

Best Practices in Parking Management Strategies for Colorado Communities

Report Pursuant to HB24-1304 | December 2024



*A Partnership of the Colorado Energy Office, the
Department of Local Affairs, and the Department of
Transportation*

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Executive Summary

On May 10, 2024, Governor Polis signed House Bill (HB) 24-1304, eliminating minimum off-street parking requirements for multifamily housing and certain types of adaptive reuse mixed-use properties in areas close to transit in Colorado’s metro regions. As required by the law and created in partnership by the Colorado Department of Local Affairs (DOLA), the Colorado Department of Transportation (CDOT), and the Colorado Energy Office (CEO) (“State Agencies”), this report provides local governments and their partners a guide for implementing context-sensitive parking management strategies.

This report encourages developers to sufficiently supply and efficiently manage off-street parking and urges local governments to prioritize managing on-street parking in the public right-of-way. Informed by a literature review, surveys, and conversations with local governments, developers, and other key stakeholders, noted off-street parking management strategies include shared parking, unbundled and priced parking, maximum parking limits, and transportation demand management, while on-street parking management strategies include time-limited and paid commercial curbside parking, neighborhood parking permit programs, and mobility benefit districts.

The report emphasizes three key themes for managing parking successfully:

1. *Knowledge is power.* By evaluating comparable properties’ or districts’ parking supply and demand, local governments, developers, and community partners can right-size parking supply and demand tools. You can’t manage what you don’t measure.
2. *Holistic parking management is necessary.* Local governments and their partners should coordinate both off- and on-street parking management strategies, including multimodal services that support community and economic development. No one management strategy should be considered in a vacuum.
3. *Consumer choice is paramount.* Whereas legacy parking management assumes that travelers will drive to destinations, contemporary management strategies acknowledge travelers’ diverse needs and, rather than try to predict them, provide a variety of mobility options for them to suit their needs best.

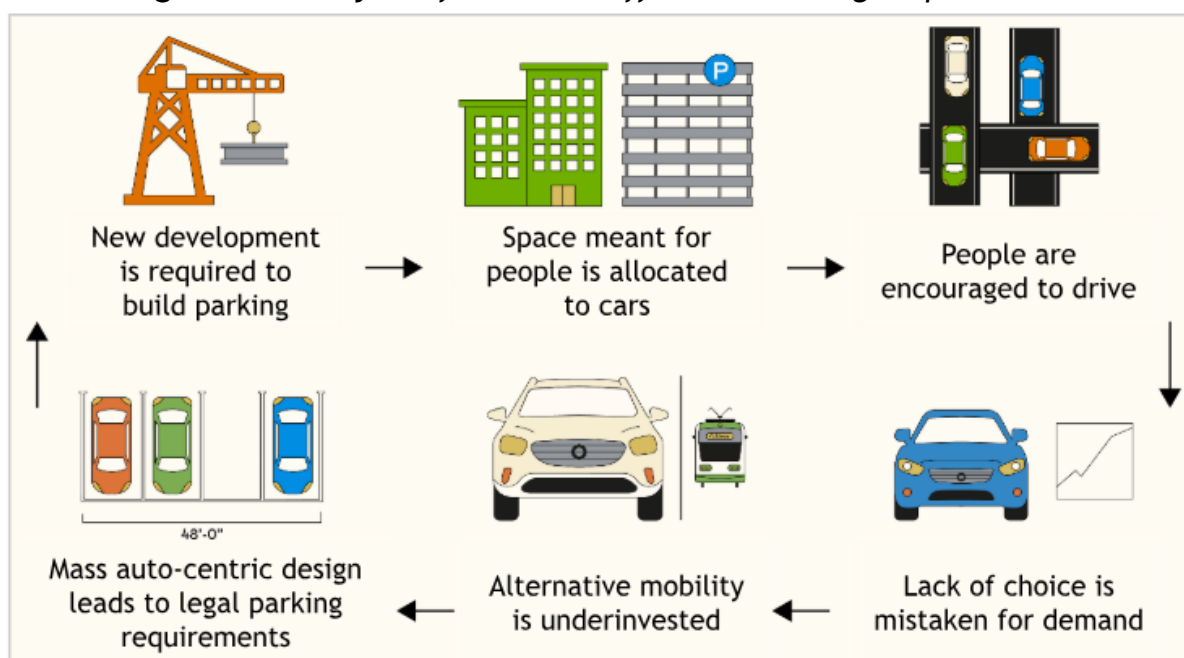
This report serves as an introductory guide for local governments, developers, and partners seeking tools to support compliance with HB24-1304 or interested in improving parking management. Although this report offers pointed parking management advice, including benefits, best practices, exemplary local codes, and contact information for further investigation, implementing each strategy will require partners to tailor a comprehensive management program to a community’s needs and assets.

Introduction

Housing and transportation costs represent the highest household costs for most residents. Minimum off-street parking requirements directly add costs to housing and indirectly increase transportation costs by necessitating higher rates of driving and car ownership. Adding an estimated [\\$225 to monthly rent or \\$18,000 to home sales](#), minimum off-street parking requirements contribute to the high rates of housing cost burden in Colorado.¹ As the [second-highest household cost](#) for Americans and Metro Denver residents (and likely denizens of other Colorado regions), transportation costs particularly burden low-income households, who spend roughly [30 percent of their income](#) on transportation.^{2, 3} By better managing parking, local governments, developers, and community partners can improve and expand access to more affordable transportation options for everyone, including for the [20 to 40 percent of residents](#) whose age, abilities, incomes, or preferences limit driving.⁴

Established by local zoning codes and enforced incrementally through permitting individual projects, minimum off-street parking requirements can contribute to [auto-oriented development](#) and [travel behavior](#), [environmental degradation](#), [economically inefficient land use](#), constrained [housing supply](#), increased [housing cost](#), and increased [greenhouse gas pollution](#).^{5, 6, 7, 8, 9, 10} [Research](#) has found that setting minimum parking requirements based on development size or use often supplies more parking than residents, employees, and others use, particularly at affordable housing.¹¹

Figure 1: The Cycle of Minimum Off-Street Parking Requirements



Source: Reproduced from [Culdesac](#)¹²

Governor Jared Polis signed [HB24-1304](#) into law to eliminate minimum off-street parking requirements within metropolitan planning organization boundaries and [select transit service areas](#) for multifamily residential and certain adaptive re-use projects by June 30, 2025.^{13, 14} The law does not reduce minimum accessible parking or bicycle parking; prohibit prior parking agreements, electric-vehicle charging agreements, or future financing requirements for affordable housing; or otherwise inhibit parking strategies discussed in this report, like setting maximum parking limits. Although HB24-1304 applies only to select areas and development projects, local jurisdictions may choose to apply the law to other areas and projects in order to simplify local parking codes and expand the benefits of promoting comprehensive parking management and multimodal mobility, as [Denver](#) recently proposed and Longmont recently implemented.¹⁵ For more specific information about the law and guidance for compliance, please review the [HB24-1304 Minimum Parking Requirements Guidance](#).¹⁶

HB24-1304 aligns with other State legislation and regional programs designed to reduce greenhouse gas emissions, support more walkable land use patterns, and improve multimodal transportation options. [HB19-1261](#) set greenhouse gas (GHG) pollution reduction goals, and the recent update to the state's [Greenhouse Gas Pollution Reduction Roadmap](#) recommended a series of strategies focused on strategic growth, including parking reform, to achieve those goals.^{17, 18} In 2021, the Colorado Transportation Commission approved [the Greenhouse Gas Transportation Planning Standard](#), which requires the Colorado Department of Transportation and metropolitan planning organizations to measure and mitigate transportation-related GHG pollution, including but not limited to reducing vehicle miles traveled (VMT) and managing parking.¹⁹ Along these lines, the recently published [Colorado Transportation Vision 2035](#) aims to reduce GHG pollution, double non-vehicle trips, nearly double transit service miles, and build half of new housing near transit in the next ten years.²⁰

HB24-1304 also requires DOLA to publish this report detailing parking management strategies, specifically to increase affordable housing supply, and specifies several strategies (listed below) to consider. To develop this report, State Agencies reviewed peer-state programs, academic reports, and other literature about parking management best practices. State Agencies also surveyed national and local stakeholders and later invited survey respondents to focus group meetings to discuss best practices, equity considerations, and on- and off-street parking management strategies (the Acknowledgements section lists many of the focus group participants).

Without parking minimums, off-street parking management strategies detailed in the report such as shared parking, unbundling parking, maximum parking requirements, and transportation demand management can achieve a more efficient travel profile that reduces costs and maximizes space for additional and lower-cost development. On-

street parking management strategies highlighted involve using time limits, prices, or neighborhood parking permits to maintain access in the public right-of-way and dedicating collected revenue to support reliable and affordable transportation options. A lack of on-street parking management can spur similar economic, equity, and environmental impacts as those caused by off-street parking minimums. For example, without on-street parking minimums, frustrated would-be customers may have to circle the block looking for a space before parking where they don't belong - double-parked in a bike lane, pulled into a bus stop, or stopped in a residential neighborhood - or giving up altogether. Better on-street parking management would help ensure an available space for a short parking stay, easing traffic, reducing pollution, and supporting business sales.

Table 1: Benefits of Off-Street Parking Management Strategies

	Economy	Equity	Environment
Shared Parking	Efficiently optimizes use of existing parking supply; promotes parking once between multiple destinations	Builds less parking; reduces development cost, reduces housing cost	Less parking built; less pavement to absorb heat, repel stormwater, or inhibit biodiversity
Unbundled / Priced Residential Parking	Allows paying only for the parking you need, not the parking you don't	Especially supports low-income households with lower rates of car ownership	Less parking built; less pavement to absorb heat, repel stormwater, or inhibit biodiversity
Unbundled / Priced Commercial Parking	Allows paying only for the parking you need, not the parking you don't	Supports affordable travel options; could offer tax advantages to employees	Less parking built; less pavement to absorb heat, repel stormwater, or inhibit biodiversity
Parking Maximums	Makes efficient use of parking supply; prioritizes productive development (e.g., housing) over parking	Encourages investment in affordable TDM	Less parking built; less pavement to absorb heat, repel stormwater, or inhibit biodiversity
Transportation Demand Management	Supports readily available, space efficient, and affordable access	Supports affordable travel options; often includes income-qualified discounts	Promotes cleaner travel modes, like walking, biking, and taking transit

Table 2: Benefits of On-Street Parking Management Strategies

	Economy	Equity	Environment
Commercial Curbside Parking	Encourages quick sales, parking turnover	Evenly benefits all-income drivers (timed); can discount low-income parking (priced)	Reduces cruising and pollution; discounts green vehicles
Neighborhood Parking Permit Programs	Supports employee access to off-site parking, customer access to on-site parking	Balances nighttime resident access with daytime access for all	Reduces cruising and pollution; can discount green vehicles
Mobility Benefit Districts	Invests parking revenue in multimodal projects and programs to enhance access; can represent business interests	Invests parking revenue in multimodal projects and programs to enhance access; can represent resident interests	Invests parking revenue in multimodal projects and programs to enhance access; supports cleaner multimodal mobility

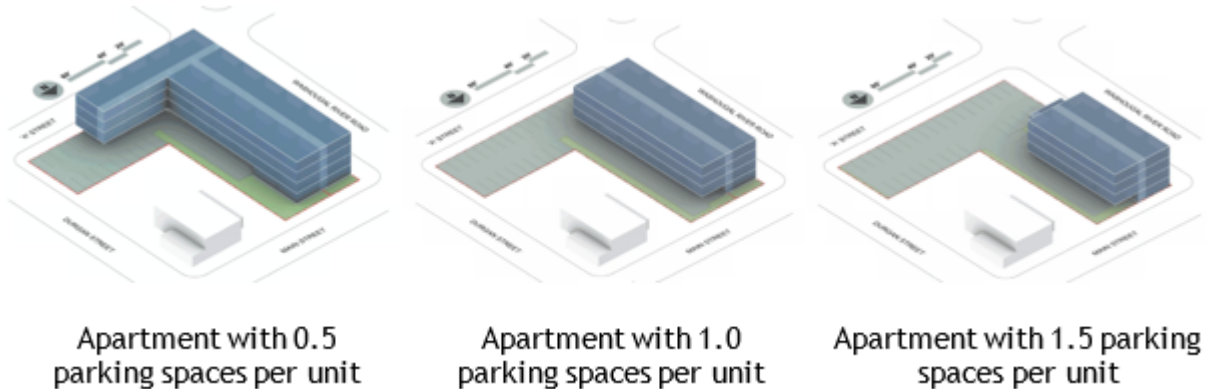
Despite categorizing strategies as off- or on-street, it is important to consider and implement both types of strategies in a comprehensive parking management plan or risk unintended consequences. For example, a local government may wish to leverage a mobility-rich neighborhood’s multimodal amenities by establishing a maximum parking limit, urging neighborhood users to walk, bike, or take transit instead of drive, while capping the amount of off-street parking a multifamily apartment building can supply, but that maximum parking limit may induce demand for on-street parking, jeopardizing neighboring residents’ access to convenient parking. A comprehensive parking management approach that considers off-street parking maximum limits and on-street neighborhood parking permits as well as transportation- demand management tools to support multimodal mobility would be more likely to deliver desired results. Although discrete and specific in their management, off- and on-street parking relate closely to each other and, so, should be considered together in a comprehensive parking management strategy with a focus on equitable mobility and inclusive development.

DOLA, CEO, and CDOT value local governments taking action to improve parking management and encourage locals to use State Agencies as a resource for this important work.

Off-Street Parking Management Strategies

“If you can’t park it, you can’t build it.” That common refrain among developers highlights the significant impact of minimum off-street parking requirements in the success or failure of affordable and market-rate housing, community-serving retail, and myriad other real estate projects.

Figure 2: Competition for Space between Housing and Parking



Source: Reproduced from [Sightline Institute](#)²¹

Off-street parking requirements use land that otherwise could support housing, businesses, or public space. When land goes to support parking, there is less land to support critical community needs like affordable housing, increasing housing costs with it. Although parking requirements are not solely responsible for increased prices, they don’t help: requiring [tens of thousands of dollars per space](#) to build and more to maintain, parking increases pass-through costs of market-rate housing, goods, and services, and limits the production of affordable housing.²² By pushing destinations farther apart and making the built environment less walkable, minimum parking requirements encourage driving in spite of State and local commitments to address [health](#), [equity](#), [affordability](#), and [climate](#) issues and to promote walking, biking, and taking transit.^{23, 24, 25, 26}

Recognizing these impacts and others, parking management practitioners have started to advocate for parking reforms. For example, despite their promotion of minimum parking requirements for decades, the [Institute of Transportation Engineers](#), the [American Planning Association](#), and the [National Parking Association](#) have acknowledged parking requirements’ impacts on neighborhood vitality and have advocated for their elimination.^{27, 28, 29} Meanwhile, the increasing popularity of shared mobility services like ride-, bike-, and scooter-share, as well as more frequent delivery traffic have pressed local governments to reconsider curbside access for myriad users.

“Eliminate mandatory minimum parking requirements - This elimination will not only give people more say over how they live their lives and use their property, but it’s also an important step in developing affordable housing.”

~ Bruce Belmore, President, Institute of Transportation Engineers

In that vein, public- and private-sector partners from [Florida](#) to [South Bend, IN](#), to the [Culdesac Tempe](#) apartments in Arizona have made significant strides in [reforming parking management](#) to increase housing supply, grow commercial sales, and shift travel to [clean](#) and [healthy](#) options.^{30, 31, 32, 33, 34, 35}

Discussed throughout this report, local governments and developers in Colorado and elsewhere have pursued a number of off-street parking management strategies that align well with HB24-1304, though further research could further inform underwriters’ expectations for right-sized parking supply and complementary mobility strategies.

This chapter discusses the following strategies, identifies areas of its practice in Colorado or beyond, and provides code language that can adapt to local contexts:

- **Sharing Parking:** Connecting available supply and unmet demand between complementary land uses, like an apartment building with overnight parking demand and an office building with daytime parking demand;
- **Unbundling & Pricing Residential Parking:** Separating the cost of using residential space from parking (i.e., unbundling) and/or charging an additional fee to park, thus asking users to pay for only what they need;
- **Unbundling & Pricing Commercial Parking:** Like its residential counterpart, decoupling the cost of commercial tenancy from parking and/or charging to park while offering tax-advantaged mobility benefits for employers and employees;
- **Setting Maximum Parking Limits:** Limiting off-street parking supply based on roadway capacity or community goals and introducing a suite of transportation options to support development with less driving; and
- **Promoting Transportation Demand Management:** Closely related to other strategies, using policies, programs, and incentives to shift mobility from using private vehicles to walking, biking, taking transit, and using shared vehicles.

Reforming minimum parking requirements

Outside of the jurisdictions, areas, and uses where HB24-1304 applies, removing or reducing minimum parking requirements can provide many of the same important benefits noted in this section such as improved walkability, increased housing supply, and lower housing costs. While this report primarily focuses on parking management strategies that complement the removal of minimum parking requirements, there are many important resources that jurisdictions looking to reform or remove their minimum parking requirements can consult.

DOLA's recent [Template Land Development Code](#) recommends in their streamlined option to remove minimum off-street parking requirements, while providing reduced options for various uses in their annotated version.³⁶ The accompanying [best practices guidebook](#) recommends that, if a local government determines that minimum off-street parking requirements are necessary to accommodate peak-hour demand, it sets requirements as low as necessary (e.g. to regularly accommodate 85 percent occupancy, which is considered a best practice) and allows additional reductions to account for low parking demand at affordable housing or near mobility options.³⁷ It also highlights newer codes that exempt smaller mixed-use and nonresidential developments, since it can be difficult to accommodate parking on those lots, and parking can harm walkability along commercial main streets with small businesses.

Figure 3: Curbside parking by multi-family housing near an RTD station



Source: Colorado Energy Office

Sharing Parking

Shared parking allows multiple properties or land uses with complementary parking demands to park in the same facility, like a professional office with daytime demand and an apartment building with nighttime demand. With [eight parking spaces for every car in the U.S.](#), shared parking presents a cost-effective and space-efficient way to manage existing parking and to reduce construction costs of new development.³⁸



Figure 4: Parked cars outside a multi-family building (Source: Colorado Energy Office)

Figure 5: Shared Parking Model



Source: [Nelson Nygaard](#)³⁹

Benefits of Sharing Parking

Featured below, local and regional governments, developers, and business owners have partnered to share new or existing parking facilities to reduce individual development costs and promote productive use of valuable land.

Allowing shared parking introduces administrative efficiencies for local governments. Whereas legacy off-street parking requirements often allow shared parking only through a costly and time-consuming variance or other process, allowed or incentivized shared parking helps local governments and developers reduce administration and development costs, increase cost savings for tenants, buyers, and customers, and increase revenue for property owners who share their otherwise empty parking supply.

“Eliminating some off-street parking requirements from the City’s zoning code to more easily share parking redirected staff focus to on-street parking matters and supported our development partners. It was a win-win administratively and politically.” ~ Oregon municipal planner

Publicly available shared parking also supports business activity through a park-once approach that invites drivers to walk to a variety of destinations without parking again. Combined with on-street parking, Boulder’s public parking garages and lots support nearby parking-constrained businesses in a walkable downtown context to help increase sales, property values, and resulting tax revenue in the process. Discussed later in this report, special revenue funds, enterprise funds, or mobility benefit districts can collect parking revenue or other sources to support public parking construction, operation, maintenance, and enforcement.

There is complementary alignment between affordable housing with overnight parking demand and mission-aligned partners with daytime parking demand, like government offices, schools, transit services, and religious institutions with daytime parking demand. Moreover, co-locating affordable housing with public services and transit facilities encourages residents’ access to these services and their ease of travel. Accordingly, RTD’s [Equitable Transit-Oriented Development Policy](#) favors redevelopment of park-and-rides that include affordable housing.⁴⁰

To a property owner, sharing parking between complementary land uses relieves each land use from building, operating, and maintaining exclusive parking. Sharing introduces parking efficiencies, reduces individual parking management costs for partners, and allows more economically productive use of high-value property. According to the [Victoria Transport Policy Institute](#) (VTPI), 100 shared parking spaces should replace 150 to 250 exclusive parking spaces.⁴¹ Discussed below, working through the complexities of shared parking can bring substantial benefits, especially in high-cost or space-constrained contexts.

Implementation Guidance for Sharing Parking

Implementing shared parking relies on coordination between local governments, neighborhood partners like a transportation management organization (TMO) or business improvement district (BID), and property owners interested in creatively addressing parking-supply constraints for greater affordability.

