Transportation Plan 2016

Transportation Plan

2016

CITY AND COUNTY OF BROOMFIELD

ADOPTED NOVEMBER 1, 2016
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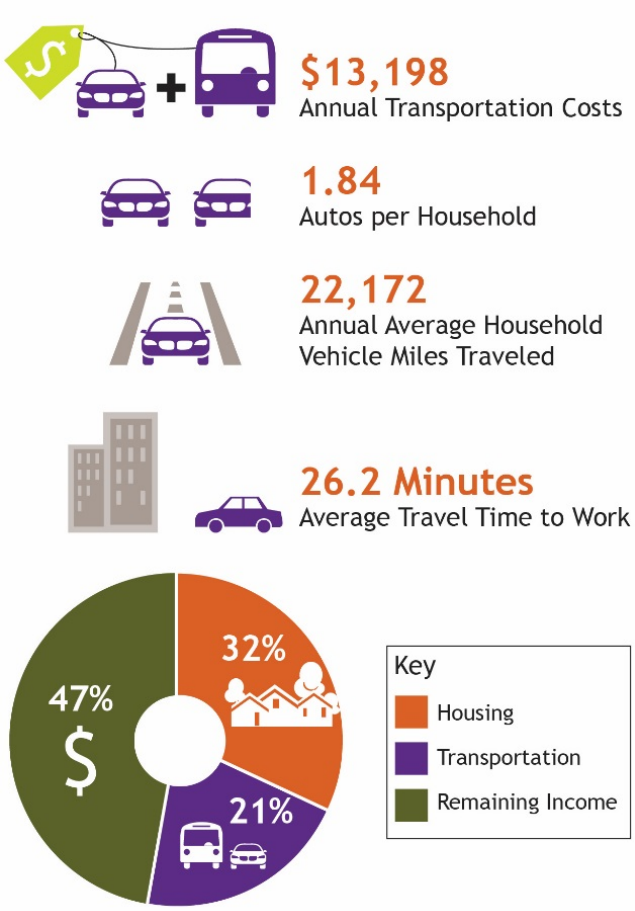
Introduction

A. WHY TRANSPORTATION MATTERS

Transportation is a basic human need that affects daily quality of life. Broomfield residents require transportation to get to work, school, medical facilities, recreational amenities, shopping, and community and social activities. A well-connected and efficient transportation network allows access to higher paying and varying job types, a wider selection of housing options, and more convenient health and human services. An integrated multimodal transportation system allows residents, employees, and visitors of Broomfield the freedom of personal mobility and choice of how to travel—whether it's walking, biking, driving, carpooling, or riding public or private transportation. Increasingly, thriving cities have an extensive and expanding transportation network that includes integrated transit, biking, and walking facilities in addition to efficiently operated and maintained roads and trails.



Broomfield residents pay approximately 53 percent of their household income to cover the cost of their housing and transportation. The Center for Neighborhood Technology's (CNT) research indicates that these costs should remain below 45 percent of the household income to be affordable.

Source: Center for Neighborhood Technology H+T Fact Sheet

A number of emerging trends are influencing transportation in Broomfield and the Denver metropolitan area. Trends influencing the demand for travel include travel patterns, mode choice, and route selection. Colorado's vehicle miles traveled (VMT) per capita decreased by over 11 percent between 2005 and 2012. This decrease has been, in part, attributed to the lower auto ownership rates by the Millennial generation and the increase in their preference for living in an urban, car-optional environment, favoring travel modes of walking, biking, and riding transit. Mobility hubs and shared-use mobility options (e.g., Uber and Lyft) are growing in popularity and serve a valuable role in closing first- and last-mile connectivity gaps. Mobility hubs are specific locations created in a community providing intermodal connectivity. Successful mobility hubs create a sense of place, provide a high-quality user experience, and seamlessly integrate all modes.

Across the United States, older adults (65+) are putting more emphasis on how and where they choose to age. While many older adults want to "age in place," many are also now making purposeful decisions about where they want to spend their retirement years based on the availability of public transportation, mobility options

and access to goods and services. While traditional mobility options of biking, walking and transit are often considered, planning for the future also requires consideration of emerging trends such as shared-use mobility, autonomous vehicles and electric bikes. When older adults and other vulnerable populations are able to easily and safely access public transportation, they are able to continue to meet their basic needs and travel to medical appointments, shopping, social and recreational activities without having to drive or rely on others.

As Broomfield moves forward, a multimodal transportation network that embraces emerging trends in technology and lifestyle preferences will be critical in helping Broomfield grow while maintaining the neighborhoods and character that residents and employees have come to love.

B. HOW TRANSPORTATION IS FUNDED

Transportation projects, maintenance, and services in Broomfield are funded from a variety of federal, state, and local sources. Federally, transportation funding is largely derived from the Highway Trust Fund, which receives funding from a federal fuel tax of 18.4 cents per gallon of gasoline and 24.4 cents per gallon of diesel fuel. Federal fuel taxes are allocated to the Highway Account—which funds road construction and other surface transportation projects—and a Mass Transit Account—which funds mass transit. Federal funding is allocated to the states for distribution, in addition to funds collected at the state level. The State of Colorado also imposes a fuel tax on consumers, in the amount of 22 cents per gallon. Both the federal and state gas taxes have been stagnant for more than 20 years. Because gas taxes are not indexed to inflation, the result is a decline in the purchasing power of the gas tax, which now has only about one-third of the buying power it had in the early 1990s.

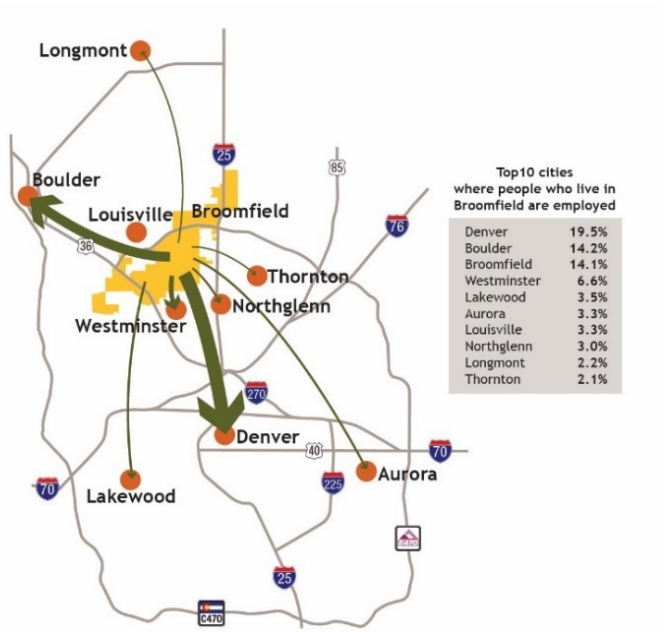
In 2009, the Colorado State Legislature approved the Funding Advancements for Surface Transportation and Economic Recovery Act (FASTER) to improve roadway safety, repair deteriorating bridges, and support and expand transit. FASTER funds are generated through several vehicle registration fees and fines. At the regional level, the Regional Transportation District (RTD) is funded through a sales and use tax (0.6 percent) and voters also approved an additional sales and use tax (0.4 percent) in 2004 to help fund FasTracks, the region's comprehensive transit expansion plan.

Locally, Broomfield funds transportation from sales and use taxes, property taxes, impact fees, and other developer contributions. Additionally, public/private partnerships are increasingly being used to help fund transportation projects as state and local governments struggle to meet growing transportation infrastructure needs.

