Downtown Parking Study APPENDICES

FINAL

City of Spokane

February 2019

CITY OF SPOKANE

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Appendices

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STATE OF THE PARKING SYSTEM
FINAL

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1 PROJECT OVERVIEW

Downtown Spokane's unique history and strong link with the past have positioned it as a premier destination to live, work, and play both today and in the coming decades. Substantial citywide and regional growth is anticipated by 2040, and **downtown will be a major focal point.** Investment is already occurring at a rapid pace, with new transformative developments in the pipeline.

Mobility and access will play a fundamental role in helping Spokane achieve its larger goals. There is a recognition that while the automobile will continue to be front and center, the transportation system must prioritize a shift of some vehicle trips to transit, biking, walking, and shared mobility services in order to achieve long-term success.

Parking is at the nexus of these growth and mobility conversations. How Spokane manages, supplies, and designs parking will have a direct impact on its ability to create a multimodal, mixed-use place and further enhance the vitality of downtown.

WHAT IS THE DOWNTOWN PARKING STUDY?

Over the past decade and half, Spokane has made progress on improving the downtown parking experience. With parking studies in 2005 and 2010, Spokane has done the "Parking 101," yet more work is needed. With rapid growth and change on the horizon, now is the time for a fresh look at parking.

The **Downtown Parking Study** will include a thorough evaluation of the existing parking system. At the end of the study, Spokane will have a comprehensive six-year plan and package of recommendations designed to facilitate growth and activity downtown, while making parking more convenient and user-friendly for residents, businesses, employees, and visitors. Over the course of 2018, the City, community, and the consultant team will seek to answer some key questions as part of this work:

- How many total parking spaces are there in downtown?
- How are they regulated and priced?
- How many people are parking in these areas? What is the busiest time of day?
- What are the biggest issues and challenges?
- Is there enough parking today? For the future?
- What is the most cost-effective mix of investments?

WHAT IS THE STUDY AREA?

The **project study area** is shown in Figure 1-1. It generally is bounded by Boone Avenue to the north, Division Street and Cowley Street to the east, Rockwood Boulevard, 9th Avenue, and 5th Avenue to the south, and Cedar Street and Maple Street to the west.

It is important to note that there is a similar, yet distinct study underway for the **University District**.

WHAT IS THE PROJECT APPROACH?

There are two primary phases to the study. The **first phase** includes an assessment of the current system, identifying key issues, challenges, and opportunities through data collection and analysis, as well as solicitation of community feedback.

The **second phase** will focus on strategy development, crafting a comprehensive and diverse set of recommendations to improve parking over the short- and long-term. The project schedule is shown in Figure 1-2.

Throughout the study, there will be multiple opportunities for the **community and stakeholders to provide input.** The input will be used to confirm and identify key challenges, as well as provide feedback at key stages in the project to guide the development of final recommendations. The major components of the outreach plan include:

- Presentations to the Parking Advisory Committee (PAC)
- Project website
- Spokane blog
- Media advisories and press releases
- Online community survey
- Community workshops

- Stakeholder interviews with local and regional agencies, residents, businesses, and community groups
- Presentations to elected bodies

WHAT IS THE STATE OF THE SYSTEM REPORT?

The *State of the System Report* summarizes the existing work to date, including stakeholder interviews, community feedback, data analysis, and documentation of key issues and challenges. A primary focus is the summary of the parking inventory (number and type of parking spaces) and level of parking demand in downtown.

Ultimately, the *State of the System Report* establishes a shared understanding of what works well and what can be improved. It facilitates a robust and productive discussion of potential improvements and sets the framework for the next stages of the project.

No recommendations are proposed as part of this document. Additional analysis is already underway, and multiple touchpoints with stakeholders and the public are still necessary to arrive at any conclusions.

Figure 1-1   Parking Study Areas
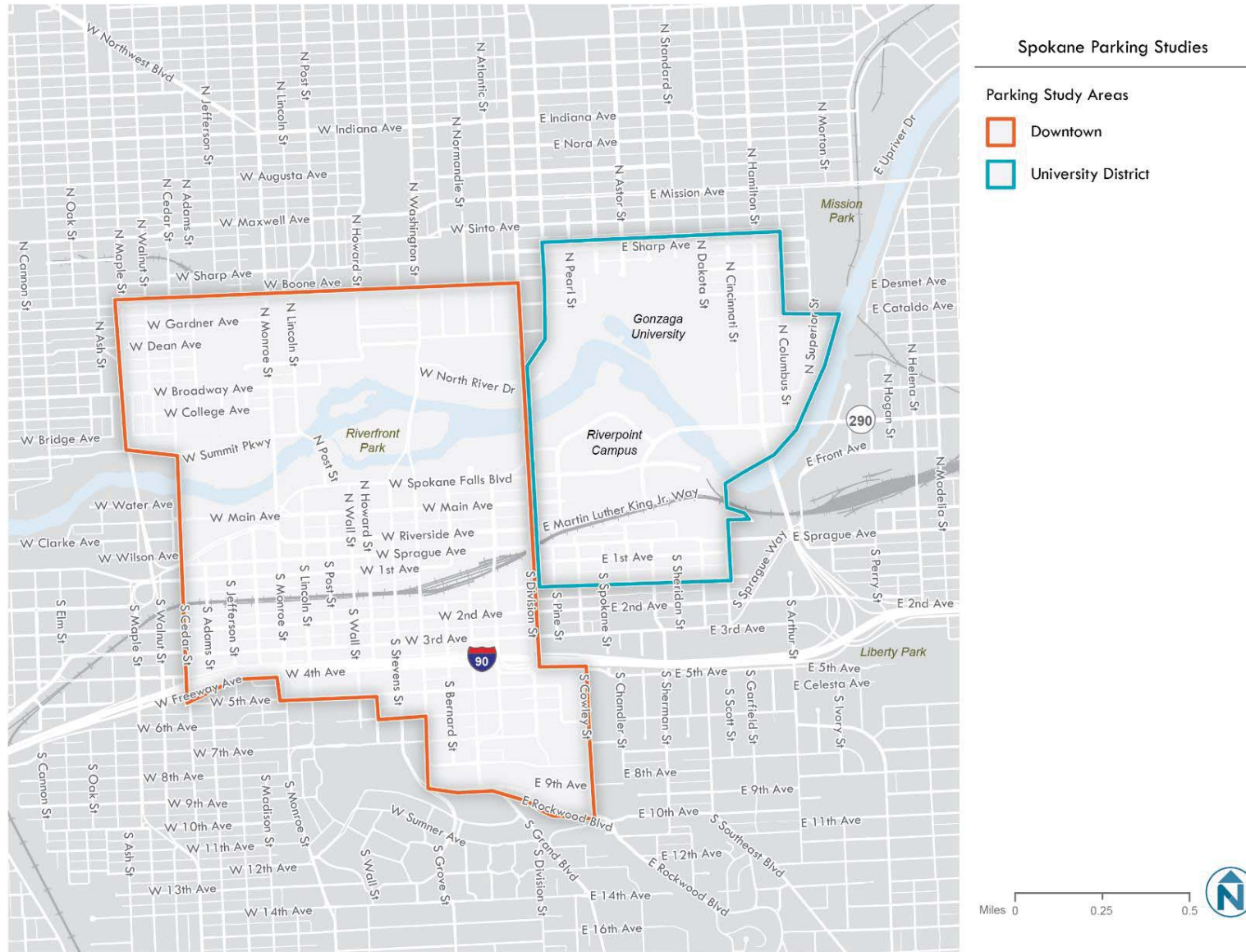
Figure 1-2   Project Schedule
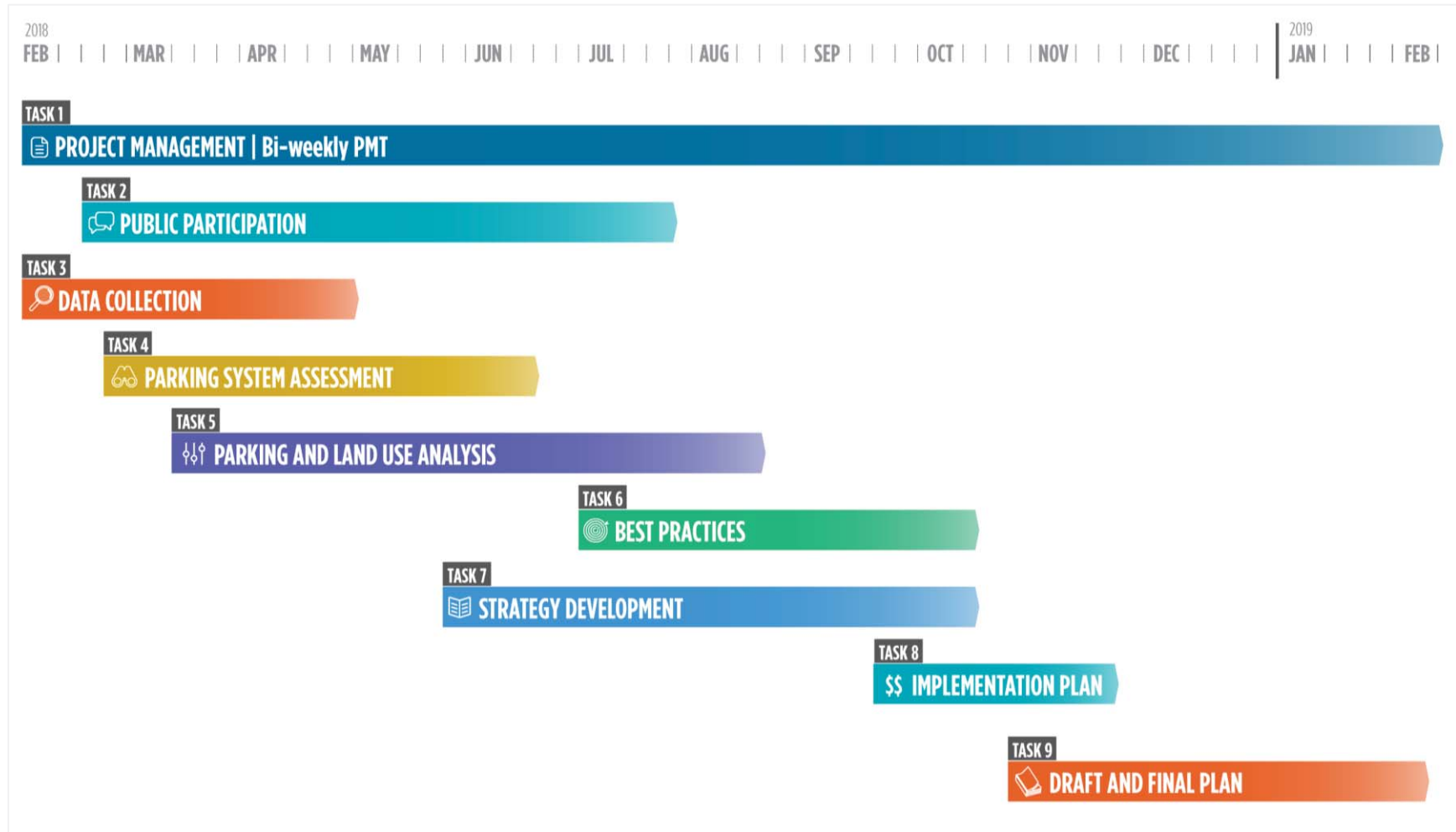
2 WHAT WE HEARD – COMMUNITY INPUT

This chapter summarizes the key findings from the **community outreach conducted thus far**, including stakeholder interviews, a downtown community event, and the online parking survey. Information has been distilled and summarized by the consultant team to identify key stakeholder perceptions and feedback. This input will be used to confirm and refine a cohesive project vision, and deepen understanding of the key issues and opportunities. Additional outreach will be conducted to develop recommendations.

STAKEHOLDER INTERVIEWS

The project team conducted individual and small group interviews to capture a representative cross-section of perspectives in the downtown. Focused conversations allowed the project team to probe more deeply on key issues. The following stakeholder groups were interviewed, capturing feedback from **more than 75 individuals**.

- Businesses and employees
- City Council members
- City staff, including planning, transportation, enforcement, and operations
- Commercial delivery services
- Downtown Spokane Partnership (DSP)
- Healthcare providers
- Housing providers
- Parking Advisory Committee (PAC)
- Parking operators
- Public schools
- Residents
- Spokane Transit Authority (STA)
- Taxi, Uber, and Lyft representatives and drivers
- Transit, bicycle, and pedestrian advocacy groups

Summary of Stakeholder Interviews

Below is feedback received from stakeholders, distilled and summarized by the consultant team to provide a sample of parking perceptions, opinions, and experiences by the greater Spokane community.

- In general, **parking is seen by some stakeholders as a "problem,"** generating overall frustration and strong opinions.

- Depending on the stakeholder/user, however, the "problem" **was defined in many different ways.** For some it was a "supply" problem, while others felt that parking was generally available, but not easy to access and/or managed as well as it could be. For some, it was a combination of factors.

- There is particular concern that parking has limited **certain types of employers (i.e. Class A office) from locating downtown**. Other stakeholders have conversely noted that there are other employers locating in downtown **to leverage downtown's mixed-use vitality and multimodal access for their employees**.

- **Stakeholders indicate that demand for curb spaces is high, particularly in the "core."** Covered and secure off-street parking is highly desired.

- There was a general consensus that **on-street parking should be for visitors and customers**, not for long-stay parkers.

- There is substantial **concern among business and property owners about on-street loading**, both for commercial deliveries and passenger loading. Increased Lyft/Uber use and loading activity have put pressure on the curb, and led to challenges with double parking and balancing access for Lyft/Uber, taxis, transit, and public parking.

- The parking "experience" can be improved.
  - There is a lack of a **visible "brand" and coordinated information/wayfinding** for finding a parking spot.
  - **Payment technologies are inconsistent** (e.g., multiple systems) and can be inconvenient (e.g., having to pay for a full hour even if one only needs 15 minutes) for both meters and off-street surface lots. New parking technology and real-time information can be used to a greater degree.
  - **Safety and comfort issues** discourage walking and limit the reach of the parking system. Many do not want to walk more than a block or two. Surface lots are less desirable to park in and are an impediment to a vibrant downtown.

- **Better communication and education around parking and related programs is needed.** For example, many businesses did not know about the City Ticket service for employees. Others had misconceptions about how the parking system works and how meter revenue is used.

- After an initial review, it appears that **on-street spaces are substantially cheaper than off-street spaces.** This likely has a number of impacts on the system, contributing to circling for a cheap on-street space and less curb parking for visitors and customers.

- **Recent growth and development** in downtown Spokane is perceived to have increased pressure on the parking system, especially in on-street spaces adjacent to new developments.

- More people living in downtown have led to an **influx of resident vehicles** being continuously stored downtown, with a shortage of covered, long-term spaces to store them.

- **Special events,** notably within the Entertainment Parking District, contribute to spillover parking and high demand in key locations.

- **Equity is a concern**, especially for lower-income service workers and their cost to park.

- The **zoning and development standards** require careful assessment. Staff and stakeholders recognize that there is likely opportunity within the code to streamline and maximize development/permitting review to ensure that upcoming and planned projects result in desired outcomes.

- There is a desire from some business owners to explore **additional changes to the right-of-way** as a means to maximize on-street parking. More conversions of parallel to angled parking, as well as center-running parking, were identified as potential strategies to further investigate.
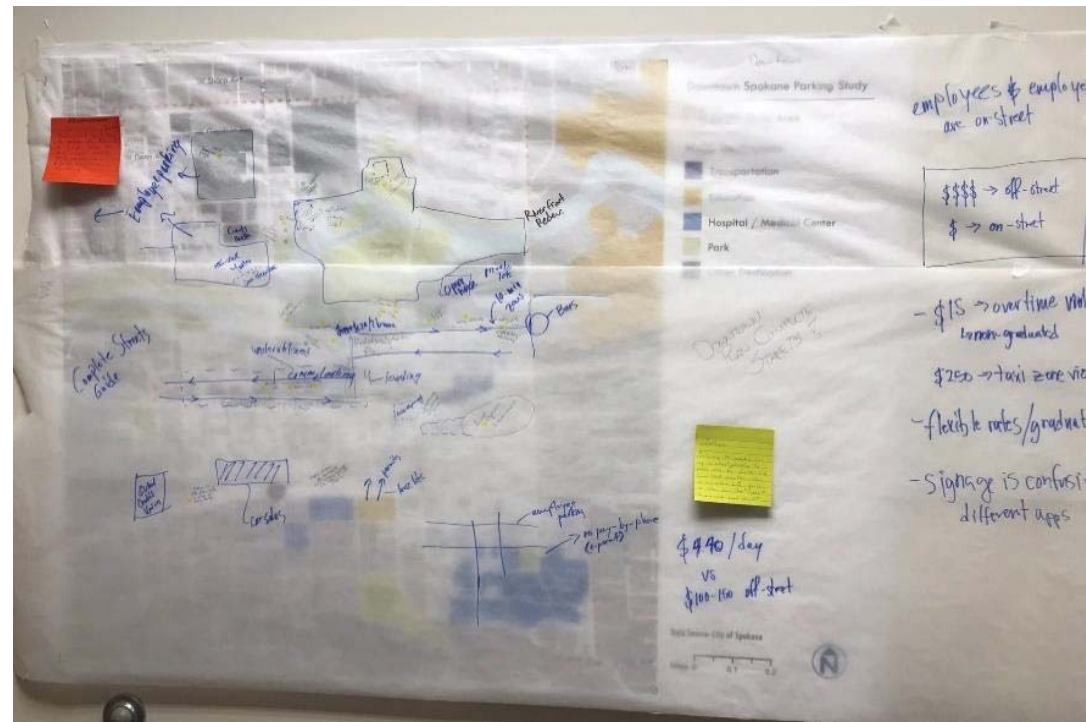
Workshops with City staff and various stakeholder groups allowed participants to identify key parking issues and concerns.

- **Part of the parking challenge in Spokane is about "culture,"** and the expectation for parking in downtown. Spokane area and regional residents are not used to paying much, if at all, for parking, or being told how long they can park their car. There is a conflict in expectations when comparing downtown to Spokane's suburbs, which provide plentiful free parking at business parks and shopping centers.

- There are several planned projects that would potentially add **new parking facilities** in the downtown. These projects are in various stages of development and planning. It is unclear at this time to what degree this study can influence and/or inform those projects.

- The City and its partners have made initial steps to address parking via **demand-side solutions** and maximize use of existing parking facilities (i.e. City Ticket service). However, there is a sense that more comprehensive policies and incentives around mobility options and choice could help to address some of the parking challenges.

Sample of Stakeholder Input

The quotes on this page represent a broad sample of direct feedback heard throughout stakeholder meetings. They are intended to highlight stakeholder perceptions and opinions about the parking system.

"Downtown simply doesn't have enough parking."

"We need to change the expectation in Spokane that you will always have a free parking spot right out front."

"Parking is too expensive for many of my employees."

"The Central City Line will change everything. I will finally get a bus pass."

"Parking in Downtown Spokane is easy…if you know what to do."

"Parking is easy to find if you are willing to walk a little bit."

"Supply is not well matched to demand – we need a technological bridge."

"There are some great parking facilities, but it's friendlier to employees and residents than to visitors."

"Parking in Spokane is cheap, compared to other Northwest cities."

"Having better signage and less private parking would be ideal."

"Many lots are in poor condition…Locals have lived with the current situation a long time, but visitors are less tolerant."

"It would be great if the Passport app allowed us to locate spaces that are not being used to find parking close to the area I need to park at."

"Longer meter times for eating, shopping, and entertainment."

"Having just one payment system would be great."

COMMUNITY EVENT

On May 21, 2018, the City of Spokane hosted a community event about ongoing and upcoming planning work in the downtown. The event included a series of interactive stations at which the community could learn and ask questions about the various plans and projects, including the Downtown Parking Study.

For the parking study, community members could review project informational materials, as well as provide feedback via an issues and opportunities map, a word wall, and an online survey. Highlights of the feedback are included below.

- **Parking during special events**, including concerts, sporting events, and shows, is a concern of event goers as well as general travelers to downtown Spokane.

- **Consistency in parking technology and signage** is an improvement community members would like to see. The potential for real-time parking information (e.g., via an app) excited people.

- **Some expressed concerns about the general scarcity of parking** in downtown, and suggested additional parking structures.

- **The community would like to see increased turnover of on-street parking.** They expressed concerns about employees 'plugging' the meters past the time limit.

- **Improved transit service** to encourage people to leave their cars at home was a frequent refrain among community members.

A community workshop in May allowed people to provide interactive input on several downtown efforts, including the parking study.

ONLINE PARKING SURVEY

An online survey was conducted to capture additional input from the community about downtown parking. The **goals of the survey** included:

- Collect information about parking behavior in downtown Spokane
- Provide insight into public perception of the parking system
- Identify major issues for downtown visitors, residents, employees, and business owners
- Leverage other data collections efforts to develop a more holistic understanding of downtown parking conditions, perceptions, and needs

The survey was open from **May 4th to May 31st**. It was distributed via the following methods:

- Emails to City of Spokane and partner outreach lists
- Social media and web advertising
- Distribution of flyers and bookmarks with survey link throughout study area

A **total of 1,861 responses** were provided to the downtown survey and key findings are summarized below. The detailed results of the survey are presented in a separate Survey Analysis Memorandum.

The survey collected information about typical travel and parking patterns and preferences, while also asking respondents questions that helped sort them into user groups.

Summary of Survey Findings

Who Responded?

- **Nearly 60% of respondents said their primary purpose for travel downtown was non-work related.** One-fifth of respondents come downtown to shop, run errands, or meet with friends/family, and another fifth come downtown for recreation – to go to special events and to eat/drink. Over half of respondents come to downtown for at least two purposes.

- **The majority of respondents park in the Downtown Core zone,** but the Downtown Core only represents 18% of spaces in the study area. Responses were weighted to represent each zone based on their proportion of the study area parking supply.

- **Half of respondents are very frequent visitors to downtown (5 days per week or more).** Another fifth of respondents come downtown 1-4 days per week, and another fifth beyond that come downtown a few times per month.

How do Respondents Travel and Park Downtown?

- **Two-thirds of respondents drive alone downtown,** and another fifth carpool with others. Nearly 10% take transit, walk, or bike.

- **One-quarter of respondents have free parking,** while nearly one-fifth have a free or discounted bus pass.

- **One-third of respondents typically park in a metered on-street space.** A quarter park in a facility fully or partially subsidized by their employer or residence. One-fifth park in a facility they pay for by the hour or day, and 15% park in a facility where they buy an annual/monthly/weekly permit.

  - Respondents who work or own a business or property downtown were more likely to park in facilities for free or at a reduced expense or park in a facility with a recurring permit.

  - Respondents who go downtown to eat/drink or shop/run errands were most likely to park in a metered space.

  - Respondents parking in the Downtown Core and adjacent areas were more likely to say they typically park in on-street metered spaces. Respondents parking in the Spokane County Campus area were most likely to say they park in a facility in which they pay for a recurring permit.

- **Thirty percent of respondents who park downtown park on-site or on the same block**, another 30% park three or more blocks away, and the remaining 40% park 1-2 blocks away.

  - Respondents eating/drinking were most likely to park approximately two blocks from their destination.

  - Respondents who live or own a business/property downtown were most likely to park on site or on the same block.

  - Respondents parking in the Arena neighborhood or the West End South area were the most likely to park three or more blocks from their destination.

  - Respondents parking on site or on the same block were most likely in the Hospital District, Spokane County Campus, and Convention Center areas.

- **The most common durations for parking were 2-3 hours (21%) or more than 8 hours (30%).**

- Respondents parking for more than 8 hours are typically working downtown, living downtown, or own a business or property downtown.
- Respondents parking 2-3 hours were typically eating/drinking or shopping/running errands.

Parking Preferences

- **Two-thirds of respondents indicated that the proximity of parking to their destination** was among the three most important factors in choosing a location to park. Price of parking (55%) and ease of finding a space (45%) were next in importance. Many respondents also indicated personal safety/security (30%) and time limits (26%) were important in selecting a location.

- **Nevertheless, over two-thirds of respondents would rather walk further to their destination for free or cheaper parking** than pay more for parking closer to their destination.

- **The top three parking issues indicated by respondents were** 1) off-street parking is too expensive (44%), 2) there is a lack of parking supply across the study area (39%), and 3) the on-street time limits are too short (32%).

  - Respondents working or living downtown were more likely to indicate that off-street parking was too expensive.

  - Respondents who do not come downtown were more likely to say on-street parking was too expensive and that they do not feel safe/comfortable walking to/from parking.

- **The top three parking system improvements preferred by respondents were** 1) new parking facilities open to the general public (34%), 2) longer time limits at on-

street spaces (33%), and 3) improved travel options and incentives for not driving alone (27%).

Figure 2-1   Top Three Parking Issues for Survey Respondents
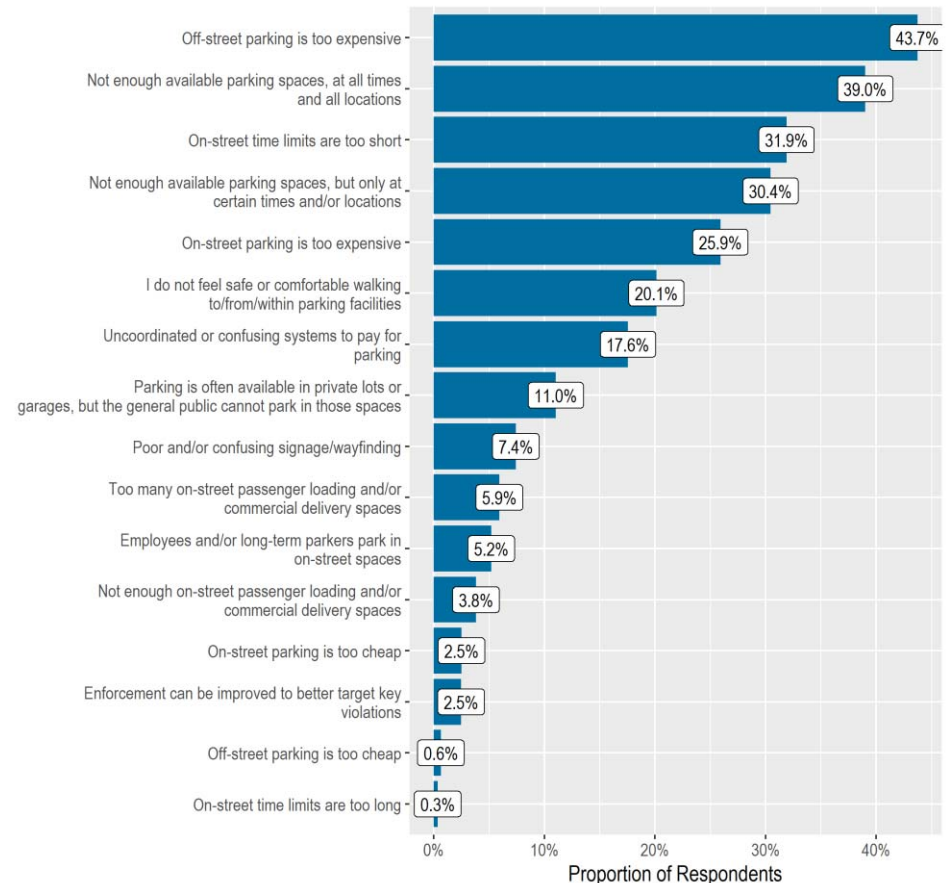
TOP FIVE TAKEAWAYS

Stakeholder Interviews and Community Event

1. Depending on the stakeholder group, the downtown parking "problem" **was defined in many different ways.** For example, there is particular concern that parking has limited certain types of employers (i.e. Class A office) from locating downtown. Other stakeholders have conversely noted that there are other employers locating in downtown to leverage downtown's mixed-use vitality and multimodal access for their employees.

2. There is **growing competition for the limited on-street parking** in downtown, especially in the core. New technologies, mobility services, and growth have exacerbated this tension.

3. The **parking "experience" can be improved** with additional investment in communication, information, payment technology, and overall pedestrian safety and comfort.

4. **A big part of the parking challenge in Spokane is about "culture,"** and how to better manage the expectation for free, on-site parking in downtown.

5. There is opportunity to address downtown parking challenges with a **coordinated approach to trip reduction** through mobility programs.

Online Parking Survey

1. **The top issue for respondents was that off-street parking was too expensive.** As discussed in later chapters, off-street parking costs significantly more than on-street parking, leading to increased pressure on the limited on-street parking in high demand areas.

2. **Nearly a third of respondents expressed that time limits are too short.** People would like to be able to park on street for up to three hours to eat, drink, or run errands.

3. **The majority of folks traveling to downtown do not have access to a free or discounted bus pass.** There is potential opportunity for employers to play an increased role in encouraging the use of multimodal options to travel downtown.

4. Over two-thirds of respondents **would rather walk further to their destination for free or cheaper parking** than pay more for parking closer to their destination.

5. The **top three parking system improvements** preferred by respondents were: 1) new parking facilities open to the general public (34%), 2) longer time limits at on-street spaces (33%), and 3) improved travel options and incentives for not driving alone (27%).

3 PLANNING CONTEXT

The Downtown Parking Study is not occurring within a vacuum. Numerous past plans, studies, and initiatives have shaped today's downtown. Several current and future planning efforts, as well as evolving demographics, will also determine what downtown will look like in the decades to come.

It is crucial that this parking study recognize and respect this planning context. In order to fully understand the key issues and craft a set of recommendations, the project team has reviewed past and present planning work, and documented policies, recommendations, and findings that are relevant to the parking system. This review includes the following major components:

- **Plans and Studies**
- **Projects**
- **Demographics and Travel Patterns**
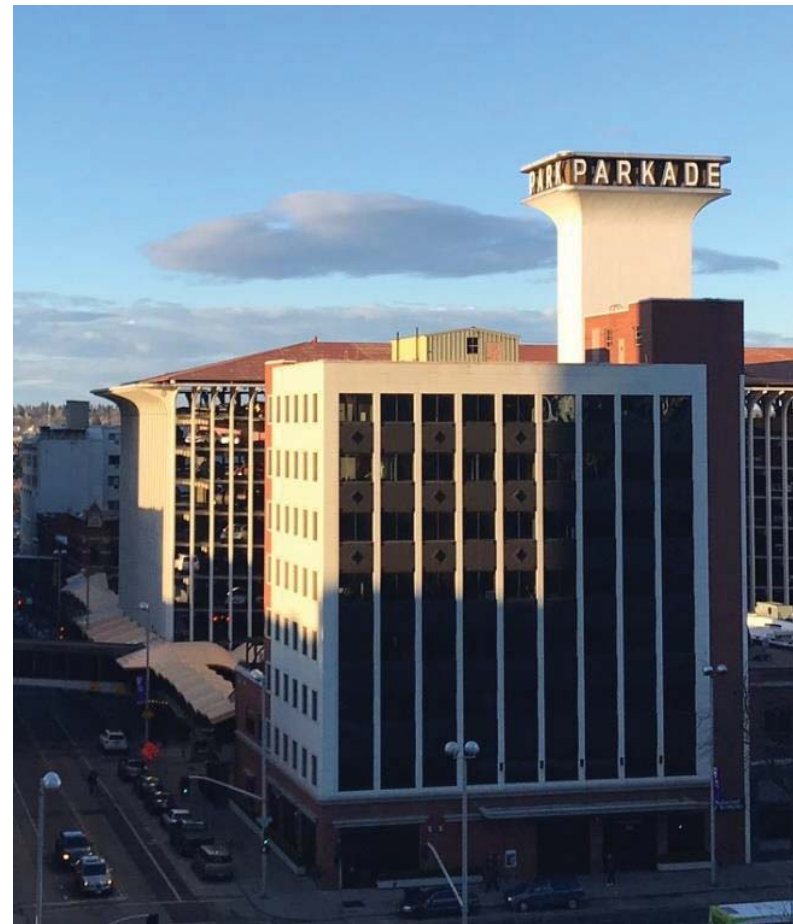
Downtown Spokane has implemented the vision of many of its past plan and studies. Substantial new growth is occurring or planned. Demographics are quickly evolving. All of which will impact the future of parking.

PLANS AND STUDIES

Figure 3-1 documents relevant plans and their major findings and/or implications for the Downtown Parking Study.

Figure 3-1   Summary of Relevant Plans and Studies

Plan	Year	Lead Agency or Organization	Summary
Downtown Central: 2018 Update to the Downtown Plan	2018	City of Spokane	Spokane is currently engaged in an update to the downtown plan, originally adopted in 1998 and most recently updated in 2008. The update will include a robust community engagement process and multiple areas of coordination with the Downtown Parking Study, including a future parking demand analysis based on multiple downtown growth scenarios.
Transit Development Plan	2018	Spokane Transit Authority	The 2017 Transit Development Plan outlines the next six years of programs and activities for the Spokane Transit Authority, which currently operates 35 bus routes, three transit centers, and 13 park-and-ride lots within its service area. Planned major activities include expansion of the employer-sponsored bus pass program and the Universal Transit Access Pass, implementation of the Central City Line, and renovation of the downtown Bus Plaza.
Shaping Spokane: Comprehensive Plan for the City of Spokane	2017	City of Spokane	The City of Spokane's Comprehensive Plan was last updated in 2017. The Comprehensive Plan sets forth goals and policies to guide future growth and development in Spokane. The plan envisions a network of transportation alternatives that includes transit, bicycling, walking, carpooling, and more efficient use of the automobile. It encourages shared parking strategies, limits on the development of new parking, the use of parking structures integrated with other land uses, and infill development in downtown.
Spokane Bicycle Master Plan	2017	City of Spokane	Spokane's 2017 Bicycle Master Plan envisions a network of comfortable bikeways, convenient and secure bicycle parking, and education and enforcement programs that will help Spokane reach a target bicycle mode share of 5% in the next 20 years.
Transportation Demand Management (TDM) Toolkit	2016	City of Spokane	An update to the Transportation Demand Management (TDM) Toolkit was completed in 2016 and released as part of the 2017 Comprehensive Plan update. TDM programs seek to reduce vehicle trips and parking demand by incentivizing multimodal travel. The updated Toolkit summarizes 13 TDM measures, including their relative cost and benefit and appropriate implementation steps.

Plan	Year	Lead Agency or Organization	Summary
Pedestrian Master Plan	2015	City of Spokane	The Pedestrian Master Plan includes an assessment of existing conditions, best practices, and existing design guidance for the pedestrian environment. It sets goals and recommends policies and actions to support a more walkable Spokane. The Pedestrian Needs Analysis identifies downtown as a Pedestrian Priority Zone, based on the level of demand and existing infrastructure.
Downtown Spokane Parking Study Update	2010	City of Spokane, Spokane County	The last downtown parking study was completed in 2010. The study included data collection for a targeted area south of the river covering approximately 11,300 parking spaces. Key findings from the 2010 study included: ▪ Peak demand for on-street parking was 63% at 7:30 p.m. Peak demand for off-street parking was 58% at 1:30 p.m. ▪ Parking activity is up in three of four parking zones, including a marked increase in evening activity ▪ Commuter parking rates have increased significantly in off-street garages ▪ Abundant off-street spaces are available throughout the day in all areas of the downtown A set of 11 core recommendations were provided in 2010, split between policy actions and management actions. Some of the key recommendations, such as establishment of a Parking Advisory Committee (PAC) and an increase in rates to $1.20 per hour, have been implemented.
University District/Downtown Transportation Improvement Study	2009	City of Spokane	The Transportation Improvement Study provides an assessment of multimodal transportation needs in the University District and downtown and suggests improvements to reduce vehicle miles traveled and greenhouse gas emissions. Key parking recommendations include: ▪ Expand parking meters to the west end of downtown and install pay stations ▪ Add on-street parking and convert parallel parking to angle parking on several lower volume roadways ▪ Improve parking guidance systems with dynamic message signs to guide users to major parking facilities downtown ▪ Provide bicycle parking

Plan	Year	Lead Agency or Organization	Summary
Fast Forward Spokane - Downtown Plan Update	2008	City of Spokane	The 2008 Downtown Plan Update envisions downtown as a regional hub where residents and visitors participate in shopping, working, living, recreation, education, and entertainment. The development concept includes streetscape improvements to create a network of "complete streets," pedestrian- and bicycle-friendly corridors that provide east-west links through downtown, increased public transportation, and smart growth that balances increased density with livability.
Growth and Transportation Efficiency Center (GTEC) Plan	2008	City of Spokane	The State of Washington created the GTEC program to increase the efficiency of the transportation system in places where people and jobs are concentrated. The downtown Spokane GTEC plan proposes policies, improvements, and strategies to help meet the goal of reducing drive-alone trips by 10% and vehicle miles traveled by 13% for work sites in downtown. Strategies that affect parking include: ▪ Encourage parking management that reduces drive-alone trips ▪ Add vanpools ▪ Provide adequate bicycle parking
Downtown Spokane Parking Demand Study	2005	City of Spokane	The 2005 Parking Demand Study found that overall parking occupancy reached a peak of 64% of total capacity on business days. It found the utilization of off-street facilities was low in the downtown core and on the west end, that time-stay violations were high, and that the available parking was sufficient to accommodate existing and future demand. The study recommended signage and communication improvements, an evaluation of time-stay regulations, the creation of a parking steering committee, and the designation of a parking manager.

PROJECTS

Several ongoing and future projects will shape the future of transportation and parking in downtown Spokane.

Central City Line

The Central City Line is a six-mile bus rapid transit (BRT) route connecting the Browne's Addition neighborhood to Spokane Community College via downtown and the University District, scheduled for completion in 2021.

CENTRAL CITY LINE ROUTE
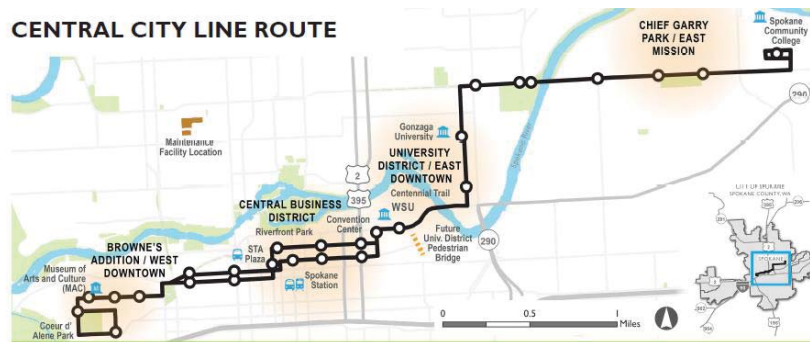
The Central City Line will serve an estimated one million annual riders, with zero-emission electric vehicles and amenities targeted at commuters. It is expected to have a positive economic impact and to help mitigate traffic and parking congestion in downtown.

The Central City Line Strategic Overlay Plan identifies transit-supported economic development opportunities and land use policy changes to accompany the Central City Line. Strategies relevant to parking include reduced parking requirements, developer bonuses for building off-street parking or secure bike parking, and the encouragement of travel demand management (TDM) programs and transit-oriented developments that reduce the need for parking.

It is currently estimated that the Central City Line will result in the loss of approximately 40 on-street spaces along its route within the downtown.

Bicycle Master Plan Implementation

Spokane is currently implementing facilities identified in the Bicycle Master Plan, including plans for a new major bicycle facility on Riverside Avenue through the downtown core.

The City is also engaged in an ongoing effort to bring a bike share program to Spokane, with a launch date as early as 2019. A major goal for the bike share system is to help reduce downtown parking demand by providing an alternative to driving, particularly for short, midday trips. Bike share can also provide first- and last-mile connections for people who take transit.

The bike share program is expected to have major hubs in downtown and the University District. The bike share program could impact on-street parking to accommodate bike share hubs and/or bike parking. No estimates are yet available.

Transit Plaza Operational Analysis

The Spokane Transit Plaza Operational Analysis project will consider restructuring bus operations near the Transit Plaza to implement planned service increases. The resulting plan will guide implementation of new services around the Transit Plaza and within downtown Spokane throughout the next five years as service is incrementally improved with full operations, including the Center City Line.

Potential benefits of the project include improved convenience for riders, improved operational efficiency, positive outcomes for all street users, and shrinkage of the current passenger loading area requirements of the Plaza.

Main Avenue Streetscape Pilot

See summary of project in Chapter 4.

Other Major Projects

A number of approved and <u>potential</u> projects will also impact downtown and its parking system. These include:

- Redevelopment and revitalization of **Riverfront Park**
- **University District Gateway Bridge**, providing enhanced pedestrian and bike connectivity to downtown
- Replacement of the **Post Street bridge**
- Various **pedestrian and sidewalk** improvements
- **Mixed-use** development at old Macy's building
- Potential/planned **developments:**
  - Additional mixed-use projects at Kendall Yards
  - Mixed-use project at old Wonder Bread building
  - Mixed-use project at Ridpath Hotel
  - Mixed-use project at old YWCA site
  - Spokane Regional Sportsplex just east of Spokane Arena
  - Plus numerous <u>others</u>

Ongoing revitalization of Riverfront Park (top) and proposed new Sportsplex north of the river (bottom) will have ongoing impacts on downtown and the parking system. Sources: my.spokanecity.org and www.spokanesportsplex.org.

Demographics and Travel Patterns

The demographics and travel patterns of downtown Spokane are evolving. These trends will impact not only who lives and works in downtown, but also the parking system. This section summarizes some of these trends.

While the number of people living in the heart of downtown Spokane has declined over the past several decades, recent data suggests a reverse in that trend. Within the project study area north of the Spokane River, the population increased by nearly 50% between 2010 and 2016. Many of the neighborhoods adjacent to the study area are experiencing population growth as well. **Downtown employment increased by 6%** between 2005 and 2015, to nearly 39,000 jobs[1].

Millennials make up the largest age group living downtown. There has also been an increase in residents age 50-64.

Figure 3-2   Age of Downtown Residents in 2000 and 2016

Source: U.S. Census Bureau 2000 Census and 2016 American Community Survey

Downtown residents are disproportionately low-income. Nearly three-quarters of downtown households earn less than $40,000 a year. More than half of households earn less than $20,000 a year, more than double the city and countywide rates.

Figure 3-3   Income of Downtown Households Compared to City and County Household Incomes
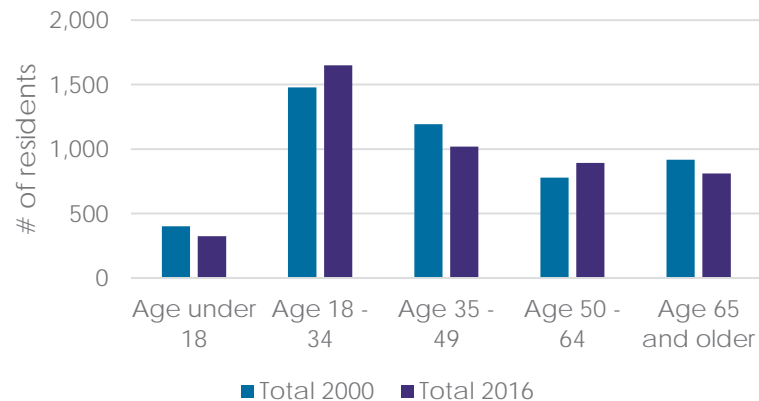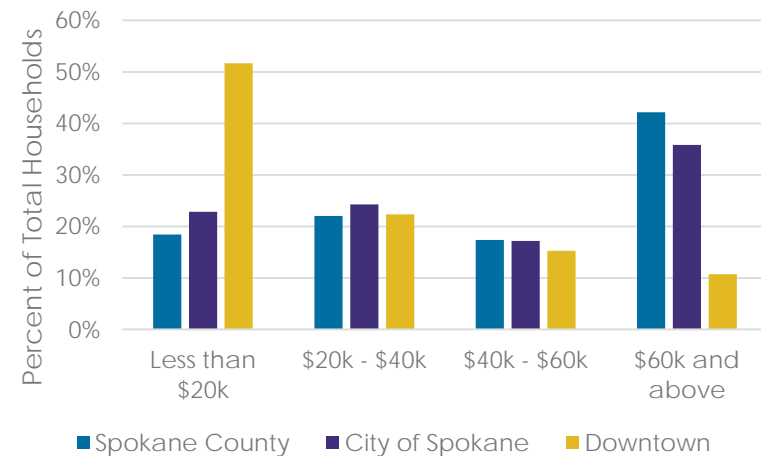
Source: U.S. Census Bureau – 2016 American Community Survey

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[1] US Census Longitudinal Employer Household Dynamics, 2005 and 2015

The **vast majority of downtown households rent** – 94%, nearly twice the rate of the city as a whole. Households that rent have a much lower average rate of car ownership than owner-occupied households (Figure 3-4).

On average, **downtown households own fewer cars than the city and county households:** 0.6 vehicles per household in downtown, compared to 1.6 for the City of Spokane and nearly two vehicles per household for Spokane County. Slightly over half of downtown households **do not own a car at all**.

Figure 3-4   Average Vehicles per Household
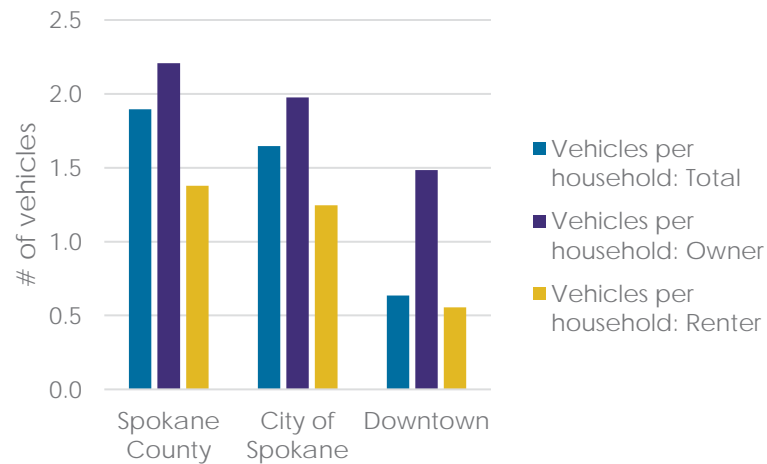
Over half of downtown residents drove alone to work in 2016, up substantially from 39% in 2000. The number of people who walked to work dropped significantly during the same time period.

Figure 3-5   Commute Mode Share of Downtown Residents, 2000 (top) vs. 2016 (bottom)
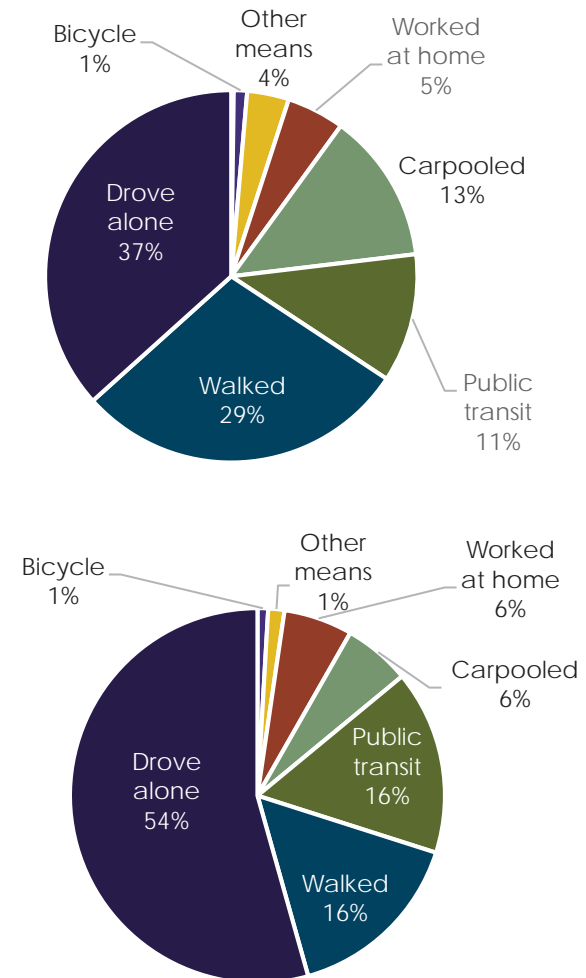
Source: U.S. Census Bureau 2000 Census and 2016 American Community Survey

The downtown study area has a total of 25 employers participating in WSDOT's Commute Trip Reduction[2] (CTR) program, comprising a total of nearly 11,000 employees.

The Drive-Alone Rate (DAR) – the primary performance metric of the CTR program – shifted from 75% in 2007/2008 to 73% in 2015/2016, with a low of 69% in 2013/2014. The lower DAR in 2013/2014 was primarily due to a particularly high transit mode share (11.8%) that year.

The majority (10% out of 27% in 15/16) of CTR employees' non-drive-alone trips are being made via carpool, with transit accounting for 8%, walking/biking accounting for just over 3%, and the remainder of trips being allocated to teleworking, compressed work week, and other modes.

Figure 3-6   Mode Share for CTR-Affected Employees in Downtown (2007-2016)
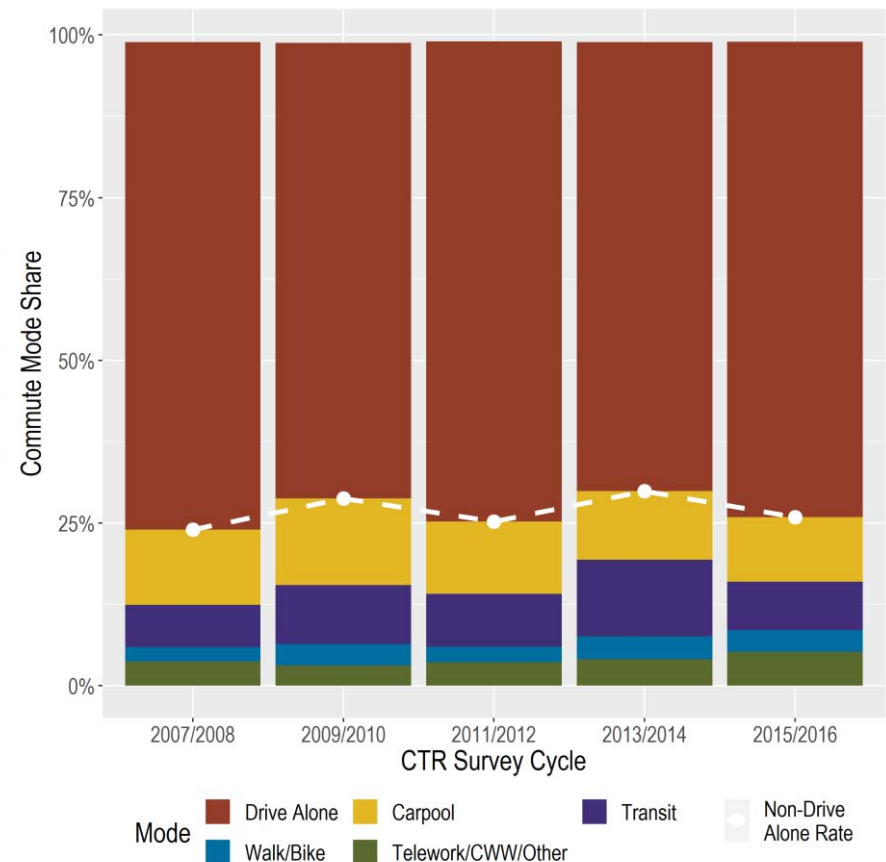
Source: WSDOT Statewide CTR Survey Results (2007- 2016)

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[2] WSDOT's Commute Trip Reduction program mandates that all employers (within counties with more than 150,000 residents) with 100 or more full time employees commuting during the 6-9 a.m. peak period participate in an annual survey and develop a plan for reducing their employee's drive-alone rate (DAR).

Figure 3-7   CTR Sites within Downtown Study Area

TOP FIVE TAKEAWAYS

Plans and Studies

1. Planning efforts for downtown Spokane emphasize the **need for a multimodal transportation system** in which walking, bicycling, and transit are attractive options.

2. Past parking studies have found that **downtown has ample off-street parking,** but that demand is on an upward trend for on-street spaces.

3. Multiple plans recommend **shared parking**, signage and wayfinding improvements, and installation of more bike parking.

4. **Transportation Demand Management (TDM) strategies have been developed** and are part of downtown's toolkit for managing demand for parking facilities. TDM implementation has been limited to larger employers as part of the state's CTR program.

5. The potential for **transit service improvements,** as well as expansion of the employer sponsored pass programs, can play a key role in managing demand for employee parking in downtown.

Projects

1. Parking impacts and parking loss mitigation around **Central City Line and future bike share** is an issue to assess further.

2. **Transit in downtown Spokane** is getting a major overhaul in the next few years – plaza operations will be reconfigured, normal bus service will increase, and the Central City Line will provide a new high-frequency, high-amenity route.

3. Spokane is pursuing a **bike share program** to launch as early as 2019 – this can be a key strategy for addressing mobility within downtown and encouraging downtown employees and residents to bike.

4. **Riverfront Park's renovation** will be a regional draw for residents, employees, and visitors, with potential parking impacts to address.

5. **Mixed-use and residential developments** are proposed in downtown – how this affects parking supply and demand will be considered as part of a more detailed land use analysis.

Demographics and Travel Patterns

1. The **resident population** in downtown Spokane had been in decline for several decades, but is experiencing a resurgence in just the last few years.

2. **Employment** in downtown Spokane is increasing – nearly 39,000 jobs were added between 2005 and 2015.

3. Many downtown residents have **lower incomes, tend to rent, and tend to own fewer cars.** These demographic groups are most likely to use other modes to get to work, but over half of them drive in downtown.

4. Approximately **70% of CTR employees commuting to downtown Spokane drive alone** accounting for nearly 8,000 drive-alone trips (and associated parking spaces) per day – this is a key source of parking demand that should be considered for increased focus in TDM programming.

5. As the number of people living and working in downtown Spokane continues to grow, increasing use of transit, carpools, and active transportation **will be key to mitigating increased demand for parking**.

4 POLICY, PROGRAMS, AND MANAGEMENT

Through previous parking studies and various initiatives over the years, the City of Spokane has established a strong policy and management framework for parking. While ongoing improvements are needed as downtown grows and evolves, there exists a foundation by which Spokane can continue to innovate its approach to parking.

This chapter documents and summarizes the **current policies, programs, and management practices.** This baseline information will help this study more effectively establish the next era for parking in Spokane.

MANAGEMENT STRUCTURE

Parking management in the City of Spokane falls within the **Neighborhood and Business Services division**. Neighborhood Services and Code Enforcement and Parking Services are the two departments within the division that directly manage parking. Parking Services has one parking foreperson who supervises 13 full-time employees (FTE).

Staff from other agencies, divisions, and departments also have key responsibilities that impact the downtown parking system. These include staff from the Planning Department, who set land use and development policy within the Comprehensive Plan, specific area plans, and the Municipal Code; and staff from Public Works, who design and manage the public right-of-way.

In downtown, the **Parking Advisory Committee (PAC)** plays an advisory role, representing a range of downtown stakeholders on parking. The PAC is a 13-member committee appointed by the City Council. The PAC was established to advise the City Council on investments in the parking environment, policy, and rate-setting as informed by the downtown parking study. Current PAC members include representatives from City Council (two members), Downtown Spokane Partnership, Spokane Arts, River Park Square, Spokane Transit Authority, Visit Spokane, Goodale & Barbieri, and other local businesses.

POLICIES AND PROGRAMS

Figure 4-1 provides a brief summary of the existing policies and programs that govern downtown parking. These policies and programs have evolved over the years as Spokane has sought to actively manage on-street parking, support a variety of users, and create a more cohesive parking system. A map of the parking district boundaries is shown in Figure 4-2.

Figure 4-1   Existing Downtown Policies and Programs

Category	Policy/Program	Description	Key Details
Parking Districts	Parking Meter Area	Pricing of parking is utilized as a key tool to manage parking and generate turnover of parking spaces. As established by Spokane Municipal Code (SMC) 16A.61.5902, parking meters are authorized in the downtown as defined by the Parking Meter Map (Figure 4-2). Rates are established in SMC Chapter 08.02 – Fees and Charges.	**Hours of Operation** M-Sa, 8 a.m. – 7 p.m., except for 10 meter holidays **Rates** 2-hour meters ($1.20 per hour) 4-hour meters ($.80 per hour) All-day meters ($.40 per hour)
	Entertainment Parking District (EPD)	Within downtown the EPD was established to meet specific operational and parking needs of entertainment venues in the area. The EPD zone offers a modified meter bag program (see below) to facilitate loading activity. The EPD boundaries are shown in Figure 4-2.	
Permits	Meter bags	Construction, maintenance, and entertainment activities within downtown often require use of on-street parking. To enhance access for these activities, meter bags can be leased on a daily, monthly, or annual basis to temporarily exempt designated spaces from posted parking regulations.	Costs are variable
	Commercial Loading Zone (CLZ)	Commercial vehicles can purchase a CLZ decal to facilitate curbside loading at designated CLZ spaces. Food trucks, taxis, and mobile vendors are not eligible. Rates are established in SMC Chapter 08.02 – Fees and Charges.	**Hours of Operation** 8 a.m. – 6 p.m. for a maximum of 30 minutes **Rates** $100/vehicle/yr. (before 6/30) $50/vehicle/yr. (after 7/1) $15/vehicle for single, transfer, replacement, decal correction

Category	Policy/Program	Description	Key Details
	Special Loading Zone (SLZ)	SLZs are created within a legal parking space via a meter bag. SLZs are for loading activity of commercial, service, news media, and non-profit vehicles. Food trucks, taxis, and mobile vendors are not eligible. Rates are established in SMC Chapter 08.02 – Fees and Charges.	Maximum of 30 minutes Pricing is set on a sliding scale depending on user and permit type. Prices can range from $15/meter/day to up to $350/quarter.
	Residential Permit Program (RPP)	RPPs allow vehicles to park free of charge at all-day meters <u>only</u>. RPPs are only distributed to landlords or property management companies, who then allocate to residents. Rates are established in SMC Chapter 08.02 – Fees and Charges.	Permits are non-transferable Cost is $25 per permit per month
	Americans with Disability Act (ADA)	Per SMC 16A.61.582, vehicles with ADA tags are permitted to park for up to four hours. In metered areas, ADA vehicles can park for free up to four hours. ADA vehicles must pay the posted rate after four hours.	See Chapter 5 for summary ADA inventory
Programs	Pay-by-phone	Pay-by-phone via a smart phone for on-street meters is available via Passport Parking. Some off-street lots also offer pay-by-phone via different vendors (e.g., CallToPark).	Allows users to pay via remote "wallet," monitor their parking session, extend time remotely, pay prior to meter hours starting at 7 a.m., get reminders before payment expires, and view parking history/receipts.
	EasyPark	EasyPark is a validation program within downtown. Participating businesses validate parking and reduce parking costs by $1 for customers who make a minimum purchase.	Provides $1 off parking Valid at River Park Square and several Diamond-operated parking lots
	PremierPass	PremierPass is another downtown validation program that allows participating businesses to pay for up to two hours of customer parking. This program cannot be combined with EasyPark program.	Provides 2 hours of free parking Valid at River Park Square and several Diamond-operated parking lots

Category	Policy/Program	Description	Key Details
	City Ticket	Operated by STA, the City Ticket program allows employees to park at the Spokane Arena and ride a free shuttle (Route #1) into downtown. City Ticket is discussed in more detail below.	**Hours of Operation** M-F, 6 a.m. – 8 p.m. City Ticket pass holders can park on weekends provided no events are scheduled 10-minute shuttle frequency **Rates** $35/month
	Employee parking	Monthly parking is available to employees at many lots and garages in downtown. Rates vary based on facility type (lot versus garage) and location.	See Chapter 5 for a summary of employee parking spaces

Figure 4-2   Parking District and Zoning Boundaries
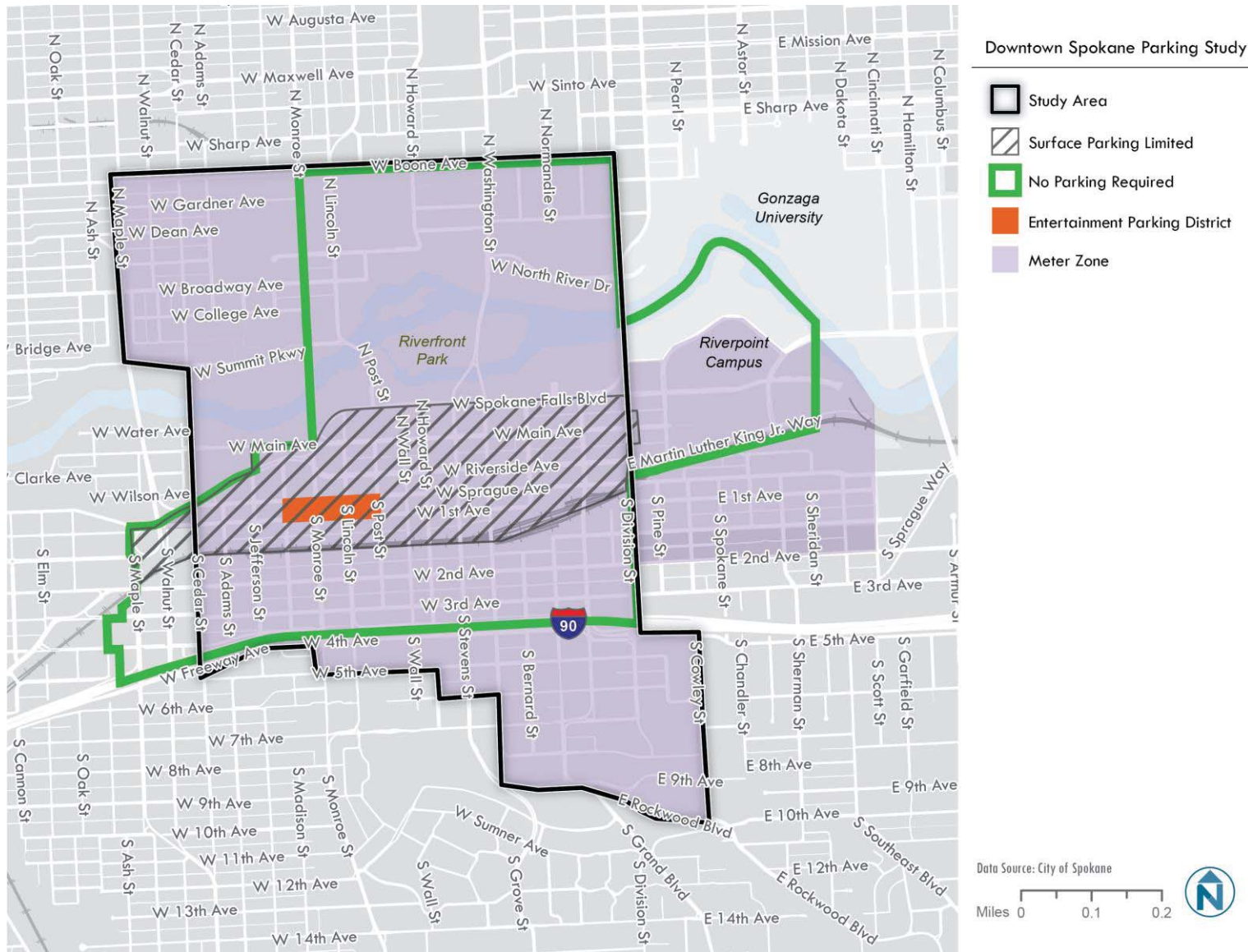
The project team explored the parking system infrastructure on the ground in February 2018. Above are different meter technologies, an example of signage, and a meter bag – these are available for activities and businesses who want to pre-pay for curb parking.

The City Ticket shuttle provides a lower-cost, remote option for parking near downtown destinations – people can park in the Arena lot and ride the shuttle the rest of the way. Reserved lots for permit holders and residential permits were common in downtown Spokane.

Main Avenue Streetscape Pilot

In 2016, the City of Spokane implemented a pilot street design project and parking program on **Main Avenue between Washington Street and Pine Street**. The primary goals of the pilot project are to create a more inviting, safe, and vital streetscape that prioritizes walking and biking. Key changes to Main Avenue included:

- Conversion of a **northbound travel lane to left turn only** at Bernard Street
- Conversion of **parallel parking to back-in angled parking** from Bernard Street to Browne Street
- Conversion of **middle two travel lanes to angled parking** between Browne Street and Division Street
- Northern travel lane and parallel parking on north side converted to **head-in angled parking** from Division Street to Pine Street
- **Net gain** in on-street parking spaces
- New **pedestrian crossings,** curb extensions, and streetscape improvements
- Installation of **pay-by-plate kiosks**

Newer meter technology allows customers to pay-by-plate or credit card. The project team heard generally positive feedback about the angled parking the City has recently piloted on Main Avenue.

MOBILITY PROGRAMS

Other key mobility and transportation programs in downtown impact parking demand and effectiveness of the overall parking system. These programs are designed to distribute parking demand to underutilized facilities, as well as reduce overall employee parking demand to free up spaces for residents, visitors, and customers.

Demand reduction programs ultimately support Spokane's efforts to reduce congestion and create a more walkable, safe, and active downtown.

City Ticket

As described above, the City Ticket program, operated by STA, provides **a reduced cost parking option for employees**, while reducing parking demand in the downtown core. Employees, or their employers, can buy a pass for $35 per month to park at the Spokane Arena lot on weekdays from 6 a.m. to 8 p.m. and then take a free shuttle to downtown. Service frequency is 10 minutes.

The City Ticket shuttle has 22 riders per revenue hour, which exceeds the target productivity set by STA of 19.7 riders per revenue hour. Farebox recovery also exceeded the target of 10% -- it recovered 18% of its cost in fares.

Nevertheless, there is still **a significant amount of excess capacity in the service.** Capacity utilization was between 15% and 20% for 2017. In 2017, there was an average 454 City Ticket passes purchased per month. Given the 900 parking spaces available at the arena, there is still capacity for the City Ticket program to grow.

Universal Transit Access Pass (UTAP)

Several universities and agencies hold an agreement with STA that enables their **employees and students to utilize a universal bus pass** as part of the Universal Transit Access Pass (UTAP) program. The program was started in 2013 with a two-year federal grant, but has since continued to be supported by reimbursement agreements with the following institutions and agencies:

- Universities
  - Eastern Washington University
  - Washington State University
  - Community Colleges of Spokane
  - Gonzaga University
- Agencies
  - City of Spokane
  - Spokane County

Employer Sponsored Bus Pass Program (EsBP)

STA also provides a bus pass program that allows employers to **purchase discounted bus passes for their employees.** Two options exist for employers:

1. Employers that provide a discount of up to $4 to employees on a 31-day bus pass, will get a corresponding match from STA up to a $4 savings (i.e., a $60 bus pass could cost $52 for the employee).
2. If an employer gets 100 or more employees to participate, STA will provide a 25% discount on each 31-day bus pass.

There are currently 57 total employers participating in the EsBP programs.

Commute Trip Reduction

In 1991, the State of Washington adopted its CTR law[3] with the intent of reducing employee drive-alone rate (DAR) and drive-alone trips (DAT). The law requires CTR-affected employment sites to create a plan for how to reduce employee DAR. The CTR requirements apply to employer sites meeting the following criteria:

- Employ 100 or more full-time employees whose workdays start between 6 a.m. and 9 a.m. on weekdays
- Located in a county with more than 150,000 residents

The Spokane Regional Transportation Council (SRTC), the federal Metropolitan Planning Organization (MPO) and state Regional Transportation Planning Organization (RTPO), adopted the Spokane Regional CTR Plan in 2008[4]. The plan set a goal to reduce drive-alone trips by 10% from present levels (75%).

Given the data presented in Chapter 3, **the employers in downtown Spokane have not been able to meet those reduction targets** – as of the 15/16 cycle they have only reduced their DAR by 2.5% (to 73%). This trend is better than Spokane County as a whole, which has seen its DAR increase by 5% (3 percentage points) from 74% to 77%.

SMC Chapter 15.01 fulfills Spokane's obligation to adopt a CTR plan and implementing ordinance. SMC 15.01 defines the basic CTR terms and outlines the mandatory program elements (15.01.410). CTR sites within Spokane must meet minimum reporting requirements, hire an on-site transportation coordinator, provide employees with travel information, and provide a minimum of two trip reduction programs.

Spokane County oversees a website (https://mycommute.org) that is a central communication point for CTR-related programming. It includes a ride-matching portal for carpoolers, summaries of policies including the CTR program itself, the Guaranteed Ride Home (GRH) program, and commuter tax benefits.

It also provides extensive resources for Employer Transportation Coordinators (ETCs), which are responsible for administering CTR programming at their worksites. Resources include sample messaging, maps, and information about travel options. The county also hosts an annual awards event, which awards high performing (in terms of drive-alone trips reduced) employees, employers, and ETCs.

For the last decade, the City has signed a series of two-year agreements with the Spokane County CTR department granting them the City's annual CTR fund allocation in exchange for implementing the CTR programming for the city. The City has its own ETC for city employees, but the coordination and operation of CTR programs for all other large employers in the City of Spokane is the responsibility of the county, per those agreements.

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[3] Revised Code of Washington (RCW) – Section 70.94.527
Washington Administrative Code (WAC) – Chapter 468-63

[4] https://www.srtc.org/wp-content/uploads/2016/11/regional_ctr_plan_11608.pdf

MUNICIPAL CODE

The City of **Spokane Municipal Code (SMC)** sets parking policy and establishes the regulatory authority by which staff can enforce those policies. Ultimately, the municipal code defines how Spokane will grow over the coming decades. A city's parking and transportation system can only be efficient if the municipal code establishes a strong, yet flexible framework by which to guide new development and changes to the right-of-way. This section summarizes the existing portions of the SMC that dictate parking policy and management.

Zoning Designations

Within the Downtown and University District parking study areas, there are a **variety of zoning categories**, offering a mix of policies and regulations related to parking. The zoning categories are summarized in Figure 4-3. Figure 4-4 shows the City of Spokane zoning map.

Figure 4-3   Zoning Categories by Study Area

Downtown	University District
Center & Corridor Core Zone 1 (CC1)	Center & Corridor Core Zone 1 (CC1)
Community Business (CB)	Community Business (CB)
Downtown Core (DTC)	Downtown University (DTU)
Downtown General (DTG)	General Commercial (GC)
Downtown South (DTS)	Office Retail (OR)
General Commercial (GC)	Residential Multifamily (RMF)
Office (O)	Residential Two Family (RTF)
Office Retail (OR)	
Residential High Density (RHD)	

Figure 4-4   City of Spokane Zoning Map

Downtown Spokane Parking Study

☐ Study Area

Zone Description
- Downtown Core
- Downtown General
- Downtown South
- Downtown University
- General Commercial
- Community Business
- Mixed Use Transition
- Neighborhood Retail
- Office Retail
- Office
- Residential High Density
- Residential Multifamily
- Residential Two-Family
- Residential Single-Family
- Light Industrial
- Heavy Industrial
- Center and Corridor Type 1
- Center and Corridor Type 2
- Context Area 1
- Context Area 2
- Context Area 3
- Context Area 4

Data Source: City of Spokane

Miles 0   0.1   0.2

Land Use Standards

This section summarizes the key provisions within **Title 17C – Land Use Standards** of the SMC as they relate to parking policy and management.

Downtown Parking Standards

As shown in Figure 4-4, there are **four downtown zoning categories – DTC, DTG, DTS, and DTU.** The first three zones are within the Downtown study area, while the DTU zone is within the University District study area.

There are specific regulations related to parking within the downtown, recognizing that parking should be managed differently here due to the density of uses, land use mix, transit access, and overall multimodal vision established for downtown by the Comprehensive Plan and Downtown Plan.

Key downtown parking provisions include:

- **No minimum amount of on-site parking is required** within the Downtown Parking Requirement Map, as defined by Section 17C.230-M1 (Figure 4-2).
- For areas within the downtown zones (i.e., DTU), but not within the Downtown Parking Requirement Map, **the minimum parking requirement is 1 space per 1,000 gross square feet (GSF) or 1 stall per dwelling unit**, whichever is less.
- The **maximum amount of parking** allowed is three spaces per 1,000 GSF.
- New **standalone commercial parking lots are not allowed** as the primary use within the area shown in Figure 4-2. Standalone commercial parking as a primary use must be located entirely within a parking structure.

- **Downtown parking structures** adjacent to a Type I street (Community Activity Street) or a Type II street (Community Connector) must include street-level retail, office, or civic uses along at least 50% of the street frontage not devoted to vehicular access.
- All parking facilities must have **lighting** compliant with the standards of the Illuminating Engineering Society of North America; and **signage** identifying floors and pedestrian walkways.

"Limiting the number of spaces allowed promotes efficient use of land, enhances urban form, encourages use of alternative modes of transportation, provides for better pedestrian movement, and protects air and water quality."
SMC Section 17C.230.120.

