EAST AREA PLAN
DRAFT RECOMMENDATIONS:
MOBILITY
OCTOBER 2019
INTRODUCTION

WHY IS IT IMPORTANT?

East Area residents rely on mobility infrastructure to reach their destinations, and demand networks that prioritize pedestrians in alignment with the community vision outlined in this plan. Nearly every resident walks or rolls at some point in their day, while others choose different transportation modes to get around. The East Area features diverse development patterns varying significantly from neighborhood-to-neighborhood and are generally older to the west and newer to the east. The older neighborhoods developed prior to the proliferation of the personal automobile and exhibit transportation, density, and land use mixes that better support a car-optional lifestyle. The newer neighborhoods developed afterwards and lack crucial mobility infrastructure like sidewalks and street crossings. The East area’s transportation and mobility networks will continue to improve with projects such as the Bus Rapid Transit (BRT) on Colfax, multimodal improvements to Quebec St., and will serve a central role in accomplishing the City’s Mobility Action Plan, as well as additional citywide goals.

EAST NEIGHBORHOODS MODE SPLIT

The East Area NPI planning process began with Blueprint Denver’s Vision Statements and crafted area-specific vision statements with neighborhood and steering committee input. The following 2040 East Area Community Vision Statements will guide future efforts and tradeoff discussions:

Well Connected, Safe and Accessible Places – In 2040, East area residents, employees, and visitors enjoy walking, biking, and taking transit on well-maintained streets that equitably serve the neighborhood. Everyone, including children, seniors, and people with disabilities, have safe and convenient options to get to work, go shopping, or visit a park in the area. Prioritized investment around transit stops, schools, and other areas of need has resulted in a comprehensive pedestrian network with sidewalks and crossings on all streets that are safe, accessible, and well-maintained. Bulb outs and signalized, well demarcated crossings provide convenient connections across major streets and the areas protected bike lanes are filled with children riding to school each day. Reliable, frequent, and affordable transit serves the entire area, and well-maintained transit stops are easy to access and provide a comfortable place to wait. People can meet their daily needs without a car, and driving is much less frequent compared to decades past, and parking lots don’t take up nearly as much of the landscape as they once did. Since redesigning streets for walking, bicycling, and transit, traffic injuries and fatalities, which once tragically plagued the area, are now a distant memory.

Source: Tefft, Brian C. Impact speed and a pedestrian’s risk of severe injury or death. Accident Analysis & Prevention. 50. 2013.
HIGH INJURY NETWORK STREET SEGMENTS
ALL CRASHES

Legend
- Plan Area Boundary
- Neighborhood Boundary
- Parks and Open Space

# Crashes - All Modes

- 1
- 2 - 5
- 5+ >
- 16 - 80

East Area Plan | Mobility DRAFT OCT 2019
RECOMMENDATIONS OVERVIEW

Recommendations include the project’s extent, need, types of potential treatments, and implementation timeframe. Priority locations were identified through a project screening process which assessed the following items, listed in no particular order:

- Alignment with East Area Plan mission and guiding principles
- Previous plan(s) recommendations
- Public/Stakeholder project or need
- Project focus group priority
- Mayor’s Mobility Action Plan Goals including mode share and safety
- Safety and Equity (High Injury Network, Communities Of Concern)
- Proximity to current and future places (Blueprint Denver)
- Proximity to a transit stop
- Implementation feasibility and impacts
- Geographic equity
- Alignment with other group recommendations
TRANSFORMATIVE STREETS TYPOLOGIES

Transformative Streets prioritize multimodal facilities and safety, while creating more mobility choices and better regional and neighborhood connections.

Bike Priority
Streets designed to provide increased separation from traffic for people riding bikes with intersections that reduce conflict between bicycles and vehicles.

*Photo: 14th Street, Denver*

Transit Priority
Streets designed to improve transit frequency, transit capacity, and provide enhanced stop amenities. Pedestrian and bicycle connections to and from transit are also included.

*Photo: UPDATE LOCATION SOURCE*

Pedestrian Priority
Streets that provide a safe, comfortable, and interesting walking experience through additional pedestrian crossings and reduced crossing distances, wider sidewalks, and safer crossings.

*Photo: UPDATE LOCATION SOURCE*
RECOMMENDATIONS

TRANSFORMATIVE STREETS

Create bold changes to the mobility system by repurposing street space along key corridors to prioritize walking, biking, rolling and transit.

Of the four streets within the area identified as part of Denver’s HIN, the East Area has a higher percentage of crashes involving pedestrians, people riding bikes and vehicles compared to the citywide HIN average. Community members expressed concerns regarding safety and comfort, gaps in the sidewalk and bike network, and the need for access to high quality mobility options. Every transformative street strategy described below is a priority of the mobility section as they have the greatest potential to improve safety and meet plan goals.

Below are key strategies to make it easier and safer for people to walk, bike, and roll or take transit to regional and neighborhood destinations and to reduce the percent of residents citywide driving alone to work. Short-term strategies are generally defined as a project that can be implemented within 0-5 years and costs less than $500,000. Long-term strategies are roughly defined as a project that takes at least 5 years and costs at least $500,000. Long-term projects are recommended to occur post-planned Colfax BRT implementation.