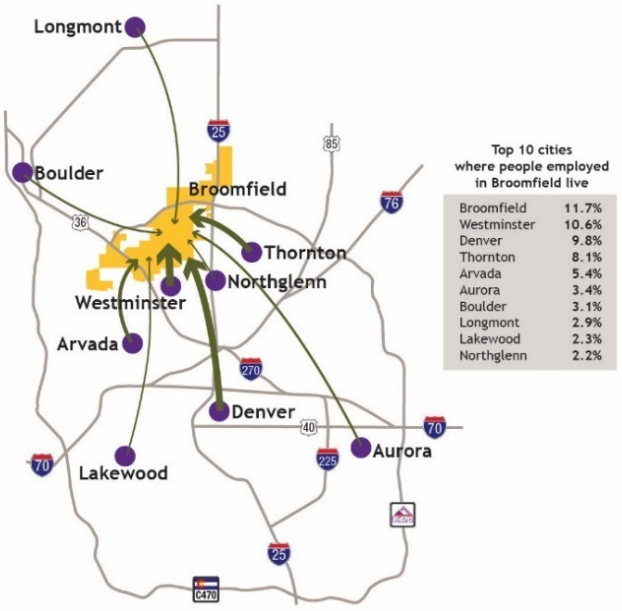
C. REGIONAL CONTEXT

The City of Broomfield was founded in its current location in part because of the regional transportation system. Broomfield's original homes were built along U.S. Highway 287 near the junction of two railroad lines. Broomfield grew significantly after the Boulder Denver Turnpike (now known as U.S. Highway 36) was constructed in the 1950s. The Turnpike's only interchange and tollbooth were located in Broomfield. Equidistant from Denver and Boulder, Broomfield continues to have strong ties to both communities, and Broomfield has emerged as a destination for regional employment and shopping. As in the past, the future health of Broomfield will depend on the quality of the transportation system serving the area. As Broomfield and the Denver metro area continue to experience population and employment growth, traffic and mobility needs will also increase. Regional growth is creating pressure on roadways internal to Broomfield, as well as on the state highway system serving the Broomfield area. Neighboring counties are growing at a fast pace, creating significant traffic impacts on our regional highways.

Broomfield has a strong history of working closely with regional partners including the Colorado Department of Transportation (CDOT), the RTD, the Denver Regional Council of Governments (DRCOG), and the surrounding communities and counties to advance regionally important transportation improvements. The recent reconstruction of U.S. Highway 36 to a state of the art highway, replacement of the Wadsworth Parkway bridge and new Uptown Avenue Bridge, Bus Rapid Transit (BRT), tolled express lanes, and the U.S. 36 Bikeway are prime examples of regional collaboration. Continuing this history of regional partnerships will be critical to meeting the transportation needs of Broomfield.



85.9 percent of employed Broomfield residents work outside of Broomfield.



88.3 percent of Broomfield employees reside outside of Broomfield.

Source: U.S. Census Bureau, Longitudinal Employer-Household Dynamics Tool

Vision, Goals and Policies

As a part of the 2016 Comprehensive Plan update, a Transportation Working Group was formed to review, edit, and refine the previous transportation vision, goals, policies, and action steps and to guide the development of this Plan. The Transportation goals and policies were revised and updated in consideration of all topic elements in the Comprehensive Plan and to ensure alignment and plan continuity.

A. TRANSPORTATION VISION

BROOMFIELD PROVIDES A WELL CONNECTED AND WELL MAINTAINED MULTIMODAL TRANSPORTATION SYSTEM THAT SAFELY AND EFFECTIVELY ACCOMMODATES ALL MODES (PEDESTRIAN, BICYCLE, AUTOMOBILE, BUS, RAIL AND FREIGHT) PROVIDING MOBILITY FOR GOODS AND PEOPLE OF ALL AGES AND ABILITIES WHILE SUPPORTING ECONOMIC DEVELOPMENT, REDUCING DEPENDENCE ON THE SINGLE OCCUPANT VEHICLE, AND MINIMIZING ENVIRONMENTAL IMPACTS.

B. GOALS, POLICIES, AND ACTION STEPS

Goal TS-A: People and Goods Moving Capacity

Optimize the capacity of the multimodal transportation system to handle existing and projected travel demands associated with moving people and goods.

Policy TS-A.1: Evaluate the need for additional multimodal capacity on Broomfield's streets to improve mobility and relieve congestion. Additional capacity could include general purpose lanes, bus-only lanes, tolled lanes, bike lanes, sidewalks, or shared-use paths.

Action Step TS-A.1.1: Engage the community to identify priorities for improvement.

Action Step TS-A.1.2: Anticipate future transportation needs in undeveloped areas of Broomfield.

Action Step TS-A.1.3: Developers should fund and construct transportation improvements with new development.

Action Step TS-A.1.4: Seek and coordinate federal and state funding to pay for or offset Broomfield costs for improvements to accelerate construction of such improvements.

Policy TS-A.2: Consider the impacts that emerging technologies in transportation (e.g., autonomous cars and online goods delivery by trucks or by drones) may have on the future capacity needs of the transportation network.

Action Step TS-A.2.1: Assess existing regulations that may be incompatible with driverless cars and identify regulations needed to support emerging technologies.

Action Step TS-A.2.2: Ensure Broomfield's infrastructure is compatible with driverless-car technology.

Action Step TS-A.2.3: Participate in regional and state discussions related to driverless-car regulations and the integration of driverless cars into the transportation network.

Action Step TS-A.2.4: Proactively plan for the social and land use implications of driverless cars such as increased drop-off/pick-up space requirements, and complementary housing options.

Policy TS-A.3: Minimize and mitigate the barriers presented by major transportation corridors such as Interstate 25, U.S. Highway 36, and railroad corridors by providing safe and convenient multimodal crossings.

Policy TS-A.4: Maximize the existing capacity through operational improvements such as state-of-the-art traffic signal systems and communication and emerging technologies.

Goal TS-B: Alternative Modes

Promote and develop transportation alternatives to provide travel choices and mobility for people of all ages and abilities.

Policy TS-B.1: Continue working with the RTD and neighboring jurisdictions to implement commuter rail and BRT to serve Broomfield's major corridors and employment centers.

Action Step TS-B.1.1: Partner with RTD to plan and implement bus feeder service, and pedestrian and bike connections serving the existing and future Park-n-Rides and future commuter rail and BRT stations.

Policy TS-B.2: Advocate for additional and/or expanded transit services that support the mobility needs of young people, older adults, and people with disabilities including Call-n-Ride, Access-a-Ride, Broomfield's "Easy Ride," and other community-based and private transportation services.

Action Step TS-B.2.1: Integrate transit, pedestrian and bikeway improvements into existing and new streetscape improvements.

Action Step TS-B.2.2: Work with RTD and other transit providers to ensure continuing Call-n-Ride and Access-A-Ride services. Advocate for expansion of Call-n-Ride services, which serve both general and special needs populations.

Action Step TS-B.2.3: Continue to finance and expand city services like "Easy Ride," providing mobility options for transportation-disadvantaged populations.

Action Step TS-B.2.4: Leverage opportunities to improve efficiencies and use of local and regional transit systems.

Action Step TS-B.2.5: Evaluate and explore options to provide public, private, and emerging technology-based transportation options to areas of Broomfield that are not currently served (southwestern and northeastern Broomfield).

Policy TS-B.3: Evaluate the viability and partnership potential for privately-sponsored shuttle routes (e.g., Lone Tree's public/private shuttle route).

Policy TS-B.4: Leverage transportation network companies (TNCs) such as Uber and Lyft to meet community mobility needs.

Policy TS-B.5: Support transportation demand management (TDM) strategies and policies, including carpooling, vanpooling, telecommuting and flexible work schedules to reduce demands on the transportation system.

Action Step TS-B.5.1: Encourage the use of alternative modes by partnering with regional organizations to promote options and incentives to driving alone. Support and promote web sites providing information on carpooling and vanpooling and regional campaigns to encourage people to try alternatives to driving alone.

Action Step TS-B.5.2: Consider a pilot project to encourage and support employee use of alternative modes, telecommuting and flexible work schedules.

Action Step TS-B.5.3: Consider reducing parking requirements for businesses instituting TDM policies and actions.

Action Step TS-B.5.4: Encourage carpool, car-share, and ride-share programs such as those provided by DRCOG and private sector.

Action Step TS-B.5.5: Consider incentive programs (such as subsidizing EcoPasses) for young people and older adults.

Policy TS-B.6: Encourage biking by creating a network that takes advantage of the trail system, streets with low traffic volumes and low speeds, wayfinding signage, and existing connections to provide options for less confident riders.

Action Step TS-B.6.1: Provide and integrate electric assist options for disabled cyclists in to the bike network.

