DENVERMOVES: Downtown will provide a roadmap for the future of transportation in downtown Denver as a people-oriented center-city. The plan will showcase short-term improvements to be implemented quickly, and longer-term, major infrastructure investments that will greatly enhance mobility across all modes of transportation. The plan will also consider the role of the public right-of-way as an amenity that provides high-quality and inviting spaces for downtown’s growing population of residents, workers, and visitors.
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Downtown: Then & Now

The downtown Denver transportation network must adapt to the growing number of people and goods moving through downtown and continuously enhance the prosperity and vitality of our city’s core.

Downtown Denver and its surrounding neighborhoods are the hub of employment, entertainment, and attractions for the surrounding region. Thousands of people rely on a number of modes to access the downtown area daily. The City has not comprehensively planned for the evolution of downtown’s transportation system since the mid-2000s when the City published the 2005 Downtown Multimodal Access Plan (DMAP) and 2007 Downtown Area Plan. Since then, substantial investment in new routes, facilities, and infrastructure has occurred in downtown and the areas surrounding the center-city – requiring a fresh perspective on the state of the system.

Several projects have brought significant investment into the downtown transportation system over the past decade:
- The 2004 voter-approved FasTracks initiative has enabled the redevelopment and relocation of bus services to Union Station; brought services including commuter rail (the A and B Lines), light rail (the W Line), and bus (the Flatiron Flyer and Free MetroRide) to downtown; and the redesign of Civic Center Station.
- The implementation of bus-only lanes on Broadway and Lincoln Street.
- Installation of bicycle lane infrastructure including the City’s first protected bike lanes on 15th Street, Lawrence Street, and Arapahoe Street.
- Construction of sidewalk and streetscape projects, such as the redesign of 14th Street.

The Golden Triangle has also become a hub of Denver’s civic and cultural institutions drawing residents and visitors alike with the recent openings or expansions of the Denver Art Museum, History Colorado Center, Denver Central Library, and other destinations.

Today downtown Denver once again faces pressures of the past: growing population and jobs in downtown and nearby neighborhoods; a need to support this growth to ensure economic vitality and quality of life; and ongoing expectations that downtown provide high-quality experiences for residents and visitors. Sustained changes in demographics and socioeconomics must be accommodated through transportation investments that leverage new technologies and approaches to providing mobility.
Recent Mobility Projects

- Transit Station
- Rail Lines
- Bus Routes
- Pedestrian Improved Streets
- Bicycle Facilities
- I-25 Express Lane
In 2004, the area between Union Station and the South Platte River had not yet been developed from its previous use as a large railyard for Union Pacific. Numerous surface parking lots also existed around Coors Field, along Speer Boulevard, and spread throughout LoDo, downtown, and the Golden Triangle.
Substantial development has occurred since 2004. All of the land between Union Station and the South Platte River, otherwise known as the Central Platte Valley, is now developed into new housing, offices, and other amenities. Numerous surface parking and underutilized lots in LoDo, the Central Business District, near Coors Field, and along both Speer Boulevard and Welton Street have also been developed.
Changing Population & Employment

Increasing numbers of residents and employees create a pressing need to move more people more efficiently.

Downtown Denver’s strengthening real estate market will result in denser housing, office, and mixed-use developments both in the core and in nearby neighborhoods that possess developable land. Such significant increases in the residential and employment populations in and around downtown Denver will require a reimagined transportation system that supports livability.

Downtown Denver and the surrounding neighborhoods - RiNo, the Central Platte Valley, the River Mile (where Elitch Gardens exists today), and parts of the Golden Triangle - are expecting significant growth in households and jobs. In total, the area will add between 20,000 and 29,000 new households by 2040 – on top of the 18,000 that exist today[3]. The same area is expected to add between 38,000 and 88,000 new jobs by 2040 – on top of the 126,000 that exist today.

Traditionally, Broadway, Colfax Avenue, Speer Boulevard, the South Platte River, and 20th Street have served as the approximate limits for downtown Denver due to their nature as physical or perceived boundaries. The 2007 Downtown Area Plan defines Broadway, Colfax Avenue, Speer Boulevard, Park Avenue, and Auraria Parkway as Grand Boulevards[2]. The Plan envisioned these Boulevards being transformed into celebrated, multimodal facilities that serve as general community amenities while stitching together the core with the new areas emerging adjacent to downtown.