General Parking Standards

Figure 4-5 summarizes the zoning standards for parking that apply to both downtown and the rest of the city. These include standards for not only how much parking should be built, but also key provisions related to sharing of parking, facility design, carpool parking, and bicycle parking, among others.

Figure 4-5   Summary of Parking Standards

Standard	SMC Sections	Summary
Minimum / Maximum Requirements	17C.230.100 17C.230.110 17C.230.120	See Figure 4-6 for summary of minimums and maximums by zone and land use. Parking requirements for mixed-use sites is calculated by the sum of the required parking for the individual uses. For every 5 non-required bike spaces = reduction of 1 vehicle space, up to 10% of required parking (includes conversion of existing parking). Immediately adjacent, non-restricted on-street parking spaces may count towards the minimum parking requirement (1 space = 20 feet). Parking provided within a building structure is not counted towards maximum (17C.230.120.B)
Parking Exceptions	17C.230.130	New building/addition less than 3,000 SF is exempt from parking requirement (Downtown, CC, FBC, CA1-3 zones). Director may approve ratios higher/lower and/or reduce or waive requirement if data is provided to support application or with an area management plan utilizing shared parking. Existing legal nonconforming buildings that do not meet minimums do not have to provide off-street parking when remodeling increases the amount of required parking occurs within the existing structure.
Change of Use	17C.230.110.B.5	A change of an existing use to a new use with a higher parking requirement must provide the additional parking, except when the additional increment required is 5 or less spaces. New uses receive credit for parking provided by existing use.
Joint Use / Shared Parking	17C.230.110.B.2	Joint/shared parking is allowed for non-residential uses if a shared parking analysis is conducted and a shared parking agreement is submitted with application.
Off-site Parking	17C.230.100.E	Required spaces must be within 600 feet of use (CC zones) and within 400 feet of the site (all industrial and commercial zones). Required spaces must be within 400 feet of use (RHD zone) and on-site (RA, RSF, RTF, RMF zones).
Stacked / Valet Parking	17C.230.100.F	Allowed to count towards minimum parking requirement. Attendant must be present to move vehicles.

Standard	SMC Sections	Summary
Carpool Parking	17C.230.110.C	Office, industrial, and institutional uses with 20+ on-site parking spaces, must designate a minimum of 5 spaces or 5% of all spaces (whatever is less) for carpool use before 9 a.m. on weekdays. Spaces must be closest non-ADA or customer spaces to the building entrance or elevator. Regulatory signs must be posted.
Parking Structure Design	17C.230.310	Parking structures that are part of a building must provide at least 2 design treatments on street-facing facades to reduce visual impacts. Free-standing parking structures must provide all design features on the façade above the ground level.
Parking Dimensions	Table 17C.230-3 Table 17C.230-4	Design dimensions are defined in 17C.230. Downtown, CC, NR, FBC, and CA1-3 zones have smaller 2-way aisle width and stall depth requirements.
Transportation Demand Management (TDM)	Chapter 15.01	See discussion of Commute Trip Reduction (CTR) program above.
ADA Parking	17C.230.140.E.3	Specifies that dimensions, minimum number, location, signage, and design of disabled person parking and access standards are defined through the building code and the latest American National Standards Institute (ANSI) standards.
Bicycle Parking	17C.230.200	Must provide equivalent of 5% of total vehicle spaces provided. Minimum of 1 bicycle space per 10,000 SF. Less than 10,000 SF must provide at least 1 bicycle space. Applies to Downtown, FBC, CA1, CA2, CA3 zones. Must provide equivalent of 5% of total vehicle spaces (if 20+ vehicle spaces required. Applies to RMF, RHD, CC1-4, O, OR, NR, NMU, CB, GC, and I zones.

Figure 4-6   Summary of Minimum and Maximum Parking Requirements

By Zone (Selected Zones)			By Land Use (Selected Land Uses)		
Zone	Minimum	Maximum	Land Use	Minimum	Maximum
RTF, RMF, RHD, O, OR, CB, GC,	Per SMC Table 17C.230-2	Per SMC Table 17C.230-2	**Residential**	1 per unit + 1 per BR after 3 BRs 1 per ADU SROs are exempt	None
CC1	1 per 1,000 GSF (NR) 1 per 1,000 GSF or 1 per unit plus 1 per BR after 3 BRs (R)	4 per 1,000 GSF (NR) 4 per 1,000 GSF (R)	**General, Medical/Dental Office; Medical Center; Community Service**	2 per 1,000 GSF	5 per 1,000 GSF
Downtown	None within designated zone (SMC 17C.230-M1) Outside of designated zone - 1 per 1,000 GSF or 1 per unit, whatever is less	3 per 1,000 GSF	**Retail, Personal Service**	3.3 per 1,000 GSF	5 per 1,000 GSF
			Restaurants/Bars	4 per 1,000 GSF	16.7 per 1,000 GSF
			Health Club/Gym	3.3 per 1,000 GSF	5.6 per 1,000 GSF
			Theaters	1 per 4 seats or 1 per 6 ft. of bench area	1 per 2.7 seats or 1 per 4 ft. of bench area
			Colleges	1.7 per 1,000 GSF (excluding dorms) + 1 per 4 dorm rooms	5 per 1,000 GSF (excluding dorms) + 1 per 2.6 dorm rooms
			High School	7 per classroom	10.5 per classroom

GSF = gross square feet, NR = non-residential, R= residential, BR = bedroom, ADU = Accessory Dwelling Unit, SRO= single room occupancy

Motor Vehicle Regulations

In addition to the land use standards described above, the Municipal Code also defines the regulations for motor vehicles, including the specific "rules of the road." SMC Chapter 16A.61- Rules of the Road includes specific key provisions related to parking. These are briefly summarized in Figure 4-7.

Figure 4-7   Summary of Motor Vehicles Regulations (Selected Sections)

Standard	SMC Sections	Summary
Special Parking for Persons with Disabilities	16A.61.381	Establishes the disabled parking requirements and provisions and penalties for violation of disabled parking.
Parking Time Limited and Regulated	16A.61.561	Establishes a 24-hour maximum parking limit on any city street and the 8 a.m. – 7 p.m., Monday-Saturday time limits within the parking meter area. Allows for one 15-minute extension beyond maximum time at a meter by phone.
Taxicab Zones	16A.61.5702	Establishes authority to designate spaces for taxicabs or other vehicles carrying passengers for hire.
Commercial Loading Zones (CLZ)	16A.61.5703	Establishes the regulations governing the CLZ program, including conditions for permits, eligible uses, time limits, and penalties.
Taxicabs and Buses	16A.61.5705	Establishes that only officially designated vehicles may stop or stand in taxi zones. Establishes loading regulations for buses and taxis.
Residential Area Parking Passes	16A.61.5708	Establishes that only owners of multifamily residential properties located within the parking meter boundary may purchase monthly parking passes. Property owners shall create a roster and pay for all parking passes on a monthly basis. Pass holders can park at only "all day" meters without payment.
Free Parking by Disabled Persons	16A.61.582	Establishes that the time limit for free parking is four hours for vehicles displaying a disabled placard under RCW 46.61.582 at metered and non-metered on-street spaces, where such four-hour limit is posted. Where a meter allows time in excess of four hours, meter fees shall be paid after four hours. Where the four-hour limit is not posted, disabled placards allow for unlimited free parking.
Parking Meter Area Map	16A.61.5902	Establishes that parking meters are authorized in the Parking Meter Map, in any City-owned public parking lot within or adjacent to either the congested district or any other area wherein parking meters are otherwise permitted. New parking meters located in the Parking Meter Map, but outside of the four downtown zones, must be approved by Council.

Standard	SMC Sections	Summary
Entertainment Parking District	16A.61.5903	Establishes the EPD, as shown in Figure 4-2
Installation of Parking Meters	16A.61.5904	Establishes authority of parking manager to install meters as single space, multi-space Pay-by-Space, or multi-space Pay-and-Display meters.
Parking Time Limit	16A.61.5910	Establishes the time limits, payment terms, and holidays at metered spaces.
Fees and Rates	08.02.083	Establishes the fees and rates for parking meters and permits.

TOP FIVE TAKEAWAYS

Management Structure

1. Parking policy and operations in Spokane depend on input, and affect the outcomes, of several divisions within the City of Spokane, as well as external stakeholders. **The Parking Advisory Committee (PAC) is the nexus between internal and external stakeholders.**

Policies and Programs

2. Parking rates and duration restrictions within Spokane's meter district were recently simplified to three rates/durations constant throughout the day. While this offers simplicity for parkers and enforcement, **the current structure does not support dynamic management of the system to adjust rates based on demand.**

Mobility Programs

3. The City Ticket shuttle program enables downtown employees to park at the Spokane Arena parking lot and ride a free shuttle into downtown Spokane. **This program, and other mobility programs/incentives, present an opportunity for improving mobility choice in the downtown core.**

Municipal Code

4. The current parking code includes many national best practices, namely **no off-street parking minimums within the core, as well as off-street maximums.** Parking minimums have been consistently shown to result in excess parking capacity in downtown, increased housing costs, and reduced development feasibility, especially on small lots or

with adaptive re-use. Eliminating parking minimums does <u>not</u> mean that no new parking will be built – current development proposals indicate that new parking will be coming to downtown.

5. However, there are **areas of the code to further evaluate that could enhance parking management, maximize downtown development, and streamline the development process.** These include, but are not limited to:

    a. Adjustments to bike parking standards to reflect best practices

    b. Requirements or incentives for implementation of TDM or mobility programs

    c. Policies for unbundling cost of parking from rent/lease/purchase agreements

    d. Shared parking requirements/incentives

    e. Changes of use and their parking burden

    f. Management practices, especially authority of staff to adjust rates and regulations to dynamically manage the parking system

    g. Policies for curb space management to maximize its utility for different users and shared mobility services

    h. Design and future-proof requirements for new parking garages

5 PARKING INVENTORY – HOW MANY PARKING SPACES ARE IN DOWNTOWN?

This chapter summarizes the downtown study area's parking inventory. It documents the number of spaces for both on- and off-street facilities, as well as how those spaces are both priced and regulated. This detailed parking inventory will allow the City, project team, and stakeholders to have a robust understanding about the number of spaces in downtown and how they are currently managed.

It is important to emphasize that the inventory presented represents **a "snapshot" summary.** The number of parking spaces in the study area on any given day or time is constantly changing due to street closures, construction activity, or additions/reductions in parking. The information presented is based upon the best available data to date. The inventory does not include parking spaces associated with single-family driveways or garages.

METHODOLOGY

The data collection began by using a combination of existing data from the City of Spokane in addition to aerial imagery to develop a geometric database of all on- and off-street parking in the study area. This data was supplemented by **a team of IDAX field surveyors** to count and/or verify the numbers and types of parking spaces based on manual counts and observations of signage. Space types were detailed in terms of their public availability, when they were reserved, who they were reserved for, and the typical price each parking facility.

Figure 5-1 illustrates the study area. For analysis purposes, **the study area was broken up into sub-zones.** These sub-zones were developed based upon previous parking studies, prominent geographic barriers (e.g., the railway/viaduct and the Spokane River), and discussion with the City project team. These analysis zones represent a reasonable walk shed and have similar land uses and travel patterns. **The zone names and boundaries are specific to this project only**.

Figure 5-1   Downtown Parking Study Area and Zone Boundaries
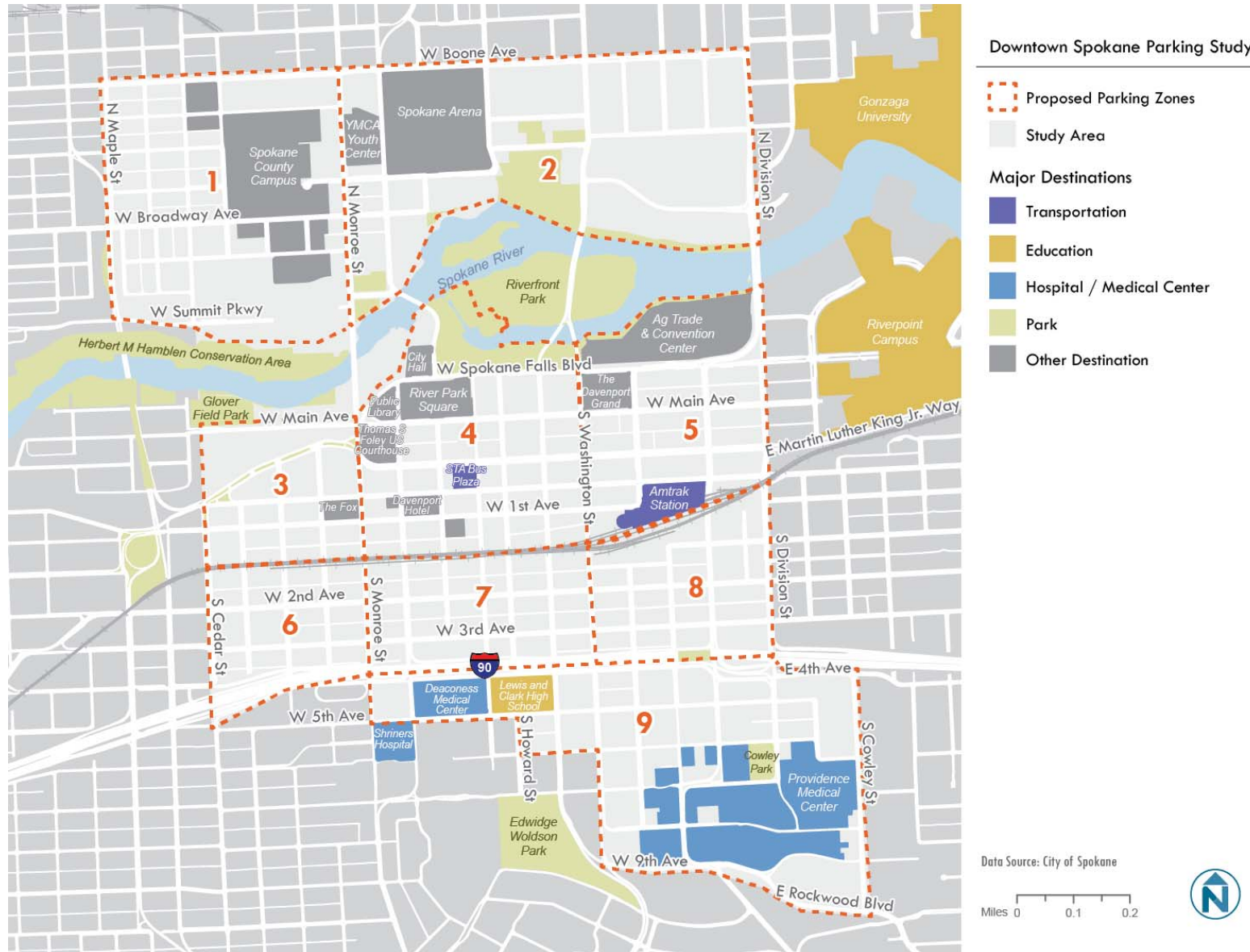
OVERALL INVENTORY

The downtown study area has a total of **almost 37,000 parking spaces.** These spaces take up approximately **29% of land within the study area, and up to 40% in the Arena zone.**

Inventory is summarized by general space type and zone in Figure 5-2. How those spaces occupy land in the zones and study area are shown in Figure 5-3. Figure 5-4 illustrates the density of parking spaces throughout the study area in a simplified map. Key data points are highlighted below.

The downtown study area has a total of almost 37,000 parking spaces. These spaces take up approximately 29% of land within the study area.

Space Types

- **Over one-third of parking in the study area is off-street paid parking available to the public.** The majority of that parking is concentrated in the Downtown Core, in the Convention Center area, and by the Spokane arena.
- Twelve percent of parking in the study area is available to **customers of businesses only**. The largest portion of this parking is in the Arena neighborhood.
- On-street metered parking (provided and operated by the City of Spokane) accounts for **9% of parking in the study area**.

Zones

- **Nearly 60% of parking is split between three areas** – the Downtown Core, the Arena neighborhood, and the Hospital District. The Spokane County campus has the next highest portion, with 11% of the total parking inventory.
- The Arena zone has the highest portion of its land occupied by parking at 40%. This is due to the **high number (6,000) of surface parking spaces** in this area—most related to the Spokane Memorial Arena itself.
- The Downtown Core has the **lowest proportion of its land occupied by parking** at 19%, and the lowest land area consumed per space at 137 SF per space. This is due to the high number (4,600) of structured parking spaces in this area.

On Street 15%
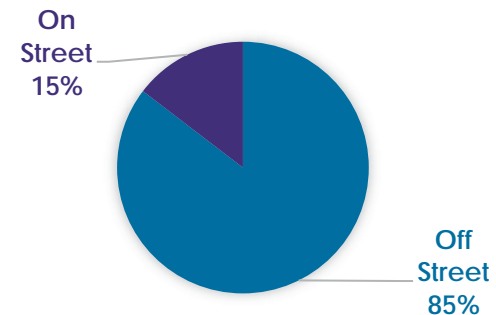
Off Street 85%

Overall

- As illustrated in Figure 5-4, there appear to be **four primary parking 'sheds'** – the Downtown core, the Hospital District, the Arena zone, and the Spokane County campus.

Figure 5-2 Overall Parking Inventory, by Zone (On- and Off-Street)

Simplified Space Type	Total Spaces	% of all Spaces	1 - Spokane County Campus	2 - Arena Neighbor hood	3 - West End	4 - Downtown Core	5 - Conventi on Center	6 - West End South	7 - Southern Downtown Core	8 - East End South	9 - Hospital District
Off-Street: Public Paid	12,482	34%	674	2,817	335	4,231	2,146	0	881	246	1,152
Off-Street: Customer	4,688	12%	580	1,449	258	270	374	176	450	585	546
Off-Street: Not Field Checked*	4,401	12%	62	334	276	710	110	248	116	63	2,482
On-Street: Metered	3,181	9%	309	200	402	577	430	255	375	240	393
Off-Street: Medical	2,546	7%	108	299	0	0	0	224	0	4	1,911
Off-Street: Employee	2,196	6%	534	471	336	51	84	0	0	44	676
On-Street: Open (Free)	1,654	5%	705	260	7	8	3	82	17	138	434
Off-Street: Reserved	1,344	4%	379	130	80	289	93	25	209	42	97
Off-Street: Private	1,126	3%	35	111	123	50	18	582	62	103	42
Off-Street: Resident	924	3%	216	422	24	20	60	8	10	68	96
On- and Off-Street: ADA	819	2%	101	204	30	113	79	24	80	45	143
On- and Off-Street: Other	616	2%	29	28	9	42	22	433	7	7	39
On- and Off-Street: Loading	440	1%	25	34	45	153	65	22	26	15	55
On- and Off-Street: University/School	208	1%	6	0	0	0	27	0	79	89	7
On- and Off-Street: Service Vehicles	196	1%	149	6	5	9	6	0	7	14	0
Total	**36,821**	**100%**	3,912	6,765	1,930	6,523	3,517	2,079	2,319	1,703	8,073
Share of All Spaces	100%		11%	18%	5%	18%	10%	6%	6%	5%	22%

* Off-street, not field-checked spaces include all spaces data collectors were unable to gain access to for field checking. Multiple attempts were made to access each site.

Figure 5-3   Land Area Allocated to Parking, by On/Off-street and Zone

Zone	Off-street Parking					On-street Parking		Total Parking Land Area	Total Zone Land Area	% of Land Consumed by Parking
	# Structured Spaces	# Surface Spaces	# Total Spaces	Land Area	Land Area per Space	# Spaces	Land Area*			
1) Spokane County Campus	13	2,819	2,832	1,213,917	430	1,080	172,800	1,386,717	5,534,621	25%
2) Arena Neighborhood	228	6,046	6,274	2,611,474	428	491	78,560	2,690,034	6,702,498	40%
3) West End	601	863	1,464	368,885	252	466	74,560	443,445	1,970,755	23%
4) Downtown Core	4,598	1,155	5,753	691,005	120	770	123,200	814,205	4,253,600	19%
5) Convention Center	1,417	1,598	3,015	894,130	297	502	80,320	974,450	3,335,168	29%
6) West End South	29	1,673	1,702	569,213	334	377	60,320	629,533	1,777,395	35%
7) Southern Downtown Core	117	1,777	1,894	725,138	383	425	68,000	793,138	2,419,847	33%
8) East End South	0	1,302	1,302	579,070	445	401	64,160	643,230	2,375,774	27%
9) Hospital District	4,997	2,208	7,205	1,481,216	206	868	138,880	1,620,096	5,887,559	28%
Total - Entire Study Area	**12,000**	**19,441**	**31,441**	**9,134,049**	**291**	**5,380**	**860,800**	**9,994,849**	**34,257,218**	**29%**

* based on an assumed 160 square feet per space

Figure 5-4   Density of On- and Off-street Inventory
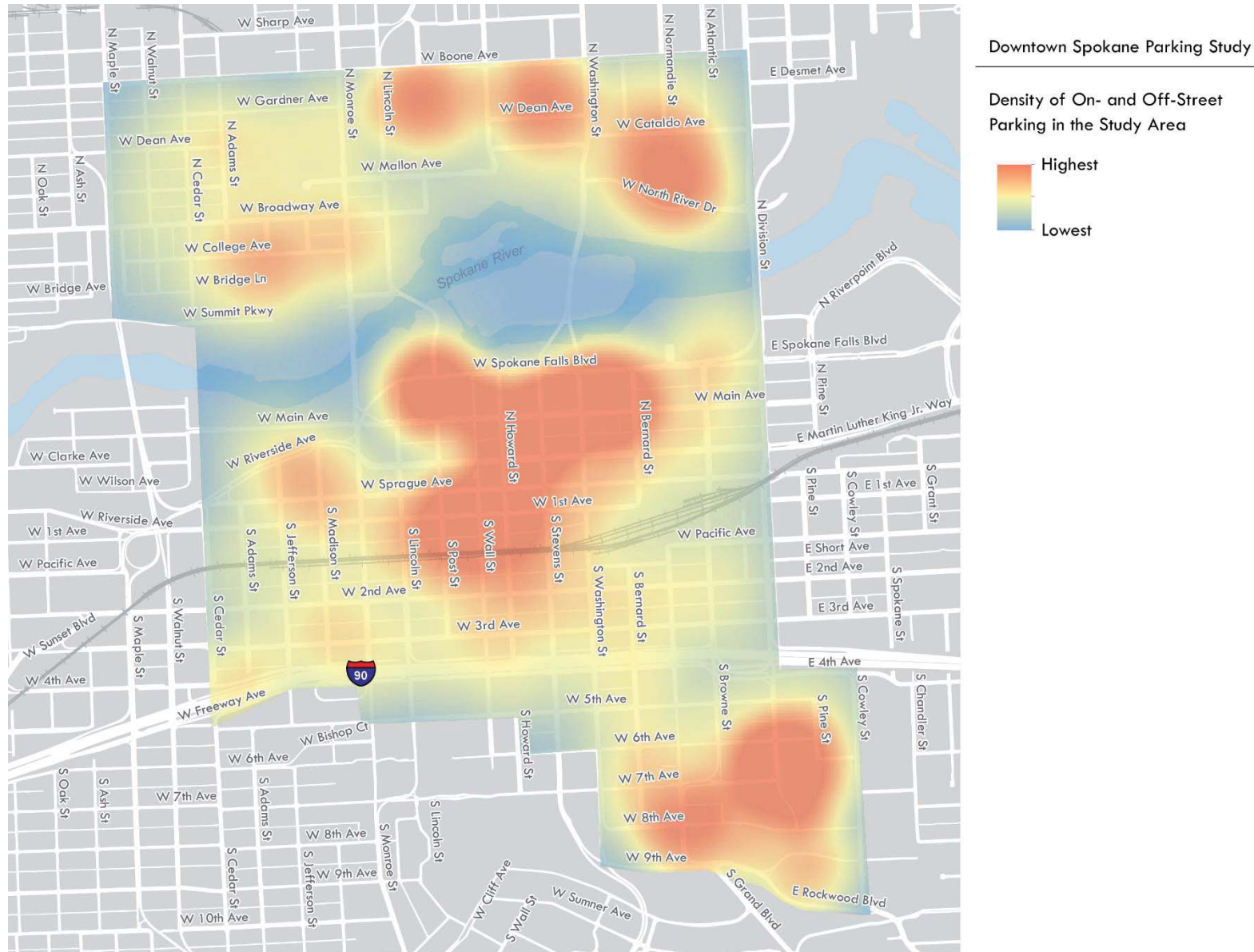
ON-STREET PARKING

Figure 5-5 presents a more detailed summary of on-street parking spaces in the study area. Overall, there are **nearly 5,400 on-street spaces.** Nearly one-third of those spaces are 2-hour metered spaces, and another 30% are unregulated/free spaces. Another quarter of spaces are All-Day metered and 4-hour metered spaces (21% and 6%, respectively).

The remaining 8% of spaces are different types of loading zones and other specific use spaces (e.g., ADA, police only). There are **only six designated on-street ADA spaces** in the Downtown study area[5].

Figure 5-6 illustrates how those space types are distributed over the study area geographically, with additional detail about loading zones illustrated in Figure 5-7.

Figure 5-8 breaks down the spaces and space types by zone. One-fifth of on-street spaces are in the Spokane County campus area, and most of these are free. Sixteen percent are in the Hospital District, and these spaces are split between free and metered spaces. Fourteen percent are in the Downtown Core, with most of these being metered spaces or loading zones.

Commercial and 10-minute loading zones are concentrated in the Downtown Core and adjacent zones. Passenger/taxi loading zones are mainly located in the Convention Center, Arena, and Downtown Core areas.

Figure 5-5   On-street Inventory, by Regulation Type

Regulation Type	# Spaces	% Spaces
2-hour Metered ($1.20/hr.)	1,714	31.9%
Unregulated (Free)	1,606	29.9%
All-Day Metered ($0.40/hr.)	1,130	21.0%
4-hour Metered ($0.80/hr.)	337	6.3%
Commercial Loading Zone	192	3.6%
10-minute Loading Zone	116	2.2%
Passenger/Taxi Loading Zone	96	1.8%
Other	67	1.2%
3-hour (no meter)	48	0.9%
Police Only	43	0.8%
Other Loading & Delivery	23	0.4%
Disabled	6	0.1%
Total	**5,378**	**100%**

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[5] Parkers utilizing handicapped placards can park at any meter without a fee.

Figure 5-6   On-street Regulations and Pricing

Figure 5-7   On-Street Loading Zones
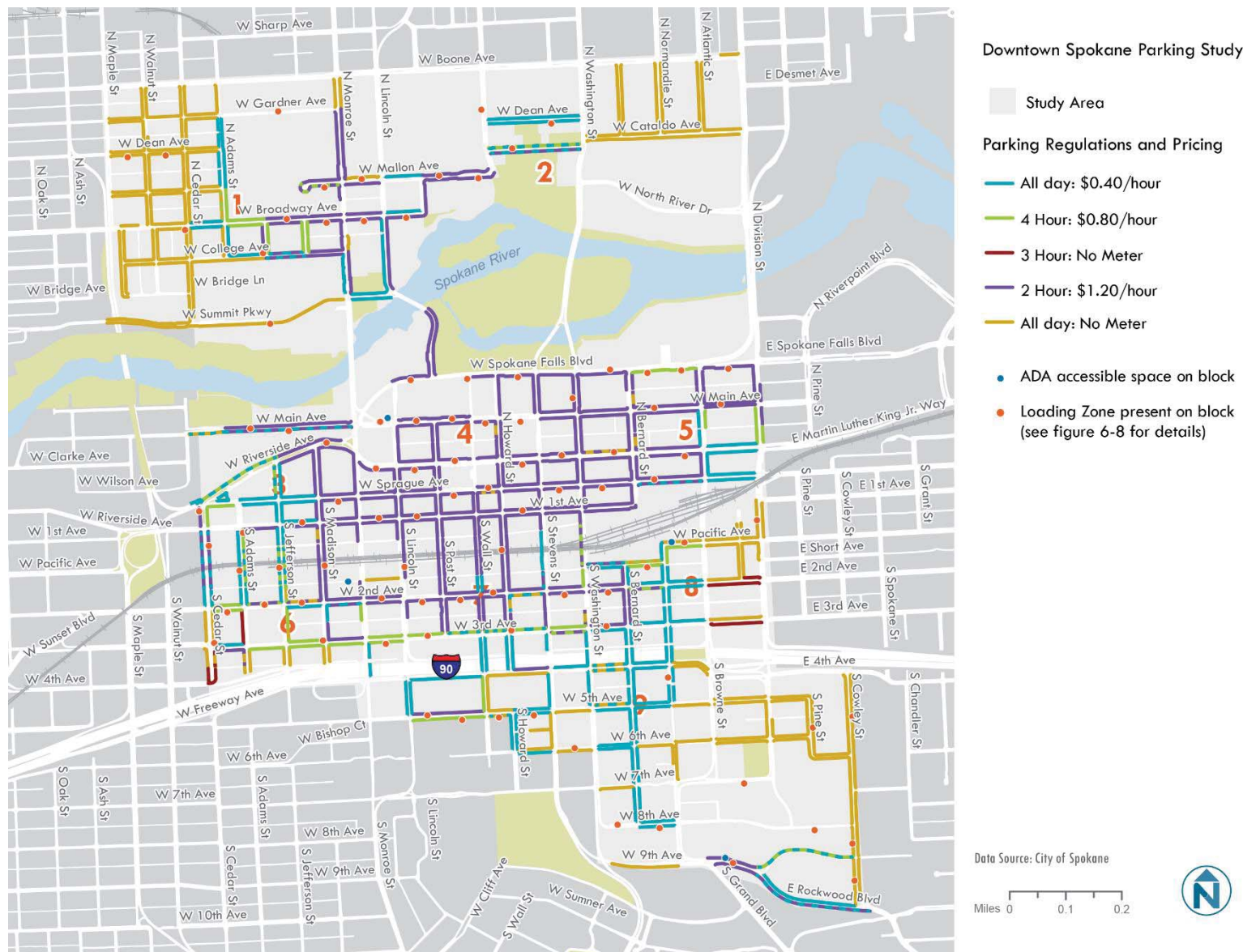
Figure 5-8   Summary of On-Street Regulations and Pricing, by Zone

Regulation Type	# of Spaces	1 Spokane County Campus	2 Arena Neighborhood	3 West End	4 Downtown Core	5 Convention Center	6 West End South	7 Southern Downtown Core	8 East End South	9 Hospital District
2-Hour Metered ($1.20/hr.)	1,714	94	76	190	564	358	90	240	54	48
Open (Free)	1,606	705	260	7	8	3	56	17	116	434
All-Day Metered ($0.40/hr.)	1,130	132	123	178	0	53	78	88	145	333
4-Hour Metered ($0.80/hr.)	337	83	1	34	13	19	87	47	41	12
Commercial Loading Zone	192	12	5	23	75	20	12	16	12	17
10-Minute Loading Zone	116	0	2	20	56	15	10	7	3	3
Passenger/Taxi Loading Zone	96	7	23	2	20	25	0	3	0	16
Other	67	12	0	9	6	8	17	4	7	4
3-Hour (no meter)	48	0	0	0	0	0	26	0	22	0
Police Only	43	31	0	3	8	0	0	1	0	0
Other Loading & Delivery	23	2	0	0	19	0	0	2	0	0
Disabled	6	2	0	0	1	0	1	0	1	1
Total Spaces	5,378	1,080	490	466	770	501	377	425	401	868
Proportion of Total Spaces	100%	20.1%	9.1%	8.7%	14.3%	9.3%	7.0%	7.9%	7.5%	16.1%

Note: Monday – Friday Regulations shown. Some loading zones only in effect Monday – Friday, metered spaces not in effect Sundays.

OFF-STREET PARKING

There are a total of **31,441 off-street spaces** in the downtown study area. Figure 5-9 presents a breakdown of the unique space *types* by zone, which is a different view of the data than in earlier tables. A portion of off-street spaces (11%) are shared between different uses. Therefore, the number of unique space *types* (30,995) adds up to more than the number of unique field checked *spaces* (27,040).

The total estimated number of spaces is also shown, which includes spaces that **were unable to be field-checked** because of access issues for surveyors. A total of 4,401 estimated spaces were not field-checked, representing 13.7% of the total off-street inventory. The majority (56%) of these spaces were in the Hospital District.

More than half of off-street parking spaces in the study area are restricted and not available to the general public for all or a portion of the day.

Spaces that could not be field-checked by surveyors were estimated based on the average land area per space based on facility type (structured vs. surface) and analysis zone. They are shown separately and are assumed to be private lots reserved for private usage. Figure 5-10 and Figure 5-11 illustrate the distribution of space types by zone and geography.

Key findings of the off-street inventory include:

- Approximately 43% percent of off-street parking is **paid parking available to the general public**.
- **None of the off-street spaces in the study area are owned and operated by the City of Spokane** – this means the City has very little control over pricing and regulation of off-street facilities.
- Most of the paid and publicly available parking is **concentrated in the Downtown Core**, the Convention Center, the Arena neighborhood, and the Hospital District.
- Most remaining parking is **reserved for specific uses**. Thirteen percent is reserved for customers/clients, 9% is reserved for medical patients and medical employees, 7% is reserved for other employees. Other uses include hotels, residents, car dealerships, church, and others.
- The Southern Downtown Core and the East End South areas have the **highest proportion of shared parking** – nearly 30% of their spaces are shared between multiple uses, such as being reserved for employees during the day and being priced for the public in the evening.

Nearly 30% of spaces in southeastern downtown are shared between uses – this allows employees to park during the day, and the public to park at night.

Figure 5-9   Off-street Inventory, by Zone, Space Type, and Unique Spaces

Space Type	# of Spaces	% of Total	1 - Spokane County Campus	2 - Arena Neighborhood	3 - West End	4 - Downtown Core	5 - Convention Center	6 - West End South	7 - Southern Downtown Core	8 - East End South	9 - Hospital District
Public Paid	13,321	43%	674	3,068	429	4,276	2,301	0	940	246	1,387
Customer/Client Parking	3,769	13%	474	1,051	231	82	285	176	434	572	464
Other Reserved	3,343	11%	379	151	80	289	93	111	678	403	1,159
Medical Patient/Employee Parking	3,016	9%	108	299	0	0	0	224	0	4	2,381
Employee Parking	2,207	7%	537	479	336	51	84	0	0	44	676
Resident Parking	939	4%	216	422	24	20	75	8	10	68	96
ADA	833	3%	99	204	30	112	79	23	80	44	162
Hotel Parking	987	3%	0	826	14	62	52	0	0	33	0
Car Dealership	574	2%	0	0	0	0	0	512	62	0	0
Private Lot	566	2%	35	111	123	50	32	70	0	103	42
Carpool/Vanpool Parking	467	1%	9	7	0	0	0	416	0	0	35
Service Vehicle	224	0%	191	5	2	1	5	0	6	14	0
Church Parking	208	1%	106	0	13	0	0	0	15	0	74
Student/Staff Parking	188	1%	6	0	0	0	14	0	79	89	0
Other	115	0%	12	25	0	19	32	0	80	0	26

Figure 5-9 (continued) Off-street Inventory, by Zone, Space Type, and Unique Spaces

Space Type	# of Spaces	% of Total	1 - Spokane County Campus	2 - Arena Neighborhood	3 - West End	4 - Downtown Core	5 - Convention Center	6 - West End South	7 - Southern Downtown Core	8 - East End South	9 - Hospital District
Number of Space Types	**30,995**	**100%**	2,846	6,687	1,282	5,110	3,089	1,540	2,306	1,620	6,515
Proportion of Space Types			9%	22%	4%	16%	10%	5%	7%	5%	21%
Number of Shared Spaces	**3,955**		76	747	94	67	184	86	528	381	1,792
Number of Unique Field-Checked Spaces	**27,040**		2,770	5,940	1,188	5,043	2,905	1,454	1,778	1,239	4,723
% Shared (out of Unique Field Checked)	**12.8%**		2.7%	11.2%	7.3%	1.3%	6.0%	5.6%	22.9%	23.5%	27.5%
Est. # of Non-field-checked Spaces	**4,401**		62	334	276	710	110	248	116	63	2,482
Est. # of Total Spaces	**31,441**		2,832	6,274	1,464	5,753	3,015	1,702	1,894	1,302	7,915

Note: Non-field-checked spaces estimated based on average area per space by facility type (structured or surface) and zone

Figure 5-10 Off-Street Parking, by Primary Use*

Downtown Spokane Parking Study

Off-Street Parking Primary Use

- Paid
- Customer/Client Parking
- Private Lot
- Public Parking
- Resident Parking
- Employee Parking
- Car Dealership
- Church Parking
- Student/Staff Parking
- University Visitor Parking
- Hotel Parking
- Medical Patient/Employee Parking
- Valet
- Loading Zone
- Service Vehicle
- ADA
- Other Reserved
- Unknown
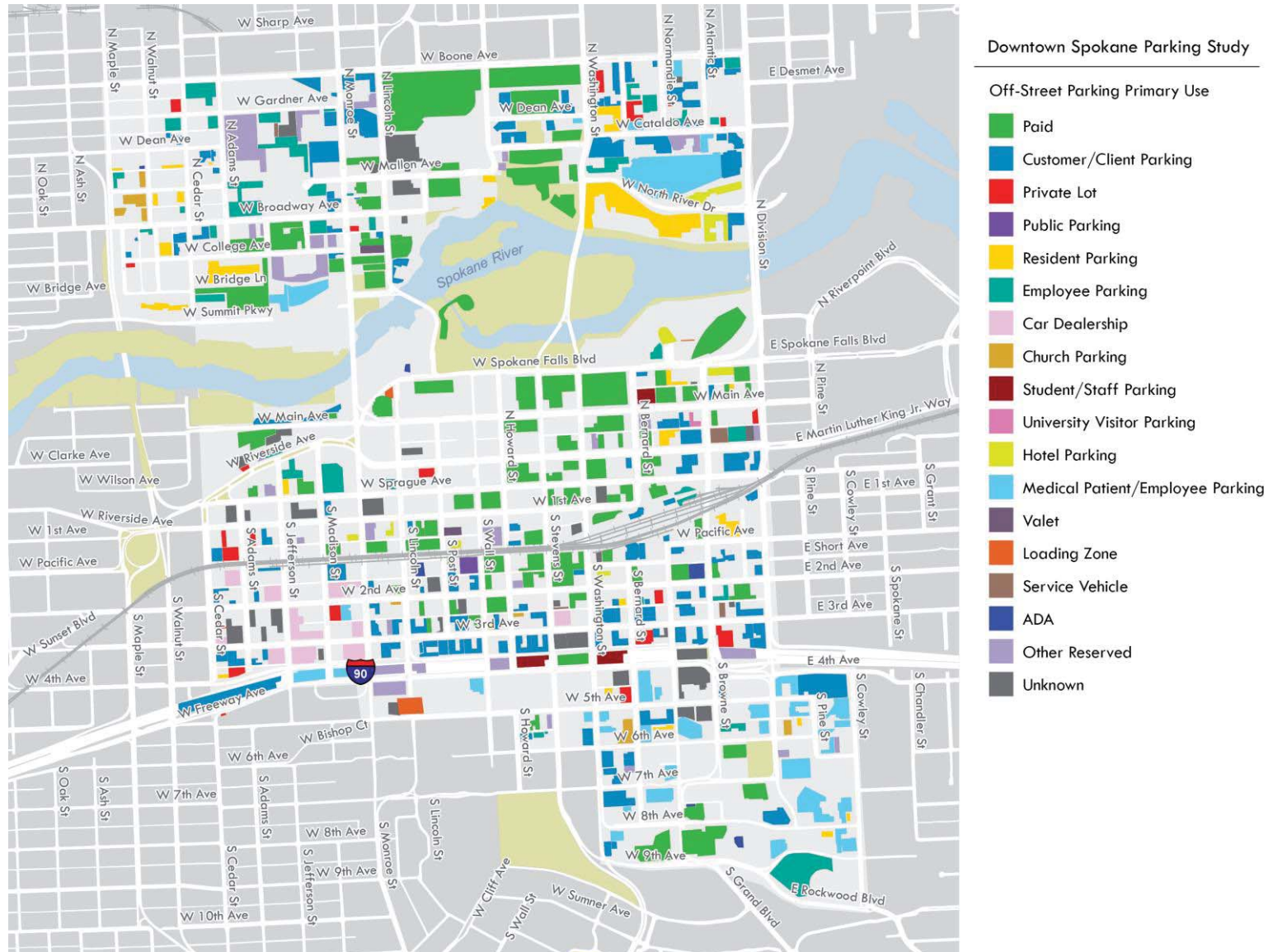
* "Primary Use" refers to the largest proportion of spaces for each facility

PRICE COMPARISON

As shown in Figure 5-11, 53% of off-street parking and 41% of on-street parking is priced (within the study area). Conversely, 47% of off-street parking and 59% of on-street parking is free. A **large portion of this free off-street parking is not available to the general public** as it is reserved for specific uses – this is discussed in the next section.

Figure 5-12 compares the average hourly rate (per space) for all priced parking in each zone. Where priced off-street parking is available (each zone except West End South), it consistently **exceeds the price of priced on-street parking**. Off-street parking in the Downtown Core is **over twice as expensive (per hour)** as on-street parking in the same area.

Figure 5-11 Priced and Free Spaces, by Zone

Zone	Off-street Parking			On-street Parking		
	# Priced	# Free	% Priced	# Priced	# Free	% Priced
1) Spokane County Campus	425	2,345	85%	309	771	71%
2) Arena Neighborhood	2,962	2,978	50%	200	291	59%
3) West End	248	940	79%	402	64	14%
4) Downtown Core	4,361	682	14%	583	187	24%
5) Convention Center	2,270	635	22%	436	66	13%
6) West End South	0	1,454	100%	252	125	33%
7) Southern Downtown Core	762	1,016	57%	375	50	12%
8) East End South	161	1,078	87%	240	161	40%
9) Hospital District	1,910	3,523	65%	394	474	55%
Total	**13,099**	**14,651**	**53%**	**3,191**	**2,189**	**41%**

Figure 5-12 Off-street vs. On-street Average Hourly Rate Comparison (Priced Parking Only)
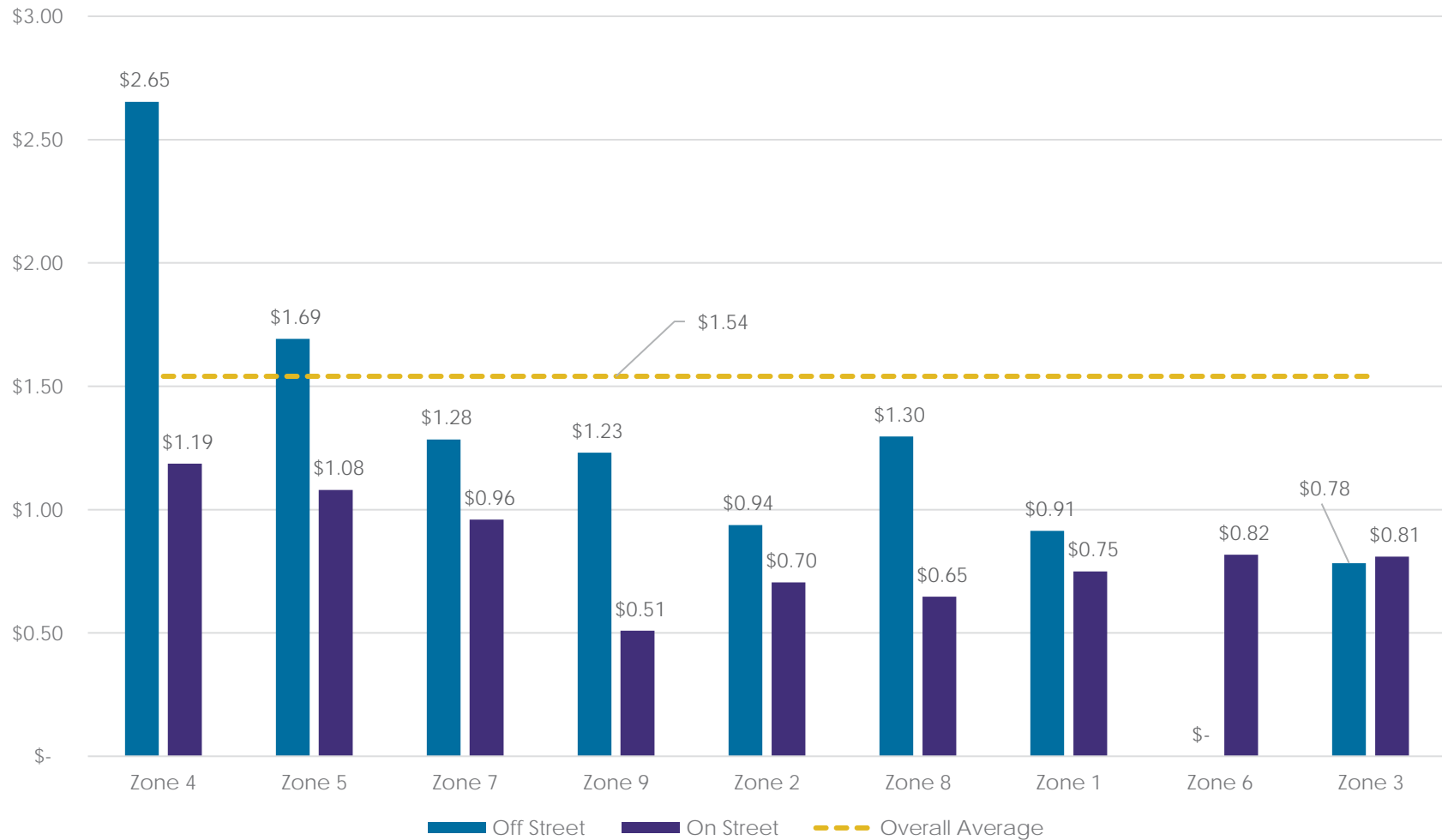
PUBLIC ACCESSIBILITY

Figure 5-13 summarizes the public and private ownership and access to parking by zone.

- **Less than half (45%) of all parking in the study area is paid and publicly available at all times** – 36% is off-street privately owned lots, and 9% is on-street.

- One fifth (21%) is privately **owned and available to the public on a limited basis** – typically this is customer, client, or patient parking. The largest concentrations of this type of parking are in the Hospital District and the Arena area.

- Over one quarter (28%) is privately owned and **only available to private motorists** – these are spaces reserved for employers, employees, patients, residents, and car dealership inventories.

- **Only 5% of parking is publicly owned and free** – these are on-street spaces open to the general public.

A substantial portion of off-street parking is reserved for specific users and not available to the general public for all or a portion of the day.

Figure 5-13 Public Accessibility of Parking

Public Accessibility	# of Spaces	% of Spaces	1 - Spokane County Campus	2 - Arena Neighborhood	3 - West End	4 - Downtown Core	5 - Convention Center	6 - West End South	7 - Southern Downtown Core	8 - East End South	9 - Hospital District
Privately Owned, Publicly Available (Paid, Off-street)	13,295	36%	773	3,021	365	4,343	2,225	23	961	290	1,294
Privately Owned, Privately Available	10,487	28%	1,305	1,644	877	1,121	392	863	476	409	3,400
Publicly Owned, Publicly Available (Paid, On-street)	3,187	9%	311	200	402	578	430	256	375	241	394
Privately Owned, Limited Public Use	7,582	21%	709	1,604	220	289	393	816	451	589	2,511
Publicly Owned, Publicly Available (Free)	1,744	5%	719	260	16	33	11	99	23	145	438
Loading/Service Vehicles	526	1%	95	36	50	159	66	22	33	29	36
Total	**36,821**	**100%**	**3,912**	**6,765**	**1,930**	**6,523**	**3,517**	**2,079**	**2,319**	**1,703**	**8,073**
Proportion of Spaces			**11%**	**18%**	**5%**	**18%**	**10%**	**6%**	**6%**	**5%**	**22%**

TOP FIVE TAKEAWAYS

1. **There are almost 37,000 parking spaces in the downtown study area.** On-street parking spaces make up just less than 15% of the overall parking inventory. In the Downtown Core (Zone 4), on-street parking is less than 12% of the total supply.

2. **Nearly one-third (29%) of land in the study area is occupied by parking**. This varies from 19% in the Downtown Core to 40% in the Arena neighborhood. Areas with more structured parking had lower rates of land consumption by parking and lower average area per space.

3. **About half of all parking in the study area is publicly available <u>at all times</u>.** Thirty-six percent is in off-street privately owned lots, 9% is in paid on-street spaces, and 5% is in free off-street spaces. On-street spaces are maintained and operated by the City of Spokane.

4. **Half of all parking in the study area is reserved for particular uses, and not available to the general public <u>for all or a portion of the day</u>**. The general public can use 21% of the parking if they are customers, clients, or students at the respective business, office, or institution. The other 29% of the parking is reserved for private motorists at all times – employees, residents, deliveries, etc.

5. **Off-street parking in the Downtown Core is over twice as expensive (per hour) as priced on-street parking in the same area**. The gap between on- and off-street rates is persistent throughout the study area, with the starkest differences in rates being in areas adjacent to the Downtown Core and the Hospital District.

6 PARKING UTILIZATION – HOW MANY VEHICLES PARK DOWNTOWN?

This chapter summarizes parking utilization in the downtown study area. It documents how many vehicles are parked downtown in both on- and off-street spaces on a "typical" day. The utilization study will allow the City, project team, and stakeholders to have a robust understanding about when and where vehicles are parked to identify current trends in demand.

It is important to emphasize that the data presented is **a "snapshot" summary,** highlighting basic trends on a representative set of days. Parking demand can and will vary from day to day. Additional and consistent data collection will be required to monitor trends over time.

For the sake of brevity, only the methodology and the combined utilization results are presented in this chapter. The separate on and off street utilization results are presented in Appendix A.

Field surveyors counted the number of vehicles in downtown to capture parking demand for a typical weekday, weekend, and special event.

METHODOLOGY

The IDAX data collection team conducted utilization counts for all on- and off-street spaces identified in the parking inventory (Chapter 5). Utilization counts were conducted **every two hours** during the following time periods to represent a typical weekday and a typical Saturday.

- **Weekday collection, from 6 a.m. to 10 p.m.** Data collection occurred over multiple weekdays (Tuesday, Wednesday, and Thursday) between April 10th and April 26th, 2018.

- **Saturday collection, from 10 a.m. to ~2 a.m.** Data collections occurred over multiple Saturdays – April 14th, 21st, and 28th of 2018.

Note that, throughout this chapter, the total supply surveyed for the utilization surveys will differ from the total supply counted in Chapter 5. This is primarily due to access issues which were inconsistent between inventory and utilization surveys – in some cases collectors were able to access facilities during the utilization collection, but not the supply collection, and vice versa. Additionally, there were also issues related to construction that may have occurred in one survey period, but not another. A summary of the supply surveyed compared with the full parking supply is available in Appendix A.

The team was also tasked with collecting utilization behavior for one special event demonstrating a likely peak demand for event parking in downtown Spokane. This event was selected to be the **Lilac Parade** because of its location within the study area and the timing of it relative to the other data collection efforts. The **Lilac Parade** took place on Saturday, May 19, 2018. This data collection occurred between 5 p.m. and 11 p.m. with counts occurring every hour. Data collected for the Lilac Parade was confined to the area shown in Figure 6-10, which extended east beyond the Downtown study area.

COMBINED UTILIZATION

This section combines on- and off-street utilization data to analyze Spokane's parking system demand as a whole. Throughout, on- and off-street utilization levels are compared to distinguish key differences.

Weekday

Figure 6-1 presents the weekday utilization for on- and off-street parking by zone and time of day. Key findings include:

- During the average weekday, parking utilization in the **study area peaks are 56% at 10 a.m. – 12 p.m.** 12 p.m. is also the peak total utilization for the **Downtown Core**, the heart of the study area and Spokane's parking program.
- While overall parking availability exists across the study area, certain sub-zones, blocks, and off-street facilities **had very high demand at peak periods.** In particular, **garages and surface lots within Main Street corridor and immediate core**, such as River Park Square, the Convention Center, and Parkade Plaza, were at or near capacity at peak period.

Figure 6-2 compares the on-street, off-street, and combined utilization profiles by time of day and zone. Key findings include:

- **Downtown Core.** On-street parking peaks at a different time *and* **at a higher occupancy rate than off-street parking** – peak utilization occurs at 6 p.m. near 75% for on-street parking and at 12 p.m. at near 65% for off-street parking. This trend is similar in the West End and the Convention Center areas, and appears to a less significant degree in the West End South, Southern Downtown Core, and East End South areas.
- **Arena neighborhood.** On-street parking peaks at a **higher occupancy rate (over 60%) during the mid-day** than off-street spaces (near 40%).This may be related to demand for parking in the adjacent Spokane County campus area or demand for parking by Gonzaga students.
- The **Spokane County campus and the Hospital District** have similar demand profiles between on- and off-street parking.

Figure 6-3 and Figure 6-4 illustrate peak parking utilization geographically. Key findings include:

- **Large off-street facilities in the northern part of the study area, such as the Arena lot, are underutilized.** The Arena lot is served by the City Ticket shuttle, and could be an opportune area for increased utilization.
- At 6 p.m., there is a mismatch in **utilization between immediately adjacent on- and off-street facilities**, which likely indicates motorists are responding to the different price signals – cheaper on-street parking (see Chapter 5) overall – as well as a significant share of off-street parking not available to the general public. For example, this discrepancy is pronounced along Sprague and Main streets, where off-street facilities have lower occupancy than adjacent curb spaces.

Figure 6-1 Combined (On + Off Street) Weekday Utilization, by Time of Day and Zone

Zone	Supply Surveyed (# of spaces)	Utilization by Time of Day							
		6 a.m.	8 a.m.	10 a.m.	12 p.m.	2 p.m.	4 p.m.	6 p.m.	8 p.m.
1) Spokane County Campus	3,440	25%	59%	68%	63%	65%	46%	28%	22%
2) Arena Neighborhood	6,609	12%	35%	40%	41%	40%	33%	18%	12%
3) West End	1,285	30%	46%	58%	60%	57%	47%	43%	36%
4) Downtown Core	4,792	18%	48%	61%	67%	65%	45%	37%	30%
5) Convention Center	3,342	23%	49%	55%	57%	48%	42%	36%	32%
6) West End South	1,222	23%	58%	66%	57%	50%	44%	24%	19%
7) Southern Downtown Core	2,069	11%	41%	51%	51%	46%	31%	17%	12%
8) East End South	1,509	15%	36%	46%	48%	38%	34%	24%	18%
9) Hospital District	7,094	29%	67%	74%	72%	68%	44%	27%	22%
Total	31,363	21%	50%	55%	56%	55%	41%	28%	22%

Figure 6-2   Combined (On + Off) Weekday Utilization Profile, by Zone
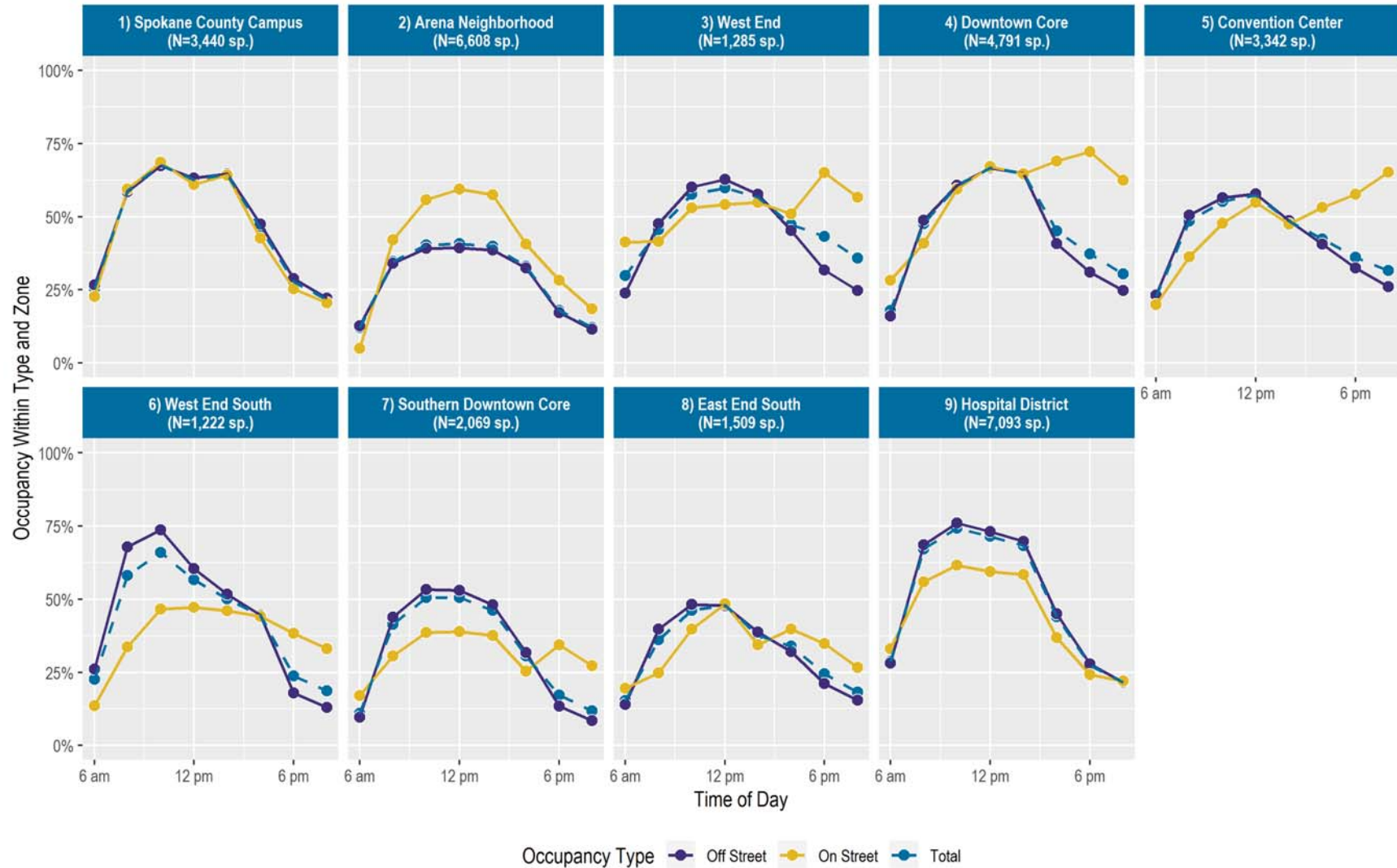
Figure 6-3   Weekday Combined Peak Utilization Map – Overall Study Area (12 p.m.)
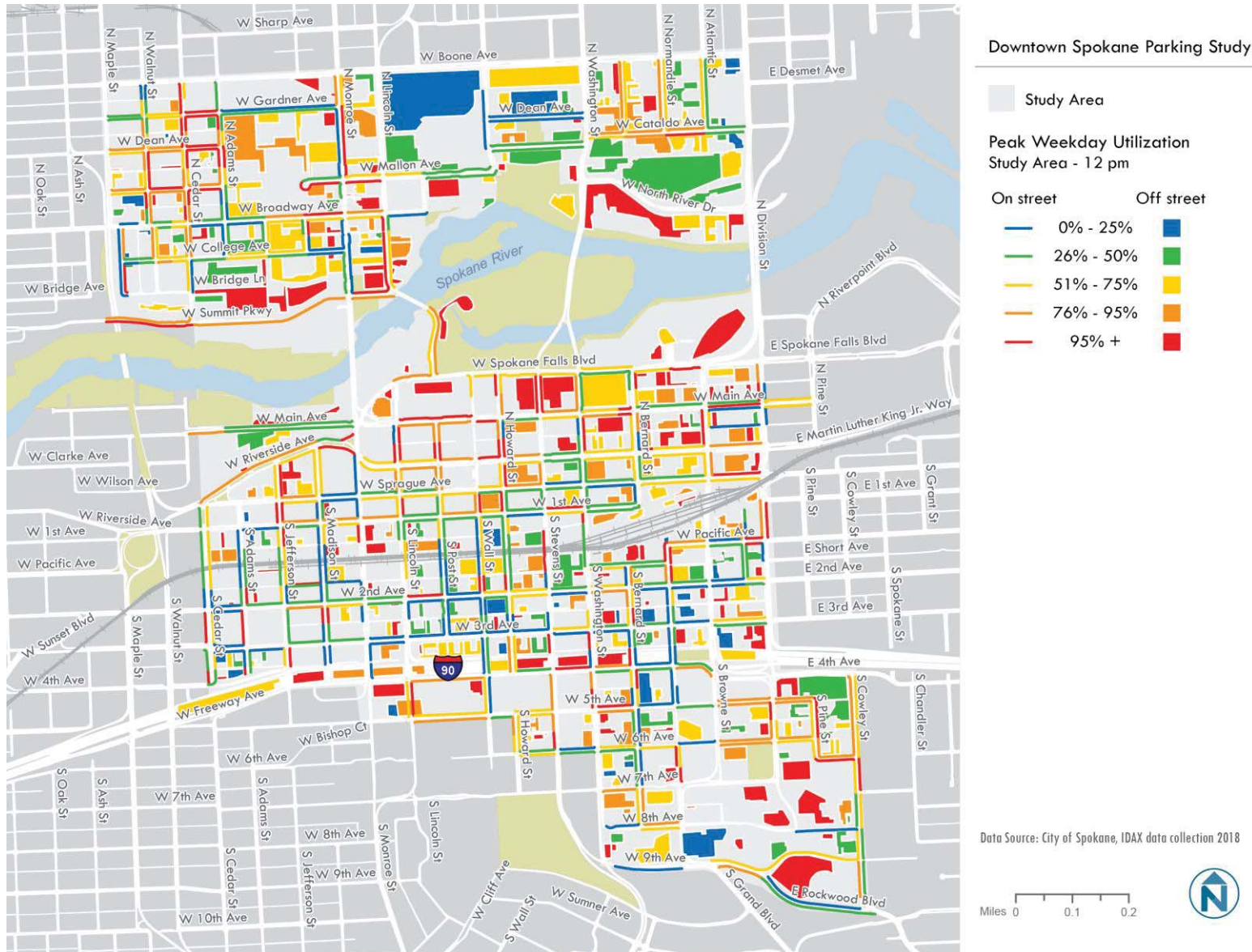
Figure 6-4   Weekday Combined Peak Utilization Map – Downtown Core (6 p.m.)
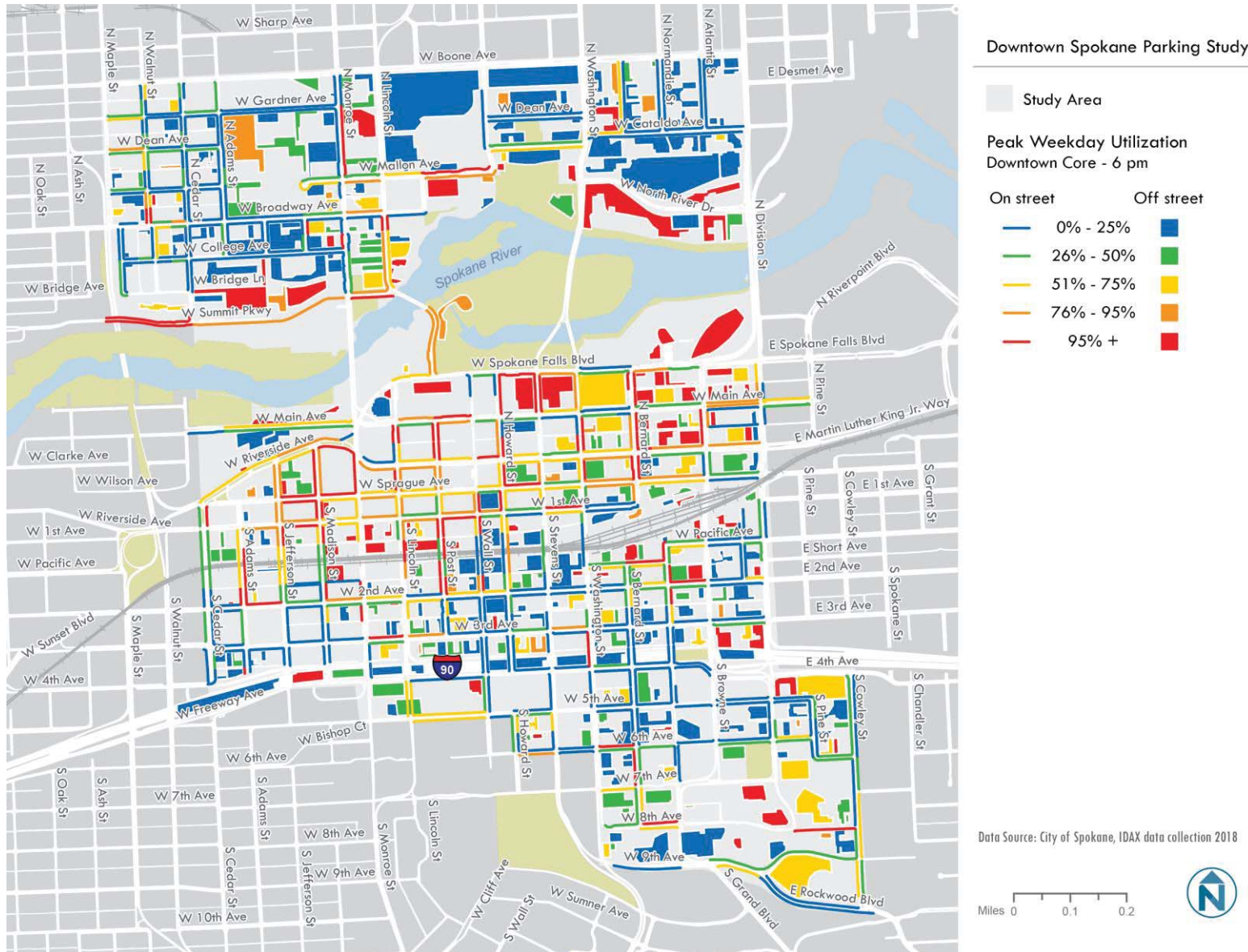
Saturday

Figure 6-5 presents the Saturday utilization for on- and off-street parking by zone and time of day.

- During the average Saturday, parking utilization **peaks at 31% at 6 p.m.**
- Utilization peaks in the **Downtown Core at 6 p.m. at 52%** and at 8 p.m. in the West End (56%) and Convention Center (55%).

Figure 6-6 compares the on-street, off-street, and combined utilization profiles by time of day and zone.

- In the six core[6] areas, on-street parking peaks at a higher rate and generally at a later time than off-street parking. This may reflect the different types of travel occurring on the weekends, as well as different price signals.

Figure 6-7 illustrates parking utilization geographically at the peak time of 8 p.m.

- Large **off-street facilities in the northern part of the study area**, such as the Arena lot, are underutilized.
- Off-street facilities south of the rail viaduct are also underutilized.
- Several blocks in the Downtown Core and Convention Center areas appear to have **high rates of on-street demand, but low rates of off-street demand**, reflecting price signals and restrictions on some off-street facilities.

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[6] Zones 3 – 7 – West End, Downtown Core, Convention Center, West End South, Southern Downtown Core, and East End South

Figure 6-5 Combined (On + Off Street) Saturday Utilization, by Time of Day and Zone

Zone	Supply Surveyed (# of spaces)	Utilization by Time of Day							
		10 a.m.	12 p.m.	2 p.m.	4 p.m.	6 p.m.	8 p.m.	10 p.m.	12 a.m.
1) Spokane County Campus	2,973	27%	29%	31%	28%	25%	23%	19%	16%
2) Arena Neighborhood	4,944	18%	18%	19%	20%	21%	18%	13%	11%
3) West End	1,356	33%	34%	34%	39%	44%	56%	45%	32%
4) Downtown Core	5,258	27%	40%	46%	44%	52%	47%	30%	21%
5) Convention Center	3,367	29%	33%	47%	44%	49%	55%	41%	34%
6) West End South	1,158	16%	22%	24%	22%	33%	32%	17%	11%
7) Southern Downtown Core	1,804	14%	16%	13%	13%	24%	19%	11%	9%
8) East End South	1,419	23%	28%	27%	24%	26%	23%	13%	8%
9) Hospital District	7,635	21%	21%	21%	19%	18%	14%	14%	14%
Total	29,914	23%	27%	29%	28%	31%	30%	21%	17%

Figure 6-6   Combined (On + Off) Saturday Utilization Profile, by Zone
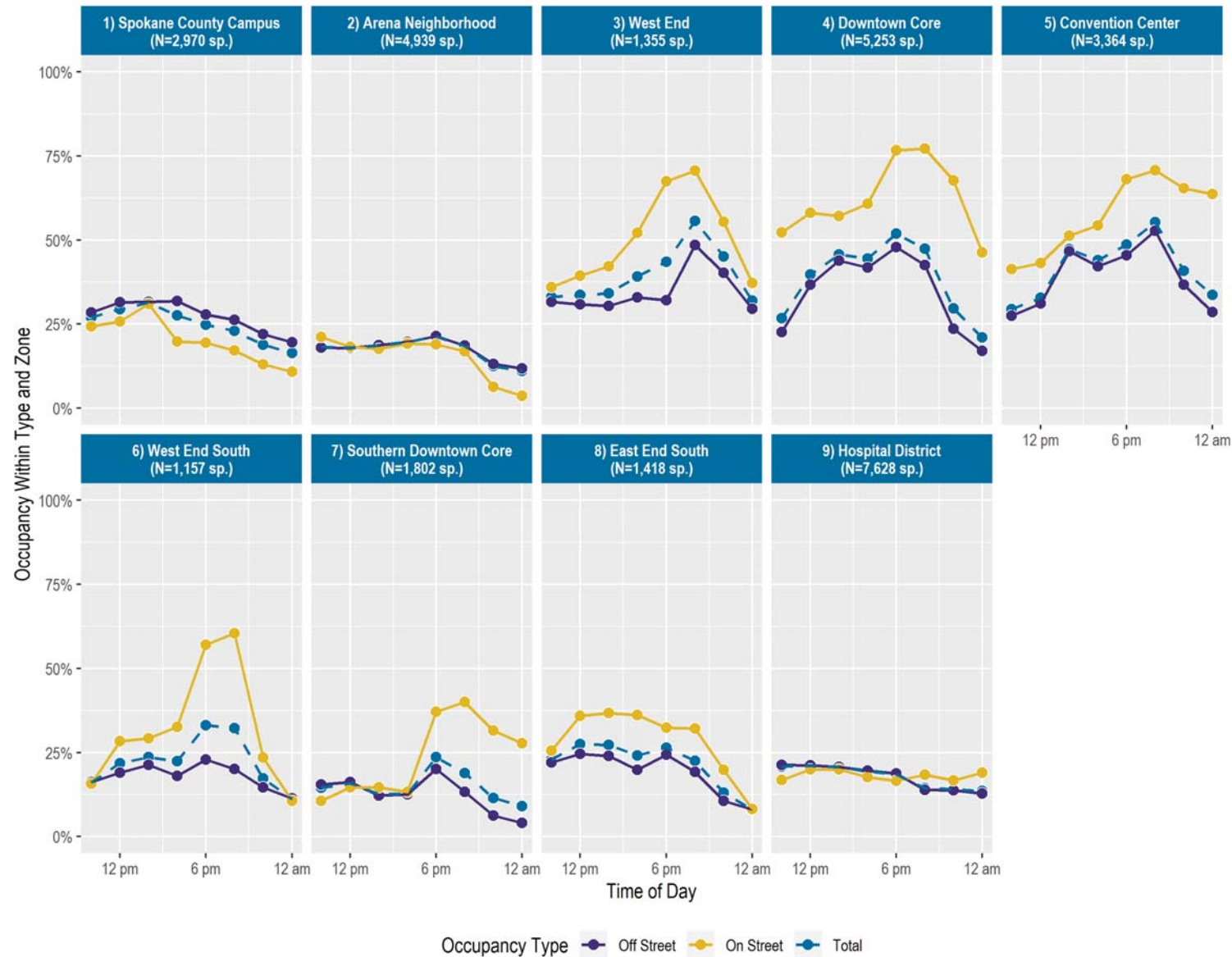
Figure 6-7   Saturday Combined Peak Utilization Map – Overall Study Area (8 p.m.)
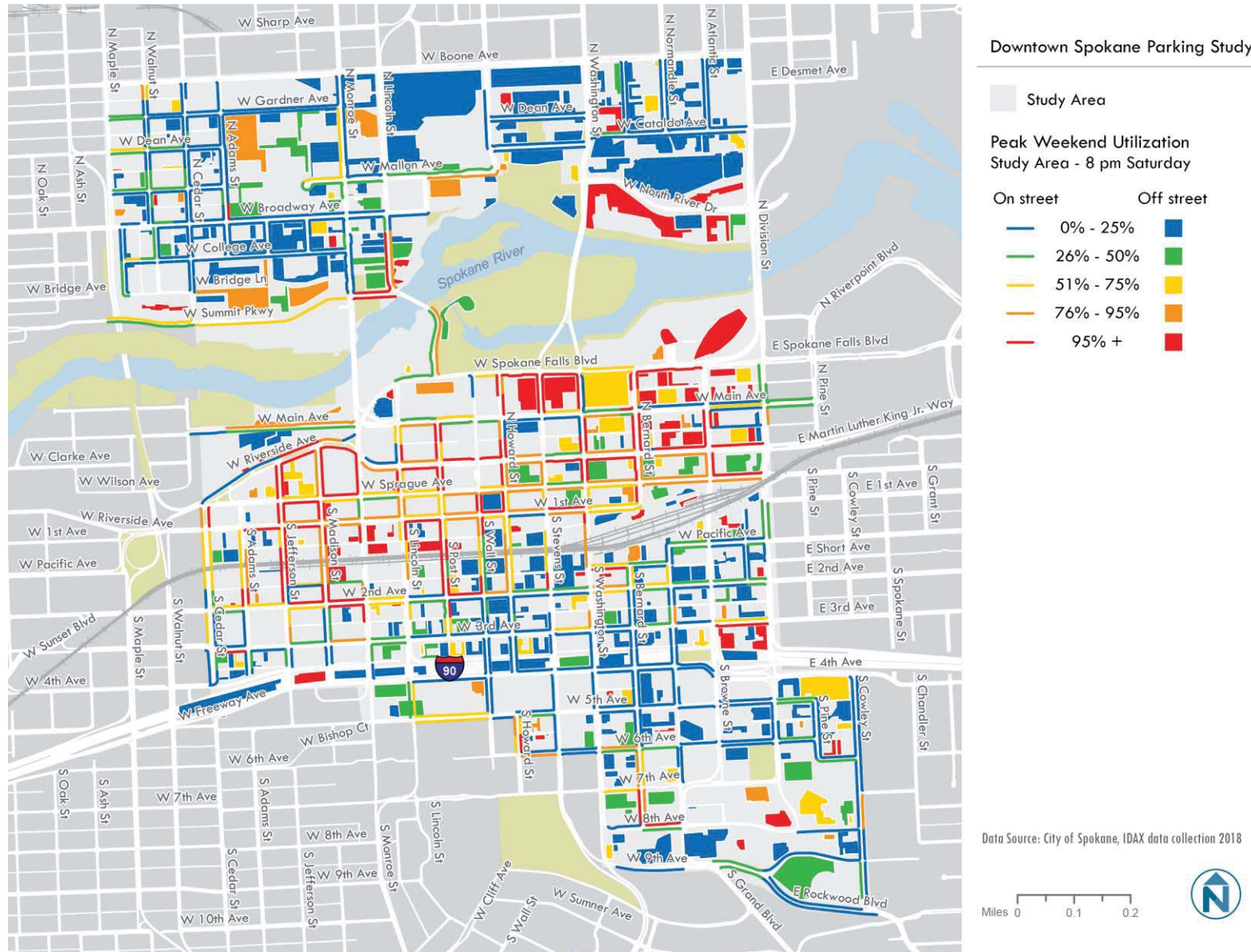
Lilac Parade

Figure 6-8 presents the Lilac Parade utilization for on- and off-street parking by zone and time of day. Note that the Lilac Parade study area includes a portion of the University District in the ESU/WSU Campus area.

