaved parking lot primarily used for overflow parking during special events such as Farmer’s Market Thursdays or Fourth of July.

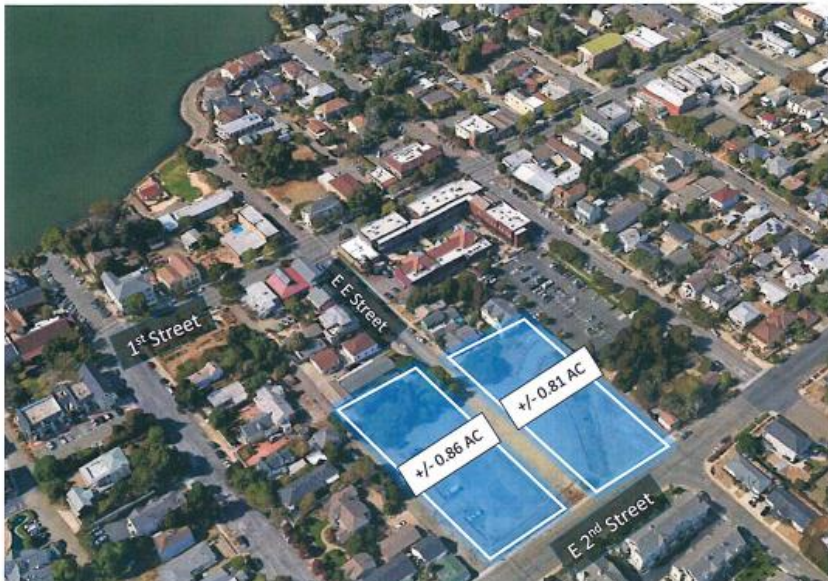
The lot is unused during typical weekdays and weekends (with the capacity to park approximately 118 vehicles). Walker observed only a few vehicles parked in this lot during field data collection. The most vehicles observed parked at one time were 11 cars on Saturday, June 25th, between 2:00 p.m. and 4:00 p.m. However, we found the lot to be highly utilized during Thursday night Farmer’s Market evenings, when a portion of First Street is blocked. On a typical Thursday Farmer’s Market evening, the East E Street lot is approximately 90% utilized at the peak, with 107+ vehicles parked.

Figure 29: E Street Lot on a Typical Day



Given that the site goes unused most of the year, the City has considered various development scenarios for the parcel. A Broker Opinion of Value Study conducted by Transwestern³ found the site has the potential for a hotel that could take advantage of business and tourism visitors. Figure 30 shows the location of the East E Street lot.

Figure 30: E Street Lot at East 2nd Street and East E Street



Source: Broker Opinion of Value, Transwestern, 2019



³ Transwestern, Broker Opinion of Value Prepared for the City of Benicia, June 14, 2018.

To determine how the potential development could impact parking in downtown and the need for parking a new use, Walker conducted an assessment of future demand. Walker utilized the Walker/Urban Land Institute's (ULI) Shared Parking Model to project the recommended future supply for the hotel development. The following section provides detailed descriptions and methodologies for this projection.

Shared Parking Model

Shared parking allows for the sharing of parking spaces among uses in a mixed-use environment—in lieu of providing a minimum number of parking spaces for each individual use. Shared parking commonly results in a reduction in the total need for parking spaces. This reduction, which is sometimes significant, depends on the quantities and mix of uses. Shared parking offers numerous benefits to a community at large, not the least of which is the cost savings and environmental benefit of significantly reducing the amount of parking provided necessary to serve commercial development. Sharing parking also promotes optimal use of land, as more people-oriented uses are built that generated economic development, tax revenues, and improve the overall atmosphere of an area.

The key goal of a shared parking analysis is to find the balance between providing adequate parking to support development from a commercial and operational standpoint while minimizing the negative aspects of excessive land area and capital costs devoted to parking, which can drive up rents and consumer costs.

The ability to share parking spaces is the result of two conditions:

1. Variations in the accumulation of vehicles by the hour, by day, or by season at the individual land uses.
2. Relationships among the land uses that result in visiting multiple land uses on the same auto trip. For example, a substantial percentage of patrons at one business (restaurant) may be visitors at the hotel. This is referred to as the “effects of the captive market.” These patrons are already parking and contribute only once to the number of peak hour parkers. In other words, the parking demand ratio for individual land uses should be factored downward in proportion to the captive market support received from neighboring land uses.

The City of Benicia allows shared parking when adjoining uses on the same site have different hours of operation and the same parking spaces can serve both uses.

The City of Benicia Municipal Code Chapter 17.74.020, Basic requirements for off-street parking and loading states:

Joint Use. Off-street parking and loading facilities required by this chapter for any use shall not be considered as providing parking spaces or loading berths for any other use except where the provisions of BMC 17.74.040, Collective provision of parking, apply or a joint facility exists. Such a facility shall contain not less than the total number of spaces or berths as determined individually, subject to the provisions of subsection (G) of this section, or fewer spaces may be permitted where adjoining uses on the same site have different hours of operation and the same parking spaces or loading berths can serve both without conflict. A determination of the extent, if any, to which joint use will achieve the purposes of this chapter shall be made by the community development director, who may require submission of survey data necessary to reach a decision.

This parking demand analysis using Walker's Shared Parking Model considers the types, quantities, and user groups of land uses for the development, as well as site-and market-specific characteristics of parking and travel behavior in Benicia. Walker's Shared Parking Model is based on the Urban Land Institute (ULI) and International Council of

Shopping Center's (ICSC) Shared Parking publication⁴. Walker led a team of consultants in writing the updated Shared Parking Third Edition and features the most up-to-date parking demand model. The model is designed to project the parking needs of various types of development from 6:00 a.m. to 12:00 midnight on a typical weekday and a weekend for every month of the year.

The resulting recommended supply for future development is based on the projected peak hour of design day parking demand. This does not represent the maximum ever generated by potential development. In Walker's experience, designing a parking system for the absolute peak busiest day of the year leads to the overbuilding of parking spaces.

The peak in this analysis refers to the "design day" or "design hour," a time that recurs frequently enough to justify providing spaces for that level of parking activity. The 85th percentile of peak-hour observations is generally recommended by *Shared Parking*, except for retail shopping, for which the 20th highest hour of the year is employed.

Walker's Shared Parking Model utilizes parking ratios expressed as a ratio of x spaces per y units. The units vary depending upon the land use – i.e., keys/rooms for a hotel, units for a residential complex, or square feet of building space. Additionally, parking generation rates for retail and restaurant land uses are based on the gross floor area (GFA).

Shared Parking Methodology

The first edition of *Shared Parking* was published in 1983 and then updated in 2005. The Third Edition is currently being finalized and is expected to go to print sometime in 2019. In accordance with the Second and Third Editions of *Shared Parking*, future parking demand for the site is analyzed separately for employees and customers/guests to improve the reliability of the projections, as well as the tools for parking management planning.

The following sections detail the methodology for the shared parking analysis to determine the future parking demand.

Land Use Potential

Given the E Street surface parking lot goes unused most of the year, the City has considered various development scenarios for the parcel, including a hotel. The Broker Opinion of Value Study conducted by Transwestern found that the site has the potential for a hotel that could capitalize on business and tourism visitors.

Conceptual plans for the hotel are shown in Table 6 and Figure 31. These potential uses are based on the size of the site as well as comparable hotels in the surrounding area. Walker assumes that approximately 30% of the hotel will be frequented by business travelers and 70% by leisure travelers.

⁴ Shared Parking (Third Edition), 2019, The Urban Land Institute, Washington, D.C.

