Mobility Study
ACTION PLAN

RiNo Art District
SUMMER 2019
Funded by the RiNo Business Improvement District
About this Study

» This Mobility Study Action Plan will guide RiNo’s objectives and advocacy with regard to transportation infrastructure and transit (aka how people travel to, from, and within RiNo).

» The objective of the Study is to facilitate a holistic view of the District’s needs and to ensure that future plans directly benefit RiNo’s communities and those of our historic neighborhood partners - particularly local residents and business owners.

» The Study’s recommendations should be considered as an integrated package, with many linkages and dependencies between the various measures described in the document.

» The Study has been directly influenced by community views, which were sought at the outset, and co-ordinates with the City and County of Denver’s transportation infrastructure policy framework.

» Infrastructure quality has not kept pace with the speed and built quantity of development and RiNo Art District believes that greater focus is required to ensure that RiNo offers a street-level environment and transit options that are safe, inclusive, and accessible to all.

» RiNo looks forward to working in partnership with local residents and business owners, and with the City and County of Denver, RTD and other enabling organizations, to implement the suite of recommendations with the aims of optimizing the use of available infrastructure resources, creating an environment that works for all, and prioritizing pedestrians, cyclists, and environmentally sustainable modes of transport.

THE CONSULTANT TEAM FOR THIS PROJECT INCLUDED:

» NELSON\NYGAARD (MOBILITY AND PARKING)  » IDAX (DATA COLLECTION)

» TWO HUNDRED (CREATIVE)  » MIG (CHARRETTE)
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The **RiNo Mobility Study Action Plan** is tailored for the RiNo Art District and surrounding communities. It is a guide for advocating on behalf of partners for safer streets, more transportation options, and expanded access to opportunities and experiences in the district. The Mobility Study Action Plan picks up where past efforts have left off, creating a comprehensive strategy for improved mobility that addresses both immediate needs and long-term goals. This includes filling in gaps in existing mobility strategies for the district and creating a cohesive vision among all the various (and growing) mobility options.

The study began with field observations, data collection, and stakeholder outreach to inform the path forward. **This section describes how RiNo moves today** to learn from what is or is not currently working. Key themes included: parking supply and availability trade-offs, bike and pedestrian connection needs, infrastructure barrier challenges, and inadequate transit service for a growing area.
How Does RiNo Move Today?

RiNo grows more popular each year, with more people traveling through the area by car, foot, bicycle, and transit. The boom in development and activity in the Art District has outpaced public infrastructure, and demands on the street network are growing quickly. The district’s streets reflect its history. Some areas have short blocks and easy walking conditions, while other blocks are missing sidewalk infrastructure, and some wide streets crossing the district encourage fast vehicle speeds. Many infrastructure improvements have been occurring – but not always coordinated toward a singular vision.

Field observations, parking data collection, and stakeholder outreach informed the RiNo Mobility and Parking Study. Key takeaways include:

» There has been a noticeable increase in app-based ride-hailing services in the district and City, increasing the number of brief passenger loading and unloading stops. The number of Denver Lyft and Uber drivers nearly doubled between 2014 and 2016, and both Uber and Lyft identify RiNo as one of Denver’s hotspots.

» While the district is transit-adjacent, it is not necessarily transit-oriented. RiNo recently got a major boost in transit access, with construction of a new rail station that connects the district to the regional transit network. The RTD A-Line station at 38th Street and Blake Street opened in 2016 and travels directly to Union Station and Denver International Airport. Bus lines through the district lack high-frequency service. During weekdays, buses do not operate at regular intervals of 15 minute or less. Some transit stops are unpaved and inaccessible. Many areas within RiNo will continue to experience increases in population and employment, but without adequate transit service to support this growth.
» RiNo is walkable, but with challenges, including: gaps in the sidewalk network, construction closures, missing crosswalks, and major infrastructure barriers that must be negotiated.

» Bicycle infrastructure can be spotty, yet the artistic and industrial legacy of the district somehow lends it to bicycling trips. As RiNo streets become more active, there is more vehicle traffic for bicyclists to navigate. Connections to and from the district and regional bicycle network are sometimes poorly coordinated.

» Locals and visitors perceive parking as a major access challenge for the district. The study team collected parking inventory, occupancy, and duration data to quantify parking issues in the district, finding that although technically there is significant unused parking, much of it is unusable to those searching for parking each day. The majority of off-street parking is reserved for customers, tenants, and employees. A lack of well-managed public parking creates frustration for the average visitor, including those who wish to park once and walk to multiple destinations in the area. On-street parking spaces comprise the majority of publicly available parking in the district, and are often full, requiring people driving to circle for parking. Many blocks with on-street parking are often too full (defined as 85% occupied or above), while many private parking facilities sit underutilized during the same time.
18,078 spaces were counted in RiNo Mobility Study Action Plan 2018

- 19% are on-street
- 80% are off-street in lots or garages
- 90% are unmanaged
- 71% are restricted from general public access
Cars are the primary mode of transport, though less so than other districts.

In the district and surrounding communities, about two of every five workers travel by non-auto modes. Additionally, over 55% of area households have no car or just one car, compared to 33% citywide. Like Denver, RiNo has a large influx of commuters each day. Employees grow the district by as many as 12,000 people per day.
Vehicle Availability for Residents

- **12%**
- **30%**
- **48%**
- **10%**

Employee Commute Patterns

- **20,050**
  - Employed in area, but live outside.

- **7,258**
  - Live in area, but employed outside.

- **476**
  - Employed and live in area.

Population unit: 1,000
What is it like to drive in RiNo?

RiNo’s streets are in flux. The City has reconstructed or is redesigning several streets in the district, while others are in poor condition – inadequate for the district’s ongoing growth.

Traffic and congestion are challenging, partly due to construction activity in the area, but also due to substandard pavement conditions and limited points of entry to the district. Several new street redesigns have improved the quality of travel for drivers and those walking and biking. However, many streets lack crosswalks or stop signs and have wide lanes, encouraging speeding through the district. There have been crashes causing serious injuries or fatalities on both sides of RiNo. Through its Vision Zero initiative, the City continues to increase efforts to prevent crashes with safer street design, including in RiNo.

Brighton Boulevard

Brighton Boulevard, the site of three serious crashes involving someone walking or bicycling in the past five years, just reopened after a complete reconstruction. Brighton Boulevard represents a major infrastructure milestone for the district. Previously a two-lane street lacking curbs, infrastructure, and sidewalks, the street redesign reflects a shift from industrial infrastructure to multimodal street design in Denver – a rare opportunity to rebuild a street from scratch. Denver completed the first stage in June 2018. The redesign adds a lane in each direction between 29th Street and 44th Street, as well as raised, protected bicycle lanes, sidewalks, traffic signals, underground utilities, stormwater features, and improved streetscaping. The construction period, starting in late 2016, challenged existing businesses and people navigating the area, as they contended with missing sidewalks and increased congestion. Private investment followed this major street redesign, with many new developments built or planned for the corridor. The incorporation of cycle lanes and comprehensive landscaping, funded by RiNo’s GID, is considered to be best practice.

Walnut Street

Walnut Street, a one-way street, was the site of a fatal crash involving a pedestrian at 27th Street. Until recently, the street had few sidewalks or defined parking areas between Broadway and 36th Street. The City is conducting a long-term study for the street, including a possible two-way conversion. In the meantime, the City created temporary walkways by installing concrete blocks. This interim sidewalk treatment is a good example of how temporary materials can improve street design in the short-term to overcome the most important gaps in the mobility network while longer-term studies and designs occur. The conversion to two-way traffic will considerably improve safety and experience for all users.

Temporary Measures

While the City advances plans to improve safety of RiNo streets, street reconstruction is creating problems as well. As the City reconstructs streets, closures create gaps in the vehicle and sidewalk networks. A construction remediation plan identifying space and routes for people walking, biking or driving would improve short- and mid-term conditions while the City and Art District study long-term options.
Major crashes have also occurred at these locations:

- Marion and 38th (fatal)
- Wazee and 36th (fatal)
- Arapahoe and Broadway (fatal)
- Walnut and 34th
- Lawrence between 30th and 31st
- Arkins and 38th
How are app-based ride-hailing services growing in RiNo?

Ride-hailing services like Uber and Lyft are on the rise in Denver and RiNo, contributing their own impacts to the transportation network.

RiNo’s high volume of bars and breweries attracts many visitors to the district. This can increase the risk of impaired drivers. A lack of frequent transit service, especially during weekends and off-peak times, makes transit an afterthought for many visitors to the area. Door-to-door ride-hailing services like Uber and Lyft increasingly fill that gap. The number of Denver Lyft and Uber drivers nearly doubled between 2014 and 2016, and both Uber and Lyft identify RiNo as one of Denver’s hotspots, recommending drivers should cover the area to maximize their potential to pick up fares. Increasing pick-up and drop-off activity creates additional congestion, primarily at a few popular intersections. Counts conducted on a Friday evening in March 2018 indicated an Uber or Lyft vehicle stopped near the intersection of Larimer Street and 27th Street about every 88 seconds. Over half of these cars stopped in the bicycle lane on Larimer Street.

Shared car services and other new mobility tools will likely grow in their role in RiNo in upcoming years, creating new opportunities and challenges. Age influences driving and car ownership trends, suggesting that travel will look different over time. Among 18-year-olds this decade, only 60% have a driver’s license, compared to 80% in the 1980s. Millennials are 30% less likely than Generation X to purchase a car. The availability of ride-hailing, car sharing, and other new options will influence that trend.

Meanwhile, Autonomous Vehicles (AVs), or self-driving cars, are on the horizon. Many vehicle companies identify 2020-2022 for their AV launch target, and there are predictions of widespread adoption by 2050. With such trends possibly reducing overall car ownership, this means that less parking may be needed in the future, particularly in high-density locations with many transportation options. However, it also means cities and districts need to plan for more curb activity and actively manage curbsides due to increased demand to access specific locations.
What is it like to ride transit in and around RiNo?

While the district is transit-adjacent, it is not necessarily transit-oriented.

RiNo recently got a major boost in transit access, with construction of a new rail station that connects the district to the regional transit network. The RTD A-Line station at 38th Street and Blake Street opened in 2016 and travels directly to Union Station and Denver International Airport.

With a relatively high density of activities and intersections supporting convenient access to streets and transit, the eastern section of RiNo should be inherently transit-oriented. Instead, transit is merely adjacent to the district and not necessarily visible and connected to buildings and amenities around it. For example, a passenger disembarking at the 38th and Blake Station may find there is no crosswalk across Blake Street connecting to their destination. The walk to transfer to buses along Larimer and Lawrence follows an indirect path, with little guidance or signage along the journey.