- During the parade, parking utilization **peaked at 63% at 8 p.m.** over the entire study area.
- Utilization peaked in the **Downtown Core at 7 p.m. at 83%** and at 8 p.m. in the West End and Convention Center areas, at 82% and 66%, respectively.

Figure 6-9 compares the on-street, off-street, and combined utilization profiles by time of day and zone.

- The few on-street spaces available in the EWU/WSU Campus area (part of the University District) filled to near capacity at 8 p.m. Overall, the occupancy rate of that zone was still low at 26% at the 8 p.m. peak.
- The West End South area (which has nearly 60 free on-street spaces) **filled to capacity at 8 p.m.** The overall occupancy rate was nearly 60%.
- On-street parking peaked at a higher rate in all zones besides the Downtown Core, where the few **off-street spaces not blocked off were filled to capacity.**

Figure 6-10 illustrates parking occupancy geographically at the peak utilization time of 8 p.m.

Figure 6-8   Combined (On + Off Street) Lilac Parade Utilization, by Time of Day and Zone

Zone	Supply Surveyed (# Spaces)	Occupancy by Time of Day					
		5 p.m.	6 p.m.	7 p.m.	8 p.m.	9 p.m.	10 p.m.
2) EWU/WSU Campus (U District)	983	9%	13%	18%	26%	24%	17%
3) West End	580	55%	64%	77%	82%	73%	51%
4) Downtown Core	316	44%	60%	83%	81%	73%	59%
5) Convention Center	3,045	37%	50%	60%	66%	64%	53%
6) West End South	278	22%	25%	42%	58%	40%	24%
7) Southern Downtown Core	987	18%	39%	49%	57%	54%	29%
8) East End South	888	30%	37%	53%	72%	62%	37%
9) Hospital District	341	81%	90%	93%	91%	92%	89%
Total	7,418	33%	44%	55%	63%	59%	44%

Figure 6-9   Combined (On+ Off) Lilac Parade Utilization Profile, by Zone
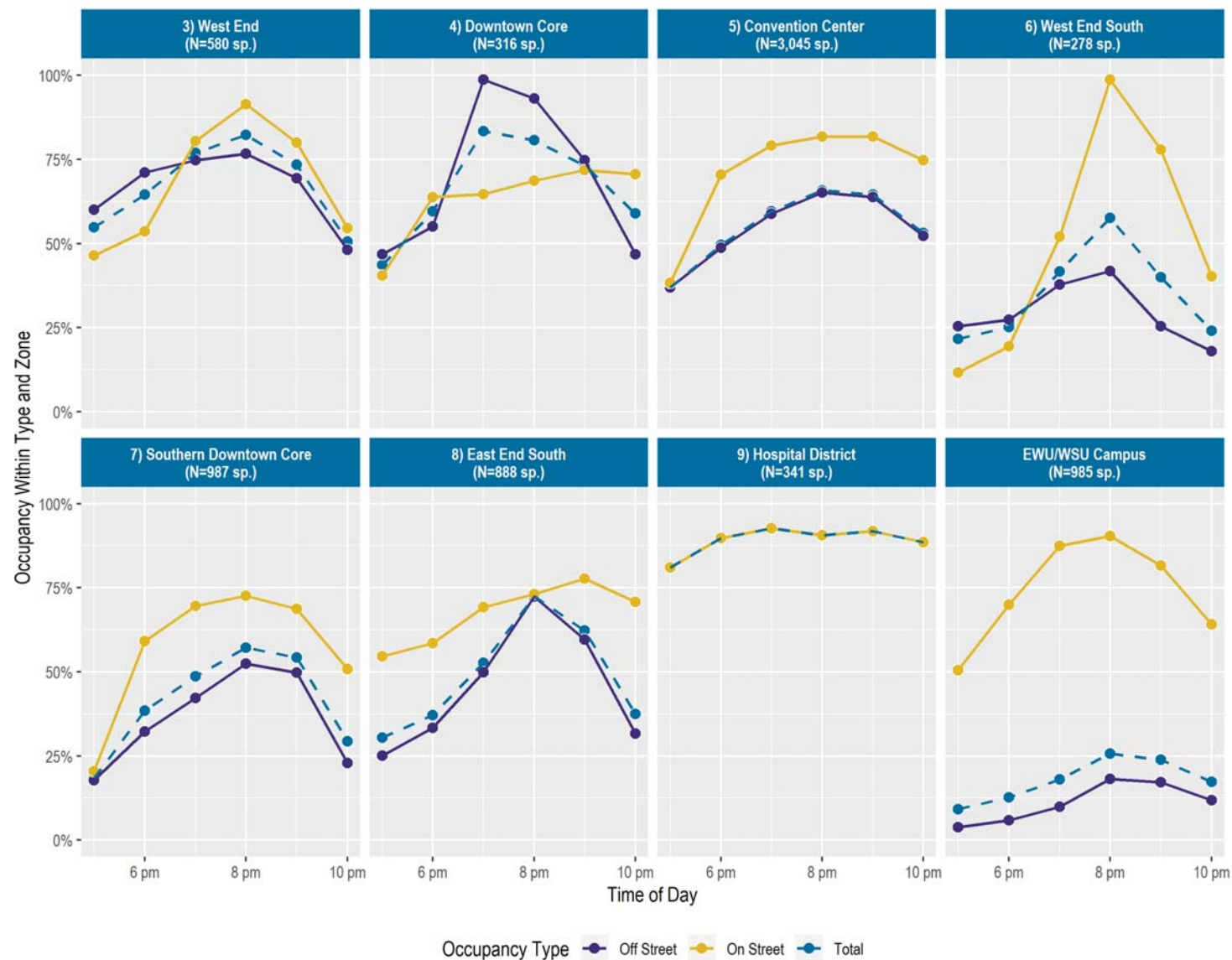
Figure 6-10 Lilac Parade Peak Utilization Map (8 p.m.)

Downtown Spokane Parking Study

Study Area

Parade Route

Lilac Parade Utilization
8 pm, Saturday May 19, 2018

On street	Off street	
		0% - 25%
		26% - 50%
		51% - 75%
		76% - 95%
		95% +

Data Source: City of Spokane, IDAX data collection 2018

Miles 0   0.2
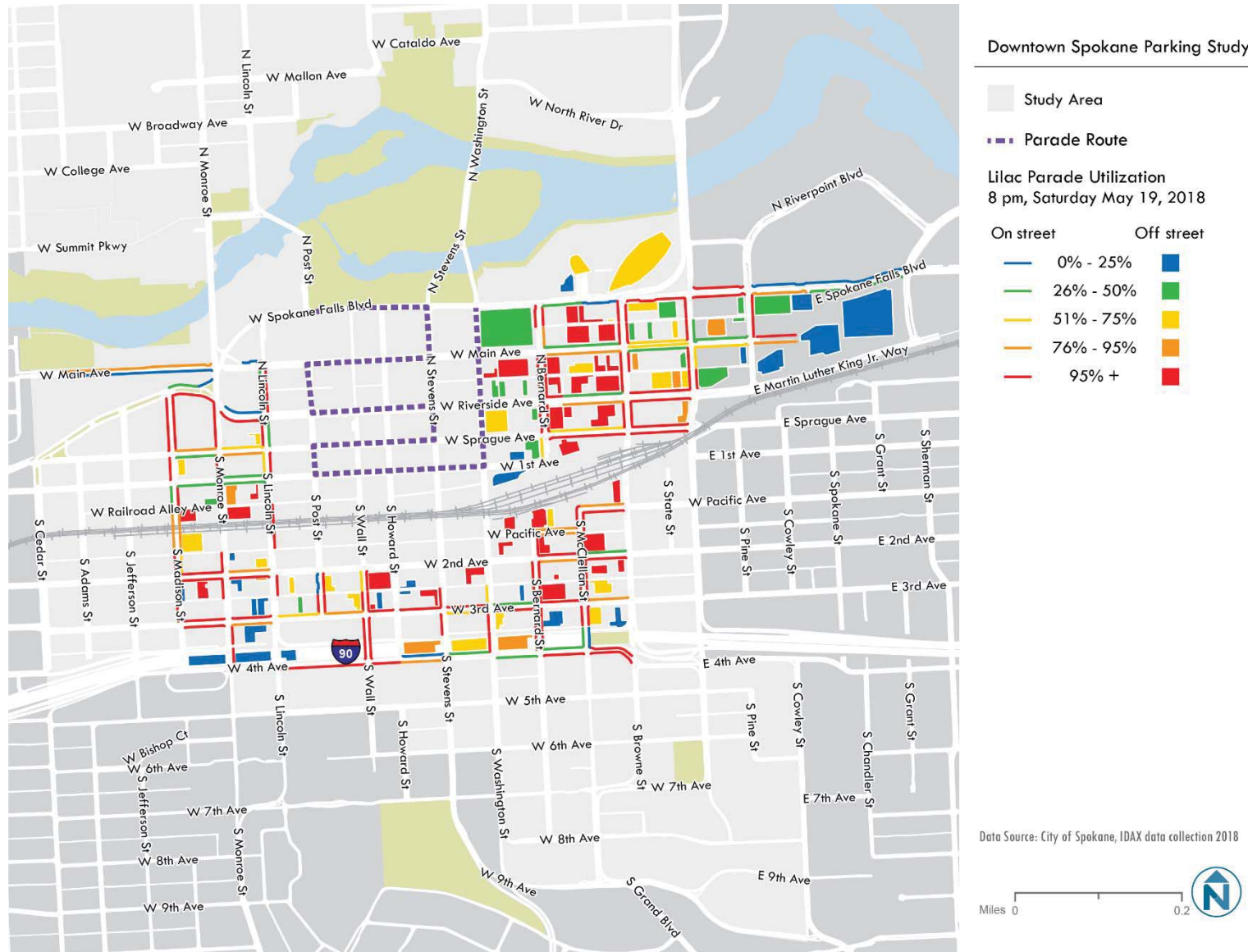
TOP FIVE TAKEAWAYS

1. In general, the **combined utilization levels indicate at least 20-25% available parking capacity** throughout the study area relative to an 85%-90% ideal occupancy level. Nevertheless, certain sub-zones, blocks, and off-street facilities **had very high demand at peak periods.** In particular, **garages and surface lots within Main Street corridor and immediate core**, such as River Park Square, the Convention Center, and Parkade Plaza, were at or near capacity at peak period. On-street spaces in higher demand areas (e.g., the Downtown Core) are also nearing capacity, but off-street parking and on-street parking within a few block walk is often underutilized.

2. A combination of **pricing signals** (i.e. on-street parking cheaper than off-street), **use restrictions** (i.e. parking reserved by user group), and **physical barriers** (e.g., Spokane River/Riverfront Park, railway/viaduct) incentivize motorists to look for on- and off-street (especially garages) parking within the Downtown Core.

3. **Free on-street spaces experience some of the highest utilization rates** in the study area. **Metered spaces in the Downtown Core, West End, and Convention Center** also have high occupancy levels.

4. The **Spokane County Campus** and the **Hospital District** experience peak demand in the morning, while the **Downtown Core** and adjacent zones experience peak demand in the late afternoon and early evening. Service-oriented land uses (e.g., government, medical) have a demand curve that peaks earlier then entertainment/shopping areas.

5. Overall peak demand in the study area on a typical weekend was low, reaching **30% at 6 p.m.** Weekend peak demand was **highest at 6 p.m. in the West End and Convention Center zones**, peaking at 56%. During the Lilac Parade, demand peaked at 83%, **with almost all on-street spaces occupied.**

7 DURATION AND TURNOVER

Within a mixed-use downtown like Spokane's, it is important to document parking behavior, notably the **length of time parked**. Many of the on-street spaces in downtown have a time limit, in addition to an hourly price. Time limits are designed to ensure that the most convenient on-street spaces are available for shorter trips. Yet, if a vehicle is parked all day long in front of a business, it limits access for other residents, visitors, or customers. Duration and turnover studies can also help identify if time limits need to be adjusted to better fit user needs.

METHODOLOGY

A *sample* duration/turnover survey was conducted for selected blockfaces (Figure 7-1), representing two high visitation areas in downtown Spokane.

Duration was monitored for two time periods: 1) a weekday between 7 a.m. and 10 p.m. and 2) a Saturday between 10 a.m. and 1 p.m. Parking duration was monitored by surveyors collecting the last four digits of every vehicle's license plate every 30 minutes during the study period.

This data was then processed by matching vehicles using the license plate digits and estimating the duration parked for each vehicle observation.

Figure 7-1   Duration and Turnover Study Area

SUMMARY OF RESULTS

Figure 7-2 presents a summary of the duration/turnover data for the entire study area by day type (weekday and Saturday) and space type.

- **Vehicles per space** indicates the level of turnover – 2-hour metered spaces and 10-minute loading zones saw between 5-7 vehicles per space (on average) during the survey.

- **Average stay** is calculated based on the estimated parking duration of each vehicle. The average stay for loading zones (both 10-minute and commercial) **exceeds their respective time limits of 10 minutes and 30 minutes.**

- **Violation rate** is estimated by comparing the estimated duration to the maximum time allowed (within operating hours) for each observation's space type.

- Roughly **5% of parkers during the survey period violated the 2-hour time limit** on metered spaces. About 6-12% of observations violated the 10-minute time limit on 10-minute loading zones, and 26%-32% violated the 30-minute time limit on commercial loading zones.

- **Unique vehicles.** The proportion of unique vehicles indicates that 7-8% of vehicles parking in 2-hour metered spaces parked in more than one space during the survey. Overall, 8% of parkers on weekdays parked in more than one space, and 6% of parkers on weekends parked in more than one space.

Data indicates that some motorists may be re-parking their vehicles to avoid the 2-hour limits.

Figure 7-2   Duration/Turnover Summary, by Day

Day Type	Space Category	# Spaces	# Vehicles	Vehicles per Space	Average Stay (minutes)	Violation Rate	# Unique Vehicles	% Unique Vehicles
Weekday	2-Hour Metered	180	1,159	6.44	76.1	5.4%	1,062	92%
	10-Minute Loading Zone	13	89	6.85	27.1	12.4%	87	98%
	Commercial Loading Zone	10	31	3.10	54.7	25.8%	29	94%
	Motorcycle Only	8	14	1.75	115.7	0.0%	14	100%
	Passenger/Taxi Loading Zone	2	4	2.00	22.5	0.0%	4	100%
	Total	**213**	**1,297**	**6.09**	**72.5**	**6.3%**	**1,196**	**92%**
Saturday	2-Hour Metered	180	1,137	6.32	95.6	5.3%	1,058	93%
	10-Minute Loading Zone	13	72	5.54	19.6	5.6%	70	97%
	Commercial Loading Zone	10	22	2.20	79.1	31.8%	20	91%
	Motorcycle Only	8	4	0.50	22.5	0.0%	4	100%
	Passenger/Taxi Loading Zone	2	3	1.50	25.0	0.0%	3	100%
	Total	**213**	**1,238**	**5.81**	**90.5**	**5.7%**	**1,155**	**93%**

BY ZONE

Figure 7-3 presents a more detailed breakdown of duration statistics by zone. Figure 7-4 and Figure 7-5 present maps of duration statistics over the study area. Figure 7-6 illustrates the distribution of durations by zone and day type. The following are key findings from those figures.

Turnover

- For both weekdays and weekends, turnover was higher in the Downtown Core than at Division & Main in most space types (except for Motorcycle Only). Turnover was also higher on weekdays than on Saturdays in the Downtown Core, whereas it was similar between weekdays and weekends at Division and Main.
- Loading Zone turnover was highest adjacent to River Park Square and on Main between Browne and Division.

Duration

- Durations were higher at Division & Main, on average. Saturdays also typically had longer stays within each area.
- Commercial loading zone stays were particularly long in the Division & Main area, though there were only two observations during the survey period.
- While violation rates ranged between 4-7% over the zones and days surveyed, the proportion of parkers staying longer than 2 hours ranged from 14% - 23%. Many of these parkers staying longer than 2 hours stayed past 7 p.m., so they were not in violation but are taking up considerable spaces and time in the parking system.

Violation Rate

- Violation rates were highest in commercial loading zones and were notably higher on weekends in the Downtown Core.

Figure 7-3   Duration/Turnover Summary, by Zone and Day

Day Type	Zone	Space Category	# Spaces	# Vehicles	Vehicles per Space	Average Stay (minutes)	Violation Rate	# Unique Vehicles	% Unique Vehicles
Weekday	Downtown Core	2-Hour Metered	150	608	4.1	73.8	7%	572	94%
		10-Minute Loading Zone	18	78	4.3	28.1	15%	76	97%
		Commercial Loading Zone	18	30	1.7	49.0	27%	28	93%
		Motorcycle Only	12	10	0.8	132.0	0%	10	100%
		Passenger/Taxi Loading Zone	2	4	2.0	22.5	25%	4	100%
	Division & Main	2-Hour Metered	210	551	2.6	78.6	4%	519	94%
		10-Minute Loading Zone	8	11	1.4	20.5	9%	11	100%
		Commercial Loading Zone	2	1	0.5	225.0	0%	1	100%
		Motorcycle Only	4	4	1.0	75.0	0%	4	100%
		Passenger/Taxi Loading Zone	2	0	0.0	0.0	-	0	-
Saturday	Downtown Core	2-Hour Metered	150	557	3.7	88.7	5%	533	96%
		10-Minute Loading Zone	18	65	3.6	19.2	5%	63	97%
		Commercial Loading Zone	18	21	1.2	69.3	33%	19	90%
		Motorcycle Only	12	1	0.1	15.0	0%	1	100%
		Passenger/Taxi Loading Zone	2	2	1.0	15.0	0%	2	100%
	Division & Main	2-Hour Metered	210	580	2.8	102.3	5%	536	92%
		10-Minute Loading Zone	8	7	0.9	23.6	29%	7	100%
		Commercial Loading Zone	2	1	0.5	285.0	0%	1	100%
		Motorcycle Only	4	3	0.8	25.0	0%	3	100%
		Passenger/Taxi Loading Zone	2	1	0.5	45.0	0%	1	100%

Figure 7-4   Map of Metered Space Duration, Turnover, and Violation Rate, by Day
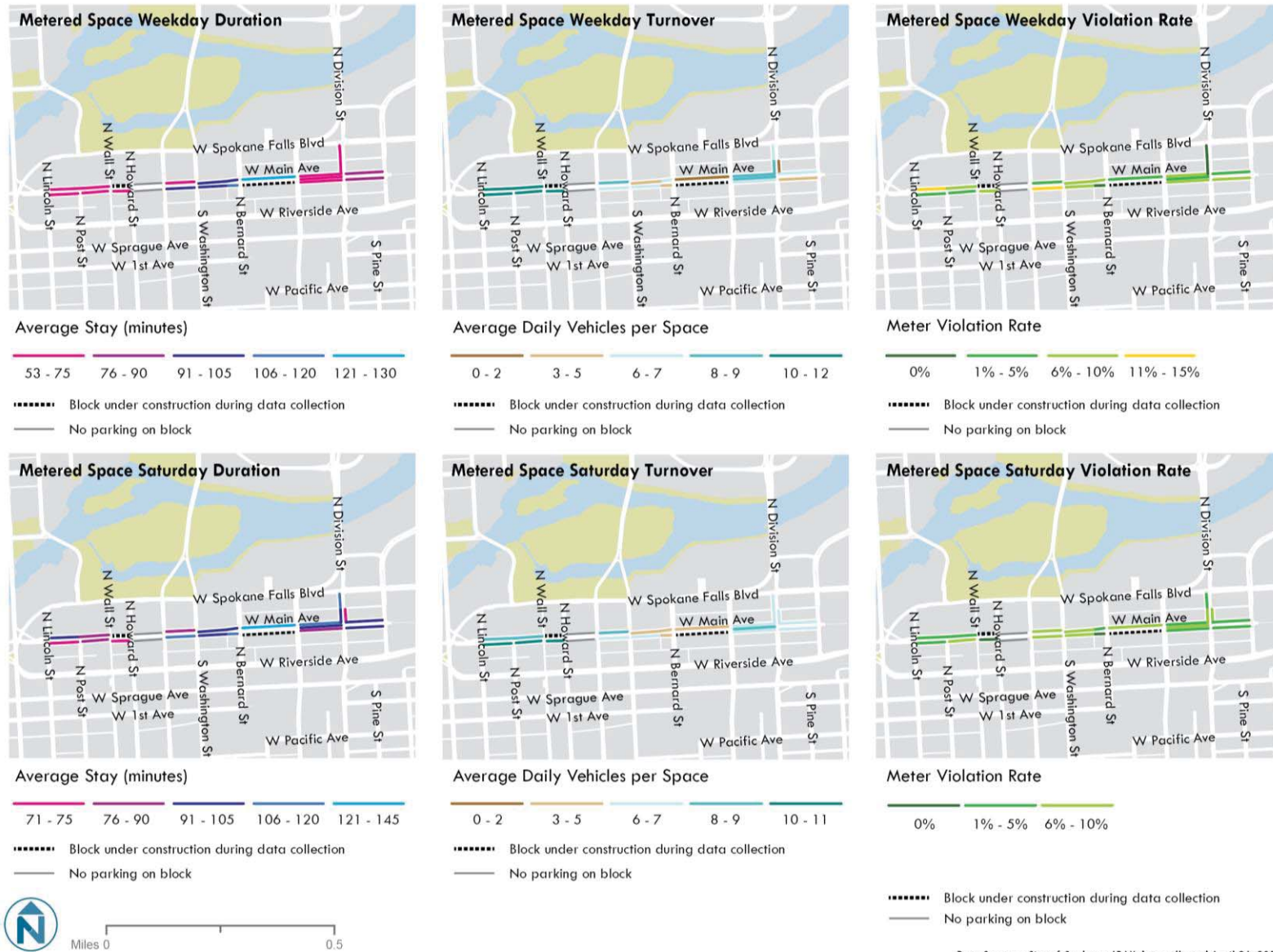
Figure 7-5   Map of Loading Zone Duration, Turnover, and Violation Rate, By Day
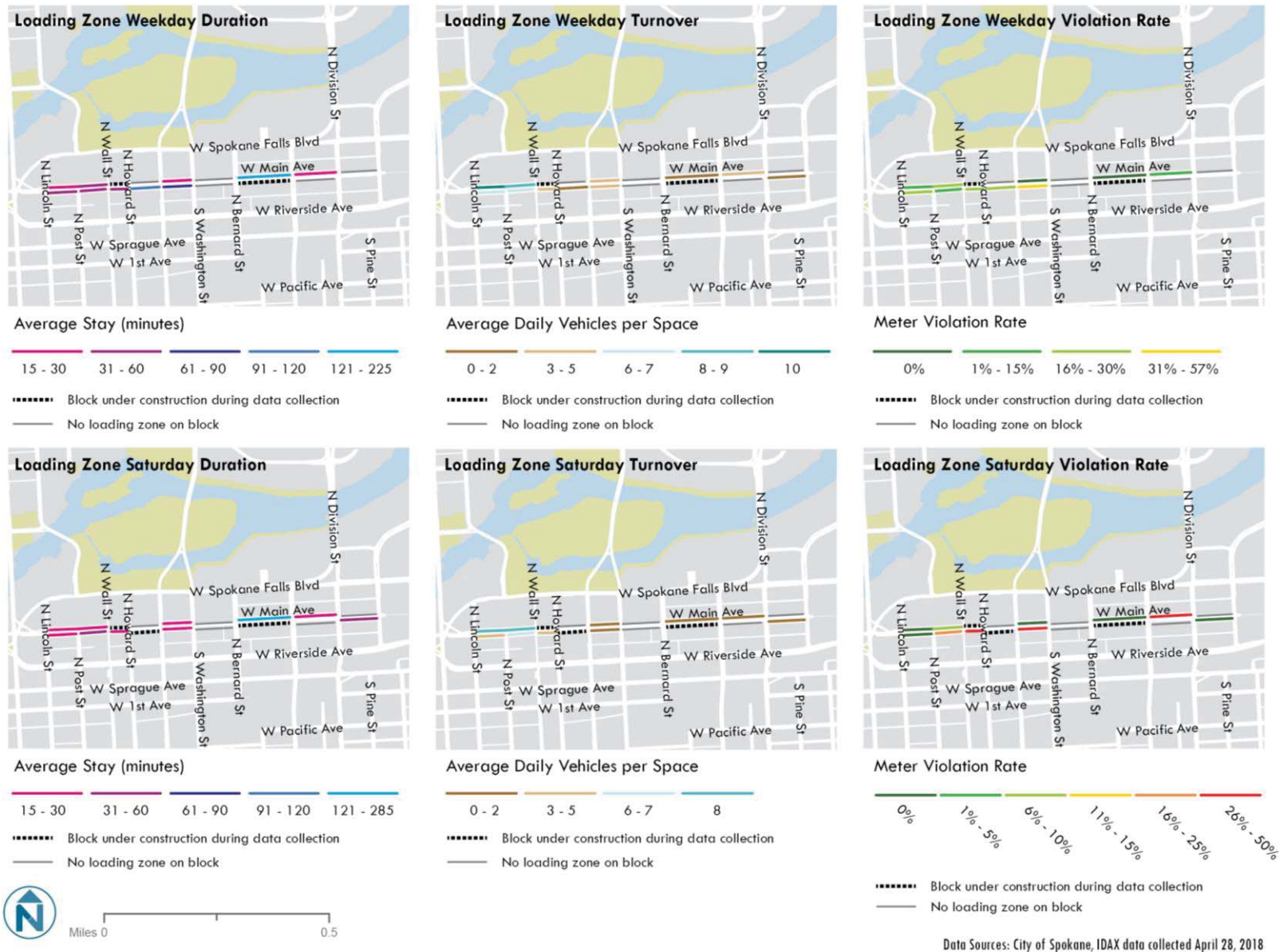
Figure 7-6   Metered Space Duration Histogram, by Zone and Day Type
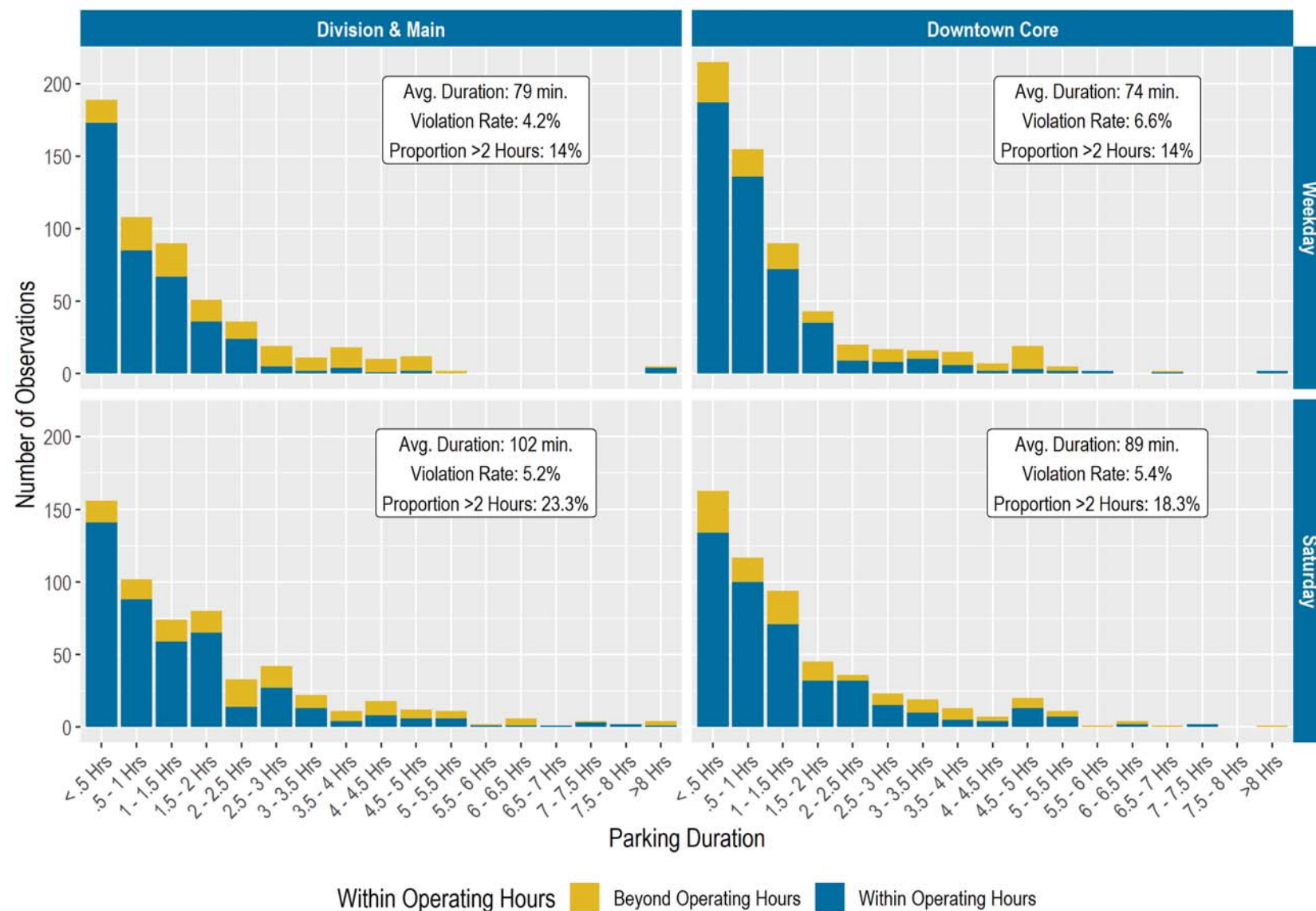
BY TIME OF DAY

The following section summarizes turnover, duration, and the violation rate by time of day in Figure 7-7, Figure 7-8, and Figure 7-9.

Turnover

- Peak turnover for metered spaces is observed at different times for each zone and day type:
  - Downtown Core: 3-5 p.m. on weekdays, 2-4 p.m. on Saturdays
  - Division and Main: 5-7 p.m. on weekdays, 4-6 p.m. and 10 p.m. to 1 a.m. on Saturdays
- Loading zones saw the **highest turnover in the late morning and early afternoon**

Duration

- After 7 p.m., the duration is no longer enforced for metered spaces, and this **leads to longer average stays,** especially on Saturdays in Division & Main area.

Violation Rate

- The **violation rate for metered spaces is highest in the morning (7 a.m. to 1 p.m.)** during the week and during the early afternoon (12 p.m. to 4 p.m.) on weekends.
- As noted throughout this chapter, loading zone time limits are **consistently being violated.**

Vehicles were consistently observed violating the loading zone time restrictions.

Figure 7-7   Average Turnover (vehicles per space) by Day, Time of Day, and Space Type
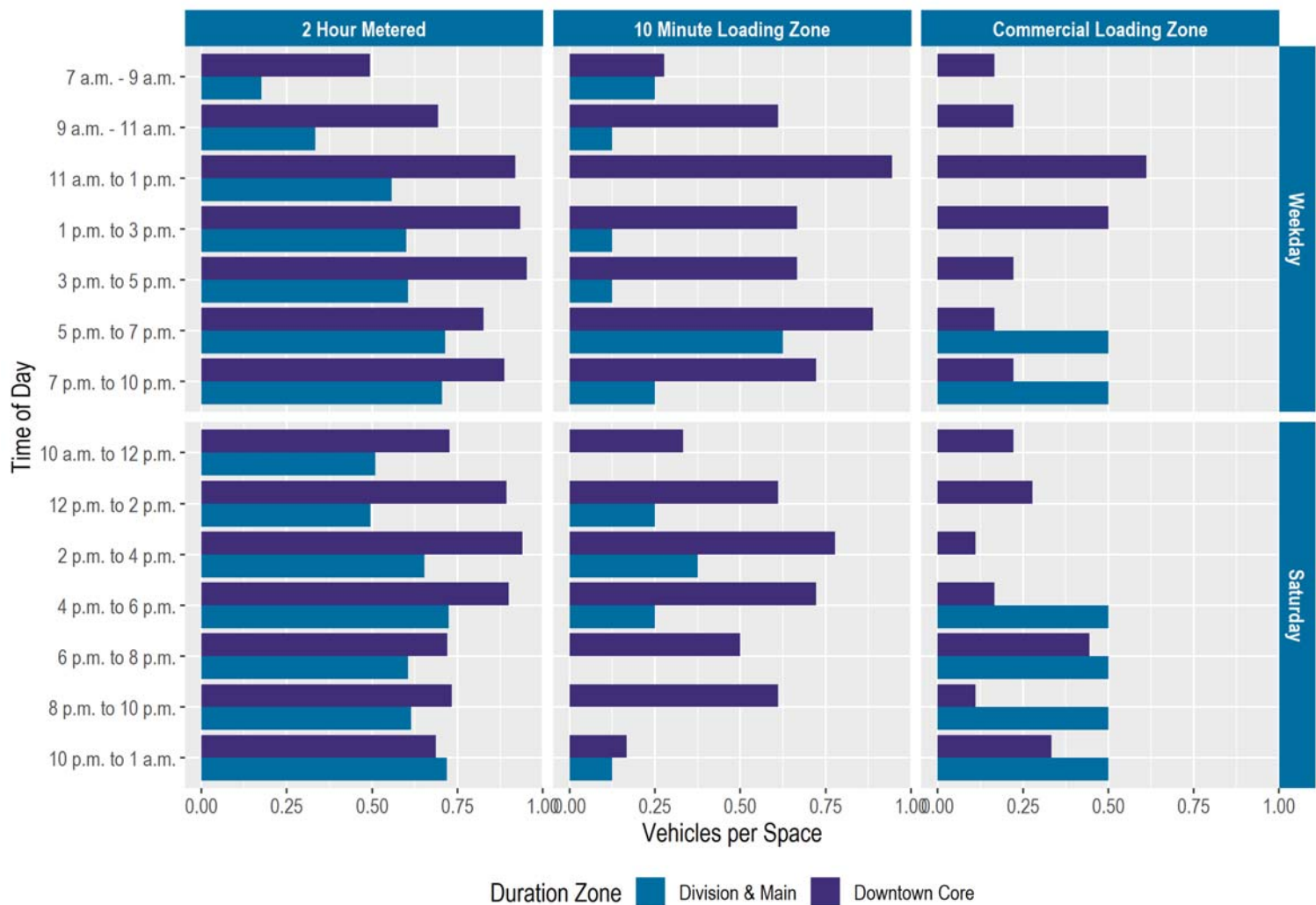
Figure 7-8   Average Duration of Stay, by Day, Time of Day, and Space Type

Figure 7-9   Violation Rate, by Day, Time of Day, and Space Type
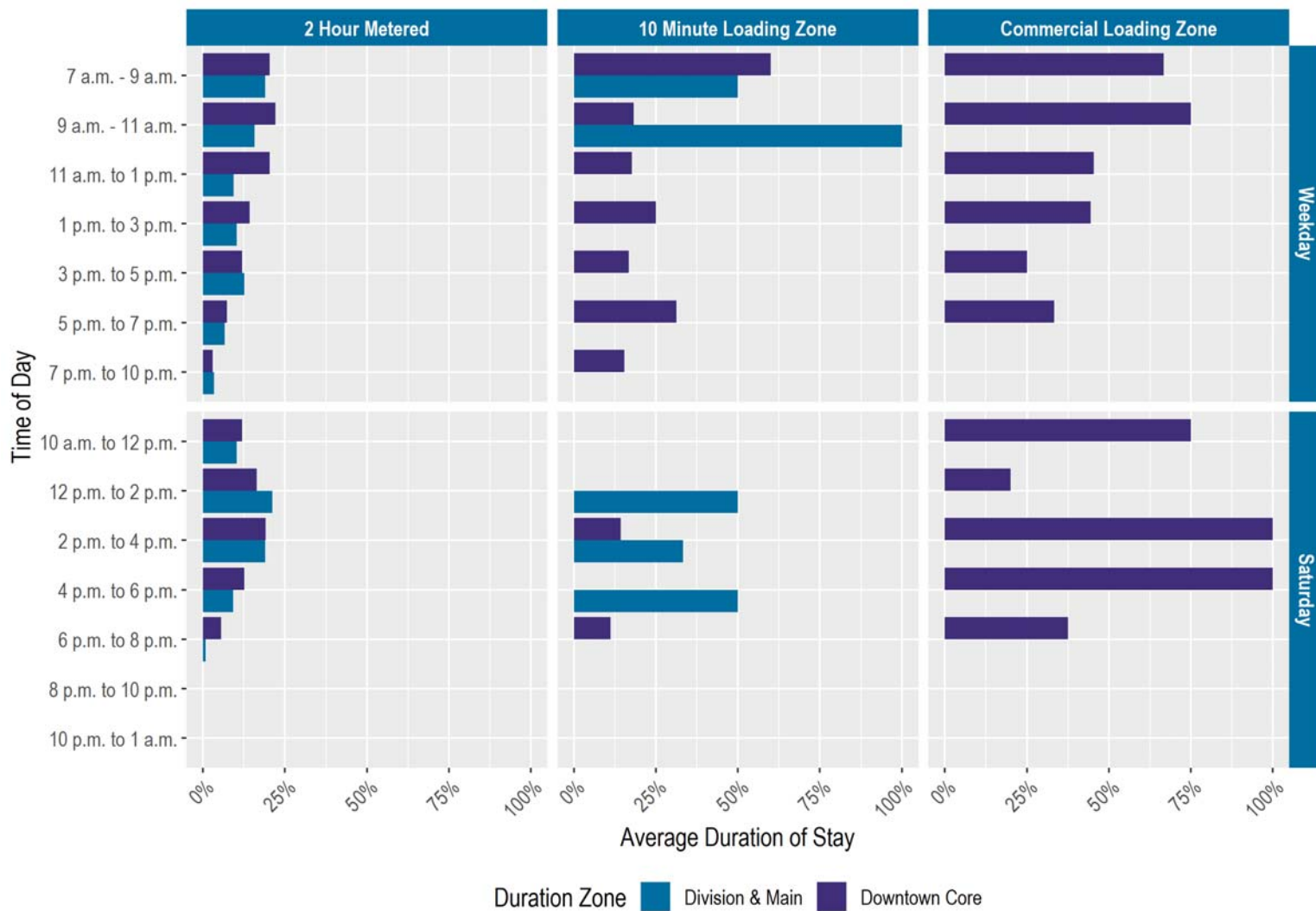
BY BLOCKFACE

Figure 7-10 provides an example of illustrating the data at a finer resolution – the full set of these time space plots are shown in Appendix B.

For the **north side of West Main (from Post to Lincoln) adjacent to River Park Square**, there are seven metered spaces and three 10-minute loading zones. There is significant turnover (9-10 vehicles per space) in these loading zones – likely more than could be captured by surveyors given the 30-minute survey frequency.

As demonstrated earlier, most loading activities are happening in the late morning and mid-day periods. The metered spaces have high turnover of nearly 10 vehicles per space (the average for the surveyed area is 6.4). **The metered spaces have violation issues** – there were six violations observed among the 58 vehicles observed for a 10% violation rate. The duration violations can significantly reduce turnover among these critical metered spaces.

Figure 7-10 Weekday Time Space Plot: West Main from Post to Lincoln (North side)
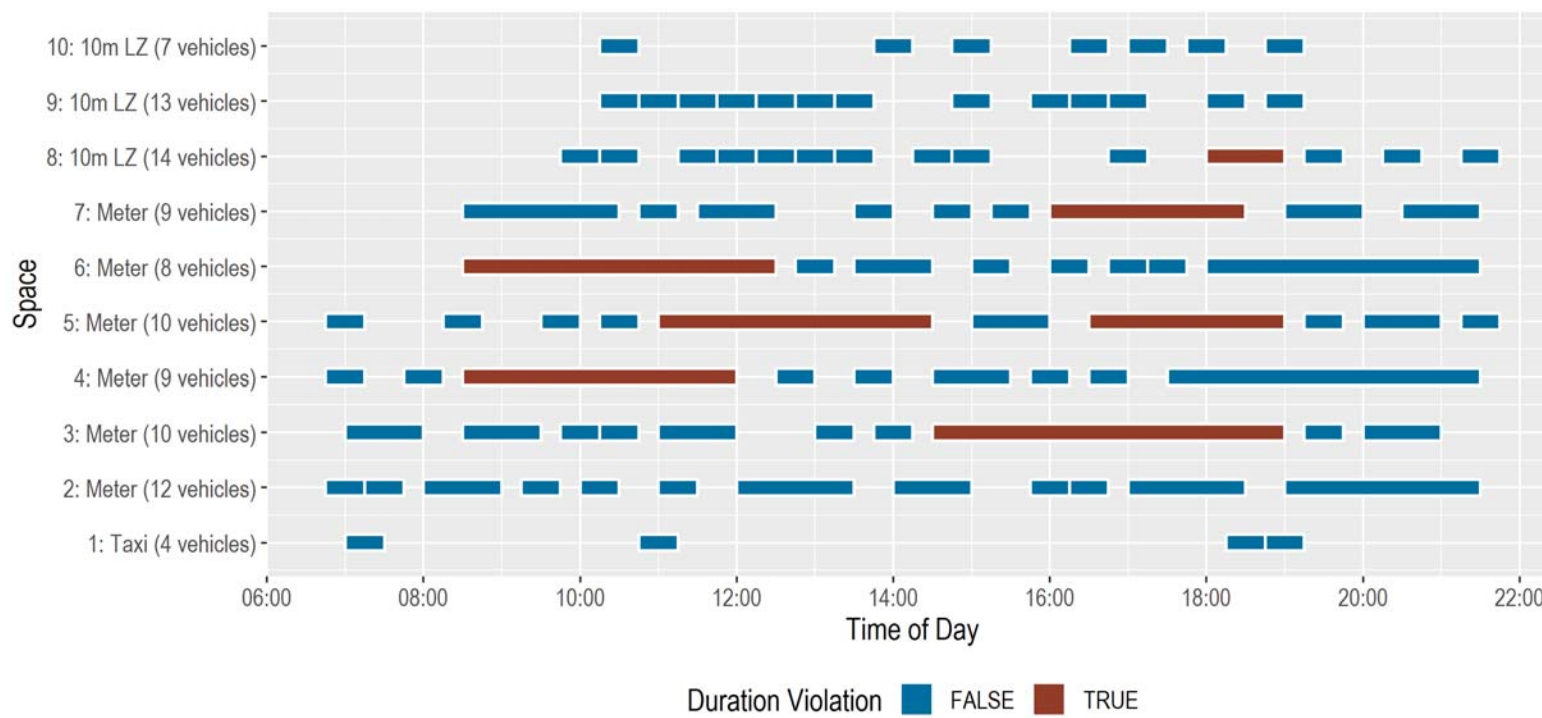
TOP FIVE TAKEAWAYS

1. Considering the distributions of parking durations and violation rates, as well as the feedback received through outreach, parkers want to be able to park for longer than two hours in the Downtown Core. Nearing and after 7 p.m., **parkers are consistently staying longer than two hours.**

2. **Longer stays and lower turnover on weekends** could indicate a benefit to having longer time limits, especially since overall utilization is lower on weekends. Tradeoffs of simplicity versus appropriate time limits should be considered.

3. Overstay violation rates in commercial and 10-minute loading zones are high – **26%-32% of observations in commercial loading zones and 6-12% of observations in 10-minute loading zones were in violation**. The City should consider:

    a. How does the City improve enforcement to decrease violation rates for loading zones?

    b. Do loading zones need longer times?

    c. Should (and by how much) the fine be increased for parking in a commercial or 10-minute loading zone?

4. **Roughly 6-8% of parkers are parking in more than one location during a given day.** This could be an indication that motorists parking in metered spaces are "shuffling" their vehicles during their stay around the downtown to avoid the time limits.

5. **Turnover is highest in the areas immediately adjacent to River Park Square and on Main Street between Division and Browne.** These are high turnover commercial areas where the two-hour time limit appears to work well.

8 PARKING EXPERIENCE

This chapter summarizes the findings about the parking experience in downtown Spokane. The parking experience is determined by more than just the cost of parking and number of spaces. For example, a certain street, parking lot, or garage may go unused not because of the cost to park there, but because the signage is confusing or people feel unsafe walking in that neighborhood.

This chapter documents the key elements that require ongoing improvements to ensure that parking is convenient and user-friendly. These elements include:

- **Parking Technology** – Is it simple and easy to find and pay for parking?
- **Parking Access** – Do I feel safe and comfortable walking to and from my parking space?
- **Parking Signage and Wayfinding** – Is signage easy to understand? Is signage coordinated? Do signs point me to available spaces? Are regulations clear?
- **Parking Information** – Can I find information online? Is information available across multiple platforms?

PARKING TECHNOLOGY

- The City of Spokane provides **multiple payment options for its on-street spaces**. Within the Downtown Core, there are 735 credit card-enabled, single-space smart meters (Duncan/CivicSmart) at approximately 40% of 2-hour metered spaces. The remaining 1,050 2-hour meters are coin-operated, single-space meters, and the additional 1,536 meters (4-hour and all day) outside the Downtown Core are also coin operated. All of the metered parking spaces allow for mobile phone payment (via Passport[7]). As part of the Main Avenue pilot, the City also utilizes a limited number of **pay-by-plate, multi-space kiosks** (Parkeon).

- Users do not directly pay **a service fee** for each meter transaction, as those are included in the hourly rate. The City pays a monthly service fee to the vendors.

- Most of the private garages and/or lots offer a combination of credit card (typically pay-by-plate) and mobile phone payment, yet the **specific system or mobile phone app can vary by facility**. For example, the mobile phone app utilized at Diamond parking facilities is Call to Park[8]. Call to Park charges a $.30 service fee per transaction directly to the user, which can discourage the use of mobile payment services by customers.

- Some private parking lots still **utilize "slot" boxes** to collect payment on-site, requiring cash or coin payment.

- The City of Spokane manages a **robust GIS shapefile of on-street parking inventory and regulations** within the parking meter area. Off-street data collected as part of this study will be integrated into the city's parking database and shapefile.

- The City is currently piloting **10 CivicSmart parking meter sensors** near City Hall to monitor real-time utilization of spaces. Monitoring and use of the data thus far has been limited, and the pilot data is not being reflected on the meters.

- While a diversity of payment options is provided, **the payment technology is fragmented**. Multiple meter types, mobile payment apps, and pay-by-plate systems create a less user-friendly system. Frequent parkers and guests may need to utilize multiple systems or apps within one visit to downtown, while fewer people carry cash or coins, limiting the utility of many of Spokane's meters.

The City utilizes older coin-operated and newer credit card-enabled, single-space meters. Both allow for mobile phone payment via Passport.

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[7] www.ppprk.com

[8] www.calltopark.com

Payment technology systems vary widely throughout downtown, which can negatively impact the user experience.

Parking meter sensors have been piloted near City Hall (bottom right), but use of data thus far has been limited.

PARKING ACCESS

- The downtown core provides a **strong, attractive, and legible street grid** for motorists and pedestrians, making it relatively easy to navigate to and from key destinations. Within the core, the sidewalk network is all but complete and recent investments in the streetscape create a pleasant walking environment.

- Outside the core, the pedestrian experience can be more challenging and less comfortable. **Sidewalk gaps exist and sidewalks are narrower**, while streets serve higher volumes of faster vehicle traffic. Key amenities, such as lighting and landscaping, are also more limited outside the core. These issues are pronounced for disabled motorists.

- Several significant **pedestrian barriers exist** within the downtown study area, including the railroad viaduct, I-90, Spokane River, and Division Street.

- Many garages and **parking lots front active pedestrian corridors**, presenting potential conflict points. Curb cuts for vehicle access also reduce the continuity of the streetscape.

- **Parking lots are a dominant land use** throughout the downtown study area. Some of these facilities are well-maintained, and provide attractive signage and adequate lighting. A number of parking lots, however, are poorly lit and maintained, creating an uncomfortable pedestrian environment and "dead" zones within the corridor or streetscape they front.

- **Weather can be a significant factor** in Spokane. During winter months, the pedestrian walk shed is more limited. Snow and snow removal can also impact sidewalk access and the overall number of available parking spaces.

- Pedestrian safety and comfort is essential to an effective parking system. Within downtown Spokane, it is likely that many facilities **outside the core go underutilized because the walking experience is challenging, confusing, or uncomfortable**.
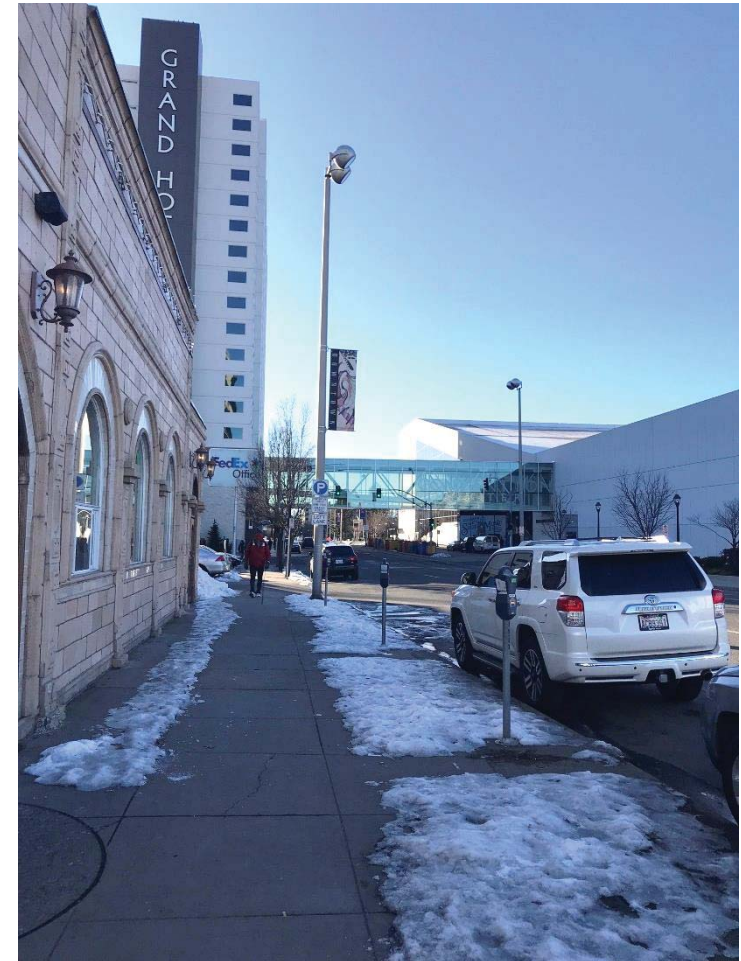
Pedestrian access is crucial for parking, as the "reach" of the parking system in a downtown is impacted by safety and comfort of the streets. In Spokane, weather is also a key factor for the parking system.

Parking impacts, and is impacted by, the built environment. In downtown Spokane, parking garages can create uninviting, "blank" streetscapes or potential conflicts with pedestrians (top left and right).

Surface parking lots are a dominant land use, yet are less desirable to motorists, especially visitors new to downtown (bottom left and right).

Outside the Downtown Core, gaps in the sidewalk network impact accessibility to parking, especially for disabled motorists (right).

PARKING SIGNAGE AND WAYFINDING

- Parking signage and wayfinding in downtown is provided and managed by the **City of Spokane and a mix of private property owners and parking operators.** For the most part, the City of Spokane manages signage for on-street parking and signage within the public right-of-way. Off-street parking signage is typically implemented by private entities, each with their own unique signage and style.

- There is **no single, unified parking "brand"** in downtown. MySpokane and 311 decals on meters provide a small precedent, but it is not utilized on parking signage elsewhere.

- **Signs on meters** provide information about rates, regulations, and payment options. However, many meters have decals which can create confusion (i.e., listing two websites for more information). Some older meters are difficult to read or were noted for having conflicting regulations.

- Parking wayfinding varies throughout the downtown. There are **different colors, fonts, and symbols** to indicate the location of parking facilities and their respective rates/regulations. The variety of signage **dilutes the overall downtown "brand."**

- Some of the signs, typically for private parking lots, are physically located in the sidewalk, **creating potential conflicts** for pedestrians and individuals with disabilities.

- Rates are posted at facilities, but are often **not legible to drivers** until one has already parked and is ready to pay.

- The variety of signs can **create user confusion and uncertainty** about what parking is publicly available versus what is restricted to specific users. This often creates ticket "anxiety" and negative perceptions about the system.

- Some wayfinding is provided to motorists directing them to key parking facilities, but there is **limited to no real-time signage** within downtown indicating actual availability of spaces in off-street facilities.

Different parking facilities utilize different types of signage to communicate parking information. Rate information is often not legible to the driver until after entry.

The wide variety of parking wayfinding and signage in downtown can lead to confusion for motorists, making it difficult to determine where one can park. The variety of signage also dilutes the overall downtown "brand."

PARKING INFORMATION

- The majority of parking information is provided on the city website. It includes basic information on Spokane's approach to parking management in downtown, key initiatives, permit programs, meter schedule, enforcement, and how to pay and contest citations. In all, the **website provides a streamlined and user-friendly portal for most parking issues and programs.**

- A short, how-to **video** is also provided, summarizing the why and how of downtown parking. A parking **blog** also provides ongoing updates about parking in Spokane. Finally, the City of Spokane also provides a **brochure** that answers a series of parking FAQs.

- Spokane also utilizes its various **social media channels** to provide parking information and occasional updates on parking programs in downtown.

- The information provided by the city, however, focuses primarily on the on-street system and regulations. This is largely due to the fact that the city owns and/or operates very little off-street parking. **Information is also largely static** and is updated on an as needed basis.

- The city website links to the **Downtown Spokane Partnership**, which provides information on its website related to key parking programs, including a **searchable Google map of off-street parking facilities**. Information on the map includes location, number of spaces, and rate information, yet not all parking facilities are included.

- Information for off-street parking is also provided via a **variety of third-party websites** hosted by individual facilities (e.g., River Park Square), private operators (e.g., Diamond Parking), or parking search engines (e.g., BestParking.com).

The City of Spokane website (top) and social media channels (middle) are utilized to communicate key parking information. Third-party websites, such as the Downtown Spokane Partnership, provide most of the available information about off-street parking.
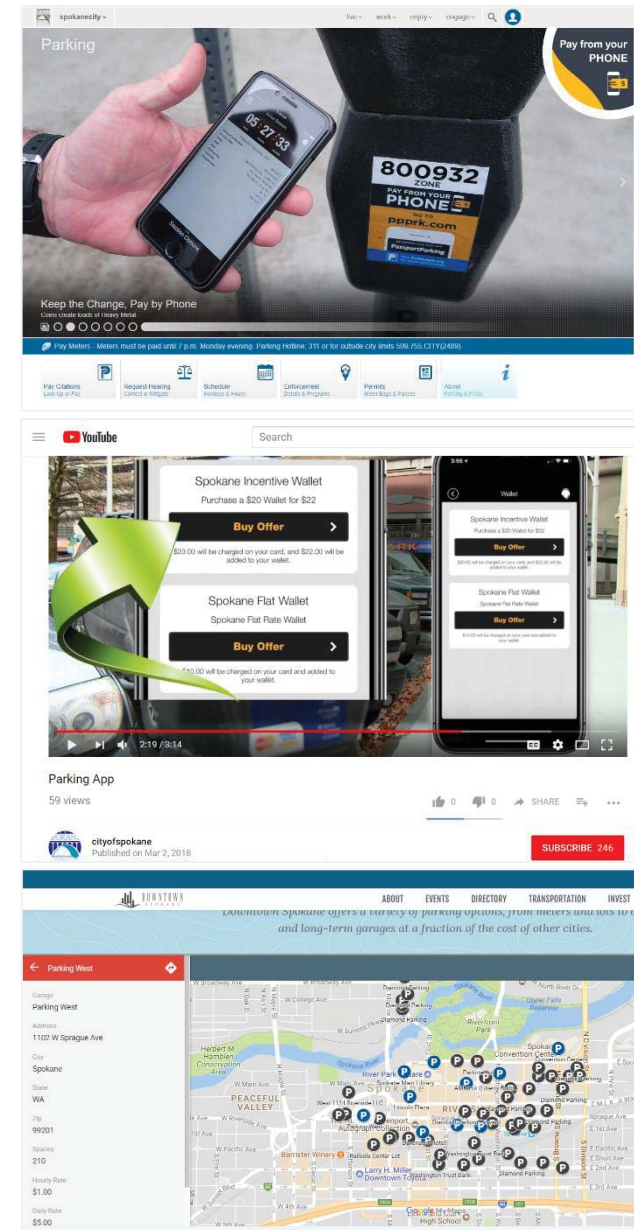
TOP FIVE TAKEAWAYS

1. While a diversity of payment options is provided, **the payment technology in downtown is fragmented**. Multiple meter types, mobile payment apps, and pay-by-plate systems create a less intuitive and user-friendly system. Frequent parkers and guests may need to utilize multiple systems or apps within one visit to downtown, while fewer people carry cash or coins, limiting the utility of many of Spokane's meters.

2. The **Downtown Core provides a strong and legible street grid** for motorists and pedestrians, making it relatively easy to navigate to and from key destinations. Outside the core, the pedestrian experience can be more challenging. In addition, a number of parking lots are poorly lit and maintained, creating an uncomfortable pedestrian environment and "dead" zones within the corridor or streetscape they front. Within the downtown study area, it is likely that many off-street facilities **outside the core go underutilized because the walking experience is challenging, confusing, or uncomfortable**.

3. **Weather can be a significant factor** in Spokane. During winter months, the pedestrian walk shed is more limited. Snow and snow removal can also impact sidewalk access and the overall number of available parking spaces.

4. There is no single, unified parking "brand" in downtown, and parking wayfinding varies throughout the downtown. The **variety of signage dilutes the overall downtown brand, and can create user confusion and uncertainty about what parking is publicly available** versus what is restricted to specific users. This often creates ticket "anxiety" and negative perceptions about the system. The lack of real-time signage within downtown limits a motorist's ability to find available parking.

5. The **city website provides a streamlined and user-friendly portal** for most parking issues and programs. However, most information about private off-street parking is only found on the Downtown Spokane Partnership and/or third-party websites. As a result, **parking information for the user can be difficult to find.**

9 OPERATIONAL ASSESSMENT

The operational assessment will allow for definition of a parking operations and technology roadmap that will ensure a stable and efficient parking operation for the city. To inform the assessment, the consultant team met with members of Parking Enforcement, Meter Collections, Finance, and Neighborhood Services & Code Enforcement. The team also participated in a daily operational duties tour, including meter collection, meter maintenance, and parking enforcement.

ENFORCEMENT

Staffing and Routes

Parking enforcement staff are knowledgeable and committed to their wide range of challenging duties. Staff split duties between parking enforcement, meter collections and maintenance, revenue reconciliation, and general administrative duties. **The current staffing schedule relies on the prioritization of enforcement and collections of the downtown meter district, as well as neighborhoods based on need.** The Parking Enforcement Department is staffed between 7:00 a.m. and 7:00 p.m. Monday to Friday and 8:00 a.m. to 7:00 p.m. on Saturdays with one Parking Enforcement Officer (PEO) dedicated to neighborhood enforcement working until 10:00 p.m. The department has one Parking Foreperson who supervises 13 full-time employees.

The Parking Foreperson and Parking Enforcement Specialist II in charge of meter maintenance have a long history with the department. Their knowledge and understanding of the daily parking operations such as route schedules, collection days, and the meter maintenance procedures is invaluable. **A short- and long-term secession plan and training for these key positions** is needed to mitigate any operational deficits if staff retire or change of positions.

There are no permanent enforcement route assignments. Instead, routes are designated each morning by the Parking Foreperson based on collection needs and the number of residential neighborhood parking complaints. For parking meter enforcement, the PEOs aim to check each meter once or twice an hour. Meter payment status is checked by the PEO first by visual inspection. When a meter time is expiring, the meter will count down to 0, then to -5:00, providing parkers a 5-minute grace period before the meter flashes red to indicate expiration. Prior to issuing a citation, PEOs must first access the Passport mobile app to check for an active mobile payment session.

Permits

As discussed in Chapter 4, the City of Spokane has designated passenger, commercial, and special loading zones throughout the downtown meter boundary. These include the Commercial Loading Zone (CLZ) permit and the Special Loading Zone (SLZ) permit. The SLZ permits are operationalized through the meter bag program.

Staff indicated that the SLZ meter bags can be difficult to track and enforce. Durations for which the meter bags have been approved are often not communicated to the PEOs, and staff does not have ability to check the validity of the meter bags in the field. There were some locations where staff noted that the meter bag has been locked on a meter for a long period of time, but the PEO was unsure if the requester had continued to extend their request or if it had expired.

With a Residential Parking Pass (RPP), a vehicle may park at an all-day meter free of charge; 2-hour and 4-hour meters still require payment. Hangtags are distributed by the City to property owners or landlords for $25 per month.

The City of Spokane recently expanded the mobile payment platform from Passport to include the RPP program. This allows the passes to be purchased, managed, and tracked electronically by license plate, which **enables enforcement by License Plate Recognition (LPR) technology.**

Meter bags can be difficult to enforce. Staff do not have means to check the validity of the bag or its approved duration in the field.

Neighborhoods

Spokane's neighborhoods enforcement program is complaint-driven. The City utilizes code enforcement software, Accela, to track and manage parking complaints. The Accela system allows for complaints by residents to be distributed to the Parking Enforcement staff, and it provides tracking of workflow and reconciliation of the issues.

Complaints are usually for vehicles that have violated the 24-hour on-street parking maximum, but areas are also checked for standard violations, such as parking in front of a driveway or fire hydrant. Enforcement staff may, but not always, begin with a warning ticket, which is at the discretion of the PEO.

Metered Citation Rates

One of the most common violations, an expired meter, has a citation penalty of just $15.00. Relative to an all-day parking cost of $13.20 at the 2-hour meters, the citation rate **does not incentivize drivers to pay for parking or comply with the time limit.** When the price of the citation is only slightly higher than the comparative all-day rate, it often makes sense to risk receiving a citation rather than moving one's vehicle multiple times a day.

In short, the parking meter and citation rate structures are not optimized to encourage compliance or turnover, thereby undermining the benefits of downtown's paid parking system.

TECHNOLOGY

Meters

The City of Spokane has a mix of smart and traditional single-space meters. In November 2017, the City converted Main Avenue to create a back-in angle parking area. As part of the new parking area on Main Avenue, the City's Parkeon pay stations were updated to pay-by-plate for payment.

All the metered parking spaces allow for Passport mobile payments. **The unique numbering system for the Passport zones identifies where a vehicle is parked.** Zone numbers include information about the unique location of the blockface. There are potential loopholes in this system, which make it difficult for PEOs to cite violators.

Enforcement

The City currently has one vehicle equipped with License Plate Recognition (LPR) technology to check for valid payments in the Parkeon pay-by-plate angle parking pilot on Main Avenue and to check vehicles violating the 24-hour parking rule enforcement in the neighborhood areas. **With the RPP program going plate-based through Passport, LPR will also be expanded to check for RPP compliance.** At the time of the on-site visit, the LPR vehicle was not operational and there was no indication by staff when it would be back in service.

Enforcement staff use **Motorola/MC75A6 handhelds with Duncan/CivicSmart AutoPROCESS citation processing software** to write tickets and Zebra Technologies/MZ320 ticket printers. It was observed that the handhelds were lagging in response time and were not always populating with data, such as previous citations issued. It was also observed that batteries drained quickly, did not charge, or the handhelds froze, requiring multiple reboots.

Due to a lack of integration between vendors and equipment, PEOs are required to check for valid meter payment through the Passport app on separate mobile phones for each vehicle parked at an expired meter. Because of this, **PEOs are frequently switching between their mobile phone and the enforcement handheld to check for compliance.**

The City is currently piloting 10 CivicSmart parking meter sensors in front of City Hall. The pilot is being overseen by CivicSmart, but is not being actively monitored by City staff. The sensors are in test mode and are collecting data for meter reset but **while in the pilot phase, the information is not being reflected on the meters or to the parker.** There are an additional 700 sensors in the parking storage area that are not currently in use.

COLLECTIONS, MAINTENANCE, AND RECONCILIATION

Collections

Meter collection schedules vary by need and demand for each area. Typically, downtown meters, most of which are 2-hour meters, will be collected at least three times per week, 4-hour meters one to two times per week, and all-day meters once per week. **Collections are completed daily on weekdays by the PEOs.**

All single space parking meters are keyed to the same key. Copies of the keys are each assigned to a specific PEO, and are not based on meter, location, or route. Although this was done for convenience, and there exists a formal sign-out process for the keys, **this approach presents a security risk.** If a key goes missing, or is stolen, it can be used to access all single space meters. This also means that all meters would need to be re-keyed if a key was lost or stolen.

Revenue collections staff uses an open-can system for single space collections, meaning the coin canister, and monies, are accessible to staff. The coins within the collection cups are funneled into a collection cart. Between the opening of the meter and the depositing of the coins into the cart, the money is exposed to the meter collector and the public. This protocol poses a safety and security risk for collections staff. **Closed-can systems and electronic locks would improve security.**

Spokane also features charity meters in which monies can be donated at the meter or at a drop site at the airport and train station. PEOs are responsible for the collection and reconciliation of these donations, including bill currency. The time commitment to pick up and count the monies from the drop sites removes the PEOs from their primary job duties, including enforcement of the downtown parking policies.

Maintenance

The City **has not been receiving consistent reports from the parking management software** regarding meter status. For example, staff is not receiving the dead battery reports, which alerts them when a battery is dead or low. Reports come from staff and the public, which results in a delay for meter repairs. In addition, because of the number of systems available to report down meters, there are at least six different processes to report and identify meter issues.

For meter repairs, some staff is completing meter maintenance work without formal or certified training. Additionally, when sending meter mechanisms to vendors for repair, which costs $100 per unit, some meters are being returned still broken. Further follow up by the City is needed around these issues.

Reconciliation

Meters are collected during morning routes and returned to the vault room. Then, meter keys are returned and logged into the log book. The last collector of the day is responsible for ensuring all keys are accounted for in the key box. Coins are counted in two-person teams by route, and full bags are collected by the armored truck company, Loomis. Loomis only picks up full bags, and the half open bags are left in the safe.

Although collection counting is done in two-person teams, the only security in place is cameras. **No specific security issues were identified, yet an enhanced process could better protect the City and its staff.** For example, direct oversight from the Finance Department could ensure financial accounts are properly reconciled. Furthermore, coin deposits are tracked by staff, but are not compared to vendor reports for financial anomalies or level of accuracy. Staff track collections using a Microsoft Excel sheet, which can be problematic in the long-term.

It was also noted that the City of Spokane is being charged a monthly $5 fee for 800 smart meters despite there only being 735 actively installed. The vendor charges a monthly fee for the service of each parking meter in operation. This discrepancy should be addressed right away.

Finally, the meters have poor coin discriminators which result in the presence of junk coins, such as counterfeit, foreign currency, or tokens during collections. This does not adhere to industry standards and creates the opportunity for new management policies.

Open-can collections pose a safety and security risk for staff. Closed-can systems and electronic locks would improve security.

TOP FIVE TAKEAWAYS

1. Parking Services has been under the direction of Neighborhood Services & Code Enforcement for the past two years. There has been improvement in operations following an internal technology review. The recently filled Parking Manager position **should prioritize enhanced communications** between management and front-line staff.

2. The Parking Foreperson and PEO II in charge of meter maintenance have a long history with the department. Given their long tenure and institutional knowledge, a **succession plan and training for these key positions is needed to mitigate any long-term operational deficits**.

3. Meter collections are handled by PEOs while also enforcing parking policy. Spokane's staff are hard-working and highly knowledgeable, but **breadth and depth of their duties poses a long-term risk for efficient operation of the system.** Formal training has not been provided or mandated for meter maintenance staff.

4. **The collection, maintenance, and reconciliation processes and protocols can be improved.** For example, an open-can system for meter collections poses a risk to staff and the City, while additional financial oversight would protect the City in the long term.

5. **The City should prioritize several key issues with their meter vendors.** Reporting from vendors has been inconsistent and staff has found it to be unreliable. Meters which have been sent back for repair are being returned with the issue unresolved. Problems with the vendor handhelds are on-going. Finally, the lack of integration between the various technologies causes operational inefficiencies and requires the use of separate devices to verify status and to follow up on service requests.

10 USER PROFILE SUMMARY

This chapter summarizes a downtown **user profile**, describing general types of parking user groups, how much parking is available to them, and an estimate of each group's level of use. Much of this information is described in previous chapters (Chapters 5 and 6), but is synthesized again for easy reference. The user profile was developed based on both quantitative and qualitative data, including the parking inventory and utilization data, the survey results, and feedback received from the City and stakeholders.

It is important to note that it is difficult to specifically define how each parking space in downtown is allocated to, and utilized by, the different users of the parking system at all times of the day. **Within a mixed-use downtown, and as discussed in Chapter 5, much of the inventory is shared among multiple users.** For example, a parking space can be used by an office worker during the day, a shopper in the evening, and a resident at night, making it difficult to pinpoint exactly how much parking is allocated and utilized by different users. The user profile summarizes the best estimate based upon available data.