[1] Source: DRCOG; Denver Office of Economic Development; Economic & Planning Systems
NOTES:
The maps illustrate the number of housing units in 2015 and the amount of housing units projected for 2040. The most intense growth in housing units is projected in areas primarily along the South Platte River and Park Avenue outside of downtown Denver.
2040 Housing Units

- 1,500 - 4,000
- 1,000 - 1,500
- 500 - 1,000
- 100 - 500
- Less than 100
2015 Total Jobs

More than 3,000
2,000 - 3,000
1,000 - 2,000
500 - 1,000
Less than 500

NOTES:
The maps illustrate the number of jobs in 2015 and the amount of jobs projected for 2040. The most intense growth in jobs is projected in areas along Speer Boulevard and Brighton Boulevard outside of downtown Denver and in the Golden Triangle.
2040
Total Jobs

- More than 3,000
- 2,000 - 3,000
- 1,000 - 2,000
- 500 - 1,000
- Less than 500
Denver Moves: Downtown is taking place during a period of unprecedented change in mobility technology.

New technologies are shifting from being newcomers to playing a core role in the transportation network:

- Transportation Network Companies (TNCs) such as Uber and Lyft
- Micro-mobility such as dockless e-bikes and e-scooters
- Microtransit such as Bridj, Via, and Lyft Shuttle
- Next-generation goods delivery methods
- Autonomous vehicles

Dockless e-bikes and e-scooters are increasingly popular modes for short trips within downtown. TNCs are serving longer trips between downtown and surrounding neighborhoods, as well as region-wide. New travel options have the potential to alter travelers’ relationship with driving and increase or decrease vehicle miles traveled (VMT).

E-scooters are currently estimated to number in the thousands, and since August 2018 more than 800,000 rides have been logged equating to nearly one million miles traveled. Issues persist with e-scooter use on sidewalks and conflicts with pedestrians, as well as placement of e-scooters on sidewalks, presenting obstacles to people walking or rolling. A revision to the City’s Revised Municipal Code in early 2019 allows for e-scooters to operate in bike lanes or on roadways with a speed limit of less than 30 mph, or on sidewalks along higher speed roadways absent a bicycle facility at a 6 mph maximum. Requiring users to operate e-scooters off the sidewalk will inevitably require a shift in planning and design to accommodate scooters on the street, alongside people bicycling.

Microtransit seeks to fill in what has traditionally been a large gap between the convenience of driving and fixed-route transit networks. By offering a travel choice that is almost point-to-point but also allows users to leave their car at home, microtransit could both help improve access to downtown while providing a mobility option for those not currently served by transit. Recent additions to microtransit in Denver have experienced mixed success. Chariot, a former microtransit provider, ceased operations in early 2019, thereby creating some uncertainty for how this mode will operate in the future.

As e-commerce continues to expand, delivery and freight movements are undergoing a substantial shift that will require better loading zone access for those door-to-door deliveries. Looking further ahead, drone deliveries may
require planning efforts to focus not just on roadways and land-based infrastructure, but on airborne travel as well.

Connected vehicle technology is increasingly prevalent and planning for downtown mobility is not complete without considering the prospective infrastructure and technology needs of this future mobility. The arrival of autonomous vehicles will carry implications for VMT, commuting patterns, pedestrian safety, transit usage, and a multitude of other factors in the mobility landscape.

In a time when new technology is reshaping the nature of urban travel environments, Denver Moves: Downtown is an opportunity to ensure downtown leverages the strengths of these technologies when planning for its mobility future rather than needing to reactively adapt once new mobility options have already fully transformed travel patterns.
Quality of Experience

A livable downtown provides a rich array of experiences for everyone who lives, works, and plays there – all activities are intrinsically tied to transportation.

The growing residential and employment population of downtown Denver and the Golden Triangle demands focus on fostering a safe, healthy, equitable, lively, and attractive place to live. From walking or rolling, to riding the light rail, a wide variety of transportation modes contribute to the ease and comfort of destination accessibility, whether that be to a Rockies game, the History Colorado Center, or a trip to the grocery store or school. Quality of life experience encompasses a person’s daily journey, the public life that surrounds an individual, and the feeling moving within the city.

Two major groups of downtown users exist: everyday users and visitors. Everyday users are the people who live and work downtown and depend on the transportation system to get them to their everyday destinations such as food stores, school, and work, as well as entertainment, shopping, and restaurant destinations. In contrast, visitors are those who do not live or work in the immediate downtown area, and travel downtown to visit entertainment, cultural, and shopping destinations, as well as conference conventions and other business engagements. For example, in 2017 the Convention Center saw 231 events with a combined attendance of nearly 950,000, a 15% increase from the previous decade[1].