Bus routes in RiNo follow traditional streetcar corridors and former traffic orientations (for example, inbound buses are along Larimer Street while outbound buses are along Lawrence Street – even though both streets are two-way). These bus lines do not have high-frequency service, as none regularly operate every 15 minutes or less during weekdays. Bus connections to the A-Line are also limited. **Buses serving the 38th and Blake Station have a frequency of 20 to 29 minutes on weekday mornings.** By comparison, buses arrive more frequently than every 10 minutes to the Peoria Street Station, also on the A-line. Many areas within RiNo will continue to experience increases in population and employment, but without adequate transit service to support this growth.

Transit stops and stations also shape the experience of using the system. Route 44, one of the oldest transit corridors in the area, has multiple stops in the district – some of them unpaved and inaccessible for people using wheelchairs and other mobility devices.
What is it like to walk in RiNo?

RiNo has the critical mass of destinations, amenities and, increasingly, residential development to make it a walkable district. Missing sidewalks and crosswalks, and gravel sidewalks, make some walking routes indirect or feel unsafe. Streets in different parts of the district reflect its industrial heritage while others have upgraded multimodal infrastructure. Many streets in the district did not historically have sidewalks, and the process of catching up to today’s walkability and accessibility standards takes time. Some locations, including the Crossroads Center on 29th Street, attract many people walking despite the lack of sidewalks. Throughout the area, old garage entrances no longer in use and other obsolete curb cuts interrupt sidewalks – though industrial loading infrastructure also creates a distinct identity for the district.

Construction projects have closed some existing sidewalks.

The City of Denver’s Right-of-Way Services states that the “closing of the sidewalk is done for safety reasons for pedestrians.” However, most construction sites in RiNo do not provide temporary alternative sidewalks. People walking must frequently enter the street as sidewalks end abruptly at construction sites. Given the ongoing development pipeline in the area, this issue will continue to impact ease of walking in the area. Some municipalities have strict requirements to identify and preserve walkway during construction. Information about how to walk, bike, or drive through the district can be a moving target; information about missing or newly built sidewalks is often not yet integrated into mobile guidance apps.

Other barriers in RiNo are more challenging to overcome. The construction of a second railroad crossing between Blake and Wazee Streets for bicycles and pedestrians helps people cross the tracks, but a mandated vertical clearance limits the ease of crossings. Building an additional crossing could connect the two sides of RiNo—however, the district’s overall connections to surrounding areas likely require bold moves to overcome major infrastructure hurdles.
What is it like to bike in RiNo?

Bicycle infrastructure can be spotty in RiNo, though its artistic and industrial legacy somehow lends the district to bicycling trips. As RiNo streets become more active, there is more vehicle traffic for bicyclists to navigate. During outreach, people reported bicycling in challenging conditions on portions of their trips, including on sidewalks (38th, Lawrence, Ringsby), in the middle of the street (Brighton, 38th), and down unpaved slopes (the Platte River Trail).

In the last seven years, Denver built 130 miles of bicycle lanes, enhancing the downtown and citywide networks. More Denver households are now within a quarter mile of a high quality bicycle path or lane, increasing from 45% to 57% between 2010 and 2017. Bicycle commuting increased 25 percent in downtown Denver from 2106 to 2017, up to 8.3% of all commuters.

In RiNo today, there are a few key bicycle routes, and more plans underway. Larimer and Blake Streets have been the primary bicycle connections across RiNo, providing bicycle lanes that cross the length of the district. The recent opening of Phase One of the reconstructed Brighton Boulevard now provides raised, protected bicycle lanes on each side of the street between 29th and 44th Street. The Platte River Trail is a major city bicycle and recreation corridor, extending over 28 miles and connecting to a broader trail network. However, it has relatively few points of entry within the RiNo district, particularly on the west end of the district.

Other bicycle infrastructure in the surrounding area serve commuters to and from RiNo but often does not connect into the heart of the district. For example, enhanced bikeways on Lawrence Street and Arapahoe Street provide a protected lane for people biking through downtown and are some of the best bicycle infrastructure in Denver. They end shortly around Broadway, however, and do not extend into the heart of RiNo.

Creating new bicycle connections is important for the RiNo district.

Denver Moves: Bicycles initially only included a small number of projects in RiNo, but recent plan updates added more projects in the district. Projects include separated bicycle lanes on Blake Street and 35th Street, district bikeways on Lawrence Street and 26th Street, and a buffered bicycle lane on 30th Street.

The Denver Moves: Bicycles 2016 update included the goal of increasing the number of enhanced bikeways in the city. The plan describes enhanced bikeways as intended to be attractive to cyclists of all abilities, including cautious riders, and proposes a network of enhanced on-street bicycle facilities. The City is evaluating additional corridors for this program, including corridors through RiNo, as well as treatments at five mid-block locations and eight intersections in the district. Connecting this new and planned bicycle infrastructure, filling in gaps, and identifying transitions in and out of the district (including across the rail tracks and river) are the next steps toward an enhanced bicycle network in RiNo.

In attracting new riders, RiNo can build on a legacy of a bicycle culture. The final stage of the Colorado Classic Bicycle race begins and ends in RiNo, organized by the Velorama Festival, an event celebrating bicycle culture and music. RiNo contains the headquarters of Denver’s primary bike share operator (Denver B-Cycle), as well as five B-Cycle stations. The district is at the eastern edge
of the B-Cycle bike sharing service area, but some surrounding areas do not contain stations, including Elyria-Swansea, Cole, and the L-Line terminus at 30th and Downing.

Denver does not yet have dockless bike share providers operating; though if they do appear in Denver, dockless bicycles would appear on RiNo sidewalks and need space for informal storage of shared bicycle around the district. Similarly, dockless scooters appeared on Denver streets in June 2018, and were the subject of a City removal request while Denver drafts regulations for the new scooters.

The district has many bicycle racks, though they are not always uniformly distributed and installed. In addition, many do not reflect best industry standards, sometimes leading to parked bicycles encroaching into walking areas. Standardized and well-distributed bicycle parking could support increased use of the district’s new and upcoming bicycle facilities, while anticipating future dockless shared bicycle and scooters that also need identified storage areas.
Locals and visitors perceive parking as a major access challenge for the district.

Study outreach participants reported long parking search times and short time limits (on some blocks) as challenges. On-street parking has fewer regulations than in Denver districts of similar levels of activity – a holdover from RiNo’s industrial past. Most parking in the district is free and either reserved for private users or otherwise unregulated. The City added two-hour time limits to a small number of blocks, primarily on the western edge of the district close to Broadway. Time limits have created turnover for some businesses, but are limited in effectiveness and are challenging to enforce. Visitors, workers, and residents compete for scarce on-street parking spaces. Some employees move their vehicles every two hours to avoid parking tickets, creating unnecessary traffic without a gain in overall parking availability in the area.

The study team collected parking inventory, occupancy, and duration data in May and June 2018 to quantify parking issues in the district. This parking analysis found that although technically there is significant unused parking in the district, much of it is unusable to those searching for parking each day. The majority of off-street parking is reserved for customers, tenants, and employees. While these lots provide access for customers of specific businesses, the lack of well-managed public parking creates frustration for the average visitor, including those who wish to park once in the district and walk between locations. Signage indicating who can park in off-street facilities is not always legible to those driving by.

Cars often park along vacant business driveways.
On-street parking spaces comprise the majority of publicly available parking in the district, and are often full, requiring drivers to circle for parking.

On-street parking is most heavily utilized, though a few small off-street parking lots are also well used. Demand varies on each block, particularly during evenings and weekends. **Many blocks with on-street parking are often too full (defined as 85% occupied or above), while many private parking facilities sit underutilized during the same time.** During the Saturday evening count, the 30th Street and Walnut Street area had the biggest concentration of blocks there were too full.

People have various parking needs, from all-day parking to short trips.

Purchasing data collection for the study included a count of how long vehicles remain parked in the same space in select areas. The results varied across the district, with some blocks with low turnover that may limit access to the unique businesses scattered across the district.

Time-limited parking on the east side of the district on popular blocks near the Denver
In the Spring of 2018, data collectors counted 18,078 parking spaces in RiNo.

- 19%, or 3,395, are on-street. Of those:
  - Almost 90% of on-street spaces have no regulations
- 80% or 14,431 spaces are off-street in lots or garages. Of those:
  - Almost 71% of off-street spaces are in facilities restricted from public access

At peak weekday occupancy (midday):
- 63% of free publicly available off-street spaces are occupied

At peak Saturday occupancy (evenings):
- 76% of spaces on Larimer Street are occupied

Central Market has created turnover among vehicles parked in the area, with people moving their vehicles every two hours or less to comply with the two hour limit. However, the time limits may encourage workers and other all-day parkers to simply move to an adjacent block to avoid citations – doing little to increase actual parking availability in the area. One block north, Walnut Street has no time limit and people tend to park all day. More typical of RiNo parking rules, Blake Street has unregulated parking and a mix of residential, industrial, and other commercial uses competing for spaces. Most blocks had long duration on weekdays, with significant all-day parking occurring near the RTD A-Line station.

Although on-street parking in RiNo is too full, some off-street parking spaces are underutilized.

While spaces along 27th, Larimer, and Blake Streets fill up on an average weekday, the Rockies and RTD lots alongside Blake Street typically sit empty. These large lots on the district’s edges make up a large portion of RiNo’s total parking supply. Some small lots in the district do tend to fill up, such as the 80-space Industry and RiNo beer garden parking lot at 38th and Walnut Streets.

Some informal sharing arrangements have increased the efficiency of private lots, and more focus on that effort could help leverage extra off-street supply for more users. A few small lots in the district have established shared parking between neighboring businesses, or by using a parking app to monetize excess parking spaces for the public. Shared parking arrangements can be particularly helpful in unlocking private parking supply for additional users and when nearby buildings have different parking demand patterns. For example, a restaurant with peak parking demand on evenings and weekends and an office with peak parking demand on weekdays could share parking spaces, thus creating more weeklong efficiency for the overall parking supply.

Although parking is perceived as a major challenge in the district today, some developers in the area anticipate a future in which less parking is needed due to widespread adoption of shared autonomous vehicle fleets. At least one planned parking garage in the area is designed for future conversion from parking garage to an active commercial use.
Community & Policy

Context
Community Participation
The study team hosted two public forums: the Online Map and the Community Charrette. RiNo community members shared their experiences traveling within the Arts District, and suggested ways to improve mobility.
A community charrette in June 2018 provided an opportunity for people to share thoughts about the future of mobility and parking in RiNo and imagine solutions for the existing challenges in the district.
RiNo Voices

The project team customized an online map asking for geo-located feedback and ideas from people who live, work, or visit RiNo. People were also asked to identify the most challenging locations in the district. Their responses on challenges and improvements spanned different parts of the district and different modes of transportation.

