



DOWN **AUSTIN TOWN** **PARKING STRATEGY**

FINAL REPORT

DOWN
AUSTIN TOWN
ALLIANCE

ACKNOWLEDGEMENTS

PROJECT STEERING COMMITTEE

Charles Heimsath, Chair, Downtown Austin Alliance Board
Annick Beaudet, Austin Transportation Department
Greg Canally, Austin Financial Services Department
John-Michael Cortez, Office of Mayor Adler
Steven Halpin, Texas Facilities Commission
Jerry Frey, Downtown Austin Alliance Board
Steve Grassfield, Austin Parking Enterprise
Brian Grieg, Headliners Club of Austin Board
Todd Hemingson, Capital Metro
Tim Hendricks, Downtown Austin Alliance Board
Jeff Howard, Downtown Austin Alliance Board
Cole Kitten, Austin Transportation Department
Chi Lee, Gensler
Steve Oliver, Chair, Planning Commission
Jason Redfern, Austin Parking Enterprise
Martin Zamzow, Office of Travis County Commissioner Daugherty

DOWNTOWN AUSTIN ALLIANCE STAFF

Dewitt M. Peart
Melissa Barry, Project Manager
Molly Alexander
John Kennedy
Jenell Moffett

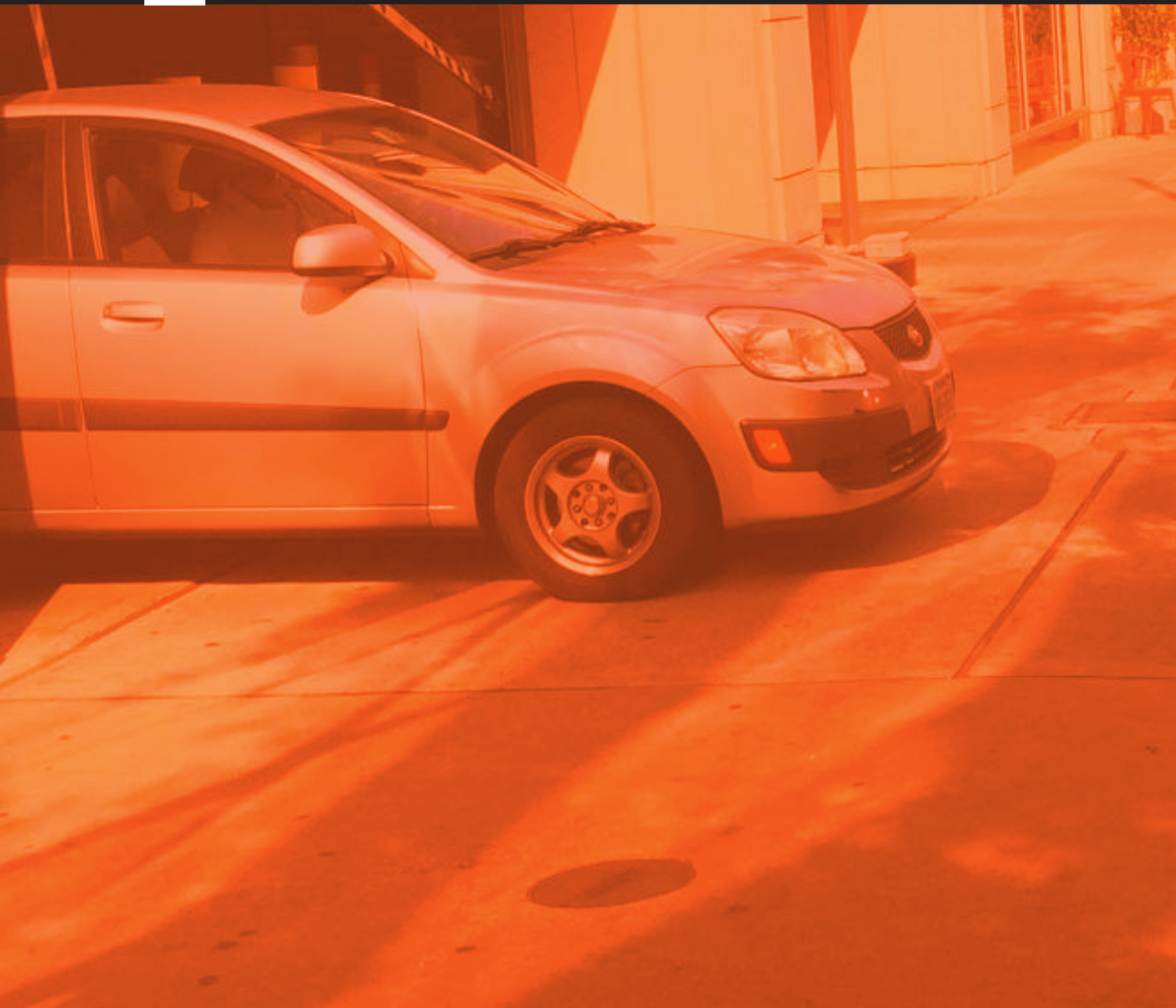
CONSULTANT TEAM

Nelson\Nygaard Consulting Associates
Asakura Robinson Company
DIXON Resources Unlimited
McCann Adams Studio

For more project information, go to
www.downtownaustin.com

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PARKING IN DOWNTOWN AUSTIN

Downtown Austin is a vibrant and growing place. Its unique culture and destinations attract an increasingly diverse set of residents, employers, workers, and visitors. With growth and change come new and difficult challenges.

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Large sites are quickly disappearing with development of new mixed-use districts and master plans. Future development will occur on smaller sites, which are more constrained physically and financially. Rapid growth has exacerbated housing affordability and equity challenges. The day-to-day experience of parking has also emerged as a defining issue, with many different uses competing for parking throughout the day.

Through its past planning efforts, Austin has established an ambitious vision for its downtown. The future of Downtown Austin is a multimodal one that seeks to provide more transportation choice by making it as easy as possible not to drive. Austin's ability to achieve that vision will be determined by many factors, but parking is central to the final outcome.

The Downtown Austin Alliance initiated this study to tackle the issue of parking head-on, as the status quo is no longer working. Austin needs a new parking approach if downtown is going to achieve its larger goals. The Downtown Austin Alliance led this study to help reframe parking not as the end itself, but as a means to an end. A new and comprehensive approach to parking is crucial to helping downtown:

- **Continue to grow.** Right-sizing parking supply through new policies will allow Austin to add more mixed-use development despite increasingly constrained parcels.
- **Ensure economic vitality.** Improved management can ensure parking provides consistent access to existing and future businesses.
- **Reduce congestion.** Congestion is a threat to downtown's success. Efficient parking management can help to support reduced reliance on single-occupancy vehicle trips.
- **Attract new employers.** More and more businesses want to call Austin home. Convenient parking, supported by transit, biking, and walking infrastructure and programs, will help attract the best and brightest.
- **Address housing affordability.** Parking increases housing costs. Providing the right amount of parking, and managing it effectively, can help Austin provide more housing choice and improve affordability.

- **Reduce transportation inequities.** Many cannot afford to own a car or park downtown. Improved parking choices tied to additional multimodal investments can strengthen job opportunities for all.
- **Prepare for emerging mobility trends.** New technology will affect parking demand and transportation systems, yet no one knows exactly to what degree or when. A dynamic and flexible parking system will allow Austin to respond in the most cost-effective manner.

A NEW ERA FOR DOWNTOWN PARKING

This study utilized a data-driven process to move past perceptions of parking and conclusively document key challenges. For the first time, Austin has an inventory of its downtown parking assets and an informed understanding of parking regulations and level of parking demand. This data, combined with comprehensive stakeholder outreach, informed the development of a detailed package of recommendations to improve parking in downtown.

The recommendations in this Plan represent a new era for parking in downtown. Adding more parking lots and garages can no longer be the only answer. Solving Austin's systemic management challenges in the face of rapid growth requires a multi-faceted set of solutions. This Plan also recognizes that the time for action is now. The Plan provides an implementation plan that sets downtown stakeholders up for immediate progress and long-term success.

The Downtown Austin Alliance initiated this study to tackle the issue of parking head-on... Austin needs a new parking approach if downtown is going to achieve its larger goals.



In the end, Downtown Austin will achieve parking success if its stakeholders can continually remember and emphasize the following key concepts.

- **Change is difficult, but necessary.**
The Plan offers new approaches to downtown parking. Austin's parking issues are profound, and require disruption of the status quo.
- **Focus on availability, not revenue.**
Performance-based management that prioritizes consistently available parking spaces will create a user-friendly and convenient experience. Revenue is needed but is not the focus.
- **Data, data, data.** Consistent and clear data should drive parking management policies and decisions.
- **The recommendations represent a package of necessary reforms.** There is no "silver bullet." Implementation of one or two items alone will not solve Austin's parking management challenges.
- **Sharing is essential.** Existing private parking is underutilized. Sharing should not be forced, but well-crafted shared parking agreements and incentives can improve return on investment and dramatically improve the efficiency of the system.
- **Implementation requires partnership.** No one person, organization, or agency can solve it all. The public and private sector must leverage each other to overcome systemic problems.

- **Austin cannot solve its parking problems overnight.** Implementation will take ongoing planning and consensus building over the coming months and years.
- **Immediate improvement is possible.** Certain actions should be prioritized to secure "easy wins" and tangible success that will allow stakeholders to build further support.
- **Communication is vital.** Ongoing communication of the Plan's rationale and benefits will be crucial to securing community support.

OVERVIEW OF PLAN

Chapter 2 summarizes the **project approach**, including an overview of the goals and objectives, steering committee, community outreach program, and project timeline.

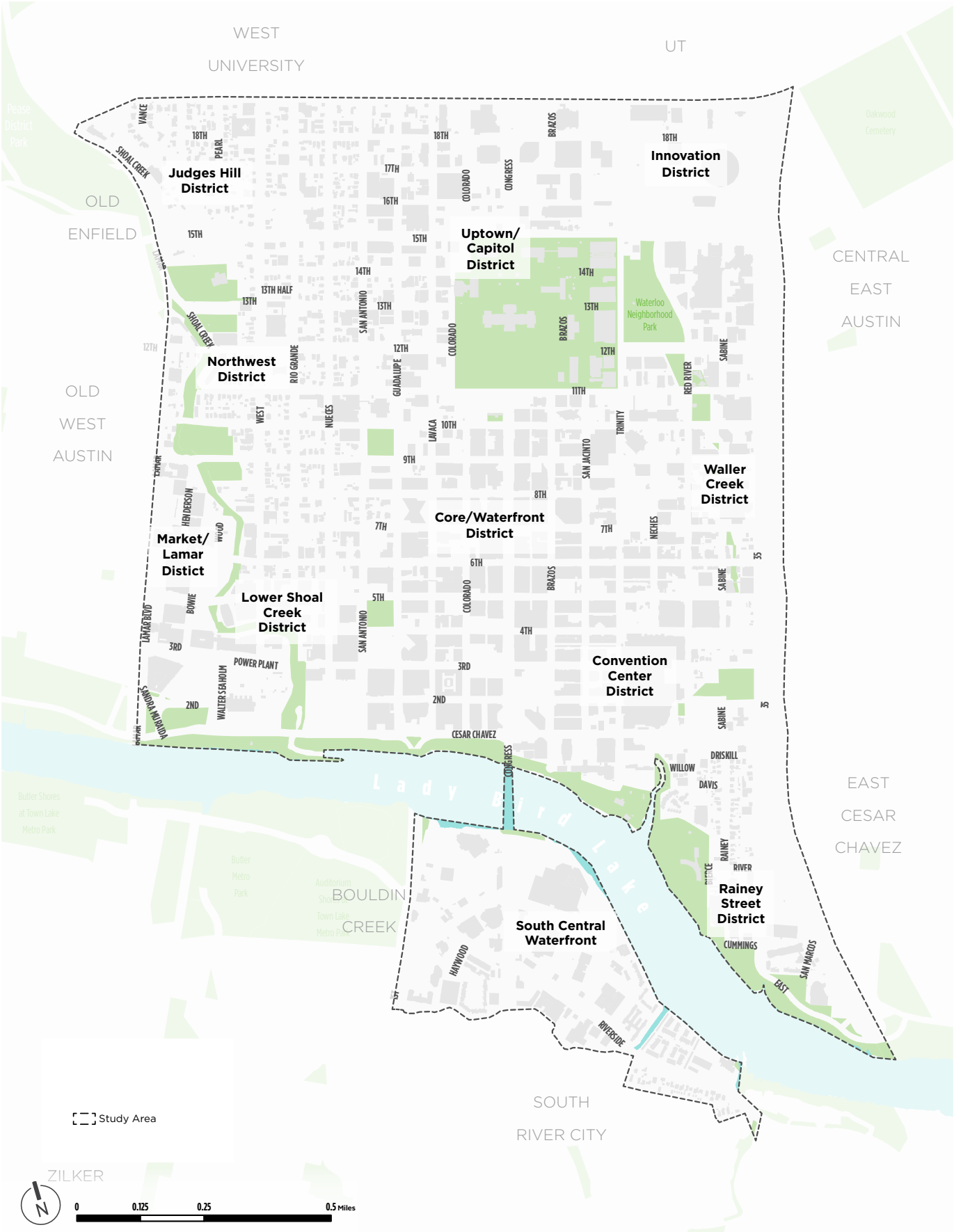
Chapter 3 summarizes the key findings from the **existing conditions analysis**, including data related to parking inventory, occupancy, regulations, and existing management practices. The Briefing Book provides additional detail on the study.

Chapter 4 describes the **parking demand analysis** conducted to understand the impact of future growth in downtown on parking.

Chapter 5 describes the **19 recommendations** developed to improve parking in downtown. The recommendations are organized by six strategy buckets.

Chapter 6 outlines the **implementation plan**, with a focus on a Priority Action Plan that describes immediate steps to generate momentum for the recommendations.

FIGURE 1
Project Study Area



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PROJECT APPROACH

The Downtown Austin Parking Strategy is a data-driven effort to develop a comprehensive parking management plan, guided by clear goals and objectives for Austin's future.

The Project Steering Committee and consultant team developed goals and objectives early on that guided the study and its processes throughout, and established a foundation for future parking management in downtown. The goals articulate a future vision in which Austin's parking system is:

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Supportive, fostering broader community goals identified through ongoing and previous planning processes



Multimodal, recognizing that parking is one element of an accessible downtown



Available, managing parking to ensure a consistent parking experience



Cost-effective, maximizing existing parking and making fiscally sustainable investments



User-friendly, prioritizing customer convenience and ease of use



Adaptable, facilitating ongoing improvements as the downtown evolves

GOAL	OBJECTIVE
SUPPORTIVE	Develop and foster a parking system that supports Austin's larger vision for a thriving downtown that enhances quality of life for residents, visitors, businesses, and employees.
	Use parking policy and management to achieve a balance of larger objectives: <ul style="list-style-type: none"> o Retain the positive qualities of downtown's vibrant and unique culture o Support the tourist industry, entertainment venues, and major events o Support existing retail and the eclectic mix of local stores o Attract new and diverse retail and businesses to Downtown Austin o Accommodate existing and future office, retail, commercial, and housing development
	Develop and foster a parking system that supports the many ongoing and future planning efforts across downtown's diverse districts, neighborhoods, and communities.
	Develop and foster a parking system that supports existing land uses and unlocks downtown's development potential.
MULTIMODAL	Recognize that some people will need a place to park downtown and that a well-managed parking experience is fundamental to downtown's ongoing success.
	Develop and manage parking as one element of Austin's efforts to improve overall downtown mobility and access.
	Develop and manage parking as a means to reduce congestion from single-occupant vehicle trips.
AVAILABLE	Manage parking with the primary goal of consistent and equitable on- and off-street availability.
	Utilize policies and management tools to achieve a target availability rate.
COST-EFFECTIVE	Maximize use of existing parking.
	Share public and private parking to the greatest extent possible.
	Add new parking supply in the most strategic and cost-effective manner possible.
	Right-size the parking code to ensure adequate parking, and development flexibility.
	Use parking revenue to support the citywide parking system and overall mobility improvements.
USER-FRIENDLY	Prioritize a convenient parking system that is seamless to navigate and easy to understand for all users.
	Clearly communicate and promote information about parking options, programs, and improvements.
	Utilize technology strategically to communicate travel and parking information across multiple platforms.
	It is easy to park once and walk, bike, take transit, or share rides to multiple destinations.
	Ensure that the parking experience is safe and comfortable.
	Enforce parking rules and regulations fairly and consistently.
ADAPTABLE	Clearly define roles and responsibilities, and empower staff through policy, tools, and data to effectively implement, operate, and manage the parking system.
	Utilize new technology platforms to operate and manage the system through streamlined data collection and processing.
	Use data consistently to inform decision making, enhance community understanding, guide system investments, and inform program adjustments.
	Position downtown to effectively respond to changes in parking behavior from improved mobility options, autonomous vehicles, and the sharing economy.



The multi-faceted project approach built around these goals and objectives included:

- **Detailed review of past, recent, and ongoing plans** to establish an understanding of the issues and opportunities.
- Numerous **stakeholder interviews, three community workshops** (May 2016, November 2016, and April 2017), and an online survey to solicit feedback on key parking challenges and desired areas of improvement. Engaging with the community allowed the project team to get the “story behind the story” of parking in Austin.
- Creating a **baseline of the current state of on-street, off-street, public and private parking assets**. This analysis included:
 - A comprehensive parking inventory, based on a combination of existing data, stakeholder input, and field surveys.
 - Parking utilization analysis using a sample of public and private on- and off-street parking through stakeholder surveys, existing data sets, and field visits.
- Sketch modeling analysis of downtown’s **future growth** and how this growth is shaped by parking demand and supply. The demand analysis allowed the team to identify where and how new parking supply should be prioritized in support of enhanced on-the-ground management.
- Development of a coordinated strategy of management, policy, and new supply recommendations **to improve the downtown parking system**, further informed by a best practices review.
- Multiple **Steering Committee meetings** to review project outcomes at key points throughout the study.

The study team documented the details of each stage in a series of reports and technical memoranda. The Briefing Book, released in the fall of 2016, provides a detailed summary of existing conditions, issues, and opportunities.

Project Steering Committee

The Downtown Austin Parking Strategy is guided by a diverse Steering Committee, including representatives from both the public and private sector. Members include:

Charles Heimsath, Chair, Downtown Austin Alliance Board

Annick Beaudet, Austin Transportation Department

Greg Canally, Austin Financial Services Department

John-Michael Cortez, Office of Mayor Adler

Steven Halpin, Texas Facilities Commission

Jerry Frey, Downtown Austin Alliance Board

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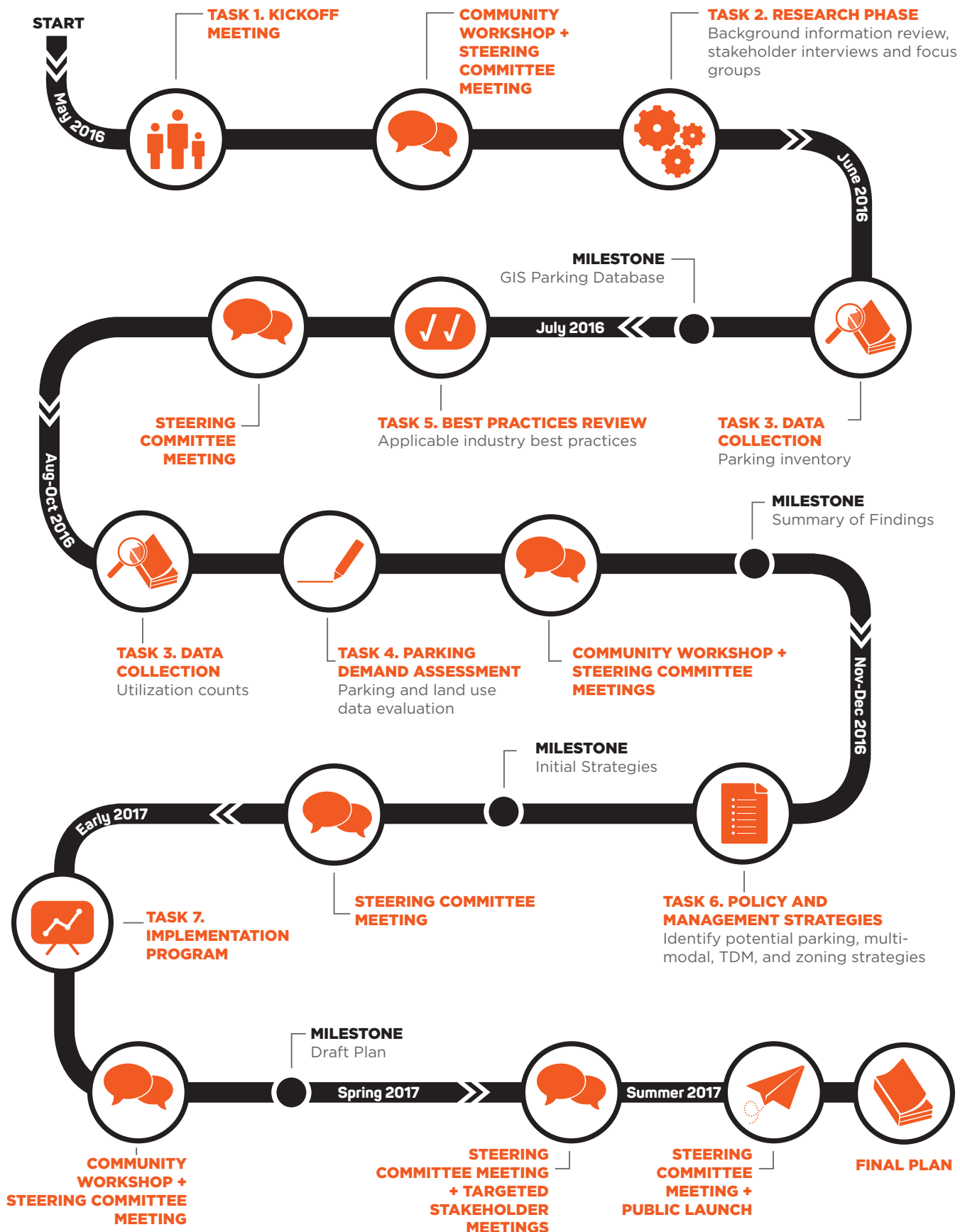


Community Outreach

This study included a comprehensive outreach program designed to be robust, inclusive, and innovative. The input was used to confirm and refine a cohesive project vision, as well as guide the development of final recommendations. The major components of the outreach plan included:

- Project Steering Committee
- Project website
- Downtown Austin Alliance newsletters
- Media advisories and press releases
- Online community survey
- Three community workshops
- Stakeholder interviews with local and regional agencies, property owners, developers, and other community groups
- Presentations to elected bodies

PROJECT TIMELINE & KEY MILESTONES



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SUMMARY OF KEY FINDINGS

The Downtown Austin Parking Strategy is a comprehensive effort to document the current parking system and parking behavior, solicit feedback from the community, and examine expected future parking needs based on Austin's rapid growth.

To establish an understanding of the issues and opportunities, the project team conducted a detailed review of past, recent, and ongoing plans. In addition, the project team conducted numerous stakeholder interviews, held a community workshop, and created an online survey to solicit feedback on key parking challenges and desired areas of improvement.

A major step was creating a baseline of the current state of on-street, off-street, public and private parking assets. This analysis included a study of existing data, stakeholder input, and field surveys. The project team also collected occupancy data for select public and private on- and off-street parking through stakeholder surveys, existing data sets, and field visits.

The project Briefing Book documents these findings in detail, including stakeholder interviews, community feedback, data analysis, and documentation of key issues and challenges. It is available at www.downtownaustin.com.

The information here and in the Briefing Book establishes a shared understanding of what works well and what can be improved in regard to parking. It allowed for a robust and productive discussion of potential improvements and set the framework for the recommendations and strategies that came out of this project.

HOW MANY PARKING SPACES ARE IN DOWNTOWN?

There are an estimated 71,504 total parking spaces within the Downtown Austin study area. This number includes public, private, on-, and off-street parking. It does not include parking spaces associated with single-family driveways or garages.