To support shared parking, local governments can:

- Allow shared parking with administrative review or by-right rather than requiring zoning variances or other approval processes;

- Incorporate incentives for sharing parking into their codes;
- Draft template shared parking agreements;
- Empower TMOs or another partner to broker shared-parking agreements; and
- Offer funding to help low-resourced property owners share parking.

What is a TMO? Occasionally referred to as Transportation Management Associations, TMOs are responsible for implementing transportation demand management programs and services in a community. TMOs work with local governments, developers, employers, and other stakeholders to coordinate transportation options. From Summit County to the Front Range, [Colorado's nine TMOs](#) typically represent multimodal transportation corridors or commercial districts and offer a range of services such as commuter shuttles, mobility services discounts, and member advocacy.⁴² To support TMOs, the Colorado Department of Transportation offers [Strategic TMO Seed Funding Grants](#) based on area need, applicant readiness, equity consideration, and long-term viability of the prospective organization.⁴³

Applicability

Although property owners could pursue shared parking anywhere, it is best applied at scale and in close coordination between parties. In this regard, shared parking is easiest to deliver in a master-planned mixed-use development with more reliable expectations for land uses and attendant parking demands. At a smaller scale, individual property owners may opt to lease parking, extending opportunity to lower-resourced parties, but they are more likely to require technical assistance and funding to participate.

Examples

As with other off-street parking strategies, code language for shared parking often relies on providing a flexible option to meet minimum off-street parking requirements. However, [Longmont](#) recently replaced parking minimum limits for maximum limits and provides a helpful example of how to encourage shared parking in its code:

“Calculation of off-street parking and loading requirements, Shared parking. Shared parking shall be provided to the extent practicable, to use parking areas efficiently while allowing flexibility for additional development.

Location of off-street parking space, Mixed-use and nonresidential zoning districts. Provided off-street parking spaces in the mixed-use and nonresidential zoning districts shall be located on the same lot as the

building or use for which they are required unless parking spaces are provided, through a shared parking agreement, on lots within one-quarter mile (1,320 feet) from the proposed building or use.”⁴⁴

In 2018, Mile High Development and Brinshore Development worked with RTD to lease parking in its adjacent parking garage for residents of [Sheridan Station Apartments](#), allowing the developer to build more housing and less parking on the space-constrained site while providing steady revenue for transit operations.⁴⁵

For more information: [George Thorn](#), Mile High Development

For areas where minimum off-street parking requirements will continue, legacy parking codes offer useful examples. Like [Jefferson County](#) and [Superior](#), [Denver’s shared-parking code](#) (reproduced in the Appendix) allows a property owner to share off-street parking after determining peak demand in the parking facility for each land use.^{46, 47,} ⁴⁸ [Aurora](#) allows a developer to divide the total required minimum parking of all land uses by a prescribed shared-parking ratio based on those land uses.⁴⁹

Table 3: Shared Parking Reduction

Property Use	Multifamily	Public, Institutional, or Civic	Food, Beverage, Indoor Entertainment, or Lodging	Retail	Other Commercial
Multifamily	1.0	-	-	-	-
Public, Institutional, or Civic	1.1	1.0	-	-	-
Food, Beverage, Indoor Entertainment, or Lodging	1.1	1.2	1.0	-	-
Retail	1.2	1.3	1.3	1.0	-
Other Commercial	1.3	1.5	1.7	1.2	1.0

Source: Reproduced from [City of Aurora, CO](#)⁵⁰

[Oregon](#) suggests encouraging shared parking in a context with minimum parking requirements:

“Shared parking. Required parking facilities for two or more uses, structures, or parcels of land may be satisfied by the same parking facilities used jointly, to the extent that the owners or operators show that the need for parking facilities does not materially overlap (e.g., uses primarily of a daytime versus nighttime nature; weekday uses versus weekend uses), and provided that the right of joint use is evidenced by a recorded deed, lease, contract, or similar written instrument establishing the joint use.”⁵¹

The parking management industry offers clear guidance on how developers could estimate shared parking demand between land uses. On behalf of the Urban Land Institute, Mary Smith’s [Shared Parking](#) serves as a comprehensive resource for the strategy.⁵² According to Smith, when parking within a reasonable walking distance goes under-used during peak-hour, sharing that parking is in the best interests of all parties. Particularly to maintain customer parking in commercial districts, employers may arrange lower-cost parking for employees in another location based on distance from work, length of stay, desired turnover, and expectations for ease of parking.

In 2004, RTD and the City of Boulder bought 11.2 acres to build a mixed-use [transit-oriented development](#) and broadly support a vibrant multimodal neighborhood.⁵³ Today, Boulder Junction boasts a train depot-turned- restaurant, a 150-room hotel, a 71-unit affordable apartment building, and a six-gate hub for the area’s local and regional bus services - all anchored by a [386-space public parking garage](#). Customers, guests, residents, and bus riders may validate their parking tickets before exiting the garage; others must pay \$1.25 per hour via kiosk or app.⁵⁴

For more information: [Lisa Houde](#), City of Boulder

Considerations

Sharing parking is more complex than providing exclusive parking due to the need to coordinate between parties and adapt to evolving needs and priorities. Not only does shared parking require agreement between property owners; it also must adjust to new residential or commercial uses, like if a multifamily building converts from rental to owner or a retail space flips from a short-stay ice cream parlor to a long-stay hair salon.

Legacy parking management expects each property owner to supply exclusive parking. Despite inefficiencies in space, time, and cost, the expectation is well understood. Shared parking complicates that understanding by introducing additional negotiation to

the already complex exercises of public administration and development, often requiring zoning variances or other processes that compel legal agreements between private property owners to establish maintenance and enforcement rules, integrate access technology between users, and mitigate liability issues. These agreements add time, cost, and uncertainty to development and introduce barriers for low-resourced owners who may need technical assistance or capital funding to participate.

In light of these challenges, it is worth stressing that, like other off-street parking management strategies, shared parking benefits from fewer local requirements. For example, rather than requiring zoning variances or other approvals to share parking, which increase barriers, local governments instead can allow shared parking with administrative review or by right and can expect developers to supply sufficient parking for lasting success. Reproduced in the Appendix, the [Denver Zoning Code](#) invites developers to propose shared-parking agreements in a site development plan and empowers the City's zoning administrator to review and approve agreements but does not require the City to monitor or otherwise continue to oversee the efficacy of the agreement.⁵⁵ Noted above, Aurora's code does not require developers to produce a parking study to share parking; compliance with calculations in Table 3 is sufficient.

After removing administrative barriers, local governments could defer additional oversight of shared parking (and other off-street parking management strategies) to a neighborhood partner. Although a local government could broker shared-parking agreements, a TMO in consultation with a BID, metropolitan district, or general improvement district may be better positioned to facilitate connections and negotiations as well as transportation-service delivery. [Portland, OR](#) invites property owners to propose a shared-parking agreement to one of four parking management districts, which also may provide funding for capital and maintenance expenses that facilitate sharing, like payment kiosks, signs, and gates.⁵⁶

Several focus group attendees, including the Downtown Denver Partnership, Transportation Solutions, and the Colorado Springs Parking System Enterprise, noted their capacity to promote travel options and leverage underutilized parking assets for district activation and redevelopment. Although Colorado has only nine TMOs, exclusively in Metro Denver, State Agencies hope to foster others with [TMO Seed Funding Grant](#) awards between \$20,000 to \$100,000.⁵⁷

Shared parking also requires compatible timing, both between complementary land uses and between agreeable parties. First, land uses must demand peak parking at opposite times, like a dentist office with daytime clients and an apartment building with nighttime residents, but involved parties also need some assurance that those complementary land uses will remain as is, and not for example convert to a late-night restaurant whose customers may compete with residents.

In 2005, St Charles Town Company purchased the vacant [Lowenstein Theater](#) and neighboring properties on East Colfax Avenue in Denver to [adapt the theater](#) into the Tattered Cover Book Store and build a movie theater, a record store, and a restaurant into the ground level of a privately owned 230-space [parking garage](#) that validates parking for employees and customers or charges others \$2.00 per hour.^{58, 59, 60, 61}



Image source: Google Maps⁶²

Regardless of a local government's role, shared parking agreements between private parties must account for risk of casualty, issues of indemnity, and other matters. Even so, private property owners regularly agree to share parking with a clear understanding of risks and responsibilities. Smith's [Shared Parking](#) advises clear and considerate business terms for shared-parking contracts, from which local governments or TMOs could develop a template agreement:

- Parties Involved: Identification of all parties to the agreement, including property owners and users.
- Description of Parking Spaces: Detailed description of the parking facilities, including location, number of spaces, and any specific designations (e.g., reserved, general).

- Usage Schedule: Outline of the specific times each party is allowed to use the spaces, ensuring no conflicts.
- Duration of Agreement: The length of time the agreement is valid, including any renewal terms.
- Fees and Payment Terms: Details regarding any fees associated with the use of the shared parking spaces, including payment methods and due dates.
- Maintenance Responsibilities: Clarification of who is responsible for maintenance, repairs, and upkeep of the parking area.
- Liability and Insurance: Terms regarding liability for damages or accidents, and any insurance requirements.
- Termination Clause: Conditions under which the agreement can be terminated by either party.
- Dispute Resolution: Procedures for resolving any disputes that arise from the agreement.
- Compliance with Local Laws: Assurance that the agreement complies with applicable zoning and parking regulations.⁶³

Although a thorough shared parking agreement can mitigate many operational and legal concerns, the cost of preparing an agreement introduces equity concerns, particularly among small businesses with relatively minimal but no less important sharing opportunities. In this regard, a local government or TMO could provide template agreements for parties to consider, transferring costs from individual parties to benefit myriad stakeholders as well as local tax coffers from more economically productive development vis-a-vis shared parking. The Appendix reproduces a template Shared Parking Business Term Sheet as a guide but not as a replacement for legal counsel.

Further Reading on Sharing Parking

- [“Depot Square at Boulder Junction.”](#) Short Elliott Hendrickson Inc.
- Goldstein, David B. [“Does Every Car Need 8 Parking Spaces? Ride-Sharing Can Save Emissions by Reducing Parking, Too.”](#) Natural Resources Defense Council.
- Herrera, Pauline. [“From Theater to Bookstore - Adaptive Reuse Tour at Tattered Cover.”](#) Denver Architecture Foundation.
- [“Joint Development of Real Property.”](#) RTD.

- [“Land Development Code, Section 15.05.080: Off-Street Parking, Stacking, and Loading.”](#) City of Longmont, CO.
- [“Lowenstein Theater.”](#) St. Charles Town Company.
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- [“Zoning Code, Article 10: General Design Standards.”](#) City and County of Denver.
- [“Zoning Resolution, Section 14: Off-Street Parking and Loading.”](#) Jefferson County, Colorado.

Unbundling & Pricing Residential Parking

Unbundled residential parking separates the price of parking from the price of housing. Although local governments typically defer to developers and their underwriters to allocate off-street parking supply within a property, some communities require developments to unbundle parking and charge an additional fee to park. Unbundling residential parking pairs well with the spirit of eliminating parking requirements in multimodal-rich areas, inviting property managers to evaluate their property's context-sensitive market while empowering prospective residents to decide whether walking, biking, taking transit, or driving best suits their needs.



Figure 6: Vehicles parked outside a multi-family residential building (Source: Colorado Energy Office)

“Unbundling parking is the single most important parking management strategy, allowing developers, tenants, and buyers to meet their needs with as much parking or other amenities as they care to pay for.” ~ Mobility consultant

Benefits of Unbundling & Pricing Residential Parking

Unbundling parking positions developers to evaluate comparable prices for housing and parking and to set a competitive price for each, benefiting consumers who can choose whether to pay for parking and/or to pay for more affordable transportation options, like transit.

“Unbundling parking helps developers keep rents low and match their mobility-rich product to a resident profile that prefers to take transit, bike, or walk over driving.” ~ Colorado developer

[Research](#) notes that less than five percent of urban homeowners and 13 percent of urban renters live in homes with unbundled parking.⁶⁴ Those few households with unbundled parking enjoy [lower costs](#) to build and maintain excessive parking, which

adds [\\$225 to monthly rent or \\$18,000 to sales](#) on average, while neighborhoods benefit from more land dedicated to [economically productive space](#).^{65, 66, 67}

Separating housing and parking costs particularly benefits lower-income households who typically [own fewer vehicles](#) and commonly pay for an unnecessary parking space (or several) nonetheless.^{68, 69, 70} One study estimates that car-free renters in the U.S. pay [\\$440 million per year](#) for parking they don't use.⁷¹

Table 4: Comparison of Transportation Use in Bundled or Unbundled Housing

Transportation Indicators	Value	Sample Size
Average Monthly Household Gas Expenditure	\$228	13,126
With Bundled Parking	\$237	11,885
Without Bundled Parking	\$105	1,241
Average Number of Household Vehicles	1.2	14,489
With Bundled Parking	1.3	13,123
Without Bundled Parking	0.7	1,347
Household Uses Transit	19%	14,229
With Bundled Parking	16%	12,898
Without Bundled Parking	59%	1,325

Source: Reproduced from [Transfers Magazine](#)⁷²

Implementation Guidance for Unbundling & Pricing Residential Parking

Unbundled and priced residential parking relies on local governments supporting mobility-rich neighborhoods and managing on-street parking in a way that encourages developers to manage off-street parking effectively. In that vein, options for local government implementation or support for this strategy include:

- Encouraging or requiring developers to unbundle during initial permitting if not also over the course of regular compliance reporting; and
- Encouraging unbundling through a TDM ordinance or other similar approach.

Applicability

Unbundling residential parking is best suited for multimodal-rich contexts where residents can choose from a variety of mobility options. Although transit services are

critical, complementary investments in high-quality walking and biking infrastructure, bike-share or car-share programs, and supportive land uses all enhance the strategy's effectiveness. Discussed later, TDM programs can also play an important role in nurturing these complementary investments.

Pricing unbundled residential parking works best in market-rate rental housing, where a property manager can set prices for all residents across the property. Pricing can be more challenging at affordable rental properties due to underwriting requirements noted below or at owned properties.

“Developers are very comfortable unbundling and pricing off-street parking based on comparable properties. They likely would unbundle more if underwriters let them.” ~ Colorado regional planner

Examples

Unbundling is increasingly popular across the country and in Colorado to satisfy trip-reduction goals and to compete for cost-conscious residents in tight housing markets.

A leader in parking management policy, Oregon offers [thorough](#) and [brief](#) guidance on the subject, including references to local regulations and sample code language:

“Parking charges separately documented. For housing units in multifamily or mixed use structures that meet the threshold size requirement of [code reference] 1. Any rental agreement entered into after [effective date of the ordinance] shall specify in a rental agreement addendum or in a separate parking agreement the amount of any parking fee. 2. A tenant may elect not to rent or lease parking when renting or leasing a unit, in which case the tenant is not required to sign a rental agreement addendum or a separate parking agreement that requires the tenant to pay a parking fee.”^{73, 74}

Seattle’s [unbundling policy](#) requires rental leases to separately document parking changes.⁷⁵ From the City’s [municipal code](#) (reproduced in the Appendix):

“Any rental agreement entered into after May 13, 2018 shall specify in a rental agreement addendum or in a separate parking agreement the amount of any parking fee. A tenant may elect not to rent or lease parking when renting or leasing a unit, in which case the tenant is not required to sign a rental agreement addendum or a separate parking agreement that requires the tenant to pay a parking fee.”⁷⁶

Supporting Seattle-area local governments, developers, and neighborhood stakeholders, the [King County Multi-Family Residential Parking Calculator](#) uses data to inform sufficient parking supply.⁷⁷ Designed in partnership with the Center for Neighborhood Technology, the Calculator estimates context-specific parking demand based on seven resident, building, and neighborhood variables, and estimates the impact of unbundling. Short of a definitive tool, the Calculator empowers local government, developers, and other stakeholders to consider context-sensitive parking solutions.

Figure 7: Comparison of Bundled and Unbundled Parking Costs

How can unbundled (priced) parking influence parking/unit ratios?

The parking/unit ratios below are calculated using preset unbundled parking prices based on parcel location and rent adjustments resulting from unbundling.

PRICE OF PARKING PER STALL	ADJUSTED AVERAGE RENT	AVG. MONTHLY COST TO RESIDENT (rent+parking)	RESULTING PARKING RATIO
Bundled Parking = \$0	\$1,838	\$1,838	0.52
Unbundled Parking = \$298	\$1,704	\$1,820	0.39

Source: [King County Multi-Family Residential Parking Calculator](#)⁷⁸

A college town of approximately 120,000, [Berkeley, CA](#), requires new or converted downtown residential or mixed-use buildings to unbundle parking.⁷⁹ The City also requires some properties to provide car-share parking, set maximum parking limits, report on TDM compliance, and provide a transit pass to residents and employees (the Appendix reproduces this section of the City’s code.) In the Twin Cities, [St Paul, MN](#) requires new or redeveloped market-rate housing of 25 or more units to unbundle parking, while twin city [Minneapolis, MN](#), encourages unbundling and pricing to meet TDM requirements.^{80, 81}

In Colorado, properties in high-value and typically transit-rich neighborhoods like Denver’s Uptown neighborhood, Olde Town Arvada, and Downtown Lone Tree unbundle parking to comply with local trip-reduction requirements, reduce housing cost, and remain cost-competitive in high-demand locations. However, unbundling need not be exclusive to urban areas. In Salida, the Chaffee Housing Authority has proposed to unbundle parking at [Jane’s Place](#) in Salida to manage demand among 17 affordable rental units and community-oriented commercial space on a half-acre lot.⁸²

Lamar Station in Lakewood offers two market-rate properties that unbundle and price parking. In addition to light-rail service on the RTD W Line, neighborhood transportation amenities include RTD Route 16 bus service on West Colfax Ave two blocks north and Dry Gulch Trail less than one mile east.

[Brickhouse at Lamar Station](#)'s 293 studio, one-bedroom, and two-bedroom apartments rent for \$1,400 to \$2,700 per month, and residents may pay \$50 or \$100 for an uncovered or covered parking space, respectively. Management staff note that unbundled and priced parking helps to reduce parking demand for the property's 301 parking spaces and encourages use of nearby mobility options, which the property advertises on a real-time transit screen in the lobby.⁸³

One block west, [West Line Flats](#)' 155 studio, one-bedroom, and two-bedroom apartments rent for \$1,400 to \$3,100 per month. Here, residents may pay an additional \$100 for a single parking space or \$150 for a tandem parking space. As at Brickhouse, West Line Flats leverages pricing to manage demand for the property's 138 parking spaces and promote multimodal mobility by including an RTD Neighborhood EcoPass in each lease and offering ample secure bike parking.⁸⁴

For more information: [Travis Parker](#), City of Lakewood

Considerations

Local governments can require or encourage unbundling and pricing parking, inviting a property manager to determine a suitable price for each space. According to one focus group attendee, requiring unbundling in new construction is relatively straightforward as part of a building permit and inspection process, while continued compliance often relies on residents filing complaints with local governments, potentially introducing a conflict between residents and management.

Developers typically opt to unbundle parking at their discretion; so long as a project supplies sufficient parking, local governments typically do not dictate how a developer dedicates parking to residents. However, developers' financial partners may require dedicated parking as a condition of underwriting to mitigate the risk of prospective renters or buyers moving elsewhere for more parking. Studying parking demand at comparable properties introduces an opportunity to inform underwriters' expectations for sufficient parking supply.

Residential property managers may choose an unbundled parking price that satisfies their bottom line, as they would for apartment rents or home sales. Given the disparate nature of development markets and building classes, the literature did not suggest

parking pricing methodologies, but focus group conversations suggested that developers are proficient at setting prices based on comparable properties.

Unbundling and pricing parking may encourage residents to park on the street, placing an onus on local governments to manage on-street parking with curbside pricing and neighborhood parking permits, and on TMOs to support shared off-street parking opportunities. Effective parking management requires consideration of the relationship between off-street and on-street parking.

Unbundling and pricing parking may be more challenging for [affordable housing](#) in both [transit-rich](#) and [more auto-oriented areas](#), whose residents typically demand considerably less parking than residents of market-rate housing but whose financing typically encourages bundling free parking.^{85, 86, 87} The federal Low-Income Housing Tax Credit (LIHTC) Program annually finances more than 90 percent of rental affordable housing in the nation. Although the LIHTC Program does not prohibit developers from unbundling priced resident parking from capped rent, it provides a greater award for larger construction costs, including parking if it is offered for free.