Downtown Denver is transitioning from being a central business district to a lively residential and commercial center. This change brings shifting demands for how the built environment serves users. Recent growth both in the residential population and the number of tourists visiting Denver has required improved transportation connections and more basic services. Approximately 17.4 million overnight visitors came to Denver in 2017 alone, and some of the top ranked destinations by number of visitors were the 16th Street Mall, LoDo Historic District, and Union Station. Downtown Denver boasts over 11,000 hotel rooms, with nearly 2,000 rooms completed in 2018 or slated to open in the near future[2]. Additionally, cultural and entertainment destinations downtown or in the Golden Triangle have created new attractions that enrich the experiences of visitors and downtown residents alike.

As more growth and investment occurs, downtown and the Golden Triangle will continue to diversify with additional services and attractions, public realm enhancements, and transportation connectivity to ensure an attractive experience that supports such development.


How Does Downtown Move?

While the majority of space on downtown streets is dedicated to motor vehicles, people move to and through downtown in many different ways.

In the fall of 2018, count data collected as part of Denver Moves: Downtown found that between 54,000 and 62,000 people moved into, out of, or through downtown Denver during peak hours. By 2040, this number is expected to grow by 40 percent with a projected 76,000 to 87,000 people traveling downtown during peak hours.

The primary flow of people is into downtown during the morning peak hour and out of downtown in the afternoon peak hour. The bar graph and mode share illustration on the following page shows the number of people traveling to or from downtown in the morning and afternoon by six transportation modes. Every intersection along the study area boundary for downtown (Park Avenue, Welton Street, Lincoln Street, Colfax Avenue, Speer Boulevard, and 15th and 20th Streets at Little Raven Street) was analyzed to provide a quantitative picture of how many people are traveling downtown at peak times, and how they are getting there. The number of transit users was calculated using data collected by RTD in 2018. These counts illustrate the number of people per mode and provides a baseline from which to study future mobility opportunities.

The Downtown Denver Partnership (DDP) also tracks commuter mode share downtown with their Downtown Commuter Survey released every October to those employed by downtown-based companies. The voluntary survey provides a sample of how downtown’s employees get to work, and has provided this data to track year-over-year trends in mode split and share results with the public. The past five years of data have showed a decrease in single-occupancy vehicle use, and slight increase in people walking or rolling, bicycling, and taking transit to work. The most recently available survey data is from October 2018.
TODAY - PERSON THROUGHPUT
TOTAL PEOPLE MOVING IN AND OUT OF DOWNTOWN

AM PEAK HOUR

IN

OUT

PM PEAK HOUR

IN

OUT

TODAY - PEAK HOUR MODE SHARE
% OF PEOPLE MOVING IN AND OUT OF DOWNTOWN (AM | PM)

53% | 54%
22% | 21%
11% | 11%
10% | 11%
2% | 2%
2% | 1%

DRIVING[2]
TRANSIT[4]
CARPOOL
WALKING
BIKING
FREIGHT[3]

Person counts were obtained by collecting the number of pedestrians, bicyclists, and vehicle at each signalized intersection that serves travelers going into or out of downtown during the peak hours. Transit ridership data shared by RTD was used to determine the number of people using buses and trains to either access or leave downtown. The percentages illustrate the share of total travelers that used each mode. The number of people carpooling was not observed, but was estimated based on the breakdown of single occupancy and multi-occupant vehicles going into or out of downtown during the peak number of people carpooling was not observed, downtown during a single trip, thereby causing vehicle mode share to be artificially inflated.

2018 MODE SHARE SURVEY
DOWNTOWN DENVER PARTNERSHIP COMMUTER SURVEY RESULTS

VANPOOL 0.1%
RIDESHARE 1.4%
MOTORBIKE 1.7%
TELEWORK 2.4%
CARPOOL 4.0%
WALK 6.9%
BIKE 9.0%
DROVE ALONE 34.5%
TRANSIT 39.8%

The Downtown Denver Partnership (DDP) Commuter Survey is released each year in October to all companies downtown that are registered as DDP members. DDP typically receives feedback from 5,000 to 8,000 respondents who voluntarily take the exam and are employees of the registered companies. The mode share survey results displayed here are primarily used to track trends in the year-over-year commuting habits of people employed by DDP member companies.