In Downtown, there are:

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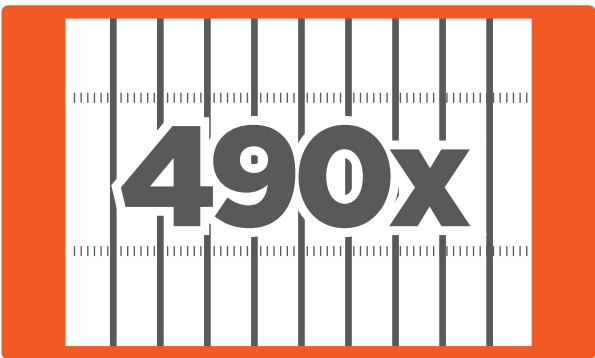
OFF-STREET SPACES

65,099

ON-STREET SPACES

6,405

This is the equivalent of 650 acres, or about 490 football fields



KEY CONCEPT

DEFINITIONS OF TERMS

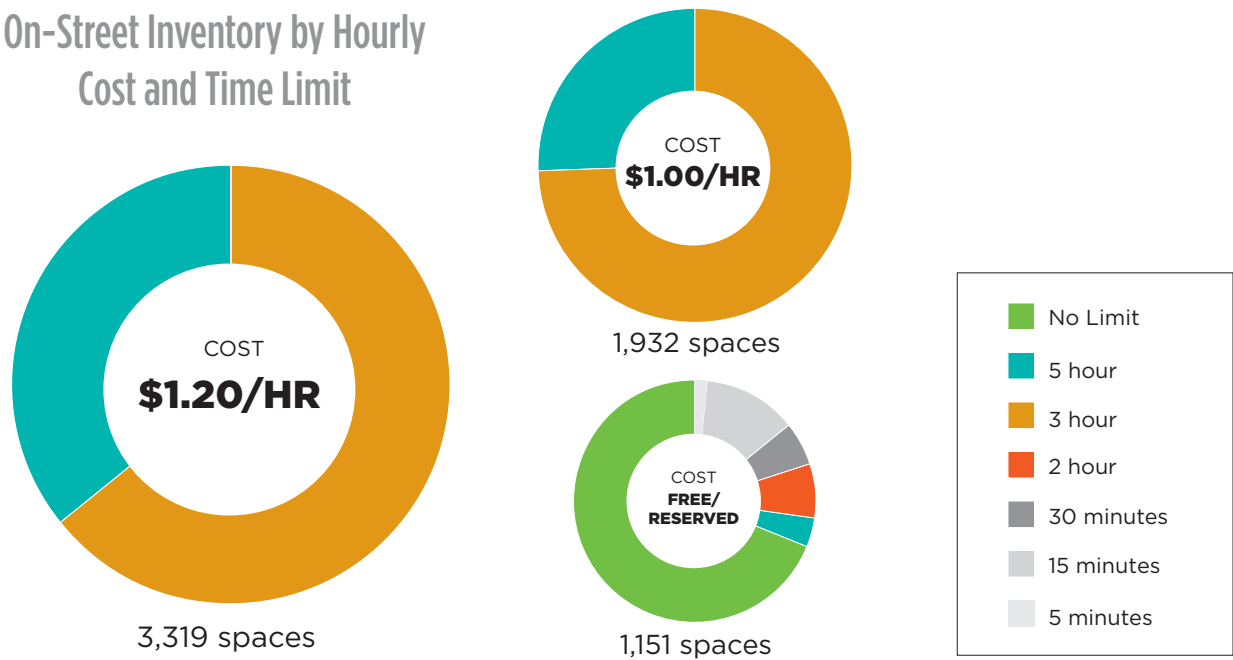
- **Public:** Facility is predominantly available to any member of the general public who wishes to park.
- **Restricted:** Facility is predominantly restricted to residents, employees, and customers only.
- **Varied:** Facility is either mostly split between public and restricted spaces, or availability changes depending on the time of day.

Availability	# of Spaces*	% of Off-street Spaces
Public	26,830	43%
Restricted	15,478	25%
Varied	20,497	33%
Total	62,805	100%

*Includes only facilities with 25+ spaces

OF THE 6,405 ON-STREET PARKING SPACES IN DOWNTOWN AUSTIN, 82% ARE METERED. THE MOST EXPENSIVE PAID PARKING ON-STREET IS \$1.20/HOUR.

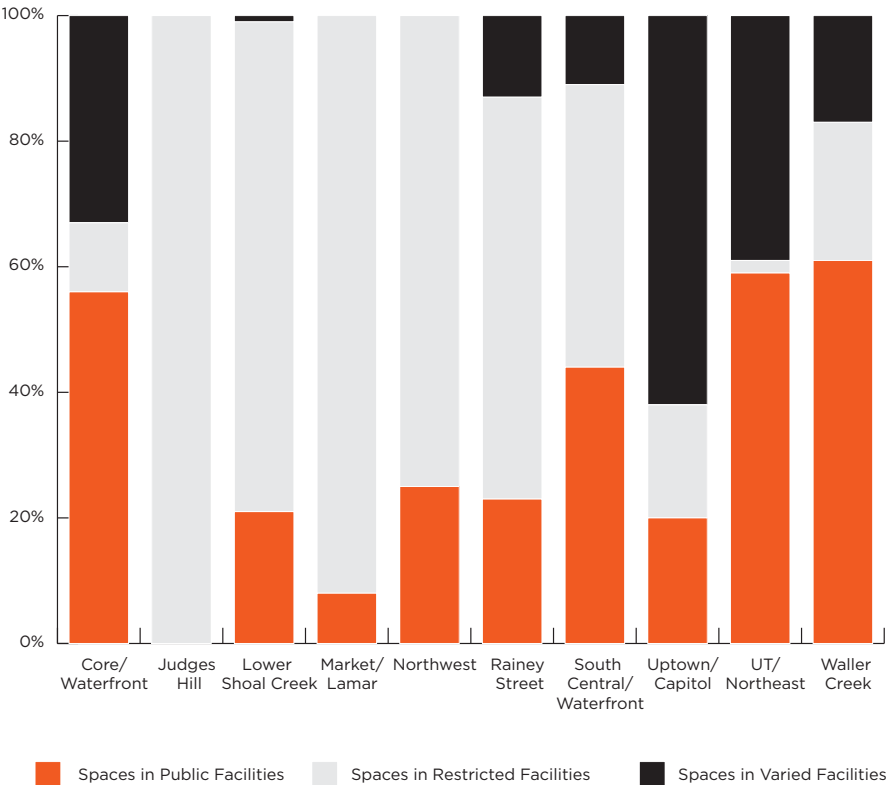
On-Street Inventory by Hourly Cost and Time Limit



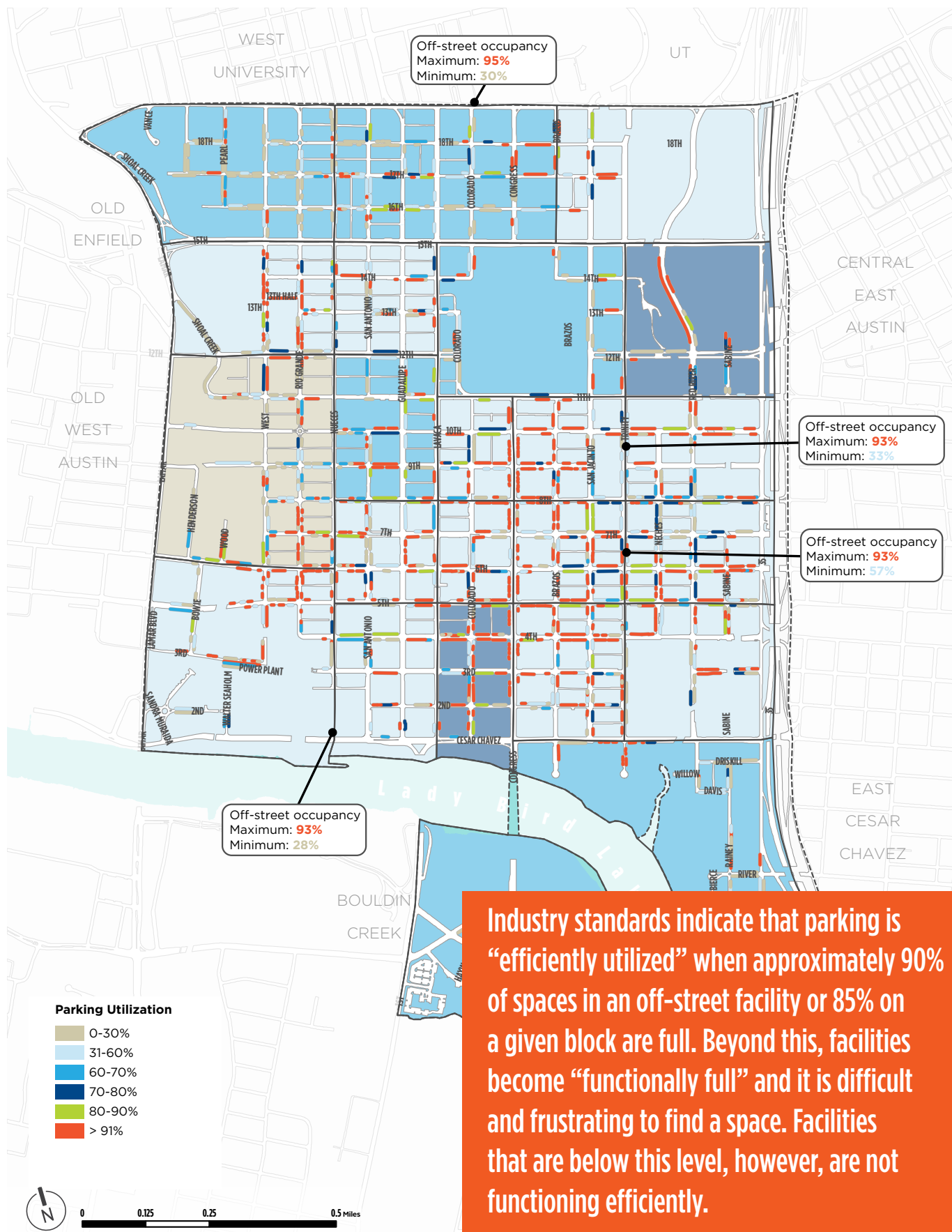
Of the 62,805 off-street spaces, 43% are available to the general public at all times, while 25% are restricted to employees, residents, and visitors of the building served by the parking facility. The remaining 33% of spaces have varied availability within the facility and by the time of day. For example, a garage exclusive to employees during the daytime opens up to the general public at night, charging a flat fee.

Northwest, Lower Shoal Creek, Judges Hill, Rainey Street, and Uptown/Capitol each have less than 30% of their spaces always open to the public.

Type of Parking Space as Percentage of Total Available



Parking Utilization (Wednesday Mid-Day)

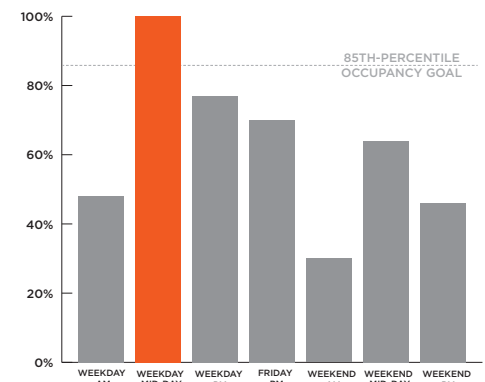


WHERE IS THERE A PARKING PROBLEM?

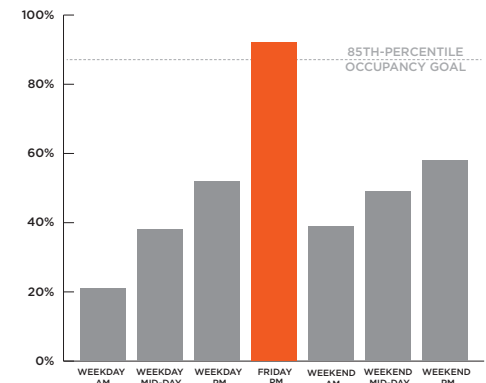
There are many situations, depending on the time, day, location, and user group, in **which parking is very difficult to find**. The challenge of finding a parking spot, is particularly evident:

- On Congress Avenue, where on-street parking is full during the weekday midday and very high most other times.
- On blocks in popular nightlife locations throughout evenings and afternoons, including West 6th Street East 6th Street, and Sabine Street.
- In the Core/Waterfront district for:
 - All parking for hotel/tourism land uses on weekend evenings.
 - All parking restricted for employees working in commercial and government land uses on weekday middays.
 - All publicly available parking for institutional and government land uses on weekday middays.
- All publicly available parking in the Rainey Street District on Friday evenings.
- Throughout the Lower Shoal Creek area, but particularly during the evenings.
- All privately owned and publicly available parking in the Waller Creek District on weekday mornings, weekday middays, weekend mornings, and weekend middays.

West 6th Street

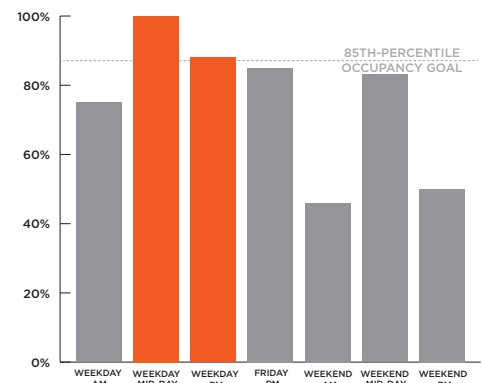


All Parking Rainey Street District—Publicly Available to All



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On-Street Congress Avenue from River to 10th



HOW IS DOWNTOWN PARKING MANAGED AND OPERATED?

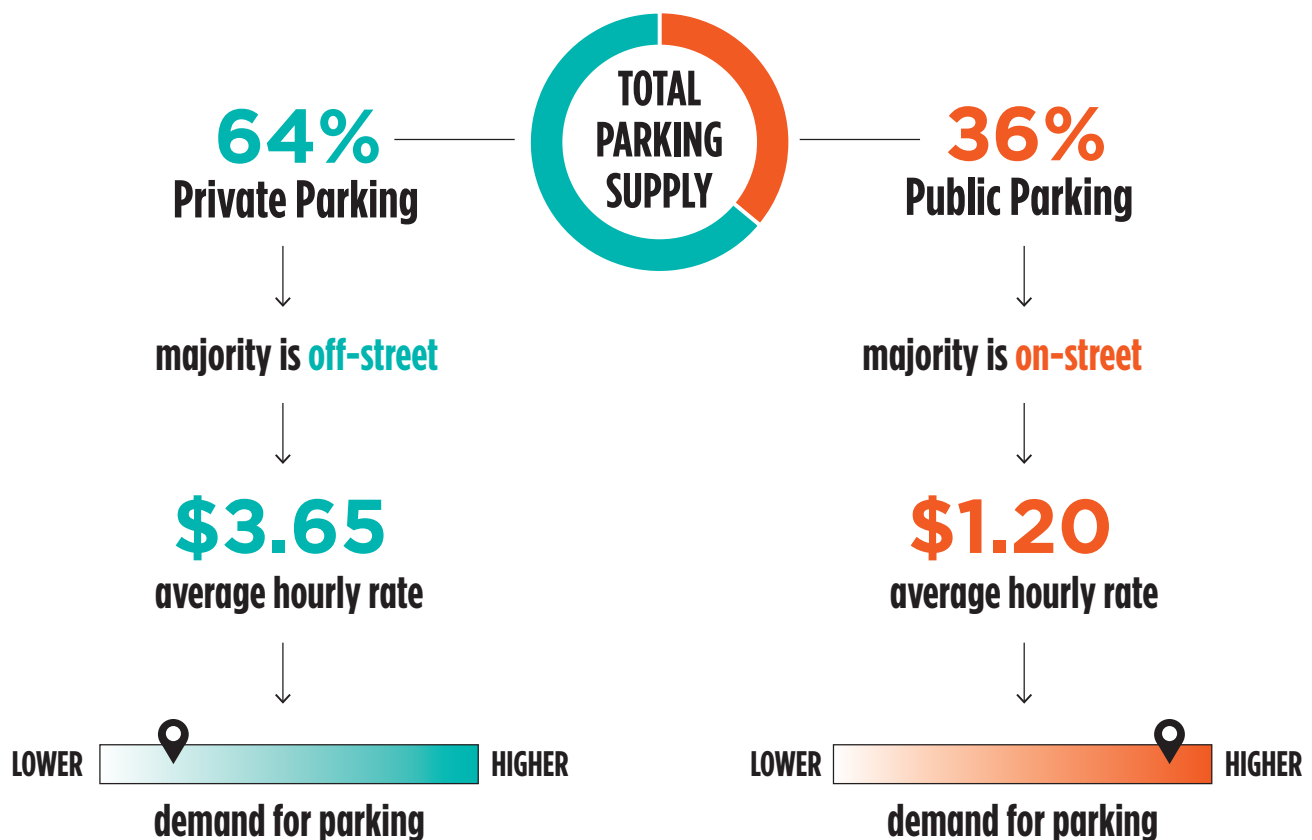
The City of Austin owns and/or controls very little—about 14%—of the overall parking supply in downtown. Most of this parking is on the street and costs up to \$1.20 an hour. These prices are extremely cheap compared to most off-street parking, costing an average of \$3.65* per hour. The much lower prices for public on-street parking make demand for these spaces much higher than for private off-street parking spaces, which account for 64% of the total parking supply. The fragmented ownership of the parking supply has also led to a scenario where the highest parking demand is for the fewest available spaces, drivers are confused about their parking options, and a substantial share of existing parking is not efficiently used.



KEY CONCEPT

TIME LIMITS, while meant to encourage turnover, also effectively tell customers and visitors that they have to leave. Austin's current 3-hour time limit in many areas prevents visitors from spending extra time and money downtown. Pricing spaces appropriately to their value instead allows people to buy exactly the amount and type of parking time that they need while still encouraging availability.

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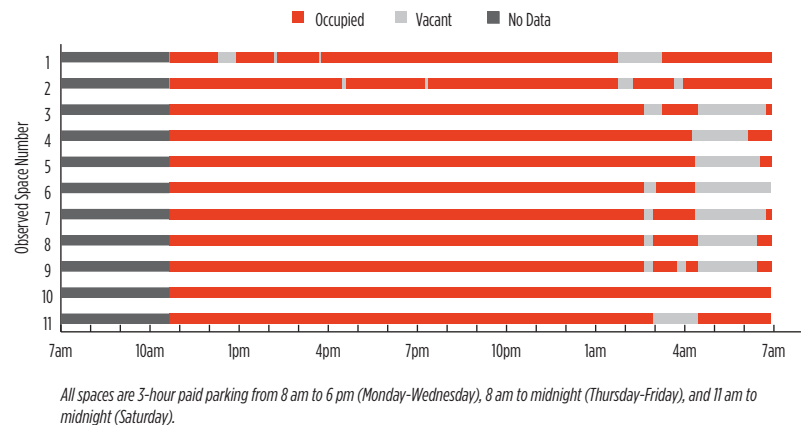


*Any facilities charging only flat fees had their highest flat fee divided by 8. The average flat fee charged is approximately \$10. If one only looks at the average hourly rate for facilities that charge by increments of an hour or smaller, the average rate is \$6 per hour. Approximately half of all private facilities charge a flat fee at all times parking is available to the public.

HOW LONG DO PEOPLE PARK AT THE CURB?

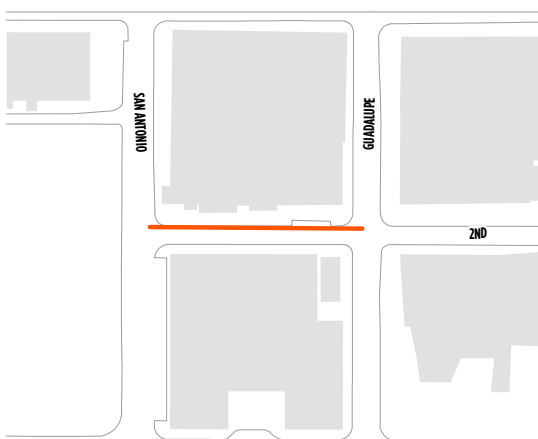
Many of the on-street spaces in the study area have a time limit, in addition to an hourly price. Time limits are designed to ensure that the most convenient on-street spaces are available for shorter trips. Time limits, however, are only as effective as their enforcement. If motorists know that enforcement is lax or

inconsistent, it is likely they will stay longer than the posted time limit. The study monitored length of stay and turnover on specific blocks in Downtown Austin, finding that most parking sessions far exceeded the posted time limits. Many of these spaces are prime for Austin's retail and restaurant businesses.



East 6th Street had much lower turnover than East 5th Street, just one block to the south. Clearly, the presence of paid parking influences a motorist's parking behavior. It is very likely that employees are parking on East 6th Street, restricting access to customers. One vehicle was parked from 9 a.m.

to 2 a.m. the following day. In all cases, there were clear violations of time limits. Every location had several spaces occupied by the same vehicle for consecutive hours beyond the time limit. East 5th was the most pronounced, as many vehicles were parked for more than 15 hours at a time.



WHAT IS THE PARKING EXPERIENCE?



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The parking experience is determined by more than just the number of parking spaces, cost, or regulations. It is the combination of all the components of the parking system that impact a motorist's decision about where to park, how to park, and how they feel about it. Together, these components contribute to an efficiently used system. The City has a strong maintenance department that has done well to troubleshoot issues and manage high volumes of events.

There are opportunities to continue to improve the parking experience, including:

1. Aligning on-the-ground and **mobile payment systems** across the study area and within the public and private sectors.
2. Coordinating parking signage, including **real-time signage**, especially among the public and private sectors.
3. Consolidating and streamlining **online parking information**. Improved messaging and communications through multiple platforms.
4. Additional resources to invest in staffing, **permit system management**, and enforcement guided by a strong policy framework.
5. Continued investment in the **walkability of downtown** to ensure safe and comfortable access to parking. **Improved access** can better distribute parking demand.

HOW DO DOWNTOWN EMPLOYEES + RESIDENTS TRAVEL?

More employees drive alone into Downtown Austin than in the city or county as a whole. There are approximately 86,000 jobs in Downtown Austin, and only 1.1% of downtown employees live downtown.

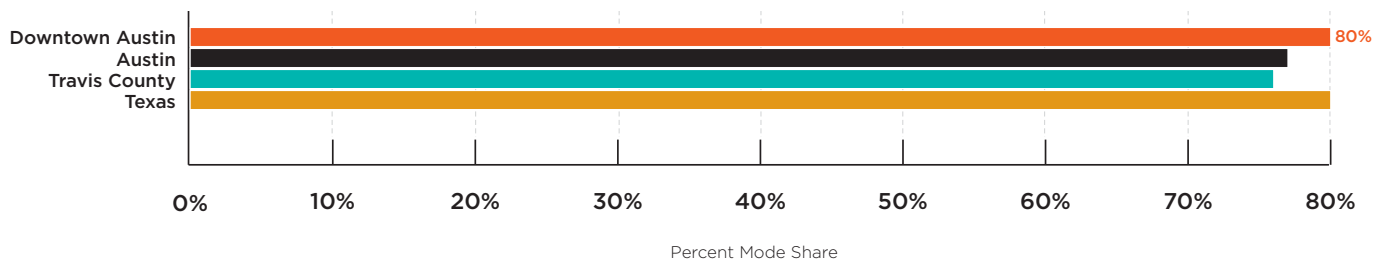


KEY CONCEPT

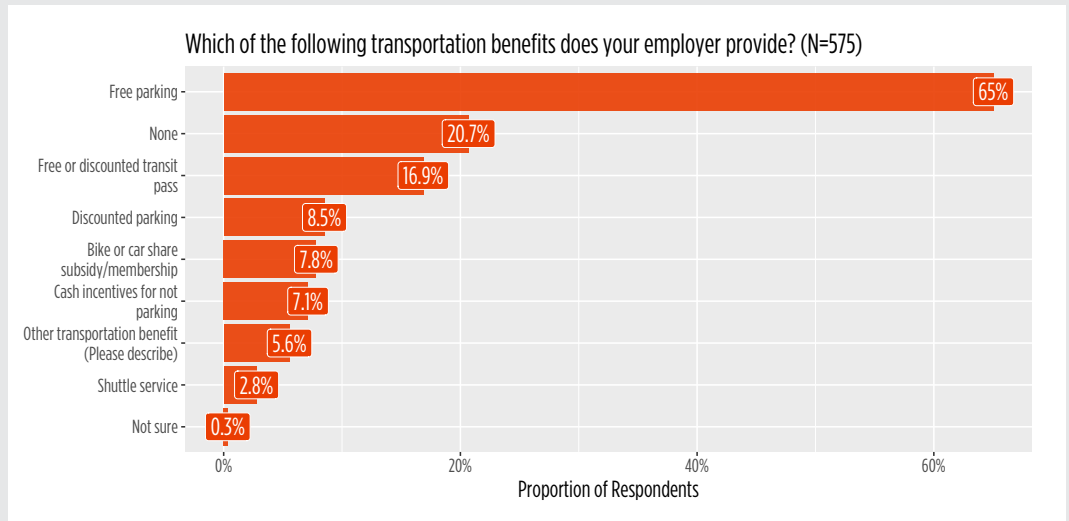
MANY EMPLOYERS recognize healthcare or stock options as benefits for employees. However, rarely are transportation options framed in that light. Providing free parking to an employee is a significant benefit, as parking is expensive to build and maintain. This benefit should be provided as part of an equal transportation benefits package. This package should be designed to provide additional choice to those employees who don't want to drive or would like to drive less.

Employee Commute Drive-Alone Mode Share

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Survey responses indicate that almost 75% of downtown employees are provided free or subsidized parking, yet few downtown employers offer comprehensive mobility programs or incentives to encourage travel by other modes or reduce overall parking demand.



WHAT DOES THE COMMUNITY SAY ABOUT PARKING?

This study included a comprehensive outreach program designed to be robust, inclusive, and innovative. The major components of the outreach plan included:

- Project Steering Committee
- Project [website](#)
- Downtown Austin Alliance newsletters
- Media advisories and press releases
- Online community survey
- Three community workshops
- Stakeholder interviews with local and regional agencies, property owners, businesses, developers, and other community groups
- Presentations to elected bodies



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The survey responses to the open-ended questions reflect a tension between two general positions about the future of parking in Downtown Austin. One group wants to prioritize access for vehicles by requiring and building more parking and making it free. By contrast, others in the community support better management of existing parking supported by multimodal investments to decrease parking demand.

HOW WOULD YOU IMPROVE PARKING IN DOWNTOWN? A SAMPLE OF RESPONSES...