Still, developers and their financial partners must consider how much parking to provide based on evidence of parking demand at comparable properties to ensure project success. The Colorado Housing and Finance Authority (CHFA) administers the LIHTC Program and defers parking supply to local codes. As an underwriting matter, CHFA's [Qualified Allocation Plan](#) requires developers of family-sized properties to provide a parking study when proposing to build less than 0.8 parking spaces per unit.⁸⁸ CHFA may adjust its underwriting requirement based on exhibited parking demand.

Affordable-housing developers and their financial partners may mix bundled and unbundled parking to strike a balance between dedicating free parking for some residents while allowing flexibility to others. For example, Denver's mixed-income campus at Benedict Park Place bundles one parking space to market-rate tenants and invites income-restricted tenants to park in available remaining spaces for free.

To advance the practice of unbundling and pricing, local governments, developers, and TMOs can take steps to better understand parking demand in various contexts for different housing types. Borrowing from local governments' and CHFA's routine requests for parking studies to inform off-street parking management at individual properties, government or industry partners can invest in regular evaluation of parking demand in mobility-rich neighborhoods to inform underwriters' expectations for sufficient parking supply at the next project in a similar neighborhood. For example, if a study of ten comparable properties in similar neighborhoods finds an average peak-hour parking demand of 0.5 spaces per unit, an underwriter should require less than one space per unit - or the project's developer should work with one who does.

Further Reading on Unbundling & Pricing Residential Parking

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- Seattle Municipal Code. [“Section 7.24.030: Rental Agreement Requirements.”](#) City of Seattle, WA.
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Unbundling & Pricing Commercial Parking

Unbundling commercial parking at office, hotel, and retail locations treats off-street parking as a service separate from the use of the property. [Research](#) suggests that pricing parking at a daily rate instead of a monthly rate further encourages employers who offer parking to encourage employees to use alternative transportation, or employees who pay for parking to commute by other means.⁸⁹ As with housing, unbundling and pricing at commercial properties allow employers to pay only for the parking that their employees and customers actually use, rather than subsidizing parking costs through higher rents and prices. A subset of unbundled and priced commercial parking, “parking cash-out” refers to an employer offering employees cash benefits commensurate with the cost to provide parking to encourage them to commute without a private vehicle (See Figure 9).



Figure 8: A parking garage near an RTD station (Source: Colorado Energy Office)

Benefits of Unbundling & Pricing Commercial Parking

Parking cash-out benefits multiple parties. Employers benefit by not having to pay for excess parking spaces. Employees benefit from having more choice and rewards about how to commute; employees could choose to drive or could earn a commensurate benefit to afford a transit pass, a bike-share membership, or other versatile travel options, thereby benefiting those service providers as well. Commercial districts benefit from more space available for economically productive uses, less peak hour driving on constrained roadways, and more foot traffic to patronize businesses.

Figure 9: Parking Cash-Out Concept



Source: Reproduced from [Reinventing Parking](#)⁹⁰

Implementation Guidance for Unbundling & Pricing Commercial Parking

As with residential parking, unbundling and pricing commercial parking benefits from local governments enabling developers and property managers to manage parking and districts for the properties' success while encouraging multimodal options and managing on-street parking for a variety of users. To encourage unbundling and pricing commercial parking, local governments can:

- Encourage or require developers to unbundle;
- Encourage or require employers to offer parking cash-out; and
- Partner with TMOs and BIDs to educate commercial property owners and employers about the benefits of unbundling.

Applicability

As a transportation demand strategy that seeks to balance multimodal access, unbundling commercial parking and parking cash-out may be most appropriate for commercial districts with limited parking supply, considerable peak-hour traffic congestion, supportive multimodal infrastructure and services, and limited multimodal demand. Per VTPI and Sightline Institute staff, cash-out works best where parking management can charge a daily rate instead of monthly rate to accurately reflect unsubsidized parking costs, providing a benefit commensurate with the daily rate, and integrating parking cash-out with overarching trip-reduction strategies.

Examples

With these considerations in mind, unbundling and pricing commercial parking benefits from a coordinated response between local governments, TMOs, commercial property owners/managers, and employers.

Local governments could leverage their authority to encourage or require commercial unbundling or parking cash-out to support public interests. In [An Assessment of the Expected Impacts of City-Level Parking Cash-Out and Commuter Benefits Ordinances](#), the Federal Highway Administration thoroughly details various local cash-out programs across the country.⁹¹ Belying its small-town nature of roughly 20,000 residents, [Sherwood, OR](#), requires leased commercial buildings to unbundle parking (and taxes revenue from commercial parking lots to support TDM).⁹² In Washington, DC, District Chapter 32-152.01: [Parking Benefit Equivalent](#) (reproduced in the Appendix) requires an employer who offers parking to also offer a multimodal subsidy equal to or greater than the monthly market value of the parking benefit, while a [cash-out toolkit](#) advises simply eliminating the parking benefit to comply with the ordinance.^{93, 94}

States, too, can play a role. [California](#) requires employers with 50 employees or more working in air pollution non-attainment areas to offer a cash benefit equivalent to the cost of parking to reduce single-occupancy vehicle trips, promote various transportation modes, and foster sustainable commuting practices.⁹⁵ [Oregon](#) recommends the following sample code language:

“Unless commercial uses are listed as exempt in subsection X, off-street parking accessory to rented or leased commercial use spaces in structures that contain 4,000 square feet or more of gross floor area shall not be included in any new rental or lease agreement and shall be subject to a separate rental or lease agreement.”⁹⁶

Like other strategies, unbundling and pricing commercial off-street parking benefits from data on parking supply and demand, and TMOs are valuable partners for collecting,

analyzing, and disseminating parking data to commercial property owners and employers. Parking data help to facilitate discussions about appropriate parking supply based on the number of employees served, daily parking rates, and availability of complementary multimodal amenities. The Colorado Department of Transportation's Office of Innovative Mobility has funded studies of commercial parking demand in Downtown Denver and the Denver Tech Center through the [Strategic Transportation Demand Management Innovation Grant](#).⁹⁷

Employers can provide employees with a transportation benefits guide that compares the costs of parking with the costs of transit passes, bike-share memberships, and local or regional transportation services. Of note, the [Internal Revenue Code Section 132\(f\)](#) qualifies an employer-sponsored cash-out benefit as a [tax-advantaged fringe benefit](#) and does not tax the employee for using it.^{98, 99} TMOs or BIDs may serve to inform property managers and employers of available transportation options and coordinate mobility services across properties in a commercial district. In focus groups, BID staff deferred to TMO staff as mobility specialists and encouraged them to expand the reach of their valuable services to other areas of the state.

Just north of Denver's Colorado Station, [Colorado Center](#) offers a useful example of balancing bundled and unbundled commercial parking.¹⁰⁰ Leases between building management and commercial tenants include two parking spaces per 1,000 square feet of office space and allow tenants to purchase an additional two parking spaces at market rate. This flexible approach helps to attract commercial tenants and invites them to tailor their mobility options.

For more information: [Stuart Anderson](#), Transportation Solutions

Considerations

Unbundling and pricing parking policies and programs can suffer from limited coordination between private owners and commercial tenants in a business district. Managing a commercial property in a high-demand commercial district is taxing enough, and property managers are not necessarily parking specialists. Moreover, commercial tenants often sign multi-year leases which include parking supply agreements, limiting opportunities to adapt parking supply to match evolving transportation options.

This lock-in effect makes right-sizing commercial parking supply in initial development permitting all the more important. While local governments can require evidence of unbundling at the time of permitting, they have little capacity to continue to monitor compliance. Instead, according to focus group discussion, local governments rely on initial unbundling to set an expectation for the practice among commercial tenants, who may in turn file complaints with local governments if property managers renege on

the program. As seen in other off-street parking management strategies, setting an expectation in the market for a perceived benefit may have the effect of maintaining that benefit without costly local enforcement. For ongoing parking cash-out programs, local governments can require regular reporting by larger employers, as Washington, D.C. does in [its policy](#).¹⁰¹

The private nature of commercial unbundling and pricing also places the onus of monitoring the efficacy of this strategy on private parties, not local governments that may be unable to dedicate staff resources to do so. Developers, property owners and managers, and tenants regularly should consider opportunities for improving cash-out programs, like adjusting parking rates from monthly to daily charges, registering employers to offer tax-deductible benefits, and educating employees of cash-out availability. As transportation specialists and business advocates, TMOs and BIDs can serve as useful partners in monitoring, evaluating, and improving cash-out programs.

Further Reading on Unbundling & Pricing Commercial Parking

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- Lutenecker, Brian. “[The Psychology of Daily versus Monthly Parking Fees](#).” State Smart Transportation Initiative.

- [“Qualified Parking Fringe Benefit.”](#) Internal Revenue Service.
- [“Strategic Transportation Management Organization \(TMO\) Seed Funding Grants: Calendar Year 2024 Round 1 Projects.”](#) Colorado Department of Transportation.

Figure 10: A protected bike lane with curbside metered parking in Denver



Source: Colorado Energy Office

Setting Maximum Parking Limits

Maximum off-street parking requirements set an upper limit on parking supply in local land use codes, but otherwise operate like legacy off-street parking minimums. Whereas local governments today may negotiate with developers who propose to supply below a prescribed minimum in a traditional parking environment, a reformed parking management environment empowers local governments to set maximum requirements based on roadway capacity, mode shift, or other community goals and to negotiate with developers who propose exceeding those maximum limits.



Figure 11: Vehicles parked at multi-family housing (Source: Colorado Energy Office)

Benefits of Setting Maximum Parking Limits

“Parking scarcity drives mobility innovation.” ~ Mobility consultant

Figure 12: Parking Management and Redevelopment with Maximum Parking Limits



Source: [City of Boston, MA](#)¹⁰²

Parking management literature and focus group attendees repeatedly emphasized the utility of setting maximum parking requirements to prompt additional complementary parking management strategies in high-value areas that support multimodal mobility, noting that maximum parking requirements enable other strategies to succeed. For

example, maximum parking requirements can prompt developers to explore alternative transportation services and parking strategies like shared and unbundled off-street parking, and can support the viability of timed, metered, or permitted on-street parking. Moreover, an increased demand for mobility options in districts with maximum parking requirements will necessitate developers' investments in shared vehicle, transit, and micro-transit (e.g., bike and scooter) services, and other TDM strategies to remain attractive to prospective tenants in a high-demand, mobility-rich area.

Implementation Guidance for Setting Maximum Parking Limits

As local governments typically set minimum parking requirements and negotiate reductions to them, they similarly could dictate maximum parking limits and developers' community contributions for exceeding them. For example, local governments short on public parking in a commercial district may allow developers to exceed a maximum parking requirement if they dedicate the excess as shared parking, invest in TDM strategies, or pay an in-lieu fee to support TDM or public parking. Specifically, options for local government implementation include:

- Replacing per-property parking requirements with area-wide requirements in close proximity to high-capacity multimodal mobility hubs, like train stations;
- Setting maximum limits as a percentage of the old minimum limits (e.g., 100 percent or 125 percent of minimum) or in consideration of roadway capacity, development yield, trip generation, and multimodal mobility options; and
- Negotiating with or incentivizing developers wishing to exceed the maximum limit to invest in community benefits, like TDM measures or affordable housing.

Applicability

“Local governments should apply maximum off-street parking limits to large-scale projects, where exceeding the minimum significantly diminishes productivity and walkability. Compared to smaller development, where a maximum limit will make little difference, larger projects will realize a larger gain and more efficient use of staff time to administer the requirement.” ~ Colorado development consultant

Maximum parking limits work best in areas with considerable development potential but constrained roadway capacity that limits realizing that growth, and may be most important in areas where excess parking could deter from vibrant multimodal districts, such as transit station areas or Main Streets. Paired with TDM investments that expand mobility options, maximum parking limits can help shift travel to more space-efficient

modes that make better use of existing right-of-way while promoting greater redevelopment of vibrant and valuable multimodal places.

Examples

Local governments can design maximum parking policies by evaluating a neighborhood's existing infrastructure, estimating future parking demand based on comparable land uses, and proposing suitable parking supply and complementary TDM strategies. In its survey of model parking codes, the Bay Area's [Metropolitan Transportation Commission](#) recommends that a local government set a maximum parking requirement of one space per residential unit and one to two spaces per 1,000 square feet of commercial space in mobility-rich areas and monitor demand through parking utilization surveys.¹⁰³ An early adopter of maximum parking requirements, [Hartford, CT](#) allows up to two parking spaces per multifamily unit and up to four spaces per 1,000 square feet of employment space while prescribing a minimum number of bicycle parking and electric vehicle charging stations per land use and size.¹⁰⁴ In its [TDM guide](#), Nelson Nygaard references a district-level flexible approach in San Jose, CA that set a single-occupancy vehicle mode-share target, a maximum parking limit based on that target, and then assigned that limit to desired development goals on a per-unit or per-square foot basis. Properties may exceed the maximum limit if excess parking is publicly available.¹⁰⁵

From [Lone Tree](#) to [Thornton](#), [Louisville](#) to [Parker](#), [Northglenn](#) to [Littleton](#), [Fort Collins](#) to [Lakewood](#), many Colorado communities already set a maximum parking limit based on project type, project location, and/or relative to the minimum parking limit (e.g., “125 percent of the required minimum” in an area requiring one space per unit would allow up to 1.25 spaces per unit).^{106, 107, 108, 109, 110, 111, 112, 113} In areas where HB24-1304 applies, these communities may consider retaining those [relative](#) maximum limits (e.g., 1.25 spaces per unit) or simply replacing the minimum limit with the maximum limit.

[Longmont](#) serves as a useful local example of evolving maximum limits, moving from citywide minimums to citywide maximums in ten years and becoming [the first Colorado community](#) to do so.^{114, 115} Reproduced in the Appendix and detailed further in the box below, the City's code allows developers to exceed maximum parking requirements, provide off-site parking, or deviate from parking design standards if an alternative parking plan will minimize or mitigate adverse impacts to neighbors, maintain or improve traffic circulation, and promote quality urban design better than a compliant plan, at the City's discretion.

[Denver's TDM program](#) assigns points to a variety of TDM strategies and requires a project to earn a number of points based on unit count or building size to receive City approval.¹¹⁶ Exceeding one of Denver's neighborhood-specific maximum parking limits will lose points from the City's required [TDM calculation](#), jeopardizing local approval.¹¹⁷

Boulder pairs maximum parking requirements with other parking management strategies. Guiding a new transit-oriented community, Boulder published the [Transit Village Area Plan](#), which proposed to initially limit off-street parking supply at 25 percent over the prescribed minimum requirement and eventually reduce that limit as the district matured, in line with trip-reduction goals and in concert with other off- and on-street parking management strategies, including providing RTD EcoPasses to all residents and employees of the area.¹¹⁸ Boulder subsequently created a [general improvement district](#), a TDM district, and a parking district for the area to coordinate strategies to reduce vehicle trips 45 percent below anticipated levels.¹¹⁹ Due to a compelling mix and density of land uses and complement of multimodal travel options, the area has surpassed that reduction.

In 2014, the City of Longmont replaced the minimum limit on commercial parking to a maximum limit, simply multiplying the former by 1.2 to set the latter. Since then, while no developer has proposed to build no parking, only a few developers have proposed to exceed the limit - and only by a handful of spaces.

In 2018, City Council adopted the [Main Street Corridor Plan](#), which delineates mixed-use zoning along US-287 through Downtown.¹²⁰ The plan recommended several parking management reforms, including sharing parking, unbundling parking at multifamily housing, and reducing minimum parking limits near transit services.

Leading up to the next parking-reform ordinance, staff commissioned the [Multifamily Housing Parking Optimization Study](#), which studied parking demand at four varied apartment buildings.¹²¹ Similar to research by [RTD](#), [Shopworks Architecture](#), and [Walker Consultants](#), University of Colorado at Denver planning student study author (and now Superior planner) Geoffrey Weathers found less peak-hour parking demand than provided or required before or after reductions.^{122, 123, 124}

In 2022, City Council revisited parking policy on the Main Street Corridor. In this update, the City eliminated minimum parking limits at multifamily housing and emphasized urban design guidelines that located parking adjacent to or behind mixed-use development rather than in front of it along the street.

In 2024, seeing an opportunity to clarify a zoning code that had set minimum parking limits for some types and areas of development, with selective reductions to those minimums, and maximum limits for others, City staff proposed replacing all minimum limits for maximum limits. City Council then adopted maximums citywide.

Rather than assume appropriate parking supply from parking generation tables or comparable communities, Longmont staff encourage peers to evaluate peak-hour

parking demand specific to their contexts in consultation with parking analysts and developers who know their properties' parking needs best.

For more information: [Ben Ortiz](#), City of Longmont

Considerations

Maximum parking requirements can face varying levels of skepticism from developers and parking managers alike. Developers and their financial partners, who prefer to oversupply parking to mitigate the risk of losing car-owning tenants or buyers, may oppose maximum parking requirements or avoid building in areas with these requirements altogether, prompting car-dependent development and jeopardizing the economic viability of areas with maximum parking requirements. Noted in an earlier section, this challenge presents an opportunity to study comparable properties' parking demand to educate developers and financial partners about right-sized parking supply with maximums or to elevate those partners interested in supporting the strategy's far-reaching aims.

“Developers don't build to ideological public policy. We develop to market demands. If a city requires less parking than what the market requires, we simply would not build in that city.” ~ Colorado developer

More academically, parking managers disagree about the utility of parking limits relative to other strategies. To some focus group attendees who endorse market-based parking reform, maximum parking requirements mimic many of the same issues with minimum parking requirements: a supply requirement based on limited or outdated data; lax evaluation of demand; limited reporting to the market; and complicated variance or similar approval processes. However, attendees agreed that first eliminating minimum parking requirements would most significantly allow the market to provide low-parking supply development in high-cost mobility-rich districts, while maximum parking requirements enhance efficient development and mobility options.

Like priced off-street parking, maximum parking limits introduce the risk of prompting encroachment to on-street parking from drivers who prefer not to pay or compete for constrained parking. Once again, this off-street strategy relies on considerate on-street strategies to comprehensively manage district parking.

Further Reading on Setting Maximum Parking Limits

- American Cities Climate Challenge. [“The New Transportation Demand Management: An Implementation Guide for City Officials.”](#) Nelson Nygaard.

- [“Boulder Junction Transportation Demand Management District.”](#) City of Boulder, CO.
- Dyett & Bhattia and Nelson Nygaard. [“Parking Code Guidance: Case Studies and Model Provisions.”](#) Metropolitan Transportation Commission.
- Fort Collins Land Use Code. [“Article 5.9.1: Access, Circulation, and Parking.”](#) City of Fort Collins, CO.
- Fox Tuttle. [“Parking & Affordable Housing: 2020/2021 Report.”](#) Accessed Shopworks Architecture.
- Frommer, Matt. [“Longmont Becomes the First City in Colorado to Eliminate Minimum Parking Requirements Citywide.”](#) Southwest Energy Efficiency Project.
- Hartford Zoning Regulations. [“Section 7.2.1: General Requirements for Parking.”](#) City of Hartford, CT.
- Lakewood Zoning Ordinance. [“Article 8: Parking and Loading Standards.”](#) City of Lakewood, CO.
- Littleton Unified Land Use Code. [“Subsection 10-1-3.7.A: Parking and Loading.”](#) City of Littleton, CO.
- Lone Tree Municipal Code. [“Section 16-28-80: Minimum requirements for off-street parking; general provisions.”](#) City of Lone Tree, CO.
- Longmont Land Development Code. [“Section 15.05.080: Off-Street Parking, Stacking, and Loading.”](#) City of Longmont, CO.
- Louisville Code of Ordinances. [“Chapter 17.20: Off-Street Parking and Loading.”](#) City of Louisville, CO.
- [“Main Street Corridor Plan.”](#) City of Longmont, CO.
- [“Maximum Parking Ratios.”](#) City of Boston.
- Northglenn Unified Development Ordinance. [“Section 11-4-6: Off-Street Parking and Loading.”](#) City of Northglenn, CO.
- Parker Municipal Code. [“Chapter 13.06.050: Off-Street Parking and Internal Circulation.”](#) City of Parker, CO.
- [“TDM Calculator.”](#) City and County of Denver, CO.
- Thornton Code of Ordinances. [“Section 18-596: Off-Street Parking and Loading Requirements Chart.”](#) City of Thornton, CO.
- [“Transit Village Area Plan.”](#) City of Boulder, CO.