A. Colfax Avenue
   > Interim
   • Improve intersections and crossings at high crash and high community priority intersection along Colfax through the Vision Zero Program.

   > Short-Term
   • Conduct next phase of study and design to advance the vision of center-running bus rapid transit (BRT) and a high-quality pedestrian environment from Colfax Corridor Connections 10% design project.
   • Identify funding opportunities to build full center-running BRT vision for corridor.
   • Implement locally preferred alternative for Colfax corridor, including center-running bus rapid transit (BRT), improved pedestrian, cyclist, and driver safety at intersections, and a beautifed corridor featuring a high-quality pedestrian space and placemaking opportunities.

B. 6th Avenue Parkway Between Colorado and Uinta Also see Quality of Life Infrastructure improvements.
   > Short-Term
   • Provide transit speed and reliability improvements at key locations and stop amenities.
   • Study the feasibility of closing select access points across the parkway to

WHY ARE TRANSFORMATIVE STREETS IMPORTANT?
- Key multimodal connections linking existing and planned centers and destinations
- Part of the High Injury Network (HIN), Communities of Concern (CoC), and/or has a high number of pedestrian and bicycle related crashes
- Identified by community members as streets with vehicular speeding and cut through issues

WHY IS COLFAK AVE IMPORTANT?
- Transit Capital Investment Corridor with several high ridership transit stops
- Planned transit and pedestrian improvements
- Supported by Denver Moves: Transit

WHY IS 6TH AVE IMPORTANT?
- Transit Capital Investment Corridor
- Street segments with greater than ¼ mile between traffic signals
- Supported by Denver Moves: Transit and BluePrint Denver
Create bold changes to the mobility system by repurposing street space along key corridors to prioritize walking, biking, rolling and transit.

automobile through-traffic.

• Create a high-quality pedestrian space with reduced crossing distances, new crossings and operational improvements

› Long-Term
  • Install a protected bike lane
  • Study the feasibility of installing a multiuse path within the parkway

C. 13th Avenue

› Short-Term
  • Create a high-quality pedestrian space with reduced crossing distances, new crossings and operational improvements
  • Evaluate street lighting
  • Coordinate with Quebec St. project to improve bicycle and pedestrian crossings
  • Implement low-cost, effective safety improvements at high-need intersections

› Long-Term
  • Study permanent safety improvements along the corridor including, but not limited to, road diets and the feasibility of converting from one-way to two-way as part of a citywide one-way couplet study

D. 14th Avenue

› Short-Term
  • Create a high-quality pedestrian space with reduced crossing distances, new crossings and operational improvements
  • Coordinate with Quebec St. project to improve bicycle and pedestrian crossings
  • Implement low-cost, effective safety improvements at high-need intersections

› Long-Term
  • Study feasibility of installing a protected bike lane

WHY IS 13TH AVE IMPORTANT?
• Recent roadway, bicycle and pedestrian safety improvements near Yosemite St. (Vision Zero)
• Street segments with greater than ¼ mile between traffic signals

WHY IS 14TH AVE IMPORTANT?
• Street segments with greater than ¼ mile between traffic signals

The 14th street protected bike lane is a precedent in Downtown Denver.
RECOMMENDATIONS

TRANSFORMATIVE STREETS

Create bold changes to the mobility system by repurposing street space along key corridors to prioritize walking, biking, rolling and transit.

- Study permanent safety improvements along the corridor including, but not limited to, road diets and the feasibility of converting from one-way to two-way as part of a citywide one-way couplet study.

E. 17th Avenue Parkway Between Colorado and Monaco

Also see Quality of Life Infrastructure improvements.

› Short-Term
- Provide a safer and more comfortable bike and pedestrian crossing across Colorado Boulevard to/from City Park
- Install a protected bike lane, and coordinate with Parks & Rec and CPD to ensure design matches historic parkway’s character
- Create a high-quality pedestrian space with reduced crossing distances, new crossings and operational improvements
- Study the feasibility of closing north/south access across the parkway to automobile through-traffic at certain intersections
- Coordinate with Quebec St. project to improve bicycle and pedestrian crossings

› Long-Term
- Study the feasibility of installing a multiuse path within the parkway

F. 23rd Avenue Between Colorado and Quebec

› Short-Term
- Improve transit speed and reliability & add amenities at stops.
- Create a high-quality pedestrian space with reduced crossing distances, new crossings and operational improvements
- Extend conventional bike lane east to Central Park Blvd.
- Coordinate with Quebec St. project to improve bicycle and pedestrian crossings

WHY IS 17TH AVE IMPORTANT?
- Street segments with greater than ¼ mile between traffic signals
- Supported by Denver Moves: Bikes and BluePrint Denver

WHY IS 23RD AVE IMPORTANT?
- Street segments with greater than ¼ mile between traffic signals
- Transit Capital Investment Corridor
- Supported by Denver Moves: Transit and BluePrint Denver
Create bold changes to the mobility system by repurposing street space along key corridors to prioritize walking, biking, rolling and transit.

