Town of Truckee, CA

Parking Action Plan

November 2019

DIXON
RESOURCES UNLIMITED

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1.0 Executive Summary

Dixon Resources Unlimited (DIXON) was selected by the Town of Truckee (Town) in May 2019 to complete a Downtown Parking District Analysis and Strategic Plan. DIXON has prepared this Parking Action Plan (PAP) on behalf of the Town to outline the recommended implementation steps and strategies to optimize the parking operation.

Input was received during a variety of meetings with internal Town staff and external community stakeholders, including in-person downtown business employee surveys and an online community survey. Over the course of the study, on- and off-street parking occupancy and turnover data were collected in the Downtown Parking District (District) during July and September.

This PAP was developed based upon a collaborate effort between various Town Departments, extensive stakeholder outreach, parking data collection, industry best practices, and the following set of overarching program priorities:

Priority	Definition
1. Customer service	The Town aims to improve customer service with parking programs and technology in order to improve the overall user experience.
2. Technology	By updating existing systems and introducing new technology, the Town can optimize program efficiency and effectiveness while providing new features and options.
3. Inventory	The Town aims to manage existing and plan for future parking inventory as the Town continues to grow.
4. Sustainability	As Truckee grows and changes, the Town intends to make updates throughout the Downtown Parking District to ensure overall sustainability from finances to branding and marketing.
5. Mobility	To support transportation to and throughout Downtown Truckee, the Town can provide and aid alternative transportation modes, such as buses and bikes.

The PAP is organized based upon near-, mid-, and long-term strategies and considers the unique parking and mobility challenges in Truckee. Parking is a key component of the Town's growth and continued popularity.

In the near-term, it is recommended that the Town require active loading and unloading within loading zones, update the Town parking webpage, increase the In-Lieu fee for parking spaces, develop a shared parking policy framework, establish a new Town parking brand, update static wayfinding signage, create a shared mobility device permit program, and implement the following technologies:

- License Plate Recognition (LPR),
- Mobile payment throughout the entire District,

- Automated permit management system, and
- New citation management technology.

In the mid-term, it is recommended that the Town adjust operating hours to align with peak periods, adjust on- and off-street paid parking rates, hire additional seasonal Parking Enforcement Officers, consider limiting commercial loading before 10 AM, develop a valet program, utilize a carpooling permit program for downtown employees, offer a low-income permit rate, explore shared parking opportunities, charge a public rate in all electric vehicle charging stalls, promote and optimize alternative modes of transportation during special events, and offer an on-demand or fixed-route shuttle program.

Long-term recommendations include making necessary technological and physical updates to the parking program. Such updates to consider include ongoing upkeep and maintenance of existing parking supply, assessing opportunities for remote employee parking supported by a shuttle, and creating new parking supply within the District (if necessary).

For every strategy, the Town should take a proactive approach to parking management that includes ongoing consideration for data-driven decisions, stakeholder feedback, technology, and transportation demand management.

2.0 Introduction

2.1 Project Overview

This Parking Action Plan (PAP) includes an assessment of the current operation and incorporates stakeholder feedback, industry best practices, and relevant case studies to justify near-, mid-, and long-term strategies recommended to optimize the parking program in Downtown Truckee.

2.2 Program Priorities

The overarching program priorities that guided the development of the PAP strategies are:

1. Technology,
2. Customer service,
3. Inventory,
4. Sustainability, and
5. Mobility.

The recommendations included in this PAP have been organized by their primary priority in Appendix A. However, each recommendation can work to achieve multiple priorities. Each recommendation table lists first the primary priority of the recommendation and then lists other relevant priorities, showcasing the overlapping nature of the program priorities.

2.3 Background Information

2.3.1 Downtown Parking District

The Truckee Downtown Parking District (District) is funded through an enterprise fund. Enterprise funds area used to account for activities that area supported primarily through user charges to external users. The Parking Fund accrues revenue through the collection of fines, DMV holds, interest income, various parking fees, and fund transfers from the State of California for snow removal.

The Parking Fund pays a rental charge based on the average base commercial square foot rental rate for commercial real estate within Truckee. The rental charge also considers the maintenance cost, including utilities, of commercial real estate within Truckee.

The District's mission statement (Resolution No. 2009-69) is the following: "The purpose of the District is to maximize efficient use of the parking in Downtown Truckee, to encourage turnover of parking spaces, to discourage abuse by long-term parkers, and to ensure the parking system is accessible to handicapped individuals. Town staff shall accomplish this by effectively planning, communicating and coordinating with parking customers, merchants, employees, visitors,

residents, and Town Council to identify parking-related needs and to propose solutions, policies, and projects that maintain the viability and financial solvency of the existing Downtown Paid Parking Program that achieves the long-term Town Council goal of eliminating taxpayer subsidy to Downtown Parking District operations."

2.3.2 2004 Downtown Parking Study

The 2004 Truckee Downtown Parking Study surveyed parking utilization. Findings from the 2004 Downtown Parking Study revealed the opportunity to increase turnover and utilization of the downtown parking supply. The peak hour of parking demand (1 PM to 2 PM) had a utilization rate of 80% on Thursday and 76% on Saturday. The 2004 study recommended increasing short-term parking availability, developing employee parking facilities, actively enforcing parking regulations, updating the municipal code, and updating the fine schedule.

2.3.3 2009 Parking Structure Feasibility Study

The 2009 Parking Structure Feasibility Study (2009 Study) evaluated Downtown Truckee's physical ability to accommodate a parking structure and assessed possible locations for construction. The 2009 Study found that the overall downtown area has ample parking, but areas close to the Commercial Core (Donner Pass Road between Spring Street and Bridge Street) are in high demand during peak periods. Recommendations include construction of a parking structure on the southwest corner of Jibboom Street and Bridge Street, where the Post Office is currently located.

2.3.4 2010 Parking Working Group

Starting in November 2010, a Parking Working Group convened. In order to join the Parking Working Group, interested individuals were required to submit an application to the Town. The Parking Working Group was comprised of residents, business owners, and Town staff. This group met for eight months and worked toward the goals of the Town Council to determine how to generate an additional $125,000 annually to fund the downtown parking program. The Parking Working Group presented the following recommendations to the Town Council in May 2011:

- Near term parking management program modifications:
    - Replace the current hourly progressive rate structure with an hourly flat rate of $1.50/hr.
    - In the Beacon parking lot, replace paid parking with 2-hour free parking.
    - Allow all-day employee parking in the Beacon parking lot with an employee permit.
    - Do not allow all-day employee parking on Jibboom Street.
    - Eliminate the $2.00 minimum charge for credit card payments.
    - Terminate the Catholic Church parking lot lease.
    - Implement an aggressive and effective public outreach program regarding downtown parking.

  - Continue to reduce Parking District budget expenses as practicable in the personnel, service, and supplies budget categories.

- Long term parking management program modifications:
  - Provide additional free parking opportunities on West River Street, Jibboom Street or Church Street as funding allows.
  - Consider a first-time warning program if new funding sources are identified.
  - Replace the user-paid parking program with free time restricted public parking throughout the downtown core provided that an alternative source to fund downtown parking is identified.
  - Free public parking and downtown parking operations should be paid for primarily through a Business Improvement District (BID) or a Property Based Improvement District (PBID).
  - Pursue a BID or PBID for the purpose of funding downtown parking. Assess interest from downtown businesses and property owners in partnering with the Town and monetarily participating to pursue this endeavor.
  - Town Council should identify the level of support the Town is willing to contribute to a BID or PBID process.
  - Consider forming a committee to pursue alternate long-term funding sources for downtown parking.

2.3.5 2016 Truckee Railyard Master Plan

In November 2016, the Town of Truckee adopted the Truckee Railyard Master Plan (Plan). The Plan updated the original Railyard Master Plan adopted on July 2, 2009 and addressed the redevelopment of the Railyard area east of the Downtown Commercial Core (see Figure 1).

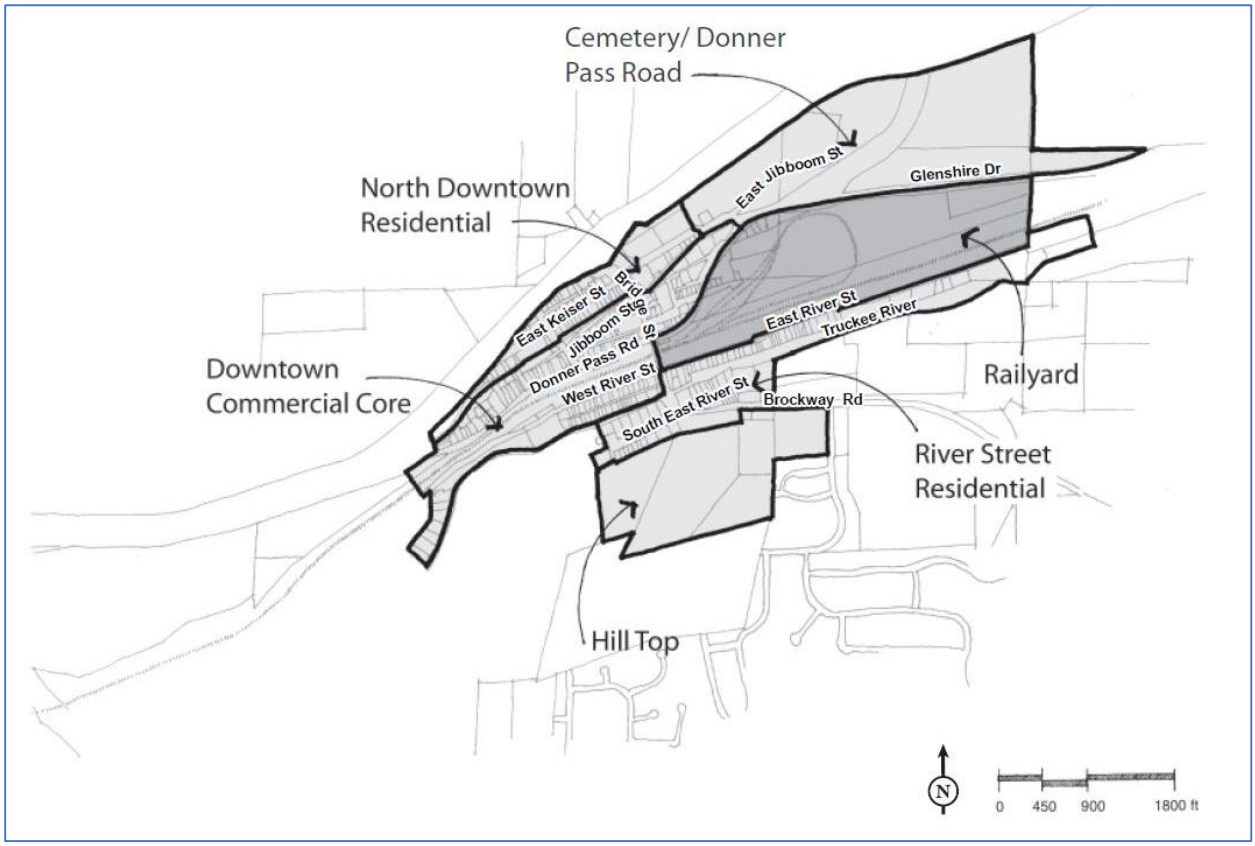


Figure 1. Map of Downtown Truckee highlighting the Railyard Development Area.

The Railyard Master Plan specifically addressed parking challenges and opportunities when redeveloping the Railyard area. The Plan recommended that parking be created along the extension of Donner Pass Road, on- street, and in parking garages and surface lots. It further stated that new parking in the public right-of-way, on publicly owned land, or within the railroad easement should be managed as part of the District.

The Plan referenced the "Park Once" concept, shared parking opportunities, parking demand reduction strategies, and ways to reduce congestion. Location and volume of parking were quoted as key factors in the redevelopment process. The Plan included the following action items regarding parking:

- 7.1 – Prepare a Parking Management Plan for the Railyard that details parking standards and includes an implementation plan by phase or district. The Management Plan should also provide for incorporating parking in the Master Plan Area into the existing Downtown

Commercial Core Parking Management Program. Public Parking within the railroad right of way shall be made available for use by the Downtown Parking Management Program at no land cost to the Parking District.

2.3.6 2025 General Plan

On November 16, 2006, the Town of Truckee adopted the 2025 General Plan. The 2025 General Plan was the first update to the Town's General Plan since the first General Plan in 1996. Table 1 compares the 2025 General Plan vision with related parking considerations.

Table 1. 2025 General Plan vision statement supporting concepts and related parking considerations.

Vision Statement Supporting Concepts	Related Parking Considerations
The General Plan will reduce sprawl by planning for projected growth, locating new development around the existing developed area, and by encouraging clustered development.	• Transportation demand management • Parking supply density
The environment is fundamental to the economy and quality of life in Truckee and the General Plan will protect and enhance this resource. The General Plan will protect important open space lands and natural resources, will work to increase the amount of permanently protected open space, and will strive to enhance public access to open space lands and public resources.	• Transportation demand management • Congestion mitigation
The General Plan will reduce the dependence on the automobile in Truckee by fostering compact development and providing for alternative modes of transportation.	• Transportation demand management • Parking supply density
The General Plan will facilitate the provision of housing affordable to all sectors of the community.	• Cost of parking • Residential parking program

The 2025 General Plan referenced the following categories: Circulation, Land Use, Community Character, and Housing. Table 2 summarizes elements of the 2025 General Plan that specifically reference parking-related policies, actions, and programs.

Table 2. 2025 General Plan parking policies, actions, and programs.

Element	Policy/Action	Description
Circulation	Policy P6.8	Ensure that adequate parking is provided for commercial, residential, and other land uses in Truckee, while, at the same time, limiting excess off-street parking.
Circulation	Action A6.2	Conduct an evaluation of parking requirements in the Development Code to ensure that excessive parking is not required, and to address options for shared parking and other parking lot alternatives, particularly in the Downtown and Gateway areas.
Land Use	Policy DSA-P4	Increase opportunities for pedestrian circulation, including improved access across the railroad tracks, and improved access between parking areas and businesses.
Land Use	Policy DSA-P5	Address parking problems in the Downtown area.
Land Use	Policy P6.4	Require buildings to be located closer to the street, where appropriate, and for off-street parking areas to be located to the rear of commercial buildings, where feasible. Ultimate building locations must accommodate snow removal and snow storage, and should maximize solar orientation.
Community Character	Policy P8.5	Encourage design oriented to the pedestrian realm through the following measures: • Building design along Donner Pass Road that is proportionate to the width of the street that it fronts, is oriented to the street, and minimizes setbacks from the public right-of-way. • Appropriate design and siting of parking facilities to minimize their visual impact and break up their massing. • Design of facades and building frontages that provide pedestrian-scale detail and a high level of visual interest along the street frontage, including storefront display windows, articulated massing, and fine-grain architectural detail.
Community Character	Policy P9.5	Require new mixed-use centers to incorporate site planning and design that reflects walkability and opportunities for indoor and outdoor social interactions, including clustered buildings, parking dispersed in smaller lots, as well as pedestrian-scale design features.
Housing	Program H-1.7	Review and revise the Secondary Residential Unit Ordinance to be in compliance with State Law. Revisions will include reducing parking requirements to one space per secondary residential unit.
Housing	Policy H-5.5	Allow shared parking in commercial and residential mixed-use projects, where it can be demonstrated that the uses do not have competing peak parking demands.

Housing	Program H-5.3	The Town will study the feasibility of continuing to reduce parking requirements in high-density residential zones where available public transportation and nearby good and services exist and consider codifying procedures for allowing flexibility for parking through parking studies from the Town's on-call traffic and parking consultant. Based on its findings, the Town will revise the Development Code as appropriate.

2.4 PAP Stakeholder Outreach

2.4.1 Stakeholder Meetings

Stakeholder meetings were conducted in June and October 2019. Table 3 outlines the primary discussion topics from stakeholders during each meeting:

Table 3. Summary of stakeholder meeting feedback.

Meeting	Date	Summary of Feedback and Suggestions
Police Department	6/5/2019	• Develop strong strategic and financial plans to improve technology within the Parking District. • Define when a parking garage should be considered. • Protect the enterprise fund to sustain the parking operation. • Identify potential parking locations throughout the downtown and evaluate the cost of locations where additional parking can be created. • Consider utilizing license plate recognition cameras. • Develop a fire evacuation plan that merges traffic capacity with fire science. • Supplement signage to improve the visitor experience. • Transition to a pay-by-plate system. • Maintain a focus on customer-friendly parking management. • Update to commercial loading to improve functionality and connectivity. • Grow and connect different areas throughout the downtown. • Increase staffing to be able to effectively support peak season population. • Develop a framework for special event parking management.
California Welcome Center	6/5/2019	• Determine whether there are enough overnight parking spaces available. • Improve signage for public transportation parking and long-term parking. • Provide a designated location to park RVs for longer than 20 minutes. • Provide a location for tour buses to park. • Update municipal code to require RVs to pay for multiple spaces. • There is a perception that there is not enough parking. • Provide employee parking within a reasonable walking distance from places of employment. • Establish a Park and Ride option with an on-demand shuttle service.

		• Ensure there are enough safe locations to park e-bikes. • Develop parking signage that matches Truckee's aesthetic. • Try to keep some parking free.
Truckee Downtown Merchant Association	6/6/2019	• Provide enough parking during peak seasons. • Promote alternative modes of transportation to get downtown. • Maximize opportunities for locals to park in Downtown Truckee for free. • Increase inclusivity and connectivity for second homeowners. • Optimize usage of private parking in Downtown Truckee through shared parking agreements. • Low utilization of TART by locals. • Implement a free shuttle for Truckee Thursdays in the summer. • Find a location to implement a park and ride. • Clarify downtown employee parking permit program options. • Create a loading zone that does not hinder parking. • Ensure sufficient lighting in the back alley for safety. • Provide a reliable option for an employee shuttle system that ensures downtown employees arrive at work on time throughout the day. • Leverage micro-shuttles during peak seasons.
Town Manager	6/6/2019	• Ensure parking land use development standards in Truckee are consistent and contemporary with comparable smart growth communities. • Develop drop-off points for Transportation Network Companies (TNCs). • Determine the best locations for the residential parking permit program. • Consider remote employee parking locations in conjunction with a shuttle program. • Determine ideal valet locations and seasonal operating times. • Consider a tiered-rate model dependent upon average length of parking session.
Engineering and Public Works Department	6/6/2019	• Downtown parking was managed by Public Works before being transferred to the Police Department. • Provide options for developing vacant land by requiring a reduced amount of parking and meeting some portion of parking requirements with in-lieu fees. • Reduce activity other than commercial loading from 6 AM to 10 AM in the alley. • Provide the necessary amount of lighting by balancing segments of the community that want less lighting and more lighting. • Optimize the permitting of residential overnight parking.

Former Town Council Member (Joan Jones)	6/14/2019	• People will choose to walk a farther distance if they can park for free. • Provide safe corridors for people to walk. • Set the price for parking to discourage employees from parking on-street in prime parking spaces. • Truckee Thursday is an example of high demand for parking assets.
Town Council Meeting	10/8/2019	• Consider the concept of a season pass for parking. Requiring payment for parking each time someone parks can be a deterrent for locals. • A parking garage is needed. • Educate community members who may not know the details of the parking program. • Invest in ongoing data collection through the parking program to determine when specific actions should be taken to optimize the parking program. • Pursue shared parking agreements with private parking lot owners. • Optimize the management of the existing inventory of downtown parking. • With the right technology, the Town can adapt and face each new parking challenge and constantly assess the parking program. • Concern that new development without on-site parking will contribute to the failure of the parking program. • The cost of employee parking permits is too high. • Parking inventory is reduced when it snows in Truckee. • Consider collecting data for additional analysis in the wintertime to better understand and plan for snow-related parking impacts.

2.4.2 Downtown Employee Surveys

On site employee surveys were conducted on August 15, 2019, during Truckee Thursday. A total of 41 employees from 39 businesses were interviewed during the door-to-door outreach efforts. Key findings included:

- 65% drove a car to work;
- 40.63% parked in a private parking lot and 25% parked on the street;
- 66.67% parked within 1 block of their workplace;
- 59.38% do not have an employee parking permit;
- 70.27% think there is not enough parking downtown for customers.

Participants were also asked what they would do if they could change, fix, or improve anything about parking in Truckee. A variety of responses were given. Some frequent answers included:

- Eliminate paid parking;
- Add more parking/build a parking garage;
- Fix employee parking.

Appendix B includes a full overview of the employee survey data results.

2.4.3 Online Survey

A comprehensive online survey was distributed to reach a broader audience. The online survey was promoted through social media platforms in October 2019, and 260 responses were collected. The vast majority of participants live within Truckee, visit downtown multiple times per month, and 25.1% work downtown. Key findings included:

- Regarding their most recent visit to Downtown Truckee:
  - Dining was the most common reason for visiting downtown;
  - Few visits lasted more than 3 hours;
  - The overwhelming majority (95.7%) of respondents drove a personal vehicle to visit downtown;
  - The majority of visitors found a parking space immediately, or in less than five minutes;
  - The majority found a parking space within 200 yards of their destination.
- Ease of finding a parking space was, on average, the most important factor when deciding where to park, closely followed by the location of the parking space.
  - The majority agreed they would visit Downtown Truckee more often for leisure activities if parking were easier to find.
- The majority of participants believed that:
  - The Town should build more parking;
  - They are unsure if the Town needs more electric vehicle charging stations;
  - They generally have difficulty finding a parking space in Downtown Truckee;
  - There are not enough parking spaces in Downtown Truckee.
- Regarding the WayToPark mobile application:
  - 59.85% of respondents had not used the WayToPark mobile application to pay to park in the Railyard Lot;
  - 37.84% were not aware of the WayToPark mobile application.

Appendix C includes an overview of the online survey data results.

2.5 Parking Data Collection

National Data & Surveying Services (NDS) provided the data collection services for the PAP and collected two rounds of parking occupancy and utilization data on the dates shown in Table 4. Ongoing data collection is a critical factor when considering immediate and future parking policy strategies. The industry standard for target parking occupancy is 85%. At this level, studies have proven that there are enough vacant parking spaces to minimize congestion from drivers searching for a space. At the same time, the 85% rate ensures that there is not too much parking supply, which is an inefficient and costly use of valuable land. The industry standard of 85% occupancy provides for safe and efficient circulation of traffic and must be considered when evaluating the downtown parking occupancy results.

Table 4. Parking data collection dates and times.

Round	Date	Times
1	Wednesday, July 17, 2019	12 PM, 3 PM, 6 PM, 9 PM
	Saturday, July 20, 2019	
2	Wednesday, September 25, 2019	
	Saturday, September 28, 2019	

Data Results Snapshot:

- Peak parking occupancy typically occurred around 12 PM and 6 PM;
- Parking occupancy was higher in central downtown areas compared to more peripheral locations;
- Highest occupied public lots included: The Fire Station Lot and the Jax Lot;
- Some private lots were underutilized; however, the Dirt Lot had consistently high occupancy;
- Portions of Donner Pass Road, Spring Street, Church Street, Bridge Street, and Jibboom Street often reached occupancy of 85% or greater.

Appendix D includes the detailed data collection locations and findings.

3.0 The Parking Action Plan

3.1 Report Structure

3.1.1 Topics

The Parking Action Plan is organized based on the following primary topics:

1. Parking Demand Management
2. Permit Parking
3. Shared Parking
4. Enforcement
5. Pay Station Maintenance and Collections
6. Special Events
7. Loading Zones
8. Electric Vehicle Charging
9. Railyard Development Area
10. Wayfinding and Parking Guidance
11. Transportation Demand Management
12. Education and Outreach

3.1.2 Assessments and Recommendations

The PAP includes an Assessment and a Recommendations section for each of these topics. The Assessment sections include an overview of existing conditions, best practices, any relevant case studies, stakeholder feedback, and data analysis results. Each Recommendations section includes a list of recommended strategies to be considered. Recommendations are grouped as near-term, mid-term, and long-term and are presented with a summary of benefits, considerations, prerequisites, timeframe, cost, and priority group. Cost is assigned a rating of either high, medium, or low based upon the estimated relative cost compared to the other strategies. The recommendations throughout this PAP are categorized into the five overarching priority groups:

- Customer service,
- Technology,
- Inventory,
- Sustainability, and
- Mobility.

4.0 Parking Demand Management

4.1 Assessment

4.1.1 Downtown Parking Supply

The Town of Truckee currently has paid parking on-street and in three municipal parking lots throughout the Downtown Parking District (District). This section relates to the Town's Inventory priority as it provides a baseline analysis of existing parking inventory and provides recommendations to best manage parking throughout the District.

Until recently, the District had a total of 467 parking spaces. The Town began the redevelopment of the Railyard Area in 2017. The Railyard Area is the historic Union Pacific railyard located on the eastern end of Downtown Truckee. The initial phase of development has already added 187 off-street parking spaces, bringing the total number of parking spaces in the District to 654.

During the winter, snow piles displace a portion of the parking supply in order to clear the driving lanes. For reference, Figure 2 displays areas throughout Downtown Truckee where snow is removed, where snow is stored, and overflow locations for excess snow.

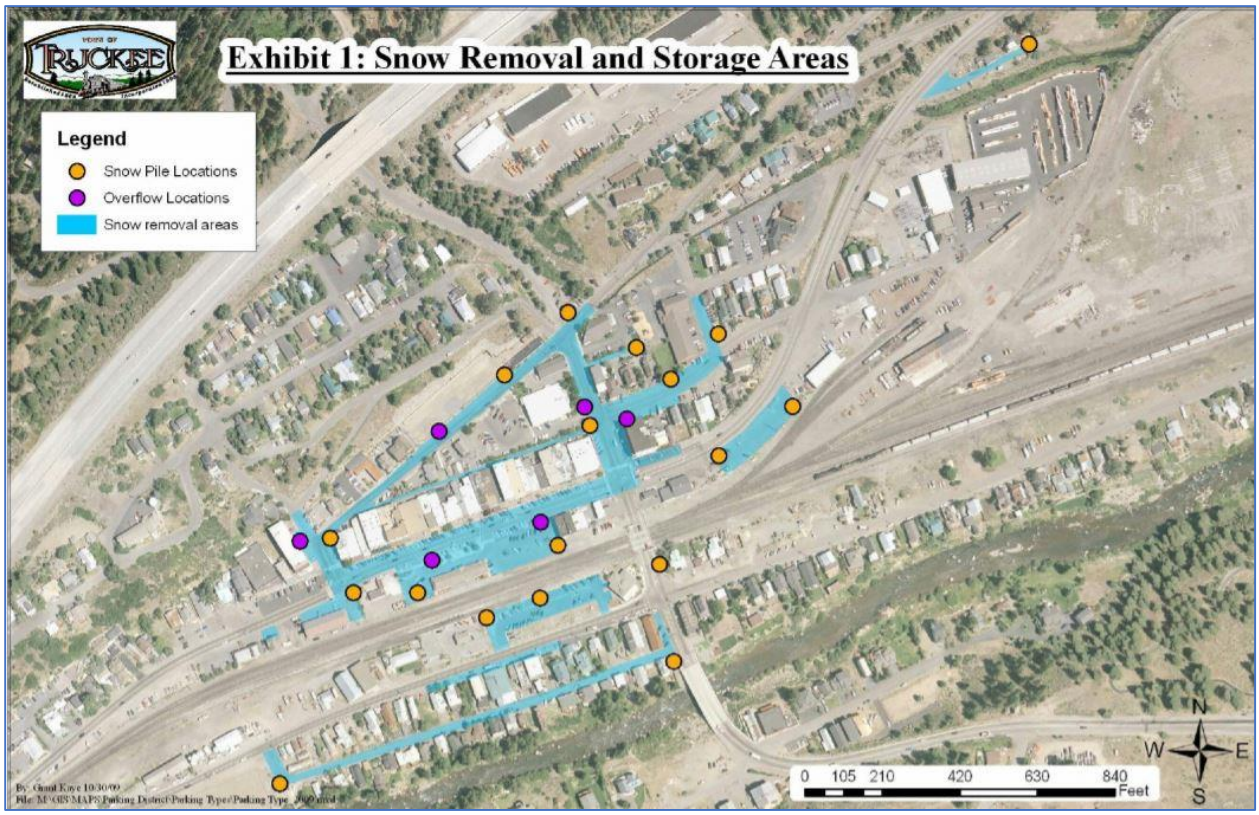


Figure 2. Snow removal and storage areas in Downtown Truckee.

Figure 3 is a map of District parking regulations and Figure 4 displays the parking that was developed in the Railyard area along with the existing parking asset locations from the District.

Figure 3. Downtown Truckee parking district regulations: 10 AM - 6 PM.

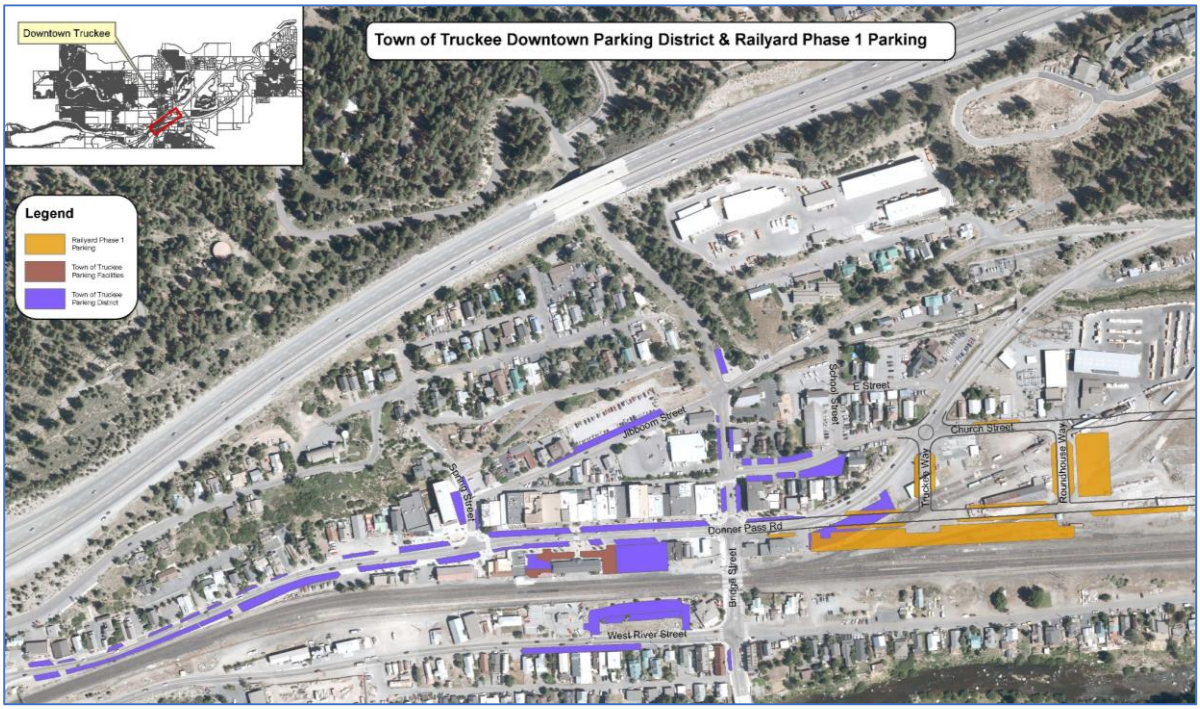


Figure 4. Town of Truckee Downtown Parking District & Railyard phase 1 parking.

Tables 5 and 6 display the on-street occupancy for July and September, respectively. On-street locations on average had higher occupancy rates comparatively and weekends demonstrated higher occupancy rates than weekdays. The average weekday occupancy peaked at 62% at 6 PM and the average weekend occupancy peaked at 80% at 12 PM. Off-street occupancy was highest at 12 PM and decreased throughout the day on both weekdays and weekends.

Table 5. On-street occupancy for July.

Day	Zone	Name	Inventory	12PM	3PM	6PM	9PM	Daily Avg.
Weekday	Brickelltown	Donner Pass Rd	134	50%	37%	77%	31%	49%
	Church St	Church St	34	65%	32%	47%	47%	48%
	Commercial Core	Bridge St	31	87%	58%	71%	48%	66%
		Donner Pass Rd	83	95%	74%	82%	56%	77%
		Spring St	17	94%	63%	81%	44%	70%
	Jibboom St	Jibboom St	17	71%	88%	76%	47%	71%
	Railyard Development Area	Church St	6	17%	17%	33%	17%	21%
		Donner Pass Rd	53	28%	15%	13%	6%	16%
		Roundhouse Rd	8	0%	0%	0%	0%	0%
		Truckee Way	7	0%	0%	0%	0%	0%
	W River St	Bridge St	3	67%	33%	0%	0%	25%
		W River St	21	76%	71%	62%	29%	60%
Weekend	Brickelltown	Donner Pass Rd	134	97%	67%	93%	49%	77%
	Church St	Church St	34	79%	79%	94%	91%	86%
	Commercial Core	Bridge St	31	97%	74%	90%	58%	80%
		Donner Pass Rd	83	83%	83%	83%	74%	81%
		Spring St	17	94%	94%	100%	88%	94%
	Jibboom	Jibboom St	17	94%	82%	71%	71%	79%
	Railyard Development Area	Church St	6	0%	33%	33%	17%	21%
		Donner Pass Rd	53	45%	28%	45%	26%	36%
		Roundhouse Rd	8	0%	25%	0%	0%	6%
		Truckee Way	7	0%	0%	0%	0%	0%
	W River St	Bridge St	3	67%	0%	33%	0%	25%
		W River St	21	95%	67%	95%	62%	80%
			Grand Total	**71%**	**56%**	**71%**	**45%**	**61%**

Table 6. On-street occupancy for September.

Day	Zone	Name	Inventory	12PM	3PM	6PM	9PM	Daily Avg.
Weekday	Brickelltown	Donner Pass Rd	134	58%	52%	73%	31%	54%
	Church St	Church St	34	41%	44%	82%	76%	61%
	Commercial Core	Bridge St	31	65%	58%	90%	84%	74%
		Donner Pass Rd	83	73%	65%	85%	61%	71%
		Spring St	17	100%	69%	63%	63%	73%
	Jibboom St	Jibboom St	17	65%	59%	29%	82%	59%
	Railyard Development Area	Church St	6	67%	100%	17%	33%	54%
		Donner Pass Rd	53	8%	6%	13%	15%	10%
		Roundhouse Rd	8	0%	0%	0%	0%	0%
		Truckee Way	7	0%	0%	0%	0%	0%
	W River St	Bridge St	3	0%	100%	0%	67%	42%
		W River St	21	67%	52%	38%	10%	42%
Weekend	Brickelltown	Donner Pass Rd	134	90%	57%	65%	32%	61%
	Church St	Church St	34	82%	59%	112%	71%	81%
	Commercial Core	Bridge St	31	100%	65%	55%	42%	65%
		Donner Pass Rd	83	96%	85%	93%	62%	84%
		Spring St	17	94%	88%	81%	56%	80%
	Jibboom	Jibboom St	17	88%	0%	76%	88%	63%
	Railyard Development Area	Church St	6	33%	33%	33%	33%	33%
		Donner Pass Rd	53	30%	21%	21%	13%	21%
		Roundhouse Rd	8	0%	0%	13%	0%	3%
		Truckee Way	7	0%	0%	0%	0%	0%
	W River St	Bridge St	3	100%	100%	100%	100%	100%
		W River St	21	62%	52%	57%	76%	62%
			Grand Total	**66%**	**52%**	**64%**	**44%**	**57%**

4.1.2 Paid Parking Rates

On-street parking in Downtown Truckee requires payment between 10 AM and 6 PM, Monday through Sunday (except Thanksgiving Day and Christmas Day). Table 7 displays the current paid parking rates in Downtown Truckee.

Table 7. Current paid parking rate model in Downtown Truckee.

Location	Rate Structure
• Donner Pass Road • Spring Street • Bridge Street • Church Street • Fire Station Lot • Jax Diner Lot	$0.25 for 10 minutes $1.50 per hour Pay-to-Stay (8 hours max - $12)
• Jibboom Street • West River Street	$0.25 for 15 minutes $1.00 per hour
• Railyard Lot	First two hour free $0.25 for 15 minutes $1.00 per hour following

There are several paid parking rate models that can be considered for the District. The various descriptions and associated considerations are outlined in Table 8.

Table 8. Paid parking rate models.

Description	Considerations
Flat Hourly	
A flat hourly rate means that the same rate is charged for each hour of the parking session, regardless of location, time of day, day of the week, or any other factor.	• With a flat hourly rate model, it is recommended that on-street time limits be included to ensure turnover. • The benefit of a flat hourly rate is that it is simple to communicate and understand. • Without any tiered pricing structure or variations in price, it does very little to change behavior.
Zone-Based / Tiered	
In a zone-based model, rates are adjusted by zone, and zones are typically created based on parking demand. Higher demand locations are priced at a higher rate.	• For this type of rate model to be effective, tiered rates must be clearly communicated and easily understood. • By offering lower rates in the more fringe or perimeter locations, this rate model encourages longer-term parkers to utilize parking locations that are traditionally less desirable. • Conversely, by setting higher rates in prime parking locations, this model encourages higher turnover and shorter visits.

Time of Day / Week / Year	
Rates can differ based upon the time of day or day of the week. This rate model is common in scenarios where there are extreme occupancies peaks, such as during the lunch or evening rushes.	• The Town may consider charging an escalated rate during peak periods to encourage drivers to visit Truckee during non-peak periods. However, this can be challenging to communicate to drivers and may not influence driver behavior significantly. • For example, a visitor coming to Downtown Truckee for lunch will likely not adjust their meal plans based on parking rates. • This rate model may not influence occupancy trends without effective communication.
Escalating / Pay-to-Stay	
An escalating or Pay-to-Stay rate model gives drivers the ability to park for as long as they desire, but at an escalated rate. For example, the rate charged during hours one and two could escalate to a higher hourly rate during additional hours.	• When utilized strategically, this type of rate model can encourage longer-term parkers to store their cars in more affordable locations, such as off-street lots or perimeter locations. However, it still provides visitors the option to park on-street or in the downtown core parking lots for a longer-term if they are willing to pay a premium for it. • Without using time limits, this provides more flexibility to visitors, but it does not ensure turnover. Relying on rates alone to encourage turnover may be risky, so it's important to monitor occupancy rates in this case. • This rate structure has the potential to create an inequitable parking experience where high-income visitors tend to occupy the convenient spaces for as long as they please, and it may not effectively influence driver behavior. • An escalating rate model is most effective when combined with Pay by Plate pay stations. A driver cannot "feed" the pay station for a lower rate when the initial payment expires.
Customer Value Model	
Similar to an escalating rate model, a customer value rate model allows drivers to park for an initial period of free time, followed by a paid hourly rate. An example is offering each driver two hours of free parking, followed by a $2.00 per hour rate thereafter.	• In order to implement this type of rate model on-street, there must be a method to verify the start of a parking session. This can be accomplished through the use of parking sensors that detect how long a vehicle has parked, or it can be tracked using license plate numbers through a Pay by Plate configuration. In the case of Pay by Plate, drivers are required to initiate a parking session at a pay station or through a mobile payment application regardless if they are going to stay beyond the free parking period or not. • Because this model relies on paid parking equipment as a parking demand management tool, it does not require

	payment for all parking sessions, it is less likely that the program will be self-sustained by paid parking revenue. • When utilized strategically, this type of rate model can encourage longer-term parkers such as employees to store their cars in more affordable locations, such as off-street lots or perimeter locations. Meanwhile, visitors and customers still have the option of parking for free for a limited period of time, similar to a time limit. However, it still provides visitors and customers the option to park on-street for a longer-term if they are willing to pay for it. • This model provides customers and visitors the most flexibility, which is why it is called the customer value model.

The Town currently operates with a non-escalating Pay-to-Stay model. While the current rate model does provide flexibility to drivers since there is no time limit, there is no further incentive for turnover since the rate does not escalate over time. Additionally, there is no rate differentiation between the on- and off-street parking spaces in the core of the Parking District. It is an industry best practice to price off-street parking lower than on-street parking in order to encourage long-term parking sessions off-street in the less convenient locations. By pricing the convenient on-street parking higher, this will encourage turnover and create more availability for short-term visits. On-street parking should be prioritized for shorter visits since it is the most convenient and will minimize the impact of walk time between the space and a destination. For longer visits, walking for extra time between destinations has less of an overall impact on the total trip time.

Truckee also operates with a customer value rate model in the Railyard Lot as part of a pilot program. More information regarding the pilot program can be found in Sections 4.1.4 and 12.1.1.

The Town should be considerate of the cost of a parking permit in comparison to metered parking to ensure that employees have an incentive to purchase a permit rather than pay for hourly parking. Community feedback has indicated that on-street paid parking prices are not high enough to discourage employees from parking on-street and paying the hourly rates all day. Encouraging employees to store their vehicles off-street will increase convenient parking availability for customers and visitors.

The Town should also ensure that locations designated for employee parking are safe (well-lit, paved, etc.) so that employees are not discouraged from purchasing permits. More information on parking is described in the next section of the PAP (Section 5.0).

There are opportunities to offer promotions and reduced parking rates during off-peak periods to encourage drivers to stop and enjoy Downtown Truckee. While there is opportunity to reduce parking rates during shoulder seasons, it will be important not to eliminate policies and to continue the assessment of parking availability to determine operational requirements. Free on-street parking would draw employees to park on the street and reduce parking availability for patrons and visitors. Parking has become a learned behavior, achieving policy compliance should be the

goal. Resetting policies requires the community to relearn and retrain and is not a cost-effective approach to parking management.

4.1.3 Paid Parking Equipment

Truckee currently has 44 multi-space pay stations installed throughout the District. There are three main operational configurations for multi-space pay stations:

- Pay and Display: The driver parks, purchases parking session time at the pay station, and then returns to the vehicle to display the dashboard receipt.
- Pay by Space: The driver parks in a numbered space, and then pays at the pay station using the parking space number. The driver is not required to return to the vehicle because payment is electronically tied to the space number. Parking enforcement is able to use a web application to verify payment status by parking space number.
- Pay by Plate: Similar to pay by space, but the driver enters the license plate number at the pay station to record the payment. This method does not require drivers to return to their cars to display the receipt on the dashboard. Parking enforcement verifies payment status by license plate using a web application and/or License Plate Recognition (LPR) technology.

Currently, the majority of downtown pay stations are configured for pay and display. However, the Railyard Lot utilizes a pay by plate configuration. For customer ease, the Town could consider updating all pay stations to the pay by plate configuration. This will allow users to complete their payment at the pay station or via their mobile phone (see Section 4.1.4) without having to return to their vehicle with a receipt. They will also have the ability to extend their session remotely using their license plate number. Additionally, the utilization of license plate numbers as the payment identifier can improve enforcement efficiency through use of license plate recognition (LPR) technology. More information on LPR is included in Section 7.1.3.

4.1.4 Mobile Payment

The Town could offer a mobile payment feature for customer convenience throughout the entire District. On August 1, 2019, the Town implemented a mobile payment option for the Railyard parking lot. This pilot program also introduced the customer value model rate structure, rather than just being a two-hour time-limit parking lot. Now, customers can enjoy two hours of free parking, followed by paid parking at $1.00 per hour. Parking can be paid for at the existing pay stations installed at the Railyard Lot or through the WayToPark mobile payment application. This pilot program is projected to continue through the end of February 2019.

A mobile payment solution allows drivers to pay for parking sessions using their cellphones and can be implemented with any rate structure. Drivers can either call a number to pay, or they can simply create an account on a mobile application to pay online. Users can complete a one-time purchase, or they can establish accounts with the mobile payment provider which facilitate the ability to maintain a credit card on the account. By maintaining an account, users may easily begin

parking sessions and extend their stays without returning to their vehicles. Zone numbers are assigned to each paid parking area for enforcement purposes, and the active paid parking sessions are tracked and verifiable by license plate numbers.