"Differentiate pricing so that high-demand spaces are more expensive and low-demand spaces are less expensive."

"Build more parking structures, and require business to provide a certain amount of parking in order to operate."

"Encourage perimeter parking with safe, comfortable, and frequent shuttle service."

"Real-time info on parking availability and regulations."

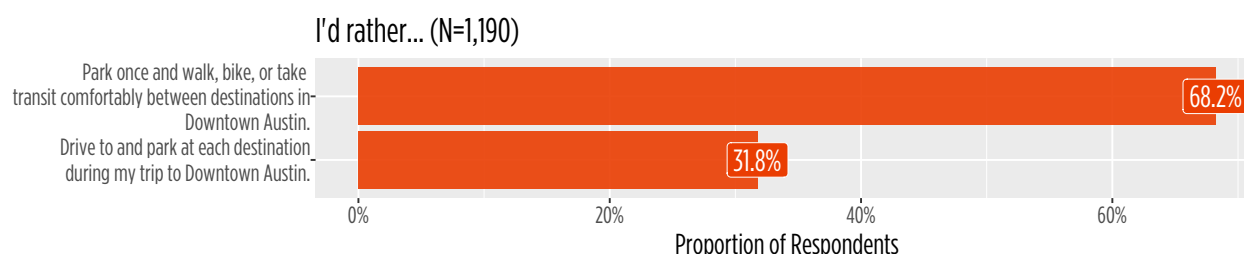
"I'd like to see more trains, buses and alternative public transportation downtown."

"Make it more expensive so less people will drive. Have employers incentivize people to use transit or carpool."

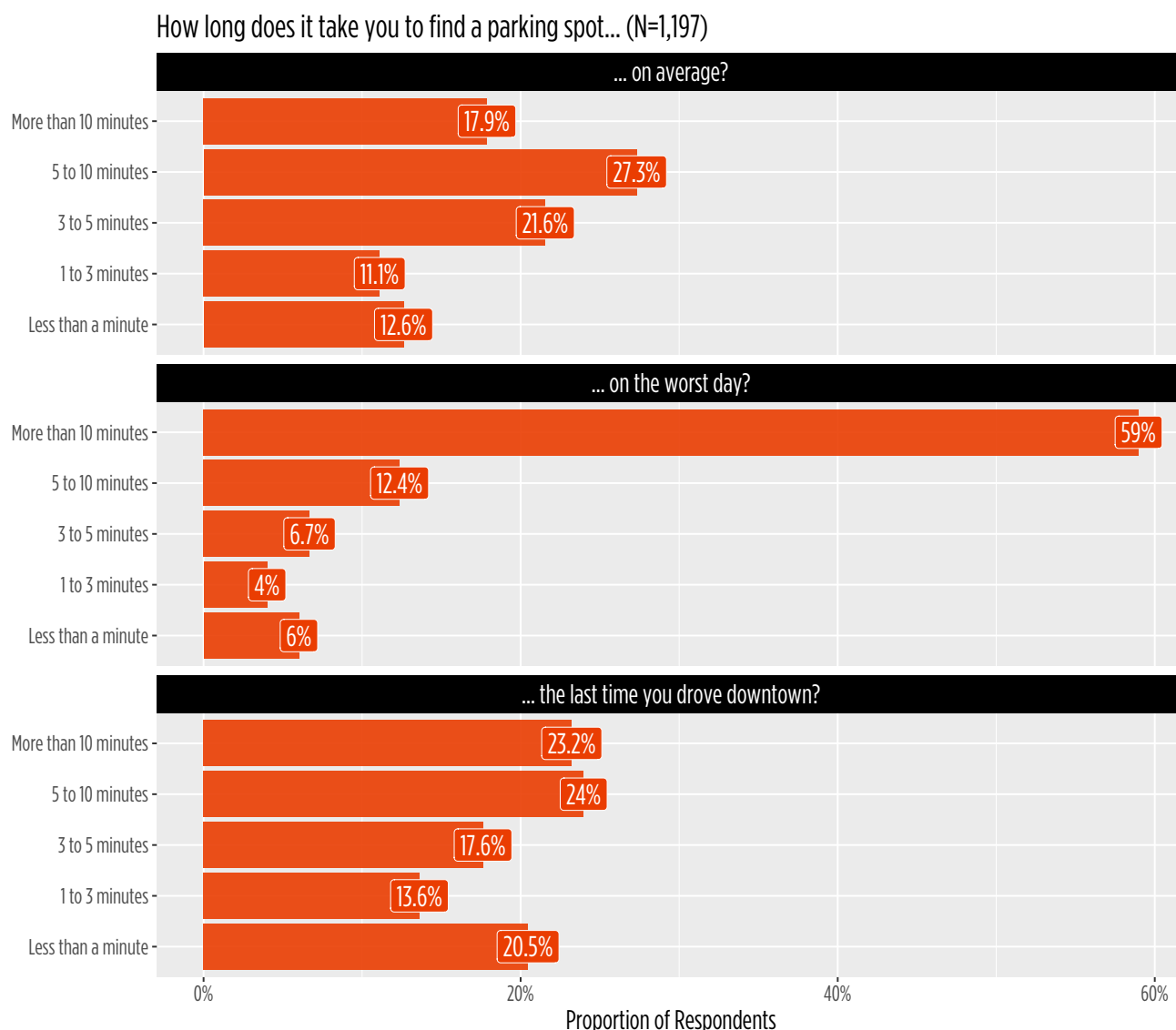
"More PUBLICLY ACCESSIBLE parking structures with affordable rates."

"Build more."

A majority of survey respondents want to walk between destinations in Downtown Austin. This indicates that one parking space could serve multiple uses. Traditional building codes and patterns dictate that each use must provide its own dedicated parking supply, and this survey response pattern shows that this is not always necessary if people can walk or travel comfortably between destinations without a car.



When asked how long it took to find parking the last time they drove downtown, over half of respondents indicated that it took less than five minutes. However, the majority of parking survey respondents indicated that on the “worst day” it took over 10 minutes to find parking. This “worst day” is often what drives parking perceptions even if the average experience is more manageable.



4



DOWNTOWN GROWTH AND PARKING DEMAND

Downtown Austin is a world-class destination that will continue to grow at a rapid pace. In the next ten years it is possible that Austin will add up to **25 million square feet of new development** within the downtown study area. This amount of growth has the potential to create additional parking issues if the City and its partners do not take a thoughtful and strategic approach to adding and managing new parking supply.

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To understand future growth, and its impacts on parking in downtown, this study used a shared parking model to conduct a detailed **parking demand analysis**. The model is based on national standards and methodologies, but is calibrated with local data to better account for downtown Austin's unique urban context and parking patterns. Parking demand in downtowns is far different from a suburb. Downtowns like Austin have a strong mix of land uses, offer a walkable street grid, and encourage people to park once and not drive to each destination.

Ultimately, the analysis provides insights into existing and future parking demand patterns and how they may need to change to support both development changes and City goals. This chapter provides a summary of the model approach, methods, and findings. In brief, we found that:

- Development potential is high and will increase demand for not just parking, but overall mobility and access in downtown.
- Given the sheer amount of new growth projected, some amount of new parking is likely needed in downtown.
- If Austin were to build strictly reserved parking for every proposed development, downtown will quickly run out of land.
- Shared parking approaches are the only way to cost-effectively unlock downtown's growth potential. Relying on smaller parcels to accommodate all of downtown's future parking is not feasible economically.
- Sub-districts 1, 3, 4 and 5 are focus areas for growth and the best candidates for additional parking supply.
- While in reality not all parking will be shared, understanding shared parking demand reveals how much more efficient shared management approaches can be in certain land uses and locations.

Recommendation #19 in Chapter 5 discusses new supply in more detail. As the City, Downtown Alliance, and its partners move forward to address its parking challenges, it is important to emphasize a few key points.

- Adding more parking alone will not solve the current management challenges. To make its future growth plans a reality, Austin must balance the provision of new parking with an emphasis on improved management.
- Significant changes in management (see Chapter 5) can improve system efficiency and reduce the amount of needed parking.
- Any investment in new parking supply should:
 - Be shared and public to the greatest degree possible.
 - Be leveraged as part of new development, as public dollars are limited and private investment in parking is vital.
 - Be managed as part of the larger system to reduce driver confusion.
 - Include high-quality and coordinated technology and wayfinding systems to facilitate coordinated management.
 - Contribute to downtown's active, vibrant, and beautiful environment.
 - Intercept vehicle traffic before it reaches the core by prioritizing connections with remote facilities.

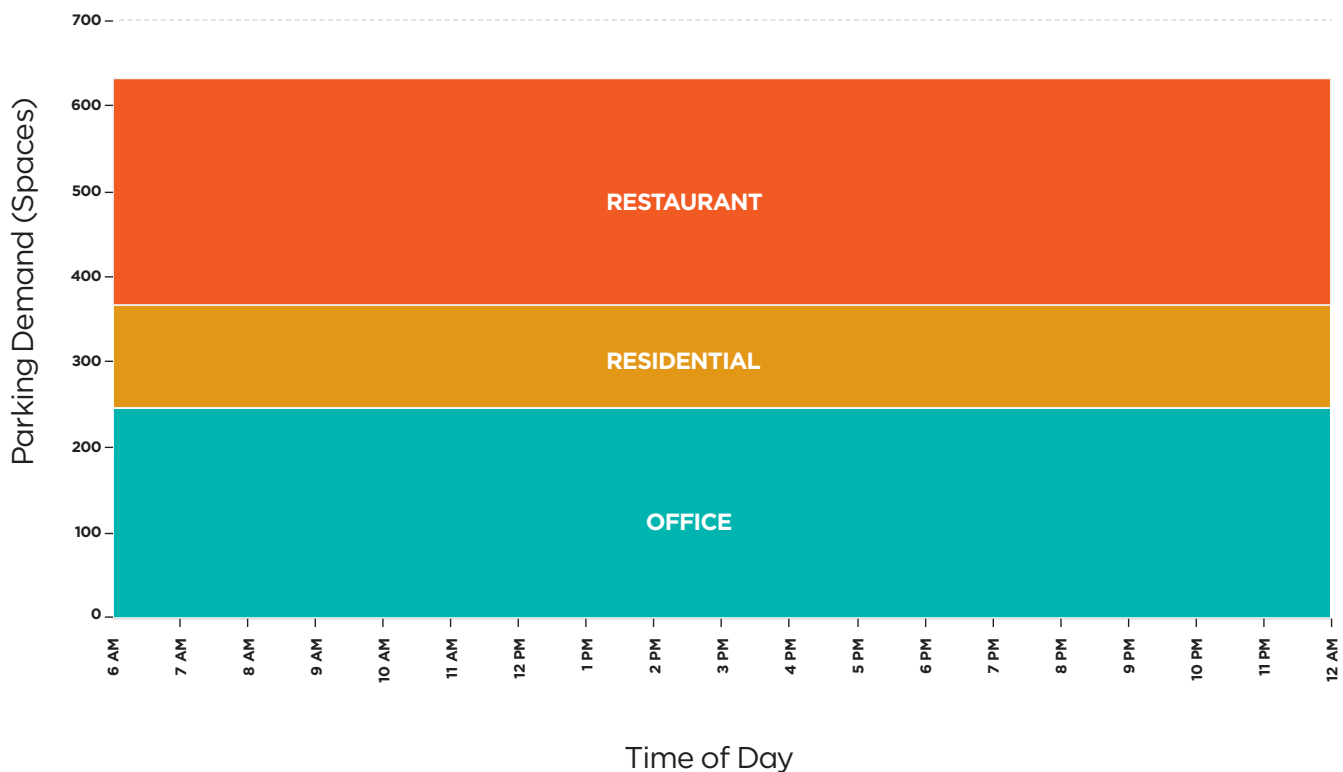
PARKING DEMAND IN DOWNTOWNS

The Institute of Transportation Engineers (ITE) Parking Generation manual is the current national standard in determining parking demand. ITE standards are based on national data, and a typical analysis takes the size of the development and multiplies it with a “standard” peak parking generation rate—for example, 4 spaces per 1,000 square feet of office or 2 spaces per residential unit. A typical analysis also assumes that each use or building needs its own spaces and that those spaces are utilized at a constant rate throughout the day.

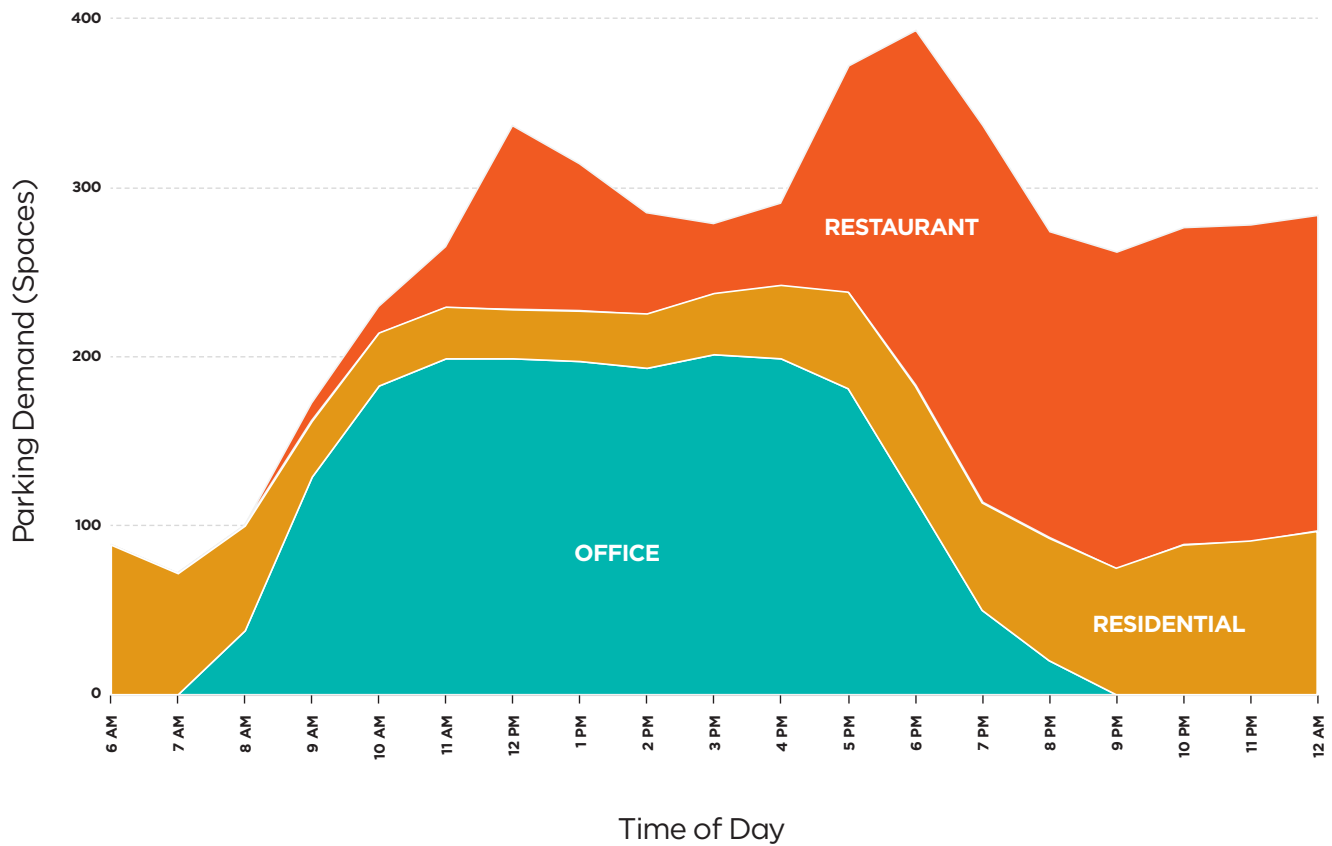
ITE parking rates and methodologies, however, often do not reflect the actual parking behavior or demand, especially in mixed-use downtown areas. In Austin, parking can be “shared” among different uses—a

pattern that is happening today and that should increase significantly into the future. Throughout the day in downtown, different uses have different peak demands. For example, an office may have a high demand until 5 p.m., while a restaurant may open for dinner only after 5 p.m., indicating “staggered peaks” of parking, which can utilize the same parking supply.

Other factors make parking in Downtown Austin different. Customers, employees, and visitors can visit multiple destinations on foot and only park once, known as “internal capture.” For example, the employee who walks to get a cup of coffee with a colleague is an “internally captured” trip—and does not require its own parking space. Austin’s pedestrian, biking, and transit systems offer travel options to, from, and within downtown and reduce the number of people who drive for every downtown trip.



The traditional approach to parking 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 results in parking being overbuilt.



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Actual parking demand changes by use by time of day, resulting in a peak that is much lower than traditional approaches would predict.

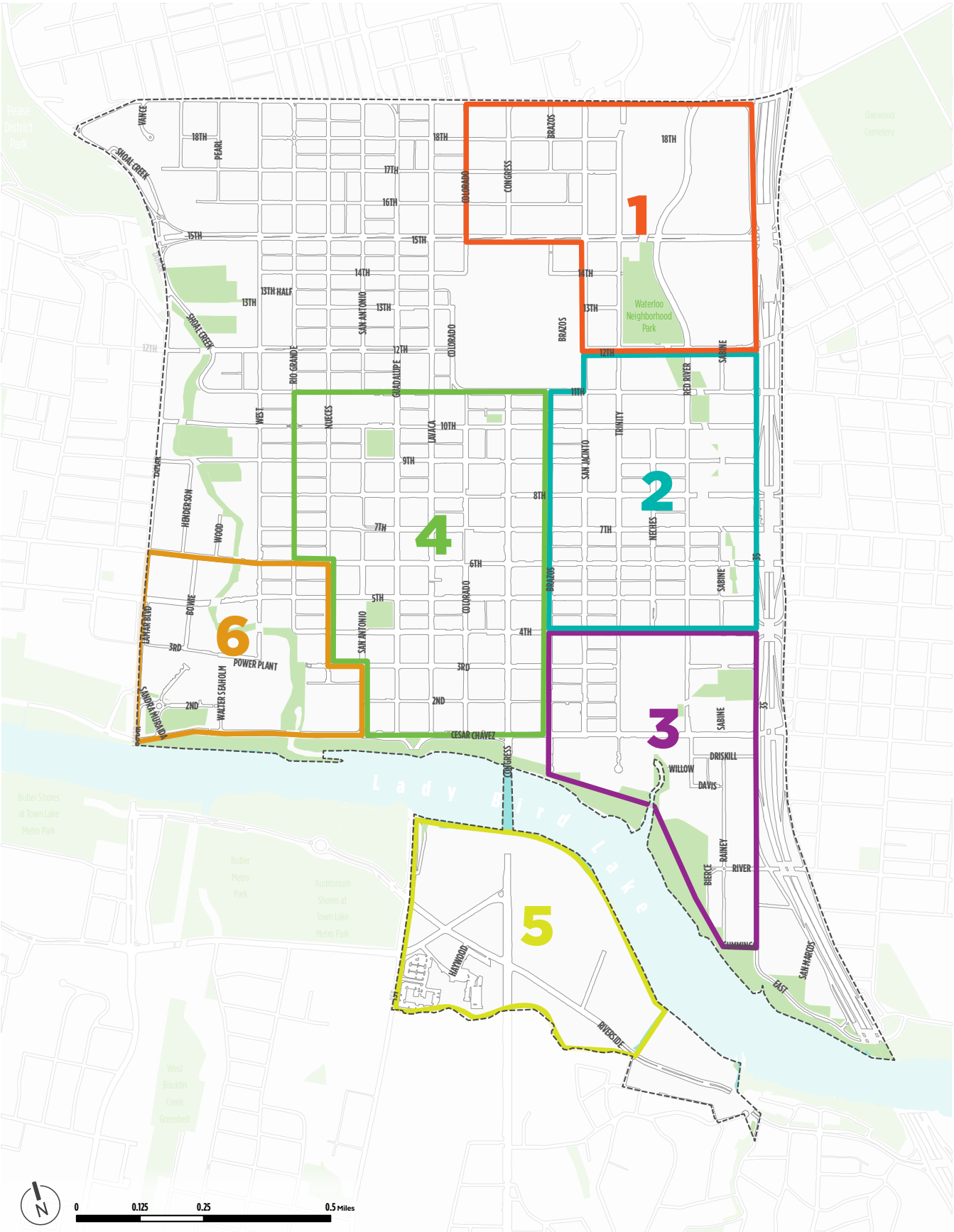
METHODOLOGY

To more accurately model downtown parking activity, Nelson\Nygaard used an adapted parking demand model from the Urban Land Institute's (ULI) Shared Parking Manual and ITE's Parking Generation. Besides capturing the "staggered peaks" of demand from various uses by time of day, the model calibrates demand specific to Austin's urban context by adjusting for local inventory and occupancy, transit service, internal capture, and management policies.

Ultimately, this modeling tool allows the user to understand how and when the parking inventory in a given location is occupied, which is useful for defining more targeted parking and development strategies for these areas.

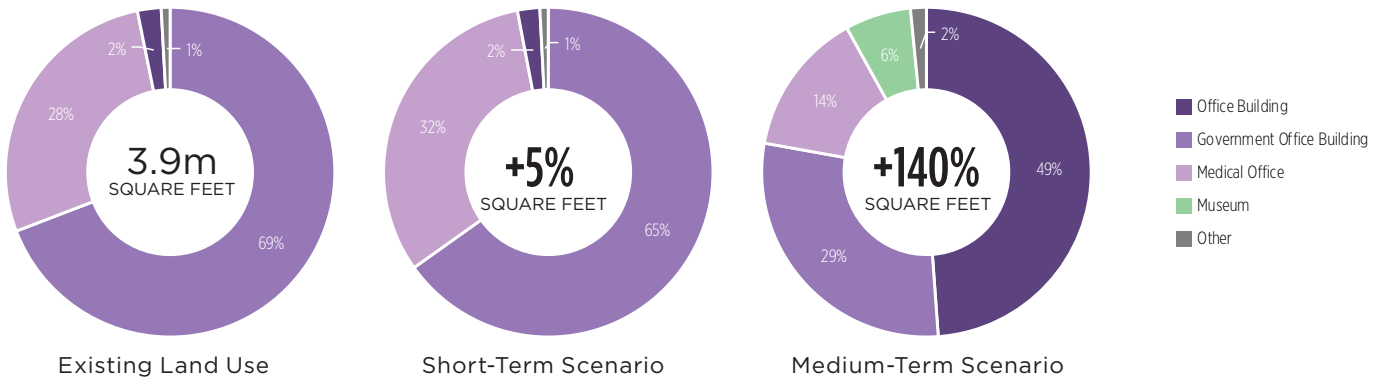
Analysis Step	Description	Data Source
1. Created sub-districts.	The team identified six sub-districts within the downtown, each about 1/2 mile in size, to better capture a realistic parking “walk shed.”	Project team and stakeholder input
2. Inventoried existing development by land use.	Compiled information on active land uses in downtown using the Travis County assessor database.	Travis County Assessor District (TCAD) land use database
3. Calibrated model based on inventory and utilization data.	Nelson\Nygaard’s shared parking model estimates parking demand by time of day by use based on nationally observed data. Using the inventory and occupancy data, the team calibrated the sketch model to real-world observations in Austin.	Parking inventory and occupancy data (2016 counts)
4. Analyzed existing demand by district.	Estimates of today’s parking demand patterns showed when peak demand occurs in each district, and gives an idea of how well spaces are used throughout the day.	Nelson\Nygaard shared parking model, adapted from ULI Shared Parking Manual (2nd Edition, 2005) and ITE’s Parking Generation (4th Edition, 2010)
5. Developed future growth scenarios by district.	The Downtown Austin Alliance worked with McCann Adams Studio to estimate growth based on known and planned development in the short- and medium-term. In total, the team identified approximately 6.2-6.6 million square feet of additional development in the short-term, and 21-25 million square feet in the medium-term.	City and stakeholder development database. Additional parcel analysis by McCann Adams Studio. Estimates per Winter 2017. Final land use study estimates may differ slightly but do not change the overall parking demand findings.
6. Analyzed future demand by scenario by districts.	The team applied the calibrated model to the future growth scenarios to estimate how parking demand would grow in the short- and medium-term.	Nelson\Nygaard shared parking model
7. Identified where and how new parking should be developed.	Based on known inventory, the team could identify where demand would be expected to exceed supply in the short- and medium-term.	Nelson\Nygaard shared parking model

Land Use Analysis Sub-Districts



District 1

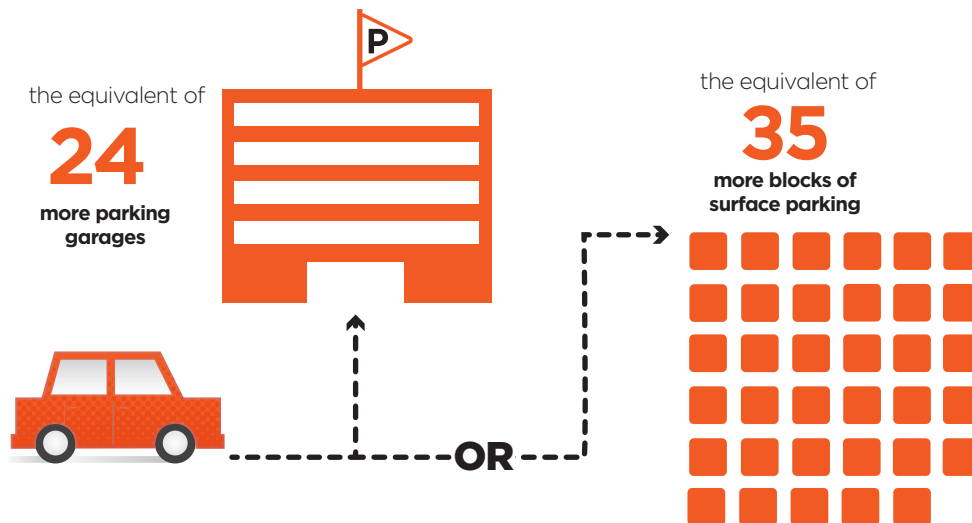
How will land use change?