Table 6: Downtown Benicia Hotel Conceptual Land Uses

| | Total | Unit |
|------------------------|-------|--------------|
| Hotel Rooms | 125 | Rooms |
| <i>Leisure Guests</i> | 38 | <i>Rooms</i> |
| <i>Business Guests</i> | 87 | <i>Rooms</i> |
| Meeting Space | 1,600 | Square Feet |
| Restaurant/Lounge | 1,000 | Square Feet |

Source: Broker Opinion of Value Prepared for the City of Benicia, Transwestern, 2018

Figure 31: Downtown Benicia Hotel Conceptual Site Plan



Source: Broker Opinion of Value, Transwestern, 2019

Base Parking Ratios

To begin a shared parking analysis, we first start with the type and quantity of land use to be analyzed. Each land use has a specific metric considered by the parking industry to be a reliable measure of the parking demand for that use. For retail, that metric is square footage (gross leasable area or GLA), for theaters that metric is the number of seats, etc. The parking demand is divided by the quantity for each metric to generate a base parking ratio for each land use based on that metric (i.e. for the hotel the ratio is presented as “spaces per room”; for restaurant/lounge the ratio is presented as “spaces per gross square foot”).

Simply put, the base parking demand ratios represent how many spaces should be supplied to each use if the spaces are unshared, and the project is in a suburban context where the driving ratio is at or near 100 percent.

Table 7 displays the base parking demand ratios used for this analysis. These base parking rates were taken from the Third Edition of Shared Parking and informed by thousands of field parking occupancy studies performed by parking and transportation professionals over decades. These ratios have been vetted by a team of consultants who specialize in parking demand analyses and who mutually agreed upon the use of these ratios prior to the publication of the Second and Third Edition of Shared Parking.

Table 7: Parking Rates by Land Use

| | Weekend | | Weekday | | Unit |
|--------------------------|---------|----------|---------|----------|-------------|
| | Guest | Employee | Guest | Employee | |
| Hotel Rooms | 1.0 | 0.15 | 1.0 | 0.15 | Rooms |
| Restaurant/Lounge | 6.67 | 1.2 | 7.67 | 1.33 | Square Feet |
| Meeting Space | 19.2 | 1.28 | 12.8 | 1.28 | Square Feet |

Source: Walker Consultants/Urban Land Institute, 2019

Drive Ratio Adjustment

A driving ratio adjustment is the percentage of patrons and employees that are projected to drive to the site in a personal vehicle expressed as a ratio. This excludes all non-driving modes of transportation including shuttle buses and other public transportation, taxi, ride-hailing (Lyft/Uber), walking, bicycling, and carpooling passengers.

Walker utilized the American Community Survey (ACS) 5-year estimates to determine drive ratios for employees of the potential hotel use. Commuter data shows that 10% of Benicia workers bike, walk, ride transit, or carpool to travel to work. A 15% reduction was applied to potential hotel guests, assuming that some patrons would arrive via alternative modes such as taxi, ride-hailing services, or transit. This 10% reduction was applied to the drive ratio presented in Table 8.⁵

Table 8: Driving Adjustments

| | Weekend | | Weekday | |
|---------------------|---------|---------|---------|---------|
| | Daytime | Evening | Daytime | Evening |
| Hotel Guests | 85% | 85% | 85% | 85% |
| Employees | 90% | 90% | 90% | 90% |

Source: Walker Consultants/Urban Land Institute, 2019

Non-Captive Adjustments

“Captive market” is borrowed from market researchers to describe people who are already present in the immediate vicinity at certain times of the day. In the shared parking analysis, the term “captive market” reflects the adjustment of parking needs and vehicular trip generation rates due to the interaction among uses in an area.

Generally, non-captive parking considerations for any development take into account that some visitors to a specific land use may already be parked or have arrived at the site to visit multiple land uses on the site, such as when a hotel guest visits a restaurant within the same development. This is referred to as the “effects of a captive market,” as some of the restaurant’s patrons are already parking at the site; therefore, they contribute only once to the number of peak hour spaces utilizing the development’s parking supply. In other words, with shared parking, the parking demand ratio for individual land uses can be corrected downward in proportion to the captive market support of the neighboring land uses.

Walker, in designing a shared use analysis, uses the inverse or non-captive ratio, which is the percentage of parkers who are not already counted as being parked. It is likely that a portion of those visiting the potential future development on the East E Street site will be a hotel guest (e.g. guests dining in the restaurant or attending an on-site meeting in the meeting space).

⁵ It should be noted that an actively managed transportation demand management (TDM) plan can result in a material reduction in parking demand for these uses, particularly for employee parking.

Non-captive ratios can vary from one property to the next and from one function to the next within the same property. Typically, a reduction ranging from 10% to 70% has been used by parking and transportation professionals to fine tune the parking requirements for mixed-use projects with primary attractors and secondary attractors. However, for some land uses, no reduction is made. For example, all hotel guests would be traveling to the hotel from somewhere other than the site, indicating a 100% non-captive ratio. The non-captive ratios included herein are intended to be reasonable and appropriate adjustments.

Based on Walker’s experience with various developments and land uses, we have assumed the following non-captive ratios described in Table 9.

Table 9: Non-captive Adjustments

| | Weekend | | Weekday | |
|--------------------------|---------|---------|---------|---------|
| | Daytime | Evening | Daytime | Evening |
| Hotel Guests | 100% | 100% | 100% | 100% |
| Restaurant/Lounge Guests | 90% | 90% | 70% | 70% |
| Meeting Space Guts | 60% | 60% | 70% | 70% |
| Hotel Employees | 400% | 100% | 100% | 100% |

Source: Walker Consultants/Urban Land Institute, 2019

Future Parking Demand Results

Based on the Shared Parking methodology, the overall peak is expected to occur in April at 9:00 p.m., at which 117± parking spaces are recommended to serve the potential future uses. A summary of the weekday and weekend peaks are shown in Table 5. Figure 4 and 5 provides a graphic illustration of the Shared Parking output by the hour for the overall weekday peak.

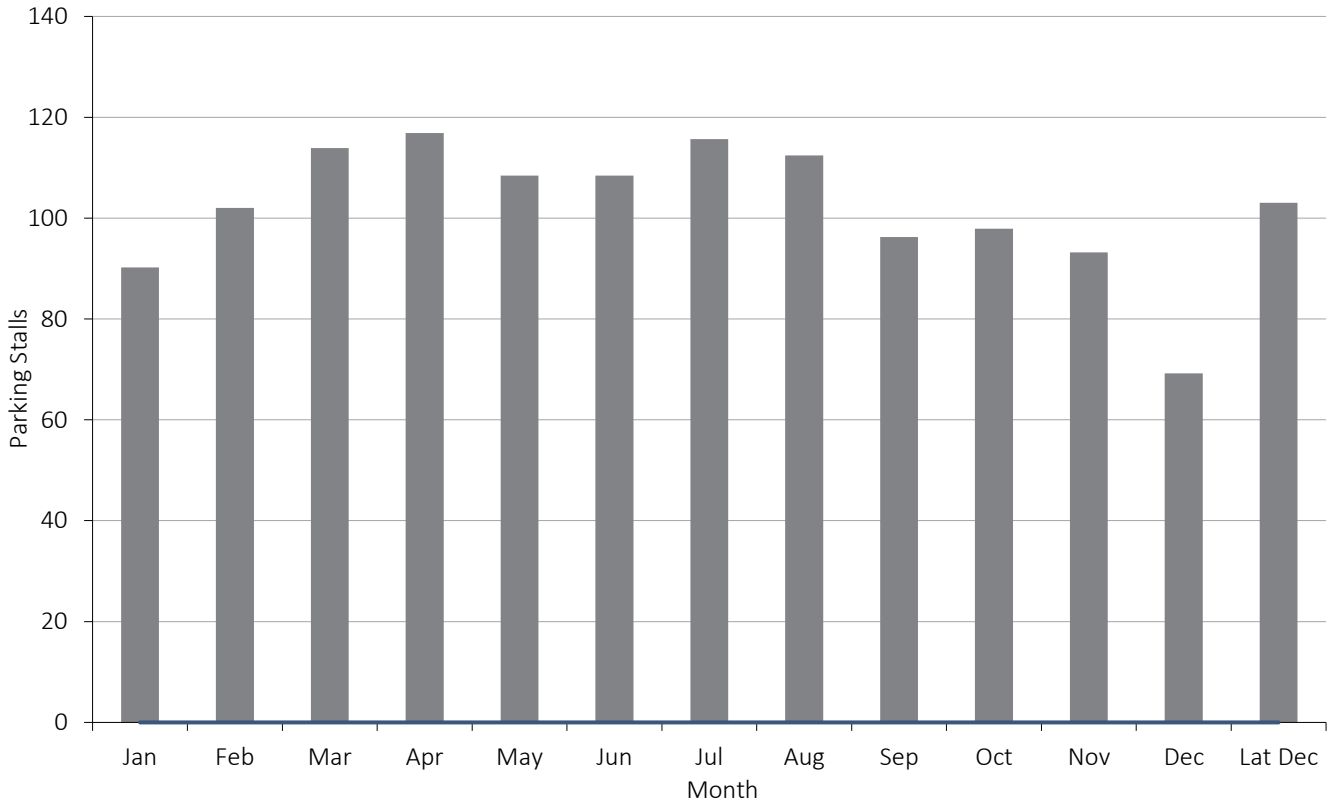
Table 10: Weekday & Weekend Shared Parking Demand Summary