WayToPark is currently provided to the Town by Flowbird at little or no cost to the Town. In the future, the Town could consider providing additional mobile payment solutions provided by other vendors. Instead, the vendor may be fully funded by the convenience fee charged to the users. Mobile payment vendors often provide decals for the meters and may support education and outreach. Sometimes, mobile payment vendors work with municipalities to offer incentives and validation programs, including resident discount programs.

Mobile payment utilization typically falls between 3% and 10% in most communities, and users pay a small convenience fee, usually between $0.10 and $0.35. Mobile payment utilization in Truckee's Railyard Lot between August and December 2019 was less than 1%. Once mobile payment is expanded throughout the Town, increased utilization is expected since it will be a convenient payment option for all public parking locations. Mobile payment can be integrated with single-space meters, dual-space meters, or pay stations. While current utilization in Truckee may seem low, with the continued widespread use of smart phone technology, it is recommended that the Town implement a mobile payment system for all paid parking locations. Verification of mobile payment will require enforcement staff to use a web application to verify payment status, or it can be supported through the use of LPR.

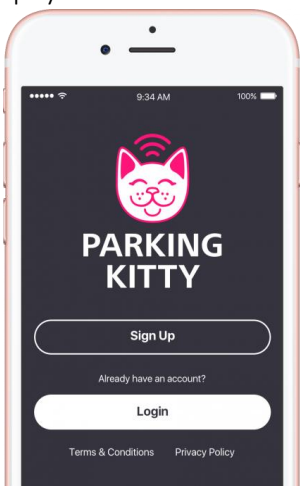


Figure 5. Parking Kitty App.

Some mobile payment vendors offer a white-label service, which would allow the Town to utilize their own branding for the mobile payment service. Portland (OR) created and implemented the Parking Kitty mobile payment application (see Figure 5). This customized application turned paying for parking into a positive and fun experience for drivers. It is important to define who owns the brand and, while the white label would allow the promotion of the Town's brand, it could take away from the ability to have a broader and unified parking experience region wide.

4.1.5 Valet Parking

The Town does not currently support a valet program. Valet parking is an opportunity to maximize the capacity of parking resources while providing a convenient parking option for visitors and minimizing congestion. To encourage the usage of valet, multiple drop-off and pick-up locations can be established, providing increased flexibility.

Introducing a valet program could be used as a promotional feature for Downtown Truckee especially during the winter season. Not only will a valet parking program help maximize the existing parking inventory in the downtown area, but downtown visitors could drop-off and pick-up their vehicles closer to their downtown destinations. This could mitigate traffic congestion and circling and help alleviate visitors from navigating unfamiliar roads and parking locations. The

Town could consider a municipal valet pilot program that was introduced for special events or a designated peak demand period to evaluate the effectiveness and level of interest for this customer service function.

In addition to insurance and indemnification requirements, any municipal valet parking operation needs to consider the operating hours/day and staffing costs, including the minimum number of employees necessary to sufficiently support the program. Another important consideration is the traffic flow and safety plan including the routes to be used between the passenger loading zone(s) or other vehicle pickup point(s) and the parking or storage location, and a safety plan to prevent traffic-related accidents and encourage safe driving practices in and around valet operations. Lastly, signage, promotion and branding are critical factors that would need to be coordinated throughout the community to ensure a successful valet program.

4.2 Recommendations

4.2.1 Near-term

Strategy #1. Implement mobile payment throughout the entire Downtown Parking District.	
Description	The WayToPark mobile application is currently a payment option in the Railyard Lot. The Town should consider expanding the option to pay for parking sessions via WayToPark or another mobile application throughout the entire District. Online survey respondents suggested and supported incorporating mobile payment for all paid parking locations in Downtown Truckee.
Benefits	• Easy and convenient for drivers to start and extend a parking session without returning to their vehicles. • Can reduce coin use and pay station revenue collection frequency. • Many mobile payment vendors offer merchant validation and incentive programs.
Considerations	• Integration with other parking technology vendors. • Signage and zone numbers. • Town or user-paid convenience fee.
Prerequisites	• None.
Timeframe	Near-term
Cost	Low
Priority	Technology, customer service

Strategy #2. Utilize the Pay by Plate configuration for pay stations and mobile payment.	
Description	Transition all pay stations to a pay by plate configuration, which requires users to input their license plate number to initiate a parking session. This method does not require a driver to return to their vehicle to display their receipt on the dashboard because the license plate number becomes the

	payment identifier. Parking enforcement verifies payment status by license plate number using a handheld device web application and/or license plate recognition technology. With mobile payment, the parking session status is also initiated and verified by the license plate. Downtown Truckee currently has a combination of pay and display and pay by plate pay stations. As the Railyard Area continues to be developed and the District expands to encompass the new public parking inventory, the Town will need to purchase additional pay stations, however the implementation and expansion of mobile payment will likely decrease the future amount of pay station hardware required. If mobile payment is expanded throughout the paid parking program, the Town should consider converting the existing pay and display pay stations to a pay by plate configuration.
Benefits	• It does not require a driver to return to their vehicle to display a receipt of payment on the dashboard. • Improves enforcement efficiency when utilizing license plate recognition technology or enforcement web applications. • Can track length of stay and prevent "feeding the meter," allowing the Town to implement a variety of parking promotions (i.e., first-hour free on-street followed by an hourly rate). • By unifying pay station configuration, it will minimize customer confusion.
Considerations	• Requires drivers to remember their license plate number. • Integration of parking session with license plate recognition and/or enforcement application.
Prerequisites	• Implement license plate recognition cameras for enforcement.
Timeframe	Near-term
Cost	Low to Medium
Priority	Technology

Strategy #3. Dual-purpose parking technology for data collection.	
Description	The Town may collect data through parking technologies, including LPR, parking occupancy sensors (see Table 8 Occupancy Counting Methods), and parking pay stations. The Town should utilize all available sources of data to provide an on-going assessment of the parking program. LPR can provide both occupancy and utilization data. The Town could develop a data collection plan with fixed routes, days, and hours. Collecting data with LPR would be a cost-effective way for the Town to understand on- and off-street occupancy and utilization trends, which would allow for data-

	driven decisions about future parking policies including time limit and rate adjustments. If the Town were to install parking occupancy sensors, this data could be used for wayfinding including parking guidance and mapping applications. The data could also be utilized to calculate occupancy trends over time. The level of granularity is dependent upon the types of sensors installed. Individual parking space sensors would be costly based upon the current parking design. The more cost-effective approach for the Town would be to install above-ground loop sensors or camera-based sensors at entrances to parking lots to promote availability and provide the total occupancy for each parking lot. Installed pay stations can provide occupancy information based on payment data. However, not all drivers will pay to park – a percentage of the drivers may not comply, and there are often a significant number of ADA placards that can skew occupancy data. This is why some parking technology companies attempt to use a predictive algorithm to estimate which areas are likely to have spaces available.
Benefits	• Strategic investments in parking technology can provide dual-purpose benefits that include ongoing data collection to support policy decisions and the provision of parking availability to assist with wayfinding. • Ongoing data collection can provide insights into daily, weekly, and seasonal trends for planning purposes.
Considerations	• The level of accuracy varies based upon the technology chosen.
Prerequisites	• Implementation of LPR, sensors, and/or parking meters.
Timeframe	Near-term
Cost	Medium to High (staff resources are needed to evaluate data; strategic and incremental technology investments in mobile LPR and parking occupancy sensors at the parking lots entry/exits)
Priority	Technology, inventory, sustainability

4.2.2 Mid-Term

Strategy #4. Adjust operating hours to align with peak periods.	
Description	The Town should consider extending hours of operation for paid parking from 10 AM to 8 PM (currently 10 AM to 6 PM). The 6 PM data collection time demonstrated 6 PM as a peak time for parking in Downtown Truckee. The 9 PM data collection time demonstrated an overall decrease, however several parking zones maintained occupancy above 85%. Extending time limits to the evening hours will improve the management of parking during the peak dinner rush. Without evening time limits, it is likely

	that evening shift employees are utilizing the convenient and premium on-street spaces for long-term parking. Extending paid parking hours can promote occupancy, encourage employees to park in designated employee areas, and create more parking space availability for visitors.
Benefits	• Operating hours will align with peak demand periods to improve the management of parking demand and impacts. • Maximize enforcement resources and staffing.
Considerations	• Impacts parking enforcement staffing and schedule. • Will require adjustments to existing signage.
Prerequisites	• Data analysis to understand parking occupancy and utilization trends. • Adequate enforcement staffing for coverage during operating hours.
Timeframe	Near-term
Cost	Medium
Priority	Customer service, sustainability

Strategy #5. Adjust on- and off-street paid parking rates.	
Description	The Town should consider an escalating Pay-to-Stay rate model for on-street parking and a customer value rate model offering 1 hour of free parking for off-street parking within the Parking District. Based on the data analysis and online survey results, a majority of Downtown Truckee visitors stay for less than 3 hours. The Town should consider increasing paid parking to $2.00 per hour for all on-street spaces during the peak seasons. After 3 hours of parking, the peak on-street parking rate could increase to $3.00 per hour. During the off-peak season, on-street parking should be $1.50 per hour with no escalation. The Town should consider a customer value rate model that provides 1 hour of free parking, followed by $1.50 per hour peak season paid parking in off-street parking locations. During the off-peak season, off-street parking should be $1.00 per hour with the first hour of parking free. In general, on-street spaces should cost more than off-street spaces in order to encourage long-term parking off-street since it is less convenient.
Benefits	• Encourages a shift in parking behavior. • Will encourage employees to participate in the permit parking program. • Can be coupled with incentive programs and merchant validation. • Price can be adjusted based on demand over time. • Can create additional parking space availability.

	• May encourage transportation mode shift for some visitors.
Considerations	• Can be combined with time limits. • Defining an appropriate rate structure that will not discourage downtown visitation but will still influence behavior. • Establishing appropriate hourly rates that influence behavior. • Understanding parking demand and utilization trends by location. • Defining appropriate boundaries. • Signage and ease of communication of rate structure.
Prerequisites	• Escalating Pay-to-Stay rate model is dependent upon a pay by plate pay station configuration with an integrated mobile payment solution. • Consistent enforcement. • Understanding of parking demand trends.
Timeframe	Mid-term
Cost	Low
Priority	Customer service, sustainability

Strategy #6. Develop a valet parking program.	
Description	Consider establishing a valet program during the highest demand periods in the summer and winter, such as Friday and Saturday evenings or in coordination with a special event. Establish convenient drop-off and pick-up locations. Some potential drop-off and pick-up locations include: • Next to Moody's Bistro Bar & Beats (10007 Bridge Street); • Railyard development area. Use of valet program technology will allow customers to request their vehicle and set pick-up times/locations via a mobile or web app and kiosk. The Town can also consider providing a valet program specifically for downtown employees to maximize parking supply.
Benefits	• Maximizes parking supply efficiency. • Maximizes employee permit parking area. • Convenience and accessibility for drivers. • Reduces congestion by encouraging drivers to drop off their vehicles at a convenient location rather than searching for parking.
Considerations	• Operating hours, days, and cost. • Traffic flow and safety plan. • Signage and promotion. • Defined valet application policies and process. • Staffing and hours of operation of the valet program.
Prerequisites	• Establish a valet policy.
Timeframe	Mid-term
Cost	High
Priority	Customer service, inventory, mobility

4.2.3 Long-Term

Strategy #7. Make ongoing adjustments to parking rates as needed.	
Description	As Truckee continues to grow, the Town should adjust parking rates as needed. The Town should adjust parking rates when parking areas (on-street and/or off-street) are consistently above 85% occupancy. The industry standard of 85% occupancy provides for safe and efficient circulation of traffic. When occupancy is consistently above 85%, drivers are more likely to circle prime parking locations in search of a parking space. This behavior increases GHG emissions and creates congestion. Therefore, when occupancy is above 85%, the Town should consider adjusting parking rates to ensure parking occupancy stays at or below 85%.
Benefits	• Encourages a shift in parking behavior. • Will encourage employees to participate in the permit parking program. • Can be coupled with incentive programs and merchant validation. • Price can be adjusted based on demand over time. • Can create additional parking space availability. • May encourage transportation mode shift for some visitors.
Considerations	• Can be combined with time limits. • Defining an appropriate rate structure that will not discourage downtown visitation but will still influence behavior. • Establishing appropriate hourly rates that influence behavior. • Understanding parking demand and utilization trends by location. • Defining appropriate boundaries. • Signage and ease of communication of rate structure.
Prerequisites	• Consistent enforcement. • Staff support for ongoing data analysis and revenue assessment. • Understanding of parking demand trends.
Timeframe	Long-term
Cost	Low
Priority	Sustainability, inventory

Strategy #8. Construct additional parking supply if needed.	
Description	The Town should first implement other parking and transportation demand management strategies before considering a significant investment in additional parking supply. If the Town continues to experience high occupancy rates, the Town should, at that point, consider constructing additional surface parking lots or a parking garage.
Benefits	• Provides more parking options and inventory.
Considerations	• Design, land, and construction cost. • Equipment and signage. • Ongoing maintenance and upkeep. • Impact of additional parking supply on roadway congestion.
Prerequisites	• Implement other parking demand management strategies first to maximize the use of existing assets. • Monitoring of data related to occupancy rates and parking demand.
Timeframe	Long-term
Cost	High
Priority	Inventory, sustainability

5.0 Permit Parking

5.1 Assessment

5.1.1 Downtown Employee Permits

Truckee currently provides four options for employee parking permits distributed through the business owners: annual ($360), bi-annual ($210), monthly ($40), and the free permit ($0). If employers choose to pay for their employees' permits (annual, bi-annual, or monthly), they are required to fill out the employee parking permit application form, pay the required amount, and provide their employees with mirror hang tags. These hang tags allow employees to park in the designated employee parking areas without requiring payment.

For businesses that choose not to pay for employee parking, they may still submit the employee parking permit application and receive free hang tag permits for their employees. Employees with hang tag permits are eligible for a $2.00 daily rate within designated employee parking areas.

Employees must park in one of the four designated employee parking areas when using their employee permit:

- Beacon Lot (Railyard Lot),
- Jibboom Street,
- Southeast end of Donner Pass Road in Brickelltown, or
- Jax Truckee Diner Lot.

Figure 6. Permit Parking Signage in Downtown Truckee.

Table 9. Employee permit parking location restrictions in Truckee.

Permit Parking Location	Location	Restrictions
Railyard Lot	East of the Beacon Gas Station	None
Jibboom Street	Jibboom Street	No parking from 10 PM to 5 AM between November 1 and April 30 for snow removal
Jax Truckee Diner Lot	West River Street	No parking from 2 AM to 5 AM between November 1 and April 30 for snow removal

5.1.2 Downtown Employee Parking Areas

Downtown Truckee does not currently have parking areas solely dedicated to employee parking. Employee parking areas are interspersed throughout time-limited and paid parking areas. The signage in permit areas is confusing. The Town could consider designating specific areas for employee parking during posted timeframes. This would ensure parking availability for various shift start times throughout the day while not eliminating parking opportunities for downtown customers.

There are 284 parking spaces available that allow both public parking and employee permit parking. However, throughout the winter, the available inventory of eligible employee parking spaces decreases due to snow storage. Also, when employees park in farther lot locations during the winter, snow storage on the sidewalks could make it difficult to navigate the path to walk to and from their workplace.

Occupancy and turnover data were collecting using license plate numbers, however since existing permits are not tied to a license plate number, the exact utilization of parking by employees must be estimated. Regardless, occupancy in employee parking areas peaked at 71% on weekdays and peaked at 79% during the weekend, both still under the 85% industry standard (see Figure 7).

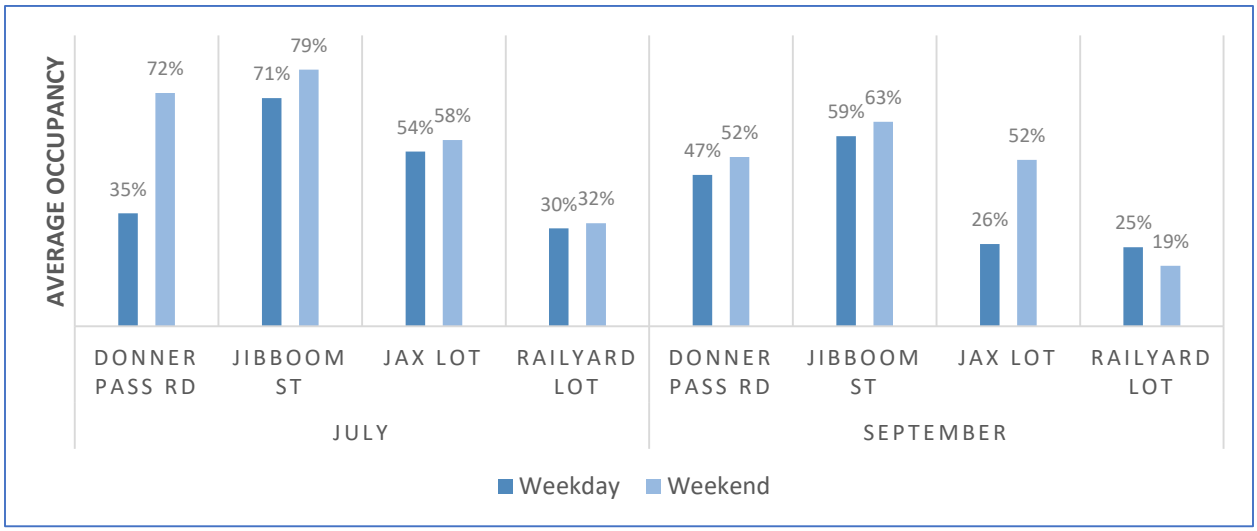


Figure 7. Daily occupancy comparisons for employee parking areas.

The largest area available for employee parking, the Railyard Lot with 155 spaces, consistently confirmed the lowest occupancy of employee parking areas (see Figure 7). This is likely due to the perimeter location of the Railyard Lot from the majority of businesses in the District.

Jibboom Street, the smallest area available for employee parking with only 17 on street parking spaces, had the highest occupancy in both rounds of data collection. Jibboom Street is just north of the commercial core of Downtown Truckee.

Another popular parking area utilized by employees is the Dirt Lot (see Figure 8). The Dirt Lot has approximately 60 parking spaces and is bordered by Jibboom Street to the south, Cal-Nevada Towing to the southwest, and a retaining wall on the northern and eastern boundaries. This is a privately-owned lot that is not explicitly reserved for employees; however, occupancy was close to or above 85% during both rounds of data collection (see Figures 7 and 9).

Figure 8. Dirt Lot on Jibboom Street.

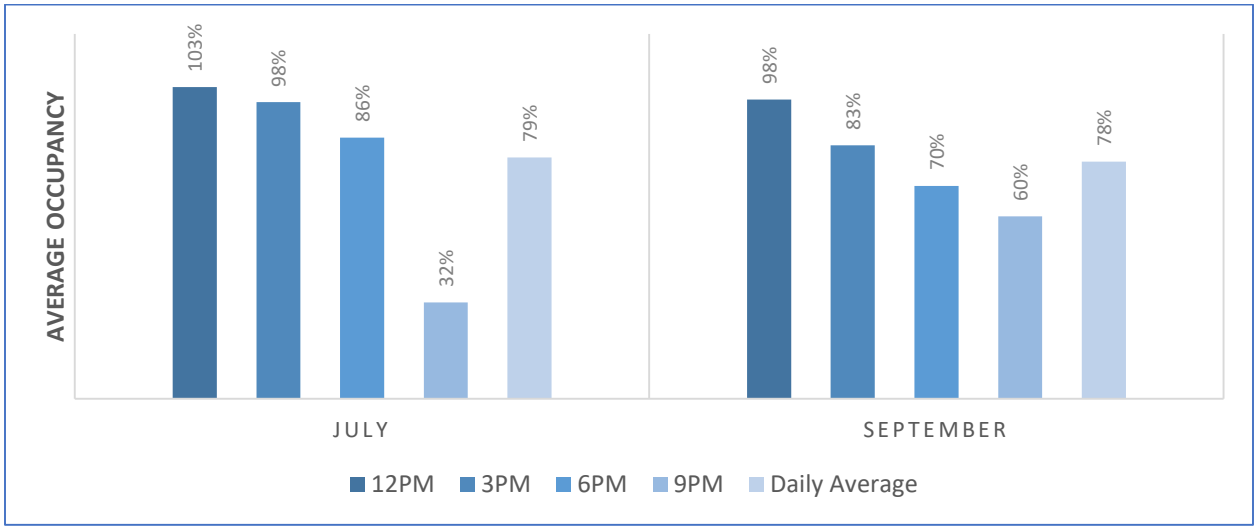


Figure 9. Off-street occupancy for the Dirt Lot: July vs. September.

A parking analysis for the proposed Residences at Jibboom housing development was competed on June 6, 2019 by Transportation Consultants, Inc. This proposed housing development would be developed in the current location of the Dirt Lot and consist of 83 multi-family units, ranging from studios to three-bedroom units. This report concludes that between 100 and 113 parking spaces will be required to accommodate residents and their visitors. The developer has proposed the development of 64 on-site parking spaces, supplemented by 9 existing on-street spaces (along Jibboom Street) and 30 on-street parking spaces along High Street (see Figure 10).

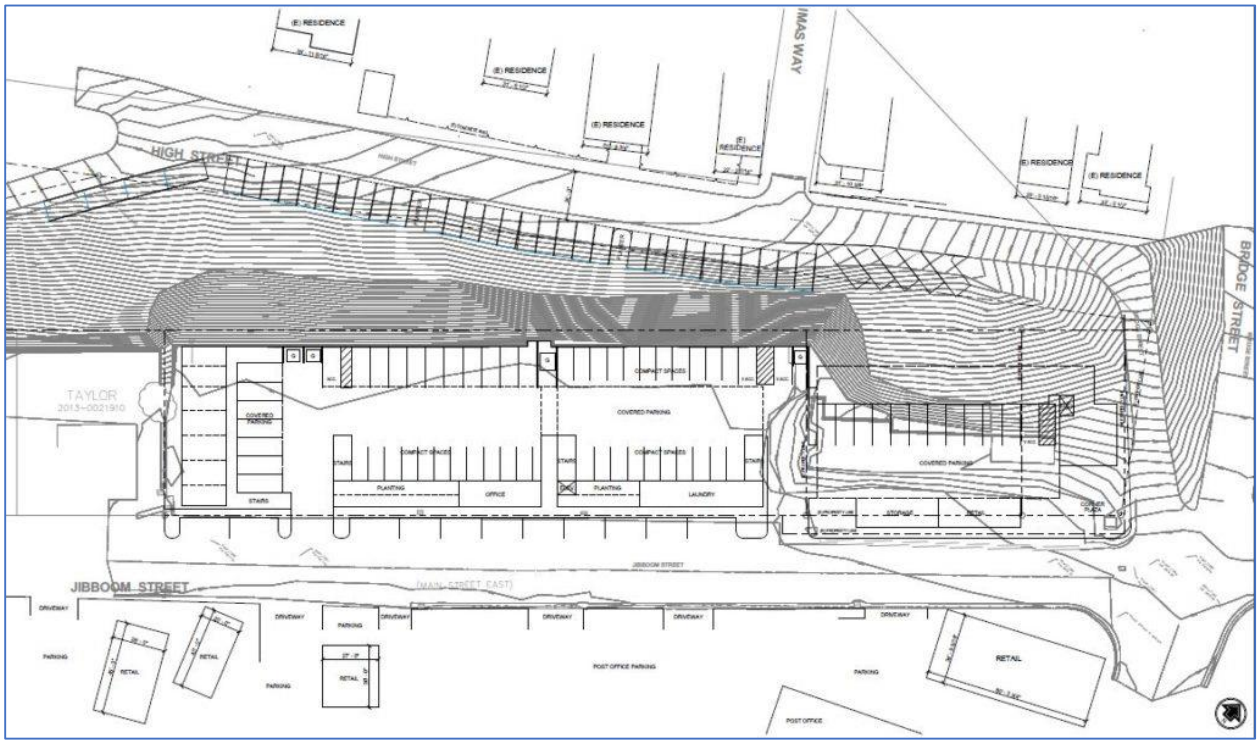


Figure 10. Residences at Jibboom Site Plan.

If this lot is developed into homes or commercial buildings, the Town should anticipate an increase in public parking demand. This could also result in additional employee permit parking program demand. Since the Dirt Lot is private property, but regularly used as a parking lot for Downtown Truckee employees and visitors, the Town should identify additional parking resources to provide to visitors and employees prior to development.

Many participants in both the employee interviews and the online survey suggested improvements to the employee parking program. Based on the current data analysis, there is employee permit parking inventory available and there is not an immediate need to increase the number of parking spaces.

5.1.3 Downtown Residential Permits

Figure 11. Residential Permit Parking Signage in Downtown Truckee.

Truckee currently has a small residential parking permit program. Residential permits are not available to all residents of Downtown Truckee. The Town has issued 17 residential parking permits as part of specific development agreements.

As an extension of the Brickelltown Streetscape Improvements project, a Truckee capital improvement project, the Wergland House granted the Town of Truckee an easement that eliminated on-site parking. Wergland House, located at 10178 Donner Pass Road, provides 13 living units (nine one-bedroom units and four studio units) in Downtown Truckee. Part of the easement agreement allows Wergland House residents with a valid lease to obtain a residential parking permit that allows permit holders to park in Town lots.

Residential permits have also been issued to residents along Trout Creek Road and for a dwelling unit above CA 89.

5.1.4 Permit Management

Residential and employee permits are fulfilled and distributed by the Town. To apply for employee parking permits, employers can download the application from the Town of Truckee website and either fax, email, or bring the completed form to the Town Parking Division (10183 Truckee Airport Road). The parking permit hang tags can then be mailed, picked up, or delivered to the employer. Parking permits are tracked in an Excel spreadsheet. Payment receipts are processed through New World ERP Solutions software.

Many agencies are beginning to transition to digital license plate-based permits instead of physical hangtags or stickers. With digital permits administer through an automated permit management system, the license plate number becomes the permit identifier for verification purposes. With the recommendation to implement LPR cameras for enforcement (see Recommendation #17), digital permits could be efficiently enforced through an integration between the Town's permit management vendor and the LPR system vendor, as described in Section 7.1.3. Digital permits also eliminate the need for physical permit fulfillment and can be easily updated online in instances where a permit holder switches vehicles.

Currently, the Town of Truckee does not have an automated permit management system. The implementation of an automated permit management system would allow permit holders to manage their permit fully online and eliminate the need for physical hangtags.

5.1.5 Low-Income Permit

It is critical for downtown vitality that low-income employees have an affordable option for parking. The Town should establish an income threshold for qualification, and with proof of wages, downtown employees could qualify for a reduced permit rate. For example, the City of Sacramento offers a Discounted Employee Parking Program (DEPP). The DEPP is designed to provide an affordable alternative to those who make an hourly wage of $16 or less and who work within a designated area of Downtown Sacramento.

5.1.6 Carpool Permit

A discounted or free carpool permit option could encourage employees to carpool. Multiple license plates should be tied to each carpool permit, with the requirement that only one license plate be observed at a time. This means that if the license plate recognition cameras detect a second plate number from the same permit within the same day, that plate would be in violation.

5.2 Recommendations

5.2.1 Near-Term

Strategy #9. Implement an automated permit management system.	
Description	The Town should invest in a permit management system to manage downtown employee and residential parking permits. Permits should also be transitioned from physical hang tags to digital, license plate-based permits. A permit management system's online portal can offer account access for employers, employees, and residents who may upload supporting documentation, apply for a permit, pay online, manage waitlists, and renew permits. The Town should require proof of downtown employment or residence. Permits should be license plate-based and the permit management system should be integrated with an enforcement application and/or LPR technology for ease of enforcement. With the current $2/day permit option, permit occupancy and utilization cannot effectively be tracked. Parking Enforcement Officers would have to search for and manually track this permit type, taking them away from other enforcement duties. Transitioning to digital, license plate-based permits will allow for effective tracking of permit utilization. With utilization data, the Town will be able to expand and adjust the permit program through data-driven decisions. By creating a more user-friendly employee permit program (through the implementation of an automated permit management system), employees will have greater control and more incentive to participate in the employee permit parking program.
Benefits	• Streamlines the permit management process. • Improves convenience during application process. • Allows for the use of digital permits. • Integrates with other parking technology for enforcement.
Considerations	• Vendor selection. • Supporting document verification. • Customer support, training, and outreach.
Prerequisites	• Employee permit parking program development.
Timeframe	Near-term
Cost	Medium
Priority	Technology, customer service

Strategy #10. Expand and adjust the employee permit parking program.	
Description	The Town should consider designating specific areas and timeframes for employee parking only. To communicate the various parking opportunities and restrictions at a location, the Town should develop a simplified sign message. Reference Section 13.1.3 for more information regarding simplified signs. However, outside of the posted timeframe, any downtown visitor should be able to park in these locations. This could ensure parking availability for various shift start times throughout the day while not eliminating parking opportunities for downtown customers. Having areas designated for employee parking only introduces the opportunity of underutilization of parking spaces. To avoid this occurrence, the Town should closely monitor the occupancy of areas designated solely for employee permit parking. The Town should also consider an oversell of permits (selling more employee permits than there are employee permit parking spaces) as it is very unlikely that every permitted employee will be working at the exact same time. This will reduce the change for underutilized employee parking and increase permit-related parking revenue for the Town.
Benefits	• Reduces the number of employees utilizing the paid parking spaces meant for customers/visitors. • Improves the parking and employment experience in Truckee.
Considerations	• Permit parking supply and demand. • Defining an appropriate permit rate structure. • Signage requirements. • Outreach and encouraging participation in the permit program. • Location of employee permit parking areas.
Prerequisites	• Implementation of an automated permit management system with an online portal. • LPR equipment for enforcement.
Timeframe	Near-term
Cost	Medium
Priority	Customer service, inventory, sustainability

5.2.2 Mid-Term

Strategy #11. Utilize carpooling permit program for downtown employees.	
Description	Offer discounted parking permits to commuters that carpool. Establish a policy that only one vehicle per carpool group can be parked in permit areas at a time and utilize an automated permit management system and plate-based technology to manage and enforce carpool parking. Consider partnering with a company to match employees in carpools via a web or mobile application. To encourage the use of carpool permits, carpool spaces within permit parking areas should be designated. These designated carpool spaces should be the most ideally located spaces within the employee permit parking areas. There are different cost models that the Town can implement that will make carpool permits effectively priced to encourage usage. These permits should cost less for an individual when compared to an employee permit for just one person/car.
Benefits	• Decreases parking demand. • Reduces vehicle miles traveled and GHG emissions.
Considerations	• Carpool permit price relative to other parking options. • Management and enforcement.
Prerequisites	• Automated permit management system.
Timeframe	Mid-term
Cost	Medium
Priority	Customer service, inventory, sustainability

Strategy #12. Offer a low-income permit rate.	
Description	Along with the revised rate structure, one recommendation for the Town is the establishment of a low-income/service worker permit option. It is important for the success of a downtown that low-income employees have an affordable option for parking. The Town should establish an income threshold for qualification, and with proof of wages, employees could qualify for a reduced permit rate. Low-income/service worker monthly permits could be $20, instead of the existing $40 monthly permits.
Benefits	• Improves the ability of low-income service workers to participate in the permit parking program. • Will improve on-street parking availability by reducing the number of employees parking on-street.
Considerations	• Income threshold and required proof of income. • Affordable low-income permit rate.
Prerequisites	• Automated permit management system.

Timeframe	Mid-term
Cost	Low
Priority	Customer service, sustainability

Strategy #13. Adjust permit parking supply and pricing over time as needed.	
Description	If additional employee permit parking supply is needed, the Town should consider potential shared parking opportunities and/or allowing a specified number of employees to park on nearby residential streets with excess capacity during the daytime only (see Section 6.0). Valet parking is also another opportunity to increase capacity. This could be an interim solution, while additional options are being vetted. Employee permits should be managed by limiting the number of permits available for all downtown employees. This will result in a first-come, first-served model to purchase employee parking permits until the cap is met. The cap should be set higher than the number of physical employee parking spaces, resulting in an oversell. It is very unlikely that every permitted employee will be working at the exact same time. This will reduce the change for underutilized employee parking and increase permit-related parking revenue for the Town. However, if the cap is met, alternative permit options such as carpooling permits and alternative modes of transportation will hopefully have increased utilization. The implementation of a permit management system and the adoption of mobile payment throughout the entire District will provide more user-friendly options for employees to pay for their permits.
Benefits	• Supports downtown businesses by encouraging employees to park off-street, therefore creating more on-street and convenient parking availability for customers.
Considerations	• Income threshold and required proof of income. • Affordable low-income permit rate.
Prerequisites	• Automated permit management system.
Timeframe	Mid-term
Cost	Low to Medium
Priority	Customer service, inventory, sustainability

5.2.3 Long-Term

Strategy #14. Assess opportunities for remote employee parking supported by a shuttle.	
Description	The Town can consider potential remote parking opportunities to provide parking for all permitted employees during the peak seasons. The Tahoe Forest Hospital could be considered for a remote employee parking location. Remote parking locations supported by a shuttle will be more important during the winter season because it is more difficult for employees to park near Downtown Truckee and walk to their work. This can be an optional program for employees during the shoulder seasons. Having all employees parking in remote location(s) during peak seasons will increase the availability of parking within the District for locals and visitors when an increased supply of parking is needed most.
Benefits	• Expands employee permit parking supply. • Encouraging employees to park on the perimeter of downtown or in remote locations can improve parking availability in the downtown core for customer parking.
Considerations	• Shuttle route, frequency, operating hours, and reliability. • Rate structure.
Prerequisites	• Ongoing data collection. • Identify and develop available remote parking locations.
Timeframe	Long-term
Cost	High
Priority	Inventory, sustainability

6.0 Shared Parking

6.1 Assessment

Shared parking agreements are a mutually beneficial opportunity to maximize the use of existing private parking assets throughout the Town. Certain parking resources may be underutilized during off-peak periods, which provides an opportunity to accommodate complementing uses that optimize the parking supply. For example, a bank or school parking lot are typically empty during the evening while surrounding restaurants could have peak parking demand. Sharing parking is more cost-effective than building additional supply, and it reduces instances of wasted land space that could otherwise be optimized for higher and better uses. Shared parking agreements are designed to safeguard the property owner while providing an opportunity for additional revenue.

The Town has established shared parking agreements in the past. Most recently, the Town had an agreement with the Catholic Church at 10116 E Street (see Figure 12). Currently, the Town does not have any active shared parking agreements. There are several private assets that should be pursued for potential shared parking agreements. Some potential locations include renewing the former shared parking agreement with the Catholic Church and exploring new shared parking agreements with the United States Postal Service location at 10050 Bridge Street.

Figure 12. Catholic Church Parking Lot.

There are multiple types of shared parking agreements including:

- Private leases to public,
- Public leases to private; and
- Private leases to private.

A portion of any revenue from shared parking can be designated to support and fund the enforcement, maintenance, and upkeep of the shared parking locations. Additionally, funds can be used to guarantee certain parking facility enhancements as an additional value add from the shared parking program. With a public-private agreement, the Town could install paid parking equipment, support permit parking, establish rates, designate policies, and provide enforcement and basic maintenance.

At a minimum, a shared parking agreement typically considers the following:

- **Term and extension:** Evaluate the return on investment and ensures that the contract terms allow for potential redevelopment in the future if needed;
- **Use of Facilities**: Establish available hours, number of spaces, time limitations and ensures that the base user will retain use at the end of the sharing period;
- **Maintenance:** Evaluate and incorporate the added maintenance and operation costs;
- **Operations:** Consider revenue collection operations as applicable and needed signage;
- **Utilities and Taxes:** Determine the responsible parties and any cost-sharing agreements;
- **Signage:** Consider opportunities for consistency with signage and branding;
- **Enforcement and Security:** Determine who will handle enforcement and towing;
- **Insurance and Indemnification:** Consider litigation with any cost-sharing; and
- **Termination:** Identify the grounds for termination or cancellation.

There are 3 private lots with a total of 148 spaces located within the downtown area that could benefit the Town through shared parking agreements. These lots include the Dirt Lot on Jibboom Street, the Catholic Church Lot, and the Community Arts Center Lot. Figure 13 displays the occupancy for the Catholic Church and Community Arts Center parking lots throughout the data collection rounds and demonstrates the occupancy opportunity for shared parking agreements.

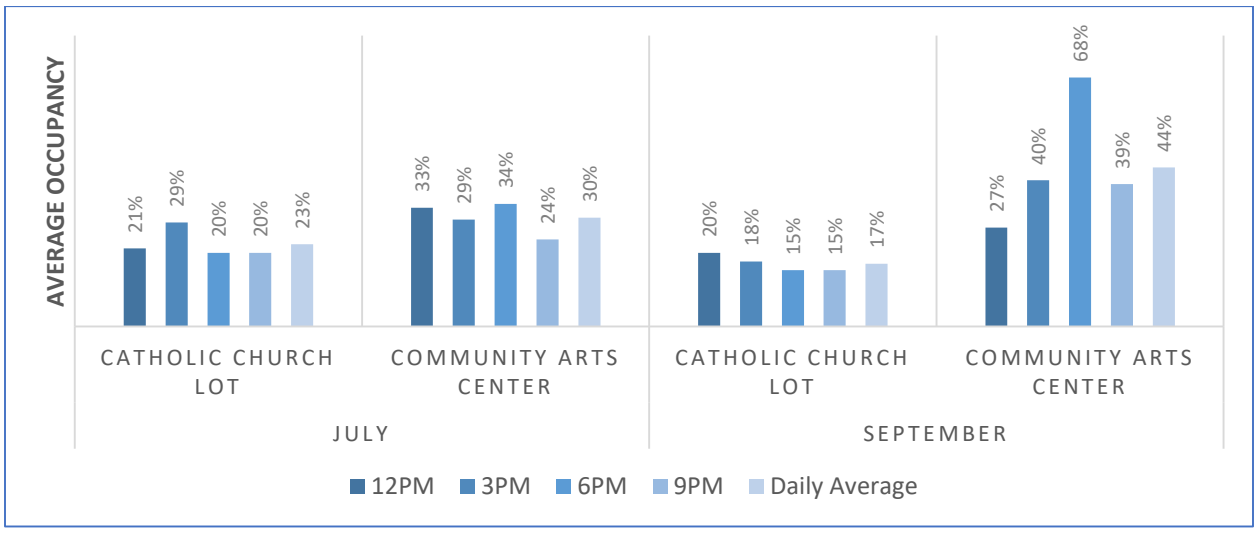


Figure 13. Off-street occupancy for Catholic Church and Community Arts Center parking lots.

The Dirt Lot, which consistently experienced occupancy rates near or above 85% throughout the data collection rounds, could also be considered for a shared parking agreement. While it is not an established parking lot with pavement and lighting, it is one of the highest utilized parking areas throughout Downtown Truckee. If the Town were to enter into a shared parking agreement with the Dirt Lot property owner, the lot could monetize parking, which could, in turn, fund parking lot improvements for lighting, paving, safety, and traffic flow. However, with a current proposal to develop the Dirt Lot into housing, this area may not be available for a shared parking agreement (see Section 5.1.2).

The Post Office parking lot at 10050 Bridge Street (see Figure 14), not included in the data collection, could also be considered for a shared parking agreement. Feedback from various internal and external stakeholders has recommended pursuing such an agreement.

Figure 14. Post Office Parking Lot in Truckee.

6.2 Recommendations

6.2.1 Near-Term

Strategy #15. Establish a shared parking policy framework.	
Description	The Town should consider offering a standardized and/or monetized shared parking policy framework that would be mutually beneficial to the private lot owners and the Town to allow for a more comprehensive approach to parking management. This will also provide consistency between all future shared parking agreements. A portion of the revenue from shared parking should be set aside to support the enforcement, maintenance, and upkeep of shared parking locations. Additionally, funds could be used to guarantee certain parking lot enhancements as an additional value add from the shared parking program. The Town would install the necessary meters or pay stations, help establish the appropriate parking rates, designate any necessary time limits, and provide enforcement and basic maintenance. The shared parking agreement would establish any potential revenue splits. To ensure the effectiveness of shared parking agreements, the Town must manage and administer the shared parking opportunities effectively per the terms of the agreement.
Benefits	• Enables the Town to negotiate and collaborate with private parking lot owners.
Considerations	• Term and extension: Evaluate return on investment and ensure terms that allow for potential redevelopment. • Use of facilities: Establish available hours, number of spaces, time limitations, and ensure that base users will retain use at the end of the sharing period. • Maintenance: Evaluate the added cost of maintenance and operation. • Operations: Consider revenue collection operations (when applicable) and necessary signage. • Utilities and taxes: Determine responsible parties and any cost sharing agreements. • Signage: Consistency with Town signage can improve the public's experience. • Enforcement/security: Determine who handles enforcement and towing. • Insurance and indemnification: Consider litigation with any cost sharing. • Termination: Establish a termination clause.
Prerequisites	• None.
Timeframe	Near-term

Cost	Medium
Priority	Inventory, sustainability

6.2.2 Mid-Term

Strategy #16. Explore shared parking opportunities.	
Description	Pursue shared parking agreements with businesses and landowners that may have underutilized parking capacity. It is important to maximize existing parking resources in the area around downtown and consider all potential solutions. Potential locations for shared parking agreements include: • The Catholic Church Lot at 10116 E Street, • The Dirt Lot on Jibboom Street, • The Community Arts Center Lot at 10046 Church Street, and • The Post Office parking lot at 10050 Bridge Street. Consider offering a monetized shared parking option that would be mutually beneficial to the private lot owners and the Town. Shared parking agreements could be established for public or permit parking.
Benefits	• Maximizes the efficiency of existing parking resources; • Lower cost option than building new parking supply.
Considerations	• Monetized vs. non-monetized agreements; • Monitoring, maintenance, and enforcement; • Signage.
Prerequisites	• Municipal code updates; • Share parking policy framework; • Enforcement and signage plan.
Timeframe	Mid-term
Cost	Medium
Priority	Inventory, sustainability

7.0 Enforcement

7.1 Assessment

7.1.1 Staffing

Parking enforcement is operated within the Police Department. The Parking Enforcement Officers (PEOs) are responsible for patrolling the District, as well as generating monthly financial reports, pay station revenue collection, pay station primary maintenance, and processing parking citation appeals. As of July 1, 2019, the Town has one full time employee (FTE) performing parking enforcement duties from 8 AM – 5 PM, Monday through Friday.

Paid parking hours of operation are currently 10 AM to 6 PM, Monday through Sunday. Since the FTE only works until 5 PM, there is no proactive parking enforcement for the last hour of parking operations or on the weekends. In order to ensure compliance, sufficient staffing levels are a necessity consistent with the parking hours of operation. There is limited, if any, enforcement coverage when the PEO may be on vacation or sick leave. Since the PEO currently supports duties besides parking enforcement, there are times of the day without any coverage in support of the downtown parking regulations. Consistent parking enforcement coverage is critical to support the parking operations as it will lead to improved compliance with regulations.

Figure 15. Velosum Anoto pen process.

The Town has an existing agreement with Velosum for citation management. The enforcement hardware includes two electronic pens and smartphones to write citations (see Figure 15). The devices provide the ability to capture violation images and track warning notices.

7.1.2 Appeals Process

Violators can pay parking citations online at www.truckeeparking.com, by mail, or in person to the Town of Truckee Police Department - Parking Division (10183 Truckee Airport Road). Violators must provide the citation number and license plate number when paying a parking fine. Only citations issued after June 30, 2009 can be paid online. When paying by mail, violations must pay

by check or money order. No cash is accepted. Violators can pay by cash, check, money order, or credit card when paying in person. Per California law, violators have 21 days from the original citation date to pay or appeal the parking ticket.

If a violator wishes to appeal their parking citation, they can appeal in person, by mail, or online at www.truckeeparking.com. All parking citation appeal decisions are processed through the mail. Violators do not need to appear in court to appeal a parking citation.

7.1.3 License Plate Recognition (LPR)

License Plate Recognition (LPR) technology is a key component of this PAP for PEOs to efficiently and effectively enforce parking throughout Downtown Truckee. An LPR system can simultaneously track and verify parking policies across multiple databases, which is significantly more efficient than traditional methods like visual verification with a physical receipt on the dashboard or chalking tires for tracking time limits.