Is estimated parking demand higher or lower than existing supply?

▼ LOWER	▼ LOWER	▲ HIGHER
Existing	Short-Term	Medium-Term

If all parking supply was strictly reserved, how much parking is needed in the Medium-Term Scenario?



How much less parking is needed if it is fully shared?

SHORT-TERM:

-50%

\$160 million dollars saved

MEDIUM-TERM:

-51%

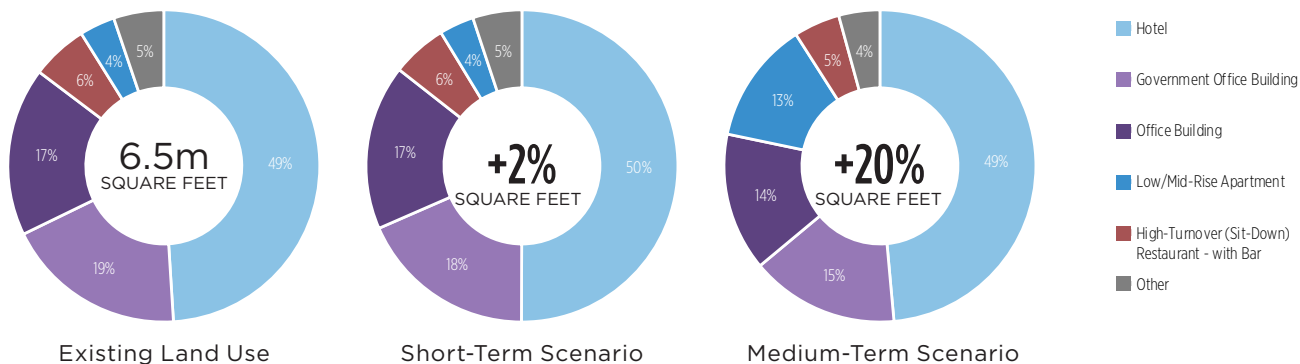
\$283 million dollars saved

KEY DISTRICT TAKEAWAYS:

- The largest planned developments in this sub-district are the Central Health Brackenridge Campus Redevelopment, and State of Texas office buildings.
- The medium-term increase in office space would likely push the projected parking demand above the existing parking supply, especially during the midday. Thus, additional demand management programs, coupled with strategic investments in new shared, public supply should both be explored.

District 2

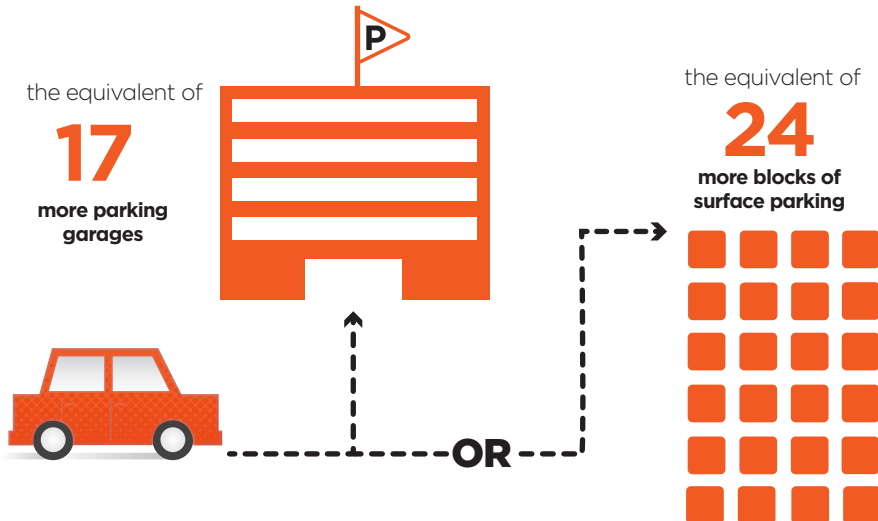
How will land use change?



Is estimated parking demand higher or lower than existing supply?

▼ LOWER	▼ LOWER	▲ HIGHER
Existing	Short-Term	Medium-Term

If all parking supply was strictly reserved, how much parking is needed in the Medium-Term Scenario?



How much less parking is needed if it is fully shared?

SHORT-TERM:

-63%

\$226 million dollars saved

MEDIUM-TERM:

-63%

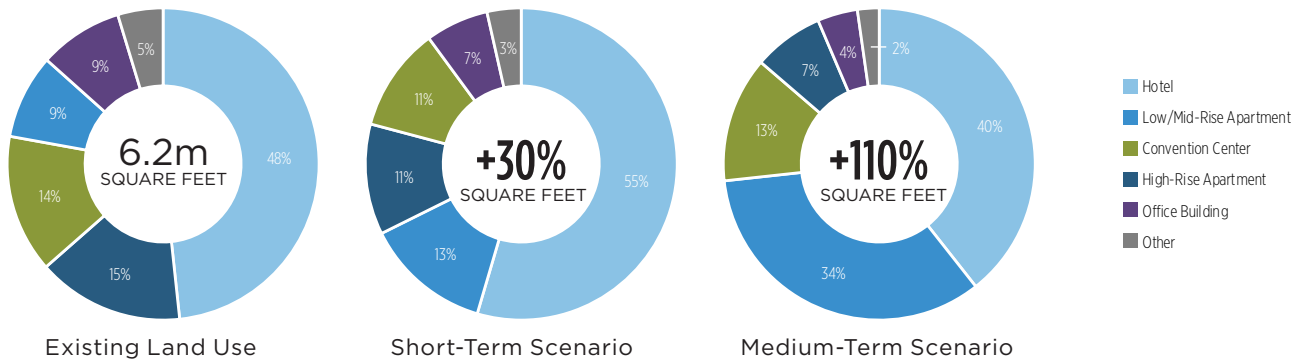
\$240 million dollars saved

KEY DISTRICT TAKEAWAYS:

- In the evening, demand from restaurants and bars replaces diminished office demand. If parking were completely shared, these two uses could use the exact same set of parking spaces.
- Transportation options for visitors such as bikeshare, carshare, transit, or transportation network companies would be effective in this sub-district to reduce its significant hotel parking demand.
- Significant investments in new supply can be limited with additional programs such as remote parking and/or improved mobility choices.

District 3

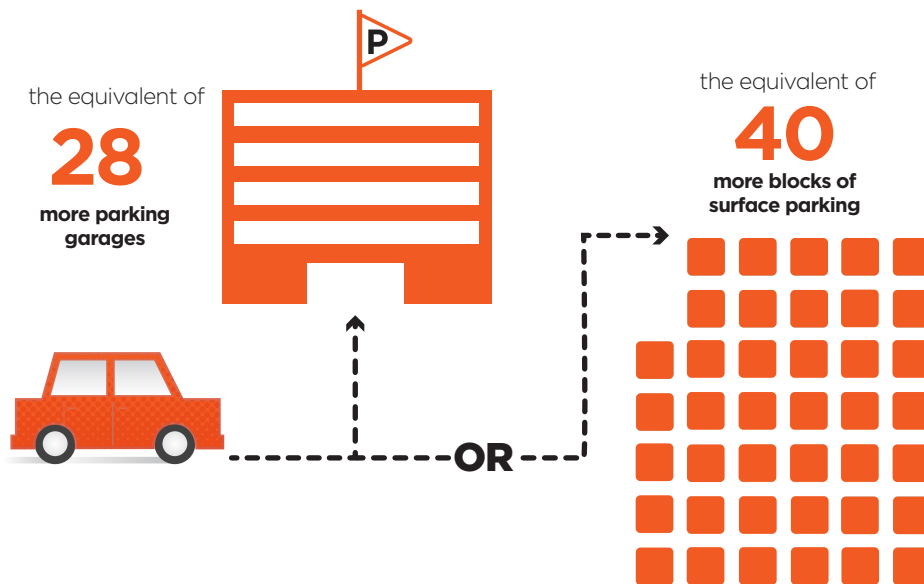
How will land use change?



Is estimated parking demand higher or lower than existing supply?

▲ HIGHER	▲ HIGHER	▲ HIGHER
Existing	Short-Term	Medium-Term

If all parking supply was strictly reserved, how much parking is needed in the Medium-Term Scenario?



How much less parking is needed if it is fully shared?

SHORT-TERM:

-41%

\$121 million
dollars saved

MEDIUM-TERM:

-40%

\$184 million
dollars saved

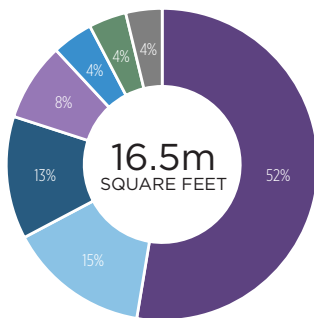
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KEY DISTRICT TAKEAWAYS:

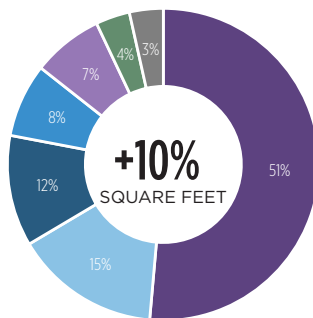
- Even without the high demand from the Convention Center, peak parking demand in this area may exceed supply in the evening in the existing scenario. Today, this may mean that people park outside of this area and walk to destinations in sub-district 3.
- In both future scenarios, demand continues to exceed capacity, even without the Convention Center. This indicates a need for additional shared public parking, better access to remote parking, and/or reducing demand, especially from convention users, through improved multimodal infrastructure and TDM programming.

District 4

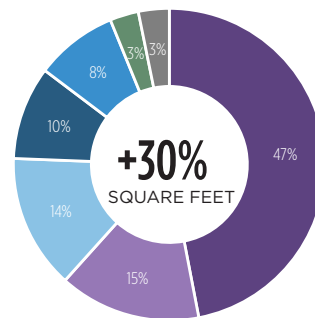
How will land use change?



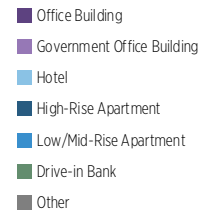
Existing Land Use



Short-Term Scenario



Medium-Term Scenario

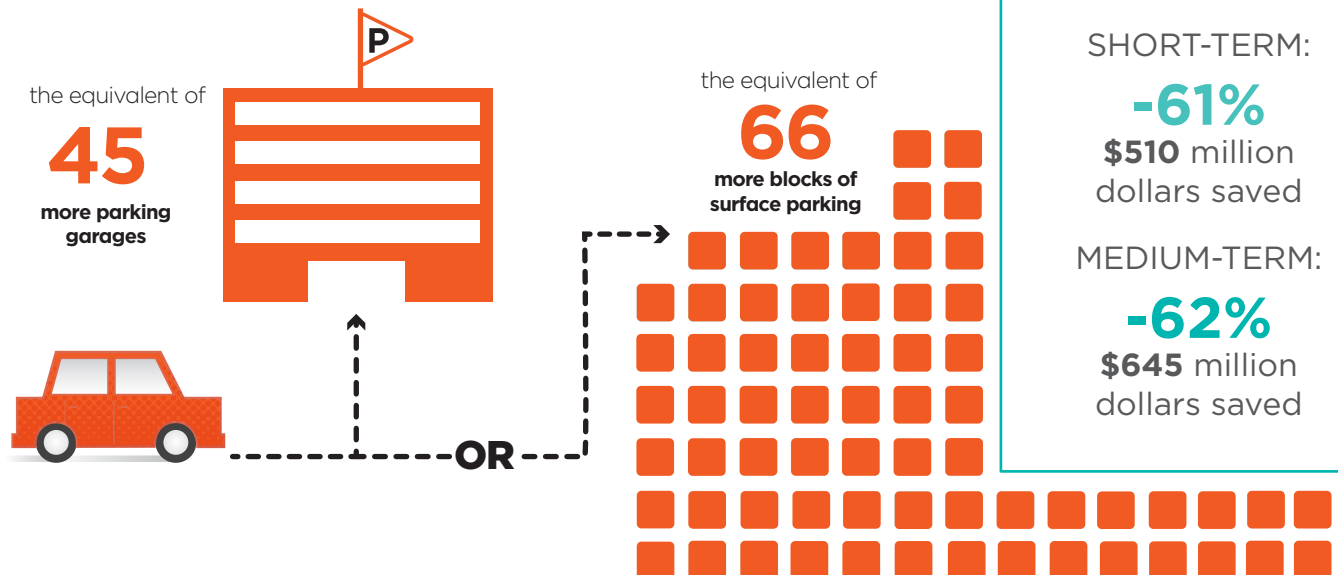


Is estimated parking demand higher or lower than existing supply?

▼ LOWER	▼ LOWER	▲ HIGHER
Existing	Short-Term	Medium-Term

If all parking supply was strictly reserved, how much parking is needed in the Medium-Term Scenario?

How much less parking is needed if it is fully shared?

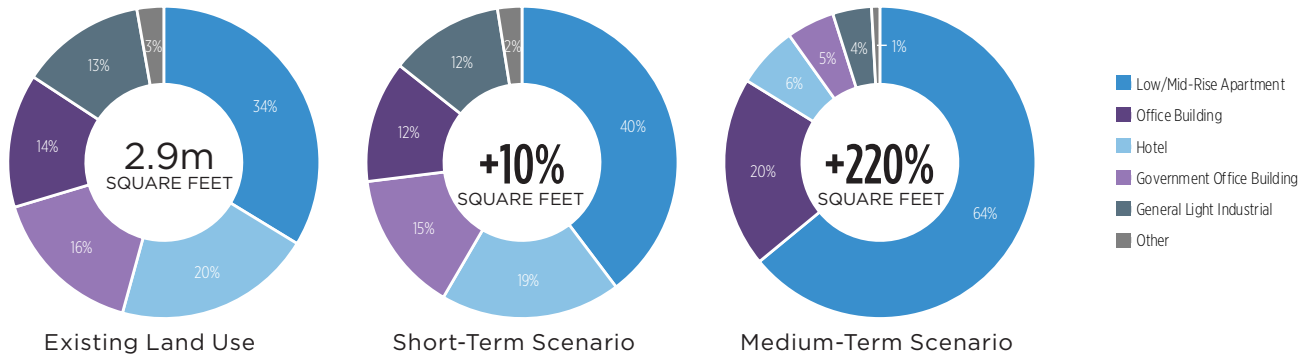


KEY DISTRICT TAKEAWAYS:

- Office uses drive parking demand in sub-district 4 which tails off after 6 p.m. Additional programs aimed at reducing parking demand and improving mobility options for daytime employees will improve parking availability
- In the medium-term scenario, parking demand will exceed the supply at peak. This indicates a need for additional public and shared supply, as well as additional investments in mobility options and improved parking management.

District 5

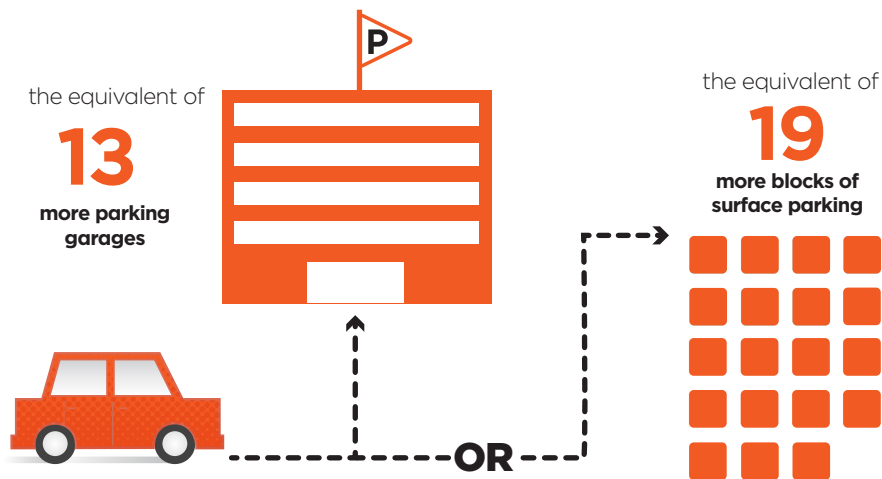
How will land use change?



Is estimated parking demand higher or lower than existing supply?

▼ LOWER	▼ LOWER	▲ HIGHER
Existing	Short-Term	Medium-Term

If all parking supply was strictly reserved, how much parking is needed in the Medium-Term Scenario?



How much less parking is needed if it is fully shared?

SHORT-TERM:

-48%

\$51 million
dollars saved

MEDIUM-TERM:

-51%

\$135 million
dollars saved

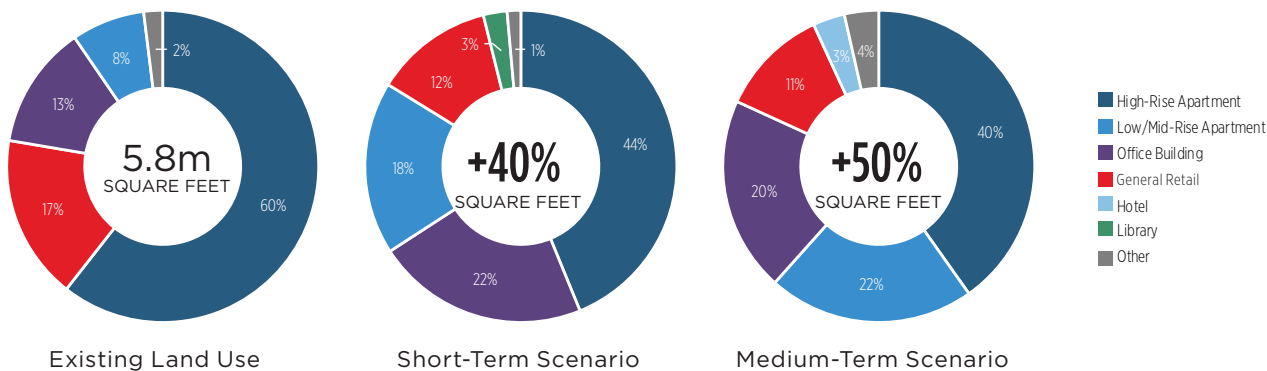
35

KEY DISTRICT TAKEAWAYS:

- Today, there is available parking in the early morning and evening. Thus, this district offers opportunities to accommodate residential or evening uses, as well as parking spillover from adjacent activity areas.
- In particular, because there is high existing office demand in this area, restaurants/retail catering to office employees could thrive without adding a significant amount of parking.
- In the medium-term, peak demand will exceed the existing parking inventory. To accommodate this density of housing, additional investment in public parking supply, supported by biking, walking, and transit will be necessary. Aggressive TDM programs and parking management can further incentivize fewer vehicle trips.

District 6

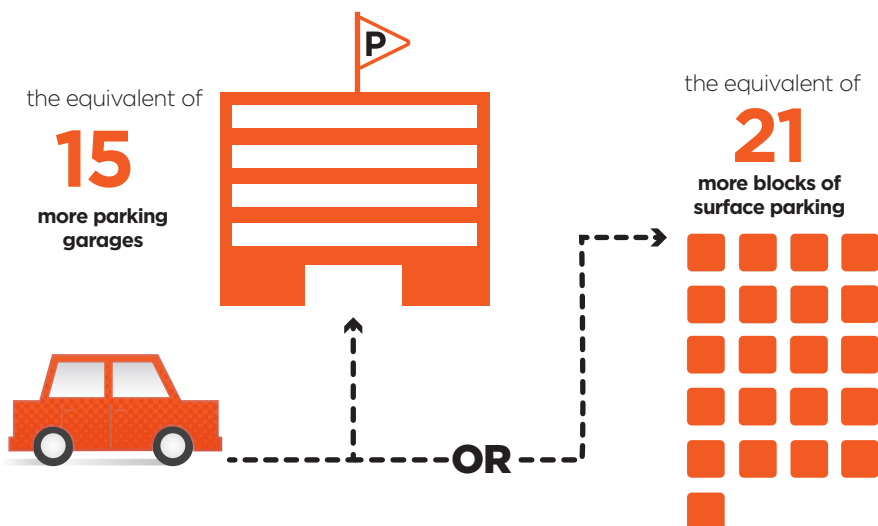
How will land use change?



Is estimated parking demand higher or lower than existing supply?

▼ LOWER	▲ HIGHER	▲ HIGHER
Existing	Short-Term	Medium-Term

If all parking supply was strictly reserved, how much parking is needed in the Medium-Term Scenario?



How much less parking is needed if it is fully shared?

SHORT-TERM:

-64%

\$178 million dollars saved

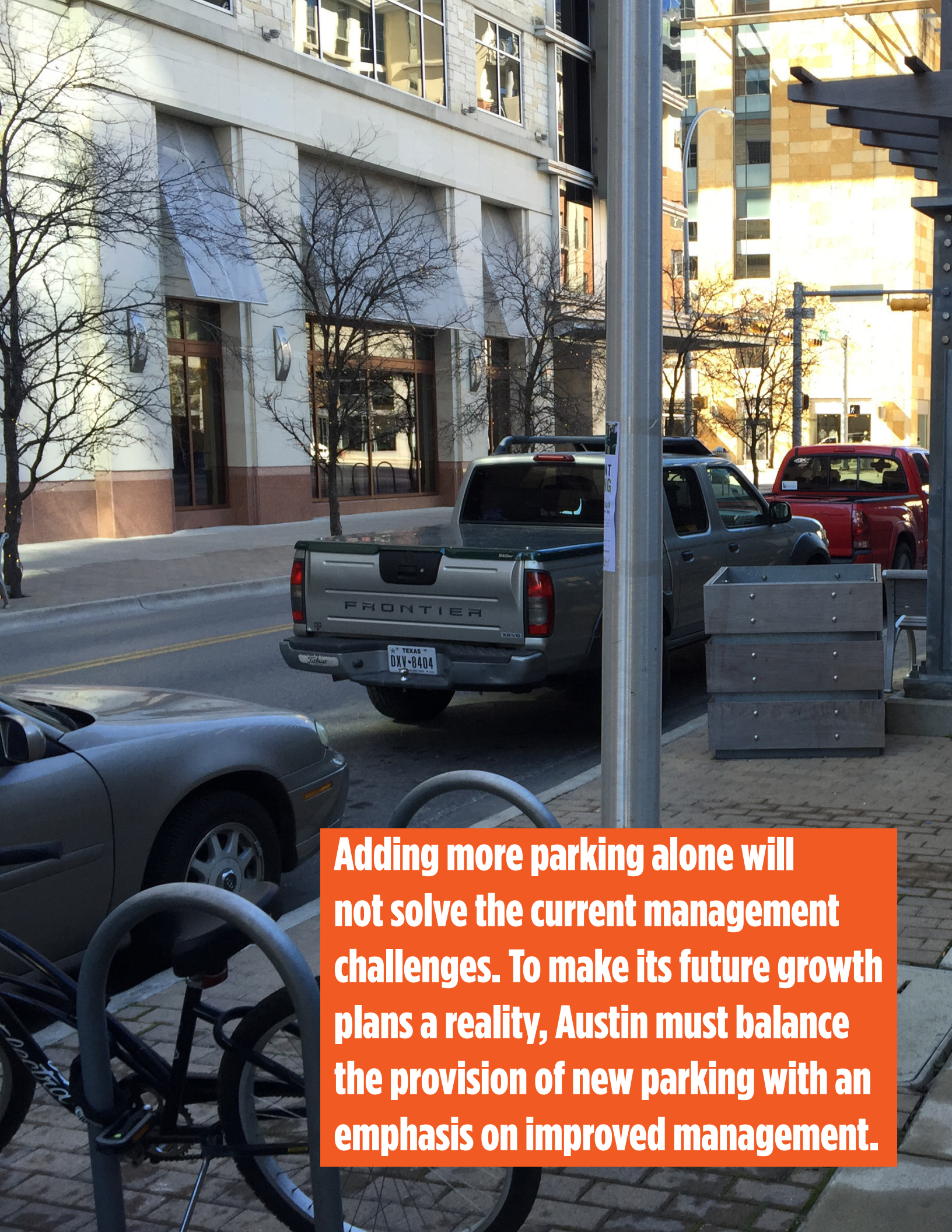
MEDIUM-TERM:

-65%

\$189 million dollars saved

KEY DISTRICT TAKEAWAYS:

- Theaters and event venues, which are common in this district, can have widely varied and intense peaks. The time of events can drive spikes in parking demand and require deliberate event management.
- In the short-term, the existing supply could accommodate demand from proposed developments. However, reductions in supply may be associated with new development and must be considered.
- In the medium-term, demand from proposed developments would likely exceed existing supply, even if parking was fully shared. This indicates a need for additional public and shared supply, remote parking, and/or a shift in travel patterns to support this kind of development.



Adding more parking alone will not solve the current management challenges. To make its future growth plans a reality, Austin must balance the provision of new parking with an emphasis on improved management.