In total, the team received over 170 comments on this interactive map. The comments spanned the following topics:

- Parking
- Connectivity
- Transit
- Hired Ride
- Bicycle
- Pedestrian

“THERE IS SOME SERIOUS IRONY TO THE IDEA THAT PARKING IS A CHALLENGE IN RINO AND THERE IS A GIANTIC PARKING LOT THAT SPANS BETWEEN 35TH AND 27TH – PERHAPS THERE IS A CREATIVE PARKING SOLUTION THAT INVOLVES WORKING WITH THE ROCKIES TO ALLEVIATE SOME OF THE PARKING ISSUES BY USING THEIR COLOSSAL PARKING LOT.”

“SO WISH FOR A PEDESTRIAN BRIDGE AT 29TH THAT CROSSES OVER THE TRAIN TRACKS TO BLAKE!”

“Ubers either park in the bike lane or just stop in the middle of the road and put on flashers. There should be designated drop off/pick up on corners for cabs because they are dangerous for all other traffic.”

“[Pedestrian directional] signage should be updated to reflect new retailers and restaurants.”

“There are a huge number of spaces that go unused during the busiest part of the evening because they are privately owned. Could [they] lease their spots out after 5pm?”

“The bike lane (traveling southwest) ends at Broadway. Continuing the bike lane into downtown would improve the connection between Lodo/downtown and Rino for bicyclists.”

“A few traffic lights or stop signs will set order, time car traffic on Larimer and make it easier for pedestrians and cars trying to cross Larimer Street on the numbered streets.”

“It is almost impossible to cross the road in 35th Street has certainly helped while the pedestrian bridge at 35th/16th has made an improvement, approaching traffic is terrible.”

“Taxi development still feels cut off.”

“Mobility Study Action Plan 2018”
In total, the team received over 170 comments that go unused during the busiest part of the evening because they are put on flashers. There should be a creative parking solution to alleviate parking issues. Mobility and Parking Snapshot 2018

Hired Ride
Parking

“While the pedestrian bridge at 35th St has certainly helped connect Brighton Blvd. to the rest of the neighborhood, the growing Taxi development still feels cut off. Another bridge over the river would do wonders.”

“Another bridge over the river would do wonders.”

“A simple turn signal that allows for the turn [from 38th onto Ringsby] and stops traffic would be safe and so much better for traffic here.”

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“A car sharing service like ZipCar would be great here!”

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“As density increases, accessible and frequent transit can make trips easier and reduce car use. City’s planned extension of the RTD line from downing to Blake St 38th station will help with connectivity.”

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“This should really be a 4-way stop because the visibility of approaching traffic is terrible.”

“This should really be a 4-way stop because the visibility of approaching traffic is terrible.”

“It is almost impossible to cross the road in either direction. Cars drive way too fast around the corners, there is no official crosswalk and I see people almost get hit on a weekly basis.”

“It is almost impossible to cross the road in either direction. Cars drive way too fast around the corners, there is no official crosswalk and I see people almost get hit on a weekly basis.”
The study team also interviewed people on the street about their reactions and ideas for traveling through, to, and from RiNo.

“Everything is so close... walking works... riding the bike is pretty good... It is difficult to drive your car if you have to park.”

“Some of the roads are hard to walk or ride on...”

“It’s rough—but you don’t want parking lots, so what are you gonna do?”

“Some bus lines are serving the district well.”

“I don’t really take the bus a lot.”

Parking is challenging but building more has big trade-offs.

RiNo’s existing walkability is a built-in strength.

There are significant infrastructure gaps.

Some bus lines are serving the district well.

But most participants reported inadequate transit access for the district.
**Community Themes**

Several themes emerged from both digital and in-person outreach. The district has “great bones.” The length of east-west blocks and interesting, variable street facades make it an attractive place to bicycle and walk through. It has an established identity that maintains a sense of community, with devoted community leaders supporting the district through events and programming. The district’s creative and innovative spirit distinguishes it from its peers – a unique strength on which to build. Simply put, RiNo knows what it is and what it wants to be – which is an important start.

**DESIRE TO CONNECT TO NEIGHBORS**

While the district has a unique identity, participants in the online survey described a desire to create better mobility connections by overcoming barriers and indirect travel routes that may be disorienting or confusing for residents and visitors.

> “Connecting East RiNo (retail-focused) and West RiNo (residential-focused) right in the middle of all the action would be amazingly beneficial for walkers and bikers alike. Zeppelin Bridge is just too far away from our RiNo retail epicenter!”

> “Despite being adjacent neighborhoods, it’s extremely inefficient to get from RiNo to LoHi in any way, driving, walking, or bike. Connecting the two would create a loop of some of the most popular neighborhoods (RiNo, LoHi, LoDo - the latter already connected of course) and make exploring the city much more interesting for residents and tourists.”

**KEEPING PACE WITH GROWTH**

The daytime, evening, and overnight district population is increasing. While growth may be inevitable, locals expressed a desire to protect neighbors from displacement, and to acknowledge that a larger population calls for new ways of travel in the district. The area’s industrial infrastructure needs large-scale upgrades to accommodate new demands.

> “As density increases, accessible and frequent transit can make trips easier and reduce car use.”

> “The bus service frequency is completely inappropriate for an area so close to downtown, which results in more people relying on cars.”
Regulations and policies need to be updated to keep pace with district growth, and to support the goals of safe travel for all modes of transportation.

“ALL the two way stops signs in RiNo/Curtis Park need to be changed to four-way stops. There is no pattern or reason why some are two-way and some are four.”

“Signage should be updated to reflect new retailers and restaurants.”

“We have an art making business/shared studio space and have to move our vehicles every two hours, which is very disruptive to our artistic workflow. We often have to load/unload materials as well, so it is not convenient to park blocks away or take other forms of transportation.”

Construction is now commonplace in the district. While neighbors are accustomed to tolerating ongoing construction, participants of the online survey widely acknowledged that better construction mitigation for transportation would help the district function well for all users, especially vulnerable users, in upcoming years.

“The city gives out road and ROW closure permits to too many developers and construction companies for too long! Give us back our sidewalks.”

“So much construction is taking up all the available street parking for tenants in the Dry Ice Factory. Will go on for years!!! Construction workers need to find other places to park.”

SAFETY AND AVAILABILITY OF MULTIMODAL OPTIONS

Walking, biking, and transit – while relatively popular in the district – could benefit from improvements in safety, infrastructure, connections, and services. Improving its multimodal infrastructure can help more households reduce travel costs, improve health, and reduce their transportation emissions. The district currently has a prime opportunity to connect residents’ desire for multimodal transportation options with the availability of those options.

“Cars come racing around the corner and many pedestrians cross here.”

“Numbered streets should also have bike lanes to protect cyclists from aggressive drivers.”

UPGRADING THE PARKING SYSTEM

While residents understand the trade-offs involved in overbuilding new parking supply that could make the district less walkable, more congested, and more car-oriented, they are also concerned about existing parking challenges. Residents reported that on-street parking spaces are often fully-parked all day, and that most off-street parking is restricted to private users. The overriding consensus is something needs to change. Ideally, the change would not come at the expense of the character of the district or its multimodal goals.

“Parking is really kind of a nightmare... [but] we don’t want parking lots, so what are we gonna do?”
“Parking is very difficult during the day.”

“There are a huge number of spaces that go unused during the busiest part of the evening because they are privately owned. Could Volunteers of America lease their spots out after 5:00 p.m.?”

“There is some serious irony to the idea that parking is a challenge in RiNo and there is a gigantic parking lot that spans between 35th and 27th - perhaps there is a creative parking solution that involves working with the Rockies to alleviate some of the parking issues by using their colossal parking lot.”

“As a non-resident of the area, but someone who is interested in exploring impactful art making and exhibits, parking for this area in general is insufficient. Please find a way to add more public parking or transportation, such as a shuttle, from other parking areas located in the downtown core.”

KEY TAKEAWAYS

1. **Long Term | Short Term**: RiNo must prioritize the most critical long-term projects, but also use creative approaches to achieve fast results.

2. **Biking & Walking**: No must harness the proliferation of construction and street projects to create a world-class biking and walking district.

3. **Transit**: RiNo must transition from transit-adjacent to transit-oriented.

4. **Public Parking**: As new businesses, residences, and density increase, RiNo must actively manage the parking system to create available spaces.

5. **Private Lots**: RiNo must find creative solutions to boost use of underutilized parking.
Policy Context

The City of Denver is undergoing intensive planning efforts across a variety of topics. Key themes include keeping up with intense growth, incorporating equity as a core goal – and recognition of the role of multimodal and transit design as essential to the future of Denver.

**Denver Moves: Transit** is a 20-year vision for a more reliable, frequent, and convenient transit service that would improve infrastructure and make it easier to access transit. The plan would invest in key Denver corridors, improve connections to destinations, promote transit-supportive land uses, and instill a “sense of place” to transit stations. The plan would also help RiNo advocate for future infrastructure projects by incorporating the community into the larger conversation of how to improve the transit system for all Denver residents. Recommendations with implications for RiNo are described on page 40.

**Denver Moves: Bikes** is a plan by Denver Parks and Recreation and Public Works to create safe corridors linking destinations and multi-use facilities across Denver. Its two goals are to create a network where every household is within a quarter mile from a facility; and to build upon existing goals of increasing bicycle commute mode share. Improving corridors will connect RiNo to the rest of Denver and encourage more bicycle commuting between RiNo and the City.

**Denver Moves: Pedestrians & Trails** is a citywide plan for completing and improving sidewalks, street crossings, and trails. The plan prioritizes connections near transit and includes recommendations to enhance Denver’s recreational trail network.

**Game Plan for a Healthy City**, a citywide and long-range parks and recreation plan, acknowledges the role of parks and green space in buttressing against increasing temperatures, urban heat island effect, and increasing health risks – and the challenge of keeping up with incredible growth. For example, the plan recognizes that South Platte River represents an important linear park as well as transportation linkage.

**Transit Oriented Denver (TOD)** is a strategic plan intended to guide city investment and development at rail stations that would support the development of transit communities. 38th and Blake was identified as a TOD opportunity that would potentially achieve the most success through the implementation of several projects, such as multi-modal street reconstruction, bicycle facilities, drainage improvements, improvements to parking, and the creation of parklands.

**Transportation Demand Management (TDM) Guidelines** for TOD developers and business owners provide cost-effective and improved experiences for tenants and visitors. The guidelines stop short of requirements, but urge developers and owners to adopt TDM measures to improve citywide mobility. The guidelines recommend constructing as few parking spaces as possible, unbundling parking costs from leases, and pricing parking at market rate. Guidelines also include car share, bike parking, bike share, transit pass subsidy, and transit screen amenity recommendations. DRCOG’s Way to Go program provides some low-cost resources toward implementing these guidelines.

**38th & Blake Height Amendments** are 2016 amendments to the 2003 River North Plan. The Amendments increased and updated building height recommendations around the commuter rail station to achieve increased housing, including affordable housing and mixed income development, within the station area.