Figure 16. License plate recognition camera.

Mobile LPR can be utilized to seamlessly capture parking violations using state-of-the-art camera technology that transfers data to remote handheld devices for citation issuance (see Figure 16). LPR vendors have integrated with most paid parking vendors to provide live payment data to enforcement officers. The live data will indicate whether a vehicle has a valid paid parking session. Additionally, if parking permits transition to a license plate-based solution, and if all pay stations are configured for Pay-by-Plate, then the LPR can efficiently verify valid parking sessions for permit and payment status.

LPR provides a value-added data collection benefit that provides the Town the ability to capture ongoing occupancy and utilization data. LPR vendors have developed user-friendly data collection modules to simplify data analysis for the Town. Data can be exported to Excel for ongoing analysis and review. The Town could develop a data collection plan with fixed routes, days, and hours. Collecting data with LPR would be a cost-effective way for the Town to understand on and off-street occupancy and utilization trends, which would allow for data-driven decisions about future policy adjustments.

A mobile LPR system can also be integrated with a fixed LPR system. Fixed-mount LPR cameras can be installed at high-trafficked intersections throughout the Town for additional data collection. An integrated mobile and fixed LPR system can provide real-time intelligence to the Town Police Department while in the field and could be utilized to support emergency evacuations, snow removal, special events, traffic management, among other uses.

7.1.4 Booting and Towing

A "scofflaw" in parking is anyone who has five or more unpaid parking citations. To encourage compliance and to collect unpaid fines, the Town could utilize vehicle immobilization equipment for scofflaw enforcement. LPR can be configured to automatically check a scofflaw database and notify PEOs upon identification. Instead of using the traditional boot, which immobilizes a vehicle from the wheel, the Town could purchase more innovative, automated, and customer-convenient options.

The boot is an example of a traditional method of vehicle immobilization. Officer safety is always a concern during any boot release. There are two types of advanced immobilization devices that the Town should evaluate and consider that specifically address the issue of officer safety – a smart release boot and a windshield immobilization device (see Figure 17). Each of these immobilization devices provides a self-release service feature that allows the customer to manage delinquent citation payments and do not require PEO field presence to complete a transaction. This minimizes wait time and mitigates the often harsh exchange that can occur when the traditional boot is removed from the vehicle.

Figure 17. Windshield immobilization device.

A smart self-release boot looks just like a traditional boot, however, embedded electronics allow for programmed release. When a scofflaw is identified by a PEO, the boot is deployed by attaching it to the wheel. The violator can contact a customer service telephone number immediately and pay the penalties owed to the Town. Prior to the payment process, the violator must acknowledge the financial responsibility to return the boot to a designated location. A credit hold is placed, and if the equipment is not returned to a designated location within the specified timeframe (typically 24 hours), the specified value is processed to the violator. The values range from $500 to $750, and equipment return compliance is high.

While also equipped with a violator release feature, windshield immobilization devices are attached to the windshield rather than the tire. This is another enhanced opportunity for officer safety because, rather than bending down to attach the boot, the device can be attached to the windshield from the curbside. Industrial suction cups adhere the device to the windshield, thereby

obstructing the driver's view. The devices are GPS-enabled and include an anti-tamper alarm. As with the smart boot option, violators must acknowledge financial responsibility for the device and, if not returned, they will be charged for the device.

Both of these immobilization solutions can automatically send an alert notification indicating when a vehicle should be towed. The Town can determine if this notification should be sent directly to the tow company or if an officer should solicit the service.

7.2 Recommendations

7.2.1 Near-Term

Strategy #17. Utilize license plate recognition (LPR) technology for enforcement.	
Description	The LPR system should be integrated with the Town's future citation and permit management vendor(s). The Town operates the parking enforcement operation with two different vehicles: an electric ATV in the summer and an all-wheel-drive pickup truck in the winter. The Town currently owns the ATV and rents the pickup truck but plans to purchase one in the near future. The Town should start by purchasing one LPR unit to manage the existing parking assets. As the District continues to expand into the Railyard, the Town should be prepared to acquire an additional LPR unit in support of the expansion to optimize the resources of an efficient parking operation. LPR can also be used as a Police Department asset outside of the District to assist with other Police Department work. If parking permits transition to a license plate-based solution as recommended, and as the parking pay stations configuration for Pay-by-Plate expands, then the LPR can effectively verify valid parking sessions. LPR technology can significantly improve enforcement efficiency and coverage. Other databases can also be integrated with the LPR system for enforcing scofflaws (vehicles with 5 or more unpaid parking citations) and stolen or wanted vehicles. LPR also has the added benefit of providing occupancy and utilization data for ongoing analysis and review. The Town could develop a data collection plan with fixed routes, days, and hours.
Benefits	• Significantly improves enforcement efficiency by automating plate lookups for payment status, permit status, scofflaws, and time limit tracking. • Can also be utilized as a data collection tool for occupancy and utilization data.

	• Data can be stored securely in a separate database not accessible by the public.
Considerations	• Integration with other parking technologies and the development of license plate-based programs. • Enforcement vehicles, installation, and secure storage. • Data security and storage.
Prerequisites	• None.
Timeframe	Near-term
Cost	Medium
Priority	Technology, customer service, sustainability

Strategy #18. Solicit new citation management technology to increase enforcement efficiency.	
Description	The Town should draft and issue a Request for Proposals (RFP) for a parking citation management system, including enforcement handhelds and LPR technology. The optimal solution should include an online web portal for citation payment. The Town should consider which of the following tasks should be outsourced to a vendor, included as an optional service in the RFP, or kept in-house to be managed by the Town: • Citation entry (handwritten citations); • Mail-in payment processing; • Appeal processing; • Customer support (phone/email); • DMV lookups; • Notice mailing; • DMV holds; • Debt collections; • Develop/supply handheld citation stock; • Develop/supply handwritten citation books; • Customizable public-facing web user interface to pay and appeal parking citations; • A toll-free phone number to accept citation payments over the phone. Handheld ticket writer-specific features to be considered should include: • Real-time transmission; • Ability to take, send, and view photos or videos • Ability to view prior citations, warnings, and valid permit information during the citation issuance process; • The use of a chalking feature; • The use of a default citation; • A simple and user-friendly interface.

	The Town should also consider obtaining a permit management system (see Recommendation #9) that can be integrated with or provided by the citation management system. The Town should also consider which of the following permit-related tasks should be outsourced to a vendor, included as an optional service in the RFP, or kept in-house to be managed by the Town: • Permit renewal mailing; • Permit application review (validate eligibility); • Customer support (phone/email).
Benefits	• Automated enforcement tools will support consistency which will improve compliance with parking regulations; • Increased compliance with parking regulations will improve the effectiveness of parking management strategies; • Increased compliance with parking regulations will improve safety.
Considerations	• Training; • Impacts to enforcement routes/beats; • Technology integration requirements.
Prerequisites	• None
Timeframe	Near-term
Cost	Medium
Priority	Technology, customer service

Strategy #19. Utilize enforcement data for Gap Management.	
Description	Parking Enforcement Officer (PEO) productivity is not, and never should be, based upon a quota or the number of citations issued. Consistent enforcement, in some cases, will reduce the frequency of citations issued over time due to an increase in compliance. PEO productivity can be measured and monitored using Gap Management strategies. Gap Management is the process of analyzing citation issuance trends and identifying gaps in issuance. Enforcement handhelds provide the ability to monitor PEO locations in the field to ensure that their assigned routes are being covered without deviation and identify areas with minimal enforcement coverage. Similar to the LPR data collection, a Town resource should be designated to frequently analyze the citation issuance data.
Benefits	• Improved measure of enforcement effectiveness; • Can identify potential inefficiencies or inconsistencies in the field.
Considerations	• Requires ongoing monitoring of data and trend analyses over time.
Prerequisites	• None
Timeframe	Near-term
Cost	Low
Priority	Sustainability, technology

7.2.2 Mid-Term

Strategy #20. Hire two additional seasonal PTE PEOs to ensure consistent enforcement.	
Description	Consistent enforcement is critical to support the parking operation and encourage compliance with parking regulations. At least two additional PTE PEOs would provide the consistent compliance coverage throughout all parking hours of operation each day. Currently, there are 56 parking hours of operation per week, exceeding the existing single FTE schedule of 40 hours. The Town should hire at least two part time employee (PTE) PEOs during the peak summer and winter seasons. This will ensure consistent enforcement of parking regulations during the busiest times in Truckee.
Benefits	• Consistent enforcement will improve compliance with parking regulations; • Increased compliance with parking regulations will improve the effectiveness of parking management strategies; • Increased compliance with parking regulations will improve safety.
Considerations	• Parking occupancy and utilization data will dictate future policy decisions and staffing requirements may shift based on the number of time limit and/or paid parking locations, operating hours, and operating days; • Certain enforcement technologies such as LPR will improve enforcement PEO efficiency.
Prerequisites	• None
Timeframe	Mid-term
Cost	High
Priority	Customer service, sustainability

Strategy #21. Utilize automated and customer-convenient vehicle immobilization equipment.	
Description	The Town should consider smart booting or windshield immobilization as a more efficient alternative to towing because it improves officer efficiency and safety. Certain immobilization devices provide a self-release service feature that allows the customer to manage delinquent citation payments and do not require enforcement officer field presence to complete a transaction. This minimizes wait time and mitigates the often harsh exchange that can occur when the traditional boot is removed from the vehicle.
Benefits	• Improves officer safety and efficiency. • Minimizes customer wait times and allows for self-release and return of equipment.
Considerations	• Equipment storage and officer training. • Immobilization versus towing policies and procedures.
Prerequisites	• None.
Timeframe	Mid-term
Cost	Low

Priority	Technology, customer service

8.0 Pay Station Maintenance and Collections

8.1 Assessment

8.1.1 Parking Pay Station Maintenance

Maintenance of paid parking infrastructure relates to both the sustainability and customer service priorities. Maintenance optimizes equipment lifespan and minimizes down time when problems occur. Regular maintenance ensures that infrastructure can effectively live out its lifespan and customers have an effortless experience when paying for parking.

Pay station Level 1 maintenance includes basic preventative maintenance and responses to service calls, such as addressing jammed credit cards. Level 2 maintenance is typically managed by the parking technology vendor. The existing paid parking technology software notifies staff of maintenance issues and revenue collection requirements. While this is a helpful tool, the Town should not rely solely on the parking software. It is recommended that the maintenance staff visit each pay station location at least once every week to ensure that there are no unidentified issues such as graffiti or vandalism. Preventative maintenance should be completed on all pay stations every three weeks to ensure that the equipment continues to function properly. Preventative maintenance should include lubrication of the meter locks, general cleaning, removal of graffiti, testing of coin chutes, and card swipe cleaning. Scheduled basic preventative maintenance of pay stations can keep small problems associated with daily use of meters from becoming larger issues that require mechanisms to be repaired or replaced.

The PEO currently conducts the majority of pay station maintenance activities, spending up to four hours per week responding to maintenance requests. Since the Town currently has only one PEO, time spent maintaining the pay stations remove the focus from the priority of enforcing parking regulations. The Town should consider identifying a non-PEO staff member for pay station maintenance and revenue collections. This would allow the PEO to more effectively and efficiently enforce parking regulations and will ensure that maintenance of the pay stations is a priority to ensure optimized equipment performance.

8.1.2 Revenue Collection and Reconciliation

The frequency of revenue collections depends on utilization. The PEO currently support pay station revenue collections in addition to parking enforcement, removing the focus from consistent enforcement during parking hours of operation. Coin boxes are emptied into bags and processed by Wells Fargo Bank.

Ideally, paid parking monies should be collected in pairs. Pay station and coin box key control must be a priority. Keys should be logged, tracked and assigned. Future paid parking technology implementations should consider including electronic locks (e-locks). E-locks are an electronic key system that is programmed for the collection routes. This adds another layer of security and access accountability for the Town. Traditional key systems are less secure because there is no electronic record of use unlike the electronic key which retains the access information details. Additionally, if there is any meter theft or an electronic key is lost, the Town can trace and identify who accessed the equipment and at what time. In addition, rather than rekeying equipment, a key can be programmed off to eliminate pay station access opportunities which provide a significant cost savings to the Town.

Figure 18. Electronic lock and key.

The amount of revenue collected by the Town should always be verified against the amount recorded by the bank once deposited. There should be controls and oversight procedures in place to limit exposure. Ideally, the pay stations should be collected based upon consistent frequencies, and the counted monies should be tracible back to specific pay stations, routes, and collectors. This will allow the Town to compare revenue trends over time for both predictive purposes and for added security. Any abnormalities in trends should be investigated.

8.2 Recommendations

8.2.1 Near-Term

Strategy #22. Designate pay station maintenance and revenue collections technician.	
Description	The Town should designate a part-time pay station maintenance and revenue collections technician. This position could either be staffed internally or contracted out, depending on the Town's preference and overall management structure. This designated pay station maintenance and collection resource will allow PEOs to prioritize parking enforcement duties rather than to collect revenue or maintain the pay stations. This will help increase consistency of enforcement and compliance throughout the District. Level 1 maintenance handles (service calls, revenue collections, basic preventative maintenance, and responses to service calls (i.e., addressing jammed credit cards). The Town's pay station vendor can provide specialized training for the designated resource. Beyond basic maintenance, Level 2 maintenance is typically managed by the parking technology vendor when the meter cannot be serviced in-house.

Benefits	• Optimizes paid parking equipment lifespan. • Ensures that pay stations do not reach capacity.
Considerations	• Collection frequency based upon paid parking locations, rates, and equipment configuration. • Level 1 maintenance is basic preventative maintenance; Level 2 maintenance is typically handled by the equipment vendor.
Prerequisites	• None.
Timeframe	Near-term
Cost	High
Priority	Sustainability, customer service

8.2.2 Long-Term

Strategy #23. Establish an ongoing parking facility (lot) maintenance and upkeep plan.	
Description	Parking facilities should be appropriately maintained and cleaned to optimize their lifespan and safety. The Town should identify internal or external resources and budget needed.
Benefits	• Optimizes the lifespan of existing and future parking facilities and assets. • Improves the cleanliness and experience of parking facilities. • Improves safety.
Considerations	• Impact on staffing, budget, and equipment. • Prioritization of repairs.
Prerequisites	• None.
Timeframe	Long-term
Cost	Medium to High
Priority	Sustainability, customer service, inventory

Strategy #24. Acquire electronic locks (e-locks) for future parking technology improvements.	
Description	The Town should consider purchasing e-locks for future parking technology. This will add another layer of security for the Town. Additionally, if there is any pay station theft, this can result in the Town needing to re-key the pay stations with traditional locks and keys. As the District expands, having individual traditional locks and keys for every pay station will become increasingly cumbersome when conducting revenue collections. E-locks will provide an easier, more efficient, and more secure collection process as the District grows.
Benefits	• Optimizes security, access control, and provides an electronic record.
Considerations	• Key management and storage.
Prerequisites	• None.
Timeframe	Long-term

Cost	Medium to High
Priority	Technology, sustainability

9.0 Special Events

9.1 Assessment

The Town of Truckee is an increasingly popular tourist destination and hosts events that impact parking, such as Truckee Thursdays in the summer and Festive Fridays in the Winter. The Town currently has a special event permitting process; however, there is no pricing difference when reserving paid parking spaces in the District compared to a car parking in the same parking space for the entire day, or any additional administrative fees:

- Reserved parking in the Downtown Paid Parking District: $1.50 per hour/per space/for spaces on Donner Pass Road
- Reserved parking in the Downtown Paid Parking District: $1.00 per hour/per space/for spaces on Jibboom and West River Streets.

Figure 19. Dixon Resources Unlimited Group Promoting WayToPark Mobile Payment Application at Truckee Thursday in August 2019.

The Town could consider charging higher parking rates during special events which would provide the Town additional revenue to continue to improve parking and transportation management.

With the existing pay stations installed throughout the downtown area, paid parking rates can be easily modified for special events that impact downtown parking. Special event rates may help motivate drivers to park farther away or seek alternative modes of transportation. A special event rate can be easily integrated and implemented with smart paid parking technology. For ease of messaging, it is recommended that the Town utilize a flat rate for special events. Any flat rate should be commensurate with the value of existing rates for on- and off-street parking locations.

To apply a special event rate, the Town needs criteria for when the rate would apply, the amount, and the advanced notification requirements. Based upon these criteria, the Town will have the option to increase special event pricing for any downtown special events, depending upon the need. It is important to keep in mind that special event rates will require increased hours of enforcement for any extended paid parking hours.

9.2 Recommendations

9.2.1 Near-Term

Strategy #25. Adjust fee schedule to increase the price of reserved parking spaces.	
Description	The Town should consider increasing the price of reserved parking spaces and available parking spaces during special events. The cost of parking spaces should be commensurate with the value of existing rates for on- and off-street parking locations during special events. The Town should determine the increased cost in one of two ways: • Adding an administrative fee, or • Increasing the total cost of a reserved parking space to account for necessary administrative cost. The Town should determine the administrative cost associated with reserving paid parking spaces downtown (accounting for processing applications, hanging temporary "No Parking" signs, etc.). This cost can either be included in the total cost of reserving a parking space or can be an additional fee someone must pay when reserving paid parking spaces in Downtown Truckee.
Benefits	• Increased income to improve parking and transportation management.
Considerations	• Pricing and parking supply. • Enforcement.
Prerequisites	• Council approval of fee schedule update. • Rate model.
Timeframe	Near-term
Cost	Low
Priority	Inventory, mobility

Strategy #26. Adjust fee schedule to provide the ability to charge higher paid parking rates during events.	
Description	Higher paid parking rates for special events may help motivate drivers to park farther away or seek alternative modes of transportation. The Town should utilize a flat rate for special event parking. Any flat rate charged should be commensurate with the value of existing rates for on- and off-street parking locations. When setting the flat rate, the Town should consider both the price to park in the affected parking spaces regularly, as well as the expected attendance of the special event and set the price accordingly.

	Special event parking rates can also include administrative costs to cover any administrative work the Town must conduct for the special event and any expanded hours of enforcement that may be required.
Benefits	• An incentive for customers to utilize alternative modes of transportation to special events. • Increased income to improve parking and transportation management.
Considerations	• Pricing and parking supply. • Enforcement.
Prerequisites	• Council approval of fee schedule update. • Rate model.
Timeframe	Near-term
Cost	Low
Priority	Inventory, mobility

9.2.2 Mid-Term

Strategy #27. Promote and optimize alternative modes of transportation during special events.	
Description	Promoting alternative transportation options should be encouraged throughout all levels of special event planning and promotions. For example, there are many cross-promotions occurring with services such as Lyft and Uber that both promote the Town event and their services to encourage other transportation sources and reduce parking demand. Municipalities across the country are coordinating directly with these resources to encourage alternative transportation. Special event planning should incorporate an accessible location for the drop-off and pick-up of passengers.
Benefits	• May reduce traffic congestion and greenhouse gas emissions; • Can reduce the demand for parking.
Considerations	• Some mode alternatives such as TNCs can increase traffic congestion; • Designated passenger loading areas; • Outreach and incentive programs; • Availability and proximity of public transportation options.
Prerequisites	• None.
Timeframe	Mid-term
Cost	Low
Priority	Mobility, inventory

10.0 Loading Zones

10.1 Assessment

The Town uses a combination of signs, curb paint, and permits to regulate loading restrictions. There are four different curb colors to indicate parking restrictions in Truckee.

Table 10. Loading Zone Restrictions in Truckee.

Curb Color	Restriction
Red	No stopping or parking at any time.
Yellow	Loading zones. No stopping, standing or parking at any time of any day for any purpose other than the loading or unloading of passengers and freight and shall not consume more than three minutes or the loading or unloading of freight more than twenty (20) minutes.
White	Passenger loading zones. No stopping, standing, or parking of any purpose other than loading or unloading passengers or for the purpose of depositing mail. Not to exceed three minutes.
Blue	Handicap parking. Will be accompanied by the blue and white disabled person sign. A properly displayed permit is required. These parking stalls are restricted 24 hours a day, 7 days a week, including holidays.

Commercial loading is primarily conducted in the alleys of Downtown Truckee. However, commercial loading is sometimes conducted illegally, with vehicles parked partially on sidewalks. There is no parking permitted in alleys, except for the active loading or unloading of people or freight. Additionally, drivers can also obtain permits to load or unload at an angle to the curb. For reference, section 10.12.020 of the Truckee Municipal Code is included below:

Town of Truckee Permits for Loading or Unloading at an Angle to the Curb: Section 10.12.020

10.12.020 Permits for Loading or Unloading at an Angle to the Curb

(a) The traffic engineer is authorized to issue special permits to authorize the backing of a vehicle to the curb for the purpose of loading or unloading property subject to the terms and conditions to such permit. Such permits may be issued either to the owner or lessee of real property alongside the curb or to the owner of the vehicle and shall grant to such person the privilege as therein stated and herein authorized.

(b) It is unlawful for any permittee or other person to violate any of the special terms or conditions of any such permit.

Loading zones could allow for both active loading/unloading of passengers and commercial uses in order to optimize the use of space. For example, with the rising popularity of Transportation Network Companies (TNCs) or ridesharing services, the demand for safe and convenient passenger

loading spaces will continue to grow. Ridesharing applications can supplement public transportation routes, providing an efficient alternative to underserved locations. They are also a common alternative to driving, due to the cost or inconvenience of parking.

Ridesharing vehicles often stop in the middle of the road or in no parking zones, and drivers also can be seen queuing up, waiting for passengers. While parking demand can be eased by the number of ride-sharing vehicles, they can also have a negative impact on roadway congestion and traffic. This is why it is important for the Town to take a proactive approach to manage the impact of ridesharing.

Unfortunately, it can be difficult to enforce parking regulations such as red curb violations for ridesharing vehicles, because they only remain at their drop-off or pick-up location for a short period of time. Drivers and passengers are also not incentivized to utilize designated ridesharing zones or legal parking spaces if it will extend the length of their session, due to the cost of the service. Most ridesharing applications also rely on a rating system for reviewing their drivers, so drivers will often favor efficiency and convenience for their passengers.

This is why it is important to provide sufficient short-term parking space and loading zone space availability in congested core destinations. The main goal is to provide adequate space for safe drop-offs and pick-ups in convenient locations that may actually be used. This could be achieved by white curb paint and/or signage. Otherwise, high parking occupancy rates may lead drivers to drop off or pick up their passengers in the travel lane, which can cause issues with traffic congestion and safety.

Another consideration is loading zone operating hours, like requiring commercial deliveries before 10 AM. Some agencies restrict loading hours and repurpose the space for time limited and/or paid parking outside of the loading zone hours. This is beneficial in commercial cores to prevent large commercial trucks from blocking sightlines to nearby businesses. However, there are several businesses that may need to adapt their operational plan to support commercial deliveries before 10 AM. At a minimum, commercial deliveries could be prohibited during the Town's peak occupancy periods like during the lunch hour.

10.2 Recommendations

10.2.1 Near-Term

Strategy #28. Require active loading and unloading within loading zones.	
Description	Update municipal code language to require "active" loading only to prevent loading zone abuse.
Benefits	• Optimizes loading zone use. • Improves enforceability of vehicles parked in loading zones that are not actively loading.
Considerations	• Clear communication via signage.
Prerequisites	• None.
Timeframe	Near-term
Cost	Low
Priority	Inventory

Strategy #29. Allow for short, time-limited parking spaces to be established.	
Description	Update municipal code language to indicate green curb spaces to indicate short-term, time-limited parking spaces. These spaces usually allow for parking for 15-30 minutes.
Benefits	• Provides short term parking spaces for quick trips downtown (e.g., picking up dinner or purchases, food delivery services)
Considerations	• Clear communication via signage and curb painting.
Prerequisites	• None.
Timeframe	Near-term
Cost	Low
Priority	Customer service, inventory

10.2.2 Mid-Term

Strategy #30. Consider limiting commercial loading before 10 AM.	
Description	Posted signage should restrict loading to before 10 AM. It is possible to allow public time limit or paid parking in loading zone spaces outside of loading zone hours. If the Town restricts commercial loading to between certain times, paid parking can be required thereafter.
Benefits	• Improves traffic congestion. • Reduces instances of commercial trucks blocking access so sightlines to businesses. • Optimizes the use of curb space by creating multi-purpose loading and parking spaces.
Considerations	• Appropriate operating hours and days. • Clear communication via signage and/or meters.

	• Communication with commercial delivery companies. • Regulation of commercial delivery companies.
Prerequisites	• Municipal code updates; • Signage.
Timeframe	Mid-term
Cost	Low
Priority	Inventory, customer service

11.0 Electric Vehicle Charging

11.1 Assessment

Downtown Truckee currently has four ChargePoint EV Charging Stations in the downtown area. EV charging locations include:

- Alibi Ale Works at 10069 Bridge Street with two Tesla-only charging stations and
- The Historic Downtown Truckee and Visitor Center parking lot (10065 Donner Pass Road) with two general EV charging stations.

EV charging at the Historic Downtown Truckee and Visitor Center parking lot costs $0.30/kWh.

There is also a proposed Tesla Supercharger station with a target of opening in 2019 near the intersection of Donner Pass Road and Bridge Street (exact timing and specific location may vary).

Additionally, there are three Tesla Supercharger stations in the Town of Truckee, outside of the downtown area. These Supercharger locations include:

- The Gateway at Donner Pass (11290 Donner Pass Road) with 11 Superchargers available 24/7,
- Cedar House Sport Hotel (10918 Brockway Road) with 1 Tesla Connector available for patrons only, and
- The Rock (11209 Brockway Road) with 8 Superchargers available 24/7.

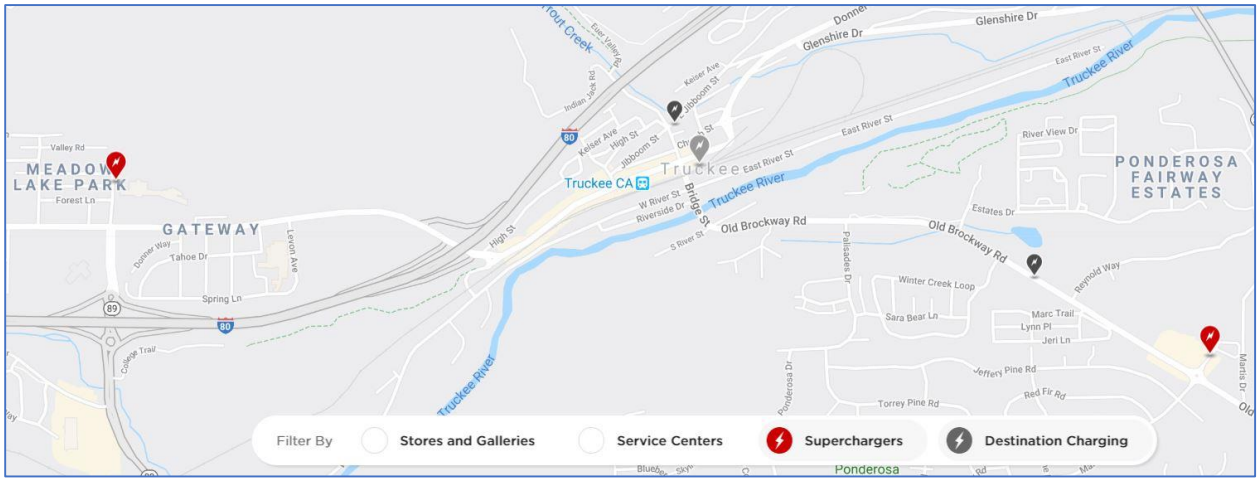


Figure 20. Tesla Supercharger Locations in the Town of Truckee.

Figure 21. EV Charging Signage in Downtown Truckee.

Figure 22. ChargePoint EV Charging Station Infrastructure in Downtown Truckee.

Offering EV charging stations can be an incentive for drivers to stop in Truckee and patronize nearby businesses while waiting for their vehicle to charge. Additionally, as EVs become more common, the demand for EV charging stalls will increase. It is uncommon for agencies to provide gasoline in public parking lots, therefore offering EV charging stations may be unnecessary, especially since EVs are becoming more efficient over time, and charging stations are beginning to provide quicker charges. Additionally, it is challenging to measure the benefit of EV charging stations to Truckee. While, in some cases, it may attract more potential customers, it is unclear how many EV drivers visit the Town for that purpose and how many visit nearby businesses as a result.

On the other hand, providing convenient EV charging locations encourages the "Park Once" mentality and reduces congestion because drivers may charge their vehicle and shop in the same location. The "Park Once" ethos is the idea that a visitor to Downtown Truckee will park once for their entire stay and rely upon other modes of transportation, such as walking, biking, and transit, to move around if there are multiple destinations per visit. Additionally, there are opportunities to tie in creative merchant validation and incentive programs with the implementation of paid parking that can further incentivize EV drivers to patronize nearby businesses.

11.2 Recommendations

11.2.1 Mid-Term

Strategy #31. Charge a public parking rate in all EV charging stalls	
Description	EV charging stalls should be included within the scope of the paid parking program.
Benefits	• Influences driver behavior and can be adjusted based upon demand. • Ability to offer incentive and merchant validation programs. • Can encourage employees to participate in a permit parking program. • Encourages the use of alternative modes of transportation. • Revenue can support a sustainable and effective parking operation.
Considerations	• Paid parking equipment installation locations, technology, and configurations.
Prerequisites	• None.
Timeframe	Mid-term
Cost	Low
Priority	Inventory, sustainability

12.0 Railyard Development Area

12.1 Assessment

Planned parking in the Railyard Development Area will be located primarily along the Donner Pass Road extension, reflecting the current state of development, which has added 187 additional off-street parking spaces in the Railyard Lot (see Figure 23). Once fully developed, all public parking in the Railyard Development Area will become part of and be managed by the District.

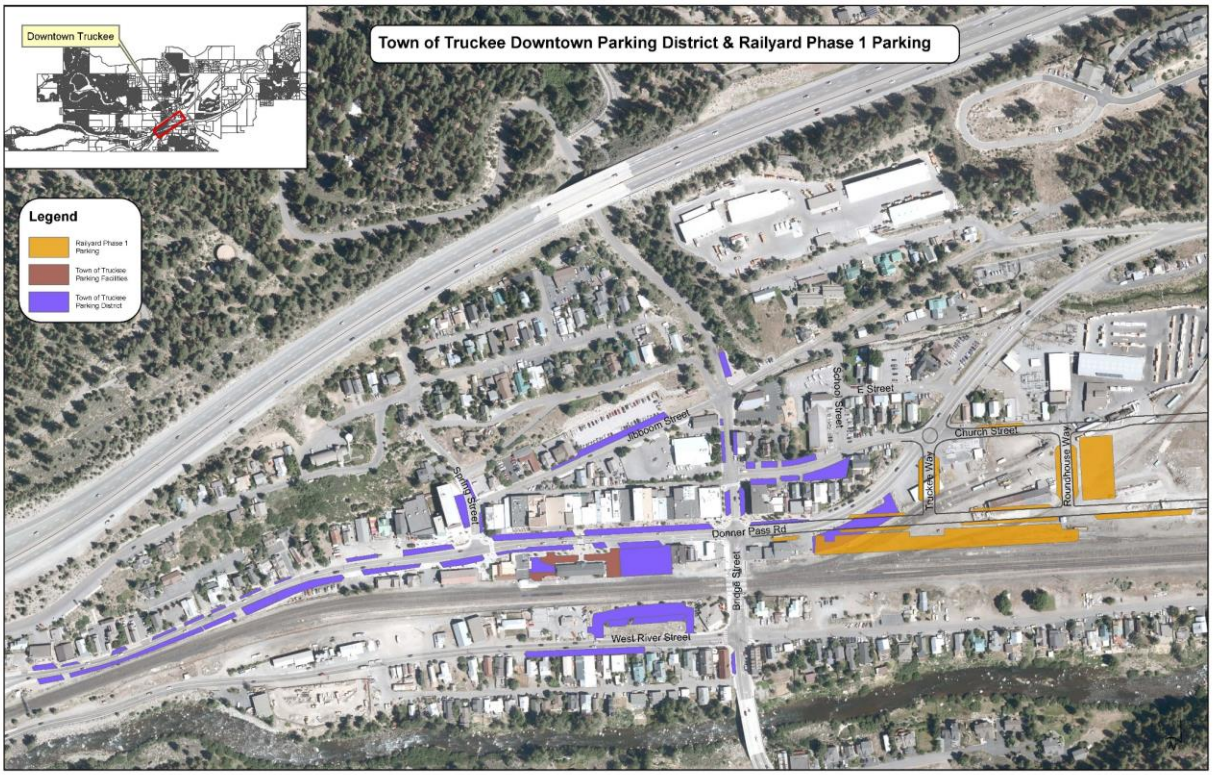


Figure 23. Town of Truckee Downtown Parking District & Railyard Phase 1 Parking.

The Railyard Area is being developed from west to east and is intended to be developed over a time period of 10 to 20 years, approximately 2017 through 2027. Figure 24 displays general areas and amounts of parking that are planned to be developed in the Railyard Area. A majority of the new parking to be developed in Phase 2 of the Railyard Area development will be private parking. There will be 237 public parking spaces on top of the 187 public parking spaces that have been developed in Phase 1.

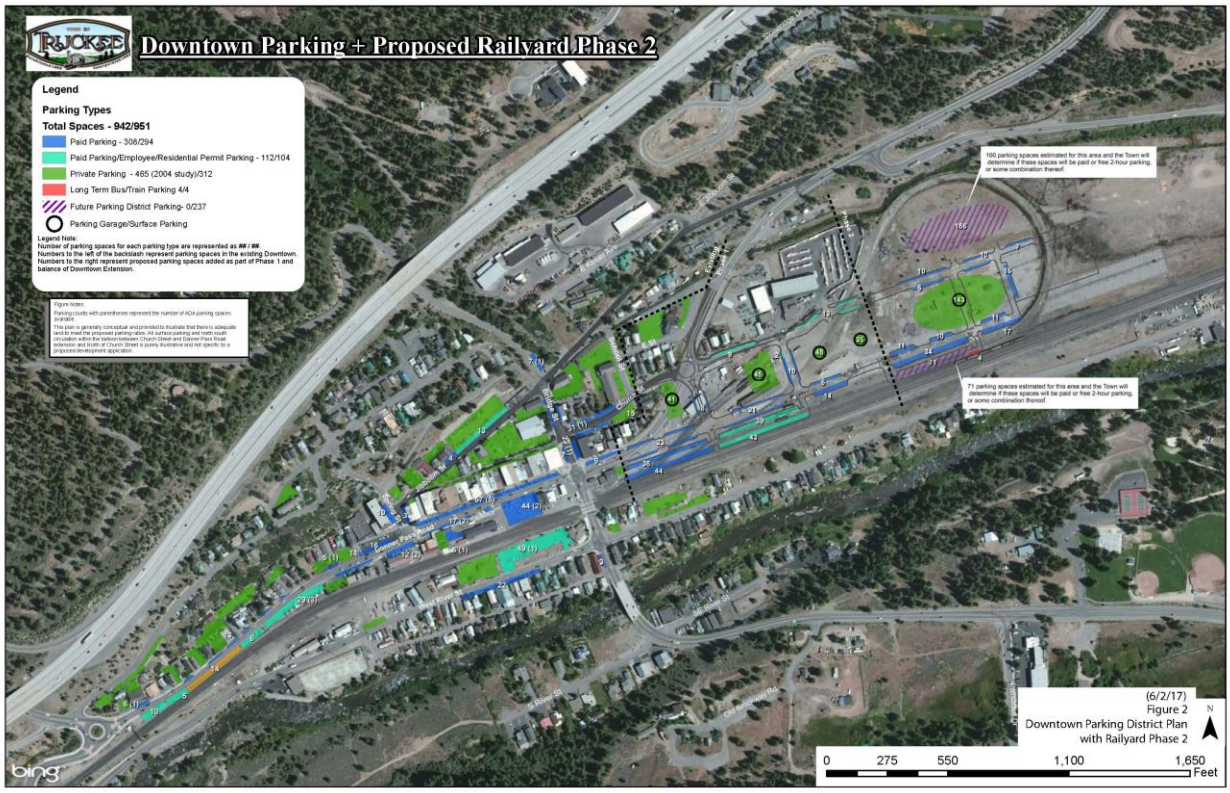


Figure 24. Downtown Truckee Parking - Proposed Railyard Phase 2.

The Railyard Lot is bordered by railroad tracks to the south, new development to the east, Donner Pass Road to the north, and the Beacon gas station to the west. A total of 155 off-street spaces were surveyed as part of the occupancy and turnover study. The Railyard Development Area also currently has 74 on-street parking spaces along Church Street, Donner Pass Road, Roundhouse Road, and Truckee Way. Figures 25 and 26 show the off- and on-street occupancy in the Railyard Lot and Railyard Development area, respectively.

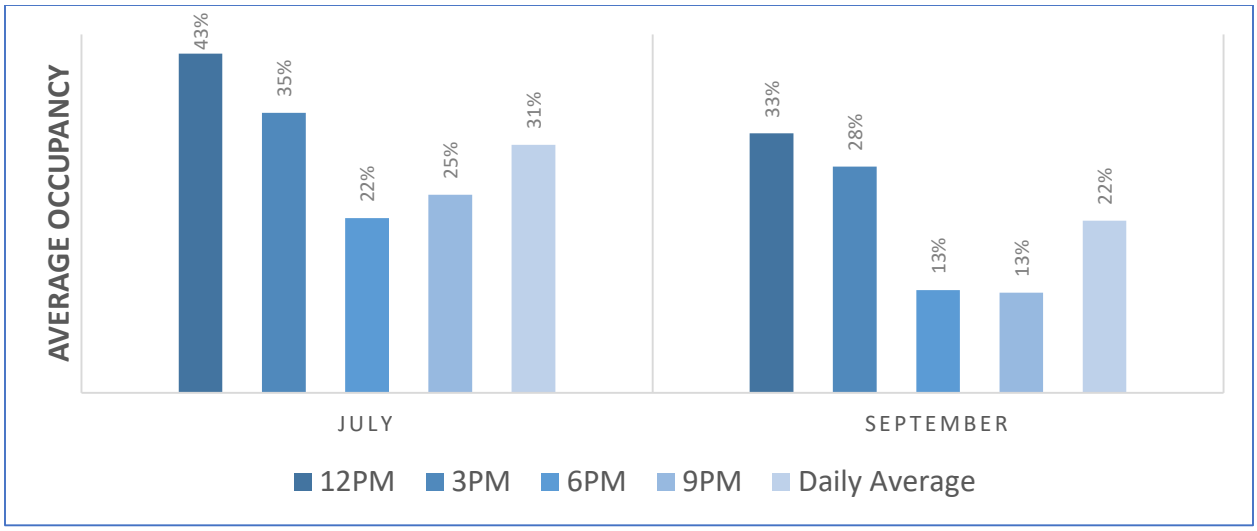


Figure 25. Off-street occupancy for the Railyard Lot: July vs. September.

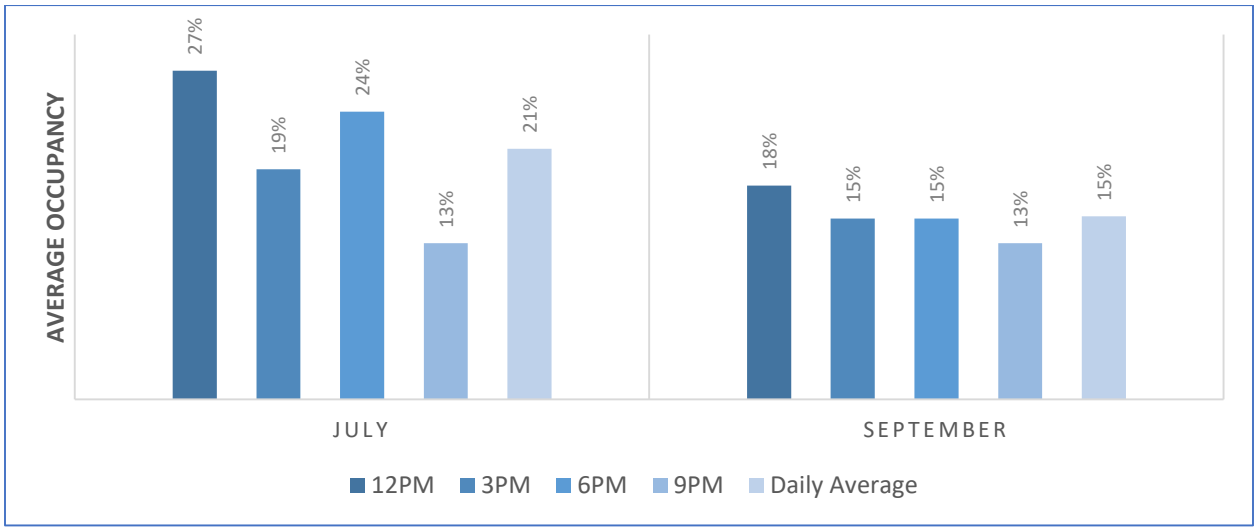


Figure 26. On-street occupancy for the Railyard Development Area: July vs. September.

On- and off-street parking in the Railyard Development area had low occupancy across both data collection rounds, peaking at 43% occupancy at 12 PM in July in the Railyard Lot (see Figure 25). The occupancy levels are well below the 85% industry standard. Currently, the Railyard Lot and new streets are the only new developments within the Railyard Area.

Figure 27. Newly Developed Parking Lot in Railyard Development Area.

However, at full build-out, the Railyard Development Area will have shops, restaurants, lodging, single family housing, multi-family housing, artisan and commercial space, and live-work and work-live uses. The fully developed Railyard Area will also have a total of 900 new, private and public parking spaces. Development plans have not specifically indicated whether the new parking spaces will be developed as all on-street and surface lots, or a mixture of on-street, surface lots, and parking garage(s).

As soon as new shops, restaurants, and other developments start opening in the Railyard Area, it is likely that the occupancy of the parking lot and on-street spaces will increase. The Town must consider the necessary expansions of the employee and residential parking permit programs to encompass the new development in the Railyard Area.

Currently, a significant number of stakeholders are in favor of building more parking inventory, and many of those stakeholders are in favor of constructing a parking garage to address the perceived parking availability issues in Truckee. While a parking garage would address the perception, there is no guarantee that the convenient, premium on-street spaces will improve in availability. The construction of a parking garage would be a significant investment for the Town and could not (and should not) be built in the center of the District. With over 66% of survey respondents indicating that they are only willing to walk 300 yards or less for a guaranteed parking space, it is unlikely that a parking garage would be constructed in a location to satisfy employees and visitors. The Town should first implement parking management strategies listed in “1. Parking Demand Management.” It is anticipated that, if the Town strategically manages the existing

supply, the Town can first generate revenue funding opportunities to construct a potential parking garage for at least the near and mid-term.

However, the Railyard Development Area currently has plans to consider multiple locations for surface lots or parking garages to accommodate the multitude of new businesses and dwellings to be built. The Town should take a similar approach to building a parking garage in the Railyard Area. The Town currently has enough space to build the projected required amount of parking for the development planned in the Railyard Area. If this can be done without constructing a parking garage, it should. However, if after development is completed, parking occupancy rates are consistently reaching above 85%, the Town should consider building a parking garage to increase parking inventory.

As with any development in Truckee, the Town will have to consider the potential for decreased parking inventory during the winter months due to snow removal and storage practices. To ensure snow is not within the driving lanes, snow is either stored linearly along streets, at intersections, or in parking lots. Figure 28 displays the snow storage concept plan for the Railyard Development Area.