USER PROFILES

Figure 10-1 estimates the available parking inventory, as well as peak demand for the different user groups. Figure 10-2 illustrates the distribution of parking inventory by user group. Most of the user groups have utilization levels close to the overall study area average with two exceptions:

- **Medical employee/patients compete for parking to a greater degree** than all other user groups – peak parking demand for their facilities reaches 75% during the mid-day period. This still leaves some reserve capacity, but given the occasionally emergent nature of this type of parking demand more reserve capacity may be desired.

- **Persons with disabilities** have the least competition for spaces within the study area – this is likely an acceptable arrangement given the travel burden placed on persons with disabilities.

Figure 10-1 Estimated Inventory and Peak Utilization, by User Group

User Group	Estimated Number of Parking Spaces	Proportion of Parking System	Estimated Peak Demand (vehicles)	Estimated Peak Occupancy	Peak Demand Period
General Employee/Employer	13,555	36.8%	7,644	56%	10 a.m. - 2 p.m.
Downtown Visitor	9,448	25.7%	5,522	58%	4 p.m. - 8 p.m.
Private Customer	6,170	16.8%	3,442	56%	10 a.m. - 2 p.m.
Medical Employee/Patient	2,549	6.9%	1,908	75%	10 a.m. - 2 p.m.
Other	1,804	4.9%	963	53%	10 a.m. - 2 p.m.
Downtown Resident	1,443	3.9%	770	53%	12 a.m. - 6 a.m.
Hotel Employee/Customer	1,007	2.7%	545	54%	4 p.m. - 8 p.m.
Person with Disabilities	844	2.3%	203	24%	10 a.m. - 2 p.m.
Total	**36,821**	**100.0%**	**20,997**	**57%**	**10 a.m. - 2 p.m.**

Figure 10-2 Estimated Inventory Distribution, by User Group
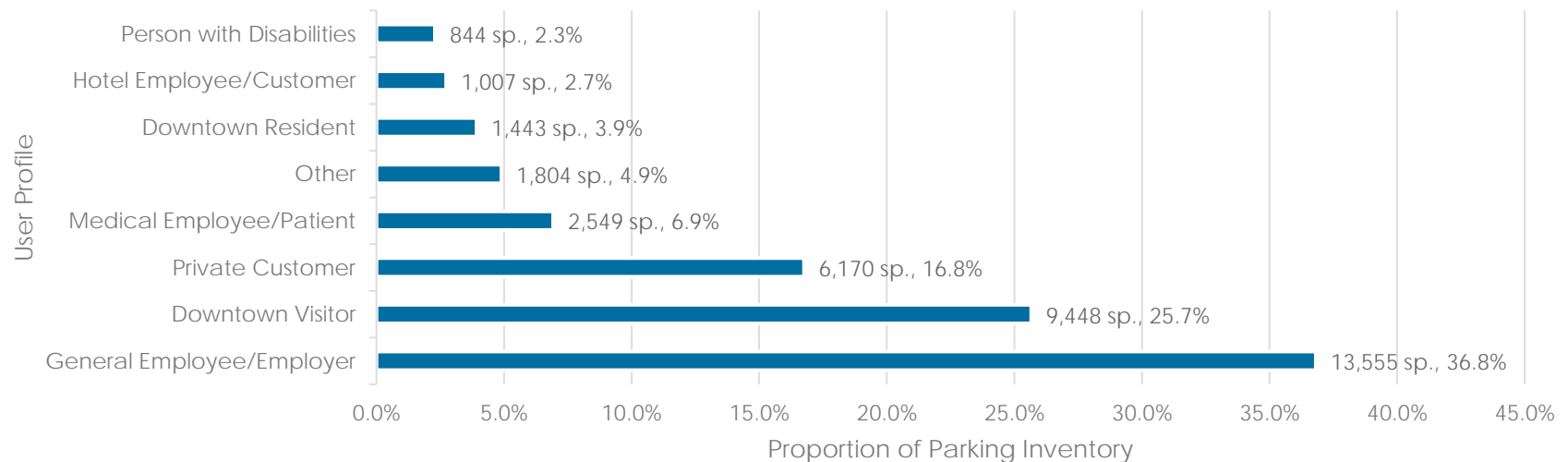
- **General employee/employer.** These users park near their place of work, primarily in an off-street facility. Nearly 40% of these users park in a lot at a free or reduced rate from their employer, 30% park in a garage or lot at their own expense with a recurring (annual, monthly, weekly) permit, and 10% park in a lot or garage they pay for by the hour/day. Fifteen percent park in a metered space and the remainder park in non-metered spaces. These users park downtown very frequently (five or more days per week) and also typically park downtown for other reasons as well (e.g., eating, running errands).

- **Downtown Visitor.** These users come to downtown to eat, drink, run an errand, or meet with a friend or family member approximately 2-3 times per week. The majority of these users (50-70%) park in an on-street metered space, and another 25-30% park in off-street facilities they pay for by the hour.

- **Downtown Resident.** These users live in downtown Spokane, and typically park in an all-day metered space with a Residential Parking Permit (RPP) or park in a lot/garage for free or partially subsidized by their residence.

- **Medical Employee/Patient.** These users either work at or are visiting the hospital, medical offices, or clinics primarily concentrated in the southern portion of the study area. They typically park in off-street facilities reserved for their use free of charge or pay a fee to park at an off-street facility. Employees park daily and patients/customers typically park 1-2 times per week.

- **Hotel Employee/Customer.** There are approximately 1,000 off-street parking spaces reserved for hotel employees and customers throughout the downtown area. Many of these users are also temporary visitors to Spokane from outside the city or region. A quarter of this parking is for valet customers.

- **Private Customer.** The remainder of customer parking besides hotel and medical uses was designated for these users. These are motorists visiting restaurants or other businesses with off-street parking reserved solely for their customers. These users park approximately twice per week.

- **Person with Disabilities.** ADA spaces are provided for persons with disabilities throughout the study area – the vast majority of these are off-street, and are distributed throughout the different types of lots and garages.

- **Other.** There are other users not highlighted above which represent a small but important minority of overall parking activity – this includes loading/delivery zone users, service vehicle drivers (e.g., police, county), electric vehicle drivers, and others.

Figure 10-3 and Figure 10-4 cross-tabulate survey respondents' primary travel reason (similar to user group) with their top three parking issues and parking strategies, respectively. Key trends relevant to the user groups defined above include:

- **Downtown workers** expressed that off-street parking is too expensive. They would like to see an increase in the off-street parking supply.

- **Downtown visitors** expressed that there is a shortage of available parking – this perception likely stems from the high competition for the most convenient on-street spaces in the Downtown Core. They would like to see more friendly parking payment technology and longer durations for on-street spaces.

- **Downtown residents** would like to see improved travel options so it is easier to not drive downtown. They would also like to see more public parking available in private facilities, and the redevelopment of surface parking in other desired uses.

Figure 10-3 Downtown User Group vs. Parking Issues

Parking Issues

Travel Reason

Proportion within Travel Reason
0% — 20%

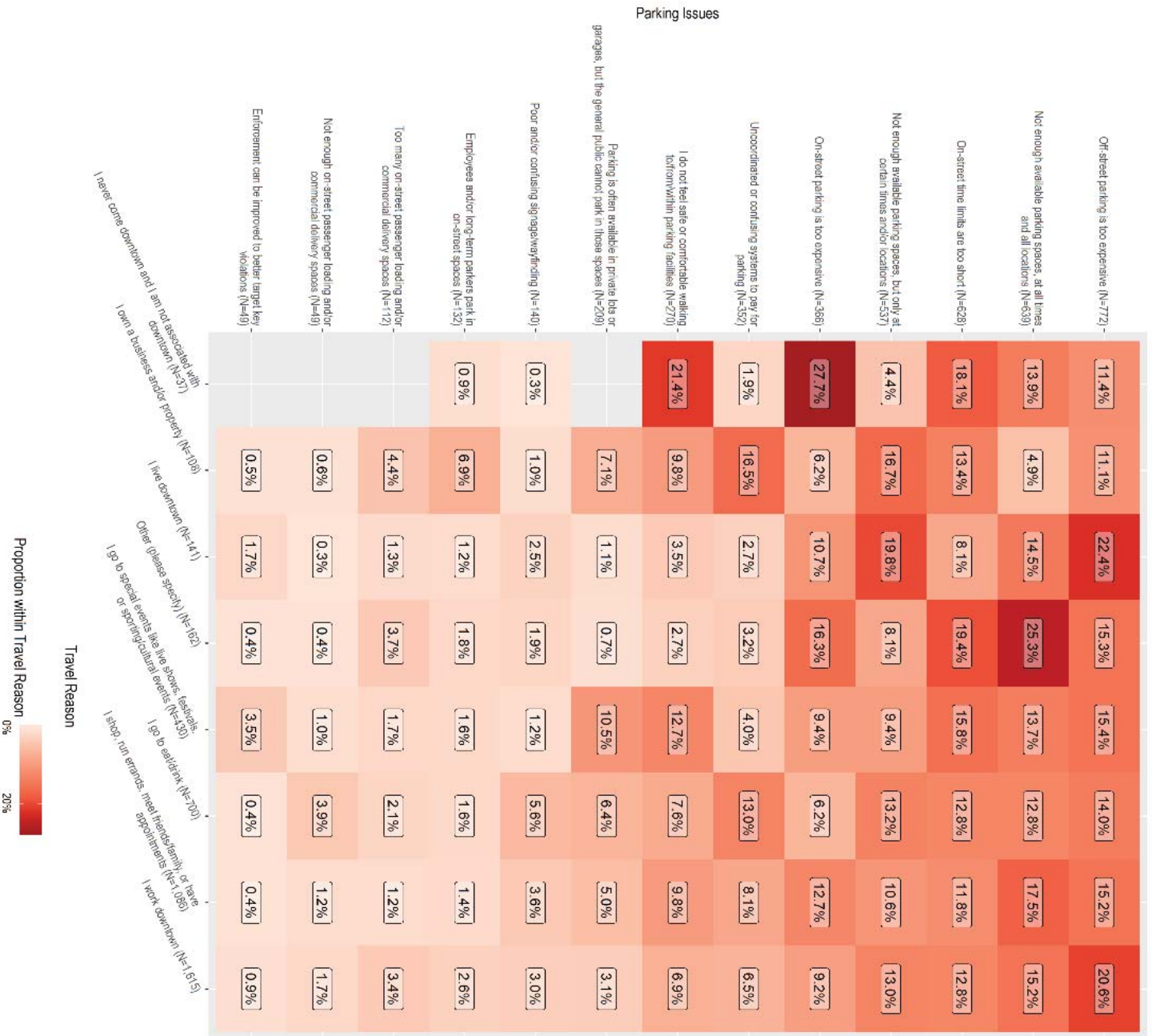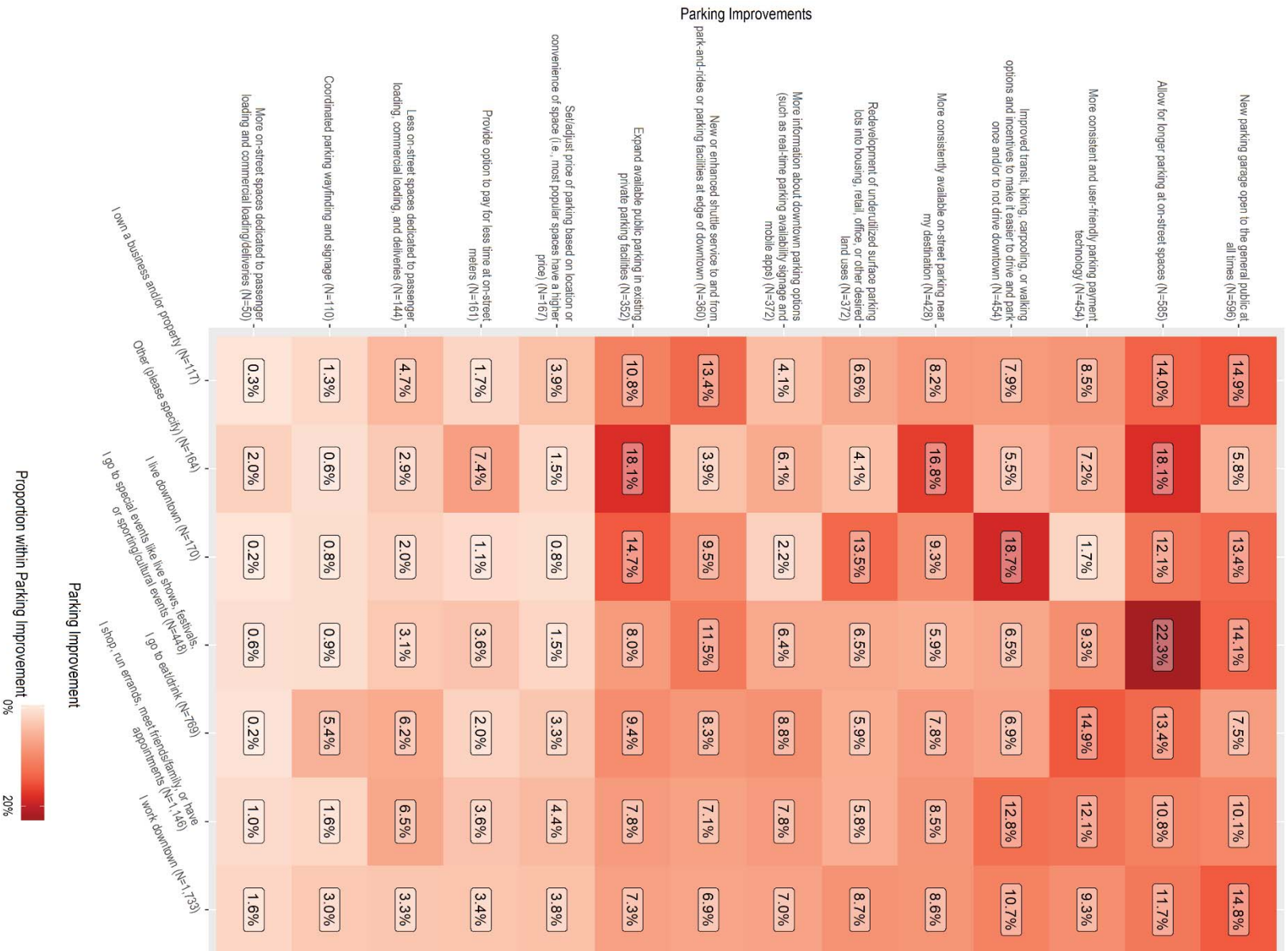| Travel Reason	Enforcement can be improved to better target key violations (N=49)	Not enough on-street passenger loading and/or commercial delivery spaces (N=49)	Too many on-street passenger loading and/or commercial delivery spaces (N=112)	Employees and/or long-term parkers park in on-street spaces (N=152)	Poor and/or confusing signage/wayfinding (N=140)	Parking is often available in private lots or garages, but the general public cannot park in those spaces (N=209)	I do not feel safe or comfortable walking to/from/within parking facilities (N=270)	Uncoordinated or confusing systems to pay for parking (N=352)	On-street parking is too expensive (N=386)	Not enough available parking spaces, but only at certain times and/or locations (N=537)	On-street time limits are too short (N=628)	Not enough available parking spaces, at all times and all locations (N=639)	Off-street parking is too expensive (N=772)
I never come downtown and I am not associated with downtown (N=57)				0.9%	0.3%		21.4%	1.9%	27.7%	4.4%	18.1%	13.9%	11.4%
I own a business and/or property (N=108)	0.5%	0.6%	4.4%	6.9%	1.0%	7.1%	9.8%	16.5%	6.2%	16.7%	13.4%	4.9%	11.1%
I live downtown (N=141)	1.7%	0.3%	1.3%	1.2%	2.5%	1.1%	3.5%	2.7%	10.7%	19.8%	8.1%	14.5%	22.4%
Other (please specify) (N=162)	0.4%	0.4%	3.7%	1.8%	1.9%	0.7%	2.7%	3.2%	16.3%	8.1%	19.4%	25.3%	15.3%
I go to special events like live shows, festivals, or sporting/cultural events (N=430)	3.5%	1.0%	1.7%	1.6%	1.2%	10.5%	12.7%	4.0%	9.4%	9.4%	15.8%	13.7%	15.4%
I go to eat/drink (N=700)	0.4%	3.9%	2.1%	1.6%	5.6%	6.4%	7.6%	13.0%	6.2%	13.2%	12.8%	12.8%	14.0%
I shop, run errands, meet friends/family, or have appointments (N=1,086)	0.4%	1.2%	1.2%	1.4%	3.6%	5.0%	9.8%	12.7%	8.1%	10.6%	11.8%	17.5%	15.2%
I work downtown (N=1,615)	0.9%	1.7%	3.4%	2.6%	3.0%	3.1%	6.9%	6.5%	9.2%	13.0%	12.8%	15.2%	20.6%

Figure 10-4 Downtown User Group vs. Parking Improvements

TOP FIVE TAKEAWAYS

1. **Reserved employee/employer parking accounts for over one-third of available parking inventory**, and has a peak demand of 56% utilization during the middle of the day. Stakeholders indicated that employer/employee parking is very constrained, especially for office workers in the core. However, there still appears to be overall capacity in the system. Pricing, access restrictions, and distance from core of available supply contribute to frustration for certain employers and employees.

2. **Downtown visitor parking (which is shared with other uses) accounts for approximately one-quarter of the parking inventory**, with a peak occupancy of 58% during the late afternoon/early evening. Stakeholders indicated that visitor parking can be difficult to access. Again, while this is more apparent in the Downtown Core, there still appears to be reserve capacity throughout the system. These users would like to see more convenient payment systems, increased availability of on-street parking, and longer on-street time limits.

3. **Private customer parking accounts for 17% of the parking system.** These are mostly surface lots at businesses throughout the study area. Occupancy is approximately the same as the study area average. This supply represents a potential sharing opportunity, especially during off-peak hours for businesses.

4. **Reserved medical employee/patient parking accounts for approximately 7% of the parking inventory,** with a peak occupancy of 75% during the mid-day period. This is the highest peak occupancy of any user group.

5. **Off-street resident parking accounts for 4% of parking in the study area**. Residents are also allowed to park at the curb via the residential permit program. Stakeholders indicated resident parking is constrained, and resident survey respondents expressed that a key issue was lack of available parking in key locations. An increasing influx of residents in downtown bringing cars with them can be problematic for parts of the study area without dedicated residential parking.

APPENDIX B: SURVEY ANALYSIS MEMORANDUM

M E M O R A N D U M

To: City of Spokane; UDDA

From: Nelson \Nygaard

Date: June 8, 2018

Subject: Online Parking Survey – Full Analysis

OVERVIEW

A total of 2,105 respondents responded to at least one of the surveys – the breakdown of respondents by surveys is presented in Figure 1. Figure 2 presents the distribution of respondents by day and survey responded to over time. The majority of respondents answered the survey during the first outreach push between May 7th and May 12th. Additional respondents submitted responses the following week, and there was another uptick in respondents following the City's outreach event on May 21.

Figure 1   Survey Respondent Overview

Survey	# Survey Respondents	Proportion
Downtown Only	1,340	63.7%
Both	520	24.7%
University District Only	245	11.6%
Total	2,105	100.0%

Figure 2   Respondents Over Time
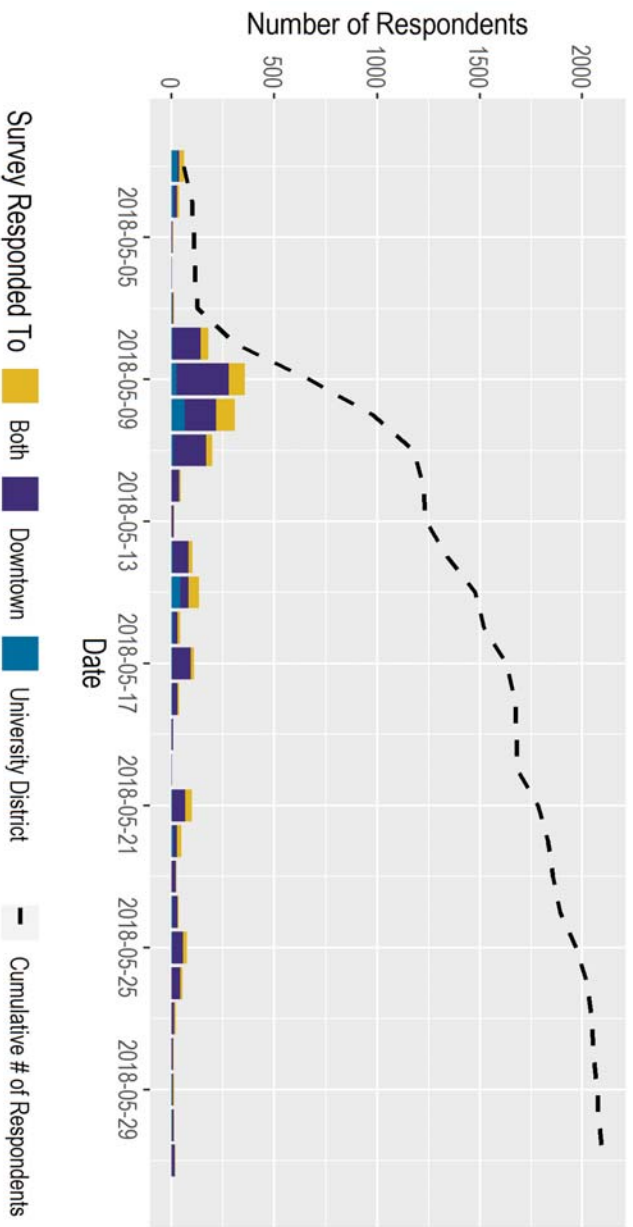
Figure 3 illustrates the distribution of respondents by home ZIP code. The majority of respondents live in Spokane or Spokane Valley, but the immediately surrounding suburbs also contributed significant numbers of respondents.

Figure 3   Survey Respondent Home Location Map
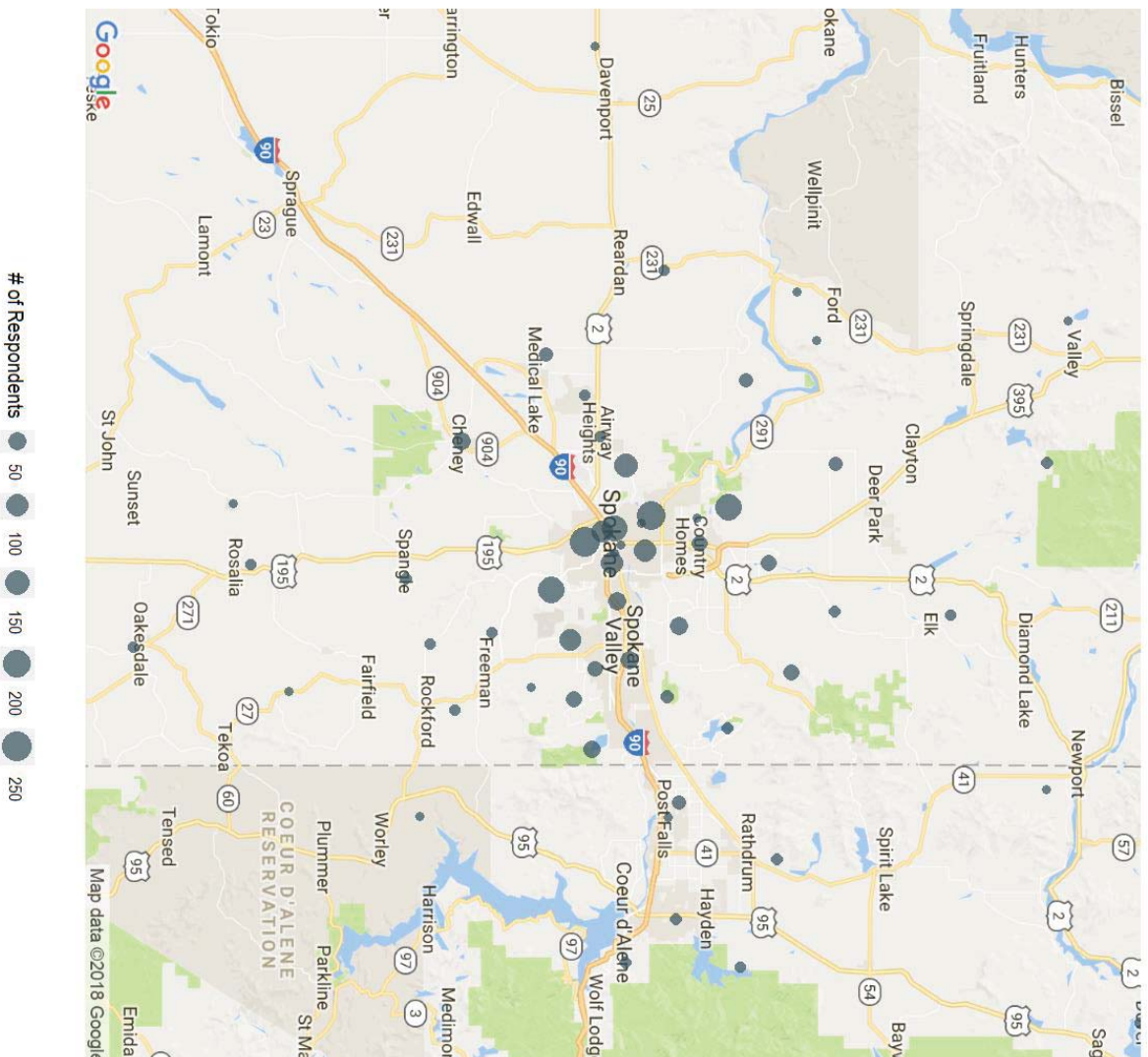
Figure 4 presents a breakdown of which sub-zone respondents to each survey typically park in within those respective study areas. Also presented are corresponding proportions of the parking inventory within each study area. The comparison of those proportions revealed that some sub-zones were significantly over- or under-represented relative to their proportion of the parking system (in terms of spaces). Consequently, weights were developed so that results are more representative of the range of opinions of people parking in all areas of the study area.

Figure 4   Response Weighting Scheme

Study Area	Zone	# Responses	% Prop	% Spaces (within Study Area)	Converted % Spaces*	Weight	Proportion of Weight
Downtown	Downtown Core	994	54.7%	17.8%	17.4%	0.32	0.97%
	Convention Center	297	16.4%	9.6%	9.4%	0.57	1.74%
	West End	137	7.5%	5.3%	5.1%	0.68	2.07%
	Southern Downtown Core	91	5.0%	6.3%	6.2%	1.23	3.75%
	Arena Neighborhood	80	4.4%	18.4%	18.0%	4.09	12.45%
	Spokane County Campus	78	4.3%	10.3%	10.0%	2.33	7.10%
	Downtown - Does not Park	42	2.3%	-	2.3%	1.00	3.04%
	West End South	40	2.2%	5.7%	5.5%	2.51	7.65%
	East End South	35	1.9%	4.6%	4.5%	2.35	7.17%
	Hospital District	22	1.2%	22.0%	21.5%	17.75	54.04%
	Total	**1,816**	**100.0%**	**100.0%**	**100.0%**	**32.85**	**100.00%**
University District	Riverpoint Campus	378	57.0%	26.7%	25.8%	0.45	8.54%
	Gonzaga Campus	197	29.7%	50.1%	48.5%	1.63	30.72%
	Southern University District	67	10.1%	23.2%	22.5%	2.23	41.91%
	University District - Does not Park	21	3.2%	-	3.2%	1.00	18.83%
	Total	**663**	**100.0%**	**100.0%**	**100.0%**	**5.31**	**100.00%**

* 'Converted % Spaces' corresponds to the proportion of spaces within the study area if the proportion of respondents who did not park were removed from the denominator. That weight was set to 1 for simplicity.

DOWNTOWN

This section first presents the key findings of the Downtown Parking Study survey, and then presents all of the plots generated to develop those key findings.

Key Findings

- **The majority of respondents park in the Downtown Core zone**, but the Downtown Core only represents 18% of spaces in the study area. Responses were weighted to represent each zone based on their proportion of the study area parking supply.

- **Nearly 60% of respondents said their primary purpose for travel downtown was non-work related.** One-fifth of respondents come downtown to shop, run errands, or meet with friends/family, and another fifth come downtown for recreation – to go to special events and to eat/drink. Over half of respondents come to Downtown for at least two purposes.

- **Half of respondents are very frequent visitors to Downtown (5 days per week or more).** Another fifth of respondents come downtown 1-4 days per week, and another fifth beyond that come downtown a few times per month.

- **Two-thirds of respondents drive alone downtown,** and another fifth carpool with others. Nearly 10% take transit, walk, or bike.

- **One-quarter of respondents have free parking,** while nearly one-fifth has a free or discounted bus pass.

- **One-third of respondents typically park in a metered on-street space.** A quarter park in a facility fully or partially subsidized by their employer or residence. One fifth park in a facility they pay for by the hour or day, and fifteen percent park in a facility where they buy an annual/monthly/weekly permit.

  – Respondents who work or own a business or property downtown were more likely to park in facilities for free or at a reduced expense or park in a facility with a recurring permit.

  – Respondents who go downtown to eat/drink or shop/run errands were most likely to park in a metered space.

  – Respondents parking in the Downtown Core and adjacent areas were more likely to say they typically park in on-street metered spaces. Respondents parking in the Spokane County Campus area were most likely to say they park in a facility in which they pay for a recurring permit.

- **Thirty percent of respondents who park downtown park on-site or on the same block,** another thirty percent park three or more blocks away, and the remaining forty percent park 1-2 blocks away.

  – Respondents eating/drinking were most likely to park approximately two blocks from their destination.

  – Respondents who live or own a business/property downtown were most likely to park on site or on the same block.

  – Respondents parking in the Arena neighborhood or the West End South area were the most likely to park three or more blocks from their destination.

– Respondents parking on site or on the same block were most likely in the Hospital District, Spokane County Campus, and Convention Center areas.

■ **The most common durations for parking were 2-3 hours (21%) or more than 8 hours (30%).**

– Respondents parking for more than 8 hours are typically working downtown, living downtown, or own a business or property downtown.

– Respondents parking 2-3 hours were typically eating/drinking or shopping/running errands.

■ **Two-thirds of respondents indicated that the proximity of parking to their destination** was among the three most important factors in choosing a parking a location. Price of parking (55%) and ease of finding a space (45%) were next in importance. Many respondents also indicated personal safety/security (30%) and time limits (26%) were important in selecting a location.

■ **Nevertheless, over two-thirds of respondents would rather walk further to their destination for free or cheaper parking** than pay more for parking closer to their destination.

■ **The top three parking issues indicated by respondents were** 1) off-street parking is too expensive (44%), 2) there is a lack of parking supply across the study area (39%) and 3) the on-street time limits are too short (32%).

– Respondents working or living downtown were more likely to indicate that off-street parking was too expensive.

– Respondents who do not come downtown were more likely to say on-street parking was too expensive and that they do not feel safe/comfortable walking to/from parking.

■ **The top three parking system improvements preferred by respondents were** 1) new parking facilities open to the general public (34%), 2) longer time limits at on-street spaces (33%) and 3) improved travel options and incentives for not driving alone (27%).

Respondent Profile

Figure 5   Primary Reason for Travel to Downtown Spokane (N=1,816)
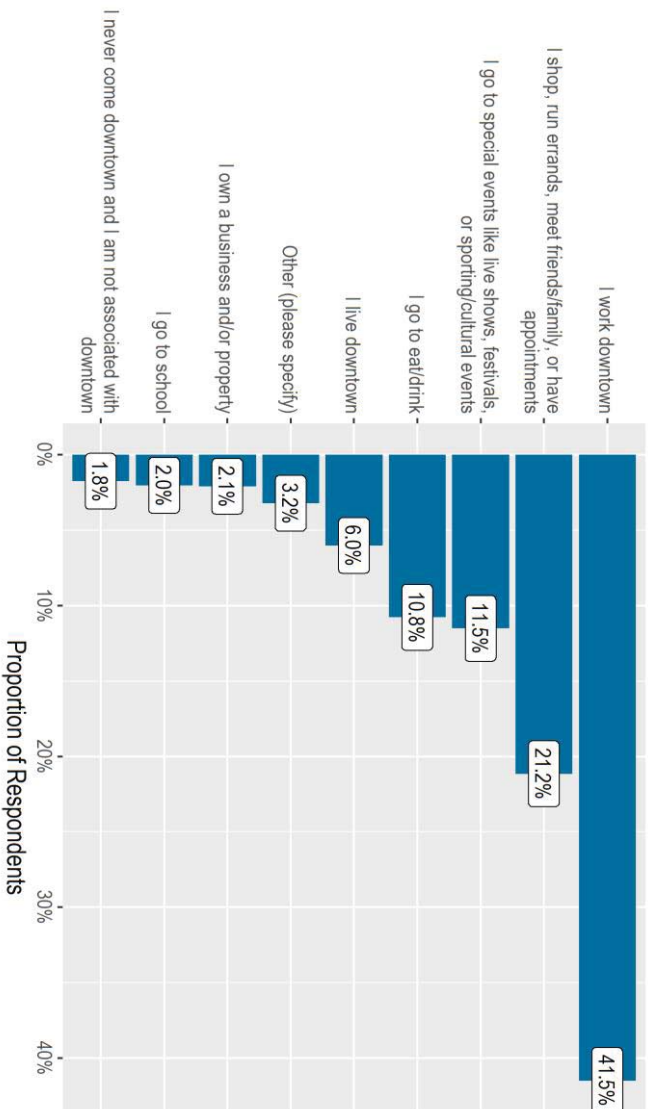
Figure 6   Secondary Reason for Travel to Downtown Spokane – Multiple Responses Allowed (N=1,765)
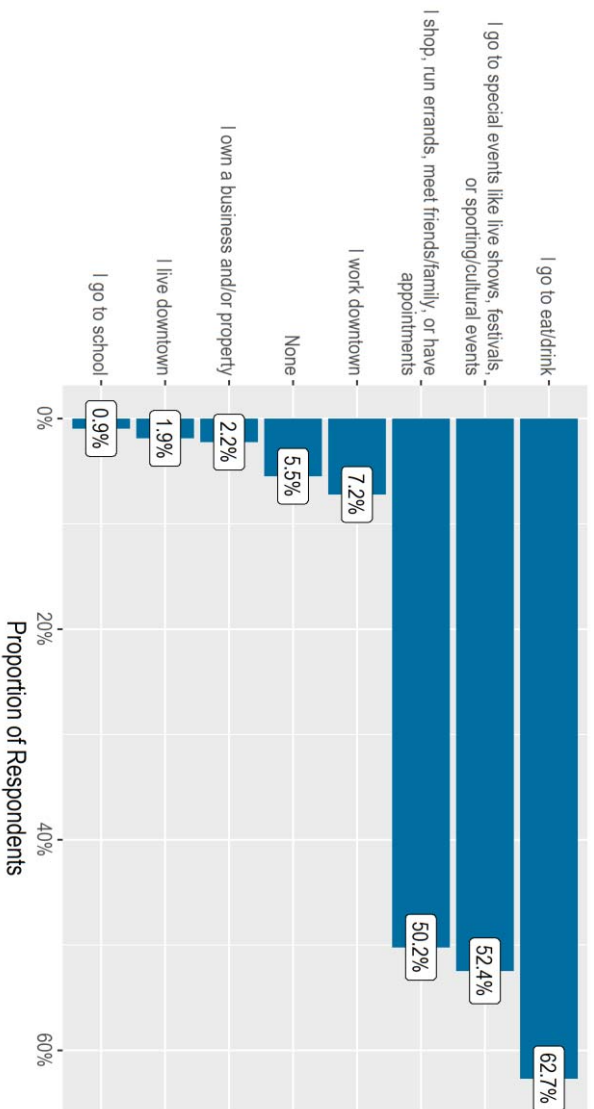
Figure 7   Respondent Employment Sector (N=686)

Proportion of Respondents

Construction/Manufacturing — 0.8%
Arts, Entertainment, and Recreation — 2.5%
Accommodation and/or Food Services — 2.8%
Retail — 3.0%
Other (please specify) — 5.0%
Non-profit — 6.8%
Professional, Scientific, and Technical Services — 10.6%
Educational Services — 11.7%
Finance and Insurance — 13.9%
Health Care and Social Services — 17.2%
Public Administration/Government — 25.8%

Figure 8   Parking Areas of Respondents, by Zone (N=1,816)
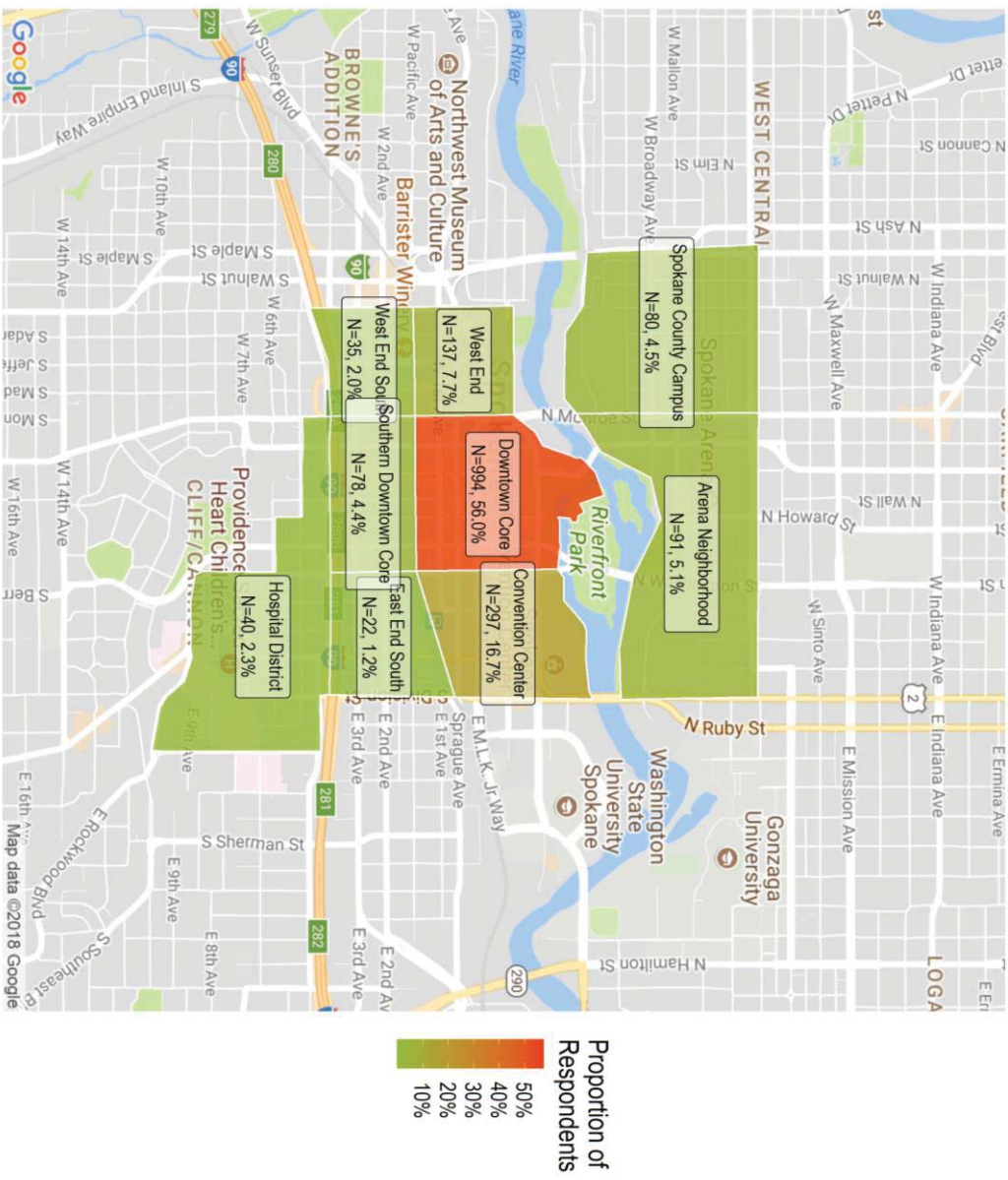
Travel Patterns

Figure 9   Respondent Visit Frequency (N=1,816)
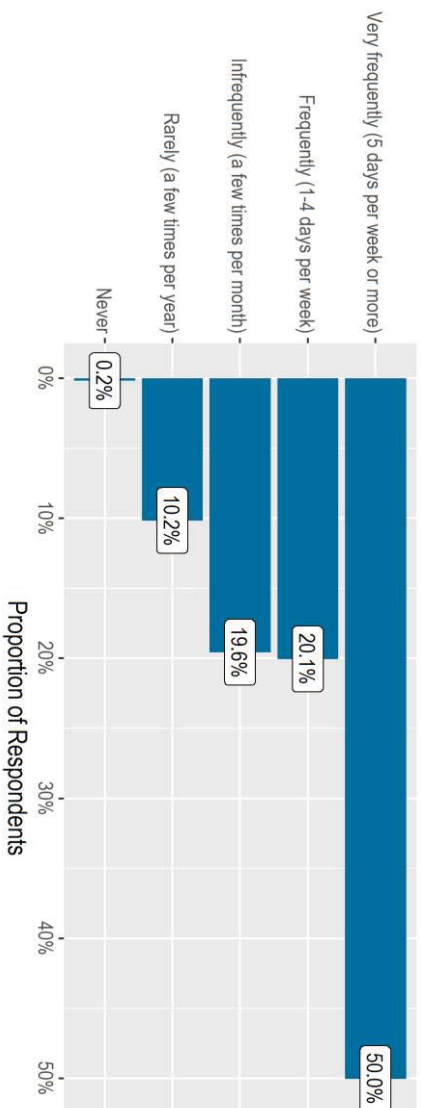
Figure 10   Respondent Travel Mode (N=1,816)
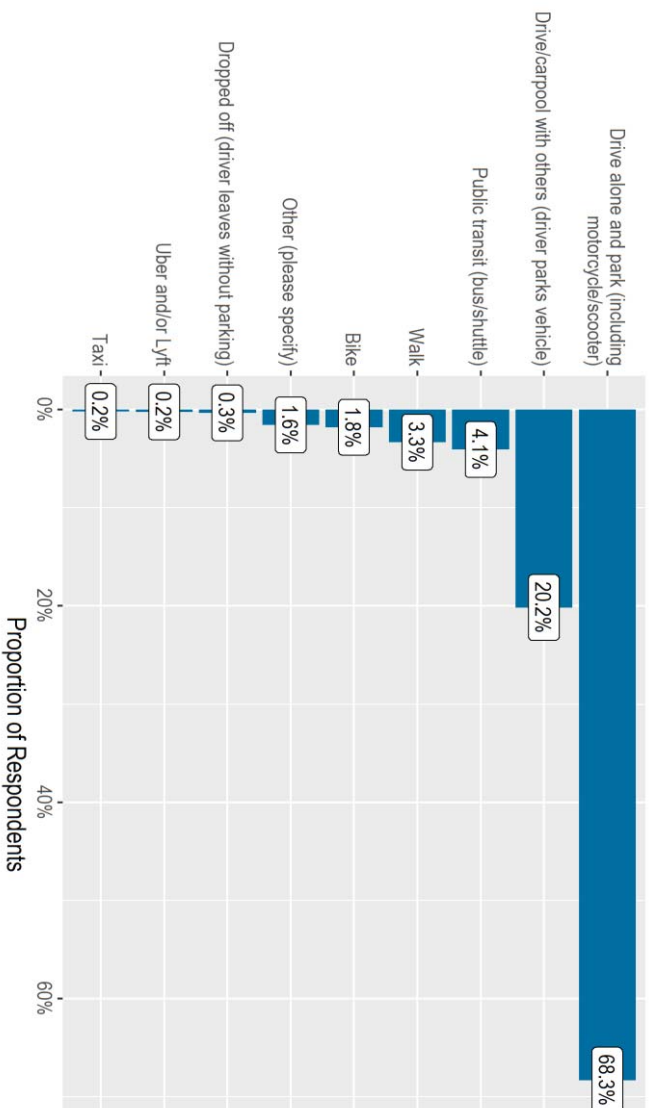
Figure 11 Downtown Employer/Residence Transportation Benefits (N=1,768)

Proportion of Respondents

- Shuttle service — 2.0%
- Financial incentives or pre-tax commute benefits — 2.2%
- Car share (i.e. Zipcar) vehicles and/or membership — 2.3%
- Not Sure — 4.0%
- Showers/Lockers — 11.0%
- Discounted parking — 11.7%
- Bike parking — 13.7%
- Free or discounted bus/shuttle pass — 18.3%
- Free parking — 25.3%
- None/Not applicable — 39.8%
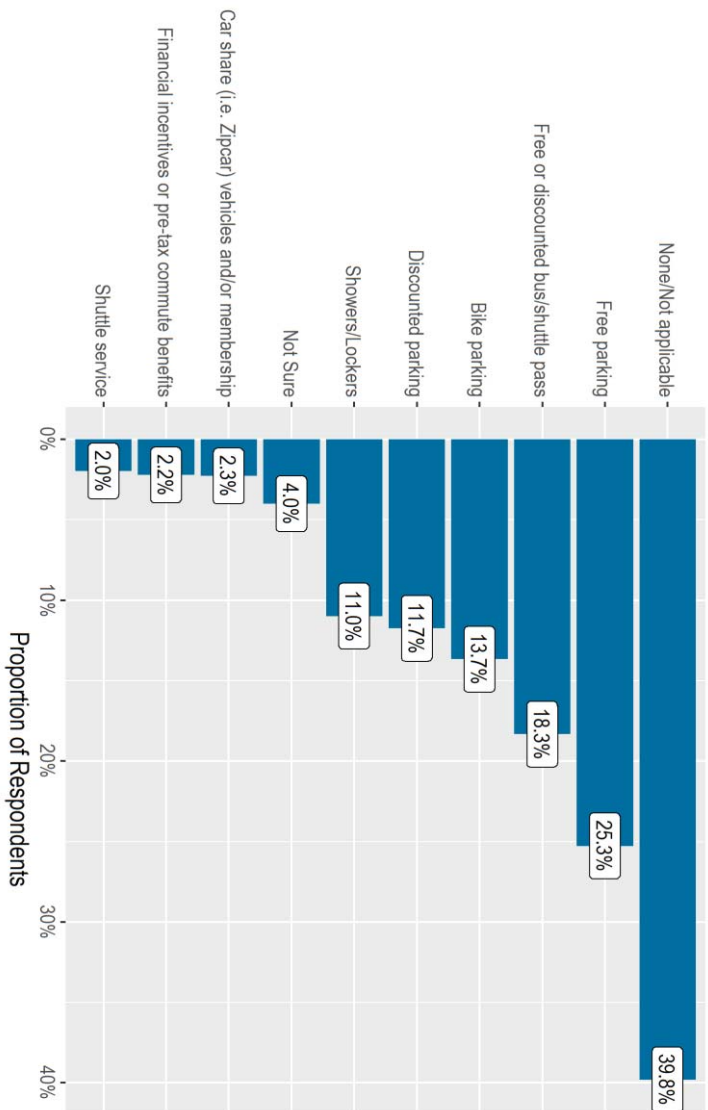
Parking Patterns and Preferences

Figure 12   Respondent Parking Facility Type (N=1,816)

Figure 13   Respondent Distance from Final Destination during Last Travel to Downtown (N=1,816)
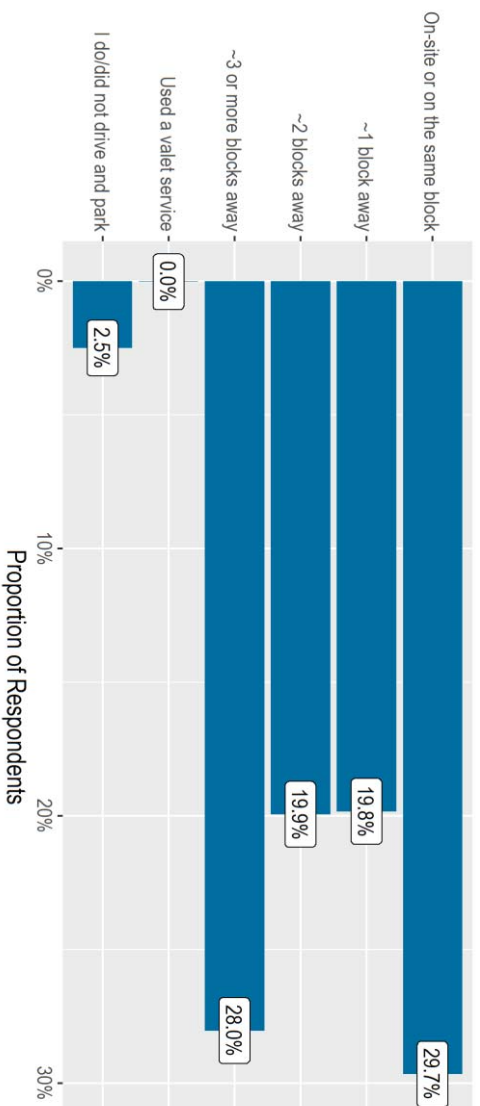
Figure 14   Respondent Typical Parking Duration (N=1,816)
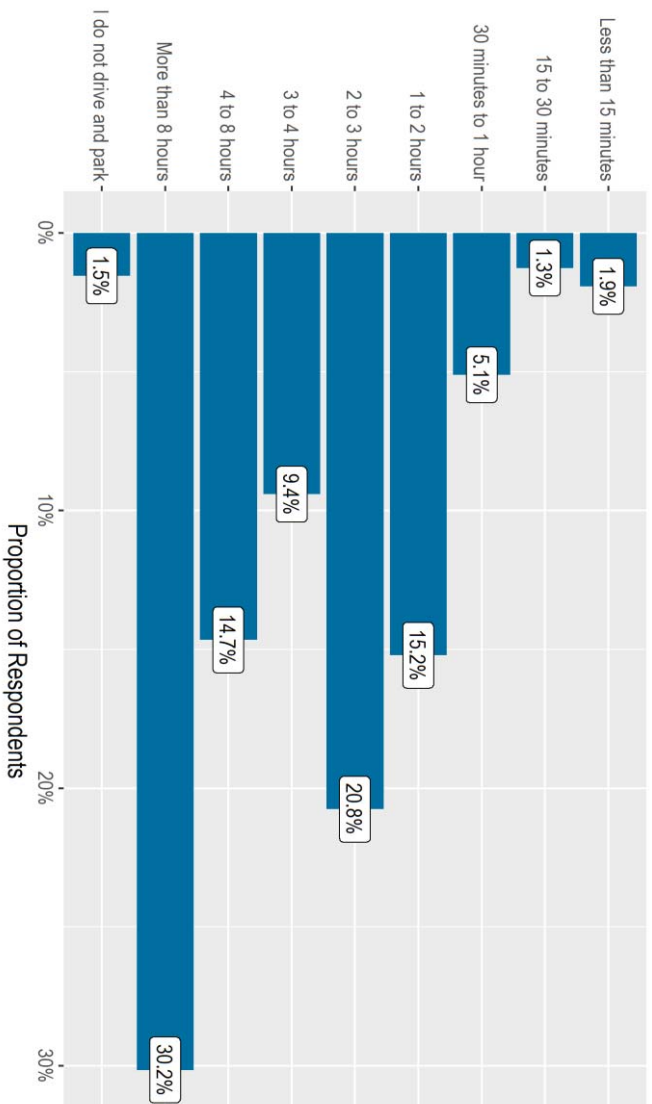
Figure 15   Respondent Top 3 Factors Determining Where to Park – Multiple Responses
Allowed (N=1,791)
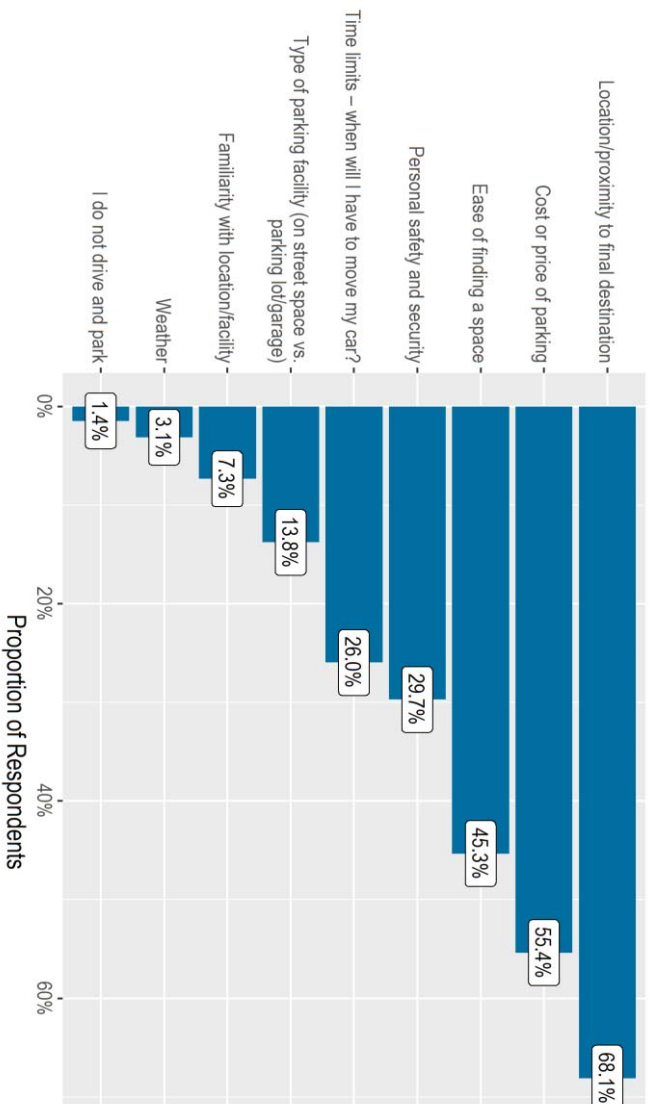
Figure 16   Respondent Preference on Parking Distance vs. Price (N=1,804)
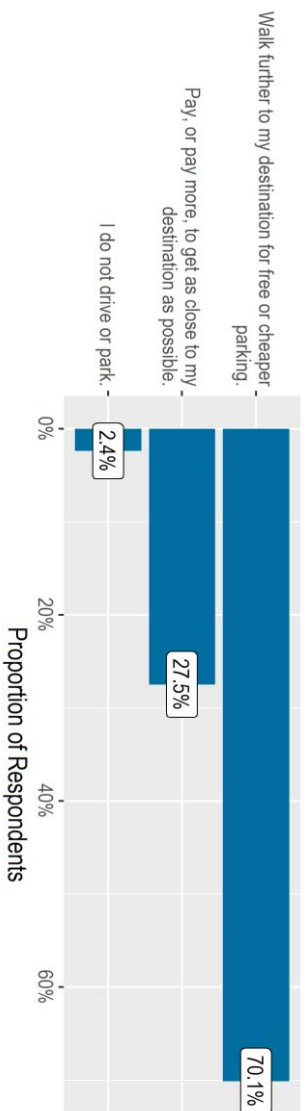
Figure 17   Respondent Top 3 Parking Issues – Multiple Responses Allowed (N=1,736)
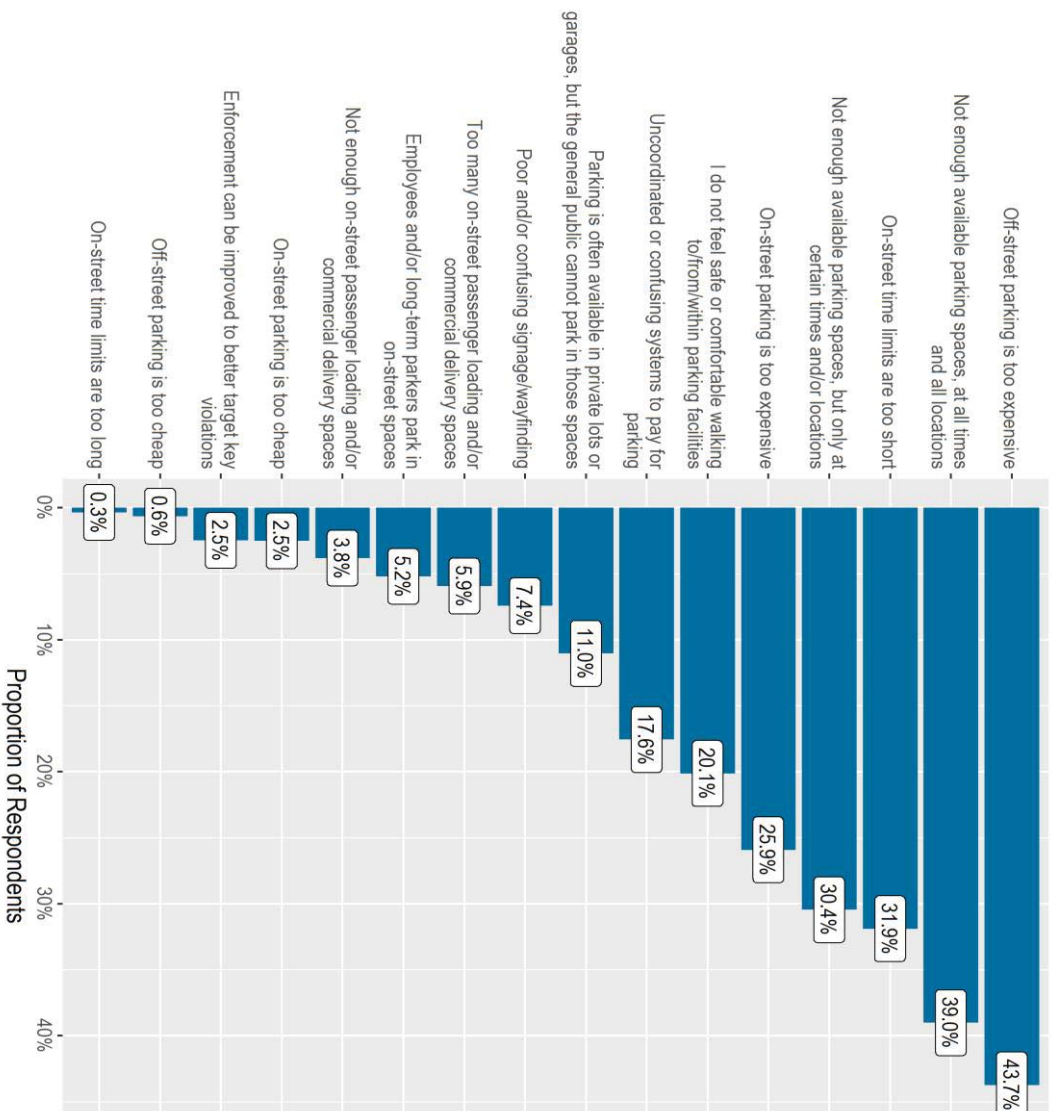
Figure 18   Respondent Top 3 Parking Strategies – Multiple Responses Allowed (N=1,771)

Proportion of Respondents

- New parking garage open to the general public at all times — 33.5%
- Allow for longer parking at on-street spaces — 33.1%
- Improved transit, biking, carpooling, or walking options and incentives to make it easier to drive and park once and/or to not drive downtown — 26.8%
- More consistent and user-friendly parking payment technology — 25.2%
- Expand available public parking in existing private parking facilities — 22.9%
- More consistently available on-street parking near my destination — 21.5%
- New or enhanced shuttle service to and from park-and-rides or parking facilities at edge of downtown — 19.8%
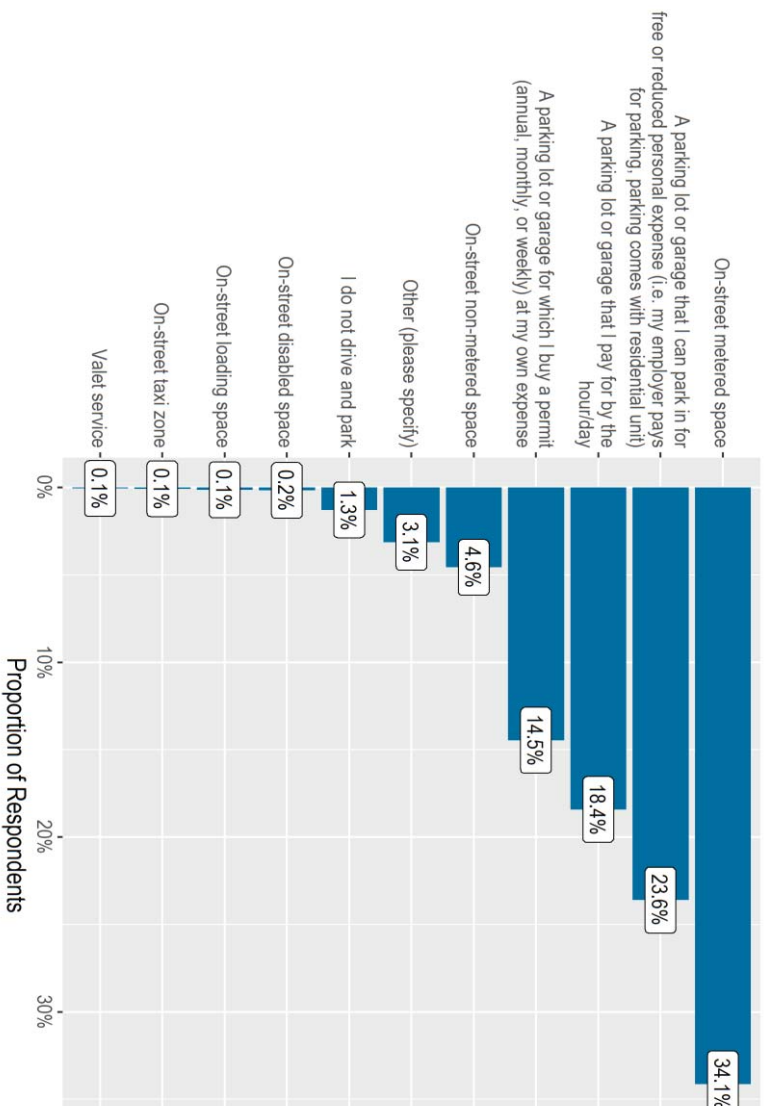- More information about downtown parking options (such as real-time parking availability signage and mobile apps) — 19.4%
- Redevelopment of underutilized surface parking lots into housing, retail, office, or other desired land uses — 19.1%
- Less on-street spaces dedicated to passenger loading, commercial loading, and deliveries — 11.6%
- Set/adjust price of parking based on location or convenience of space (i.e., most popular spaces have a higher price) — 8.6%
- Provide option to pay for less time at on-street meters — 8.2%
- Coordinated parking wayfinding and signage — 6.4%
- More on-street spaces dedicated to passenger loading and commercial loading/deliveries — 3.7%