**Blueprint Denver**, a citywide land use and transportation plan for the next 20 years, includes recommendations around creating complete neighborhoods and transportation networks; a measured, common-sense approach to new growth; and consideration of land-use decisions through the lens of social equity. It guides where new jobs and
homes should go and how the transportation must improve to keep pace. Goals include developing safe, high-quality mobility options that prioritize walking, biking, and transit; and focusing growth in walkable mixed-use centers along high-capacity and high-frequency transit corridors.

**Comprehensive Plan 2040** is an update of the city’s 2000 vision, reflecting citywide input on a variety of issues. It intends to provide 20 years guidance centered on a vision and goals to tie together the city’s plans and policies. Goals that shape transportation design include:

» Deliver a multimodal network that encourages more trips by walking, rolling, biking and transit.
» Provide a safe transportation system that serves all users.
» Maximize the public right-of-way to create great places.
» Create an equitable and connected multimodal network that improves access to opportunity and services.
» Ensure the development of a frequent, high-quality, and reliable transit network.
» Build and maintain safe bicycle and pedestrian networks.

» Expand funding options for multimodal infrastructure.
» Strengthen multimodal connections in mixed-use centers and focus growth near transit.
» Advance innovative curb lane management and parking policies.
» Embrace innovations in transportation policy and technologies to improve movement throughout the city.
» Mitigate climate impacts by reducing greenhouse gas emissions.
» Create and enhance environments that support physical activity and healthy living.

These planning processes directly support RiNo’s ambitions toward a better connected district that is easily accessed via transit, walking, and biking by all Denverites.
RECOMMENDATIONS

“This is a critical point in the district’s history to plan and implement mobility improvements.”
Project Goals

RiNo’s goal is to be a pedestrian, bicycle, and transit-friendly district that decreases reliance on motor vehicle travel. Improving RiNo’s mobility and access requires a major transportation system overhaul.

RiNo must implement recommendations which will:

» Transition RiNo from a transit-adjacent district into a transit-oriented district.
» Ensure RiNo’s streets and destinations are accessible to all residents and visitors.
» Advocate for safer street design in RiNo as well as the greater Denver region.
» Manage parking to create more open spaces.
» Maintain RiNo’s vibrant artistic community.

This is a critical point in the district’s history to plan and implement mobility improvements. RiNo Mobility Study Action Plan intends to provide long-term multimodal improvements for RiNo and North Denver’s mobility, find ways to make some short-term enhancements, and to adapt to the district’s changing transportation demand as well as the mobility technology trends ahead. The recommendations described in the Plan have been designed as a coherent package to support mobility throughout RiNo. The Plan’s greatest value will be derived from their cumulative impact.
Mobility Action Plan Recommendations

This map is a summary of the many coordination upgrades and investments required for RiNo and North Denver to overcome critical mobility and access challenges. As with any transportation network, no single improvement can meet everybody’s needs. However, implementing the majority of these recommendations will help RiNo emerge as a district with great transportation options, while continuing to be among America’s most exciting urban districts.
Key Recommendations

1. Advance RiNo Enhancements from Denver Moves: Transit Plan
2. Implement a RiNo Circulator
3. Enhanced Transit Station Amenities
4. Directional Signage around Major Transit Stations
5. Upgrade Bicycle Facilities
6. Standardize Bicycle Parking
7. New Platte River Trail Access
8. Connections During Construction
9. Pedestrian Safety at Intersections
10. Light Streets for People
11. Complete the Pedestrian Network
12. Complete Prioritized Crossings
13. Use Greenery to Expand the Public Realm
14. Implement Demand-Responsive Paid Parking
15. Introduce Flexible Loading Zones
16. Encourage Shared Parking
17. Transportation Demand Management in New Buildings
18. Engage with Coors Field Lot Owners
19. Prepare RiNo’s Parking and Streets for Changing Mobility Options
Transit

Simply put, there is a mismatch between RiNo’s limited transit service and the density currently being built. Key issues include:

» Coverage and frequency are too low to boost transit mode share to desired level.
» Many transit stops are substandard.
» Route design is not necessarily reflective of development activity within the district – or new user expectations for transit.
» User experience of route labeling and wayfinding could be improved to be more intuitively named, and to orient riders – especially new riders – to their destination.

While service may not yet match activity in RiNo, progress has been made and more is on track.

» The addition of RTD’s A-Line commuter rail in 2016 created an important high-capacity line for RiNo, connecting the district to Downtown Denver and Denver International Airport, and operating every 15 minutes during peak hours and every 30 minutes during off-peak hours (with a 2-3 hour late-night service break). There is further need to capitalize on the station, orienting development and first and final mile solutions to enhance its reach. The 38th & Blake Height Amendments were a major step toward improving transit-oriented development opportunities in the district – further Transportation Demand Management (TDM) options can continue to boost ridership.

» Another investment under the 2004 FasTracks transit expansion package, the first 12 miles of the N-Line is under construction. The line will provide service from Union Station, through the nearby 48th & Brighton National Western Center site, north to Commerce City, Thornton, Northglenn – and eventually farther. The first phase is due to open in 2020 and will improve access to northern neighborhoods.

However, to prevent congestion issues, boost transit mode split, and improve access to RiNo, the district should proactively lead the implementation of transit enhancements – those included in recent citywide plans as well as those identified in this document.

“There is a mismatch between RiNo’s limited transit service and the density currently being built.”
Ideally, transit service should reflect relative activity and density of the surrounding district.

RiNo’s 2015 job density (last available data set) suggests some activity nodes call for an increase in service to rapid bus, bus rapid transit, or light rail levels. The area has rapidly developed since 2015, so job and residential density is likely to require further increase in transit service to accommodate the growing district. As a whole, all parts of the district require at least bus service frequency every 30 minutes (based on 2015 job density metrics).

<table>
<thead>
<tr>
<th>Light Rail</th>
<th>&gt;45 Residents/Acre</th>
<th>&gt;25 Jobs/Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus Rapid Transit</td>
<td>30 to 45 Residents/Acre</td>
<td>15 to 25 Jobs/Acre</td>
</tr>
<tr>
<td>Rapid Bus</td>
<td>30 to 45 Residents/Acre</td>
<td>15 to 25 Jobs/Acre</td>
</tr>
<tr>
<td>Local Bus every 30 mins</td>
<td>15 to 30 Residents/Acre</td>
<td>10 to 15 Jobs/Acre</td>
</tr>
<tr>
<td>Local Bus every 60 mins</td>
<td>10 to 15 Residents/Acre</td>
<td>5 to 10 Jobs/Acre</td>
</tr>
</tbody>
</table>

87% of public transportation trips involve direct economic impact on the local economy (49% work trips, 38% trips to shopping or other recreational spending), according to a 2017 APTA study.¹
Denver Moves: Transit

Recommendation

1 Advance RiNo Enhancements from Denver Moves: Transit Plan

Denver Moves: Transit planning was completed in early 2019 and marks the conclusion of a robust multi-year long-range transit planning process for Denver.

Key components of the plan that are in or near RiNo include:

Transit Capital Investment Corridors

Corridors include:

» Designation of Brighton Boulevard as a medium capacity transit corridor, receiving treatment ranging from rapid bus to full bus rapid transit (BRT).

» Designation of Martin Luther King Boulevard as a medium capacity transit corridor, receiving treatment ranging from rapid bus to full BRT.

» Designation of Broadway as a medium capacity transit corridor, becoming a high-capacity transit corridor just south of RiNo (the latter designation indicating treatment ranging from full BRT to rail).

These designations represent the creation of transit priority streets – meaning transit will be prioritized over other modes. Transit priority streets receive investments such as:

» Dedicated transit lanes or grade separation: Transit runs in exclusive lanes or in dedicated guideways (e.g., rail). This helps transit to move the most people reliably and efficiently.

» Operational: Improvements, such as transit signal priority, prioritize transit at traffic signals, reducing travel time and improving reliability.

» Advanced, higher-capacity vehicles: High-capacity vehicles, such as rail or BRT, can carry more people and increase person-throughput of a corridor.

» Enhanced stops/stations: Stops with shelters that protect riders from the elements, provide real-time transit information, and offer off-board ticket stations are amenities that should be expected on transit priority streets.

Frequent transit designations

People are more likely to use transit when service operates frequently throughout the day and into the evening. Frequent transit designations may be implemented sooner than corridor recommendations, as they involve additional service rather than physical improvements.

Frequent transit network designations in or near RiNo include:

» Very frequent service (every 5-10 minutes) on:
  • Brighton Boulevard
  • Park Avenue
  • North Broadway

» Frequent service (every 15 minutes) on:
  • Walnut Street (or nearby), as part of the 40th/Smith designation
  • York Street, as part of the University Avenue designation
Station and stop amenities

» The plan notes the role of stop and station enhancements in boosting ridership, recommending designing and enhancing transit stops and stations to create a comfortable and safe experience for transit riders. A lack of transit amenities, such as shelters or benches, can also impact a rider’s experience.

» **Recommended elements include:**

  - amenities including shelters, benches, trash receptacles, and rider information (print and real-time); multimodal access and connections; wayfinding; landscaping, trees, and art; and green infrastructure.

» A second plan phase will identify locations for a transit stop and station program.

First/Last Mile recommendations

» The plan calls for encouraging first and final mile services, programs, and technology to increase options for transit access and connections. Community feedback noted that user experience of access transit stops varies widely across neighborhoods, and there is a need for improved connections through pedestrian and bike facilities and perhaps shared-mobility services.

» **Key strategies include:**

  - Integrating and improving pedestrian and bicycle facilities and amenities that provide access and connections to transit.
  - Supporting the implementation of Vision Zero through safe access and connections to transit.
  - Encouraging first and final mile services, programs, and technology to increase options to transit.
  - Encouraging first and final mile services, programs, and technology to increase options for transit access and connections.
  - Evaluating curb lane management and off-street parking strategies to support multimodal access and connections.

» These recommendations are supportive of a district circulator concept.

Higher-amenity transit facilities send a signal to real estate developers that a station is a permanent investment.²
RiNo Circulator

The existing Regional Transportation District (RTD) transit service to RiNo is limited in frequency during evenings and weekends, which are critical times for RiNo businesses to attract customers.

Why a circulator?

A high-frequency downtown circulator bus offers an additional option for connecting between RiNo and downtown Denver – and thus to many neighborhoods and employment centers beyond. Circulators are more space efficient than parking, taxis, and transportation network companies, making the areas they service more accessible to people of varying abilities. A circulator can offer visitors the flexibility to park once and visit a variety of destinations across RiNo. For employees and residents, another connection to and from Union Station and Downtown Denver provides access to jobs, and the broader city. While they require ongoing operating expenses, a RiNo circulator is likely to mitigate those expenses by attracting many types of riders, strengthening the quality of life and the economic health of the district.