**POLICY**

G. Colorado Boulevard

- **Short-Term**
  - Provide transit speed and reliability improvements and customer amenities at stops
  - Improve pedestrian safety with reduced crossing distances, new crossings and operational improvements. High priority locations are 17th, Colfax, 13th, 12th, and 9th Avenue crossings.
  - Conduct a corridor study to determine the multimodal vision for the corridor, including pedestrian, bicycle, and transit improvements such as BRT

- **Long-Term**
  - Implement findings of corridor study
  - Provide high capacity transit service via speed and reliability improvements, increased frequency and expanded hours of service, dedicated travel lanes, and customer amenities at stops
  - Create a greater separation between the sidewalk and the roadway

H. Monaco Parkway Between

Also see Quality of Life Infrastructure improvements.

- **Short-Term**
  - Create a high-quality pedestrian space with reduced crossing distances, new crossings and operational improvements
  - Study the feasibility of closing access across the parkway to automobile through-traffic at select intersections.

**STRATEGIES**

**WHY IS COLORADO BLVD IMPORTANT?**

- Street segments with greater than ¼ mile between traffic signals
- Transit Capital Investment Corridor
- Supported by Denver Moves: Transit, BluePrint Denver, Denver Strategic Transportation Plan, and City Park Master Plan

**WHY IS MONACO PKWY IMPORTANT?**

- Street segments with greater than ¼ mile between traffic signals
- Supported by Denver Moves: Bikes, BluePrint Denver, and Colfax Multimodal Access Study
Create bold changes to the mobility system by repurposing street space along key corridors to prioritize walking, biking, rolling and transit.

POLICY

- Long-Term
  - Study the feasibility of installing a protected bike lane.
  - Study the feasibility of installing a multiuse path within the parkway

I. Quebec Street

- Short-Term
  - Implement pedestrian and transit speed and reliability improvements, such as installing new sidewalks and bus shelters, to create a high-quality pedestrian environment and facilitate connections to transit
  - Create a high-quality pedestrian space with new sidewalks, reduced crossing distances, new crossings and operational improvements

- Long-Term
  - Complete transit speed and reliability improvements for entire corridor as outlined in Denver Moves Transit.

J. Montview Boulevard

- Short-Term
  - Create a high-quality pedestrian space with reduced crossing distances, new crossings and operational improvements
  - Coordinate with Quebec St. project to improve bicycle and pedestrian crossings

- Long-Term
  - Study the feasibility of upgrading conventional bike lanes to a high-comfort bikeway

WHY IS QUEBEC ST IMPORTANT?

- Transit Capital Investment Corridor
- Planned roadway, transit, and pedestrian improvements
- Street segments with greater than ¼ mile between traffic signals
- Identified by community members as a priority for pedestrian improvements
- Supported by Denver Moves Transit, BluePrint Denver, and Quebec Street Multimodal Improvement Project

WHY IS MONTVIEW BLVD IMPORTANT?

- Greatest distances between traffic signals than any other transformative street
- Supported by City Park Master Plan
Create bold changes to the mobility system by repurposing street space along key corridors to prioritize walking, biking, rolling and transit.

K. Hale Parkway Between Colorado and Grape St./8th Ave Also see Quality of Life Infrastructure improvements.
   - Short-Term
     - Connect to 12th Ave. neighborhood bikeway improvements
     - Assemble funding package to build out vision from Hale Parkway Project including improvements such as new trails, crossings, intersections, and river channel naturalization to help with flood mitigation. See Quality of Life Section
   - Long-Term
     - Create a high-quality pedestrian space with reduced crossing distances, new crossings and operational improvements

WHY IS HALE PKWY IMPORTANT?
- Supported by Denver Moves: Bikes and BluePrint Denver
- Supported by recent comprehensive study

Case Study:
Seattle Department of Transportation
Dexter Avenue

During a scheduled resurfacing project of 1.5 miles of Dexter Avenue, the Seattle Department of Transportation reimagined the street to improve transit and bike safety and operations. Key features included installation of buffered bike lanes, 10 dedicated transit islands, enhanced customer amenities at stops and improved street crossings and full ADA accessibility. Since implementation, bus boardings have increased 23% with no change in vehicular travel time. A 19% drop in collisions has occurred.
BICYCLE NETWORK: EXISTING, PLANNED, AND NEW RECOMMENDATIONS

Legend
- City of Denver
- City of Aurora
- City of Lakewood
- Neighborhood Bikeway
- Trail
- Buffer
deln
- Park
- Shared Roadway
- Existing
- Planned
- NPI Recommended High Comfort Bikeway
- NPI Proposed Neighborhood Bikeway (type of high comfort bikeway)

*Future study and outreach will determine and confirm bikeway type.
DENVER MOVES: BIKES TYPOLOGIES

High comfort bikeways are safe and comfortable spaces designated for bicyclists through pavement markings and/or a separated path. Intersections are designed to reduce conflict between bicyclists and vehicles by improving visibility and marking space in the right-of-way for cyclists. *(Primary Source: Denver Bikeway Design Guidelines)*

01 Neighborhood Bikeway
Low-volume, low-speed streets modified to enhance bicycle safety and comfort and act as shared streets. Design treatments include signage, pavement markings, speed and/or volume reduction features, and crossing improvements. *(Photo: Shared Neighborhood Bikeway, NACTO.org)*

02 Protected Bikeway
An exclusive bike facility with a path physically separated from motor traffic and distinct from the sidewalk. Intersections are designed for safety and facilitate left-turns for bicyclists. *(Photo: Protected Bike Lane, Source: www.kimley-horn.com)*

03 Bike Lane
Exclusive space for bicycles noted by pavement markings and signage (without buffers or barriers to separate from traffic).

