

# Denver Moves: Transit Plan



JANUARY 2019

**Denver**right.  
Denver Moves: Transit

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# 1 **WHY DENVER MOVES: TRANSIT?**

Denver is experiencing a period of rapid growth—over 7,000 people are moving to Denver every year, and 189,000 more people and 136,000 new jobs are projected by 2040. Growth presents both opportunities and challenges for cities, including an increased number of vehicles on the roadways. Like Denver, growing cities are increasingly exploring and implementing transportation system investments by providing more reliable, connected, and safe mobility options, including transit, to move more people along their roadways.

The Regional Transportation District (RTD) has made significant investments in commuter rail and light rail transit over the last decade to help Denver and the region accommodate this growth. Even with these major investments in the regional transit system, Denver residents, businesses, and visitors want more frequent, reliable, and convenient connections to jobs, neighborhoods, schools, and services. City and regional agencies are challenged to find a sustainable approach to expand and improve transit in Denver.



## In Denver by 2040:

**189,000 more residents**

**136,000 new jobs**

**1 in 4 between the ages of 18-34**

**1 in 5 age 60+**

**1 in 5 under the age of 18**

Source: DRCOG, 2015; State of Colorado Department of Local Affairs, 2016

Addressing growth challenges and opportunities by implementing transit capital investments, service improvements, and transit-supportive policies and programs will move more people along Denver’s roadways and improve connections around the city. The first step in addressing Denver’s transit needs is the development of Denver’s transit plan, *Denver Moves: Transit*, to establish the near- and long-term local transit vision and identify transit-supportive strategies and actions to meet Denver’s mobility needs.

### **SUCCESSFULLY IMPLEMENTING DENVER MOVES: TRANSIT**

The City and County of Denver (the City) plays a key role in advancing many actions identified in this plan, depending on priorities and available funding and resources. Successful implementation will also require coordination, investments, and participation from partners, including RTD and other local and regional agencies, advocacy and non-profit organizations, employers, and neighborhood organizations.

### **WHY NOW?**

Rapidly growing cities across the country, like Denver, are realizing that local government must be more active in planning, developing, funding, and even operating transit if they want to deliver on economic and quality of life goals. RTD operates a transit system connecting Denver and the region, but local transit does not provide the frequent, connected, and reliable service Denver needs to meet the city’s mobility needs both now and in the future. The *Denver Moves: Transit* vision and implementation strategies and actions help support ongoing growth and local mobility needs by improving transit and connecting more people to more places, sustaining Denver as a healthy and vibrant community.



## A CHANGING CITY

As Denver continues to grow, impacts to the transportation system will increase with more vehicles traveling into, out of, and within Denver. In addition to the impacts from growth, travel behaviors are shifting nationwide, including in Denver: young adults are driving less and show a clear preference for options to bike, walk, and take transit; technology is changing the face of transportation; and the number of older adults is growing as baby boomers reach retirement and desire to age in place. The impacts from growth as well as the changes in travel behavior are two of the important reasons why providing frequent, reliable, and connected transit is important in Denver.

**The number of employees traveling in and out of Denver is increasing.** Every weekday, 300,000 people travel into Denver.<sup>1</sup> Commute trips will continue to increase with the anticipated population growth and the addition of new jobs in Denver and the region.

**Congestion is expected to continue to increase.** Hours of delay are expected to increase on major roads in Denver by 122% by 2040. Roads that are categorized as “congested” for three or more hours per day are projected to increase by 39% by 2040.<sup>2</sup>



**Transportation options influence where people live.** A recent study by the Rockefeller Foundation and Transportation for America found that 54% of millennials (people who were between the ages of 18 and 34 in 2015) would consider moving to a city if it had more and better options for getting around; 66% said that access to high-quality transportation options would be one of their top three priorities when considering a move.<sup>3</sup>

**Technology advancements are a game changer.** Mobile technologies have changed how people connect with each other, how and where they choose to live, how they work, and how they travel. Use of technology has changed the expectations of transit riders—dynamic, flexible, and real-time information shapes people’s decisions about how to travel and plays a large role in changing travel behavior.

**Millennials are driving less.** The millennial generation is the first in decades that drives less than their parents, and the number of young people with a driver’s license is declining.<sup>4</sup> As of 2015, 31% of Denver’s population are millennials.<sup>5</sup>

**The number of baby boomers is increasing, and they prefer to age in place.** The number of people 65 and older in Denver is expected to increase from 11% in 2015 to 17% of the population in 2035. According to a 2014 study by the American Association of Retired Persons (AARP), 87% of those over age 65 want to stay in their current home and community as long as possible.<sup>6</sup> Accessible and convenient transportation options support older adults who want to age in place.

## DENVER'S TRANSIT CHALLENGES

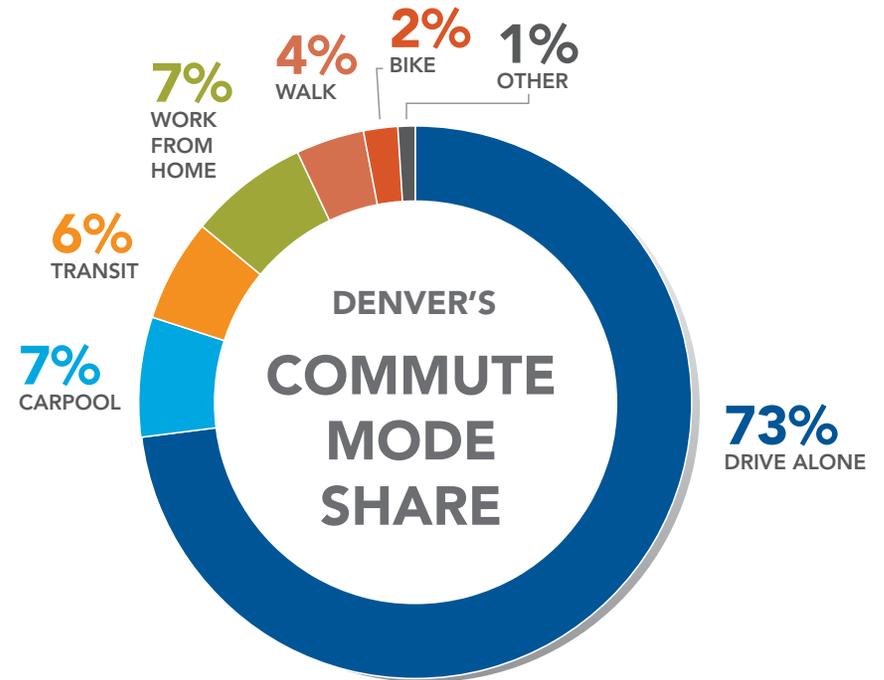
Denver faces a variety of transit-related challenges addressed in the *Denver Moves: Transit* plan, highlighting the need for more transit investments that provide higher-quality and more reliable and connected transit in Denver. These challenges are further discussed in the State of the System Report (Appendix B).

**Frequent bus service does not reach everyone.** Only 25% of Denver residents are within a convenient walk (quarter-mile walk to a bus stop or half-mile walk to a light rail station) to all-day frequent service (arriving every 15 minutes or less).<sup>7</sup> People are more likely to use transit when service operates frequently, runs at the times they need it, and is easy for them to reach by walking or biking.

**Most people drive alone to work in Denver—and transit ridership is declining.** The percent of Denver residents using transit to get to work has declined from 8% in 2000 to 6% in 2015, while the percentage of people driving alone has increased.<sup>8</sup>

**Access to rail service is limited.** The reliability of rail service combined with fast travel times makes it competitive with driving, but access to the rail system is limited. Only 10% of Denver residents live within a half-mile of a rail station.<sup>9</sup>

**Bicycle and pedestrian access to transit stops and stations is challenging in many areas.** Safe and comfortable walking and biking access to transit can be a deciding factor in the decision to ride transit, especially for those with the option to drive. According to the *Denver Moves: Pedestrians and Trails* Existing Conditions Report, 9% of the sidewalks within a half-mile of light rail and a quarter-mile of bus stops are missing and 28% are deficient in width (i.e., less than four feet wide).



Source: U.S. Census American-Community Survey 2015 5-year estimate

**Inefficiencies in the bus system make the rider experience less positive.** Transit routes jog between Denver's streets and have many turns. In some cases, this is due to the street network; in others, it reflects how service has evolved to serve the most people. Fewer deviations can make the system easier to understand, improve the directness and legibility of transit routes, and reduce travel times.



**Bus stops with shelters are limited.** Only 25% of Denver bus stops with 40 or more daily boardings have shelters.<sup>10</sup> Transit stop and station amenities can enhance comfort and improve the overall rider experience. While a shelter may not be needed at every bus stop, stops without shelters or other amenities can discourage people from using transit, especially during inclement weather.

**Street connectivity influences access to transit and route design.** Well-connected streets provide shorter travel distances and make it easier and faster for pedestrians, bicyclists, and drivers to access transit. Off-street paths and first and final mile connections can also help reduce the travel distance to transit. Streets in Denver become less connected further from downtown.

**The costs of housing and transit are high.** The cost of transit can significantly influence ridership and accessibility. Compared to its peer cities (e.g., Portland, Seattle, Minneapolis, Austin), Denver has among the highest one-way transit fares, ranging from \$2.60 for local trips to \$4.50 for regional trips. Denver also has high housing costs; according to the National Association of Realtors, Denver has the 12th highest median home sales price in the country.<sup>11</sup>



## DENVER'S CALL TO ACTION: TRANSIT'S OPPORTUNITY

*Denver Moves: Transit* is the first step for the City to support the regional and local transit system by identifying local transit improvements, enhancing bicycle and pedestrian access to transit, and identifying important first/final mile solutions. *Denver Moves: Transit* sets a course for Denver to enhance transit service within the city to help make transit a first choice for all types of trips, providing a number of economic, health, environmental, and accessibility benefits. Transit also helps the City accomplish the following:

**Meet City goals.** *Denver Moves: Transit* seeks to move more people more efficiently and safely on the existing street network. This plan recommends more reliable and frequent transit service with enhanced connections. It builds on existing local and regional initiatives related to mobility, safety, economy, and health, and helps Denver achieve citywide goals.

**Enhance interagency coordination.** *Denver Moves: Transit* creates a local vision for transit that leverages RTD's investments in rail and bus, enhances the current transit system, increases ridership, and builds a culture of transit ridership in Denver.

**Identify the City's role in supporting transit.** The City plays an important role in framing and supporting a local vision for transit. *Denver Moves: Transit* sets this vision and identifies the actions the City should take to deliver on that vision, in partnership with RTD and in coordination with community organizations and businesses.

**Maintain and prioritize public infrastructure and the right-of-way to support transit.** The City is responsible for building and maintaining public infrastructure, such as roadways and sidewalks, as well as prioritizing how streets are used. This critical function supports access to transit and ensures that transit can be prioritized to improve reliability and the overall experience of taking the bus or train in Denver.

### DENVER'S MOBILITY ACTION PLAN (2017)

In July 2017, Mayor Hancock unveiled his Mobility Action Plan—a comprehensive, multimodal vision for addressing Denver's transportation and mobility needs. The plan identifies strategic goals and actions to:

- Reduce single-occupant vehicle commuters to 50%, and increase the percentage of bicycle and pedestrian commuters to 15% and transit commuters to 15%.
- Reduce to zero the annual number of traffic fatalities, serious injuries, and major crashes by fully implementing the City's *Vision Zero* program.
- Protect the climate and improve public health by reducing greenhouse gas emissions 80% by 2050.
- Eliminate barriers and increase access to smart technologies and mobility services for everyone.

Implementation of the recommendations and strategies identified in *Denver Moves: Transit* will help to meet the goals of the Mobility Action Plan.



# HOW DOES TRANSIT BENEFIT THE CITY OF DENVER?



## Supports a healthy environment.

Tailpipe emissions are the leading contributor to ozone and other air pollutants. Meeting new air quality standards will be difficult without a reduction in single occupancy vehicles and congestion, as well as a move to alternative fuels.



## Attracts talent and makes Denver more competitive.

Quality transit service helps to attract and retain a talented work force.



## Supports accessibility and affordability.

Transit reduces household transportation costs and provides access for residents who are not able or cannot afford to drive, allowing them to access work, shopping, medical appointments, and social activities.



## Supports sustainable growth.

Denver is growing at an unprecedented rate. Transit supports growth by moving more people within the same right-of-way footprint—accommodating new residents and employees efficiently.



## Contributes to active, healthy lifestyles.

Transit riders walk an average of 19 minutes per day, nearly reaching the Center for Disease Control's recommendation of 22 minutes a day of moderate aerobic activity.



## Makes Denver a better place to visit.

Visitors expect quality public transportation to get around a world-class city.



## Boosts the region's economy.

By 2040, Denver will add more than 136,000 jobs.\* Transit can help people reach these jobs and expand economic mobility.

\*Source: DRCOG





## WHAT IS *DENVER MOVES: TRANSIT*?

*Denver Moves: Transit* is Denver's near- and long-term transit vision and guiding framework that accomplishes the following:

- Identifies local transit improvements based on analysis and community input
- Guides decisions and identifies near- and long-term investment and implementation strategies to meet Denver's current and future mobility needs
- Provides guidance on how to ensure safe and accessible connections to transit
- Illustrates transit stop and station amenities that make it more comfortable and attractive for people to ride transit
- Identifies the agency and private sector partners that play a role in supporting, designing, and promoting transit



## DENVER MOVES: TRANSIT GOALS

Through community input (see Chapter 2 and Appendix C), feedback from the *Denver Moves: Transit* Task Force, and with extensive technical analysis, the *Denver Moves: Transit* Plan goals were developed to align with the overarching *Denverright* vision (discussed at the end of this chapter) and to meet Denver's mobility needs and priorities.

These goals guided the work of the project team and were used to identify corridors for service and capital investments, establish policy and programmatic strategies and actions to support transit improvements, and guide the development of metrics to help track how the plan is implemented. These goals will also be used to inform future decisions for prioritizing, funding, and implementing transit investments.



### ENHANCE

Make transit more appealing by making it **reliable and competitive** with driving, increasing the **frequency** of transit service, enhancing the **passenger experience**, and increasing transit **ridership**.



### SIMPLIFY

Make transit easier to use by improving **legibility** and **rider information**, investing in **new technologies**, and expanding **educational transit programs**.



### CONNECT

Connect people and places to transit by strengthening **regional and neighborhood connections**, integrating with **land use development** patterns envisioned in *Blueprint Denver*, and enhancing **multimodal access and first/final mile connections** to and from transit.



### THRIVE

Improve community health and access to opportunity by developing a more **equitable** and more **affordable** system for all, improving the **environment**, and promoting **community health**.



### SUSTAIN

Support a transit system in Denver that will be successful over the long-term by pursuing **sustainable funding** sources, identifying **resources** (staffing, programs, policies, and more) to support the expanding system, and developing an approach to **tracking progress**.

## CREATING DENVER MOVES: TRANSIT

*Denver Moves: Transit* was developed over two years and included extensive technical analysis and community input. Community engagement and input was critical throughout—Chapter 2 and Appendix C describe how the project team engaged the community, what feedback was shared, and how that input informed the plan. The development of *Denver Moves: Transit* was closely coordinated with other citywide plans and projects, including *Denverright*.

The development of *Denver Moves: Transit* included the following:

- **Creating a picture of Denver’s existing transit system** and identifying potential opportunities for improving that system for all Denver residents, workers, and visitors (see Appendix B: State of the System Report).
- Existing conditions findings were used to engage with the community and to **develop a vision and goals for transit** that are aligned with the community’s values and plans for growth.
- The goals helped to **identify and evaluate corridors** best suited for different types of transit and the **capital and service improvements** needed to ensure that transit is a reliable and competitive option to driving alone.
- To support corridor investments, *Denver Moves: Transit* envisions a **complete transit system** that ensures bicycle and pedestrian access to transit is seamless; stops and stations are comfortable and safe; and information and programs improve the awareness and legibility of transit for all.



# Denver Moves: Transit Phases and Schedule

## VISION & GOALS

Our first task is to develop a vision and set of goals to guide project decisions and recommendations, with input from the Task Force, stakeholders, and the community.

August 2016 – May 2017

## SCENARIO DEVELOPMENT

Working closely with the *Blueprint Denver* team, we'll establish scenarios that match future land uses and potential transit services, demonstrating different outcomes and the trade-offs they would require. These scenarios will be evaluated using a framework grounded in the vision and goals.

January – October 2017

## TRANSIT PLAN

*Denver Moves: Transit* establishes a transit vision and guiding framework for Denver. The plan identifies local transit improvements and implementation strategies including safe and accessible connections to transit, improved stops and stations, and transit-supportive programmatic actions and policies.

February – Late 2018

## EARLY IMPLEMENTATION

We've already started planning and implementing transit improvements in Denver, guided by the recommendations in *Denver Moves: Transit*:

- Colfax Bus Rapid Transit (BRT) planning and design
- Broadway and Lincoln transit improvements
- Speed and reliability improvements on key corridors
- Strengthening the city's partnership with RTD

Ongoing

## STATE OF THE SYSTEM & MARKET ASSESSMENT

The State of the System Report documents existing conditions of the transit system and provides statistics and trends that will help lay the groundwork to develop the vision for transit in Denver.

August 2016 – February 2017

## CORRIDOR EVALUATION

Building on the preferred scenario, we will establish priority transit corridors and evaluate them for necessary investments. We'll explore potential modes of transit—rail, bus rapid transit, local bus—for each corridor along with capital projects that can make transit service work better.

May 2017 – January 2018

## A COMPLETE TRANSIT SYSTEM

In coordination with *Denver Moves: Pedestrians and Trails*, *Denver Moves: Bikes*, and *Vision Zero*, we will create strategies to improve access and connections to transit corridors. We will also develop recommendations for improving transit stops and stations, information and wayfinding, and creating a great passenger experience.

August 2017 – March 2018

## COMMUNITY ENGAGEMENT

Community engagement will occur throughout the project to guide the vision for transit in Denver and ensure the plan meets the community's needs.

Ongoing

## About Denverright

*Denverright* is a set of community-driven plans that shape Denver's future land use, mobility, parks, recreational resources, and more.



Citywide strategies from Comprehensive Plan 2000, the 2002 *Blueprint Denver* land use and transportation plan, and the 2003 Game Plan for parks and recreation have served Denver well for the last decade and a half. They have guided our transportation choices; promoted new mixed-use development; created and enhanced parks, trails, and recreation centers; and catalyzed areas of change while preserving the character of stable neighborhoods.

But a lot has changed since those plans were adopted.

RTD's FasTracks system has added significant new transit options to the region. Our population has experienced rapid growth. We've learned smarter and more modern ways to plan for the future of our city with inclusivity and climate change in mind.

*Denverright* represents an unprecedented opportunity to align citywide plans to guide future investments so that the whole is greater than the sum of its parts. *Denverright* strategies come straight from the community, and are designed to help the city prepare for and deliver a future that is responsive to their goals, visions and priorities.



## Your Vision for Denver

You helped planners create six “vision elements” that serve as the basis for *Comprehensive Plan 2040* and drive each plan’s goals.

Equitable,  
Affordable and  
Inclusive



Economically  
Diverse and  
Vibrant



Environmentally  
Resilient



Connected,  
Safe and  
Accessible Places



Healthy and  
Active



Strong and  
Authentic  
Neighborhoods



## Your Voice

Thousands of Denverites shared their unique perspectives on what makes Denver great and how it can evolve to be even better. You shared your voice in many ways—by attending meetings and workshops; taking online map-based surveys; talking with the *Denveright* street team at festivals, community events, and transit stations; joining a Community Think Tank; and more. Through coordinated *Denveright* outreach and the individual plans’ efforts, there were limitless opportunities to help shape our city’s future.



# Denverright.

Your Voice. Our Future.

## Comprehensive Plan 2040

The comprehensive plan—an update of the city’s guiding vision from 2000—reflects the voice of Denver today on issues spanning land use, mobility, parks, neighborhood authenticity, equity, economic growth, arts, culture, and sustainability. This modern comprehensive plan will chart the course of the Mile High City for 20 years.

## Blueprint Denver

Civic leaders who had a vision for Denver in 2002 created *Blueprint Denver*, a citywide plan to link land use and transportation. Innovative for its time, the plan served us well—promoting a walk- and bike-friendly city, increasing transit service on major corridors, more housing in mixed-use areas, and directing new development to areas where growth is most appropriate. Based on community input, the *Blueprint Denver* 2018 update focuses on creating a blueprint for an inclusive city made up of “complete” neighborhoods with infrastructure and amenities, diversity of housing choices, further attention to urban design, and more.

## Parks & Recreation Game Plan

In a city as active and outdoor-oriented as Denver, a great parks system is essential to our quality of life. In 2003, a community-based process created the first *Game Plan*, which emphasized the vision of “a city in a park” and set priorities on the environment, engagement, equity, and sound economics. With the updated *Game Plan for a Healthy City*, we’re responding to climate change, growth, increased use, and a lack of funding by prioritizing new parks, recreation and community programming, drought resiliency, and upgrading existing facilities.

## Denver Moves: Transit

As our population grows, Denver needs more transportation choices to move more people efficiently and safely on our existing street network. *Denver Moves: Transit* is Denver’s first-ever citywide transit vision to guide improving the quality of transit options in our city—making transit more reliable, more frequent, and more convenient for daily use.

## Denver Moves: Pedestrians & Trails

The *Denver Moves: Pedestrians & Trails* plan will help make walking a viable and primary way for people to get around town comfortably and safely. With guidance from the community, the plan identifies citywide needs and defines priorities for improving and connecting Denver’s pedestrian and off-street trail network; it also examines costs, funding options, and policies to achieve the community’s vision.