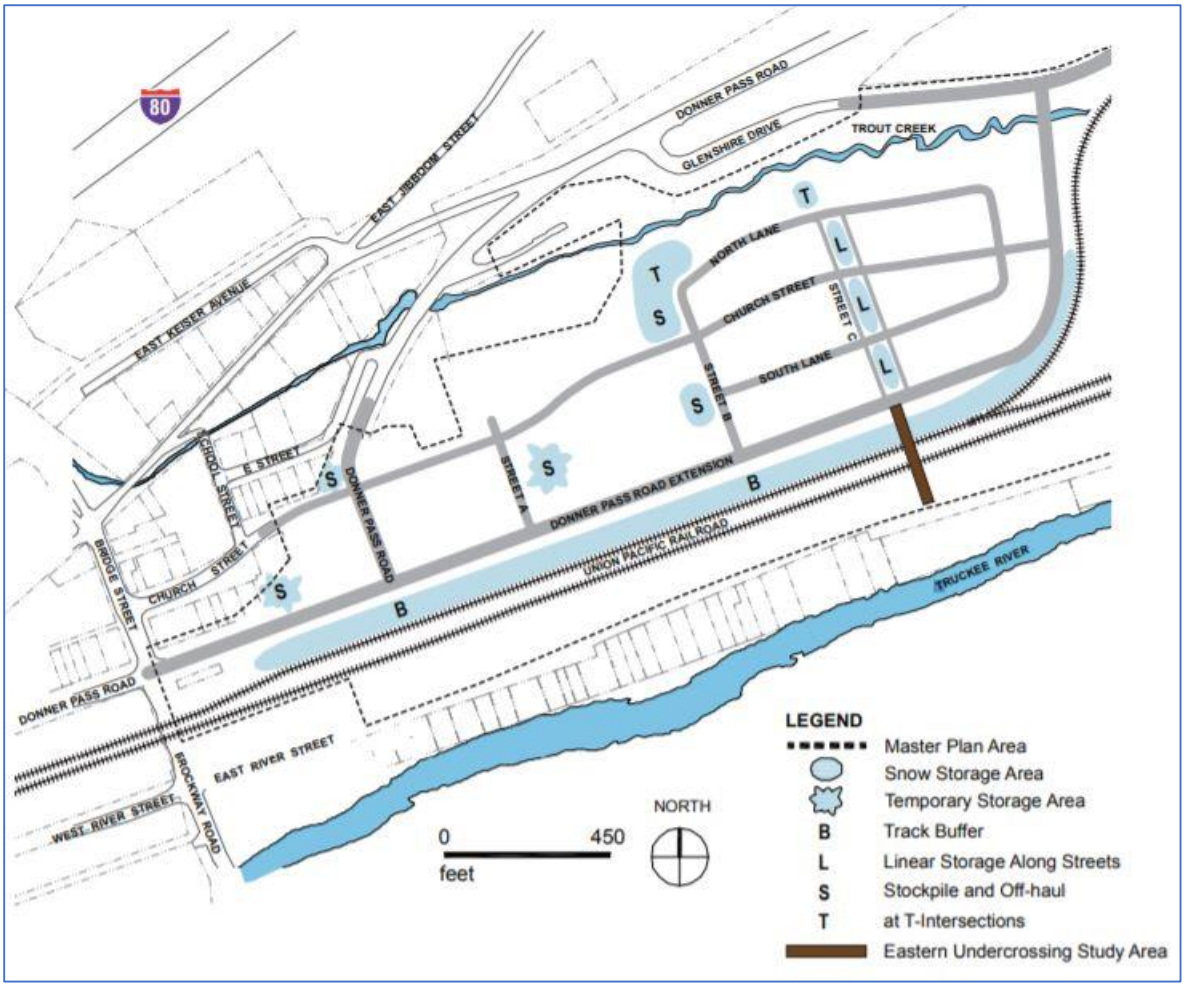


Figure 28. Railyard Development Area Snow Storage Concept Plan.

12.1.1 Mobile Payment Pilot Program – Railyard Lot

Figure 29. Mobile Payment Signage in Railyard Lot.

On August 1, 2019, the Town implemented a mobile payment option in the Railyard parking lot. This pilot program also introduced the customer value model rate structure, rather than just being a two-hour time limit parking lot. Now, customers can enjoy two hours of free parking, followed by paid parking at $1.00 per hour. Parking could be paid for at the existing pay stations installed at the Railyard parking lot or through the WayToPark mobile payment application. This pilot program is projected to continue through the end of February 2019.

When surveyed, 44.44% of employees were aware of the WayToPark mobile payment pilot program in the Railyard Lot, and 55.56% were not aware of the pilot program. Of those who were aware of the pilot program, only 3.57% had used the WayToPark app.

Online survey respondents indicated that only 2.32% had used the WayToPark mobile application to park in the Railyard Lot, 59.85% have not used the WayToPark mobile application, and 37.84% have not even heard about the WayToPark mobile application. Despite the low usage of the WayToPark mobile application in the Railyard Lot, several individuals suggested implementing the same rate structure currently being used in the Railyard Lot or the expansion of mobile payment to be used throughout the entire District.

12.1.2 Town of Truckee Development Code Parking Requirements and In-Lieu Fees

The Town of Truckee's current in-lieu parking fee is $5,634 per parking space. This in-lieu fee is currently far below comparable municipality's In-Lieu fee and should be increased. The in-lieu fee in Truckee was established in 1999 and based on the high cost estimate when in-lieu fees were calculated including land acquisition but does not include yearly maintenance/snow removal costs.

Comparable locations such as Breckenridge and Aspen, Colorado have considerable higher in-lieu fees. Breckenridge has an in-lieu fee of $19,236 per space (measured in 2013 dollars, increasing by CPI). However, this in-lieu fee can only be used in a specified service area. Aspen has an in-lieu fee of $30,000 per space throughout the City. The in-lieu fee program is only available to commercial and multi-family residential uses. The North Tahoe Parking Study prepared for Placer

County calculated an in-lieu fee of $37,000 if an in-lieu fee were to be implemented in the Kings Beach area. This cost accounts for both the price of land and the cost of the construction and development of parking lots.

As in the Town of Truckee, the majority of municipalities throughout the United States have a set of minimum parking requirements that mandate the number of on-site parking spaces required per development. The Town generally will not allow a project to use the in-lieu fee for more than 50% of the required on-site parking. Truckee lists the parking requirements by land use in Section 18.48.040 of the Development Code. Parking requirements are included for the following land use types:

- Manufacturing processing and warehousing;
- Recreation, education, public assembly;
- Residential uses;
- Retail trade; and
- Service uses.

Truckee currently has parking minimums with the goal of eliminating spillover parking impacts, by ensuring that a development supplies an adequate amount of parking spaces to support the use of a property. Often times, municipalities adopt these minimum parking requirements essentially based upon a set of arbitrary numbers, which often have little basis in actual data or consideration for local demographics, resources, and parking management strategies. This is observed in many cases where minimum parking requirements blanket a large area of a municipality, despite a variety of land uses, urban forms, and demographics. Importantly, minimum parking requirements have wide-reaching impacts on how a municipality grows over time, impacting land use patterns, development intensity, and housing affordability.

In many cases, parking minimums plan for the maximum number of vehicles that would be stored on-site to mitigate spillover parking. This often results in the excessive development of parking. A recent report released in 2018 by the Research Institute for Housing America (RIHA) found that there is typically an imbalance between the amount of parking supplied versus the current parking demand.[1] Recognizing that parking is expensive to build, maintain, and manage—and that parking spaces utilize land that could otherwise be developed for more valuable uses—this trend of excessive parking development can ultimately have negative impacts and unintended consequences. This is what often encourages planners to reduce or eliminate parking minimums or adopt parking in-lieu fees, as described below.

Reducing parking requirements can help prevent excessive space dedicated to parking, which adds to the cost of development and housing. Parking reductions are typically granted in cases where car ownership rates are currently, or could be, lower than the minimum parking requirements are designed to cater to. This is typically in locations that are walkable and within close proximity to major public transit stops. Ideally, parking minimums should be designed to meet the true parking

[1] https://www.mba.org/news-research-and-resources/research-and-economics/research-institute-for-housing-america/published-reports/2018/quantified-parking-comprehensive-parking-inventories-for-five-us-cities

needs of a location and encourage alternative mode adoption. While the Town of Truckee does have an urbanized downtown, it is set within a remote setting. While public transit may be accessible downtown, the rural location of the Town makes car ownership more likely.

In-lieu fees can be established to give developers an opportunity to pay a fee in-lieu of reaching the minimum parking requirements. These fees can be established so a municipality may develop consolidated off-site parking to offset the amount required on individual parcels. By providing this in-lieu fee alternative to developers, certain projects that would otherwise have difficulty reaching the minimum parking requirements, due to space or financial constraints, would become feasible. Revenue generated by the in-lieu fees can be used to develop more centralized public parking facilities and to support transportation alternatives and Transportation Demand Management (TDM) initiatives. While these fees are increasingly common, the fee amounts vary significantly. Some municipalities set their fee with the intention of financing new parking facilities, while others charge a fee that can support the ongoing operation and maintenance of existing parking facilities. Municipalities also often consider the cost of developing and encouraging alternative modes of transportation, especially when in conjunction with Transit Oriented Developments (TOD) or TDM strategies. Choosing an appropriate fee amount should be based upon the municipality's goals and resources and should take into account the level of parking and transit program management and oversight that will be required to ensure that reduced parking supplies does not negatively impact the community.

When Truckee established its parking in-lieu fee in 1999, the Town Attorney advised the Town to remove the fee amount from the Specific Plan ordinance and add language to the ordinance referring to a resolution that would establish the amount of the in-lieu fee. This was done so it would not be necessary to amend the zoning ordinance and comply with State law noticing and procedural requirements to revise the fee amount. However, the in-lieu fee has not been updated since 1999 and should be to better reflect the price of developing a parking space today and moving into the future.

Truckee has established their in-lieu fee based upon a flat rate per parking space not developed. Some municipalities choose to determine in-lieu fee amounts based on square footage or on a case-by-case basis. Uniform fee amounts are simpler to administer and for developers to plan for and utilize. In-lieu fees can be charged when a development is permitted, or they may be imposed as a property tax surcharge.

For municipalities, setting an appropriate parking in-lieu fee amount can be a conundrum. While a low fee will effectively encourage development, resulting in a dense, walkable environment. This strategy is often employed as a way to encourage the development of more housing. But, the low fee will likely not supply a municipality with the necessary funds to effectively manage the potential impacts of higher-than-expected car ownership. If the per parking space fee isn't commensurate to the cost of developing a parking space elsewhere, then the municipality is taking a risk. In this case, the municipality will be unable to supply the level of parking that is theoretically required to support the proposed developments. The burden of parking management, in this case, falls upon the municipality rather than the developer. This type of scenario often results in

significant spillover parking impacts and congestion on-street. In many cases a preferential residential parking permit program alone will not address this issue effectively. While the developer receives an incentive, the municipality must consider the ongoing parking management support required to mitigate the impacts, including considerations for additional parking supply, enforcement, paid parking, and permit parking.

12.2 Recommendations

12.2.1 Near-Term

Strategy #32. Increase parking in-lieu fees.	
Description	The Town should increase the current parking in-lieu fee from $5,634 to $12,000 per space. The fee amount should be adjusted annually consistent with CPI adjustments. The proposed increase will bring the in-lieu fee amount to a similar rate in comparable locations, and continued annual CPI adjustments will allow the Town to more closely matches the value of a parking space over time. The Town should also consider expanding in-lieu revenue allocations beyond the development or purchase of additional parking supply. There are other strategies that can influence parking demand and behavior. Revenue allocations could include: • Adjusting public transit routes, route frequencies, or hours of operation. • Implementing bike lanes, bike valet, or secure bike parking. • Widening sidewalks and improvements to pedestrian walkability. • Shuttle routes to/from remote parking options. • Carpool incentive programs. • Increased supply through new developments or shared parking agreements.
Benefits	• An increase in parking in-lieu fee revenue will provide the Town more opportunities for parking program investments.
Considerations	• If the in-lieu fee is set too high, this could deter potential development projects.
Prerequisites	• Council resolution.
Timeframe	Near-term
Cost	Low
Priority	Inventory, sustainability

12.2.2 Mid-Term

Strategy #33. Identify opportunities for new parking lots or garages within the Railyard Development Area.	
Description	Figure 24 shows approximate parking spaces counts and locations of future public and private parking in the Railyard Area. The locations identified with a small black circle indicate locations where surface lots or parking garages will be considered.

	Since the Railyard Area is developing the farthest eastern extent of the downtown area, it is unlikely that the development of additional parking or a parking garage will greatly alleviate parking issues felt in the central and western parts of the downtown area. However, if the additional parking inventory is implemented alongside other recommendations outlined in this PAP (e.g., a fixed route shuttle or valet parking), this additional inventory could work to serve Downtown Truckee at large.
Benefits	• Smaller footprint of parking (compared to surface lots providing the same number of parking spaces).
Considerations	• Return on investment. • Demonstrated parking demand for a garage (occupancy rates consistently reach above 85%.
Prerequisites	• None.
Timeframe	Mid-term
Cost	High
Priority	Inventory, sustainability

12.2.3 Long-Term

Strategy #34. Consider a public private partnership when developing a parking garage in the Railyard Area.	
Description	If the Town or a private developer decides to build a parking garage in the Railyard Area, the Town should consider entering into a public-private partnership (PPP) to develop the parking garage. A PPP is a joint venture between the public and private sectors where the government leverages their financing capacity and private partners leverage their expertise and efficiency to accomplish a public purpose. Entering into a PPP when building a parking garage could allow the Town to hand-off the building, operations, and maintenance of the parking garage to a private partner while still providing financial benefits to the Town. One example of a PPP the Town could pursue would be receiving a lump sum of money from a private partner to build, operate, and maintain the garage. The Town would still be able to maintain ownership of the garage.
Benefits	• Smaller footprint of parking (compared to surface lots providing the same number of parking spaces). • Less cost burden on the Town.
Considerations	• Return on investment.

	• Demonstrated parking demand for a garage (occupancy rates consistently reach above 85%). • Potential increased risk of entering a PPP rather than the Town or a contractor building the parking garage.
Prerequisites	• None.
Timeframe	Long-term
Cost	High
Priority	Inventory, sustainability

13.0 Wayfinding and Parking Guidance

13.1 Assessment

Most parking lots within the District are on the outskirts of the Commercial Core. As most folks look for parking as close to their destination as possible, it may be challenging for drivers to identify available parking options and access points throughout the downtown area.

Figure 30. Wayfinding Signage in the Railyard Lot.

The Town does not currently have effective existing static parking wayfinding signage throughout the District. The signage and parking brand should be consistent throughout the downtown area, including sign format, symbols, and fonts. Adopting a unified parking brand provides an improvement to the overall customer experience.

In particular, there is not sufficient wayfinding directing drivers to park in the Railyard Lot, where there are generally many available parking spaces. This area presents a unique challenge when implementing new signage. The intersection of Donner Pass Road and Bridge Street is a highly trafficked area and likely considered by most as the eastern edge of Downtown Truckee. Since this intersection is located near the railroad tracks, it is important to ensure drivers can drive safely and not be distracted by wayfinding signs. When driving into Downtown Truckee north along Bridge Street, additional signage could be implemented to clearly direct drivers to available parking in the Railyard Lot.

In addition to static wayfinding signage, the Town can deliver real-time parking availability information through digital signage or vehicle messaging systems. Vehicle counting systems, coupled with automated wayfinding systems, are helping to revolutionize how the public utilizes parking resources. Automated Parking Guidance System (APGS) signs can promote parking availability and mitigate congestion in the vicinity of parking facilities. Parking availability information can also inform drivers about parking availability before they enter into a parking lot.

13.1.1 Real-Time Parking Availability

The Town should collect parking occupancy data at public parking locations to provide real-time parking guidance information to drivers for both directional and trip planning purposes. The same data can also be utilized for ongoing occupancy analysis to determine program and policy adjustments. Parking occupancy data can be collected through physical counts, LPR cameras, sensors, or through the use of predictive analytics. A combination of these options is recommended for Truckee, as described below in Table 11.

Table 11. Occupancy Counting Methods.

Method	Description	Opportunities
Physical Counts	Physical counts are the simplest approach to collecting data by hiring a data collection contractor or assigning internal staff to walk or drive the study area at various points of a day to record the number of vehicles per block and parking facility.	• Utilize physical counts in order to sample data and validate the results of other automated parking occupancy counting technologies. • Certain systems such as loop counters will need to be reset at a certain point each day or week in order to prevent compounding minor inaccuracies over time. Physical counts can be used to help reset these systems to a realistic level.
LPR Cameras	The same LPR cameras that will be utilized for parking enforcement can also be used as a data collection tool. Each license plate read is recorded along with a GPS location and time/date stamp.	• By assigning staff to drive specific routes at specific times of the day, data can be downloaded for those timeframes and exported to Excel for analysis using the vendor backend management system.
Loop Sensors	Loop sensors can be in-ground or above-ground systems that detect vehicle movement and direction in order to collect facility-wide occupancy counts.	• Utilize loop sensors in all parking lots and parking garages to collect facility-wide counts. • In facilities with partitioned areas for different types of parking (i.e., public vs. permit), additional loop sensors can be used to divide occupancy counts by zone within the facility.
Predictive Analytics	Access to parking pay station payment data allow the Town to predict occupancy rates. Payment data isn't accurate on its own because of variable	• Utilize parking payment data to predict parking occupancy in on-street locations. The Town should collect manual physical occupancy counts to compare with the parking meter payment data to identify trends and correlations in results. This

	compliance rates (not everyone pays for their parking time), and because ADA placard holders are not required to pay for parking.	information can be utilized to predict occupancy and utilization over time. • Some companies specialize in predictive analytics to utilize various data sources, including the payment data, to estimate occupancy trends. The Town could work with a company or data analyst to extract realistic occupancy trends from the data.

13.1.2 Parking Applications

Another benefit to real-time parking information is that parking availability can be linked to a variety of publicly available, free parking applications. This information can be monitored both remotely and on-site by parking operations personnel to anticipate traffic flow impacts and capacity levels, especially for special event management. Integrating these systems with everyday phone and mapping applications has provided drivers with the ability to plan their parking experiences before leaving their homes, enabling them to make more informed decisions about how to get to their destinations and evaluate alternative modes of transit.

A growing number of parking vendors are delving into the mobile application space, many utilizing web applications that can feed from open-source data platforms. Real-time data can be integrated with several existing parking applications. To stay competitive in today's market, most parking technology vendors recognize that an open platform is necessary.

Parking and transportation data can be directed to popular mapping applications such as Google Maps and Waze. Many municipalities understand that sharing data with any platform will allow the information to reach a broader audience, thus improving the overall operation and user experience.

Because applications like Google Maps and Waze have such a large user base, it may not be valuable for the Town to compete by introducing a standalone Truckee mobile application. Some municipalities aim to create their own mobility applications; however, this can be a significant undertaking and often requires a costly software development process that must be maintained and supported on an ongoing basis. The overall cost of the mobile application development does vary depending on the type of information to be displayed, any specific branding or graphics requirements, and additional features such as find my car, directions, traffic information, parking reservations, or 3rd party integrations.

13.1.3 Public Parking Brand

With the phasing out of the "park! Truckee" logo, the Town should consider developing an updated, easily recognizable public parking brand. The signage and parking brand should be consistent, including sign format, symbols, and colors. A unified parking brand improves the overall parking experience by clearly designating public parking locations. The direction of the signage needs to be clear, easy to understand, and simple to follow along with. The branding can also be utilized on all public parking outreach materials to consistency.

Figure 31. Current paid parking signage in Downtown Truckee.

Figure 32. Simplified sign message example from Park City, Utah.

When developing Truckee's new public parking brand, the Town should update signage throughout the District to streamline and simplify the sign message (see example in Figure 32). Consistent and simple parking and wayfinding signs will ensure the easy and efficient transfer of information to individuals parking in the District. Simplifying and streamlining signage throughout the District will also help to reduce clutter in Downtown Truckee.

The Town should also expand the public parking branding to any future shared parking agreement locations. For shared parking agreements, the parking brand/signage should be required in conjunction with the terms and conditions of the agreement. Expanding the public parking brand to shared parking locations will provide consistency to the drivers, making it easier to identify public parking locations, regardless of ownership.

13.2 Recommendations

13.2.1 Near-Term

Strategy #35. Establish a new Town parking brand.	
Description	Truckee should establish a new, recognizable, and consistent parking brand. This branding should touch all things parking, from outreach material, to signage, pay stations, and other equipment.
Benefits	• Program cohesiveness.
Considerations	• Removal and replacement of all parking-related infrastructure that has the current "park! Truckee" logo.
Prerequisites	• None.
Timeframe	Near-term
Cost	Medium
Priority	Sustainability, customer service

Strategy #36. Update static wayfinding signage as needed.	
Description	Improve and add static wayfinding signage to more effectively communicate locations of interest and available parking areas to drivers. The Town should conduct an audit of existing wayfinding signage and update accordingly. Wayfinding signage should be consistent throughout the District, easy to read, in good condition (replace if fading or peeling) and should be installed with one to two signs per block face. Due to Truckee's historic nature, the wayfinding signage should be designed in such a way that compliments Truckee's historic character and aesthetic. Signs should not be installed so frequently that they become excessive and result in sign blight. Wayfinding signage should be placed in strategic places that will not distract drivers, but safely, and effectively, guide them to available parking locations and points of interest.
Benefits	• Maintaining up to date signage can improve traffic circulation and congestion within the Town.
Considerations	• Signage visibility. • Consistency of signs and brand. • Selection of key destinations included within wayfinding signs.
Prerequisites	• None
Timeframe	Near-term
Cost	Medium
Priority	Sustainability, customer service

13.2.2 Mid-Term

Strategy #37. Utilize integrated occupancy counting technology.	
Description	Utilize loop sensors at parking lot ingress/egress points to collect facility-wide occupancy data, rather than on a space by space basis. Real-time parking occupancy data should be broadcast via digital signage and on the Town website. Since the municipal parking lots in Truckee do not have a single ingress/egress point, but, in some cases, more than four points of entrance (e.g., the Railyard Lot), guidance should be enhanced in these lots to provide more accurate occupancy counts when utilizing loop sensors.
Benefits	• Improves the overall parking experience. • Data can be integrated with mapping applications for trip planning purposes. • Information about occupancy can influence transportation mode choice. • Digital signage is easier to notice and allows for dynamic messaging. • Promoting occupancy information can mitigate congestion and redirect drivers to underutilized locations.
Considerations	• Signage aesthetics. • Installation locations. • Granularity of occupancy data.
Prerequisites	• None.
Timeframe	Mid-term
Cost	High
Priority	Technology, customer service

14.0 Transportation Demand Management

14.1 Assessment

14.1.1 Public Transportation

In 2016, Placer County developed a Systems Plan Update for Tahoe Truckee Area Regional Transit (TART) in Eastern Placer County. This Plan outline improvements that TART will implement, and impact Truckee include:

- Increasing peak season service frequency;
- Expanding the days of summer service levels;
- Additional morning 267 route northbound run;
- Provide wheelchair-accessible paratransit service through Town of Truckee contractor.

This Plan also includes improvements that are not financially sustainable, given expected funding sources. Such improvements presented that impact Truckee include:

- Free transit boarding throughout the TART system;
- Evening service improvements to Truckee.

Figure 33. TART bus at current Truckee Transit Center.

TART currently provides five fixed-route services, including (see Figure 34):

- The Mainline Route – operates along the Lake Tahoe shoreline between Sugar Pine Point State Park and the Hyatt Regency Resort in Incline Village. Three buses provide hourly service between Sugar Pine Point and Crystal Bay, and half-hourly service between Crystal Bay and the Hyatt.
- The Highway 89 Route – operates hourly between Tahoe City and Truckee between 6:00 AM and 6:28 PM, year-round.
- The Highway 89 Route – operates hourly between Crystal Bay and Truckee via Northstar and the Truckee Airport between 6:00 AM and 6:28 PM, year-round.
- The Night Service – operates in the summer and winter. Provides free hourly travel between Squaw Valley and Crystal Bay (7:00 PM to 2:00 AM), between Tahoe City and Tahoma (6:30 MP to 1:30 AM), and between Crystal Bay and Northstar (6:30 PM to 1:30 AM)

- The North Tahoe Ski Shuttle – operates on peak ski days. These times include a two-week period around the Christmas holidays, a one-week period around Presidents Day, and a one-week period around Spring Break. This route connects lodging areas along the North Shore, the West Shore, and in Squaw Valley to ski lifts at Squaw Valley, Alpine Meadows, and Homewood.

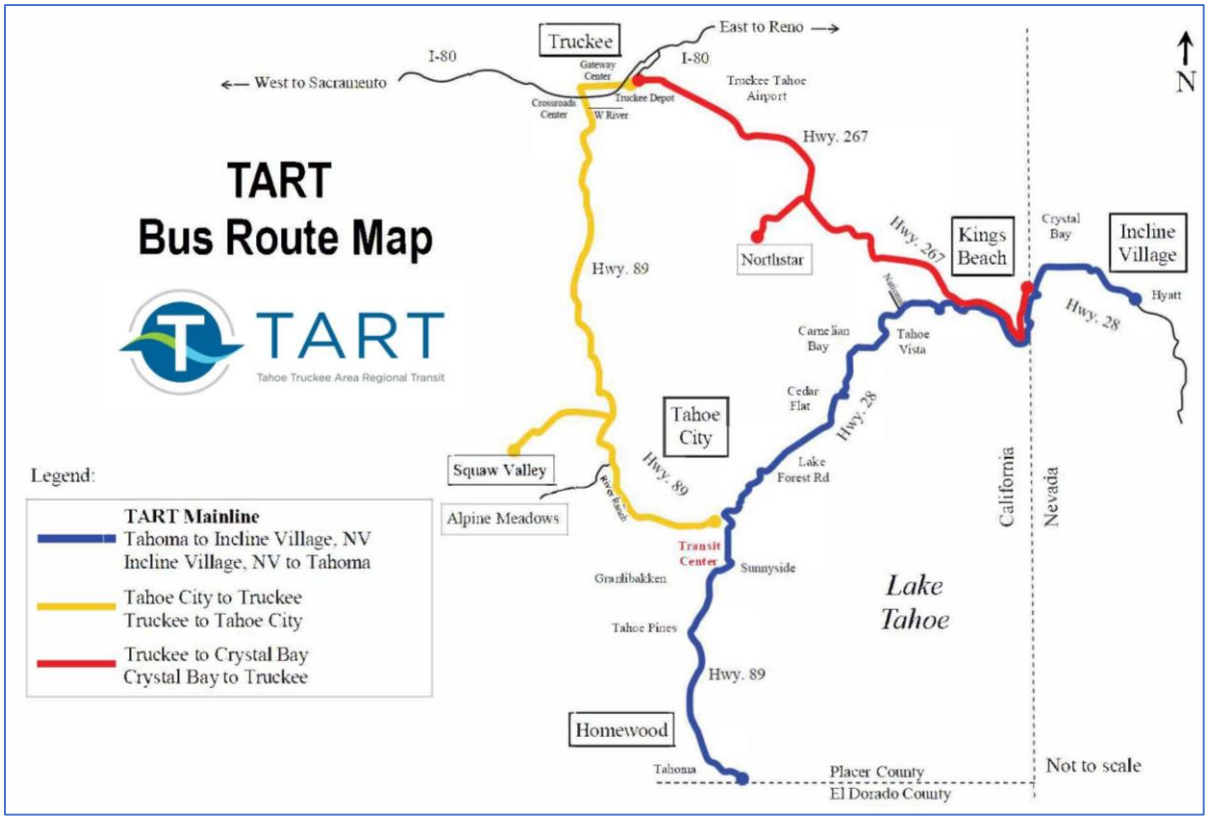


Figure 34. TART bus route map.

Throughout the TART transit system, overall ridership has fallen along all routes between 2011 and 2015. Currently, the TART local route in Truckee is free to riders. TART also offers a free shuttle service during Truckee Thursdays throughout Truckee neighborhoods and Northstar to and from Downtown Truckee every Thursday evening. Based on data from 2016 and 2017, the TART-operated shuttles for Truckee Thursdays experienced a 28% increase in ridership and serviced 11,428 riders from June 8, 2017, to August 17, 2017.

When asked, "if you could change, fix, or improve anything about parking in Truckee, what would it be?" responses from both the employee and online surveys mentioned expanding the current shuttle services or improving the busses throughout Downtown Truckee.

With the Truckee Transit Center Relocation Feasibility Study currently being developed, the Transit Center could be moved from its current location along Donner Pass Road. The Town is currently investigating four potential relocation options:

- The California Highway Patrol (CHP) substation at 10077 State Highway 89,

- The Truckee Airport at 10356 Truckee Airport Road,
- The Truckee Railyard at 10250 Church Street (this would be located along the balloon railroad loop), or
- The current transit depot location at 10065 Donner Pass Road.

The relocation and expansion options provide the following opportunities for the new Truckee Transit Center:

- Movement of 10 buses in 10 minutes,
- Internal circulation,
- Ingress/egress circulation,
- Central location for transit users,
- Practical location for connecting services, and
- Future electrification capacity.

During this study, the Town is considering the opportunities and constraints that each potential site provides, the potential for future and redevelopment, additional uses that can be incorporated at each location, improving access for alternative modes of transportation such as biking and walking, improving overall mobility, and the public perception.

14.1.2 On-Demand Shuttle

A shuttle program could be an effective way to incorporate remote parking locations by giving drivers the ability to park and ride into the downtown core. Additionally, if the Town wants to promote the "Park Once" approach, then a shuttle program could be an effective way for drivers to rely upon the shuttle for shorter trips, rather than re-parking their vehicle.

Figure 35. On-demand shuttles.

For example, The Free Ride Everywhere Downtown ("FRED") is a free shuttle program in San Diego that has been successfully implemented and expanded. The shuttle program is free to the users because the staffing and operating costs are completely funded by advertisements. There are moving billboards, videos for passengers, and even sample products that are given out during the rides. The vehicles are all electric, and each fit up to five passengers. The benefit of utilizing smaller vehicles is that the insurance costs are significantly reduced. Additionally, a mobile application allows users to request a ride within certain boundaries; users are prompted to select their pick-up and drop-off locations, and the application provides real-time driver ETAs.

Typically, a program like FRED is structured as an on-demand service; however, the Town could solicit a shuttle service company about the potential for a fixed route program if desired. A fixed-route option could be designed to serve a remote employee permit parking location, for example.

14.1.3 Shared Mobility Devices

Figure 36. Zagster dock station in Truckee.

Zagster, a bike sharing program, already operates within Truckee. This bike sharing program is managed by the Truckee Tahoe Airport District. Zagster is a docked bike-sharing program. There is only one docking location for Zagster bikes in Downtown Truckee, next to the fire station. There are four other docking stations within the Town. Two are located in western Truckee, at the Truckee Donner Public Utility District and the Tahoe Forest Hospital. The other two Zagster docking locations are east of downtown at the Airport. Docking locations at the Airport are located in both the South and North Stations.

Bike and scooter-sharing could provide the Town with additional resources to mitigate the first mile/last mile problems and provide increased accessibility throughout downtown. Bike and scooter sharing can also help support remote parking locations. While Lime, Bird, and other dockless mobility device share companies offer improved convenience and flexibility for users (because they are not required to leave the bike at a designated location), dockless programs can be challenging to manage and regulate. Many agencies experience a significant amount of complaints due to dockless bikes, especially regarding blocked sidewalks and ramps, which limits ADA accessibility. The Town could adopt ordinance language that allows the Town to hold vendors accountable when bikes are left in locations where they cause a public nuisance. Adding a fee to the collection of devices that have been impounded by the Town encourages the companies to inform their users of the correct locations to leave bicycles when they are done.

Dockless bike and scooter programs offered by private companies are a tremendous opportunity for improving mobility at no upfront cost to the Town. The main financial impact results from the additional monitoring and enforcement required to manage the impacts. Currently, the City of South Lake Tahoe has Lime electric scooters deployed.

Figure 37. Zagster bike.

The City of Santa Monica recently adopted an ordinance addressing the permitting and use of shared mobility devices. This ordinance gives Santa Monica additional control and

oversight through a permitting process. For reference, excerpts from Chapter 3.21 of the Santa Monica Municipal Code is included below:

City of Santa Monica Shared Mobility Device Pilot Program: Chapter 3.21

3.21.010 Purpose.

Consistent with the City's goals of enhancing mobility and access, easing traffic congestion, and promoting sustainability, this Chapter creates a limited term pilot program to facilitate the use of shared mobility devices while ensuring the protection of public health and safety, including the safety of the public traveling by foot, bicycle, or vehicle on public sidewalks, streets, and other public rights-of-way.

3.21.020 Definitions.

(f) "Shared mobility device" shall mean any transportation device by which a person can be propelled, moved or drawn, that is displayed, offered or placed for rent in any public area or public right-of-way, except that a "shared mobility device" does not include any device being vended or made available for rent exclusively from a vehicle pursuant to a valid City vending permit; a car share vehicle, as defined by Chapter 3.06 of this Code; a device authorized by the City bike share system pursuant to Chapter 3.20 of this Code; a taxicab as regulated in Chapter 6.49 of this Code, a device operated by the Los Angeles County Metropolitan Transportation Authority; or any other device excluded pursuant to administrative regulations.

3.21.040 Maximum number of shared mobility operator permits and shared mobility devices permitted.

(a) The Director may issue up to four shared mobility operator permits authorizing the deployment of a shared mobility device within the City. Two shared mobility operator permits shall be issued to operators that propose to deploy electric scooters as shared mobility devices and two shared mobility operator permits shall be issued to operators that propose to deploy electric bikes as shared mobility devices. No shared mobility operator permits shall be issued to any operator that proposes to deploy a shared mobility device that is exclusively powered by the human body or powered by combustion engine.

(b) The Director may establish the number of shared mobility devices authorized under each shared mobility operator permit. No more than on a weekly basis or within fourteen days following any City Council action adjusting the number of permitted operators or devices pursuant to Subsection (d), the Director may adjust the maximum number of devices authorized by each shared mobility operator permit. The Director shall take into consideration market needs, the number of devices deployed in the City, device utilization, and any other criteria set forth in administrative regulations. The Director shall first publish his or her tentative adjustment decision under this Section, along with reasons supporting the decision, and solicit comments prior to making a final determination. The Director's determinations under this Section shall constitute the final decision of the City and are not subject to further administrative review. No person shall fail to comply with the Director's established device limitation.

(c) No operator may be granted authorization for less than two hundred fifty shared mobility devices.

(d) At any time, in the City Council's discretion, the City Council may reassess the number of shared mobility operator permits authorized for issuance. The City Council, in its discretion, may determine by resolution that the number of shared mobility operator permits or the number of total authorized devices should be reduced or increased. (Added by Ord. No. 2578CCS § 1, adopted 6/26/18)

3.21.100 Impoundment of devices.

(a) A shared mobility device that is displayed, offered, or made available for rent, or abandoned, in the public right-of-way or a public area in violation of Section 3.21.030 shall be subject to immediate impoundment by the City.

(b) The City Council may adopt impound fees by resolution, which shall reflect the City's enforcement, investigation, storage and impound costs.

(c) No person shall retrieve any impounded shared mobility device except upon demonstrating proper proof of ownership of the device and payment of applicable impound fees.

14.2 Recommendations

14.2.1 Near-Term

Strategy #38. Create a shared mobility device permit program.	
Description	The Town should establish a shared mobility device program that establishes the application and permitting process. The program should limit the number of devices a company can operate within the Town. Rules and regulations for parking, impoundment, safety, and access should be defined. The Town has the opportunity to set speed limitations as needed in certain areas using GPS technology. Data sharing can also be included within the program requirements.
Benefits	• Improves the Town's ability to manage shared mobility device programs. • Provides revenue that can offset the management and enforcement costs.
Considerations	• Permit program policies and guidelines. • Ability to enforce the program. • Number of permits and devices allowed per year. • Application review process.
Prerequisites	• None.
Timeframe	Near-term
Cost	Low
Priority	Mobility, customer service, sustainability

14.2.2 Mid-Term

Strategy #39. Offer an on-demand or fixed-route shuttle program.	
Description	The Town can allocate a portion of paid parking revenue to support the ongoing operation of shuttle programs. The shuttles could serve the Brickelltown, the main Commercial Core, Railyard area, and parking areas south of the train tracks. The shuttle program could be an opportunity to promote remote or fringe parking options, especially to employees or customers/visitors planning to park long-term.
Benefits	• Can reduce and/or spread out parking demand. • Can reduce traffic congestion and GHG emissions. • Improves access to parking options that are further away from a destination.
Considerations	• Fixed route vs. on-demand service. • Convenience and accessibility. • Route frequency, stops, and locations. • Operating days and hours.

	• Cost to rider and incentives.
Prerequisites	None
Timeframe	Mid-term
Cost	High
Priority	Mobility, customer service, sustainability, inventory

15.0 Education and Outreach

15.1 Assessment

To successfully implement the recommendations throughout this report, the Town could begin by launching an education and outreach program to inform the public about upcoming parking program changes. The Town could also utilize available community resources such as the Truckee Donner Merchant Association and the Chamber of Commerce to help provide information to the broader community.

Truckee currently has a webpage on the Town's website with information about downtown parking. This is a great location to include educational information about the program as it changes. The webpage can be treated as a repository of all downtown parking-related information for Truckee. All information should be consistent no matter the location posted, and all information should be easy to find by any user visiting the webpage. The Town should continue to proactively promote information through this page.

Figure 38. Truckee downtown parking webpage.

Paid parking signs throughout the District currently include the "park! Truckee" logo. Since the Town is choosing to move away from this logo, Truckee could establish a new, recognizable, and consistent parking brand. This branding should touch all things parking, from outreach material, signage, pay stations, and other equipment to ensure program cohesiveness.

Successful education and outreach campaigns in other municipalities have included social media pages, online video instructions, flyers, press releases, and field parking ambassadors to assist with education and demonstrations. A useful example is the City of Sacramento's online pricing sheet that explains its tiered pricing program using easy to understand graphics (Figure 37). This sheet includes instructions on how to understand signage, how to pay for parking, including mobile payment information, and how the pricing structure works for different tiered zones. The sheet is also branded with the "SacPark" brand that is included on all parking outreach materials and signage. The City of Sacramento even has an instructional video posted on its website to demonstrate how to use its smart meters.

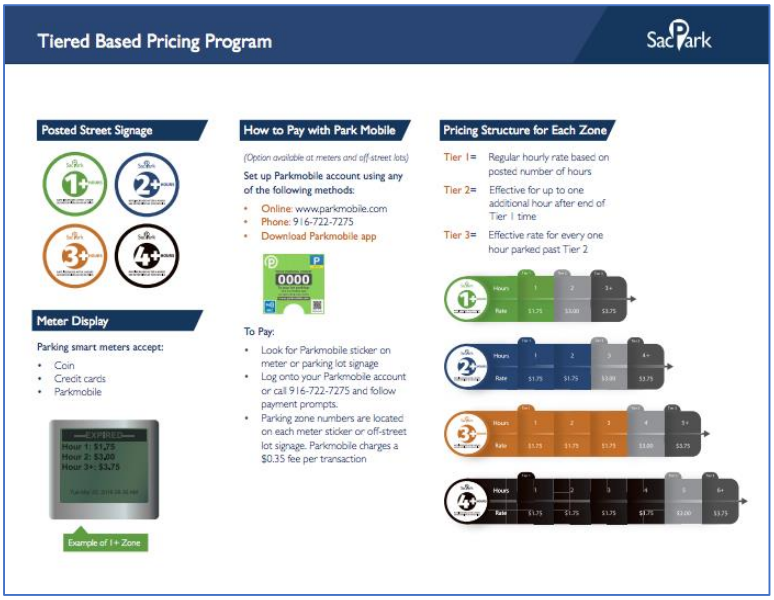


Figure 39. City of Sacramento on-street paid parking guide.

When communicating to the residents and the public about the parking program, it will be important for the Town to explain the program's purpose, goals, and benefits of any changes. The Town should define and communicate its overall parking ethos.

The Seattle Department of Transportation (SDOT) has an effective example[2] on their website about the importance of managing on-street parking:

"Parking is a key piece of the transportation puzzle. As a limited resource that's often in high demand, SDOT manages on-street parking to: balance competing needs (transit, customers, residents, shared vehicles), move people and goods efficiently, support business district vitality, and create livable neighborhoods."

"The Seattle Department of Transportation (SDOT) manages street parking to support a vibrant city with connected people, places, and products. Curb space used for on-street parking (as well as transit, deliveries, and many other things) is a limited resource in high demand. So, we carefully balance competing needs in order to move people and goods efficiently, support business district vitality, and create livable neighborhoods. That's why we regulate curb space, install and maintain paid parking, loading, and short-term access in business districts as well as restricted parking zones in residential areas."

[2] https://www.seattle.gov/transportation/permits-and-services/permits/parking-permits

Figure 40. SDOT "Can I Park Here?" brochure excerpt.

SDOT is also effective in using positive wording to communicate parking regulations. Seattle's "Can I Park Here?" brochure shifts the focus to what is allowed instead of what is prohibited (Figure 38). It concisely identifies signage information, how to avoid parking tickets, and how to "Park Like a Pro." Additionally, it is a one-stop-shop for parking information and resources with regard to paying parking tickets, digital tools, and contacts.

Seattle has also implemented the "Play Like a Parking Pro" program. Using Monopoly-style card signage, along with a series of funny informational videos, the City communicates new parking program changes and regulations. This campaign is meant to educate drivers about the parking system, so they can park smart, understand the rules, and use tools like mobile payment and online maps to improve their experience. By taking a fun approach to an educational campaign, the City improves the overall perception of parking while providing useful information. The City uses playful flags along with Monopoly signage at its meters (Figures 39 and 40).

Figure 41. Seattle parking flag.

Figure 42. Seattle Play Like a Parking Pro sign.

When the Portland Bureau of Transportation implemented its mobile payment application, called "Parking Kitty," a successful education and outreach campaign included the collaboration with iAmMoshow, the "Cat Rapper." The City released a humorous music video with the Cat Rapper promoting the mobile payment application. The YouTube video has over 20,000 views, and it was broadcast on the news as well. The parking zone map uses Parking Kitty logos, and the City even sells Parking Kitty branded T-shirts. The Town of Truckee could consider taking a creative approach to promote parking information to make the parking experience fun and positive.

Figure 43. Parking Kitty music video.

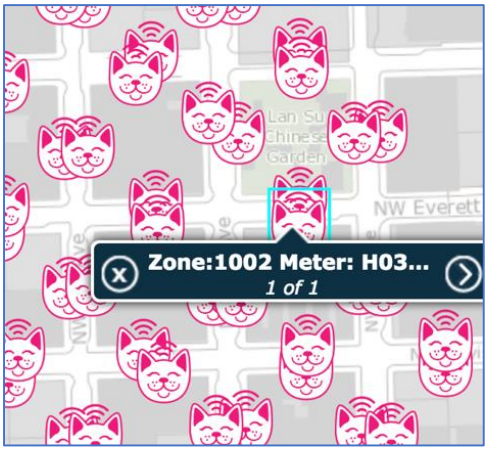


Figure 44. Parking Kitty map.

15.2 Recommendations

15.2.1 Near-Term

Strategy #40. Update the Town parking webpage.	
Description	The Town should update the parking webpage to create a central repository of easy-to-access information related to parking. Parking-related information should be presented in a consistent and user-friendly manner to ensure accurate information is being disseminated to the community.
Benefits	• Increased outreach throughout the community. • Consistent and accurate information. • User-friendly interface to search for information.
Considerations	• Updating current information posted to webpage. • Consistent updating of information as the parking program expands and changes.
Prerequisites	• None.
Timeframe	Near-term
Cost	Low
Priority	Customer service

15.2.2 Long-Term

Strategy #41. Continue communication with and information dissemination to important stakeholder groups throughout the community.	
Description	Continue to engage with the Truckee Donner Merchant Association and Chamber of Commerce to provide ongoing parking-related information to stakeholders.
Benefits	• Increased outreach throughout the community.
Considerations	• Identify points of contact with each important community stakeholder group.
Prerequisites	• None.
Timeframe	Long-term
Cost	Low
Priority	Customer service, sustainability

16.0 Appendix A: Summary of Strategies

This Parking Action Plan was designed to be realistic and achievable, however the actual implementation steps may vary depending on the Town's priorities, budget, staffing, and other factors. The Town should aim to complete any prerequisites listed for each strategy in the appropriate order to optimize the operation. Estimated costs are listed next to each strategy in green font. The cost levels are defined as: $ = low, $$ = medium, and $$$ = high. For the purposes of this timeline, the phases are defined as: Near-Term = 1 to 2 years, Mid-Term = 3 to 5 years, and Long-Term = 6 to 10 years. For each strategy the dark blue represents the estimated heaviest period of work and the light blue represents the estimated lighter period of ongoing implementation, oversight, and/or management. The development of the PAP was based on five overarching program priorities: customer service, technology, inventory, sustainability, and mobility. The recommendations included in this PAP have been organized below by their primary priority. However, most recommendations can work to achieve multiple priorities. For ease of presentation, each recommendation is listed only once below.