5



PARKING →

RECOMMENDATIONS

The Plan recommendations support the achievement of the goals and objectives identified by the project team and Steering Committee. Austin's diverse parking stakeholders will need to collaborate to implement recommendations as a package; each strategy coordinates with others to improve the overall parking system.

This chapter includes an overview of the recommendations framework, as well as detailed descriptions for each recommendation. The recommendations emphasize a need for a district- and performance-based management approach that better utilizes existing parking assets. Improved management of parking will enable Austin to unlock its development potential and continue to grow sustainably, while reducing overall demand for parking and minimizing traffic congestion.

Implementing these recommendations will not be easy. Deliberate and continued recognition of the project goals and desired outcomes is key to overcoming inertia, resistance, and growing pains along the way. Implementation of the recommendations is described in Chapter 6 and Appendix A.

RECOMMENDATIONS FRAMEWORK

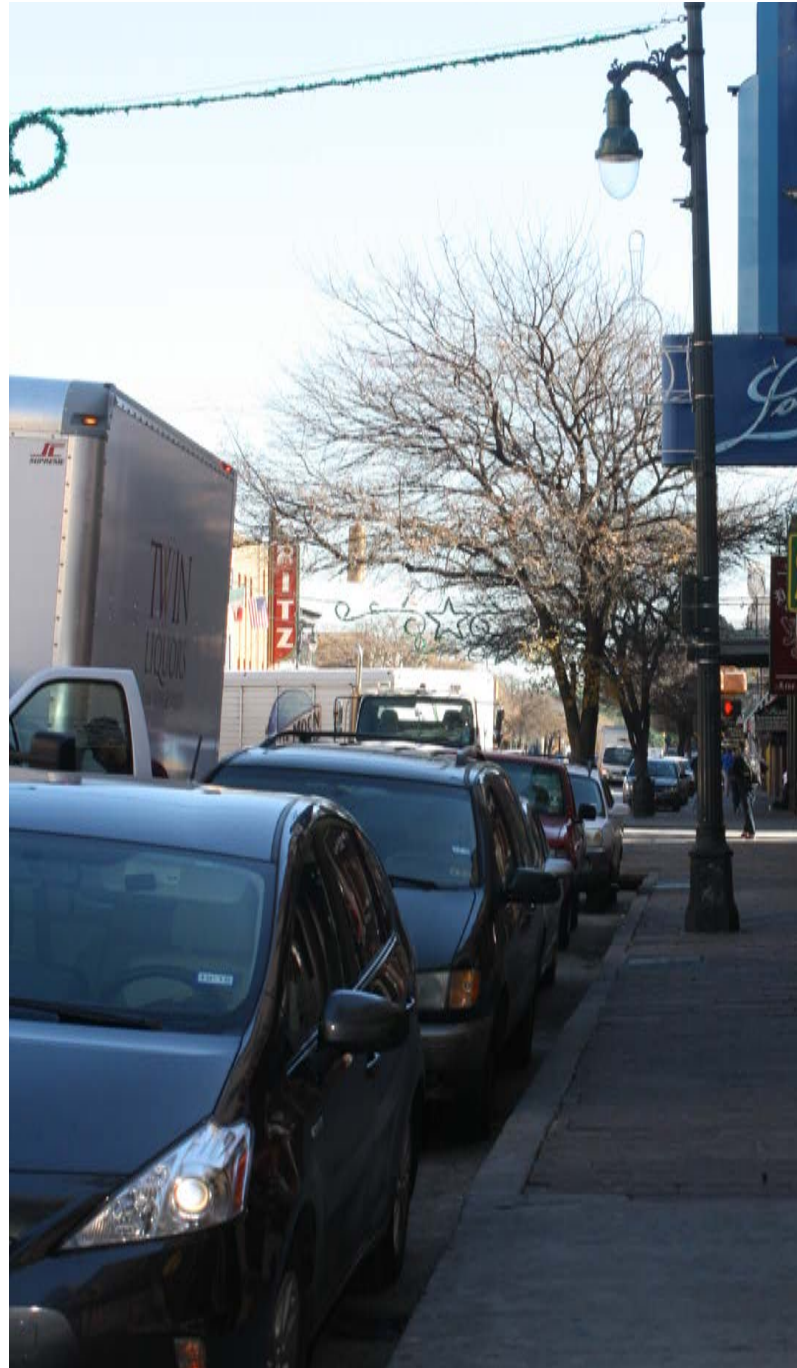
An overview matrix of the recommendations is provided on the following page. There are 19 specific recommendations organized by six overall strategies:

- **Maximize Use of Existing Parking Supply**
- **Strategically Invest in Information and Technology**
- **Improve Mobility Options to Reduce Parking Demand**
- **Simplify and Leverage the Zoning Code**
- **Enhance Parking Administration and Operations**
- **Provide Additional Public Parking as Needed**

40

The matrix shows a summary of how each recommendation fulfills the six major parking goals—**Supportive, Multimodal, Available, Cost-Effective, User-Friendly, and Adaptable**. The matrix also summarizes each recommendation against some key implementation criteria. These include:


































































































































































- **Status** – Does the recommendation involve creation of a new program or policy, or does it enhance an existing one?
- **Cost** – What is the relative cost of the recommendation?
- **Impact** – What is the relative impact of the recommendation in addressing identified parking challenges?
- **Level of Difficulty** – What is the relative difficulty to implement the recommendation?
- **Priority** – What is the relative priority of the recommendation?
- **Coordinate with Recommendation** – Which of the other recommendations are needed to support successful implementation?





DOWNTOWN AUSTIN PARKING STRATEGY RECOMMENDATIONS FRAMEWORK

STRATEGY	RECOMMENDATION	ALIGNMENT WITH PROJECT STEERING COMMITTEE			
		Supportive	Multimodal	Available	Cost-Effective
Maximize Use of Existing Parking Supply	1. Design and implement a performance-based parking management program that focuses on creating available spaces for different user groups.	✓	✓	✓	✓
	2. Pilot a shared parking program in which private parking is better shared with the “public.” Provide technical assistance to better facilitate shared parking.	✓		✓	✓
	3. Expand and diversify existing Affordable Parking Program.	✓		✓	✓
	4. Enhance pedestrian access to parking facilities.		✓	✓	
	5. Explore opportunities to expand and clarify on-street supply.			✓	✓
Strategically Invest in Information and Technology	6. Fully invest and implement a comprehensive parking signage and wayfinding system.	✓		✓	✓
	7. Define an overall strategy that ensures technology tools support broader parking and mobility goals.	✓		✓	✓
Improve Mobility Options to Reduce Parking Demand	8. Continue to reinvest parking revenues into downtown and evaluate allocation of additional revenue to multimodal improvements.	✓	✓		
	9. Evaluate and implement a park-n-ride or circulator shuttle to improve transit connections and access to remote parking.		✓	✓	✓
	10. Support comprehensive and coordinated improvements in employee-focused mobility services and programs.	✓	✓	✓	✓
Simplify and Leverage the Zoning Code	11. Revise the zoning code to better support walkable, mixed-use development within the downtown.	✓		✓	✓
	12. Require provision and enforcement of a TDM program for all new downtown development above a certain size.	✓	✓	✓	✓
	13. Revise the zoning code to incentivize sharing of parking.	✓		✓	✓
Enhance Parking Administration and Operations	14. Create dynamic inventory and adjust on-street regulations to maximize flexibility at the curb.			✓	
	15. Define and implement enforcement strategy to support performance-based management. Allocate sufficient resources to parking enforcement.	✓		✓	✓
	16. Establish a formal collaboration between the City, State, and other parking stakeholders.	✓		✓	✓
	17. Enhance event management practices to maximize parking system flexibility and predictability.	✓			✓
	18. Plan for the future to nimbly respond to long-term trends in mobility and parking.	✓	✓		✓
Provide Additional Public Parking as Needed	19. Strategically invest in public and shared parking supply in key locations.	✓			

EE PARKING GOALS		IMPLEMENTATION					
User-Friendly	Adaptable	Status	Cost	Impact	Level of Difficulty	Priority	Coordinate with Recommendation
		New	\$\$\$	  	  	  	2, 3, 6, 7, 8, 14-17, 19
		New	\$\$\$	  	  	  	1, 3, 4, 6, 7, 9, 13, 15-17, 19
		Enhance Existing	\$\$\$	  	  	  	2, 6, 7, 9, 10, 13, 15-17, 19
		Enhance Existing	\$\$\$	  	  	  	2, 5, 8, 14, 17
		Enhance Existing	\$\$\$	  	  	  	4, 7, 14, 15
		Enhance Existing	\$\$\$	  	  	  	1-3, 7, 16, 17, 19
		Enhance Existing	\$\$\$	  	  	  	1-3, 5, 6, 8, 14, 16-18
		Enhance Existing	\$\$\$	  	  	  	1, 4, 7, 9-11, 16, 18, 19
		New	\$\$\$	  	  	  	2, 3, 8, 16, 17
		Enhance Existing	\$\$\$	  	  	  	3, 8, 9, 12, 16, 18
		Enhance Existing	\$\$\$	  	  	  	8, 12, 13, 16, 18, 19
		New	\$\$\$	  	  	  	10, 11, 13, 16, 18, 19
		New	\$\$\$	  	  	  	2, 11, 12, 16
		Enhance Existing	\$\$\$	  	  	  	1, 4, 5, 7, 15, 17
		Enhance Existing	\$\$\$	  	  	  	1-3, 5, 14, 17
		New	\$\$\$	  	  	  	1-3, 6-13, 17, 18, 19
		Enhance Existing	\$\$\$	  	  	  	1-4, 6, 7, 9, 14-16, 18
		New	\$\$\$	  	  	  	7, 8, 10-12, 16, 17, 19
		Enhance Existing	\$\$\$	  	  	  	1-3, 6, 8, 11, 13, 16, 18

DESIGN AND IMPLEMENT A PERFORMANCE-BASED PARKING MANAGEMENT PROGRAM

Strategy: **Maximize Use of Existing Parking Supply**

Cost: **\$\$\$**

Impact: ●●●

Level of Difficulty: ●●●

Priority: ●●●

Coordinate with: **2, 3, 6, 7, 8, 14-17, 19**

It is recommended that the City of Austin adopt and implement a performance-based parking program. 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 lowest price that will achieve an availability target. Adjusting rates over time—up where demand is higher and down where demand is lower—will allow Austin to better distribute parking demand across downtown. In general, off-street parking should provide a **cheaper, long-term option**.

Adopt a formal policy that does the following:

- Sets specific availability targets for on- and off-street parking, such as 85% for on-street spaces.
- Grants staff authority to adjust rates and regulations at least annually to meet adopted availability targets.
- Establishes minimum and maximum changes per rate adjustment (i.e. \$.25 or \$.50).

Establish initial boundaries, rates, and regulations by location and time, reflecting patterns of demand.

One option for Austin is to define “zones” or specific blocks and facilities corresponding to convenience and demand—“Premium,” “Value,” and “Discount” tiers of price.

Incentivize private lots and garages to participate.

Proactively engage willing private property owners to incentivize their participation in this program. (See #2, #3, and #13).

Communicate the program prior to implementation with effective outreach and messaging, including:

- An overall brand for the program.
- Marketing materials, including website/apps, social media, brochures, advertisements and service announcements.
- Ongoing workshops, trainings, and/or one-on-one meetings with downtown stakeholders.

CHALLENGE

There are over 71,500 parking spaces in downtown and yet parking availability challenges persist because:

- On-street meter rates are static at \$1 or \$1.20 per hour, even during the busiest times. **The rates do not match the level of demand or patterns of behavior.**
- On-street prices are lower than off-street prices. There is a direct **incentive for drivers to circle and hunt for** the best deal.
- As a result, the most popular on-street spaces are always taken, while others go unutilized.
- Long-term parkers use prime on-street spaces all day, **limiting access for customers and visitors.**

Ensure signage, wayfinding, and information technology systems are in place prior to rollout to effectively operate the program and serve the customer.

These tools are essential in performance-based management as they make both finding parking and payment as easy as possible. (See #6 and #7).

Monitor and evaluate parking availability on a regular basis. Adjust rates and regulations on a periodic basis to meet adopted availability targets. Specific elements could include:

- Develop and implement specific methodologies for tracking occupancy data for on- and off-street parking. Initial approaches could include manual spot counts and evolve into utilizing algorithms based on meter and payment data.
- Establish data sharing protocols, including making inventory and occupancy data “open source.”
- Issue quarterly reports on system performance for parking/city staff and key stakeholders. Develop an annual “State of Downtown Parking Report” for review by City Council and the public.

Case Study: Seattle SeaPark Performance-Based Parking

Goal: Use data to set rates so that one to two parking spaces are open per city block throughout the day.

Program Initiated: 2011

Summary: The Seattle City Council and Mayor created the structure for a data-driven process to dynamically set on-street parking prices. To do so, the City passed two Statements of Legislative Intent (SLI) providing staff authority to develop the program and added resources for parking data collection. The outcomes-based approach aspired to:

- Help retail business
- Provide more consistent parking availability
- Reduce congestion and greenhouse gas emissions

Demand for parking varies block to block, so the city established 30 distinct parking zones. The city collects parking data and measures occupancy rates between April and June on typical weekdays. The target range is 70-85%, which results in one to two spaces available per block. Pricing and regulations are adjusted to achieve this target, and demand is evaluated by time of day groupings (morning, afternoon, and evening).

BY THE NUMBERS

30 parking areas with different hourly rates

27% of hourly rates decreased in 2016

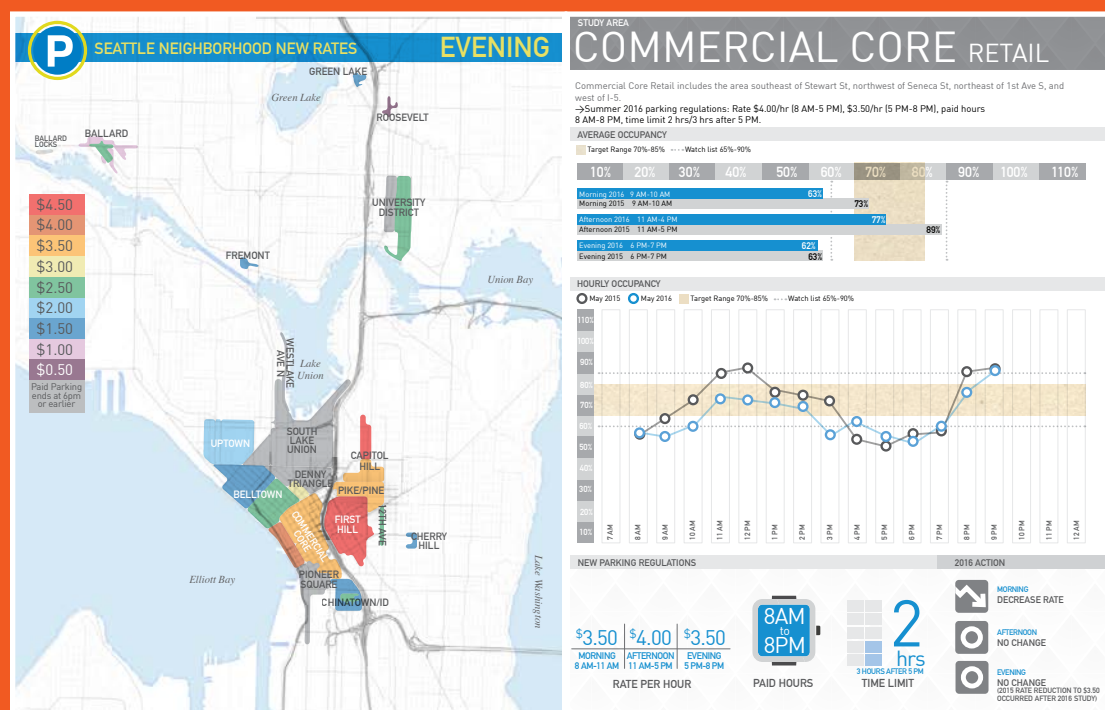
26% of hourly rates increased in 2016

The program is supported by a comprehensive signage program, which clearly communicates the parking 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.

Assessment: From 2010 to 2015, the Seattle DOT (SDOT) authorized 70 adjustments to the on-street paid parking area rates and hours of operation. Rate changes follow a simple process based on occupancy levels. Over time, more and more areas have found occupancy levels to fit within the target range throughout the day. All parking data is open source, including annual counts and meter transaction data. The SDOT releases an annual report summarizing the data within each neighborhood and city-wide.

Find out more: www.seattle.gov/transportation/parking/signs_icons.htm

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The SeaPark program in Seattle uses annual data to adjust parking rates. The program has improved parking access and convenience.

2 PILOT A SHARED PARKING PROGRAM AND FACILITATE SHARED PARKING

Strategy: **Maximize Use of Existing Parking Supply**

Cost: **\$\$\$**

Impact: ●●●●

Level of Difficulty: ●●●●

Priority: ●●●●

Coordinate with: **1, 3, 4, 6, 7, 9, 13, 15-17, 19**

Shared parking programs maximize use of existing parking facilities, reduce the overall need for additional parking, help reduce congestion, facilitate more walkable, safe, and active downtowns, and ensure more efficient use of public dollars. Better use of existing and available facilities is crucial to ongoing downtown success and growth.

Pilot a shared parking program in which the City or other entity manages private parking as “public” parking.

The City or another entity could take the lead to engage willing property owners and develop shared parking agreements in which:

- The City or other entity would directly lease parking from a private facility for use as public parking.
- The entire facility, or portion of the facility, would be open for public use. Public use could be restricted to certain hours/days, depending on tenant needs.
- To incentivize participation, the City or other entity would collect revenue during the “public” hours. Any net revenue could also be shared as part of the agreement.
- Ongoing data collection should be required to facilitate performance-based management of the downtown system.

Provide technical assistance to better facilitate shared parking.

Some private property owners may wish to share all or a portion of their parking, but would prefer to share with other private entities, such as a specific employer or business, and have a third-party operator manage their parking. To support private-to-private agreements, the City, other entity, and/or Movability Austin could proactively offer ongoing technical assistance to both parties.

Potential elements include:

- Parking database, connecting parties to each other
- Educational materials about benefits of shared parking
- Sample language and agreements
- Cost and revenue sharing information

CHALLENGE

Only 43% of Austin’s 65,000 off-street spaces are “public” at all times. Another 33% have public availability at certain times of the day, while **one in four spaces is not open to the general public at any time.** Many of these restricted spaces often sit empty even when it is busy downtown.

Property owners are currently hesitant to open up their parking to the “public” due to legitimate concerns about liability, maintenance, loss of revenue, or impacts to tenants.

The lack of easily accessible public parking has resulted in an ongoing cycle. Property owners and developers respond to parking challenges by “reserving” more and more parking for their specific tenants and then leave those spaces unused even when their tenants are not parking.

This fragmentation creates confusion and dissatisfaction with the overall parking system.

HOW MUCH PARKING NEEDS TO BE SHARED?

Not all private parking needs to be shared. Some private owners will not want to share. Partnerships should not be forced. Spaces also do not need to be shared at all times.

If even 10% of the fully or partially reserved off-street spaces can be converted for a portion of the day, that would put more than 3,500 existing spaces into the “public” system, at a fraction of the cost of new construction.

- Facility infrastructure, including baseline technology/receipt requirements
- Payment technology options
- Wayfinding and signage standards
- Insurance and liability information
- Zoning/property rights retainage
- Precedents, including reasonable comparables within Austin

Case Study: City of Sacramento

Shared Parking

Goal: Minimize new parking construction and better use existing parking facilities.

Program Initiated: 2006

Summary: As California's capital, Sacramento's downtown generates heavy daytime parking demand from government and office uses. Historically, downtown Sacramento's nighttime activity is 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 regularly unused.

To facilitate ongoing revitalization and address these challenges, the City has made a well-rounded push towards better sharing of parking. As a core tenant of the program, the City is willing to take on the short-term expenses to avoid significant long-term costs to build and operate more public parking.

A key step was an overhaul to the city's parking code in 2012, which eliminated parking minimums in the Central City, discouraged developers from building stand-alone parking, incentivized shared parking with a 25% reduction in parking for joint or complementary uses, and allowed shared parking to count toward minimum parking requirements across the city.

BY THE NUMBERS

10,000	spaces under shared agreements
40	million estimated municipal savings
1	million in revenue from shared facilities

Note: As of 2015

The City has also prioritized shared parking agreements with private owners. The parking agreements vary from facility to facility, but usually they are either "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).

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East End Garage

Owner: State of California

Number of spaces: 600 of 1,400 spaces are shared

The City began an agreement with the State in 2007 to use the East End Garage during the evenings, as demand in the area was growing due to an emerging nightlife scene. The garage was constructed in 2003 to serve a new government building; nighttime parking demand was historically low. 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.



The East End Garage is privately owned and provides monthly parking during the day for employees only. In the evenings and on weekends, the City operates the facility for the general public.

3

EXPAND THE EXISTING AFFORDABLE PARKING PROGRAM

Strategy: **Maximize Use of Existing Parking Supply**

Level of Difficulty: ●●○

Cost: \$\$\$

Priority: ●●○

Impact: ●●○

Coordinate with: **2, 6, 7, 9, 10, 13, 15-17, 19**

Expanding access to available off-street parking for employees is crucial to ongoing downtown success. The City of Austin has already prioritized this issue and recently started the *Affordable Parking Program* for employees. The pilot program offers evening/night employee parking for \$35 per month at the Waller Creek garage, which serves Austin Water employees during the day.

Passes can be shared among employees, further increasing the program's affordability. Employees can park in the evening at the garage, between 6 p.m. and 5 a.m. To support the program and increase its attractiveness, the City invested in technology, signage, lighting, and security upgrades to the Waller Creek garage.

The City should expand the Affordable Parking Program.

While only a small pilot, initial results and feedback on the program offer a positive outlook. Specific recommendations include:

- Expand the program to other key parts of downtown by identifying and securing participation from other underutilized parking lots/garages. Priority locations should be proximate to major commercial, retail, or entertainment corridors and neighborhoods.
- Evaluate options for diversifying the program to include daytime parking options.

Key considerations for program expansion include:

One option for Austin is to define “zones” or specific blocks and facilities corresponding to convenience and demand – “Premium,” “Value,” and “Discount” tiers of price.

- Authorization of additional financial resources to support expansion of the program.
- Identifying, contacting, and securing participation from more parking facilities. Initial expansion plans may focus on other city or government parking facilities with low evening and nighttime use. The program should also identify private parking that has availability.

CHALLENGE

Access to jobs is crucial to the vitality of downtown and for the financial stability of each individual. Improving overall mobility choices for employees is a fundamental tenet of this plan (see #10), as it will help reduce overall congestion and improve parking availability.

However, it is clear that many employees will need to continue to drive downtown and they need a place to park.

“For those of us who work downtown, it is very expensive to pay parking fees. There should be more reasonably priced parking areas, whether on-street or in a garage.”

- Parking survey respondent

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

- Monthly permit costs, which will likely need to vary by facility depending on demand, convenience, and operating costs. Permit costs should offer a significant discount relative to nearby rates.
- Required or negotiated upgrades to participating facilities to ensure convenient payment, access, and user safety.
- Enhanced technology to streamline permit purchase, facility access, and ongoing administration of the program as it grows.
- Expanded marketing of the program to ensure participation by both employees and property owners.

4 ENHANCE PEDESTRIAN ACCESS TO PARKING FACILITIES

Strategy: **Maximize Use of Existing Parking Supply**

Cost: \$\$\$

Impact: ●●○

Level of Difficulty: ●○○

Priority: ●○○

Coordinate with: **2, 5, 8, 14, 17**

Pedestrian safety and comfort is essential to creating a “park-once” downtown where there is active street life and all parking facilities are used optimally.

While the City has made tremendous walkability improvements on key corridors in the immediate downtown core, additional investment in other districts should be prioritized.

Identify priority walking routes to more remote parking facilities.

In general, the downtown core has high-quality pedestrian infrastructure. However, many sizeable parking facilities are a short walk away, yet are often underutilized because people do not want to walk to them due to safety, lack of shade, or inconvenience.

With focused improvements on a few select routes to garages just beyond the central core, parking demand in downtown can be more evenly distributed.

When walkability improves, parking spaces can act as part of a “park once” system where people walk from destination to destination in downtown. This allows one parking space to serve multiple uses, thus limiting the need for a space at each individual destination.

CHALLENGE

One of the biggest parking challenges in downtown Austin is the varying walkability and pedestrian comfort. In the core of downtown, sidewalks are largely complete, well-lit, offer shade, and provide a sense of security and safety. As one moves to the edges of downtown or outside of the core, the pedestrian realm begins to fray and amenities are limited.

For example, the Capitol Tower Garage advertises its facility as publicly available parking. Located along the 900 block of San Jacinto Boulevard, the closest sidewalk connections to 6th Street require a walk past office buildings without visible frontage, many curb cuts for private garage entrances, and virtually no pedestrian-scale lighting.

As a result, **while parking may be available a few blocks away from one’s destination, many do not feel comfortable or safe walking to and from more remote parking facilities.** The utility of these facilities diminishes and demand concentrates on the most proximate on-street spaces and/or lots and garages, leaving others underutilized.