| | Estimated Weekday Parking Demand | Estimated Weekend Demand |
|--------------|----------------------------------|--------------------------|
| Hotel Guests | 113 | 110 |
| Employees | 4 | 7 |
| Total | 117 | 117 |

Source: Walker Consultants/Urban Land Institute, 2019

Figure 32 displays the demand fluctuations for the proposed land uses throughout an entire year for the design day (85th percentile) scenario, showing that April is the likely peak parking demand month. The graph displays the fluidity of demand based on the uses and adjustments factored into the analysis.

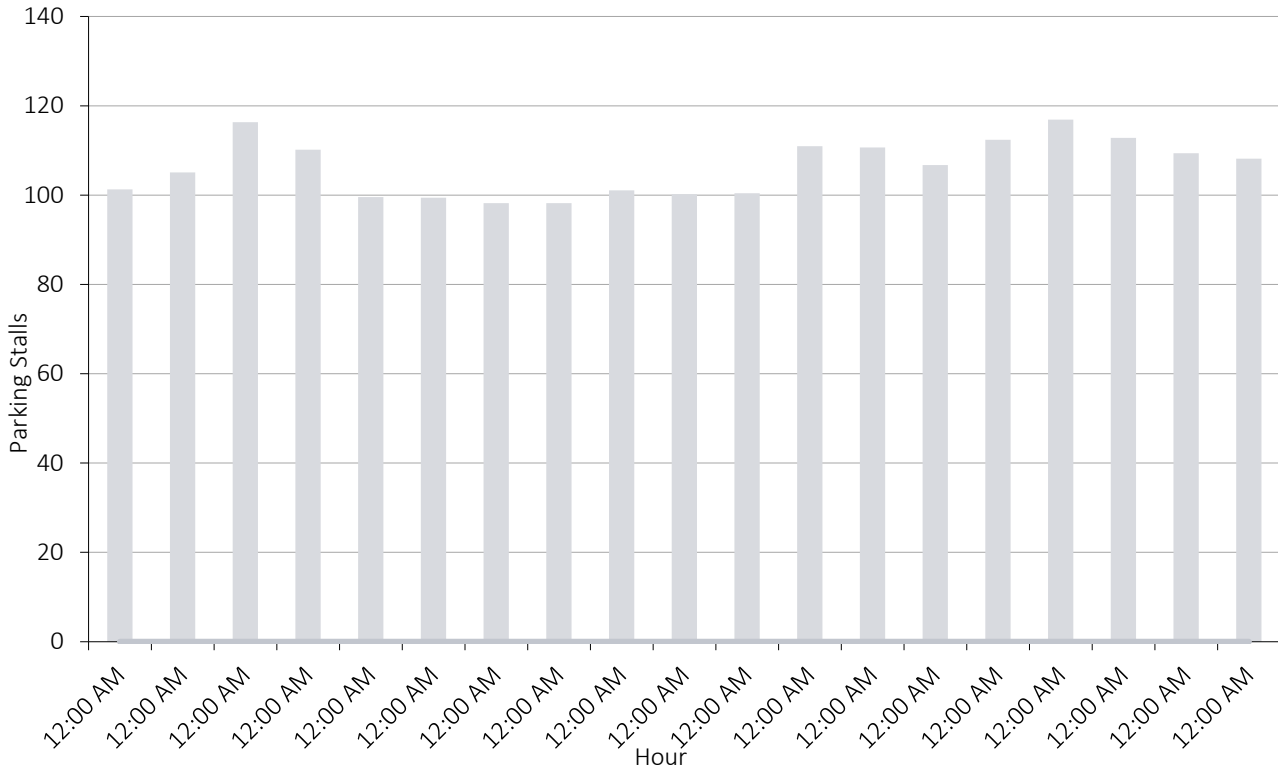
Figure 32: Recommended Weekday Supply by Month



Source: Walker Consultants/Urban Land Institute, 2019

Figure 33 displays the demand fluctuations for the proposed land uses throughout an entire day for the design day (85th percentile) scenario. The graph displays the fluidity of demand based on the uses and adjustments factored into the analysis and shows a likely parking demand peak in the morning and evening.

Figure 33: Recommended Weekday Supply by Hour



Source: Walker Consultants/Urban Land Institute, 2019

05 Recommendations

Recommendations

Based on the existing conditions analysis, review of public outreach results, and parking best practices, Walker developed the following near, mid, and long-term recommendations for parking and transportation improvements in downtown Benicia. These recommendations take a comprehensive and holistic approach to planning for parking and transportation in downtown Benicia.

When considering the implementation of these recommendations, it is important to recognize that policy decisions and investments made today will last for decades. Therefore, those decisions should take into consideration how people will get around in the future and be flexible to adapt as travel behavior changes with the implementation of mobility options that do not involve driving and parking.

Recommendations are categorized along the following timeline:

- **Near-Term:** Strategies that can be implemented in the next six months to one year.
- **Medium-Term:** Strategies and infrastructure that can be implemented within one to two years.
- **Long-Term:** Strategies and infrastructure that can be implemented over the next five years or more, some of which coincide with City development (for example developing the East E Street parking lot).

Table 11 provides a summary of the recommendations provided in this report. The following sections include details for each recommendation.

Table 11: Summary of Recommendations

| Timeframe | Strategy | Implementation | Goals |
|-----------------------------------|---|--|--|
| Near-Term (6 months to 1 year) | Enforcement | Parking Ambassadors Program | Enforce 3-hr. time limit on First Street in a customer service-oriented manner, increase the turnover of spaces and parking capacity, deter long-term parkers from using customer spaces |
| | Regulations | Retain existing 3-hr. time limit | Provides sufficient time to accommodate the majority of downtown visitors' various activities, dining, shopping, and walking along the waterfront |
| | | Continue providing some short-term 30-minute spaces | Allow convenient parking for quick visits. There is currently an adequate number of these spaces |
| | Employee Parking Plan | Implement an employee parking program -Park employees in underutilized parking -Create an Employee Parking Management Plan | Preserves the most in-demand parking areas on First Street for customers and visitors |
| | Shared Parking | Public-private partnerships with private lots for employee and special event parking | Maximize all the space (public and private) dedicated to parking in downtown Benicia |
| | Wayfinding | Update parking signage and wayfinding with larger, more prominent signs | Directs visitors to available parking, increases parking ease and convenience, reduces circling |
| | New Mobility | Partner with Sol Trans or the Solano County Transportation Authority to implement docked bikeshare or dockless bike or scooter share program | Promote alternative modes of transportation and reduce the need for parking |
| | ADA Parking | Provide more ADA spaces on and near First Street | Provide adequate parking for all users |
| Parklets | Implement a parklet or flex space program | Create a comfortable pedestrian environment and encourage walking, promote economic development | |