Policy TS-B.7: Evaluate and prepare for the effect that new technologies (such as TNCs and driverless vehicles) will have on parking demands in Broomfield.

Policy TS-B.8: Enhance community information about the availability and benefits of alternative travel modes.

Goal TS-C: A Connected Transportation System

Create and collaborate on an interconnected transportation system that facilitates safe travel for all modes, allows for seamless connections between modes, and provides linkages between neighborhoods and to neighboring communities.

Policy TS-C.1: Identify and complete "missing links" in the bike and pedestrian infrastructure.

Action Step TS-C.1.1: Annually assess opportunities and community support to complete "missing links" in the bike and pedestrian infrastructure identified in the Open Space, Parks, Recreation and Trails Master Plan and the Transportation Plan Update.

Action Step TS-C.1.2: Provide sidewalk and trail connections to facilitate quick access to bus service or mobility centers, explore retrofitting existing neighborhoods, and require connections for new developments.

Action Step TS-C.1.3: Evaluate how to provide accessibility and infrastructure that supports the use of electric carts for the older adults and people with special needs.

Policy TS-C.2: Utilize existing natural or human-made corridors (drainage ways, ditch corridors, and utility corridors) to provide trail connections where feasible. Where off-street trail connections are not feasible, create safe and user-friendly on-street connections that maximize separation between pedestrians/cyclists and vehicles.

Policy TS-C.3: Ensure connectivity between the trail system and on-street bicycle facilities and sidewalks by providing physical connections, implementing way-finding signage, and using technology (e.g., smartphone app) for trail information and routing.

Action Step TS-C.3.1: Enhance regional trail connectivity.

Action Step TS-C.3.2: Work in concert with the Open Space and Trails Committee to consider, and implement, policy changes that allow for use of electric bikes on trails to enhance mobility options.

Policy TS-C.4: Facilitate connections between travel modes and improve first- and last-mile access to transit.

Action Step TS-C.4.1: Provide covered and secured bike parking at transit stations, integrate bike share and work with RTD to ensure adequate space for bikes on buses.

Action Step TS-C.4.2: Implement mobility hub and micro-mobility hub concept at identified locations.

Action Step TS-C.4.3: Utilize and consider public/private partnerships for shared-use mobility options (e.g., Uber and Lyft) to provide access in areas that currently do not have transit service.

Action Step TS-C.4.4: Leverage new technologies at transit stations and mobility hubs to provide access to real-time passenger information and to improve wayfinding.

Action Step TS-C.4.5: Evaluate opportunities to encourage the use of alternative vehicles such as electric neighborhood vehicles, electric bicycles and other technologies.

Policy TS-C.5: Enhance connectivity for existing neighborhoods by investing in multimodal improvements and requiring connections for new developments; work with affected residents/property owners to plan for transportation improvements.

Policy TS-C.6: Provide leadership to collaborate with neighboring jurisdictions to ensure compatibility between multimodal transportation improvements and connectivity of the regional trail and transit networks.

Goal TS-D: Livable Streets

Encourage livable streets that are accessible, safe, efficient, and enjoyable for all people.

Policy TS-D.1: Design streets to be safe for all modes of transportation. Minimize traffic volumes and unsafe travel speeds on neighborhood streets through traffic management and traffic mitigation.

> **Action Step TS-D.1.1:** Continue to review and enforce appropriate speed limits along neighborhood streets.
>
> **Action Step TS-D.1.2:** Continue to review and maximize the capacity and functioning of the existing transportation system by timing traffic signals to facilitate safe travel conditions and smooth traffic flow and by adding right- and left-hand turn lanes where warranted.

Policy TS-D.2: Encourage property owners to use a grid system for the street network that distributes traffic, provides routing options, and enhances walkability in new developments.

Policy TS-D.3: Incorporate best practices into streetscape design for existing and new streets, including the integration of transit, pedestrian and bikeway improvements.

Policy TS-D.4: Consider current national innovations for safe and efficient bike travel such as protected bikeways, buffered bike lanes, and bike boulevards. Target streets with underused capacity to expand the on-street bike network with high-quality bike facilities.

Policy TS-D.5: Tailor landscaping, streetscape, public facilities, cultural features and other programs to heighten the individual identity of distinct neighborhoods.

Policy TS-D.6: Anticipate and require bike and pedestrian facilities in new development and between new and existing development and adjacent communities, through mechanisms that include crosswalks, raised crossings, overpasses and underpasses and signalized intersections.

> **Action Step TS-D.6.1:** Work with developers and business owners to ensure that bicycle and pedestrian amenities (such as bike racks, benches, and pedestrian-scaled lighting) are incorporated into development plans and current business locations.

Policy TS-D.7: Connect existing neighborhoods and activity centers with streets, trails and pedestrian ways and bikeways where the community supports these investments.

> **Action Step TS-D.7.1:** Review opportunities to repurpose streets in existing neighborhoods to better accommodate all modes of transportation.

Policy TS-D.8: Increase understanding among different transportation mode users through education to create a culture of courtesy.

> **Action Step TS-D.8.1**: Continue and enhance the implementation of the Open Space, Parks, Recreation, and Trails Master Plan wayfinding signage for trails to increase understanding and ease of use.

Action Step TS-D.8.2: Continue to provide and expand online community information regarding the trail system.

Action Step TS-D.8.3: Develop an educational program (e.g., brochure, signage) related to the rules of the road for bicyclists, pedestrians, and others, and encourage bicycle safety training through the school district.

Goal TS-E: Regional Transportation Planning

Participate in and influence regional transportation planning efforts and Broomfield's accessibility to the regional multimodal network, while coordinating with neighboring communities to promote an efficient and integrated transportation system.

Policy TS-E.1: Encourage staff and elected officials to seek appointments and leadership roles on key committees in various organizations and actively participate to ensure that Broomfield projects are prioritized, coordinated, and funded.

Action Step TS-E.1.1: Continue regional and national relationships with transportation bodies and encourage Broomfield staff and officials to take even more leadership roles in regional transportation issues.

Policy TS-E.2: Proactively work with regional and state transportation agencies to encourage completion of regional transportation infrastructure projects. Key projects include Jefferson Parkway, Interstate 25/State Highway 7 interchange, U.S. Highway 36/State Highway 128 (120th Avenue) interchange and Interstation 25/Sheridan Parkway interchange. Seek to influence the final configurations of the Northwest Rail/B Line and North Metro Rail/N Line. These projects will shape future land use and regional connectivity in Broomfield.

Goal TS-F: Land Use and Transportation

Integrate the multimodal transportation system to support and complement Broomfield's economic development plans and policies.

Policy TS-F.1: Coordinate development and redevelopment to maximize and take advantage of regional and local transportation corridors.

Policy TS-F.2: Create compact and mixed-use development in targeted locations to provide options that reduce dependency on automobiles.

Policy TS-F.3: Advocate connecting the North Metro Rail/N Line to Broomfield at or near the Interstate 25/State Highway 7 interchange.

Policy TS-F.4: Establish appropriate setbacks for major arterials to mitigate negative impacts such as noise, air quality, and light impacts on existing and future residences.

Goal TS-G: Sustainability

Maintain and improve existing transportation infrastructure in a socially, environmentally, and fiscally sustainable manner.

Policy TS-G.1: Seek regional, state, federal, and public/private partnership funding opportunities for multimodal transportation improvements.

Action Step TS-G.1.1: Pursue grant and/or other outside funding for alternative transportation improvements.

Action Step TS-G.1.2: Pursue opportunities for public/private partnerships to advance the multimodal transportation network through the development/ redevelopment process.

Action Step TS-G.1.3: Coordinate with the Northwest Parkway Authority to maximize the capacity of the tollway to relieve east/west congestion on local streets (e.g., by using variable pricing).

Policy TS-G.2: Fund and maintain the existing transportation infrastructure in coordination with other departments.

Action Step TS-G.2.1: Coordinate utility improvements with transportation infrastructure updates.

Action Step TS-G.2.2: Continue to evaluate opportunities to improve bicycle and pedestrian accommodation as a part of street maintenance projects.

Policy TS-G.3: Promote and support vehicle charging and fueling stations (e.g., electric vehicle charging stations, CNG/biodiesel fueling stations).