[1] Excludes the 16th Street MallRide and Free MetroRide.
[2] Includes cars and light trucks only.
[3] Includes medium and articulated trucks.
The public right-of-way is a space that serves people walking, rolling, driving, and taking transit. In downtown, that space is not always divided according to demand. The following graphics show the amount of space dedicated to each mode on four different downtown roadways, and the percentage of overall right-of-way per mode vs. the percentage of travelers utilizing each mode for peak hour travel.

**STOUT STREET**

80' RIGHT-OF-WAY (ROW)

<table>
<thead>
<tr>
<th>20' SIDEWALK</th>
<th>12' TRANSIT RAIL</th>
<th>20' TRAVEL LANES (2)</th>
<th>8' PARKING</th>
<th>20' SIDEWALK</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>50% OF ROW</th>
<th>15% OF ROW</th>
<th>35% OF ROW</th>
</tr>
</thead>
<tbody>
<tr>
<td>12% OF TOTAL USERS</td>
<td>1% OF TOTAL USERS</td>
<td>70% OF TOTAL USERS</td>
</tr>
</tbody>
</table>

**15TH STREET**

80' RIGHT-OF-WAY (ROW)

<table>
<thead>
<tr>
<th>12.5' SIDEWALK</th>
<th>45' TRAVEL LANES (4)</th>
<th>10' BIKE LANE</th>
<th>12.5' SIDEWALK</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>31% OF ROW</th>
<th>13% OF ROW</th>
<th>56% OF ROW</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5% OF TOTAL USERS</td>
<td>5% OF TOTAL USERS</td>
<td>26% OF TOTAL USERS</td>
</tr>
</tbody>
</table>
18TH STREET

80' RIGHT-OF-WAY (ROW)

15' SIDEWALK  8' PARKING  6' BIKE LANE  26' TRAVEL LANES (3)  15' SIDEWALK

38% OF ROW  8% OF ROW  54% OF ROW

11% OF TOTAL USERS  2% OF TOTAL USERS  58% OF TOTAL USERS  29% OF TOTAL USERS

WYNKOOP STREET

80' RIGHT-OF-WAY (ROW)

15' SIDEWALK  8' PARKING  5' BIKE LANE  24' TRAVEL LANES (2)  5' BIKE LANE  8' PARKING  15' SIDEWALK

38% OF ROW  13% OF ROW  50% OF ROW

58% OF TOTAL USERS  4% OF TOTAL USERS  39% OF TOTAL USERS
People Walking

Space and amenities provided for pedestrian access, safety, and comfort are fundamental to the livability of downtown Denver.

While the share of people accessing downtown solely by walking or rolling is currently upwards of 11 percent, most trips start or end downtown by walking or rolling. For example, the Downtown Denver Partnership estimates that over 29,000 people walk on the 16th Street Mall between California Street and Stout Street on a given day, and many streets carry more than 5,000 pedestrians per day.

A variety of factors contribute to downtown’s walkability, notably its land use density and diversity, as well as its underlying infrastructure and complete network of sidewalks and crossings. Streets within downtown currently have speed limits of 25 to 30 mph, and many signalized intersections feature an all-pedestrian phase where vehicles are stopped at all approaches. Certain downtown streets, such as 14th Street, provide enhanced amenities including curb extensions that reduce the crossing distance and wider sidewalks to accommodate the large number of people walking or rolling.

Despite their general walkability, approximately 70 percent of downtown blocks have recorded crashes between a person driving and someone walking or rolling over the past five years. Corridors with a high-number of crashes include Broadway, Lincoln Street, Speer Boulevard, Park Avenue, and 20th Street.

The top three intersections by number of vehicle-pedestrian crashes (in parentheses) over the past five years include: 20th Street and Market Street (23), a tie between Park Avenue and Lawrence Street (15) and Broadway and Colfax Avenue (15), and a tie between 20th Street and Larimer Street (14) and Broadway and 13th Avenue (14). Broadway, Lincoln Avenue, Colfax Avenue, Speer Boulevard, and Park Avenue are all included in the High-Injury Network (HIN) which was developed as a part of the Denver Vision Zero Action Plan (2017), and represents corridors with the highest number of fatal or severe injury crashes. These corridors account for 50 percent of traffic deaths, but only five percent of the streets in Denver.