| Timeframe | Strategy | Implementation | Goals |
|---------------------------------|----------------------------|---|--|
| | Pave existing parking lots | Pave existing parking lots to create a more comfortable environment for parkers -East B & East E Street Lots (if no development) | Encourage the utilization of existing parking facilities |
| Mid-term (1 to 2 years) | Additional parking | Create angled parking on East D, F, and H Streets (gain roughly 124± new parking spaces) | Create additional parking capacity |
| | Curb Management | Create pick-up and drop-off space for Transportation Network Companies (Uber and Lyft) when TNC activities increase | Promote safety |
| | Bicycle Infrastructure | Reconfigure First Street to include bike lanes | Promote alternative modes of transportation and reduce the need for parking |
| Long-term (3 to 5 years) | Event Parking | If the City develops the East E Street Lot, an event parking plan should be developed -Public-private partnerships to share parking with private facilities -Direct event parkers to underutilized streets and lots | Maximize all of the space (public and private) dedicated to parking in Downtown Benicia |
| | Back-in Angle Parking | Consider reconfiguring First Street to back-in angle parking with bike lanes | Provide more parking on First Street while improving bike and pedestrian friendliness and safety; encourage travel by other non-auto modes |

Source: Walker Consultants, 2019

Near-Term Recommendations

1. Enforcement

Currently, there is little to no enforcement of the existing three-hour time limit on First Street. Enforcement is primarily done via posted signs showing the limit, with no enforcement officers checking to see if parkers are abiding by the regulations. As a result, several long-term parkers, likely employees, are parking on First Street, utilizing these spaces for four or more hours. This limits the supply of prime parking spaces on First Street to customers and visitors downtown. The existing conditions analysis in Section 1 of this report showed that approximately 40± vehicles are being parking on First Street. **Increasing enforcement of the existing three-hour limit would assist in deterring long-term parking and open approximately 40± spaces on First Street to downtown visitors and customers.**

Parking on First Street is a finite commodity. Enforcing the three-hour restriction will encourage greater parking turnover and increased the capacity of the most in-demand spaces, as well as the number of people who are able to park in front of storefronts. This will allow more vehicles to park during the day in the most desirable locations and will encourage downtown employees and other long-term parkers to use parking spaces on the periphery that may otherwise sit empty.

There are varying types of enforcement options to consider. Since patrons of downtown use these spaces to access shopping, dining, and businesses downtown, it is important to find a balance with enforcement to deter unwanted parking behavior as well as not penalizing customers shopping in downtown.

Parking Ambassadors

To make enforcement a more acceptable program, **Walker recommends that the City of Benicia adopt the “Ambassador Program” model for the enforcement areas** such as that used successfully in many other cities across the United States. In addition to the hospitality-oriented nature of the program, Ambassadors are still required to enforce parking regulations.

The mission of an Ambassador Program would be to provide hospitality, tourism, and public safety services to local residents, businesses, and visitors, in addition to enforcing parking regulations. The Ambassadors would be required to complete a multi-faceted training program in hospitality and customer service, emergency response and first aid, public transportation, and city services.

A comfortable and weather-appropriate uniform or other methods to make Ambassadors clearly identifiable would be necessary. However, it is also important that they are not imposing or seem police oriented. The goal is for them to be identifiable but approachable in both how they look and act.

The primary goals of an Ambassador program are to promote the area, resolve concerns, and help make the downtown area a better, safer, and friendlier place to live, visit, shop, and conduct business. Ambassadors should

initiate personal contacts with the parking public (known as “touches”), issue more warnings and slightly fewer citations, and interact with visitors and citizens in a genuinely positive manner.

The vision of the program is to help promote a progressive and dynamic downtown experience. The Ambassadors can accomplish this while providing parking management by monitoring public safety, extending a helping hand in emergency situations, and calling on area merchants on a regular basis.

Beyond enforcing parking regulations, the following are examples of encouraged behaviors of Ambassadors:

- To greet visitors and offer customer service
- To give a friendly face to many people’s initial interaction with the City.
- To give accurate directions to visitors and direct visitors to destinations
- To provide information and explain local traffic and parking regulations to seek voluntary compliance
- To distribute city brochures and maps.

Time Limits

Walker recommends retaining the existing three-hour time limit. The parking turnover analysis conducted by Walker showed that approximately 80% of vehicles were parked for approximately one to two hours. Three hours is anticipated to be sufficient to accommodate the majority of downtown visitors and varying activities – dining, shopping, walking along the waterfront, etc. It is also short enough to deter employees or residents from parking long-term on First Street. However, as tourism and visitor populations increase in downtown Benicia, the City may want to consider lowering the time limit in the future.

Additionally, **the City should continue providing some short-term 30-minute spaces** to allow for quick visits or pickup/drop-off activities in downtown. In general, it was found that people abided by this limit and were not violating the 30-minute limit, leaving these spaces available for those that need short-term parking. Because the 30-minute spaces are available, there is likely enough to satisfy demand.

2. Employee Parking

It was revealed in the existing conditions analysis (Section 1) as well as feedback from community members during outreach that one of the major parking challenges in downtown Benicia is employees of the downtown businesses parking on First Street. It is estimated, based on parking turnover data, that approximately **40+** employee cars are parked for four or more hours on First Street on both weekdays and weekends. Employees parking on First Street reduces the minimal supply of prime parking spaces that could otherwise be used by downtown visitors and customers

Directing employees to long-term spaces preserves the most in-demand parking areas on First Street for customers.

This makes it easier for customers and visitors to park, as well as increases the number of people who can park in front of storefronts by making short-term parking spaces more available through increased turnover.

To assist in alleviating the impacts of employee parking and move employees off of First Street, Walker recommends the following:

Park Employees in Underutilized Downtown Parking

Since on-street parking on First Street comprises downtown Benicia's most prime parking spaces, the City should consider requiring employees to park in underutilized off-street lots and on-street spaces.

East B Street Lot & East E Street Lot

Data collection indicated that the public off-street lot on East B Street (shown as Lot 10 on the study area map in Section 1), near the waterfront, experiences relatively low occupancies throughout the day and during peak hours. With fewer customers utilizing this lot, it is a potential option for employee parking.

Additionally, while there are potential plans to redevelop the E Street public lot, for the near term it will likely continue to remain a parking lot, and is another option for employee parking. This lot was only utilized by a few cars during typical weekday and weekend locations, leaving ample space to park employees of downtown businesses.

Yacht Club Parking

While not included in the study area, it was observed that the Yacht Club parking (400 E Second Street), which is open to the public, has available public parking. This lot has a four-hour limit, with extended hours available with a permit. Although this lot was not analyzed, the City should consider evaluating opportunities to use some of these spaces for employee parking.

On-Street Parking

Additional parking is available off First Street on the side streets as well as **East and West Second Street**. While the spaces just off First Streets, the lettered side streets are typically used by customers and patrons, spaces closer to the end of the blocks, towards Second Street, had notable availability. Additionally, both East and West Second Street only had a few cars parked throughout the day, leaving most of the street open. This may be an additional option to accommodate employee parking. However, it should be noted that these streets are primarily adjacent to residential land uses and the City would want to ensure that any conflicts between residential parking needs and employee parking are managed.

Shared Parking: Public-Private Partnership with Private Lots

The City could enter a public-private partnership with property-owners that have available parking to maximize all of the space dedicated to parking in downtown Benicia. The City would likely need to offer a monetary subsidy that would be mutually beneficial to the private property owner and the City.

The first step in implementing a public-private partnership to share parking is to establish a process to enter a shared parking agreement, including determining available hours, the number of spaces, cost-sharing of utilities, maintenance, and taxes, signage, insurance and indemnification, and enforcement.