49



5 EXPLORE OPPORTUNITIES TO EXPAND AND CLARIFY ON-STREET SUPPLY

Strategy: **Maximize Use of Existing Parking Supply** Level of Difficulty: ●○○○

Cost: \$\$\$

Priority: ●○○○

Impact: ●○○○

Coordinate with: **4, 7, 14, 15**

This study recommends that, where feasible, existing rights-of-way be modified to **expand the number of on-street spaces**. The primary goal is to increase access and convenience for those looking for short-term on-street parking. In addition, on-street parking can act as a physical buffer, improving comfort and safety for pedestrians.

Develop or update design guidelines to expand the supply of on-street parking spaces where appropriate.

Develop design standards based upon a typology of right-of-way, road function, safety concerns, and traffic volumes.

Any addition of parking, adjustments to lanes, or conversion to parallel/angled parking should carefully consider each street's function and each location's unique characteristics to ensure that the changes support safe travel for all modes.

50 For example, the provision of angled parking may not be appropriate on high-volume or high-speed arterials, or on major bicycle corridors, as vehicles backing out have reduced sightlines.

Identify locations for expanding on-street supply.

The next step is to determine which blocks or corridors are suitable for design changes to add on-street parking. Contributing factors include: level of commercial/retail activity and visitor demand, width of street, traffic volumes, and repaving/construction schedules.

For example, there are segments of the I-35 frontage road, just south of 4th Street, where people are already illegally parking because the width of the road allows for it. Formalizing these parking spaces would facilitate additional and safe access to the 6th Street corridor.

Phase addition of pavement markings into ongoing maintenance program. Ensure curb space markings clearly communicate the parking system to users.

Some blocks that currently allow on-street parking lack pavement markings for parking spaces. Clearly marking spaces, particularly on blocks with multi-space meters, will quickly differentiate blocks with parking and improve parking efficiency.

CHALLENGE

On-street spaces are in high demand, yet they make up only about 9% of the downtown parking supply. The vast majority of this parking is located in the Core/Waterfront districts. The Rainey Street district, by contrast, has only several hundred on-street spaces.

The City has taken steps to specifically demarcate on-street parking, yet it is inconsistently applied. Some streets, such as West 12th Street, allow on-street parking, but there are no pavement markings. Inconsistent markings can create confusion and system inefficiency.



Lack of space markings can create confusion about use of on-street spaces, especially when using multi-space meters.

Additionally, blocks with restricted parking (i.e. bus stops or commercial loading) should all be painted in a “hot” color, such as red or yellow.

Communicate the program through effective outreach and messaging.

Some cities effectively communicate the system of colored curbsides and their associated restrictions with a simplified brochure and online campaign.

6

FULLY INVEST IN AND IMPLEMENT COMPREHENSIVE SIGNAGE AND WAYFINDING SYSTEM

Strategy: **Strategically Invest in IT**

Cost: \$\$\$

Impact: ●●○

Level of Difficulty: ●●○

Priority: ●●●

Coordinate with: **1-3, 7, 16, 17, 19**

With the proposed performance-based program (see #1), signage and wayfinding will be especially important to communicating pricing, regulations, and parking availability.

Fully fund and implement 2013 Wayfinding Plan based on outcomes from 2017 pilot.

The City of Austin has already begun to plan for signage improvements. The City should implement the parking signage program recommended as part of the 2013 Downtown Austin Wayfinding Master Plan.

Coordinate with major downtown parking stakeholders. Evaluate incentive programs for private facilities.

Coordination with major parking owners, such as the State of Texas, Travis County, and UT-Austin, should be a priority. At a minimum, the City should work with these major partners to ensure that signage provides **consistent information and functionality**.

With a majority of downtown Austin's off-street parking spaces in the control of the private sector, the full impact of a program will be limited without private sector participation. While full adoption is not likely, the City can establish a successful precedent by securing the participation of just a few existing and future private facilities. As part of shared parking agreements (see #2), or as a stand-alone program, the **City should explore cost-sharing agreements to fund signage upgrades** at participating private facilities.

Ensure improvements support performance-based program implementation.

Signage and wayfinding is a core component of communicating the performance-based management program. For example, **street signage should be used to display pricing tiers and level of availability for multiple parking options so that drivers can make an informed parking decision**.

It is crucial that signage improvements are coordinated with other enhancements to parking information as discussed more in Recommendation #7.

CHALLENGE

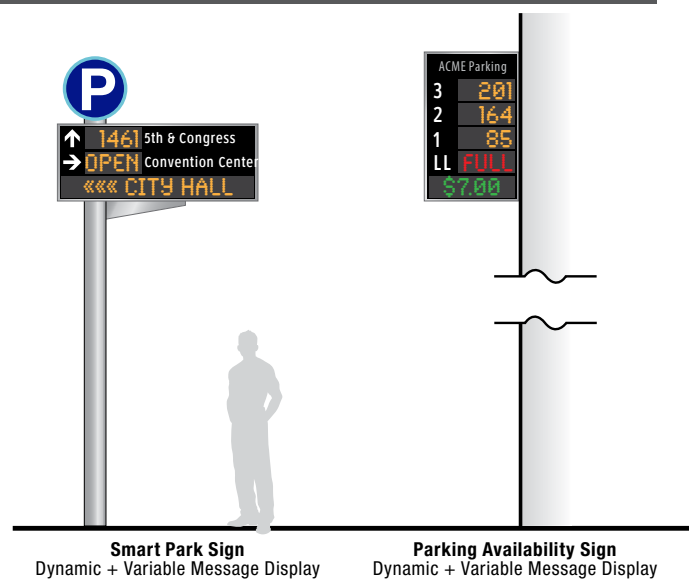
Parking signs are prevalent throughout downtown, including pricing, regulatory, and informational signs. However, signage varies from district to district and is largely inconsistent. There is also limited branding of parking assets and private operators all utilize their own signs.

Inconsistent signage can undermine communication and create confusion about a person's ability to legally park in a space. This is especially true in garages with both restricted and public parking. Lack of coordination can also result in visual clutter and reduce the attractiveness of downtown.

Finally, there is limited use of real-time signage in downtown. The City is investing in such systems, but private sector implementation is very limited at this time. This ad hoc approach limits Austin's ability to evaluate and respond to emerging and evolving technology platforms.

One of the biggest outcomes of the existing signage is that available parking can go unused, simply because motorists do not know where or how to find it.

51



The 2013 Wayfinding Plan should be fully implemented to support performance-based management and efficient use of available parking.

7 DEFINE AN OVERALL STRATEGY THAT ENSURES TECHNOLOGY TOOLS SUPPORT BROADER PARKING AND MOBILITY GOALS

Strategy: **Strategically Invest in IT**

Cost: \$\$\$

Impact: ●●○

Level of Difficulty: ●●○

Priority: ●●○

Coordinate with: **1-3, 5, 6, 8, 14, 16-18**

A strategic vision for technology solutions, specifically tied to new parking management policies, would ensure successful implementation of the City's ongoing and future information technology (IT) investments.

Formally integrate parking goals and objectives into evaluation and implementation of IT systems.

To ensure that implementation of "Path to Park" and other new platforms are coordinated, it is recommended that the City formally link technology evaluation and implementation to official parking goals and objectives. This includes:

- Adoption of guidelines for existing and future vendors to support performance-based management
- Review of existing vendor contracts and identification of areas for modification upon renewal or renegotiation

Prioritize investments in a few key areas to support performance-based management, such as:

- Real-time availability information via both on-the ground signage, advance signage, a one-stop website, and mobile phone application
- Driving directions and wayfinding to available parking
- Use of social media platforms to communicate system information and updates
- Back-end systems that provide staff with real-time understanding of inventory and regulations, as well as key enforcement metrics
- Meter and payment systems that facilitate dynamic rate changes and provide multiple payment options

Pilot and test an advance reservation system for off-street facilities. Further evaluate a reservation system for on-street parking.

Allowing motorists to reserve and pre-pay for off-street parking can enhance customer convenience, ensure that

CHALLENGE

The creation of the Parking Enterprise has allowed for substantial investments in parking IT to improve the user-experience and asset management.

City staff have a strong desire to stay ahead of the technology curve with ongoing investments. For example, the City will implement "Path to Park" in 2017, an application that will provide users with real-time information about the location of available parking, including interactive guidance.

At the same time, the amount and variety of payment, information, and technology systems in downtown can overwhelm the user and undermine their value. The systems are hard to distinguish, require their own administrative processes, and new initiatives have the potential to duplicate other efforts.

available spaces are effectively used, and reduce congestion related to the cruising for parking.

The City should first assess the impacts of performance-based management on on-street availability to determine if on-street reservations add value relative to several key issues with such a system (data accuracy, administrative burden, and equity). Application should likely be limited to certain corridors during major events and/or commercial loading spaces.

Coordinate and integrate technology systems throughout downtown.

In addition to collaboration via the Parking Working Group (Recommendation #16), other avenues to facilitate coordination include subsidized or cost-shared upgrades via shared parking agreements (Recommendation #2), the recommended expansion of the Affordable Parking Program (Recommendation #3), and/or revisions to business license requirements that stipulate certain conditions, such as requirement of a receipt for all parking transactions.

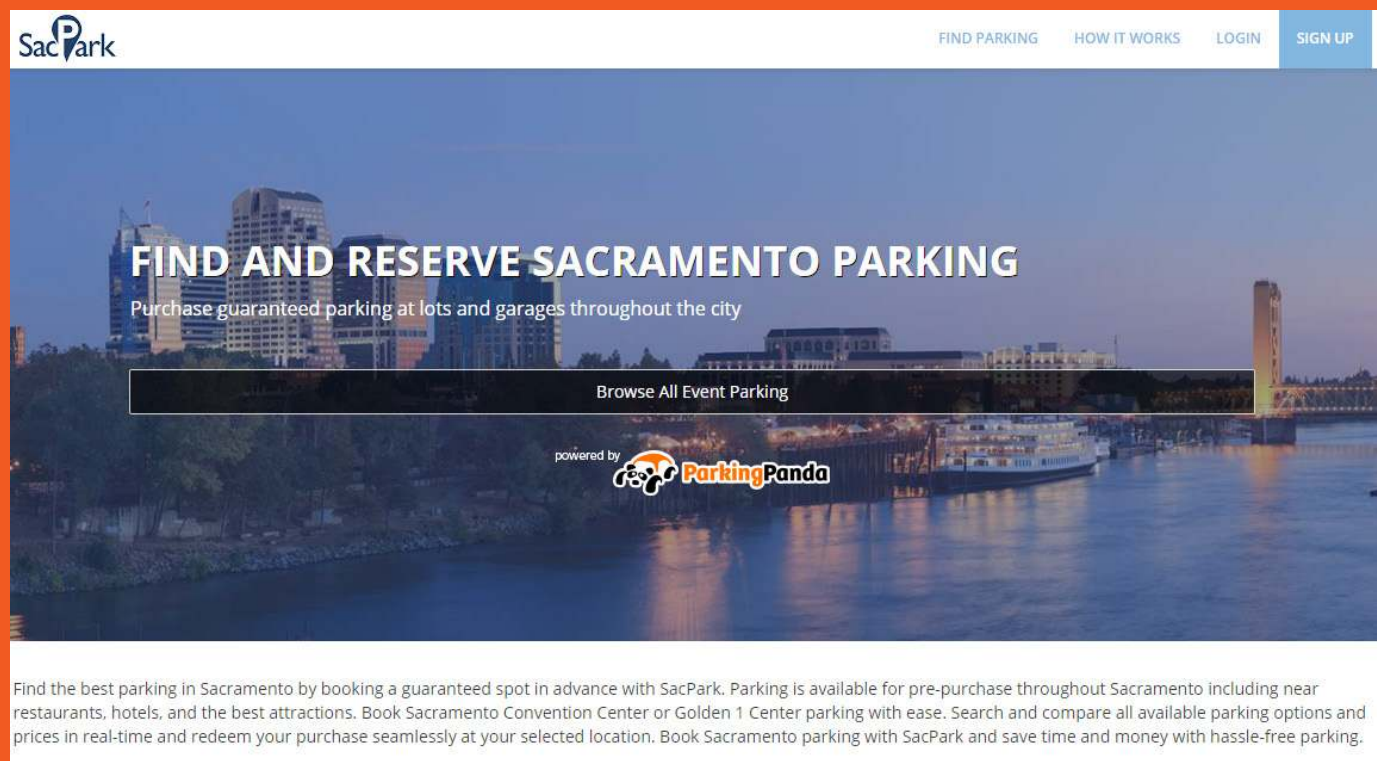
Case Study: City of Sacramento Parking Technology

Goal: Better utilize technology to facilitate dynamic management of the parking system and improve the overall customer experience.

Program Initiated: 2017

Summary: Downtown Sacramento is undergoing a tremendous transformation with the opening of a new downtown multipurpose arena. To help the residents of Sacramento locate available parking, the City invested in several parking management tools, including Parkeon's Path to Park. The Path to Park application is currently in implementation and due for public release in 2017. It will support other tools, such as ParkingPanda, to provide users with a number of ways to find parking. These tools include:

- On-street guidance pictograms showing high, medium, or low probability of open parking
- Off-street location "tap on" feature to obtain information about the facility
- On-street "tap-on" feature to get current rates, time limit, restrictions, etc.
- Future off-street parking availability
- Turn-by-turn navigation system
- Purchase parking in advance for a City-operated off-street parking facility
- Process mobile payment at parking facilities using the vehicle's license plate as identification
- Website where the user can create an account and browse city events
- Allow real-time inventory management, with the ability to add, update, or remove off-street facilities
- Allow real-time dynamic pricing, with the ability to change pricing on the fly for off-street facilities
- Provides various out-of-the-box analytics, dashboards, and reports
- Provides a mechanism for the City to download the data for offline reporting
- Dashboards to monitor the real-time activities



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8

CONTINUE TO REINVEST PARKING REVENUES INTO DOWNTOWN AND EVALUATE ALLOCATION OF ADDITIONAL REVENUE TO MULTIMODAL IMPROVEMENTS

Strategy: **Improve Mobility Options to Reduce Parking Demand**

Cost: \$\$\$

Impact: ●○○

Level of Difficulty: ●○○

Priority: ●○○

Coordinate with: **1, 4, 7, 9-11, 16, 18, 19**

The City should increase and diversify allocation of parking revenue to investments that will improve overall mobility in downtown, such as:

- Shared parking initiatives to improve access to parking for the general public (Recommendations #2 and #3)
- Further evaluation of new public parking, as feasible and needed (Recommendation #19)
- Partnerships with Capital Metro to support additional investment into enhanced transit service in downtown. Implementing Connections 2025, which prioritizes rapid and frequent connections to downtown, should be a primary focus
- Coordinating parking investments that capitalize on existing transit initiatives, such as Capital Metro rapid bus routes
- Support investment in transit stations and stops to ensure their visibility, convenience, and safety can attract new riders
- Further evaluation and planning of a downtown circulator shuttle (Recommendation #9)
- Improving pedestrian access, especially to parking outside the core (Recommendation #4)
- Fully fund and implement downtown wayfinding plan (Recommendation #6)
- Enhancing bicycle access, including bike parking and protected bike lanes
- Operational funding for Movability Austin to promote mobility investments that encourage employees to bike, walk, and take transit (Recommendations #10 and #12)
- Enhanced enforcement and event management (Recommendation #15 and #17)
- Marketing and communication of parking system and mobility programs

CHALLENGE

Parking is about more than vehicle storage; it is about access and mobility. For every person that uses another mode, there is one more parking space available for someone who does drive. Furthermore, everyone who parks is a pedestrian at some point on his or her trip.

Performance-based management may create additional parking revenue in the future, but that is not the primary goal (Recommendation #1). The Parking Enterprise is already a best practice, as it reinvests 40% of net parking revenue directly into multi-modal and parking improvements downtown. However, this study includes significant new programs that will require additional resources.



The City of Walnut Creek, California, clearly communicates how parking revenue is used to support overall downtown access and vitality.

With any supplementary parking revenue for performance-based management, it is vital to prioritize reinvestment back into the downtown, not only for new parking supply, but also to fund programs and strategies that improve overall access.

- Technology upgrades to parking system (Recommendation #7)
- Other streetscape and safety improvements, such as additional policing, ambassador programs, or street cleaning

9 EVALUATE A PARK-N-RIDE OR CIRCULATOR SHUTTLE TO IMPROVE TRANSIT CONNECTIONS AND ACCESS TO REMOTE PARKING

Strategy: **Improve Mobility Options to Reduce Parking Demand**

Cost: \$\$\$

Impact: ●●○

Level of Difficulty: ●●●

Priority: ●○○

Coordinate with: **2, 3, 8, 16, 17**

The City, Movability Austin, and the Downtown Alliance should work closely with Capital Metro to improve downtown transit connections to underutilized parking assets which in turn will distribute parking demand.

Evaluate a redesigned park-n-ride or circulator shuttle.

Downtown circulators are challenging to operate productively—by default they actually serve few destinations and often require transfers to travel elsewhere within the system.

Establishing a new circulator shuttle will have to overcome the previous challenges that led Austin to eliminate its free “Dillo” shuttle in 2009. Of particular importance are:

- **Operating model.** Options include Austin’s existing transit agency, Capital Metro, a private operator, or a hybrid of the two.
- **Fare structure.** Heavily subsidized service will require additional funding sources.
- **Funding mechanism.** Options include federal, state, and/or local funds, private funds pooled from downtown businesses/employers, contributions from private sources, parking revenue, or likely a combination of all of the above.

Intentionally link transit to parking and other transportation modes.

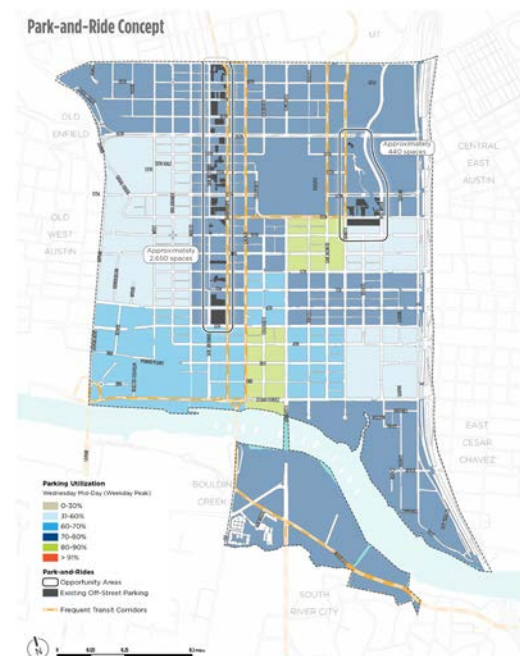
Wayfinding and marketing materials should clearly link transit, parking, and other facilities. Examples include:

- Provide transit information with the Parking Enterprise’s Affordable Parking Program. For example, marketing materials should highlight that Routes 4 and 17 provide service from the Waller Creek garage into the heart of downtown. Capital Metro’s maps should also highlight the garage and promote the program.
- Use on-the-ground wayfinding to enhance connections between transit services and parking lots/garages.

CHALLENGE

Parking utilization and turnover data show that many prime on-street parking spaces are full and used for long-term parking, while many off-street spaces outside the core remain empty throughout the day. In fact, almost 20% of downtown employees who responded to the online parking survey park on-street. Observations indicated that most people were parking for much longer than posted time limits.

Transit can help alleviate and redistribute parking demand. Capital Metro provides transit service both in downtown Austin and from several park-and-rides outside downtown. In addition, Capital Metro’s service provides frequent north-south connections on the western side of downtown, as well as east-west connections along 11th Street. These services are an asset to downtown, but are not directly linked to longer-term parking facilities located within downtown.



10 SUPPORT COMPREHENSIVE AND COORDINATED IMPROVEMENTS IN EMPLOYEE-FOCUSED MOBILITY SERVICES AND PROGRAMS

Strategy: **Improve Mobility Options to Reduce Parking Demand**

Cost: \$\$\$

Impact: ●●●

Level of Difficulty: ●●○

Priority: ●●●

Coordinate with: **3, 8, 9, 12, 16, 18**

Improving mobility choice does not mean that every employee has to stop driving. In fact, a shift in behavior for a fraction of employees can have a significant impact on reducing parking demand and congestion.

Expand and diversify the TMA's role as a one-stop mobility and parking resource for employers.

Formalize Movability Austin as a shared parking resource to support employee access to underutilized parking for example:

- Create a shared parking database
- Develop and share templates for shared parking agreements (Recommendation #2)

Expand information and mobility services to include:

- Formal on-boarding program and survey
- Collecting/reporting parking and employee travel survey data
- Clearinghouse connecting employers with emerging mobility platforms and incentive programs
- Enhanced travel training and analysis for employees
- Branding and marketing services

Update website, marketing, and messaging to be more interactive and dynamic. For example:

- Provide an interactive map of available parking resources for employers and employees
- Facilitate transit pass purchases
- Pursue "certification" program for employers who provide TDM programs and services
- Continue and expand events like "Austin Don't Rush Day" and "Austin Work from Home Day"
- Create (or update existing) "TDM Toolkit" for employers with clear implementation steps

Prioritize allocation of parking revenues to TDM programs, such as:

- Free or subsidized transit passes

CHALLENGE

About 80% of downtown employees drive alone to work, a rate higher than that of the City and Travis County. Survey responses indicate that almost 75% of downtown employees receive free or subsidized parking, yet few downtown employers offer comprehensive mobility programs or incentives to encourage travel by other modes.

Movability Austin, the Transportation Management Association (TMA) serving downtown, is working hard to create balanced mobility programs and services. Movability Austin's staff works with approximately 20 employers per year to create employee-focused mobility plans. At this time, Movability Austin has limited resources to significantly expand the program and TMA membership is voluntary, which minimizes the impact of the programs.

- Ongoing operational funding for the TMA
- Subsidized shuttle, carpool, guaranteed ride home, or shared mobility programs
- Marketing or branding services
- Support City's Smart Trips Program
- Bicycle/pedestrian safety and encouragement programs

Support parallel efforts to require TDM programs for new development (Recommendation #12). Potential elements include:

- Require membership in the TMA
- Require a baseline set of programs or services and/or a flexible menu of options. Incentivize and reward employers who go beyond baseline measures.
- Require ongoing monitoring and reporting of parking and employee mobility metrics

Case Study: Boulder EcoPass

Goal: Reduce vehicles miles of travel and greenhouse gas emissions, increase transit mode share, improve access to transit, and provide a financially feasible transit pass program.

Program Initiated: 1994

Summary: The program provides an unlimited pass for transit services throughout the Denver and Boulder regions. The program started as an employer-provided pass program and now provides passes for college and university students (CollegePass), individual neighborhoods (NECOPass), and for downtown employees (Downtown EcoPass).

Employers pay a flat rate per employee depending on the location of the business and employee count. The City also offers a free Downtown EcoPass for full-time employees located within the Central Area General Improvement District (CAGID). The employer-based EcoPass is subsidized by the city for the first few years and is then covered fully by the employer. The NECOPass is subsidized by the city

BY THE NUMBERS

60% of downtown workers have an EcoPass. Employees with an EcoPass are **10x more likely** to use transit.

(approximately 30%) by a dedicated transportation tax and a portion of the city's Climate Action Plan funds.

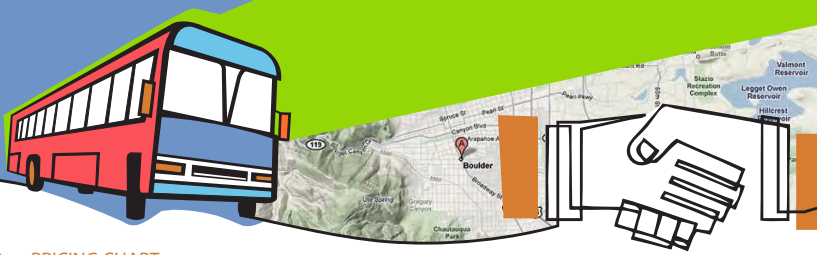
One key aspect with the Downtown EcoPass is the re-investment of parking dollars back into the community. Within the downtown area, the CAGID manages paid on-street parking and properties are taxed to provide shared structured parking and parking management services. The Downtown EcoPass is funded by the revenue from paid parking in the CAGID. By creating a district to manage all parking as a public system, developers do not need to build as much parking into their projects.

The City is analyzing the feasibility of expanding the program to city and countywide residents, employees, and university students.

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EcoPass Central

PRICING CHART and SERVICE LEVELS MAP



2017 EcoPass PRICING CHART

Zone	Number of Employees	Contract Minimum Per Year	Price per Employee per year				
			1-24	25-249	250-999	1,000-1,999	2,000+
A	1-10	\$ 1,150					
	11-20	\$ 2,299					
	21+	\$ 3,448	\$ 98	\$ 85	\$ 75	\$ 64	\$ 60
B	1-10	\$ 2,108					
	11-20	\$ 4,215					
	21+	\$ 6,321	\$ 209	\$ 189	\$ 173	\$ 160	\$ 151



MISSING: Cranky, late employees.

Since he signed his company on with the RTD Eco Pass bus pass program, this man's employees have been unusually chipper and on-time in the morning.


Though he now must share the chocolate donuts in the break room in the mornings, he's quite pleased that he found one more benefit to give his employees. After all, a sugar rush doesn't quite drive the bottom line as much as happy, stress-free workers.

What are you missing by not offering the Eco Pass?
Find out by calling 303.299.2132 or visit RTD-Denver.com

Bus. Bike. Walk.
It's the Boulder way to GO.

50% discount available for first-time Eco Pass companies within the city of Boulder.

© 2007 GO Boulder



Boulder found that it is cheaper to pay for downtown employee transit passes than build, operate, and maintain one new parking structure.