04 Buffered Bike Lane
Traditional bike lane separated by painted buffer from vehicle traffic lanes and/or parking. Intersections are designed for safety.

05 Trail/Shared Use Path
Completely separated from roadway and typically shared with pedestrians.
RECOMMENDATIONS

HIGH COMFORT BIKEWAYS

ADOPT, UPGRADE, AND INSTALL PLANNED DENVER MOVES: BIKEWAYS

The East Area’s bike network consists of four miles of separated bike lanes. Denver Moves: Bikes outlines plans for over eleven miles of separated bikeways and less than one mile of protected bikeways. East Area neighborhoods prioritize investments in new high comfort bikeways and provided a clear direction to enhance and expand the current bicycle network. Based on a review of the planned bikeways in Denver Moves: Bikes as they relate to the current network, this plan provides greater detail to the bikeway routing and infrastructure and upgrades to previously identified routes. Below are key strategies including modifications to Denver Moves: Bikes recommendations in the East Area to respond to the community’s concerns and key findings.

WHY IS IT IMPORTANT?

These recommendations provide additional comfort and safety to planned Denver Moves: Bikes.

A. Study the feasibility of upgrading Denver Moves: Bikes recommendation to a protected bike lane on Monaco Parkway. Also see Quality of Life Infrastructure improvements.

B. Upgrade Denver Moves: Bikes recommendation to a protected bike lane on 17th Avenue between Colorado and Monaco and a high comfort bikeway on 17th Avenue between Monaco and Yosemite. Also see Quality of Life Infrastructure improvements.

C. Install Denver Moves: Bikes recommendation of neighborhood bikeway on 12th Avenue. Also see Quality of Life Infrastructure improvements.

D. Install Denver Moves: Bikes recommendation of a neighborhood bikeway along Kearney/Krameria Streets

E. Install Denver Moves: Bikes recommendation of a neighborhood bikeway along Cherry/Clermont Streets

F. Upgrade Denver Moves: Bikes recommendation of a neighborhood bikeway along Hale Parkway
Install New Bikeways Not Previously Identified in Denver Moves: Bikes

Biking in the East Area is more hazardous than Denver citywide, as the area experiences a more frequent occurrence of bicycle-related crashes on streets not identified as HIN. Key connections to certain local and regional destinations do not currently exist. East Area neighborhoods prioritize investments in high comfort bikeways and provided a clear direction to expand the bicycle network and improve bikeways where necessary. Based on a review of network gaps and possible enhancements to current bikeways, this plan builds upon recommendations in Denver Moves: Bikes to provide greater detail to the plans for bikeway routing and infrastructure. Below are key strategies to providing safe, comfortable and equitable bikeways for all ages and abilities that connect people to regional and neighborhood destinations.

A. Study the feasibility of a neighborhood bikeway on Holly Street between 17th and the Cherry Creek trail.
B. Extend the bike lane on 23rd Avenue between Kearny and Central Park.
C. Study the feasibility of installing a protected bike lane on 14th Avenue.
D. Install a protected bike lane on 6th Avenue Parkway between Colorado and Uinta.
E. Study the feasibility of installing a neighborhood bikeway on Oneida St.

Why Is It Important?

These recommendations build upon Denver Moves: Bikes and community feedback to create more comprehensive bike network coverage providing access and connections to key destinations.

Case Study:
City and County of Denver 14th Street Protected Bike Lane

In April 2015, City and County of Denver Public Works installed a parking protected bike lane on 14th Street between Market Street and Colfax Avenue. In order to provide a greater level of separation from vehicles, concrete curbs were installed. This high comfort bikeway filled a gap in the bikeway network while providing access and connections to key destinations.
EXISTING PEDESTRIAN CHALLENGES
Intersection safety improvements are proven to reduce pedestrian, bicyclist, and driver exposure to crashes. They include physical and operational improvements to increase visibility and safety at intersections.

**PHYSICAL IMPROVEMENTS**

01 **Bulbouts**

Extensions of the curb at intersections to improve visibility for pedestrians and drivers, reduce crossing distances, and slow vehicle traffic.

02 **Medians/Pedestrian Refuges**

Raised islands in the center of a street separating opposing lanes of traffic with curb ramps and cutouts at pedestrian access points. Medians slow vehicle traffic while providing safe refuge for pedestrians while crossing busier streets.

03 **Lane width reductions**

10 feet lanes are appropriate in urban East neighborhoods. Narrower lane widths help to reduce speed and shorten crossing distances for pedestrians.