CUSTOMER SERVICE												
The Town aims to improve customer service with parking programs and technology in order to improve the overall user experience.												
Strategies	Near-Term				Mid-Term				Long-Term			
#4 Adjust operating hours to align with peak periods. $$												
#5 Adjust on- and off-street paid parking rates. $												
#6 Develop a valet parking program. $$$												
#10 Expand and adjust the employee permit parking program. $$												
#11 Utilize carpooling permit program for downtown employees. $$												
#12 Offer a low-income permit rate. $												
#13 Adjust permit parking supply and pricing over time as needed. $-$$												
#20 Hire two additional seasonal PTE PEOs to ensure consistent enforcement. $$$												
#29 Allow for short, time-limited parking spaces to be established. $												
#40 Update the Town parking webpage. $												
#41 Continue communication with and information dissemination to important stakeholder groups... $												

TECHNOLOGY												
By updating existing systems and introducing new technology, the Town can optimize program efficiency and effectiveness while providing new features and options.												
Strategies	Near-Term				Mid-Term				Long-Term			
#1 Implement mobile payment throughout the entire Downtown Parking District. $												
#2 Utilize the Pay by Plate configuration for pay stations and mobile payment. $-$$												
#3 Dual-purpose parking technology for data collection. $$-$$$												
#9 Implement an automated permit management system. $$												
#17 Utilize license plate recognition (LPR) technology for enforcement. $$												
#18 Solicit new citation management technology to increase enforcement efficiency. $$												
#21 Utilize automated and customer-convenient vehicle immobilization equipment. $												
#24 Acquire electronic locks (e-locks) for future parking technology improvements. $$-$$$												
#36 Utilize integrated occupancy counting technology. $$$												

INVENTORY													
The Town aims to manage existing and plan for future parking inventory as the Town continues to grow.													
Strategies	Near-Term				Mid-Term				Long-Term				
#8 Construct additional parking supply if needed. $$$										■	■	■	
#14 Assess opportunities for remote employee parking supported by a shuttle. $$$									■	■	■		
#15 Establish a shared parking policy framework. $$				■									
#16 Explore shared parking opportunities. $$					■	■							
#25 Adjust fee schedule to increase the price of reserved parking spaces. $	■												
#26 Adjust fee schedule to provide the ability to charge higher paid parking rates during events. $	■												
#28 Require active loading and unloading within loading zones. $	■												
#30 Consider limiting commercial loading before 10 AM. $					■								
#31 Charge a public parking rate in all EV charging stalls. $					■								
#32 Increase In-Lieu fee for parking spaces. $	■												
#33 Identify opportunities for new parking lots or garages within the Railyard Development Area. $$$									■				
#34 Consider a public private partnership when developing a parking garage in the Railyard Area. $$$										■	■	■	

SUSTAINABILITY													
As Truckee grows and changes, the Town intends to make updates throughout the Downtown Parking District to ensure overall sustainability from finances to branding and marketing.													
Strategies	Near-Term				Mid-Term				Long-Term				
#7 Make ongoing adjustments to parking rates as needed. $													
#19 Utilize enforcement data for Gap Management. $													
#22 Designate pay station maintenance and revenue collections technician. $$$	■												
#23 Establish an ongoing parking facility (lot) maintenance and upkeep plan. $$-$$$								■	■				
#35 Establish a new Town parking brand. $$	■	■											
#36 Update static wayfinding signage as needed. $$	■	■											

MOBILITY													
To support transportation to and throughout Downtown Truckee, the Town can provide and aid alternative transportation modes, such as buses and bikes.													
Strategies	Near-Term				Mid-Term				Long-Term				
#27 Promote and optimize alternative modes of transportation during special events. $					■								
#38 Create a shared mobility device permit program. $	■	■	■										
#39 Offer an on-demand or fixed-route shuttle program. $$$					■	■	■	■					

17.0 Appendix B: Employee Survey Results

DIXON visited a variety of downtown businesses and conducted employee surveys in-person on August 15, 2019. A total of 41 employees were surveyed from 39 businesses. The results for each question are included below.

1. What mode of transportation did you use to get to work?

Mode	Responses
Car	65%
Walk	17.5%
Bike	2.5%
Rideshare	7.5%
Other (please specify)	7.5%

Alternative modes of transportation used that were not listed include carpooling and public transportation.

2. Where did you park?

Location	Responses
On the street	25%
Public parking lot	6.25%
Private parking lot	40.63%
Used valet	0%
Other (please specify)	28.13%

3. How many blocks away from work is your parking space?

Distance	Responses
One block	66.67%
Two blocks	16.67%
Three blocks	12.5%
Four or more blocks	4.17%

4. Do you have an employee parking permit?

Answer	Responses
Yes	37.5%
No	59.38%
I don't know about the permit parking program	3.13%

5. Do you think there is enough parking downtown for customers?

Answer	Responses
Yes	21.62%
No	70.27%
Not sure	8.11%

6. Are you aware of the parking pilot program in the Railyard Lot?

Answer	Responses
Yes	44.44%
No	55.56%

7. If so, have you used the WayToPark application to park at the Railyard Lot?

Answer	Responses
Yes	3.57%
No	96.43%

8. If you could change, fix, or improve anything about parking in Truckee, what would it be?

Suggestion	Responses
Get rid of paid parking	13
Add more parking	7
Fix employee parking	6
Build a parking garage	5
Consider the growth of the community	4
Provide free parking for locals	3
Improve commercial loading options	3
Provide an expanded shuttle program	3
Nothing	2
Provide more payment options (remove coin payment choice)	2
Parking only needs to be fixed during special events	2
Stop building new buildings	1
Provide more 2-hour parking and pay after that	1
Improve residential parking	1
Improve parking facilities	1

18.0 Appendix C: Online Survey Results

18.1.1 Question 1: Where do you live?

The majority of respondents live in the Town of Truckee; however, less than 5% live downtown. The remaining responded that they live either in the North Lake Region, California, or another state.

Table 1: Question Responses

Answer Choices	Responses	
Downtown Truckee	4.62%	12
Town of Truckee	81.92%	213
North Lake Region	5.00%	13
California	5.38%	14
Other state	0.77%	2
Other (please specify)	2.31%	6

18.1.2 Question 2: Do you work in Downtown Truckee?

Almost three-fourths of the respondents do not work in Downtown Truckee. The respondents who do work in Downtown Truckee were primarily full-time employees.

Table 2: Question Responses

Answer Choices	Responses	
Yes (full time)	16.22%	42
Yes (part time)	8.88%	23
No	74.90%	194

18.1.3 Question 3: How often do you typically visit Downtown Truckee?

Almost half of individuals frequently visit Downtown Truckee multiple times per week. However, over 20% of respondents visit Downtown Truckee less than once per month.

Table 3: Question Responses

Answer Choices	Responses	
Everyday	14.67%	38
Multiple times per week	34.36%	89
Multiple times per month	30.50%	79
Less than once per month	20.46%	53

18.1.4 Question 4: What was the primary purposed of your most recent visit to downtown?

The largest percentage of respondents, at 41.92%, came to Downtown Truckee for Dining. 20.77% and 22.69% visited for shopping and work respectively. And the remaining 14.62% was for the other category, which had a lot of reports of visitors coming for the post office, health and beauty appointments, or for just general visiting of the town.

Table 4: Question Responses

Answer Choices	Responses	
Working/business	22.69%	59
Shopping	20.77%	54
Dining	41.92%	109
Other (please specify)	14.62%	38

18.1.5 Question 5: How long was your most recent visit?

The length of visits to Downtown Truckee varies from less than 30 minutes to more than 4 hours with no outstanding trend, however, trips less than 2 hours had the highest percentage of responses at just under 36%. Long visits (4+ hours) were not uncommon though, as respondents reported at 17.37%.

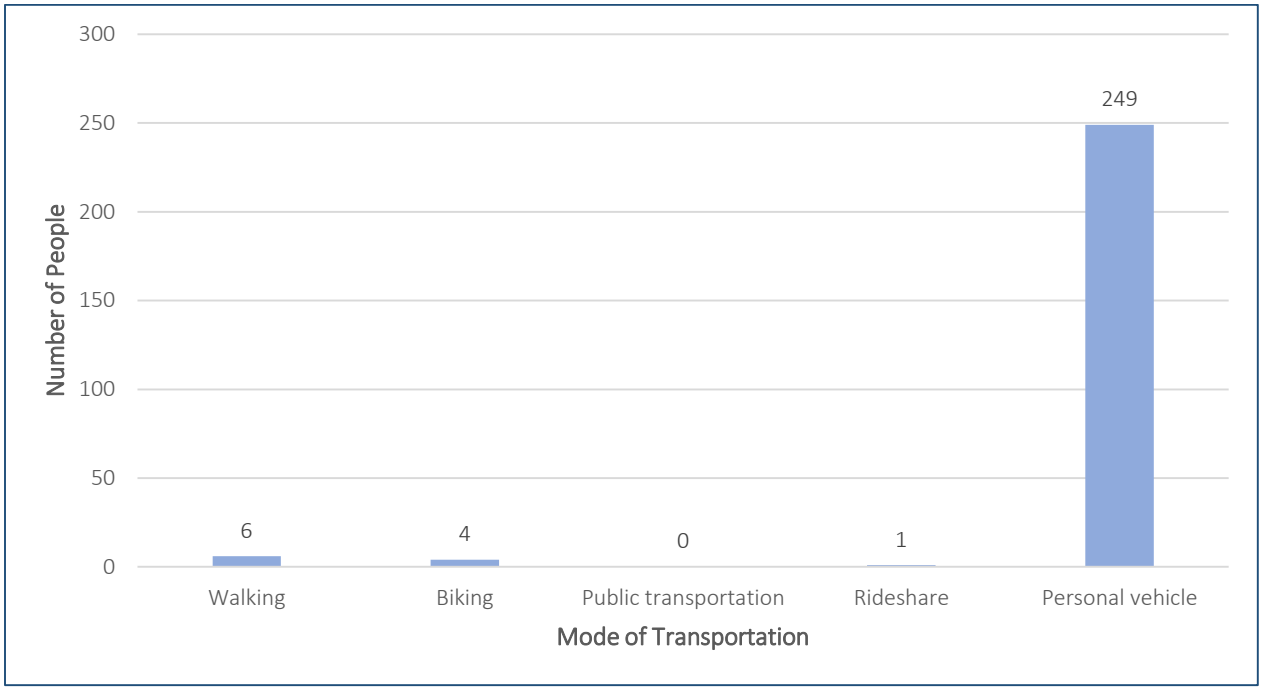
Table 5: Question Responses

Answer Choices	Responses	
Less than 30 minutes	9.27%	24
Less than 1 hour	15.44%	40
Less than 2 hours	35.91%	93
Less than 3 hours	18.15%	47
Less than 4 hours	3.86%	10
More than 4 hours	17.37%	45

18.1.6 Question 6: What mode of transportation did you use to get downtown for your most recent trip?

The most common mode of transportation was overwhelmingly via personal vehicle, at 249 responses. The remainder was for walking or biking but was uncommon.

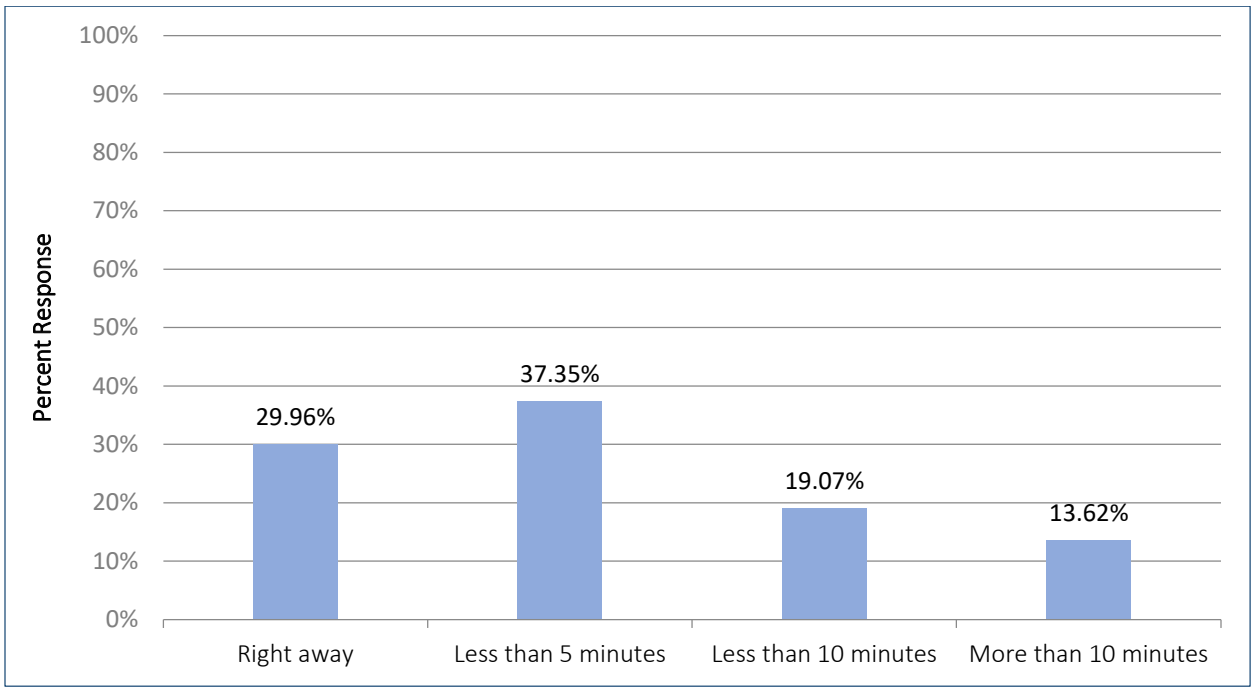
Table 6: Question Responses



18.1.7 Question 7: How long did it take you to find parking for your most recent visit?

In their most recent trip, the majority of respondents found they were able to find parking in less than 5 minutes. Of that, 30% reported that they were able to find parking immediately. However, 13.62% of respondents had to spend more than 10 minutes to find a spot.

Table 7: Question Responses



18.1.8 Question 8: Where did you park for your most recent visit?

Over half of the responses reported that they had parked on the street as opposed to off-street lots. Of off-street choices, public lots were more popular.

Table 8: Question Responses

Answer Choices	Responses	
On the street	51.76%	132
Public parking lot	30.20%	77
Private parking lot	18.04%	46

18.1.9 Question 9: How far from your destination did you park for your most recent visit?

Most respondents parked less than 200 yards from their destination during their most recent visit.

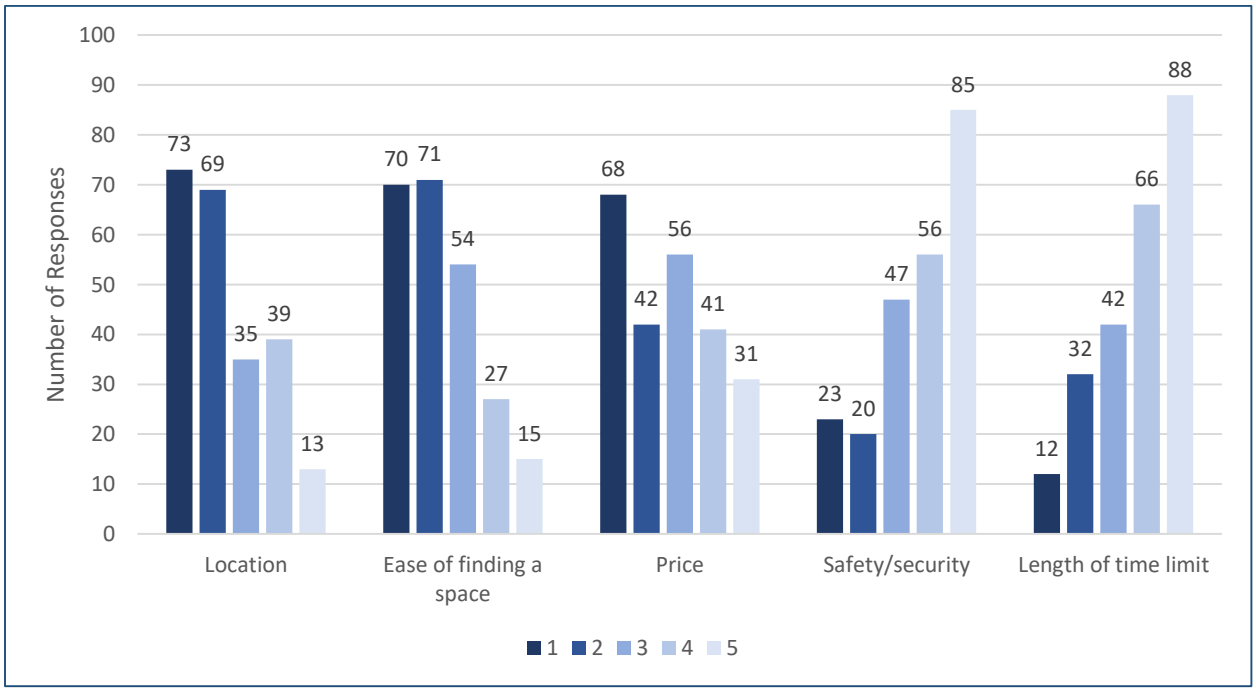
Table 9: Question Responses

Answer Choices	Responses	
Within 100 yards	39.61%	101
Less than 200 yards	20.39%	52
Less than 300 yards	18.82%	48
400 yards or more	21.18%	54

18.1.10 Question 10: Typically, when you drive (or if you were to drive) to a destination, what is the most important factor when deciding where to park? (Rank from 1=most important to 5=least important)

The results from this question showed that location and the ease of finding a space were the most important factors when visitors were deciding where to park. These categories had average scores of 2.11 and 2.19, respectively. Price was the next consideration for visitors with an average score of 2.52. The safety and security of the space and the time limits were the least important factors to visitors, which received scores of 2.52 and 3.36, respectively.

Table 10: Question Responses



18.1.11 Question 11: The Town should build more parking.

The majority of respondents agreed that the town should build more parking.

Table 11: Question Responses

Answer Choices	Responses	
Agree	57.92%	150
Disagree	15.83%	41
Not sure	26.25%	68

18.1.12 Question 12: The Town needs more electric vehicle charging stations.

There is no clear majority for whether the Town should build more electric vehicle charging stations. The largest percentage of responses reported that they were unsure.

Table 12: Question Responses

Answer Choices	Responses	
Agree	22.48%	58
Disagree	31.01%	80
Not sure	46.51%	120

18.1.13 Question 13: I generally have little or no difficulty finding a parking space in Downtown Truckee.

Responses to this question were generally split; however, the majority reported that they do have difficulty finding spaces in Downtown Truckee.

Table 13: Question Responses

Answer Choices	Responses	
True	43.41%	112
False	55.43%	143
I don't drive	1.16%	3

18.1.14 Question 14: There are enough parking spaces in Downtown Truckee.

The majority of the respondents argue that there is not enough parking in Downtown Truckee.

Table 14: Question Responses

Answer Choices	Responses	
True	28.02%	72
False	70.04%	180
I don't drive	1.95%	5

18.1.15 Question 15: Would you come to Downtown Truckee more often for leisure activities (dining, recreation, shopping) if parking was easier to find?

Roughly two-thirds of respondents say that they would visit Downtown Truckee more often for leisure activities if parking was easier to find, however, the other third of the respondents stated that the ease of parking would not affect how often they visit.

Table 15: Question Responses

Answer Choices	Responses	
Yes	67.57%	175
No	32.43%	84

18.1.16 Question 16: How far are you willing to walk for a guaranteed parking space?

Willingness to walk between 100 and over 400 yards for a guaranteed parking space was almost evenly distributed among the five distance options. Several respondents indicated that they need a parking space at their work or within 100 yards from their destination.

Table 16: Question Responses

Answer Choices	Responses	
I need a space at my work	8.59%	22
100 yards	19.53%	50
200 yards	21.88%	56
300 yards	18.75%	48
400 yards	12.89%	33
Over 400 yards	18.36%	47

18.1.17 Question 17: Have you used the WayToPark mobile application to pay to park in the Railyard Lot?

The majority of the respondents have not used the WayToPark mobile application, and another 37.84% had not have heard about the application before. Just over 2% of the respondents had used the application.

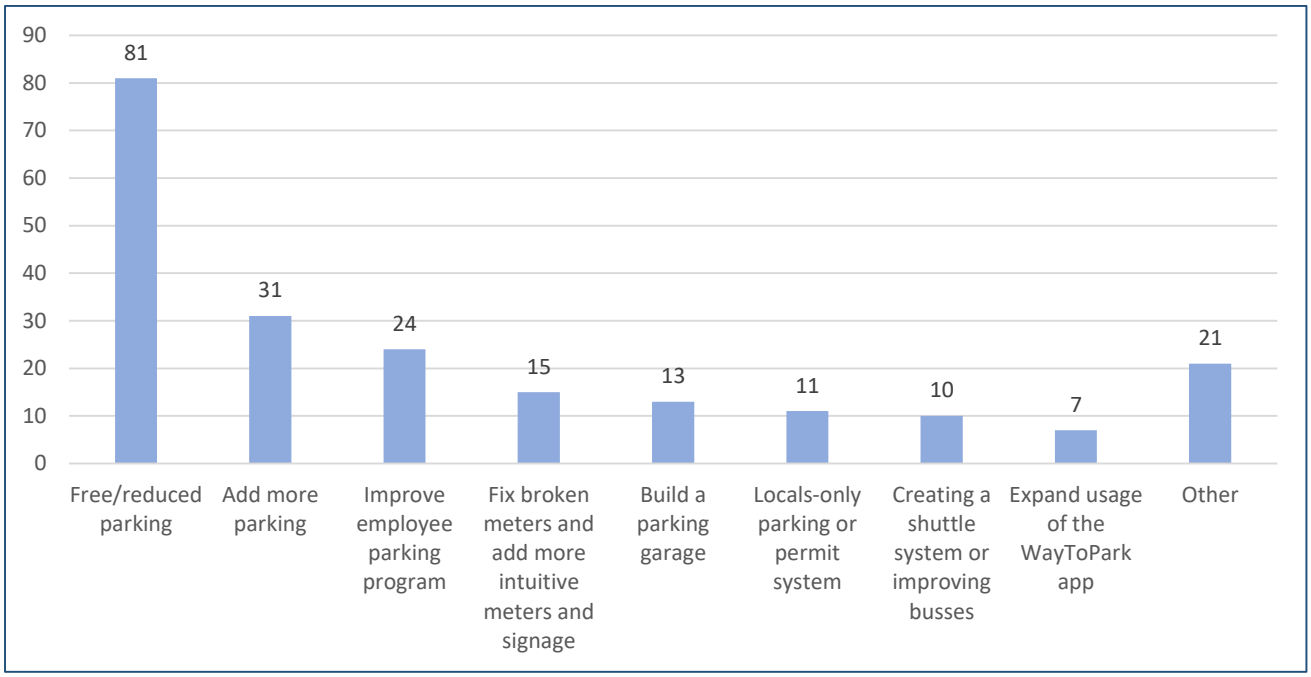
Table 17: Question Responses

Answer Choices	Responses	
Yes	2.32%	6
No	59.85%	155
I haven't heard about the WayToPark mobile application	37.84%	98

18.1.18 Question 18: If you could change, fix, or improve anything about parking in downtown Truckee, what would you do?

210 individuals responded to this open-ended question, which hoped to gather additional parking needs of those who visit Downtown Truckee. A majority of respondents indicated that providing parking should be free in some form. Respondents varied from believing that all parking should be free, locals should enjoy free or reduced parking fees, to providing a period of free parking followed by paid parking. Many individuals requested the addition of more parking, generally and specifically in the form of a parking garage. Another prominent response was to improve the employee parking permit program.

Table 18: Question Responses



19.0 Appendix D: Data Collection and Analysis Results

This Appendix presents the findings from data collection efforts held in July and September 2019 at key locations within Truckee's Downtown Parking District. Occupancy and turnover data were collected for on-street and off-street locations in the downtown area.

19.1 Project Background

On behalf of the Town of Truckee, Dixon Resources Unlimited (DIXON) conducted a parking study to understanding parking occupancy and utilization trends in the Downtown Parking District.

DIXON procured the services of National Data & Surveying Services (NDS) to complete a data collection effort across on-street and off-street inventory. A detailed description of the location and parking supply associated with each survey area is provided in the corresponding sections below.

The data collection types, study locations, and study time periods were selected to better understand weekday and weekend parking trends in the Town of Truckee. The data analysis results are intended to supplement the Parking Action Plan (PAP) and allow the Town to make program adjustments applicable to the needs and uses of each on-street or off-street public parking location in the Downtown Parking District. The data are meant to provide a baseline by which to measure future occupancy and turnover rates as the Town of Truckee continues to grow and change over the next several decades.

19.2 Data Types

19.2.1 Occupancy Data

Parking occupancy counts were conducted at each location at 12 PM, 3 PM, 6 PM, and 9PM. For each study area, the occupancy rate was calculated by dividing the number of observed vehicles by the total parking supply.

It is an industry standard that parking occupancy should remain around 85%. Maintaining at least a 15% vacancy rate minimizes driver congestion without providing an oversupply, thereby improving traffic flow and visitor experience while efficiently utilizing the Town's parking supply. The summary tables presented in the "Summary Tables" section highlight areas of concern in red (>85%), areas approaching high occupancy in yellow (>60%), and areas with ample supply in green (≤60%).

19.2.2 Turnover Data

During the four occupancy counts conducted at 12 PM, 3PM, 6PM, and 9PM, license plate numbers were recorded. If the same license plate number was recorded only once, the vehicle was assigned a 0-3 HR turnover duration. If the same license plate was recorded during two, three, or four successive observations, the vehicle was assigned a 3-6 HR, 6-9 HR, or 9-12 HR turnover duration, respectively. For each study area, the volume of cars was calculated based upon the discrete number of license plates observed each day. Turnover percentages for each study area were calculated by dividing the number of vehicles that turned over within three, six, nine, or twelve hours by the total volume of cars. Turnover rate is an important measure of the length of time that drivers utilize parking supply resources.

19.2.3 Data Collection Methodology

Data collection took place in two rounds. The first round of data collection occurred on Wednesday, July 17, and Saturday, July 20, 2019. The second round of data collection occurred on Wednesday, September 25, and Saturday, September 28, 2019.

Data for all study areas were collected during 12 PM, 3 PM, 6 PM, and 9 PM observations. The two rounds of data collection were selected to allow for a comparison between weekday and weekend occupancy and turnover rates during the peak summer season (July) and the shoulder season (September). The selected data collection dates were determined with input by the Town to ensure that no major events conflicted with typical daily operations. Both Table 11 and Figure 34 present a brief description of each of the study areas.

Table 1. Study Area Locations

General	Zone	Name	From	To	Type	Inventory
On-Street	Brickelltown	Donner Pass Road	McIver Crossing	Spring Street	Public	134
On-Street	Commercial Core	Bridge Street	North Boundary	Donner Pass Road	Public	31
On-Street	Commercial Core	Donner Pass Road	Spring Street	Bridge Street	Public	82
On-Street	Commercial Core	Spring Street	Donner Pass Road	High Access Road	Public	17
On-Street	Jibboom Street	Jibboom Street	Spring Street	Bridge Street	Public	17
On-Street	Railyard Development Area	Church Street	Donner Pass Road	Roundhouse Road	Public	6
On-Street	Railyard Development Area	Donner Pass Road	Bridge Street	Roundhouse Road	Public	53
On-Street	Railyard Development Area	Roundhouse Road	Church Street	Donner Pass Road	Public	8
On-Street	Railyard Development Area	Truckee Way	Donner Pass Road	Church Street	Public	7
On-Street	Church Street	Church Street	Bridge Street	School Street	Public	34
On-Street	West River Street Area	Bridge Street	West River Street	South Boundary	Public	3

On-Street	West River Street Area	W River Street	Bridge Street	West Boundary	Public	21
Off-Street	West River Street Area	Jax Lot	--	--	Public	49
Off-Street	Commercial Core	Fire Station Lot	--	--	Public	35
Off-Street	Commercial Core	Visitor Center Lot	--	--	Public	12
Off-Street	Railyard Development Area	Railyard Lot	--	--	Public	155
Off-Street	Jibboom Street	Dirt Lot	--	--	Private	60
Off-Street	Church Street	Catholic Church Lot	--	--	Private	42
Off-Street	Church Street	Community Arts Center Lot	--	--	Private	46

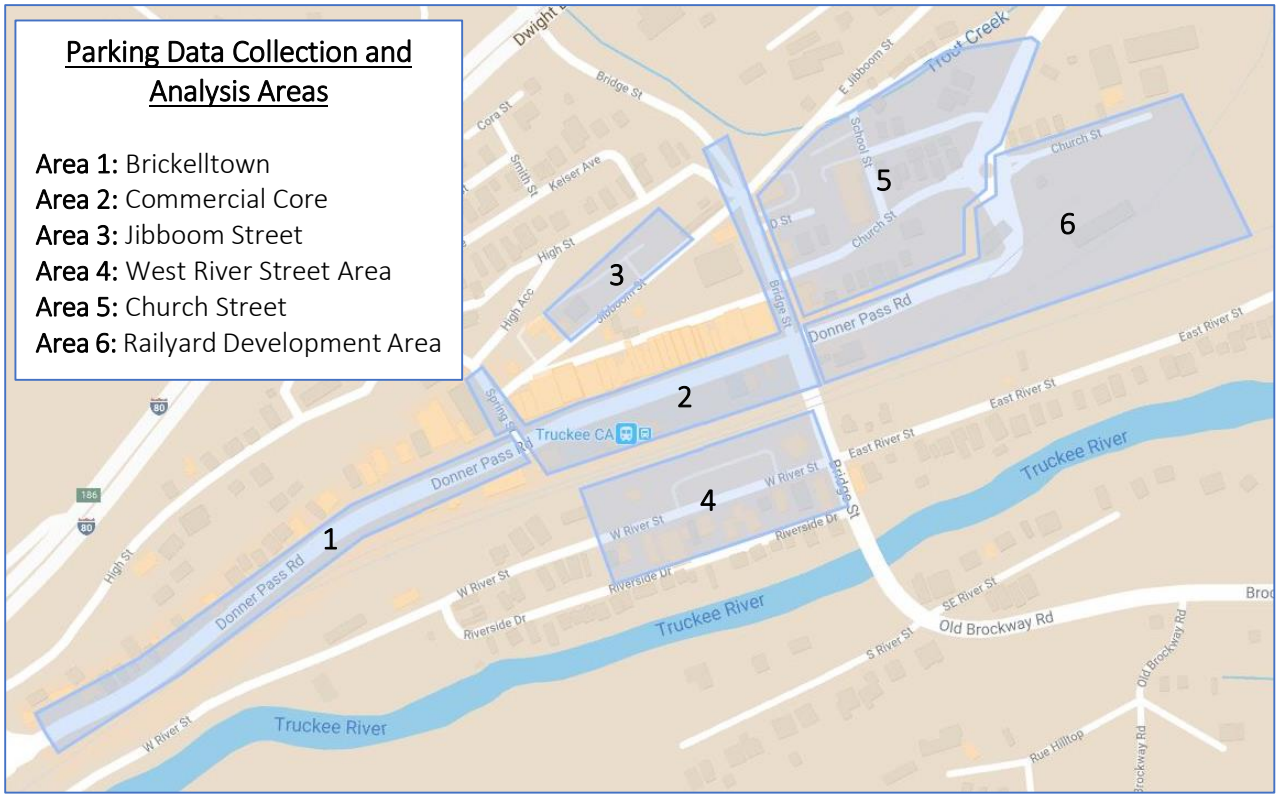


Figure 1. Study Area Location Map

19.3 On-Street Data

19.3.1 Brickelltown

On-street occupancy and turnover data were recorded for Brickelltown, a segment of Donner Pass Road that stretches from McIver Crossing in the west to Spring Street in the east. Brickelltown is located west of the Commercial Core in the Downtown Parking District. A total of 134 on-street spaces were surveyed as part of the occupancy and turnover study.

Table 2. Brickelltown On-Street Inventory

Name	Type		#
Donner Pass Rd	Public	Paid Parking	128
	Public	Handicap	6
		Total	134

The descriptions below detail the key occupancy and turnover observations for Brickelltown.

Key Takeaways

- Average occupancy across all time periods was observed to be moderate in July (63%) and low in September (57%).
- Occupancy was observed to be highest during the 6PM time period in July (85%) and highest during the 12PM time period in September (74%).
- Average occupancy across all time periods was observed to be low on the weekday (51%) and moderate on the weekend (69%).
- Occupancy was observed to be highest during the 6PM time period during the weekday (75%) and highest during the 12PM time period during the weekend (93%).
- Occupancy exceeded the 85% industry standard target for at least one time period.
- Approximately 81% to 90% of observed vehicles turned over within 0-3 HRS during the weekday between July and September data.
- Approximately 86% to 91% of observed vehicles turned over within 0-3 HRS during the weekend for July and September data.

Figure 2. On-Street Occupancy for Brickelltown: July vs. September

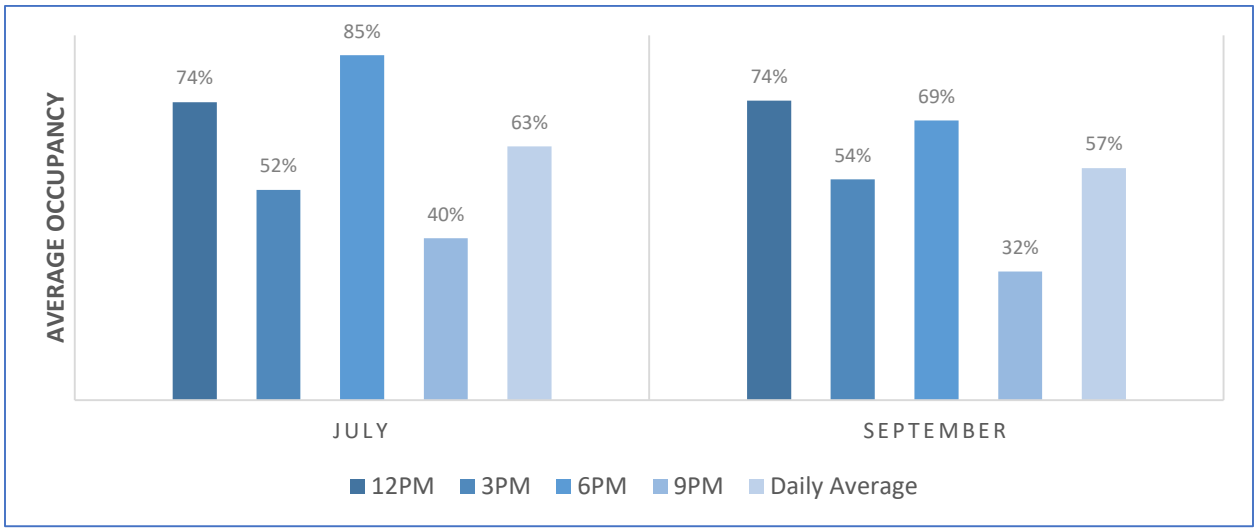


Figure 3. On-Street Occupancy for Brickelltown: Weekday vs. Weekend

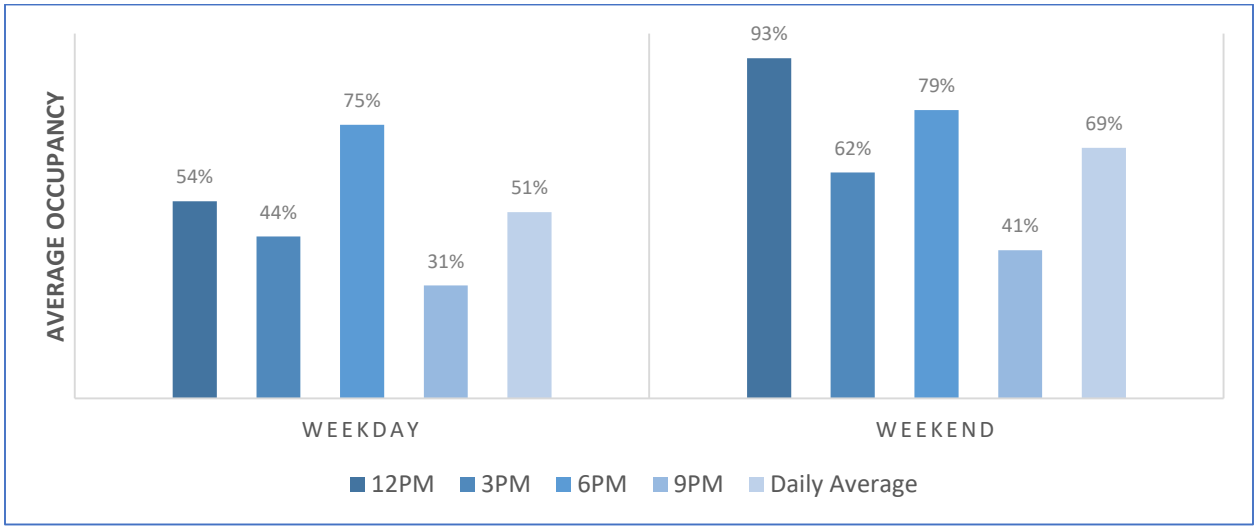


Figure 4. On-Street Turnover for Brickelltown by Vehicle Number

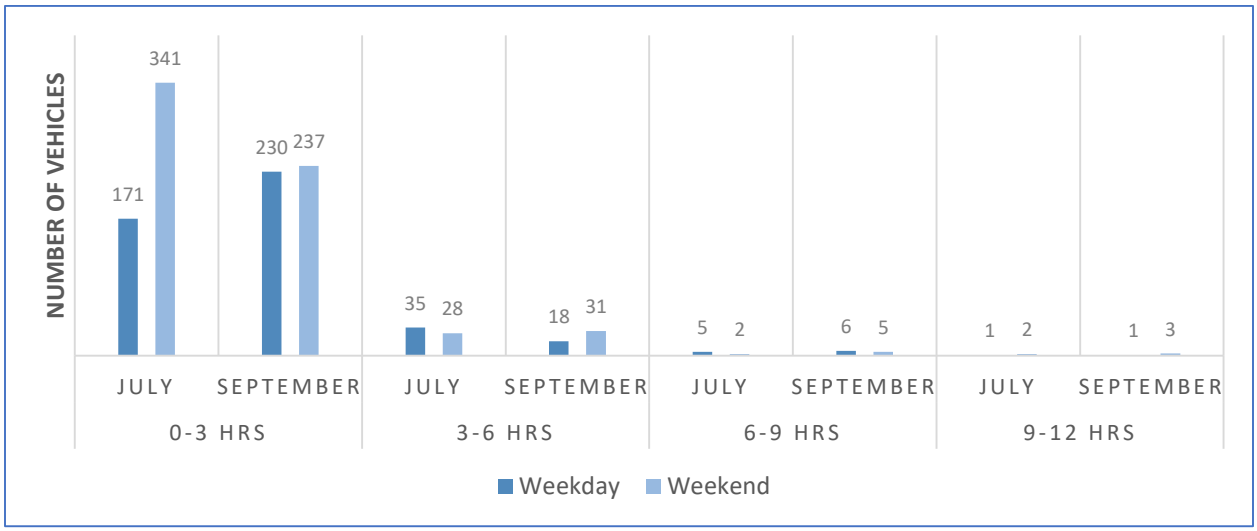
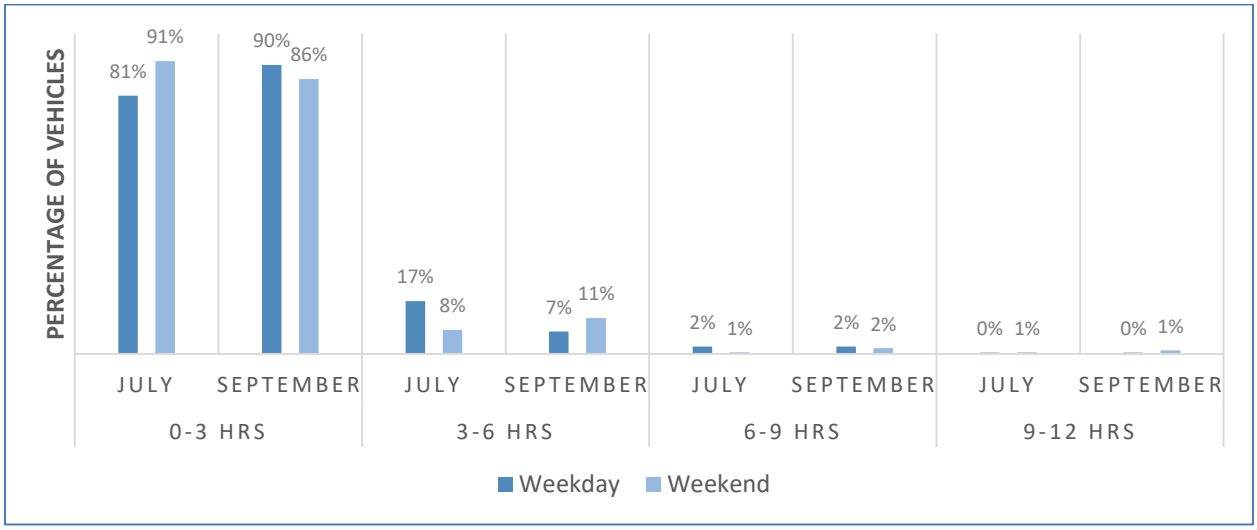


Figure 5. On-Street Turnover for Brickelltown by Vehicle Percentage



19.3.2 Commercial Core

On-street occupancy and turnover data were recorded for the Commercial Core, a segment of Donner Pass Road in the Downtown Parking District that stretches from Spring Street in the west to Bridge Street in the east. On-street parking in the Commercial Core includes inventory located on Donner Pass Road, Spring Street, and Bridge Street. A total of 130 spaces were surveyed as part of the occupancy and turnover study.

Table 3. Commercial Core On-Street Inventory

Name	Type		#
Donner Pass Rd	Public	Paid Parking	77
	Public	Handicap	5
Bridge St	Public	Paid Parking	29
	Public	Handicap	2
Spring St	Public	Paid Parking	16
	Public	Residential Permit	1
		Total	130

The descriptions below detail the key occupancy and turnover observations for the Commercial Core.

Key Takeaways

- Average occupancy across all time periods was observed to be moderate in July (78%) and moderate in September (76%).
- Occupancy was observed to be highest during the 12PM time period in July (90%) and highest during the 12PM time period in September (86%).
- Average occupancy across all time periods was observed to be moderate on the weekday (73%) and moderate on the weekend (81%).
- Occupancy was observed to be highest during the 12PM time period during the weekday (84%) and highest during the 12PM time period during the weekend (94%).
- Occupancy exceeded the 85% industry standard target for at least one time period.
- Weekend occupancy generally exceeded weekday occupancy on Donner Pass Road and Spring Street.
- Approximately 93% of observed vehicles turned over within 0-3 HRS during the weekday between July and September data.

- Approximately 94% of observed vehicles turned over within 0-3 HRS during the weekend for July and September data.