Action Step TS-G.3.1: Advance increased funding for alternative vehicles and transportation improvements.

Policy TS-G.4: Avoid, minimize, and mitigate or improve environmental impacts of transportation projects to the extent reasonably practical.

Policy TS-G.5: Encourage transportation investments and projects that promote community health and wellness and encourage social connections.

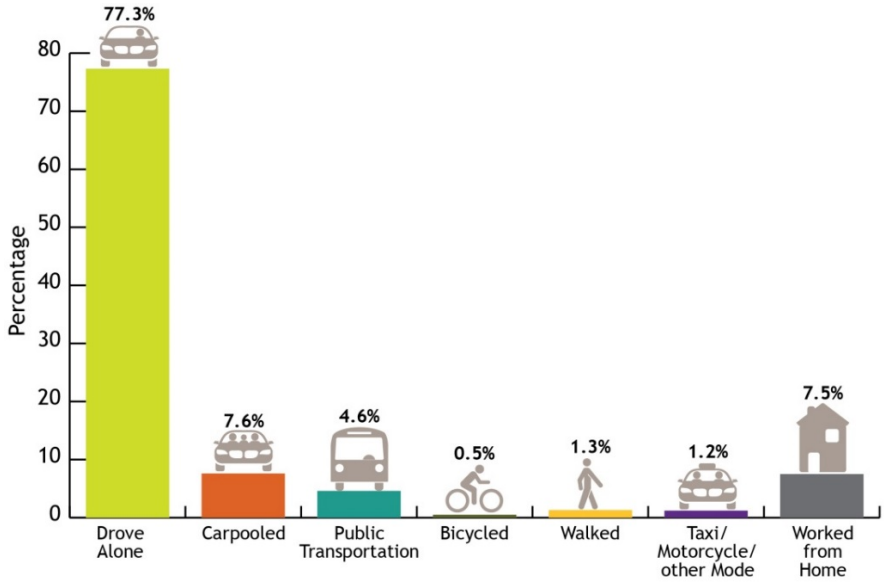
Transportation Snapshot

Transportation continues to evolve and change along with the population of Broomfield. This chapter provides an overview of existing conditions in Broomfield for roadway, bicycle, pedestrian, safety, freight and transit. Understanding the current transportation deficiencies and opportunities is a critical step to forming the future transportation framework and recommendations of this Plan.

A. MODE SPLIT

The automobile remains the predominant means of travel to work for Broomfield residents; more than 77 percent drive alone to work, and 7.6 percent carpool as shown in **Chart 1**. Alternative travel modes account for 6.4 percent of work trips: 4.6 percent by public transportation, 0.5 percent by bike, and 1.3 percent by foot.

Chart 1. Means of Travel to Work



Source: U.S. Census Bureau, 2009–2013 American Community Survey

B. VEHICULAR MOBILITY

CURRENT CONDITIONS

In the 2015 Broomfield Citizen Survey, 81 percent of residents rated the ease of travel by car as "good or excellent." The City and County of Broomfield maintains a database of daily traffic volume counts, which is updated on an ongoing basis. Traffic volumes indicate the relative usage of a roadway segment. CDOT, DRCOG, and adjacent communities also maintain traffic volume databases. Broomfield's existing traffic volumes are identified on **Map 1**.

When compared to the capacity of a roadway, the traffic volume also reveals generally how well a road is functioning (level of service) and if improvements to increase capacity are necessary. One measure that is used to define operational characteristics is volume to capacity (V/C) ratio. The measure compares the capacity of the street, as it is designed and constructed, to the volume of traffic it carries or is projected to carry in the future.

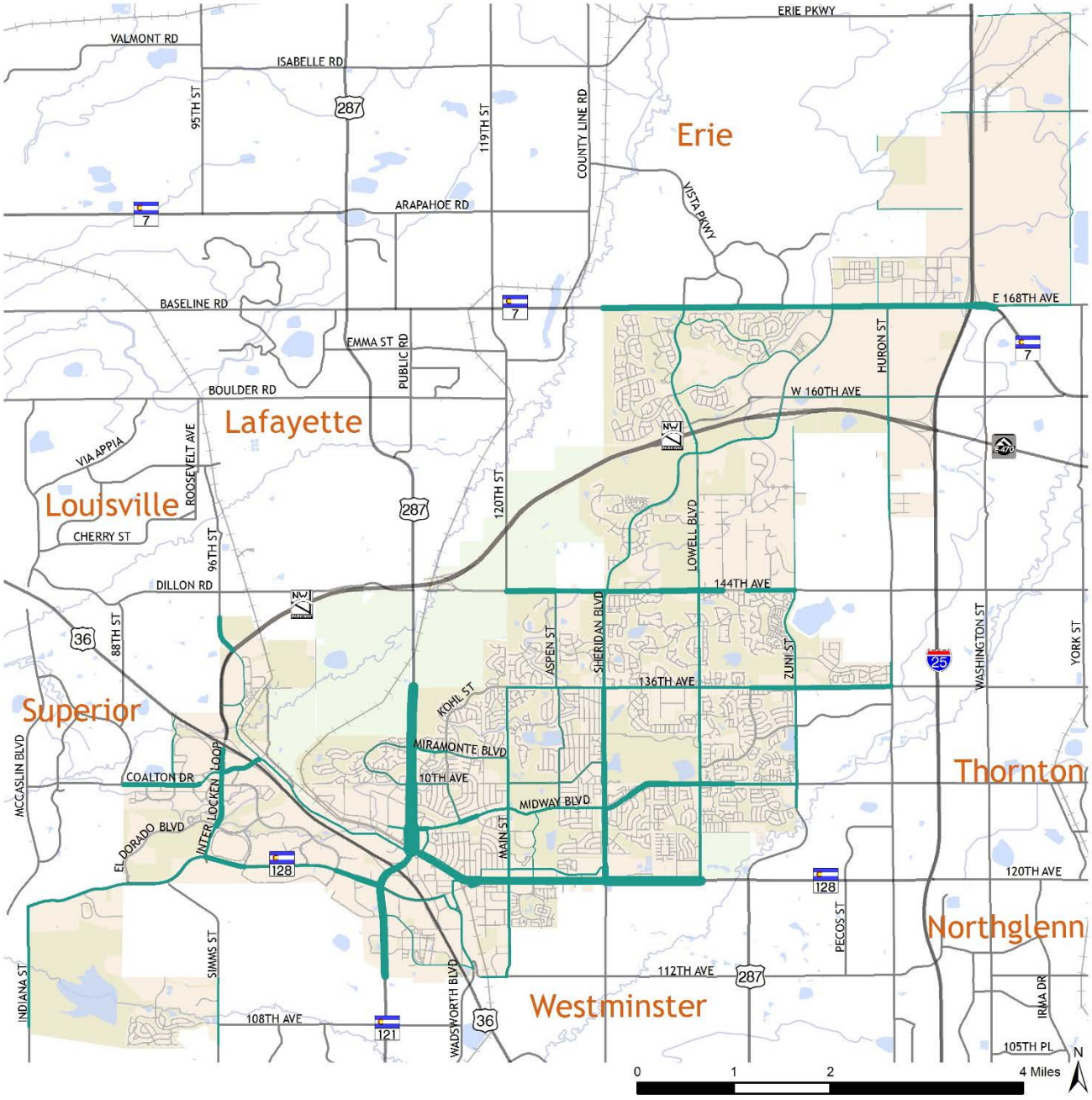
Planning-level daily capacity thresholds are used as the basis for the V/C ratios, as shown in **Table 1**. Roadway capacities are based on a roadway's functional classification and the number of through lanes. Roads with lower functional classifications and fewer lanes would be expected to carry fewer vehicles per day, while roads with higher functional classifications would be expected to accommodate more vehicles. V/C ratios are used to describe congestion on street segments. This planning level measure does not specifically take into account delay at signalized intersections and is based on only total daily traffic volumes with no explicit consideration to peak hour spikes in traffic.