## Chapter 1 Endnotes

- 1 Data from Longitudinal Employer-Household Dynamics (LEHD), 2014.
- 2 [DRCOG 2015 Annual Traffic Congestion report](#), Table 2, page 9.
- 3 Rockefeller Foundation and T4America. Survey: To Recruit and Keep Millennials, Give them Walkable Places with Good Transit and Other Options.” April 22 2014. <http://t4america.org/2014/04/22/survey-to-recruit-and-keep-millennials-give-them-walkable-places-with-good-transit-and-other-options/>
- 4 According to the Federal Highway Administration, from 2000 to 2010, the share of 14 to 34 year olds without a driver’s license increased from 21 percent to 26 percent. Federal Highway Administration, Highway Statistics 2010 – Table DL-20, September 2011.
- 5 Pew Research Center, 2016 and U.S. Census American Community Survey 2015 1-Year Estimates.
- 6 AARP. “What Is Livable? Community Preferences of Older Adults. April 2014. [https://www.aarp.org/content/dam/aarp/research/public\\_policy\\_institute/liv\\_com/2014/what-is-livable-report-AARP-ppi-liv-com.pdf](https://www.aarp.org/content/dam/aarp/research/public_policy_institute/liv_com/2014/what-is-livable-report-AARP-ppi-liv-com.pdf)
- 7 For analysis and mapping purposes, frequent service was classified based on an average frequency of 18.5 minutes or less across both directions of a route (or corridor with multiple routes serving similar travel patterns).
- 8 Commute mode share data from U.S. Census American Community Survey 2015 1-Year Estimates.
- 9 Population data from DRCOG, 2015; schedule and routing information, RTD GTFS Feed April 2016.
- 10 Based on RTD shelter maintenance inventory and 2015-2016 boarding data. There are approximately 500 Denver bus stops with 40 or more daily boardings. Stops with shelters maintained by RTD represent less than 5% of the over 3,000 bus stops in Denver. There are additional stops with shelters installed and maintained through a City of Denver advertising contract, but a comprehensive inventory of stops with these additional shelters is not available.
- 11 Emmie Martin. “The 15 most expensive places to buy a home in the US.” July 2017. <https://www.cnn.com/2017/07/27/most-expensive-places-to-buy-a-home-in-the-us.html>



# 2 COMMUNITY INPUT

## CREATING DENVER'S TRANSIT VISION TOGETHER

To create a *Denver Moves: Transit* plan that reflects the vision, values, and mobility needs of the people who live, work, and play in Denver, the project team gathered community input over 18 months, beginning in summer 2016. Feedback from thousands of people around the city—of all ages, abilities, and neighborhoods—provided a clear picture of what transit improvements are most important, both today and in the future. This input shaped the *Denver Moves: Transit* plan.

The project team, in coordination with *Denveright*, used in-person and online approaches to gather input throughout the plan process, including pop-up workshops in neighborhoods, booths at community events, and interactive online surveys. This chapter provides a brief overview of the engagement activities and key findings, including how this input helped shape the plan's goals, identify the most important corridors for transit improvements, and inform the policy and programmatic strategies and actions to support transit capital and service investments. Additional details about these outreach activities can be found in Appendix C.

## COMMUNITY OUTREACH PROCESS

Over the course of developing *Denver Moves: Transit*, the project team engaged with thousands of community members at events, workshops, and open houses and through online surveys. The project team also worked with three committees: *Denver Moves: Transit* Task Force, Youth Stakeholder Group, and *Denverright* Think Tank.

Each major *Denver Moves: Transit* community outreach activity is discussed briefly in the following pages. The activities and events gathered input from the community and provided an opportunity for the project team to share information and answer questions.



### ENGAGING IN NEW AND CREATIVE WAYS

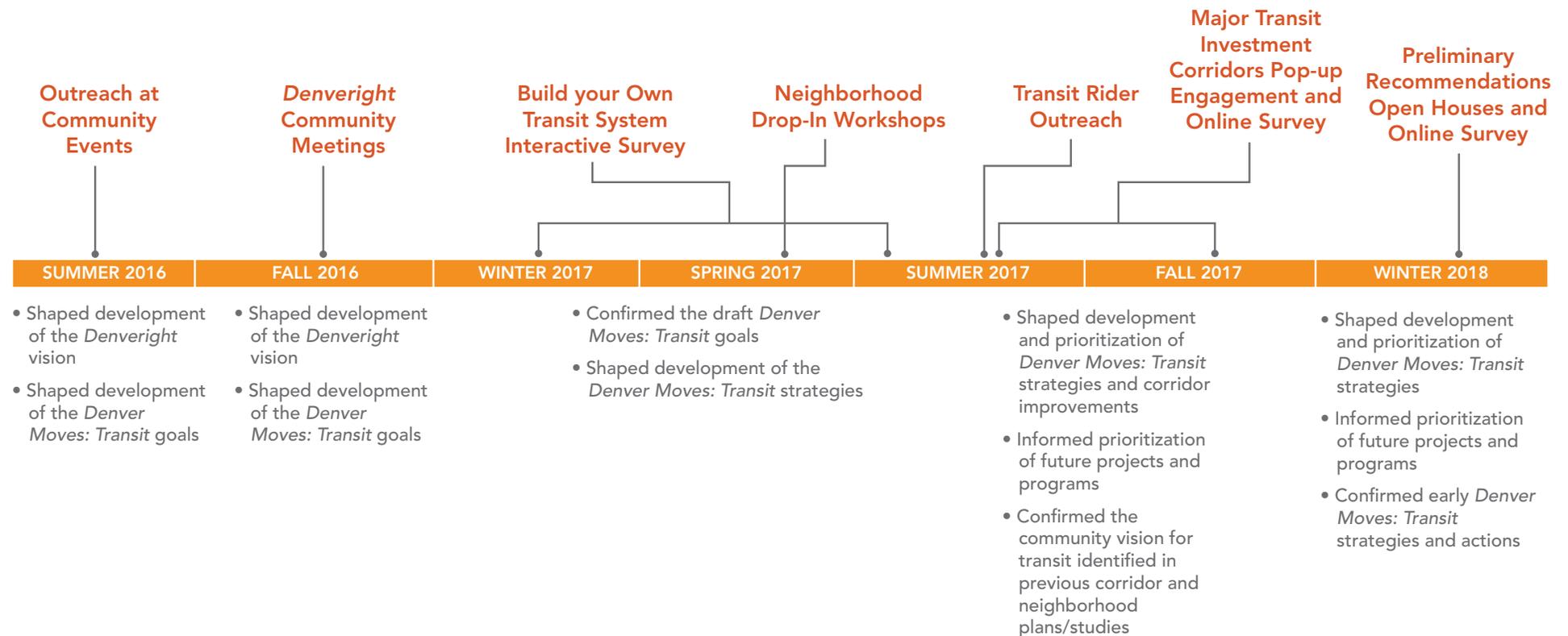
The *Denver Moves: Transit* team used many approaches to provide opportunities for input. The project team engaged with people throughout Denver, including at bus stops and coffee shops. The team also staffed *Denver Moves: Transit* and *Denverright* booths at community events. For those that were not able to attend in-person events, the project team provided opportunities to share feedback through online surveys.



## How Community Input Shaped the *Denver Moves: Transit Plan*

Analysis alone did not create the *Denver Moves: Transit* goals, strategies, and actions—community input was an important part of identifying the types of transit improvements needed for Denver. The timeline below shows how community input gathered throughout the project informed the plan. The project team also gathered public input at additional community events in coordination with *Denveright*.

### Denver Moves: Transit Outreach Timeline



## How Committees Informed the Plan

### DENVER MOVES: TRANSIT TASK FORCE

The *Denver Moves: Transit* Task Force was a 28-member committee comprised of community leaders including Councilmembers, Commissioners, and neighborhood and community organization leaders. The Task Force informed the *Denver Moves: Transit* plan by providing feedback at key milestones, sharing information with their communities and organizations, and bringing community input back to the project team. The group met 10 times between July 2016 and February 2018 to:

- Develop and refine outreach efforts
- Set the project's vision, goals, and objectives
- Assist with identifying key corridors for transit improvements
- Share feedback on access and connections improvements
- Provide input on the plan's actions and metrics



## YOUTH STAKEHOLDER GROUP

Young people in Denver are often active transit riders who rely on public transportation, especially to get to school. To engage young people in the development of *Denver Moves: Transit*, the project team worked with the Mayor's Youth Commission to establish a Youth Stakeholder Group, made up of eight high school students from around the city.

The Youth Stakeholder Group provided input on *Denver Moves: Transit* through feedback from their peers and communities. They brought a unique perspective to the project, focusing on transit needs for young people as well as the neighborhoods in which they live. To support the plan's education and outreach efforts, the Youth Stakeholder Group worked with the project team to develop a [video](#) about transit riders and the connections that transit can help us all make.



## DENVERIGHT THINK TANK

The *Denverright* Think Tank provided a forum for community leaders to share ideas on important topics related to all four *Denverright* plans. Composed of Denver residents who represent the diversity of the city, the Think Tank provided deeper insight into the community's values and priorities for land use, mobility, and parks and recreational resources. Members were selected through an application process and met four times over the course of the coordinated planning effort.



“ The current transit system is not intuitive. Transit needs to be an attractive mode for people with other travel choices. ”

- *Denver Moves: Transit* Task Force member

## COMMUNITY ENGAGEMENT ACTIVITIES OVERVIEW

The following pages provide an introduction to the major *Denver Moves: Transit* outreach activities. Refer to Appendix C for more details about each event.

### Outreach at Community Events (Summer 2016)



The project team attended 11 community events to share information about *Denver Moves: Transit* and ask community members where transit service and access improvements are needed.



### Denveright Community Meetings (October 2016)

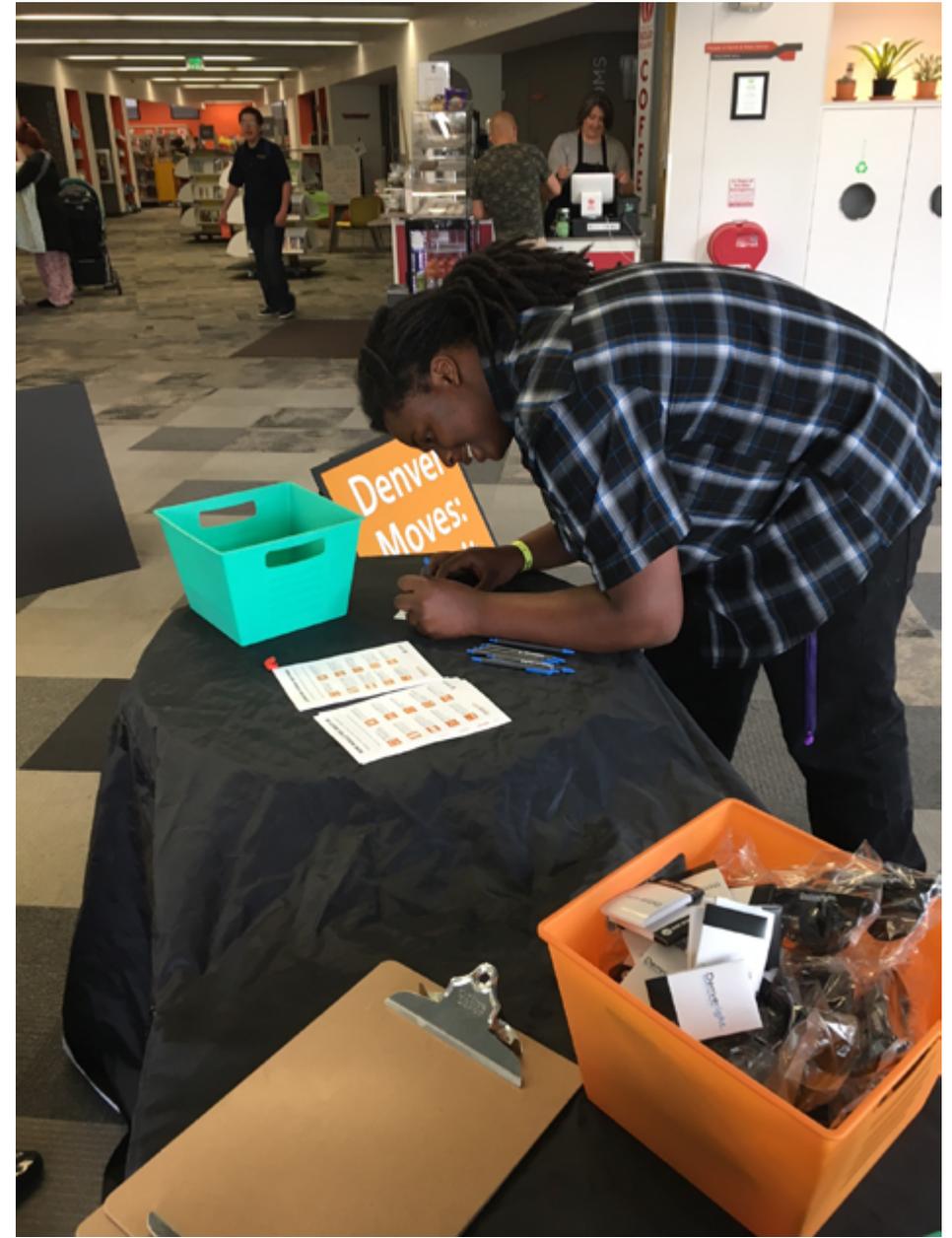
The *Denveright* Community Visioning Workshops provided an opportunity to hear from community members about their hopes, ideas, and concerns for the future of Denver in the areas of land use, mobility, and parks and recreational resources. The *Denver Moves: Transit* team gathered attendees' input on Denver's vision for transit, including transit service as well as stop, station, and access improvements.





### Build Your Own Transit System Interactive Survey and Neighborhood Drop-in Workshops (Spring/Summer 2017)

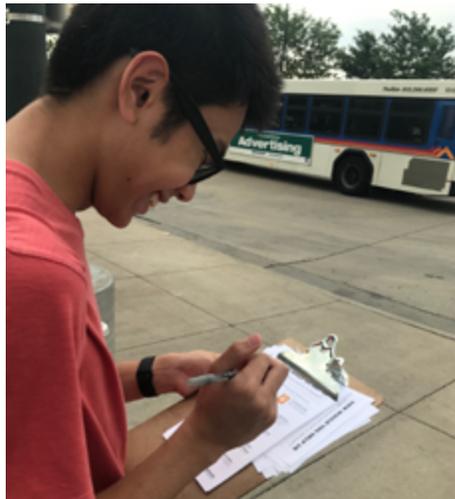
The Build Your Own Transit System survey was an interactive online tool that invited people to select their top priorities for transit in Denver within a budget. Choices included transit service enhancements, capital investments, access and connections improvements, and customer amenities. Paper versions of the survey were used at the seven Neighborhood Drop-in Workshops. At the workshops, participants were also asked to confirm the plan goals and to provide feedback on key findings from the *Denver Moves: Transit State of the System Report* (Appendix B).



## Transit Rider Outreach (Summer 2017)



Transit riders were surveyed at four RTD stops and stations in Denver. People were asked to provide their input about future transit investment priorities through a paper version of the Build Your Own Transit System survey.



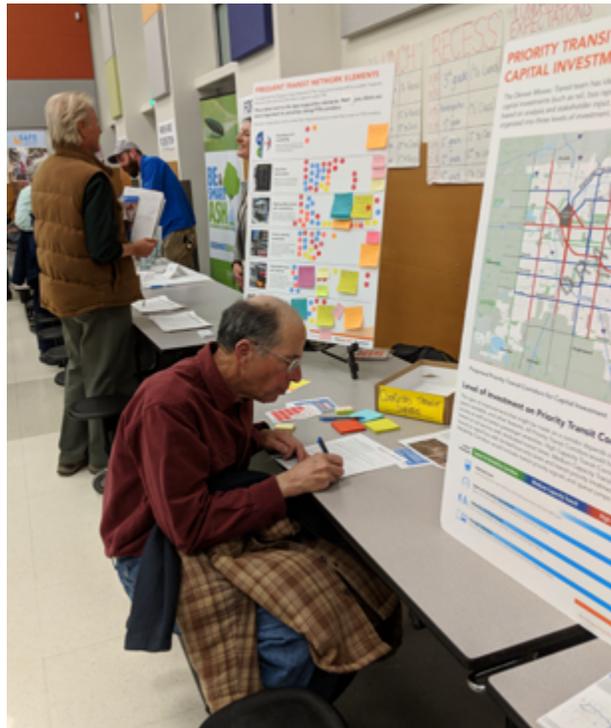
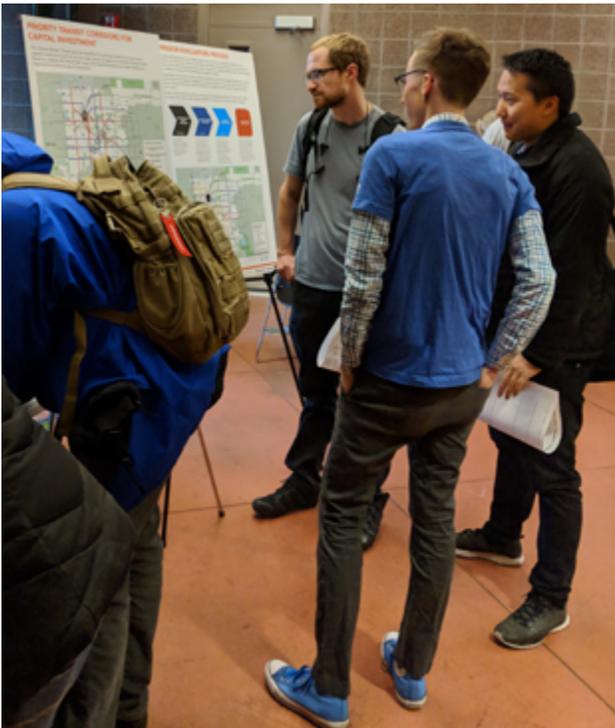
## Major Transit Investment Corridors Pop-Up Engagement (Fall 2017)

The project team attended six community events throughout Denver to talk with people about the corridors proposed for major transit investments and the criteria used in evaluation. An online survey was used to engage people who did not attend an in-person event.



## Preliminary Recommendations Community Open Houses (Winter 2018)

The final major outreach effort for *Denver Moves: Transit* included six open house events throughout Denver. The project team gathered feedback about proposed capital investments and service enhancements for transit in Denver as well as recommendations to improve transit stops and stations. An online open house was also available on the project website, including a survey and a narrated video presentation.



### NEIGHBORHOOD OUTREACH HIGHLIGHT: WINDSOR GARDENS

In July 2017, the *Denver Moves: Transit* Project Manager met with residents of Windsor Gardens, an age 55+ active adult community of 3,500 residents, to talk about *Denverright*, development of the transit plan, and how residents could get engaged in *Denver Moves: Transit*. Participants shared feedback on transit accessibility, frequency, and regional connections.



## WHAT WE HEARD FROM THE COMMUNITY

Four key themes emerged from the input received from thousands of residents, commuters, and visitors during the plan's development. These key themes and related findings helped inform the development of the *Denver Moves: Transit* goals, strategies, and actions.

### Higher-quality and more reliable and frequent transit

The community wants transit options that are reliable and frequent, making transit more competitive with driving and more convenient overall.

- Almost half of participants in the *Denveright* Community Visioning Workshops would ride the bus or train more often if service was more frequent, took less time, or was easier to use.
- Over half of the 2,400 Build Your Own Transit System survey respondents (both online and in person) want higher frequency bus service.
- Nearly 500 people responded to the Preliminary Recommendation Open Houses survey (in person and online), and nearly 1/3 of those respondents think dedicated transit lanes are the most important investment on Transit Capital Investment Corridors.

Transit has to be the easiest choice to get where you want to go.



### Improved access and connections to transit

The community wants safe and convenient pedestrian and bicycle facilities to improve access to transit. They also want information that is easy to understand and helps them navigate the system.

- Of the 2,400 people who responded to the Build Your Own Transit System survey (both online and in person):
  - Nearly half want improved pedestrian and bicycle access to transit;
  - Over 40% want better transit connections (e.g., improved bicycle and pedestrian access to transit); and
  - Improved transit legibility (e.g., better maps, wayfinding, and trip planners) is a priority for another 40%.
- Of the nearly 500 people who responded to the Preliminary Recommendations survey (both online and in person), more than 25% want to prioritize high-quality access and connections to support the Frequent Transit Network.

The main barriers to people taking public transportation are availability and accessibility of stops and routes, understanding where routes run and how to ride, as well as making passes easy to use and inexpensive.





## Safer and more comfortable stops and stations

The community wants to feel safe and comfortable when they ride transit. Amenities at transit stops and stations—such as bus shelters, lighting, and landscaping—improve the overall experience of waiting for the bus or train.

- Over 40% of Build Your Own Transit System survey respondents (both online and in person) want more amenities at transit stops (e.g., shelters, seating, lighting).
- The nearly 500 people who responded to the Preliminary Recommendations survey (both in person and online) indicated real-time travel information, bus shelters, lighting, safe crossings, and pedestrian connections as the five most desired improvements for transit stops and stations.

Good transit can make communities and neighborhoods safe for families and students to access.




## More accessible and equitable transit

The community wants accessible and equitable transit, ensuring that people can access, ride, and depend on transit regardless of age, race, income, or physical ability. The community also values affordable fares. The cost of riding transit must be competitive with the cost of driving and affordable for all.

- More than half of the 2,400 Build Your Own Transit System survey respondents (both online and in person) want more fare pass programs.
- About a quarter of attendees from the 2016 outreach events and meetings said they would ride the bus or train more often if there were improvements to accessibility and affordability.

I believe the most important transit priority for Denver's future is to ensure the city is accessible and affordable for those living in disadvantaged areas.