Figure 6. On-Street Occupancy for Commercial Core: July vs. September

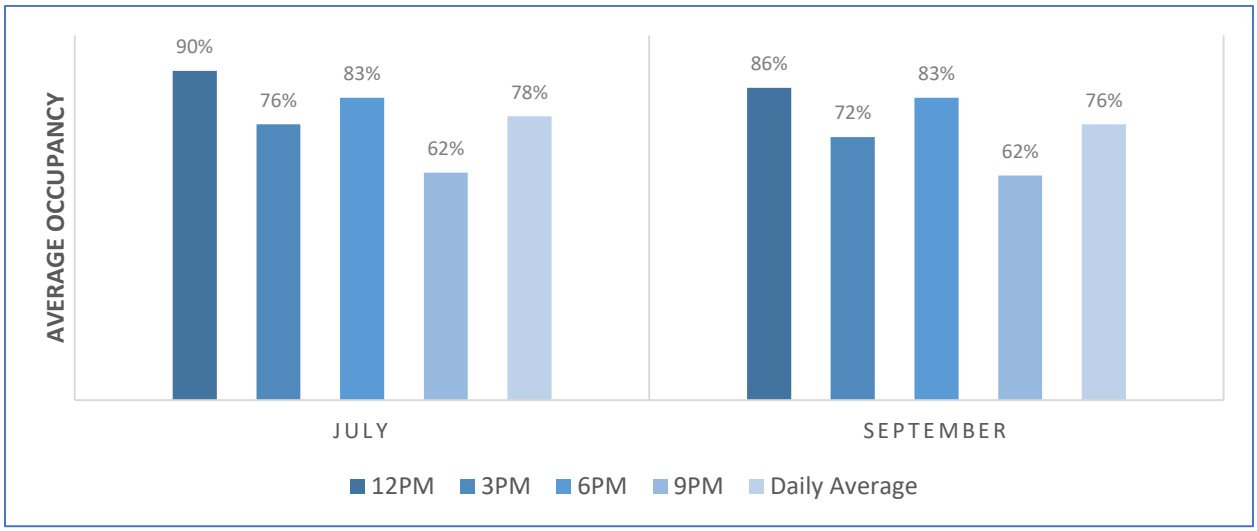


Figure 7. On-Street Occupancy for Commercial Core: Weekday vs. Weekend

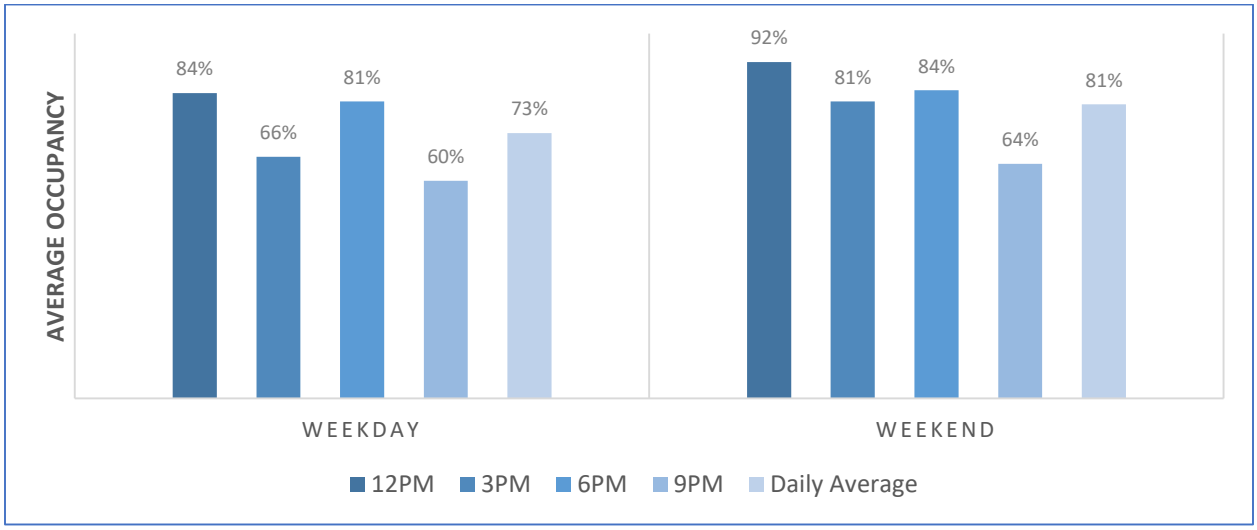


Figure 8. Daily On-Street Occupancy for Commercial Core by Street

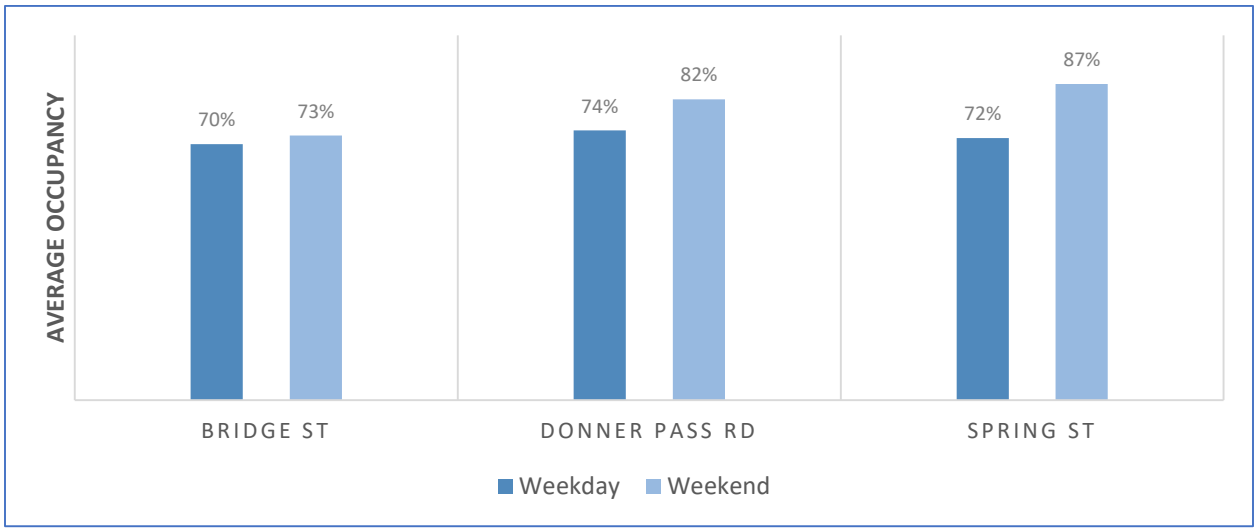


Figure 9. On-Street Turnover for Commercial Core by Vehicle Number

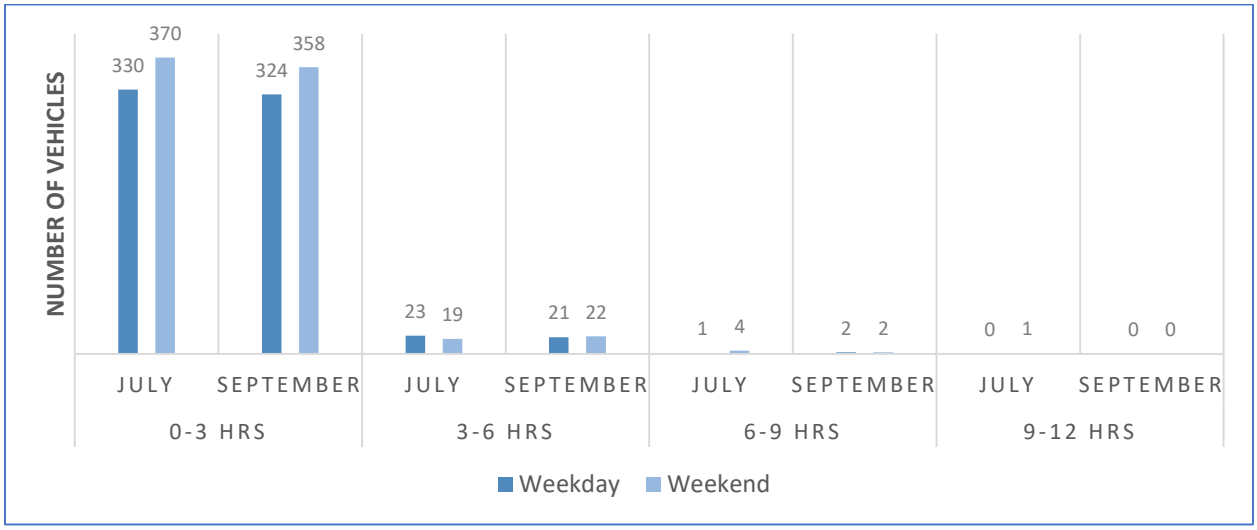
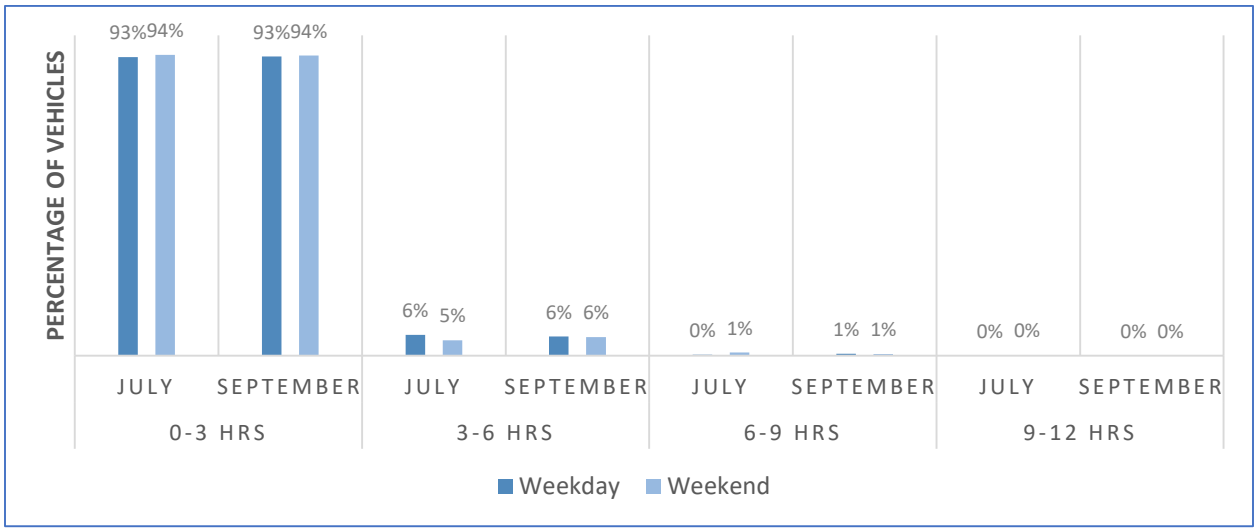


Figure 10. On-Street Turnover for Commercial Core by Vehicle Percentage



19.3.3 Jibboom Street

On-street occupancy and turnover data were recorded for Jibboom Street between Spring Street and Bridge Street, located adjacent to the Dirt Lot in the Downtown Parking District. A total of 17 spaces were surveyed as part of the occupancy and turnover study.

Table 4. Jibboom Street On-Street Inventory

Name	Type		#
Jibboom St	Public	Paid Parking	17
		Total	17

The descriptions below detail the key occupancy and turnover observations for Jibboom Street.

Key Takeaways

- Average occupancy across all time periods was observed to be moderate in July (75%) and moderate in September (61%).
- Occupancy was observed to be highest during the 3PM time period in July (85%) and highest during the 9PM time period in September (85%).
- Average occupancy across all time periods was observed to be moderate on the weekday (65%) and moderate on the weekend (71%).
- Occupancy was observed to be highest during the 3PM time period during the weekday (74%) and highest during the 12PM time period during the weekend (91%).
- Occupancy exceeded the 85% industry standard target for at least one time period.
- Approximately 71% to 78% of observed vehicles turned over within 0-3 HRS during the weekday between July and September data.
- Approximately 74% to 79% of observed vehicles turned over within 0-3 HRS during the weekend for July and September data.

Figure 11. On-Street Occupancy for Jibboom Street: July vs. September

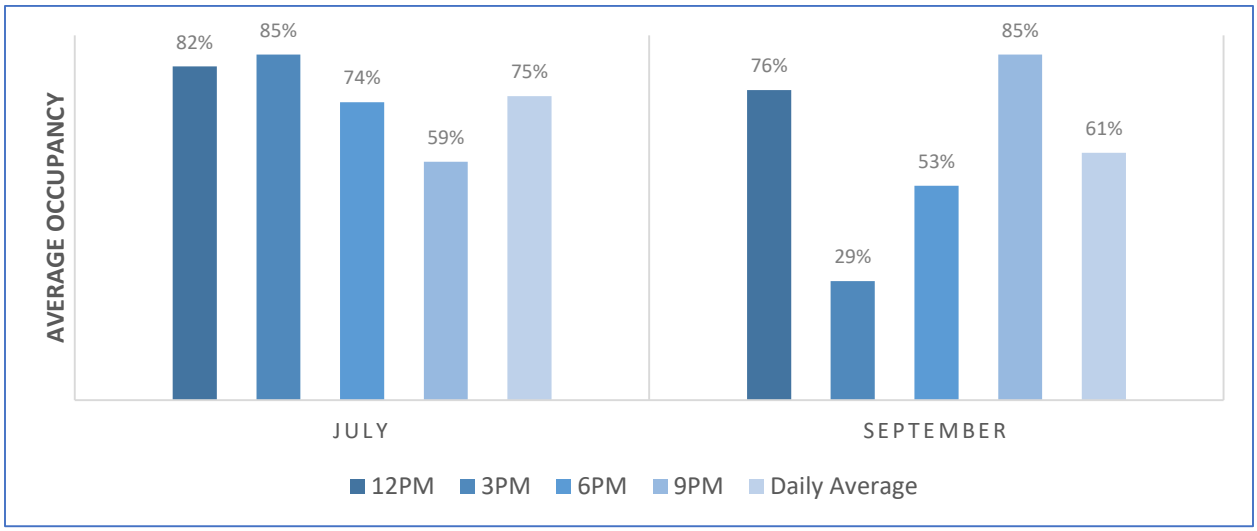


Figure 12. On-Street Occupancy for Jibboom Street: Weekday vs. Weekend

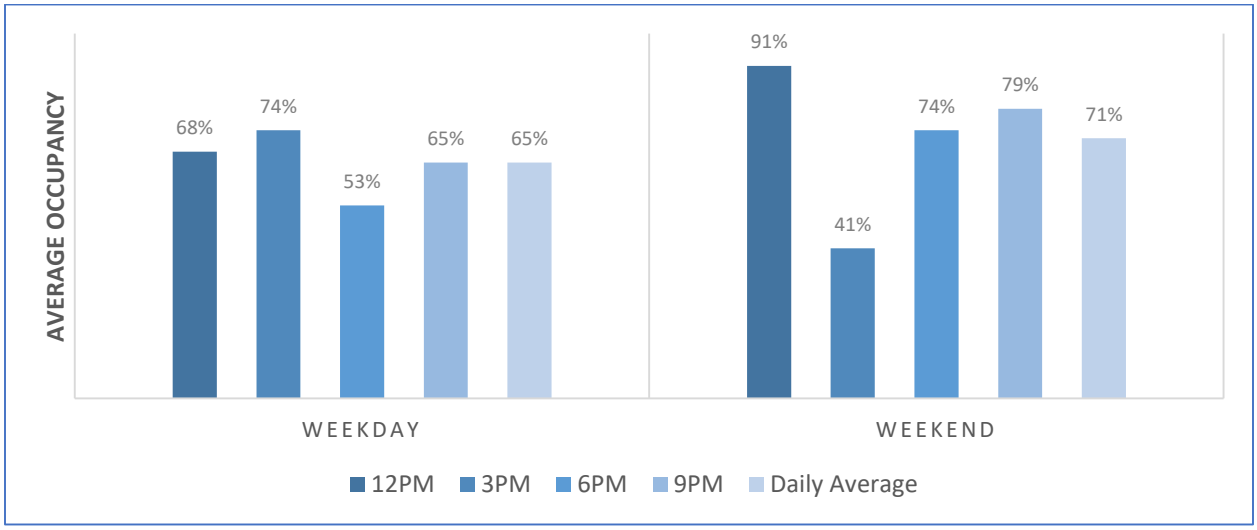


Figure 13. On-Street Turnover for Jibboom Street by Vehicle Number

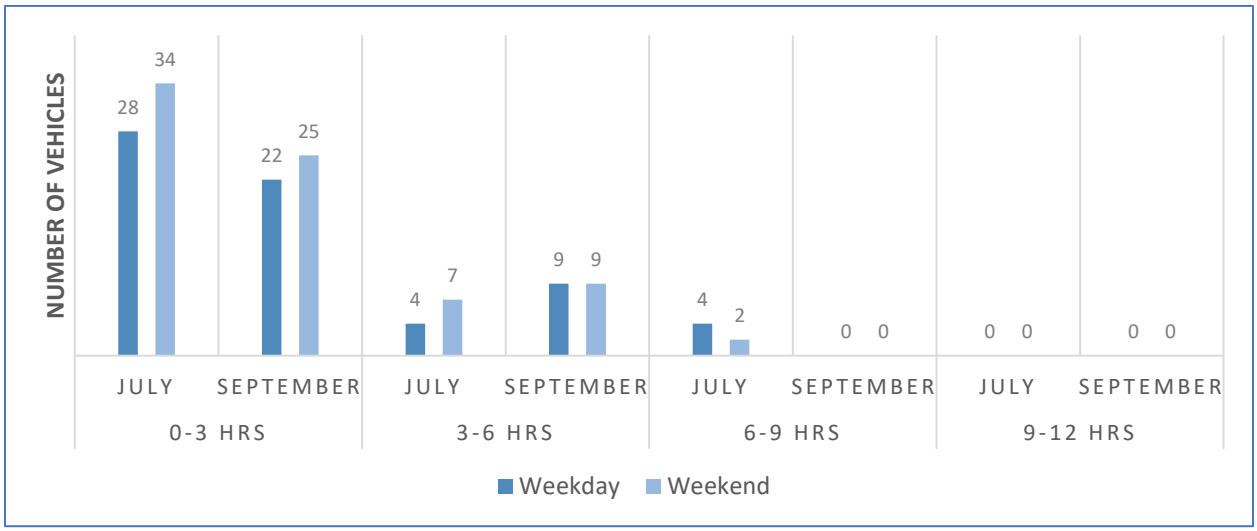
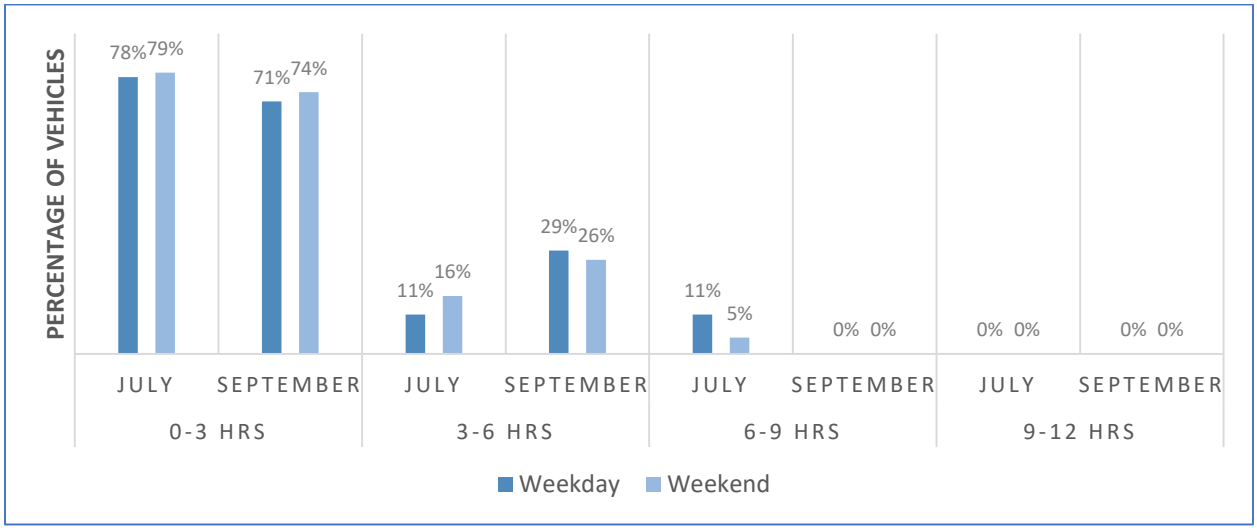


Figure 14. On-Street Turnover for Jibboom Street by Vehicle Percentage



19.3.4 Railyard Development Area

On-street occupancy and turnover data were recorded for the Railyard Development Area, located along Donner Pass Road, east of Bridge Street in the Downtown Parking District. On-street parking in the Railyard Development Area includes inventory located on Church Street, Donner Pass Road, Roundhouse Road, and Truckee Way. A total of 74 spaces were surveyed as part of the occupancy and turnover study.

Table 5. Railyard Development Area On-Street Inventory

Name	Type		#
Church St	Public	Paid Parking	6
Donner Pass Rd	Public	Paid Parking	53
Roundhouse Rd	Public	Paid Parking	8
Truckee Way	Public	Paid Parking	7
		Total	74

The descriptions below detail the key occupancy and turnover observations for the Railyard Development Area.

Key Takeaways

- Average occupancy across all time periods was observed to be low in July (21%) and low in September (15%).
- Occupancy was observed to be highest during the 12PM time period in July (27%) and highest during the 12PM time period in September (18%).
- Average occupancy across all time periods was observed to be low on the weekday (12%) and low on the weekend (23%).
- Occupancy was observed to be highest during the 12PM time period during the weekday (16%) and highest during the 12PM time period during the weekend (28%).
- Occupancy did not exceed the 85% industry standard target for any time period.
- Approximately 73% to 83% of observed vehicles turned over within 0-3 HRS during the weekday for July and September data.
- Approximately 78% to 92% of observed vehicles turned over within 0-3 HRS during the weekend for July and September data.

Figure 15. On-Street Occupancy for Railyard Development Area: July vs. September

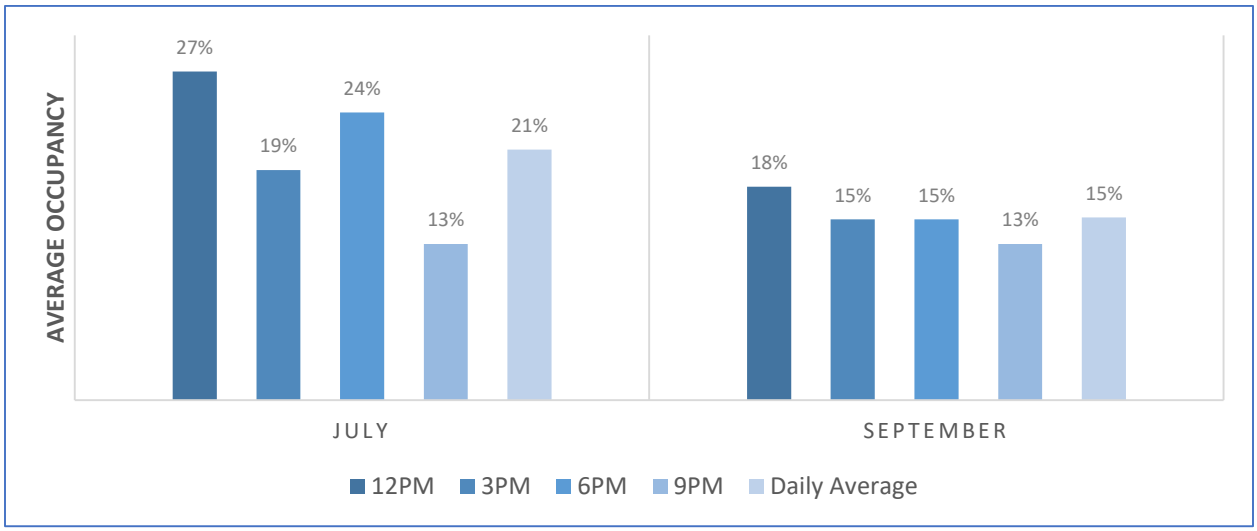


Figure 16. On-Street Occupancy for Railyard Development Area: Weekday vs. Weekend

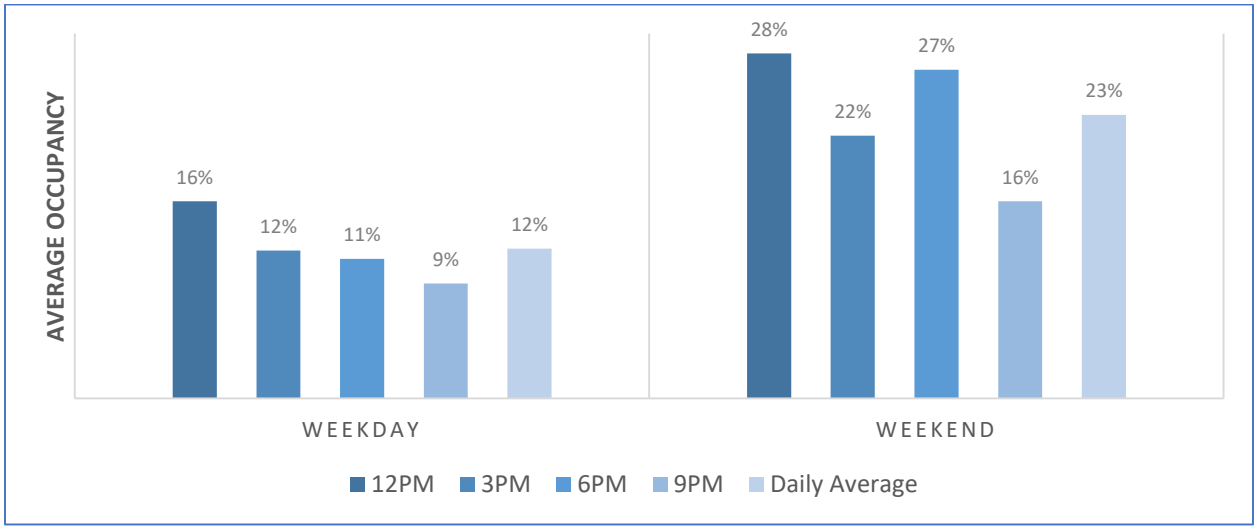


Figure 17. On-Street Turnover for Railyard Development Area by Vehicle Number

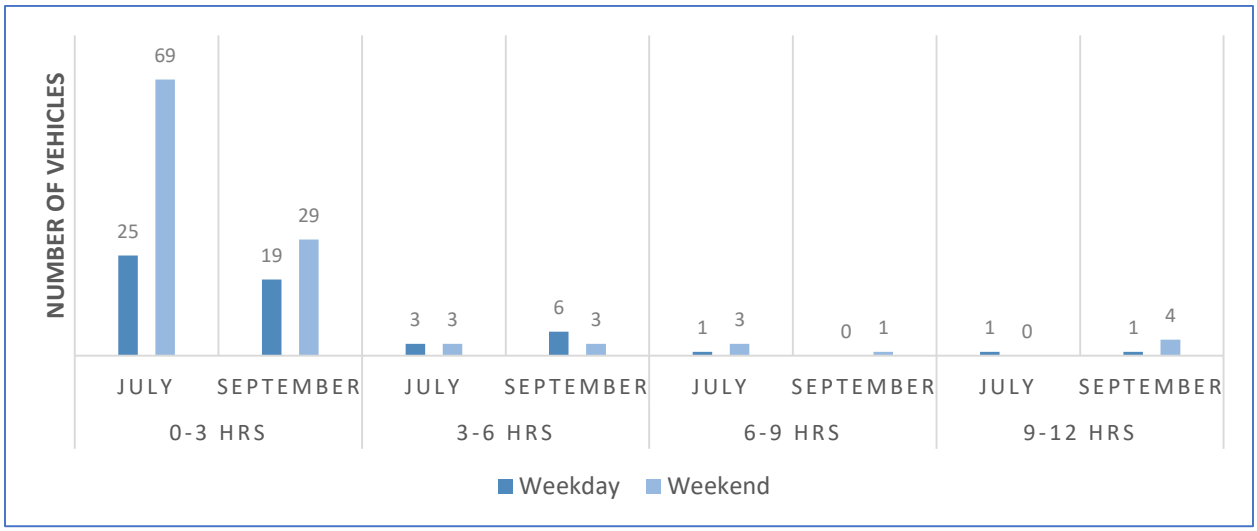
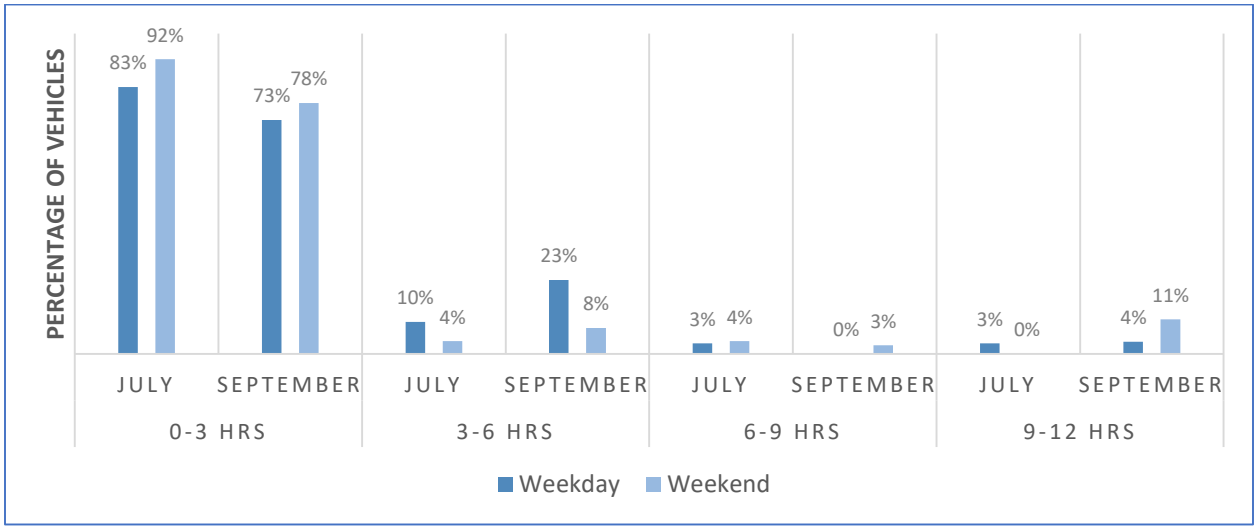


Figure 18. On-Street Turnover for Railyard Development Area by Vehicle Percentage



19.3.5 Church Street

On-street occupancy and turnover data were recorded for Church Street between Bridge Street and School Street, located adjacent to the Community Arts Center in the Downtown Parking District. A total of 34 spaces were surveyed as part of the occupancy and turnover study.

Table 6. Church Street On-Street Inventory

Name	Type		#
Church St	Public	Paid Parking	31
	Public	Handicap	1
	Public	15 Minute	2
		Total	34

The descriptions below detail the key occupancy and turnover observations for Church Street.

Key Takeaways

- Average occupancy across all time periods was observed to be moderate in July (67%) and moderate in September (71%).
- Occupancy was observed to be highest during the 12PM time period in July (72%) and highest during the 6PM time period in September (97%).
- Average occupancy across all time periods was observed to be low on the weekday (54%) and moderate on the weekend (83%).
- Occupancy was observed to be highest during the 6PM time period during the weekday (65%) and highest during the 6PM time period during the weekend (103%).
- Occupancy exceeded the 85% industry standard target for at least one time period.
- Approximately 70% to 98% of observed vehicles turned over within 0-3 HRS during the weekday between July and September data.
- Approximately 77% to 81% of observed vehicles turned over within 0-3 HRS during the weekend for July and September data.

Figure 19. On-Street Occupancy for Church Street: July vs. September

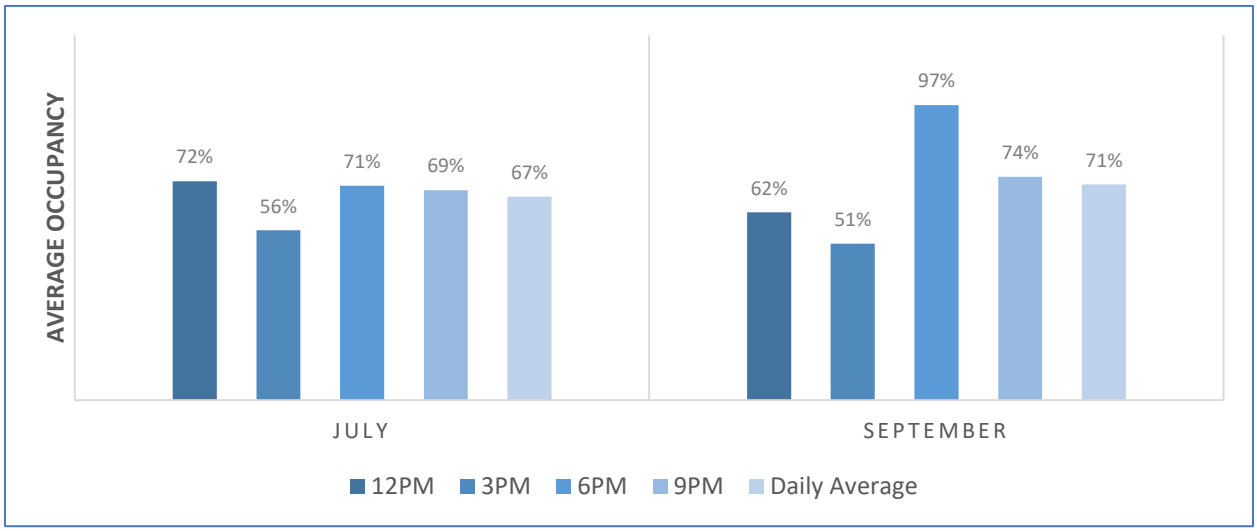


Figure 20. On-Street Occupancy for Church Street: Weekday vs. Weekend

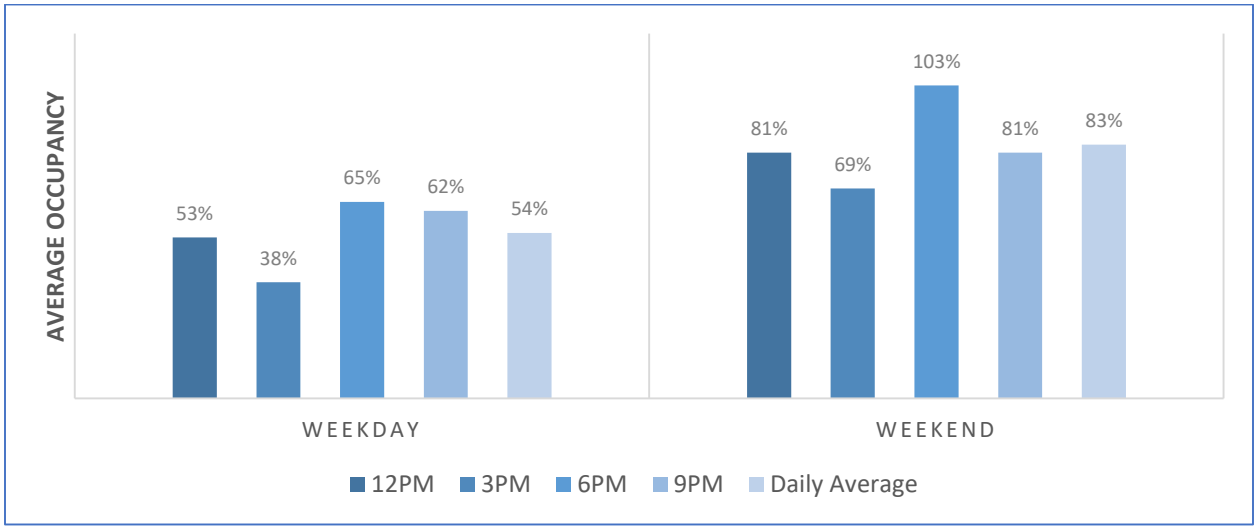


Figure 21. On-Street Turnover for Church Street by Vehicle Number

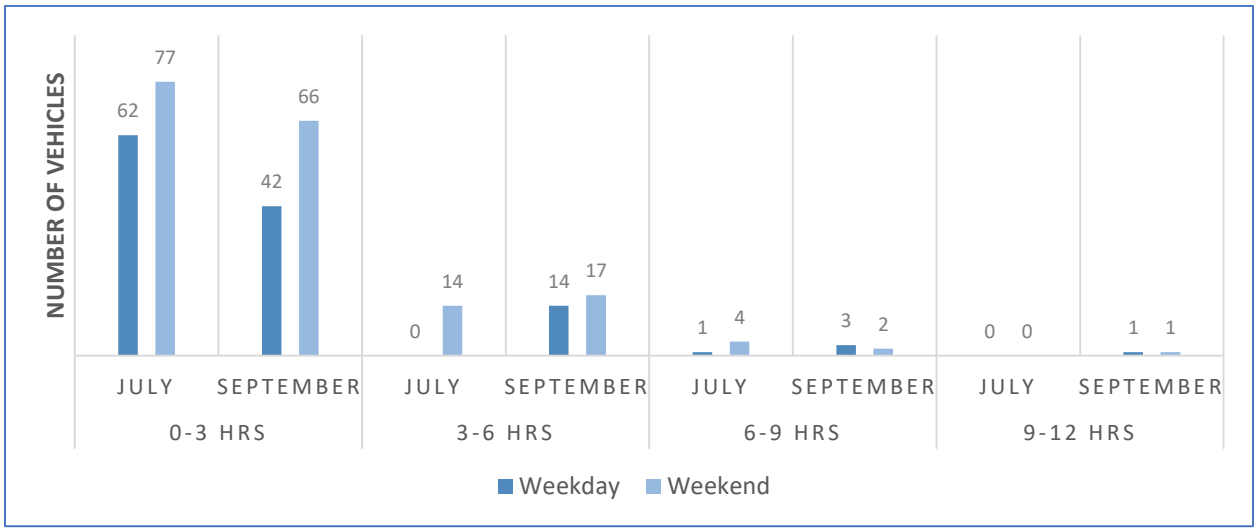
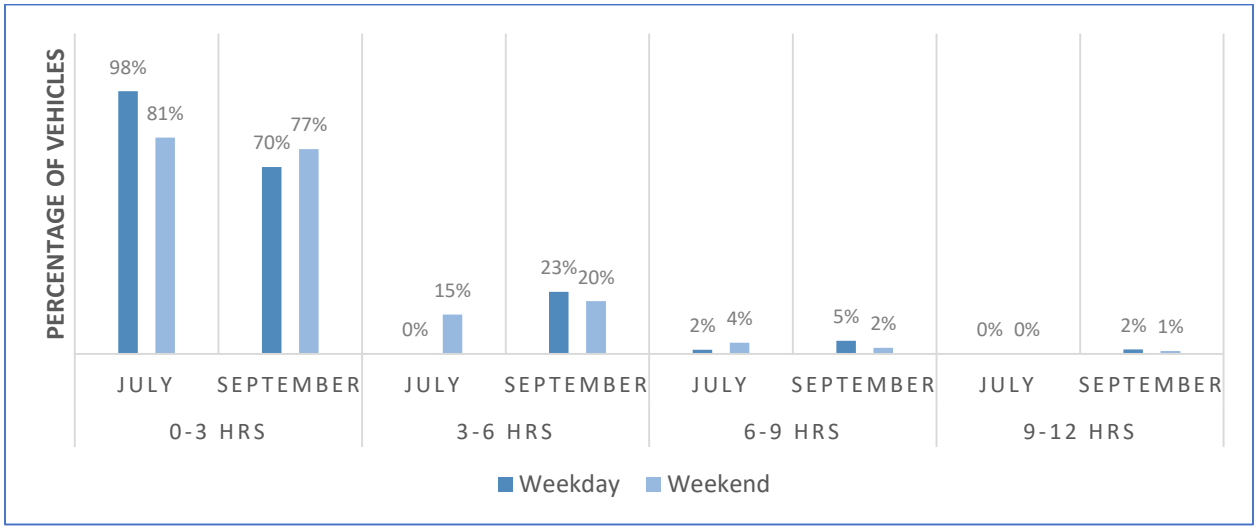


Figure 22. On-Street Turnover for Church Street by Vehicle Percentage



19.3.6 West River Street Area

On-street occupancy and turnover data were recorded for the West River Street Area, located south of the railroad tracks in the Downtown Parking District. On-street parking in the West River Street Area includes inventory located on West River Street and Bridge Street. A total of 23 spaces were surveyed as part of the occupancy and turnover study.

Table 7. West River Street Area On-Street Inventory

Name	Type		#
Bridge St	Public	Paid Parking	3
W River St	Public	Paid Parking	20
	Public	Handicap	1
		Total	24

The descriptions below detail the key occupancy and turnover observations for the West River Street Area.

Key Takeaways

- Average occupancy across all time periods was observed to be moderate in July (67%) and low in September (57%).
- Occupancy was observed to be highest during the 12PM time period in July (87%) and highest during the 12PM time period in September (65%).
- Average occupancy across all time periods was observed to be low on the weekday (51%) and moderate on the weekend (73%).
- Occupancy was observed to be highest during the 12PM time period during the weekday (70%) and highest during the 12PM time period during the weekend (83%).
- Occupancy exceeded the 85% industry standard target for at least one time period.
- Approximately 84% to 100% of observed vehicles turned over within 0-3 HRS during the weekday for July and September data.
- Approximately 88% to 96% of observed vehicles turned over within 0-3 HRS during the weekend for July and September data.