One potential opportunity is on East F Street, where a 92-space privately owned surface parking lot serving a multi-use site of businesses and residential units. During the weekday parking occupancy count, this lot experienced its peak parking demand at 12:00 p.m. with 41% of the spaces utilized. It gradually decreased the rest of the day and was only 12% utilized by at 6:00 p.m. On the Saturday weekend count, the lot was only 18% utilized during its peak, at both 10:00 a.m. and 12:00 p.m., and continued to decline throughout out the day, with only a 5% utilization at 6:00 p.m. Less than one-half of this lot is being utilized during peak demand on the weekday, leaving approximately 45± spaces available.

Due to the size of this private lot, and existing conditions revealing that it is relatively underutilized, this lot is a prime location for a public-private partnership between the City and the owner of this lot for long-term employee parking. **If the City could enter into a partnership with the owner, it is recommended that the downtown employees be eligible to park long-term in this lot.**

Employee Parking Management Plan

Even if an employee parking program is implemented, without enforcement, it may be challenging to ensure employees do not park on First Street. **It is recommended that the City ensure employees are not parking on First Street by increasing enforcement (as described above) as well as requiring businesses to provide a parking management plan.**

A parking management plan would be a plan that businesses would develop in order to show how their employees are arriving in downtown and where they will park. This may be done via a mandatory commute survey where every year, businesses issue the survey to their employees and then submit the results to the City. This should also be combined with education and outreach from the City to business owners to share why it is important for employees to not park on First Street and the benefits of moving employee parking off of the main street.

The survey may also assist the City in knowing how many employees are parking in downtown, and over time, to assist in adequate planning and management of employee parking needs.

Employee parking may also be tracked via an employee parking permit. These permits would be issued to employees of downtown with educational materials indicating where they should park with the permit. The City can then track the number of permits issued and conduct counts when needed to understand how many employees need parking in downtown and locations of long-term parking.

Education and Outreach

The City may also partner with downtown businesses, the Chamber of Commerce, and the Downtown Business Alliance to provide education to business owners and employees on why it is bad for business when employees park on First Street. This may also include strategies that owners may use to ensure their employees do not park on First Street and help them identify where they should park.

3. Signage and Wayfinding

During public outreach, it was revealed in the survey responses that providing more signage and wayfinding to available parking is one of the top parking solutions supported by survey participants. To help downtown visitors more easily find available parking, the City should consider updating and providing additional wayfinding signage and features.

Currently, signage is primarily provided via white and green signs with an arrow pointing the direction toward public parking. These signs are somewhat small and appear sun-faded. In order to improve visibility, these signs should be updated with larger, more prominent signs, directing visitors to downtown lots or on-street spaces.

Wayfinding signage should also have a unified look and theme. For example, there are currently no designated names for the existing public lots. Creating names for these lots based on either the streets they are located or numbering system, e.g. Lot 1, Lot 2, etc., could help visitors better locate these facilities.

Figure 34 provides an example of the City of Santa Barbara's downtown parking and wayfinding signage system. As shown in the figure, it has a unified theme as well as a naming convention for its public lots.

Figure 34: Example of Parking Wayfinding Signage



Source: Hunt Design accessed via <https://www.huntdesign.com/projects/signage-wayfinding/cities/santa-barbara-signage-wayfinding/>, 2019

4. Additional ADA Spaces

During outreach, some community members expressed a desire for more ADA spaces. If additional spaces were created through angled parking on side streets, this also provides the opportunity to create more ADA spaces, especially spaces closest to First Street. Opportunities to add more ADA spaces on First Street should also be explored. **The City should consider completing a comprehensive review of downtown ADA parking to identify key areas for additional spaces.**

5. Flex Space/Parklets

The City of Benicia expressed interest in exploring the opportunity to allow for flex space, also known as parklets, in downtown. **A parklet reimagines on-street parking as places to “park” people instead of cars, expanding the sidewalk into one or more on-street parking spaces.** The intent of parklets is to provide more space for people and people-oriented activity. Flex space provides the opportunity to provide street amenities such as seating, landscaping, public art, bicycle parking, among others.

Similar to a public park, flex space is typically open to the public and allows for a free flow of community activity. Many cities across the country have implemented flex space in varying capacities with great success in generating community and economic development by attracting more people to retail corridors where they are shopping, people watching or just plain having fun. Businesses have reported a 10% to 20% increase in sales when parklets were built.⁶ Further, studies have shown that parklets can activate a commercial district by encouraging people to visit when they otherwise would stay home.

⁶ Metropolitan Planning Council study of Chicago’s People Spots, 2014 available at www.metroplanning.org/peoplespots

Figure 35: Parklet with Outdoor Seating and Bike Parking Example



Given that First Street is a relatively long street for walking, there is an opportunity to use a parklet to create a more comfortable pedestrian experience, allowing pedestrians a place to rest and relax.

Further, given that outdoor dining areas on First Street can block pedestrian access, moving dining areas to a parklet opens the sidewalk back to pedestrians.

The City can partner with local businesses and other organizations to lease the right-of-way and create flex spaces that provide additional outdoor seating for a restaurant or provide additional public space. A similar program in Portland, Oregon, called the Street Seat Program, allows businesses and non-profits to build flex spaces based on City approval for a fee of \$5,520. Flex spaces work well outside of existing restaurants or cafes, especially those with no cost Wi-Fi. The City can partner with these locations to assist in the responsibilities and upkeep of the space (e.g. taking in chairs, move dining tables, etc.). Flex spaces should be ADA accessible and outfitted with seating and planters to provide a barrier to the street.

Beyond just dining or sitting, flex spaces may be used for bike or scooter parking. Some flex spaces may be designed to allow for a combination of both seating and parking for bikes or scooters.

Some additional benefits of flex space include:

- Flex space increases foot traffic around nearby businesses, providing a positive economic impact
- Can provide a traffic-calming effect on the street

- Enhanced pedestrian experience
- Increase sense of place and community

Figure 36: Flex Space Example



If it is the community's desire to retain parking on First Street, flex spaces may also be considered alongside streets, just off First Street. This provides additional public space while still being within close proximity to the commercial downtown.

Based on field observations by Walker, potential locations to consider a flex space include the locations in front or adjacent to:

- Farm & Flour
 - A flex space either in front of the café (where the existing 30-minute) space is or on East G Street, bordering the southern end of the restaurant. Currently on East G Street, a Farm & Flour truck parks at the corner of First Street/East G Street. This could also be a potential location for flex space.
 - Farm & Flour already provides some outdoor street seating on East G Street that appeared to be highly used. With the popularity of this café, additional seating within close proximity would likely be used.

- One House Bakery
 - One House Bakery is another popular bakery and café on First Street. Flex space in front of the bakery could provide additional seating for the bakery as well as provide space along First Street for people to gather.
- Double Rainbow Café
 - Double Rainbow Café is an ice cream shop on First Street. This shop is primarily neighbored by offices, with little to no outdoor seating areas. Walker staff observed several people sitting along ledges and stone planters while enjoying ice cream near this location. This indicates a potential need for some seating or outdoor dining space in this location.

In general, the City may approach one of these businesses to partner in providing flex space, or the City may allow businesses to approach them if they are interested in a flex space in front of or near their establishment.

6. New Mobility and Alternative Modes of Travel

Downtown Benicia is a walkable and bikeable community with generally temperate weather throughout the year. With these features and its scenic views, downtown Benicia is the ideal location to prioritize non-driving modes of travel. With over 80% of survey participants indicating that they arrive in Benicia by car, the City should work toward providing additional amenities to encourage alternative modes of travel. Additionally, these types of amenities will also help the city achieve a “park once” downtown environment where visitors only need to park their car in one location and use other modes (walk, bike, scooter, etc.) to travel between destinations rather than moving their car.