Table 1. Planning Level Roadway Capacities

Functional Classification	Through Lanes	Capacity (Vehicles per Day)
Major Arterial	6 Lanes	48,000
	4 Lanes	32,000
	2 Lanes	16,000
Minor Arterial	4 Lanes	24,000
	2 Lanes	12,000
Connector	4 Lanes	20,000
	2 Lanes	10,000

As shown on **Map 2,** approximately 13 miles (16 percent) of the arterial street system is congested (over capacity). The three corridors that are most notably operating at over capacity conditions include State Highway 7, U.S. Highway 287, and 144th Avenue/Dillon Road.

Map 1. Existing Traffic Volumes



LEGEND

Source: Broomfield GIS Department; CDOT; DRCOG

<5,000 vehicles per day

40,000 vehicles per day

85,000 vehicles per day

Highways

Streets

Railroad

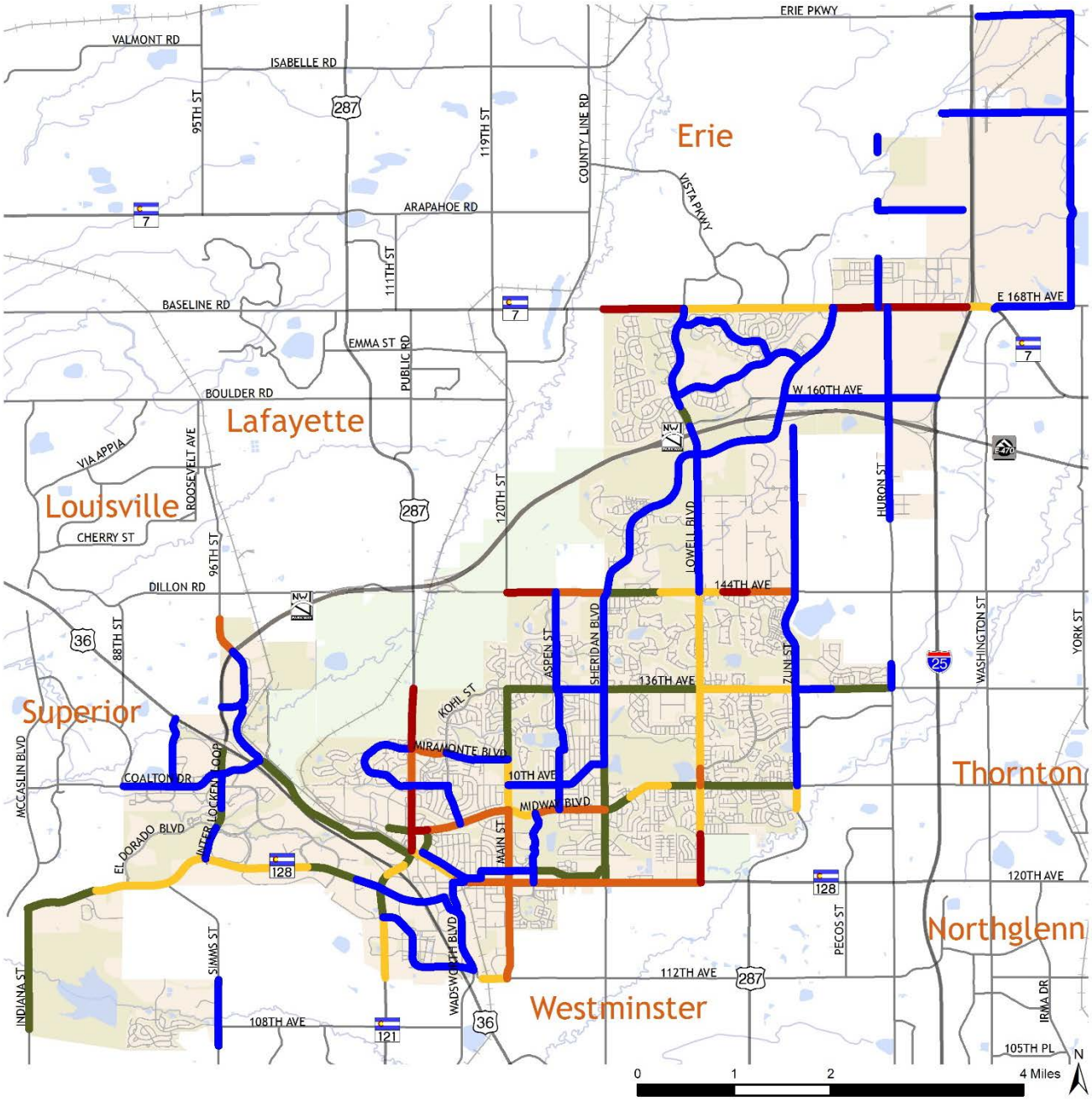
Creeks, Ditches, and Canals

Waterbody

Open Lands

City and County of Broomfield

Map 2. Existing Traffic Volume/Capacity Ratios



LEGEND

Source: Broomfield GIS Department; CDOT; DRCOG

- Excess Capacity (v/c less than 0.6)
- Below Capacity (v/c between 0.6 - 0.8)
- Near Capacity (v/c between 0.8 - 1.0)
- Slightly Over Capacity (v/c between 1.0 - 1.3)
- Over Capacity (v/c greater than 1.3)
- Highways
- Streets
- Railroad
- Creeks, Ditches, and Canals
- Waterbody
- Open Lands
- City and County of Broomfield

FUTURE CONDITIONS

As Broomfield experiences residential and employment growth over the next 25 years, traffic volumes are expected to increase. The analysis of future travel in Broomfield is based on the DRCOG 2040 regional travel demand model. This computerized model includes the entire seven-county Denver region and provides the context of Broomfield in relation to the rest of the Denver region. This regional model accounts for anticipated growth not only within Broomfield but also in the region as a whole. Demographic data sets, including household and employment estimates and forecasts, form the basis for travel demand forecasting. Within the City and County of Broomfield, the DRCOG regional model forecasts a 150 percent increase in households and a 200 percent increase in the number of jobs between 2010 and 2040 as shown in **Table 2.**

Table 2. Household and Employment Growth in Broomfield

	2010	2040	Growth	Percent Growth
Households	19,353	48,826	+29,473	152%
Employment	33,159	100,262	+67,103	202%

Source: Denver Regional Council of Governments

The future travel demand patterns in Broomfield and the Denver metropolitan area are primarily a function of the population and employment opportunities in the area, along with the multimodal transportation infrastructure available for travel in the region. The DRCOG model includes those transportation projects that are expected to be funded and built by 2040. For the purpose of this Plan, roadway widening projects associated with Broomfield's Roadway Plan (see Chapter 4) have been added to the model to understand the future travel demand and levels of congestion on the street network and are shown in **Map 3**.

Map 4 shows that by 2040, approximately 20 miles (roughly 20 percent) of the arterial street system are expected to be congested with the anticipated local and regional growth. Street segments that are over capacity may indicate a need for widening, operational improvements, or increased investment in alternative modes.