Potential benefits include increased retail spending. Although a precise forecast of these benefits cannot be guaranteed, it is reasonable to assume that the circulator would have a net positive effect on district marketability. While tracking economic impacts has been challenging, some peer circulators have documented increased visitor and tourist numbers after implementation. A similar shuttle in Grand Rapids, Michigan, connecting a growing district to downtown received praise from the tax district chairman, who cited an increase in neighborhood restaurant visitors, as well as an increase in visitors to downtown from the district: “It’s been a great boon to both economies... it’s really hard to measure the economic impact that it’s having on both areas.” A similar circulator, the CBUS in Columbus, Ohio, inspired a reduction in the need for parking in at least one subsequent residential development along the line, and thus the opportunity to increase housing density.

Other benefits are likely to include:

» Balanced occupancy of district parking through better access to parking.

» Improved circulation of the district and downtown workforce.

» Expanded district and downtown ADA accessibility.

» Enhanced perception of district and downtown safety in evening hours.

» Increased pedestrian circulation in inclement weather.

» Reduced vehicle reliance and thus potential environmental improvements.

Improving general mobility throughout a district or downtown is typically the top reason cited for providing a circulator. Circulators provide access, which is important for creating a great district.

“Circulators are more space efficient than parking, taxis, and transportation network companies, making the areas they service more accessible to people of varying abilities.”

Recommendation

2 Implement a RiNo Circulator

A dedicated circulator with off-peak frequencies and easy transfers to rail would improve service between RiNo and central Denver.

Implement a RiNo Circulator

Mobility Study Action Plan 2018
Circulator Examples:

**DC Circulator**

» Mission is to deliver “affordable, comfortable and efficient bus service that connects people to business, culture and entertainment throughout the district.”
» Runs M-Th 6am-Midnight, F 6am-3:30am, Sat 7am-3:30am, Sun 7am-Midnight.
» Provides close to 5 million trips a year.
» Partnership between District Dept of Transportation (DDOT), Washington Metropolitan Area Transit Authority (WMATA) and DC Surface Transit, Inc (DCST).
» The DC Circulator services six routes and services each stop every 10 minutes.
» The Circulator system began in 2005 with the Georgetown-Union Station and Convention Center-SW Waterfront routes. Added 2 routes in 2009, one in 2010, and one in 2011.
» It costs $1 and accepts the SmarTrip card as well as coins and dollar bills.

**Englewood Trolley**

» Free service connects from the Englewood City Center through downtown and the medical complexes at Craig Hospital and Swedish Medical Center.
» Funding partnership with the Regional Transportation District (RTD) and the City of Englewood.
» Began in 2004 to reduce congestion on the streets and help improve air quality.
» Runs M-F 6:30am-8pm every 15 minutes.
» 19 stops.
» 14,000 riders every month.
Circulators have been used in a variety of contexts and use cases – with one of the best examples local to Denver in the form of the MallRide.
Tempe Circulator - Tempe, AZ

WeHo The Pickup - West Hollywood, CA

Dart D-link - Dallas, TX
Features

RiNo is uniquely well-suited for a circulator service, due to its increasing density of mix of uses; the distance and geography of trip origins and destinations; transit gaps and first/last mile needs; and the consistency in supportive multimodal policy and communications that boost ridership. System design details are critical. Key elements of a successful circulator in RiNo include:

» Seven-day weekly service with consistent frequency to provide reliable access.
» Branding as a “RiNo” circulator with easily identifiable vehicles.
» Offering free fares.
» Allowing boarding at all doors to expedite service.
» Available every 10 minutes or less during evenings and weekends.
» Receiving traffic signal prioritization in collaboration with the City of Denver.
» Directly connecting to RTD rail stations.
» Regularly promoted by all BID members.

Recommended Circulator Routes

The study explored potential route options, balancing the following priorities: length and cost of the route, frequency and service, and supportive land uses and destinations. With a significant and growing number of both residents and employees – as well as visitors – RiNo is a prime location for a district shuttle service.

The following two routes surfaced as feasible options, meeting feasibility and frequency (10 minutes or less) criteria, and meeting objectives. Of the two options, the Loop to Union Station option is recommended for further consideration.

The following approach is recommended:

» Three vehicles meeting ten minute headways.
» Operating seven days per week, on Sunday through Thursday from 6am to 10pm and with extended hours until 1am on Friday and Saturday nights.

Implementation

As noted previously, this approach requires three vehicles. These services are most commonly contracted out to a private operator, which also enables more control over branding. However, the service could be created in partnership with RTD, similar to the 16th Street Free MallRide or Free MetroRide on 18th and 19th Streets. Grant funding can be explored as well.

Based on the operating profile described above, either recommended route would cost roughly between $1.4 million and $2 million per year to operate. Funding for similar circulators in other cities is typically comprised of some combination of the following sources: subscription funding from businesses who directly benefit from the route, state grants, federal funding, clean air grant programs, transit agencies, Business Improvement Districts (BIDs), nearby institutions or employers, city funding, or district or city parking revenues.

Potential partners for a RiNo circulator include: the City of Denver, RTD, Downtown Denver Partnership, parking revenues generated from additional parking meters, direct funding through employers or institutions benefiting from the line, and sponsorship by BID members or GID assessment.
CIRCULATOR ROUTES

The following options for routing the RiNo Circulator are both feasible and will ensure a high frequency of 10 minutes or less:

1. **LOOP TO UNION STATION (PREFERRED OPTION)**

   Instead of relying on the RTD A-Line to connect to RiNo from Denver’s largest transit hub, the Circulator would provide a direct link at a higher frequency. The service would not go to Denver’s downtown and civic civic center, but Union Station would allow for more transfers to RTD services. Service may be slowed by traffic before and after Rockies games.

2. **LOOP TO CENTRAL DENVER**

   Circulator service would directly connect RiNo to the financial and government core of Denver while avoiding Rockies traffic. By avoiding Union Station, there would be less direct connections to other transit services, but transfers could still be made to the Free MallRide and buses along the popular Colfax corridor.
Transit Amenities

Recommendation

3 Enhanced Transit Station Amenities

A typical RiNo bus stop currently consists of one pole-mounted sign. The sign typically indicates that a bus stops at the location, but otherwise lacks specific information about its schedule, route, or destination. Many stops also lack rider-friendly and safety features such as ADA-accessible sidewalks, weather shelters, and dedicated evening lighting. Providing clear bus information and a safe, accessible, and comfortable waiting environment would encourage ridership.

Upgraded designs at transit stations could expand road capacity for stopping vehicles, and create new open spaces in the district. Most importantly for transit, better stops will get more visitors and commuters acquainted and comfortable with riding the bus for the first time and enable habitual transit use in the future. This could include future circulator stops, though major transit stations should get highest design investment.

High-capacity transit stops, such as the 38th and Blake RTD station, make ideal mobility hub locations, further reinforcing ease of use and boosting ridership.

Mobility hubs provide multiple transportation choices all in one site. They offer a variety of services and amenities such as ride-hailing loading zones, commuter shuttle stops, realtime transit information, electric vehicle charging stations, transit pass sales kiosks, bike and car share parking, and secure bike lockers. Mobility hubs can encourage riders to try more sustainable commute modes by improving access and connectivity.

This bus stop in Las Vegas has the essentials for encouraging new transit riders. It provides shelter from the elements, plenty of information on transit service and fares, real-time updates on where the bus is, and a machine where someone can buy a transit pass (without having to walk to a store or a rail station).
A transit station wayfinding system should focus primarily on helping passengers reach their destinations. Wayfinding should also incorporate passengers’ experiences when they exit the transit station. The current signage around the 38th and Blake Station does not incorporate most locations beyond RTD property, including major destinations in RiNo, and transfer bus stops. Directional signage in and around the 38th and Blake Station should include RiNo destinations. This signage would assure visitors they are going the right direction, and indicate approximately how many minutes their walk will be. Sidewalk bus stops and other transit stops outside of RTD-owned property can provide signage directing riders to buses specifically servicing RiNo destinations, as well as major areas including downtown Denver and LoDo.

**Specific destinations and walking times in minutes (as shown both formally and informally in the Los Angeles area) are an easy way to point people in the correct direction upon disembarking from transit.**
Bicycling and Walking

Recommendation

5 Upgrade Bicycle Facilities

The current on-street bicycle lanes along Larimer Street are vulnerable to vehicle interference. Bicycle safety can be increased by placing bicycle lanes alongside the curb, and placing on-street parking between the bicycle lane and travel lanes. Other bicycle facilities, such as the overpass between 35th and 36th Streets, can be improved with the addition of bicycle ramps. Currently, bicyclists must carry their bicycles up stairs to access the overpass, or take an elevator, which has the effect of reducing overpass usage. Bicycle facilities in RiNo must continue to improve to accommodate the district’s density and activity growth.

The following bicycle facility upgrades should be prioritized:

» Parking-protected bicycle lanes on Larimer Avenue from Park to Downing.
» Parking-protected bicycle lanes on Blake Street from Park to Downing.
» Protected bicycle lanes on Lawrence and Arapahoe between Broadway and 26th Street.
» Protected bicycle lanes on 26th Street between Larimer and Arapahoe.
» Widened and demarcated sidewalk on 31st Street Bridge across Platte River from Brighton to Ringsby.
» ADA-accessible ramps and/or bicycle runnels along stairs to bridge on the 35th Street Overpass.
» ADA-accessible ramps and/or bicycle runnels along stairs to bridge on the 38th Street Overpass.

“Bicycle facilities in RiNo must continue to improve to accommodate the district’s density and activity growth.”
Upcoming repaving or reconstruction projects should include conversion of bicycle lanes to vehicle-protected bicycle lanes. New or improved bicycle infrastructure should connect to existing downtown Denver bicycle facilities.

Established design standards and dimensions for bicycle racks can be used to maximize functionality and prevent sidewalk encroachment.

Recommendation

6 Standardize Bicycle Parking

Bicycle racks in RiNo are not always uniformly distributed and installed, and sometimes lead to parked bicycles encroaching into walking areas. While there is a precedent of showcasing district art through bicycle racks, the district should prioritize functional bicycle rack designs that increase the ease and simplicity of navigating the district by bicycle. Uniform, functional designs are recommended. Otherwise, bicycles may continue being locked around existing railings, street signs, and trees. Additionally, in locations where sidewalk space is limited, the district should consider installing bicycle rack corrals in the curbside lane of the street.

Bicycle amenities can support bicycle economies - for example, cycling adds over $556 million and 3,400 jobs to Wisconsin’s economy through increased tourism, bicycle manufacturing, sales and repair, bike tours, and other activities.6

After on-street parking was replaced with bike parking in Toronto’s Bloor West Village, a follow-up study found that, customers who arrived by transit, foot, and bicycle visited businesses more often and spent more money than those who drove.8
Recommendation

7 New Platte River Trail Access

The South Platte River Trail, a major artery in Denver’s bicycle network, bisects RiNo. However, RiNo entry points to the trail are limited to Arkins Court (off 38th Street), 31st Street, and 29th Street. After the 29th Street entrance, the next entry point is ¾ miles away on the southern side of the River. A minimum of three additional ADA-accessible entryways to the trail should be constructed at 36th Street, 35th Street, and Denargo Street. Additionally, directional signage should be established on the trail showing distances to upcoming entryways, along with destinations served by those access points. Upgraded lighting, bicycle share stations (or regular distribution of dockless bicycles), and bicycle repair stands should be added near all access points. RiNo streets should also provide directional signage to trail entrances.