11 REVISE THE ZONING CODE TO BETTER SUPPORT WALKABLE, MIXED-USE DEVELOPMENT WITHIN THE DOWNTOWN STUDY AREA

Strategy: **Simplify and Leverage the Zoning Code**

Cost: \$\$\$

Impact: ●●○

Level of Difficulty: ●○○

Priority: ●●○

Coordinate with: **8, 12, 13, 16, 18, 19**

This recommendation offers high-level concepts to evaluate in the context of CodeNEXT, a comprehensive update to the Land Development Code (LDC). Recommendations are specific to downtown, but could be evaluated for application citywide.

Eliminate parking minimums (except for single-family residential) throughout the downtown.

Eliminating minimums does not mean that new parking will never be built. Instead, it provides developers flexibility to build according to market demand.

Expand parking maximums throughout the downtown.

The current code has flexible parking maximums, which should be extended beyond the DMU and CBD districts. Developers should be allowed to exceed the maximum, but only if the additional amount is shared and conditioned to certain outcomes (Recommendation #13).

Exempt changes of use from providing additional parking.

The code could establish a size threshold below which development would be exempt, such as 10,000 square feet.

Incorporate policy levers to improve development and tenant flexibility to produce context-sensitive design.

- Allow for parking in-lieu fees, enabling developers to pay a per space fee instead of providing the parking on-site. Use revenue to fund shared parking supply.
- Reduce maximums near transit stations
- Require “unbundling,” allowing residents to pay only for the parking they need
- Where feasible, Austin should condense parking land use categories

Incorporate site-specific requirements related to all mobility options.

- Link bicycle parking requirements to the size of a given use, and include parking spaces per the Transportation Criteria Manual (TCM)

CHALLENGE

Downtown Austin is bustling with new and proposed development. Large, undeveloped parcels are all but gone in downtown, and most future development will utilize existing buildings and/or smaller parcels. Flexible and innovative management of parking and mobility in the zoning code will be crucial to support this type of infill development.

The existing Land Development Code (LDC) includes many industry best practices related to parking, yet also offers opportunities for improvement and revision. For example, the parking maximums are easy to exceed and decoupled from larger goals.

- Require car-share and electric vehicle spaces in proportion to the size of the use, phased down above a certain number of spaces

Incorporate design requirements that support a walkable environment.

- Provide adequate setbacks from the building envelope, particularly on pedestrian-oriented street frontages
- Limit driveways and driveway width along walkable corridors
- Provide high-visibility pedestrian accommodations across curb cuts
- Encourage joint access to multiple lots from the street
- Expand garage “wrap” requirement throughout downtown
- Plan for a changing mobility environment.
- Incorporate TNC drop-off areas at the curb. Minimize conflict with transit, pedestrian, and/or bicycle activity.
- Incentivize the design and construction of parking that can be converted to other active uses

12 REQUIRE PROVISION AND ENFORCEMENT OF TRANSPORTATION DEMAND MANAGEMENT (TDM) FOR ALL NEW DOWNTOWN DEVELOPMENT ABOVE A CERTAIN SIZE

Strategy: **Simplify and Leverage the Zoning Code**

Cost: \$\$\$

Impact: ●●●

Level of Difficulty: ●●○

Priority: ●●●

Coordinate with: **10, 11, 13, 16, 18, 19**

This recommendation offers high-level concepts to be evaluated in the context of CodeNEXT, the comprehensive update to the LDC.

Establish minimum required TDM elements for all new development in downtown.

TDM requirements, supported by ongoing monitoring, can improve mobility choice and reduce parking demand. Requirements should vary across downtown to account for differences in land use mix, density, and multimodal access. Potential elements include:

- Transportation Management Association (TMA) membership (Recommendation #10)
- On-site transportation coordinator to implement programs, market services, and coordinate with the TMA
- Pre-tax commuter benefits for employees
- “Unbundle” parking from residential and commercial leases
- Whole or partial subsidies for car share and bike share
- On-site bike repair stations, showers, and lockers
- Subsidized ridesharing and priority rideshare parking
- Individualized marketing (i.e. Smart Trips Program)
- Monitoring, reporting, and enforcement

Prioritize additional TDM measures as part of trip mitigation requirements.

If a project will generate significant new vehicle trips, TDM strategies should be prioritized to mitigate traffic impacts. In addition to the elements described above, some of the more common and effective TDM programs include:

- Parking pricing and performance-based management
- Parking cash-out program, where employers who pay for employee parking also offer an equivalent cash payment to employees who do not drive

CHALLENGE

In order to achieve its multimodal vision and reduce congestion while embracing growth, the City and its downtown partners should leverage new growth to enhance mobility choices for employees, residents, and visitors.

The existing Land Development Code (LDC) includes several industry best practices related to parking. However, the LDC is largely silent on TDM as a policy lever and Austin has yet to capitalize on proven programs as a means to incentivize more trips by walking, biking, ridesharing, or transit.

Furthermore, most downtown employers or property owners do not offer mobility services and few are thinking comprehensively about parking or mobility as part of their projects. There is a missed opportunity to improve the parking system and support downtown Austin’s multimodal vision.

- Ride share matching service
- Guaranteed ride home program that provides a “back-up” ride to employees who do not drive alone to work
- Subsidized transit pass program
- Bike giveaway for employees/tenants who commit to biking to work for a minimum number of days per week or month
- Shuttle service, as a means to reduce employee driving, provide additional employee benefits, and increase employee productivity

Case Study: San Francisco SHIFT TDM Ordinance

Goal: Reduce the vehicle miles traveled associated with development projects.

Program Initiated: 2017

Summary: The TDM Ordinance stems from the extreme population growth San Francisco is experiencing. The program is one of three components of the Transportation Sustainability Program, including having development invest in the region's transportation system and improving environmental review to include priorities like reducing greenhouse gas emissions.

The program provides developers flexibility in meeting TDM requirements by allowing the developer to choose the right combination of TDM measures that will work best for reducing vehicle trips associated with their project. Developers choose from a menu of different on-site TDM measures, each worth different point values based on the relative impact and effectiveness at reducing vehicle trips. For example, providing showers for bike commuters is worth one point, while reducing on-site parking is worth up to 11 points. Each project is required to meet a minimum point threshold based on project size, characteristics, and location.

BY THE NUMBERS

10,000+ square feet non-residential projects





10+ residential units

Exempt: 100% affordable housing projects; parking garages and parking lots

Method: The program is built into the development application, and developers are required to select the measures they are planning on utilizing before they file a development application. This allows planning staff an opportunity to comment or recommend measures for a project prior to starting the development application process.

Assessment: The program is enforced via an inspection before occupancy is certified, ongoing monitoring requirements, and a program audit every three years. Enforcement is funded through program fees—developers must pay an initial fee of \$6,000 and an annual fee of \$1,000.

Find out more: <http://sf-planning.org/shift-encourage-sustainable-travel>

 CAR-SHARE	CSHARE-1	Car-share Parking & Membership: Options A - E	Several options for providing car-share parking and memberships, more points given for higher levels of participation	●●●●●	1 - 5
	DELIVERY-1	Delivery Supportive Amenities	Facilitate deliveries with a staffed reception desk, lockers, or other accommodations	●	1
 DELIVERY	DELIVERY-2	Provide Delivery Services	Provide delivery of products (groceries) or services (dry cleaning)	●	1
	FAMILY-1	Family TDM Amenities: Options A - B	Provide storage for car seats near car-share parking, cargo bikes and shopping carts	●●	1 - 2
 FAMILY	FAMILY-2	On-site Childcare	Provide on-site childcare services	●●	2
	FAMILY-3	Family TDM Package	Provide a combination of car-share parking and memberships and family amenities	●●	2
 HIGH OCCUPANCY VEHICLES	HOV-1	Contributions or Incentives for Sustainable Transportation: Options A - D	25, 50, 75, or 100% subsidies for sustainable transportation use (e.g. Muni fast pass), more points given for higher rate of subsidy	●●●●●●●●	2 - 8
	HOV-2	Shuttle Bus Service: Options A - B	Provide shuttle bus services, more points given for more frequent service	●●●●●●●●●●●●	7 - 14

San Francisco's SHIFT TDM Ordinance provides developers flexibility to choose from a menu of TDM options to best suit their project's needs and resources.

13 REVISE THE ZONING CODE TO INCENTIVIZE SHARING OF PARKING

Strategy: **Simplify and Leverage the Zoning Code**

Cost: \$\$\$

Impact: ●●●

Level of Difficulty: ●○○

Priority: ●●●

Coordinate with: **2, 11, 12, 16**

This recommendation offers high-level concepts to be evaluated in the context of CodeNEXT, the comprehensive update to the LDC.

Revise the zoning code to incentivize the provision of shared, public parking within private downtown developments.

The City of Austin should evaluate revisions to the LDC that leverage private development to create a greater number of “public,” shared parking spaces. In short, developers could exceed the parking maximum ratio in downtown, provided the increment above the maximum is publicly available.

This would require that the LDC define shared versus reserved parking, establish different maximums for each, and allow parking provided in excess of the maximum, as long as it is shared. “Reserved” parking would be defined as parking specifically designated for on-site tenants and their visitors. “Shared” parking would be defined as parking open to the general public and not designated to a specific user.

Additional criteria could stipulate that the public supply be designated by appropriate signage and markings; available for at least a certain number of total and contiguous hours within a 24-hour period; and managed according to a management plan that identifies the hours, rates, and minimum technology systems.

CHALLENGE

Downtown parking is managed by not just the City of Austin, but also a large mix of public and private entities. In fact, 63% of off-street parking is operated by the private sector, and only 7% of off-street spaces are managed by the City.

Count data reveal that even during the busiest times, there are many off-street spaces that go unused due to parking restrictions. Other spaces often remain unused simply because would-be parkers cannot easily find them.

The status quo is simply not providing enough publicly available spaces that are easily accessible to the average employee, resident, or visitor. Better sharing of parking supply will also simplify the development of smaller parcels, where building new parking can be financially or physically impossible.

Similar code language in vibrant downtowns have enabled developers to build an adequate amount of parking for their tenants while also providing additional parking above the maximum to support the shared, public system.

In addition, it is recommended that Section 25-2-581 and 25-2-589 of the Land Development Code be modified to clarify that the provision of shared parking does not require a Conditional Use Permit.

61

THE VALUE OF SHARED PARKING

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

Shared parking benefits multiple user groups. First, allowing less parking to be built saves up to \$20,000 per space in construction costs. Cheaper development costs then facilitate lower sale or lease costs for would-be homeowners or renters. Second, well-crafted shared parking agreements can allow property owners to recognize significantly more return per space on their investment.

Third, shared parking is the only way to make most small downtown parcels viable for development. Austin's true economic potential will only be unlocked when it can provide an easily accessible pool of shared, public parking.

Finally, shared parking will better enable growth without exacerbating congestion problems. Building reserved parking for every use results in system inefficiencies and will ultimately induce more vehicle trips on Austin's congested downtown streets.

Case Study: Arlington County's Columbia Pike Code

Goal: Better utilize off-street parking and develop fewer stand-alone public parking facilities.

Program Initiated: 2011

Summary: 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.

Outcomes: The Columbia Pike code is 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

BY THE NUMBERS

min 1.125 spaces per residential unit, .125 spaces must be shared

max 1 space per 1,000 sf of non-residential building can be reserved parking

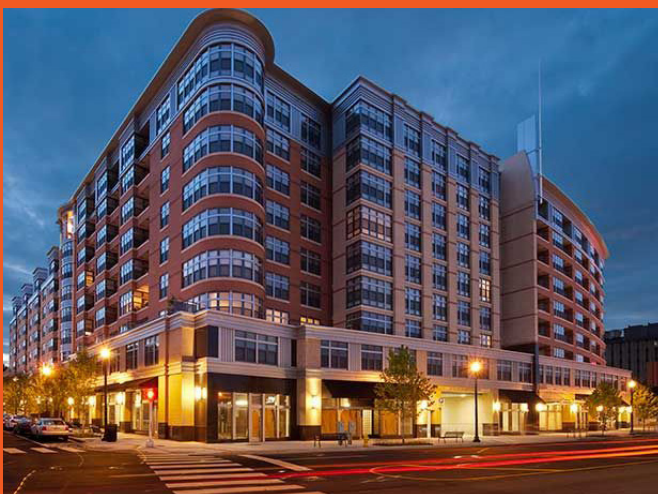
max 1 space per residential unit can be reserved parking

Sites under 20,000 sf have no minimum parking requirement

on reserved parking. Each project's Certificate of Occupancy required a County-approved parking management plan for all parking credited as shared/public 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. These spaces are located on the uppermost levels of the parking garage.

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.



Avalon Columbia Pike (left) and Penrose Square (above) are mixed-use projects that provide and operate public parking.

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

14 CREATE DYNAMIC INVENTORY AND ADJUST ON-STREET REGULATIONS TO MAXIMIZE FLEXIBILITY AT THE CURB

Strategy: **Enhance Parking Administration and Operations**

Cost: \$\$\$

Impact: ●○○○

Level of Difficulty: ●●○

Priority: ●○○○

Coordinate with: **1, 4, 5, 7, 15, 17**

The Austin Transportation Department (ATD) has is working to create a comprehensive database of its on-street parking and regulations. Using this study as a start, off-street facilities should also be integrated to allow for a real-time understanding of all downtown parking by regulation type and time of day/week.

Create a database and tool to enable dynamic understanding of inventory and regulations.

A digital version of the database (created in-house or via a third-party vendor) might include:

- Canvassing downtown to digitally record on-the-ground parking inventory, signage, and regulations
- Developing an online interface for staff to easily access and update parking information
- Staff training and capacity building to be able to update and maintain the database in the field
- Integration with existing work order processes, so that changes are updated automatically
- Integration into complementary platforms providing real-time parking availability information

Review and calibrate loading zone distribution.

The City should use its updated inventory to determine what percentage of businesses have access to an on-street loading zone by time of day. ATD can update on-street regulations to ensure equal distribution and mitigate loading hot spots (i.e. event and musician loading) by location and time.

Continue to encourage and enhance valet parking. Ensure consistent regulations among providers.

Evaluate universal valet service that allow motorists to drop their vehicle off at one stand and pick up at any other stand in the area.

The City should not set private valet rates, but could offer incentives, such as reduced permitting fees, if prices reflect performance-based management.

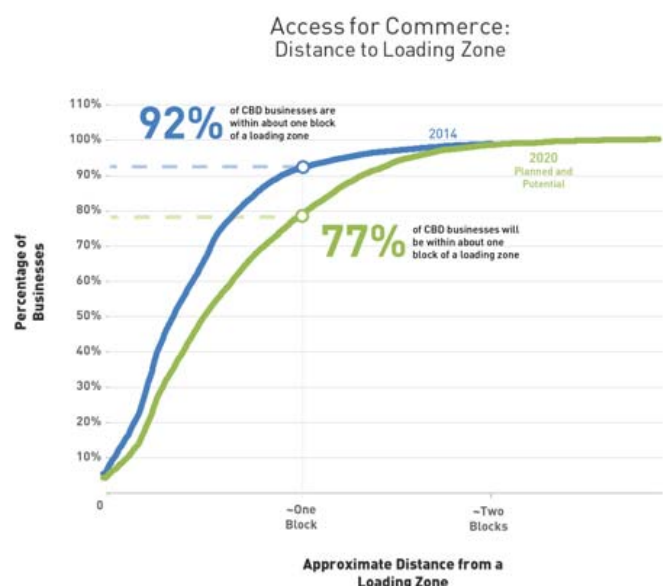
The current valet fee of \$0.60 per space, per hour is below market rate. The City should evaluate higher rates for premium spaces in the core or on key corridors.

CHALLENGE

The flexibility of Austin's on-street regulations supports access for many uses. However, some know that on certain blocks they can dodge the time limits, while others struggle to figure out where they can park, for how long, and when. Hundreds of spaces change regulation by time of day, further complicating the process.

In particular, management of special events and loading presents unique challenges. Downtown events frequently compete for limited parking and loading curb space. Moreover, parking demands vary between events. The current management system has a high administrative burden, from physically limiting parking and “bagging” meters to processing loading permits.

Additional tools to capture parking information would facilitate dynamic management of the system, especially as downtown accommodates more event and loading activity each year.



A comprehensive inventory of on-street spaces and regulations enabled Seattle to assess different future parking scenarios and their impacts on loading access in downtown.

Case Study: Boston Street Atlas

Goal: Create a data-driven parking management tool to improve decision making for both the City and the public.

Program Initiated: 2015

Summary: The Boston Street Atlas aims to create a database with existing parking information and provide a tool to keep the database up to date as work orders are made in the field. The database will provide a framework for future parking and curbside management efforts.

The team is in a beta testing phase with a third-party vendor. Data collectors wearing GPS units canvassed a section of the city to collect data on regulations, signage and signage location, and parking space counts. The team is also working on a back-end analysis that will address issues such as no parking zones that are measured from the intersection points of sidewalk curbs.

BY THE NUMBERS

200,000

estimated on-street parking capacity

8,000

metered spaces

64

Case Study: New York City DOT Parking Blueprint

Goal: Development of a Curbside Management Blueprint to provide a parking management plan for the future.

Program Initiated: 2015

Summary: New York City DOT's Parking Blueprint initiative is broader than the Boston Street Atlas efforts. The Parking Blueprint also collected occupancy data, reviewed policies, and identified gaps in an effort to develop a Curbside Management Plan. However, the data collection and inventory synthesis played a key role in plan development.

With a more digital approach to data collection, NYC DOT is in the process of inventorying its curbside regulations as well. The analysis relies on publicly available data through NYC OpenData, as well as DOT datasets. To create the inventory, the team used a Geographic Information System (GIS)-based technology to assign different block faces to different regulations. This required an understanding of signage, specifically which section of a given block signage may apply. The team identified a methodology based on available resources that creates as accurate a database as possible.

The screenshot shows the NYC OpenData website interface. At the top, the 'NYC OpenData' logo is on the left, and navigation links for 'Home', 'Data', 'About', 'Learn', 'Alerts', 'Contact Us', 'Blog', and a search icon are on the right. A 'Sign In' button is also present. Below the navigation bar, the main heading is 'Parking Regulation Locations and Signs', with a 'Transportation' tag. To the right of the heading are buttons for 'Manage Dataset', 'Share', and a menu icon. The main content area contains a paragraph: 'The Parking Regulations are drawn from DOT's traffic sign database, STATUS, which is used by DOT in managing its inventory of over one million traffic signs in New York City. The database keeps track of the description, location and installation dates for DOT traffic signs. The Locations and Signs datasets need to be used in combination. The data in files can be linked, to find an... [More](#)'. On the right side of this content area, there is a section with 'Updated August 18, 2016' and 'Data Provided by Department of Transportation (DOT)'.

15 DEFINE AND IMPLEMENT ENFORCEMENT STRATEGY TO SUPPORT PERFORMANCE-BASED MANAGEMENT. ALLOCATE SUFFICIENT RESOURCES TO PARKING ENFORCEMENT.

Strategy: **Enhance Parking Administration and Operations**

Cost: \$\$\$

Impact: ●●○

Level of Difficulty: ●●○

Priority: ●●○

Coordinate with: **1-3, 5, 14, 17**

No one wants a parking ticket, yet regulations must be enforced if the parking system is to function. If enforcement is administered consistently, fairly, and with a strong customer focus, complaints can be minimized and users will recognize how enforcement supports overall parking access.

Define and implement enforcement strategy to support performance-based management (Recommendation #1).

Specific actions for the City could include:

- Adopt **specific guidelines** for downtown parking enforcement, articulating that the primary goal is to meet the adopted parking availability targets
- Evaluate **enforcement zone boundaries**, ensuring they align with performance-based pricing zones
- During rollout of the performance-based program, implement a “**grace**” period in which warnings are issued
- Update guidelines for enforcement officers that formally prioritize an “**Ambassador**” approach in which officers also provide mobility information to the public
- Review citation data and identify key trends. Define **new metrics and benchmarks** for enforcement, including:
 - Total citations issued
 - Citations by type/block/zone/facility
 - Complaints and appeals requested and won by block/zone/facility/issuing officer
 - Scofflaws cited and collection rate
- Create **structured routes** to ensure consistent enforcement, allowing the City to monitor performance-based analytics
- **Increase parking fines** to ensure compliance

CHALLENGE

Austin's parking enforcement staff are dedicated to their jobs and do admirable work under tough conditions. The City has provided strong training and equipped its officers with the tools necessary to monitor parking.

However, enforcement is inconsistently applied throughout the downtown area. Staffing is also a challenge, which can lead to a lack of coverage and ongoing issues with compliance.

Current citation rates are often lower than off-street parking, doing little to discourage illegal parking. Finally, there appears to be no adopted goals, objectives, or metrics to evaluate and guide enforcement practices.

Data observations at five locations confirmed clear and consistent violations of time limits. For example, the average length of stay on East 6th Street was 166 minutes, exceeding the two-hour limit by 38%. In fact, multiple vehicles remained parked in the same spot for over seven hours at a time.

- Ensure the City has legal **authority to tow and/or boot vehicles**. This is a measure of last resort, but should be an option available to the City.
- Clearly **communicate enforcement goals and policies** on the city website and at parking facilities

Allocate sufficient resources to parking enforcement.

The City should conduct a workforce management review to ensure there are enough officers to enforce parking downtown. A structured plan should be developed to ensure adequate coverage seven days a week (including evenings) and for special events.

In addition, the City should implement an ongoing training program to reinforce parking enforcement policies, including compliance priorities, such as when to issue a warning notice versus a citation.

16 ESTABLISH A FORMAL COLLABORATION BETWEEN THE CITY AND PARKING STAKEHOLDERS

Strategy: **Enhance Parking Administration and Operations**

Cost: \$\$\$

Impact: ●●○

Level of Difficulty: ●○○

Priority: ●●●

Coordinate with: **1-3, 6-13, 17, 18, 19**

A formal Parking Working Group (PWG) is recommended to facilitate and implement parking reforms and to advise the City as challenges arise.

Establish a formal collaboration between the City and parking stakeholders.

The City and/or Downtown Alliance are likely candidates to initiate the PWG, formalize its membership, and lead the group. One option to govern the group is an inter-local agreement. Specific PWG initiatives could include:

- **Support performance-based management program (Recommendation #1).** Help to guide parking rates, integrate private facilities, and liaise with businesses and employers. Equally as important, members of the PWG should distribute parking reform information within their given networks.
- **Support shared parking programs and policies.** Educate and market shared parking efforts (Recommendations #2 and #3), including distribution of shared parking agreements and utilization information. Work with City partners to help identify willing parties and negotiate shared arrangements.
- **Support coordinated approach to technology and emerging mobility.** The PWG can help inform efforts to coordinate payment and information technology (Recommendation #7). The PWG should also play a key role in developing guidelines for emerging mobility solutions (Recommendation #18).
- **Incentivize private owners to improve and coordinate signage and information.** Motorists are often unaware of which parking facility is publicly available, which limits public access. The City already has institutional capacity to maintain parking assets, both in knowledgeable staff as well as equipment. Trading these services in kind—such

CHALLENGE

The number of people and organizations that contribute to parking management is substantial, ranging from major state and regional institutions to private parking operators to businesses. While the Downtown Alliance is a full-time advocate on key issues, parking cannot always be front and center.

A key to unlocking Austin's parking system is better access to existing off-street parking. Austin's off-street parking could likely accommodate significantly more vehicles, but a variety of issues prevent this.

Recommendations #2, #3, and #13 provide specific actions to improve shared parking. However, to maximize these efforts a formal collaboration is needed between the City, State of Texas, University of Texas, Travis County, private entities, prominent employers, Capital Metro, and other stakeholders.

as producing signage—in exchange for creating a system that is comprehensible to the general public, will quickly and inexpensively open new capacity (Recommendation #6).

- **Support TDM programs and initiatives.** The PWG should also serve as a forum for employers, transportation providers, and other stakeholders to work together to create successful TDM programs (Recommendations #10 and #12).
- **Allocation of parking revenue.** A PWG could help the City define expenditures and allocate parking revenue to support downtown parking and mobility improvements (Recommendation #8).

17 ENHANCE EVENT MANAGEMENT PRACTICES TO MAXIMIZE PARKING SYSTEM FLEXIBILITY AND PREDICTABILITY

Strategy: **Enhance Parking Administration and Operations**

Cost: \$\$\$

Impact: ●●○

Level of Difficulty: ●●○

Priority: ●●○

Coordinate with: **1-4, 6, 7, 9, 14-16, 18**

Adjust rates via performance-based program to include peak event pricing in high demand areas.

Value, discount, or remote parking should be priced at a lower rate to incentivize use of those areas and to balance demand.

Provide as much advance information as possible.

Providing information before a driver arrives in downtown limits searching, traffic, and frustration. Suggested approaches could include:

- **Online information**, including prices and location of parking, as well as real-time utilization. Coordinate information via a centralized parking database of parking with pricing and availability. Link parking information to event organizers, hotels, ticket sites, and other key stakeholders.
- **GPS-compatible information**, so that drivers do not begin their search for parking right at their destination.
- **Temporary signage** directing drivers to multiple parking options. Incorporate and require coordinated signage and its placement into event permitting processes.

Pilot advanced parking purchases for off-street locations.

Advanced purchases can be advantageous to both users and operators as it makes parking needs more predictable. Advance purchase prices should be slightly lower than day-of rates to encourage the practice, yet should support a 10-15% availability target, so that parking facilities can still provide capacity for short-term, spontaneous parking.