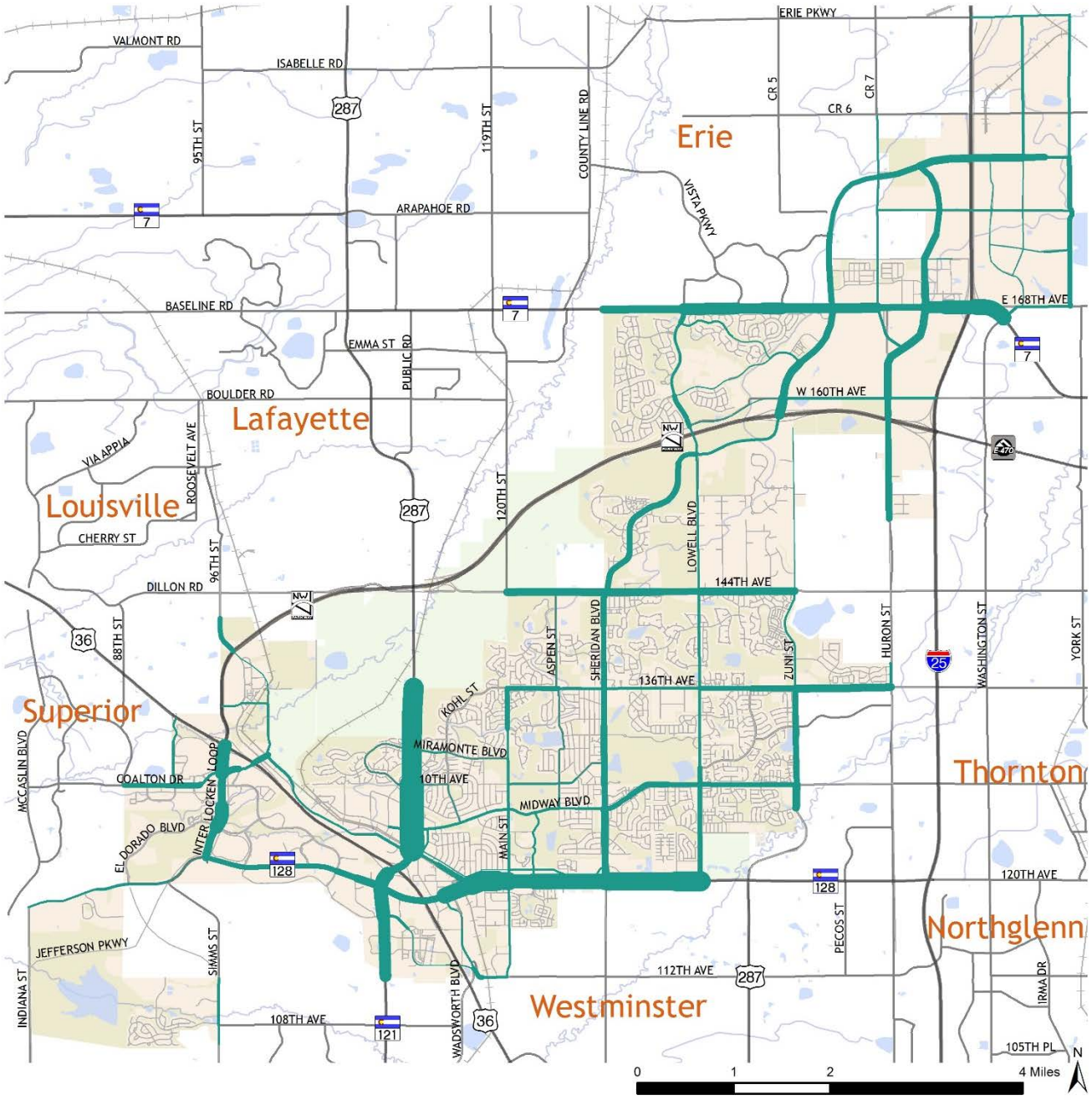
Conversely, 45 miles of arterial streets have excess capacity and will remain well under capacity in 2040. These street segments represent a potential opportunity for repurposing to better accommodate alternative travel modes – bicycling, walking, and transit.

13 miles of arterial streets that are currently congested

20 miles of arterial streets that are expected to be congested by 2040

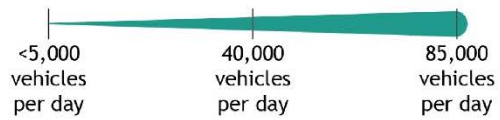
45 miles of arterial streets that have excess capacity today and in the future

Map 3. 2040 Traffic Forecasts



LEGEND

Source: Broomfield GIS Department; CDOT; DRCOG



Highways

Streets

Railroad

Creeks, Ditches, and Canals

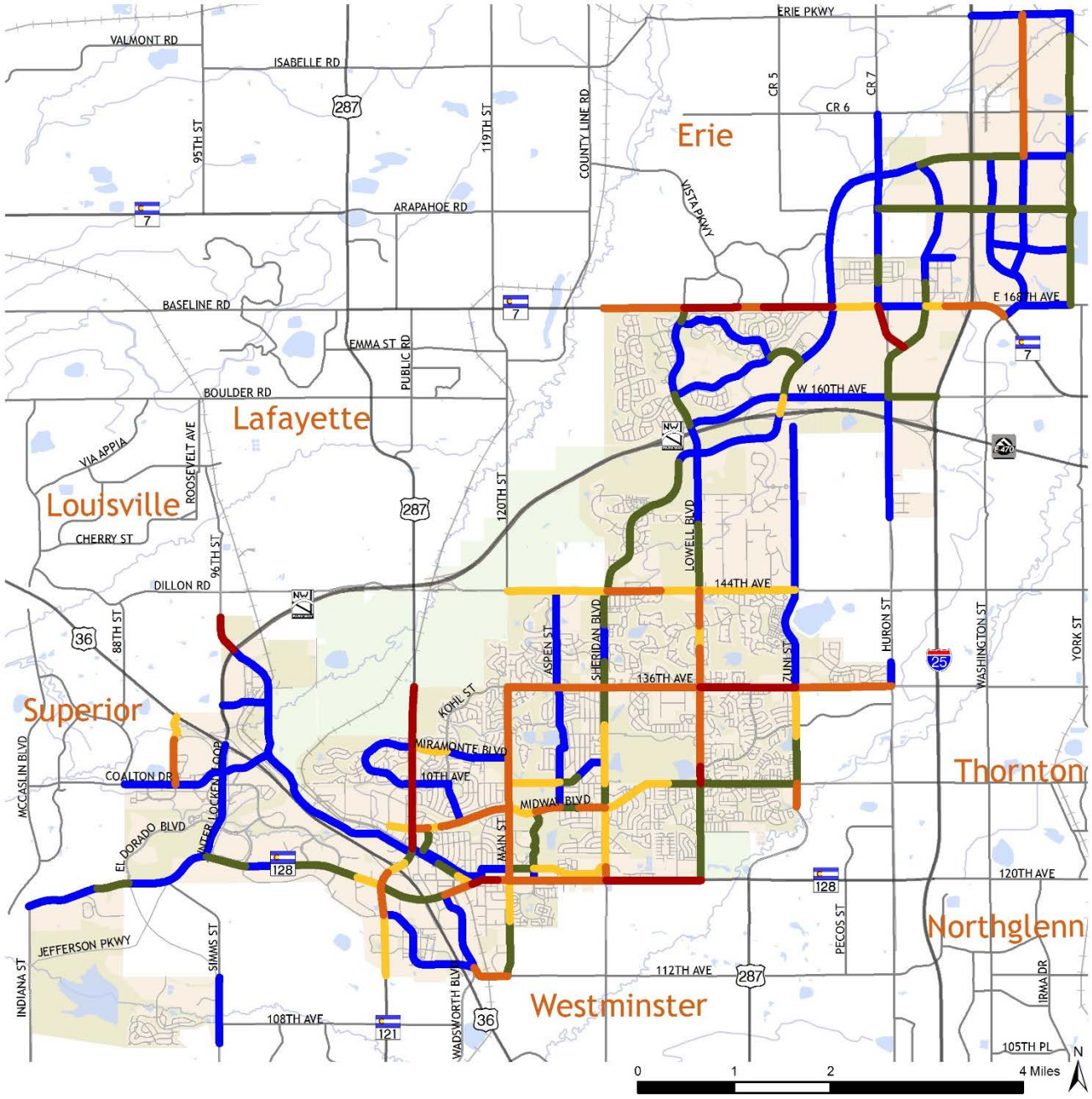
Waterbody

Open Lands

City and County of Broomfield

NOTE:
Based on Roadway Plan network.

Map 4. 2040 Traffic Volume/Capacity Ratios



LEGEND

Source: Broomfield GIS Department; CDOT; DRCOG

- Excess Capacity (v/c less than 0.6)
- Below Capacity (v/c between 0.6 - 0.8)
- Near Capacity (v/c between 0.8 - 1.0)
- Slightly Over Capacity (v/c between 1.0 - 1.3)
- Over Capacity (v/c greater than 1.3)

- Highways
- Streets
- Railroad

- Creeks, Ditches, and Canals
- Waterbody
- Open Lands
- City and County of Broomfield

NOTE:
Based on Roadway Plan network.