Cross-Tabulations

Figure 19   User Group vs. Facility Type

Figure 20   Primary Travel Reason vs. Distance from Destination

Figure 21   Primary Travel Reason vs. Parking Duration

Figure 22 Primary Travel Reason vs. Parking Issues

Figure 23   Parking Zone vs. Facility Type

Figure 24   Parking Zone vs. Distance from Destination

Figure 25   Parking Zone vs. Parking Duration

Figure 26

Figure 26   Parking Zone vs. Parking Issues

Parking Issues

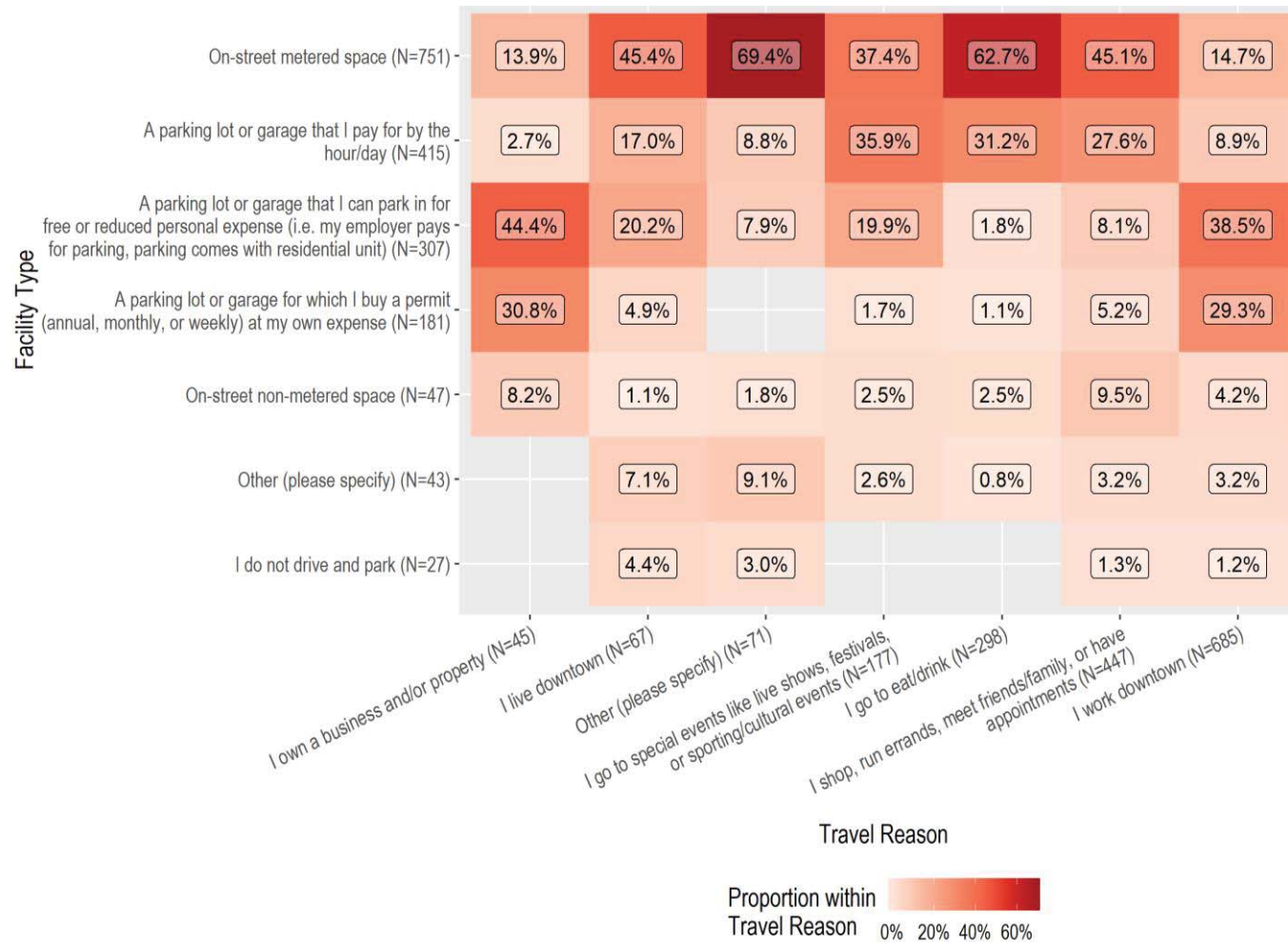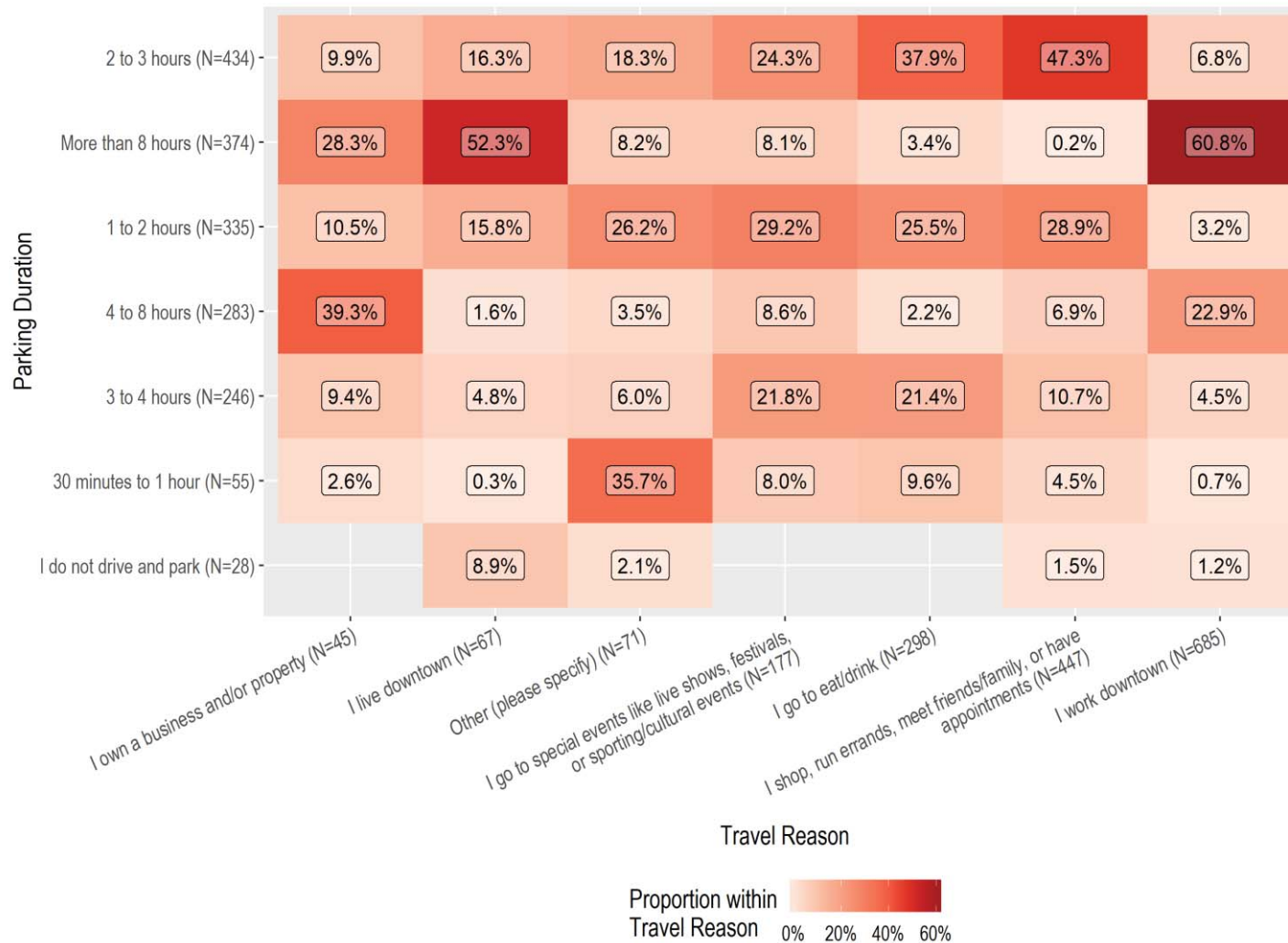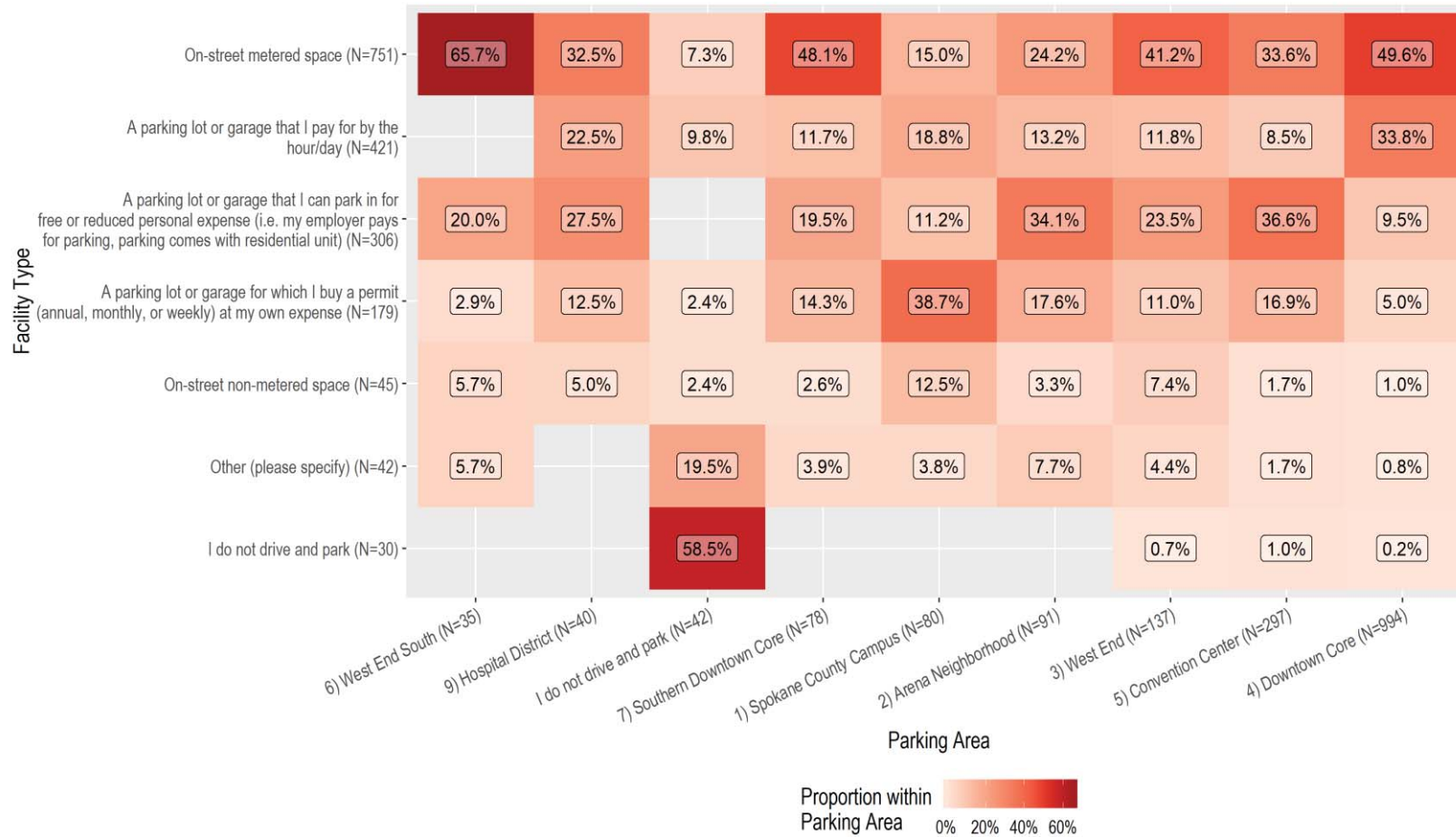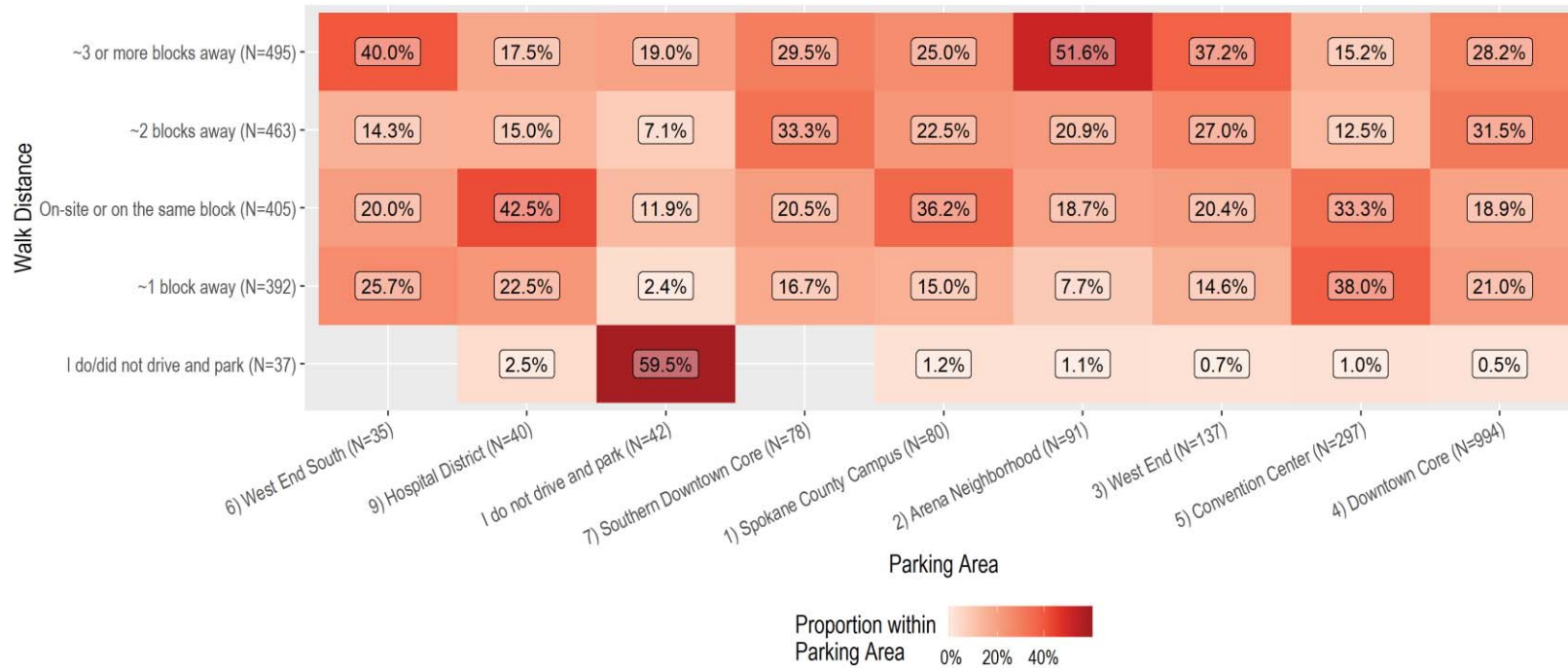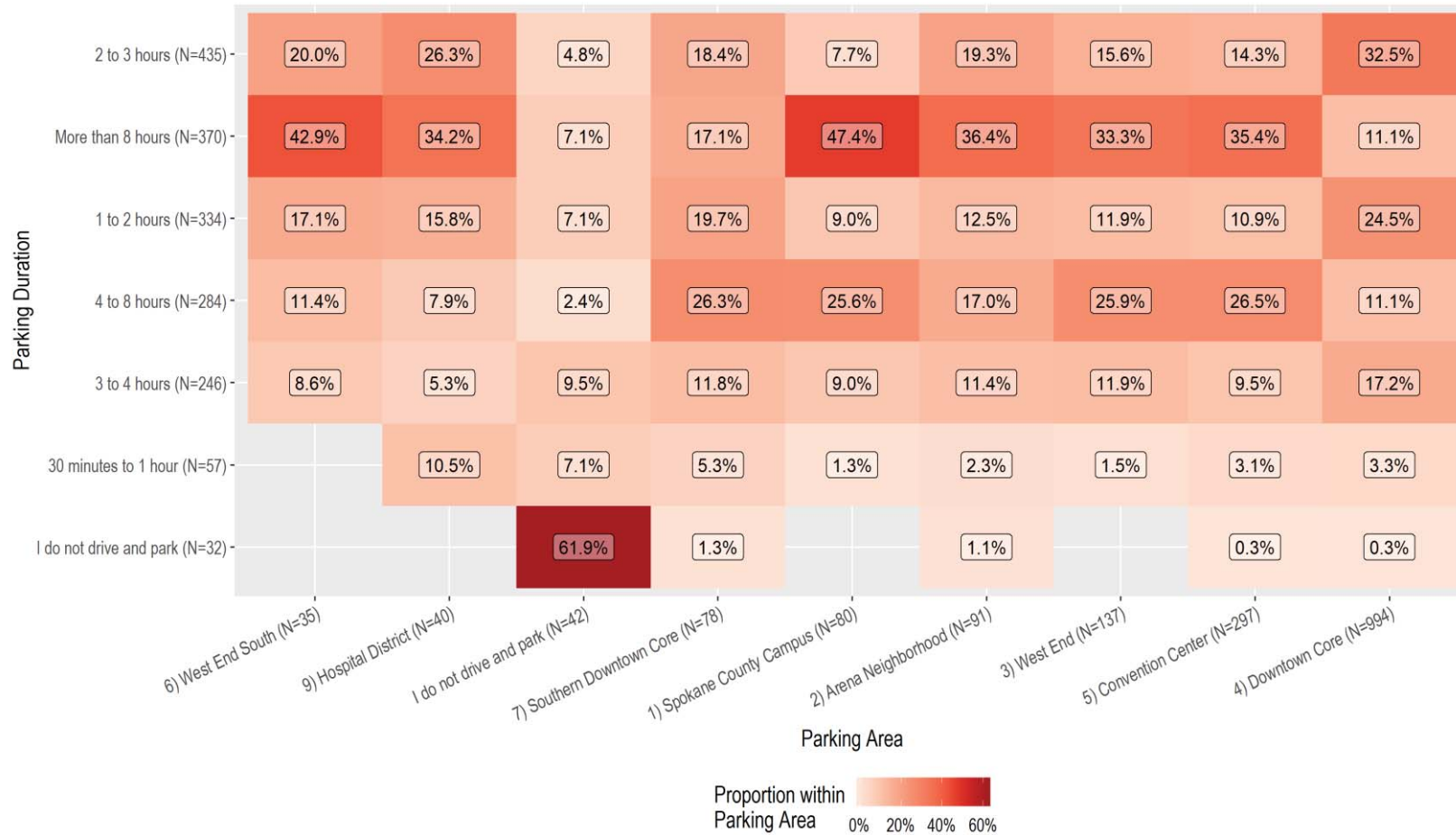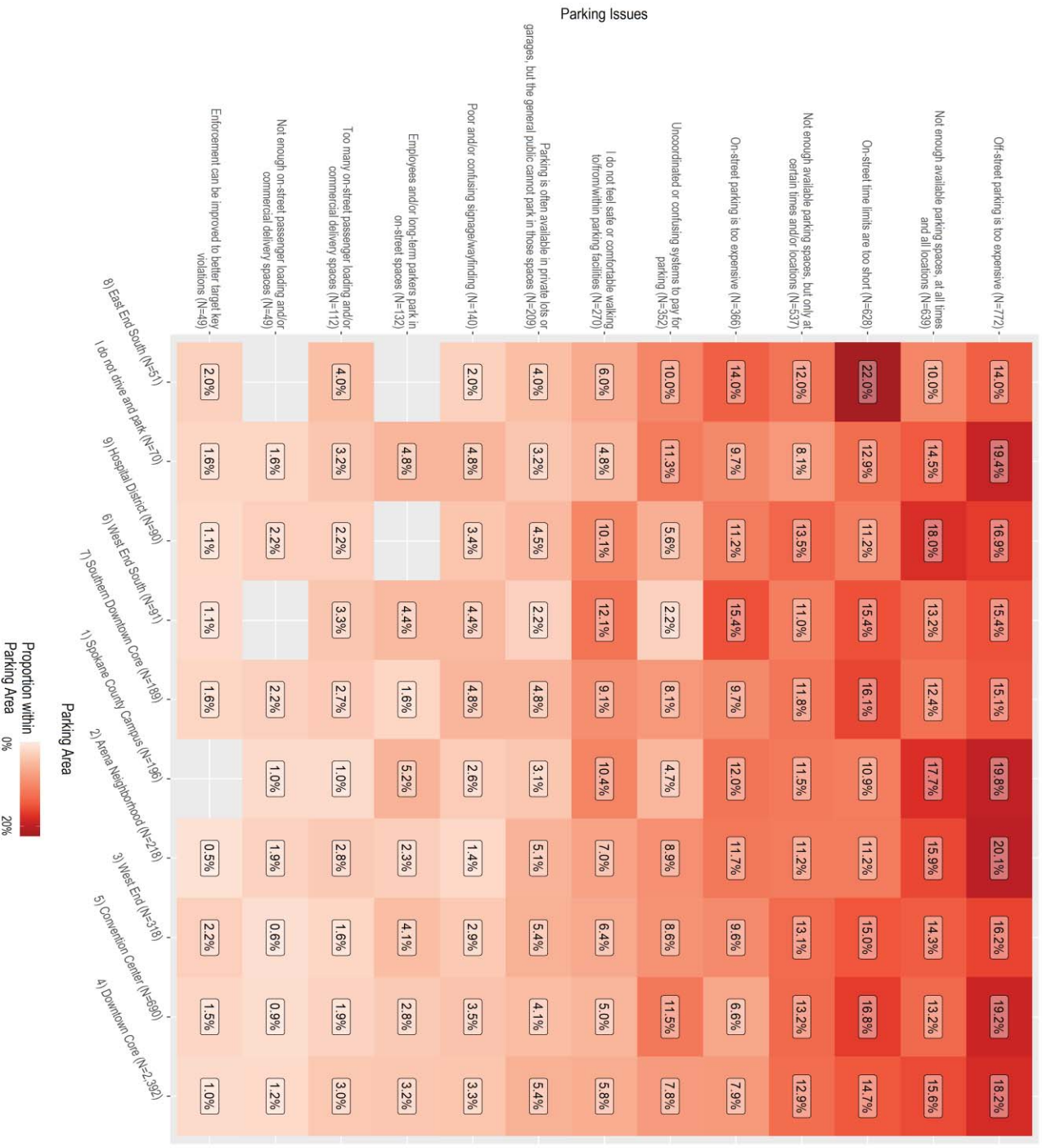| Parking Area	Enforcement can be improved to better target key violations (N=49)	Not enough on-street passenger loading and/or commercial delivery spaces (N=49)	Too many on-street passenger loading and/or commercial delivery spaces (N=112)	Employees and/or long-term parkers park in on-street spaces (N=132)	Poor and/or confusing signage/wayfinding (N=140)	Parking is often available in private lots or garages, but the general public cannot park in those spaces (N=209)	I do not feel safe or comfortable walking to/from/within parking facilities (N=270)	Uncoordinated or confusing systems to pay for parking (N=352)	On-street parking is too expensive (N=366)	Not enough available parking spaces, but only at certain times and/or locations (N=537)	On-street time limits are too short (N=628)	Not enough available parking spaces, at all times and all locations (N=639)	Off-street parking is too expensive (N=772)
8) East End South (N=51)	2.0%		4.0%		2.0%	4.0%	6.0%	10.0%	14.0%	12.0%	22.0%	10.0%	14.0%
9) Hospital District (N=70)	1.6%	1.6%	3.2%	4.8%	4.8%	3.2%	4.8%	11.3%	9.7%	8.1%	12.9%	14.5%	19.4%
6) West End South (N=90)	1.1%	2.2%	2.2%		3.4%	4.5%	10.1%	5.6%	11.2%	13.5%	11.2%	18.0%	16.9%
7) Southern Downtown Core (N=91)	1.1%		3.3%	4.4%	4.4%	2.2%	12.1%	2.2%	15.4%	11.0%	15.4%	13.2%	15.4%
1) Spokane County Campus (N=189)	1.6%	2.2%	2.7%	1.6%	4.8%	4.8%	9.1%	8.1%	9.7%	11.8%	16.1%	12.4%	15.1%
2) Arena Neighborhood (N=196)		1.0%	1.0%	5.2%	2.6%	3.1%	10.4%	4.7%	12.0%	11.5%	10.9%	17.7%	19.8%
3) West End (N=218)	0.5%	1.9%	2.8%	2.3%	1.4%	5.1%	7.0%	8.9%	11.7%	11.2%	11.2%	15.9%	20.1%
5) Convention Center (N=318)	2.2%	0.6%	1.6%	4.1%	2.9%	5.4%	6.4%	8.6%	9.6%	13.1%	15.0%	14.3%	16.2%
4) Downtown Core (N=690)	1.5%	0.9%	1.9%	2.8%	3.5%	4.1%	5.0%	6.6%	11.5%	13.2%	16.8%	13.2%	19.2%
(N=2,392)	1.0%	1.2%	3.0%	3.2%	3.3%	5.4%	5.8%	7.8%	7.9%	12.9%	14.7%	15.6%	18.2%

Proportion within
Parking Area

0%   20%

Parking Area

UNIVERSITY DISTRICT

This section first presents the key findings of the University District Parking Study survey, and then presents all of the plots generated to develop those key findings.

Key Findings

- **Nearly half of respondents work in the University District.** Fifteen percent shop, run errands, or visit friends/family. Nine percent are students.

- **The majority of respondents park in the Riverpoint Campus area**, but this area only accounts for a quarter of the spaces. Responses in the three zones were weighted up or down based on the proportion of parking spaces counted in each area.

- Over two-thirds of respondents who work in the University District are employed in Educational services (e.g., university faculty, staff). Ten percent work in professional, scientific, and technical services.

- **Nearly two-thirds of those Educational services respondents work for Gonzaga University.** Twelve percent work for Eastern Washington University, nine percent work for the Community Colleges of Spokane, and nine percent work for Washington State University Health Sciences.

- Over one-third of student respondents study at Whitworth University, and a quarter each study at EWU and GU. Ten percent study at WSU Health Sciences.

- Half of respondents travel to the University District very frequently (5 days per week or more). One-fifth visit 1-4 days per week, and another visit a few times per month.

- Nearly eighty percent of respondents drive alone and park for most of their trips to/in the University District. Twelve percent carpool with others.

- **Nearly one-third of respondents have access to a free or discounted bus pass.** Over one-fifth have access to bike parking at their employer or residence, and nearly one-fifth have access to free vehicle parking.

- **One-third of parkers utilize a lot or garage with a purchased recurring permit** – likely through one of the universities in the study area. Another third park in an on-street non-metered space. Fifteen percent park in a lot or garage at a free or reduced price provided by their employer or residential unit.

- Over half of employees, and over one third of students, parking in the University District park in lots or garages for which they purchase a recurring permit.

- Nearly one-third of students indicated they have access to free or reduced price parking.

- **Over forty percent of parkers park on-site or on the same block.** One-fifth park one block away, 17% park two blocks away, and another 17% park three or more blocks away.

- Over half of parkers park for four hours or longer, with most of those parking for eight hours or more.

- **Over two-thirds of respondents** prioritized proximity to their destination among their top three factors in selecting where to park. The second and third most important factors were ease of finding a space (56%) and the price of parking (42%).

respectively. A quarter indicated personal safety and security, and 18% indicated time limits.

- Nearly three-quarters of respondents would prefer to park further from their destination for free or cheaper parking. Only one-quarter would be willing to pay more to park closer to their destination.

- Over forty percent of respondents indicated a lack of parking at specific locations or times was among their most important parking issues. Over one-third of respondents indicated a lack of supply at all locations was among their top three issues, and one-fifth indicated off-street parking was too expensive.

Respondent Profile

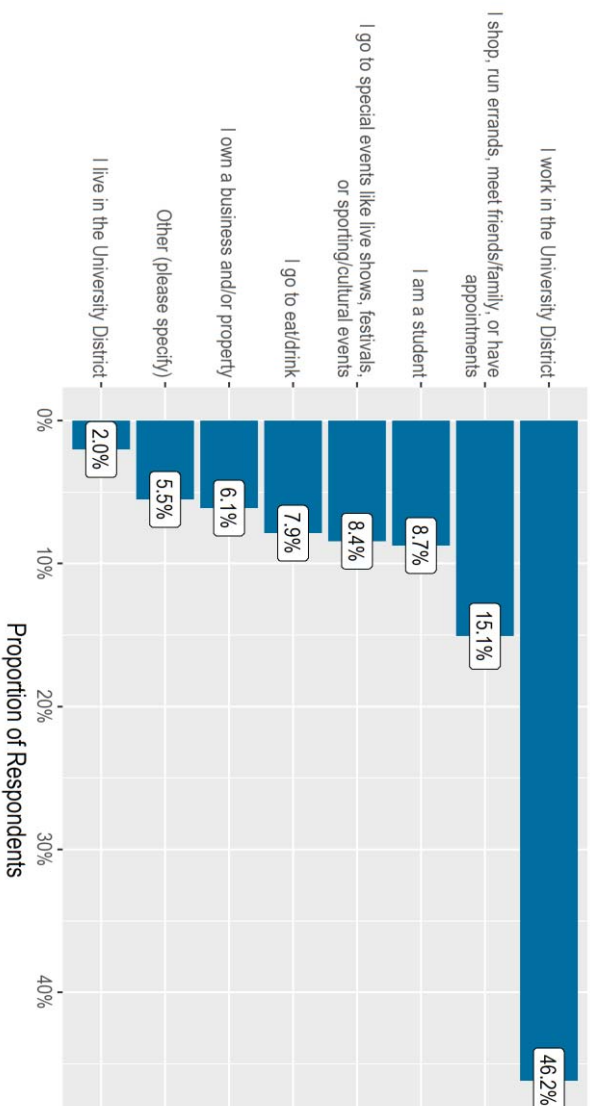**Figure 27** Primary Reason for Travel to the University District (N=663)

Figure 28 Secondary Reason for Travel to University District – Multiple Responses Allowed (N=627)
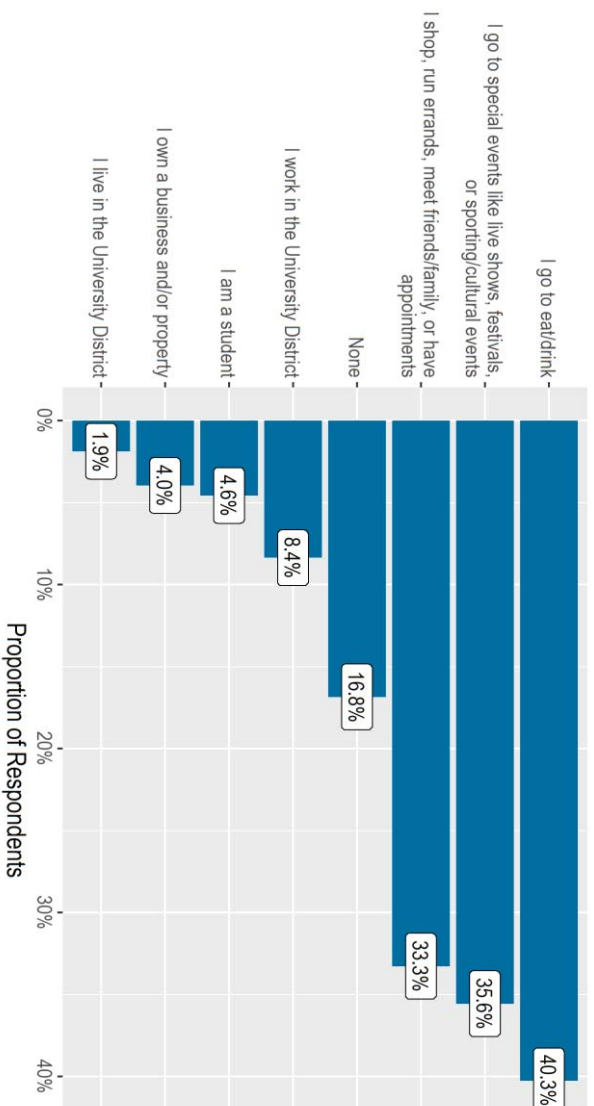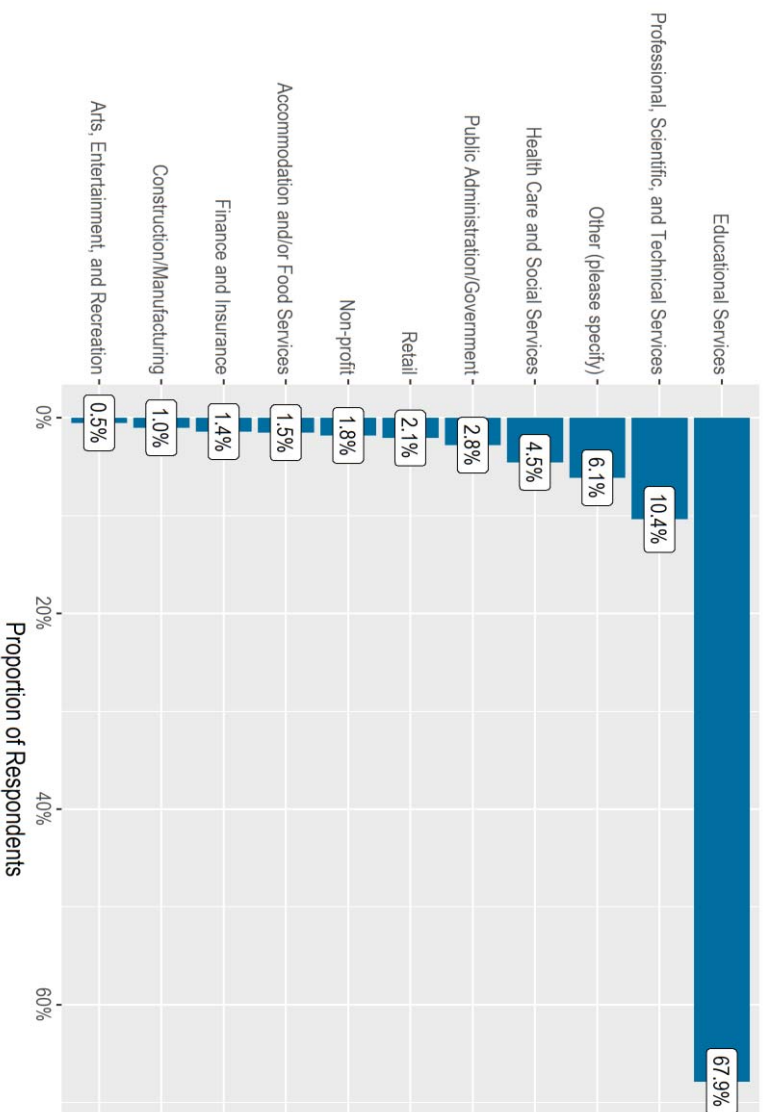
Figure 29   Respondent Employment Sector (N=329)

- Educational Services — 67.9%
- Professional, Scientific, and Technical Services — 10.4%
- Other (please specify) — 6.1%
- Health Care and Social Services — 4.5%
- Public Administration/Government — 2.8%
- Retail — 2.1%
- Non-profit — 1.8%
- Accommodation and/or Food Services — 1.5%
- Finance and Insurance — 1.4%
- Construction/Manufacturing — 1.0%
- Arts, Entertainment, and Recreation — 0.5%

Proportion of Respondents

Figure 30   Respondent School Employed At (N=240)

- Gonzaga University — 62.0%
- Eastern Washington University — 12.0%
- Community Colleges of Spokane — 9.2%
- Washington State University Health Sciences Spokane — 8.9%
- Washington State University — 3.9%
- Whitworth University — 2.4%
- Other (please specify) — 1.6%
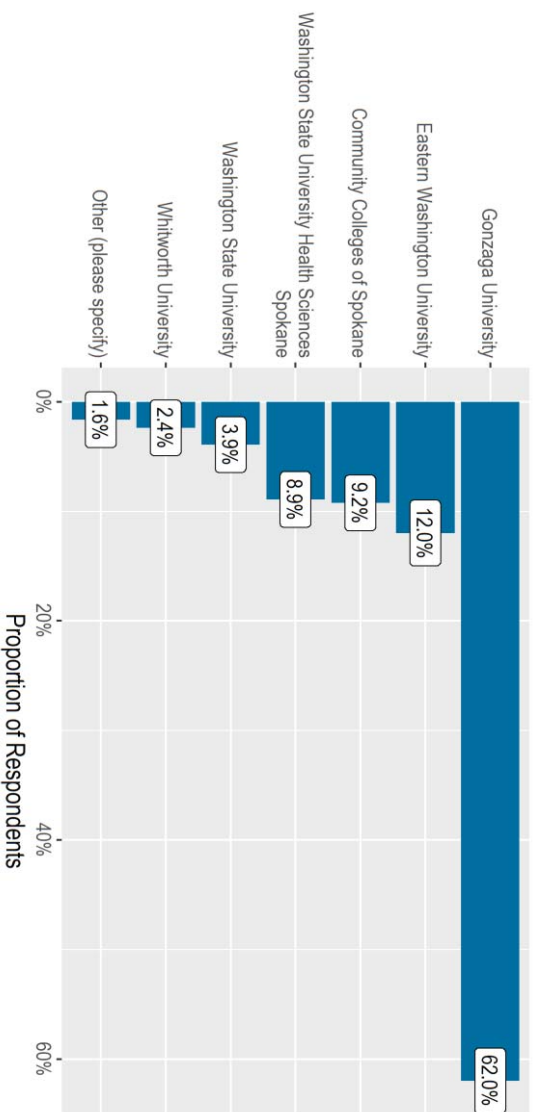
Proportion of Respondents

Figure 31 Respondent School Attended (N=98)
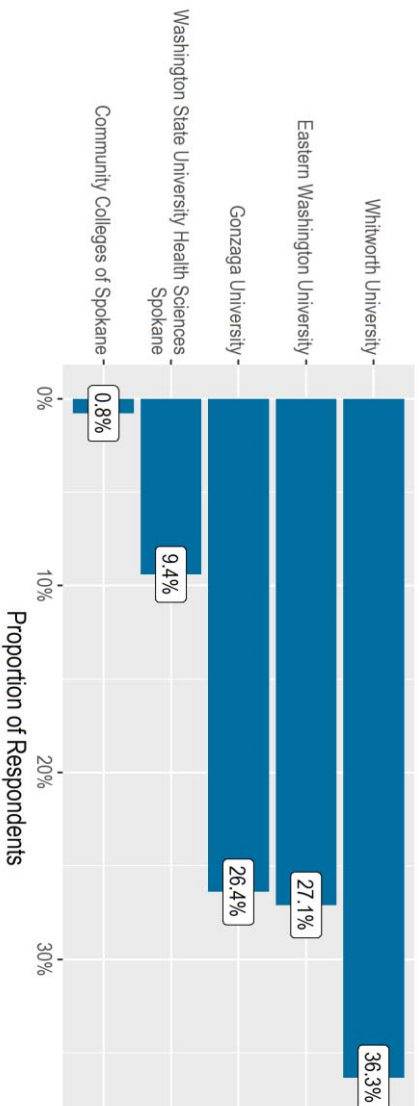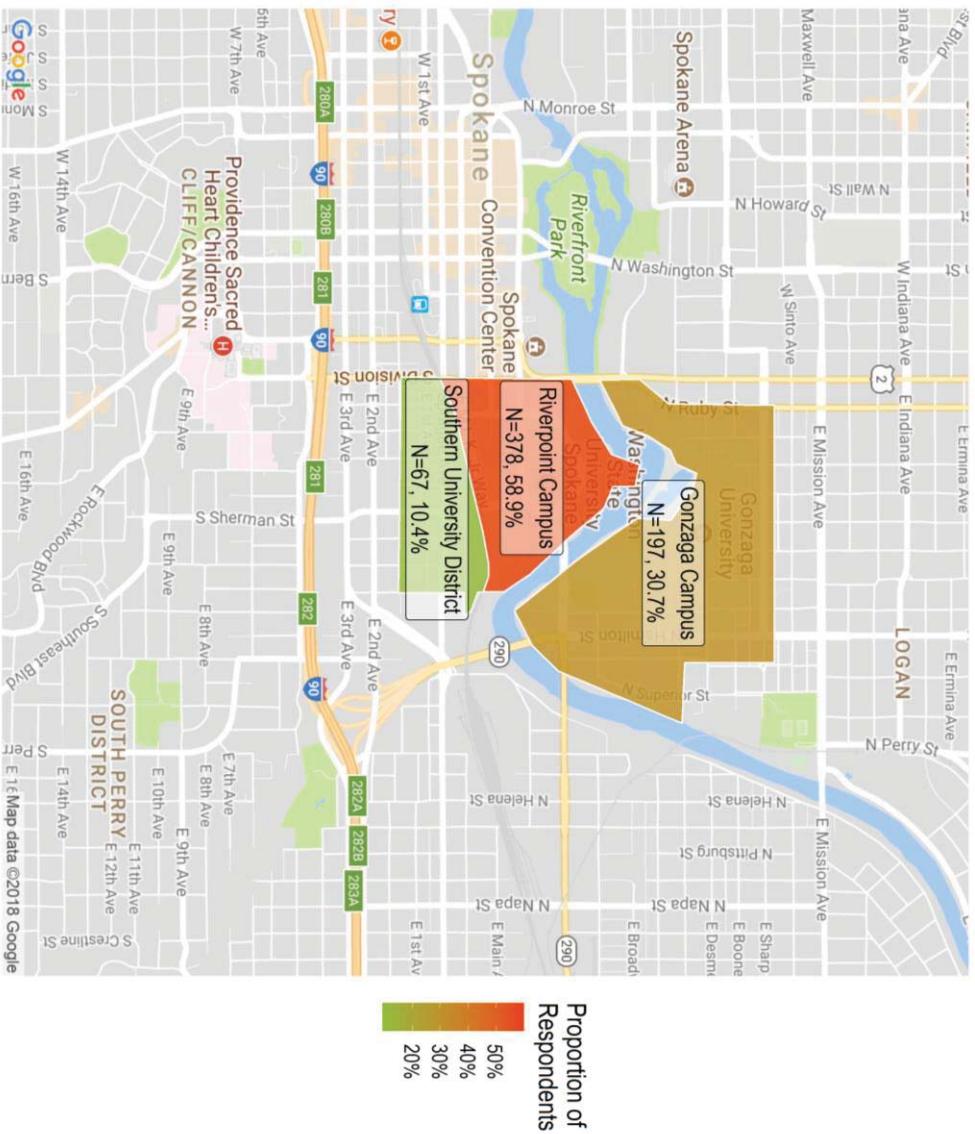

Figure 32 University District Respondents, by Parking Area (N=663)

Travel Patterns

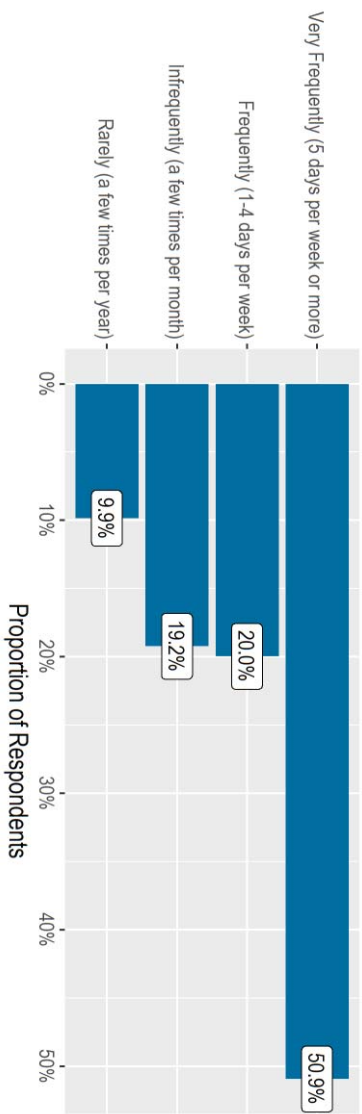## Figure 33   Respondent Visit Frequency (N=663)
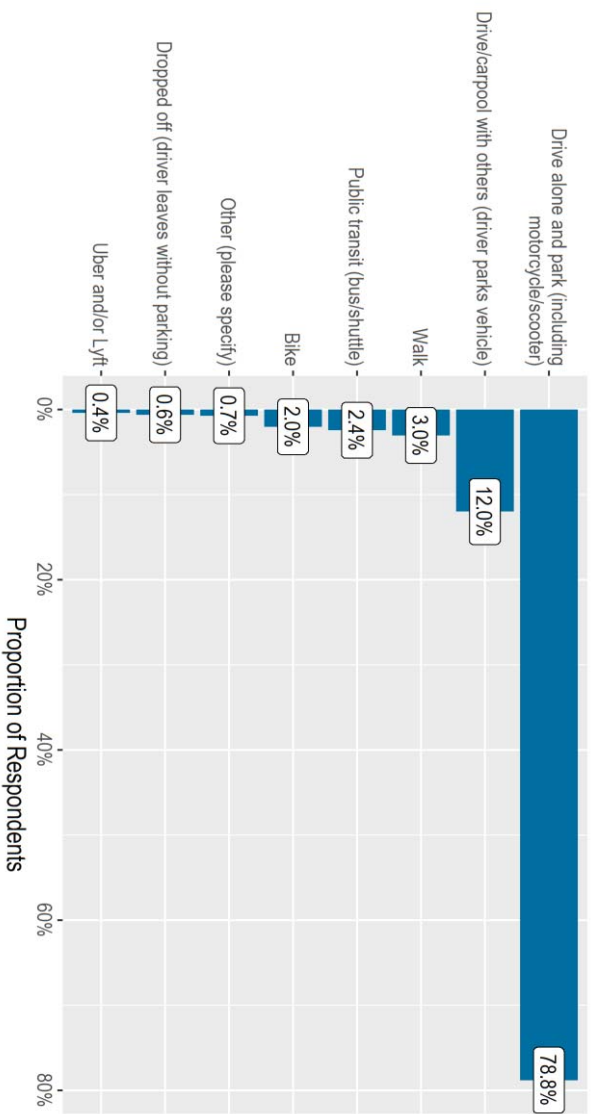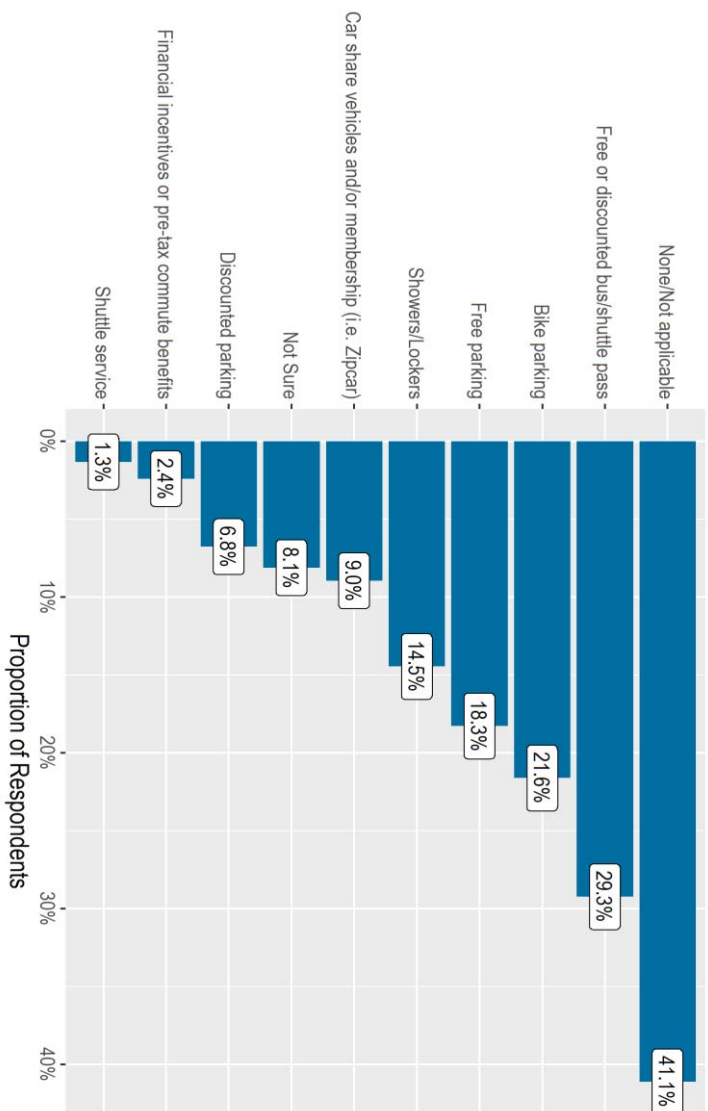

Figure 34   Respondent Travel Mode (N=663)

Parking Patterns and Preferences

Figure 36   Respondent Parking Facility Type (N=663)

Proportion of Respondents

- A parking lot or garage for which I buy a permit (annual, monthly, or weekly) at my own expense — 31.1%
- On-street non-metered space — 30.7%
- A parking lot or garage that I can park in for free or reduced personal expense (i.e. my employer/school pays for parking, parking comes with residential unit) — 14.9%
- On-street metered space — 9.2%
- Other (please specify) — 5.4%
- A parking lot or garage that I pay for by the hour/day — 5.3%
- I do not drive and park — 2.7%
- On-street disabled space — 0.7%

Figure 37   Respondent Distance from Final Destination during Last Travel to University District (N=663)
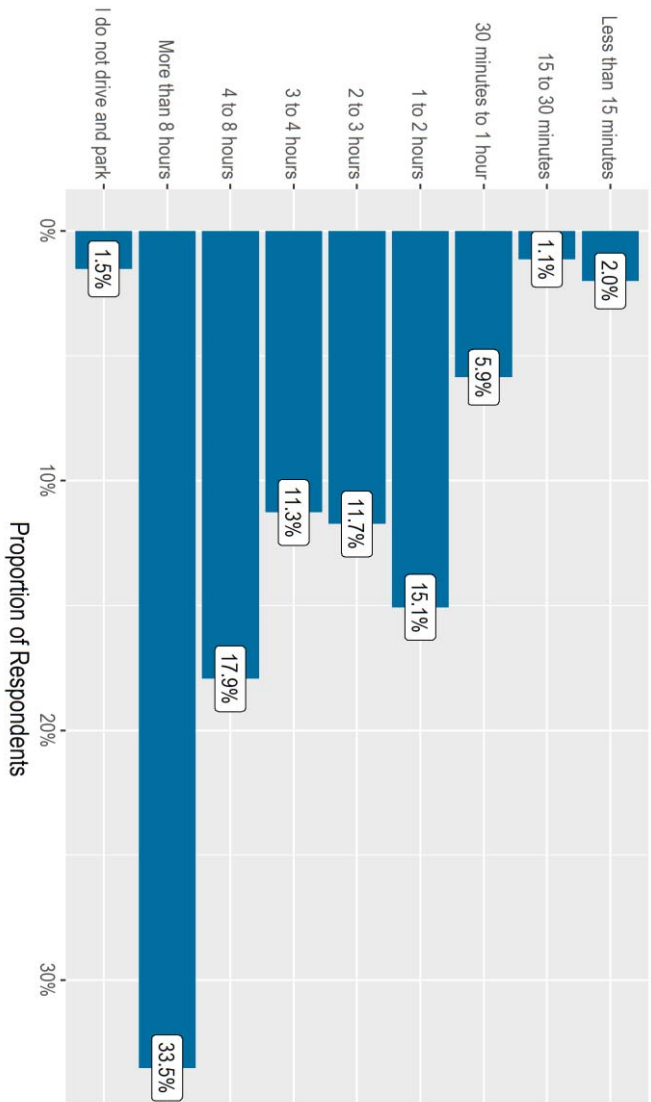

Proportion of Respondents

- On-site or on the same block — 42.4%
- ~1 block away — 21.5%
- ~2 blocks away — 16.7%
- ~3 or more blocks away — 16.9%
- I do/did not drive and park — 2.4%
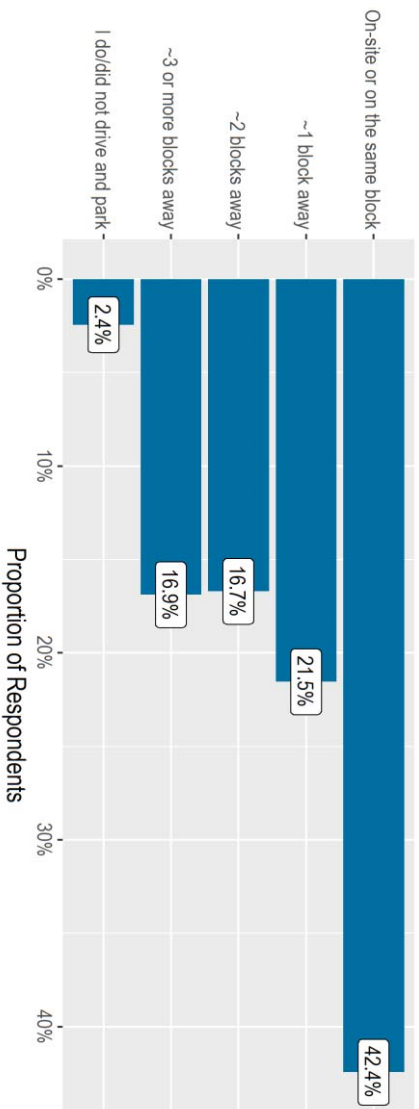
Figure 38   Respondent Parking Duration (N=663)

Proportion of Respondents

Category	%
Less than 15 minutes	2.0%
15 to 30 minutes	1.1%
30 minutes to 1 hour	5.9%
1 to 2 hours	15.1%
2 to 3 hours	11.7%
3 to 4 hours	11.3%
4 to 8 hours	17.9%
More than 8 hours	33.5%
I do not drive and park	1.5%

Figure 39   Respondent Top 3 Factors Determining Where to Park – Multiple Responses Allowed (N=650)

Proportion of Respondents

Category	%
Location/proximity to final destination	69.9%
Ease of finding a space	56.4%
Cost or price of parking	42.1%
Personal safety and security	25.3%
Time limits – when will I have to move my car?	18.2%
Type of parking facility (on street space vs. parking lot/garage)	12.6%
Familiarity with location/facility	8.1%
Weather	6.1%
I do not drive and park	2.4%
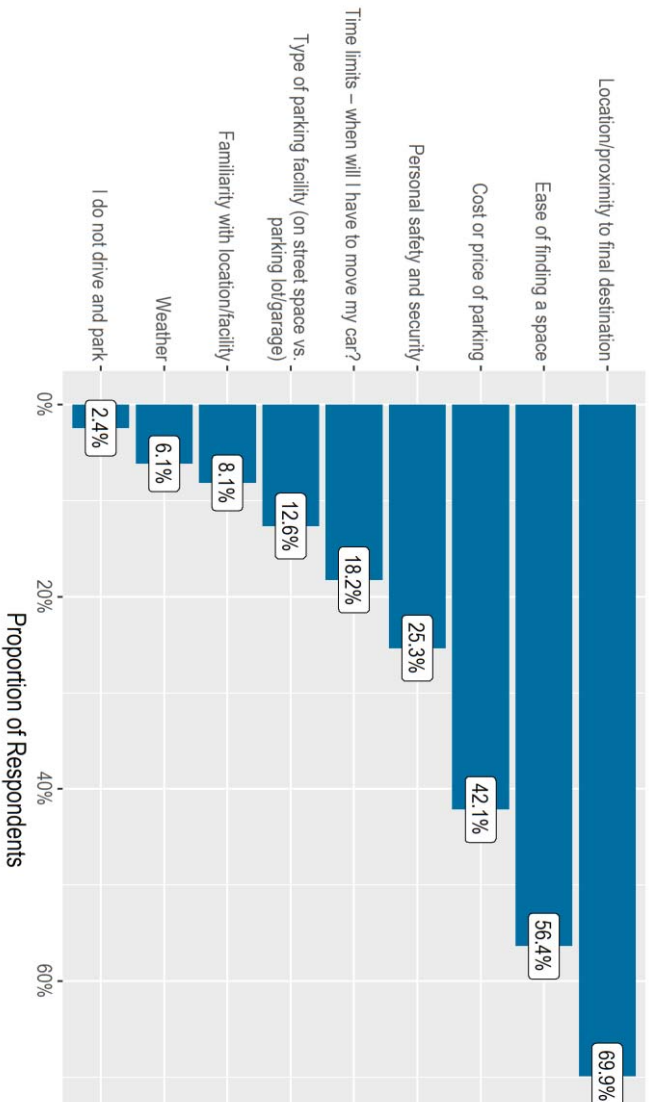
Figure 40   Respondent Preference on Parking Distance vs. Price (N=661)

Walk further to my destination for free or cheaper parking. — 73.5%

Pay, or pay more, to get as close to my destination as possible. — 24.5%

I do not drive or park. — 2.1%

Proportion of Respondents
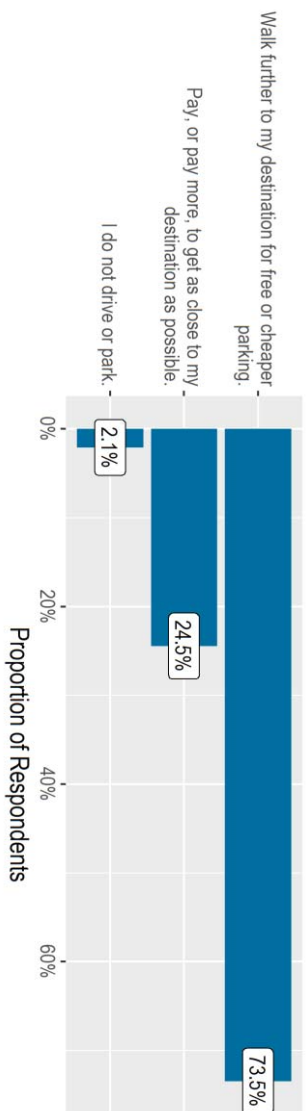
Figure 41   Respondent Top 3 Parking Issues – Multiple Responses Allowed (N=599)

Not enough available parking spaces, but only at certain times and/or locations — 43.3%

Not enough available parking spaces, at all times and all locations — 36.5%

Off-street parking is too expensive — 22.1%

Parking is often available in private lots or garages, but the general public cannot park in those spaces — 18.3%

On-street time limits are too short — 15.5%

On-street parking is too expensive — 13.7%

Enforcement can be improved to better target key violations — 11.9%

I do not feel safe or comfortable walking to/from/within parking facilities — 11.6%

Uncoordinated or confusing systems to pay for parking — 10.2%

Poor and/or confusing signage/wayfinding — 8.3%

Employees and/or long-term parkers park in on-street spaces — 7.3%

Not enough on-street passenger loading and/or commercial delivery spaces — 2.6%

On-street parking is too cheap — 2.0%

Off-street parking is too cheap — 1.7%

On-street time limits are too long — 0.6%

Proportion of Respondents

Cross Tabulations

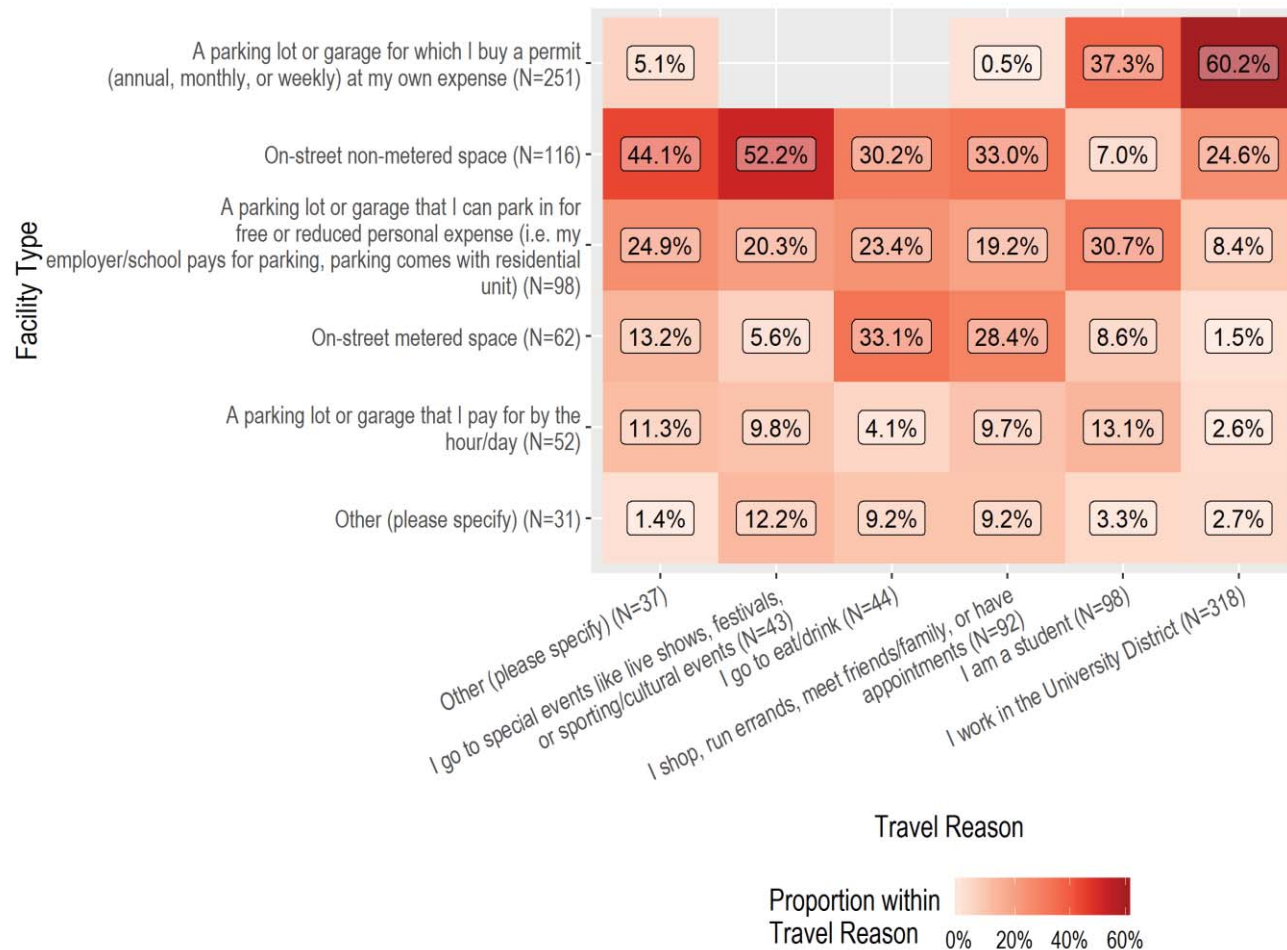**Figure 42   University District Primary Travel Reason vs. Facility Type**

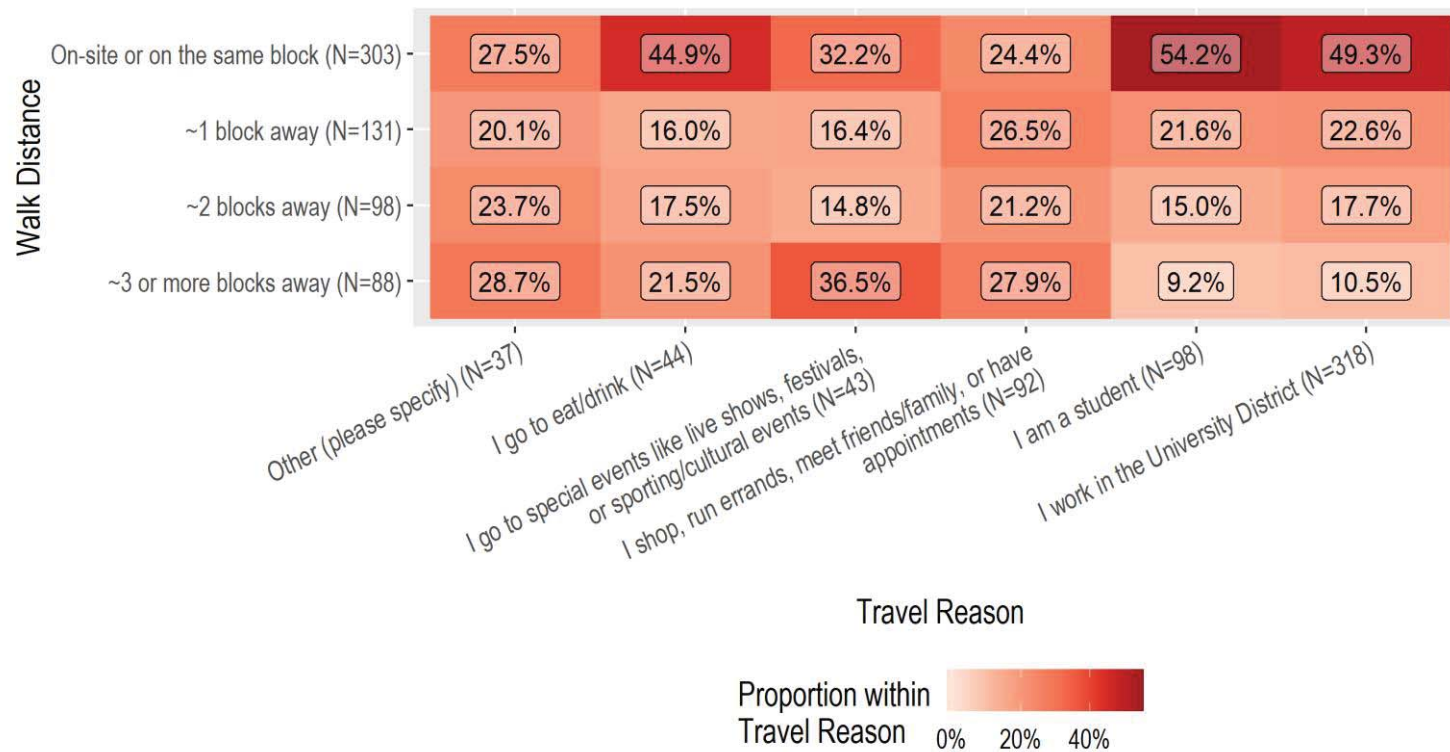**Figure 43   University District Primary Travel Reason vs. Distance from Destination**

Figure 44   University District Primary Travel Reason vs. Parking Duration
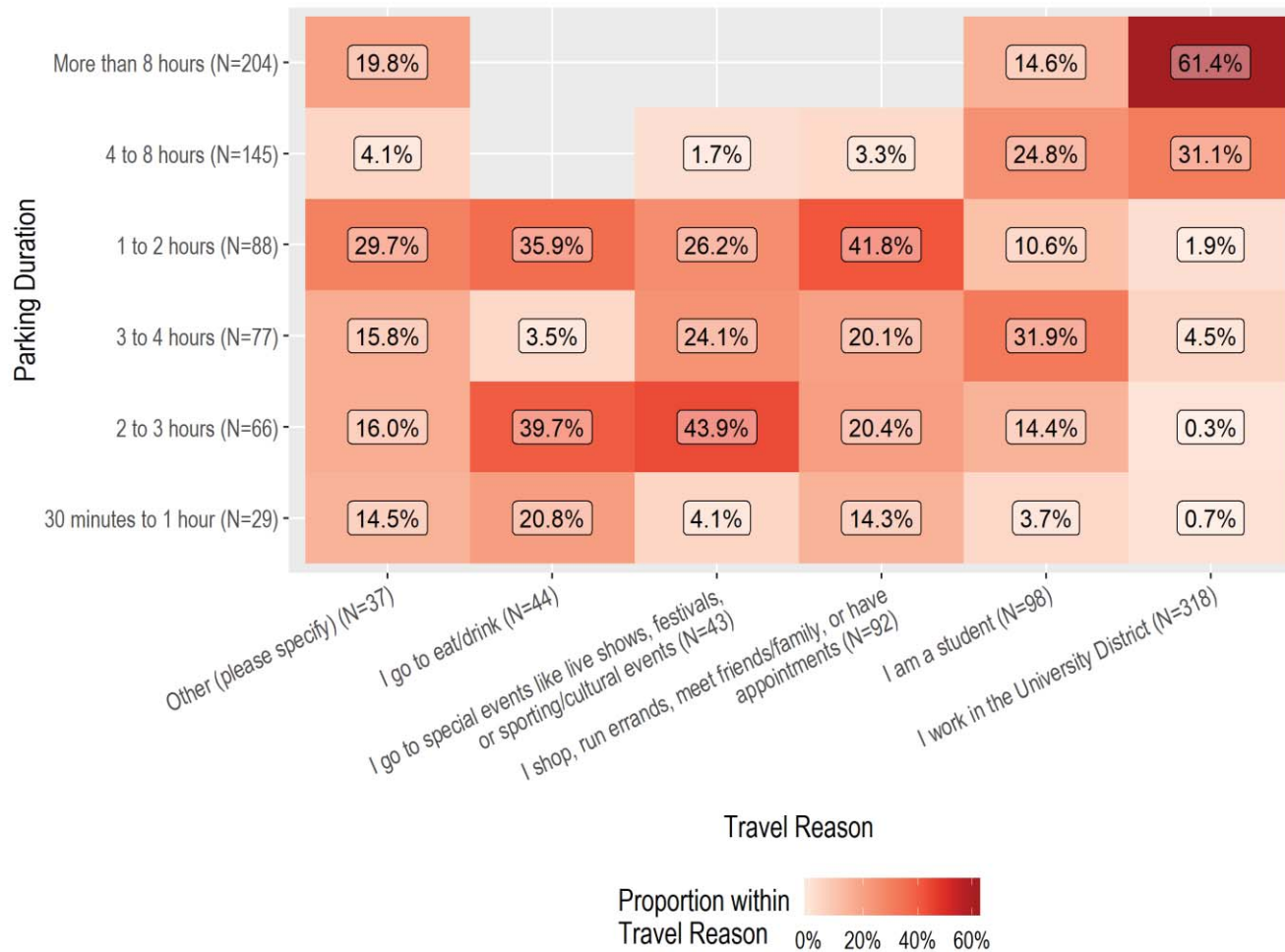
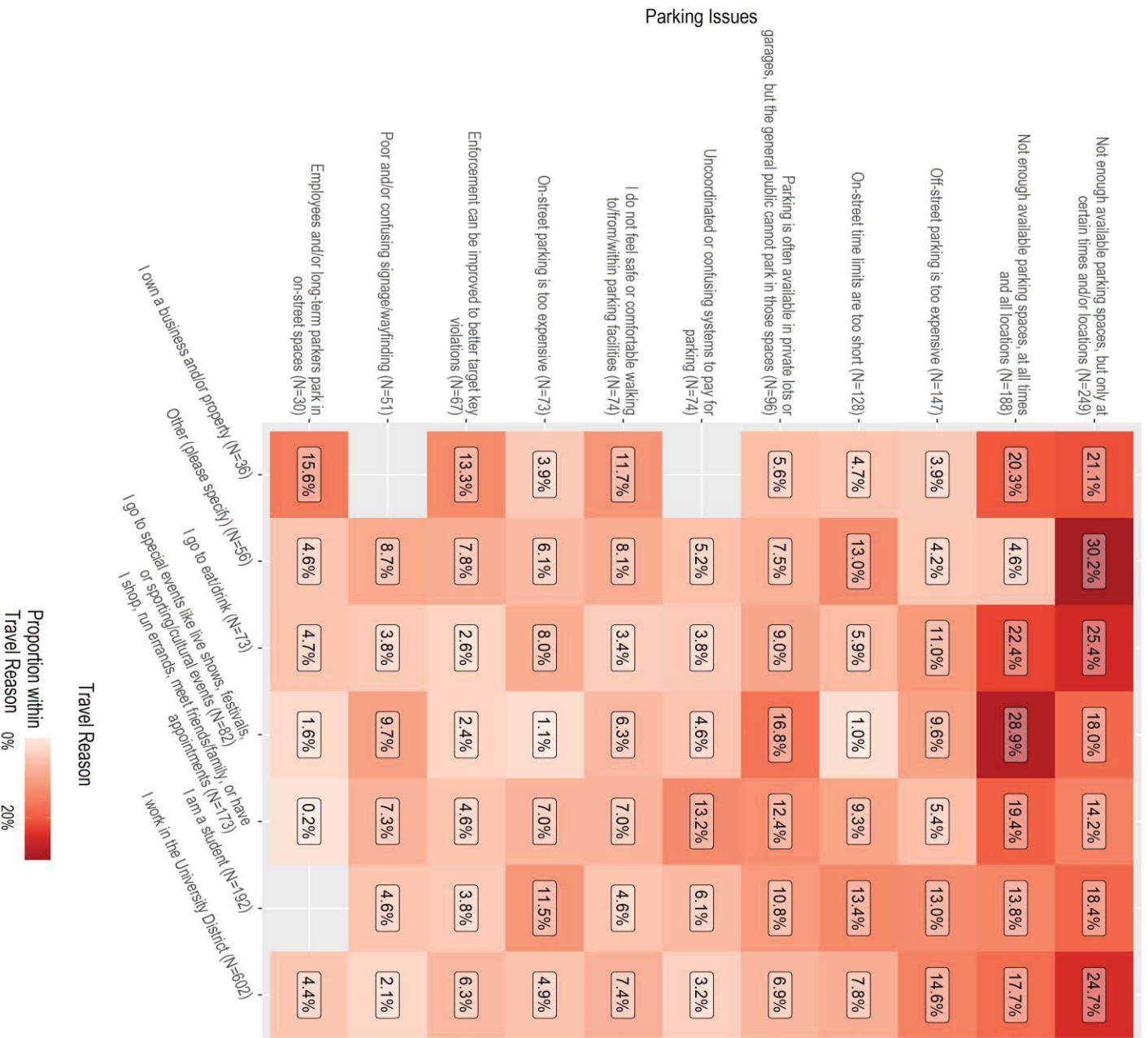Figure 45   University District Primary Travel Reason vs. Parking Issues

Parking Issues

Travel Reason	Not enough available parking spaces, but only at certain times and/or locations (N=249)	Not enough available parking spaces, at all times and all locations (N=188)	Off-street parking is too expensive (N=147)	On-street time limits are too short (N=128)	Parking is often available in private lots or garages, but the general public cannot park in those spaces (N=96)	Uncoordinated or confusing systems to pay for parking (N=74)	I do not feel safe or comfortable walking to/from/within parking facilities (N=74)	On-street parking is too expensive (N=73)	Enforcement can be improved to better target key violations (N=67)	Poor and/or confusing signage/wayfinding (N=51)	Employees and/or long-term parkers park in on-street spaces (N=30)
Other (please specify) (N=36)	21.1%	20.3%	3.9%	4.7%	5.6%		11.7%	3.9%	13.3%		15.6%
I go to special events like live shows, festivals, or sporting/cultural events (N=82)	30.2%	4.6%	4.2%	13.0%	7.5%	5.2%	8.1%	6.1%	7.8%	8.7%	4.6%
I go to eat/drink (N=73)	25.4%	22.4%	11.0%	5.9%	9.0%	3.8%	3.4%	8.0%	2.6%	3.8%	4.7%
I shop, run errands, meet friends/family, or have appointments (N=173)	18.0%	28.9%	9.6%	1.0%	16.8%	4.6%	6.3%	1.1%	2.4%	9.7%	1.6%
I am a student (N=192)	14.2%	19.4%	5.4%	9.3%	12.4%	13.2%	7.0%	7.0%	4.6%	7.3%	0.2%
I work in the University District (N=602)	18.4%	13.8%	13.0%	13.4%	10.8%	6.1%	4.6%	11.5%	3.8%	4.6%	
I own a business and/or property (N=56)	24.7%	17.7%	14.6%	7.8%	6.9%	3.2%	7.4%	4.9%	6.3%	2.1%	4.4%

Proportion within Travel Reason

0%   20%

Travel Reason

Figure 45   University District Primary Travel Reason vs. Parking Issues

Figure 46   University District Parking Area vs. Facility Type

Facility Type

A parking lot or garage for which I buy a permit (annual, monthly, or weekly) at my own expense (N=252)

On-street non-metered space (N=133)

A parking lot or garage that I can park in for free or reduced personal expense (i.e. my employer/school pays for parking, parking comes with residential unit) (N=104)

On-street metered space (N=61)

A parking lot or garage that I pay for by the hour/day (N=52)

Other (please specify) (N=33)

3) Southern University District (N=67)
1) Gonzaga Campus (N=197)
2) Riverpoint Campus (N=378)

3.0%	38.3%	47.0%
55.2%	33.7%	8.1%
19.4%	12.2%	18.0%
13.4%	6.6%	10.5%
6.0%	2.0%	11.8%
3.0%	7.1%	4.6%

Parking Area

Proportion within Parking Area

0%   20%   40%

Figure 47   University District Parking Area vs. Distance from Destination

Figure 48 University District Parking Area vs. Parking Duration

Parking Duration

	3) Southern University District (N=67)	1) Gonzaga Campus (N=197)	2) Riverpoint Campus (N=378)
More than 8 hours (N=217)	38.7%	35.6%	33.5%
4 to 8 hours (N=149)	11.3%	17.0%	29.5%
1 to 2 hours (N=88)	14.5%	17.5%	12.2%
3 to 4 hours (N=78)	14.5%	9.8%	13.5%
2 to 3 hours (N=63)	8.1%	15.5%	7.6%
30 minutes to 1 hour (N=31)	12.9%	4.6%	3.8%

Parking Area

Proportion within
Parking Area

0%   20%

Figure 49   University District Parking Area vs. Parking Issues

Parking Issues

Not enough available parking spaces, but only at certain times and/or locations (N=252)

Not enough available parking spaces, at all times and all locations (N=190)

Off-street parking is too expensive (N=148)

On-street time limits are too short (N=128)

Parking is often available in private lots or garages, but the general public cannot park in those spaces (N=98)

Uncoordinated or confusing systems to pay for parking (N=75)

I do not feel safe or comfortable walking to/from/within parking facilities (N=75)

On-street parking is too expensive (N=74)

Enforcement can be improved to better target key violations (N=70)

Poor and/or confusing signage/wayfinding (N=52)

Employees and/or long-term parkers park in on-street spaces (N=31)

I do not drive and park (N=33)

3) Southern University District (N=116)

1) Gonzaga Campus (N=348)

2) Riverpoint Campus (N=735)

Parking Area

Proportion within Parking Area

0%   20%

	3) Southern University District	1) Gonzaga Campus	2) Riverpoint Campus	(4th)
Not enough available parking spaces, but only at certain times and/or locations	3.8%	17.0%	25.7%	20.2%
Not enough available parking spaces, at all times and all locations	11.5%	12.5%	24.9%	12.4%
Off-street parking is too expensive	19.2%	9.8%	9.8%	13.8%
On-street time limits are too short	7.7%	7.1%	4.1%	14.5%
Parking is often available in private lots or garages	15.4%	8.0%	10.9%	6.7%
Uncoordinated or confusing systems to pay for parking	3.8%	7.1%	2.7%	7.9%
I do not feel safe or comfortable walking		11.6%	5.6%	6.0%
On-street parking is too expensive	15.4%	8.0%	3.8%	6.7%
Enforcement can be improved to better target key violations		9.8%	4.4%	6.1%
Poor and/or confusing signage/wayfinding	19.2%	4.5%	3.3%	4.3%
Employees and/or long-term parkers park in on-street spaces	3.8%	4.5%	4.7%	1.3%

APPENDIX C: LAND USE AND PARKING DEMAND ANALYSIS MEMORANDUM

M E M O R A N D U M

To: Kevin Freibott, City of Spokane

From: Nelson\Nygaard

Date: September 6, 2018

Subject: Downtown Parking Study – Land Use + Parking Demand Analysis (FINAL)

OVERVIEW

This memorandum presents the results of the land use and parking demand analysis for the Downtown Parking Study. This analysis uses a shared parking model built on national standards to explore the relationship between land use and parking demand.

The model results are compared with the **existing** parking inventory (and a minimal number of increases in supply) in each analysis zone to understand current and potential future supply deficits and surpluses.

The primary goal of the analysis is to identify estimated surpluses and deficits against existing supply to better inform a discussion of supply- and demand-side solutions, and to help the City right-size supply through calibrations of zoning policy, on-the-ground management practices, and the development review processes.

The model results are one piece of the study analysis. They should be viewed in the context of all of the other findings documented in the State of the System Report as the project team moves towards development of recommendations.

It is also crucial to note that the model results presented should not be interpreted as a precise prediction of future conditions. The growth scenarios represent two possible future conditions based upon reasonable assumptions. Furthermore, future parking demand is not generated within a vacuum – City management and land use policy can affect both parking supply and demand.

SUMMARY OF KEY FINDINGS

- The current land use mix in the Downtown Parking Study boundaries is illustrated in Figure 1. Several uses are projected to **experience significant growth over the next six years,** changing the land use composition. These include:
  - 1,100-1,500 hotel rooms are expected to be added.
  - Over 300 residential units are expected to be added.
  - Medical office space is expected to grow by 16%-24% GSF.

NELSON
NYGAARD

Figure 1 Existing Land Use Composition in Downtown Spokane

Existing Land Use Composition in Downtown Spokane

- Government 7%
- Medical 18%
- Office/Commercial 29%
- Other 5%
- Retail 6%
- Residential 21%
- Hotel 9%
- Theater/Convention Center 5%
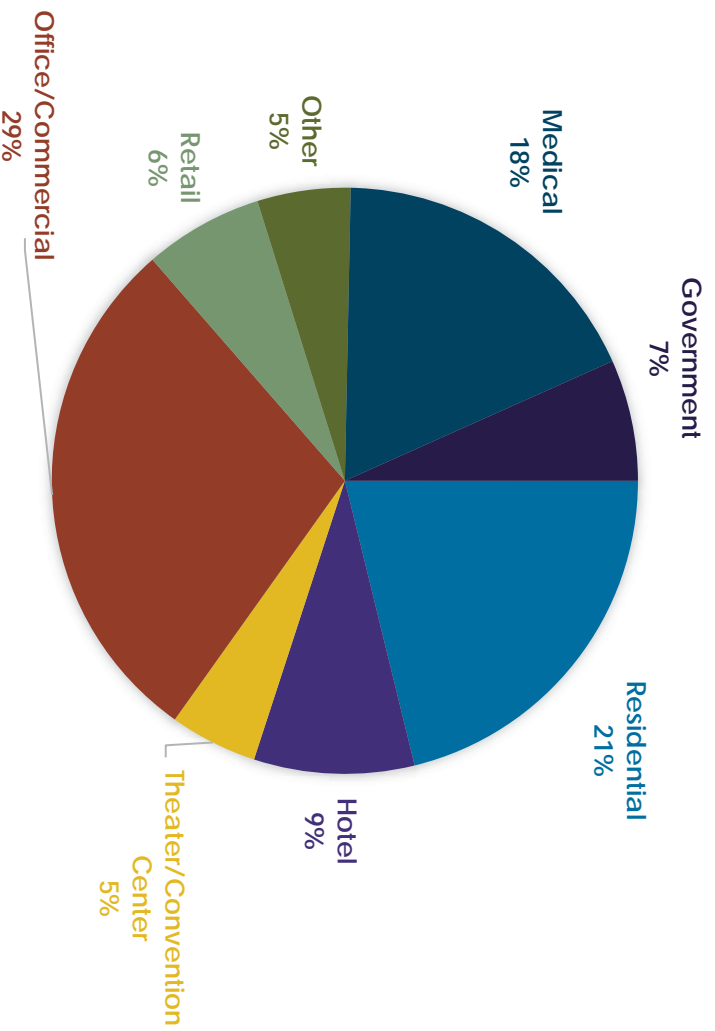
- The overall study area experiences peak parking demand **below "effective" capacity (90% of total supply) in existing and future scenarios**. See Figure 2 for complete summary of peak demand by zone.