- [“Transportation Demand Management.”](#) City and County of Denver, CO.
- RTD. [“Residential Parking in Station Areas: A Study of Metro Denver.”](#)
- Weathers, Geoffrey. [“Multifamily Housing Parking Optimization Study an Evaluation of Parking Requirements for Multifamily Housing in Longmont, Colorado.”](#) University of Colorado at Denver.
- Willsey, Drew. [“Affordable Housing: How Much Parking Is Needed?”](#) Colorado Real Estate Journal.

Figure 13: Multi-family housing in Denver



Source: Colorado Energy Office

Promoting Transportation Demand Management

Transportation demand management (TDM) refers to a suite of complementary multimodal strategies designed to promote mobility options other than driving and, with it, parking. Individual TDM strategies include but are not limited to:

- Access to multimodal mobility services, like biking, transit, car- and ride-share;
- Infrastructure for those services, like bike parking and maintenance rooms;
- Subsidies for tenants, guests, or employees for those services, like transit passes and ride- or car-share credits;
- Wayfinding signage and related design interventions to support those services;
- Education and outreach about those services to new residents and employees;
- Flexible work schedules, telecommuting, and shuttles to limit commutes; and
- Other off-street parking management strategies listed above.



Figure 14: Bikes parked on a curbside bike rack, across the street from a parking garage (Source: Colorado Energy Office)

Benefits of Promoting TDM

In its [guide for city transportation officials](#), Nelson Nygaard itemizes several direct TDM benefits, including reduced vehicle miles traveled per vehicle, reduced number of vehicles traveling at peak-hour, increased per-person fuel efficiency in those vehicles, and improved time and fuel efficiencies for those still driving.¹²⁵ The guide also notes indirect benefits, such as:

- Expanding equitable access to housing, jobs, education, and healthcare;
- Enabling multimodal mobility to compete with driving benefits;
- Enhancing safety for vulnerable road users from fewer vehicles;

- Improving health through routine physical activity via more active travel;
- Growing local economies with better multimodal access to more jobs; and
- Increasing value of TDM-supportive mixed-use, higher-density development.

Implementation Guidance for Promoting TDM

TDM is an invaluable resource for local governments intending to prompt space- and cost-efficient travel. While not a new concept, TDM is gaining popularity among local governments as an encouraged or required feature of development proposals. To nurture TDM investments, local governments can:

- Encourage or require developers to invest in TDM as a condition of local permitting;
- Publish a suite of TDM tools, their typical costs, and their efficacy for mode shift from private vehicles to shared and/or active mobility;
- Educate residents, employees, and other stakeholders about how to access TDM services; and
- Partner with state and regional agencies to coordinate and fund TDM policies and programs.

Applicability

As a versatile and comprehensive strategy, TDM can apply anywhere and adapt to a variety of contexts. In its [Parking Management Toolkit](#) for Portland, OR, Kittelson & Associates itemizes 14 TDM tools and appropriate contexts for their application.¹²⁶

Although HB24-1304 applies to transit-served areas, TDM does not require transit service. Instead, TDM programs can offer ride-share services, bike libraries, wayfinding signage, and other strategies that support travel without private vehicles. Similarly, although other parking management strategies discussed in this report do not require investments in TDM, those investments enhance the strategy considerably and improve its effectiveness.

Typically, local governments and developers focus on making initial TDM investments that introduce residents, employees, and other stakeholders to the strategy in an effort to affect lasting travel behavior. Increasingly, some local governments require property owners to commit to TDM strategies as a condition of a land use approval and then regularly report on their implementation and efficacy.

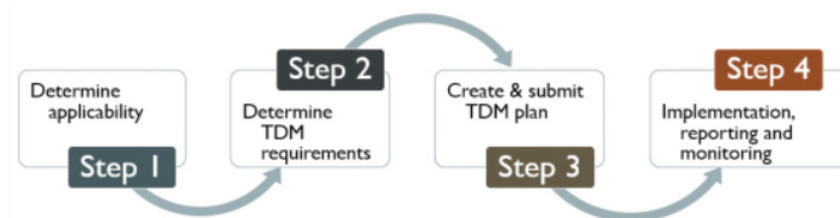
Examples

Literature and focus group attendees agree that local governments typically promote TDM to meet VMT reduction goals. Whether encouraged or required in development review, TDM is a critical strategy to shift travel to cleaner, healthier, and more affordable modes. CDOT [recommends](#) ten steps to create a TDM plan and links to helpful statewide resources.¹²⁷ Nelson Nygaard’s [guide](#) for implementing TDM requirements for development proposals recommends that local governments should:

1. Determine applicability, typically based on number of residential units, commercial or industrial area, or number of peak-hour vehicle trips.
2. Define and publish clear compliance options and whether they are required, prescribed, or available on a point-based system in a menu of strategies.
3. Define ongoing compliance requirements that rely on self-reporting and monitoring before and after occupancy.
4. Allow for updating the TDM plan to reflect unexpected changes.¹²⁸

In 2022, [Madison, WI](#), began requiring applications for new development, changes of use, and site alterations to submit a TDM plan that identifies a selection of weighted [TDM measures](#) for active transportation, transit, shared mobility, land use, and parking management, like shared parking, unbundled parking, and parking cash-out, based on project size and off-street parking supply.^{129, 130} For example, a 100-unit affordable-housing property with 50 off-street parking spaces could provide indoor bike parking, half-priced transit passes, car-share parking, and share parking with a neighboring property or public garage to satisfy the City’s 17-point requirement. [San Jose, CA](#) and [Boston, MA](#) similarly require developers to submit TDM plans with strategies that garner sufficient points to earn approval.^{131, 132}

Figure 15: City of Madison, WI, TDM Plan Review Process

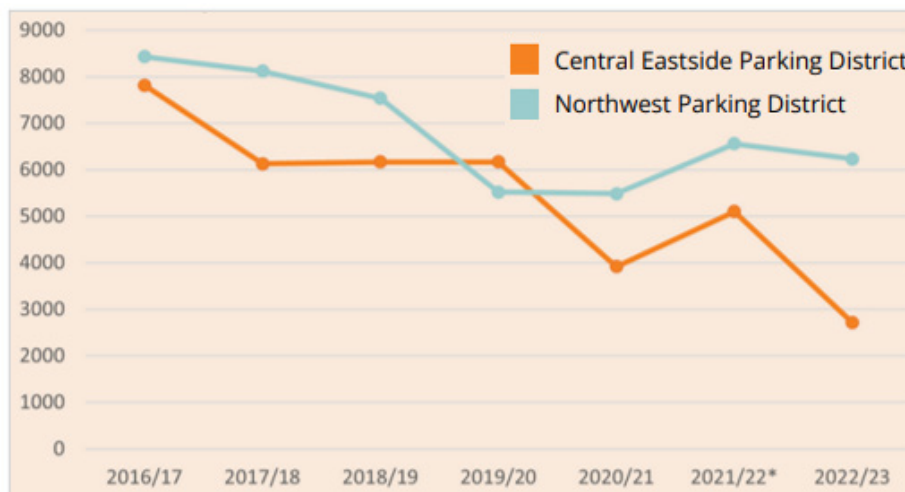


Source: [City of Madison, WI](#)¹³³

Since 2017, the Portland, OR [Transportation Wallet Program](#) has provided participants with credits for multimodal transportation.¹³⁴ Leveraging parking permit surcharge fees collected in select neighborhoods, the program provides a bundle of transportation options to eligible residents and employees at a fraction of the full retail cost, or for

free when trading in a parking permit or meeting other eligibility criteria. The program has reduced parking demand and single occupancy vehicle use in two parking districts while increasing use of transit, bike-share, and car-share services.

Figure 16: *On-Street Parking Permit Issuance since Transportation Wallet Inception*



Source: [Portland, OR](#)¹³⁵

Although a handful of Colorado communities have promoted TDM for years, [Denver](#) is the first Colorado city to require most new residential, commercial, and industrial development to comply with and routinely report on TDM measures.¹³⁶ The City's 2020 [TDM Plan](#) categorizes strategies in five groups, while a [TDM Strategy Menu](#) itemizes dozens of strategies and their expected trip reduction (See Table 5 below).^{137, 138}

Already a leader in Colorado parking reform and TDM, Denver has proposed to [eliminate minimum parking limits](#) and instead rely on TDM requirements to influence parking supply and prompt investments in multimodal mobility.¹³⁹ After conducting a parking study to understand parking demand at comparable properties, a developer would better understand sufficient parking supply and leverage TDM tools like transit pass discounts, car-share memberships, and bike libraries to further reduce costly parking supply while more affordably maintaining residents' quality of access.

Close coordination between a developer and a TMO familiar with TDM tools helps to tailor those tools. In addition to planning initial TDM investments, like bike libraries and transit passes, TMOs can monitor and recommend adjustments to TDM programs for lasting success. In Denver's Central Park neighborhood, Mile High Development's LIHTC application for [Beeler Park Flats](#) benefited from partnering with TMO Northeast Transportation Connections to install and manage a bike-lending library, including soliciting user feedback to maintain a successful resident amenity.¹⁴⁰

[The Quayle](#) rehabilitated an historic hotel property into 102 units of affordable housing in Denver’s mobility-rich Baker neighborhood. The property’s transportation program includes secure parking for approximately 100 bicycles and a well- equipped bicycle-repair room. With only 30 parking spaces, the property unbundles parking and charges \$150 per month per space while encouraging residents to walk, bike, or take transit with multimodal service information. Since opening in 2019, developer Zocalo Community Development further invested in shared e-scooters, e-bicycles, a tricycle, and a vehicle - all available for residents. Owing in part to its compelling transportation program, The Quayle earned awards from several organizations, including the Association for Commuter Transportation, Housing Colorado, and Historic Denver Inc.¹⁴¹

For more information: [Stuart Anderson](#), Transportation Solutions

Table 5: Denver TDM Plan Categories of Strategies

Services	Infrastructure	Parking Management	Subsidies	Education
Transit	Curb Management	Paid Parking	Transit Pass Discounts	New Resident / Employee Welcome Kits
Microtransit	Bicycle Parking	Unbundled Parking	Car-share Membership Discounts	Information Kiosks
Car-Share	Transit Stop Enhancements	Preferential Parking	Bike-share Membership Discounts	General Marketing
Shuttles	Bicycle Repair Stations	Discounter Car-Pool Parking	TNC Discounts	Bicycle Workshops
TNCs	Wayfinding	Car-share Parking	Micromobility Credits	Websites / Apps
Micromobility	Showers/Changing Facilities	Shared Parking	Direct Payment to Service Providers	Trip Planning Assistance

Source: Reproduced from [City and County of Denver](#)¹⁴²

Recognizing TDM’s value to mode choice and attendant benefits, CDOT OIM offers [TDM Innovation Grants](#) to support and demonstrate creative solutions to address gaps in existing TDM approaches and programming, recently awarding the Denver South Transportation Management Association to inventory commercial parking supply in the Denver Tech Center, Downtown Denver Partnership to evaluate employer parking needs, and Transportation Solutions to expand e-bike storage in Southeast Denver.¹⁴³

Considerations

TDM's comprehensive nature requires support from a variety of stakeholders, such as public- and private-sector partners, residents with a range of household incomes, and drivers and users of other modes, to coordinate investments. More stakeholders can increase the complexity of TDM programs and the risk of opposition. Further, developers and property managers may hesitate to invest in TDM when public partners have not made commensurate investments in infrastructure or services, such as high quality transit service, sidewalks, or bike lanes.

“Fewer developers are pursuing RTD Neighborhood EcoPasses for residents and employees due to service cuts and ongoing maintenance of the transit system.” ~ Colorado municipal planner

Local governments committed to leveraging TDM should appreciate the administrative cost of doing so. Sufficiently administering a citywide TDM program requires significant staff time to collaborate with developers, coordinate across departments, confirm implementation, and ongoing compliance monitoring to the extent feasible. Although Denver is the only Colorado community to monitor compliance, other jurisdictions like Boulder require developers to set aside funding in a short-term escrow account, and CHFA expects LIHTC applicants to show two years of TDM programming in operating expenses. [Research](#) suggests that developers' initial TDM investments influence residents' travel behaviors and set market-based expectations for maintaining TDM services without compliance monitoring.¹⁴⁴

“We cannot be the TDM police.” ~ Colorado municipal planner

Finally, relying on travelers' appetite to change travel behavior, TDM must compete with markets well beyond its control, including but not limited to whether a household already owns a vehicle, the cost to operate that vehicle, the availability of multimodal infrastructure and services, and the patience necessary to accommodate the occasional inconveniences of multimodal travel. To address some of these issues and to facilitate low-income households' access to affordable transportation, TDM programs in [Portland](#), [Madison](#), and [San Jose](#) all favor affordable housing, while RTD's [LiVE Program](#) halves transit fare for low-income customers in Metro Denver.^{145, 146, 147, 148}

Further Reading on Promoting TDM

- [“12 Ways Developers Can Guide Tenants To Better Transportation Decisions.”](#) Mobility Lab.
- [“2023 Transportation Wallet in Parking Districts Report.”](#) City of Portland, OR.

- American Cities Climate Challenge. [“The New Transportation Demand Management: An Implementation Guide for City Officials.”](#) Nelson Nygaard.
- [“CHFA Announces 2024 Round One Housing Tax Credit Awards.”](#) Colorado Housing & Finance Authority.
- Dill, Jennifer. [“Long Term Evaluation Of Individualized Marketing Programs For Travel Demand Management.”](#) National Institute for Transportation and Communities.
- Harris, Kyle. [“Denver wants to get rid of minimum parking requirements for all new development.”](#) Denverite.
- [“How to Create a TDM Plan.”](#) Colorado Department of Transportation.
- Kittelson & Associates, Inc. [“Parking Management Toolkit.”](#) City of Portland, OR.
- [“LiVE: An Income-Based Fare Program.”](#) RTD.
- [“Office of Innovative Mobility \(OIM\) Grants.”](#) Colorado Department of Transportation.
- [“Parking and Transportation Demand Management \(TDM\) Ordinance Update.”](#) City of San Jose, CA.
- [“Pre-Approved TDM Plan Information.”](#) City of Portland, OR.
- State Smart Transportation Initiative. [“Transportation Demand Management Program.”](#) City of Madison. June 2024.
- [“TDM Plan Creation Tool.”](#) City of Madison, WI.
- [“TDM Plan Review Process.”](#) City of Madison, WI.
- [“TDM Strategy Menu.”](#) City and County of Denver, CO.
- [“The Quayle.”](#) Zocalo Community Development.
- [“Transportation Demand Management \(TDM\) Checklist.”](#) City of San Jose, CA.
- [“Transportation Demand Management \(TDM\) Point System.”](#) City of Boston.
- [“Transportation Demand Management Background.”](#) City of Madison, WI.
- [“Transportation Demand Management.”](#) City and County of Denver, CO.
- [“Transportation Options: Requirements for New Development.”](#) City and County of Denver, CO.

On-Street Parking Management Strategies

Compared to off-street parking, which commonly accommodates long-term stays from more predictable users like residents and employees, on-street parking is more dynamic and must accommodate short-term customers, passenger pickups and dropoffs, bikes and scooters, deliveries, emergency vehicles, home-improvement services, and countless other users. This variety of users—each with different parking demands for different durations at different times of day—requires flexible tools closely coordinated with off-street parking management strategies.

Unlike off-street parking, which concerns private properties and owners, on-street parking in the public right-of-way primarily concerns local governments that regulate by whom, when, and how on-street parking is used, including setting parking time limits, collecting and dedicating parking fees, and supporting complementary multimodal investments. Local governments may delegate on-street parking management to TMOs or other neighborhood partners, who may tailor tools to fit a specific context, but they hold primary responsibility for efficient use of the public right-of-way.

This chapter considers three on-street parking management strategies:

- **Managing Commercial Curbside Parking:** Using time limits or pricing to maintain parking vacancy and access to commercial districts while encouraging parking turnover or generating revenue;



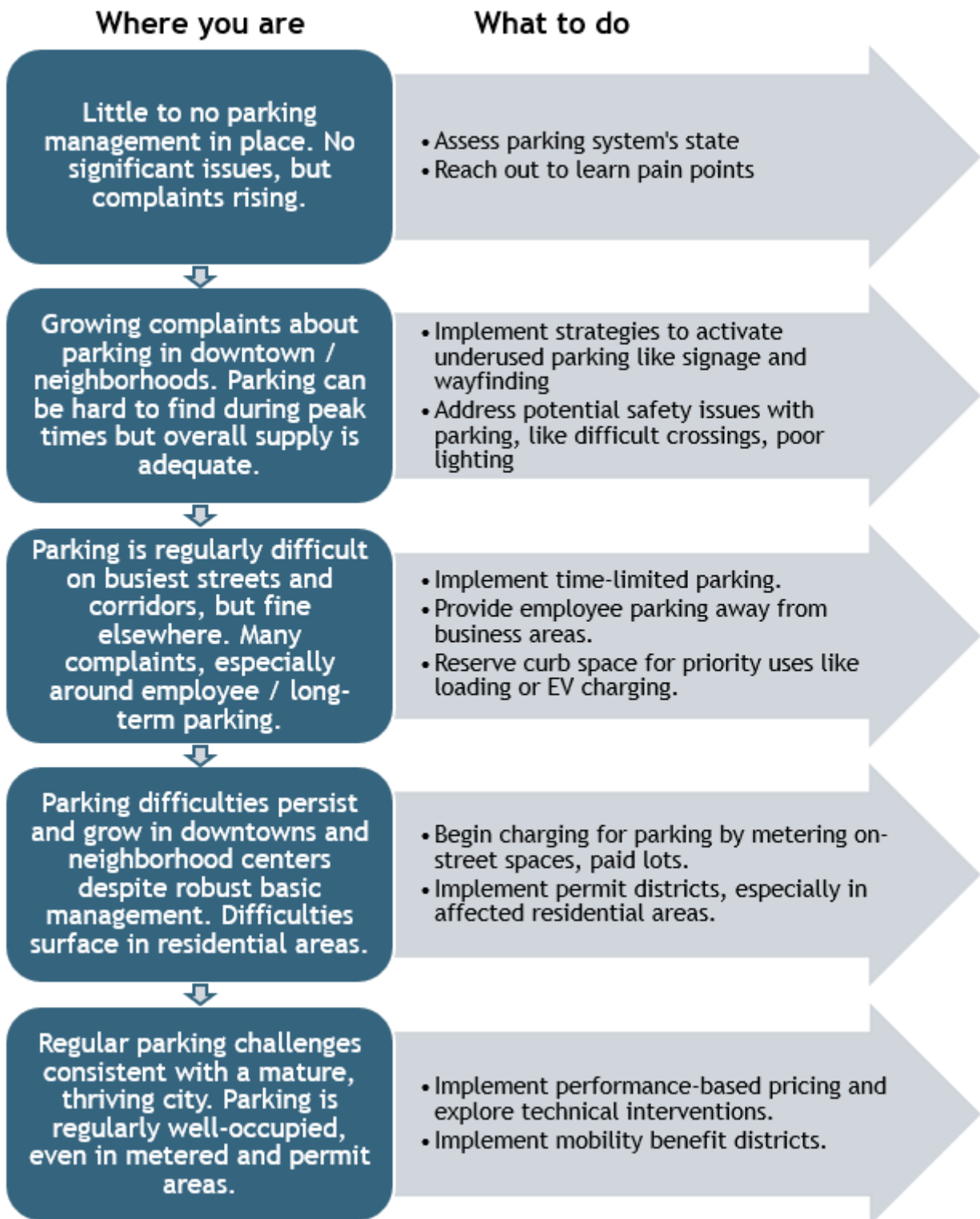
Figure 17: Managed on-street parking with time limits (Source: Colorado Energy Office)

- **Permitting Neighborhood Parking:** Giving residents of neighborhoods near commercial districts or other destinations preferential access for long-term parking while allowing visitors to park for shorter and selective durations; and
- **Establishing Mobility Benefit Districts:** Leveraging revenue from priced commercial curbside parking and neighborhood parking permits to invest in equitable and multimodal mobility options.

Like the off-street parking management strategies discussed above, on-street parking strategies rely on measuring parking supply and demand, working with partners familiar with local contexts and appropriate solutions, pairing these strategies with off-street parking reform, and providing residents and visitors with choices that may suit their diverse interests. Rather than dictate a one-size-fits-all strategy, communities and their partners should test creative strategies to address complex needs; solutions should be as dynamic as the space employing them.