The Downtown Area Plan, Blueprint Denver, and Denver Moves: Pedestrians & Trails identify downtown as a “Pedestrian Priority Area”, or an area where the City will strive for wider sidewalks to serve demand, enhanced crossings for a safer environment, and signal timings that maximize pedestrian convenience. To accommodate future growth in downtown and the Golden Triangle, the expectation of how these corridors look and function will evolve so people walking or rolling may safely travel on downtown streets and across major roadways.

Vehicle / Pedestrian Crashes

NOTES:
This data represents crashes between 2013 & 2017.
People Biking

The existing downtown bicycling network provides a range of connectedness, safety, and comfort.

The level of people bicycling to, from, and around downtown has increased significantly in recent years. Currently, an estimated 900 to 1,100 people access downtown by bicycle during the morning or afternoon peak hours, respectively. Ten years ago, Denver was one of the first cities in the United States to launch docked bike share on a large scale when it debuted B-cycle. Today, dockless e-bikes are supplementing traditional docked bike share to provide even more options for people choosing this mode.

The past decade has seen a significant expansion of bikeways in the downtown transportation system, evolving from painted bike lanes to protected bike lanes physically separated from traffic that serve bicyclists of all ages and abilities. Downtown includes over 20 miles of on- and off-street bicycle facilities, of which ten miles are either protected bike lanes, shared-use sidewalks, or trails. Examples of these include the 14th Street protected bike lane, 20th Street shared-use sidewalk, and Cherry Creek Trail.

Despite a growing network of low-stress facilities, two-thirds of downtown blocks over the past five years have recorded crashes between a vehicle and a person bicycling, as shown in the map at right. The top three intersections by number of vehicle-bicyclist crashes (in parentheses) over the past five years include: Lincoln Street and 12th Avenue (9) and 15th Street and Champa Street (9). Not all parts of downtown are easily accessible via bicycling within the existing low-stress network, however the City plans to construct approximately 4.5 additional miles of protected bike lanes within downtown or the Golden Triangle in the near-future.

E-bikes, which use electric motors to assist riders while pedaling, are helping to attract additional riders. Other recent micro-mobility innovations, such as e-scooters, will have to share space with people bicycling in the street or a bike lane. Transportation Network Companies (TNCs) such as Uber or Lyft, and freight delivery services, are increasing demand for curb space, which in-turn raises the potential for conflicts with people bicycling. Denver Moves: Bicycles and Denver Moves: Pedestrians & Trails promote a complete and comprehensive network of bicycle facilities citywide that facilitate bicycle travel to, from, and within downtown.
Bicycle Network

- Shared Use Path
- Protected Bike Lane
- Buffered Bike Lane
- Bike Lane
- Shared Lane
- Future Protected Bike Lane
- Future Buffered Bike Lane
- Future Bike Lane
- Future Neighborhood Bikeway
People Riding Transit

Downtown is the most transit accessible area within the Denver region, where RTD’s commuter rail, light rail, and most bus routes converge.

RTD provides local and regional transit to downtown Denver, with CDOT’s Bustang, Amtrak, and Greyhound or other bus operators offering regional and intercity connections. Recent transit investments include the A and B Line commuter rail, W Line light rail, regional Denver-Boulder Flatiron Flyer, and the local Free MetroRide, as well as new, high-quality transit stations at Union Station and Civic Center Station.

Bus service or rail transit line operates on nearly every downtown street. The downtown signal system is prioritized for light rail and the 16th Street Free MallRide, which can sometimes cause reduced speed and reliability for buses on other streets. Transit is concentrated on the 16th Street Mall (Free MallRide), 15th and 17th Streets (local routes), and 18th and 19th Streets (Free MetroRide, local and regional routes). Transit service is less concentrated on the named streets with the exception of Stout and California Streets, which serve light rail. The City and RTD have invested in transit infrastructure in downtown and the Golden Triangle, with improvements including the 16th Street Mall, BRT-like elements (bus stop islands and queue jumps) on 18th and 19th Streets, and bus-only lanes on portions of 19th Street, Broadway, and Lincoln Street, as well as traffic signals that prioritize light rail.