Figure 23. On-Street Occupancy for West River Street Area: July vs. September

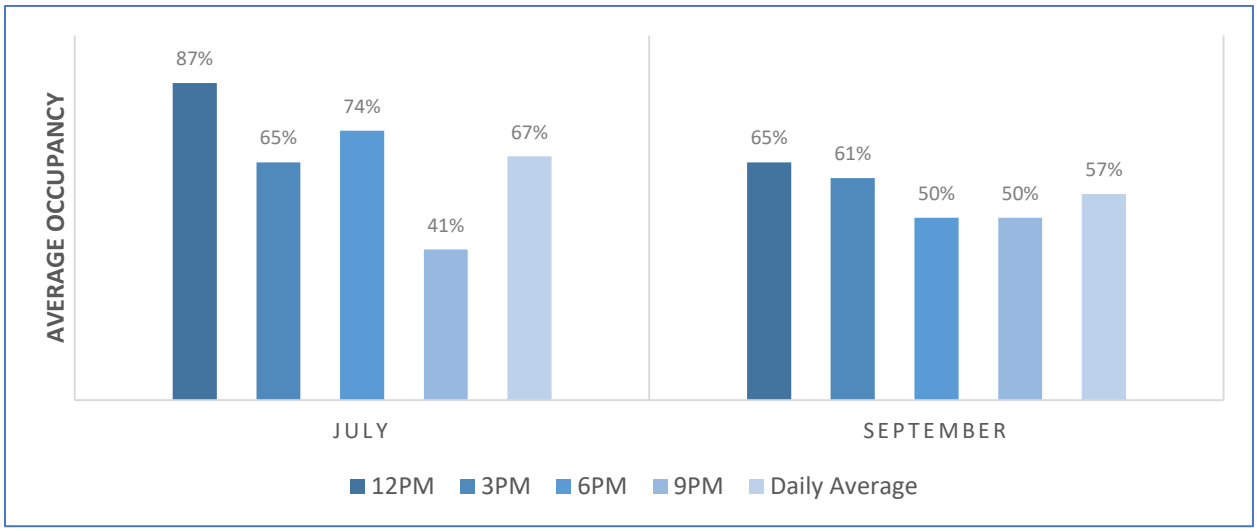


Figure 24. On-Street Occupancy for West River Street Area: Weekday vs. Weekend

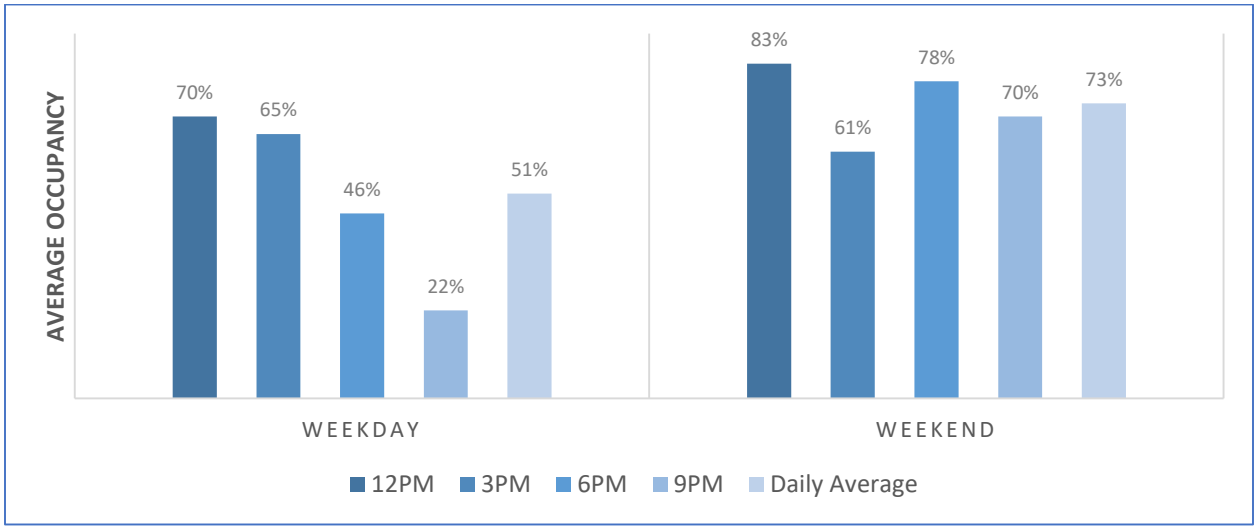


Figure 25. On-Street Turnover for West River Street Area by Vehicle Number

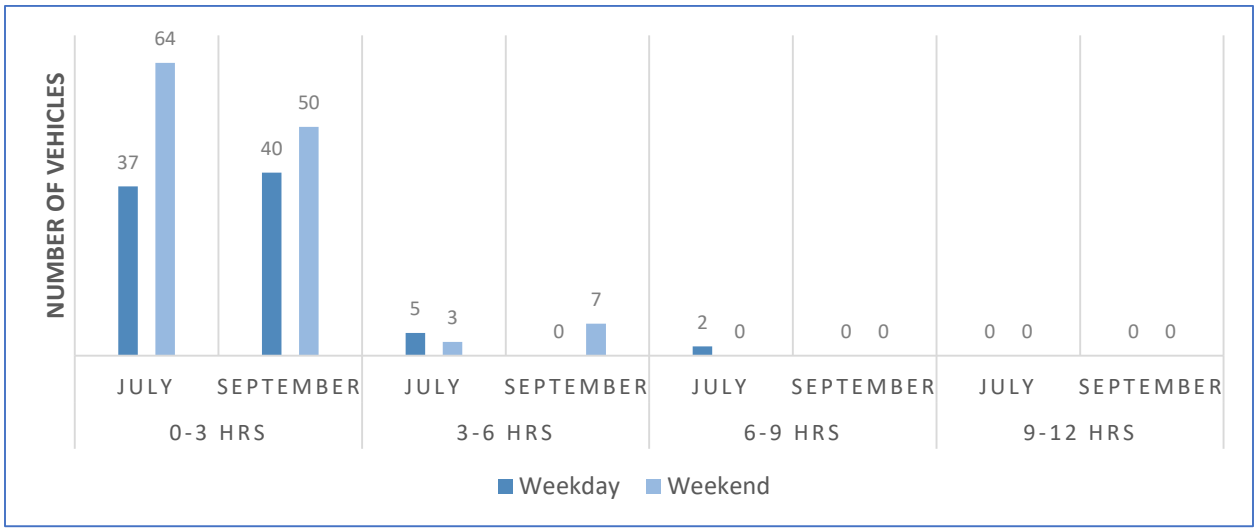
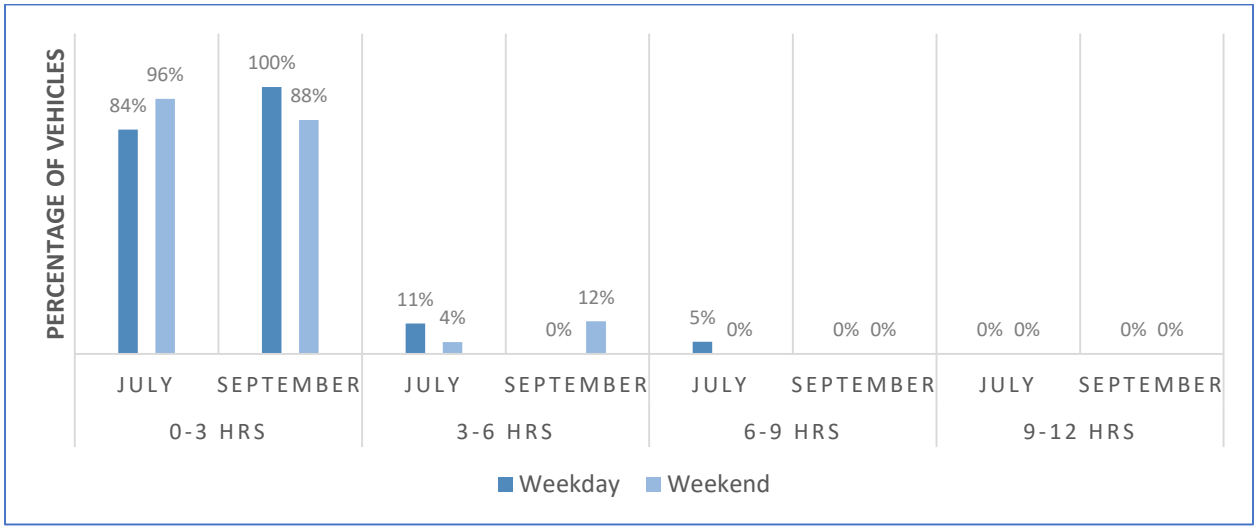


Figure 26. On-Street Turnover for West River Street Area by Vehicle Percentage



19.4 Off-Street Data

19.4.1 Jax Lot

Off-street occupancy and turnover data were recorded for the Jax Lot. The Jax Lot is bordered by railroad tracks to the north, Jax At the Tracks diner to the east, The Station restaurant to the west, and West River Street to the south. A total of 49 off-street spaces were surveyed as part of the occupancy and turnover study.

Table 8. Jax Lot Off-Street Inventory

Name	Type		#
Jax Lot	Public	Paid Parking	47
	Public	Handicap	2
		Total	49

The descriptions below detail the key occupancy and turnover observations for Jax Lot.

Key Takeaways

- Average occupancy across all time periods was observed to be low in July (56%) and low in September (39%).
- Occupancy was observed to be highest during the 12PM time period in July (92%) and highest during the 12PM time period in September (68%).
- Average occupancy across all time periods was observed to be low on the weekday (40%) and low on the weekend (55%).
- Occupancy was observed to be highest during the 12PM time period during the weekday (65%) and highest during the 12PM time period during the weekend (95%).
- Occupancy exceeded the 85% industry standard target for at least one time period.
- Approximately 79% to 87% of observed vehicles turned over within 0-3 HRS during the weekday between July and September data.
- Approximately 89% of observed vehicles turned over within 0-3 HRS during the weekend for July and September data.

Figure 27. Off-Street Occupancy for the Jax Lot: July vs. September

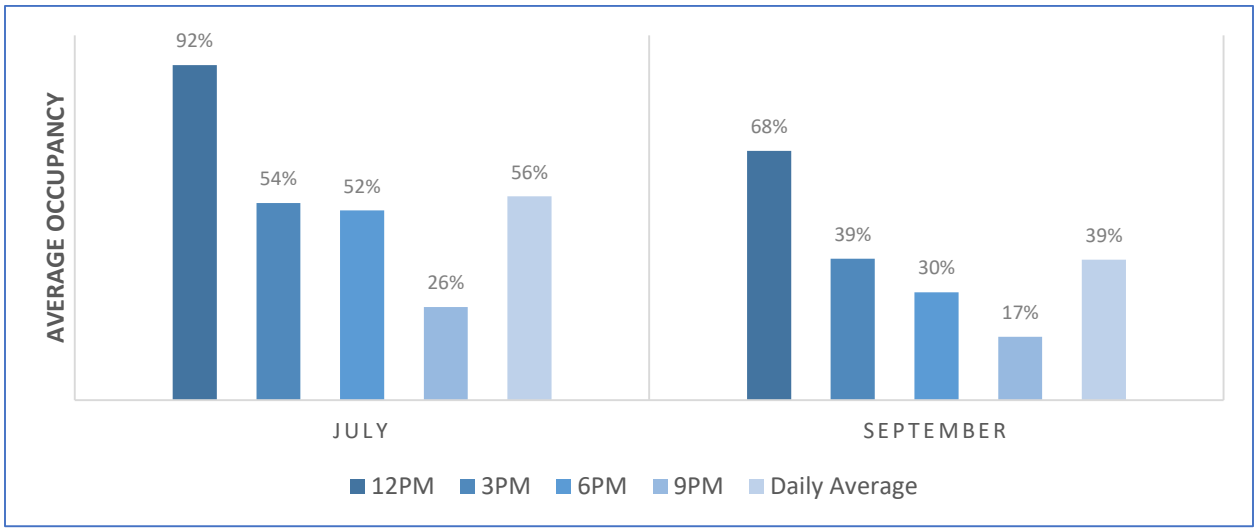


Figure 28. Off-Street Occupancy for the Jax Lot: Weekday vs. Weekend

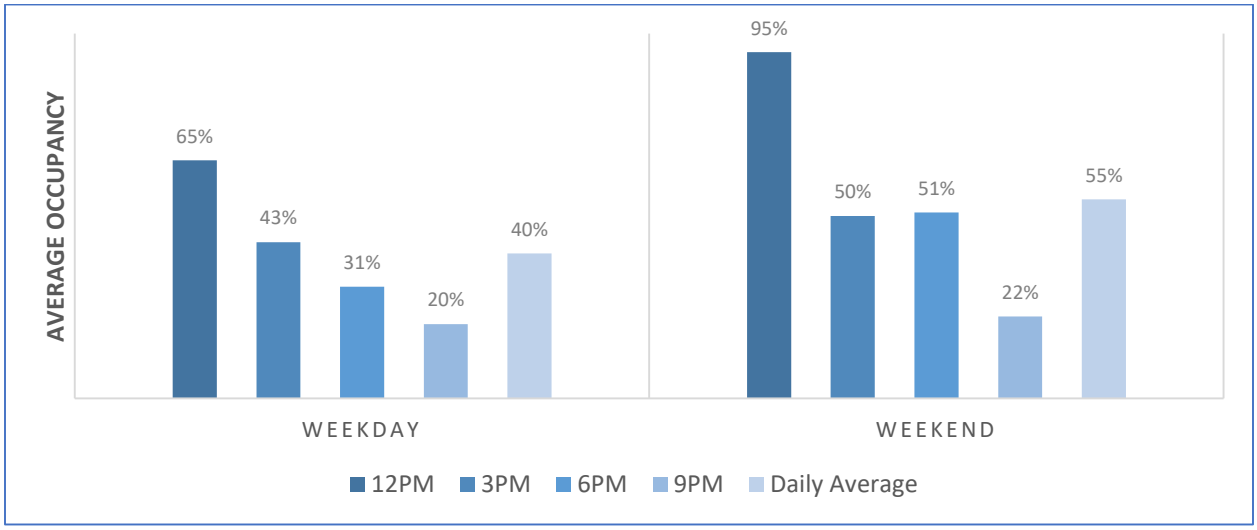


Figure 29. Off-Street Turnover for the Jax Lot by Vehicle Number

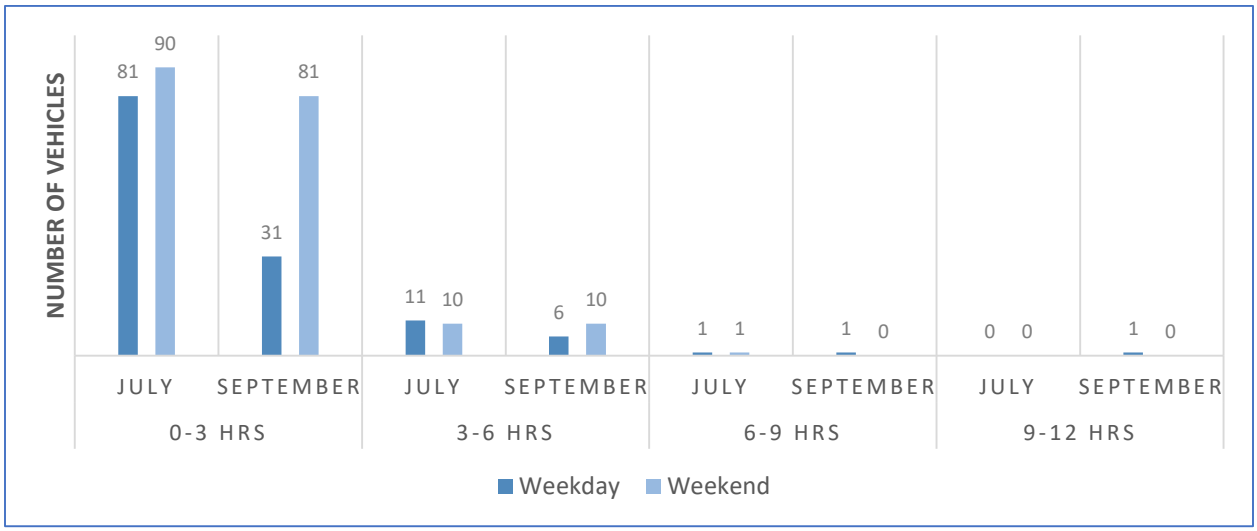
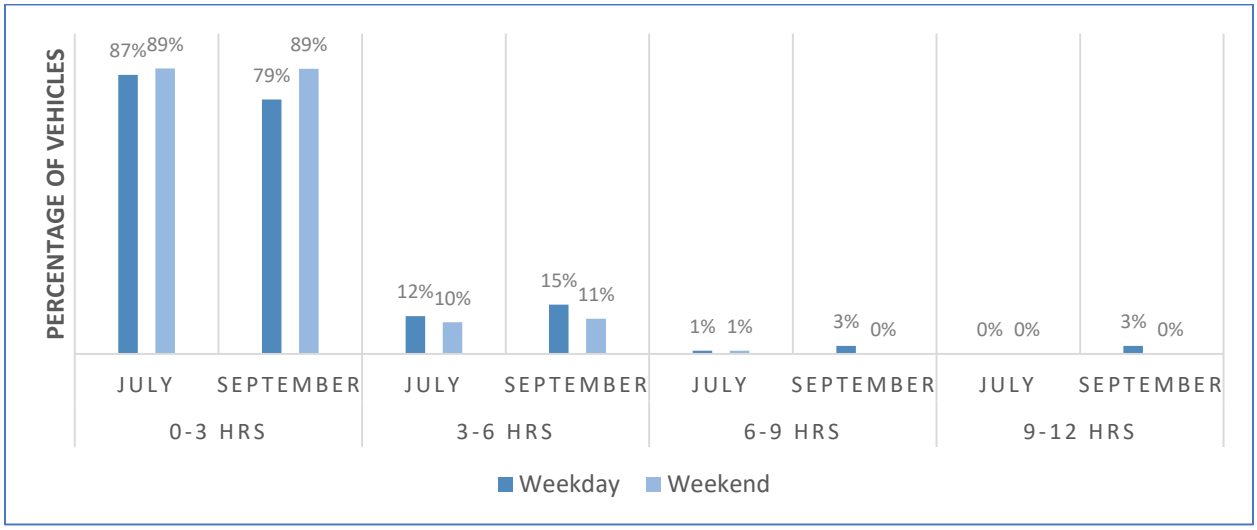


Figure 30. Off-Street Turnover for the Jax Lot by Vehicle Percentage



19.4.2 Commercial Core Lots

Off-street occupancy and turnover data were recorded for municipal parking in the Commercial Core. This off-street area, consisting of Visitor Center Parking and the Fire Station Lot, is bordered by the Truckee Fire Station to the east, Donner Pass Road to the north, Tahoe Oil & Spice to the west, and the railroad tracks to the south. A total of 47 off-street spaces were surveyed as part of the occupancy and turnover study.

Table 9. Commercial Core Lots Off-Street Inventory

Name	Type		#
Fire Station Lot	Public	Paid Parking	33
	Public	Handicap	2
Visitor Center Parking	Public	Art Gallery	1
	Public	Chamber of Commerce	2
	Public	Electric Charging	2
	Public	Handicap	2
	Public	Paid Parking	2
	Public	15 Minute	1
	Public	Visitor	2
		Total	47

The descriptions below detail the key occupancy and turnover observations for the Commercial Core Lots.

Key Takeaways

- Average occupancy across all time periods was observed to be low in July (56%) and low in September (39%).
- Occupancy was observed to be highest during the 12PM time period in July (79%) and highest during the 12PM time period in September (61%).
- Average occupancy across all time periods was observed to be low on the weekday (34%) and moderate on the weekend (61%).
- Occupancy was observed to be highest during the 12PM time period during the weekday (52%) and highest during the 12PM time period during the weekend (87%).
- Occupancy exceeded the 85% industry standard target for at least one time period.
- Approximately 84% to 94% of observed vehicles turned over within 0-3 HRS during the weekday between July and September data.
- Approximately 91% to 93% of observed vehicles turned over within 0-3 HRS during the weekend for July and September data.

Figure 31. Off-Street Occupancy for the Commercial Core Lots: July vs. September

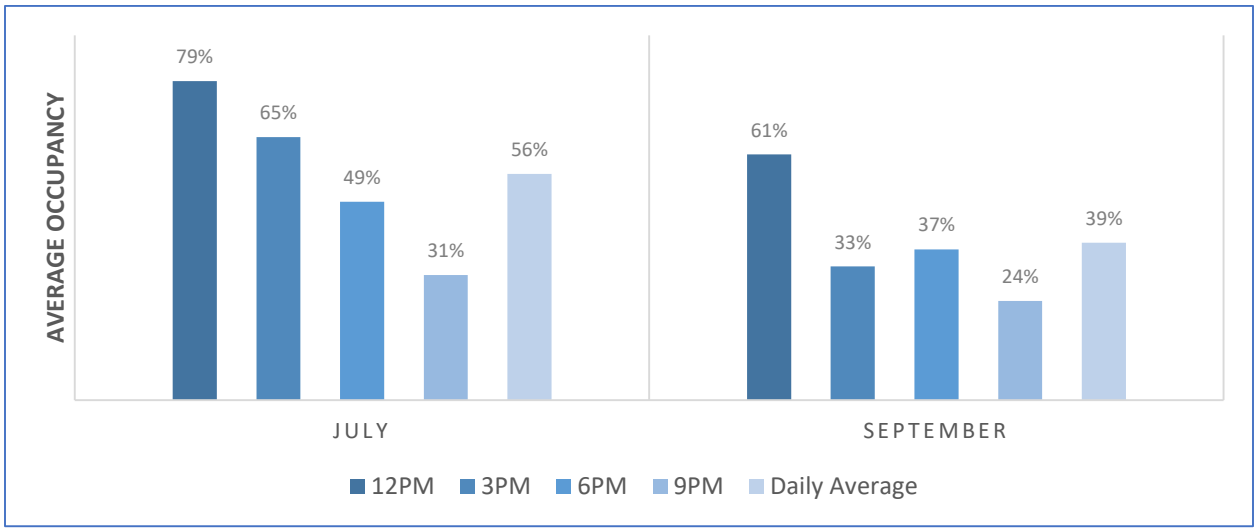


Figure 32. Off-Street Occupancy for the Commercial Core Lots: Weekday vs. Weekend

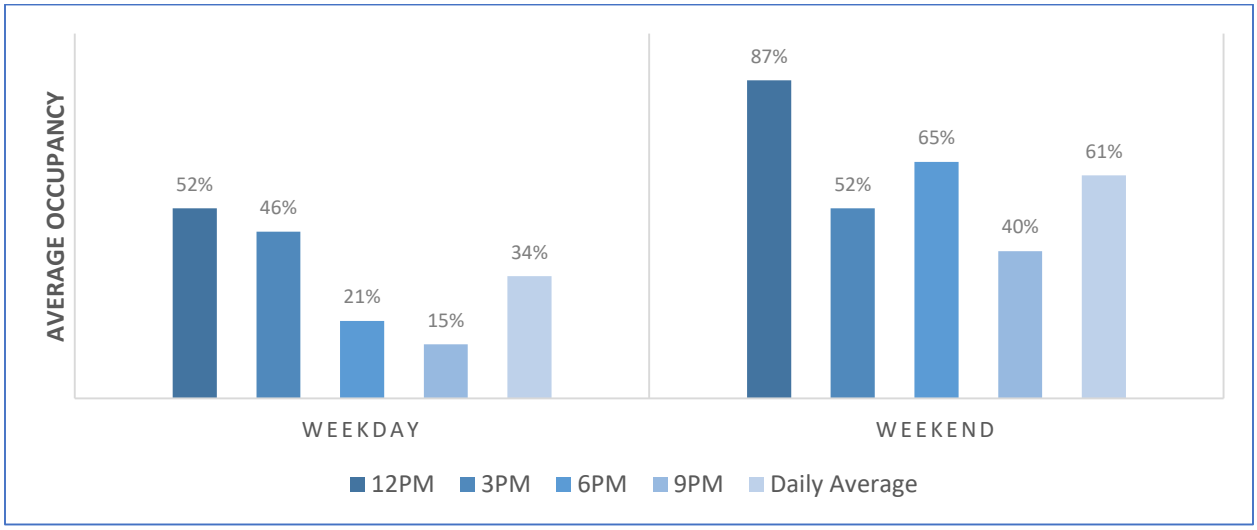


Figure 33. Daily Off-Street Occupancy for the Commercial Core by Lot

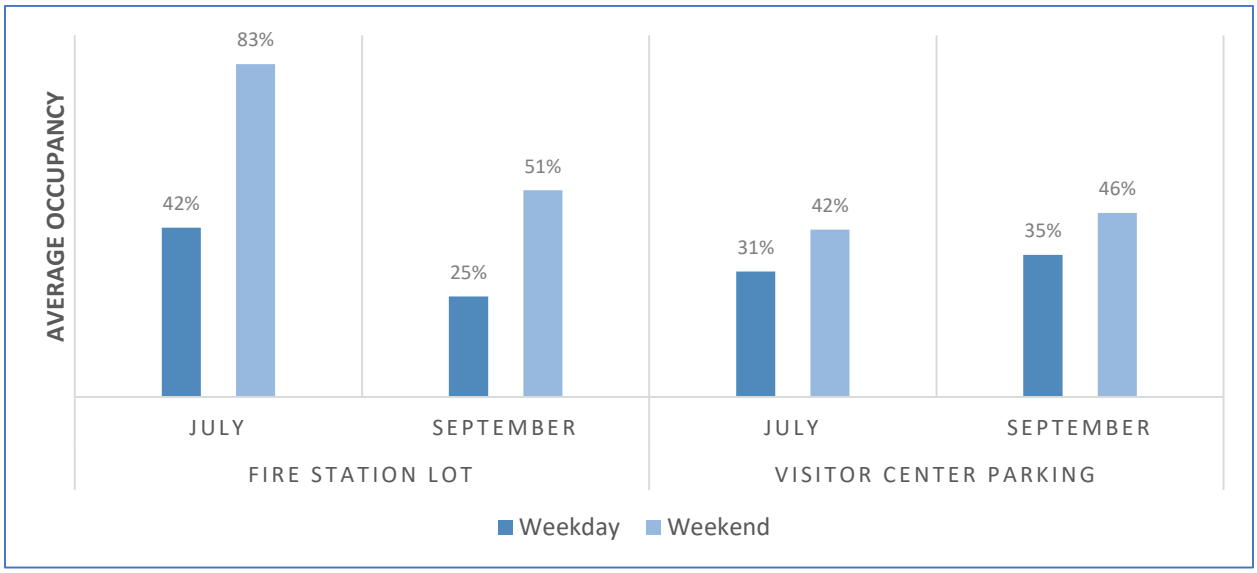


Figure 34. Off-Street Turnover for the Commercial Core Lots by Vehicle Number

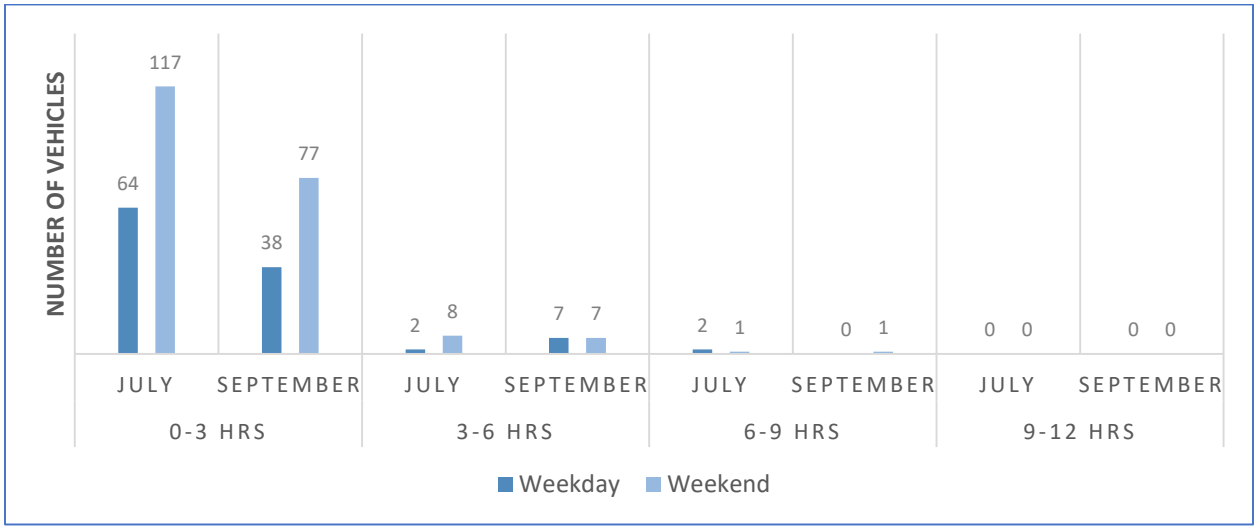
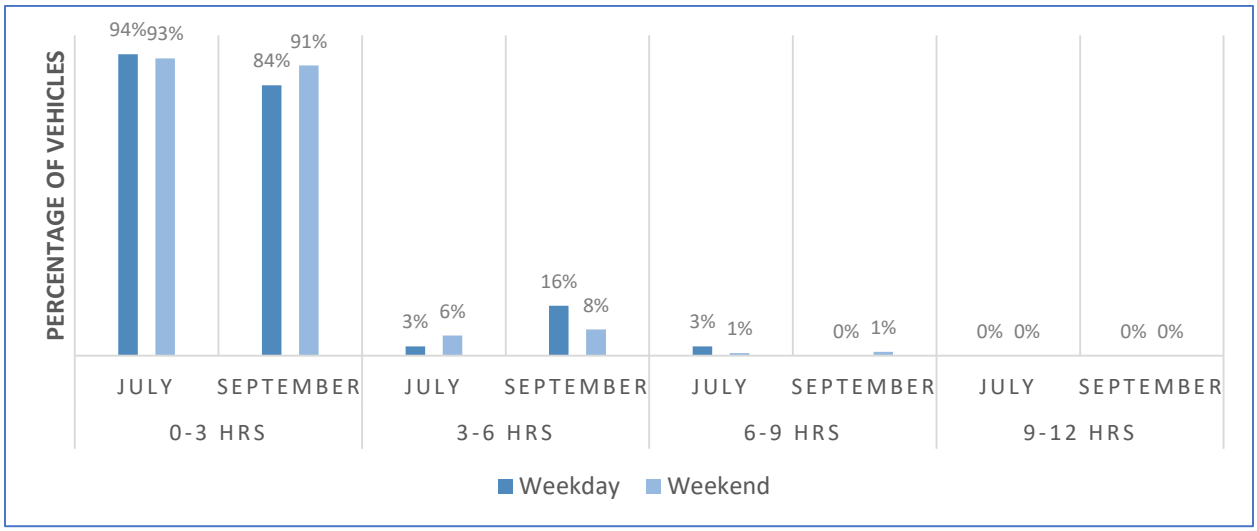


Figure 35. Off-Street Turnover for the Commercial Core Lots by Vehicle Percentage



19.4.3 Railyard Lot

Off-street occupancy and turnover data were recorded for the Railyard Lot. The Railyard Lot is bordered by railroad tracks to the south, new development to the east, Donner Pass Road to the north, and the Beacon gas station to the west. A total of 155 off-street spaces were surveyed as part of the occupancy and turnover study.

Table 10. Railyard Lot Off-Street Inventory

Name	Type		#
Railyard Lot	Public	Paid Parking	147
	Public	Handicap	8
		Total	155

The descriptions below detail the key occupancy and turnover observations for the Railyard Lot.

Key Takeaways

- Average occupancy across all time periods was observed to be low in July (31%) and low in September (22%).
- Occupancy was observed to be highest during the 12PM time period in July (43%) and highest during the 12PM time period in September (33%).
- Average occupancy across all time periods was observed to be low on the weekday (27%) and low on the weekend (25%).
- Occupancy was observed to be highest during the 12PM time period during the weekday (42%) and highest during the 12PM time period during the weekend (33%).
- Occupancy did not exceed the 85% industry standard target for any time period.
- Approximately 61% to 70% of observed vehicles turned over within 0-3 HRS during the weekday between July and September data.
- Approximately 76% to 78% of observed vehicles turned over within 0-3 HRS during the weekend for July and September data.

Figure 36. Off-Street Occupancy for the Railyard Lot: July vs. September

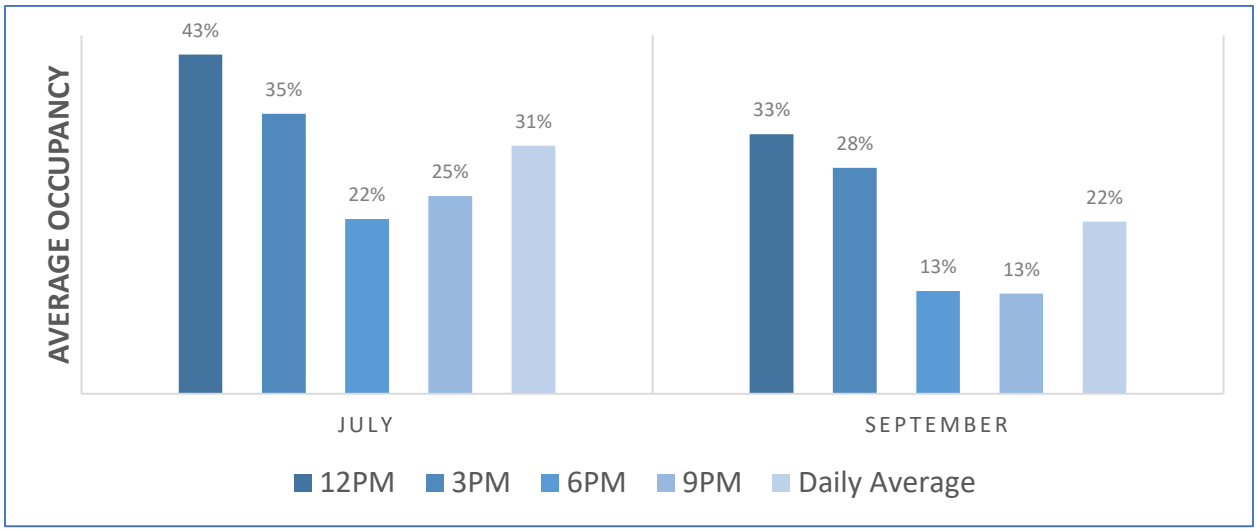


Figure 37. Off-Street Occupancy for the Railyard Lot: Weekday vs. Weekend

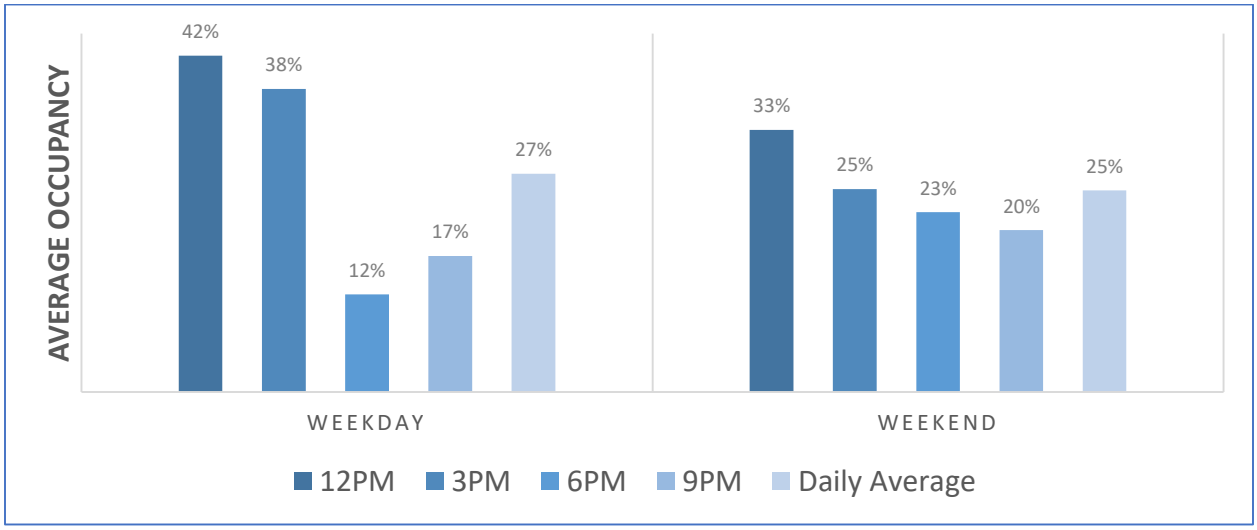


Figure 38. Off-Street Turnover for the Railyard Lot by Vehicle Number

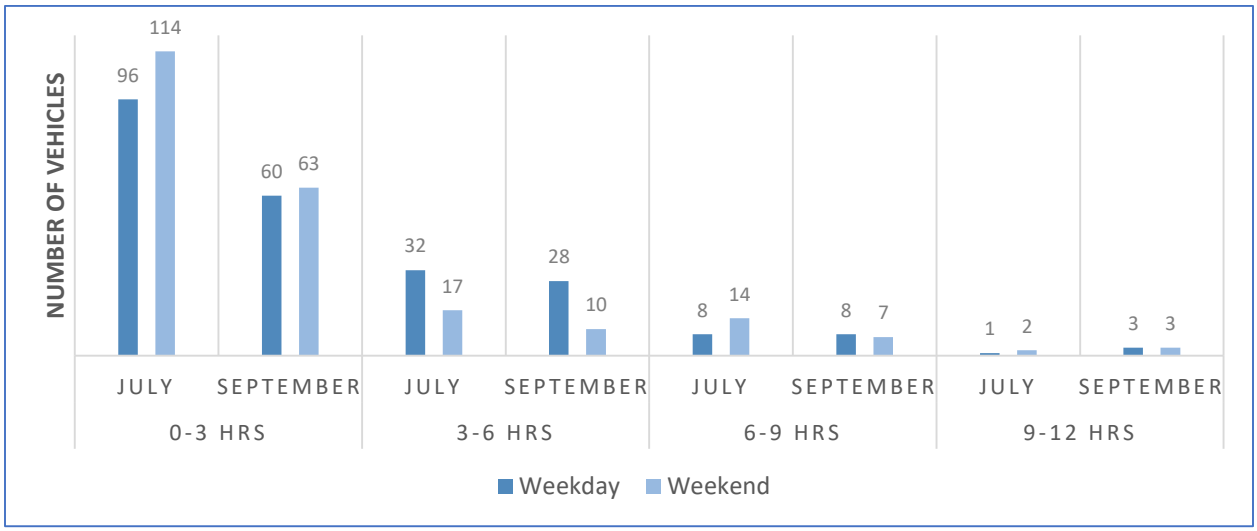
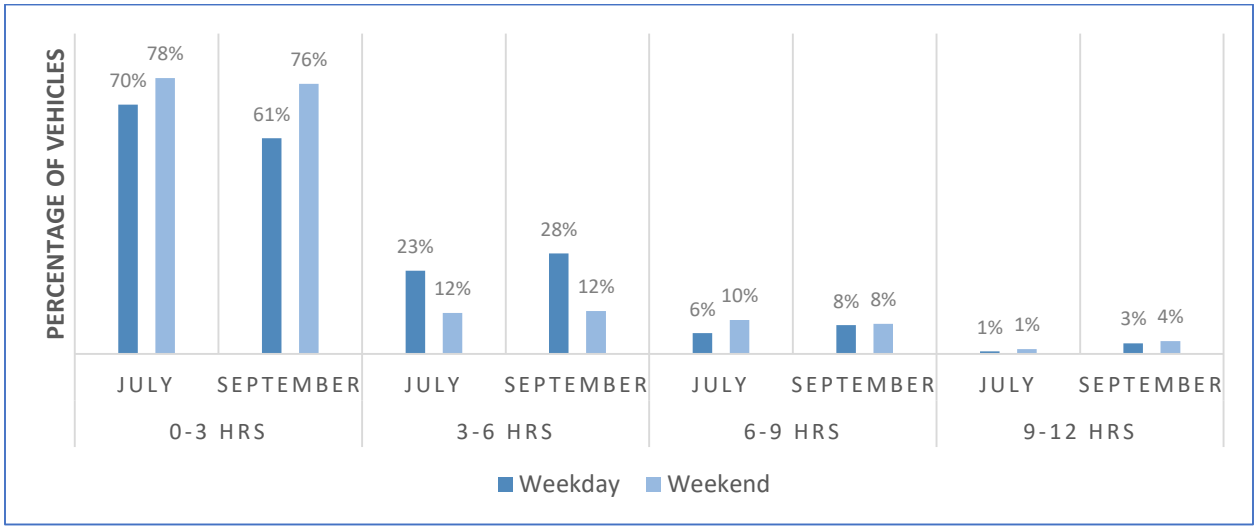


Figure 39. Off-Street Turnover for the Railyard Lot by Vehicle Percentage



19.4.4 Dirt Lot

Off-street occupancy and turnover data were recorded for the Dirt Lot. The Dirt Lot is bordered by Jibboom Street to the south, Cal-Nevada Towing to the southwest, and a retaining wall on the northern and eastern boundaries. A total of 60 private spaces were surveyed as part of the occupancy and turnover study. Spaces in the Dirt Lot are not marked, and total inventory has been estimated based on observed behavior.

Table 11. Dirt Lot Off-Street Inventory

Name	Type		#
Dirt Lot	Private	Customer Only	60
		Total	60

The descriptions below detail the key occupancy and turnover observations for the Dirt Lot.

Key Takeaways

- Average occupancy across all time periods was observed to be moderate in July (79%) and moderate in September (78%).
- Occupancy was observed to be highest during the 12PM time period in July (103%) and highest during the 12PM time period in September (98%).
- Average occupancy across all time periods was observed to be moderate on the weekday (70%) and high on the weekend (87%).
- Occupancy was observed to be highest during the 12PM time period during the weekday (93%) and highest during the 12PM time period during the weekend (108%).
- Occupancy exceeded the 85% industry standard target for multiple time periods.
- Approximately 49% to 71% of observed vehicles turned over within 0-3 HRS during the weekday between July and September data.
- Approximately 56% to 68% of observed vehicles turned over within 0-3 HRS during the weekend for July and September data.