## WHAT DOES THE COMMUNITY WANT DENVER MOVES: TRANSIT TO ACCOMPLISH?

During the first phase of *Denver Moves: Transit*, members of the community were asked what goals they would like to see *Denver Moves: Transit* accomplish. The community's top responses included:

- Help to create a more livable community
- Create great places at stops and stations
- Support economic development and access to jobs
- Improve community health

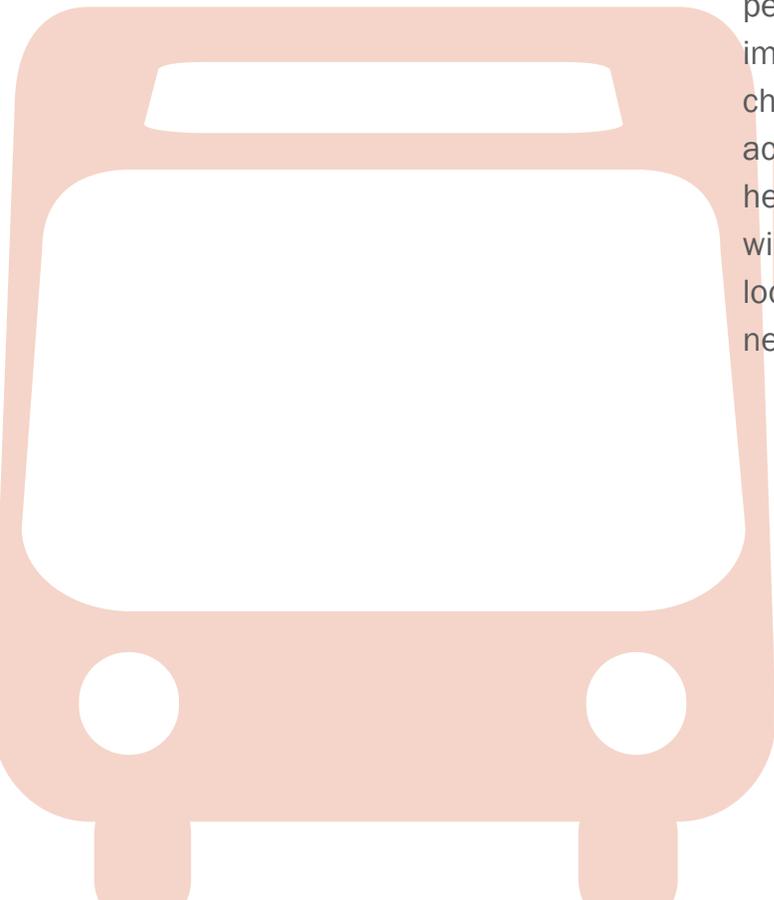
The community also indicated they wanted the plan to:

- Make it easier to travel between neighborhoods
- Improve walking and biking connections to transit
- Add high-capacity transit
- Make buses faster and more reliable
- Improve connections to existing rail



# 3 DENVER'S BIG MOVES

*Denver Moves: Transit* creates a local transit vision and guiding framework of near-term and future investments to provide more frequent, reliable, connected, and high-quality transit service in Denver. Denver's future transit system is envisioned to move more people within the transportation network, enhance connections between communities, improve the experience for current and future transit riders, and make transit a first choice option for more trips. Implementation of transit-supportive strategies and actions, as discussed in this chapter, is needed to improve the transit system and help to meet Denver's current and future mobility needs. Successful implementation will require coordination, investments, and participation from partners including local and regional agencies, advocacy and non-profit organizations, employers, and neighborhood organizations.



## DENVER'S BIG MOVES

To successfully achieve the *Denver Moves: Transit* goals, the City and County of Denver (the City) and its partners should invest in and improve transit in five key areas. These “Big Moves,” shown on the following page, are the guiding framework for *Denver Moves: Transit* implementation. These five priorities are supported by strategies and associated implementation, programmatic, and policy actions (see Figures 3-1, 3-3, 3-7, 3-8, and 3-9).

### Introduction to the Strategies and Actions

While transit service enhancements and capital investments are a major component of achieving Denver’s transit vision, other actions are needed. The actions described in this chapter will help to ensure a complete transit system in Denver through transit-supportive street design and land use, partnership opportunities, transit service improvements and capital investments, and improvements to multimodal access and connections. In addition to these actions, the Transit-Friendly Streets Guide (Appendix D) is an important resource to inform Denver’s transit improvements and investments.

The 13 strategies on the following pages and their associated actions (in Figures 3-1 to 3-9) are not presented in a specific order for implementation. Rather, they are proposed to begin in the near-term (1-5 years) or mid-term (6-10 years), but may be adjusted to long-term (11-20 years) initiation to match priorities and resources. The City will play a key role in advancing as many actions as possible, depending on priorities, available funding, staffing, and other resources. However, successful implementation requires coordination, investment, and participation from partners, including the Regional Transportation District (RTD) and other local and regional agencies, advocacy and non-profit organizations, employers, and neighborhood organizations. Chapter 4 identifies early actions the City and its partners are moving forward during the next few years.

### VISION FOR DENVER: TRANSIT AS A FIRST CHOICE

By providing a more convenient, reliable, and connected transit system in Denver that is competitive with driving, transit becomes a first choice of travel for more trips in Denver. Transit improvements also provide higher-quality service to existing transit riders, especially those who rely on transit as their primary mode of travel.



# DENVER'S BIG MOVES AND STRATEGIES

<p><b>Implement High-Quality and Reliable Transit</b></p>		<ol style="list-style-type: none"> <li>1. Provide high-quality and reliable transit service through implementation of transit capital investments.</li> <li>2. Design and enhance transit stops and stations to create a comfortable and safe experience for transit riders.</li> <li>3. Provide priority to transit on High- and Medium-Capacity Transit Corridors to ensure reliable and safe transit service.</li> </ol>
<p><b>Provide Frequent Service</b></p>		<ol style="list-style-type: none"> <li>4. Develop a network of corridors with frequent transit service.</li> </ol>
<p><b>Improve Access and Connections to Transit</b></p>		<ol style="list-style-type: none"> <li>5. Integrate and improve pedestrian and bicycle facilities and amenities that provide access and connections to transit.</li> <li>6. Support the implementation of <i>Vision Zero</i> through application of safe access and connections to transit.</li> <li>7. Encourage first and final mile services, programs, and technology to increase options for transit access and connections.</li> <li>8. Evaluate curb lane management and off-street parking strategies to support multimodal access and connections.</li> </ol>
<p><b>Build a Sense of Place</b></p>		<ol style="list-style-type: none"> <li>9. Create transit-friendly communities and community spaces by integrating transit into projects.</li> <li>10. Promote transit-supportive land use and development.</li> </ol>
<p><b>Make the Most of our Investments</b></p>		<ol style="list-style-type: none"> <li>11. Continue to promote, educate, and encourage the use of transit.</li> <li>12. Support expansion of affordable fare programs and fare payment technology.</li> <li>13. Encourage the use of sustainable technology in transit and evaluate and promote the environmental benefits of transit.</li> </ol>

Actions associated with each Big Move and strategy are listed in Figures 3-1, 3-3, 3-7, 3-8, and 3-9. Successful implementation will require coordination, investments, and participation from partners including local and regional agencies, advocacy and non-profit organizations, employers, and neighborhood organizations.

## Coordination with Other City and Regional Goals, Plans, and Programs

Achieving the *Denver Moves: Transit* goals by implementing the actions listed in this chapter will require coordination with other City and regional goals, plans, programs, and initiatives including the examples listed below.

### DENVER

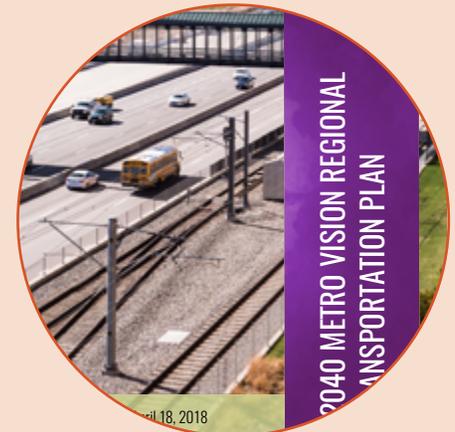
- Comprehensive Plan 2040
- Blueprint Denver
- Game Plan
- Denver Moves: Pedestrians and Trails
- Denver Moves: Bicycles
- Denver Moves: Downtown
- Strategic Transportation Plan
- Vision Zero Action Plan
- 80x50 Climate Action Plan
- Strategic Parking Plan
- Housing an Inclusive Denver
- Safe Routes to School Strategic Plan/Program
- Smart City
- Transit Oriented Development (TOD) Strategic Plan
- Ultra-Urban Green Infrastructure Guidelines



- Green Infrastructure Implementation Strategy
- Public Realm Green Infrastructure Guide
- Transportation Demand Management (TDM) Program
- Other City projects including corridor studies, station area planning, and neighborhood planning

### REGIONAL

- RTD's First and Last Mile Strategic Plan
- RTD's Regional Bus Rapid Transit (BRT) Feasibility Study
- RTD's Pass Program Working Group
- RTD's Service Standards and Stop Amenities Guidelines
- DRCOG's 2040 Metro Vision Regional Transportation Plan



# BIG MOVE: IMPLEMENT HIGH-QUALITY AND RELIABLE TRANSIT



Many factors influence a person's experience riding transit—the destinations to which transit connects, how often the bus or train arrives and if it arrives on time, and stop and station access and comfort. Improving the frequency of transit service is one of the important features of high-quality transit and is discussed in detail in the following Big Move: Provide Frequent Service (page 3-22). However, even frequently scheduled service can be unreliable when it is impacted by roadway conditions, such as traffic congestion.

Achieving more reliable and high-quality transit is possible through implementation of high- and medium-capacity transit and speed and reliability improvements, such as dedicated transit lanes and enhanced stops and stations, along the Transit Capital Investment Corridors (Figure 3-2). Most recommended improvements along the Transit Capital Investment Corridors can be made within the right-of-way, where the City plays an important role in street design and operations.

Managing the right-of-way to prioritize transit can help to ensure that buses move reliably throughout Denver, making transit a first choice option and more competitive with driving.

**Figure 3-1 lists the strategies and associated actions to support the implementation of high-quality and reliable transit. The key strategies are:**

1. Provide high-quality and reliable transit service through implementation of transit capital investments.
2. Design and enhance transit stops and stations to create a comfortable and safe experience for transit riders.
3. Provide priority to transit on High- and Medium-Capacity Transit Corridors to ensure reliable and safe transit service.

Figure 3-1 Strategies and Actions to Implement High-Quality and Reliable Transit

Strategies and Actions	Why it Matters	Action Initiation <sup>a</sup>	Implementing Partners <sup>b</sup>
<b>Strategy 1: Provide high-quality and reliable transit service through implementation of transit capital investments.<sup>c</sup></b>			
<b>Action 1.1:</b> Develop and implement the Transit Capital Investment Corridors.	Implementing transit investments improves the quality and reliability of transit and the experience taking transit, increases ridership, and supports the economy and environment. Implementation of the Transit Capital Investment Corridors also supports the 20-year land use vision described in <i>Blueprint Denver</i> .	Near-term	DPW, CPD, DPR, OED CDOT, RTD Private Sector
<b>Action 1.2:</b> Develop design standards for each type of Transit Capital Investment Corridor in coordination with development of the City’s street design guidelines, incorporating elements of the Transit-Friendly Streets Guide.	Transit corridor design standards that are coordinated with the City’s street design guidelines—including multimodal connections to transit and integration of elements such as green infrastructure, curbside management, wayfinding, and other public realm features as described in the Transit-Friendly Streets Guide (Appendix D)—ensure each transit corridor is designed and implemented with the level of investment needed to achieve Denver’s vision for higher-quality, reliable, and connected transit.	Near-term	DPW, CPD RTD
<b>Action 1.3:</b> Establish the City’s Transit Program to build capacity to implement the <i>Denver Moves: Transit</i> capital investments and manage other transit-supportive actions.	Building the City’s capacity to implement transit improvements by establishing a Transit Program dedicates staff to guide implementation priorities, identify funding, and manage transit project implementation.	Near-term	DPW, CPD, OED RTD
<b>Action 1.4:</b> Conduct corridor studies to refine corridor mode selection, develop concept design, undertake operations planning, and estimate capital and operating costs.	Using the <i>Denver Moves: Transit</i> guiding framework, corridor studies can help to define and design the elements at transit stops and stations and along corridors, and inform mode selection.	Near-term	DPW RTD, CDOT
<b>Action 1.5:</b> Evaluate and study the City’s legislative, organizational, and financial capacity to supplement, own, and/or operate high-quality transit service to support land-use strategies.	To ensure the <i>Denver Moves: Transit</i> vision is fully implemented, resources to improve transit service beyond those provided by RTD may be needed to meet Denver’s mobility needs.	Mid-term	DPW, DOF, Mayor’s Office RTD
<b>Action 1.6:</b> Pursue mechanisms that raise revenue to fund transit infrastructure improvements.	Funding mechanisms identified for the ongoing implementation of transit capital and service investments will ensure that Denver’s near-term and long-term mobility needs and other City goals are achieved.	Near-term	DPW, DOF RTD, DRCOG, CDOT

a. Action initiation is when an action is proposed to begin in the near-term (0-5 years) or mid-term (6-10 years), but may be adjusted to long-term (11-20 years) initiation to match priorities and resources. Chapter 4 identifies early actions the City, in coordination with partners, is moving forward during the next few years.

b. Successful implementation will require coordination, investments, and participation from partners including local and regional agencies, advocacy and non-profit organizations, employers, and neighborhood organizations. Refer to the Glossary (Appendix A) for a list of acronyms and definitions.

c. For more details about the level of investments defined for each Transit Capital Investment Corridor, see the Transit-Friendly Streets Guide (Appendix D).



Strategies and Actions	Why it Matters	Action Initiation <sup>a</sup>	Implementing Partners <sup>b</sup>
<b>Strategy 2: Design and enhance transit stops and stations to create a comfortable and safe experience for transit riders.</b>			
<b>Action 2.1:</b> Develop a transit stop and station program to manage, design, build, and maintain stops and stations.	A transit stop and station program ensures that existing stops are enhanced as investments in the transit system and supportive development occur. The program would develop a stop and station inventory and typologies, prioritize improvements, and develop guidelines for stop siting.	Near-term	DPW, CPD RTD
<b>Action 2.2:</b> Improve transit stops and stations by implementing elements of the Transit-Friendly Streets Guide (Appendix D), including wayfinding, green infrastructure, curbside management, sustainable design and materials, and other public realm elements.	Investments at transit stops and stations create a more comfortable and safe environment for transit riders and help people access transit and connect to their destinations. Stop and station design can also contribute to environmental, economic, and social benefits. Refer to the Transit-Friendly Streets Guide for stop and station elements.	Near-term	DPW, CPD, DDPHE, DPD, DPR Mayor's modal advisory committees RTD, CDOT TMAs, Special Districts Advocacy and non-profit organizations Universities/schools Private Sector
<b>Action 2.3:</b> Identify a mobility hub typology and support the development of mobility hubs that provide access to a variety of transportation options.	Mobility hubs can help encourage transit use by providing seamless, integrated connections between modes in one location. Mobility hubs also can be used to develop community gathering places and provide placemaking opportunities.	Mid-term	DPW, CPD RTD, DRCOG TMAs, Special Districts Private Sector
<b>Strategy 3: Provide priority to transit on High- and Medium-Capacity Transit Corridors to ensure reliable and safe transit service.</b>			
<b>Action 3.1:</b> Develop policy to provide priority to transit vehicles on High- and Medium-Capacity Transit Corridors.	Reliable and rapid transit service moves more people when the design and operation of transit is prioritized along High- and Medium-Capacity Transit Corridors ( <i>Blueprint Denver's</i> Transit Priority Streets). Efficient transit operations also can reduce operating costs.	Near-term	DPW, CPD RTD

a. Action initiation is when an action is proposed to begin in the near-term (0-5 years) or mid-term (6-10 years), but may be adjusted to long-term (11-20 years) initiation to match priorities and resources. Chapter 4 identifies early actions the City, in coordination with partners, is moving forward during the next few years.

b. Successful implementation will require coordination, investments, and participation from partners including local and regional agencies, advocacy and non-profit organizations, employers, and neighborhood organizations. Refer to the Glossary (Appendix A) for a list of acronyms and definitions.

c. For more details about the level of investments defined for each Transit Capital Investment Corridor, see the Transit-Friendly Streets Guide (Appendix D) .

## Transit Capital Investment Corridors

Improving transit service by increasing frequency (as described in Big Move: Provide Frequent Service) is important for enhancing the transit experience and increasing transit ridership in Denver. However, providing improved transit service is difficult if the bus is slow or unreliable. A lack of transit amenities, such as a shelter or bench, can also impact a rider's experience. To improve the reliability and quality of transit in Denver, *Denver Moves: Transit* identifies corridors for capital improvements such as dedicated bus lanes and enhanced stops and stations.

*Denver Moves: Transit* identifies 21 Transit Capital Investment Corridors (shown in Figure 3-2) based on technical analysis and community input. The selection of these corridors was informed by the three-stage analysis described on page 3-12 and discussed in more detail in Appendix E. The Transit Capital Investment Corridors are identified for significant improvements to serve a large number of people, including Denver residents with the greatest need for transit. These corridors include strong connections between neighborhoods and points of interest, as well as the highest densities of jobs and households. Investments in these corridors have the potential to provide significant social and environmental benefits.



Enhanced stops and stations are a feature of Seattle's RapidRide system.

The recommendations for the Transit Capital Investment Corridors are organized into three tiers: High-Capacity Transit, Medium-Capacity Transit, and Speed and Reliability. High- and Medium-Capacity Transit Corridors are served by higher-capacity modes, such as BRT, and include improvements such as dedicated transit lanes and enhanced stops and stations. Speed and Reliability Corridors include improvements such as transit signal priority to help transit move through the corridor faster and more reliably. The High- and Medium-Capacity Transit Corridors also inform the *Blueprint Denver* Transit Priority Streets, described on page 3-11.

Future corridor studies and design projects, building on the guidance of *Denver Moves: Transit*, will provide a more in-depth evaluation of each corridor, including defining the transit mode, alignment, and design, and developing detailed costs for each corridor. The level of investment for each type of corridor may change over time as priorities and resources are identified. For example, a High-Capacity or Medium-Capacity Transit Corridor may be improved with interim speed and reliability treatments until funding is identified for major capital investments.

People who use Denver's transportation system come from around the region. With over 300,000 work trips into Denver every weekday, regional transportation investments are needed to move and connect people to work, home, services, and other destinations. The Regional Coordination Corridors shown in Figure 3-2 identify where investments in improved transit service and infrastructure could be extended beyond the city limits. RTD and jurisdictions in the RTD region can work together to enhance these regional corridors to complement investments made within Denver, creating a seamless and reliable transit experience for commuters, residents, and visitors.



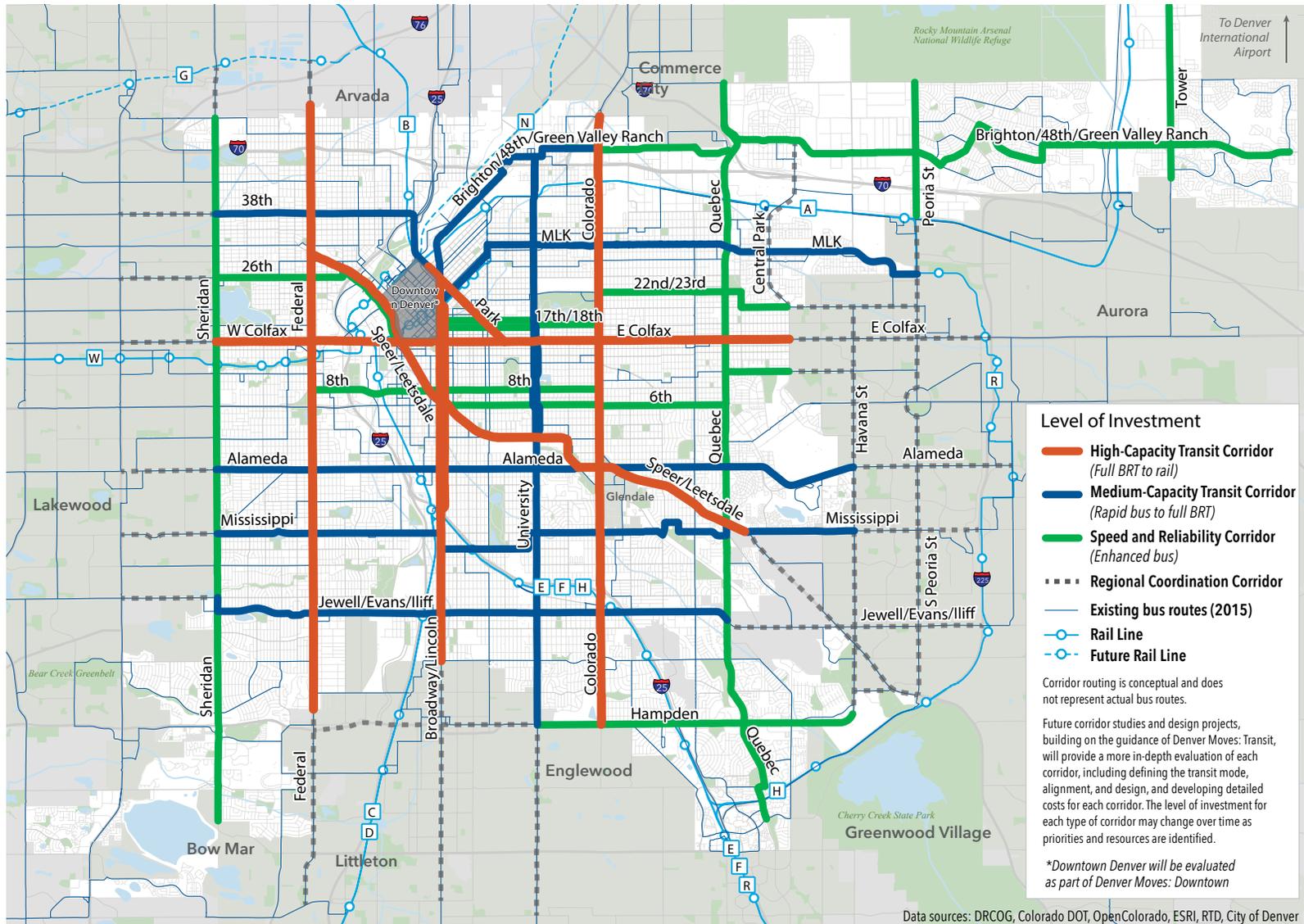
## WHAT IS A MODE?

A transportation mode is how one travels, whether walking or using a mobility device, biking, driving a personal vehicle, or taking transit. Specific to transit, “mode” refers to different types of transit technologies and vehicles, including rail (e.g., commuter rail, light rail, streetcar) and rubber-tired bus (e.g., BRT, rapid bus, local bus).

*Denver Moves: Transit* does not make a specific mode recommendation for each Transit Capital Investment Corridor—instead, the plan identifies tiers of investments with a range of applicable modes. Specific modes will be determined through future studies and design for each corridor. For more details about the level of investment anticipated for each Transit Capital Investment Corridor, see the Transit-Friendly Streets Guide (Appendix D).



Figure 3-2 Transit Capital Investment Corridors



The existing local bus network and first and final mile services, as described in Big Move: Improve Access and Connections to Transit (Chapter 3), will be essential in connecting people to the Frequent Transit Network and Transit Capital Investment Corridors.

## BLUEPRINT DENVER'S TRANSIT PRIORITY STREETS

Transit priority streets are those on which transit will be prioritized over other modes when making decisions about how to design or operate the right-of-way. By prioritizing a particular street to benefit transit, the City can help transit reach its potential to transport more people reliably and rapidly. In *Blueprint Denver*, transit priority streets are those that have been identified in *Denver Moves: Transit* as High- or Medium-Capacity Transit Corridors. Transit capital investments take many forms, but they are direct expenditures by the City (and its partners) on corridors that are or aspire to be mixed-use, transit-supportive places. Design and operation of transit priority streets will prioritize transit through the following investments:

- **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.