In general, **the street is currently designed to prioritize automobile travel** with wide travel lanes and curb space entirely devoted to parking. Providing facilities for new mobility services and alternative modes may help encourage visitors and employees of downtown to consider other methods of travel beyond their car.

Additionally, First Street is approximately 0.7 miles long, from the city park at First Street/K Street to Benicia Point. This is just over what is considered a comfortable walking distance of 0.5 miles. With the relatively long length of First Street, the City should consider providing methods of travel on First Street beyond driving that will assist visitors in traveling from one end to the other without having to move their cars.

Bikeshare and Dockless Micromobility

Docked Bikeshare

Implementing a bikeshare system will increase mobility options for residents and visitors to travel around downtown Benicia and would help connect locations along First Street. The City should undertake a study to create a business plan for implementing a docked bikeshare system. This includes determining the appropriate scale for the system, the operational model, and working with the community to determine station locations. The National Association of City Transportation Officials (NACTO) has found that to be successful, bike share stations should be placed within an easy, 3-5 minute walking distance. A docked bikeshare system has the advantages of maintaining

order, as the bikes must be parked at stations, and is easier to enforce over a dockless station, where bikes could realistically be parked anywhere and block pedestrian access. The City could explore partnering with SolTrans or the Solano County Transportation Authority to implement a docked bikeshare system and assist with funding and administration.

Dockless Micromobility

The City should also consider a dockless bike or scooter share system. In the last year, both dockless bikes and scooters have become popular modes of travel. These modes provide flexibility in how they are used and accessed. Since they do not have to be parked at a station, users can typically locate the nearest bike or scooter via a mobile application (app). This is a major benefit when compared to a typical bike share that requires users to return the bike to a designated docking station. A designated docking station may severely limit how far users may travel as they will only be able to travel to areas with stations, likely limiting them to only a block or two from their location.

The intent of these programs is to provide mobility services for people, especially those who lack transit access. Additionally, since these bikes and scooters are typically motorized, they make traveling on an incline easier (traveling north from Benicia Point to the park would require riding up a slight incline).

While these vehicles do not need to be parked at a designated dock or station, to ensure that they do not end up blocking the sidewalk, designated scooter and bike corrals should be provided in popular, high-pedestrian areas. These may be just painted on a sidewalk or be provided in a flex space on the street (shown in Figure 37).

Figure 37: Dockless Vehicle Parking Example



Given Benicia's size, the City could partner with SolTrans or the Solano County Transportation Authority to implement a bike or scooter share program and assist with funding and administration.

When implementing a dockless vehicle program, there is an opportunity to generate fees associated with permits and trips. Typical fees in cities across the country range from a per-unit fee of \$30/unit to \$80/unit into a per-trip surcharge of \$0.25. There are typically permit fees and performance bond requirements, which must be paid in advance of permit approval. These fees can help offset administrative costs. Cities have reported a significant amount of administrative time allocated to managing dockless mobility programs. Some cities have one person dedicated to program management and others allocate management across several staff. **If Benicia were to implement a dockless vehicle program, the City would need to enact policy and regulations around permitting operators, total number of vehicles allowed in operations, insurance requirements, data privacy and sharing, fees, compliance, and rider regulations.**

Medium-Term Recommendations

1. Paving Existing Public Lots

Community outreach efforts revealed that several community members would like the City to pave the existing public parking lots on East E Street and East B Street, which are currently dirt lots. There is discomfort with the terrain and dust that is created as a result of the existing conditions. **The City should consider interim paving the East B Street lot⁷ and, if not moving forward with development, the East E Street lot.** pavement should be designed in such a way that it will create a more comfortable environment for parkers in these lots while also being easily removable in the event of redevelopment.

2. Opportunities for Additional Parking

With a potential loss of parking from the redevelopment of the East E Street Lot, the City may consider exploring opportunities to add additional parking spaces in downtown.

Additional Angled Parking

Currently, angled parking exists on West H Street, West and East F Street, and West D Street. **Converting additional on-street parallel parking to angled parking has the potential to add significantly more parking to the street.** Since there are limited land opportunities to add any additional public parking lots, and the capital and operations expense of additional parking facilities would outweigh the benefits, given there is ample available parking, increasing the capacity of street parking would be a more suitable option within downtown Benicia.

Walker estimates a right of way of at least 50 feet is necessary for a street to be a candidate for angled parking. Based on measured street widths, with each street having 50 feet or more of width, potential streets that could be considered for new angled parking include:

- **East D Street** – East D Street currently has a supply of approximately 54_± spaces. With angled parking, it's estimated that the street could accommodate 100_± spaces. This would add 46_± new spaces.
- **East F Street** – Approximately one-half of East F Street already has angled parking. This could be extended to the eastern half of the street. There are currently approximately 66_± spaces on East F Street. Approximately 16_± of these spaces are parallel on-street spaces. If these parallel spaces were converted to angled, it is estimated that approximately 40_± angled spaces could be created. This would result in a net increase of 24_± new spaces.

⁷ The City of Benicia Urban Waterfront Enhancement and Master Plan also recommends to pave the B Street Lot. Page 4-6 of the Plan states: *Parking: The existing gravel parking lot will be replaced by diagonal parking along the south side of B Street, which will provide roughly 60 parking spots for park visitors. A sidewalk between the parking spaces and the rain gardens will provide a transition from the parking area to the multi-use path, as well as the expanded Green. The parking area along the east end of B Street will also be formalized with curbs, lighting that complements existing nearby lighting, and lane and parking space striping. Approximately 45 parallel spaces will continue to be accommodated on the north side of the street.*

- **East H Street** – East H Street has approximately 46± existing parallel spaces. If these spaces were converted to angled parking, it's estimated that capacity could increase to 100± spaces, with 54± net new spaces.⁸

Based on these approximations, **it's estimated that through additional angled parking, the City could gain roughly 124± new spaces.**⁹ In general, approximately 100 feet of curb space equates to 10 angled spaces and only four or five parallel spaces (depending on the size of the cars parked). The City should continue to explore opportunities to add angled spaces to increase capacity as needed.

Walker does not recommend pull-in angled parking on First Street. While angled parking has the potential to add notable capacity, its major drawback is that it makes the street less bike friendly. Angled parking requires vehicles to back out of a space, providing less visibility of bikes traveling up and down First Street. It is recommended that bike travel on First Street continue to be prioritized over adding capacity through angled parking. **Angled parking on First Street should only be considered if it is designed as back-in angled parking,** which is discussed in the Long-Term Strategies section (see page 67).

Regulating Oversized Vehicles

It was noted by several community members during outreach efforts that large vehicles parking in the existing angled spaces are challenging to navigate around as they typically extend past the designated parking space into the travel way. This could be rectified through increased enforcement with warnings issued to oversized vehicles notifying owners that if their car does not fit in the space, it should park elsewhere (in a surface lot or parallel parking space). This could be included as part of the parking ambassador program recommended.

New Parking Facilities

Some online survey respondents stated the City should build a new parking facility (for example a parking garage or another surface lot). **Walker does not recommend the City build a new parking facility.** Most customers and visitors to downtown Benicia choose to park on First Street near their destination (and most reported they are able to find parking relatively quickly). Considering existing surface parking lots go underutilized most of the day, it is likely any new facility would follow the same parking patterns.

Further, the significant capital and operations cost of building a new parking facility would outweigh the public benefit, given the availability of existing downtown parking. Instead, the City should implement an employee parking program, create public-private partnerships to share parking, enforce existing regulations, and encourage alternative modes of transportation to better manage parking demand. Further, implementing a dockless bikes-hare program could encourage the use of parking on Second Street, which has a significant amount of available spaces throughout the day.

⁸ Note that the draft Solano Transportation Authority Active Transportation Plan calls for a bike lane on East H Street, which could limit the potential for angled parking in the right-of-way.