Recommendation

8 Connections During Construction

The City of Denver’s Right-of-Way Services states that the “closing of the sidewalk is done for safety reasons for pedestrians.” Many construction sites in RiNo lack temporary alternative sidewalks, which causes pedestrians to enter the street at construction sites. Construction is ongoing in RiNo, and will be for some time, so preservation of walkways and bikeways is critical. The City of Denver must enact strict requirements to identify and preserve pedestrian pathways during construction. Alternative bicycle facilities must also be provided during construction.

Minneapolis’s Midtown Greenway has catalyzed more than $750 million worth of new residential development.9

Seattle just implemented a new policy that sidewalks are a “last resort” closure, but the only documentation refers to the safety benefits, not economic.10
**Pedestrian Safety at Intersections**

The City of Denver improved traffic safety in RiNo by converting streets to two-way traffic and increasing the number of stop signs, particularly along Larimer Street. However, there are many intersections missing controls throughout the area, resulting in high speeds for through traffic heading to and from downtown Denver. Additionally, many popular intersections controlled by a stop sign or a signal lack marked crosswalks. Locations with an accessible curb ramp leading from the sidewalk into the street may present liabilities due to the lack of marked crosswalks. RiNo should consult recent Denver policy recommendations, such as the Denver Uncontrolled Pedestrian Crossing Guidelines, for information on the requirements for installing a marked crosswalk.

The placement of stop signs and signals is also inconsistently applied across the whole of RiNo’s street network. For example, on a one-mile stretch of Larimer Street between Broadway and Downing Street, there are three stop signs. Drivers can easily avoid the intersections with the stop signs and maintain speeds which endanger people walking and biking in the district. In this case, the study recommends a grid of complete four-way stop signs at the intersection of every odd-numbered street from 27th to 35th. For example, Blake, Larimer, and Walnut.

The following intersections lack complete controls and crosswalk markings, but they merit additional review due to their prominence in the RiNo community:

- Signals and crosswalks at Larimer Street and Downing Street.
- Crosswalks at 36th Street and Downing Street.
- Signals and crosswalks at 38th Street and Wynkoop.
- Stop signs and crosswalks at 35th Street and Blake.
- Stop signs and crosswalks at 36th Street and Blake.

In Washington, D.C., design improvements along a three-quarter mile corridor in Barracks Row, including new patterned sidewalks and traffic signals, helped attract 40 new businesses and nearly 200 new jobs, along with increases in sales and foot traffic.\(^{11}\)

This crosswalk in Jersey City uses bright designs to extend the curb – but technically do not extend paint across the full crosswalk, potentially more easily avoiding City objections in some municipalities. Colorful crosswalks are seen as an attractive option for improving walkability and safety.
Recommendation 10: Light Streets for People

RiNo pedestrians encounter hazards such as uneven sidewalks and construction, posing a danger of tripping and falling. Lighting is most effective for pedestrian security when it is scaled to the pedestrian along with street activity. Typically, 12-foot high lampposts spaced 30 to 50 feet apart along all local sidewalks, trails, and alleyways, is good practice for pedestrian-scaled lighting. RiNo should prioritize pedestrian-scaled lighting for paths of travel to and from transit stations, major destinations, and large parking facilities. The district’s status as a nightlife destination and its increasing 24-hour residential community warrant investment in quality lighting for pedestrians.

Recommendation 11: Complete the Pedestrian Network

There are many missing sidewalks throughout RiNo because of its legacy as a predominantly industrial and automobile-oriented district. Although there is an interest in maintaining many aspects of RiNo’s industrial heritage, it is absolutely necessary to add accessible sidewalks to RiNo. Even as the number of people who live, work, and visit RiNo grows, there will continue to be gaps in the network between between existing sidewalks and newer sidewalks constructed in tandem with new developments. RiNo should advocate for the City of Denver to complete the missing pieces of the network that connect the multiple activity centers in the district.

CASE STUDY
Cool District, Rotterdam

This district focuses attention on one street, Witte de Withstraat, which is dense with small businesses and enlivened by colorful, funky street art on every surface. The district has made continual efforts to make the area increasingly pedestrian and cyclist friendly, recognizing that this enhances the identity and access of the district, despite restricted car traffic. Notably, the district has equally vibrant day and nightlife.

The temporary sidewalks demarcated along Walnut Street create a precedent practice for establishing continuous walkways throughout the traditionally industrial district.

Pedestrians should not have to wear reflectors to be visible to drivers. The practice of lighting crosswalks from overhead is commonplace in European cities.
Connectivity by Design

Recommendation

12 Complete Prioritized Crossings

All modes of transportation in RiNo must contend with major physical and constructed barriers, including a river, railroads, train yards, and interstate highways. Crossings, in the form of overpasses and underpasses, have improved some travel. However, the street grid network maintains limited continuity, and segments of RiNo remain isolated from other neighborhoods. Although 38th Street crosses both the railroad and river barriers, there is insufficient dedicated right-of-way to bicycle and pedestrian traffic. Additional crossings would help unify the street-grid by reuniting RiNo’s more isolated blocks and neighbors with other corridors. More crossings would also reduce congestion by increasing the availability of route options for people choosing to use active transportation. The following crossings should be prioritized:

» 31st Street (across railroad facilities).
» 28th Street (across railroad facilities).
» 35th Street (across the South Platte River).

In identifying railroad crossings, underpasses require significantly less vertical clearance and should be considered superior to overpasses. These connections are one way to create more space for people, which is a consistent need across the district. A district-wide wayfinding program can also improve awareness and orientation of district destinations and multimodal infrastructure.

CASE STUDY
Culver City Art District

Large-scale street art can add instant identity and create visual landmarks that orient people. This concept can also help boost awareness and identity of large-scale infrastructure, such as the pedestrian over cross bridges or the rail station. Culver City's Art District has successfully created a sense of place using large-scale street art, in this case also creating and drawing people to calm walking streets that are a pleasant respite from LA traffic, connected to a concentration of studios, galleries, eateries, and music venues.
Create distinct identities for key crossings

Distinct details on bridges - like materials in Columbus, OH and lighting in Madrid, IA - will help RiNo’s current overpasses become more identifiable and visible from one another. Their visibility will increase their use and purpose to better connect two sides of the district.
Industrial areas comprise a significant portion of RiNo. These areas traditionally lack green spaces, public parklands, and street trees. As RiNo continues to grow in both daytime and evening populations, the district’s lack of green spaces is increasingly apparent. Large, empty areas alongside the railroad corridors present an opportunity for green space transformation. Sidewalks and trails should also be improved to accommodate increases in walking and biking. RiNo must identify its many underutilized spaces and alleyways and transform them into safe and inviting areas. This transformation will encourage more people to walk around the district. Additional greenery may include street trees for shading pedestrians on sunny days, planted medians for beautifying streets (and calming traffic), and more permeable and lighter-colored pavement surfaces for reducing the urban “heat island” effect of high temperatures. RiNo should also provide tree cover alongside street amenities and stormwater management systems as identified in the RiNo Design Guidelines Manual. New public spaces should be identifiable from each other, or help anchor users to a sense of direction or place.
Parking and Loading

Manage Parking to Create Available Parking Spaces

Parking is currently a major challenge in the district. On-street parking spaces comprise about 19% of the total parking supply. However, on-street parking spaces are full more often than off-street facilities. This is because 90% of on-street spaces are unrestricted (i.e., no time limits). While the area has over 14,000 off-street parking spaces, almost 71% are restricted from public access.

The following principles of parking and curbside management can improve RiNo’s system:

» Maximize existing parking space utilization before building new spaces.

» Manage on-street parking to increase available parking spaces. Maintain a minimum level of parking availability.

» Create a positive user experience: Make it convenient to find a parking space, but not free to park. Make parking restrictions simple and easy to quickly understand.

» Anticipate changing curbside management needs, whether from ride-hailing services, micro-mobility parking, or autonomous vehicles.

» Manage parking toward broader sustainability and mobility goals.

» Organize and manage parking toward goals as needed: Keep rules as flexible as possible to help support the diverse land uses and activities in the area, including makers and evening entertainment uses that define the district.

These principles can help guide curbside and parking strategies in RiNo. The principles reflect how to better manage parking in coordination with broader district goals and citywide goals—including supporting bike, transit, and walking as primary modes—while balancing the need for vehicle access, particularly for local retailers and arts destinations.
Implement Paid Parking

Paid parking is needed at strategic locations throughout RiNo, as it is challenging to find a parking space in the district for much of a given day. The primary goals of paid parking are to create more available parking spaces and to improve the experience of people who drive when visiting the district. The intent is to maintain a minimum level of parking availability. Improving parking availability can improve the economic vitality of RiNo. Paid parking would shift parking management from long-term storage to active available space management.

Parking parking should be implemented on blocks with significant commercial frontages—particularly in the district core, where parking challenges are most acute—in order to create additional parking availability. A long term goal would be to implement paid parking for most of the on-street spaces. If implemented well, paid parking can greatly improve the experience of parking and visiting RiNo.

Pricing should be more actively managed throughout the district—however, pricing should be implemented on commercial and mixed use streets with high parking demand, and which have adequate sidewalk and drainage infrastructure necessary for parking payment equipment.

The following details can help make sure the system is well received by the community:

» Manage parking when and where needed to create available parking spaces.
» The need for parking management is greatest when spaces are in high demand, particularly along commercial frontages, and during times that nearby businesses or other uses need available spaces for access.
» Parking rates should be set at the lowest possible rate that achieves availability targets.

After paid parking hours in Seattle, WA were extended in mid-2011, gross receipts for downtown restaurants climbed by 5.4%.13

Paid parking is recommended for a zone bounded approximately by Larimer, N Broadway, the railroad tracks, and N Downing Street. The zone is shown on the overall recommendations map on pages 36-37.

These boundaries were selected to match occupancy and utilization trends revealed by parking analysis, and to match locations where businesses require parking access. The paid parking area has clear, intuitive boundaries to make it simple to understand where to pay for parking. However, due to the evolving infrastructure on RiNo streets, some blocks will require sidewalk or similar upgrades to install payment equipment.

Why paid parking?

» Makes it easier to park in RiNo for those who drive.
» Frustrating parking experiences hold back the economic vitality of the district.
» Create more parking spaces, particularly on the busiest blocks, and spread out parking demand more evenly across the district.
» A lack of available parking spaces creates unnecessary circling for open spaces, creating additional vehicle miles traveled and greenhouse gas emissions – and frustrated drivers making many turns to search for a space create unsafe streets for people biking and walking.