- However, particular zones within the study area – the Spokane County Campus, Downtown Center North, and the Hospital District area – experience higher parking occupancy rates, and demand is expected to grow. **In these zones, the City and stakeholders will need to explore both supply- and demand-side solutions to address effective supply deficits.**

  - For example, the overall surplus in the wider study area supports exploring additional remote and shared parking opportunities.

  - Key obstacles to more effective sharing of parking include: physical barriers (e.g., the railway viaduct, I-90, and the Spokane River), the safety and comfort of the pedestrian environment, and coordination with private property owners and operators.

- The **future Low Growth scenario** anticipates minimal growth, so the model results are similar to the existing condition model results.

- **Observed demand is lower than existing modeled demand in all areas.** Adjustments were made to calibrate the model, but this difference indicates that industry standards for parking demand are above what occurs in Spokane – this is not atypical, as many studies find that Institute of Transportation Engineers (ITE) demand factors overestimate parking demand.

Figure 2   Peak Demand Summary, by Zone

Analysis Zone	Existing Supply	Modeled Future Supply	Effective Future Supply (90%)	Observed		Observed Peak Hour	Modeled Peak Hour	Existing (Modeled)		Future Low (Modeled)		Future High (Modeled)	
				Peak Demand	Effective +/-			Peak Demand	Effective +/-	Peak Demand	Effective +/-	Peak Demand	Effective +/-
1) Spokane County Campus	3,912	4,287	3,859	2,710 (69%)	1,149	10:00 AM	10:00 AM	3,225 (82%)	634	3,282 (77%)	577	3,563 (83%)	296
2) Arena Neighborhood	6,765	7,492	6,743	2,759 (41%)	3,984	12:00 PM	2:00 PM	3,489 (52%)	3,254	3,837 (51%)	2,906	5,068 (68%)	1,675
3,4,5) Downtown Center North	11,970	11,989	10,791	7,577 (63%)	3,214	12:00 PM	2:00 PM	9,670 (81%)	1,121	10,298 (86%)	493	11,171 (93%)	9,674
6,7,8) Downtown Center South	6,101	6,101	5,491	3,025 (50%)	2,466	10:00 AM	2:00 PM	3,664 (60%)	1,827	3,804 (62%)	1,687	4,237 (69%)	1,254
9) Hospital District	8,073	8,073	7,266	5,309 (66%)	1,957	10:00 AM	11:00 AM	7,117 (88%)	149	7,411 (92%)	-145	7,971 (99%)	-705
Study Area	36,821	37,942	34,150	**20,823 (57%)**	**13,325**	10:00 AM	2:00 PM	**26,463 (72%)**	**7,685**	**27,911 (74%)**	**6,239**	**31,228 (82%)**	**2,922**

Entries shown in orange have between 80-89% occupancy, while entries shown in red are greater than or equal to 90% occupancy.

Note: Totals for study area peak results do not equal the sum of zonal results – the peaks for each zone may differ from the study area peak.

SUMMARY OF SHARED PARKING

Parking and land use are not static. Downtown Spokane will grow and change in the coming years. In order to understand the potential parking impacts of future growth, this study assesses the parking supply relative to existing and future land use scenarios. This analysis allows the City and its downtown partners to estimate the degree of parking supply deficit or surplus against existing supply, but in a way that highlights the shared parking opportunities in downtown.

The conventional way to estimate parking demand is to consider the peak demand of each land use in isolation, and require each land use to provide the resulting number of spaces to meet peak demand. ITE publishes a set of nationally recognized "parking demand ratios" in Parking Generation, 4th edition. These demand ratios are used to estimate parking demand based on the type of land use.

It is important to note that the ITE ratios are derived from case-study observations that focus largely on suburban, auto-oriented land use patterns. In these locations there is little shared parking, as land uses tend to be physically separated, so the parking demand is based on the assumption that parking will not be shared between uses. Assessments that use this traditional methodology for determining needed parking supply, particularly in a downtown, often result in an overstated need for increasing parking supply.

A more accurate approach considers the potential for parking to be shared. In a mixed-use downtown, such as Spokane, some parking demand is already shared among uses. Real parking demand for a specific land use is also rarely constant; it changes over the course of the day. For example, while typical office parking demand is low after 6 p.m. and on weekends, typical theater and restaurant parking demand extends into the evening and on weekends.

These variable demand curves make these land uses excellent candidates for shared parking. The key element of shared parking is recognition that, in reality, there are different peak parking demand hours for different land uses – even in the same or adjacent developments. Figure 3 and Figure 4 illustrate these shared parking concepts.

Figure 3   Illustration of Unshared and Shared Parking
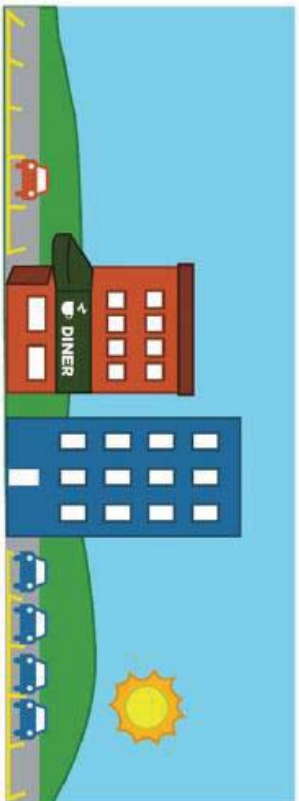
Office and café unshared parking in the morning (top), day (top-middle), and evening (lower-middle). With shared parking all day (bottom). 20% fewer overall spaces are needed.
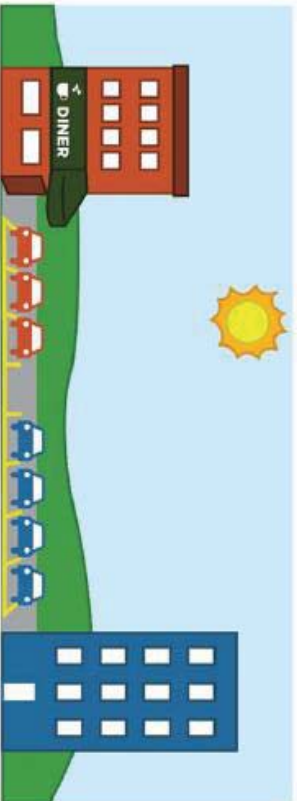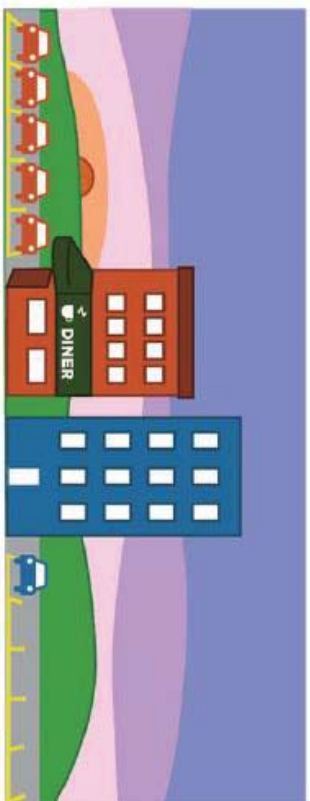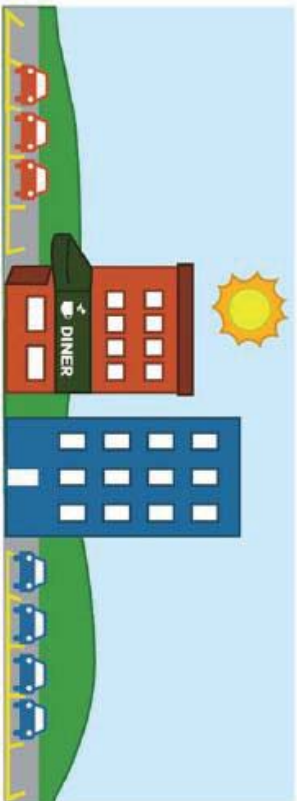
Figure 4   Example Parking Demand Curves, by Land Use and Time of Day

Unshared: The traditional analysis approach is to provide a designated supply for each use based on the highest parking demand for that use. This does not account for fluctuations in demand by time of day, and often results in parking being overbuilt.

Parking Demand (Spaces)

OFFICE

RESIDENTIAL

RESTAURANT
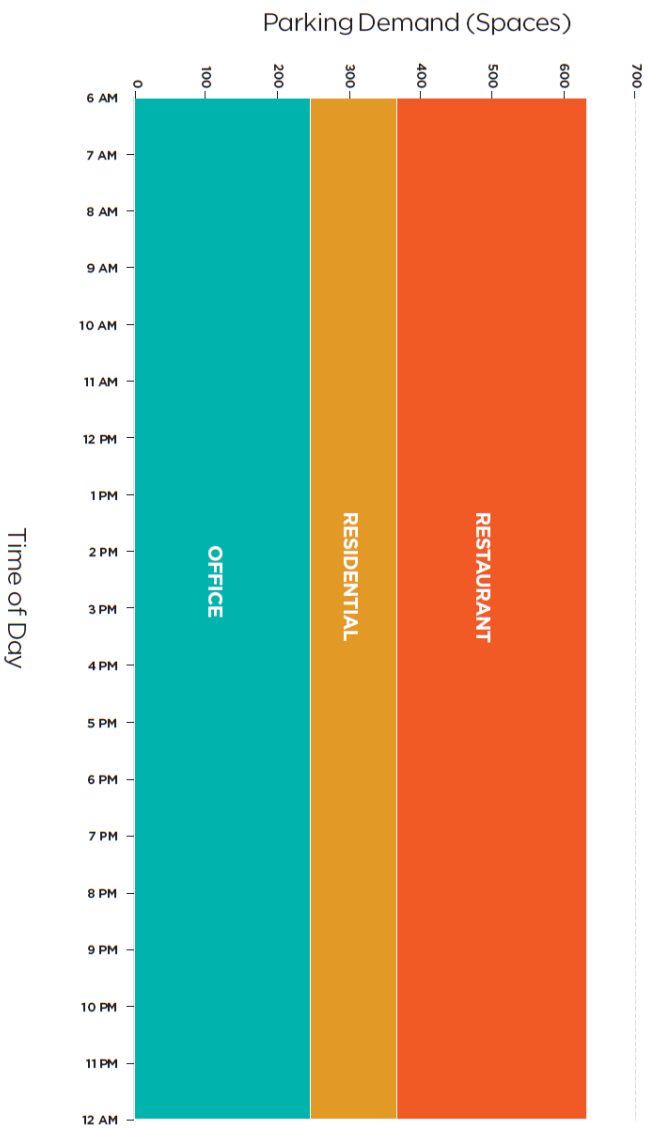
Time of Day

Shared: Actual parking demand changes by use by time of day, resulting in a peak that is much lower than traditional approaches would predict (~625 spaces versus ~400 spaces).

Parking Demand (Spaces)

OFFICE

RESTAURANT

RESIDENTIAL

Time of Day
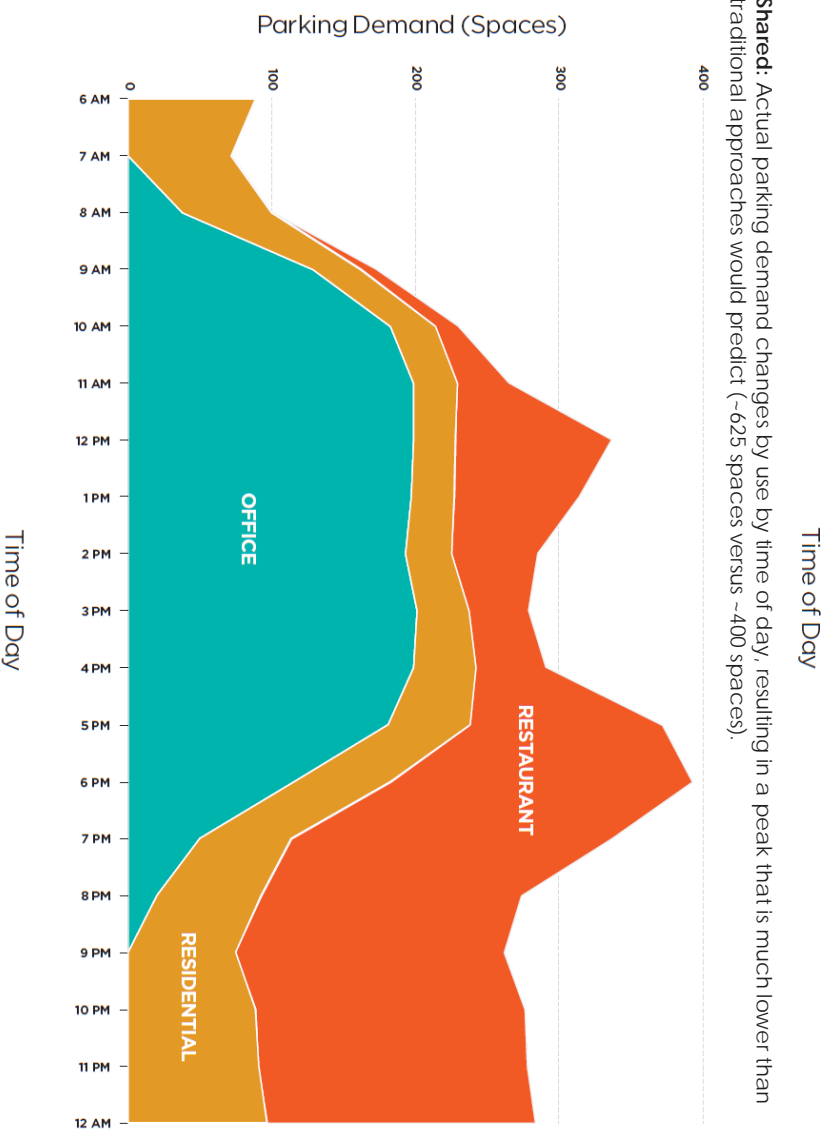
Target Occupancy Levels

Parking demand should not be too high or too low. At, or approaching, 100% occupancy, drivers typically circle in search of parking, creating traffic congestion. By contrast, a street or lot/garage that is consistently underutilized represents an ineffective use of resources and valuable land.

Therefore, parking demand is often assessed not against 100% of supply, but against an **"effective" supply**, typically 85-90% for on-street parking and 90-95% for off-street parking. Using effective supply as a target threshold ensures that there is always an available space for would-be parkers and that there is an adequate buffer in the parking system to accommodate typical fluctuations in daily/hourly demand.

METHODOLOGY

Study Area

The study area for this analysis is shown in Figure 6. Recognizing that downtown has many distinct sub-areas and variations in land use and parking demand, the overall study area has been broken down into smaller analysis zones for use throughout the parking inventory and demand analysis as well as the public survey. Those sub-areas are again used in this analysis, but are aggregated to simplify the land use analysis to five areas. A cross-reference between the original nine zones and the five zones used in the land use analysis is presented in Figure 5.

Figure 5   Downtown Parking Study Zones vs. Land Use Analysis Zones

Zone #	Downtown Parking Study Zone	Land Use Analysis Zone
1	Spokane County Campus	Spokane County Campus
2	Arena Neighborhood	Arena Neighborhood
3	West End	
4	Downtown Core	Downtown Center North
5	Convention Center	
6	West End South	
7	Southern Downtown Core	Downtown Center South
8	East End South	
9	Hospital District	Hospital District

Figure 6   Downtown Study Area
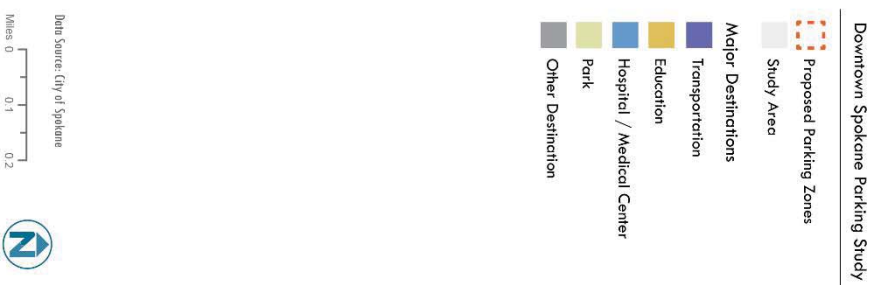
Observed Supply and Demand

Through detailed data collection in the field, Nelson\Nygaard documented the observed average and peak demand for a typical weekday and Saturday relative to existing effective parking supply. This analysis is presented in full in the State of the System Report, but relevant statistics including existing supply and observed demand are included in this memorandum.

Land Use Analysis

The second method to estimate existing parking demand in relation to current parking supply is via a land use-based analysis. This method estimates parking demand from specific land uses based on industry standards for peak parking demand ratios by land use category[1]. The primary source for this data is ITE's Parking Generation, 4th Edition.

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[1] For example: 2.47 vehicles per 1,000 square feet of office (ITE land use category 701) or .89 vehicles per occupied hotel room (ITE land use category 310)

As discussed above, while the most robust available database of parking demand by land use, ITE parking rates often do not reflect the actual parking demand profile in mixed-use downtowns. To more accurately model downtown parking activity, Nelson\Nygaard will use an adapted land use model from the Urban Land Institute's (ULI) Shared Parking Manual, 2nd Edition. Nelson\Nygaard's model still uses ITE rates to represent maximum demand; however, these rates are modified based on several adjustment factors.

Using land use data provided by the City of Spokane, Nelson\Nygaard generated an estimate of existing and future parking demand relative to existing supply to estimate parking deficits and surpluses for downtown as a whole and for sub-areas. Basic steps in this analysis include:

1. Identify existing and future (low- and high-growth scenarios) square feet, rooms, and/or units by general land use category by analysis zone

2. Identify or develop assumption of vacancy/occupancy rates by general land use category by analysis zone

3. Calibrate shared parking adjustment factors (i.e. internal capture, TDM/transit, etc.)

4. Generate peak parking demand ratios via locally-calibrated ITE rates

5. Distribute peak demand across day by ULI time-of-day factors

Land Use and Parking Scenarios

Figure 7 summarizes existing land uses in each of the five analysis zones. The existing land use estimates were developed by the City of Spokane's Planning department based on a combination of GIS assessor data, building permits, aerial photography, known vacancy rates, and field verification.

Figure 8 and Figure 9 define scenarios for future "low" and "high" growth scenarios, respectively. These scenarios represent potential future development scenarios for the year 2024. These were developed by the City of Spokane Planning department based on a regression model using existing development data, as well as data about known development projects. A detailed description of the City's methodology is presented in Appendix B.

Figure 7   Existing (2018) Land Use Scenario, by Zone

Units	Land Use Category	1) Spokane County Campus	2) Arena Neighborhood	3,4,5) Downtown Center North	6,7,8) Downtown Center South	9) Hospital District	Total
Residential Units	Single Family Units	30	0	0	0	1	**31**
	Multi-Family Units	504	125	1,531	710	474	**3,345**
	Total Units	**534**	**125**	**1,531**	**710**	**475**	**3,376**
Hotel Rooms	**Hotel Rooms**	**0**	**419**	**1,433**	**124**	**92**	**2,068**
Seats	Live Theater Seats	0	12,546	7,662	103	0	**20,311**
	Movie Theater Seats	0	0	2,097	0	0	**2,097**
	Total Seats	**0**	**12,546**	**9,759**	**103**	**0**	**22,408**
Gross Square Feet (GSF)	Office/Commercial GSF	302,062	1,127,990	4,206,558	1,476,766	283,222	**7,396,598**
	Retail GSF	98,856	123,896	1,286,462	180,106	1,954	**1,691,275**
	Industrial GSF	274,691	57,078	182,841	20,094	0	**534,703**
	Church GSF	122,890	0	50,036	67,038	55,918	**295,881**
	Medical Office GSF	50,417	94,487	0	12,935	985,732	**1,143,571**
	Hospital GSF	0	0	0	0	3,484,362	**3,484,362**
	Education GSF	0	0	157,511	11,497	309,531	**478,539**
	Jail GSF	153,528	0	0	0	0	**153,528**
	Government GSF	892,483	92,443	583,187	0	0	**1,568,113**
	Library GSF	0	0	14,015	0	0	**14,015**
	Conference/Convention GSF	0	0	805,430	0	29,472	**834,902**
	Total GSF	**1,894,926**	**1,495,894**	**7,286,040**	**1,768,436**	**5,150,191**	**17,595,487**

Source: City of Spokane

Figure 8   Future (2024) Low Growth Scenario, by Zone

Units	Land Use Category	1) Spokane County Campus	2) Arena Neighborhood	3,4,5) Downtown Center North	6,7,8) Downtown Center South	9) Hospital District	Total
Residential Units	Single Family Units	33	0	0	0	1	34
	Multi-Family Units	561	139	1,713	789	527	3,729
	Total Units	**593**	**139**	**1,713**	**789**	**528**	**3,762**
Hotel Rooms	**Hotel Rooms**	**0**	**648**	**2,216**	**192**	**142**	**3,197**
Seats	Live Theater Seats	0	12,912	7,885	106	0	20,903
	Movie Theater Seats	0	0	2,097	0	0	2,097
	Total Seats	**0**	**12,912**	**9,982**	**106**	**0**	**23,000**
Gross Square Feet (GSF)	Office/Commercial GSF	307,540	1,148,446	4,282,847	1,503,548	288,358	7,530,739
	Retail GSF	109,895	137,731	1,430,118	200,218	2,173	1,880,134
	Industrial GSF	274,691	57,078	182,841	20,094	0	534,703
	Church GSF	122,890	0	50,036	67,038	55,918	295,881
	Medical Office GSF	58,811	110,219	0	15,088	1,149,855	1,333,973
	Hospital GSF	0	0	0	0	3,484,362	3,484,362
	Education GSF	0	0	157,511	11,497	309,531	478,539
	Jail GSF	153,528	0	0	0	0	153,528
	Government GSF	892,483	92,443	583,187	0	0	1,568,113
	Library GSF	0	0	14,015	0	0	14,015
	Conference/Convention GSF	0	0	845,878	0	30,952	876,830
	Total GSF	**1,919,837**	**1,545,918**	**7,546,432**	**1,817,483**	**5,321,149**	**18,150,819**

Source: City of Spokane

Figure 9   Future (2024) High Growth Scenario, by Zone

Units	Land Use Category	1) Spokane County Campus	2) Arena Neighborhood	3,4,5) Downtown Center North	6,7,8) Downtown Center South	9) Hospital District	Total
Residential Units	Single Family Units	34	0	0	0	1	35
	Multi-Family Units	586	145	1,790	825	551	3,897
	Total Units	**620**	**145**	**1,790**	**825**	**552**	**3,932**
Hotel Rooms	**Hotel Rooms**	**0**	**723**	**2,472**	**214**	**158**	**3,567**
Seats	Live Theater Seats	0	18,310	8,129	109	0	26,548
	Movie Theater Seats	0	0	2,097	0	0	2,097
	Total Seats	**0**	**18,310**	**10,226**	**109**	**0**	**28,645**
Gross Square Feet (GSF)	Office/Commercial GSF	347,235	1,296,678	4,835,640	1,697,614	325,577	8,502,744
	Retail GSF	117,080	146,736	1,523,618	213,309	2,315	2,003,057
	Industrial GSF	274,691	57,078	182,841	20,094	0	534,703
	Church GSF	122,890	0	50,036	67,038	55,918	295,881
	Medical Office GSF	62,335	116,824	0	15,992	1,218,757	1,413,909
	Hospital GSF	0	0	0	0	3,800,953	3,800,953
	Education GSF	0	0	157,511	11,497	345,031	514,039
	Jail GSF	213,528	0	0	0	0	213,528
	Government GSF	932,483	92,443	583,187	0	0	1,608,113
	Library GSF	0	0	14,015	0	0	14,015
	Conference/Convention GSF	0	184,925	805,430	0	29,472	1,019,827
	Total GSF	**2,070,241**	**1,894,684**	**8,152,278**	**2,025,543**	**5,778,023**	**19,920,769**

Source: City of Spokane

Figure 10 summarizes the changes by land use (over the whole study area), to illustrate the growth trends. Hotel rooms, residential units, retail space, and medical office space are all expected to grow significantly (by at least 8.5%) over the next six years. Office space is expected to grow much more in the high versus the low scenario (17.3% vs. 1.8%), as is conference/convention space (22.1%). Due to the inclusion of a potential new stadium in the high growth scenario, live theater seats also grow much more in the high scenario (30.7%) than in the low scenario (2.9%).

Figure 10   Downtown Study Area Land Use Summary

Units	Land Use Category	Existing	Future Low #	Future Low % Increase	Future High #	Future High % Increase
Residential Units	Single Family Units	31	34	10.0%	35	15.0%
	Multi-Family Units	3,345	3,729	11.5%	3,897	16.5%
	Total Units	**3,376**	**3,762**	**11.4%**	**3,932**	**16.5%**
Hotel Rooms	Hotel Rooms	**2,068**	**3,197**	**54.6%**	**3,567**	**72.4%**
Seats	Live Theater Seats	20,311	20,903	2.9%	26,548	30.7%
	Movie Theater Seats	2,097	2,097	0.0%	2,097	0.0%
	Total Seats	**22,408**	**23,000**	**2.6%**	**28,645**	**27.8%**
Gross Square Feet (GSF)	Office / Commercial GSF	7,396,598	7,530,739	1.8%	8,502,744	15.0%
	Retail GSF	1,691,275	1,880,134	11.2%	2,003,057	18.4%
	Industrial GSF	534,703	534,703	0.0%	534,703	0.0%
	Church GSF	295,881	295,881	0.0%	295,881	0.0%
	Medical Office GSF	1,143,571	1,333,973	16.6%	1,413,909	23.6%
	Hospital GSF	3,484,362	3,484,362	0.0%	3,800,953	9.1%
	Education GSF	478,539	478,539	0.0%	514,039	7.4%
	Jail GSF	153,528	153,528	0.0%	213,528	39.1%
	Government GSF	1,568,113	1,568,113	0.0%	1,608,113	2.6%
	Library GSF	14,015	14,015	0.0%	14,015	0.0%
	Conference / Convention GSF	834,902	876,830	5.0%	1,019,827	22.1%
	Total GSF	**17,595,487**	**18,150,819**	**3.2%**	**19,920,769**	**13.2%**

Source: City of Spokane

Figure 11 presents the net changes in parking supply for the horizon year (2024). These changes have been included in the following discussion of future supply. Additional parking supply that will be created as part of new developments in the two future scenarios have not been assumed.

Again, the primary goal of the analysis is to identify estimated surpluses and deficits against existing supply to better inform a discussion of supply- and demand-side solutions, and to help the City right-size supply through calibrations of zoning policy, on-the-ground management practices, and the development review processes.

Figure 11   Modeled Net Parking Changes (by 2024), by Zone

Land Use Analysis Area	Increase/Decrease in Parking Stalls
1) Spokane County Campus	+375
2) Arena Neighborhood	+727
3,4,5) Downtown Center North	+19
Total	**+1,121**

Source: City of Spokane

RESULTS

Figure 12 presents a high-level summary of the model results with the peak demand for each zone and scenario (including observed). Detailed results by zone are then presented. Both an "unshared" and a "shared" parking demand model are provided for each zone for comparison purposes. The unshared results represent maximum demand according to traditional ITE parking demand rates and methods.

The results indicate that the Downtown Center North and Hospital District areas are most likely to exceed effective capacity (90%) under the high-growth scenario. The Hospital District approaches this capacity (90%) also under the low growth scenario.

Note that the models are meant to be conservative – i.e., the existing modeled demand exceeds the observed demand to simulate demand conditions higher than during the survey period (April 2018). The existing model was calibrated to match the shape of the observed demand curve (e.g., the peaks and valleys), but represent a condition where 10-20% more parking was occupied to be conservative. The future scenarios also assume no change in the degree to which parking is shared from the existing model.

Throughout this section, summaries of the changes in land use are presented in terms of GSF – units not already in GSF (e.g., residential units) were converted using the factors identified in Appendix A.

Figure 12   Peak Demand Summary, by Zone

Analysis Zone	Existing Supply	Modeled Future Supply	Effective Future Supply (90%)	Observed		Observed Peak Hour	Modeled Peak Hour	Existing (Modeled)		Future Low (Modeled)		Future High (Modeled)	
				Peak Demand	Effective +/-			Peak Demand	Effective +/-	Peak Demand	Effective +/-	Peak Demand	Effective +/-
1) Spokane County Campus	3,912	4,287	3,859	2,710 (69%)	1,149	10:00 AM	10:00 AM	3,225 (82%)	634	3,282 (77%)	577	3,563 (83%)	296
2) Arena Neighborhood	6,765	7,492	6,743	2,759 (41%)	3,984	12:00 PM	2:00 PM	3,489 (52%)	3,254	3,837 (51%)	2,906	5,068 (68%)	1,675
3,4,5) Downtown Center North	11,970	11,989	10,791	7,577 (63%)	3,214	12:00 PM	2:00 PM	9,670 (81%)	1,121	10,298 (86%)	493	11,171 (93%)	9,674
6,7,8) Downtown Center South	6,101	6,101	5,491	3,025 (50%)	2,466	10:00 AM	2:00 PM	3,664 (60%)	1,827	3,804 (62%)	1,687	4,237 (69%)	1,254
9) Hospital District	8,073	8,073	7,266	5,309 (66%)	1,957	10:00 AM	11:00 AM	7,117 (88%)	149	7,411 (92%)	-145	7,971 (99%)	-705
Study Area	36,821	37,942	34,150	20,823 (57%)	13,325	10:00 AM	2:00 PM	26,463 (72%)	7,685	27,911 (74%)	6,239	31,228 (82%)	2,922

Entries shown in orange have between 80-89% occupancy, while entries shown in red are greater than or equal to 90% occupancy.

Note: Totals for study area peak results to not equal the sum of zonal results – the peaks between zones may differ from the study area

Zone 1: Spokane County Campus

- The Spokane County Campus zone has a **parking supply of nearly 4,000 spaces** (3,912). The model includes a modeled increase of 375 spaces.

- **One-quarter of the land area** in the Spokane County Campus area is consumed by parking.

- **Over one-third of the existing built area is government use** (e.g., Spokane County offices, courts), and another third is residential (e.g., Kendall Yards). These proportions are expected to stay relatively similar over the next six years.

- In both the observed demand and the modeled demand, **the peak demand for parking in this zone occurs at 10 a.m.** Another smaller peak is modeled to occur at 3 p.m.

- As shown in the models, unshared demand would exceed existing supply by between 273-634 spaces. With shared parking, however, **peak demand is still within the 90% effective capacity envelope.** Under a high growth scenario, demand could push effective supply.

- As illustrated in the shared demand models, the **vast majority of parking demand is generated by office use** – the government offices related to Spokane County.

Figure 13   Spokane County Campus Summary

Metric		Value
Existing Supply		3,912
Modeled Future Supply		4,287
Effective Future Supply (90%)		3,859
Observed	Peak Demand	2,710 (69%)
	Effective Surplus	1,149
Existing (Modeled)	Peak Demand	3,225 (82%)
	Effective Surplus	634
Future Low (Modeled)	Peak Demand	3,282 (77%)
	Effective Surplus	577
Future High (Modeled)	Peak Demand	3,563 (83%)
	Effective Surplus	296
Existing Parking Land Area Consumption		25.1%
Existing Built Area		2,794,036
Future Low Built Area		2,917,940 (+4.4%)
Future High Built Area		3,113,375 (+11.4%)

Figure 14   Spokane County Campus - Land Use Summary

Land Use

Proportion of Built Area

Scenario

- Existing
- Future - Low
- Future - High

Medical: 1.8%, 2.0%, 2.0%
Retail: 3.5%, 3.8%, 3.8%
Office/Commercial: 10.8%, 10.6%, 11.5%
Other: 14.2%, 13.7%, 12.9%
Residential: 32.2%, 33.7%, 32.4%
Government: 37.4%, 36.1%, 37.3%
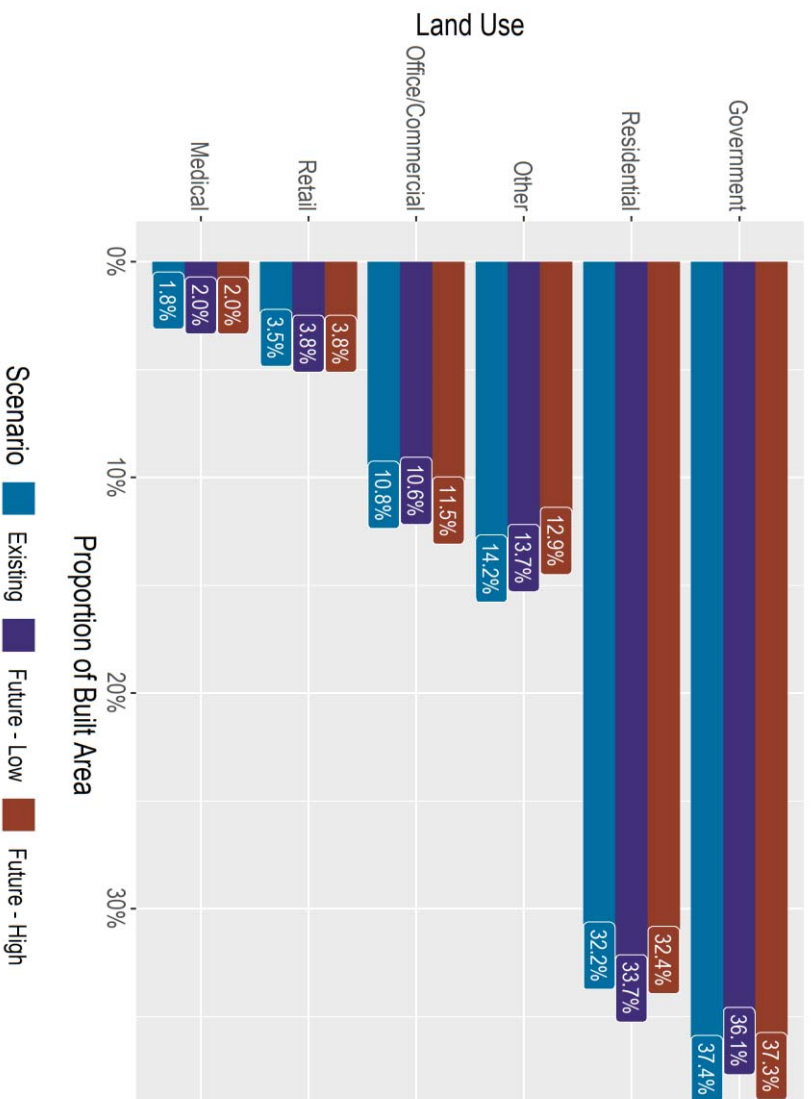
Figure 15   Spokane County Campus – Summary Results (Weekday)
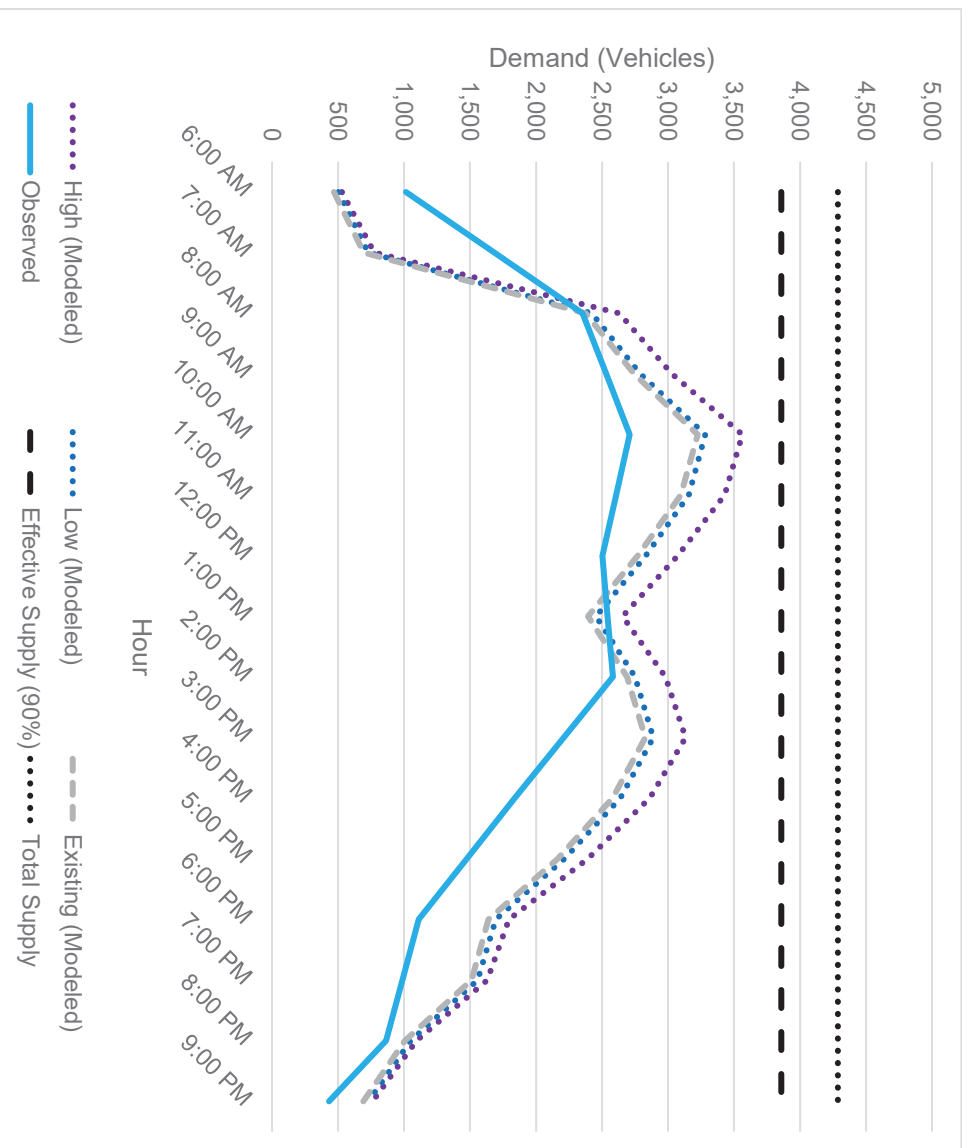
Existing

Figure 16   Spokane County Campus – Existing Results (Weekday), by Land Use
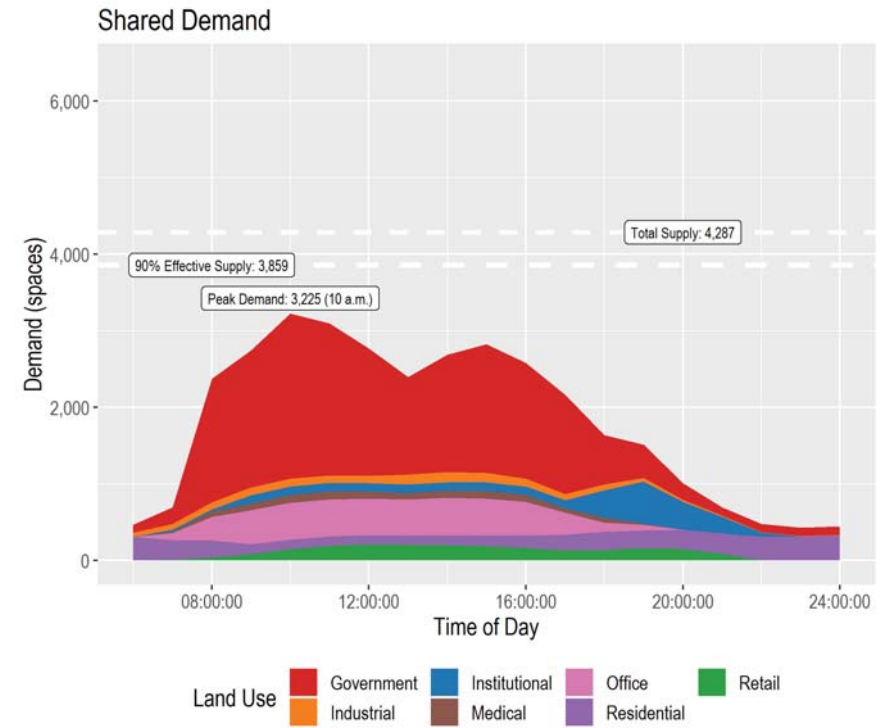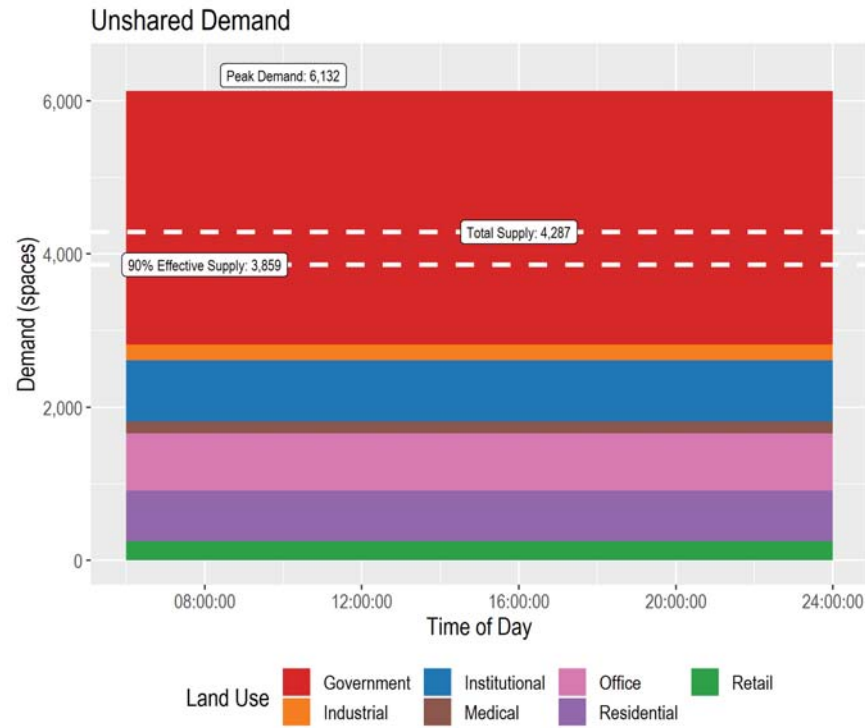
Future Low

Figure 17   Spokane County Campus - Future Low Results (Weekday), by Land Use
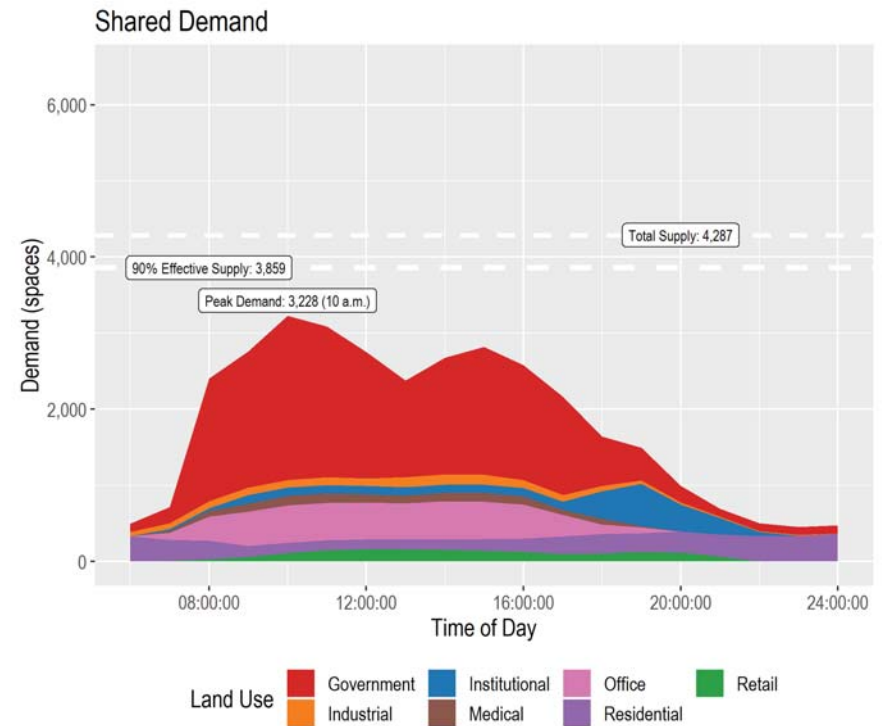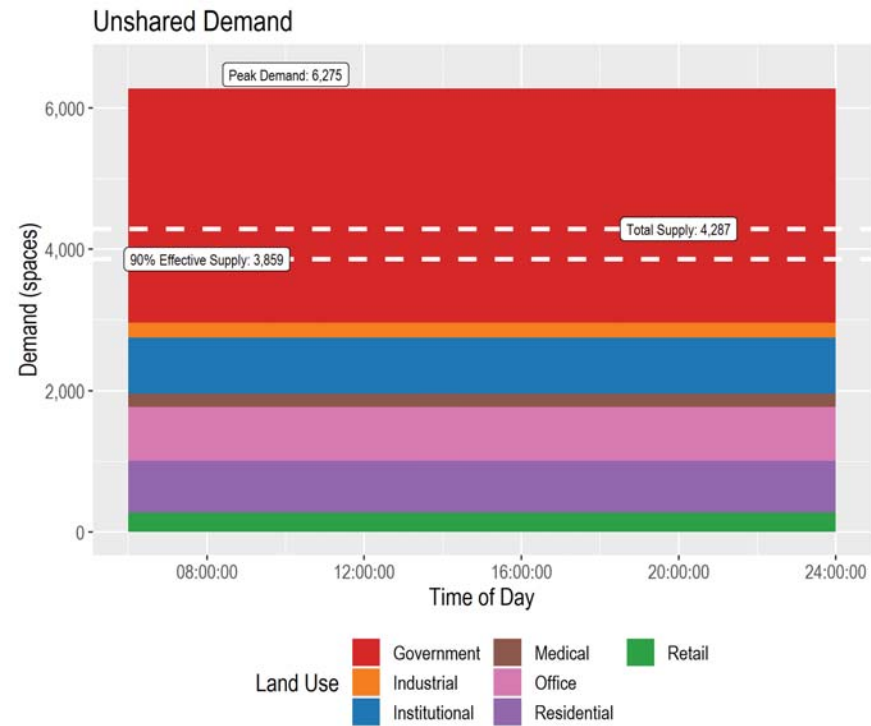
Future High

Figure 18   Spokane County Campus - Future High Results (Weekday), by Land Use
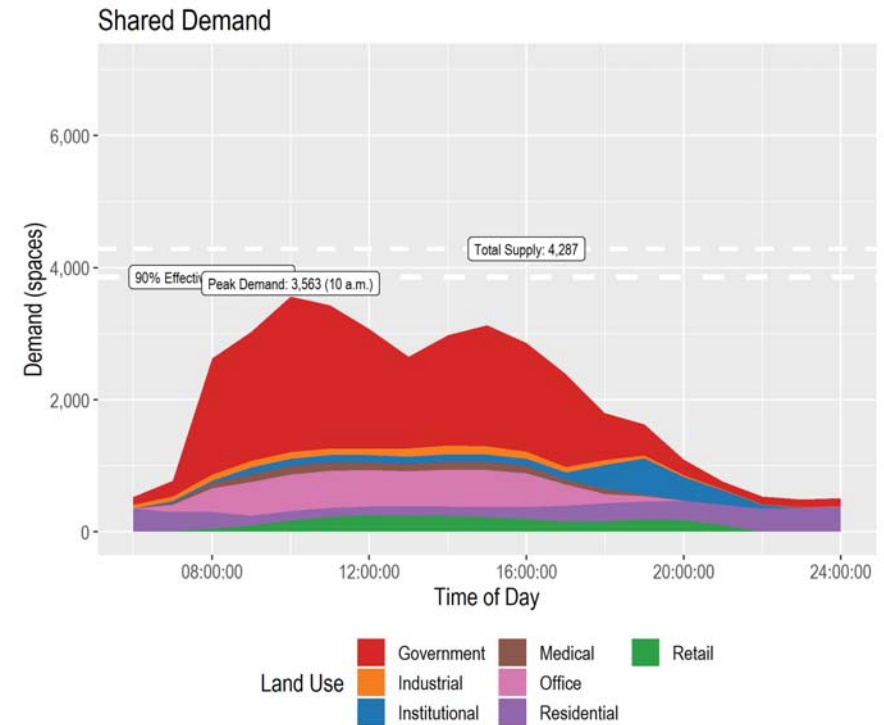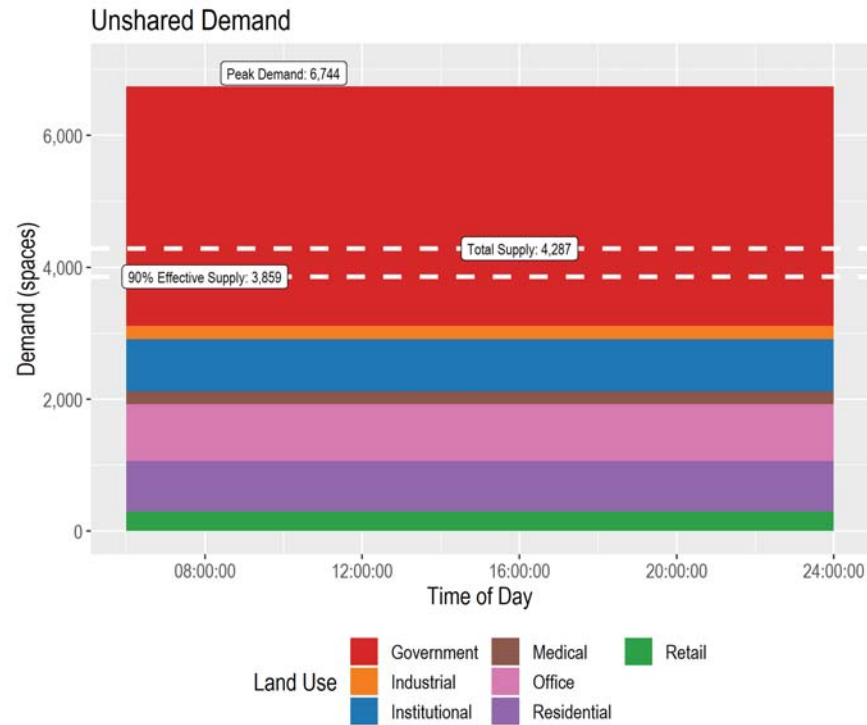
Zone 2: Arena Neighborhood

- The **Arena Neighborhood has a parking supply of 6,765 spaces.** The model includes a modeled increase of 727 spaces.

- **Forty percent of the land in the Spokane Arena area** is consumed by parking.

- **Nearly half of the built area is office/commercial use,** one-fifth is hotel, and nearly 10% is theater/convention center (e.g., the Spokane Arena or Spokane Civic Theatre). These proportions are expected to shift, with potential additional hotel and entertainment space increasing and the share of office space decreasing. The High scenario assumes the addition of an additional stadium in the Arena Neighborhood, adding 5,000 seats.

- **Effective supply substantially exceeds peak demand in this zone.** The balance of uses experiences a **peak parking demand at 12 p.m.** in both the observed and modeled results. The observed occupancy peak was 2,759 vehicles (41%), whereas the modeled demands peak between 50 -65% occupancy. Parking demand peak again in the evening at 7 p.m. at 50% occupancy.

- **There is a stark difference in demand peaks by use** – office uses peak during the day and empty out by 6 p.m., while the recreational uses (i.e., the arena and theater) peak at 7 p.m. and do not subside until late at night.

- There are opportunities to **better share the excess parking** in this zone and/or identify further development opportunities. As observed in the State of the System report, the CityTicket shuttle – which enables people to park at a reduced rate at the Arena lot and take the shuttle to Downtown – is underutilized by at least a factor of two. Given its geographic proximity, the Spokane Arena parking could also be shared with the Spokane County Campus when that parking is at or near capacity.

Figure 19   Arena Neighborhood Summary

Metric		Value
Existing Supply		6,765
Modeled Future Supply		7,492
Effective Future Supply (90%)		6,743
Observed	Peak Demand	2,759 (41%)
	Effective Surplus	3,984
Existing (Modeled)	Peak Demand	3,489 (52%)
	Effective Surplus	3,254
Future Low (Modeled)	Peak Demand	3,837 (51%)
	Effective Surplus	2,906
Future High (Modeled)	Peak Demand	5,068 (68%)
	Effective Surplus	1,675
Existing Parking Land Area Consumption		40.1%

Metric	Value
Existing Built Area	2,345,467
Future Low Built Area	2,674,989 (+14.0%)
Future High Built Area	3,197,114 (+36.3%)

Figure 20   Arena Neighborhood - Land Use Summary

Land Use

Scenario

- Existing
- Future - Low
- Future - High

Office/Commercial: 48.1%, 43.0%, 42.2%

Hotel: 19.7%, 26.7%, 25.3%

Theater/Convention Center: 8.0%, 7.3%, 12.3%

Residential: 8.5%, 8.1%, 7.1%

Retail: 5.3%, 5.2%, 4.7%

Medical: 4.0%, 4.1%, 3.7%

Government: 3.9%, 3.5%, 2.9%

Other: 2.4%, 2.1%, 1.8%

Proportion of Built Area
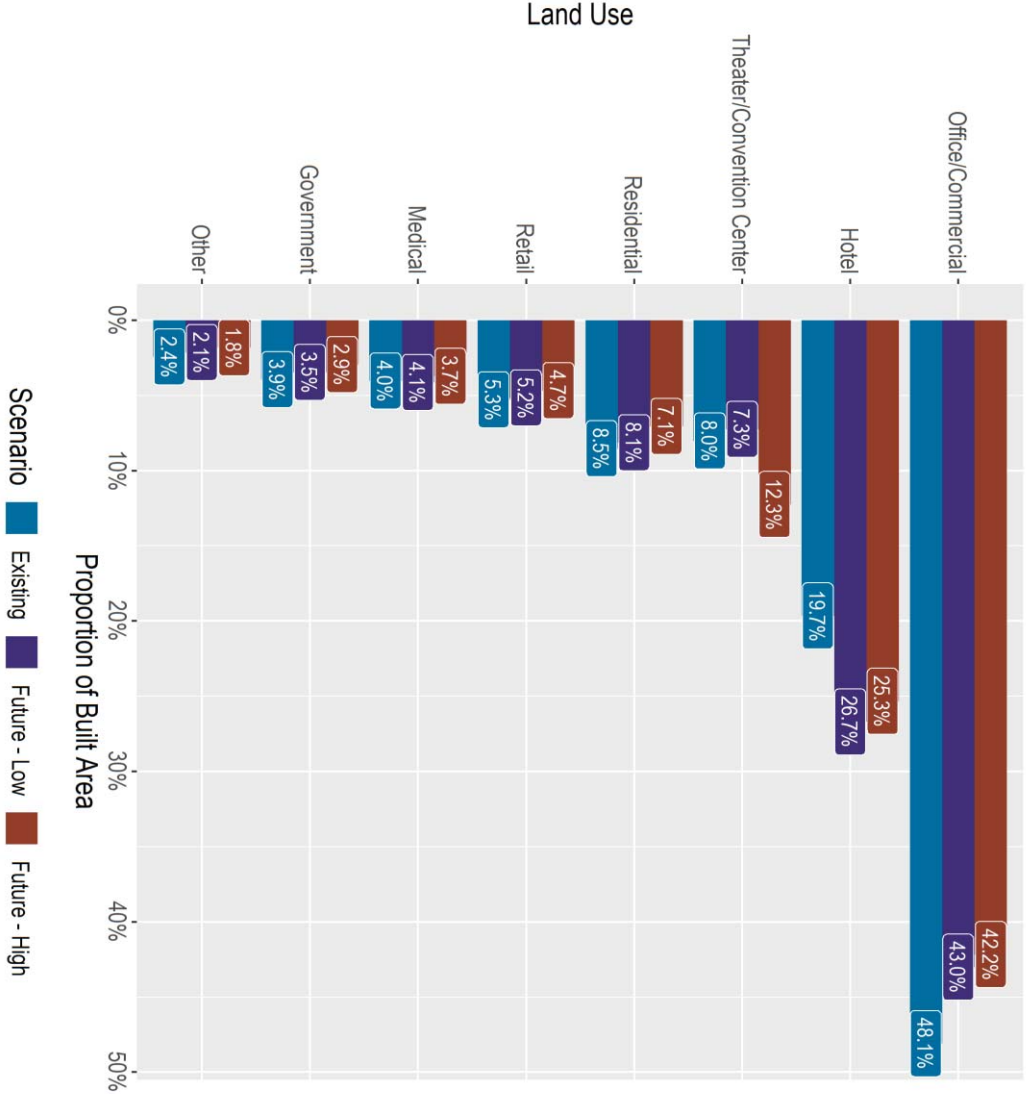
Figure 21   Arena Neighborhood – Summary Results (Weekday)
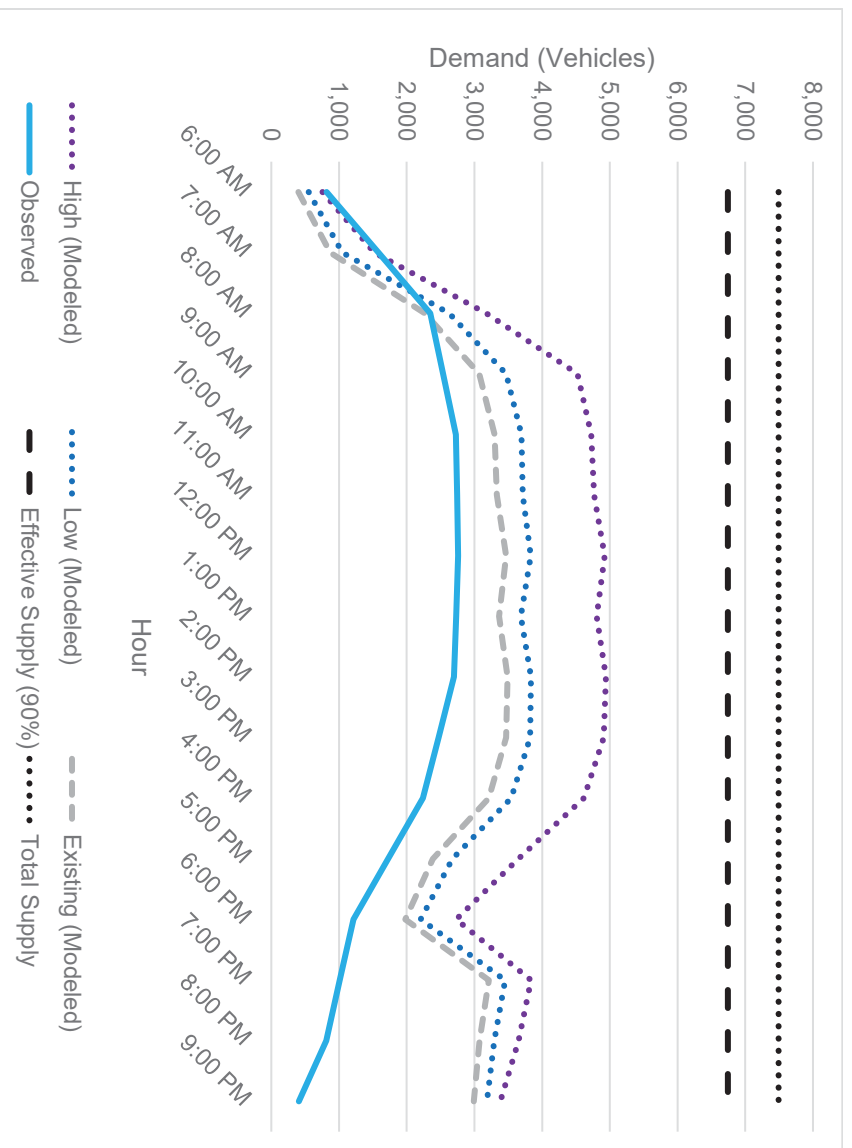
Existing

Figure 22   Spokane Arena – Existing Results (Weekday), by Land Use
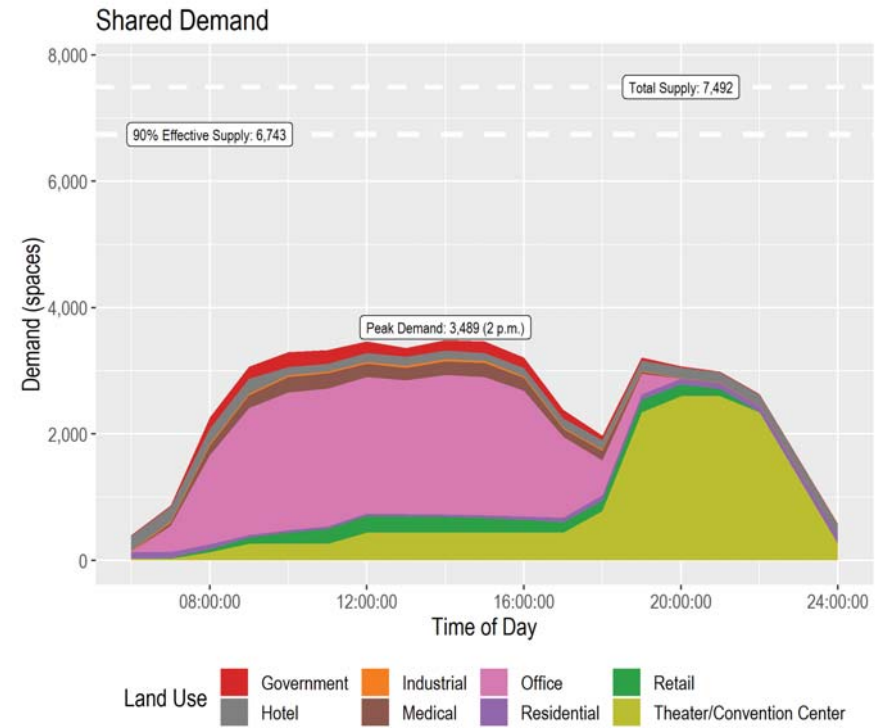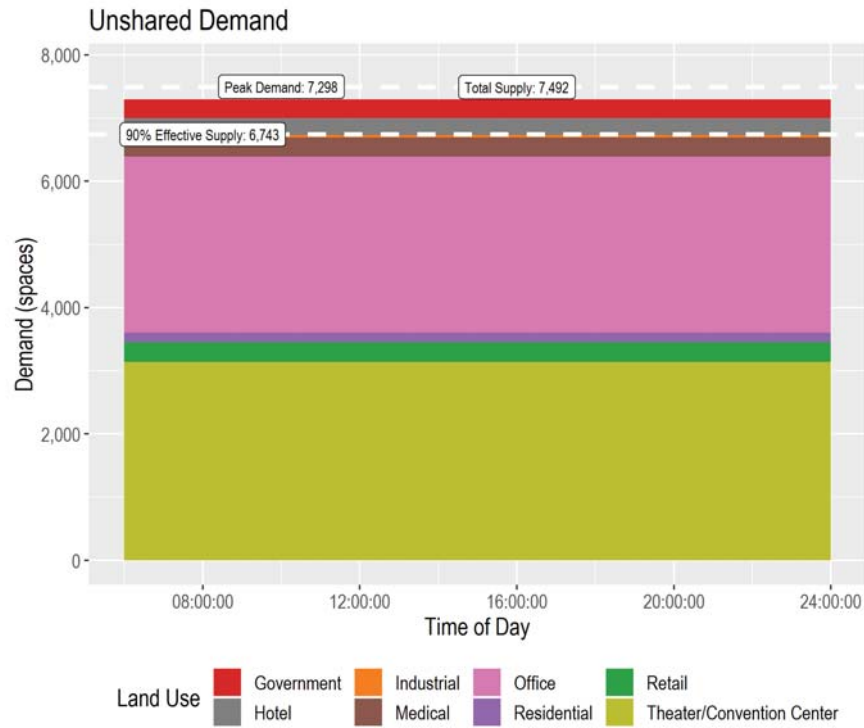
Future Low

Figure 23   Spokane Arena - Future Low Results (Weekday), by Land Use
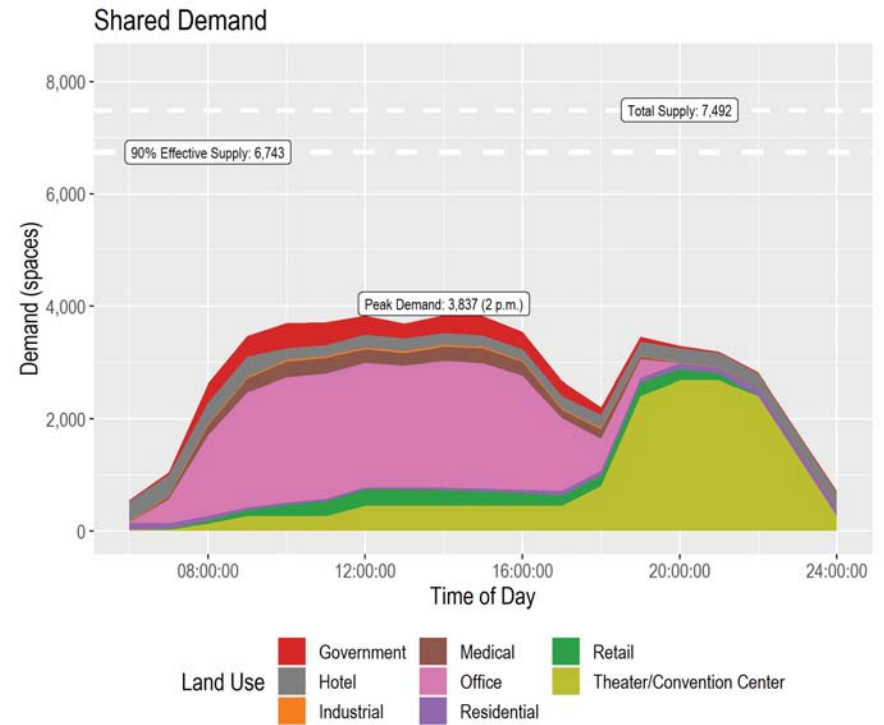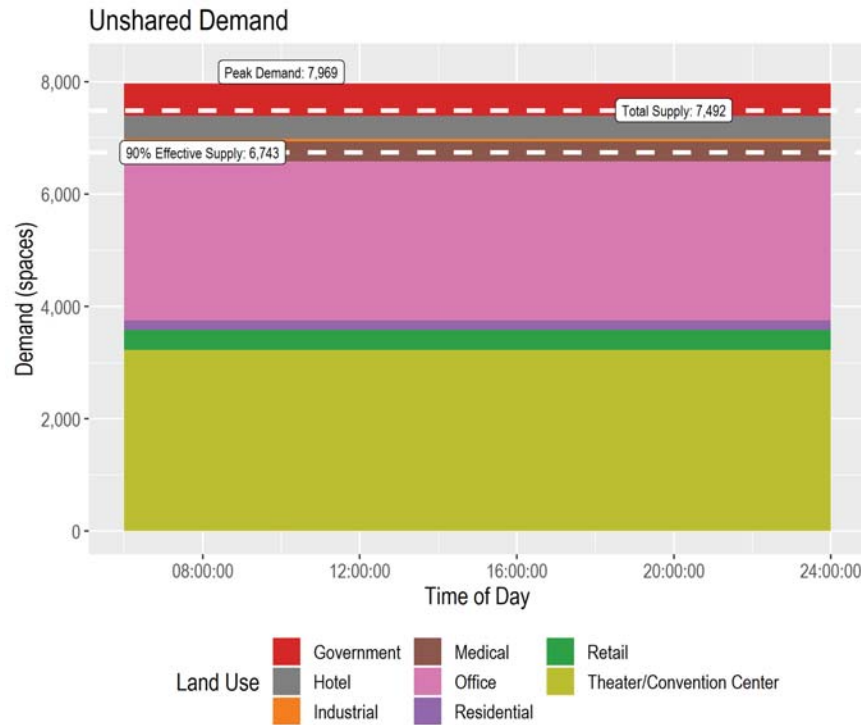
Future High

Figure 24   Spokane Arena - Future High Results (Weekday), by Land Use
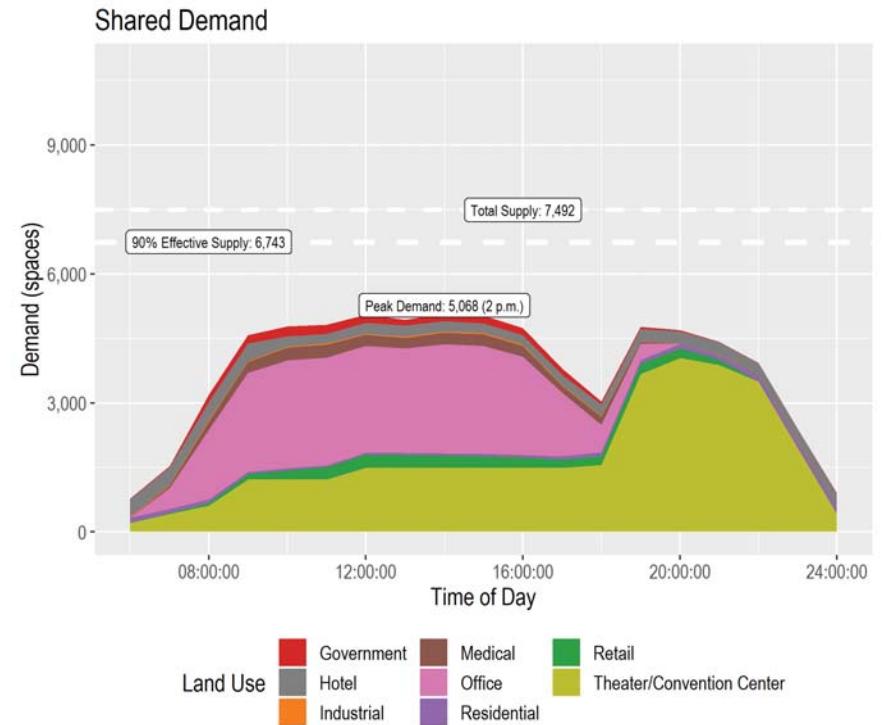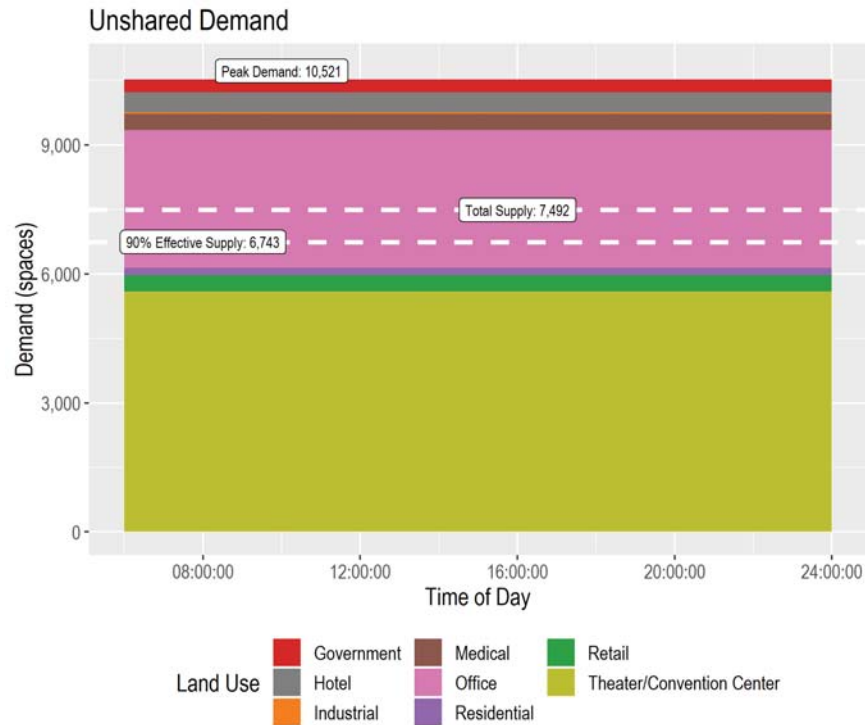
Zones 3, 4, and 5: Downtown Center North

- The Downtown Center North zone has a **parking supply of nearly 12,000 spaces** (11,970). The model includes an increase of 19 spaces.