## MAKING TRADE-OFFS

To move more people on city streets, higher-capacity modes should be prioritized to provide reliable, rapid, and high-quality service. Where design

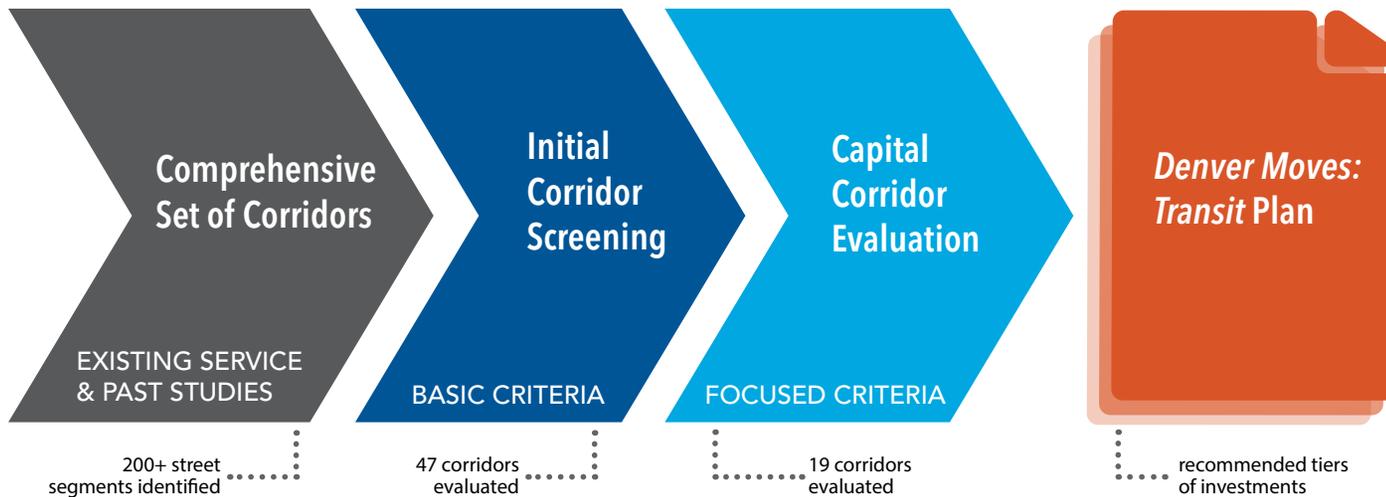
and operations trade-offs are needed, transit reliability and access will be given priority on transit priority streets. These trade-offs may include removal of a general-purpose travel lane or on-street parking. Some of the factors that will be considered when making a trade-off to prioritize transit on a particular corridor include the following:

- **Person Throughput:** Transit-only or business access and transit (BAT) lanes are justified if the shift from general-purpose travel lanes to transit lanes increases the total number of people that can be carried through a corridor.
- **Bus Volume:** Transit-only or BAT lanes are justified by a combined flow of 30-40 in-service transit vehicles or more per hour during peak operations—typically representing a minimum of one bus per traffic signal cycle. (This national standard may need to be adjusted for Denver's context moving forward.) That level of operation ensures a transit lane never looks “empty” and virtually guarantees the lane is moving more people during an hour than a general-purpose traffic lane.
- **Speed:** The transit-only or BAT lane provides an increase in transit operating speed (for the distance of the lane or in the corridor), improves the overall person speed through the corridor, or improves service reliability.
- **Increased Reliability:** The transit-only or BAT lane dramatically improves reliability and reduces travel time on consistently delayed bus routes.

Implementing the transit priority streets will result in a complete transit network for Denver that complements the existing regional rail system. Refer to *Blueprint Denver* for more information about transit priority streets.

## The Corridor Evaluation Process

Denver Moves: Transit used a three-stage evaluation process to determine the improvements best suited for different corridors. More detail about the evaluation process and results is provided in Appendix E: Corridor Evaluation Process.



More than 200 street segments were identified for consideration based on past City projects and studies, RTD’s planning, and public input.

The 200 segments were screened based on current and future population and employment density, key demographics (including people who rely on transit), and select transit and access measures. This analysis resulted in 19 corridors that are best suited for transit capital improvements.

The 19 corridors<sup>a</sup> were analyzed based on additional evaluation criteria, including future ridership, productivity, and connections. This step also included coordination with the *Blueprint Denver* team to identify a recommended level of investment for each corridor based on future land use and growth.

The evaluation results were refined based on public feedback and additional analysis, resulting in the Transit Capital Improvement Corridor recommendations<sup>b</sup> included in the *Denver Moves: Transit* plan. The plan’s goals, citywide priorities, and funding will help determine how investments are implemented along these corridors.

- a. The Peoria and Tower Speed and Reliability corridors were not included in this evaluation phase - these corridors were identified during the Neighborhood Planning Initiative (NPI) and will be further evaluated during future corridor studies and design projects.
- b. Future corridor studies and design projects, building on the guidance of Denver Moves: Transit, will provide a more in-depth evaluation of each corridor, including defining the transit mode, alignment, and design, and developing detailed costs for each corridor. The level of investment for each type of corridor may change over time as priorities and resources are identified.



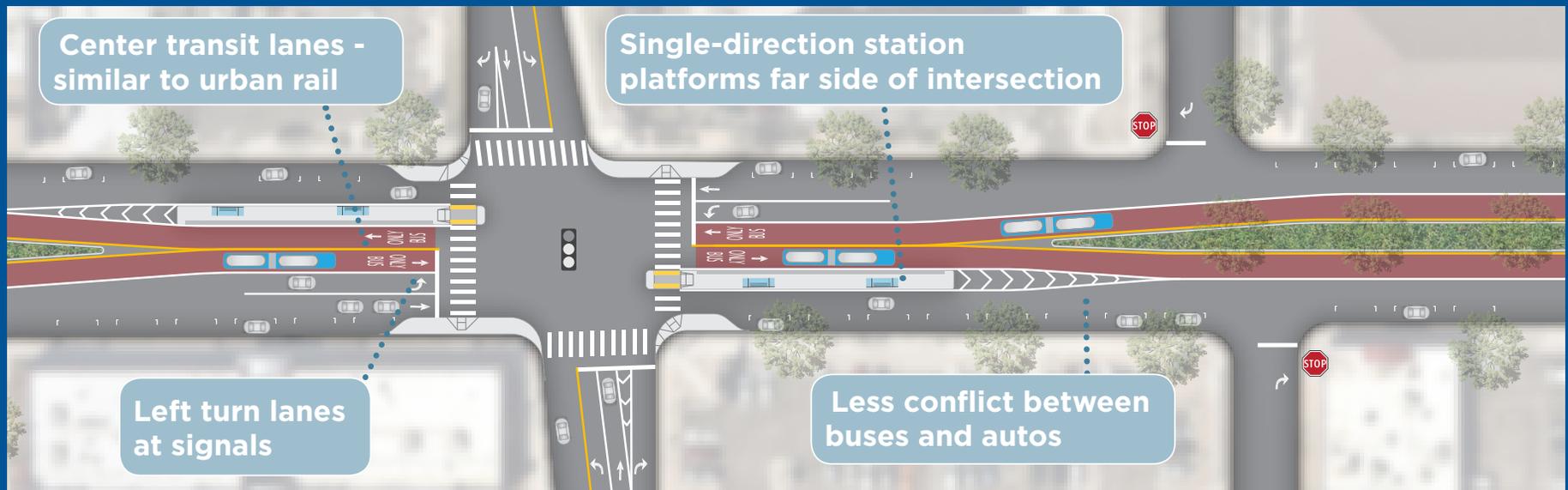
## What is a High-Capacity Transit Corridor?

High-Capacity Transit (HCT) Corridors are those with high levels of passenger capacity, very frequent service, and high-quality design. HCT Corridors include many features to make transit more reliable and rapid, as well as enhanced stops and stations that are easy to access. *Denver Moves: Transit* plans for high-quality service on major arterials, providing connections between the regional rail network and the local bus network.

For most HCT Corridors identified in *Denver Moves: Transit*, full BRT with dedicated transit lanes is an appropriate and cost-effective mode that provides high-quality service and amenities similar to rail. Rail, such as streetcar, may be viable for some of Denver's HCT Corridors in the future.

### WHAT IS BUS RAPID TRANSIT?

Bus Rapid Transit (BRT) is a rubber-tired transit mode that can deliver a high-quality passenger experience comparable to rail, with flexibility to operate in a combination of dedicated center- or side-running transit lanes and mixed traffic. Full BRT has dedicated transit lanes for at least 50% of the route (according to the Federal Transit Administration), although that may not be feasible for all corridors. BRT is anticipated to be the appropriate mode for most of the HCT Corridors in *Denver Moves: Transit*.



Concept for future center-running BRT on East Colfax Avenue in Denver.

Denver’s HCT Corridors are envisioned to include the following features:

- Improved service frequency, with transit arriving every 5 to 10 minutes during peak commute times, and every 15 minutes throughout the rest of the day, 7 days a week
- Lanes reserved for exclusive transit use, either in the middle of the street (center-running) or next to the curb (side-running), to separate transit vehicles from general-purpose traffic
- Transit vehicles with special branding to establish HCT as a distinct service
- Enhanced stops and stations to improve passenger comfort and convenience, including shelters and real-time arrival and fare collection technologies
- Upgraded connections to, from, and around stops and stations, including complete sidewalks, enhanced crosswalks, bicycle facilities, and other improvements to make accessing transit easier and safer
- Dedicated parking spaces for car-share vehicles and designated pick-up areas for ride-hailing services (e.g., taxis, Lyft, Uber)
- Development or redevelopment of parcels along HCT Corridors include a mix of transit-supportive uses and intensities, as envisioned by *Blueprint Denver*
- Major streetscape changes to encourage integration of transit into community gathering places and adjacent land uses, including development of mobility hubs

For more details about the level of investment defined for each Transit Capital Investment Corridor, see the Transit-Friendly Streets Guide (Appendix D).

### WHAT IS A DEDICATED TRANSIT LANE?

Dedicated transit lanes, also known as exclusive transit lanes, separate transit vehicles from general purpose traffic with a combination of signs and pavement markings (such as striping or colored paint). Dedicated lanes can be installed in the center of the roadway (center-running lanes) or next to the curb (side-running lanes).

A Business Access and Transit (BAT) lane is primarily for transit use, but general-purpose traffic is allowed to enter the lane to make right turns to access driveways or intersecting streets.



In New York, paint and BUS ONLY markings separate transit-only lanes from auto travel lanes.



Segments of the BAT lane along Broadway in Denver have been painted and marked to indicate where general-purpose traffic is permitted to access adjacent streets.



CONCEPTUAL GRAPHIC OF A HIGH-CAPACITY TRANSIT CORRIDOR IN DENVER



## What is a Medium-Capacity Transit Corridor?

Medium-Capacity Transit (MCT) Corridors have elements that help to move buses through traffic in key locations, as well as improved stops and pedestrian and bicycle connections. Most of the *Denver Moves: Transit* MCT Corridors would be served by Rapid Bus with bus-only lanes in key locations and other transit-priority treatments throughout the corridor. Full BRT may be possible on some MCT Corridors.

Denver's MCT Corridors are envisioned to include the following features:

- Improved service frequency, with transit arriving as often as every 5 to 10 minutes during peak commute times on some corridors, and every 15 minutes throughout the rest of the day, 7 days a week
- Lanes reserved for exclusive transit use or BAT lanes in key sections of some corridors
- Queue jumps or bypass lanes and transit signal priority to move transit vehicles around traffic congestion at busy intersections

- Transit vehicles (BRT, primarily) with special branding to establish a distinct service
- Enhanced stops and stations to improve passenger comfort and convenience, including shelters and real-time arrival and fare collection technologies at some stops
- Upgraded connections to, from, and around stops and stations, including complete sidewalks, enhanced crosswalks, bicycle facilities, and other improvements to make accessing transit easier and safer
- Development or redevelopment of parcels along MCT Corridors includes a mix of transit-supportive uses and intensities, as envisioned by *Blueprint Denver*

For more details about the level of investment defined for each Transit Capital Investment Corridor, see the Transit-Friendly Streets Guide (Appendix D).

### WHAT IS RAPID BUS?

Rapid Bus is a high-quality bus service that includes fewer features than full BRT. Rapid Bus includes less passenger capacity, more limited use of transit-only lanes, and a slightly lower level of investment in amenities at stops and stations. However, it does offer significant transit priority features and improved amenities beyond those found on enhanced or local bus services.



**Rapid bus offers significant transit priority features, such as strategic use of transit-only lanes. Current bus service along Broadway and Lincoln in Denver is an example of Rapid Bus.**



# CONCEPTUAL GRAPHIC OF A MEDIUM-CAPACITY TRANSIT CORRIDOR IN DENVER



## What is a Speed and Reliability Corridor?

Speed and Reliability Corridors benefit from investments, such as transit-priority signals, that make transit faster and more reliable in mixed traffic lanes. In some instances, Speed and Reliability Corridors can include dedicated transit lanes at key locations. These corridors also have improved stop amenities and pedestrian and bicycle access improvements. The types of improvements used on Speed and Reliability Corridors can also help to improve local bus service on corridors throughout Denver.

Denver's Speed and Reliability Corridors are envisioned to include the following features:

- Improved service frequency, with transit arriving every 15 minutes or less throughout the day, 7 days a week
- Queue jumps or bypass lanes and transit signal priority to help transit move past traffic congestion at busy intersections
- Enhanced stops and stations to improve passenger comfort and convenience, including shelters at high-ridership stops, seating, and printed or real-time information
- Consolidated stops or longer stop spacing along portions of corridors to improve transit speed and efficiency
- Upgraded connections to, from, and around stops and stations, including complete sidewalks, enhanced crosswalks, bicycle facilities, and other improvements to make accessing transit easier and safer

For more details about the level of investment defined for each Transit Capital Investment Corridor, see the Transit-Friendly Streets Guide (Appendix D).

## WHAT IS TRANSIT-SIGNAL PRIORITY (TSP)?

TSP is a tool used to modify traffic signal phases to advance transit vehicles through intersections, helping to reduce delays and increase transit speeds.

## WHAT ARE QUEUE JUMPS AND BYPASS LANES?

Queue jumps and bypass lanes are short segments of dedicated transit lane with TSP. These improvements make it easier for buses to move past traffic congestion at key locations, such as an intersection, and more easily enter the flow of traffic in a priority position. Queue jumps and bypass lanes can reduce transit service delay and increase transit reliability.



**In Seattle, signal priority on Columbia Street crossing 2nd Avenue allows buses to move ahead of traffic.**



# CONCEPTUAL GRAPHIC OF A SPEED AND RELIABILITY CORRIDOR IN DENVER



## Level of Investment

The types of improvements made along a corridor depend on many characteristics including current and future land uses, the street space available, other uses of the street (e.g., bicycle facilities), and traffic volumes. Therefore, the Transit Capital Investment Corridors include a range of potential capital investments. For example, select stops along every Transit Capital Investment Corridor would likely include pedestrian and bicycle access improvements as well as standard passenger amenities. Higher-capacity corridors would have more capital investments such as

exclusive transit lanes and enhanced stops and stations. For more detail on specific capital improvements, such as dedicated bus lanes and stop and station enhancements, see the Transit-Friendly Streets Guide (Appendix D). The level of improvement and investment appropriate for each of Denver’s Transit Capital Investment Corridors and at associated stops and stations will be further defined during *Denver Moves: Transit Phase 2* and during future corridor studies and design projects.



### Dedicated Lanes

Center-Running Transit Lanes, Peak-Hour or All-Day Business-Access and Transit (BAT) Lanes



### Speed and Reliability Improvements

Bypass Lanes, Transit Signal Priority, Stop Consolidation, Enhanced Fare Collection



### Pedestrian and Bicycle Access

Street Crossings, Sidewalks and Curb Ramps, Stop Accessibility, Bicycle Parking



### Passenger Experience

Enhanced Stops and Stations, Real-Time and Printed Information (Visual, Audio, and Tactile)



## DESIGNING STOPS AND STATIONS

To help ensure that transit stops and stations in Denver provide a high-quality, comfortable, and safe experience for transit riders—and contribute environmental, economic, and social benefits to all Denver residents—improvements will include combinations of the elements listed below and discussed in the Transit-Friendly Streets Guide (Appendix D):

- Amenities including shelters, benches, trash receptacles, and rider information (print and real-time)
- Multimodal access and connections
- Sustainable design and materials
- Crime Prevention Through Environmental Design (CPTED) tools and standards
- Wayfinding
- Green infrastructure
- Landscaping, trees, and art
- Other public realm features

The specific station and stop improvements needed on a corridor will be determined during future corridor studies and design, depending on corridor type, adjacent land use, ridership, and available space. Stop and station typologies, used in guiding studies and design, will be further developed during *Denver Moves: Transit Phase 2*.



Landscaping and trees (above) and real-time bus information (left) are examples of stop and station improvements.

# BIG MOVE: PROVIDE FREQUENT SERVICE



Making capital investments along transit corridors to provide reliable and high-quality service can help to make transit a first choice for many people and increase transit ridership. People are also more likely to use transit when service operates frequently throughout the day and into the evening and is easy to access. Denver could increase transit service frequency by working with RTD to develop a citywide network of frequent service corridors where existing service is enhanced and, in some cases, where new transit routes are created.

**Figure 3-3 lists the strategy and associated actions to provide frequent service. The key strategy is:**

4. Develop a network of corridors with frequent transit service.



**Figure 3-3 Strategies and Actions to Provide Frequent Service**

Strategies and Actions	Why it Matters	Action Initiation <sup>a</sup>	Implementing Partners <sup>b</sup>
<b>Strategy 4: Develop a network of corridors with frequent transit service.<sup>c</sup></b>			
<b>Action 4.1:</b> Establish the City’s Frequent Transit Network (FTN) supporting program to prioritize and implement the FTN, in coordination with RTD.	Implementing the vision of <i>Denver Moves: Transit</i> requires a programmatic approach to corridor investment and delivery. Establishing an FTN supporting program within the City’s Transit Program (Action 1.3) guides implementation priorities and assigns staffing to coordinate with RTD. Implementing an FTN provides more frequent service throughout the city, with buses arriving so often that it is not necessary to consult a schedule. Frequent service improves reliability, making it easier to take transit at more times during the day, on both weekdays and weekends.	Near-term	DPW RTD
<b>Action 4.2:</b> Develop an agreement framework with RTD and identify a funding mechanism to provide City support for incremental FTN implementation.	Most RTD bus service in Denver does not meet the City’s FTN goal of providing all-day frequent service. By creating a framework to incrementally implement the FTN, through options such as “buying-up” RTD service, more frequent transit service can be provided throughout the day.	Near-term	DPW, DOF RTD
<b>Action 4.3:</b> Develop and apply a distinct FTN brand at FTN stops and stations, on FTN buses, and in online and printed information.	A consistent brand visually unites FTN vehicles, stops, and stations with print and online information and reinforces the value of the service while improving awareness and system legibility. Information about routes at stops and stations is also important for people without access to smart phones.	Mid-term	DPW RTD
<b>Action 4.4:</b> Provide real-time transit information displays at FTN stops and stations where feasible, and integrate real-time information into mobility platforms. <sup>d</sup>	Real-time information at stops and stations informs riders when the next bus or train will arrive, reducing the need to reference schedules or have access to a smart phone. Integrating real-time information into mobility platforms helps enhance the passenger experience and provides more certainty for travel planning.	Mid-term	RTD DPW Private partners
<b>Action 4.5:</b> Work with RTD and jurisdictions within the RTD region to explore opportunities to increase the frequency and capacity of the regional rail network.	As the region continues to grow, regional rail services connecting communities will need to provide more reliable and frequent service for all types of transit trips throughout the day. Increasing rail service frequency, where feasible, not only increases transit service between and within communities in the RTD region, it also supports development around rail stations.	Mid-term	RTD DPW, CPD Jurisdictions within the RTD region

a. Action initiation is when an action is proposed to begin in the near-term (0-5 years) or mid-term (6-10 years), but may be adjusted to long-term (11-20 years) initiation to match priorities and resources. Chapter 4 identifies early actions the City, in coordination with partners, is moving forward during the next few years.

b. Successful implementation will require coordination, investments, and participation from partners including local and regional agencies, advocacy and non-profit organizations, employers, and neighborhood organizations. Refer to the Glossary (Appendix A) for a list of acronyms and definitions.

c. For the FTN, frequent service is defined as service that arrives every 15 minutes or less from 6 AM to 10 PM every day.

d. A transit stop and station typology, including amenities, will be further defined in *Denver Moves: Transit Phase 2*.

## What is the Frequent Transit Network?

The Frequent Transit Network (FTN) is Denver’s vision for a network of transit corridors (shown in Figure 3-4) identified for phased implementation of frequent transit service. By 2040, the goal is for 75% of households and 75% of jobs in Denver to be within one-quarter mile of the FTN (see Figure 3-5) and one-half mile from an enhanced BRT or rail stop or station, as described in the metrics to track progress in Chapter 4. Implementation of the FTN will be coordinated with RTD.

The FTN is envisioned to provide transit services that are scheduled to arrive more often throughout the day, seven days a week, according to Denver’s Frequent Transit Network service standards. During peak morning and afternoon

commute times, and on the high-demand corridors identified for “very frequent” service, transit will arrive every 5 to 10 minutes. In the near-term and mid-term, FTN implementation focuses on increasing bus service frequency. As the Denver region continues to grow, the City can work with RTD and jurisdictions within the RTD region to explore opportunities to increase frequency on the regional rail network, where feasible.

The FTN is intended to serve most of the areas in Denver with the highest propensity for riding transit (Figure 3-6). The Transit Propensity Index, a measure developed for the State of the System Report (Appendix B), identifies areas of the city with greater numbers of residents who

are more likely to use transit (including zero-car households, low-income households, older adults, youth, and people with disabilities).

In addition to transit that arrives more often, the FTN is supported by a strong and recognizable brand that is integrated into stops and stations as well as transit vehicles. Some FTN stops and stations also may include real-time transit information and off-board fare payment technologies. The existing local bus network and first and final mile services, as described in Big Move: Improve Access and Connections to Transit, also will be essential in connecting people to the FTN.

### HOW FREQUENT IS SERVICE ON THE FTN?

Transit service on the FTN is envisioned to arrive every 15 minutes or less from 6 AM to 10 PM, seven days a week.