Update asset management systems.

Asset management systems can be improved to create administrative efficiencies. This may include:

CHALLENGE

Austin's thriving downtown is home to a substantial number of events. These events spur economic growth downtown and are a fundamental part of Austin's culture. Events also place a heavy burden on the parking system and often disrupt downtown access with street closures and deliveries.

Today's event management system requires a large allocation of City resources. For example, staff go out and physically "bag" meters and/or put up temporary signage to manage parking demand.

There are also limited systems in place to ensure consistency between signage, payment systems, or clear communication of event parking policies. Together, these issues can create a system that is disconnected from the user and creates parking pinch points, while easily accessible parking is underutilized.

Centralized and dynamic parking inventory. Real-time inventory data (Recommendation #7 and #14) will allow the City to quickly understand where and how to address event hot spots.

Capitalize on meter technology. Remotely program City meters to display "No Parking" along with a flashing red light to more easily communicate parking regulations. Transition to a real-time "event system" with dynamic signs linked to meters, reducing administrative burden.

Require event planners to support event management. This could include financial and/or on-the-ground support with meter bagging, signage, and/or traffic control related to parking.

18 PLAN FOR THE FUTURE TO NIMBLY RESPOND TO LONG-TERM TRENDS IN MOBILITY AND PARKING

Strategy: **Enhance Parking Administration and Operations**

Cost: \$\$\$

Impact: ●●○

Level of Difficulty: ●○○

Priority: ●○○

Coordinate with: **7, 8, 10-12, 16, 17, 19**

Technology already plays a significant role in Austin's mobility. A streamlined and integrated approach to technology regulation will ensure downtown continually provides equitable mobility opportunities.

Provide flexible policies and guidelines.

The City should adopt an "Emerging Technologies Policy" that outlines its mobility goals and how they should be applied and integrated into guidelines for emerging technologies. These might include:

Prioritizing high occupancy trips. Austin has limited ability to expand its road capacity, especially in downtown. Prioritizing new services that facilitate high-occupancy vehicle trips will help to address congestion issues.

Equity in transportation. By putting disadvantaged people at the heart of transportation planning, the City can leverage technologies in service of this goal.

Design principles that prioritize people and safety. New vehicle technologies are exciting, yet it is vital that both private and municipal infrastructure continue to prioritize personal safety and access.

Design adaptability of parking facilities. New technologies may reduce overall parking demand and change how parking facilities are used. Considerations include:

- Vehicles that park themselves may require less circulation space as well as less vertical space.
- Structured parking design including floor heights, electrical/cooling/heating systems, and ramp placement are important to consider to ensure flexible adaptation of parking garages.

Continue to prioritize a flexible curb space.

As the transportation landscape changes, so will the demands on Austin's curb space. For example, one on-street parking space could serve as a drop-off point for many autonomous vehicles that could then go park themselves in a remote, off-street location. Many of the recommen-

CHALLENGE

Cities nationwide are working to understand how emerging alternatives to private car ownership will impact their mobility systems. Coupled with demographic and mobility trends, these technologies signal a long-term shift to lower rates of vehicle ownership and decreased parking demand.

The timing is unknown, but impacts will be profound. City infrastructure will likely need to transition as fewer parking spaces are used for vehicle storage and as shared mobility services and autonomous vehicles (AVs) become more prominent.

For example, downtown's roughly 65,000 off-street spaces represent over 520 acres of land and the 6,400 on-street spaces represent approximately 22 linear miles of curb space. As mobility preferences and behaviors change, how parking assets are used and repurposed will dramatically alter the character and functionality of downtown.

dations of this study, such as creating a comprehensive and dynamic inventory of curb space and flexing spaces by time of day, better position the City to more easily accommodate future advances changes in transportation technology.

Support transportation network companies (TNCs) that fill mobility gaps and meet citywide goals.

Given that most cars sit idle, TNCs can be a more efficient use of vehicle capacity. TNCs can also reduce demand for parking and therefore provide an important service to downtown. The City should support those services that meet City standards and support the overall goals for downtown.

19 STRATEGICALLY INVEST IN PUBLIC AND SHARED PARKING SUPPLY IN KEY LOCATIONS

Strategy: **Provide Additional Public Parking as Needed**

Cost: \$\$\$

Impact: ●●●

Level of Difficulty: ●●●

Priority: ●○○

Coordinate with: **1-3, 6, 8, 11, 13, 16, 18**

Strategically invest in public and shared parking supply in key locations as new development occurs.

This recommendation comes with several points of emphasis:

- This study has identified that even during existing peak demand, numerous parking spaces are available. However, drivers either cannot access them or are not aware they exist. Austin currently has a parking management problem—adding more parking, especially more “private” spaces that are not accessible to the public, will only exacerbate the city’s current dilemma.
- **Recommendations #1-18 should be prioritized** to address current issues related to high on-street demand and time limit violations, confusing signage, and fragmented technology and payment systems.
- **The modeling analysis associated with this study is a planning-level exercise.** It assumes a robust development program and level of parking demand that may evolve due to macro-level trends, such as overall economic conditions or changes in travel behavior.
- While there are no parking minimums in much of Austin’s downtown, future development will continue to generate new off-street parking supply that is needed. As discussed in the earlier recommendations, the City should revise the parking code and facilitate agreements with developers to ensure that **new parking supply is shared and publicly available to the greatest degree possible.**
- All decisions to build more parking should be evaluated in the context of Austin’s **primary goals to reduce vehicular congestion and improve multimodal travel.** While new parking is needed, that parking will also bring more vehicles to downtown. Solving downtown congestion is not possible if the status quo approach to off-street parking continues.

CHALLENGE

Austin’s ongoing success has attracted substantial new development in downtown. In particular, unlocking the potential of smaller parcels is essential to future growth plans. **Multimodal access, complemented by convenient and accessible parking, is a key factor for downtown success.**

To understand the parking demand of future development relative to parking supply, **this study conducted a parking demand analysis of downtown.** Downtown Austin was divided into six districts where new growth is predominantly planned. Short-term and medium-term scenarios were developed based upon best available knowledge of planned, proposed, or possible projects in each district.

In the end, the analysis indicates that if all of the possible development in the short- and medium-term scenarios occur, it is likely to push peak parking demand above target availability rates (~10% of spaces open at peak). **Districts 1, 3, and 5 will likely experience the biggest impacts.**

- **Parking is expensive to build, operate, and maintain.** For example, a 500-space parking garage would cost the City almost \$10 million to build and \$29 million to maintain over its lifetime. Given these costs, new parking construction should be evaluated relative to the cost-effectiveness of the other recommendations designed to improve overall management, enhance mobility, and reduce demand for parking.

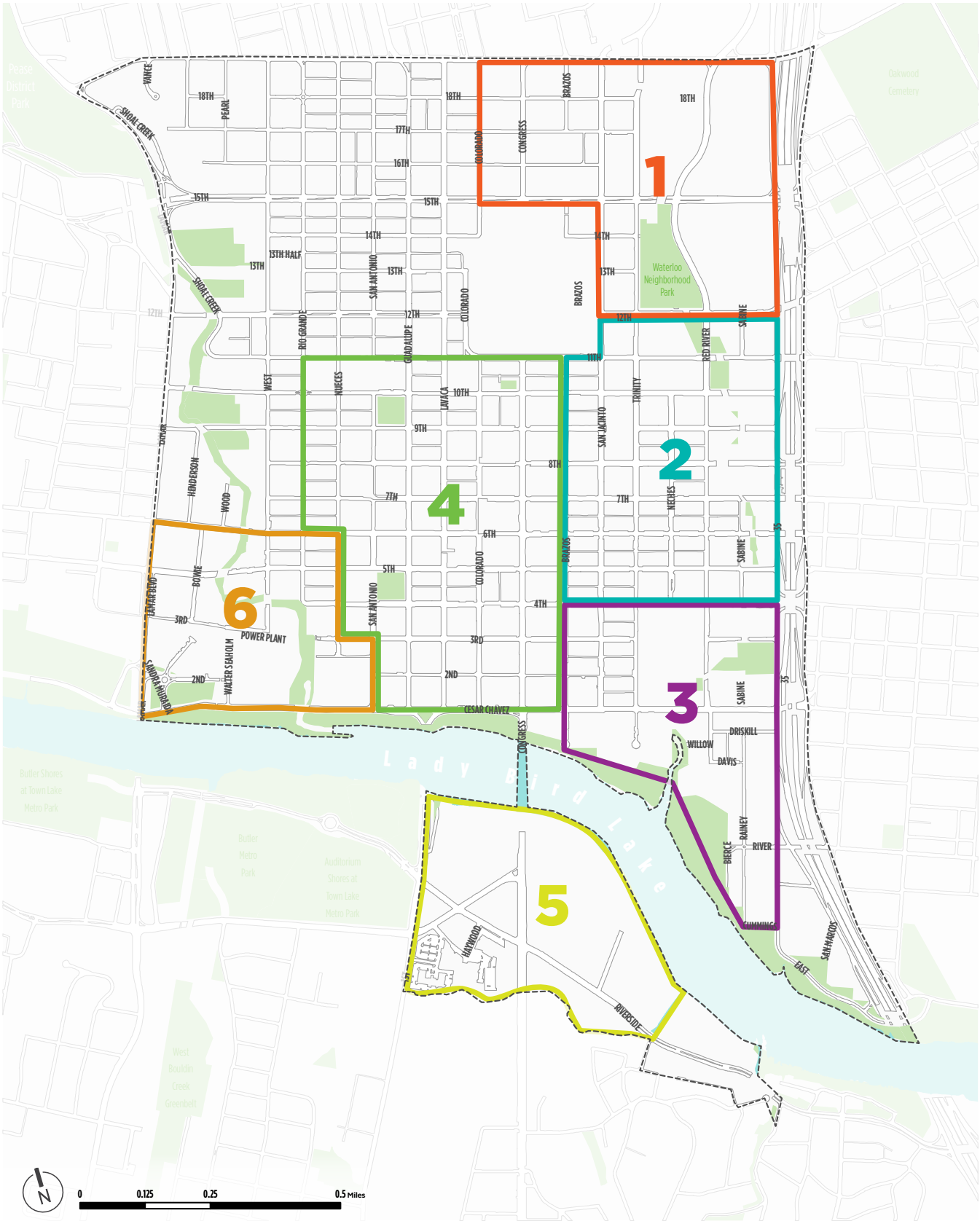
Specific locations for new parking supply have not been identified as part of this study. In general, districts that should prioritize access to new parking supply in the short- and/or medium-term include:

- **District 1:** Significant new growth is planned in the district, almost 4.5 million square feet of general office, government office, or medical office. District 1 offers extraordinary opportunities to enable growth in the downtown core and cultural/entertainment corridors by allowing new supply to serve as remote parking for evening, weekend, and event uses.
- **District 3:** The existing Convention Center and proposed growth in hotel, residential, and nighttime entertainment uses contribute to significant future demand, especially in the medium-term scenario.
 - New public supply would **enhance a district-based management approach in this district**, allowing smaller parcels and historic uses to leverage new supply without having to add on-site parking. New supply that provides access to both the Convention Center and the Red River Cultural district should be prioritized.
- **District 4:** A substantial amount of new government offices is proposed. Given this district's central location, strong pedestrian access and connectivity to regional transit corridors, and primarily daytime demand, additional supply in this district could support all downtown activity, but especially nighttime and weekend demand. Proposed residential uses in this district also offer a strong complement to the office-based daytime demand, enabling maximum use of new supply.
- **District 5:** A substantial amount of new residential development is proposed. Additional supply should prioritize effective sharing between daytime office uses and nighttime residential demand. Similar to District 1, parking in this district could also serve as remote supply for the downtown core and major events.

KEY PRINCIPLES FOR NEW PARKING SUPPLY

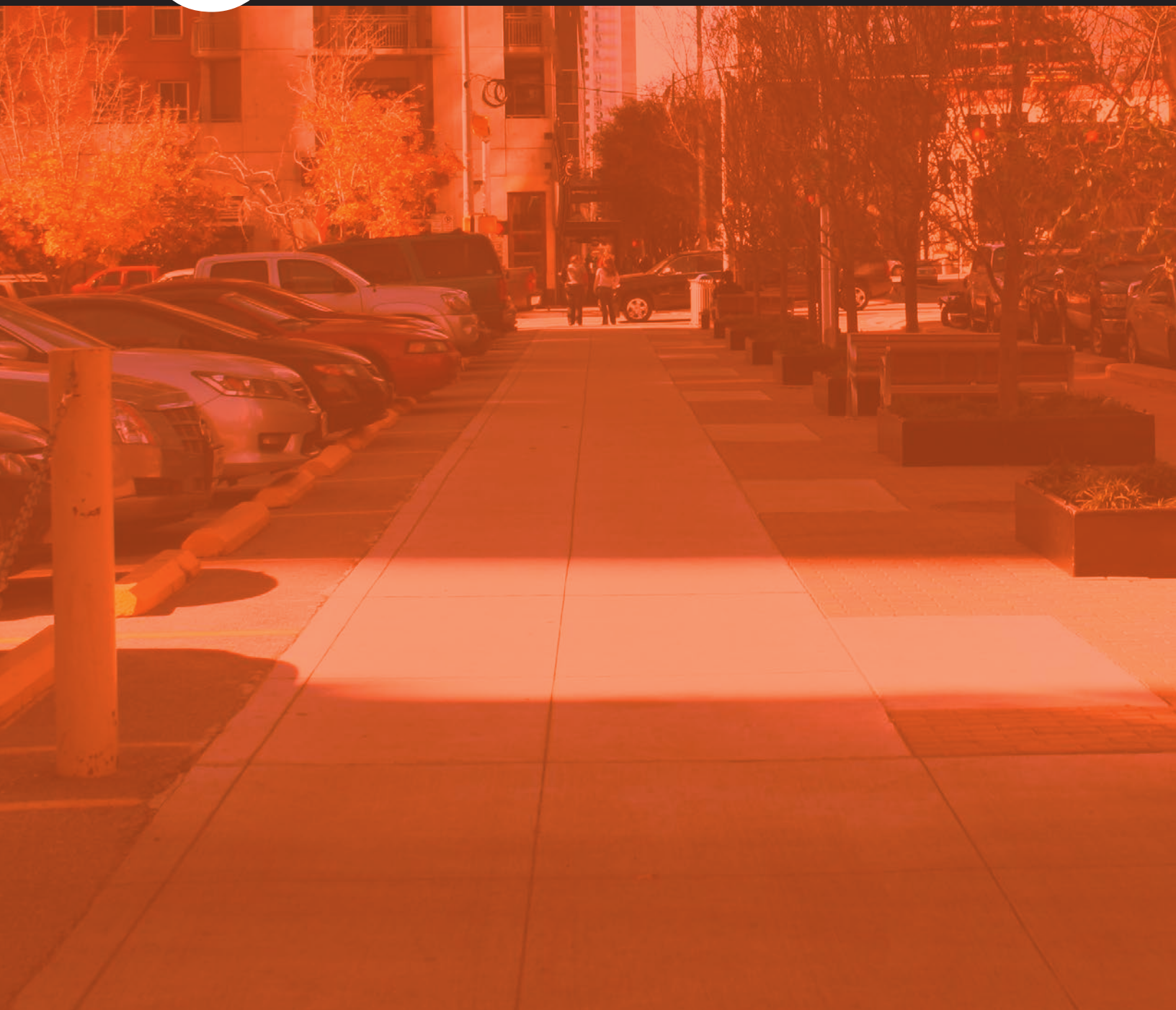
- Ensure that **parking is shared and open to the public** to the greatest degree possible. (Recommendation #13)
- **Manage new parking as part of the larger system**, so that prices and regulations primarily incentivize use by long-term parkers. If off-street parking is more expensive than on-street parking, people will continue to circle and create congestion.
- Include **technology and wayfinding** that makes parking easy to locate and use. (Recommendation #7)
- **Contribute to the downtown environment** by supporting strong urban design, pedestrian access and safety, and promote street activity via ground floor uses.
- **Consider design implications of reduced parking demand** due to new technology and mobility solutions.

Land Use Analysis Districts



The study considered future parking needs for specific districts. The analysis used a sketch modeling tool that factored in short- and long-term growth relative to existing supply and demand.

6





IMPLEMENTATION

The Downtown Austin Parking Strategy provides 19 recommendations to improve parking in downtown. The recommendations reflect community input and a data-driven planning process. While certain recommendations require additional planning and evaluation, definitive progress towards implementation is a priority for all stakeholders.

This chapter provides a short-term **Priority Action Plan**, designed to advance high-priority recommendations over the next year through a set of 10 initiatives and corresponding actions. A Parking Action Team (PAT), led by the Downtown Alliance and City of Austin, will implement the Priority Action Plan.

Implementing the Priority Action Plan will transition Downtown Austin from “study to action,” generate momentum through tangible improvements, identify examples of success and champions, and position Austin for long-term success.

The Priority Action Plan is only the beginning—Austin will not solve its parking challenges in a single year. **Appendix A** includes a summary matrix of a **detailed implementation plan** and timeline for each of the 19 recommendations. It is anticipated that the short-term Parking Action Team would transition to a Parking Working Group (Recommendation #16) to implement the recommendations over the long-term.

Priority Action Plan

Form a Priority Action Team (PAT)

ADVANCES RECOMMENDATION #	LEAD ORGANIZATION	SUPPORT
16	Downtown Alliance	Core downtown stakeholders
ACTION STEPS		
<ol style="list-style-type: none"> 1. Identify and secure participation from core set of stakeholders. PAT should be focused and nimble. Potential partners include: City of Austin, especially the Austin Transportation Department (ATD), Capital Metro, and Movability Austin. 2. Adopt the Priority Action Plan and allocate responsibility. 3. Meet at regular intervals to report on progress and troubleshoot issues. 4. At the end of six to twelve months, transition the PAT to a Parking Working Group (PWG), as described in Recommendation #16. 		

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Initiate shared parking partnerships

ADVANCES RECOMMENDATION #	LEAD ORGANIZATION	SUPPORT
2, 13	Downtown Alliance	Core downtown stakeholders
ACTION STEPS		
<ol style="list-style-type: none"> 1. Identify and meet with willing public and private partners. Identify key issues and concerns. 2. Create a shared parking “toolkit” that includes: <ul style="list-style-type: none"> - Model templates for shared parking agreements with options for typical issues. - Database of private/public parking facilities. Explore third party vendors to develop and update database. - Updated maps and online information. - Marketing materials and examples of local precedents. 3. Test pilot program in one or two public and/or private facilities. Monitor and document success. 4. Identify and promote shared parking champions and supporters. 5. Modify Section 25-2-581 and 25-2-589 of Land Development Code to clarify that the provision of shared parking does not require a Conditional Use Permit. 		

Initiate expansion of Affordable Parking Program

ADVANCES RECOMMENDATION

3

LEAD ORGANIZATION

Parking Enterprise

SUPPORT

Downtown Alliance and
Movability Austin, Capital
Metro

ACTION STEPS

1. Secure additional resources for program expansion. Adjust current program contracts and agreements based on Waller Creek experience (as needed).
2. Identify priority areas for expansion, with focus on locations that will especially benefit hourly, shift, and/or low-income employees.
3. Identify one or two candidate facilities for participation and secure agreements with property owners.
4. Update marketing materials/website. Roll out program expansion.
5. Monitor and evaluate with larger expansion as goal.

Initiate formation of performance-based management program

ADVANCES RECOMMENDATION

1

LEAD ORGANIZATION

ATD, Parking Enterprise, City of
Austin

SUPPORT

Downtown Alliance

ACTION STEPS

1. Clarify and rectify any legal barriers with City and State to adjusting parking rates based on parking demand.
2. Meet with City Council and city staff to review program and identify concerns/barriers.
3. Draft and adopt policy statement for Council approval supporting key principles of program and directing staff to initiate program development and implementation.
4. Collect additional data as needed. Draft data collection processes, methods, and tools.
5. Draft basic program parameters—program “brand,” boundaries, rate structure, time limits, and adjustment schedule.
6. Meet with meter and technology vendors to outline desired program specs, including reporting requirements.
7. Draft ordinance language codifying program.
8. Develop work plan for program roll out and future phases, including marketing campaign.

Adjust enforcement policies to target key issues

ADVANCES RECOMMENDATION #	LEAD ORGANIZATION	SUPPORT
15	Parking Enterprise	Downtown Alliance and Movability Austin
ACTION STEPS <ol style="list-style-type: none"> 1. Adopt increased citation rates to establish an effective deterrent to illegal parking. 2. Identify priority issues and areas for enforcement. Potential priorities include violations of length of stay at meters. Enforcement on and around east 5th and 6th streets could build on the data collected by this study showing many stayed past the time limits. 3. Partner with major developers and construction companies to identify and create parking mitigation plans for workers. Ensure compliance with parking mitigation plans. 		

Case Study: Contractor Parking

In **Cambridge, MA** all development projects must file a Construction Management Plan with the Public Works and Traffic, Parking and Transportation Department. An element of that plan is “Modes of Transportation for Construction Workers and Initiatives for Reduction in Driving and Parking Demands” and must include detailed explanations.

For more information, see: <https://goo.gl/xorWRd>

In **Seattle**, the process is more rigorous. Construction Management Plans must include details of planned contractor parking, including the peak number of workers anticipated, a map of facilities that workers will use and the number of spaces in those facilities, methods to encourage other forms of transportation, and a schedule of when contractors may park on-site.

For more information, see: <https://goo.gl/MsHtaC>

Implement real-time signage at key facilities

ADVANCES RECOMMENDATION #	LEAD ORGANIZATION	SUPPORT
6	Parking Enterprise	Downtown Alliance, Movability Austin, and private facility owners
ACTION STEPS <ol style="list-style-type: none"> 1. Upgrade technology and signage at all publicly operated parking facilities in downtown to include real-time availability signage. Signage should prominently display the number of available spaces at all on-street entrances and approaches to facility. 2. Link real-time signage to parking website and all third-party smartphone apps. 3. Identify one or two private facilities willing to participate in a real-time signage pilot program. 4. Secure participation via cost-sharing agreement, with the City handling signage installation, operation, and maintenance. At a minimum, technologies should allow for integration, sharing of data, and ongoing collection of occupancy data. 		

Implement initial upgrades to technology and data processes

ADVANCES RECOMMENDATION

7

LEAD ORGANIZATION

Parking Enterprise

SUPPORT

Downtown Alliance

ACTION STEPS

1. Formalize processes for ongoing updates to parking inventory developed as part of this study.
 - On-street: Complete and refine City's GIS database. Explore partnerships with third party vendors to utilize software that allows for real-time updates in the field.
 - Off-street: Conduct periodic updates to GIS-based inventory developed as part of this study. Explore partnerships with third party vendors to collect data and manage database.
2. Develop draft methods for collecting parking occupancy data. Initial efforts could include field-based counts, but should eventually transition to a mix of sampling counts and automated methods based on transaction data.
3. Develop guidelines for future technology RFPs and/or updates to existing vendor contracts. Guidelines should prioritize methods, tools, and processes that support performance-based management.
4. Advance implementation of "Path to Park" system.

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Evaluate pilot test of a shuttle service

ADVANCES RECOMMENDATION

9

LEAD ORGANIZATION

Capital Metro and ATD

SUPPORT

Downtown Alliance and
Movability Austin

ACTION STEPS

1. Initiate detailed discussions with Capital Metro and potential private operators regarding a pilot test of a downtown circulator and/or park-and-ride shuttle. New investments in transit should support Capital Metro's recently adopted Connections2025 strategic plan.
2. Key issues to evaluate and resolve include: routing and connections to parking facilities, service span, service frequency, operator, fare structure, and funding.
3. Coordinate with Capital Metro's Project Connect and Austin Strategic Mobility Plan.

Coordinate with CodeNEXT to refine code recommendations

ADVANCES RECOMMENDATION #
11, 12, 13

LEAD ORGANIZATION
City of Austin and ATD

SUPPORT
Downtown Alliance and
Movability Austin

ACTION STEPS

1. Recommendations #11, 12, and 13 propose initial concepts for Austin’s zoning code. The Downtown Alliance should initiate detailed discussions with CodeNEXT staff to ensure coordination. Priority focus areas would include:
 - Establishment of “hard” parking maximums
 - Requirements and incentives for shared parking
 - Requirements and incentives for transportation demand management (TDM)
 - Revisions to enhance developer flexibility and streamline development approval
 - Revisions to Section 25-2-581 and 25-2-589 of the Land Development Code to clarify that the provision of shared parking does not require a Conditional Use Permit.

Develop and launch a public communications plan

ADVANCES RECOMMENDATION #	LEAD ORGANIZATION	SUPPORT
ALL	Downtown Alliance and Movability Austin	ATD and City of Austin

ACTION STEPS

1. Successful implementation will require a well-coordinated campaign to communicate the rationale and benefits of the recommendations. Key messages and/or themes might include:
 - Consistent parking availability and access
 - Affordable parking choices for all users
 - A user-friendly experience that puts the customer first
 - Simple tools that make it easy to find and pay for parking
 - Friendly, but consistent enforcement of the rules
 - Parking revenue supporting improved mobility choices in downtown
2. Key components should include:
 - High-quality informational material distributed via website, apps, and social media
 - Press releases and engagement strategies
 - Personal engagement with key stakeholders
 - Development of local champions, case studies, and precedents
 - Tours of best practices and/or speakers from cities that have implemented performance-based parking management programs

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For more project information, go to
www.downtownaustin.com