04 **Lighting**

Improved lighting along sidewalks and at intersections helps increase visibility for all users/modes.

05 **Pavement markings**

Marked crossings or bike boxes at intersections help to denote space for all modes and improve safety.

03 **Raised crosswalks**

Marked crosswalks that are raised to slow driver turning speed and increase yielding compliance.
PEDESTRIAN IMPROVEMENTS, INTERSECTION SAFETY, AND NEW CROSSINGS

OPERATIONAL IMPROVEMENTS

01 Protected Turn Phasing
Protected right or left turn traffic signal phasing creates a separate phase for pedestrians and cyclists to cross the street vs vehicles turning. This eliminates conflicts between turning vehicles and people walking or biking.

02 Leading Pedestrian Intervals
Traffic signal timing that provides pedestrians and cyclists with a few seconds head start to cross the street before vehicles are given a green light. This increases visibility and reduces conflict of turning vehicles with people walking or biking.

03 Restricted Turns
Signs that prohibit vehicular left and/or right turns eliminates conflicts between turning vehicles and people walking, rolling, or biking – one of the most common types of crashes.

01 New Crossing Infrastructure
New installation of signs, markings, rapid flashing beacons, bike signals, pedestrian countdown signals, or traffic signals in locations that do not currently have a controlled crossing.

02 Automatic Crossing Infrastructure
Signals that automatically phase pedestrian crossing time or bicycle detection technology create easier crossings for pedestrians and cyclists.

03 Signal Coordination (Progression) or “Green Wave”
Traffic signals aligned to biking speeds reduce start and stop delay for cyclists and drivers traveling at slower, safer speeds.
Install new sidewalks.

Missing sidewalk connections and substandard sidewalks pose the greatest barrier to walkability and safety risk in the East area. The feedback received through this planning process emphasized that improving sidewalks and walkability is the top priority for East Area residents. To enable pedestrians to safely access their destinations, sidewalks must be installed in areas where they are missing and upgraded in areas where they are too narrow.

A. Fill network gaps with new sidewalks in all neighborhoods in the East Area in coordination with City standards
   - Interim sidewalk extensions and ADA treatments, such as painted sidewalk extensions, could preempt permanent sidewalks and ADA elements

B. Identify resources to augment Denver’s Sidewalk Gap Program to fund and implement sidewalk installation and widening.

WHY IS IT IMPORTANT?

- There are 186,245 feet of missing sidewalks in the East Area neighborhoods, with an average of 19 percent missing throughout the four neighborhoods.
- There are 392,957 feet of narrow sidewalks (width under four feet) in the East Area neighborhoods, with an average of 41 percent too narrow throughout the four neighborhoods.

Case Study:
City and County of Denver Walnut Street Corridor Improvements

Installed in 2017, quick and low cost improvements along Walnut Street between Broadway and 36th Street has helped define space for people to walk and prevent cars from entering areas designated for pedestrians. Using posts and curb stops, the interim approach has helped make the street safer and more walkable for people before a longer-term building of curb, gutter and sidewalks can be installed.
Install new safe and comfortable pedestrian and bicycle crossings.

Appropriate spacing between intersections is essential to pedestrian comfort and safety and in the East Area, there are 21 street segments where the distance between signalized crossings is so wide that it could encourage unsafe crossing behavior. East Area residents underlined pedestrian safety and comfort as one of their top priorities and cited the need for new bicycle and pedestrian crossings. By identifying areas where the distance between signalized intersections is greater than ¼ mile, these recommendations identify gaps that are recommended locations for new pedestrian and bicycle crossings. See Colfax specific recommendations for new safe and comfortable pedestrian and bicycle crossings.

Specific intersection locations are detailed by neighborhood in the Neighborhood Chapters (pg x).

Install safety improvements at existing intersections.

Many intersections in the East Area have a repeated pattern of crashes, including crashes that involve bicyclists and pedestrians. The safety at these intersections must be addressed to achieve Denver’s Vision Zero goal to eliminate traffic deaths and serious injuries on Denver’s streets. East Area residents prioritize pedestrian and bicycle safety improvements, especially at intersections that are difficult to cross and where crashes frequently occur. The following recommendations prioritize intersections for study, ultimately leading to geometric and operational improvements to increase pedestrian safety and visibility at intersections.

Specific intersection locations are detailed by neighborhood in the Neighborhood Chapters (pg x).

WHY IS IT IMPORTANT?

• These are areas where the distance between signalized crossings is greater than ¼ mile.

PERCENTAGE OF SIDEWALK NETWORK WITH MISSING, NARROW AND ATTACHED SIDEWALKS ALONG STREETS*

- Attached Sidewalks
- Narrow Sidewalks defined as sidewalks under 4 feet
- Missing Sidewalks

*Sidewalks along streets only. Does not include sidewalks within parks but includes sidewalks along park edges.