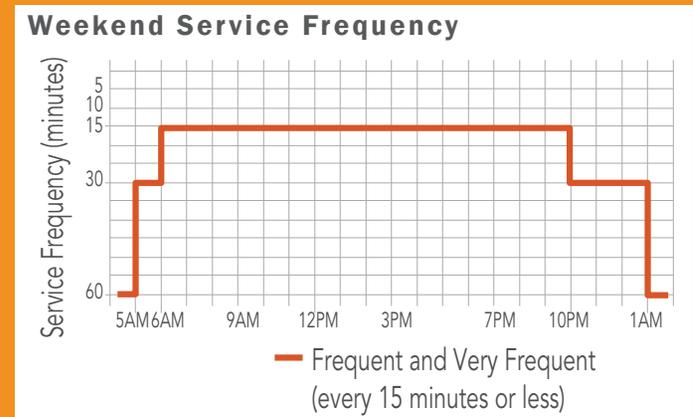
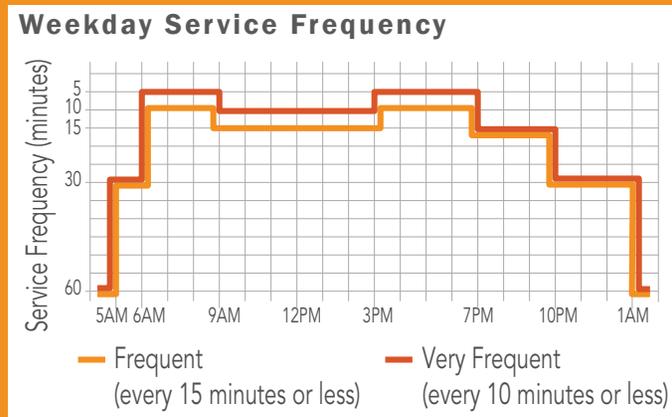
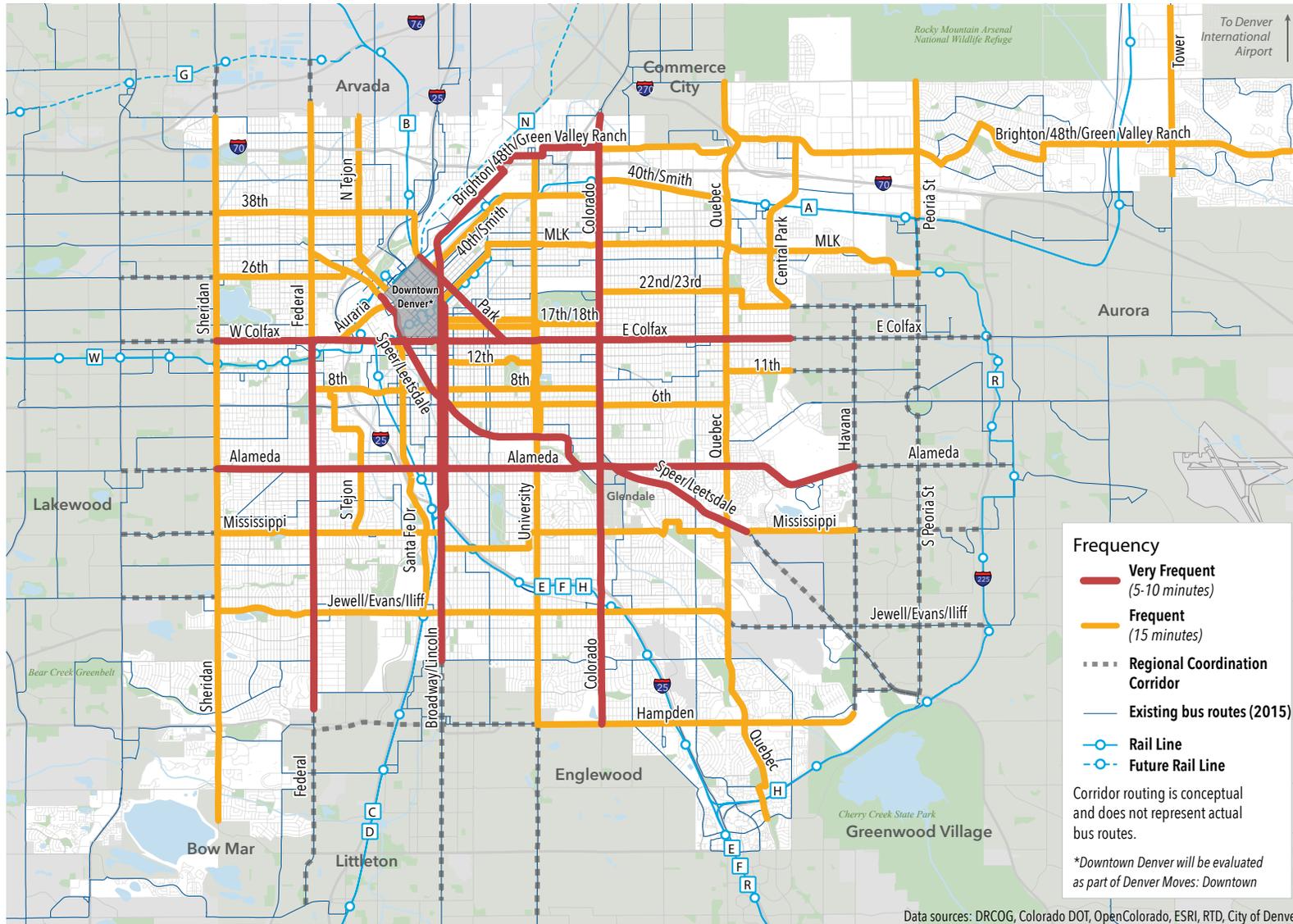


Figure 3-4 Denver's Frequent Transit Network Vision



**Frequency**

- Very Frequent (5-10 minutes)** (Red line)
- Frequent (15 minutes)** (Orange line)
- Regional Coordination Corridor** (Dashed grey line)
- Existing bus routes (2015)** (Thin blue line)
- Rail Line** (Blue line with circles)
- Future Rail Line** (Blue dashed line with circles)

Corridor routing is conceptual and does not represent actual bus routes.

*\*Downtown Denver will be evaluated as part of Denver Moves: Downtown*

**Regional Coordination**  
The FTN vision focuses on the bus network within Denver. As described in Action 4.5, the City will work with RTD and jurisdictions within the RTD region to explore opportunities to increase frequency on the regional rail network as well.

**Access and Connections**  
The existing local bus network and first and final mile services, as described in Big Move: Improve Access and Connections to Transit (Chapter 3), will be essential in connecting people to the Frequent Transit Network and Transit Capital Investment Corridors.

Data sources: DRCOG, Colorado DOT, OpenColorado, ESRI, RTD, City of Denver



Denver's Frequent Transit Network Vision

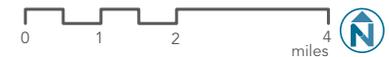
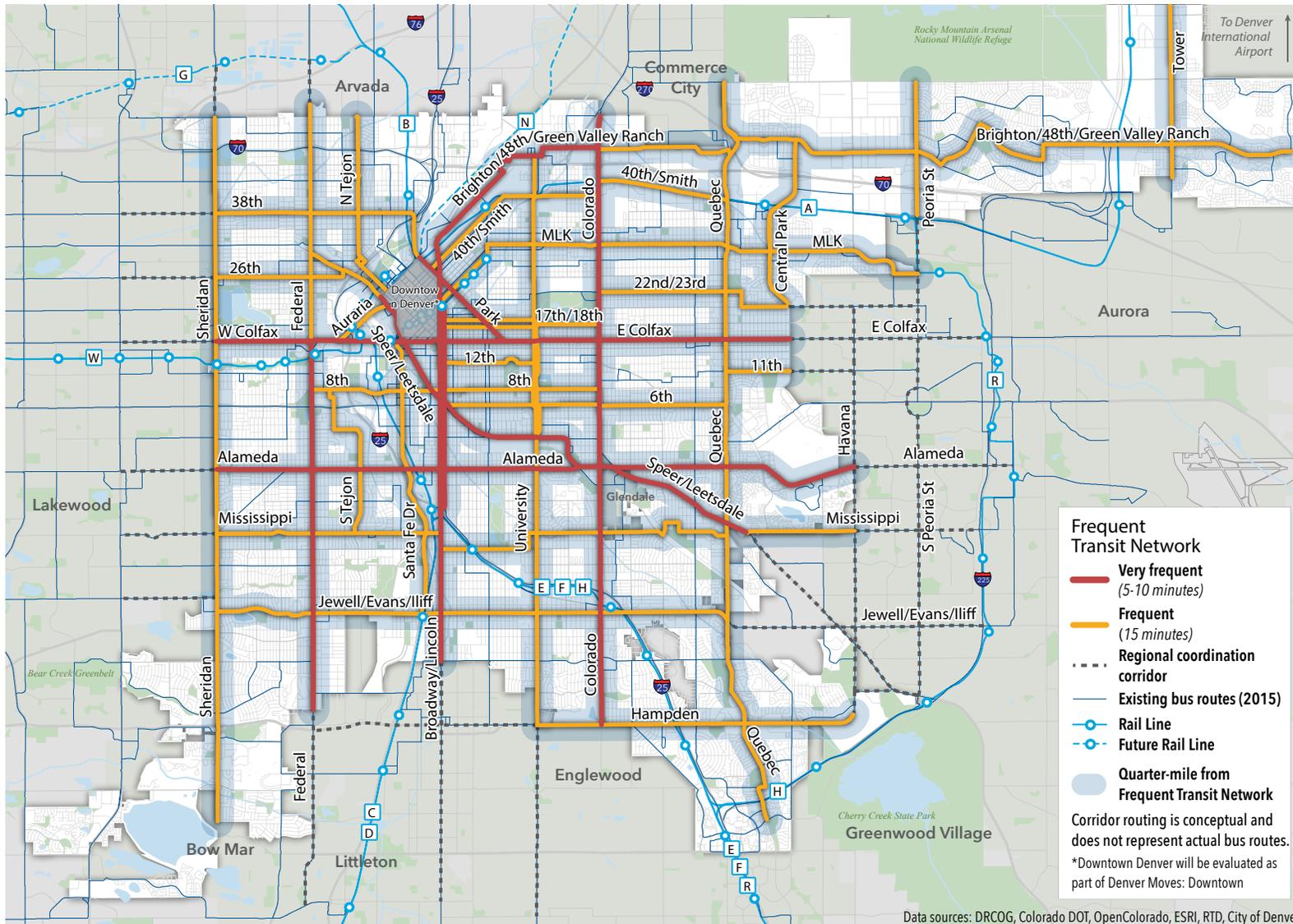


Figure 3-5 Denver's Frequent Transit Network Vision with Quarter-Mile Buffers



**Regional Coordination**  
 The FTN vision focuses on the bus network within Denver. As described in Action 4.5, the City will work with RTD and jurisdictions within the RTD region to explore opportunities to increase frequency on the regional rail network as well.

**Access and Connections**  
 The existing local bus network and first and final mile services, as described in Big Move: Improve Access and Connections to Transit (Chapter 3), will be essential in connecting people to the Frequent Transit Network and Transit Capital Investment Corridors.



Denver's Frequent Transit Network Vision with Quarter-Mile Buffers

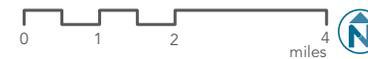
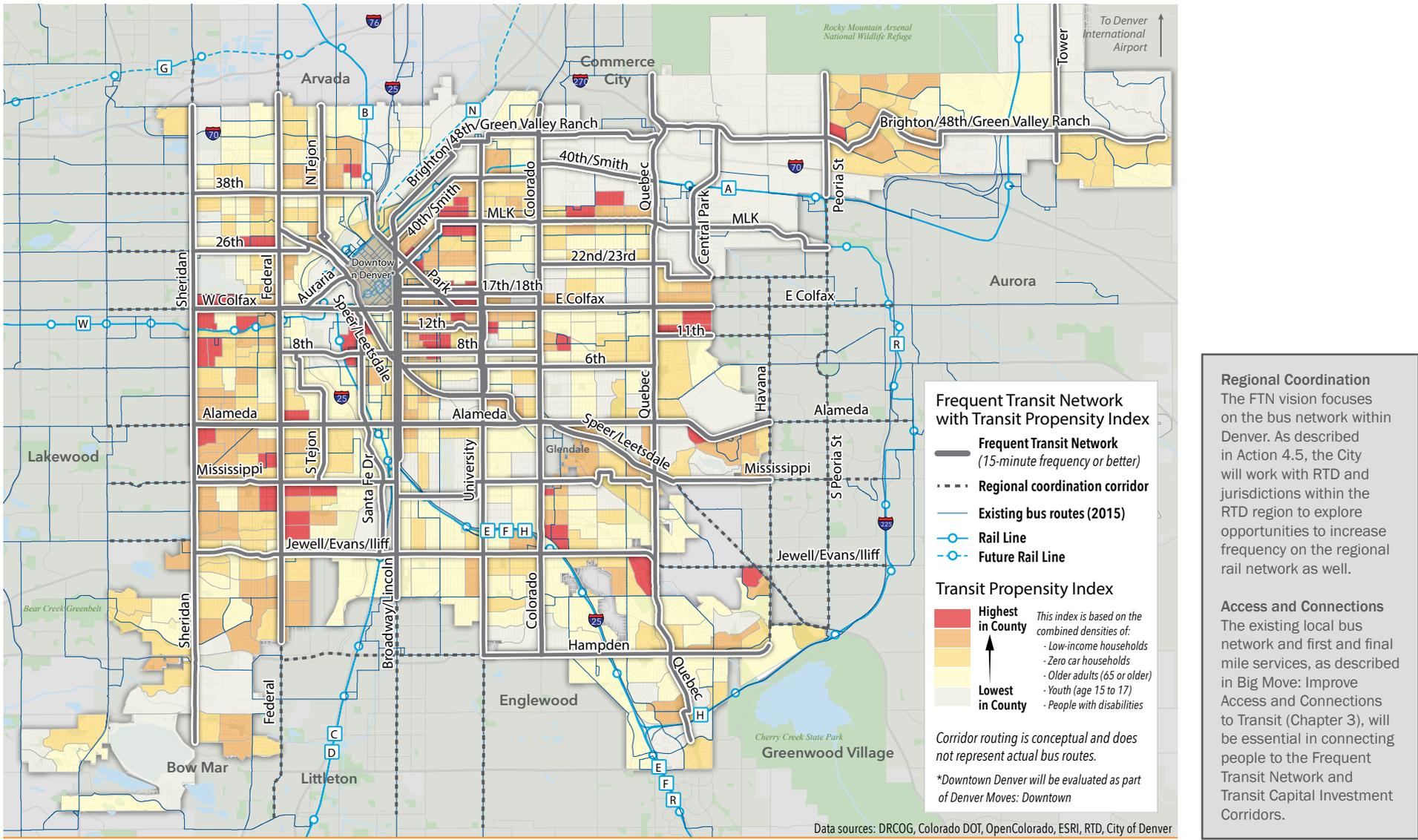
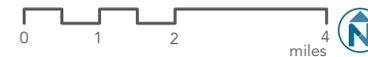


Figure 3-6 Denver's Frequent Transit Network Supports Areas of High Transit Propensity



Denver's Frequent Transit Network, with Transit Propensity Index



## Future Expansion of the Frequent Transit Network

The FTN is based on future land use projections from *Blueprint Denver*. Some of the identified FTN corridors can support frequent or very frequent service today, such as Broadway and East Colfax. For other corridors, such as Hampden or 48th/Green Valley Ranch, fully implementing the FTN service level (including into the evening) may depend on the density of people and jobs reaching a threshold to support that level of service. As FTN implementation proceeds, communities will benefit from multimodal options (e.g., improved pedestrian and bicycle facilities) and mobility services (e.g., ride-share, shuttles) to access transit service.

In addition to potential future increases in service levels, the FTN may expand beyond the network described in this plan. The primary factors that make frequent transit service cost effective and productive are high densities of jobs and residents. Generally, higher densities can support more frequent service; therefore, an increase of jobs and residents in a particular area may justify an FTN extension. In the near-term and mid-term, implementation of the FTN focuses on increasing bus service frequency. As the region continues to grow, the City can work with RTD and regional jurisdictions to explore opportunities for increasing rail service frequency.



# BIG MOVE: IMPROVE ACCESS AND CONNECTIONS TO TRANSIT



The experience accessing transit stops and stations varies widely across the city—some areas have discontinuous sidewalks, few bicycle facilities, and limited first and final mile connections to transit, while other areas benefit from seamless and high-quality connections. Community feedback during the development of *Denver Moves: Transit* indicated a need for improved access and connections to transit through more comfortable and safe pedestrian and bicycle facilities and other mobility options, such as shared-mobility services.

The City plays an important role in designing and operating the network that connects people to transit, including the streets and sidewalks in Denver. In addition to sidewalk and street improvements, partnership opportunities with community organizations and other mobility services (e.g., shared vehicles and on-demand services) can provide additional options to connect to transit.



**Figure 3-7 lists the strategies and associated actions to support improved access and connections to transit. The key strategies are:**

5. Integrate and improve pedestrian and bicycle facilities and amenities that provide access and connections to transit.
6. Support the implementation of *Vision Zero* through safe access and connections to transit.
7. Encourage first and final mile services, programs, and technology to increase options for transit access and connections.
8. Evaluate curb lane management and off-street parking strategies to support multimodal access and connections.

**Figure 3-7 Strategies and Actions to Improve Access and Connections to Transit**

Strategies and Actions	Why it Matters	Action Initiation <sup>a</sup>	Implementing Partners <sup>b</sup>
<b>Strategy 5: Integrate and improve pedestrian and bicycle facilities and amenities that provide access and connections to transit.</b>			
<b>Action 5.1:</b> Support the implementation of <i>Denver Moves: Pedestrians and Trails</i> to provide safe and improved connections to transit.	A complete, continuous, and accessible pedestrian network helps to improve access to transit. A complete pedestrian network not only increases accessibility and safety, but also encourages physical activity and improves human health.	Near-term	DPW , DDPHE, CPD RTD, CDOT Advocacy and non-profit organizations Private Sector
<b>Action 5.2:</b> Support and integrate bicycle facilities near transit including coordinating with the implementation of <i>Denver Moves: Bicycles</i> .	Bicycling is an important component of the transit system, allowing people to connect to buses and trains by bicycle. Locating low-stress bikeways and pedestrian pathways near transit stops helps people bike and walk to transit.	Near-term	DPW RTD TMAs, Special Districts Advocacy and non-profit organizations Private Sector
<b>Action 5.3:</b> Review RTD’s and the City’s bicycle parking inventory along the Transit Capital Investment Corridors and FTN and identify locations to install secure and convenient short- and long-term bike parking at transit stops and stations.	Bicycle parking at transit stops and stations allows people to connect easily to transit by providing a safe and convenient place to park their bike. It can also alleviate the demand for bike storage on transit vehicles. Bicycle parking options include bike racks, lockers, or cages/rooms.	Near-term	DPW RTD Advocacy organizations
<b>Action 5.4:</b> Promote and encourage flexible new mobility solutions that support non-SOV access to transit.	Having a variety of transportation options such as bike share, scooters, ebikes, etc., to access transit encourages transit use. Parking hubs for these mobility services increase reliability and predictability for people using these modes as first and last mile connections to transit. Successful implementation and integration of mobility solutions will require partnerships and coordination.	Near-term	DPW, CPD RTD TMAs Bicycle and other mobility share providers Advocacy organizations
<b>Action 5.5:</b> Work with RTD to determine how additional bicycle storage areas can be accommodated on buses and trains.	Allowing bikes on transit vehicles encourages bicyclists to use transit and take their bikes with them to their destination.	Mid-term	DPW RTD Advocacy organizations Jurisdictions within the RTD region

a. Action initiation is when an action is proposed to begin in the near-term (0-5 years) or mid-term (6-10 years), but may be adjusted to long-term (11-20 years) initiation to match priorities and resources. Chapter 4 identifies early actions the City, in coordination with partners, is moving forward during the next few years.

b. Successful implementation will require coordination, investments, and participation from partners including local and regional agencies, advocacy and non-profit organizations, employers, and neighborhood organizations. Refer to the Glossary (Appendix A) for a list of acronyms and definitions.



Strategies and Actions	Why it Matters	Action Initiation <sup>a</sup>	Implementing Partners <sup>b</sup>
<b>Strategy 6: Support the implementation of <i>Vision Zero</i> through safe access and connections to transit.</b>			
<p><b>Action 6.1:</b> Improve crossings near transit stops and stations in coordination with priorities defined in <i>Vision Zero, Denver Moves: Pedestrians and Trails, and Denver Moves: Bicycles</i>.</p>	<p>More visible pedestrian crossings, with elements such as high-visibility striping and special paving, help to improve pedestrian safety and access to transit. In coordination with <i>Vision Zero</i>, these safety elements help achieve a reduction in fatalities and injuries.</p> <p>Shorter crossings also improve the pedestrian environment and access to transit. Improved bicycle facilities provides safer access and connections to transit for bicyclists.</p>	Near-term	<p>DPW RTD, CDOT TMAs, Special Districts Advocacy organizations</p>
<p><b>Action 6.2:</b> Coordinate with <i>Vision Zero</i> to develop a Safe Routes to Transit Program that identifies and implements bicycle and pedestrian safety improvements near transit.</p>	<p>A Safe Routes to Transit Program prioritizes safety improvements on Denver's <i>Vision Zero</i> High Injury Network that overlap with transit routes and provides a safer and more comfortable environment for people accessing transit.</p>	Near-term	<p>DPW RTD, CDOT TMAs Advocacy organizations Universities/schools</p>
<b>Strategy 7: Encourage first and final mile services, programs, and technology to increase options for transit access and connections.</b>			
<p><b>Action 7.1:</b> Explore partnerships and opportunities to implement and subsidize shared-ride, shared-mobility, and on-demand services to provide additional first and final mile transit options.</p>	<p>Having a variety of transportation options to access transit encourages transit use. On-demand ride and microtransit services provide a more flexible travel option than fixed-route transit, with some services allowing people to request a ride that meets their schedule and destination needs. These services can provide first/last mile solutions that help support connections to transit stops and stations.</p>	Near-term	<p>DPW, OED, DDPHE RTD, DRCOG Shared mobility providers TMAs</p>
<p><b>Action 7.2:</b> Conduct pilot programs in partnership with on-demand/ shared-ride service providers to supplement RTD service and connect people to transit stops and stations.</p>	<p>Providing subsidies to riders who cannot afford ride-share, car-share, or other transportation services that connect to transit increases equitable access to transit.</p>		<p>Advocacy and non-profit organizations</p>

a. Action initiation is when an action is proposed to begin in the near-term (0-5 years) or mid-term (6-10 years), but may be adjusted to long-term (11-20 years) initiation to match priorities and resources. Chapter 4 identifies early actions the City, in coordination with partners, is moving forward during the next few years.