For cities just starting out with parking management, Oregon's [Parking Management Jump Start Guide](#) offers a useful framework for how to incrementally implement strategies to better utilize and manage existing on-street and off-street parking based on different contexts and levels of parking demand (See Figure 18). Several of these strategies are outlined in this section, with more detail in Oregon's guide.¹⁴⁹

Figure 18: The Parking Management Journey



Source: Reproduced from [State of Oregon](#)¹⁵⁰

Managing Commercial Curbside Parking

Local governments commonly manage curbside parking in commercial districts to maintain access to businesses and/or to generate revenue for transportation and other local services and amenities. [Literature](#) recommends setting a goal of 85 percent parking occupancy, leaving one or two spaces per block face available to accommodate a short walk to a desired destination.¹⁵¹

Benefits of Managing Commercial Curbside Parking

Managing commercial curbside parking with time-limited or metered strategies can expand business access, improve non-vehicular travel for a variety of users, and enhance environmental quality. Noted in Boulder's' [Curbside Implementation Guidebook](#):

“The curb traditionally has been dedicated to on-street parking, but changes in how people and goods move—and the COVID-19 pandemic—have brought to light new, creative ways of using curbside space. From ‘parklets’ to outdoor dining to pick-up/drop-off, curbside spaces provide valuable opportunities to meet community needs.”¹⁵²

With on-street parking management, businesses and customers enjoy predictable access to support sales and visibility. Whereas an unmanaged parking area may routinely prompt congestion and unreliable parking that may discourage customers from driving to a commercial district, proper management can maintain sufficient on-street parking availability for quick trips throughout the day.

Importantly, commercial curbside parking management intends to make room for customers rather than employees, who may park closest to a business before it opens and remain parked in that space during business hours, preventing prospective customers from using that space. By limiting time or charging for high-demand on-street



Figure 19: Parking meters with a time limit in Denver (Source: Colorado Energy Office)

parking spaces, proper curbside management urges employees to park in larger-supply, lower-demand, longer-term off-street parking facilities.

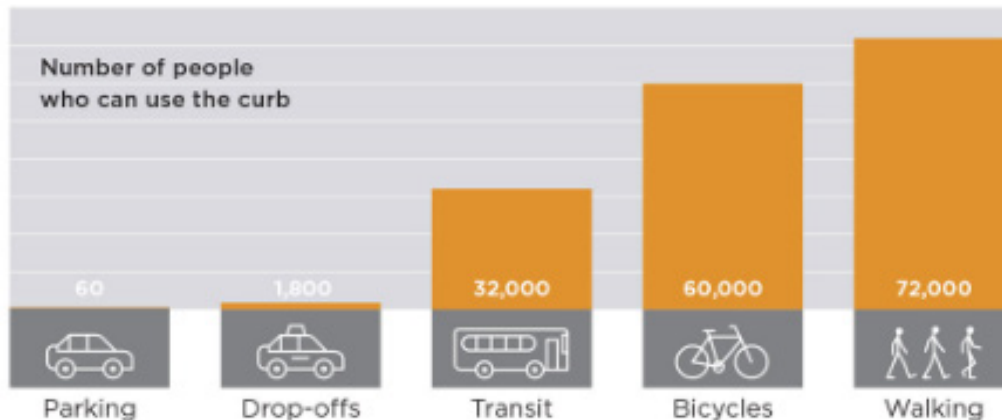
On-street parking management can enhance multimodal access by managing parking as one of several curb uses. Dedicating curb space to buses or ride-share services supports reliable access for long-distance mobility without car ownership, while bike parking accommodates far more travelers in the space of a single vehicle. Bikers' and pedestrians' safety improves as well with fewer distracted and frustrated drivers circling the block or cruising for an available parking space.

Figure 20: Comparison of Number of Users of Curbside Parking Space per Hour



Source: [American Planning Association](#)¹⁵³

Figure 21: Comparison of Number of Users of Curbside Parking Area



Source: [American Planning Association](#)¹⁵⁴

Cars entering and exiting parking spaces slow passing traffic, subtly fostering an inviting streetscape for pedestrians coming and going from Main Street destinations. Moreover, the exercise of parking at the curb activates the space and invites more pedestrians to the area. Where street design locates bike lanes between travel and parking lanes, [back-in angled parking](#) could accommodate more vehicles than parallel parking, enhance passengers' access to the sidewalk behind the open car door, and improve drivers' awareness of passing cyclists in front of them.¹⁵⁵

Figure 22: Example of Parallel and Back-In Angled Parking with Bike Lane



Image Source: [Google Maps](#)¹⁵⁶

Circling the block increases congestion, VMT, and GHG pollution. Eminent parking management scholar Donald Shoup [estimated](#) that 10 cars cruising a 500-space district for three minutes at 10 miles per hour will travel nearly one million miles per year and contribute 730 tons of GHG pollution.¹⁵⁷ As a practical example, after deploying [SFpark](#) to dynamically adjust meter fees to reflect parking demand, cruising time decreased 43 percent and VMT and GHG pollution each declined 30 percent in pilot areas in San Francisco.¹⁵⁸

Implementation Guidance for Managing Commercial Curbside Parking

Local governments have a direct role in managing a successful on-street parking program. To support efficient use of curbside parking, local governments can:

- Set time limits to require turnover and hourly prices to encourage turnover;
- Install kiosks and contract with app providers to offer varied payment methods;
- Fund enforcement with parking revenue and related bond proceeds;
- Provide or support longer-term off-street parking areas; and
- Educate drivers and other stakeholders of parking and other mobility options.

Applicability

Time-limited or metered parking is best applied in pedestrian-oriented commercial areas where some parking vacancy and regular parking turnover could support business sales, limit cruising for parking, and fund multimodal investments.

Examples

You can't manage what you don't measure. Peer communities offer several resources to help understand on-street parking demand and fit management tools to match it.

Oregon's new [Parking Data Collection and Meter Revenue Estimating Tool](#) helps local governments or partners evaluate on-street parking demand to inform parking-management strategies.¹⁵⁹ After users enter information about curbside occupancy and turnover, the Excel worksheet prepares a summary of parking value and an hourly parking-demand curve for the selected parking area.

Greater Boston's [Metropolitan Area Planning Council](#) (MAPC) offers clear guidance on how to conduct a parking study and provides a sample study with notes about preparing and conducting a site survey, analyzing data, and presenting findings as well as pointers for data collectors.¹⁶⁰ The guide highlights a study of Arlington, MA, a Boston-area inner-ring suburb of 45,000 residents, to set the study process in context.

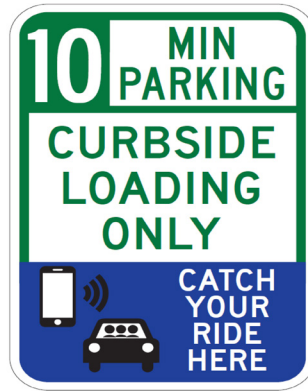
[University of Colorado at Denver](#) planning students recently evaluated parking demand on Denver's East Colfax Ave for a larger parking study led by [Denver Streets Partnership](#) and funded by the [Denver Regional Council of Governments](#) (DRCOG).^{161, 162, 163}

Focus group attendees agreed with the literature framework and noted their use of many of these tools. For example, Boulder's [performance-based parking model](#) digitizes the curb, sets and adjusts parking rates on several downtown block faces, and publishes those rates at the payment kiosk and on an easy-to-use interactive map on the City's website.¹⁶⁴ Similar to SFpark, Boulder recently [increased parking rates](#) by \$0.50 on high-demand downtown curbs.¹⁶⁵

Understanding demand, local governments may find it useful to establish both time-limited and metered commercial curbside parking in a given district, depending on parking demand in the area relative to land uses influencing it. In a focus group conversation, a mobility consultant illustrated an on-street management lifecycle, moving from no management to time-limits to meters to TDM to address persistently high parking occupancy with alternate mobility options, similar to the process in Figure 16. [Kittelson and Associates](#) describes eight ways to manage on-street parking.¹⁶⁶

Focus group attendees stressed that commercial curbside parking should account for occasional but predictable demands, such as an office cleaner with a vacuum, a landscaper with a lawnmower, a parent with a toddler. To that end, Boulder staff touted the popularity of its Flex Parking program, which provides at least one free 15-minute parking space per block face. Rather than predict who may need a spot when and for how long, the City's flexible parking arrangement invites that market of parking demand to sort itself out.

Figure 23: Boulder Flex Parking Signage



Source: [City of Boulder](#)¹⁶⁷

Denver staff referenced the City’s [Curbside Area Management Plan](#), which addresses resident, business, and property-owner parking challenges, explores alternate strategies, and makes neighborhood-specific recommendations, and its [Curbside Action Plan](#), which prioritizes accessible parking, outdoor places, mobile commerce, flexible zones, commercial loading, bike and scooter parking, passenger pickup and drop, car-share, and—lastly—parking of personal vehicles.^{168, 169}

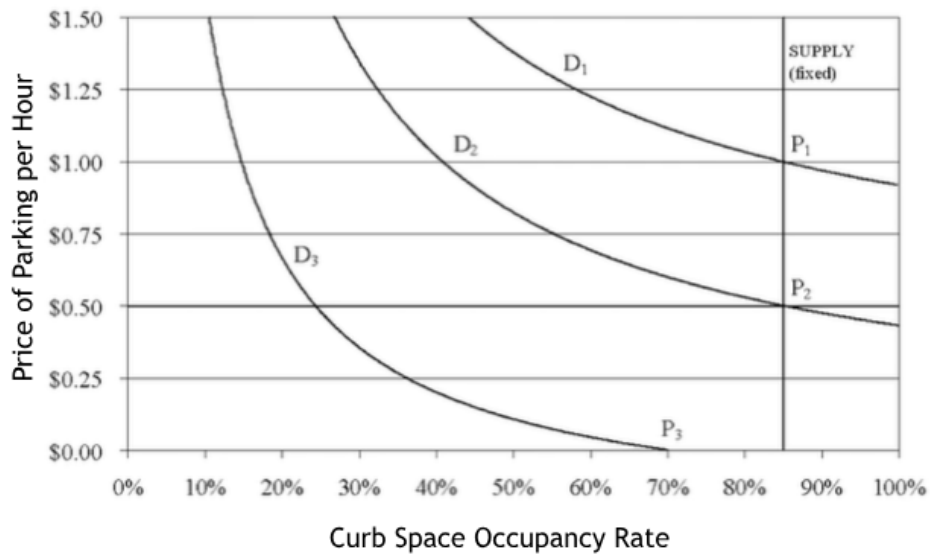
Considerations

Commercial on-street parking management should rely on exhibited demand and community feedback to inform lasting solutions. Oregon’s [Parking Made Easy](#) manual itemizes several benefits of effective on-street parking management and recommends a variety of implementation steps, starting with setting a suitable study area to catalog peak-hour parking demand by various methods.¹⁷⁰

In congested areas, time-limited parking management strategies aim to increase turnover and parking availability. Limiting parking duration and tailoring individual parking spaces to specific users helps increase turnover while also supporting business sales. These strategies may be especially useful in areas with businesses suited to quick transactions, while longer-stay businesses like restaurants and professional offices should utilize low-turnover off-street parking.

Metered parking requires drivers to pay a fee based on duration, time of day, day of week, and other factors. Local governments or their parking management partners should set and adjust fees based on desired occupancy. Following classical economic principles, an area with low parking demand should charge less to park, while an area with higher parking demand should charge more. Based on this principle, drivers can decide whether the time to park farther from their destinations in a low demand area is more important than paying more to park in a closer high demand area.

Figure 24: Market Price (P) of Commercial Curbside Parking per Demand (D)



Source: [Planetizen](#)¹⁷¹

Local governments typically face opposition from business owners concerned that either time limits or fees will turn away customers and hurt sales, and charging for commercial curbside parking may carry connotations of inequity among low-income drivers. Inconsistent parking enforcement can allow some users to overstay time limits or park where they are not allowed, frustrating and negatively impacting other users.

Various resources agree on the fundamental steps to establish curbside parking management. Writing for the American Planning Association (APA), Walker Consultants' Chrissy Mancini Nichols and John Dorsett [recommend](#) that practitioners set goals, create a curbside inventory, and launch a pilot program, among other steps.¹⁷²

In another [APA piece](#), Brian Barth supports Walker Consultants' approach and emphasizes financial benefits of a metered management strategy.¹⁷³ Referencing Jason Schrieber at Stantec, "Curb space in high-demand areas could be up to 30 times more valuable if reconfigured from typical paid parking to flexible pickup and drop-off [parking] that accommodate rapid-fire movement of multiple transportation modes."

Agreeing with the VTPI's [Parking Pricing Implementation Guidelines](#), the Institute for Transportation and Development Policy's (ITDP) [On-Street Parking Pricing Guide](#) urges local governments to prioritize management of on-street parking in the public realm over off-street parking on private property and agrees with the basic tenets of implementing commercial curbside parking management, including setting an occupancy goal and adjusting time limits or fees accordingly.^{174, 175} ITDP urges creating a financial model that considers capital and operating costs and an enforcement strategy that notes technical solutions and penalties for non-compliance.

Oregon’s [Parking Management Jump Start Guide](#) clearly instructs how to establish time-limited parking.¹⁷⁶ Over 30 pages, the Guide outlines several time-limited system tools, including program design for general and special-use parking spaces, appropriate time limits for various trip purposes, clear signage, and enforcement policies before considering metered system approaches to where, when, and how to meter through technology and enforcement. Noting that time-limited management should precede metered management, the Guide recommends “the most significant and effective step” of pricing the curb only after time limits have not addressed persistent demand and further advises leveraging a variety of pricing schemes for different objectives:

- Fixed-fee pricing to create predictable parking, in tandem with time limits;
- Increased fees (\$1 for the first hour, \$4 for the second) to prompt turnover;
- District pricing to reflect demand registered by kiosks, apps, or observation;
- Time-of-day pricing to match demand, like peak-hour commute or dinner; and
- Discounts to support community goals for equity, clean mobility, etc.

Regularly monitoring commercial curbside parking requires local resources. A study by the University of Washington’s [Urban Freight Lab](#) found that delivery trucks in downtown Seattle double-park, or otherwise park illegally, for about half of delivery stops.¹⁷⁷ In Washington D.C., UPS pays more than \$1 million in parking fines annually to the [Parking System Fund](#), which funds capital projects and covers administrative costs.¹⁷⁸

Distinguished by their revenue sources but similar in their investments in mobility, [Aurora](#) and [Fort Collins](#) operate special revenue funds supported by various sources, while [Boulder](#), [Colorado Springs](#), [Pueblo](#), and [Westminster](#) rely on enterprise funds with support from transportation-related sources.^{179, 180, 181, 182, 183, 184} Either fund typically helps hire parking management staff, install parking kiosks (typically one per block face), increase enforcement, and enhance mobility options for pedestrians, cyclists, transit users, and drivers alike.

ITDP’s [On-Street Parking Guide](#) considers various parking- payment methods, favoring versatile apps but acknowledging the necessity of kiosks:

“Some cities are replacing some or all traditional coin- or card-operated parking meters with pay stations that require users to pay at a kiosk and enter their license plate number (pay by plate) or display a receipt on their dashboard (pay and display). Pay stations eliminate the need to install or maintain a meter at every single parking space, reducing the profile of parking infrastructure on the street and lowering costs.

Pay-by-app systems enable users to more easily and accurately pay for parking and, if needed, extend parking time without having to return to a meter or kiosk. The easier it is for users to pay, the more willing they will probably be to comply, resulting in higher revenues and more effectively managed space.

App-based payment has also enabled cities to cheaply expand paid parking zones beyond initial areas with meters. For example, app-based payment can add a paid option for visitors to park in low-demand on-street spaces that are otherwise not priced, and where it would not be cost-effective to install parking meters. Mobile-app-based payment systems also present an opportunity for payment integration with other city services, such as public transport or bike-share.”¹⁸⁵

Adding apps to the suite of on-site parking payment tools can reduce costs of infrastructure and enforcement for local governments, enable tracking parking availability, improve convenience by allowing users to add time remotely, and introduce opportunities for integration with multimodal services.

Further Reading on Managing Commercial Curbside Parking

- [“10 Bow St, Somerville, MA.”](#) Google Maps.
- [“2024 Adopted Budget.”](#) City of Westminster, CO.
- [“2025 Parking System Enterprise Budget.”](#) City of Colorado Springs, CO.
- [“2023 Annual Comprehensive Financial Report.”](#) City of Aurora, CO.
- Barth, Brian. [“Curb Control.”](#) Planning Magazine.
- [“City of Boulder Changes On-street Pay Parking Pricing in High-demand Areas of Downtown, Effective April 3, 2023.”](#) City of Boulder.
- [“City Of Boulder To Begin Implementing Curbside Management Pilot Project.”](#) City of Boulder, CO.
- [“City Parking Garages.”](#) City of Boulder, CO.
- Code of the District of Columbia. [“Section 50-2510: Parking System Fund.”](#) Washington, D.C.
- [“Curbside Action Plan.”](#) City and County of Denver, CO.
- [“Curbside Area Management Plans.”](#) City and County of Denver, CO.
- [“East Colfax Parking Management Study.”](#) Denver Streets Partnership.

- Fehr & Peers. [“Boulder Curbside Implementation Guidebook.”](#) City of Boulder.
- [“Financial Management Policy 3: General Financial Policies.”](#) City of Fort Collins, CO.
- [“How to Do a Parking Study.”](#) Metropolitan Area Planning Council.
- Kittelson & Associates, Inc. [“Parking Management Toolkit.”](#) City of Portland, OR.
- Litman, Todd. [“Parking Pricing Implementation Guidelines.”](#) Victoria Transport Policy Institute.
- Machado-León, J.L., MacKenzie, D. & Goodchild, A. [“An Empirical Analysis of Passenger Vehicle Dwell Time and Curb Management Strategies for Ride-Hailing Pick-Up/Drop-Off Operations.”](#) Transportation.
- Nichols, Chrissy Mancini and John Dorsett. [“Create a Curb-Management Framework in 7 Steps.”](#) Planning Magazine.
- [“On-Street Parking Pricing: A Guide to Management, Enforcement, and Evaluation.”](#) Institute for Transportation and Development Policy.
- [“Parking Data Tool.”](#) State of Oregon.
- [“Parking Facilities, 2024 Adopted Budget.”](#) City of Pueblo, CO.
- [“Parking Made Easy: A Guide to Managing Parking in Your Community.”](#) Oregon Transportation & Growth Management Program.
- [“Parking Management Jump Start Guide.”](#) State of Oregon.
- [“Parking Occupancy Data Collection.”](#) Institute of Transportation Engineers.
- [“SFpark Pilot Project Evaluation.”](#) San Francisco Municipal Transportation Agency.
- Shoup, Donald. [“The Right Price for Curb Parking.”](#) Planetizen Courses.
- [“Transportation & Mobility, 2023 Budget.”](#) City of Boulder, CO.
- [“Transportation Demand Management Services Set-Aside.”](#) Denver Regional Council of Governments.
- [“Urban and Regional Planning Department.”](#) University of Colorado at Denver.
- VHB. [“On-Street Motor Vehicle Parking And The Bikeway Selection Process.”](#) Federal Highway Administration.

Initiating Neighborhood Parking Permit Programs

Closely related to curbside management in commercial districts, neighborhood parking permit (NPP) programs intend to address spillover congestion from multifamily buildings or commercial destinations in residential areas. Although a business customer's trip may allow a short parking session, timed or priced commercial curbside parking would not suffice for a longer night's stay, work shift, game, or concert. NPP programs manage those spaces, striking a balance between occasional visitor and regular residential demands. By determining where, when, and for how long multifamily residents, employees, or customers can and cannot park, NPP programs encourage developers to build sufficient off-street parking and position local governments to represent neighborhood concerns ahead of complaints.



Figure 25: Denver Parking Permit Signage
(Source: Colorado Energy Office)

Benefits of Initiating NPP Programs

As much a parking management tool as a strategy to address resident concerns, neighborhood parking permits prioritize residents while inviting visitors to park during select times and/or for limited durations. Clear permit signage and programming help to mitigate encroachment from residents, employees, and others with off-street parking options. In the example in Figure 23, Denver residents holding a Baker Area (BA) permit may park any time, while visitors without permits cannot park between 10:00 am and 10:00 pm except for Sundays and Holidays.