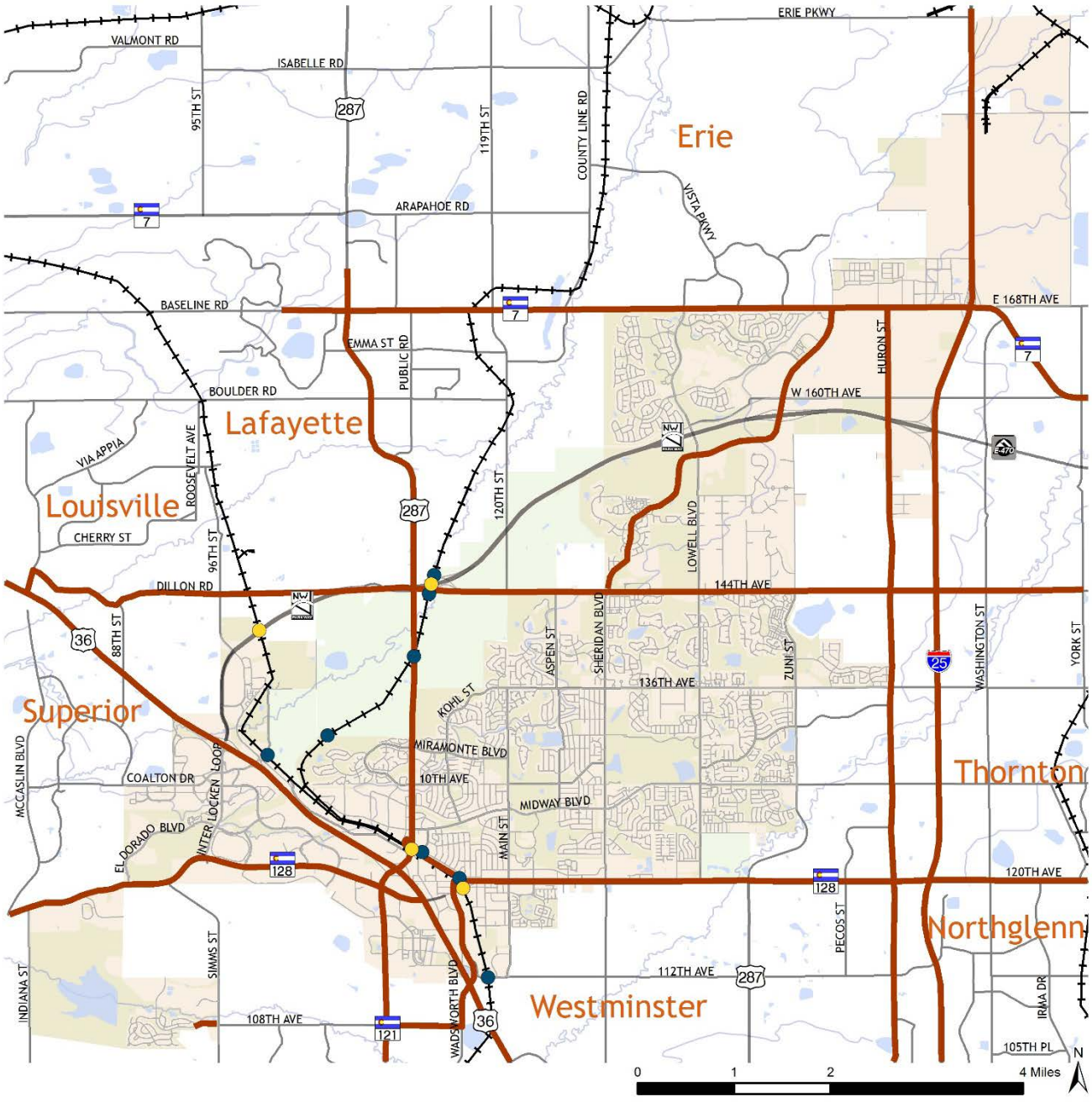
C. FREIGHT AND GOODS MOVEMENT

Broomfield has a long history of freight movement and distribution, dating back to 1886 when Marshall and Boulder Railway completed a line through Broomfield. Freight trains continue to run through Broomfield on tracks owned by the BNSF Railway. The railroad tracks in Broomfield are located east of U.S. Highway 36 and run parallel to Industrial Lane and Midway. The two railroad lines split, with one extending northwest toward Boulder and the other extending north through Lafayette and Erie. There are three grade-separated crossings of the railroad lines in Broomfield; two on Northwest Parkway and one on U.S. Highway 287. An additional grade separation will be constructed with the 120th Avenue connection. There are eight at-grade crossings of the railroad tracks in Broomfield.

Broomfield designates truck routes that are the preferred routes for through truck travel in and around the city. The truck routes include state facilities (Interstate 25, U.S. Highway 36, U.S. Highway 287, State Highway 7, State Highway 121 and State Highway 128 (120th Avenue)) and a few major arterials such as Huron Street, 144th Avenue/Dillon Road, and sections of Sheridan Parkway, Old Wadsworth Boulevard, and 108th Avenue in Westminster. Railroad lines, crossings, and truck routes are identified in **Map 5**.

In the future, the trend of freight movement and distribution will continue in Broomfield due to the shift in how people are choosing to shop and purchase goods. Online sales are predicted to grow by 20 percent in 2016, which will also affect the distribution of goods at a local level in Broomfield. The presence of delivery trucks and vehicles will continue to grow, placing more pressure on the roadway network, including local streets, where deliveries are being made. While new technologies may impact delivery of goods in the future (e.g., drones), it is expected that truck traffic will continue to grow in the near term.

Map 5. Freight Corridors



LEGEND

Source: Broomfield GIS Department; CDOT; FHU GIS Department

- At-Grade Crossing
- Grade Separated Crossing
- Truck Routes
- Highways
- Streets
- Railroad
- Creeks, Ditches, and Canals
- Waterbody
- Open Lands
- City and County of Broomfield

D. TRANSIT SERVICE

RTD provides the public transit in Broomfield, which consists of a variety of service delivery models, including:

- BRT along U.S. Highway 36, which operates in the express lane,
- Traditional fixed-route transit,
- The more flexible Call-n-Ride providing transport to destinations within specific geographic areas.

Source: Regional Transportation District

Call-n-Ride serves 71 percent of Broomfield. The City and County of Broomfield operates the Easy Ride service, providing quality transportation for all Broomfield residents 60 years and older and residents with disabilities. The Seniors' Resource Center provides access to additional transportation resources. The addition of the Flatiron Flyer BRT service along U.S. Highway 36 connects Broomfield to our neighboring communities to the west and to Denver Union Station's FasTracks rail hub, taking people to the airport and throughout the Denver metropolitan area. Existing transit services in Broomfield are identified on **Map 6**.