*Sidewalk only. Does not include crosswalks, other crossings, trails or walkways.
17TH AVE & COLORADO BLVD CONCEPTUAL SKETCH

- Install new bikeways not previously identified in Denver Moves: Bikes.
- Expand diversity of housing types.
- High capacity transit along Colorado Blvd.
- Increase tree canopy in right-of-way.
- Install new safe and comfortable pedestrian and bicycle crossings.
- Increase pervious surface coverage with natural green infrastructure systems.
- Provide better pedestrian and bicycle connections to resources and community amenities.
TRANSIT AND MOBILITY HUBS EXISTING CONDITIONS
RECOMMENDATIONS

TRANSIT AND MOBILITY HUBS

Adopt and prioritize transit along corridors in East

The current bus routes in the neighborhood are largely on a grid network, providing the opportunity for predictable, rapid service and convenient transfers. This strong foundation for transit provides an opportunity to increase the transit ridership to reach or exceed the mode shift goal outlined in the Mobility Action Plan. The community cited network gaps, high transit fares, and transit speed and reliability as areas where the transit system needs improvements in the East Central Area. While RTD manages most operations of the public transit in Denver, there are many strategies CCD can employ to improve transit speeds and reliability while reducing delay, such as boarding islands and bus bulbs, dedicated bus lanes, signal priority, and queue jumps. As recommended in Denver Moves: Transit, this plan will support the establishment of the City’s Frequent Transit Network (FTN) supporting program to prioritize and implement the FTN, in coordination with RTD. In addition, Denver can coordinate with RTD to recommend operations improvements, such as bus frequency and stop placement. A study identifying potential treatments at each of the priority locations listed below is recommended.

Priority Transit Corridor Improvements:

A. Implement high capacity transit (Full BRT to rail)
   • Colorado Boulevard. Also see Quality of Life Infrastructure improvements.

B. Implement medium capacity transit (Rapid Bus to full BRT)
   • 6th Avenue Parkway Between Colorado and Quebec. Also see Quality of Life Infrastructure improvements
   • 23rd Avenue Between Colorado and Quebec.
   • Quebec Street.
   • Yosemite Street.

C. Implement speed and reliability improvements (Enhanced Bus)
   • 6th Avenue between Colorado and Quebec
   • 22nd/23rd Ave.
   • Quebec Street.

WHY IS IT IMPORTANT?

• These corridors were identified through an analysis of gaps in the transit network and a review of Denver Moves: Transit of corridors where improved transit should be prioritized.

Case Study:

City of Chicago Bus Priority Zones Project

In order to improve slow bus speeds, prioritize transit along key corridors, and increase transit ridership, the City of Chicago initiated a $5 million project to unclog bus slow zones at bottlenecks and pinch points around the city with the goal of improving service along entire bus routes. Treatments include dedicated bus lanes, queue jump stops, transit signal priority, relocating bus stops, reconfiguring complex intersections, and pedestrian safety infrastructure. The first phase of the project includes improvements along three streets with high ridership bus routes and at two critical intersections.

Photo Source: Streetsblog Chicago
MOBILITY HUBS

(Primary Source: RTD Mobility Hub Guidelines, January 2019 *not yet public)

Mobility hubs are improved transit stations that seamlessly integrate different transit modes. Mobility Hubs are important because they have the ability to attract more people to use transit by making it accessible and user-friendly. Mobility Hubs vary in size, programming, and design depending on the surrounding land use and level of use, and often incorporate placemaking strategies.

LOCAL MOBILITY HUB

Any transit stop with approximately less than 100 boardings per day that provides connections to homes and local destinations from transit. Local Mobility Hubs can include the following elements:

- ADA Accessible Design
- Pedestrian Access
- Passenger Loading Zones
- Bikeshare Access
- Real-time Arrival Information
- Integrated trip planning
- Integrated and electronic fare payment
- Wayfinding
- Benches
- Lighting

(REASON)

PHOTO: Local Mobility Hub, source: www.westsideaction.ca

REGIONAL MOBILITY HUB

Any transit stop with ridership of approximately more than 100 boardings per day that provides connections to regional destinations from transit and serves as a key regional destination. Regional Mobility Hubs include all of the elements found in a Local Mobility Hub, in addition to the following elements:

- Bicycle Access
- Carshare Access
- Shelters
- Services and Retail
- Hub placement (off-street)

(REASON)

PHOTO: Regional Mobility Hub, source: denverurbanism.com

RECOMMENDATIONS

Install customer amenities at transit stops and better connect transportation modes

The households in the East Area have a greater proximity to transit stops (82 percent) compared to the citywide average (75 percent), but ridership must increase to achieve the mode shift outlined in the Mobility Action Plan. Community members in the East Area support transit improvements, and stated concerns about the current transit system and amenities provided to transit riders. To increase transit ridership, this policy will seamlessly integrate various transportation modes and enhance the transit rider experience. Through activity centers at transit stops that maximize first-mile last-mile connections, transit will become even more convenient and user-friendly. Customer amenities can lead to provide safe, comfortable and equitable transit stops that improve rider perceptions of transit service. A study identifying potential treatments at each of the priority locations listed below is recommended. Coordination with key partners including RTD is necessary.

Priority Transit Stop Locations:

A. Colorado Boulevard at 8th, 11th and Colfax. Also see Quality of Life Infrastructure improvements.
B. Colfax Avenue at Krameria and Colfax and Yosemite. Also see Quality of Life Infrastructure improvements.
C. 9th Avenue at Clermont

WHY IS IT IMPORTANT?