Implementation Guidance for Initiating NPP Programs

Noted by Walker Consultants' Tania Schleck, NPP programs can effectively manage parking spillover from commercial and institutional uses into residential areas, improving parking availability for residents while reducing congestion and related effects. To support neighborhood parking permits, local governments can:

- Establish a process for residents to request permits in a defined neighborhood;
- Evaluate parking-demand generators in that neighborhood, including multifamily properties with constrained off-street parking supply;
- Facilitate community discussions about addressing parking demand;
- Issue monthly or annual parking permits by request;
- Price permits to reflect administrative costs, supply of curbside parking space, demand for them, and equity considerations; and
- Publish permit resources online, including an interactive map and rules.¹⁸⁶

Applicability

NPP programs are useful in residential areas near multifamily housing, commercial districts, stadiums, hospitals, and other regional traffic generators, and are especially effective in older neighborhoods where properties may not include off-street parking options like garages or driveways. Focus group attendees emphasized that NPP programs work best in areas with similar building types, noting that new multifamily properties can increase parking demand in otherwise low-density neighborhoods.

Examples

Austin, TX designates [Residential Parking Permit zones](#), which reserve parking for residents and guests during certain times of the day.¹⁸⁷ Residents and visitors in those zones may request annual permits ranging from \$20 for the first permit to \$70 for the sixth permit. The City also issues day passes for \$5 each. Non-residents may park in permitted zones outside of designated times. The City publishes zones and related information on [an interactive online map](#).¹⁸⁸

Fort Collins' [Residential Parking Permit Program](#) issues time-unlimited permits to residents but also allows non-residents to park up to two hours per day.¹⁸⁹ Implemented in 12 zones around Colorado State University, the City outlines the following process for residents to request neighborhood parking management:

1. Property owners submit a petition endorsed by ten affected households;
2. City verifies parking demand in the proposed management zone;
3. City confirms the management zone and other characteristics of the program;
4. City hosts a public meeting for potentially affected residents and businesses; and

5. Property owners vote on whether to create the management zone by simple majority.

To help address concerns over misuse and equity, the price of annual parking permits in Fort Collins increases in cost per vehicle, rising from \$0 for the first permit to \$200 for the fifth permit for residents and up to \$10 for guests, per a [two-page handout](#).¹⁹⁰

Figure 26: Map of Fort Collins Residential Parking Permit Program Zones



Source: [City of Fort Collins, CO](#)¹⁹¹

Emphasizing the value of leveraging data to inform management and transparency to earn constituent confidence, Boulder recently transitioned to an [annual digital parking-permit system](#).¹⁹² Rather than recording stickers or hang tags, Boulder parking-enforcement staff are able to more quickly drive through the City's 12 permitted neighborhoods while scanning plates with license plate recognition software and confirm whether the scanned car's owner is permitted to park there. Residents should enjoy easier registration and renewal as well.

Denver also manages on-street parking demand through its [Residential Parking Permit Program](#), issuing either a digitally managed vehicle-specific parking permit or a hangtag

flex parking permit for residents (and their guests) living in an eligible zone established by a [Curbside Area Management Plan](#).¹⁹³ The City's \$25 annual permit fee pays for administering the program but does not reflect demand.

Considerations

NPP programs are perhaps the most contentious parking management strategy, often pitting residents who are accustomed to easily park on the street near their homes against community members who bristle at seemingly exclusive use of public right-of-way by those with the financial means and political acumen to demand it.

Tactfully implemented permit programs can strike a balance between neighbors and the public. The first step, according to Todd Litman at VTPI, is to be clear about the goal of an NPP program: Who is the program trying to help? The answer should account for the needs of all stakeholders to inform a supportive NPP program strategy. In that vein, Kittelson and Associates' [Parking Management Toolkit](#) lists seven approaches to implementing NPP programs depending on a number of desired results.¹⁹⁴

Trying to appease residents, local governments often issue permits at low cost with little consideration for parking supply. This approach limits local governments' ability to recover administrative costs and to discount permits for low-income households, clean-vehicle owners, or others supporting community goals.

"Without calibrating neighborhood parking permits to parking supply, they essentially act as a hunting license without a guarantee to park." ~ Colorado municipal planner

Low-cost permits also don't encourage residents to use available garages or driveways for parking; why use the garage for a car when a resident can park for free on the street and use the garage for storage or living space? Moreover, local staff cannot regularly inspect a permit holder property to ensure responsible permit use.

Permits carry equity concerns as well. By protecting parking access, NPP programs inherently support driving over cleaner, healthier, and more affordable travel modes. Although many permit programs are available to residents at all income levels, literature suggests that higher income residents' greater rates of homeownership, familiarity with local government services, and higher rates of car ownership incline them to more frequently request permits.

A more equitable NPP program could reflect parking supply and administrative costs with higher costs and in turn help fund programs that support community goals. Implementing an appropriately priced and targeted NPP program to address access,

congestion, and equity is not easy, but robust stakeholder engagement and education about the benefits and tradeoffs of different permitting and pricing approaches should reach agreeable results.

Further Reading on Initiating NPP Programs

- Kittelson & Associates, Inc. “[Parking Management Toolkit](#).” City of Portland, OR.
- “[Neighborhood Parking Permits](#).” City of Boulder, CO.
- Parking Services. “[Residential Parking Permit Program \(RP3\)](#).” City of Fort Collins.
- “[Purchase Permits for Residential Parking](#).” City of Austin, TX.
- “[Residential Parking Permit Program Map](#).” City of Fort Collins, CO.
- “[Residential Parking Permit Program](#).” City and County of Denver, CO.
- “[Residential Parking Permit Program: Landlord and Property Management Information](#).” City of Fort Collins, CO.
- “[Residential Parking Permits GIS](#).” City of Austin, TX.
- Schleck, Tania. “[Challenges of Free Residential Parking Permits and Potential Solutions](#).” Walker Consultants.

Establishing Mobility Benefit Districts

Like transportation demand management, parking or mobility benefit districts (MBDs) help to coordinate on- and off-street strategies. Typically led by either local government or non-profit organization, a district works closely with TMOs, BIDs, and multimodal service providers to tailor various strategies to context-sensitive mobility needs.

Benefits of Establishing Mobility Benefit Districts

A key feature of MBDs is holding a portion of parking revenue in the district where it is collected and dedicating it to multimodal investments there. Traditionally, a local government collects revenue from public off- and on-street parking and contributes it to the general fund to support a variety of programs. Under an MBD, a local government still collects parking revenue, but it reserves some revenue for a district, which then dedicates that revenue to building or maintaining transportation assets, enhancing safety programs, enforcing parking regulations, providing transit passes to employees or residents within the district, or other mobility-related investments that local government otherwise may not have capacity to pursue.

Implementation Guidance for Establishing Mobility Benefit Districts

Like other strategies, establishing mobility benefit districts relies on consistent communication, regular parking demand data collection and evaluation, and clear decision-making about how to collect, hold, and spend parking revenue and other funding. To nurture MBDs, Kimley-Horn's [Performance-Based Parking Management Manual](#) recommends that local governments:

- Establish a process for community stakeholders to request a new district;

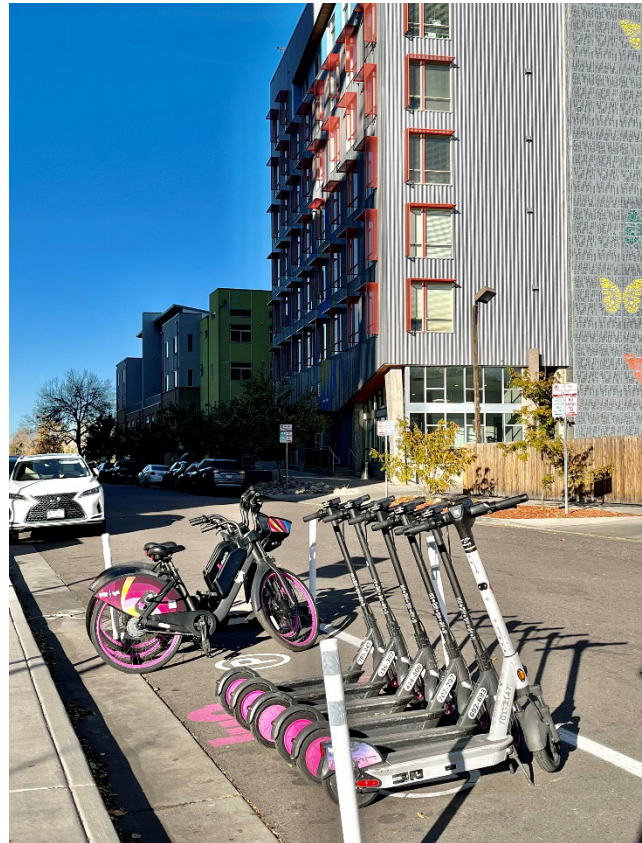


Figure 27: Micromobility options in a dedicated curbside parking area (Source: Colorado Energy Office)

- Draft preliminary district boundaries;
- Create a workgroup or parking committee;
- Document existing conditions and parking management strategies;
- Collect data on parking demand, including who is parking when and where;
- Recommend parking management strategies, including revenue sharing; and
- Establish a district and monitor its performance.¹⁹⁵

Applicability

MBDs are appropriate for commercial and mixed-use districts with consistent parking demand and complementary mobility and development assets, like transit service, a variety of businesses and nearby residences, and bicycle and pedestrian infrastructure. Moreover, districts can fund shared publicly-owned parking to efficiently expand parking supply, relieve congestion, and support businesses with a park-once approach. Without enough parking demand to generate revenue or without the Main Street context to invest in, an MBD would lack critical financial support and popular demand.

Examples

Established in 1993 to respond to declining commercial vitality along Historic Colorado Blvd, the [Old Pasadena, CA, Parking Meter Zone](#) installed 690 meters on 15 blocks to collect parking fees until midnight seven days a week, collecting \$1.2 million in its first year.¹⁹⁶ The City borrowed \$5 million against this revenue to finance the Old Pasadena Streetscape and Alleyways Project, which funded installation of street furniture, trees and tree grates, decorative lighting, and alley restoration. In five years, property tax revenue tripled, and sales tax revenues quadrupled.

Figure 28: Old Pasadena Parking Meter



Source: [ACCESS Magazine](#)¹⁹⁷

“The only reason meters went into Old Pasadena in the first place was because the City agreed all the money would stay in Old Pasadena. This might seem silly to some people, but if not for our parking meters, it’s hard to imagine that we’d have the kind of success we’re enjoying. At first it was a struggle to get people to agree with the meters. But when we figured out that the money would stay here, that the money would be used to improve the amenities, it was an easy sell.” ~ Marilyn Buchanan, Old Pasadena Parking Meter Zone Advisory Board

The [Parking Reform Network](#) has catalogued cities across the country that have followed Pasadena’s lead.¹⁹⁸

- In Austin, TX, parking benefit districts hold 51 percent of net revenue to “promote walking, cycling, and public transit and public transit use within the district,” per [City ordinance](#).¹⁹⁹ Initially created in West Campus near the University of Texas, Austin now manages [three other districts](#).²⁰⁰
- Columbus, OH [created](#) the [Short North Parking Benefit District](#) in 2019 to improve employee mobility options between downtown and Ohio State University with discounted transit passes, car-, ride-, and bike-share memberships, and parking permits for public and private facilities.²⁰¹
- In the [South Side Flats](#) entertainment district, Pittsburgh, PA extended meter hours and dedicated revenue to fund police patrols, sidewalk improvements, and pedestrian wayfinding.²⁰² Unlike other cities’ programs, Pittsburgh holds and distributes revenue directly.
- Portland, OR directs [four parking management districts](#) in partnership with local stakeholders, who recommend how to invest 51 percent of [net revenues](#) in multimodal projects and programs, including parking facilities and the comprehensive [Transportation Wallet program](#) noted in the TDM chapter above.^{203, 204, 205}
- Located in the heart of a 100,000-resident Central Oregon city, the [Old Bend Parking District](#) issues on-street parking permits and invests in projects that enhance neighborhood livability and safety.²⁰⁶

With financial support from a DRCOG [TDM set-aside grant](#), technical support from the [University of Colorado at Denver](#), and community support from corridor BIDs, TMOs, and other stakeholders, Denver Streets Partnership’s [East Colfax Parking Management Study](#) aspires to leverage parking management to maximize the benefits of future bus rapid transit (BRT) service and encourage residents, employees, and visitors to travel the corridor without driving.^{207, 208, 209} Before concluding in May 2025, the project will work

with Denver staff to consider an MBD or similar multimodal strategy for the corridor and may serve as an example for planned BRT corridors across Metro Denver.

RTD's [EcoPass](#) and [Neighborhood EcoPass](#) programs provide unlimited transit travel on all bus and train services at a significant discount to passholders.^{210, 211} [EcoPass](#) helps employers enhance employees' access to work and countless destinations.²¹² Employers may pay for passes and take advantage of the State's [Alternative Transportation Option Tax Credit](#), employees may pay with pre-tax dollars as a [fringe benefit](#), or the parties can split the cost.^{213, 214} The [Neighborhood EcoPass](#) program similarly offers free transit but to a wider selection of community members in a contiguous area, including a multifamily property or district like Downtown Boulder.²¹⁵

Whether an owner of a single business, property manager of a single apartment building, an organization representing several blocks, or a BID supporting a commercial district, an agent contracts with RTD to set a price for two years, after which time RTD will propose adjusting the price based on pass utilization.

Boulder impressively leverages the programs, subsidizing companies' contract costs, contracting with RTD for property owners in the [Downtown](#) and [University Hill](#) general improvement districts, helping other [neighborhoods](#) register for the program, and working with local [businesses](#) to offer discounts to passholders.^{216, 217, 218, 219}

For more information: [Jyotsna Khattri](#), RTD

Considerations

Concerns for benefit districts align closely with concerns for on-street parking management in general, particularly charging new or increased parking fees. Although business leaders often champion districts as a way to fund vital Main Street investments, businesses, residents, and other stakeholders may not be supportive. Earning support from diverse partners requires tactful relationship building and clear communication that emphasizes a parking fee's investment in the community.

Local governments may resist establishing districts for their risk to general fund priorities, accounting complexity, and intra-jurisdictional competition for funding. A benefit district may indeed afford a number of municipal improvements, like additional patrolling or streetscape repair, but commercial areas without benefit districts will not enjoy these improvements, and political dissatisfaction with local leaders may follow. MBDs should advertise their potential for making additive investments, not for replacing basic services afforded to all neighborhoods.

Particularly applicable to Metro Denver in light of RTD's EcoPass programs but potentially useful in other regions too, an MBD could fund free or low-cost transit access for district residents and employees as well as subsidized bike- and car-share memberships and other mobility services. Acting as a contracting agent and representing registered neighborhood organizations, multifamily property managers, and BIDs in the district, an MBD could work with RTD to provide Eco Passes to just one property or to a contiguous neighborhood, enhancing efficient and reliable access to area businesses and neighborhoods.

Further Reading on Establishing Mobility Benefit Districts

- [“2023 Transportation Wallet in Parking Districts Report.”](#) City of Portland, OR.
- [“Alternative Transportation Option Tax Credit.”](#) Colorado Department of Revenue.
- [“Discover EcoPass For Your Business And Employees.”](#) RTD.
- [“Discover Neighborhood EcoPass For Your Neighborhood And Residents.”](#) RTD.
- [“East Colfax Parking Management Study.”](#) Denver Streets Partnership.
- [“EcoPass Discounts.”](#) City of Boulder, CO.
- [“EcoPass Program.”](#) City of Boulder, CO.
- [“EcoPass.”](#) RTD.
- [“Fringe Benefit Guide.”](#) Internal Revenue Service.
- Geeting, Jon. [“Ideas Worth Stealing: Parking Benefit Districts.”](#) WHYY.
- Kindler, Evan. [“Parking Benefit Districts: A Guide.”](#) Parking Reform Network.
- Kolozsvari, Douglas and Donald Shoup. [“Turning Small Change into Big Changes.”](#) ACCESS Magazine.
- [“Map of Central Area General Improvement District and Business Improvement District.”](#) City of Boulder, CO.
- [“Map of University Hill General Improvement District.”](#) City of Boulder, CO.
- [“Neighborhood EcoPass.”](#) RTD.
- [“Net Meter Revenue Policy Review.”](#) City of Portland, OR.
- [“Old Bend Parking District.”](#) City of Bend, PR.
- [“Ord. No. 20111006-053: Establishing a Parking Benefit District.”](#) City of Austin, TX.

- [“Parking Benefit District Rules and Regulations.”](#) City of Columbus, OH.
- [“Parking and Transportation Management District.”](#) City of Austin, TX.
- [“Performance Based Parking Management Manual.”](#) City of Portland, OR.
- [“Transportation Demand Management Services Set-Aside.”](#) DRCOG.
- [“Urban and Regional Planning Department.”](#) University of Colorado at Denver.

Conclusion

Surveying various off- and on-street parking management strategies, this report has considered challenges, benefits, and implementation approaches for establishing these strategies in your community. In light of its relative brevity and the complexity of tailoring context-sensitive strategies, the report has pointed to dozens of resources to further support your pursuit of parking management. Although no strategy can easily be implemented off the shelf, these resources should help inform next steps.

Funding Resources

There are considerable funding opportunities and other support available from a variety of levels of government for pursuing management strategies, including:

- [U.S. Department of Housing and Urban Development, Pathways to Removing Obstacles \(PRO\) to Housing](#), which helps governments like [Denver](#), metropolitan planning organizations, and others to reform zoning codes and parking rules.
- [U.S. Federal Transit Administration, Pilot Program for Transit-Oriented Development Planning](#), which funded Denver's Neighborhood Planning Initiative plans along East Colfax Ave ahead of BRT investments.
- CDOT grants, including [Strategic TDM Innovation Grants](#), [Strategic TMO Seed Funding Grants](#), and [Revitalizing Main Streets Grants](#) that all fund investments in TDM and active transportation.
- [The Colorado Local Government Climate Action Accelerator](#), which soon will provide grants to local governments for reducing GHG and other air pollutants through parking management, TDM measures, and other strategies.



Figure 29: Cars parked on the curb alongside multi-family housing (Source: Colorado Energy Office)

- The [Colorado Employer TDM State Tax Credit](#), which DRCOG brands as the [Colorado Clean Commute Program](#) to help employers receive up to \$125,000 in tax relief for adopting TDM measures.
- [DRCOG Set Aside Funding](#) of \$13 million for [TDM](#), [Transportation Corridor Planning](#), [Community-Based Transportation Planning](#), [Livable Centers Small-Area Planning](#), and [Innovative Mobility](#).

Next Steps

While this report focused on strategies local governments can implement or support, often in partnership with other local stakeholders, it also noted other barriers to right-sizing parking supply and managing demand. For example, the report noted the importance of data to inform implementation of parking management strategies and recommended resources to support local data collection, but it also acknowledged the administrative cost of doing so. Further research on strategies should evaluate comparable properties' parking demand to inform developers and financial partners about suitable parking supply. HB24-1304 elevates evidence over estimates to inform parking supply; now, local governments, developers, their financial partners, and community stakeholders need evidence of comparable properties' peak-hour parking demand to make a difference. Future research supported by the state, regional entities, or local governments could support that impactful change.

In time, sufficient data could support a tool like the King County Right Size Parking Calculator calibrated to Colorado's regional contexts. Like the Seattle-area example, Colorado's calculator could help local governments, developers, TMOs, and other partners realize the potential impacts from traditional off-street parking management and adjust those practices to realize desired outcomes for multimodal mobility, inclusive neighborhoods, and vibrant business districts.

The report also noted financing partners' hesitation in some cases to finance developments with less parking than they are used to. Collecting data and engaging financial partners could give them the confidence to right-size parking in the future.

Moreover, data could inform the State's increasing investments in regional transit services and active transportation. In line with significant projects like BRT, a local government or TMO could evaluate parking demand along comparable transit corridors to inform a coordinated strategy for multimodal mobility and inclusive redevelopment that invites various travelers, residents, and employees to a thriving district. A successful pilot on one corridor could inform similar approaches tailored to other corridors' contexts, evaluated for gaps, and adjusted for success.

Reflection

Like any good public service, parking management should value the diversity of the people who make a community. Parking management is as complex as the travelers it aspires to support. On any given trip, we may have more or less time, money, or patience to inform our travel options: a quick drive necessitates a short parking session; more time on a nice day could prompt a bike ride; a long shift could encourage parking farther from work. Rather than predicting behavior and prescribing solutions, enhanced parking management humbly acknowledges that there is no one right answer to parking while honestly accounting for market competition for space.

Thank you for supporting a more economically resilient, socially equitable, and environmentally restorative Colorado through enhanced parking management.