⁹ Additional parking spaces from angled parking are approximates. The City should undertake a comprehensive review to determine exact numbers and evaluate feasibility of conversion.

3. Pickup/Drop-off Space

While activity by Transportation Network Companies (TNCs), such as Uber and Lyft, is relatively low in downtown Benicia, the rise in TNC usage is dramatically rising across the country. Both large and small cities are seeing an uptick in TNCs as a mode of travel.

Downtown Benicia has been seeing an increase in restaurants, bars, and nightlife within downtown. With these types of activities, the use of TNCs to arrive or depart a destination is likely to increase. While usage is minimal now, it is important for the City to consider how these uses may impact future travel in downtown.

The biggest impact of TNCs is typically the number of pickup/drop-offs these services conduct. If there is not a designated space for this, TNCs often double park or park illegally, potentially causing safety hazards or blocking travel lanes. When TNC activity increases, **the City should consider providing designated pickup/drop-off space along First Street** to aid in deterring illegal parking or stopping by TNC vehicles.

These pickup/drop-off zones may also be utilized by deliveries during off-peak hours, which may also help ensure that delivery trucks and drivers do not block travel lanes and have a safe space to unload.

Since First Street is approximately 0.7 miles long, a pickup/drop-off space should be provided in at least two or three locations to provide service to both ends of downtown.



4. Special Event Parking

It is understood that the potential redevelopment of the E Street Lot may have a significant impact on those who utilize the lot for special event parking. Outside of special events, this lot experiences very low utilization during typical weekdays and weekends, with only a few cars at any given time.

With the lot's close proximity to downtown and low utilizations, it is reasonable to consider this lot for uses other than parking. However, with the high demands experienced during special events, such as the Thursday Farmer's Market, it is important to plan for how this parking will be redistributed in downtown on these event days. It is assumed that any new development on this site would self-park and not spill over into the public supply.

Event Parking Management Plan

The City should consider developing a parking management plan specifically for events. This plan may include designated areas visitors will be encouraged to park during these events. If the City develops the East E Street lot, it will likely need to accommodate approximately 107± vehicles (the number of vehicles parked during peak parking for the Thursday Farmer's Market).

Public-Private Partnerships

As part of this plan, the City should encourage developing public-private partnerships with privately-owned parking lots to assist with event parking. As mentioned in the employee parking section above, some of the East F Street lot could be utilized during events. This lot experiences relatively low occupancies in the afternoon and evening hours. During the 2:00 p.m. to 4:00 p.m. count, only 33 spaces were utilized (36%), and 31 from 4:00 p.m. to 6:00 p.m. (34%). With Farmer's Market beginning at 4:00 p.m., this lot could be incrementally opened up to Farmer's Market visitors or vendors as other businesses that use this lot during the early weekday hours begin to leave. With 92 spaces available in this lot, and only approximately 10 spaces utilized after 6:00 p.m., it is estimated that at least 50 to 80 Farmer's Market visitors could use this lot throughout the evening. However, if downtown employees are given permits for this lot, this number may be lower depending on how many spaces are reserved for employees during these hours.

Just north of downtown is Solano Square is a shopping center that hosts a Safeway, Rite Aid, and several small stores and restaurants. When conducting field data collection, Walker observed available parking in Solano Square's large parking lot (this lot was not included in the analysis area and therefore was not counted). This is another potential lot that could be ideal for a public-private partnership to provide additional parking during events. The City could request to lease a set number of designated spaces.

Underutilized Streets and Lots

East and West Second Streets both experienced low occupancies throughout the day on both weekdays and weekends. These streets may also be possible locations for visitors to park during events. During the peak, there were approximately 200 parking spaces available on East and West Second Streets.

Additionally, the public lot at Benicia Point along the waterfront also experienced low occupancies throughout the day and may be a good space to encourage visitors to park during events.

Further, there are several City-owned parking lots in the area between Military and K Street and West and East 2nd Street that may go underutilized during peak parking times.¹⁰ When not in use by the park and Civic Center, the City should consider opening these lots to the public to accommodate peak parking demand on evenings and weekends and during special events. Further, the City could explore a partnerships with the Veterans Memorial Hall to find opportunities to open their parking lot to the public.

Additional Parking Supply

As described previously, if new angled spaces are created in downtown on side streets, this would increase the overall supply in downtown. This increase in spaces could off-set the loss of parking in the E Street lot during events.

¹⁰ This area was outside of Walker's study area, however through discussions with the City Walker understands there are opportunities for additional customer and visitor parking during peak times and special events.

Long-Term Strategies

1. Bike Lanes on First Street

Currently, First Street from E Street to the Peninsula Pier is a designated bike route. However, the entire First Street corridor currently has bicycle lane infrastructure indicated via shared lane markings on First Street (bike sharrows) and signage. With the existing bicycle activity as well as the potential of increased cyclists from the Carquinez Straight Scenic Loop Trail bike trail alignment that is expected to increase bicycle tourism as well as additional dockless bike and scooter activity, **the City should consider reconfiguring First Street to include bike lanes.**

Generally, First Street has approximately 80 feet of right-of-way. This includes two 16-foot travel lanes and two 15-foot sidewalks, and two nine-foot wide parking lanes along the curb. Based on a preliminary review, this is sufficient space to provide bike lanes by restriping the roadway.

Using the tool Streetmix, Walker developed a high-level, conceptual mockup of adding bike lanes to First Street. It is recommended that these lanes border the curb, with parking used as a buffer between the bike lane and travel lane. This provides an additional level of protection for cyclists from vehicles traveling on First Street. However, if parking along the curb is maintained or if flex space/parklets are considered on First Street along the curb, bike lanes should be designed between the travel lane and parking lane. **In general, it is recommended that any configuration of bike lanes include a buffer between the bike lane and travel lane.** An example is shown in Figure 38.

A two-way cycle track could also be potentially provided on one side of the street, though it would provide bicycle travel in both directions.

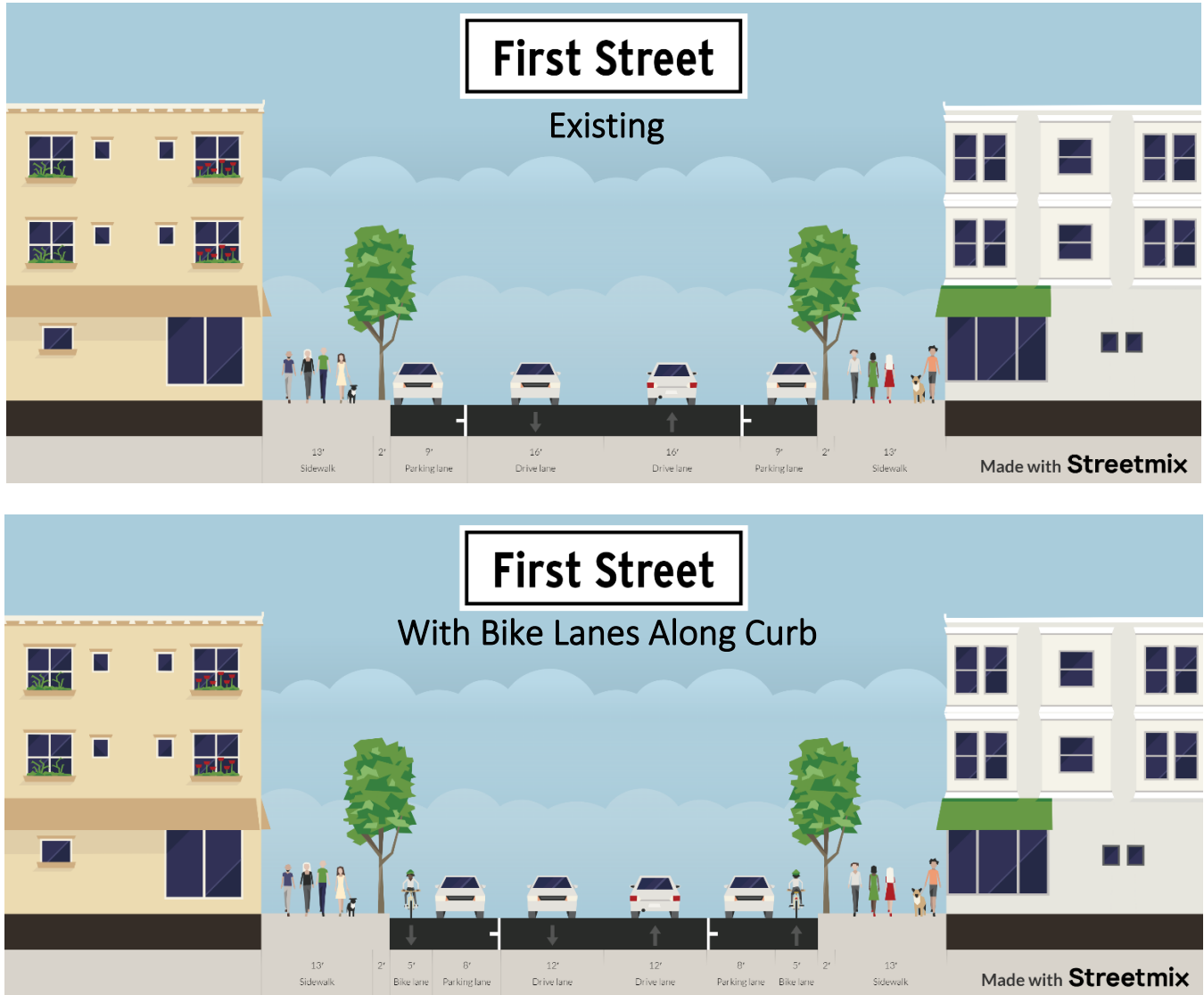
Figure 38: Example of Buffered Bike Lane