Land devoted to street and garage parking generates less tax revenue for a city than other types of development.12
Design Parking System to be User Friendly and Flexible for Unique Uses

» **Retain flexibility among other rules**, even while implementing paid parking. Parking and curbside resources should be managed in RiNo without imposing other restrictions that would inhibit the creative use of district space.

» **Improve the user experience.** To create a positive experience for visitors and give the perception of how easy it is to park, use consistent and simple rules, no time limits, and well-designed signage. Making parking as simple, easy, and user-friendly as possible is an opportunity for RiNo to further distinguish itself as a destination within the region.

» **Relax time limits.** Cities have typically focused on turnover as a core parking management goal, rather than parking availability, thus relying on short time limits to manage spaces. Given that the primary goal of the parking management program is to create availability, the study recommends RiNo advocate for relaxed time limits across the on-street paid parking system for the following reasons:

- Time limits can be inconvenient, and at times stressful, for visitors who are anxious about receiving a parking ticket. They can discourage shoppers from lingering and spending additional money in the district.
- Time limits are inefficient to enforce because they require multiple passes by enforcement officers.

» Prices are the most effective way to ensure a minimum level of availability. Pricing is a more direct, understandable, and predictable signal to people, and as such, it is more effective at informing people’s decisions. Time limits may still be an appropriate tool on some blocks, but pricing should be used where it is appropriate.
When implementing paid parking, the district should advocate for using demand-responsive pricing to ensure the parking system achieves its goals. Rather than a static pricing system, a demand-based system allows rates to adjust over time based on demand data. The goal is to set prices so at least one to two spaces per block are available at any time. To actively maintain a minimum level of availability over time, RiNo should recommend that the City periodically adjust on-street parking rates to respond to changes in demand over time. Adjustments would be made no more than quarterly.

In order to achieve the goal of always having at least one or two available parking spaces per block, meter rates should be adjusted to find the lowest price that achieves the target availability range. During any particular price adjustment, rates should go up or down by no more than $0.25 or $0.50. For a given block, the “right price” is the lowest price that will achieve this goal. This means that pricing should not be uniform: the most desirable spaces need higher prices, while less convenient spaces can be very inexpensive. The primary goal of progressive pricing is not to generate increased revenue, but rather to make it as easy as possible to find a parking space.

After the SFpark pilot implementation in San Francisco, target parking occupancy (60-80%) was achieved 31% more often.14
CASE STUDY

Seattle SeaPark Performance-Based Parking

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

Program Initiated: 2011

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

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

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

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

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

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

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

Flexible Loading Zones

Increased curb demand from ride hailing services is creating curbside pressure and loading challenges, particularly at popular nightlife destinations. Curbside pressure from such services is expected to increase. Additional pressure is expected to be caused by the delivery economy and autonomous vehicle loading. RiNo should pilot several flexible loading zones throughout the district and track their performances. These zones would need friendly, clear signage that would indicate the types of drivers invited to use them and for what duration. The district and city should work with ride hailing services to monitor, via geofence, pick up and drop off activity within these zones.

When certain blocks become crowded with nightlife or pickups and drop-offs near transit, it is imperative to set aside flexible parking zones which are regularly enforced and ADA-accessible. These zones should be clearly marked for pick-up and drop-off activity.
Encourage Shared Parking

Approximately 73% of the off-street parking in RiNo is privately owned and operated. The study recommends a shared parking approach to cost-effectively unlock more available parking in the area. While not every facility is easily shared, if a significant number are shared and managed under a common framework, a shared parking program could quickly increase parking availability. Off-street owners can find ways to monetize their unused spaces while serving the district.

The best shared parking arrangements contain the following components:

» Consistency in application, great branding and signage design, and ongoing, active management of the program.

» Consistent signage, hours, rules, and payment options among different parking lots helps the lots appear as a single system and helps parkers know what to expect.

» Mobile payment options offer a low-infrastructure approach to sharing and monetizing private parking in a short time frame.

» Consistent and “public” looking signage among lots will improve their success and availability. The simple, large “P” is the universal symbol that members of the public are allowed to park in the lot.

» A focus on simple, positive branding can also help make private shared parking more attractive to people.

CASE STUDY
City of Sacramento Shared Parking

This 2006 program was created to minimize new parking construction and better use existing facilities. It included 10,000 spaces under shared parking agreements, $40 million estimated in municipal savings, and generated an estimated $1 million in revenue from shared facilities.

Sacramento’s downtown generates heavy daytime parking demand, and more recent additions to event and nightlife offerings have added evening parking demand. To facilitate ongoing revitalization and address those challenges, the City has made a well-rounded push toward better sharing of parking. The City is willing to take on the short-term expenses to avoid significant long-term costs to build and operate more public parking.

Key steps included overhauling the city’s parking code to eliminate minimums in the area, prioritizing shared parking agreements with private owners, managing enforcement of private agreements, and, for full management agreements, managing facility and controls revenue collection, liability, enforcement, and maintenance.
Shared Parking Strategy

- **Daytime**
  - Residential Building
  - Office Building

- **Nighttime**
  - Residential Building
  - Office Building

**Pricing and Availability**

- **Parking for Employees Only**
  - 9AM to 7PM
- **Parking for Residents Only**
  - 7PM to 9AM

**Other Restrictions**

- **RiNo Arts District Parking**
- **All Others** will be towed

**Source**

Mobility Study Action Plan 2018
Implementing Parking Changes and Leveraging Funding

Implementation of recommended parking changes should proceed with:

» Coordinate with Public Works on an assessment of sidewalk and meter/kiosk installation conditions.

» Blocks with appropriate infrastructure are slated for meter/kiosk installation.

» Coordinate with Public Works on selection of user-friendly payment infrastructure, mobile payment service, and signage. While there are existing parking management contracts and practices, RiNo should work within those practices – or beyond in the form of piloting next evolutions of city parking practices – to advocate for payment infrastructure, user-friendly details, parking regulations, and pricing details that match RiNo’s goals.

» Work with Public Works to pilot a policy and program that includes an availability target for parking facilities in the district.

» Advocate for creation of a RiNo Parking Benefit District. Although not common City practice today, creation of a district will help patrons understand that paid parking improves the district, and will help fund much-needed infrastructure improvements in the district.

Why Create a Parking Benefit District

A Parking Benefit District creates boundaries extending from a metered area and dedicates a portion of revenue from meters for street and sidewalk improvements with the boundaries. Common improvements include those that promote walking, bicycling, and transit use, such as sidewalks, curb ramps, lights, and bicycle lanes. Some districts spend funds on street sweeping and other activities that boost the attractiveness of visiting and shopping. Money could also be used to incentivize drivers to consider other ways to reach their destination without driving and parking. As an ongoing source of funding, parking fees are particularly beneficial for an investment like the recommended RiNo circulator, which requires ongoing operations funding. A Benefit District is particularly useful in an area that is newly metered, as it helps stakeholders understand the connection between the improvement of paid parking and the improvement of district facilities.

In the West Campus Neighborhood in Austin, a Parking Benefit District generates ~$100,000 per year to reinvest in local streetscape enhancement projects.15

CASE STUDY
Boulder CO, Parking Benefit District

Parking Benefit Districts (PBD) are an established practice in Colorado. Boulder’s program, called the Central Area General Improvement District (CAGID), is often considered a national exemplar among PBDs. CAGID’s program uses over $3 million in parking revenue from meters and garages to fund area improvements, including more than $325,000 per year in PBD programs. Programs funded by CAGID revenues include the EcoPass (a free universal transit pass for all downtown employees), a Guaranteed Ride Home program, ride-matching services, and bicycle parking.

The program is credited with establishing a transit-oriented culture that coincided with Boulder’s population and employment growth, as well as overall improvements to transit frequency and network expansion. Since the program’s establishment, the drive-alone rate has fallen from 56% in 1995 to 35% in 2008, and the transit rate has more than doubled from 15% to 32% - largely avoiding congestion increases that usually accompany rapidly growing urban areas.
Although the Denver region has many programs to assist developments curbing their dependence on single-occupancy vehicle trips and parking demand, there is little to no requirement that such developments enact TDM programs. As the City and County of Denver plan ahead to create a citywide TDM program, RiNo should advocate that future developments be required to provide TDM programs for all building occupants, regardless of the amount of parking provided. These requirements, which would scale up the closer a development is to major transit service, will make clear to developers that TDM is encouraged, allowed, and will reduce developer and funder concerns about not building enough parking in a location where minimum requirements are waived. The approved amendments to height limits, design overlays, and waived parking requirements in the blocks surrounding the 38th and Blake RTD Station are starting points. Requiring additional TDM for new developments in RiNo will ensure they do not overload the district with congestion and underutilized parking spaces.

TDM requirements are usually part of amendments to municipal codes. Such requirements, which are employed in transit-oriented districts throughout North America, usually give developments the choice of which programs to subsidize or provide to occupants. Examples may include:

- Provision of subsidized transit passes, TNC credits, bicycles, and safety gear for all development tenants and employees.
- “Cash-out” incentives for employees to relinquish access to a parking space.
- “Unbundling” the cost of parking.
- Membership in a Transportation Management Association (TMA).
- Programs to match employees into carpools and vanpools.
- Investment in upgrades to connecting bicycle and pedestrian facilities.

Several American cities of varying sizes have implemented TDM policies for new developments. Three examples include:

**Seattle, WA:**
Seattle has implemented a transportation management program and has reduced minimum parking requirements in transit-rich locations. The City is also offering categorical exemptions from environmental review for transit-oriented development. Developers must also pay a transportation impact fee.

**Santa Monica, CA:**
Off-street parking requirements have been reduced in mixed-use districts and developers are offered shared parking incentives. The City also requires developers to include multimodal facilities and programs, and pay transportation impact and TDM fees.

**Cambridge, MA:**
Large projects must make a single occupancy vehicle (SOV) mode share commitment of 10% below 1990 census level and apply a comprehensive set of TDM measures to developments. Developers must provide the City with annual TDM reports with status updates.
Engage with Coors Field Lot Owners

The Coors Field lot and garage facilities in RiNo include over 2,900 spaces, or 20% of the total off-street parking supply of the whole district. While a portion are shared, the majority of these spaces sit empty most of the time – with large sections empty even at peak occupancy during Rockies games.

During digital outreach, frustration about available parking unusable by members of the public was common:

» “Can’t stay until the end of the business day when Rockies have a game. Have to exit parking 2 hour prior to game time so this makes it especially difficult on days when there are afternoon games. Most game days you must exit the lot by 4:40p.m., also inconvenient if you’re supposed to be at work until 5.”

» “It would be very beneficial if we could open the Rockies parking during work hours so my employees can park throughout all the road work.”