Appendix

Model Code for Shared Parking: Denver, CO

Zoning Code Section 10.4.5.4

A. Applicability

1. An applicant may request shared parking to meet the minimum/maximum vehicle parking requirements for mixed use developments, or for multiple uses that are located near one another, and which have different peak parking demands and/or operating hours.
2. Parking spaces that may be shared according to this subsection:
 - a. Shall be located on a zone lot (on-street parking spaces are not eligible), and
 - b. Shall be capable of being specifically allocated or reserved for the primary uses served (spaces in a surface lot or garage that are accessible by the general public are not eligible), except that this provision shall not apply in areas where only maximum parking standards apply;
 - c. However, in the event that a shared parking entity has been formed and is fully operational, the documented parking spaces allocated to the zone lot will count toward the vehicle parking requirement. Although allocated to a specified zone lot, said spaces need not be reserved for said specified zone lot.

B. Shared Parking Where Maximum Parking Standards Apply

1. When located on a Zone Lot subject only to a vehicle Surface Parking maximum according to section 10.4.4.4, each shared vehicle Surface Parking space shall be counted only once in the calculation of vehicle Surface Parking spaces that contribute to the maximum allowed.
2. When shared vehicle parking is required for a change of use according to Section 10.4.2.1.C.2.c, the number of shared spaces provided may exceed the number required to be shared according to that section. Shared spaces shall be counted only once in the calculation of the number of spaces that contribute to the maximum parking allowed for each Primary Use included in the parking analysis.

3. In all other areas subject to maximum vehicle parking standards the following shall apply:
 - a. Parking may be shared between Primary Uses located on separate Zone Lots according to this subsection.
 - b. Surface Parking and/or Garage Parking shall only be permitted as a Primary Use on a Zone Lot if the spaces are provided as shared vehicle parking according to this subsection.

C. Shared Amount Allowed

The Zoning Administrator shall determine the total amount of parking allowed to be shared based upon the shared parking analysis.

D. Process for Review and Approval

Requests for shared parking shall be processed according to Section 12.4.3, Site Development Plan Review. In addition to the requirements for a Site Development Plan, requests for shared parking shall comply with this Section's standards and criteria.

E. Shared Parking Analysis Required

A parking analysis shall be submitted as part of the Site Development Plan application which clearly establishes that the subject uses will use the shared parking spaces at different times of the day, week, month, or year. The analysis shall reference a shared parking study prepared by a Qualified Professional. A shared parking study shall, at a minimum, address:

1. The intensity and type of activities and the composition of uses;
2. Hours of operation of the uses;
3. The rate of turnover for proposed shared spaces;
4. Distances of shared parking spaces from the uses they serve; and
5. The anticipated peak parking and traffic loads for the site.
6. Parking spaces reserved for a specific tenant or dwelling unit shall not be included in the shared parking calculation.
7. In areas subject to minimum parking requirements, if the shared parking spaces are located on a different zone lot than the primary use(s) served, such off-site spaces shall be located within a walking distance no greater

than 1,500 feet from the use served. This provision shall not apply in areas where only maximum parking standards apply.

- a. “Walking distance” shall be measured from the primary entrance of the primary use served along a connection that meets ADA requirements.
 - b. The Zoning Administrator may increase the allowed distance or waive the standard entirely when there is a shared parking entity and support in the shared parking analysis.
8. In areas subject to maximum parking requirements, when multiple off-site Primary Uses are included, the number of shared spaces shall be specified for each off-site Primary Use contributing to the maximum parking allowed.

F. Withdrawal from Participation in Plans or Programs

1. Upon application to the Zoning Administrator, the owners of the properties and land uses participating in a special parking arrangement authorized by this Section 10.4.5.4 may withdraw, either partially or completely, from any such arrangement or program, provided all uses, land, and structures remaining under such arrangement or program will comply with all conditions and limitations of the arrangement or program, and all primary uses, land and structures withdrawn from such arrangement or program can comply with this Division and the applicable zone district parking requirements. The Zoning Administrator shall keep the special parking arrangement/program withdrawal among its records and record the withdrawal in the Denver County real property records.
2. The Zoning Administrator may allow withdrawal from a special parking arrangement authorized by this Section 10.4.5.4 to result in a permanent deficiency of the required amount of parking spaces that was otherwise allowed as part of the special parking arrangement if the owner(s) demonstrates that best efforts, as determined by the Zoning Administrator, were made to maintain and continue the authorized special parking arrangement.

Model Code for Unbundled and Priced Residential Parking: Seattle, WA

Municipal Code Section 7.24.030

- A. Any rental agreement or renewal of a rental agreement for a residential rental unit in The City of Seattle entered into after October 28, 1998, shall include or shall be deemed to include a provision requiring a minimum of 60 days' prior written notice whenever the periodic or monthly housing costs to be charged a tenant are to increase , except that for a subsidized tenancy where the amount of rent is based on the income of the tenant or circumstances specific to the subsidized household, the rental agreement shall instead provide a minimum of 30 days prior written notice of an increase in the amount of rent to each affected tenant.
- B. No rental agreement entered into after September 29, 1993, that creates or purports to create a tenancy from month to month or from period to period on which rent is payable, may:
 - 1. Require occupancy for a minimum term of more than one month or period;
 - 2. Impose penalties, whether designated as "additional rent" or fees, if a tenant terminates the tenancy pursuant to law and vacates before expiration of any minimum term prohibited by subsection 7.24.030.B.1;
 - 3. Require forfeiture of all or any part of a deposit if the tenant terminates the tenancy pursuant to law and vacates before expiration of any minimum term prohibited by subsection 7.24.030.B.1; provided, that nothing in this Chapter 7.24 shall prevent a landlord from retaining all or a portion of a deposit as compensation for damage to the premises as provided by law and the rental agreement or, as provided by law, for failure to perform other obligations imposed by the rental agreement.
- C. Any rental agreement entered into after the January 15, 2017 is subject to the requirements of this subsection 7.24.030.C. Security deposits and non-refundable move-in fees are prohibited unless authorized by and identified in a written rental agreement that:
 - 1. Describes the terms and conditions under which the security deposit or portion thereof may be retained by the landlord. The landlord shall prepare and provide to the tenant at the commencement of tenancy a written checklist or statement specifically describing the condition and

cleanliness of or existing damages to the dwelling unit at the time of occupancy including damages to the premises and furnishings, which include but are not limited to walls, floors, countertops, carpets, drapes, furniture, and appliances. The checklist or statement shall be signed and dated by the landlord and the tenant, and the tenant shall be provided with a copy of the signed checklist or statement.

2. Describes the terms and conditions of the payment schedule for the security deposit and non-refundable move-in fees pursuant to subsection 7.24.035.C.
- D. Any rental agreement entered into after January 15, 2017 is subject to the requirements of this subsection 7.24.030.D. Any payment of last month's rent by the tenant to the landlord shall be authorized by a written rental agreement that:
1. Identifies the amount of the last month's rent; and
 2. Describes the terms and conditions of the payment schedule for the last month's rent if the tenant elects to pay the last month's rent in installments as authorized by Section 7.24.036.
- E. Any rental agreement entered into after January 15, 2017 shall describe the terms and conditions of any monthly or periodic payments required as a condition of tenancy, including but not limited to: rent, security deposits, non-refundable move-in fee, last month's rent, utility payments, parking fees, late fees authorized by the rental agreement, or other monthly or periodic payments required to be made by the tenant to the landlord. When any monthly or periodic payment is made pursuant to the rental agreement, the landlord shall apply the payment in accordance with chapter 59.18 RCW.
- F. Any rental agreement entered into after January 15, 2017 is subject to the requirements of this subsection 7.24.030.F. Any payment of a pet damage deposit shall be authorized by a written rental agreement, or an addendum to the written rental agreement, that:
1. Identifies the amount of the pet damage deposit; and
 2. Describes the terms and conditions of the payment schedule for the pet damage deposit if the tenant elects to pay the pet damage deposit in installments as authorized by Section 7.24.038.

G. Parking charges separately documented. For housing units in multifamily or mixed-use structures that meet the threshold size requirement of subsection 23.42.070.A:

1. Any rental agreement entered into after May 13, 2018 shall specify in a rental agreement addendum or in a separate parking agreement the amount of any parking fee.
2. A tenant may elect not to rent or lease parking when renting or leasing a unit, in which case the tenant is not required to sign a rental agreement addendum or a separate parking agreement that requires the tenant to pay a parking fee.

Model Code for Unbundled and Priced Residential Parking: Berkeley, CA

Municipal Code 23.322.060

The parking and transportation demand management requirements in this section apply in the C-DMU district.

A. Dynamic Signage.

1. New construction that results in an off-street total of more than 25 publicly available parking spaces shall install dynamic signage to Transportation Division specifications.
2. Required signage includes, but is not limited to:
 - a. Real-time garage occupancy signs at the entries and exits to the parking facility with vehicle detection capabilities and enabled for future connection to the regional 511 Travel Information System; or
 - b. Equivalent signs as determined by the Zoning Officer in consultation with the Transportation Division Manager.

B. Unbundled Parking.

1. For any new building with residential units or structures converted to a residential use, required parking spaces shall be leased or sold separate from the rental or purchase of dwelling units for the life of the dwelling unit.
2. The ZAB may approve a Use Permit to waive the requirement in Paragraph (1) above for projects that include financing for affordable housing. To approve the Use Permit, the ZAB must find that the applicant has shown that the combined parking is necessary to obtain financing or meeting other obligations.

C. Employee/Resident Benefits.

1. For new structures or additions over 20,000 square feet, the property owner shall provide at least one of the following transportation benefits at no cost to every employee, residential unit, and/or group living accommodation resident:

- a. A pass for unlimited local bus transit service; or
 - b. A functionally equivalent transit benefit in an amount at least equal to the price of a non-discounted unlimited monthly local bus pass. Any benefit proposed as a functionally equivalent transportation benefit shall be approved by the Zoning Officer in consultation with the Transportation Division Manager.
2. A notice describing these transportation benefits shall be posted in a location visible to employees and residents.

D. Vehicle Sharing Spaces.

1. **Spaces Required.** For residential structures constructed or converted from a non-residential use that provide off-street parking, vehicle sharing spaces shall be provided in the amounts shown in Table 23.322-6. Vehicle sharing spaces are not required for projects that do not provide off-street vehicle parking.

Table 23.322-6. REQUIRED VEHICLE SHARING SPACES

Number of Parking Spaces Provided	Min. Number of Vehicle Sharing Spaces
0-10	0
11-30	1
31-60	2
61 or more	3, plus one for every add'l 60 spaces

2. **Requirements.**
 - a. The required vehicle sharing spaces shall be offered to vehicle sharing service providers at no cost.
 - b. The vehicle sharing spaces shall remain available to a vehicle sharing service provider as long as providers request the spaces.
 - c. If no vehicle sharing service provider requests a space, the space may be leased for use by other vehicles.
 - d. When a vehicle sharing service provider requests such space, the property owner shall make the space available within 90 days.

E. Parking and Transportation Demand Management Compliance Report.

1. Before issuance of a Certificate of Occupancy, the property owner shall submit to the Department of Transportation a completed Parking and Transportation Demand Management (PTDM) compliance report on a form acceptable to the City of Berkeley.
2. The property owner shall submit to the Department of Transportation an updated PTDM compliance report on an annual basis. (Ord. 7787-NS § 2 (Exh. A), 2021)

Model Code for Unbundled and Priced Commercial Parking (Parking Cash Out): Washington, DC

Code Section 32-152.01

- A. The requirements of this section shall only apply to covered employers offering a parking benefit.
- B. If a covered employer offers a parking benefit to an employee, the covered employer shall:
 - 1. Offer the employee a Clean-air Transportation Fringe Benefit in an amount equal to or greater than the monthly market value of the parking benefit offered to the employee, pursuant to subsection (c) of this section;
 - 2. Pay to the Department a Clean Air Compliance fee of \$100 per month for each employee who is offered a parking benefit; or
 - 3. Implement a transportation demand management plan, pursuant to subsection (d) of this section.
- C.
 - 1. An employee shall not accept the Clean-air Transportation Fringe Benefit offered pursuant to subsection (b)(1) of this section unless the employee has declined the parking benefit offered by the covered employer.
 - 2.
 - a. An employee who accepts a Clean-air Transportation Fringe Benefit shall, in a form determined by the Department, estimate the amount of the Clean-air Transportation Fringe Benefit that the employee will use each month.
 - b. An employee may, from time to time, amend the estimate provided pursuant to subparagraph (A) of this paragraph; except, that the employee shall not amend the estimate provided pursuant to subparagraph (A) of this paragraph more than once every 12 months.
 - 3. If the estimate provided pursuant to paragraph (2)(A) of this subsection is less than the Clean-air Transportation Fringe Benefit offered to the employee pursuant to paragraph (1) of this subsection, the covered employer shall provide the employee with additional compensation, an increase contribution to the employee's health coverage, or both, in an

amount that, when combined with the estimate provided pursuant to paragraph (2)(A) of this subsection, is equal to the Clean-air Transportation Fringe Benefit offered to the employee pursuant to paragraph (1) of this subsection.

D.

1. To comply with subsection (b)(3) of this section, a covered employer shall submit a proposed transportation demand management plan to the Department, which shall include:

- a. A plan, in a form prescribed by the Department through rulemaking or publication on the Department's website, that would reduce by at least 10% from the previous year the number of commuter trips employees of the covered employer made by car, including for-hire vehicles, until 25% or less of employees' commuter trips are made by car, including for-hire vehicles; and
- b. Any other information required by the Department.

2.

a.

- i. If the Department determines that the proposed transportation demand management plan is likely to meet the requirements of this subsection, the Department shall approve the proposed transportation demand management plan.
 - ii. If the Department determines that the proposed transportation demand management plan is not likely to meet the requirements of paragraph (1) of this subsection, the Department shall provide the covered employer a brief description of the deficiencies in the plan and an opportunity to amend and resubmit the proposed transportation demand management plan.
- b. If, after a covered employer resubmits an amended proposed transportation demand management plan, the Department again determines that the proposed transportation demand management plan is not likely to meet the requirements of paragraph (1) of this subsection, the covered employer shall begin offering a Clean-air Transportation Fringe Benefit, pursuant to subsection (b)(1) of this

section, or begin paying the Clean Air Compliance fee, pursuant to subsection (b)(2) of this section.

3.

a. A covered employer whose proposed transportation demand management plan has been approved, pursuant to paragraph (2)(A)(i) of this subsection, shall submit to the Department annual data reports on the actual commute mode share of its employees.

b.

i. Each year, the Department shall determine whether the covered employer is complying with the transportation demand management plan.

ii. If the Department determines that the covered employer is not complying with the transportation demand management plan, the covered employer shall have 180 additional days to comply with the requirements of the transportation demand management plan for the previous year.

c. If, after the 180-day period described in subparagraph (B)(ii) of this paragraph, the Department determines that the covered employer is still not in compliance with the transportation demand management plan for the previous year, the covered employer shall begin offering a Clean-air Transportation Fringe Benefit, pursuant to subsection (b)(1) of this section, or begin paying the Clean Air Compliance fee, pursuant to subsection (b)(2) of this section.

4. A covered employer who submits a proposed transportation demand management plan pursuant to paragraph (1) of this subsection need not comply with subsection (b)(1) of this section or subsection (b)(2) of this section until the Department informs the covered employer that:

a. The Department again determined that the proposed transportation demand management plan is not likely to meet the requirements of paragraph (1) of this subsection; or

b. After the 180-day period described in paragraph (3)(B)(ii) of this subsection, the Department determined that the covered employer is still not in compliance with the requirements of the transportation demand management plan for the previous year.

- E. For the purposes of this section, the market value of a parking benefit shall be:
1. The publicly-advertised price of parking available for rent to the public at a privately-owned parking facility within one-quarter mile of the business premises; or
 2. If there is no privately-owned parking facility within one-quarter mile of the employee's place of work that rents parking to the public, an amount determined pursuant to rules issued by the Department.
- F. Each covered employer shall within 90 days after October 1, 2020, and every 2 years thereafter, submit to the Mayor a report that includes:
1. The total number of employees;
 2. The number of employees:
 - a. Offered a parking benefit;
 - b. Using a parking benefit;
 - c. Offered a Clean-air Transportation Fringe Benefit; and
 - d. Using a Clean-air Transportation Fringe Benefit; and
 3. Any other information required by the Mayor by rulemaking.
- G. Beginning October 1, 2022, and every 2 years thereafter, the Mayor shall provide a report to the Council containing the following:
1. Aggregate data from the reports required by subsection (f) of this section;
 2. An assessment of how many covered employers have not filed the report required by subsection (f) of this section; and
 3. A description of actions that will be taken to achieve full compliance with this section.
- H. The Mayor may impose civil fines or penalties as sanctions for a violation of subsection (a) or subsection (f) of this section, or any rule issued pursuant to § 32-153(b), pursuant to Chapter 18 of Title 2 ("Civil Infractions Act"). Enforcement and adjudication of an infraction shall be pursuant to the Civil Infractions Act.
- I.
1. This section shall not apply to a parking benefit offered by a covered employer who, before October 1, 2020, owned, and continues to own, the parking spots used by the employees who are offered a parking benefit.

2. If, before October 1, 2020, a covered employer leases the parking spot used by the employee who is offered a parking benefit, this section shall apply to the parking benefit at the end of the current lease term, regardless of whether the lease agreement contemplated extensions beyond the current lease term.
3. If, before October 1, 2020, a covered employer is party to a transportation demand management plan that was reviewed by the Department this section shall apply to the covered employer at the end of the current term of the transportation demand management plan, regardless of whether the transportation demand management plan contemplated extension beyond the current term, or 5 years after October 1, 2020, whichever is earlier.
4. If, before October 1, 2020, a covered employer is party to a Campus Plan approved pursuant to section X101 of Title 11 of the District of Columbia Municipal Regulations (11 DCMR § X101), this section shall apply to the covered employer at the end of the current term of the Campus Plan, regardless of whether the Campus Plan contemplated extension beyond the current term, if the Campus Plan requires annual reporting to the Department of:
 - a. The current percentage, and year-over-year change in the percentage, of trips to campus that are made by car, including for-hire vehicles;
 - b. Performance standards in the Campus Plan related to reducing the percentage of trips to campus that are made by car, including for-hire vehicles; and
 - c. Policies that the covered employer will adopt to meet the performance standards in the Campus Plan related to reducing the percentage of trips to campus that are made by car, including for-hire vehicles.

Model Code for Parking Maximum: Longmont, CO

Land Development Code Section 15.05.080

- A. Purpose. This section is intended to provide off-street parking and loading facilities in proportion to the parking, loading, and transportation demands of different land uses throughout the city. This section is also intended to help protect the public health, safety, and general welfare by:
1. Mitigating single-occupancy motor vehicle travel, encouraging active forms of transportation and less polluting forms of transportation;
 2. Providing safe and convenient interaction between vehicles and pedestrians;
 3. Providing necessary access for service and emergency vehicles;
 4. Providing methods to help reduce stormwater runoff and the heat island effect of large paved parking areas; and
 5. Providing flexible methods of responding to the transportation, access, and parking demands of various land uses in different areas of the city through changes in markets, technology, and demographics.
- B. Applicability.
1. New development and redevelopment. Unless otherwise exempted in this development code, this section shall apply to all development.
 2. Nonconforming parking and loading. Nonconforming off-street parking and loading requirements shall be subject to section 15.08.100.
 3. Exemption. Properties located within the General Improvement District ("GID") are exempt from maximum parking requirements.
- C. Reserved.
- D. Calculation of parking and loading requirements.
1. Area measurements. All square-footage based parking and loading requirements shall be calculated on the basis of gross floor area of the subject use. Structured parking within a building shall not be counted in such calculation.
 2. Fractions. When a calculation of a parking allowance results in a fractional number, a fraction of 0.5 and higher shall be rounded up to the next

highest whole number and a fraction less than 0.5 shall be rounded down to the next lowest whole number.