Source: www.pedibikeimages.org/DanBurden

Adding bike lanes on First Street would require slightly reducing the width of both the travel and parking lanes. However, providing designated bike lanes will create a more comfortable biking environment and help encourage the use of these modes as well as reduce the need for driving and parking. Bike lanes would also provide street calming effects, helping reduce speeds of vehicles on the roadway, which creates a more comfortable environment for both bikers and pedestrians. Figure 39 provides a conceptual graphic comparing the existing configuration of First Street and First Street with bike lanes, created using Streetmix.

Figure 39: First Street Bikes Lanes Conceptual Mockup



Source: Streetmix, 2019; Walker Consultants, 2019

In general, the City has a notable amount of right-of-way on First Street to provide premium bike and pedestrian facilities. The City should work closely with transportation planners and engineers to develop and evaluate various alternatives and bike configurations on the roadway. This is in line with existing plans including the draft Solano Transportation Authority Active Transportation Plan that calls for a Class IV separated bike lane on First Street.

Back-In Angle Parking with Bike Lanes

Another option the City of Benicia should consider is converting parking on First Street to back-in angle parking. Back-in angle parking is designed similarly to a typical, pull-in, angled space, except that vehicles back-in to the

space instead of pulling in. To back-in to a space, vehicles stop and signal that they are going to park in that space, then pull slightly past the space, and finally back-in to the space.

Back-in angle parking has numerous benefits. For starters, it creates more bike and pedestrian-friendly streets while still being able to provide more parking capacity.

According to the Pedestrian and Bicycle Information Center (PBIC)¹¹, back-in angled parking has the following benefits:

- Provides motorists with better vision of bicyclists, pedestrians, cars, and trucks as they exit a parking space and enter moving traffic.
- Eliminates some risks associated with parallel parking, e.g. motorist may open the car door into the path of a bicyclist.
- Removes difficulty for drivers, especially older drivers, when backing into moving traffic.
- Increased parking capacity (10 to 12 feet of curb space per vehicle versus 22 feet for parallel spaces).
- Clear sightlines when pulling out.
- Ease of loading and unloading cargo and children in/out of car seats. Trunks of cars are now facing the sidewalk versus the street with on-coming traffic.
- Protection for children because the open car door now directs young children back to point of safety rather than out into the street.

Additional benefits include:

- Back-in parking helps visually narrow the roadway, providing a traffic-calming effect, reducing speeds.
- Decrease in collisions as drivers no longer have to back out blindly.
- Increase in space as back-in parking does not require as much space to maneuver as traditional angle parking, which may increase number of spaces or additional room for sidewalks, bike lanes, etc.

An example of back-in parking with bike lanes, located on Old Roadway Highway in Windsor, California, is shown in Figure 40.

¹¹ The Pedestrian and Bicycle Information Center (PBIC) is a government organization supported by the Federal Highway Administration (FHWA) and the National Highway Traffic Safety Administration (NHTSA) and housed within the UNC Highway Safety Research Center. Their mission has been to improve quality of life in communities through the increase of safe walking and bicycling as a viable means of transportation and physical activity.

Figure 40: Back-In Angle Parking with Bike Lanes Example - Windsor, CA



Source: *Google Maps*, 2019

Back-in parking may also be designed with the bike lane along the curb, using the parking as a buffer between bikes and traffic. This is shown in an example from San Francisco, California, in Figure 41.

Figure 41: Back-in Angle Parking Example - San Francisco, CA



Source: SFMTA accessed via: <https://www.sfmta.com/blog/back-angled-parking-meets-bike-lane>, 2019

The biggest challenge of back-in parking is educating community members. Signage should be provided indicating that the spaces are back-in only and the step-by-step process of how to park in the space.

The City may also provide educational materials prior to the implementation of back-in materials to inform the community when it will be implemented and how to properly park. Parking ambassadors may also assist during initial implementation in directing people in how to park and be available for questions.

In general, back-in angled parking requires very similar maneuvers as parallel parking. So, while the style of parking would likely be intimidating and unfamiliar to parkers using it the first time, they would likely gradually be able to learn and adjust to this type of parking, just as they did while learning to parallel park.

Back-in angle parking may also be considered on side-streets. The PBIC recommends installing back-in parking first on side-streets in order to give the community time to adjust and learn to park correctly in these spaces. Once the

community is comfortable with how to park in back-in spaces on a lower volume street, it may then be implemented on main streets with greater ease of adoption.

An example of the type of signage that should be provided with back-in parking is shown in Figure 42.

Figure 42: Back-In Parking Signage Example



Pilot Projects

One of the most effective methods of presenting new treatment options on the roadway is to organize a pilot program and test of the proposed changes, such as parklets and bike lanes. This would include a temporary installation of the proposed treatment.

A pilot program would allow community members to interact and engage with the treatment and provide feedback on their experience. This feedback would allow for adjustments to be made to the proposed treatment in order to best serve the corridor and community prior to more permanent implementation. Opportunities for pilot projects include:

- **Flex Spaces:** Test flex spaces with businesses and other entities for a six to nine month trial. The City could also partner with Benicia High School or another entity to have a “Park (ing) Day” contest. Park (ing) Day is a grass-roots event where people redesign parking spaces into places for people for a few hours of the day. The redesign uses low-cost temporary materials such as AstroTurf and lawn chairs.

- **Bike Infrastructure:** Setting temporary bike lanes using paint, traffic cones, and/or plastic removable bollards to evaluate needs, use, and any issues before permanent implementation.
- **Parking Ambassador:** A one-year parking ambassador program to determine the effect in moving long-term parkers off of First Street.
- **Employee Parking Plan:** Phasing an employee parking plan with ten businesses to understand where employees park and evaluate effect before rolling out downtown-wide.

Figure 43: Example of Bike Lane Pilot



Source: BikeArlington.

Figure 44: Example of a Temporary Flex Space Using Astroturf and Lawn Furniture



Source: Streetsblog.



Appendix A – Parking Occupancy Counts

Appendix B – Online Survey Results