» “There is a gigantic parking deck that is available to park in on days that the Rockies are not playing yet no one knows about it because there is not proper signage displayed anywhere within the neighborhood.”

» “There is some serious irony to the idea that parking is a challenge in RiNo and there is a gigantic parking lot that spans between 35th and 27th - perhaps there is a creative parking solution that involves working with the Rockies to alleviate some of the parking issues by using their colossal parking lot.”
During charrette outreach, participants articulated strong sentiment about the role the lot plays in physically dividing the district. RiNo community members noted:

» **Long term:** desire for redevelopment – starting at the eastern end of the lot where the parking is rarely used—even on game days.

» **Short and mid-term:**
  
  - Cultivate better methods for sharing the parking spaces.
  - Utilize the space as public art canvas or for cultural programming.
  - Consider game-day TDM strategies that reduce vehicle traffic and a need for excess parking, such as including an RTD ticket with a game ticket or providing multimodal travel options via email when Rockies tickets are purchased.

Can the 18-acre Coors lot serve as public art canvas in the short-term to reduce its visual blight on the district?
CASE STUDY

The San Francisco Giants have had an evolving relationship with the surrounding urban neighborhoods:

» They have an active plan to redevelop their parking lot.

» They also have shared parking resources well. Their Lot A in nearby neighborhood Mission Bay is open to the public and used as shared parking. The lot uses dynamic pricing to create availability for ballgames. Their private facility operator uses dynamic pricing to create open spaces without sporadic restrictions due to game schedules.

» They have also flexed their parking lot, using large portions of their primary lot for a food truck event, also sometimes inhabited by a large inflatable play structure, or a temporary beer garden.

» They have engaged surrounding neighborhoods, Mission Bay and Northeast Mission, increasingly positively, to the point that they are well received and their plans now are approved easily. They have created a playbook for partnerships, and are creating a vibrant area around the stadium.

Trends from other ballparks:

» Using the “bring the ballpark back to the city” trend to positively impact surrounding area.

» Using the draw of regional crowds to revitalize the area, like the Washington Nationals have done.

» Some stadiums, like Boston’s Fenway, have strategically been able to do well with limited parking resources.
**Future Proof**

**Recommendation**

**Prepare RiNo’s Parking and Streets for Mobility Options**

Autonomous vehicles (AVs) could transform the future of parking demand and design. If adoption of AVs becomes widespread, parking demand could be reduced by up to 80%. One recent modeled study found that in a system fully optimized for parking reduction, cities might be able to eliminate up to 90% of parking demand for districts who adopt an optimized network of Shared Autonomous Vehicles (SAVs). That figure demonstrates that the combination of Transportation Demand Management (TDM) policies and AV fleets could lead to the highest possible reduction in parking demand.

Minimum parking requirements have already been eliminated in part of RiNo near the RTD station, which is a positive step toward preparing for the future of the parking system while supporting multimodal goals. RiNo has a large number of parking spaces, and better utilizing existing parking spaces is more beneficial than creating new spaces. Removing parking minimums and establishing TDM ordinances are critical steps toward preparing for that future and creating a more sustainable transportation system in the meantime.

RiNo streets will continue to see new mobility tools. Electric, dockless scooters and bikes have joined ridehailing services in changing our transportation options landscape. This pace of change will only increase. RiNo streets should be designed to anticipate changing options, and the district should advocate for policies that help the district create non-auto options for residents and visitors.

The following are steps RiNo can take to prepare parking, curbspace, and streets for an evolving future transportation landscape:

- **Price and manage the curb** to anticipate increasing demand.
- **Increase the number of curbside pick-up and drop-off spaces.**
- **Emphasize and provide technical support to developers regarding the removal of parking minimums,** including highlighting developers creating no-, low-, or convertible-parking projects.
- **Consider parking maximums** to avoid overbuilding parking supply.
- **Carve out safe, protected space for bicycles, transit, and pedestrians.** Roadways may become more congested. The curbside will become the center of increased demand and access challenges, and thus must be managed to reflect priority and safety for sustainable modes.
- **Ensure that site planning and zoning requirements allow less parking and more pick-up and drop-off facilities.** Ensure that multimodal design and TDM programs are integrated into land use decisions.
- **Consider piloting an integrated trip planner** or an app that helps make residents, employees, or visitors aware of their transportation options and incentivizes sustainable transportation choices.
- **Allow and encourage micromobility tools that support non-driving modes.** In particular, first/last mile options that help extend the reach of the 38th and Blake station or that help connect to downtown and nearby neighborhoods should be encouraged. This station is a good candidate for transition to a mobility hub—with physical and digital infrastructure that makes it easy to use transit and clusters mobility options near it.
Economic Benefits

RiNo is a mixed-use district where the collocation of multiple land uses allows short trips, often by foot. Multimodal streets accommodate more people and trips in a smaller amount of space by providing high-quality facilities for walking and biking, and improving transit. Therefore, enhancing multi-modal transportation accommodation within the RiNo district can encourage residents and visitors to walk, bike, or take transit to get around RiNo and to access destinations outside of the community. In metro Denver, the average household spends 20% of annual income (roughly $15,000) on transportation – largely reflective of the cost of owning, operating, and maintaining a motor vehicle. Eliminating one motor vehicle can save upwards of $9,000 per year (according to the latest total cost of vehicle ownership estimates from AAA)\textsuperscript{16}, which is money that can be returned back to the local economy through retail spending, restaurant visitation, or property purchases. The benefits of the strategies discussed in this report are numerous – and will be shared by developers, local businesses owners, and residents alike. Some specific economic benefits documented in research and case studies for these strategies include:

**Benefits to City**

- Travel Time Savings for residents and employees through transit speed and reliability investments (Nationwide – 38% of transit trips are for shopping or recreational spending)
- Increased sales tax base due to multimodal infrastructure investments and mixed-use development (Nationwide – smart growth generates 10 times more tax revenue per acre)
- Potential revenue stream from pricing public parking that can enhance district and city maintenance efforts, among other initiatives (Austin – parking benefit district produces over $100,000 per year for district projects)\textsuperscript{17}

**Benefits for Businesses**

- Lower household transportation costs and higher business spending due to trips shifting to transit, biking, and walking with improved multimodal infrastructure
- Circulator implementation extending walkshed for potential customers coming from Union Station and/or Downtown, particularly tourists (Oakland)\textsuperscript{18}
- Increased retail sales due to implementation of active transportation infrastructure (Salt Lake City – 8.8% increase in retail sales after protected bike lane installed)\textsuperscript{19}
- Increased availability of business-adjacent on-street parking spaces due to paid parking and demand-responsive pricing models, leading to more visits and higher sales (San Francisco – 31% increase in optimal on-street parking occupancy, Seattle – 5.4% increase in restaurant sales)\textsuperscript{20,21}
**Benefits for Community Members**

» Transit enhancements are in high demand (Nationwide – 42% premium for high quality transit access)

» Circulator implementation enabling lower household transportation costs and limiting need for parking (Oakland –potential $200 million increase in value due to bus circulator)\(^{22}\)

» Improved walkability resulting in measurable, positive impacts on office rents and retail rents (Washington D.C. - $9/sf premium for retail rent)\(^{23}\)

» Opportunity to monetize underutilized private parking (Seattle - $62,000 per year extra income from leasing underused parking)\(^{24}\)

<table>
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<tr>
<th>Strategy</th>
<th>Potential Benefits to City</th>
<th>Potential Benefits to Business</th>
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<td><strong>Transit Priority Treatments</strong></td>
<td>Travel time savings for residents and visitors ($ value of time)</td>
<td>Increase in ridership due to speed/reliability can save household transportation costs</td>
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<td><strong>Circulator</strong></td>
<td>Maximize ROI of existing HCT investments</td>
<td>Extend walkshed from Union Station/Downtown, especially for tourists</td>
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<td><strong>Multimodal Streets</strong></td>
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<td>Shift in trips to other modes can save dollars that are spent at local businesses</td>
<td>Walkable places have higher property values and common higher rents for all uses</td>
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<td><strong>Bike Infrastructure</strong></td>
<td>Increased sales tax base</td>
<td>Increased sales (“Cars Don’t Shop”). E.g., 8.8% increase in SLC study</td>
<td>Increased sales tax base</td>
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<tr>
<td><strong>Trail Access</strong></td>
<td>Improved accessibility to regional trail network</td>
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<td><strong>Paid Parking</strong></td>
<td>Potential revenue stream that can supplement other district initiatives (including street maintenance, marketing, security, etc.)</td>
<td>Increased availability of business-adjacent on-street parking spaces</td>
<td>Increased parking availability and reliability</td>
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<td><strong>Shared Parking</strong></td>
<td>Lower barrier and cost of development due to lower cost of providing parking</td>
<td>Improved access to off-street parking as lots are replaced</td>
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<td><strong>Mixed-Use Amenities</strong></td>
<td>Higher sales tax revenue</td>
<td>Increased number of potential customers within walking distance</td>
<td>Higher ROI on urban mixed-use development</td>
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<td><strong>TDM</strong></td>
<td>Reduced parking and traffic needs and costs, and associated reduced VMT and GHG emissions</td>
<td>Reduced parking costs, and for employers: increased employee retention</td>
<td>Increased mobility options and incentives</td>
</tr>
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Moving Forward

While transportation challenges are acute in the district, the vision of RiNo as a world-class multimodal district in which non-auto modes are easy to use and enjoyable is attainable.

Quick Wins and Big Moves

While some projects represent major infrastructure investments that will take planning, funding, time, and coordination, many lend themselves to “quick wins,” that show progress in the right direction and help a “planning fatigued” district and city see results quickly.

Partnerships

Effective delivery and completion of infrastructure and programming projects depends not only on good concepts. Things like internal and external coordination can impact the success of the project. Government agencies, developers, job centers, area neighborhood liaisons, and community members all play a role in co-creating RiNo’s mobility future.

Coordination with local agencies is crucial. Street design projects in particular can be coordinated with other projects to minimize inconvenience. For example, resurfacing, stormwater management, utility maintenance, and new construction/development all create opportunities to ensure the multimodal values of the district are integrated systematically. Iterative implementation tied to a strong, unshakeable vision is key.

Measuring and Monitoring

Metrics are an important piece of goal development. Ensuring metrics can display results is necessary to showcase the success of projects and continually build and scale excitement and momentum toward creating a healthy, multimodal district.

RiNo can be a multimodal district with robust travel options for residents, visitors, employees, and nearby neighbors. Establishing and circulating this exciting vision for the district can help ensure that decisions made by the district, city departments, developers, and district representatives all move in the same direction.
Citations


19. SLCMoves. 300 South Progress Report: Broadway Protected Bike Lane. Salt Lake City, UT: Salt Lake City Division of Transportation, 2015. https://drive.google.com/file/d/0B8tOk7_Xv5djCajg1Z0I3bmhTVTwWdwrRzA0YjJWNW9R/view