Given both its space efficiency and distance coverage across the region, transit offers the greatest potential for increasing person-throughput to, from, and within downtown Denver. Currently, approximately 22 percent of the total number of people accessing downtown during peak periods are doing so by transit. This equates to upwards of 12,000 people during the morning peak hour, and 13,000 people during the afternoon peak hour – roughly split equally between people riding the bus or taking rail. Moreover, daily ridership on the 16th Street MallRide, an important east-west connection across downtown, carries approximately 66,000 people daily on average during the week. Denver Moves: Transit envisions a grid system of transit routes serving the City with increased speed, reliability, and frequency. Such improvements will further enhance the accessibility to downtown or Golden Triangle by transit.
Peak Hour Downtown Transit Frequency

- Every 10 Minutes (or fewer)
- Every 15 Minutes
- Every 30 Minutes
- More than 30 Minutes
- Light Rail / Commuter rail

NOTES:
All light rail and commuter rail lines operate at 15 minute frequencies during the peak hour, except for the B Line which is every 30 minutes.
People Driving

Many people drive downtown because past decision-making prioritized travel by automobile. Since the width of downtown streets is fixed, tradeoffs are required to balance travel modes and keep people moving.

Historically, many aspects of downtown’s transportation system have been designed to quickly and efficiently move people by car. This includes the direct connections between downtown and I-25, system of one-way streets, right-of-way configurations that maximize the number of travel lanes, traffic signal progression prioritizing vehicular movement, and ample parking – illustrated by the 32 percent of land allocated to surface parking in downtown. Even with recent improvements in multimodal infrastructure, downtown continues to be an environment for driving due to those incentivizing factors.

Today, approximately two-thirds of people traveling downtown during peak commuting periods are driving alone or as a carpool. The transportation system generally moves cars efficiently via the one-way street network that funnels people driving to the major perimeter roadways which then either intersect with I-25 or traverse to other parts of the city. The speed and time efficiency of driving has contributed to peak congestion. Key downtown intersections, otherwise termed as congestion sources for this report, generate delay throughout the broader network, especially during peak commuting periods. These areas typically delay all users, including people taking transit, and create safety hazards between those driving, and people walking, rolling, or bicycling.

The most congested corridors are generally along downtown and the Golden Triangle’s perimeter, and include Speer Boulevard, Colfax Avenue, Broadway, Lincoln Street, 20th Street, and Park Avenue. The photos on the following page illustrate the lower-usage of downtown streets during midday versus in the afternoon peak hour. Many of the crashes occur along these corridors, with all of the aforementioned corridors except 20th Street included in Denver’s High-Injury Network (HIN).

The objective of Denver Moves: Downtown is to accommodate projected growth of people living and working downtown through walking, bicycling, transit, and other non-single-occupancy vehicle modes. Existing streets downtown cannot be widened to accommodate additional travel lanes for people driving; accommodating more person trips will require enhancing mobility through non-driving modes.
Peak Morning Congestion

- <50% Free-Flow
- 50% Free-Flow
- 60% Free-Flow
- 70% Free-Flow
- 80% Free-Flow
- >90% Free-Flow

Congestion Source

**NOTES:**
Free-flow speed is the average speed recorded on a street during off-peak hours. This graphic shows how average peak hour corridor speeds compare to average free-flow speeds on all Tuesdays, Wednesdays, and Thursdays in 2017[1]. In other words, a lower percent free-flow during peak hours means vehicles are moving slower and there is potentially more congestion.

---

[1] Source: INRIX, 2018
Peak
Evening
Congestion

- <50% Free-Flow
- 50% Free-Flow
- 60% Free-Flow
- 70% Free-Flow
- 80% Free-Flow
- >90% Free-Flow

Congestion Source
Curb Space

Downtown curb space is misallocated and underused. With better management and increased flexibility, curb space use can be optimized for the public good.

Curb space has historically been reserved for parking, though shifting expectations and new technologies are repositioning curb space as expanded transit stops and stations, loading and freight delivery zones, taxi/TNC passenger loading, public space, or green infrastructure.

Downtown and the Golden Triangle collectively contain 34 miles of curb space. Only 15 percent of that curb space is dedicated to high-productivity uses such as a bus stop, loading zone, or designated pick-up/drop-off area. A much larger share is dedicated to low-productivity use, like metered parking.

While on-street parking serves an important function, most blocks in downtown do not exceed 85 percent parking occupancy at peak times. Anyone seeking parking can generally find at least one on-street parking spot available on any given block. Approximately 10 percent of downtown blocks experience chronically low parking occupancy throughout the day, which demonstrates an over-supply of on-street parking in some portions of downtown. And many blocks do not feature ADA designated parking, presenting a mobility challenge for some downtown visitors.