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Strategies and Actions	Why it Matters	Action Initiation <sup>a</sup>	Implementing Partners <sup>b</sup>
<p><b>Action 7.3:</b> Identify opportunities for partnerships with sponsored shuttle or other shared-ride programs to connect to transit.</p>	<p>Sponsored shuttles can extend the reach of fixed-route transit service and provide first/last mile connections between transit and employment centers, residential complexes, and activity centers. Employer-sponsored shuttles can improve employer competitiveness by attracting and retaining employees. Shuttles can also potentially provide low-cost transit options similar to the Free Mall Ride.</p>	<p>Near-term</p>	<p>DPW RTD Shared mobility providers TMAs Employers, activity centers, residential complexes</p>
<p><b>Action 7.4:</b> Explore partnerships and opportunities with private companies, neighborhood organizations, and social service programs to subsidize and implement neighborhood circulators or shuttles.</p>	<p>Neighborhood circulators or shuttles can help connect Denver communities to transit by bridging the gap between major transit stops and stations along the Transit Capital Investment Corridors and the FTN and communities not directly served by these routes. Circulators and shuttles can connect communities on the outskirts of the city to reliable and frequent transit service.</p>	<p>Mid-term</p>	<p>DPW RTD Shared mobility providers TMAs Non-profit organizations, social service providers</p>
<p><b>Action 7.5:</b> Improve and prioritize local bus service connections to the FTN and rail stations.</p>	<p>Local bus service provides connections for residents who live beyond walking distance of the FTN and rail stations.</p>	<p>Near-term</p>	<p>DPW RTD</p>
<p><b>Action 7.6:</b> Identify the most meaningful shared mobility strategies to meet Denver’s mobility goals through a shared-use mobility plan that addresses multimodal facilities at transit stops and stations and includes an access hierarchy, curbside management, and electric vehicle charging.</p>	<p>A shared-use mobility plan can help to establish a hierarchy for how different modes interact to support access to transit, including curb lane management. Car-share services (e.g., Zipcar, Car2Go) and shared mobility services (e.g. scooters, ebikes) provide first and last mile connections to and from transit. These services also provide an option for those that do not own a car and/or depend on transit, reducing the need for car ownership and parking.</p>	<p>Near-term</p>	<p>DPW, CPD RTD Shared mobility providers TMAs Advocacy organizations</p>
<p><b>Action 7.7:</b> Support carpool and vanpool access to transit by designating priority and/or subsidized parking for carpool and vanpool vehicles at park-and-ride lots.</p>	<p>Priority and subsidized carpool and vanpool parking at park-and-ride lots and near transit facilities can help encourage people to carpool, reducing the number of vehicles on the road and supporting transit use.</p>	<p>Near-term</p>	<p>RTD DPW TMAs</p>
<p><b>Action 7.8:</b> Research and develop recommendations for integrating and regulating new vehicle technology, such as autonomous vehicles (AV), in the City right-of-way.</p>	<p>Being proactive about how to integrate and regulate new vehicle technologies ensures they best meet City goals and mobility priorities. Integration of new vehicle technologies could include autonomous transit vehicles.</p>	<p>Mid-term</p>	<p>DPW, CPD, Denver Smart City, DDPHE RTD</p>

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Strategies and Actions	Why it Matters	Action Initiation <sup>a</sup>	Implementing Partners <sup>b</sup>
<b>Strategy 8: Evaluate curb lane management and off-street parking strategies to support multimodal access and connections.</b>			
<b>Action 8.1:</b> Evaluate and implement curb lane management strategies near transit stops and stations to ensure the highest and best use of the curb lane.	Parking and curb lane management can ensure the highest and best use of limited curb space to support transit ridership, such as space for loading and bike lanes. Right-of-way enforcement creates the compliance of on-street policies.	Near-term	DPW, DFD, DPD, CPD RTD Car share providers
<b>Action 8.2:</b> Consider off-street parking strategies to support access to transit corridors.	By instituting parking maximums, encouraging shared parking opportunities, and implementing dynamic parking pricing, for example, parking demand can be managed effectively along transit corridors.		
<b>Action 8.3:</b> Develop a park-and-ride spillover strategy to address park-and-ride lots that are at or over capacity.	As park-and-ride lots reach capacity, people may choose to park on adjacent streets, impacting neighborhood parking and access. By implementing both on- and off-street strategies in coordination with RTD, spillover parking impacts can be managed. Similar actions could be taken with implementation of a park-and-ride use fee.	Mid-term	DPW, CPD RTD TMAs
<b>Action 8.4:</b> Explore shared-parking concepts and potential partnerships for park-and-ride spaces.	Shared parking (e.g., shared retail and transit rider parking) that functions as park-and-ride spaces can expand parking capacity in a more cost-effective manner than building new parking. With additional park-and-ride capacity, more people will have the opportunity to use transit.	Mid-term	DPW, CPD RTD TMAs Businesses

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## WHAT ARE FIRST AND FINAL MILE CONNECTIONS AND SERVICES?

First and final mile connections, also known as first/last mile, describes how transit riders get to and from transit stops and stations. Transit trips generally do not start at the front door of a person's home, business, or shop—transit riders must walk, bike, drive, or be dropped off to access a transit stop or station.

The first and last mile to access transit is often the most difficult mile to travel, especially in suburban communities that were originally designed for cars.\* First and final mile access is especially important for zero-car households and people who depend on transit. Incomplete or missing pedestrian and bicycle facilities connecting to transit is a common barrier to transit access in many neighborhoods.

Providing first and final mile solutions—such as improved pedestrian and bicycle connections supported by wayfinding signs—creates more seamless options to access transit. Additionally, mobility services, including on-demand services (e.g., Uber, Lyft) and shared-use options (e.g., car share, bike share), are becoming more popular first and final mile options. When implementing first and final mile connections and services to provide people with more ways to access transit, it is important to provide options for people of all ages, incomes, and abilities.



**Bike share, microtransit, and car share services are increasingly popular first and final mile options.**

\*Source: Commuting Solutions - [www.commutingsolutions.org](http://www.commutingsolutions.org)



# BIG MOVE: BUILD A SENSE OF PLACE



The growing neighborhoods around major transit stops and stations throughout Denver, like Union Station, create community gathering places, connect multiple modes of transportation in one location, and improve safety. Community feedback has indicated that improving stops and stations in ways that provide opportunities to build a sense of place and weave transit into the fabric of a neighborhood is an important way to draw people to transit. This feedback also reflects the need to develop stops and stations that are both accessible and connected by pedestrian and bicycle facilities and also provide a comfortable and safe experience for transit riders and other community members.

The City plays a key role in fostering vibrant spaces near transit throughout Denver by promoting a mix of land uses and an attractive street environment. The level and type of transit investment must be designed and built to best serve the population and land use in a particular area.

For example, higher-density areas in Denver are best served by high-capacity transit, such as BRT or rail, while lower-density suburban areas are best served by improved connections to the transit stops and stations along frequent transit service corridors. Transit investments support Denver's 20-year growth vision as described in *Blueprint Denver*, ensuring high-growth areas are linked to existing or planned high-quality, frequent transit that can help attract new households and jobs.

**Figure 3-8 lists the strategies and associated actions to build a sense of place. The key strategies are:**

9. Create transit-friendly communities and community spaces by integrating transit into projects.
10. Promote transit-supportive land use and development.

Figure 3-8 Strategies and Actions to Build a Sense of Place

Strategies and Actions	Why it Matters	Action Initiation <sup>a</sup>	Implementing Partners <sup>b</sup>
<b>Strategy 9: Create transit-friendly communities and community spaces by integrating transit into projects.</b>			
<p><b>Action 9.1:</b> Integrate elements of <i>Denver Moves: Transit</i>, including the Transit-Friendly Streets Guide (Appendix D), into public and private projects.</p>	<p>Integration of the <i>Denver Moves: Transit</i> recommendations and guidelines, including the Transit-Friendly Streets Guide (Appendix D), into public and private projects ensures that all mobility projects incorporate transit investments to help achieve Denver’s mobility goals and provide more high-quality and reliable transit in Denver.</p>	Near-term	DPW, CPD, OED, DPR RTD, CDOT Private Sector
<p><b>Action 9.2:</b> Develop comprehensive street design guidelines based on <i>Blueprint Denver</i> street types that integrate elements from <i>Denver Moves: Transit</i> and the Transit-Friendly Streets Guide (Appendix D).</p>	<p><i>Blueprint Denver</i> establishes a set of street types for Denver that considers the corridor’s surrounding land-use character. Street design guidelines build on the street types to inform the standards and regulations that are necessary to implement the design vision for each street type. These guidelines also address green infrastructure, street trees, bikeway design, amenity zones, and sidewalks.</p>	Near-term	DPW, CPD, DPR RTD
<b>Strategy 10: Promote transit-supportive land use and development.</b>			
<p><b>Action 10.1:</b> Promote a mix of land uses by employing land use and zoning tools to encourage and incentivize a mix of uses and transit-supportive densities along the Transit Capital Investment Corridors.</p>	<p>Mixed land uses provide economic, safety, and health benefits to the community. Density is a key driver of transit ridership and supports economic growth and walkability.</p>	Near-term	CPD, DPW TMAs, Special Districts
<p><b>Action 10.2:</b> Integrate strategies to understand and mitigate involuntary displacement, including identifying best practices from other cities and developing a consistent approach for evaluating displacement in planning and implementation of major transit investments.</p>	<p>Large capital projects, such a new High-Capacity Transit Corridor, can lead to private investment and increased property values. In turn, lower-income residents and businesses close to the corridor may not be able to afford to stay in the area. Evaluating these potential community impacts and identifying strategies that could reduce involuntary displacement enables more equitable access to transit investments.</p>	Near-term	CPD, DPW, OED Advocacy and non-profit organizations
<p><b>Action 10.3:</b> Encourage new development and preservation of affordable housing along the Transit Capital Investment Corridors and FTN.</p>	<p>Encouraging affordable housing along the Transit Capital Investment Corridors and the FTN supports transit access for those in the community that may need it most.</p>	Near-term	CPD, OED, DPW Advocacy and non-profit organizations Private Sector
<p><b>Action 10.4:</b> Examine additional design review and standards along transit corridors to ensure that site plans provide high-quality access to transit stops and stations.</p>	<p>Private development adjacent to transit stops and stations has a large impact on connectivity and how comfortable people feel accessing transit. Enhanced connections provided by private development can improve the transit experience and increase ridership.</p>	Near-term	CPD, DPW

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# BIG MOVE: MAKE THE MOST OF OUR INVESTMENTS



Capital and service investments are only part of what is needed to achieve Denver’s transit vision. Transit-supportive programs help to ensure that Denver leverages its investments by implementing programs that promote transit use, increase transit awareness and understanding, provide affordable transit, and promote transit’s environmental benefits.

The City can initiate most of these actions, but successful implementation will require coordination between, investments by, and partnerships with other agencies and community organizations.

**Figure 3-9 lists the strategies and associated actions to make the most of our investments. The key strategies are:**

11. Continue to promote, educate, and encourage the use of transit.
12. Support expansion of affordable fares and programs and fare payment technology.
13. Encourage the use of sustainable technology in transit and evaluate and promote the environmental benefits of transit.

**Figure 3-9 Strategies and Actions to Make the Most of Our Investments**

Strategies and Actions	Why it Matters	Action Initiation <sup>a</sup>	Implementing Partners <sup>b</sup>
<b>Strategy 11: Continue to promote, educate, and encourage the use of transit.</b>			
<p><b>Action 11.1:</b> Develop and implement public information and marketing campaigns to help promote, educate, and encourage the use of transit.</p>	<p>A lack of information can be a barrier to riding transit. Public information and marketing campaigns can help to promote and encourage the use of transit and can be an effective method for delivering key messages such as safety and environmental benefits. Targeted or individualized marketing campaigns for neighborhoods, districts, diverse audiences, and other key markets can help to raise awareness about existing and new transit services and options, how to ride transit, transit rules and regulations, and the benefits of riding transit.</p>	<p>Near-term</p>	<p>DPW RTD, DDP TMAs Advocacy and non-profit organizations Universities/schools Businesses/employers</p>
<p><b>Action 11.2:</b> Provide transit information, including trip planning, through various formats including online, print, kiosks, and broadcast.</p>	<p>Information about stop and station locations, trip options, and service frequencies can help people navigate the transit system.</p>	<p>Near-term</p>	<p>RTD DPW, Denver Smart City</p>
<p><b>Action 11.3:</b> Fully develop and communicate a comprehensive, citywide Transportation Demand Management (TDM) program to ensure that transit-supportive programs and infrastructure are implemented for both new and existing developments and projects.</p>	<p>Expanding the City’s efforts to establish a TDM program puts more focus on providing meaningful mode shift strategies for new private developments, capital projects, and existing developments that mitigate both traffic and curb lane congestion. The program identifies clear roles and responsibilities for City staff to implement these programs and an auditing process to ensure any requirements are upheld. The program also includes a robust stakeholder outreach process to engage TMAs, employers and employees, developers, property owners and managers, the general public, and other transportation service providers.</p>	<p>Near-term</p>	<p>DPW, CPD, HR, OED DRCOG TMAs Advocacy and non-profit organizations Employers/businesses Universities/schools</p>

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c. Recommendations of the RTD Pass Program Working Group were under development at the time of this writing.



Strategies and Actions	Why it Matters	Action Initiation <sup>a</sup>	Implementing Partners <sup>b</sup>
<b>Strategy 12: Support expansion of affordable fares and programs and fare payment technology.</b>			
<p><b>Action 12.1:</b> Work with key partners to support implementation of the approved recommendations of the RTD Pass Program Working Group (2018)<sup>c</sup> including a low-income fare program, a discounted fare program for youth, the updated EcoPass and Neighborhood EcoPass programs, and the updated College Pass program.</p>	<p>Affordable transit fares ensure that transit is available for people of all ages and income levels and makes transit a more competitive option to driving. Transit pass programs broaden the awareness of transit service, provide a convenient payment method, and help increase transit ridership.</p>	<p>Near-term</p>	<p>RTD Pass Program Working Group member organizations DPW, DHS, OCA, OED, DDPHE RTD, DPS, TMAs Universities, advocacy and non-profit organizations, private partnerships</p>
<p><b>Action 12.2:</b> Work with partners (e.g., Denver Public Schools, TMAs, non-profit organizations) to provide additional fare pass subsidies for specific markets.</p>			
<p><b>Action 12.3:</b> Work with RTD and other partners to explore a regional mobility platform that integrates cost, travel and trip planning, real-time information, and fare payment technologies across providers and modes.</p>	<p>A comprehensive mobility platform that integrates cost and travel information helps people understand available transportation options. A multimodal trip planner helps people make informed decisions about transportation choices and connections. Additional fare payment options, such as mobile ticketing and integrated fare payment, can make it easier for people to pay their fare. Consolidating multiple mobility providers and modes (e.g., transit fare payment, on-demand services, BCycle) into one payment platform can also streamline multimodal mobility.</p>	<p>Near-term</p>	<p>RTD, DRCOG, CDOT DPW, TS, Denver Smart City Shared mobility and other transportation service providers</p>
<b>Strategy 13: Encourage the use of sustainable technology in transit and evaluate and promote the environmental benefits of transit.</b>			
<p><b>Action 13.1:</b> Work with RTD, transportation providers, and other agencies to develop and track environmental metrics related to transit.</p>	<p>Measuring and evaluating the environmental impacts of transit (e.g., reduction in greenhouse gas emissions) can help to promote the benefits of transit investments. Metrics can also support and inform conservation efforts and environmental messaging and marketing.</p>	<p>Near-term</p>	<p>DPW, DDPHE, CPD RTD, DRCOG, CDOT, DDP TMAs Shared mobility service providers</p>
<p><b>Action 13.2:</b> Encourage RTD to integrate electric, low-emissions, and low-noise transit vehicles into the fleet.</p>	<p>Sustainable transit vehicle technology can help to reduce the amount of greenhouse gas emissions from transit and improve local air quality.</p>	<p>Mid-term</p>	<p>RTD DPW, DDPHE, Denver Smart City</p>

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## BUILDING A COMPLETE TRANSIT SYSTEM

*Denver Moves: Transit* identifies the implementation strategies and actions needed to create a complete transit system for Denver that provides high-quality, reliable, connected, and frequent transit service complemented by supportive land uses and multimodal access. These elements will work together to create a complete network of safe and reliable connections between all modes of transportation while providing mobility options to and between Denver's neighborhoods. Implementing a complete transit system requires partnerships and coordination with local and regional agencies and community organizations.

**E**xpanded frequent transit service that is fast and reliable allows people to ride transit without a schedule and transfer with ease



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**C**oordinated land use, parking, and placemaking policies help transit connect people to destinations



**H**igh-quality stops and stations make transit accessible, comfortable, and convenient



**E**ducation and outreach improve awareness and understanding of how to use the transit system



**S**afe and convenient pedestrian and bicycle access connects people to transit stops and key destinations



**T**ransit information lets riders know when transit will arrive and makes using the system intuitive



**O**n-demand and shared-ride services help to meet first and last mile needs and extend transit's service hours



**F**lexible fare and pass programs make transit easy to use and affordable

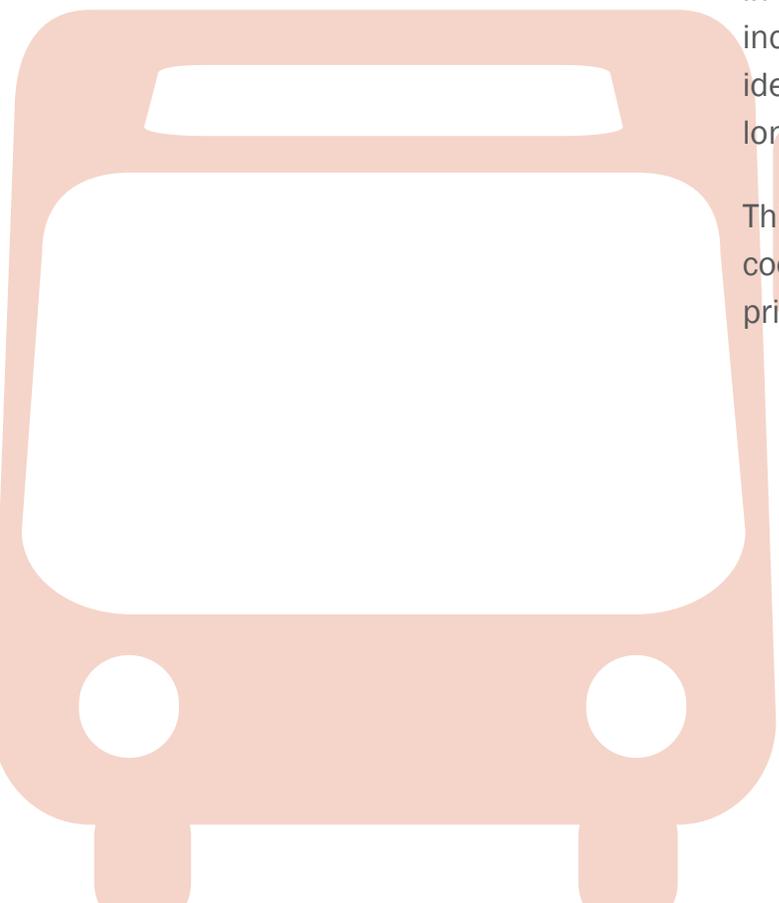




# 4 GETTING STARTED & MOVING FORWARD

This chapter describes a guiding framework for the City and County of Denver’s (the City) programmatic approach to implementing the transit-supportive actions listed in Chapter 3. This approach organizes the near-, mid-, and long-term actions, which include building the City’s capacity to manage and implement transit improvements, identifying resource and funding needs, preparing for the implementation of longer-term projects, and tracking progress over time.

This chapter also discusses the early action items the City plans to initiate—in coordination with partners, including RTD—over the next few years, depending on priorities and resources.



# DENVER MOVES: TRANSIT IMPLEMENTATION PHASES

Implementation of the *Denver Moves: Transit* vision is anticipated through the three phases shown below to initiate the plan’s actions, as priorities and resources are identified.



## CURRENT STATUS OF EACH PHASE

The City, in coordination with RTD, has begun early actions that fall within the three *Denver Moves: Transit* phases (as of mid-2018). The work underway reflects the City's commitment to achieving the vision of *Denver Moves: Transit* and meeting the mobility needs of Denver residents, commuters, and visitors. Community input and engagement will continue to inform corridor studies and design projects.

### PHASE 1: DENVER MOVES: TRANSIT PLAN DEVELOPMENT

- Development of the *Denver Moves: Transit* plan, anticipated to be completed in early 2019, will provide the framework to guide Phases 2 and 3.

### PHASE 2: PROGRAM DEVELOPMENT AND NEAR-TERM IMPLEMENTATION

- Preliminary development of the City's transit program is underway.
- Initial project prioritization has begun based on project readiness and available funding sources. The City continues to seek additional funding sources.
- Early action projects underway include Broadway/Lincoln Transit Improvements, Colfax Bus Rapid Transit (BRT), and Free MetroRide enhancements.

### PHASE 3: MID- AND LONG-TERM IMPLEMENTATION

- Bond projects that include transit improvements will be implemented as project phasing is identified.
- Project prioritization for mid- and long-term projects is informed by prioritization work begun in Phase 2.
- Continued implementation of early action projects underway in Phase 2.



### SUCCESSFUL IMPLEMENTATION THROUGH PARTNERSHIPS: SPEED AND RELIABILITY CORRIDORS

RTD is a key partner in implementing many of the transit corridor and service improvements identified in *Denver Moves: Transit*. Implementing the Speed and Reliability Corridors is an example of the City and RTD working in close coordination to deliver projects that include both transit capital investments and service improvements.

Since most speed and reliability and stop and station improvements are anticipated to be implemented frequently, the City and RTD are developing a coordinated and streamlined process to plan, design, and construct speed and reliability enhancements along corridors in Denver.

## EARLY ACTIONS

Building on the momentum of the transit projects already underway in Denver, the City, in coordination with partners, is moving forward with a number of important and highly beneficial early actions during the next few years (see the following page). These early actions focus on building the City's transit program, prioritizing projects, pursuing funding, and implementing projects that have identified funding and resources. They also ensure that public and private projects and programs begin incorporating the *Denver Moves: Transit* goals, strategies, and actions.