- Nearly **one-quarter of the land in the Downtown Center North** area is consumed by parking.

- Over **one-third of built area is comprised of Office/Commercial uses**, one-fifth is residential uses, and one-sixth is hotel uses.

- The **observed demand in the Downtown Center North peaks at 12 p.m.** The shared parking models estimates peak demand at 2 p.m.

- In the high-growth scenario, **parking demand is estimated to exceed effective supply.** While the models are intentionally conservative, the results indicate a need to address a future parking deficit through a combination of additional shared and public supply, improved management of existing supply, and a reduction in parking demand.

- **The three primary land uses generating parking demand in this zone are office, retail, and institutional (i.e., the Convention Center).** As more residential units come into downtown, residential parking policy and management should be carefully considered.

Figure 25   Downtown Center North Summary

| Metric		Value
Existing Supply		11,970
Modeled Future Supply		11,989
Effective Future Supply (90%)		10,791
Observed	Peak Demand	7,577 (63%)
	Effective Surplus	3214
Existing (Modeled)	Peak Demand	9,670 (81%)
	Effective Surplus	1121
Future Low (Modeled)	Peak Demand	10,298 (86%)
	Effective Surplus	493
Future High (Modeled)	Peak Demand	11,171 (93%)
	Effective Surplus	-380
Existing Parking Land Area Consumption		23.3%
Existing Built Area		11,532,651
Future Low Built Area		12,947,243 (+12.3%)
Future High Built Area		13,961,893 (+21.1%)

Figure 26   Downtown Center North - Land Use Summary
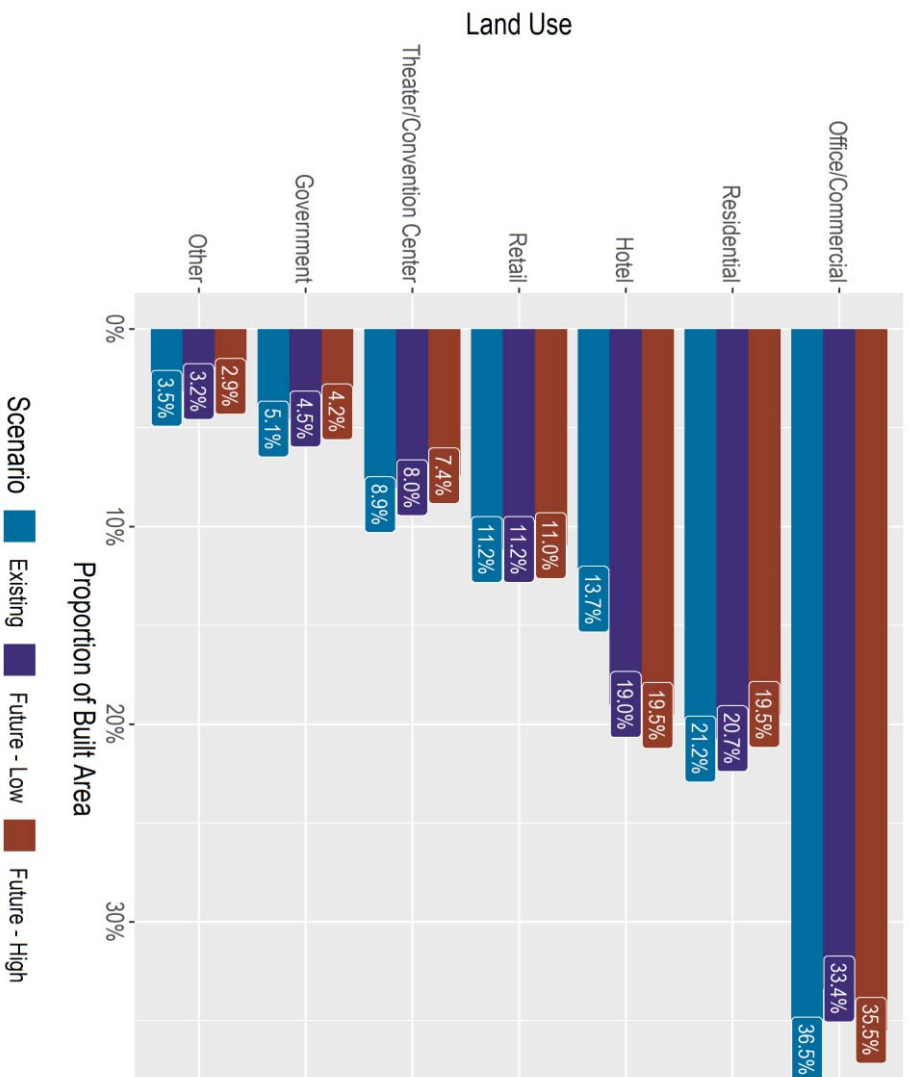
Figure 27   Downtown Center North – Summary Results (Weekday)
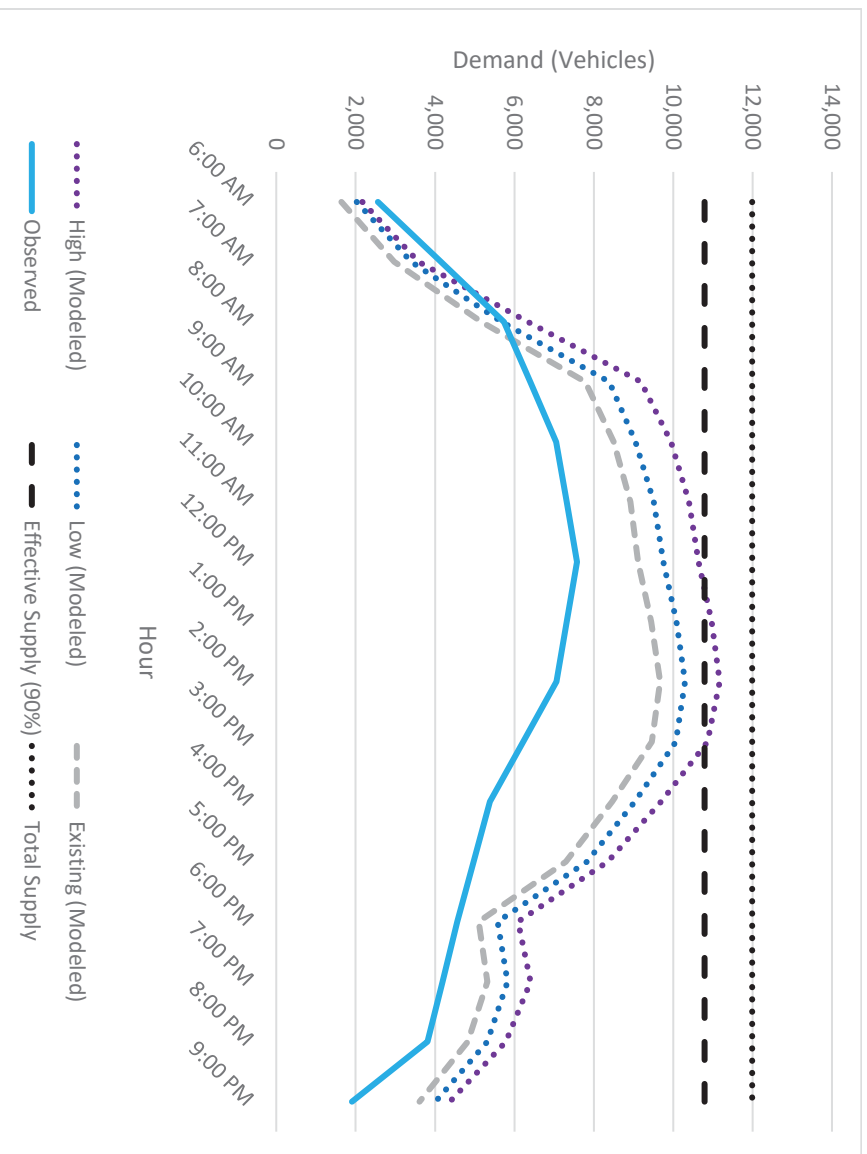
Existing

Figure 28   Downtown Center North – Existing Results (Weekday), by Land Use
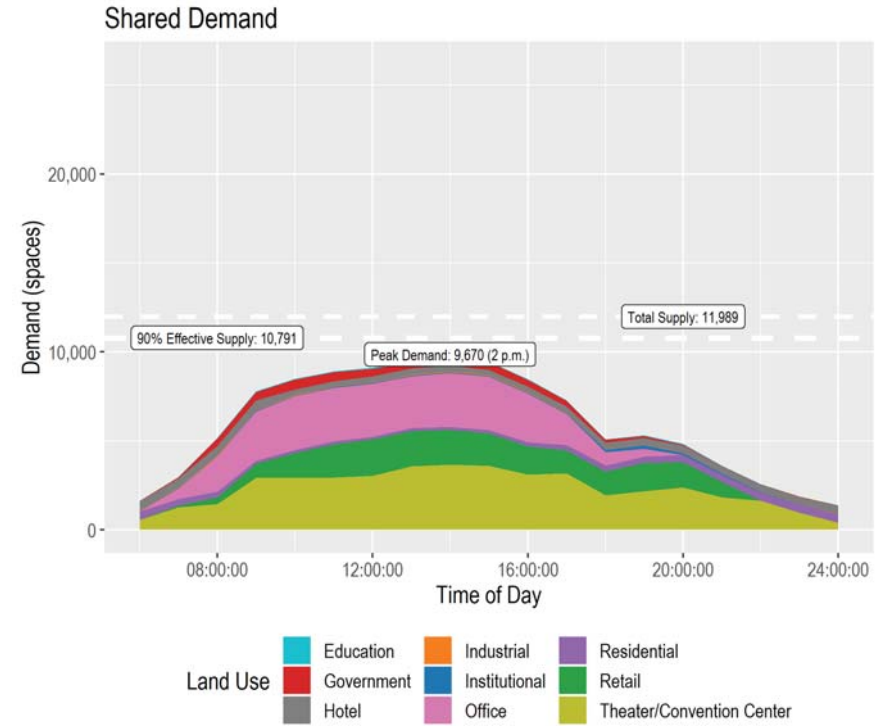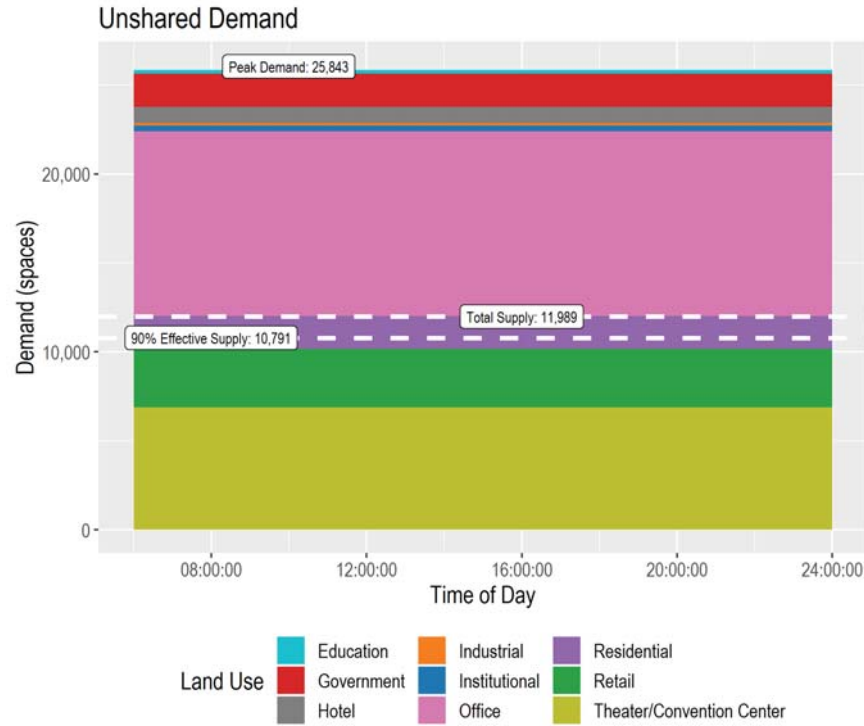
Future Low

Figure 29   Downtown Center North - Future Low Results (Weekday), by Land Use
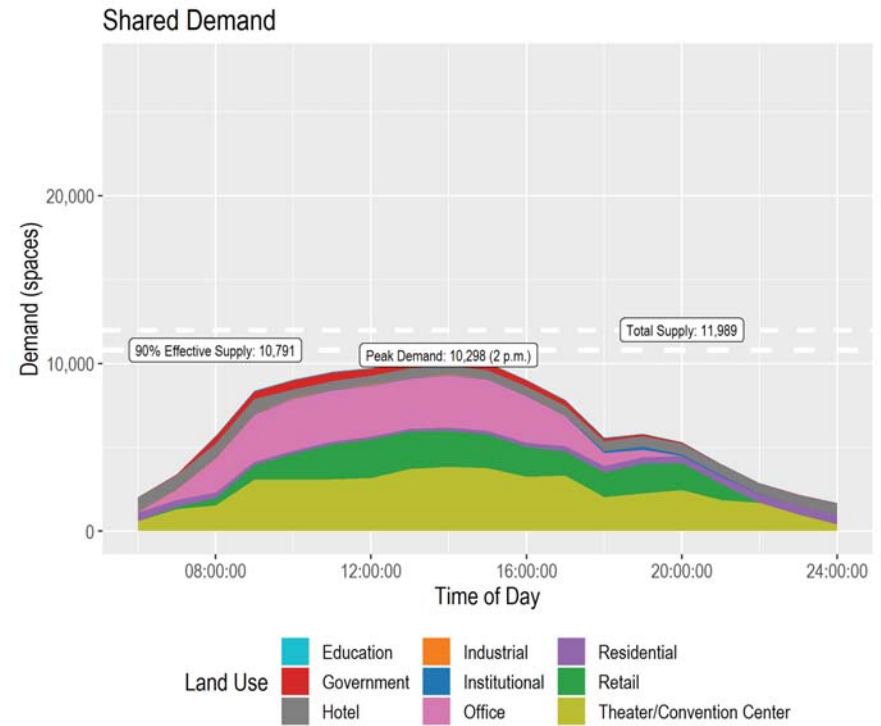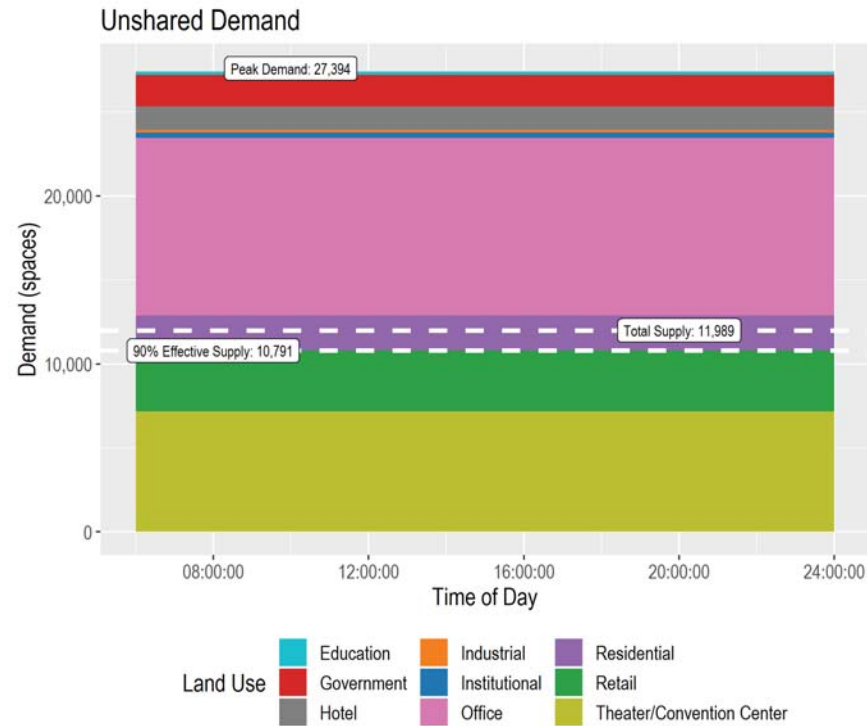
Future High

Figure 30   Downtown Center North - Future High Results (Weekday), by Land Use
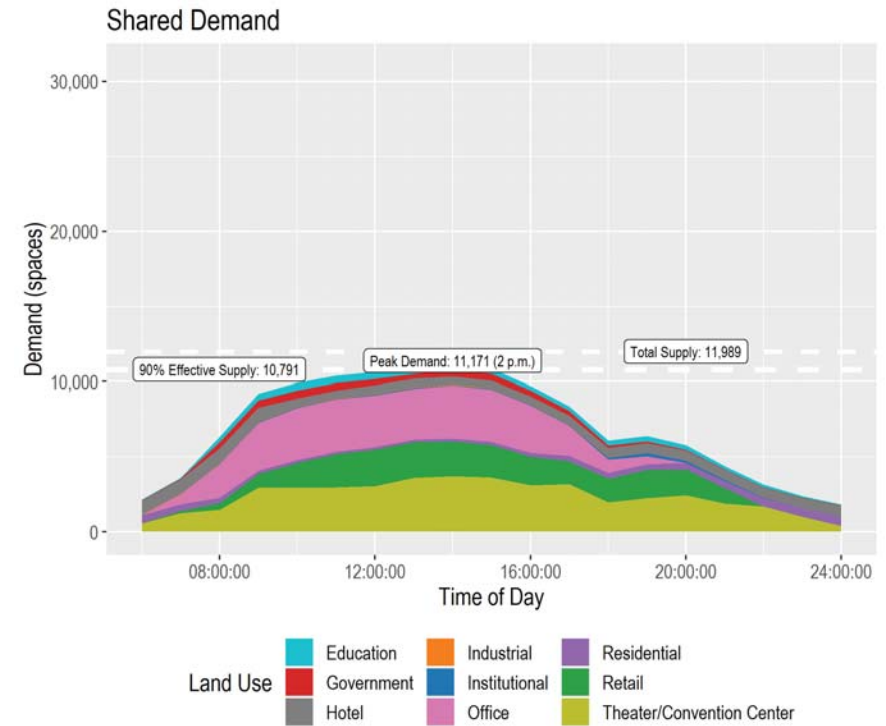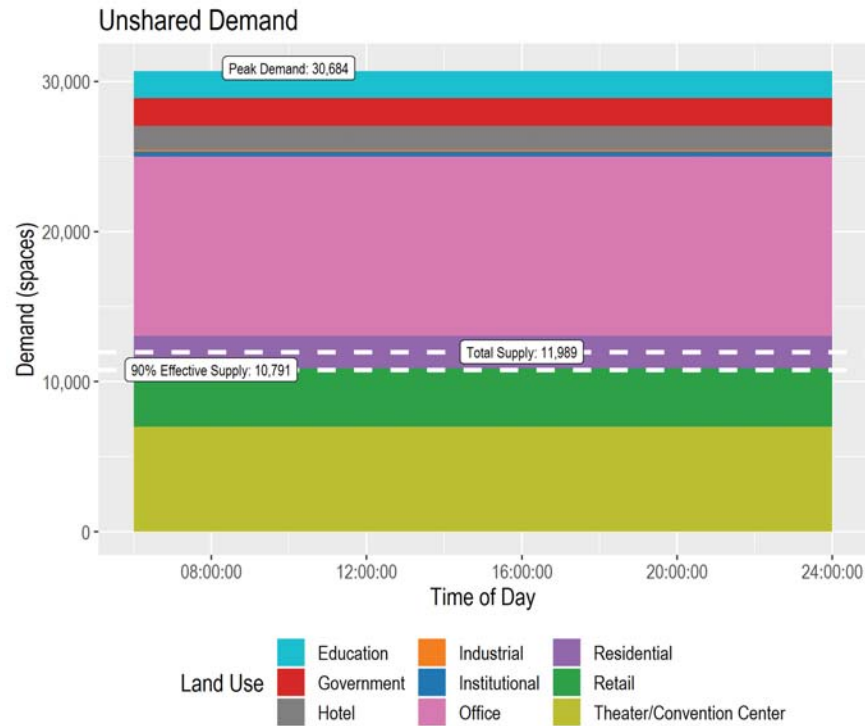
Zones 6, 7, and 8: Downtown Center South

- The **Downtown Center South zone has a parking supply of 6,101 spaces**. The model includes no supply changes.

- Nearly **one-third of the land in the Downtown Center South area is consumed by parking.**

- **Nearly half of the built area is office, and over one-third is residential.** The demand curves for these uses are roughly opposites (i.e., high office demand during the day, high residential demand at night), which is conducive to shared parking.

- **Observed parking demand peaks at 10 a.m., while modeled demand peaks at 2 p.m.** This is a result of differences in the actual use patterns of the land uses in the zone when compared with the patterns described by ITE/ULI.

- **Observed and modeled demands are comfortably within the effective supply envelope.** This area could offer opportunities for shared parking with both the downtown core and the Hospital District, but the stark physical barriers (the rail viaduct and I-90) and pedestrian environment make walking between these areas unpleasant for many parkers. Crossing improvements and safety/comfort investments can extend the reach of the parking supply.

Figure 31   Downtown Center South Summary

Metric		Value
Existing Supply		6,101
Modeled Future Supply		6,101
Effective Future Supply (90%)		5,491
Observed	Peak Demand	3,025 (50%)
	Effective Surplus	2,466
Existing (Modeled)	Peak Demand	3,664 (60%)
	Effective Surplus	1,827
Future Low (Modeled)	Peak Demand	3,804 (62%)
	Effective Surplus	1,687
Future High (Modeled)	Peak Demand	4,237 (69%)
	Effective Surplus	1,254
Existing Parking Land Area Consumption		31.4%
Existing Built Area		3,042,610
Future Low Built Area		3,292,649 (+8.2%)
Future High Built Area		3,582,101 (+17.7%)

Figure 32   Downtown Center South - Land Use Summary
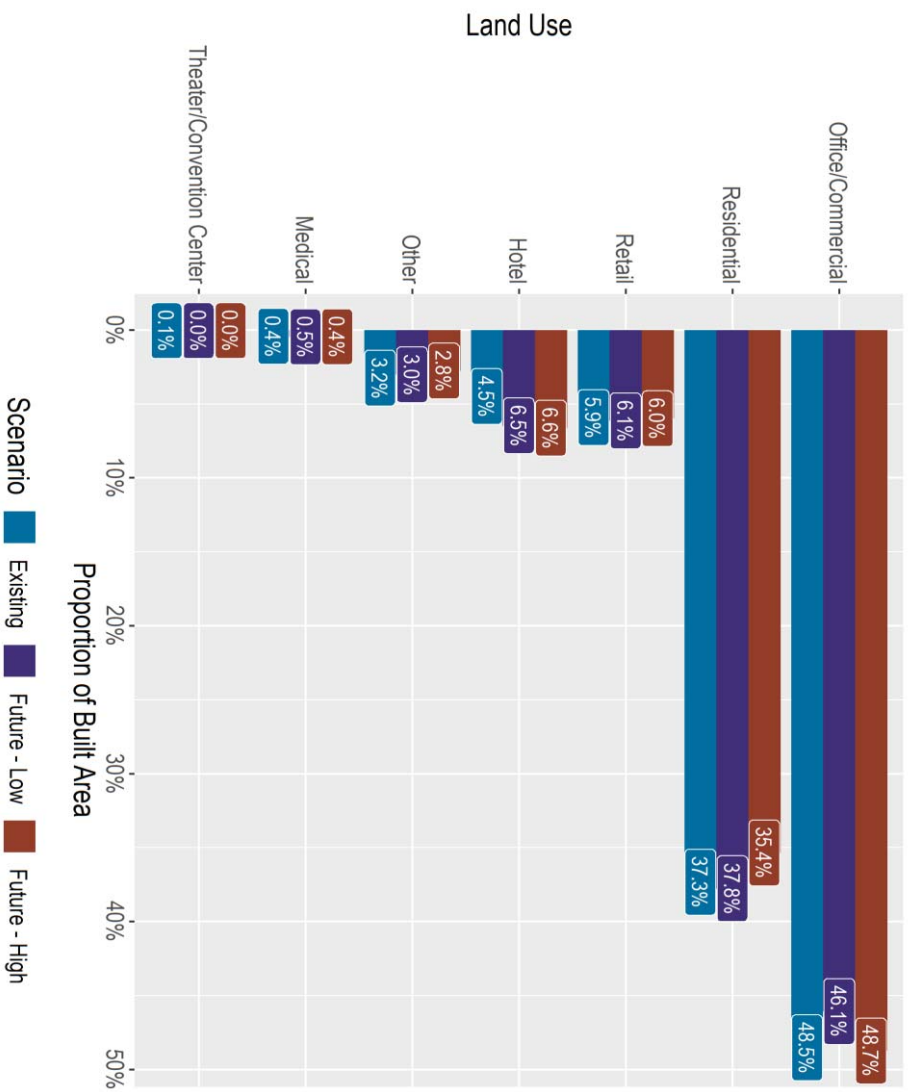
Figure 33   Downtown Center South – Summary Results (Weekday)
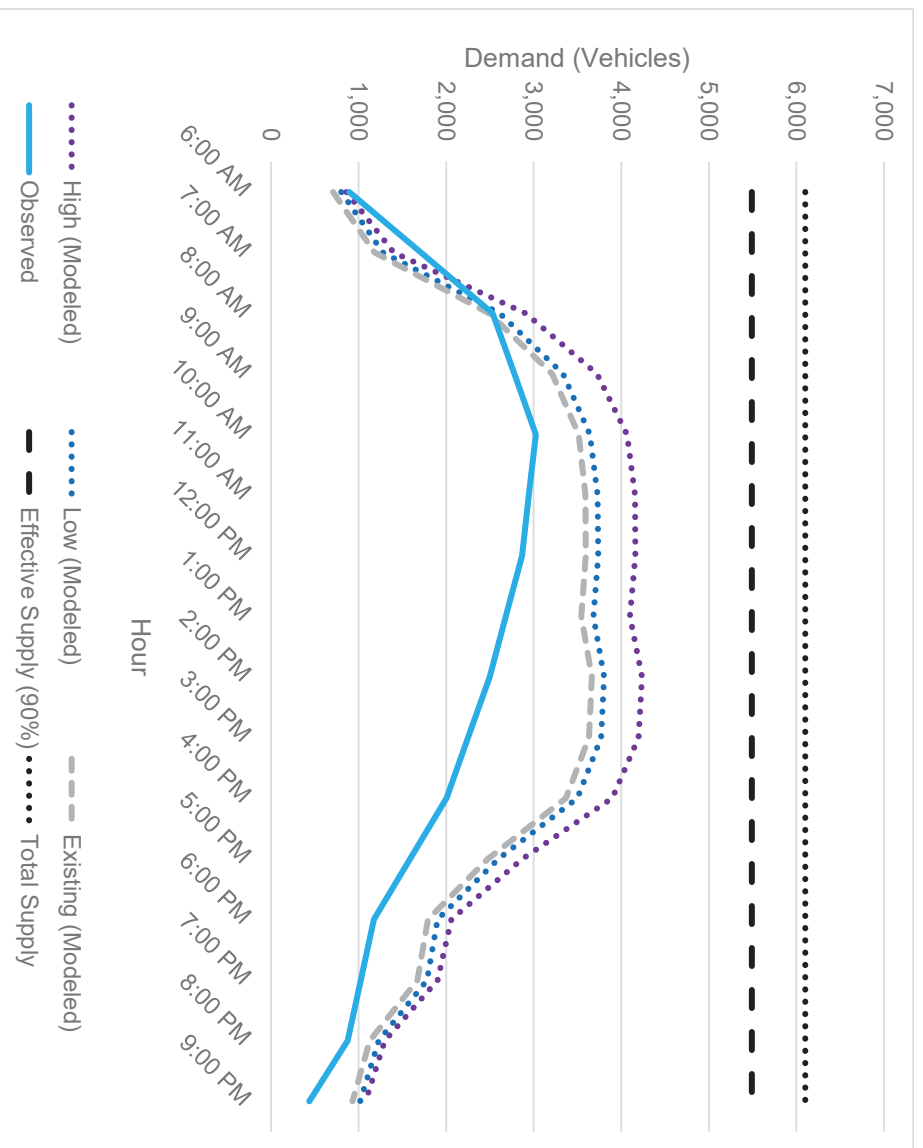
Existing

Figure 34   Downtown Center South – Existing Results (Weekday), by Land Use
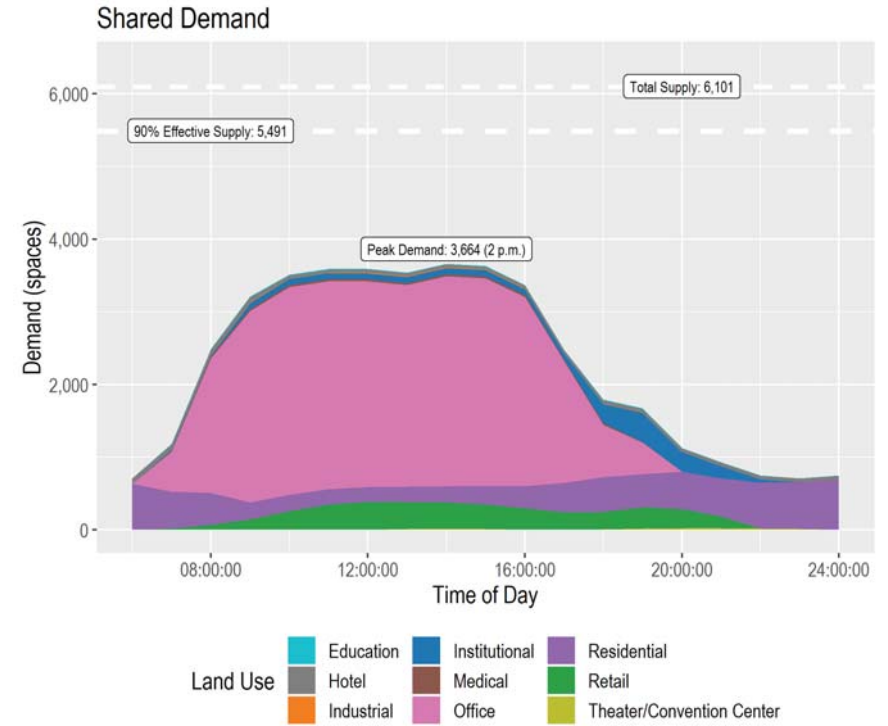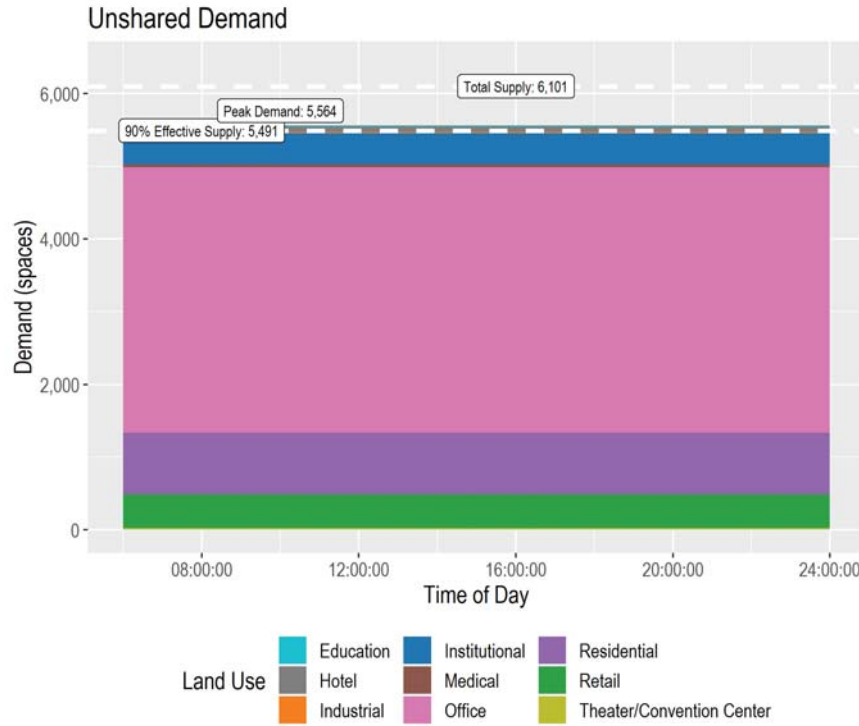
Future Low

Figure 35   Downtown Center South - Future Low Results (Weekday), by Land Use
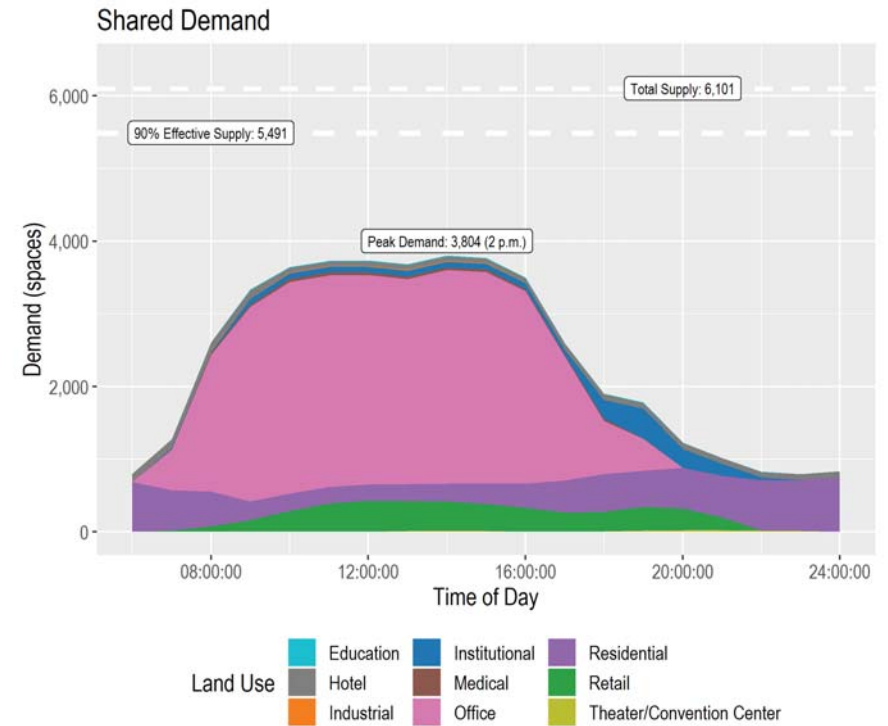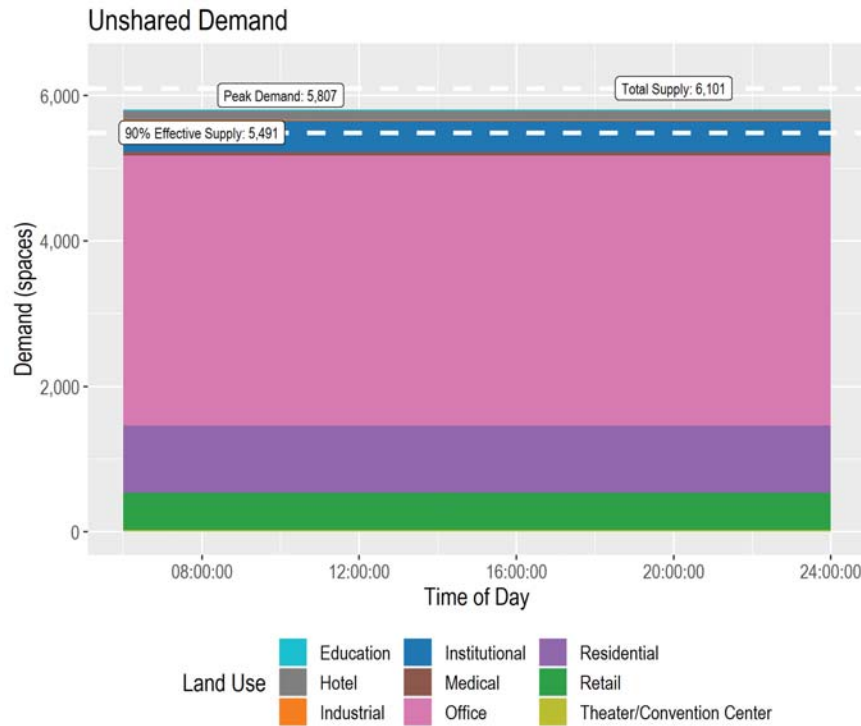
Future High

Figure 36   Downtown Center South - Future High Results (Weekday), by Land Use
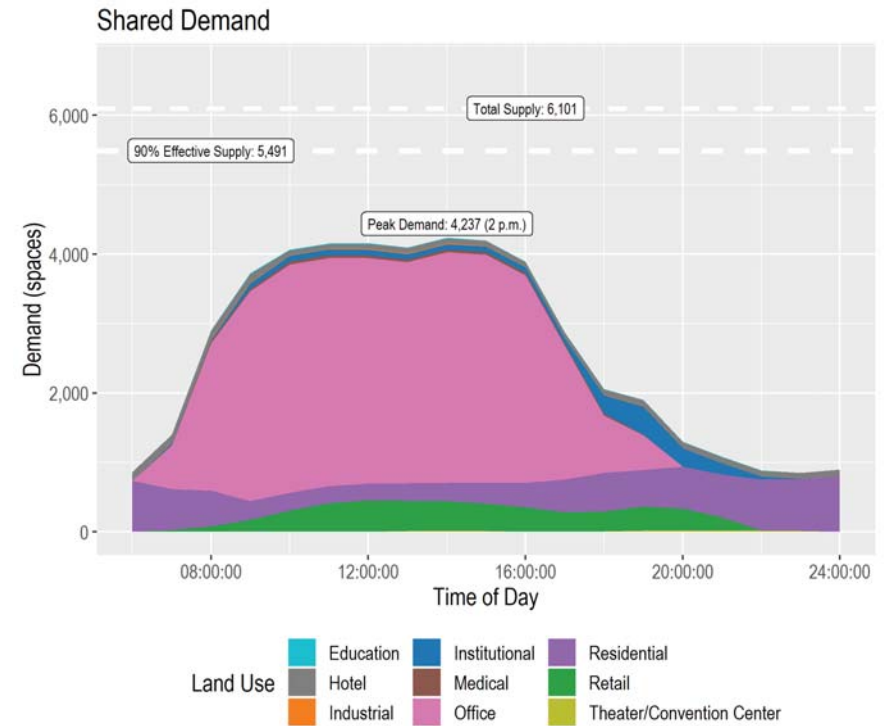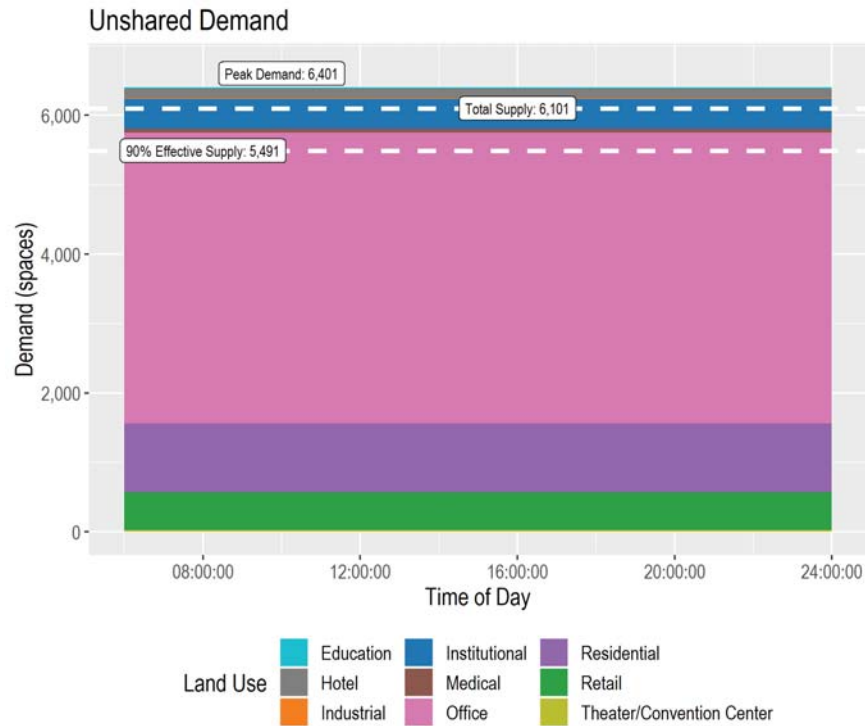
Zone 9: Hospital District

- The Hospital District zone has a **parking supply of 8,073 spaces**. The model includes no changes to supply.

- **Over one-quarter (27.5%) of the land** in the Hospital District area is consumed by parking.

- **Nearly two-thirds of the built area in this zone is medical use.** The next highest use is residential at approximately 12%. These proportions are not expected to change.

- **The Hospital District is the zone most likely to approach or exceed its effective supply in the future.** The models have parking occupancy peaking at 88% at a minimum (the existing model) and 99% at a maximum (the high growth model). The results indicate a need to address a future effective parking deficit through a combination of additional shared and public supply, improved management of existing supply, and a reduction in parking demand.

Figure 37   Hospital District Summary

Metric		Value
Existing Supply		8,073
Modeled Future Supply		8,073
Effective Future Supply (90%)		7,266
Observed	Peak Demand	5,309 (66%)
	Effective Surplus	1957
Existing (Modeled)	Peak Demand	7,117 (88%)
	Effective Surplus	149
Future Low (Modeled)	Peak Demand	7,411 (92%)
	Effective Surplus	-145
Future High (Modeled)	Peak Demand	7,971 (99%)
	Effective Surplus	-705
Existing Parking Land Area Consumption		27.5%
Existing Built Area		6,012,724
Future Low Built Area		6,323,432 (+5.2%)
Future High Built Area		6,836,496 (+13.7%)

Figure 38   Hospital District - Land Use Summary

Land Use

Retail — 0.0% / 0.0% / 0.0%
Theater/Convention Center — 0.5% / 0.5% / 0.4%
Hotel — 1.7% / 2.5% / 2.6%
Office/Commercial — 4.7% / 4.6% / 4.9%
Other — 6.1% / 5.9% / 5.9%
Residential — 12.7% / 13.3% / 12.4%
Medical — 74.3% / 73.2% / 73.8%

Proportion of Built Area

Scenario
Existing
Future - Low
Future - High
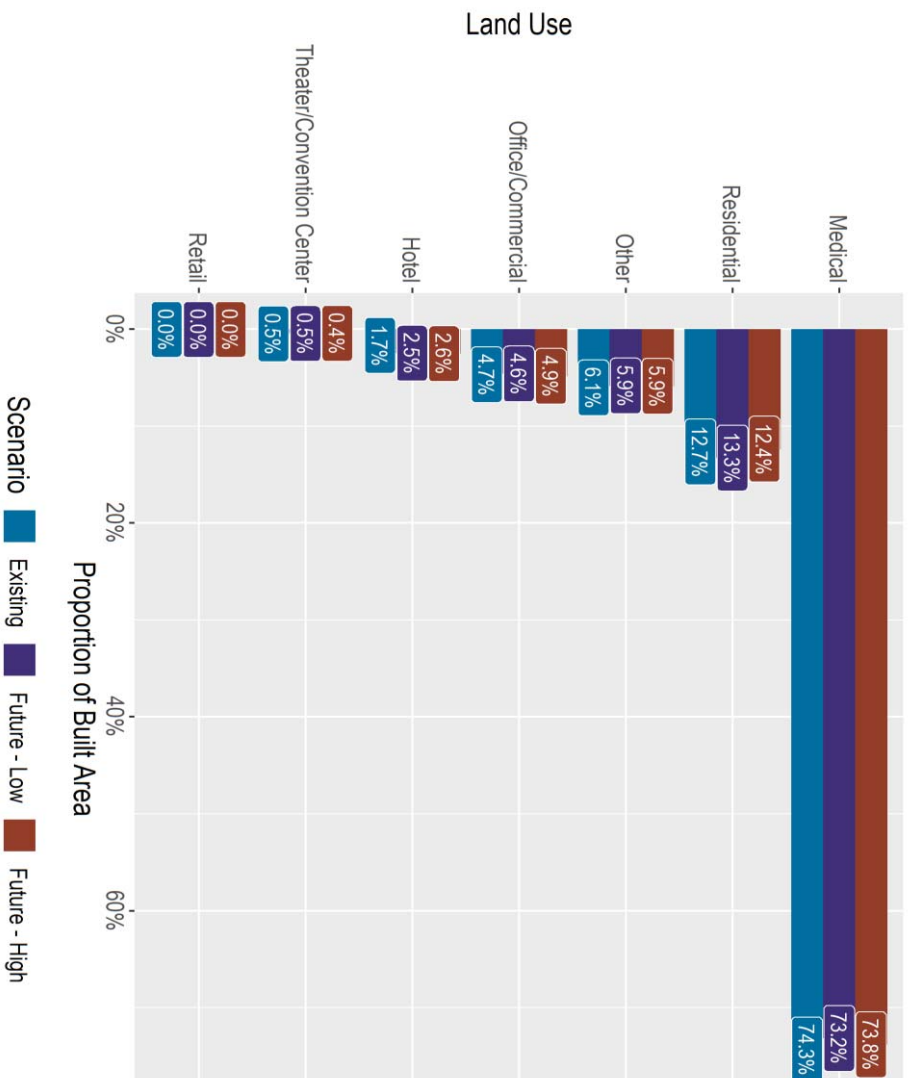
Figure 39   Hospital District – Summary Results (Weekday)
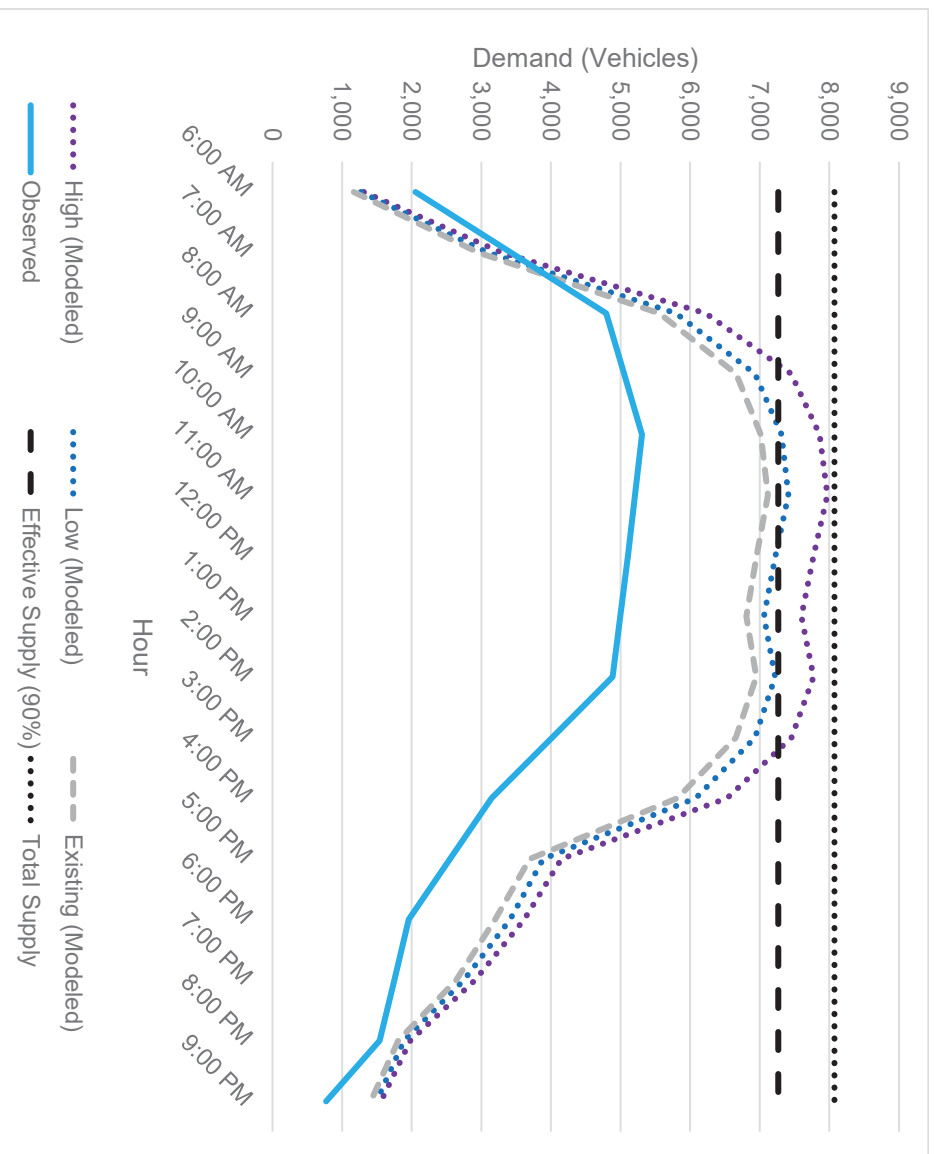
Existing

Figure 40   Hospital District – Existing Results (Weekday), by Land Use
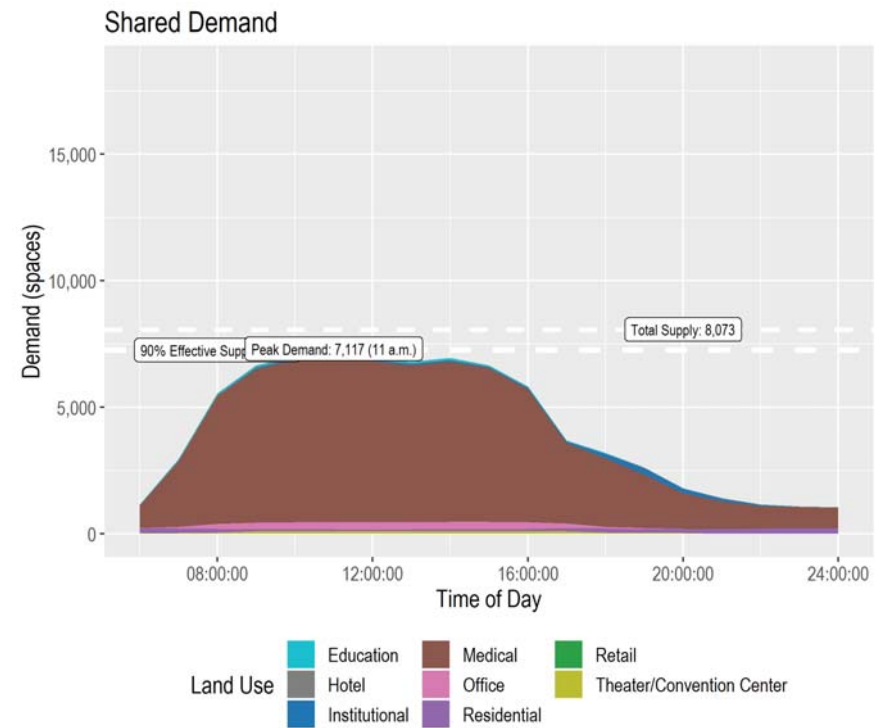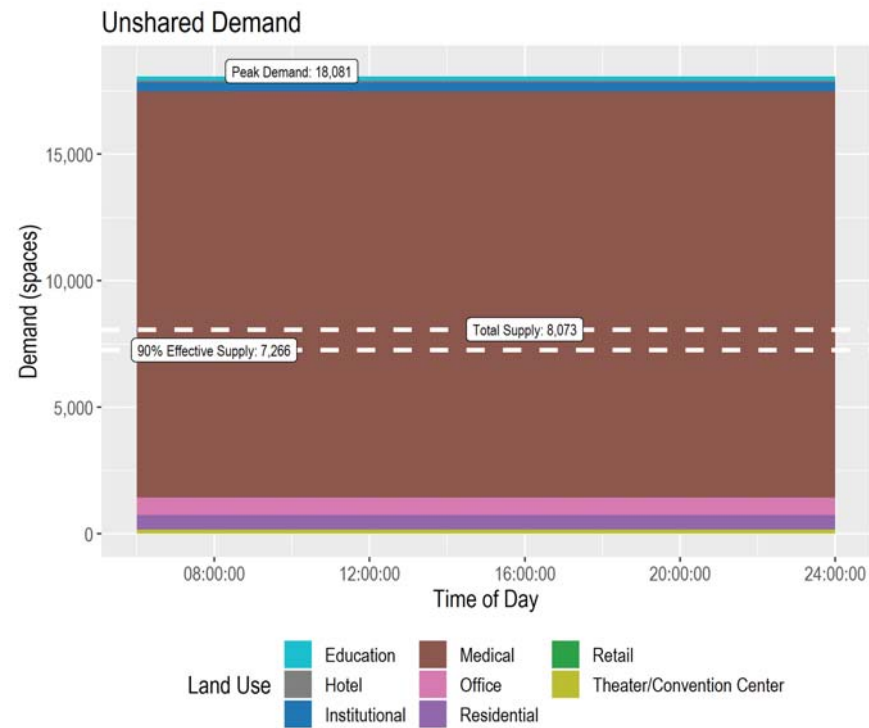
Future Low

Figure 41   Hospital District - Future Low Results (Weekday), by Land Use
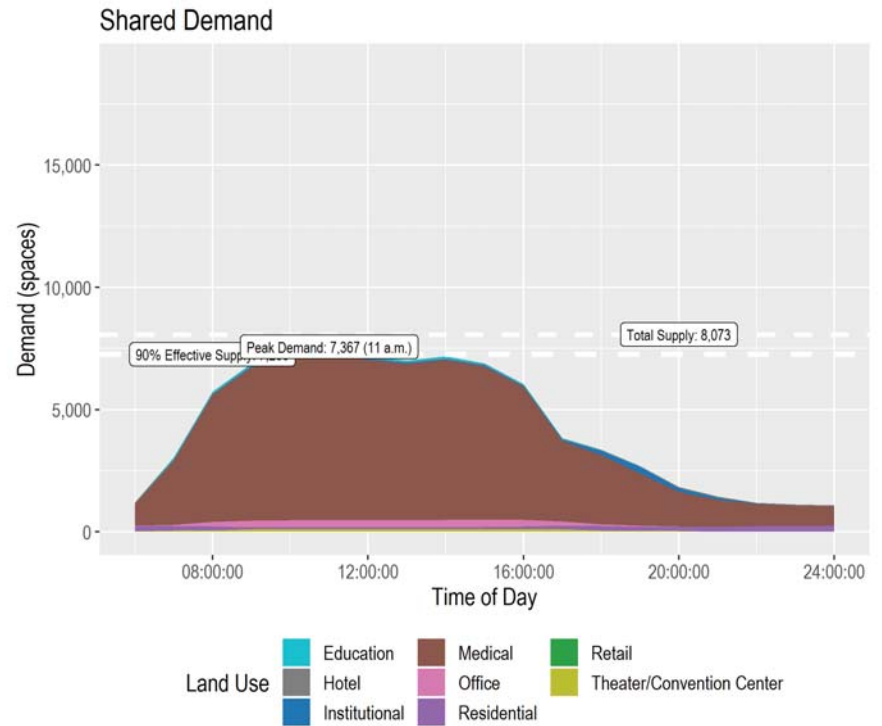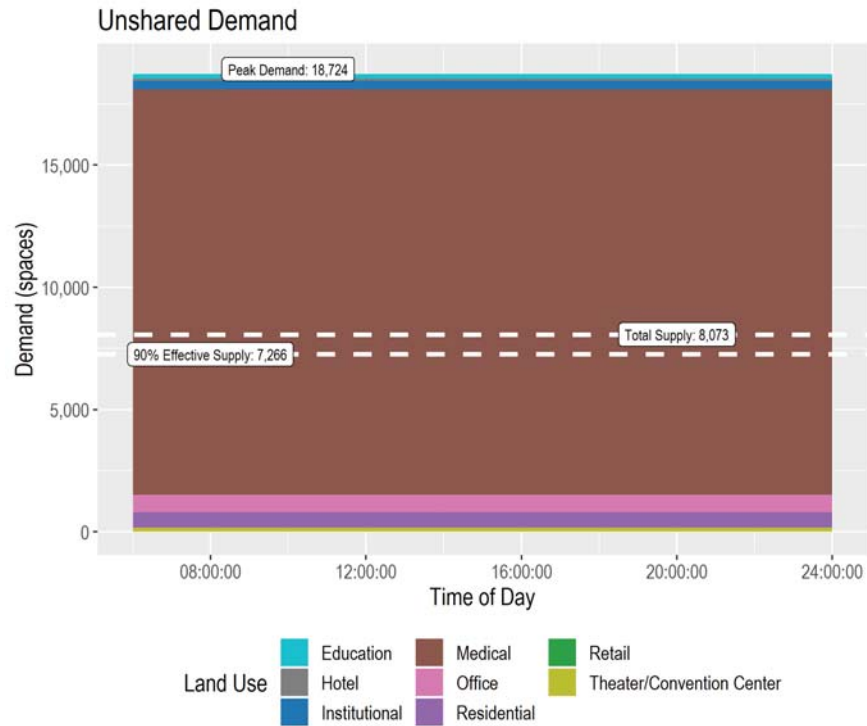
Future High

Figure 42   Hospital District - Future High Results (Weekday), by Land Use
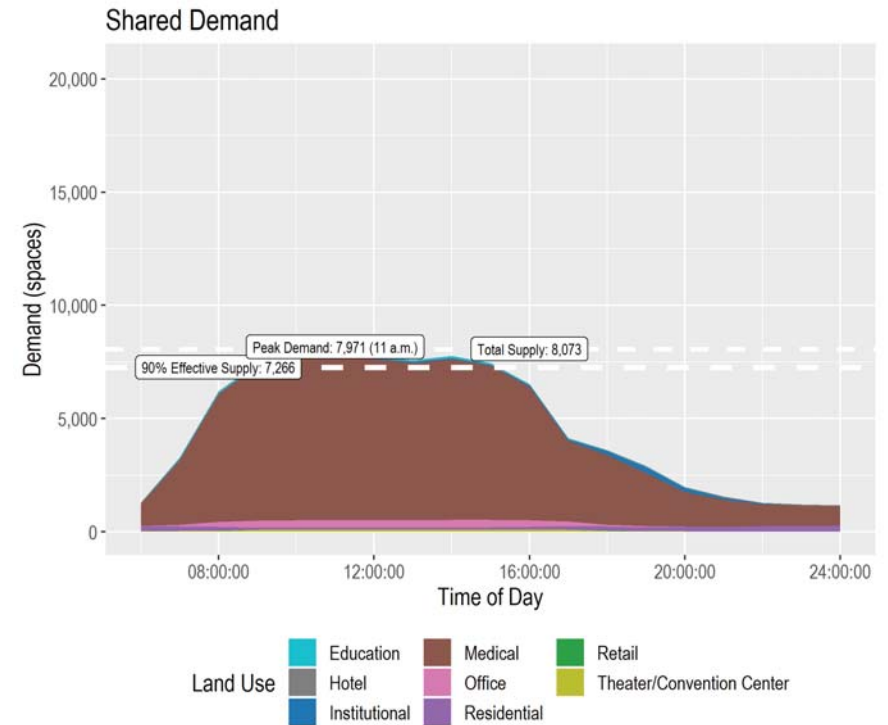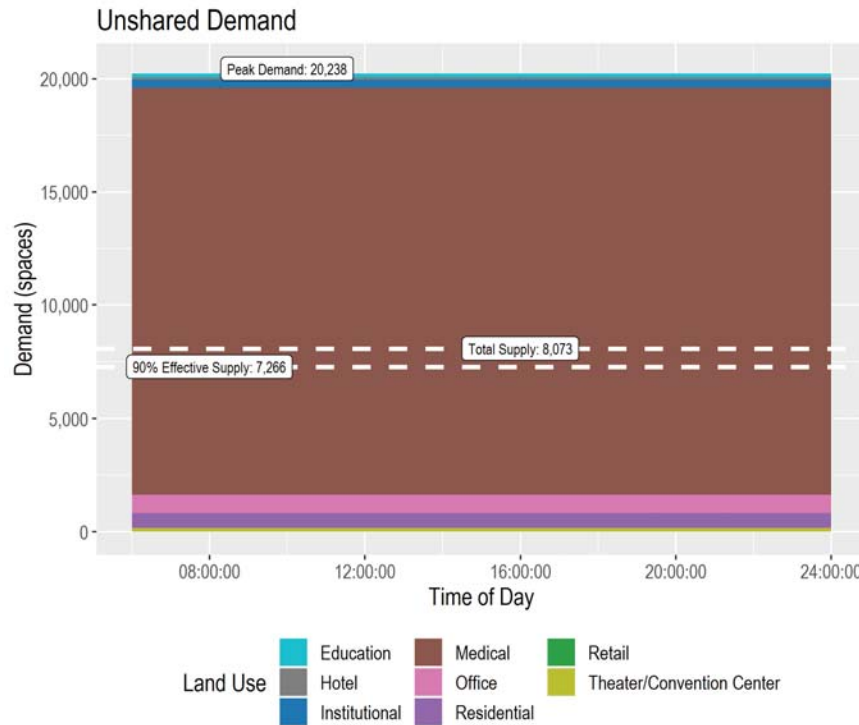
Appendix A Methodology

Figure 43   Gross Square Footage Conversion Factors

Land Use	Assumed GSF per Unit
Single Family Units	3,100
Multi-Family Units	1,600
Hotel Rooms	1,100
Live Theater Seats	15
Movie Theater Seats	50

Appendix B Land Use Assumptions

BACKGROUND

The project scope for the Downtown Parking Study includes an analysis of the current parking load (both gross square feet available today separated by land use, as well as projected spaces available within the next six years). In order to conduct that analysis, the City provided to Nelson\Nygaard, the consultant on the project, totals of certain land uses within the downtown study area. An annual growth rate was then developed for all uses under both a low-growth scenario and a high-growth scenario, which Nelson/Nygaard then used to build a model of the expected parking demand in each sub area, including both current demand versus supply as well as future demand versus current supply.

METHODOLOGY—EXISTING USES

The City quantified the existing uses by the following method:

1. The footprint of each building was measured by the City GIS department.

2. The known height of the building was measured using LIDAR and pictometry to determine the likely number of stories in each building.

3. A basic use for each building was assigned according to publicly available assessor data.

4. A building-by-building survey of each building was undertaken by City staff, wherein the assumed square footage of building area was further refined based on aerial photography, oblique pictometry, and permit data supplied by Accela, the City's permit database. As a result, staff made corrections to the base assumptions for gross floor area as well as building use (e.g. buildings that were assumed by their height to be a given number of stories were corrected according to a visual count of the stories).

5. City staff determined live theater seats and movie theater seats via calls to those establishments asking for their information. In cases where calls were not returned, City staff instead used the maximum occupancy as supplied by the Spokane Fire Department.

6. City staff determined the number of dwelling units via permit data in Accela and, failing any information there, by calls to property managers. Staff counted units in a small number of multi-family buildings based on other secondary sources, such as newspaper articles or a count of gas meters on the building (or similar means).

7. Staff categorized buildings with split uses—such as the high number of buildings in the core that contain retail on the first floor and commercial above—based on first-hand knowledge and pictometry imagery.

8. Staff discounted from the total any buildings known to generate little or no parking demand (substations, the STA plaza, outbuildings, parking garages, etc.). Uses such as the STA plaza effectively reduce the parking demand in the downtown rather than generate it, thus Staff did not include them in the total land uses.

METHODOLOGY—EXISTING VACANCY

City staff calculated vacancy according to available sources, dependent on the use. The following summarizes how staff determined assumed vacancy by use category:

- Staff assumed zero vacancy for many of the uses, either because there were very few of those uses or because the City possessed direct information from those users as to their vacancy rate (i.e. the high school is the only education use in its zone and it is common knowledge that the high school is occupied).

- For commercial, retail, and office uses, the City assumed an average vacancy rate based on The Real Estate Report: Regional Research on Spokane, Kootenai, Bonner Counties (Spring, 2018) with some adjustment based on direct knowledge of depressed areas, for which City Staff slightly increased the vacancy rate.

- The City utilized general occupancy rate for hotels provided by published sources. Likewise, the City received direct data on the average attendance for the Arena from the Public Facilities District and average occupancy of theater seats from the various theaters. City staff then adjusted the vacancy of those uses accordingly.

- Staff then applied these vacancy rates to the existing square footage of various uses in order to calculate an existing parking demand for the downtown.

METHODOLOGY—FUTURE GROWTH

Annual growth rates for each of the land use categories was calculated via one of a few methods, depending on the information available:

- Staff assumed movie theaters, industrial uses, churches, and libraries are not expected to grow, based on direct information from those uses.

- Staff updated education, jails, government, and conference/convention uses according to known projects in the pipeline within the next six years (a proposed expansion to Lewis and Clark High School, a proposed jail expansion by the County, a possible expansion of the County Campus facilities, and the proposed Spokane Regional Sportsplex).

  - For the low growth scenario, staff assumed that these specific developments would not occur within six years.

- Staff calculated annual growth rates for hotel, live theater, and hospital uses using prior permit data from the City's permit database. Microsoft Excel's forecast function was then used to develop a linear regression for each use, predicting both a high growth rate and a low growth rate.

  - The low rate given by the forecast results was used for the low growth scenario and the high growth rate was used for the high growth scenario.

- For single-family and multi-family residential uses, as well as office/commercial, retail, and medical office uses, staff utilized the published historic growth rates provided by The Real Estate Report: Regional Research on Spokane, Kootenai, Bonner Counties, published by the Spokane-Kootenai Real Estate Research Committee (Spring, 2018). Staff then fed these historic rates into the same forecast model in Excel used previously, resulting in both a high and low rate growth rate.

– As with the other forecast results, the low rate was used in the low-growth scenario and the high rate was used in the high-growth scenario.

PEER REVIEW

In order to provide the most accurate assumptions possible, Staff requested a few local agencies and companies to review the data provided and to provide comment. Charlie Wolff, the City's Business Development Manager and local real estate broker, reviewed the data and provided minor comment. Additionally, Andrew Rolwes of the Downtown Spokane Partnership (DSP) provided specific comments on possible adjustments to the data consistent with the DSP's local knowledge and internal data. City staff made all the changes recommended by Andrew Rolwes prior to submitting the number to Nelson\Nygaard for their use.

APPENDIX D:
BEST PRACTICES AND PEER REVIEW
FINAL

Table of Contents

INTRODUCTION

The City of Spokane, downtown stakeholders, and the consultant team developed a package of 20 strategies to improve downtown parking as part of the Downtown Parking Study. Many of the strategies recommended are not new ideas – they are developed partially based upon best practice research and experience from peer cities around the U.S. This document presents a detailed review of research for seven strategies the City team thought would benefit from specific implementation examples in other peer cities. Highlights of this document are also included in the final report.

B.1 – PERFORMANCE-BASED MANAGEMENT

OVERVIEW

Performance-based management adjusts rates and regulations to make it as easy as possible to find a parking space. Consistent availability, not additional revenue, is the central goal. The "right price" is always the <u>lowest</u> price that will achieve the availability target. Typical on-street target occupancy rates are 70-85%, depending on specific location and adjacent uses.

Adjusting rates over time—up where demand is higher and down where demand is lower—will allow Spokane to better distribute parking demand across downtown. In general, off-street parking should complement on-street parking by providing a cheaper, long-term option.

Effective performance-based management requires consistent monitoring — tracking the occupancy of parking spaces, continuously or via spot checks. Parking managers must strategically monitor parking occupancy and should prioritize, but not necessarily be limited to, locations and times that consistently experience peak demand conditions.

Ideally, Spokane would adopt new municipal code language that would allow city staff to periodically adjust parking rates to meet adopted occupancy targets, without City Council action. This would ensure that parking prices are based on regularly collected data, and would improve transparency about the decision-making process. Examples of adopted code language from Seattle, Washington, and Berkeley, Walnut Creek, and Redwood City, California are provided below.

BENEFITS

The primary performance measure should be "availability" – the proportion of parking spaces that are open at a given point in time. Achieving optimal availability conditions can bring about several parking-management objectives. The most significant and transformative are:

- Improved customer experience, as more parking spaces are consistently available
- More choice for customers, allowing those who want a front-door space to more easily get it, but at a market price
- Reduced traffic congestion and vehicle emissions, as drivers do not have to circle

- Reduced citations/violations, as greater availability reduces the perceived need to park illegally
- Enhanced data to inform management and policy decisions

IMPLEMENTATION EXAMPLES

Seattle, WA

Seattle's performance-based program was initiated in 2011, with the goal of using data to set rates so that one to two parking spaces are open per block throughout the day. The Seattle City Council and Mayor passed two Statements of Legislative Intent (SLI) providing staff authority to develop the program and added resources for data collection.

The city collects parking data and measures occupancy rates between April and June on typical weekdays. The target range is 70-85%, and pricing and regulations are adjusted to achieve this target. Occupancy is evaluated by time of day groupings (morning, afternoon, and evening).

The program is supported by a comprehensive signage program, which clearly communicates the prices and regulations. The City is also in the process of updating all parking meters to better support the price changes and better calibrate data analytics.

From 2010 to 2018, the Seattle DOT (SDOT) authorized over 250 adjustments to the on-street paid parking area rates, hours of operation, and area time limits. Over time, more and more areas have occupancy levels that fit within the target range throughout the day.