- These locations were chosen based on an analysis of transit stops with the highest ridership and locations of key multimodal connections and neighborhood destinations.
NEIGHBORHOOD TRAFFIC CALMING TYPOLOGIES

Includes infrastructure upgrades and operational improvements to neighborhood streets and intersections to address insufficient pedestrian crossings, speeding and cut-through on local streets, and visibility issues.

01 Daylighting Intersections
Removing parking spaces immediately adjacent to intersections to improve sight lines and visibility.

02 Physical barriers
Roundabouts, traffic diverters, or other physical cues that slow or limit traffic on local streets.
(Photo: )

03 Lane Reduction/Chicanes
Lowering lane width and/or forcing new travel patterns that require driver attention help to slow traffic and increase awareness for all modes.

04 Intersection improvements
Bulbouts, medians, lighting, and raised crosswalks are some examples of intersection improvements. See Safe Crossings section for more information.

05 Limit Vehicular Traffic
In certain situations, half or full closures of streets to vehicles can create a vibrant and safe neighborhood space.
Case Study: City and County of Denver Neighborhood Transportation Management Program

CCD’s Neighborhood Transportation Management Program (NTMP) identifies and delivers quick solutions to address transportation priorities and challenges within neighborhoods including vehicular speeding and cut through issues along local residential streets. Traffic calming projects that are developed through the NTMP include pedestrian, bicycle operational, multimodal operational, volume management, speed management and street grid management treatments. Several neighborhoods within the East Central Area will be addressed through the NTMP program in the coming years.

Case Study: City of Boston Neighborhood Slow Streets

The City of Boston’s Neighborhood Slow Streets Program implements a smaller zone-based approach to traffic calming. The program aims to further limit vehicular cut through traffic within neighborhoods and surrounding key community places such as libraries, schools and parks, and to reduce the number and severity of crashes on residential streets. Key tactics include lowering speed limits to 20 mph via signage and pavement markings and traffic calming gateways at the entrances to slow zone areas to provide consistent, recognizable entrances to traffic-calmmed zones. Similar to the NTMP neighborhood methodology, Boston’s program focuses on neighborhoods with homes with a higher percentages of youth, older adults, and people with disabilities, areas that experience higher numbers of traffic crashes per mile that result in an EMS response, areas that include, or border, community places such as public libraries, community centers, schools, and parks, areas that support existing and planned opportunities for walking, bicycling, and access to transit, and areas are feasible for the City of Boston to implement improvements.

RECOMMENDATIONS

NEIGHBORHOOD TRAFFIC CALMING

M9

Study measures to slow traffic along neighborhood streets directly surrounding schools, parks, hospitals, libraries, commercial nodes and recreation centers

The East Area has many community amenities where traffic safety is a concern to prevent pedestrian and bicycle-related crashes. Residents in East Central have identified traffic, speeding, and congestion as a major concern and ranked routes that improve safety and routes to schools and parks as their top priorities. A zone-based approach to neighborhood traffic calming along local residential streets can add safety measures in select areas to alert drivers to sensitive land uses (such as parks, schools, commercial nodes, and hospitals) and change driver behavior. The neighborhood slow zone could reduce cut-through traffic, reduce traffic noise, and improve safety in neighborhoods. Projects that can contribute to a neighborhood slow zone include gateways at entrances via signs, markings and other traffic calming treatments to reduce speeding, and limiting vehicular access within each zone. Priority zones are listed below. Zones are determined based on the local street network but in general are bounded by arterials and/or collector streets.

WHY IS IT IMPORTANT?

- These destinations are frequented by sensitive users such as children and seniors. In addition, the areas around these destinations require a high level of safety due to the number of multimodal transportation users accessing the site.

Specific locations for traffic calming priorities are detailed by neighborhood in the Neighborhood Chapters (pg x).
WHAT IS CURBSIDE MANAGEMENT?

Curbside management optimizes, prioritizes, and manages the curb lane to provide designated space for critical curbside uses. Primary uses include, but are not limited to:

- Motor and electrical vehicle parking
- Loading (passenger and freight)
- ADA accommodations
- Car share zones
- Transit lanes and infrastructure
- Bicycle lanes, parking, and infrastructure

RECOMMENDATIONS

CURBSIDE MANAGEMENT AND FREIGHT ACCESS

M10

Manage and more efficiently use the existing curbside space

Curbside space has a relatively low demand in the East Area, compared to downtown Denver and surrounding neighborhoods. However, curbside space must be managed and efficiently used to accommodate prioritized needs in the neighborhoods. As parking utilization is low, the priority for curbside space may not be for vehicles, and identifying and prioritizing those uses is important. The community is concerned about bicycle parking and flexibility to accommodate curbside space needs as the Colfax BRT transforms the corridor. Through these strategies, priorities can be identified and the curbside can be repurposed to accommodate other uses in areas of ample parking.

A. Pilot converting on-street parking spaces in key locations into high productivity uses such as public parklets, cafe seating, bicycle and micromobility parking, shared parking, mobility hub/transit stop infrastructure.