Figure 40. Off-Street Occupancy for the Dirt Lot: July vs. September

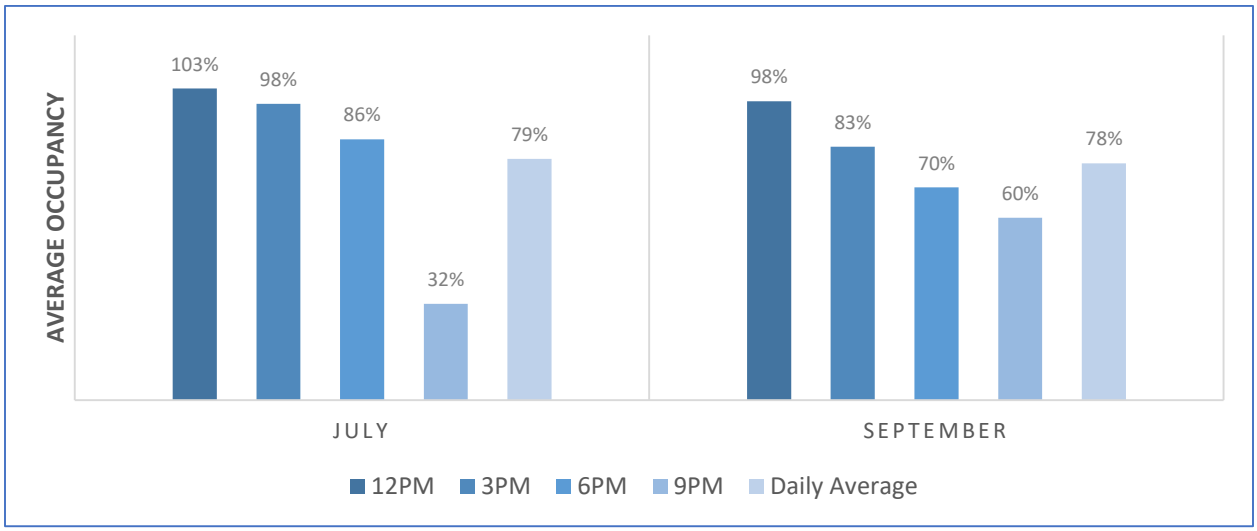


Figure 41. Off-Street Occupancy for the Dirt Lot: Weekday vs. Weekend

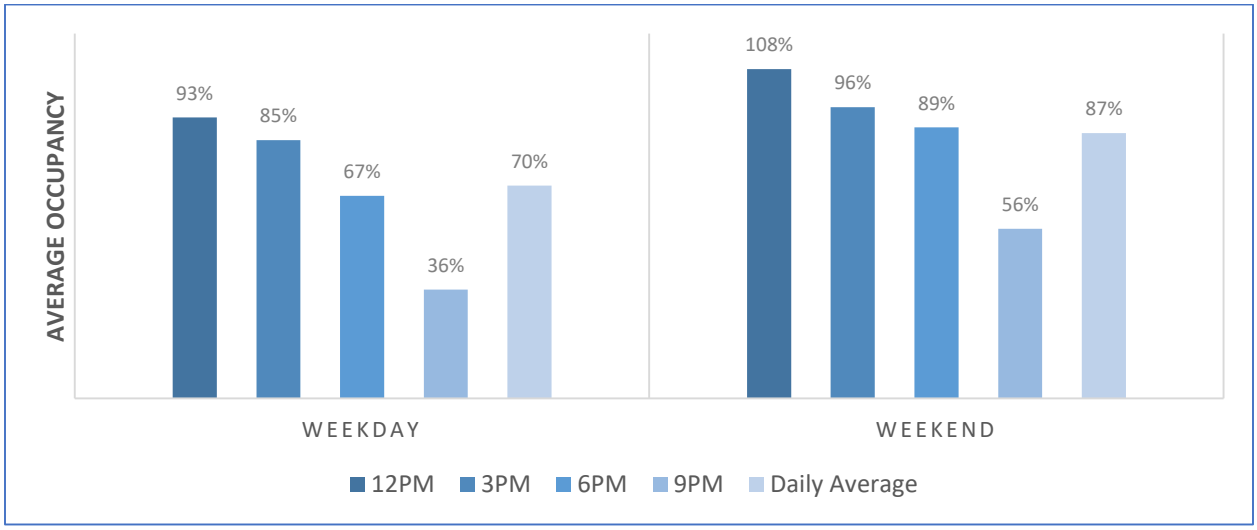


Figure 42. Off-Street Turnover for the Dirt Lot by Vehicle Number

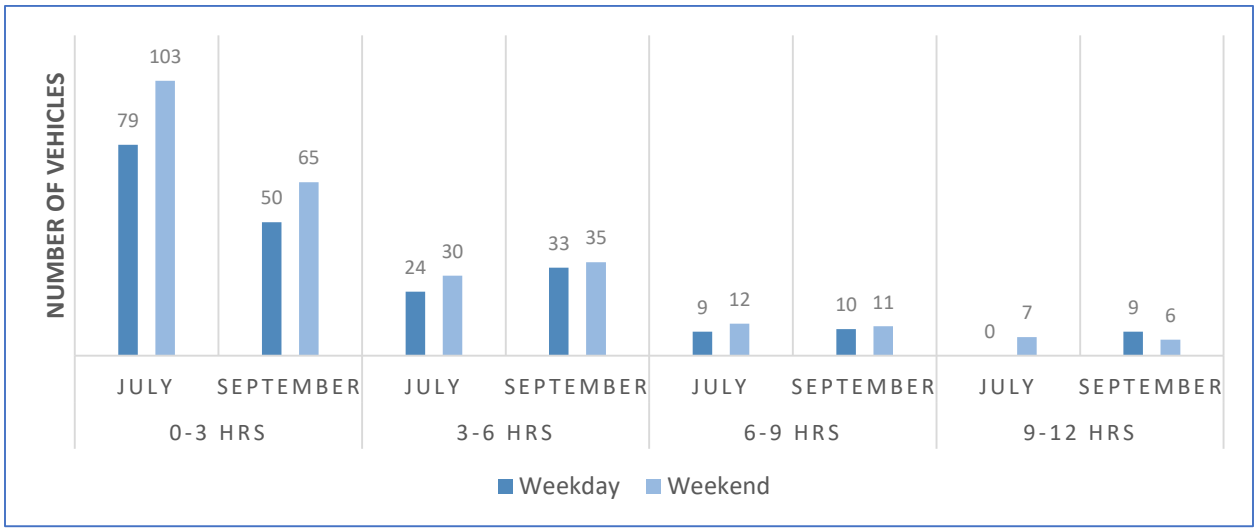
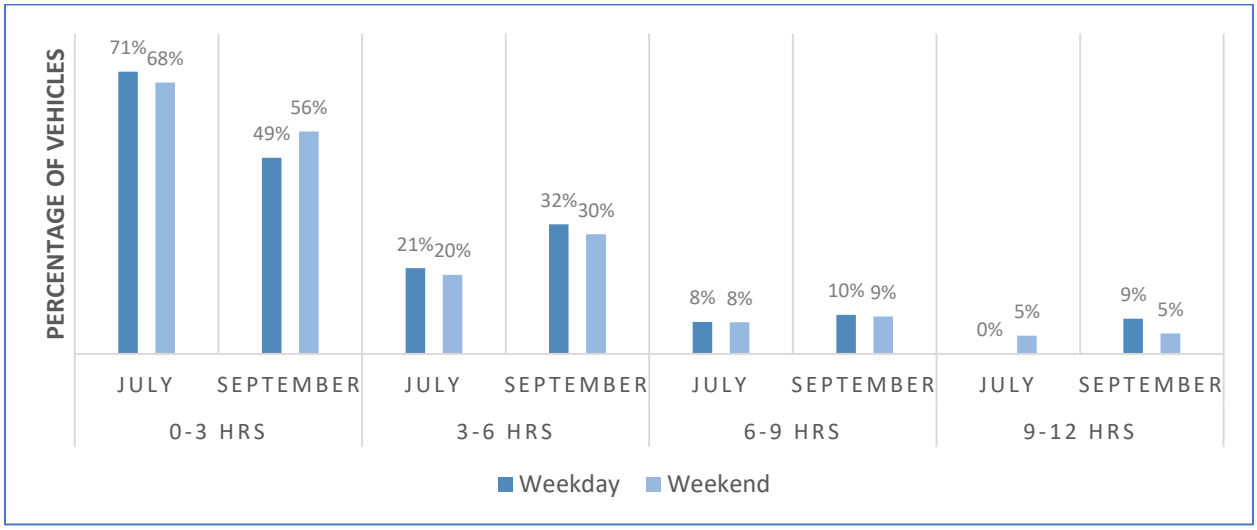


Figure 43. Off-Street Turnover for the Dirt Lot by Vehicle Percentage



19.4.5 Other Private Lots

Off-street occupancy and turnover data were recorded for other private lots within the Downtown Parking District, including the Catholic Church Lot and the Community Arts Center Lot.

The Catholic Church Lot consists of two distinct parking areas accessible from E Street. The Community Arts Center consists of front and back parking areas accessible from School Street. A total of 42 private spaces were surveyed for the Catholic Church Lot, and a total of 46 spaces were surveyed for the Community Arts Center Lot.

Table 12. Other Private Lots Off-Street Inventory

Name	Type		#
Catholic Church Lot	Private	Customer Only	20
	Private	Cal Neva	5
	Private	Mountain Lotus	17
		Total	**42**
Community Arts Center	Private	Community Center Only	38
	Private	Handicap	2
	Private	Staff	1
	Private	TDRPD	5
		Total	**46**

The descriptions below detail the key occupancy and turnover observations for the Catholic Church Lot and Community Arts Center Lot.

Key Takeaways

- Average occupancy across all time periods for the Catholic Church Lot was observed to be low in July (23%) and low in September (17%).
- Average occupancy across all time periods for the Community Arts Center Lot was observed to be low in July (30%) and low in September (44%).
- Average occupancy across all time periods for the Catholic Church Lot was observed to be low on the weekday (23%) and low on the weekend (17%).
- Average occupancy across all time periods for the Community Arts Center Lot was observed to be low on the weekday (38%) and low on the weekend (35%).
- Occupancy did not exceed the 85% industry standard target for any time period.
- Approximately 49% and 17% of observed vehicles for the Catholic Church Lot turned over within 0-3 HRS during the weekday and weekend, respectively.
- Approximately 69% and 62% of observed vehicles for the Community Arts Center Lot turned over within 0-3 HRS during the weekday and weekend, respectively.

Figure 44. Off-Street Occupancy for Other Private Lots: July vs. September

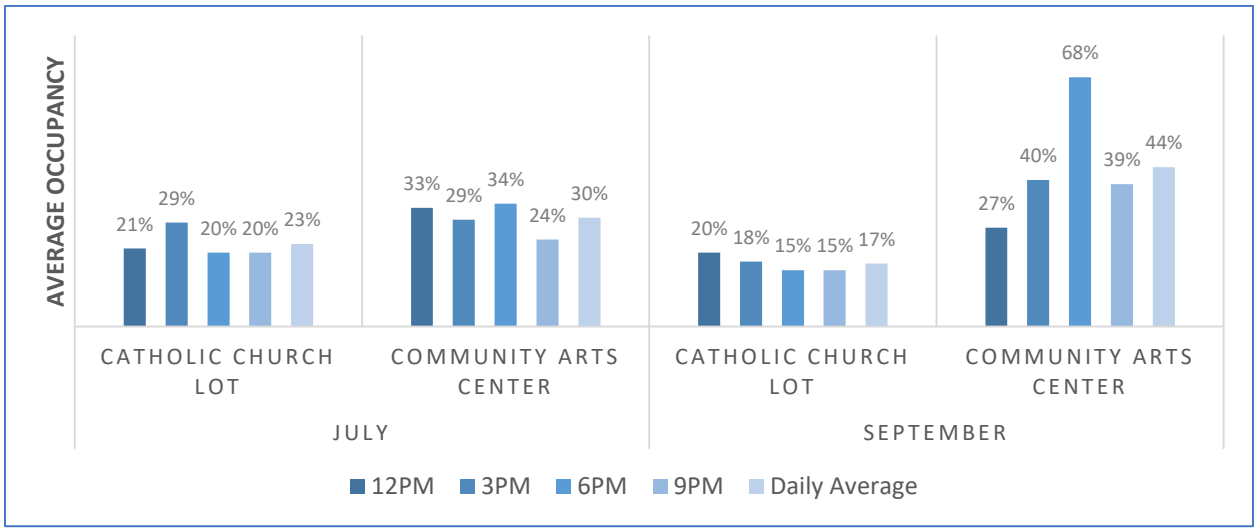


Figure 45. Off-Street Occupancy for Other Private Lots: Weekday vs. Weekend

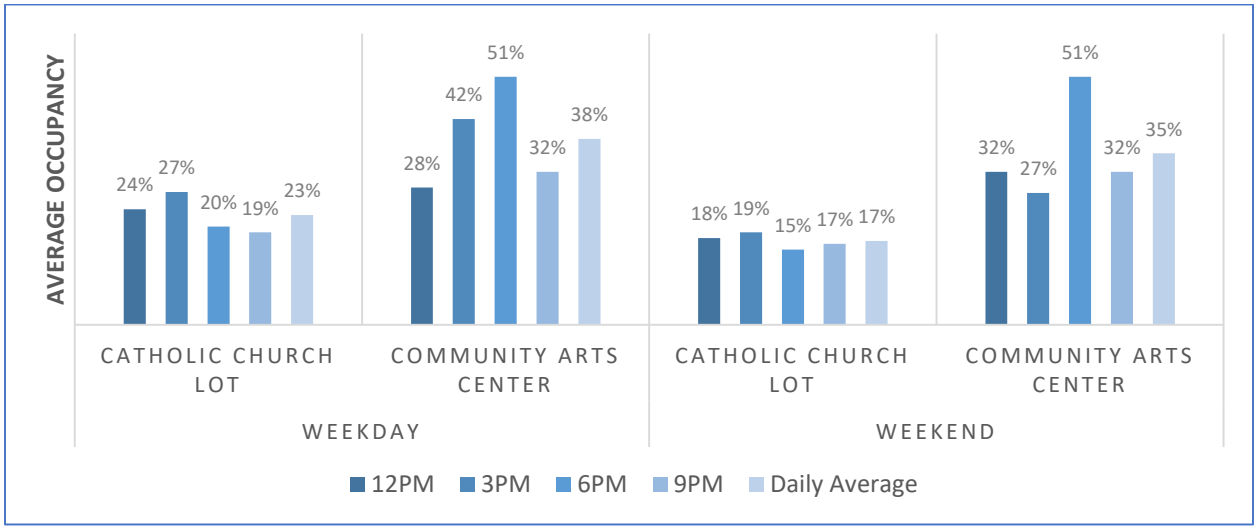


Figure 46. Off-Street Turnover for Other Private Lots by Vehicle Number

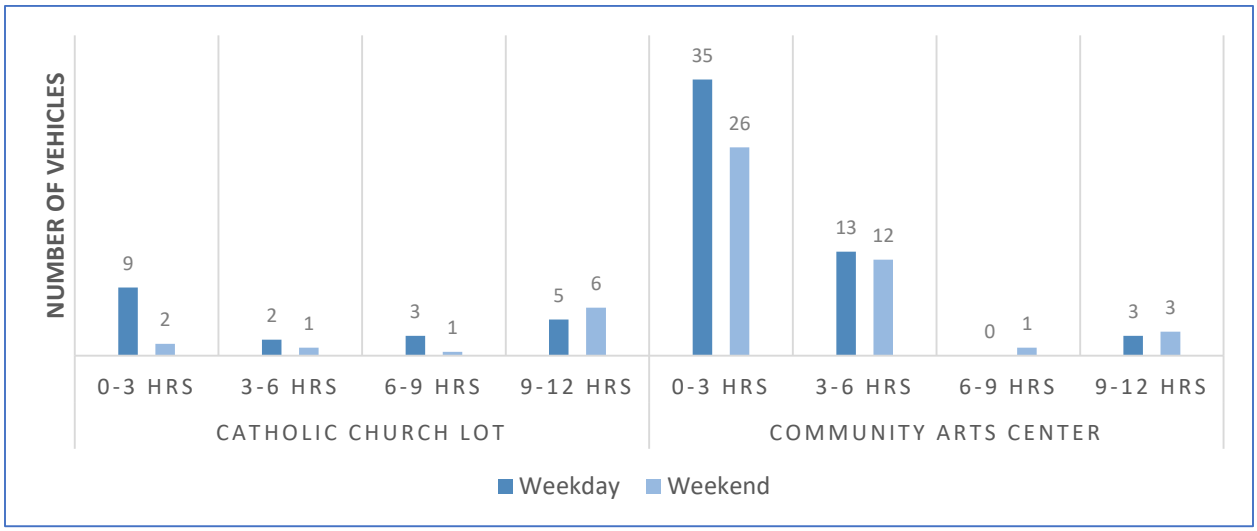
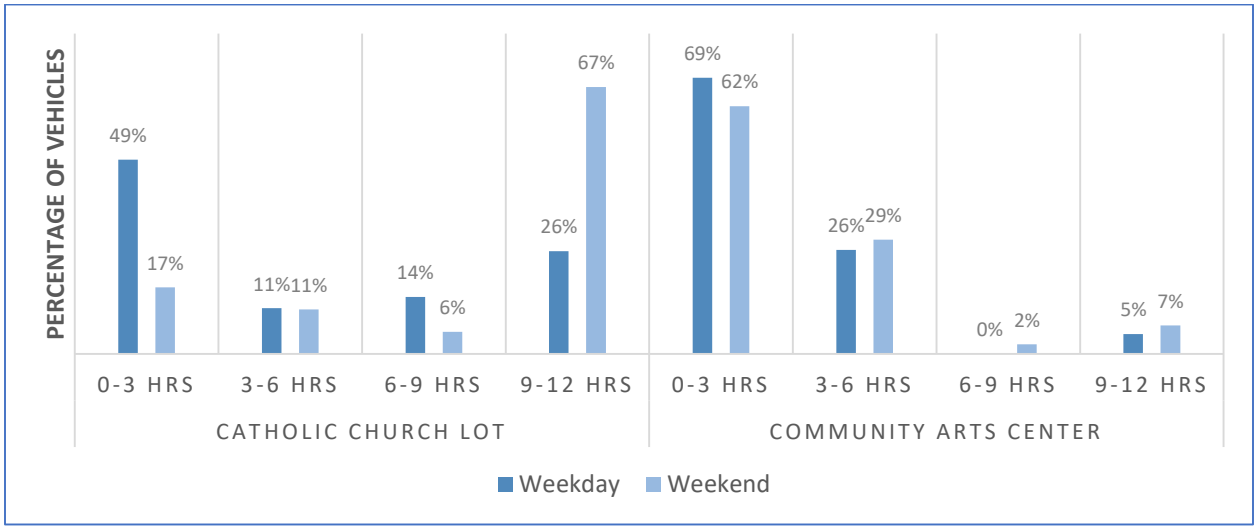


Figure 47. Off-Street Turnover for Other Private Lots by Vehicle Percentage



19.5 Employee Parking Areas

Occupancy and turnover data were recorded for designated employee parking areas located within the Downtown Parking District, including segments of Donner Pass Road, segments of Jibboom Street, the Jax Lot, and the Railyard Lot. A total of 284 public, employee-eligible spaces were surveyed as part of the occupancy and turnover study.

Table 13. Employee Parking Areas Inventory

Name	Type		#
Donner Pass Road	Public	Employee Permit	63
Jibboom Street	Public	Employee Permit	17
Jax Lot	Public	Employee Permit	49
Railyard Lot	Public	Employee Permit	155
		Total	284

The descriptions below detail the key occupancy and turnover observations for the employee parking areas.

Key Takeaways

- Average daily occupancy on the weekends generally exceeded average daily occupancy on the weekdays for employee parking areas.
- Average daily occupancy in July generally exceeded average daily occupancy in September for employee parking areas.
- Average daily occupancy did not exceed the 85% industry standard target for any designated employee parking area.
- Average daily occupancy for on-street parking in employee parking areas generally corresponded to average daily occupancy in other on-street parking areas in the Downtown Parking District.
- Average daily occupancy for Jibboom Street generally exceeded average daily occupancy for other designated employee parking areas.
- 0-3 HR weekday turnover was generally observed to be lowest (67%) for the Railyard Lot, among designated employee parking areas.
- 0-3 HR weekend turnover was generally observed to be lowest (77%) for both Jibboom Street and the Railyard Lot, among designated employee parking areas.

Figure 48. Daily Occupancy Comparisons for Employee Parking Areas

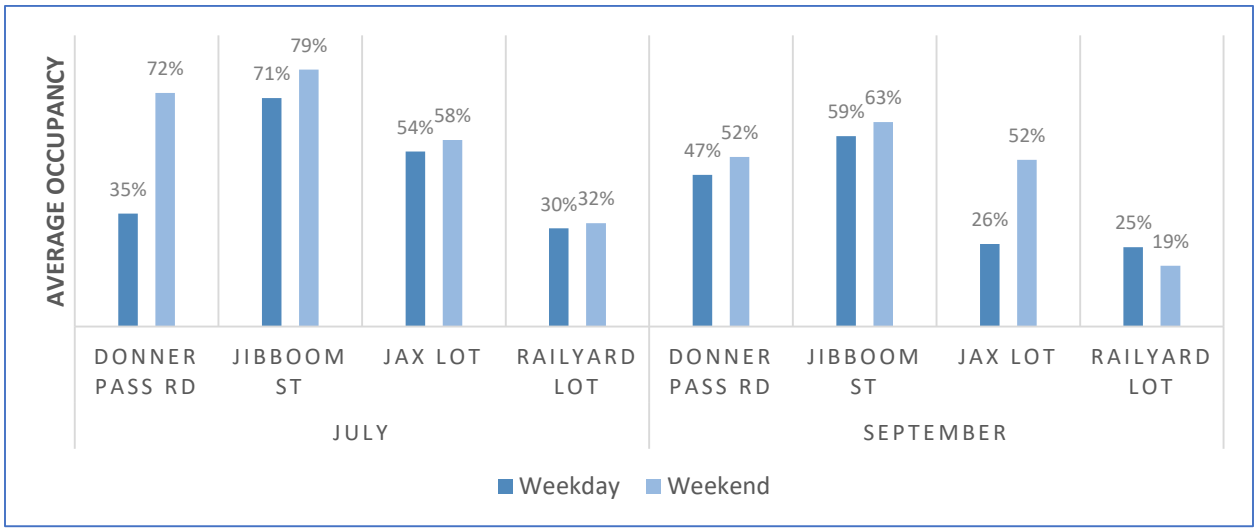


Figure 49. On-Street Occupancy: Employee Permit vs. All Other Areas

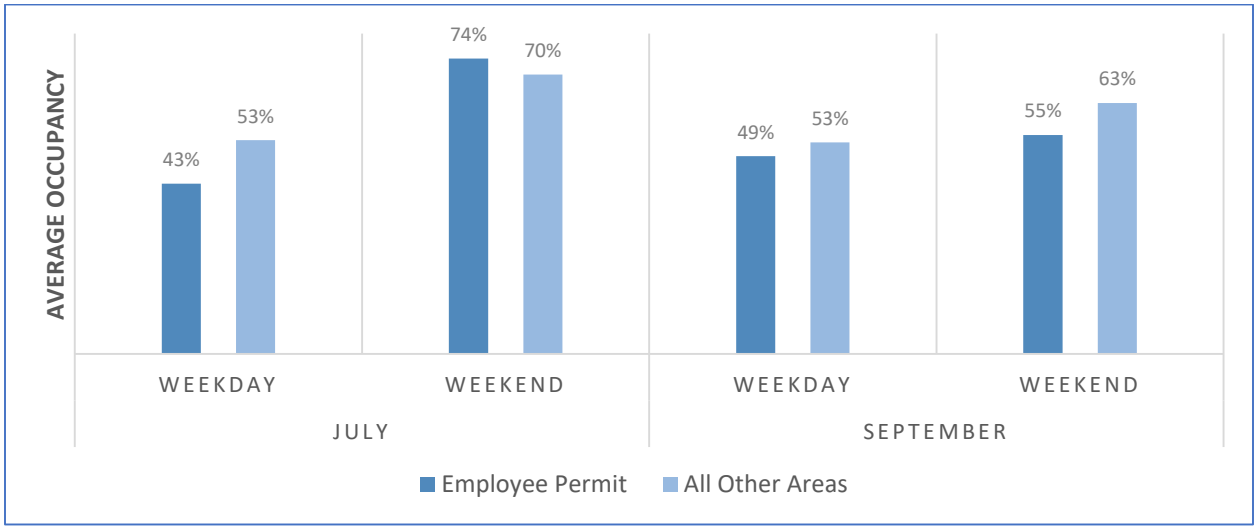


Figure 50. Turnover for Employee Parking Areas by Vehicle Number

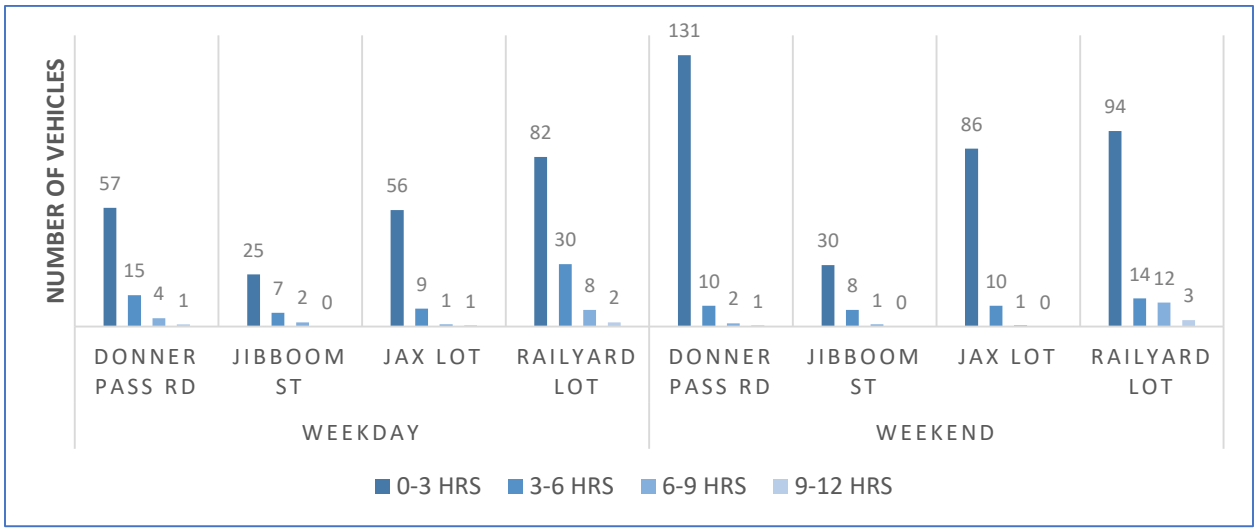
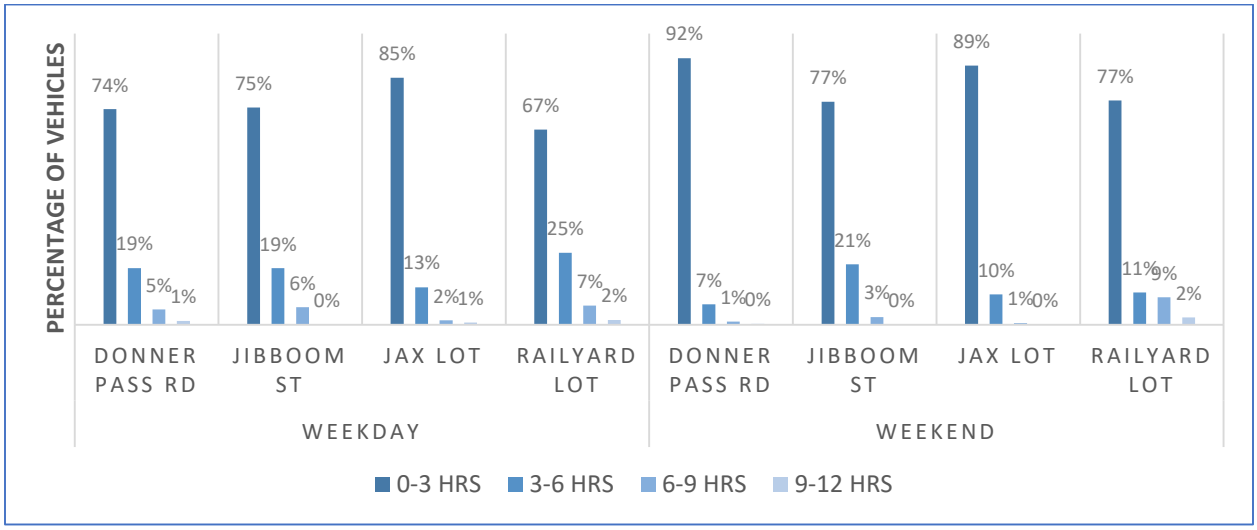


Figure 51. Turnover for Employee Parking Areas by Vehicle Percentage



19.6 Summary Tables

Table 14. On-Street Occupancy for July

Day	Zone	Name	Inventory	12PM	3PM	6PM	9PM	Daily Avg.
Weekday	Brickelltown	Donner Pass Road	134	50%	37%	77%	31%	49%
	Church Street	Church Street	34	65%	32%	47%	47%	48%
	Commercial Core	Bridge Street	31	87%	58%	71%	48%	66%
		Donner Pass Road	83	95%	74%	82%	56%	77%
		Spring Street	17	94%	63%	81%	44%	70%
	Jibboom Street	Jibboom Street	17	71%	88%	76%	47%	71%
	Railyard Development Area	Church Street	6	17%	17%	33%	17%	21%
		Donner Pass Road	53	28%	15%	13%	6%	16%
		Roundhouse Road	8	0%	0%	0%	0%	0%
		Truckee Way	7	0%	0%	0%	0%	0%
	West River Street	Bridge Street	3	67%	33%	0%	0%	25%
		West River Street	21	76%	71%	62%	29%	60%
Weekend	Brickelltown	Donner Pass Road	134	97%	67%	93%	49%	77%
	Church Street	Church Street	34	79%	79%	94%	91%	86%
	Commercial Core	Bridge Street	31	97%	74%	90%	58%	80%
		Donner Pass Road	83	83%	83%	83%	74%	81%
		Spring Street	17	94%	94%	100%	88%	94%
	Jibboom Street	Jibboom Street	17	94%	82%	71%	71%	79%
	Railyard Development Area	Church Street	6	0%	33%	33%	17%	21%
		Donner Pass Road	53	45%	28%	45%	26%	36%
		Roundhouse Road	8	0%	25%	0%	0%	6%
		Truckee Way	7	0%	0%	0%	0%	0%
	West River Street	Bridge Street	3	67%	0%	33%	0%	25%
		West River Street	21	95%	67%	95%	62%	80%
			Total	**71%**	**56%**	**71%**	**45%**	**61%**

Table 15. On-Street Occupancy for September

Day	Zone	Name	Inventory	12PM	3PM	6PM	9PM	Daily Avg.
Weekday	Brickelltown	Donner Pass Road	134	58%	52%	73%	31%	54%
	Church Street	Church Street	34	41%	44%	82%	76%	61%
	Commercial Core	Bridge Street	31	65%	58%	90%	84%	74%
		Donner Pass Road	83	73%	65%	85%	61%	71%
		Spring Street	17	100%	69%	63%	63%	73%
	Jibboom Street	Jibboom Street	17	65%	59%	29%	82%	59%
	Railyard Development Area	Church Street	6	67%	100%	17%	33%	54%
		Donner Pass Road	53	8%	6%	13%	15%	10%
		Roundhouse Road	8	0%	0%	0%	0%	0%
		Truckee Way	7	0%	0%	0%	0%	0%
	West River Street	Bridge Street	3	0%	100%	0%	67%	42%
		West River Street	21	67%	52%	38%	10%	42%
Weekend	Brickelltown	Donner Pass Road	134	90%	57%	65%	32%	61%
	Church Street	Church Street	34	82%	59%	112%	71%	81%
	Commercial Core	Bridge Street	31	100%	65%	55%	42%	65%
		Donner Pass Road	83	96%	85%	93%	62%	84%
		Spring Street	17	94%	88%	81%	56%	80%
	Jibboom Street	Jibboom Street	17	88%	0%	76%	88%	63%
	Railyard Development Area	Church Street	6	33%	33%	33%	33%	33%
		Donner Pass Road	53	30%	21%	21%	13%	21%
		Roundhouse Road	8	0%	0%	13%	0%	3%
		Truckee Way	7	0%	0%	0%	0%	0%
	West River Street	Bridge Street	3	100%	100%	100%	100%	100%
		West River Street	21	62%	52%	57%	76%	62%
			Total	**66%**	**52%**	**64%**	**44%**	**57%**

Table 16. On-Street Occupancy for July and September

Day	Zone	Name	Inventory	12PM	3PM	6PM	9PM	Daily Avg.
Weekday	Brickelltown	Donner Pass Road	134	54%	44%	75%	31%	51%
	Church Street	Church Street	34	53%	38%	65%	62%	54%
	Commercial Core	Bridge Street	31	76%	58%	81%	66%	70%
		Donner Pass Road	83	84%	70%	84%	59%	74%
		Spring Street	17	97%	66%	72%	53%	72%
	Jibboom Street	Jibboom Street	17	68%	74%	53%	65%	65%
	Railyard Development Area	Church Street	6	42%	58%	25%	25%	38%
		Donner Pass Road	53	18%	10%	13%	10%	13%
		Roundhouse Road	8	0%	0%	0%	0%	0%
		Truckee Way	7	0%	0%	0%	0%	0%
	West River Street	Bridge Street	3	33%	67%	0%	33%	33%
		West River Street	21	71%	62%	50%	19%	51%
Weekend	Brickelltown	Donner Pass Road	134	93%	62%	79%	41%	69%
	Church Street	Church Street	34	81%	69%	103%	81%	83%
	Commercial Core	Bridge Street	31	98%	69%	73%	50%	73%
		Donner Pass Road	83	90%	84%	88%	68%	82%
		Spring Street	17	94%	91%	91%	72%	87%
	Jibboom Street	Jibboom Street	17	91%	41%	74%	79%	71%
	Railyard Development Area	Church Street	6	17%	33%	33%	25%	27%
		Donner Pass Road	53	38%	25%	33%	20%	29%
		Roundhouse Road	8	0%	13%	6%	0%	5%
		Truckee Way	7	0%	0%	0%	0%	0%
	West River Street	Bridge Street	3	83%	50%	67%	50%	63%
		West River Street	21	79%	60%	76%	69%	71%
			Total	**69%**	**54%**	**67%**	**45%**	**59%**

Table 17. Off-Street Occupancy for July

Day	Type	Name	Inventory	12PM	3PM	6PM	9PM	Daily Avg.
Weekday	Public	Fire Station Lot	35	80%	66%	17%	6%	42%
		Jax Lot	49	88%	53%	47%	29%	54%
		Railyard Lot	155	42%	41%	14%	25%	30%
		Visitor Center Parking	12	42%	42%	17%	25%	31%
	Private	Catholic Church Lot	42	24%	36%	24%	21%	26%
		Community Arts Center Lot	46	37%	39%	43%	24%	36%
		Dirt Lot	60	98%	92%	67%	0%	64%
Weekend	Public	Fire Station Lot	35	97%	77%	97%	60%	83%
		Jax Lot	49	96%	55%	57%	22%	58%
		Railyard Lot	155	43%	30%	30%	25%	32%
		Visitor Center Parking	12	58%	50%	33%	25%	42%
	Private	Catholic Church Lot	42	19%	21%	17%	19%	19%
		Community Arts Center Lot	46	28%	20%	24%	24%	24%
		Dirt Lot	60	107%	103%	105%	63%	95%
			Total	**69%**	**58%**	**51%**	**27%**	**51%**

Table 18. Off-Street Occupancy for September

Day	Type	Name	Inventory	12PM	3PM	6PM	9PM	Daily Avg.
Weekday	Public	Fire Station Lot	35	29%	34%	23%	14%	25%
		Jax Lot	49	43%	33%	14%	12%	26%
		Railyard Lot	155	43%	35%	11%	9%	25%
		Visitor Center Parking	12	50%	25%	33%	33%	35%
	Private	Catholic Church Lot	42	24%	19%	17%	17%	19%
		Community Arts Center Lot	46	20%	46%	59%	39%	41%
		Dirt Lot	60	87%	78%	67%	72%	76%
Weekend	Public	Fire Station Lot	35	100%	23%	54%	29%	51%
		Jax Lot	49	94%	45%	45%	22%	52%
		Railyard Lot	155	23%	21%	15%	16%	19%
		Visitor Center Parking	12	50%	67%	33%	33%	46%
	Private	Catholic Church Lot	42	17%	17%	14%	14%	15%
		Community Arts Center Lot	46	35%	35%	78%	39%	47%
		Dirt Lot	60	110%	88%	73%	48%	80%
			Total	**48%**	**39%**	**33%**	**25%**	**36%**

Table 19. Off-Street Occupancy for July and September

Day	Type	Name	Inventory	12PM	3PM	6PM	9PM	Daily Avg.
Weekday	Public	Fire Station Lot	35	54%	50%	20%	10%	34%
		Jax Lot	49	65%	43%	31%	20%	40%
		Railyard Lot	155	42%	38%	12%	17%	27%
		Visitor Center Parking	12	46%	33%	25%	29%	33%
	Private	Catholic Church Lot	42	24%	27%	20%	19%	23%
		Community Arts Center Lot	46	28%	42%	51%	32%	38%
		Dirt Lot	60	93%	85%	67%	36%	70%
Weekend	Public	Fire Station Lot	35	99%	50%	76%	44%	67%
		Jax Lot	49	95%	50%	51%	22%	55%
		Railyard Lot	155	33%	25%	23%	20%	25%
		Visitor Center Parking	12	54%	58%	33%	29%	44%
	Private	Catholic Church Lot	42	18%	19%	15%	17%	17%
		Community Arts Center Lot	46	32%	27%	51%	32%	35%
		Dirt Lot	60	108%	96%	89%	56%	87%
			Total	**53%**	**44%**	**36%**	**26%**	**40%**

Table 20. On-Street Turnover for July by Volume

Day	Zone	Name	0-3 HRS	3-6 HRS	6-9 HRS	9-12 HRS	Volume
Weekday	Brickelltown	Donner Pass Road	171	35	5	1	212
	Church Street	Church Street	62	0	1	0	63
	Commercial Core	Bridge Street	74	4	0	0	78
		Donner Pass Road	232	10	0	0	242
		Spring Street	24	9	1	0	34
	Jibboom Street	Jibboom Street	28	4	4	0	36
	Railyard Development Area	Church Street	3	1	0	0	4
		Donner Pass Road	22	2	1	1	26
		Roundhouse Road	0	0	0	0	0
		Truckee Way	0	0	0	0	0
	West River Street	Bridge Street	3	0	0	0	3
		West River Street	34	5	2	0	41
Weekend	Brickelltown	Donner Pass Road	341	28	2	2	373
	Church Street	Church Street	77	14	4	0	95
	Commercial Core	Bridge Street	82	5	1	1	89
		Donner Pass Road	250	6	1	0	257
		Spring Street	38	8	2	0	48
	Jibboom Street	Jibboom Street	34	7	2	0	43
	Railyard Development Area	Church Street	2	0	1	0	3
		Donner Pass Road	65	3	2	0	70
		Roundhouse Road	2	0	0	0	2
		Truckee Way	0	0	0	0	0
	West River Street	Bridge Street	3	0	0	0	3
		West River Street	61	3	0	0	64
		Total	1,608	144	29	5	1,786

Table 21. On-Street Turnover for September by Volume

Day	Zone	Name	0-3 HRS	3-6 HRS	6-9 HRS	9-12 HRS	Volume
Weekday	Brickelltown	Donner Pass Road	230	18	6	1	255
	Church Street	Church Street	42	14	3	1	60
	Commercial Core	Bridge Street	77	6	1	0	84
		Donner Pass Road	211	11	0	0	222
		Spring Street	36	4	1	0	41
	Jibboom Street	Jibboom Street	22	9	0	0	31
	Railyard Development Area	Church Street	5	2	0	1	8
		Donner Pass Road	14	4	0	0	18
		Roundhouse Road	0	0	0	0	0
		Truckee Way	0	0	0	0	0
	West River Street	Bridge Street	5	0	0	0	5
		West River Street	35	0	0	0	35
Weekend	Brickelltown	Donner Pass Road	237	31	5	3	276
	Church Street	Church Street	66	17	2	1	86
	Commercial Core	Bridge Street	74	2	1	0	77
		Donner Pass Road	248	14	0	0	262
		Spring Street	36	6	1	0	43
	Jibboom Street	Jibboom Street	25	9	0	0	34
	Railyard Development Area	Church Street	0	0	0	2	2
		Donner Pass Road	28	3	1	2	34
		Roundhouse Road	1	0	0	0	1
		Truckee Way	0	0	0	0	0
	West River Street	Bridge Street	10	1	0	0	11
		West River Street	40	6	0	0	46
		Total	**1,442**	**157**	**21**	**11**	**1,631**

Table 22. On-Street Turnover for July by Percentage

Day	Zone	Name	0-3 HRS	3-6 HRS	6-9 HRS	9-12 HRS
Weekday	Brickelltown	Donner Pass Road	81%	17%	2%	0%
	Church Street	Church Street	98%	0%	2%	0%
	Commercial Core	Bridge Street	95%	5%	0%	0%
		Donner Pass Road	96%	4%	0%	0%
		Spring Street	71%	26%	3%	0%
	Jibboom Street	Jibboom Street	78%	11%	11%	0%
	Railyard Development Area	Church Street	75%	25%	0%	0%
		Donner Pass Road	85%	8%	4%	4%
		Roundhouse Road	0%	0%	0%	0%
		Truckee Way	0%	0%	0%	0%
	West River Street	Bridge Street	100%	0%	0%	0%
		West River Street	83%	12%	5%	0%
Weekend	Brickelltown	Donner Pass Road	91%	8%	1%	1%
	Church Street	Church Street	81%	15%	4%	0%
	Commercial Core	Bridge Street	92%	6%	1%	1%
		Donner Pass Road	97%	2%	0%	0%
		Spring Street	79%	17%	4%	0%
	Jibboom Street	Jibboom Street	79%	16%	5%	0%
	Railyard Development Area	Church Street	67%	0%	33%	0%
		Donner Pass Road	93%	4%	3%	0%
		Roundhouse Road	100%	0%	0%	0%
		Truckee Way	0%	0%	0%	0%
	West River Street	Bridge Street	100%	0%	0%	0%
		West River Street	95%	5%	0%	0%

Table 23. On-Street Turnover for September by Percentage

Day	Zone	Name	0-3 HRS	3-6 HRS	6-9 HRS	9-12 HRS
Weekday	Brickelltown	Donner Pass Road	90%	7%	2%	0%
	Church Street	Church Street	70%	23%	5%	2%
	Commercial Core	Bridge Street	92%	7%	1%	0%
		Donner Pass Road	95%	5%	0%	0%
		Spring Street	88%	10%	2%	0%
	Jibboom Street	Jibboom Street	71%	29%	0%	0%
	Railyard Development Area	Church Street	63%	25%	0%	13%
		Donner Pass Road	78%	22%	0%	0%
		Roundhouse Road	0%	0%	0%	0%
		Truckee Way	0%	0%	0%	0%
	West River Street	Bridge Street	100%	0%	0%	0%
		West River Street	100%	0%	0%	0%
Weekend	Brickelltown	Donner Pass Road	86%	11%	2%	1%
	Church Street	Church Street	77%	20%	2%	1%
	Commercial Core	Bridge Street	96%	3%	1%	0%
		Donner Pass Road	95%	5%	0%	0%
		Spring Street	84%	14%	2%	0%
	Jibboom Street	Jibboom Street	74%	26%	0%	0%
	Railyard Development Area	Church Street	0%	0%	0%	100%
		Donner Pass Road	82%	9%	3%	6%
		Roundhouse Road	100%	0%	0%	0%
		Truckee Way	0%	0%	0%	0%
	West River Street	Bridge Street	91%	9%	0%	0%
		West River Street	87%	13%	0%	0%

Table 24. Off-Street Turnover for July by Volume

Day	Type	Name	0-3 HRS	3-6 HRS	6-9 HRS	9-12 HRS	Volume
Weekday	Public	Fire Station Lot	59	0	0	0	59
		Jax Lot	81	11	1	0	93
		Railyard Lot	96	32	8	1	137
		Visitor Center Parking	5	2	2	0	9
	Private	Catholic Church Lot	10	3	4	4	21
		Community Arts Center Lot	30	16	0	1	47
		Dirt Lot	79	24	9	0	112
Weekend	Public	Fire Station Lot	104	6	0	0	110
		Jax Lot	90	10	1	0	101
		Railyard Lot	114	17	14	2	147
		Visitor Center Parking	13	2	1	0	16
	Private	Catholic Church Lot	3	1	1	6	11
		Community Arts Center Lot	19	7	1	2	29
		Dirt Lot	103	30	12	7	152
		Total	**819**	**161**	**54**	**23**	**1,057**

Table 25. Off-Street Turnover for September by Volume

Day	Type	Name	0-3 HRS	3-6 HRS	6-9 HRS	9-12 HRS	Volume
Weekday	Public	Fire Station Lot	29	3	0	0	32
		Jax Lot	31	6	1	1	39
		Railyard Lot	60	28	8	3	99
		Visitor Center Parking	9	4	0	0	13
	Private	Catholic Church Lot	7	1	1	5	14
		Community Arts Center Lot	39	10	0	4	53
		Dirt Lot	50	33	10	9	102
Weekend	Public	Fire Station Lot	61	4	1	0	66
		Jax Lot	81	10	0	0	91
		Railyard Lot	63	10	7	3	83
		Visitor Center Parking	16	3	0	0	19
	Private	Catholic Church Lot	0	1	0	6	7
		Community Arts Center Lot	33	17	1	4	55
		Dirt Lot	65	35	11	6	117
		Total	**549**	**165**	**42**	**42**	**798**

Table 26. Off-Street Turnover for July by Percentage

Day	Type	Name	0-3 HRS	3-6 HRS	6-9 HRS	9-12 HRS
Weekday	Public	Fire Station Lot	100%	0%	0%	0%
		Jax Lot	87%	12%	1%	0%
		Railyard Lot	70%	23%	6%	1%
		Visitor Center Parking	56%	22%	22%	0%
	Private	Catholic Church Lot	48%	14%	19%	19%
		Community Arts Center Lot	64%	34%	0%	2%
		Dirt Lot	71%	21%	8%	0%
Weekend	Public	Fire Station Lot	95%	5%	0%	0%
		Jax Lot	89%	10%	1%	0%
		Railyard Lot	78%	12%	10%	1%
		Visitor Center Parking	81%	13%	6%	0%
	Private	Catholic Church Lot	27%	9%	9%	55%
		Community Arts Center Lot	66%	24%	3%	7%
		Dirt Lot	68%	20%	8%	5%

Table 27. Off-Street Turnover for September by Percentage

Day	Type	Name	0-3 HRS	3-6 HRS	6-9 HRS	9-12 HRS
Weekday	Public	Fire Station Lot	91%	9%	0%	0%
		Jax Lot	79%	15%	3%	3%
		Railyard Lot	61%	28%	8%	3%
		Visitor Center Parking	69%	31%	0%	0%
	Private	Catholic Church Lot	50%	7%	7%	36%
		Community Arts Center Lot	74%	19%	0%	8%
		Dirt Lot	49%	32%	10%	9%
Weekend	Public	Fire Station Lot	92%	6%	2%	0%
		Jax Lot	89%	11%	0%	0%
		Railyard Lot	76%	12%	8%	4%
		Visitor Center Parking	84%	16%	0%	0%
	Private	Catholic Church Lot	0%	14%	0%	86%
		Community Arts Center Lot	60%	31%	2%	7%
		Dirt Lot	56%	30%	9%	5%