All parking data is open source, including annual counts and meter transaction data. SDOT releases an annual report summarizing the data within each neighborhood and citywide (Figure 1). In 2016, SDOT further refined the pricing structure, adding variable rates by time of day rather than single daily rates. In 2017, the municipal code was amended to allow a greater range of parking

By The Numbers

As of 2018, Seattle has 93 time-of-day rate periods
- 66% of those rates stayed the same in 2018
- 18% of those rates went down in 2018
- 15% of those rates went up in 2018

### City of Seattle – Chapter 11.16.121.C

The Director shall establish on-street parking rates and shall adjust parking rates higher (up to the Maximum Hourly Rate) or lower (as low as the Minimum Hourly Rate) in neighborhood parking areas based on measured occupancy so that approximately one or two open spaces are available on each block face throughout the day in order to:

1. Support neighborhood business districts by making on-street parking available and by encouraging economic development
2. Maintain adequate turnover of on-street parking spaces and reduce incidents of meter feeding in commercial districts
3. Encourage an adequate amount of on-street parking availability for a variety of parking users, efficient use of off-street parking facilities, and enhanced use of transit and other transportation alternatives
4. Reduce congestion in travel lanes caused by drivers seeking on-street parking
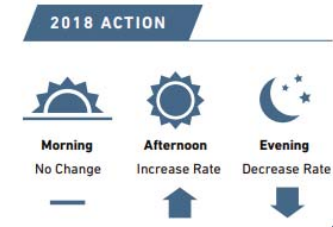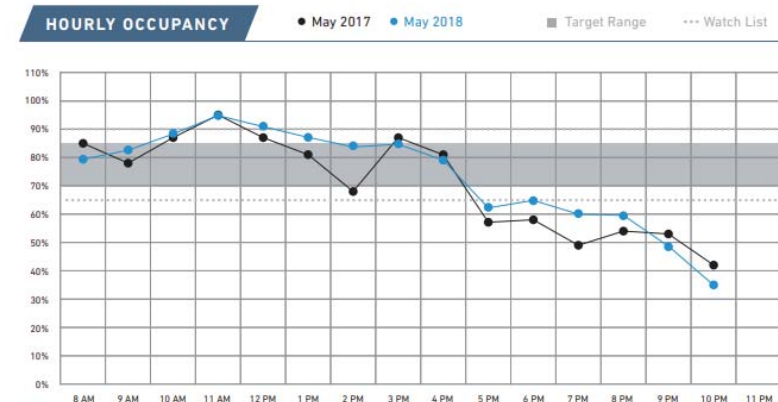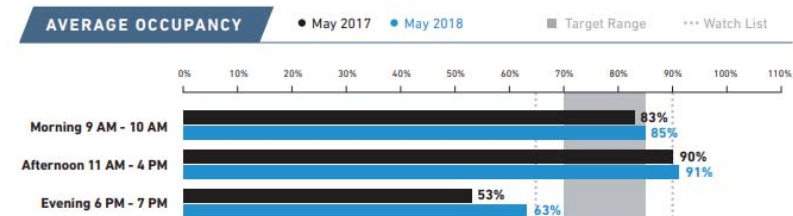
rates, extending from a minimum of $.50 per hour to a maximum of $5.00 per hour.[1]

Figure 1   Seattle's Paid Parking Areas and Example of Annual Reporting
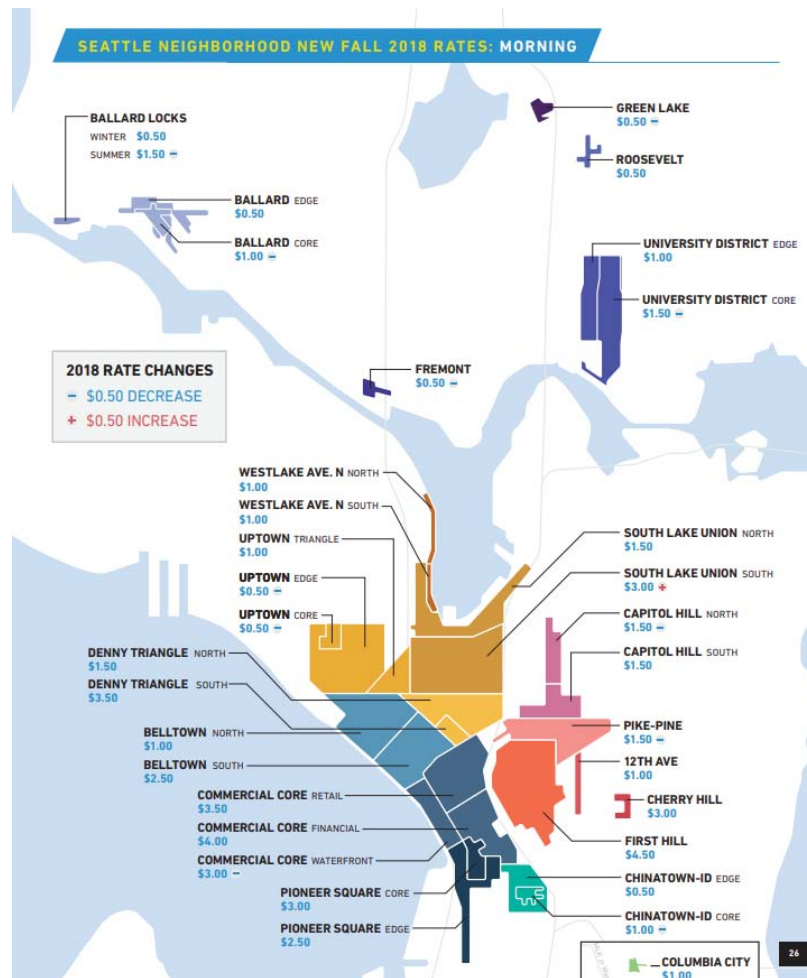
Berkeley, CA

The City of Berkeley implemented goBerkeley - a performance-based parking program in three neighborhoods in 2013. Rates and time limits are adjusted periodically to achieve 65%-85% occupancy target per block.

Through the municipal code, the City Manager is authorized to set parking rates within a Council-adopted pricing structure. The program applies to both on-street parking and public off-street facilities (Figure 2). Through this program, the City hopes to achieve less circling by drivers, more time spent by visitors at destinations, cleaner air, and safer streets.

The 2013 pilot program also implemented a suite of complementary transportation demand management (TDM) strategies, including:

- 1,000 free 6-month AC Transit passes for residents
- 1,000 free 1-year AC Transit passes for employees
- Up to 90% discounted City CarShare fees for businesses and their employees

The pilot program resulted in an overall reduction in automobile use; an increase in regular use of transit, walking, and bicycling for daily trips; and a decrease in drive alone automobile usage.

Current rates in Berkeley's actively managed parking zones range from $2.00-3.50 per hour. Colored signage identifies the Value (Green) and Premium (Blue) parking areas.[2]

City of Berkeley – Chapter 14.52.120.B

For parking meter zones set forth in Section 14.52.010(B) (goBerkeley Program Areas):

A. At single-space meters and pay-and-display stations within the goBerkeley Program parking meter zones:

1. The hourly rate may vary between $0.50 and $5.00 per hour effective FY 2017, between $0.50 and $6.00 per hour effective FY 2018, between $0.50 and $7.00 effective FY 2019, and between $0.50 and $8.00 effective FY 2020, as set by the City Manager.

2. The parking fee may be either flat rates (same rate for a specified time period e.g. 1 hour, 4 hours, all day), or may be variable rates based on time of day, length of stay, or a combination of those pricing structures, as set by the City Manager.

3. The City Manager may adjust the parking fee by increments no larger than 50 cents ($0.50) per hour.

4. The City Manager may implement special event pricing at designated times and at designated pay-and-display stations and parking meters.

5. Adjustments to the parking fee must be supported by published data on parking usage statistics with the goal of achieving 65-85% parking occupancy of spaces as calculated in the goBerkeley Program Guidelines.

6. Adjustments to the parking fee at pay-and-display stations and parking meters must be posted to the City's website no later than 30 calendar days prior to the adjustment.

7. Parking rates may be adjusted no more frequently than once per 60 calendar days.

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[2] http://www.cityofberkeley.info/Clerk/City_Council/2014/12_Dec/Documents/2014-12-16_Item_38_goBerkeley_Pilot_Program.aspx

Figure 2   goBerkeley Pricing and Time Limits
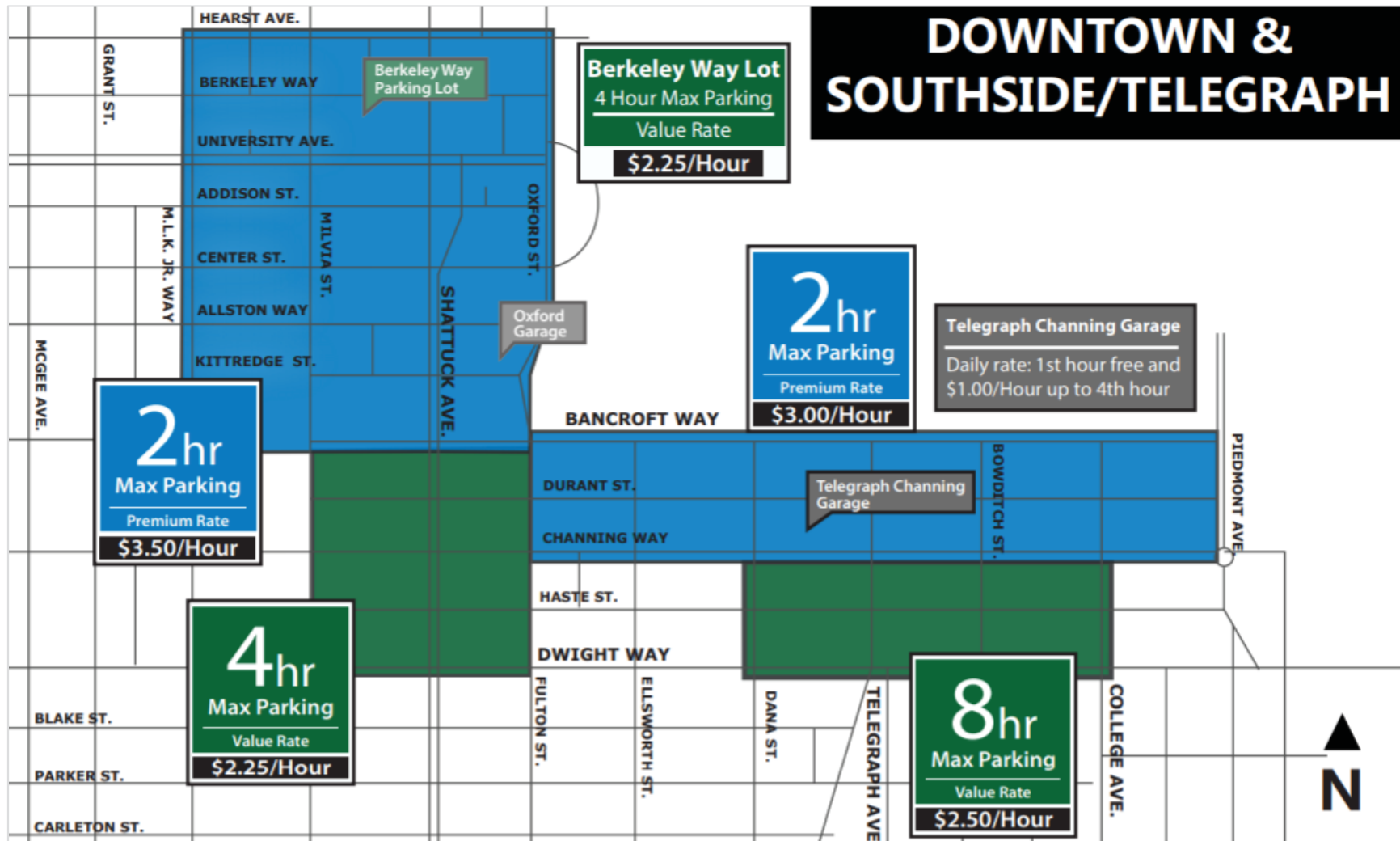
Source: www.goberkeley.info

Additional Municipal Code Examples

Walnut Creek, CA

3-5.1408 Periodic Adjustment of Downtown Parking Meter Zone Parking Meter Rates.

The City Council hereby adopts the following process for adjusting Downtown Parking Meter Zone meter rates from time to time to manage the use and occupancy of the parking spaces for the public benefit in all parking areas within the Downtown Parking Meter Zone.

- To accomplish the goal of managing the supply of parking and to make it reasonably available when and where needed, a target on-street occupancy rate of eighty-five percent (85%) is hereby established.

- At least annually and not more frequently than quarterly, the City Manager or his or her designee shall survey the average occupancy for each area in the Downtown Parking Meter Zone that has parking meters. Based on the survey results the Transportation Commission may adjust metered parking rates within the Downtown Parking Meter Zone in increments of no more than fifty cents ($0.50) per hour within the rate set forth in Section 3-5.1401(b). The City Manager or his or her designee will then adjust the rates up or down to seek to achieve the target on-street occupancy rate. The base parking meter rates, and any adjustments to those rates made pursuant to this section, will then become effective upon the programming of the parking meter for that rate and the proper posting of the rates. A current schedule of parking meter rates will be available at the City Clerk's office and on the City website. (§8, Ord. 2121, eff. 1/16/14)

Redwood City, CA

Sec. 20.133. - PERIODIC ADJUSTMENT OF DOWNTOWN METER ZONE METER RATES:

Under the authority of California Vehicle Code section 22508, the following process for adjusting Downtown Meter Zone meter rates from time to time to manage the use and occupancy of the parking spaces for the public benefit in all parking areas within the Downtown Meter Zones is hereby established.

- A. To accomplish the goal of managing the supply of parking, including the use and occupancy of parking spaces for the public benefit, and to make it reasonably available when and where needed, a target occupancy rate of eighty-five percent (85%) is hereby established as the goal sought to be achieved with the rate structure for parking meters within the Downtown Meter Zones. Such target occupancy rate balances the consistent use of the public parking supply with minimizing the time it takes for individual parkers to find a parking space. For purposes of this Section 20.133, the "two (2) representative days" shall fall on a Tuesday, Wednesday, or Thursday, and shall exclude days that fall on a holiday, experience severe weather, or host a special event within the City's downtown area. The two (2) representative days shall be taken from within a single month during one of the busiest four (4) months of the year, based on the past twelve (12) month period of parking data.

B.3 – SHARED PARKING

OVERVIEW

Shared parking is crucial to creating a vibrant, multimodal downtown. Different land uses have different peak parking demands spread across different times of the day. Allowing a daytime office building, for example, to share its parking at night with a nearby restaurant allows less parking to be built than if the restaurant had to construct its own parking. The outcome is less valuable land dedicated to parking.

The most common shared public-private parking agreements allow owners of private parking lots or garages, which often serve customers within a specific timeframe, to open their parking spaces to the general public during other times. A variety of arrangements are possible, including:

- facilities available to the public at all times
- facilities available to the public at all times, but enough capacity is reserved to ensure space for monthly permit holders
- spaces are rented to the public only when the primary tenants are not typically present
- spaces are rented to the public only on a long-term basis (e.g. month-to-month)

BENEFITS

Shared parking benefits multiple user groups, serving the parking demand for multiple land uses in a mixed-use context. Allowing less parking to be built saves $20,450 on average per space in construction costs[3]. Cheaper development costs can then facilitate lower sale or lease costs for would-be homeowners or renters. Well-crafted shared parking agreements can also allow property owners to recognize significantly more return per space on their investment, since parking revenue may be collected by, or shared with, the lot owner.

Shared parking also maximizes the value of existing parking resources, benefitting the community by providing additional parking without the city having to construct it. It reduces the supply need; reduces parking restrictions, making parking easier and less confusing for visitors; and limits pressure on on-street parking resources by making off-street options more user-friendly.

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[3] https://wginc.com/wp-content/uploads/2018/07/Parking-Construction-Cost-Article-17x11-8.5x11-Pages.pdf

IMPLEMENTATION EXAMPLES

Sacramento, CA

As California's capital, Sacramento's downtown generates heavy daytime parking demand from government and office uses. Historically, downtown Sacramento's nighttime activity was limited, but major revitalization efforts, including a new multipurpose arena, have created increased nighttime and weekend demand. Even with higher demand, thousands of spaces are often unused, especially in off-peak hours.

To facilitate ongoing revitalization and address parking challenges, the City has pushed shared parking via the municipal code and new management programs. The City has prioritized the short-term costs of shared parking to avoid significant long-term capital and operating expenses to build and operate more public parking.

A key step was an overhaul to the Sacramento's parking code in 2012, which provided the following incentives for shared parking:

- No minimum vehicle parking requirements within the downtown core
- A 25% reduction in parking requirements for joint uses
- Shared parking may count toward minimum parking requirements
- Allows Zoning Administrator to waive up to 75% of the required parking

East End Garage

The State of California owns the East End Garage. The garage was constructed in 2003 to serve a new government building; nighttime parking demand was historically low. The City of Sacramento initiated an agreement to use the East End Garage during the evenings, as demand in the area was growing due to an emerging nightlife scene.

The garage is now open to the public in the evenings (after 4 p.m.) and after 10 a.m. on the weekend. Approximately 600 of the 1,400 spaces are shared. The City pays for staffing and operations costs, and charges a flat rate of $2, or $5 for the option to pre-pay. The City is allowed to adjust the rate as needed to effectively manage the facility. The existing agreement is for two years, with two, two-year options to extend.

Sacramento has also developed shared parking agreements with private owners. The parking agreements vary from facility to facility, but they are typically "enforcement only" or full management agreements. For enforcement only, the City manages enforcement and there is no management fee or revenue sharing (all revenue is returned to the City), but the owners give right-of-entry to the City.

For full management agreements, the City manages the facility and controls revenue collection, liability (via city insurance), enforcement, and maintenance. The City will often staff a parking attendant at the lot or garage. Depending on agreement type, the City pays for the capital improvements, signage, and marketing expenses; when the lot starts being profitable, the City pays itself back. After breaking even, the profits are then shared with the facility owner (depending on the agreement).

Arlington County, VA

The private sector provides most of the public, off-street parking in Arlington County. The county had been reluctant to invest in new stand-alone public parking facilities, largely because there is already underutilized parking in most of the transit-oriented and mixed-use corridors. The County's response was to encourage and reward shared parking through the zoning code.

The Columbia Pike District form-based zoning code outlines minimum requirements for shared parking for all private development, as well as a maximum standard for parking that is reserved only for on-site uses. The code utilizes flexible maximums, allowing developers to build more parking than a hard maximum would allow, provided that the excess parking is unreserved and open to the general public.

The Columbia Pike code is largely considered a success. Redevelopment has been significant while parking supplies remain modest, yet efficiently used. Brokers now advertise the availability of public parking, as well as non-driving mobility options in the area, when leasing new development space.

The Avalon Columbia Pike and Penrose Square are two example projects that incorporated significant, public parking facilities directly in response to the flexible-maximum limit on reserved parking. The Avalon Columbia Pike project combines 269 residential units with more than 40,000 square feet of retail and includes 449 underground parking spaces. As part of the shared-parking requirements, no more than 321 parking spaces were allowed to be built and maintained as reserved parking. The remaining shared parking spaces are available for use by the general public at all times on all days. The Penrose Square is a 299-unit rental apartment building with approximately 36,000 square feet of ground floor retail, a 61,500 square foot grocery store, and a public plaza along Columbia Pike. The project is served by 713 parking spaces, including 320 public, shared parking spaces. Each project's Certificate of Occupancy required a County-approved parking management plan for all parking credited as shared/public parking.

Penrose Square (left) and Avalon Columbia Pike (right).

Source: www.penrose-square.com and www.avaloncommunities.com

Omaha, NE

Emerging technology has been one key component of Omaha's shared parking program, Park Omaha Partners. The program provides a user-friendly, online process for property owners to offer their unused spaces, at a specified schedule, to the Park Omaha public parking system through a shared parking agreement.

The process begins with the property owner completing an online application. There are three levels of Park Omaha partnership[4]:

1.) **Information only.** A partner provides information about the facility, number of spaces, and hours they would like their facility to appear in the Park Omaha database.

2.) **Event Parking.** Some partners want to work with the City's Event Parking program, which enables partners to leverage the City's phone app for customer payment.

3.) **Signage and Branding.** Full partners will brand their parking facility with the City's proprietary Park Omaha brand. The City will donate its branding assets and in some cases will invest in signage. These partners also have access to the City's phone app for customer payment.

Accepted locations are then added to the Park Omaha interactive map. An expanded map view also provides information on rates, hours of operation and payment options. Park Omaha identifies these facilities as Partner facilities, and distinguishes them from Park Omaha facilities in its maps and information materials.

[4] Information from interview with Kenneth Smith, City of Omaha Parking Division (ken.smith@cityofomaha.org).

As Partner facilities, private lots are given official (copyrighted) signage/iconography with a distinct logo that identifies them as part of the City parking system, while indicating that hours of access, rates, and other regulations may vary from standard Park Omaha facilities. The copyrighted branding helps to prevent unapproved private lots from using the same design and calling themselves Park Omaha Partners.

One of the key tools to make this work has been facilitating payment via the Park Omaha App. Partner facilities are given a unique payment-zone designation to use this mobile-payment system, allowing drivers to pay for parking exactly as they would in a City facility. Payment revenue goes directly to the facility owners, thus allowing private facility owners to monetize their excess parking without having to set up payment systems. This has been a critical component in recruiting new Partners to the program.

Source: https://parkomaha.com/

Austin, TX

While some downtown Austin employees have access to off-street parking, many do not, especially in the service and construction industries. As a result, many employees park on the street, hoping to avoid a ticket by moving their car every few hours. This creates congestion and limits on-street access for customers and visitors.

The City initiated the *Affordable Parking Program* in 2016 and expanded the program in 2018. Employees in the service industry, including musicians, business owners, and restaurant workers, are eligible for discounted monthly parking passes at a number of public and private downtown parking facilities. The program encourages efficient use of parking supplies, and helps maintain parking availability for customers of downtown businesses.

The program offers evening/night employee parking for as low as $35 per month, depending on ownership of the facility. Passes can be shared among employees, further increasing the program's affordability. Employees can usually park in the late afternoon or early evening until early morning.

Depending on the facility, the City of Austin and Premier Parking administer the application and tenant management process, along with collecting and marketing information about available spaces and garages.

As of August 2018, the program includes a total of 2,500 spaces. City staff are hopeful that the program can expand to more areas and garages to unlock spaces that are currently privately owned and underutilized. The City is also considering including daytime parking to serve more types of employees.

AFFORDABLE PARKING PROGRAM

Evening and late-night parking for Austin service and entertainment industry employees

To sign up for garages 1-4, contact Ryan Royal with the Austin Transportation Department at Ryan.Royal@AustinTexas.gov or 512.974.5161.

To sign up for garages 5-12, contact Christina Murray with Premier Parking at premieraustin@premierparking.com or 512.536.1145.

1 City Hall Garage
301 W. Second St.
$35 per pass per month
5 p.m. – 5 a.m. Mon. – Sun.
(excluding holidays and special events)

2 One Texas Center Garage
505 Barton Springs Rd.
$35 per pass per month
5 p.m. – 5 a.m. Mon. – Sun.

3 Waller Creek Center Garage
625 E. 10th St.
$35 per pass per month
6 p.m. – 5 a.m. Mon. – Sun.

4 State of Texas Garage N
300 San Antonio St.
$65 per pass per month
4 p.m. – 3 a.m. Mon. – Sun.

5 Frost Garage
401 Congress Ave.
$40 (plus tax) per pass per month

7 Littlefield Garage
508 Brazos St.
$40 (plus tax) per pass per month
3 p.m. – 7 a.m. Mon. – Fri. and all day Sat./Sun.

8 St. David's Church Garage
710 Trinity St.
$40 (plus tax) per pass per month
3 p.m. – 7 a.m. Mon. – Fri. and all day Sat./Sun.

9 300 West Sixth Garage
300 W. Sixth St.
$40 (plus tax) per pass per month
4 p.m. – 7 a.m. Mon. – Fri. and all day Sat./Sun.

10 501 Congress Garage
112 E. Fifth St.
$40 (plus tax) per pass per month
4 p.m. – 7 a.m. Mon. – Fri. and all day Sat./Sun.

11 Lavaca Plaza Garage
504 Lavaca St.
$40 (plus tax) per pass per month
4 p.m. – 7 a.m. Mon. – Fri. and all day Sat./Sun.

Source: http://www.austintexas.gov/affordableparking

C.1 – FLEXIBLE CURB SPACE

OVERVIEW

City streets perform a variety of functions. They carry transit vehicles, trucks, automobiles, bicycles, and pedestrians, and also serve social, economic, and environmental purposes. Increasingly, cities are faced with increased competition for the curb, especially as new mobility services emerge as travel options. In response, many cities are rethinking the function and purpose of curbside right-of-way to create modal or functional hierarchies that prioritize the movement and management of people and goods, rather than prioritizing parked cars.

Flex zones are the area of streets between the sidewalk and travel lanes where vehicles can park or pick up and drop off people and goods. Flex zones can also serve diverse uses such as food truck staging, outdoor seating, parking for bicycles and shared mobility devices, and temporary events. Flex zone functionality can vary geographically and temporally, based on the needs of various users, adjacent land uses, and the broader area.

Seattle, WA and Washington, DC provide examples of creating policy frameworks and implementation case studies that can inform a conversation about a curbside policy in downtown Spokane.

BENEFITS

- Better supports nearby land uses, improves street safety, and accommodates access for a greater range of users
- Better integrates new and shared mobility services – ride share, bike share, e-scooters, etc.
- Creates more active and pedestrian-friendly streetscapes
- Provides greater adaptability to changing mobility needs and varying neighborhood contexts

IMPLEMENTATION EXAMPLES

Seattle, WA

Seattle is a valuable case study in multifunctional street planning. As it has grown in recent years, Seattle has moved away from the idea of curbside spaces "for-parking-only" and towards planning for a variety of street and curbside functions. Planners now designate the function of a curb or street within its local context. For example, street and curb space priorities are set in line with distinct street typologies in an effort to both maximize mobility and support local land uses. This shift was necessary to address conflicts and competition, on the ground and in policy, for the curb in an increasingly multimodal transport system.

Planning for Streets and Flex Zones

One of Seattle's main street planning goals is to allocate space on streets to "safely and efficiently connect and move people and goods to their destinations while creating inviting spaces within the right-of-way."[5] The City views flex zones as an important tool in achieving this goal with limited street space. The City's policies on flex zones attempt to prioritize short-term and dynamic uses. Key elements include:
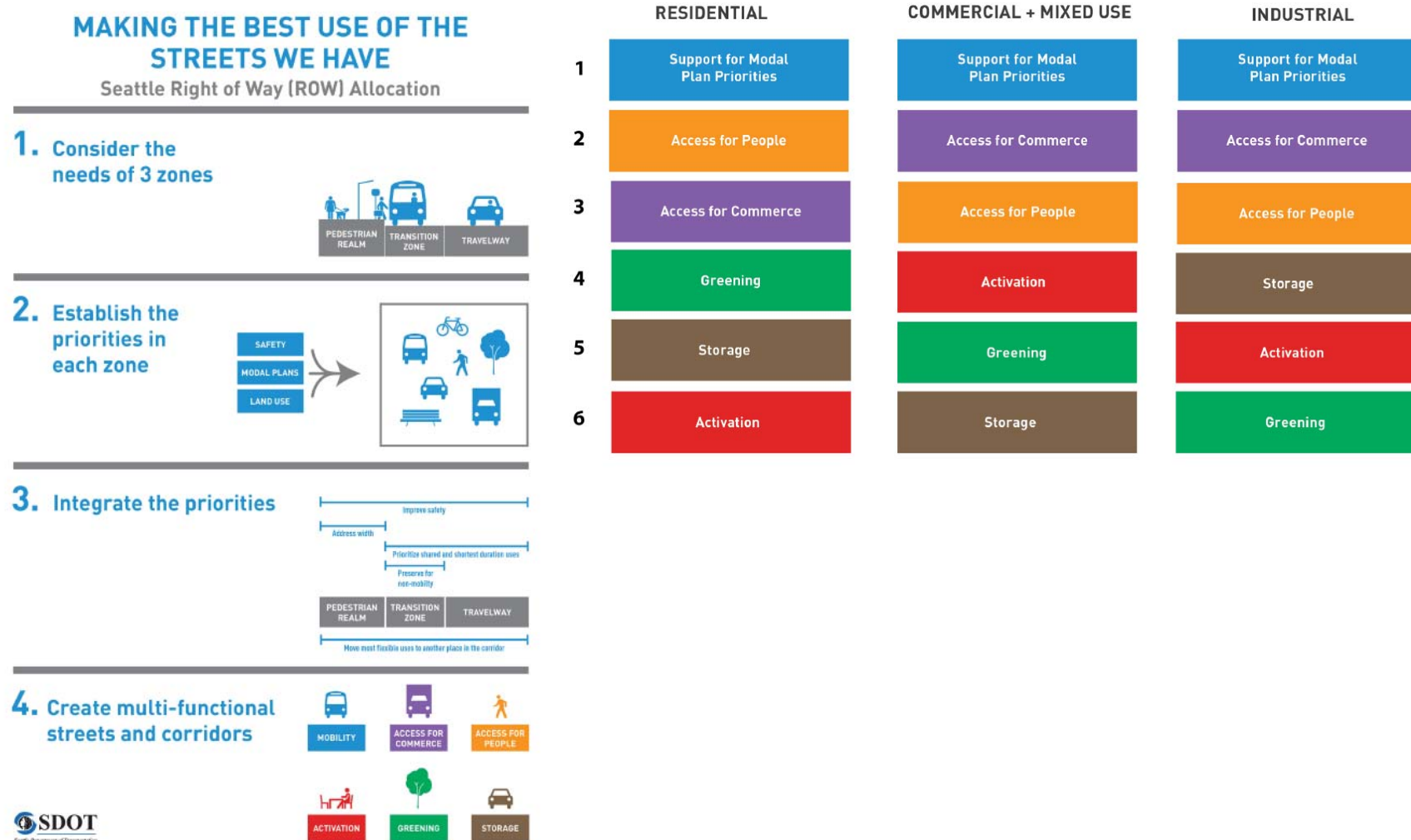
- Assess the adequacy of the pedestrian realm before allocating space to the travel way or flex zones
- Allocate flex zone space to accommodate access, greening, and activation functions except when the need to accommodate mobility is critical
- Assign space in the flex zone to support nearby land uses, support modal plan priorities, and perform multiple functions

Flex Zone Prioritization

In implementing flex zones, Seattle prioritizes certain flex zone functions based on the surrounding built environment context. For example, flex zone elements like plantings, parklets, or bike parking are more valuable in residential areas, while others, like taxi zones, public art, or short-term parking are more valuable in commercial, mixed-use, or industrial areas. Seattle's Comprehensive Plan prioritizes flex zone functions as shown in Figure 3.

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[5] https://www.seattle.gov/transportation/projects-and-programs/programs/parking-program/parking-regulations/flex-zone/curb-use-priorities-in-seattle

Figure 3   Seattle's ROW Allocation Process and Flex Zone Priorities by Area Typology

Washington, DC

Formal Curbside Space Priorities

The District Department of Transportation (DDOT) has developed a neighborhood typology to acknowledge the distinctive contexts in which competing demands for curbside space must be managed. These typologies include Downtown Core, Mixed-Use, Neighborhood Centers, and Residential/Low-Intensity districts. Within these neighborhood typologies, four basic management approaches help to set curbside use priorities that are sensitive to neighborhood context:

- Managed availability – performance-based management that prioritizes availability

- Resident priority and protection – parking for established residents

- Local amenity support – loading and deliveries are a key priority

- Equitable access – minimal restrictions or cost

Figure 4 summarizes the curbside use and parking priorities for each neighborhood context, along with possible tools for implementation.
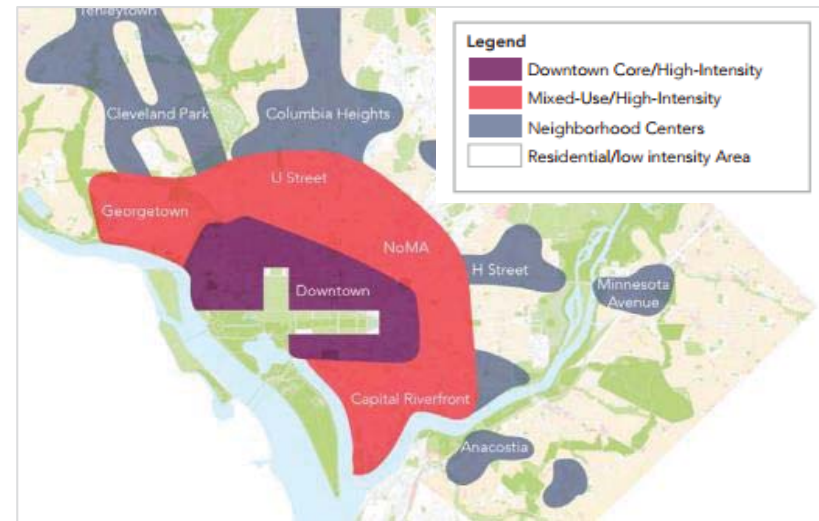
Source: DDOT

Figure 4   Matrix of Parking Approaches by Zone, with Applicable Implementation Tools

Zones	Parking Priorities				Implementation Tools to Explore
	Performance-based Management	Resident Protection	Equitable Access	Local Amenity Support	
Downtown Core/High Intensity	✔				▪ **Loading and delivery zones:** expanded or relocated loading zones; extended loading hours; metered or permit loading ▪ **Mass access:** bus zones; valet parking; travel lanes; bicycle corrals; motorcycle parking; taxi stands ▪ **Metered parking:** performance-based pricing; extended hours and days; effective occupancy monitoring; smart meters ▪ **Residential parking:** limited residential permit areas; demand-responsive pricing for permits; shorter time period options (e.g., monthly versus annual permits); newer building exclusions; smaller zones; neighborhood-based boundaries; escalating prices for multi-permit households; limited quantity of permits ▪ **Visitor parking:** per-use permits paid visitor permits and/or limited quantity; online/phone/text visitor registration; LPR enforcement
Neighborhood Centers (established)	✔			✔	▪ **Metered parking:** performance-based pricing; extended hours; effective occupancy monitoring; smart meters ▪ **Loading and delivery:** expanded or relocated loading zones; effective enforcement ▪ **Residential parking:** demand-responsive pricing; escalating prices for multi-permit households; non-resident pay to park on residential streets; newer building exclusions; smaller zones; non-political boundaries ▪ **Visitor parking:** per-use permits; limited quantity free visitor permits; online/phone/text visitor registration

Zones	Parking Priorities				Implementation Tools to Explore
	Performance-based Management	Resident Protection	Equitable Access	Local Amenity Support	
Neighborhood Centers (emerging)			✓	✓	▪ **Metered parking:** smart meters; effective occupancy monitoring; elimination of time limits; potential parking fee reductions ▪ **Loading and delivery:** enforcement for loading zones to protect availability ▪ **Residential parking:** confirmation of need for residential parking protection; monitor availability; allow non-residents to use residential curbsides for a fee if parking is tight, free 2-hour grace period if demand is low; maintain very low to no cost residential parking permits if modest demand (cost recovery only), demand-responsive if demand is high ▪ **Visitor parking:** free limited number allocation to residents; flex-pass type permits
Residential Low-Intensity (high demand)	✓	✓			▪ **Residential parking:** assessment and monitoring of curbside utilization; demand-responsive pricing for permits; escalating prices for multi-permit households; maximum permits per household; small zone size; elimination of no-pay grace period ▪ **Visitor parking:** Low cost limited number allocation to residents (print at home, register and LPR, or booklet); tracking on per use basis per household; flex-pass type permit; limited to residents and guests only
Residential Low-Intensity (low demand)		✓	✓		▪ **Residential parking:** confirmation of need for residential parking protection – if not needed, remove curbside regulations. If warranted, low permit cost (cost recovery only). ▪ **Visitor parking**: free per day permits (print at home, register and LPR, or booklet); flex-pass type permit.

Transportation Network Companies (TNC) Zones Pilot

The District Department of Transportation (DDOT) observed significant traffic congestion and conflicts with pedestrians after 10 p.m. on weekends due to transportation network companies (TNC) loading activity. TNC vehicles had difficulty finding appropriate pickup/dropoff points in high demand locations, especially where on-street parking prevents easy access to the curb.

In response, the DDOT implemented a pilot program to convert parking lanes to TNC pickup/dropoff lanes. Previously, parking restrictions ended at 10 p.m., leading to very low curbside turnover. The pilot program restricts parking from 10 p.m. to 7 a.m., Thursday through Sunday, on four key blocks near DuPont Circle, an area in which nightlife activity is prominent.

Local partnerships were key to successful implementation, with the business improvement district (BID) managing outreach to local businesses to increase support. Unlike in many retail/restaurant districts, BID stakeholders were highly supportive of the idea, since use of the free overnight parking by residents often precluded use by patrons of the many bars, restaurants, and nightclubs in the area.

New signage in the pilot area reinforces the nighttime parking restrictions.
Source: DDOT

Positive benefits so far include improved pedestrian safety, faster TNC pick up/drop off, increased customer traffic to businesses along the corridor, and favorable reactions from business owners and law enforcement. Challenges include lack of driver education and awareness, as drivers often still park illegally in the no-parking zones. The pilot was implemented in the fall of 2017, and the DDOT plans to evaluate the program after one year of operation. The DDOT intends to convene a working group to develop guidance on delineating other areas of the city for a similar program, with the goals of developing criteria for eligibility (including land use,

multimodal safety, curbside geometry, mode split, and transit availability); developing performance indicators; monitoring enforcement; and exploring a curbside access fee for TNC operators.[6,7]

Flexible Loading Zones

The DDOT announced plans to launch new flexible loading zones in five locations throughout the District in late 2018. Locations include entertainment hotspots, similar to the DuPont Circle TNC pilot described above, and include the National Zoo, areas of Georgetown, and other popular destinations.

Currently, TNC and taxi pick-up and drop-off activity commonly occurs in the travel lane, bike lanes, and crosswalk areas, with double and triple parking a frequent occurrence. Drivers of delivery vehicles also continue to double park along many major corridors in spite of increased enforcement and higher penalties for violations.

The new flex zones will allow 24-hour commercial unloading and passenger pickup and dropoff. They are intended to reduce conflict between loading activity and people in bicycle lanes, travel lanes, and crosswalks, improving safety by moving loading and unloading activities to the curb. The District will begin operating five flex zones later this year, and the DDOT has identified at least 30 additional locations for future implementation. As with the TNC zones pilot, the DDOT worked closely with business improvement districts to identify candidate sites for flex zone designation.[8]

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[6] DDOT, via https://nacto.org/wp-content/uploads/2017/12/NACTOTNCWebinarPresentation-1.pdf

[7] DDOT, via staff notes from NACTO "Curb Appeal" webinar, December 2017.

[8] https://www.washingtonpost.com/transportation/2018/10/26/uber-lyft-pick-up-zones-coming-dc/?noredirect=on&utm_term=.a85a8f66a29e

Car Share Parking

The DDOT was an early adopter of strategies to use curbside space to facilitate car sharing. In 2012, DDOT established new curbside access agreements that helped launch the first successful one-way car sharing system in a large U.S. city.

Car2Go's fleet was provided with universal exemption from curbside parking rates and time limits, in return for an annual fee paid to DDOT in compensation for meter-revenue impacts. This exemption allows District travelers to incorporate car share into their trips, paying only for driving time (though they can continue to pay the hourly rate if they want to "hold" their car while it is parked) and free from the need to return the vehicle to its original location.

Today, there are 700 vehicles with permits to use curbside parking spaces for one-way car sharing. Additionally, there are 90 on-street spaces reserved for traditional car share vehicle parking, located in both residential and commercial areas and assigned to one of the car share companies operating in the District.

Source: https://ddot.dc.gov/page/street-carsharing-program

Initially offered free of charge to support the growth of car sharing, DDOT began charging operators for the spaces in 2011.[9] DDOT's agreement with Car2Go also required the company to meet certain equity targets, so that the service remained available for people of various neighborhoods and socioeconomic backgrounds. DDOT requires Car2Go to maintain at least seven vehicles in low-income neighborhoods and at least 1% of its fleet in each of the city's Wards.

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[9] Car sharing space permits now cost $2,890 per space per year, adjusting annually for inflation.
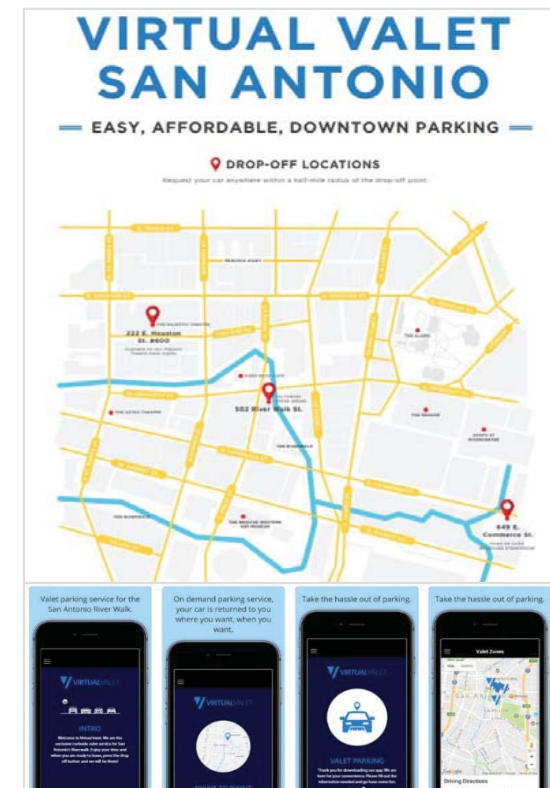
San Antonio, TX

Many cities address on-street parking availability by offering a centrally managed valet service. These services allow drivers to drop off their car at one location, shop and run errands, and then pick up their car when they are done. Key benefits include expanding curbside turnover and capacity, the potential to use underutilized privately owned parking spaces without opening them to the general public, and providing more parking options and a better parking experience for customers.

The city of San Antonio launched a public valet program in 2017, allowing drivers to drop off their vehicles at three downtown locations. Operated by a parking management contractor, the system uses a mobile phone app called Virtual Valet, which allows users to alert valet staff of their arrival, and request a pickup from a location different than the designated curbside dropoff point. Drivers may also use the service without using the app, but those drivers must return to the same dropoff point to retrieve their vehicle.

Valet employees park vehicles in city-owned facilities first, with spillover parking accommodated in several privately-owned facilities. The cost to use the service ranges from $12 to $15, of which the City receives 20% in exchange for giving the valet contractor access to city parking facilities and dedicated space at sidewalks and curb at the three pickup locations.[10]

The City also has access to user data through the contractor, which will allow valet locations to be refined over time to maximize efficiency.[11] The service may be scaled up in the future, with additional curbside points or service areas added in response to demand. The valet operates from 5 p.m. to midnight, Thursday through Saturday.

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[10] https://www.sanantonio.gov/Portals/0/Files/CCDO/ValetFAQs.pdf

[11] https://therivardreport.com/virtual-valet-to-bring-low-stress-low-cost-parking-option-to-downtown/

C.2 – PERMITS AND PROGRAMS

OVERVIEW

Permits are one of the most important tools that cities have for managing parking. Parking permits allow cities to manage on-street parking supply in areas of high parking demand, including commercial centers and dense residential neighborhoods, or residential neighborhoods subject to spillover parking. Permits may be allocated to businesses, individuals, particular types of vehicles, or residential units. The number of permits issued can be adjusted to match supply in a given area, and pricing can be actively adjusted to manage demand for permits.

Several key permit program types are highlighted below, along with critical technological solutions that simplify and streamline enforcement and administration of permit programs.

BENEFITS

- Permits can allow cities to tailor parking management solutions to the varying needs of individual neighborhoods or districts, and to expand equitable parking access within permit zones based on financial need.
- Parking permits provide a tool for actively managing curb space according to need and demand for different users, such as delivery traffic, passenger loading, or special event parking needs.
- Plate-based permit systems can improve the customer experience when applying for or renewing parking permits by using online permit portals.
- Simplifying Spokane's permit and enforcement systems will help to maximize staff efficiency and minimize abuse of existing loading and residential parking permits. Moving parking permits to a plate-based system would simplify enforcement by allowing integration with a potentially expanded pool of vehicles or mobile devices with license plate recognition (LPR) technology.

IMPLEMENTATION EXAMPLES

Portland, OR

Residential Permit Program

In addition to timed parking and metered parking, Portland uses permits as another way to manage on-street parking demand. The primary purpose of parking permits is to account for high demand of on-street parking and minimize impacts for residents and businesses. Initiated in 1981, the Area Parking Permit Program (APPP) is a direct response to local concerns about spillover parking into neighborhoods.

The APPP has evolved over the years and is applied in different ways across the city, depending on local issues and needs. The permit program establishes time limits in each permit zone to restrict commuter parking. Business owners and residents of the areas may apply for a paid permit to park on-street within the zone without adhering to the time limits. Currently there are 18 zones, primarily located in or surrounding the Central City.

Area residents and business owners must initiate the formation of a new APPP, with 50% of addresses signing a petition of support. The minimum

Northwest District Supplemental Plan

Portland's Northwest District Supplemental Plan manages permit parking in an area of high demand for both residents and employers. Annual parking permits cost $180 for both residents and businesses. Businesses may manage and distribute their passes for use by employees, clients, or suppliers of that business. Residents, businesses, and hotel or bed and breakfast proprietors who do not need an annual pass may apply for daily scratch-off permit booklets.

Residents may purchase more than one permit, but additional permits are progressively priced. Permits are based on individual driver licenses, and not addresses. Residential permits also include an income-based permit fee for low-income residents.

To reduce overall parking demand, businesses and residents can also purchase an annual "Transportation Wallet" for $99, which covers fare on Portland Streetcar, bike share rides, and $100 of public transit credit. The cost of the Wallet is offset by parking permit fees collected in the APPP across the city.

area for APPP eligibility is 40 block faces, or 8,000 linear feet of curb space. [12] Additionally, the following requirements apply when determining eligibility:

- Parking spaces are at least 75% occupied for at least four days per week and for at least nine months of the year.
- The City Traffic Engineer must determine that a permit program would increase access to residents and businesses, reduce congestion, promote the use of non-driving modes of transportation, and increase roadway safety.
- The area does not lack alternative modes of transportation, there are no available parking options that are simpler or cheaper, and there are no businesses with 50 or more employees.

Commercial Loading

Businesses with delivery and/or loading needs whose vehicles do not meet the definition of a commercial vehicle under city code are eligible for a commercial parking permit. This permit allows the vehicle to occupy any 15-minute space for up to 5 minutes, or any other metered space for up to 20 minutes without payment; vehicles may occupy truck loading zones for up to 30 minutes.

Implementing a similar commercial loading permit system in Spokane could eliminate the need for the existing Commercial Loading Zone (CLZ) permit decal system and the Special Loading Zone (SLZ) permit meter bag system, which is difficult for parking enforcement staff to track and enforce. Commercial loading permits could be license plate-based, and integrated into the LPR system so that loading zone enforcement can be easily handled by enforcement staff in real time. Such a system could be designed to consolidate SLZ permittees, such as news media vehicles, with CLZ loading permittees.

Validation Program

Downtown Portland businesses can opt in to a validation program that allows them to offer free or discounted parking at City-owned garages. Over 375 businesses participate to date. Customers can park in one of six Smart Park garages, then upon completing their transaction ask the business for a validation voucher. They then return to the parking facility, insert the voucher and their original ticket into the pay kiosks, and pay any remaining balance due after the voucher is applied. [13] The validation program encourages people to support downtown businesses while incentivizing parking in off-street facilities, leaving on-street parking spaces available for other uses.

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[12] https://www.portlandoregon.gov/citycode/article/16112
[13] https://www.portlandoregon.gov/transportation/article/401204

Seattle, WA

Commercial Loading

Seattle's Commercial Vehicle Loading Zones (CVLZs) and permits were established to provide a special parking space for service delivery vehicles. Load Zones are areas of the curb that are restricted for use by qualifying commercial vehicles, with a 30-minute limit. Commercial vehicle owners may purchase annual permits for $195, or pay by use at pay stations in lieu of permits.[14]

City code clearly defines qualifying commercial vehicles and requirements for permit issuance. The City has found that up to 40% of activity in CVLZs was by passenger vehicles, but even with these parking violations, there is additional capacity within CVLZs to allow additional delivery and loading activity, especially outside the hours of 11 a.m. to 2 p.m.[15]

Seattle's commercial loading zones and permits offer another regional alternative to the Portland example described above. Implementing this type of loading zone and permit system could also consolidate Spokane's CLZ and SLZ permits, and the associated meter bag system, and would help to concentrate loading activity in areas of highest demand. In this system, permits could also be issued and enforced by plate number.

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[14] https://www.seattle.gov/transportation/projects-and-programs/programs/parking-program/urban-goods-delivery-strategy
[15] https://www.seattle.gov/Documents/Departments/SDOT/FreightProgram/Urban_Goods_FinalCVDataCollectSumm20131210.pdf

D.2 – STAFF TRAINING AND COMMUNICATIONS

OVERVIEW

Parking staff, from managers and supervisors to enforcement and revenue collection staff, all benefit from clear, consistent communications and ongoing training. Communication may take the form of route maps for enforcement or revenue collection, daily email updates from supervisors and managers, text messages and calls to and from officers in the field, and white boards with posted messages that staff check as they begin their shifts. Appropriate communication tools may vary by the number of staff in the parking department, the shift schedules of different staff members, and the technology available to parking staff.

Training available to parking staff may come from materials developed by agency staff, or from webinars or conferences and other resources available regionally and nationally. Training should cover topics including conflict resolution, customer service, parking fundamentals, and tactical communications with the public.

BENEFITS

- Consistent communications between officers in the field and parking management staff ensure that all staff are attuned to customer service issues and areas or times of day to target for enforcement.
- Ensures that issues encountered in the field can be logged and actively managed by supervisory staff in the office.
- Staff training provides field staff with skills to deal effectively with issues that arise on daily patrols, and to serve as parking ambassadors for the city, providing an accessible public-facing education service that many city residents and visitors may not otherwise encounter.
- Training can help staff adjust to new technologies as they become available, and can ensure that enforcement staff adopt techniques for improving personal safety while patrolling in the field.
- Clear inter-departmental and inter-agency communication, including daily or weekly staff briefings, ensures that key city staff have the most up-to-date information regarding parking permit zones, price changes, parking time restrictions, meters out of service, customer satisfaction, and special events that may have significant impacts on parking supply and demand.

IMPLEMENTATION EXAMPLES

The project team researched the parking staff and operational characteristics of Vancouver, WA, Seattle, and Portland, Oregon, three regional cities that provide strong case study examples. A summary comparison of the three cities is shown in the table below. This chapter details staff and communication examples from each city, while the following chapter describes enforcement technology.

Quantity	Vancouver, WA	Seattle	Portland, OR
Number of parking enforcement staff	• Six FTE and one ½ FTE enforcement officers • One parking enforcement supervisor	• 96 enforcement officers • 12 supervisors	• Approximately 60 enforcement officers • 4 dispatcher
Number of meters/spaces patrolled	• 4,040 on-street parking spaces patrolled • 1,170 off-street spaces patrolled • 150 pay stations	• 12,000 paid on-street parking spaces • 1,600 pay stations • Residential permit parking areas throughout the city • All off-street parking privately managed	• 17,000 metered spaces • Approximately 60,000 unmetered on-street spaces patrolled • Area Parking Permit Program areas throughout the city • 1,900 pay stations
Communication technology used	• Mobile smartphones for text messages, calls, and email	• Mobile smartphones for text messages, calls, and email	• Radios for communication with dispatch officers • Mobile smartphones for calls, texts, and video communications with supervisors
Enforcement technology used	• Citations: Mobile smartphones using T2 software, connected to Bluetooth printers • LPR: None at this time.	• Citations: Mobile smartphones using gtechna software, connected to Bluetooth printers • LPR: Genetec and PIPS systems	• Citations: Schweers handhelds connected to mobile printers • LRP: None at this time; will implement in coming years
Number of LPR-equipped vehicles	• None at this time	• 5, used primarily for enforcing specific time limit zones	• None at this time

Quantity	Vancouver, WA	Seattle	Portland, OR
Payment technology	• Parkeon card and coin pay stations • Piloting pay-by-phone in select areas using Parkmobile	• Parkeon card and coin pay stations • Evaluating options for a careful rollout of pay-by-phone	• Cale card and coin pay stations for pay by plate and pay and display • Pay by phone/plate available for all metered spaces through Parking Kitty mobile application

Seattle, WA

Staffing Structure

The City of Seattle does not have a dedicated parking operations department. Parking management and operations are handled by staff in various departments, including Finance and Administrative Services, Planning, Transportation (SDOT), and the Seattle Police Department.

Parking Enforcement Officers (PEOs) are employed within the Seattle Police Department, but they are civilians rather than officers with designated police powers. PEOs work closely with SDOT staff to ensure they have the latest information regarding parking permits, special events, and other transportation issues that affect daily enforcement operations. Many PEOs also assist police officers with traffic control for sporting events or other large events, but this is done on an overtime basis only.

In addition to enforcing metered time limits and parking permit zones, PEOs are also responsible for addressing complaints from the public regarding issues such as abandoned vehicles in the right-of-way.

Communications

PEOs use handheld mobile phones for validation and enforcement, in combination with Bluetooth-connected printers for issuing citations. The mobile phones allow PEOs to be in constant communication with office staff via calls and text messages, as well as allowing constant access to email.

Calls and texts are directed to the appropriate supervisor, who can assess and prioritize incoming questions and issues from the field. PEO shifts span 18 hours per day, from 6:00 a.m. to midnight. Each supervisor manages a squad of PEOs, but supervisor shifts do not always align with PEO shifts. Because of these schedules, which overlap but do not begin and end at the same times, the parking enforcement staff rely heavily on group email communication. There is no daily or weekly all-staff briefing.

Communication from SDOT regarding updated parking regulations, zones boundaries, and permits to parking enforcement staff is particularly important since enforcement staff are not housed in the same city department as planning staff.

Training and Evaluation

Seattle staff have recently developed their own in-house training manual[16] for PEOs. New hires go through a nine-week training program that is administered by city staff, during which recruits have classroom training sessions as well as field work with current PEOs. At the end of the course, people who show aptitude for the position are assigned to a zone of the city and put in the field to work, assisted by their supervisor.

City staff are in the process of updating performance evaluation procedures for parking enforcement staff, after realizing that the standard citywide performance review was not adequately capturing the scope and duties of PEOs' daily work. The updated performance review system will incorporate feedback on, and evaluation of, basic customer service skills, application of common sense discretion to parking enforcement, fair application of the City code, and any complaints addressed to a particular individual.

Key Lessons Learned

- Seattle recognized the need to develop internal capacity and IT/data infrastructure to ensure the success of their parking program. This has included developing the analytics used to monitor and calibrate the performance-based pricing system, data storage infrastructure and back-office software and data integration to allow modern parking management operations, and IT support for these data systems.
- Modern parking operations rely heavily on high quality, live data systems. Seattle staff stressed the need to build internal capacity in data analytics and wider familiarity for all levels of staff with modern computer devices and systems in order to function smoothly.

Vancouver, WA

Staffing Structure

City of Vancouver parking staff are housed under the Community and Economic Development department. The City employs six full-time PEOs and one half-time PEO, in addition to one full-time maintenance technician, who collects meter revenue, does mapping analysis, and services meters and pay stations. Two managerial staff oversee the parking department, while several other staff provide administrative support, data analysis, and maintenance support. The parking program covers both on-street and many off-street facilities.

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[16] Seattle staff are checking to see if they can provide Spokane with a copy of their manual.

Communications

Parking enforcement staff begin their shifts at either 7:30 a.m. or 9:30 a.m. PEOs are assigned a different route each week. A dry-erase board in the office is a key method of communication – PEOs check the board for their weekly route assignments, ongoing maintenance issues that affect their routes, and other information relevant to their work in the field.

While on patrol, PEOs, managerial staff, and support staff in the office are in constant communication via a variety of methods. All PEOs carry iPhones, which serve two primary functions: enforcing pay-by-phone parking through the T2 mobile application, and for constant communication through email and group texts with other parking staff to address questions and issues that arise during the course of enforcement rounds.

Vancouver staff also build in frequent face time between supervisors and PEOs through weekly enforcement group meetings and monthly all-staff meetings. The weekly meetings cover issues such as special events that will affect parking, who is the back-up person to contact for maintenance issues, new businesses opening along the enforcement routes, and other relevant changes.

Training and Evaluation

Vancouver staff have developed a training manual[17] that covers parking zone boundaries, rule exceptions, and code language. The manual is periodically updated as rules, regulations, and boundaries change. Newly hired staff shadow a PEO currently working in the field for a week, and recruits and PEOs initial each section of the training manual as they work through it together.

Parking managers are continually looking for additional training and staff development opportunities for existing PEOs. Staff have attended the Pacific Intermountain Parking and Transportation Association (PIPTA) conference, and courses at Washington State University Vancouver, focusing on topics such as customer service and safety training.

Enforcement officers are evaluated on timeliness in their work, and the amount of time spent in the field doing active enforcement. Evaluation is ongoing, with many opportunities for one-on-one discussions regarding performance. Employees are unionized, so serious personnel issues require written documentation and must follow contract procedures.

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[17] Included in final folder of supplemental content

D.3 – ENFORCEMENT TECHNOLOGY

OVERVIEW

Enforcement technology is constantly evolving, with new and updated options for both hardware and software emerging every year. New enforcement technology can be implemented on an incremental, modular basis. For example, pay stations may be enabled for print-and-display parking passes, but can later be upgraded to a pay-by-plate system as handheld enforcement devices are integrated.

New mobile devices can enable quick and efficient citations, and can provide access to real-time data on active permits and passes. Challenges can include integrating software and hardware from multiple vendors into the ongoing operations of a parking program.

Cities across the country have outfitted various aspects of their parking programs (e.g., meters, enforcement devices, payment applications) with different software and hardware solutions from a variety of vendors. Inter-operability between vendors is key to the longevity of a given hardware or software solution, and most vendors will accommodate these issues with leadership from their client cities.

BENEFITS

- An integrated enforcement system that includes handheld devices and additional license plate recognition (LPR) systems will increase efficiency for enforcement staff and parking compliance.
- Additional LPR systems can support expanded use of digital permits and plate-based payments, including mobile and pay station payments.
- Many new technology solutions not only make enforcement simpler, but also dramatically improve the customer experience. Examples include mobile payment and pay-by-plate options.
- New technologies enable better real-time collection, management, and analysis of parking data, which is needed to support performance-based management.
- Integration of data between pay-by-phone, meters (single and multi-space), enforcement citations, and a centralized database is essential to the operation of a complex parking program. Parking operations staff must proactively manage vendor contracts to ensure inter-operability.

IMPLEMENTATION EXAMPLES

Vendor Integration

Spokane currently has a variety of vendor software and hardware solutions that comprise the external and internal infrastructure of their parking system. This is typical, as capital investments are made at a specific point in time, and cities aim to maximize the longevity of those investments. Yet, the number of vendors has caused a conflict for Spokane, which uses a Passport mobile payment system that greatly increases customer convenience, but also increases the level of effort for PEOs to validate and enforce parking payment because Passport's data is not currently integrated with the PEOs' Duncan/CivicSmart handhelds.

Other cities, including Atlanta, GA, have similar systems that rely on both Passport mobile payment and Duncan/CivicSmart meters and enforcement technology. These cities have prioritized the provision of modern handheld devices to all PEOs that allow for easy data integration between multiple sources in real time. In order to advance Spokane's parking system, an investment in enforcement technology and data integration will have to be made.

Vehicle-Mounted License Plate Recognition (LPR)

LPR parking enforcement systems replace the standard tire chalking and ticket citation process. Through a combination of image capture and GPS technology, the software records vehicle location, time/date, and license plate number. LPR systems make use of cameras mounted on a vehicle. These cameras are connected to a computer system within the vehicle. The entire mobile setup is connected to a home server located in the parking office, allowing the LPR system to make use of a live database. As the vehicle patrols the zone, the system takes photographs of the parked vehicles as well as the license plates. The system works using a time-restricted or "no permit, no park" application.

When an enforcement officer returns to a specific block for a second time, the software scans plates again, notifying the officer when it detects a vehicle that has been parked longer than the posted time limits. The officer can then make a visual confirmation that the plate matches the pictures captured by the LPR system, and issue a citation. LPR technology can also be programmed to enforce permit parking regulations, accessing a database of license plate numbers with the appropriate permit.

While the associated capital costs of an LPR system are rather high (between $35,000 and $70,000), many cities report that the increase in parking citation revenue and reduced administrative costs can cover these expenses. Costs within the range depend mainly on the capabilities of back-end office systems and staff that support the functions of LPR vehicles in the field.

Figure 5   Vehicle mounted LPR in San Francisco, CA (left) and Boulder, CO (right)

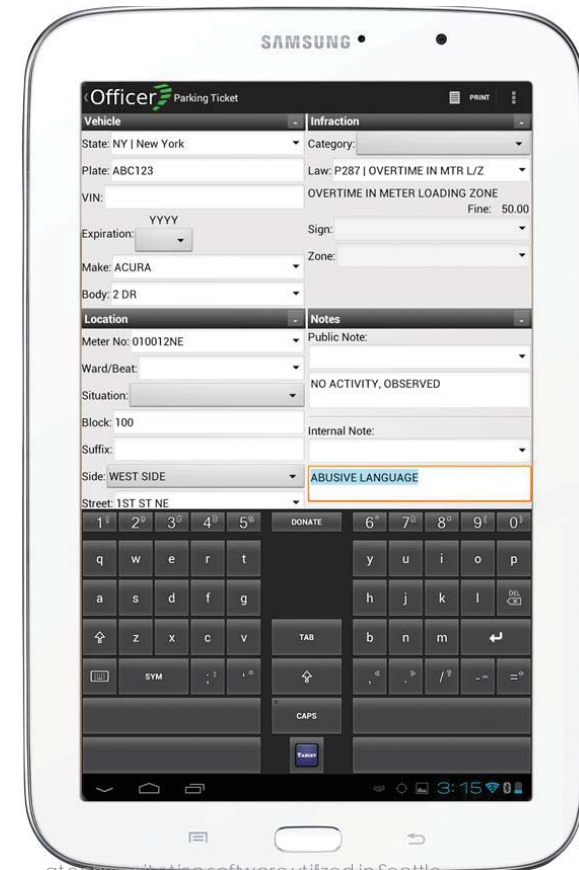Sources: Nelson\Nygaard and City of Boulder

Seattle, WA

Seattle PEOs currently use mobile phones that run gtechna citation software, which are connected to small Bluetooth printers for issuing citations. In addition to five license plate recognition (LPR) vehicles, PEOs operate three-wheel scooters and bicycles, depending on the street context and maneuverability needs.

Currently, all on-street paid parking uses printed pay-and-display tickets, which PEOs can read and check as they patrol. Seattle is also examining the operational impacts of mobile phone and pay station pay-by-plate options, which they plan to roll out soon. Careful field study with PEOs will ensure that checking handheld devices for pay-by-plate violations does not negatively affect PEOs' ability to safely operate scooters and bicycles, and does not reduce their overall efficiency.

gtechna citation software utilized in Seattle

Key Lessons Learned

Seattle was an early adopter of much of the modern parking technology in use today, rolling out solar-powered, multi-space, modem-connected pay stations in 2004. Staff shared several key lessons they have learned along the way.

- Integrating new technology has not always been as easy as vendors proposed. Seattle has dealt with many rounds of debugging, troubleshooting, and fixing when new systems are installed.

- It is critical that city staff take the lead when integrating technology from multiple vendors and systems, requiring vendors to work together to build integrated system infrastructure.

- Seattle has found that vendors can accommodate a wide range of needs and requests, as long as staff can articulate the problem to solve. For example, after installing and operating a number of Parkeon pay stations for several years, the City expanded the area that uses multi-space pay stations, but chose a different vendor for the new pay stations. After hearing that the City wanted to operate all pay stations through the same vendor system, the new vendor, IPS, offered to retrofit the existing pay station boxes with their own internal technology. This approach saved the City money in hardware installation, and allowed a smooth systemwide integration and update of software and hardware.

- It is important to select technology and integrated software/hardware systems that are already in place and functioning well in other cities. Ask vendors for specific contacts at these cities that staff can turn to for additional help beyond the individual vendor's capacity or willingness to help.

- Ensure that cell network connectivity is consistent and reliable for all handheld and mobile enforcement devices. Work with cell carriers to improve connectivity where issues arise.
- When implementing new technology solutions, ensure that vendors provide systems that are "future-proof" to the greatest extent possible. For example, do not settle for vendors insisting that you must upgrade to new modems in order for existing systems to function.

Vancouver, WA

All PEOs carry iPhones running T2 enforcement software, which are connected to Bluetooth printers for issuing citations. The T2 software has been difficult to work with, and City staff are exploring the possibility of switching to gtechna. Parking permits, both on-street and off-street, consist of window cling stickers with barcodes, which PEOs scan with their iPhones to check for compliance.

Over the past three years, the City has added 150 Parkeon pay stations, all of which use pay-and-display printed tickets. Remaining single-space meters are manufactured by Mackay, and are operated by coin only. Vancouver has recently begun a pay-by-phone pilot, which is linked to the T2 mobile software through the customers' Parkmobile mobile phone application. The City plans to expand the pay-by-phone program citywide by next year.

Portland, OR

Portland Bureau of Transportation (PBOT) employs approximately 60 parking enforcement officers (PEOs), including four dispatchers. There are 16 walking patrol officers, 16 assigned to three-wheel driving scooters, 11 who patrol on bicycles, and others who drive cars to investigate complaints regarding illegal parking, abandoned vehicles, and vehicle inspections. Two other officers manage meter collections. PBOT manages 17,000 metered parking spaces, in addition to more than 60,000 non-metered parking stalls within the right-of-way.

PEOs currently carry handheld citation devices manufactured by Schweers, which are paired with mobile printers. The handhelds run Schweers citation software. PBOT is in the process of transitioning all handhelds to new Schweers/Zebra devices, but will continue to run Schweers software when the hardware switch is complete.

An example of new Schweers/Zebra handhelds. Source: Schweers

Metered spaces are served by nearly 1,900 Cale pay stations. Portland launched the Parking Kitty mobile parking application in May of 2017. Pay-by-phone, using pay-by-plate, is available for all metered spaces in the city through Parking Kitty. For parkers without a mobile phone, pay-by-plate is available from most pay stations, with the remaining pay stations requiring non-mobile payments to use the pay-and-display ticket system. Within the next year, PBOT plans to have pay-by-plate capability at all pay

stations for all metered spaces regardless of mobile phone access. Permits for the Area Parking Permit Program (discussed above in C.2 – Permits and Programs), which currently use a permit tag affixed to the automobile window, will transition to plate-based permits within the next year.

D.4 – REVENUE COLLECTIONS AND RECONCILIATION

OVERVIEW

A number of common practices in parking revenue collections and reconciliation ensure that parking staff can focus on parking and customer service duties, while improving the safety and efficiency of the entire parking operation. In many cities, collections are not handled by parking enforcement, but by staff in other city agencies or departments, or even outsourced to firms that handle all aspects of collection and counting.

Revenue counting can also be outsourced to armored transport services or to local banks, with cities receiving daily deposits and receipts for reconciliation by city staff.

Smart locks and closed coin can systems are available to increase security for collection staff, and to improve reconciliation between meter or pay station receipts and final daily coin counts. Cities should implement the strictest controls possible on revenue collection systems, including zero tolerance for any theft.

BENEFITS

- Restructuring staff duties to shift revenue collection away from enforcement officers would increase efficiency by allowing parking enforcement officers (PEOs) to focus on enforcement, customer service, and ambassador duties, while other staff could focus on collections.
- Closed coin can systems would improve security of personnel by not exposing coin to the public or to collection staff during meter collections.
- Outsourcing coin counting and switching to daily coin room collections would eliminate risk of theft by parking staff and improve accuracy of coin counts, while allowing more frequent and potentially more accurate reconciliation with meter receipts.

IMPLEMENTATION EXAMPLES

San Francisco, CA

The San Francisco Municipal Transportation Agency (SFMTA) has a parking meter operation that includes over 25,000 single space parking meters and over 200 multi-space pay stations. Parking meter revenue accountability is a priority for the program and the SFMTA closely monitors deposits, variances, and reports. The program has extensive documentation that defines roles, responsibilities, performance standards, and troubleshooting. Annual parking meter revenues are over $50 million and the reconciliation process

identifies variances and anomalies that are investigated daily. While the program is one of the largest in the country, there are several lessons that can be learned and best practices that can be applied to a parking meter operation of any size.

Documented procedures define details from equipment that can be carried in the field, maintenance reporting requirements, collection frequency, routing, and counting and reconciliation policies. Money handling and security protocols are also clearly defined. Maintenance issues are addressed immediately by parking meter repair technicians that minimize opportune risk but also maximize revenues by ensuring that meters are available for payment during operating hours.

Collection equipment is proactively maintained to ensure that staff can be safe and efficient in the field. Personnel receive extensive training with ongoing supervisor oversight that includes random field inspections and coin room audits. Security cameras are installed and actively monitored and collection personnel can be geo-located at any time.

Seattle, WA

Personnel from Finance and Administrative Services (FAS) handle all pay station revenue collection. Parking enforcement staff are not responsible for any aspects of revenue collection, allowing them to focus on customer service and enforcement duties. All paid parking spaces in Seattle are managed though multi-space pay stations provided by the vendor IPS Group. There are no more single-space meters remaining in Seattle.

Real-time counts for each pay station are available through IPS's data management system. No routing or mapping software is used to plan collection routes; rather, collection staff plan their collection routes based on the amount of coin currently in the pay stations, while balancing pay station canister capacity with grouping collections by neighborhood wherever possible. Staff aim to collect coin canisters at around $250.

FAS has a contract with Loomis to handle counting of coin canisters. Collection staff deliver coin canisters to Loomis each day, but collection staff have no access to the contents of the cans, or the receipts showing the exact amount contained in each can at collection time. Loomis counts and submits receipts and bank deposits daily. Once per week, FAS staff reconcile these Loomis deposits and receipts with collection receipts from the IPS pay stations.[18]

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[18] Seattle staff are checking to see if they can provide example forms and documentation.

Vancouver, WA

The City of Vancouver provides an example of a mid-size city in the process of modernizing payment technology and corresponding revenue collections. One full-time technician handles revenue collections and maintenance of meters and pay stations. The technician collects closed canisters from the city's 150 pay stations, and individual closed cans from the single space meters. After collecting the closed coin containers, the technician returns to the balancing room, which is equipped with security cameras. A second staff person is required to be in the room for accountability. Here single space meter cans are consolidated into larger coin canisters using the locking system shown in Figure 6.
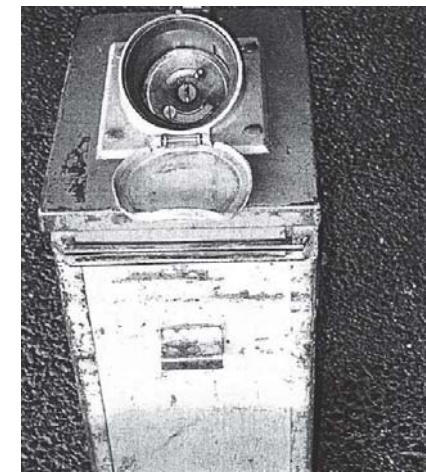
Figure 6   Single space meter closed can system
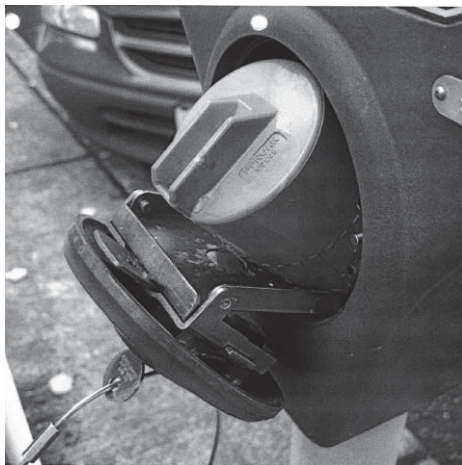
Closed coin cans are removed from single space meters.

The coin cans have a locking mechanism on the bottom that matches the receptacle on the canister.

Cans are emptied into the canister, and Loomis collects the canisters each day.

Credit all photos: City of Vancouver

Vancouver also contracts with Loomis for coin pickup and counting. Loomis staff collect coin canisters from the balancing room each day. City staff do not have access to the contents of any of the single space cans or the large coin canisters – only Loomis can open any of these coin containers. Loomis issues a collection report each day detailing the amount of coin collected from the balancing room. Parking Customer Service staff use the Loomis collection report to deposit the collections in the city's General Ledger Fund. The city's Finance Analyst compares the Loomis report with the pay station receipts from Parkeon, which show the expected amount of coin in the pay station canisters each day, then applies the funds to the city's Parking Services accounts. The Parking Supervisor then confirms that the individual collection canisters that were signed out by the parking technician and by Loomis match up with records entered into the collection calendar by the collection technician.

APPENDIX E:
FINANCIAL ANALYSIS APPENDIX
FINAL

Appendix E   Financial Analysis

ASSUMPTIONS

Figure Error! No text of specified style in document.**-1**   **Financial Assessment Assumptions**

Quantity		Value	Source
Credit Card Usage Rate (at eligible meters)		67.28%	Calculated from 2017 data
Credit Card Transaction Fee		$0.03	City of Spokane
Pay by Phone Usage Rate		9.41%	Calculated from 2017 data
Pay by Phone Transaction Fee		$0.10	City of Spokane
Elasticity of Parking Occupancy With Respect to Price		-0.3	Assumed from previous projects
Meter Compliance Rate	Existing	69.24%	Calculated to calibrate model to existing reported meter revenue
	Future	79.62%	Calculated based on 15% improvement
Meter Violation Enforcement Rate	Existing	5.56%	Calculated to calibrate model to existing reported citation revenue
	Future	6.39%	Calculated based on 15% improvement
Meter violation charge	Existing	$15.00	Existing
	Future	$30.00	Proposed to double existing rate
Meter Violation Proportion of Total Fines		18.59%	Calculated from 2017 data
Total Revenue as Proportion of Total Fines		62.70%	Calculated from 2017 data
Municipal Court Expense Proportion of Revenue		31.00%	Calculated from 2017 data
Salary Inflation		4.0%	Assumed

Quantity		Value	Source
Default Cost Inflation		3.0%	Assumed
Debt Service Inflation		0.6%	Calculated from 2017-2019 budget
Administration/Planning Employees	Salary	$74,983	Averaged from existing salaries
	Benefits	$26,633	
	Total	$101,616	
Enforcement Employees	Salary	$59,781	
	Benefits	$22,647	
	Total	$82,704	
Parking Meter (Duncan Liberty) Unit Cost		$475	City of Spokane
Parking Kiosk (EV02 Strada Rapide) Unit Cost		$6,250	City of Spokane
LPR Vehicle		$19,411	City of Spokane
Enforcement Vehicle		$24,657	City of Spokane
Wayfinding Cost per City Block		$20,000	From Ventura, CA wayfinding implementation
Shared Parking Program Cost per Lot/Garage		$10,000	Assumed half as expensive as full city block of wayfinding implementation