### Preparing for Mid- and Long-Term Implementation

Transit Capital Investment Corridors have a longer implementation timeline to accommodate the planning, design, and construction of their improvements. As the City's Transit Program capacity to implement major projects and programmatic actions in parallel grows, Phase 2 and 3 projects will be prioritized as resources are identified. The City's programmatic approach is intended to be flexible to support adjustments to the phasing and implementation depending on resources and priorities.



**Early projects build the skills of existing staff and lay the groundwork for future projects. New projects test an agency's ability to implement new and innovative projects, specifically revealing technical and resource needs.**



- National Association of City Transportation Officials (NACTO)



THE BIG MOVES	EARLY ACTIONS	ACTION REFERENCE <sup>a</sup>	
<b>Implement High-Quality and Reliable Transit</b>		Build the City's capacity to manage and implement the <i>Denver Moves: Transit</i> capital investments through the development of the City's Transit Program. The program will also support ongoing coordination with RTD to implement improved transit service.	1.3, 2.1
	Develop an implementation plan ( <i>Denver Moves: Transit Phase 2</i> ) that establishes priorities and timelines for High- and Medium-Capacity Transit Corridor implementation.	1.1	
	Develop corridor typologies, stop and station inventory and typologies and update the Transit-Friendly Streets Guide (Appendix D).	1.3, 2.1, 2.2	
	Continue pursuing funding mechanisms to implement transit infrastructure improvements.	1.3, 1.6	
	Ensure that public and private projects integrate guidelines and actions from <i>Denver Moves: Transit</i> , including the Transit-Friendly Streets Guide.	1.2, 9.1	
<b>Provide Frequent Service</b>		Work with RTD to develop a phased implementation strategy for the Frequent Transit Network.	4.1, 4.2
<b>Improve Access and Connections to Transit</b>		Support the implementation of <i>Denver Moves: Pedestrians and Trails</i> and <i>Denver Moves: Bicycles</i> to improve access and connections to transit.	5.1, 5.2, 5.3
	Ensure transit improvements support the <i>City's Vision Zero</i> program.	6.1, 6.2	
	Develop a shared-use mobility plan to identify shared mobility strategies to help meet Denver's mobility goals and address multimodal facilities at transit stops and stations.	7.6	
	Ensure curb lane management strategies and projects support transit reliability, ridership, access, and connections.	8.1, 7.6	
<b>Build a Sense of Place</b>		Support the implementation of <i>Blueprint Denver</i> , including encouraging and incentivizing a mix of land uses and transit-supportive densities along the Transit Capital Investment Corridors.	10.1
	Work with other City departments to integrate strategies to understand and mitigate involuntary displacement, including identifying best practices from other cities and developing a consistent approach to evaluating displacement in planning and implementation of major transit investments.	10.2	
	Encourage new development and preservation of affordable housing along the Transit Capital Investment Corridors and FTN.	10.3	
<b>Make the Most of our Investments</b>		Support the continued development of the City's transportation demand management (TDM) program to include strategies for new private development, capital projects, and established land uses.	11.3
	Continue to support implementation of the RTD Pass Program Working Group (2018) recommendations.	12.1	
	Begin identifying actions (e.g., implementation of first and final mile services and programs) that will require coordination, investments, or participation from local and regional agencies, advocacy and non-profit organizations, employers, and neighborhood organizations. Begin identifying partnership opportunities to initiate these actions.	1.3	

a. Refer to Figures 3-1, 3-3, 3-7, 3-8, and 3-9 in Chapter 3 for more details.

Successful implementation will require coordination, investments, and participation from partners including local and regional agencies, advocacy and non-profit organizations, employers, and neighborhood organizations.

## TRANSIT INVESTMENTS UNDERWAY IN DENVER

Over the last two decades, the Denver region has made significant investments in its transit system, including the development of RTD's light rail system, FasTracks, new and enhanced stations and facilities, and improvements to bus service.

Before the development of *Denver Moves: Transit* began, the City was already partnering with RTD to implement transit investments throughout Denver, including the Union Station enhancements. The Broadway/Lincoln corridor transit improvements and the Colfax BRT project are two examples of other transit improvements underway that are consistent with the capital investments and service improvements described in *Denver Moves: Transit*.



### Broadway/Lincoln Corridor Transit Improvements

Transit service improvements were implemented on the Broadway and Lincoln corridors in 2017, including converting portions of the peak period transit lanes to 24-hour lanes. Pavement markings and new signage help to define the roadway space for transit.

Learn more at: [denvermovesbroadway.com](http://denvermovesbroadway.com).



### Colfax Bus Rapid Transit

The Colfax corridor is a High-Capacity Transit Corridor that will have very frequent BRT service, center-running dedicated transit lanes, and enhanced stops and stations. More information is available at: <http://www.denvergov.org/content/denvergov/en/denver-department-of-public-works/projects/current/colfax-corridor-connections.html>.



## THE CITY'S TRANSIT PROGRAM

To successfully initiate and manage the *Denver Moves: Transit* actions described in Chapter 3, the City has begun developing a Transit Program to build the City's capacity to implement Denver's transit priorities. This program creates a guiding framework for the City to more effectively prioritize and advance the planning, design, and delivery of transit capital investments. It also supports the City's partnership and coordination with RTD to implement transit service improvements to meet Denver's transit vision and mobility needs.

Currently there are two City staff dedicated to managing transit projects. Adding personnel and resources (e.g., consultant support) dedicated to transit is needed to manage and implement a growing transit program for a city of Denver's size. Similar to other cities that are establishing transit programs and taking a more proactive role in implementing transit projects, the City's Transit Program is envisioned to grow to include a team of project managers, planners, and engineers supporting the implementation of corridor investments and managing programmatic actions. The Transit Program will be supported by other City departments and resources, including industry experts and consultants, as needed through different project phases and for programmatic and policy action implementation.

As shown on the following page, the City's Transit Program is organized into three supporting programs to implement and coordinate the key investments of *Denver Moves: Transit*—Transit Capital Investment Corridors, Speed and Reliability and Stop and Station Improvements, and the Frequent Transit Network. Additionally, Transit Program staff will provide technical input during City projects, participate on RTD projects, and manage programmatic actions that require initiation by and coordination with partner organizations and agencies.

**“Quality transit relies on the orchestration of service planning, geometric design, signals, corridor traffic management, curbside regulations, passenger information, and any related capital construction, convening multiple practice areas and agency subdivisions.”**

- National Association of City Transportation Officials (NACTO)

## SUPPORTING PROGRAMS WITHIN THE CITY'S TRANSIT PROGRAM

### SPEED AND RELIABILITY AND STOP AND STATION IMPROVEMENTS PROGRAM

This program is responsible for the management and coordination of implementing intersection and corridor improvements to help transit operate more efficiently and reliably along corridors in Denver. In coordination with RTD and other partners, the Speed and Reliability and Stop and Station Improvements Program manages:

- Design and construction of stop and station enhancements as guided by street design guidelines, the Transit-Friendly Streets Guide (Appendix D), and stop and station typologies developed in *Denver Moves: Transit Phase 2*
- Design and construction of speed and reliability and stop and station improvements along the High- and Medium-Capacity Transit Corridors in the interim until they are prioritized and funded for major capital investments
- Implementation of short-term projects that improve areas where transit operations are impacted by new development, traffic growth, or other system changes

### CAPITAL INVESTMENT CORRIDOR PROGRAM

Planning, design, and construction of one Medium- or High-Capacity Transit Corridor can take four to eight years—implementing transit capital investments at this pace will not help achieve Denver's mobility goals or allow transit to keep pace with growth.

The Capital Investment Corridor program is intended to advance multiple corridors simultaneously, using funding, staffing, and other supportive resources more efficiently. Work within this program will be closely coordinated with RTD and other partners. This program will be responsible for:

- Developing an implementation program that establishes project priorities and implementation schedule
- Pursuing funding mechanisms
- Advancing corridors through planning, design, and construction

### FREQUENT TRANSIT NETWORK PROGRAM

Managing and advancing the actions needed to achieve Denver's vision for more frequent service citywide through implementation of the FTN is the responsibility of the Frequent Transit Network Program. This supporting program will:

- Prioritize FTN corridor implementation, in coordination with transit capital investments
- Advocate for increased service on priority segments of the FTN
- Advance opportunities to contribute funds to deliver enhanced FTN service (e.g., "buying-up" service), depending on the progress of FTN implementation
- Develop service plans for any city-purchased service
- Evaluate RTD service changes and monitor delivery efforts

### OTHER TRANSIT PROGRAM SUPPORTING ACTIONS

- Programmatic action implementation, management, and partner coordination
- Program and project implementation progress tracking
- Other RTD project, process, and programmatic coordination and support needs



## COSTS AND FUNDING

*Denver Moves: Transit* establishes Denver’s transit vision, achieved through the phased implementation of near- and long-term transit capital and service improvements, and transit-supportive policy and programmatic actions, in coordination with partners. It is a financially unconstrained plan. These investments and actions vary in cost and level of investment, implementation resource needs, and partner roles.

Implementation costs for the *Denver Moves: Transit* actions, calculated during future planning phases and projects, will help guide the City’s prioritization and delivery of projects as well as identify internal and external resource needs. Implementation costs for transit capital investments will be defined during corridor studies and design projects; costs for transit service improvements and operations will be determined in coordination with RTD; and funding needs to implement programmatic actions will be determined by or in coordination with implementing partners. For planning purposes and to illustrate examples of transit capital costs, conceptual cost estimates were developed for the Transit Capital Investment Corridors as further discussed in this section and in Appendix D.

In addition to the funding and staffing resources provided by the City, participation and investments from partner agencies and organizations will be needed to support the implementation of the Transit Capital Investment Corridors, provide more frequent service along Denver’s Frequent Transit Network vision, and implement the various programmatic and policy actions. Local, regional, federal, and other partner funding resources can be leveraged to help implement *Denver Moves: Transit*; however, new funding strategies and resources will also be needed.

### WHAT IS A “LEVEL OF INVESTMENT”?

The types of improvements made along a corridor depend on characteristics including current and future land uses, the street space available, other uses of the street (e.g., bicycle facilities), and traffic volumes.

Figure 3-7 in Chapter 3 illustrates the range and type of capital investments in the three Transit Capital Investment Corridor types. For example, select stops along each type of corridor would likely include pedestrian and bicycle access improvements as well as standard passenger amenities. Higher-capacity corridors would have more capital investments such as exclusive transit lanes and enhanced stops and stations.

The level of investment along each corridor and at stops and stations will be further defined during *Denver Moves: Transit Phase 2* and in coordination with other City projects, including development of the street design guidelines. The *Denver Moves: Transit* corridor analysis, recommendations, and cost estimates are based on core transit and access improvements—future corridor studies and design projects may identify additional placemaking features and streetscape enhancements.

For more detail on specific capital improvements, such as dedicated bus lanes and stop and station enhancements, see the Transit-Friendly Streets Guide (Appendix D).



## Transit Capital Investment Corridors Estimated Implementation Costs and Level of Investments

For planning purposes and to help determine resource and funding needs and potential approaches to plan, design, and build the 158 miles of Transit Capital Investment Corridors (Figure 4-2), three examples of scalable conceptual cost estimate combinations were developed as shown in Figure 4-1. The cost estimates are shown in 2018 dollars and do not include maintenance and operations costs, which will be identified separately in coordination with RTD. Future corridor studies and design projects, expanding on the *Denver Moves: Transit* guiding framework, will provide a more in-depth evaluation of each corridor including development of detailed cost estimates for each corridor.

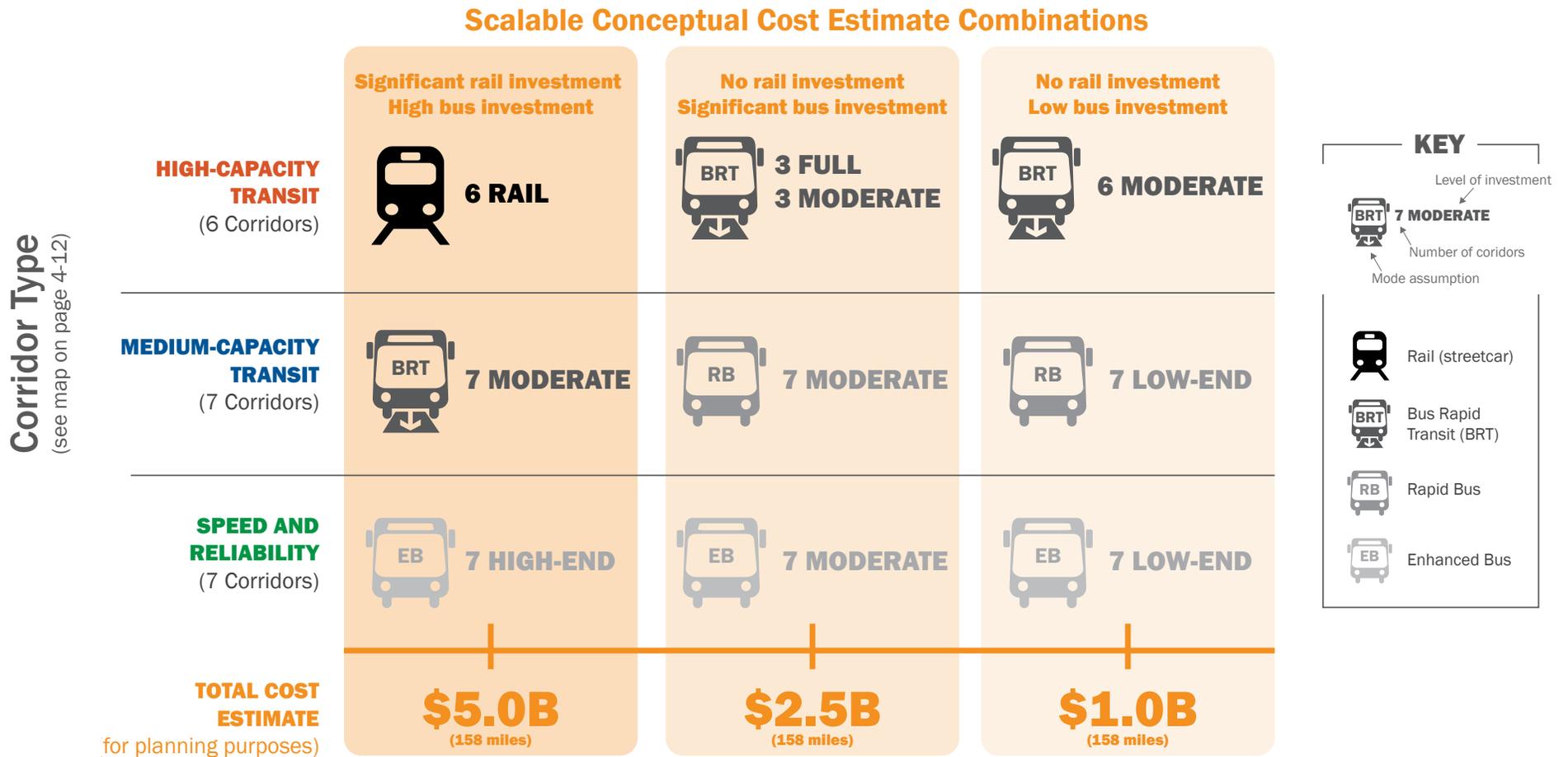
Developing potential combinations of different levels of capital investments is useful to identify approaches to guide project prioritization and implementation. For example, the left column of Figure 4-1 shows that if all of the High-Capacity Transit, Medium-Capacity Transit, and Speed and Reliability Corridors were implemented at the highest level of investment (rail, BRT, and enhanced bus, respectively), the total estimated cost is \$5 billion for 158 miles of transit capital investments in Denver. In comparison,

the right column shows that implementing the 158 miles of transit corridors with the lowest level of investment (BRT, rapid bus, and enhanced bus, respectively) for each corridor type would cost an estimated \$1 billion. Cost estimates ranges for each of the Transit Capital Investment Corridors are provided in the Transit-Friendly Streets Guide (Appendix D).

A build-out year for implementation of the Transit Capital Investment Corridors has not yet been established—as implementation priorities and resources are defined, beginning in *Denver Moves: Transit Phase 2*, the City will develop refined combinations of corridor investments and identify a timeline to implement the Transit Capital Investment Corridors in coordination with other projects and programs. As discussed in the Tracking Progress section at the end of this chapter, and supporting the *Blueprint Denver* goals and 20-year growth strategy, corridor implementation phasing will be guided by the goal to implement five High- or Medium-Capacity Transit Corridors in 20 years.

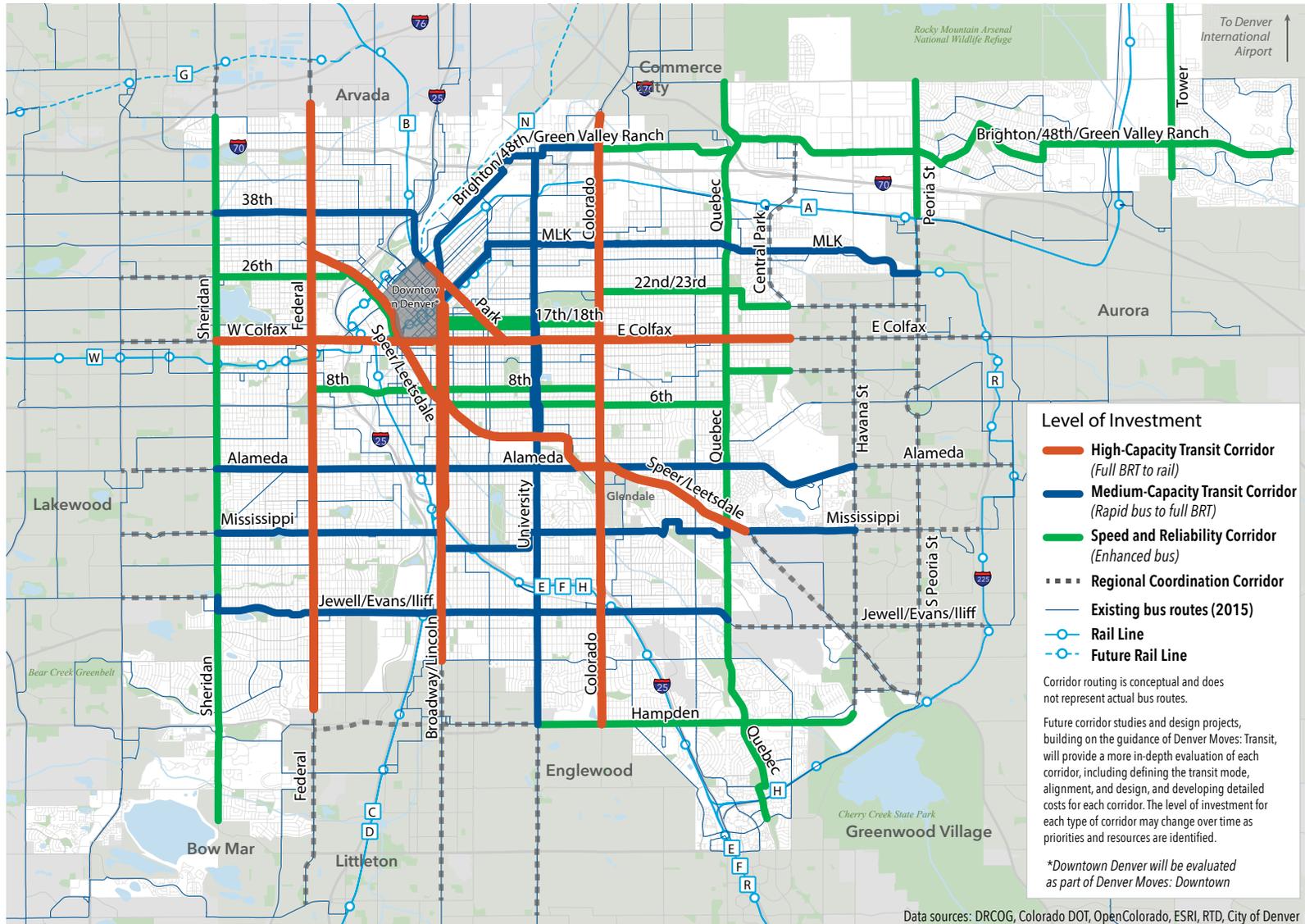


Figure 4-1 Transit Capital Investment Corridors Estimated Implementation Costs and Level of Investments



- Notes:
- Cost estimates are shown in 2018 dollars and are for planning purposes only. Estimates do not include maintenance and operations costs—costs will be determined during a future planning phase in coordination with RTD. The Peoria and Tower Speed and Reliability corridors were not included in these cost estimates - these corridors were identified during the Neighborhood Planning Initiative (NPI) and will be further evaluated during future corridor studies and design projects. High-Capacity Transit Corridors, particularly rail and full BRT, often include placemaking features and streetscape enhancements in addition to the core transit investments. For other types of corridor investments, additional placemaking features and streetscape enhancements are not included in the cost estimates shown, but may be identified through future corridor studies. The graphic illustrates example scalable investment combinations for each type of corridor. As priorities and resources are defined in *Denver Moves: Transit* Phase 2, the combinations of corridor investments will likely be refined. Future corridor studies and design projects, building on the guidance of *Denver Moves: Transit*, will provide a more in-depth evaluation of each corridor including defining the transit mode, alignment, and design and developing detailed costs for each corridor.
  - The map in Figure 4-2 identifies the Transit Capital Investment Corridors. Figure 4-3 defines the level of investment and cost assumptions used to calculate the estimates shown above. See Chapter 3 (page 3-20) for an illustration of the range of investments for each corridor type.
  - The Transit-Friendly Streets Guide (Appendix D) provides cost estimates for each of the Transit Capital Investment Corridors. The Guide also describes the various types of transit improvements in more detail.
  - There are 21 capital investment corridors. However, for cost estimation purposes, there is a total of 20 corridors in the above graphic. The Brighton portion of the Brighton/48th/Green Valley Ranch corridor is a Medium-Capacity Transit Corridor, while the remainder (east of Colorado) is a Speed & Reliability Corridor. The Peoria and Tower Speed and Reliability corridors were not included in the above graphic - these corridors were identified during the Neighborhood Planning Initiative (NPI) and will be further evaluated during future corridor studies and design projects.