3. Parking and loading for unlisted uses. For uses that are not specifically listed in table 15.05.080(1), the number of parking spaces permitted shall be the number permitted for the most similar use listed or as approved in an alternative parking plan described below.
4. Shared parking. Shared parking shall be provided to the extent practicable, to use parking areas efficiently while allowing flexibility for additional development.
5. Reserved.
6. Reserved.
7. Alternative parking plans.
 - a. Scope. An alternative parking plan may be approved to satisfy vehicle parking needs by means other than providing parking according to the ratios established in table 15.05.080(1), or by providing an alternative to this section's off-street parking area design standards. Alternative parking plans may not be used to reduce required setbacks, landscaping, or screening of off-street parking areas.
 - b. Applicability. Applicants who wish to: (1) provide additional parking beyond the allowed parking maximums of this section; (2) provide parking off-site; or (3) deviate from this section's off-street parking design standards, shall secure approval of an alternative parking plan according to the standards of this subsection.
 - c. Contents. Alternative parking plans shall be submitted in a form established by the director. At a minimum, such plans shall detail the type of alternative proposed and the rationale behind the proposal.
 - d. Review procedure and additional criteria. The alternative parking plan shall be reviewed according to the administrative modification procedure in section 15.02.080.B, and shall also demonstrate:
 - i. The plan will minimize or mitigate adverse impacts to surrounding neighborhoods to the maximum extent practicable;

- ii. The plan maintains or improves traffic circulation patterns; and
- iii. The plan promotes quality urban design as well as or better than a plan that strictly complies with the off-street parking standards.

E. Off-Street Parking Spaces. Off-street parking allowances for all projects, not in the GID zoning district, are identified in Table 15.05.080(1) below.

1. Number of Parking Spaces Required—By Land Use. [Example provided below. See Code for more uses.]

Unit Type	Maximum Spaces
Dwelling, Multifamily	2 per unit
Restaurant	12 per 1,000 SF
Office	4 per 1,000 SF
Retail Sales, General	4 per 1,000 SF

2. Reserved.
3. Reserved.
4. Accessible Parking.
 - a. The location of accessible parking spaces shall be pursuant to the adopted building code and the Americans with Disabilities Act (ADA), as amended. The number of required accessible spaces shall be provided in accordance with US Department of Justice ADA Standards for Accessible Design, as amended. Accessible spaces are counted towards any parking allowance or restriction.
 - b. The US Department of Justice ADA Standards for Accessible Design is on file in the office of the Director and Planning and Development Services and may be inspected by an interested person between 8:00 a.m. and 5:00 p.m., Monday through Friday, holidays excepted.
5. For any required off-street parking minimums, a parking space that is served by an EV charging station (EVSE) counts as one standard automobile parking space and any van-accessible parking space that is wheelchair

accessible and served by an EV charging station counts as two standard automobile parking spaces.

F. Location of off-street parking spaces.

1. Residential zoning districts.

- a. Reserved.
- b. Off-street parking for single-family detached and single-family attached dwellings may be located within the front yard setback area on a hard-surfaced driveway approved by the city, but shall not be located in any landscape area.
- c. Off-street parking for multifamily dwellings shall be located behind buildings or no closer to the street than buildings to the maximum extent practicable.

2. Mixed-use and nonresidential zoning districts.

- a. Provided off-street parking spaces in the mixed-use and nonresidential zoning districts shall be located on the same lot as the building or use for which they are required unless parking spaces are provided, through a shared parking agreement, on lots within one-quarter mile (1,320 feet) from the proposed building or use.
- b. Off-street parking in the mixed-use and nonresidential zoning districts shall not be located within a required buffer or landscape area or in the right-of-way between the curb and the property line.
- c. Off-street parking and loading areas shall be located behind buildings or no closer to the street than buildings to the maximum extent practicable. See sections 15.05.120 and 15.05.200 for additional site layout requirements.
- d. In the MU-D and MU-C zoning districts, no parking lots shall front Main Street for new developments.

3. Protection of rivers, streams, riparian areas and wetlands. See section 15.05.020 for required parking area setbacks from delineated river/stream corridors, riparian areas, and wetlands.

[Code continues to consider additional off-street parking matters.]

Model Code for Transportation Demand Management: Denver, CO

Revised Municipal Code 54.2.3

Section 54-48: Definitions

- A. Transportation demand management ("TDM") means a collection of strategies that shift the how, when, and where of people's travel to increase the efficiency of the transportation system by maximizing travel choices.
- B. Single occupancy vehicle ("SOV") means a motor vehicle designed to accommodate more than one (1) person but is used to transport only one (1) occupant.
- C. TDM plan means an approved plan of strategies, including TDM supportive infrastructure and TDM programmatic strategies to maximize options for non-SOV travel modes for building occupants/resident and visitors.
- D. TDM strategies means physical improvements, incentives, and subsidies that encourage the reduction of single-occupancy vehicle travel.

Section 54-49: Rules and Regulations

The executive director of the department of transportation and infrastructure (DOTI) and the executive director of community planning and development (CPD) shall have the authority to jointly adopt rules and regulations for the implementation and administration of the city's TDM program, as authorized by this article.

Section 54-50: Transportation Demand Management

- A. Applicability. Any development project subject to one (1) or more of the development review processes listed below shall provide a TDM plan for review and approval concurrently with their application submittal to the Department of Community Planning and Development (CPD):
 - 1. Denver Zoning Code:
 - i. Denver Zoning Code, Sec. 12.4.3. Site Development Plan Review; and
 - ii. Denver Zoning Code, Sec. 12.4.12. Large Development Review;
 - 2. Former Chapter 59:

- i. Former Chapter 59, Sec. 59-97. Site plan required for development of lots over 10,000 square feet;
 - ii. Former Chapter 59, Sec. 59-107. Permitted development in the R-X district;
 - iii. Former Chapter 59, Sec. 59-192. Development plan;
 - iv. Former Chapter 59, Sec. 59-313. Site plan review;
 - v. Former Chapter 59, Sec. 59-314. General development plan;
 - vi. Former Chapter 59, Sec. 59-315. Development review and approval process; and
 - vii. Former Chapter 59, Article VIII. Special Zone Lot Plans for Planned Building Groups.
- B. Tiers. Requirements for participation shall be divided into at least two (2) tiers in order to appropriately account for the ability of developments of different sizes or other characteristics to implement a TDM program and comply with TDM regulations.
- C. TDM menu. The city shall make available to the public a list of TDM strategies ("TDM menu") that applicants shall utilize to create their TDM plan.

Section 54.51: Monitoring

Annual monitoring will be required of every property subject to this division.

Section 54-52: Enforcement

- A. Notice of violation. If it is determined by the manager of DOTI or the manager of CPD, or either of them or their designee(s) that a violation of this division or the rules and regulations promulgated hereunder has occurred, the manager or his designee shall, in writing, notify the owner of the property or responsible party through the issuance of a notice of violation. The notice of violation shall require compliance within ten (10) days, unless otherwise specified in the rules and regulations. The notice of violation may be served by personal service; first class mail and posting the subject property or by posting the subject property and publishing the notice in the official city newspaper.
- B. Notice of violation; contents. The notice of violation shall identify the property in violation, generally describe the violation, describe the proposed remedy to cure said violation, and give notice that failure to cure the violation is prohibited

by city law and may lead to legal action. The notice of violation shall state that the owner or responsible party may appeal the notice of violation by following the appeal process found in section 56-106 of this Code within the same time period allowed to cure in the notice of violation, and by paying an appeal fee of one hundred dollars (\$100.00).

- C. Appeals. An owner who has been affected by a determination made pursuant to the provisions of this division 3 may appeal that determination to the manager by following the procedures set forth in section 56-106 of this Code. An appeal made pursuant to this section must be filed within the time prescribed for cure in the notice of violation, and an appeal fee of one hundred dollars (\$100.00) must be paid at the time the appeal is filed.
- D. In addition to any other method of enforcement of this article, the executive director of DOTI, or the executive director of CPD, or either of their respective designees may, by rules and regulations, administer citations pursuant to article XII (Administrative citations), chapter 2, Denver Revised Municipal Code, to enforce this division.

Mobility Benefit District: Bend, OR

City Code Section 6.20.035

- A. Parking Benefit Districts are intended to reduce hazardous traffic conditions resulting from the use of streets within areas zoned primarily for residential uses for the parking of vehicles by persons attending nearby recreational or commercial facilities, events, or districts; to protect the residential and commercial users along the streets from polluted air, excessive noise, and trash and refuse caused by entry of such vehicles; to protect residents, businesses, customers, and guests of those areas from unreasonable burdens in gaining access to their residences, businesses, or accommodations; to preserve the character of those areas as primarily residential areas; to promote efficiency in the maintenance of those streets in a clean and safe condition; to preserve the value of property in those areas; and to preserve the safety of children and other pedestrians and traffic safety.
- B. Definitions.
 - 1. Parking Benefit District means a defined area within which parking may be restricted by signs or require parking permits, fees for which will be established by Council by resolution, in which a portion of revenues from

permit sales and citations is allocated for projects supportive of parking and pedestrian infrastructure within the district boundary.

2. Old Bend Neighborhood Parking Benefit District (OBNPBD) encompasses all public streets, alleys, parking lots and sidewalks within the following boundary description and as shown on the map following the boundary description:
 - a. Beginning in the north at the corner of NW Riverside Boulevard and Broadway Street, then following the east side of NW Riverside Boulevard to the west and south until the corner of NW Riverfront Street, then going south on NW Riverfront Street to Miller's Landing Park, then turning west following NW Riverfront Street to the corner of NW Riverfront Street and NW Riverside Boulevard, then turning southeast onto NW Riverside Boulevard, then turning northeast onto NW Carlon Avenue to the corner of NW Broadway Street and NW Carlon Avenue, then turning north onto NW Broadway Street to the corner of NW Broadway Street and NW Tumalo Avenue, then following both sides of NW Broadway Street north to the point of beginning.
 - b. Parking supportive projects means projects to improve the right-of-way within the district, including but not limited to walking and biking infrastructure, street trees, benches, and lighting, or projects previously identified but not funded under the Neighborhood Street Safety Program.

C. Repealed.

D. The City Manager is directed to implement the OBNPBD as follows:

1. Establish regulations setting the days of the week and the times of day for parking management solutions, which may include but are not limited to:
 - a. Time limited parking;
 - b. Paid special event parking;
 - c. Paid on-street parking;
 - d. Permit parking.
2. Erect signs indicating the required permits or limitations on parking throughout the OBNPBD.

- E. Permits. One permit shall be available for each vehicle owned by a resident or registered at the residential address or owned and/or used by each owner or employee of any business within the OBNPBD (maximum of one vehicle per employee), as well as for short-term rental guests and contractors/service providers for residences and businesses within the OBNPBD. Applications and application procedures shall be provided by the City Manager or designee. Fees for such permits and renewals will be established by the City Council in the City's fee resolution. No permit shall be issued unless the applicable fee has been paid.
1. All parking permits expire the last day of the calendar year in which the permit is issued. Permits are not prorated and are not transferable. A permit may be renewed by filing an application pursuant to this section and paying the applicable fee. A renewal permit application shall be reviewed and approved in accordance with this section; provided, that a person who has had a permit revoked shall not be reissued a permit for a period of two years from the date of revocation.
 - a. The renewal period for parking permits shall begin on November 1 and end on January 31 of the following year. If a permit is not renewed by January 31, the holder of the permit may apply for a new permit for the calendar year and shall pay the required application fee.
 2. No parking permit shall be issued to a person who is neither a resident nor associated with a business within the OBNPBD.
 3. A holder of a parking permit who is no longer a resident of or associated with business in the OBNPBD no longer qualifies for a parking permit. The holder shall surrender the permit to the parking official. Use of a permit when the holder is no longer a resident of or associated with business in the OBNPBD is a parking offense subject to citation.
 4. Issuance of a parking permit does not guarantee or reserve a parking space within a Parking Benefit District. A parking permit issued pursuant to this chapter does not authorize the standing or parking of any motor vehicle in any place or during any time when the stopping, standing or parking of motor vehicles is prohibited or set aside for specified motor vehicle types. The issuance of a permit shall not excuse the observance of any traffic regulation.
 5. Whenever the holder of a parking permit is not in compliance with one or more of the applicable provisions of the policy controlling the issuance or

renewal of permits, the City may direct the permit holder to surrender the permit or present evidence that the permit has been removed from the motor vehicle.

6. Until its expiration, surrender or revocation, a parking permit shall remain valid for the length of time the holder continues to reside or own and/or operate a business within the OBNPBD.
 7. A parking permit issued under this section shall be valid only in the OBNPBD.
 8. In addition to the penalties provided for violation of this section, the City Manager or designee shall revoke the parking permit of any individual found to have committed three or more violations of this section within any preceding 12-month period. This City Manager or designee shall provide written notification to such person by certified mail, return receipt requested, revoking the permit and ordering the surrender of such permit to the City. Failure to surrender a revoked permit when ordered to do so constitutes a separate violation of this section, and a signed return receipt shall be prima facie evidence of the delivery of the notice to surrender the permit.
- F. Fees and revenue from the OBNPBD shall be first used for administrative costs; then the remaining funds shall be split between parking supportive projects in the OBNPBD and the Parking Services Division Fund. Additional private or public funds may be combined to fund projects under this section, but no project may be initiated until at least \$50,000 has been allocated for projects under this section.
1. In the event that the OBNPBD is terminated, any fees and revenues generated that have not been expended shall be transferred to the Parking Services Division Fund.
- G. The provisions of this chapter shall be enforced through the procedures outlined in BC Chapters 6.25 and 6.30.

Model Parking Survey: Boulder, CO

Downtown Boulder Parking and Access Questionnaire

1. How often do you travel to downtown Boulder?

- a. Daily
- b. Several times a week
- c. About once a week
- d. About once every two weeks
- e. About once a month
- f. Less than once a month
- g. Never

2. Which categories best describes your primary reason(s) for traveling to downtown Boulder? Please select all that apply.

- a. I live downtown
- b. I work downtown
- c. I visit downtown for retail, dining, services or special events
- d. I own a business or a building downtown
- e. Other (please specify)

3. (If I work downtown is selected): Which category best describes your job?

- a. Retail/sales
- b. Service/restaurant/delivery
- c. Manufacturing/production
- d. Office (professional, business, administrative)
- e. Medical/dentist
- f. Construction/trades/laborer
- g. Other

4. (If I work downtown is selected): Which of the following parking and access products do you use as a downtown employee? Please select all that apply.

- a. I use my free EcoPass
- b. My employer provides a parking permit
- c. I purchase a garage permit
- d. I park in the neighborhoods with a commuter permit
- e. I utilize the \$3 garage rate between 3 p.m. and 3 a.m.
- f. I do not use any parking and access products

5. On a typical good weather day, how often do you use the following modes to travel to downtown Boulder? (Always - Frequently - Sometimes - Never)

- a. Personal vehicle
- b. Walk
- c. Bus
- d. Park and Ride
- e. Bicycle/E-bicycle
- f. Scooter
- g. Taxi/ride share (Uber/Lyft)

6. If you use a bicycle or scooter to get downtown, how often can you find convenient parking? (Always - Frequently - Sometimes - Never)

- a. For my bicycle
- b. For my scooter

7. If you drive a personal vehicle to downtown Boulder, do you have a City of Boulder parking permit?

- a. Yes
- b. No
- c. I do not drive a personal vehicle to downtown Boulder

8. (If no): Please rank your preference for the following parking options downtown on a scale of 1 to 6, with 1 being most preferred and 6 being least preferred.

- a. In a BoulderPark garage powered by Metropolis
- b. On-street paid using a pay station
- c. On-street paid using ParkMobile
- d. City surface lot paying the hourly rate
- e. Residential street, free parking
- f. Private lot, private garage or private parking space

9. The City of Boulder recently transitioned downtown garages to a gateless system using Metropolis. Parkers must create an account at app.metropolis.io and will be automatically charged payment upon exiting the garage without keeping track of a ticket. Have you parked in a downtown BoulderPark garage:

- a. In the last six months
- b. Over six months ago
- c. I have never parked in a downtown BoulderPark garage

10. (If in the last six months is answered): Please answer the following questions about the Metropolis system using strongly agree, neutral, disagree or strongly disagree.

- a. Registering for the new system is simple and easy.
- b. I could easily explain to a friend how to pay to park in the garages.
- c. Mobile pay for parking works well for me.
- d. The price I pay for parking in garages is reasonable and fair.
- e. Gateless has improved my overall experience parking in garages downtown.

11. Do you have any additional comments about your experience parking with Metropolis that you would like to share?

12. (If in the last six months or over six months ago is answered): Please answer the following questions about your overall parking experience in downtown BoulderPark garages using strongly agree, agree, neutral, disagree or strongly disagree.

- a. The parking garages are clean.

- b. My vehicle is secure in the parking garages.
- c. I feel safe in the parking garages.
- d. The parking garages are well lit.
- e. Navigating the parking garages is simple and easy.
- f. Locating City of Boulder-owned garages is simple and easy.
- g. The parking garages are conveniently located.

13. In which category is your age?

- a. Under 18
- b. 18 - 24
- c. 25 - 34
- d. 35 - 44
- e. 45 - 54
- f. 55 - 64
- g. 65 and over
- h. I prefer not to say

14. What is your home zip code?

15. Is there anything else you'd like to share about your parking and access experience downtown?

Sample Shared Parking Methodology for a Mixed-Use Property

1. Gather and review project data
 - Type and quantity of land uses
 - Local zoning standards and practices
 - Existing conditions, parking pricing, local users, and facilities
 - Local mode splits, transit, and transportation demand management
 - Physical relationships between uses
 - Parking management strategies acceptable to the various parties
2. Select parking ratios (spaces / unit land use)
 - Weekend and weekdays
 - Visitor / customer, employee / resident, and reserved
3. Select factors and analyze differences in activity patterns
 - Time of day
 - Monthly
4. Develop scenarios for critical parking needs periods
5. Adjust ratios for mode split and persons per car for each scenario
6. Apply captive market adjustments for each scenario
7. Calculate required parking spaces for each scenario
8. Do scenarios reflect all critical parking needs and management concerns?
 - If no, return to Step 3
9. Recommend parking plan
 - Confirm adequacy of parking for key scenarios
 - Evaluate potential facilities and allocation of spaces to each
 - Confirm physical relationships between uses to encourage shared parking
 - Recommend parking management plan to achieve shared parking

Shared Parking Agreement - *Sample Business Term Sheet*

1. The parties propose to enter into a shared parking agreement for the use of XX parking spaces to be made available to PARTY 1 on or before [date]. PARTY 1's spaces will consist of a minimum of YY monthly spaces and ZZ transient spaces.
2. The parties wish to establish operating, maintenance, and legal standards to enhance and protect the value of both parties' properties.
3. PARTY 2 will own and operate the parking facility.
4. PARTY 2 will charge market rates for the parking spaces to all parkers, including PARTY 1's parkers. Market rates will be determined by a biannual survey of [Central Business District] parking and actual rates charged must be maintained within +/- five percent of market rates for each parking product offered. The costs of the survey will be paid as operational costs and conducted by a mutually agreeable parking consultant.

Cost and Revenue Sharing (if included in deal)

1. PARTY 1 will make a one-time payment of [negotiated amount] towards the capital cost of the parking spaces.
2. PARTY 1 will receive [percentage] percent of the net operating income from the XX spaces to help PARTY 1 offset the contribution for capital costs. PARTY 2 will provide monthly profit and loss statements related to the operation of the spaces. The annual operating statements shall be audited annually by a mutually agreeable third party parking consultant. It shall be considered that all monthly and transient spaces in the facility (exclusive of spaces) generate revenue and expenses equally, and PARTY 2's share of the revenue shall be in proportion to the percentage of the XX spaces in the monthly and transient parking.
3. PARTY 2 will create or cause to be created a parking plan to ensure the parking spaces are used fully to support PARTY 1's parking demand. An operations plan must be submitted annually. Moreover, an annual operating budget that delineates revenue by category (e.g., monthly, transient, hotel, validated, special event) and line-item categorized operating expenses must also be submitted. The annual operating plan and budget shall be submitted 60 days before the beginning of PARTY 1's fiscal year. PARTY 1 shall have the right of approval of the plan but shall not unreasonably withhold such approval.

General Business Terms of Agreement

1. The parking spaces are needed to support PARTY 1's parking demand for the life of the parking facility.
2. The parking spaces will be available to PARTY 1's parkers (seven days per week, 24 hours per day, 365 days per year).
3. Both parties must mutually agree and participate in the selection of a parking garage operator if PARTY 2 chooses to retain one.
4. Both parties will mutually agree on the location of PARTY 1's spaces and/or all public parking spaces in the garage if PARTY 2 allocates, controls, or otherwise reserves any spaces with the garage to specific users.
5. Both parties must mutually agree on public parking access and revenue controls for the parking spaces.
6. Both parties must mutually agree on signage for the garage as regards who parks in the spaces allocated for PARTY 1's parkers, payment, and other parking instructions.

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