Blocks with low-occupancy on-street parking could be reimagined to better serve the public and optimize the limited space available. The increase in TNC use challenges the traditional relationship between the roadway and the sidewalk. By providing point-to-point transportation services, TNCs can replace single-occupancy vehicle trips and consequently reduce the need for on-street parking downtown. Frequent passenger loading and unloading simulates transit-like activity but without taking place at designated stops. The shift in curb usage can be witnessed whenever a TNC vehicle pulls into a metered parking space to drop-off a passenger. Whereas previously that passenger may have driven downtown and paid the meter fee, Denver now forgoes parking revenue without changing curb restrictions. TNCs such as Uber and Lyft have dramatically altered how curb space is used and will continue to do so as demand grows for passenger loading zones.

<table>
<thead>
<tr>
<th>CURB LANE USE</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Parking</td>
<td>44%</td>
</tr>
<tr>
<td>Metered Spaces</td>
<td>39%</td>
</tr>
<tr>
<td>Loading Zones</td>
<td>8%</td>
</tr>
<tr>
<td>Other[1]</td>
<td>5%</td>
</tr>
<tr>
<td>Bus Stops</td>
<td>2%</td>
</tr>
<tr>
<td>ADA Parking</td>
<td>1%</td>
</tr>
</tbody>
</table>

[1] “Other” represents specialized curb uses like consulate parking or loading by permit only.
Services like Amazon that make home delivery more convenient and affordable than ever before are also challenging traditional approaches to curb management. Whereas delivery of goods was most often made in bulk to stores that then relied on customer visits, small parcel delivery is changing the freight landscape by relying on smaller vehicles to make deliveries block by block. These vehicles can use metered spaces, again upending traditional approaches to curb management by using the public right-of-way to conduct commercial activity.
Loading Zones & Freight Access

- Block w/ Loading Zone
- Block w/o Loading Zone (with Alley Access)
- Block w/o Loading Zone (Without Alley Access)
Average Parking Occupancy

- **Very High** (Fully Occupied 2+ Hours a Day)
- **High** (85% - 95% Occupied 2+ Hours a Day)
- **Medium** (20% - 85% Occupied 2+ Hours a Day)
- **Low** (Under 20% Occupied 5+ Hours a Day)
- **-----** No Parking
Public Realm

From its architecture to its tree canopy, the downtown built environment plays a crucial role in creating a comfortable and attractive experience.

The urban fabric of downtown Denver provides the context for the user experience and establishes the public life of the city. As a public space, the downtown right-of-way should provide an abundance of amenities that support an active public life and an enjoyable pedestrian experience.

A healthy tree canopy and other high-quality plantings create a visually interesting and inviting public realm, while providing shade and other environmental benefits. Wider sidewalks and areas for seating allow for more efficient and comfortable movement along streets. Consistent use of pedestrian-scale lighting provides a perception of safety, while providing architectural elements for visual interest. These streetscape features collectively contribute to the design quality of the public right-of-way by adding elements of safety, comfort, and convenience.

Streets designed as destinations provide the highest-quality public realms due to their complete streetscapes and comfortable user experience. Examples downtown include the 16th Street Mall and Larimer Square. Areas near major destinations such as Coors Field, Union Station, and the Colorado Convention Center generally have higher-quality public realm treatments.

Areas targeted for growth without a coherent public realm continue to lack an identity, including the Golden Triangle and Arapahoe Square neighborhoods which suffer from consistently low-quality streetscapes. Major streets such as Lincoln Street, Park Avenue, and 20th Street provide a low-quality, vehicle-focused public realm. Furthermore, areas along the edge of downtown without a clearly-defined building or neighborhood fabric also tend to lack streetscape treatments.
Next Steps
The data summarized in this report forms a baseline from which the City can develop recommendations and set a long-term vision for how the transportation network will accommodate and balance the needs of all users walking, rolling, bicycling, scooting, taking transit, driving or riding in a vehicle to, from, or within downtown Denver. The Denver Moves: Downtown journey will take a variety of steps to arrive at a plan for the downtown transportation system.

Having established a comprehensive understanding of the state of the downtown system, the City will advance a new transit vision, devise and analyze alternative scenarios, and ultimately identify and refine a preferred alternative. The City will engage the public throughout this process. The resulting Denver Moves: Downtown plan will advance downtown as a livable, supportive, and desirable place to live, work, and visit.