Figure 4-2 Transit Capital Investment Corridors Map

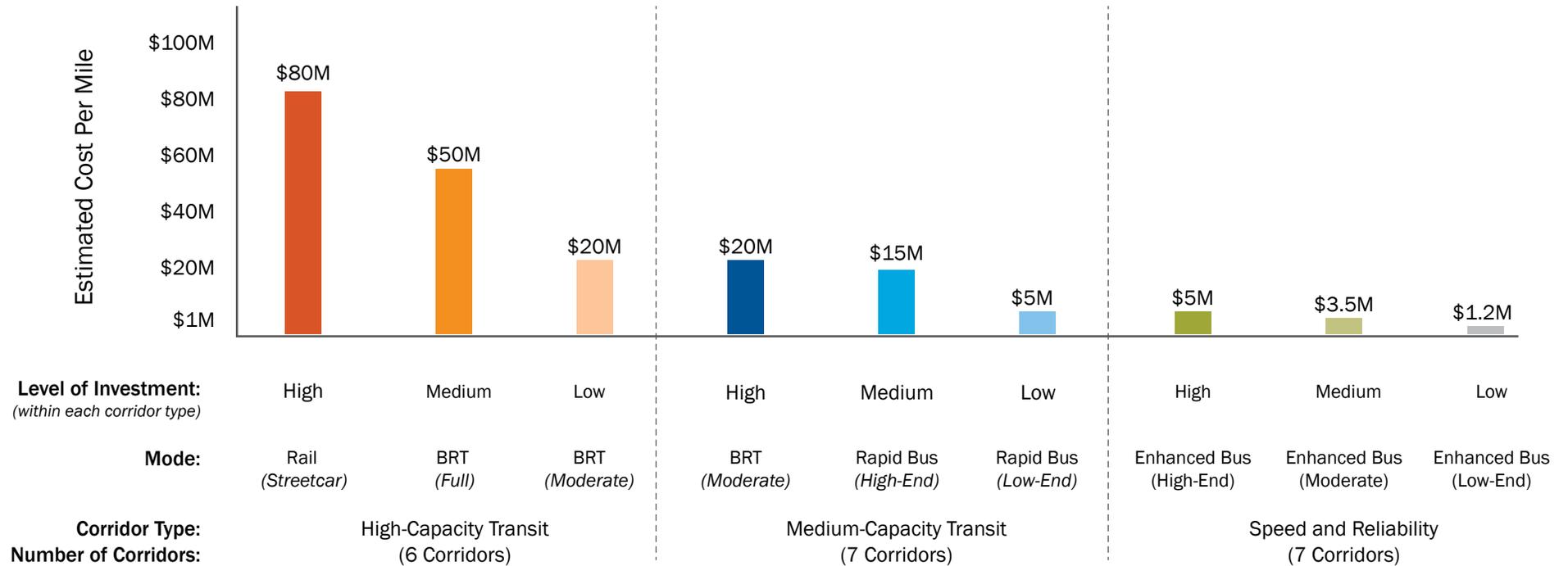


The existing local bus network and first and final mile services, as described in Big Move: Improve Access and Connections to Transit (Chapter 3), will be essential in connecting people to the Frequent Transit Network and Transit Capital Investment Corridors.

The conceptual estimated costs in Figure 4-1 were informed by the capital cost estimates per mile (2018 dollars) and mode assumptions shown in Figure 4-3. Since capital costs can vary widely depending on the mode, design, and individual needs and character of a corridor, a range of costs

is provided for a low-, medium-, and high-level of capital investment. For example, BRT could be implemented in a High-Capacity Transit Corridor with a low to medium level of investment (\$20-50 million per mile), while streetcar would require a higher level of investment (\$80 million per mile).

**Figure 4-3 Transit Capital Investment Corridors Implementation Cost Estimate Calculation Assumptions**



Notes:

- a. Per mile costs are shown in 2018 dollars and are for planning purposes only. Estimates do not include maintenance and operations costs—costs will be determined during a future planning phase in coordination with RTD. The Peoria and Tower Speed and Reliability corridors were not included in these cost estimates - these corridors were identified during the Neighborhood Planning Initiative (NPI) and will be further evaluated during future corridor studies and design projects. Future corridor studies and design projects, building on the guidance of *Denver Moves: Transit*, will provide a more in-depth evaluation of each corridor including defining the transit mode, alignment, and design and developing detailed costs for each corridor.
- b. Rapid Bus, BRT, and rail cost estimates are informed by past or current projects funded through Federal Transit Administration (FTA) programs. Enhanced bus estimates are based on conceptual quantities of improvements and unit costs (e.g., number of stops, traffic signal improvements, and bicycle/pedestrian features), as well as soft costs (e.g., design, administration, contingency).
- c. Cost estimates for rail and full BRT often include placemaking features and streetscape enhancements in addition to the core transit investments. For other modes (moderate BRT, rapid bus, and enhanced bus), additional placemaking features and streetscape enhancements are not included in the cost estimates shown, but may be identified through future corridor studies.
- d. Full BRT typically includes most features of rail, including full running way separation and a high-level of investment in placemaking features and streetscape enhancements.
- e. There are 19 capital investment corridors. However, for cost estimation purposes, there is a total of 20 corridors in the above graphic. The Brighton portion of the Brighton/48th/Green Valley Ranch corridor is a Medium-Capacity Transit Corridor, while the remainder (east of Colorado) is a Speed & Reliability Corridor. The Peoria and Tower Speed and Reliability corridors were not included in the above graphic - these corridors were identified during the Neighborhood Planning Initiative (NPI) and will be further evaluated during future corridor studies and design projects.

## Service Improvement Costs

As the next *Denver Moves: Transit* phases move forward, the City will continue to work with RTD to identify the transit service improvements needed to meet Denver’s goals to provide more high-quality, frequent, and reliable service. Capital investments provide multiple benefits, such as improving passenger comfort at transit stops and stations and enhancing access to transit, as well as improving transit reliability along Denver’s roadways. Improvements in transit reliability are not anticipated to increase transit operations costs; the City will work with RTD to calculate operational costs and estimate potential savings as transit capital investments are implemented.

Since most current RTD bus service in Denver does not meet the City’s FTN vision of providing all-day frequent service—with transit arriving every 15 minutes or sooner from 6 AM to 10 PM every day—it is anticipated additional funding will be needed to implement the FTN. The City will work with RTD to develop a phased implementation strategy for the FTN, including calculating the costs and resources needed to implement the FTN.

## Other Costs

Transit capital and service improvements are key components to develop a complete transit system—other key actions are also required to continue to grow and sustain an improved transit system in Denver, including maintenance, operations, and implementation of transit-supportive programmatic and policy actions.

- Costs for the maintenance and operation of capital investments and transit service along corridors in Denver are not included in the Transit Capital Investment Corridor costs discussed previously—as implementation priorities are developed, the City will work with RTD to

identify the respective agency roles and determine costs for operations and maintenance of implemented *Denver Moves: Transit* improvements and investments.

- The City will play a key role in moving forward a number of the programmatic and policy actions discussed in Chapter 3; however, the full implementation of these actions will require coordination, investment, and participation from partners. Most programmatic actions will likely be initiated, funded, and/or managed by private or non-profit sector organizations. As programmatic action priorities are identified, costs to initiate and manage programmatic and policy actions will either be determined exclusively by partners or in coordination with the City in a future planning phase.



## Funding

Several City transit projects currently underway, in coordination with RTD, are funded through existing City sources such as the Capital Improvement Program (CIP), grants from RTD, and the GO Bond. To implement the recommended capital investments and service improvements needed to achieve the *Denver Moves: Transit* goals, partnerships with agencies (including RTD) and existing and new funding strategies and sources will be needed. Implementation of the High- and Medium-Capacity Transit Corridors is critical to supporting the city's 20-year growth strategy identified in *Blueprint Denver*.

The *Denver Moves: Transit* plan does not identify specific funding sources for capital improvements (e.g., enhanced stops, transit signal priority, pavement markings, improved pedestrian infrastructure) or service enhancements (e.g., improve service frequency and hours of operation), as those will be identified through other processes and future projects. However, there are a number of local, regional, state, and federal sources the City can leverage to fund the projects and programs included in the plan. Successful implementation of *Denver Moves: Transit* requires coordination, investments, and the participation of partners, including RTD and other local and regional agencies, advocacy and non-profit organizations, employers, and neighborhood organizations.



### DENVER'S COMPREHENSIVE PLAN 2040 GOALS AND POLICIES SUPPORTING FUNDING FOR TRANSIT

*Denver's Comprehensive Plan 2040* is the vision for Denver—guiding city leaders, institutions, and citizens to shape the city over the next 20 years. Composed of a vision framework and elements, the plan knits together a set of long-term, integrated goals that provide a guide for the future. *Denver Moves: Transit* benefits from and supports the *Comprehensive Plan's* vision and goals, including goals and policies regarding the need for multimodal funding:

**Goal:** Expand and improve funding options for multimodal infrastructure by:

- Exploring new funding tools that will enable increased investments in mobility projects and services, and
- Continuing to make significant increases in the City's annual budget allocation for capital investment in mobility and increasing budgets for maintenance and operations.

**Policy:** Develop a comprehensive funding approach to implementation of *Comprehensive Plan 2040*.

## TRACKING PROGRESS

The City's Transit Program, in coordination with partners including RTD, other City departments, and data resources, will report on *Denver Moves: Transit* implementation progress using the metrics listed on the following pages, including change in mode share and improved transit access and performance. The City will use both qualitative and quantitative metrics to track progress toward achieving Denver's transit vision and to guide future transit investments. Metrics may be created or modified during *Denver Moves: Transit* Phase 2 and future planning phases as implementation details and priorities, such as stop and station typologies, are further defined. The initial metrics were based on peer city examples, industry best practices, and City goals, and were also informed by the *Denver Moves: Transit* Task Force.

### Citywide- vs. Project-Level Metrics

The metrics on the following pages reflect those changes and benefits that can be measured at a citywide level. Since most of the capital and service improvements are anticipated to be implemented on a project-by-project basis, additional metrics defined in *Denver Moves: Transit* Phase 2 are intended to be measured and reported at the project level.

Moving forward, incorporating elements from *Denver Moves: Transit* in public and private projects ensures that corridor and stop and station improvement projects include transit improvements (e.g., transit signal priority, bulb outs), amenities (e.g., shelters, rider information), and multimodal connections (e.g., complete sidewalks, safe crossings) whenever feasible. The resulting benefits of these improvements will be reported on an individual project or corridor basis and reflected through citywide metrics when feasible.



**Collecting data demonstrates project benefits and can be used to build momentum and a strong case for future work, especially if outcomes that improve safety and mobility or make transit easier and more cost effective to operate.**



- National Association of City Transportation Officials (NACTO)



**SUPPORTING CITYWIDE GOALS AND INITIATIVES**

Investing in and improving the transit system in Denver will help to support and to achieve many other citywide mobility, economic, and environmental goals and initiatives. The City's Transit Program will coordinate with and inform other citywide efforts, including the following:



Increase transit commute trips and reduce single-occupant commute trips to support the City's mobility goals as well as Denver's *80x50 Climate Action Plan* goal to reduce greenhouse gas emissions.



Apply safe access and connections to transit to support *Denver's Vision Zero* goal to reduce traffic-related deaths and serious injuries.



Implement high-quality and frequent transit investments citywide to support the 20-year land use vision described in *Blueprint Denver* and to reinforce the importance of access between transit and housing as defined in *Housing an Inclusive Denver*.



Increase transit service and investments in Denver to support the *Comprehensive Plan 2040* goal of reducing the amount of cost-burdened households (percent of Denver households who spend more than 45% of their income on housing and transportation costs).

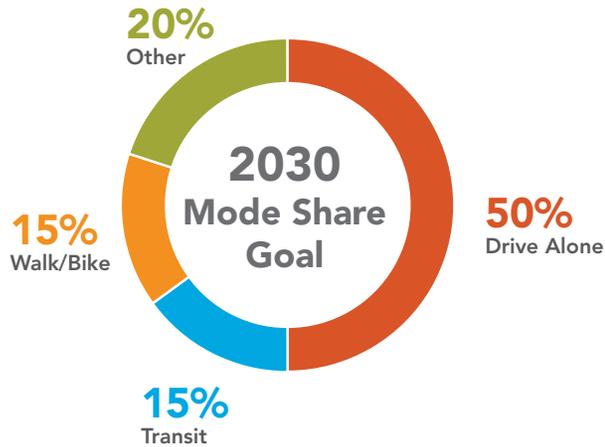
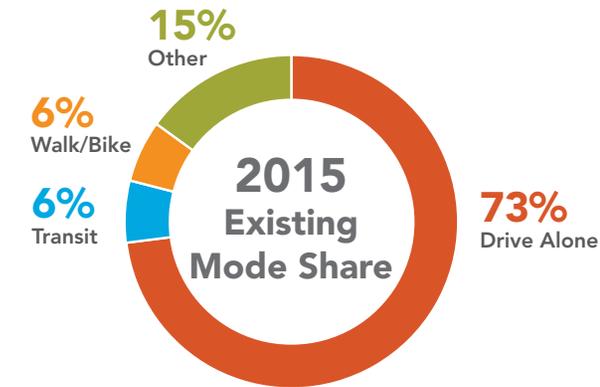


Increase access and connections to transit by implementing *Denver Moves: Pedestrians and Trails'* actions to complete sidewalks connecting to transit stops and stations and complete missing sidewalks along prioritized tiers (including high-frequency transit).

## Key Metrics

### Transit Trips (Mode Share)

#### INCREASE TRANSIT COMMUTE TRIPS



Source: U.S. Census American Community Survey, 2016 1-Year Estimate

#### INCREASE ALL TYPES OF TRIPS ON TRANSIT



In 2015, 5% of all trips\* within Denver are on transit. In 2040, 10% of all trips in Denver are on transit.

\* Blueprint Denver Community Profile, 2016. Data Source: DRCOG Front Range Travel Counts, 2009-2010

Source: RTD On-board survey and DRCOG Travel Demand Model

Metrics may be created or modified during Denver Moves: Transit Phase 2 and future planning phases as implementation details and priorities are further defined.



## Transit Ridership

## INCREASE TRANSIT RIDERSHIP IN DENVER



In **2017**, there are **210,000** average daily weekday boardings at bus stops and rail stations in Denver

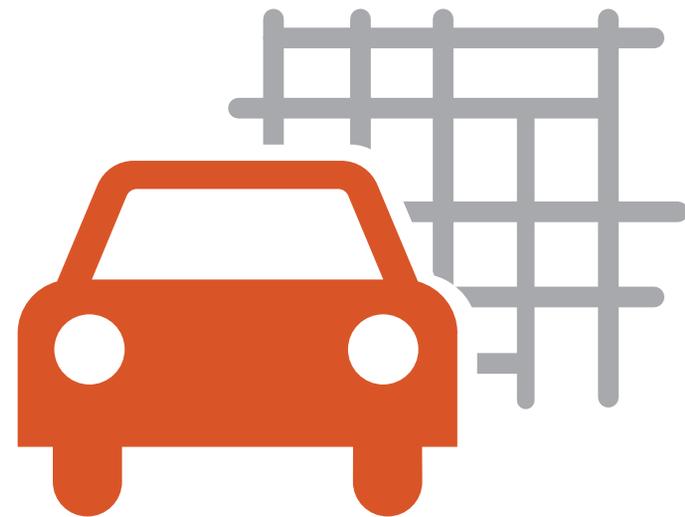
Ridership data collection and reporting schedule will be defined in *Denver Moves: Transit Phase 2*.

Source: RTD (August – December 2017)

Metrics may be created or modified during *Denver Moves: Transit Phase 2* and future planning phases as implementation details and priorities are further defined.

## Vehicle Miles Traveled (VMT)

## REDUCE VEHICLE MILES TRAVELED IN DENVER



In **2015**, there are **16.5M** vehicle miles traveled in Denver.

VMT data collection and reporting schedule will be defined in *Denver Moves: Transit Phase 2*.

Source : DRCOG

## Transit Service and Performance

### INCREASE THE NUMBER OF CORRIDORS THAT MEET THE CITY'S FREQUENT TRANSIT NETWORK STANDARD\*



In 2018, only **3 bus routes (0, 15, 16)** and the combined **Southwest (C, D) and Southeast (E, F, H) rail lines** meet the FTN standard. **By 2040, 75%** of the FTN corridors meet the minimum FTN standard.

\*Denver's FTN Standard: Transit arrives every 15 minutes or less, 6 AM to 10 PM, 7 days a week. Days/times where the above bus routes and rail lines fall short of the standard include: Route 0 does not begin 15-minute service until 7 AM on Saturdays and 9 AM on Sundays, and transitions to 30-minute service after 8:30 PM on Sundays. The C and D lines transition to 30-minute service after 9:30 PM on both weekdays and weekends.

Source: CCD, RTD

Metrics may be created or modified during Denver Moves: Transit Phase 2 and future planning phases as implementation details and priorities are further defined.

### PERCENT CHANGE IN TRANSIT TRAVEL SPEED ON THE FTN AND CAPITAL INVESTMENT CORRIDORS IN DENVER



Transit travel speed data collection and reporting timelines will be defined in *Denver Moves: Transit Phase 2*.

Source: RTD



## Access to Transit

## ACCESS TO THE FREQUENT TRANSIT NETWORK



## HOUSEHOLDS AND JOBS

In 2015, **25%** of households and **47%** of jobs are within  $\frac{1}{4}$  mile (10-minute average walk) of bus routes that meet the City's FTN standard and  $\frac{1}{2}$  mile of enhanced stops/stations.\* **By 2040, 75%** of households and jobs are within  $\frac{1}{4}$  mile (10-minute average walk) of the FTN and  $\frac{1}{2}$  mile from enhanced stops/stations.

Source: DRCOG, 2015

\* In 2018, only three bus routes (0, 15, 16) meet the City's FTN standard. Existing enhanced stops/stations include all rail stations.

Metrics may be created or modified during Denver Moves: Transit Phase 2 and future planning phases as implementation details and priorities are further defined.

## LOW-INCOME RESIDENTS

In 2015, **23%** of low-income residents live within  $\frac{1}{4}$  mile of bus routes that meet the City's FTN standard and  $\frac{1}{2}$  mile of enhanced stops/stations.\* **By 2040, 40%** of low-income residents live within  $\frac{1}{4}$  mile from the FTN and  $\frac{1}{2}$  mile of enhanced stops/stations.

Source: American Community Survey, 2011-2015 5-Year Estimates

## OLDER ADULTS

In 2015, **16%** of older adults live within  $\frac{1}{4}$  mile of bus routes that meet the City's FTN standard and  $\frac{1}{2}$  mile of enhanced stops/stations.\* **By 2040, 40%** of older adults live within  $\frac{1}{4}$  mile from the FTN and  $\frac{1}{2}$  mile of enhanced stops/stations.

Source: American Community Survey, 2011-2015 5-Year Estimates

## Corridor Implementation

### IMPLEMENTATION OF THE HIGH- AND MEDIUM-CAPACITY TRANSIT CORRIDORS



In **2018**, planning and design for one High-Capacity Transit Corridor (**East Colfax**) is underway. **By 2040**, implement **five** High- or Medium-Capacity Transit Corridors.

Source: CCD, RTD

*Metrics may be created or modified during Denver Moves: Transit Phase 2 and future planning phases as implementation details and priorities are further defined.*



### IMPLEMENTATION OF SPEED AND RELIABILITY CORRIDORS

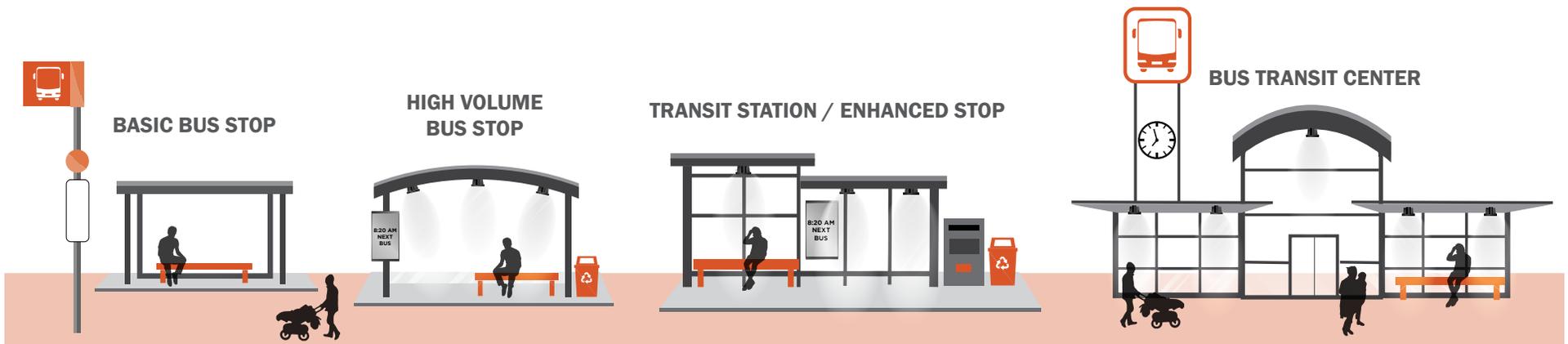


In **2018**, the City and RTD developed a Speed and Reliability and Stop/Station Improvements implementation process. **Broadway/Lincoln, 18th/19th, and Federal** are examples of speed and reliability corridors already underway. **By 2040**, implement **ten** Speed and Reliability Corridors.

Source: CCD, RTD

## Stop and Station Enhancements

### INCREASE NUMBER OF ENHANCED STOPS AND STATIONS IN DENVER



Example transit stops/stations for illustrative purposes only—Denver’s stop and station typologies will be defined in *Denver Moves: Transit Phase 2*.

In 2015, approximately **25% of bus stops** in Denver with at least 40 daily boardings (125 out of 500 stops) have a shelter. There are over **3,000 total bus stops** in Denver.

Stop and station enhancement metrics will be informed by the development of stop and station typologies (e.g., shelters, real-time information) defined during *Denver Moves: Transit Phase 2*.

Source: CCD, RTD

Note: Does not include shelters that are not maintained by RTD.

Metrics may be created or modified during *Denver Moves: Transit Phase 2* and future planning phases as implementation details and priorities are further defined.

## NEXT STEPS

As implementation of the *Denver Moves: Transit* strategies and actions begins, there remains much work to be done. The City's Transit Program is envisioned to lead many of the next steps, with the support of RTD and other agency and community partners.

The community played an important role in shaping *Denver Moves: Transit*, and there are opportunities to stay involved. The next phases of *Denver Moves: Transit* will be connected with ongoing neighborhood planning efforts and corridor studies that offer more avenues for public feedback. The City will continue to work closely with community members to help make transit a first choice of travel for more trips in Denver.