B. Pilot converting alleys into public open space with green stormwater infrastructure.

C. Pilot converting on-street parking into freight loading zones at varying times of the day.

D. Implement intersection daylighting and parking standards changes near intersections.

E. Conduct a comprehensive freight access review.

F. Formally allow use of alleys for business loading/unloading.

G. Develop additional Area Management Plans (AMP) for neighborhood curbside use as need arises.

WHY IS IT IMPORTANT?

- Strategy C: Pilots allow CCD to test ideas on a small scale to evaluate feasibility, cost, and adverse effects, and to improve upon the program or design before implementing the final project.
- Strategy F: The movement of goods, packages, and freight is important to the East Area neighborhood businesses and residents. As technology changes the way we shop and move goods, adaptable solutions to managing freight must be evaluated and adopted.
- Strategy G: The AMP is a program in place that will be an important tool for East Area residents to give feedback as CCD evaluates curbside management tools.
RECOMMENDATIONS

CURBSIDE MANAGEMENT AND FREIGHT ACCESS

Strengthen parking management tools that reflect the City’s strategic parking goals.

Population growth in Denver places an increased demand on parking availability. Parking utilization is currently low throughout the East Area neighborhoods and even on East Colfax. Some communities perceive parking availability to be an issue and fear that parking will become scarce with the development of the Colfax BRT. To optimize curbside space, parking management tools and strategies must balance parking needs of new development that supports active modes of transportation. This plan recommends maximizing existing parking and repurposing parking where it is appropriate.

A. Explore a dynamic parking pilot program (performance-based pricing).
B. On-street parking meters
   • Explore additional opportunities for metered parking
   • Explore opportunities for adjusting/extending meter times due to adjacent land uses
   • Upgrade technology for ease of use
   • Explore increasing rates in high-demand areas and near appropriate adjacent land uses
C. Encourage shared parking arrangements and provide guidance to businesses and residents.
D. Develop additional Area Management Plans (AMP) for neighborhood parking challenges.

WHY IS IT IMPORTANT?

• Strategy A: Pilots allow CCD to test ideas on a small scale to evaluate feasibility, cost, and adverse effects, and to improve upon the program or design before implementing the final project.
• Strategy C: Shared parking can encourage more efficient use of existing parking lots and decrease demand for on-street parking.
• Strategy D: The AMP is a program in place that will be an important tool for East Area residents to give feedback as CCD evaluates parking management tools.

Case Study:
Seattle Department of Transportation Flex Zone/Curb Use Priorities

The City of Seattle’s City Comprehensive Plan establishes policies that set priority for curb uses by function. Priorities allow for streets and curb uses to take on varying functions based on surrounding land uses and ensure streets safely and efficiently connect and move people and goods to their destinations while creating inviting spaces within the right-of-way. Functions include mobility, access for people, and access for commerce, activation, greening and storage. Examples of uses including bike lanes, bike parking, truck loading zones, food trucks, parklets, plantings and long-term parking.
Adopt TDM strategies and policies to shift people’s travel behavior and meet City goals.

As CCD invests in multimodal options in the East Area, it is important to provide opportunities for residents to access these options and shift their travel behavior. Currently, the majority of residents in the East Area drive alone to work and TDM strategies can help interested residents to choose other modes and contribute toward the Mobility Action Plan mode shift goals. The residents of East area neighborhoods were very supportive of TDM measures, and many even suggested specific TDM strategies, demonstrating an open-mindedness to the concept. The strategies for TDM implementation align with CCD’s TDM Program and Plan. These strategies generally follow the program’s primary goal of shifting peoples’ travel behavior to increase system efficiency, reduce single occupancy vehicle (SOV) trips, and achieve specific planning goals.

A. Allow/encourage Business Improvement Districts to join a regional Transportation Management Association to have access to services and funds to administer, promote, and implement TDM programs.

B. Require new development strategies in coordination with Denver’s TDM Plan guidance such as max parking ratios, shared car service and allocated parking, private bike shared program, secure bike parking, car/bike share memberships for tenants, transit passes for tenants, Uber/Lyft drop off parking or pull out, deliveries scheduled during non-rush hours.

C. Work with TMAs, employers, residences, RNOs, and BIDs to provide reduced or free RTD fares for residents and employees.

WHY IS IT IMPORTANT?

- **Strategy A:** There is currently one BID in the East Area, the Colfax Mayfair BID, that could take advantage of this policy.
- **Strategy B:** As new development projects are built in the East Area, this strategy will promote multimodal transportation options for residents.
- **Strategy C:** Many people travel daily to the East Area for jobs and employment, therefore, encouraging transit for those travelers, in addition to residents, could minimize parking demand and decrease congestion.

Case Study:
City of Santa Monica Parking Cash-Out

The City of Santa Monica was the first in the State of California to implement a TDM program where large employers must submit an emissions reduction plan, with one of the required strategies being offering employees the cash value of a subsidized parking space rather than providing the parking space.

(Source: http://www.smartgrowthamerica.us/documents/Parking_Cash_Out_Santa_Monica_Ordinance.pdf)

Photo Source: ParkMe