Transit Services

1 Bus Rapid Transit Route

10 Fixed-Routes

3 Call-n-Ride Areas

7 Human Services Providers

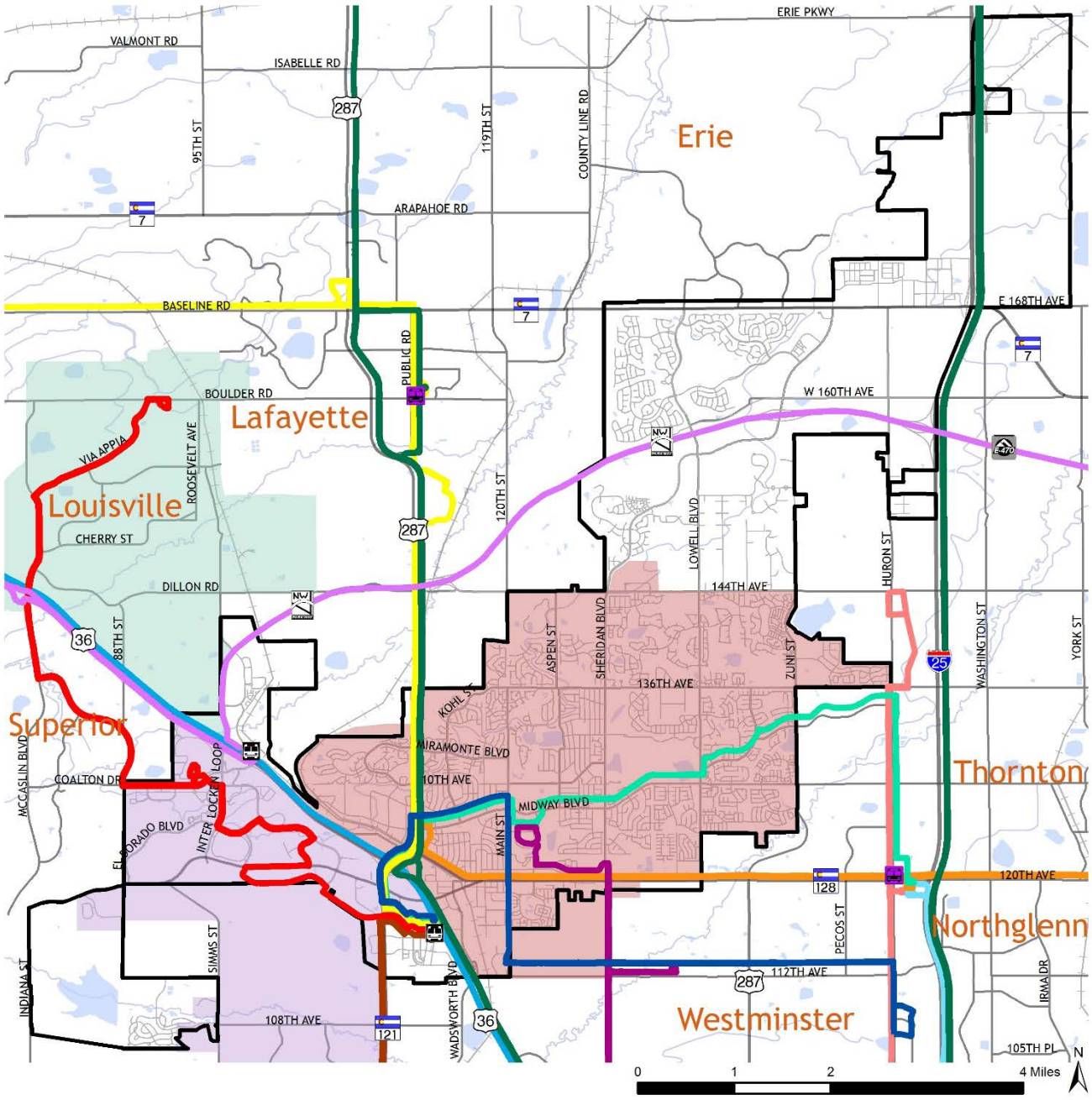
Currently, seven specialized transportation providers operate in Broomfield as shown in **Table 3** and on **Map 7**. Funding allocation to these providers is very complex and coordination of these services is being addressed at the federal, state and local levels. The City and County of Broomfield participates in the Denver Regional Mobility and Access Council (Regional Coordinating Council) and the Broomfield Local Coordinating Council both of which are working to leverage resources to improve mobility for transportation dependent populations.

Table 3. Broomfield Human Services Transportation Providers

Provider	Type	Population Served
BrightStar Lifecare	Private, for-profit	Older adults 60+, children, people with disabilities, individuals with mental health issues
Broomfield Easy Ride	Public Transit Operator	Older adults 60+, people with disabilities, individuals with mental health issues, low-income
Broomfield United Methodist Church	Non-profit	Children, families, older adults, people with disabilities, individuals with mental health issues, low-income
Imagine!	Private, non-profit	Older adults, children, people with disabilities, and individuals with mental health issues
RTD Access-a-Ride	Public Transit Agency	People with disabilities
RTD Senior Ride	Public Transit Agency	Older adults
Seniors' Resource Center	Non-profit	Older adults, others on a select basis

Source: Broomfield Local Coordinating Council 2014 Provider Survey

Map 6. Transit Services



LEGEND

Source: Broomfield GIS Department; CDOT; RTD

- Existing BRT Station
- Existing Park-n-Ride

RTD Bus Routes

- Route 8
- Route 51
- Route 76
- Route 112
- Route 120
- Route 128
- Route 225
- Route 228
- Route AA
- Route AB
- Route L
- Flatiron Flyer BRT
- Highways
- Streets
- Railroad

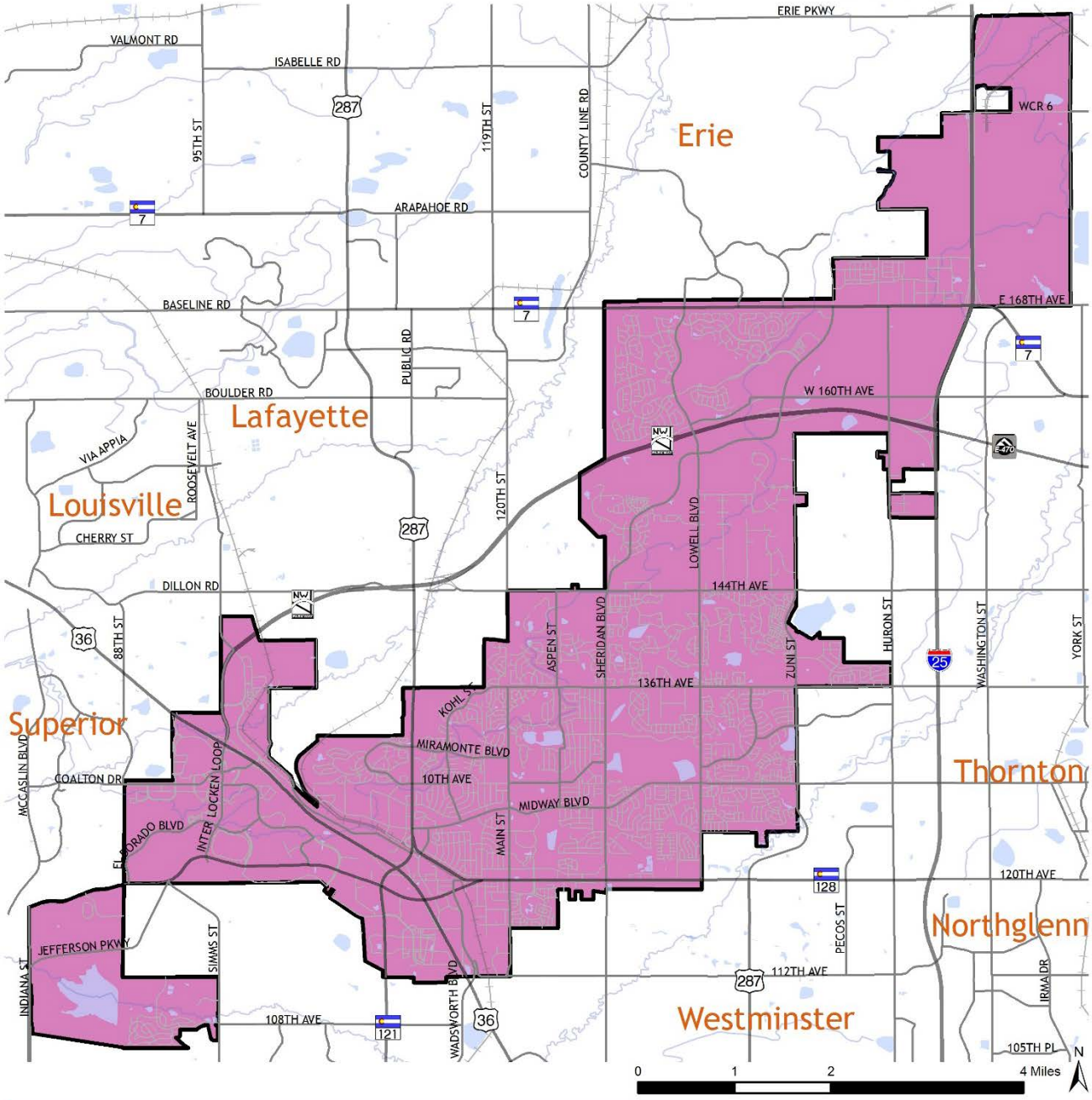
Call-n-Ride Areas

- Broomfield
- Interlocken/Westmoor
- Louisville

- Easy Ride/Seniors' Resource Center Service Area/ City and County of Broomfield

NOTE:
Easy Ride is operated by the City and County of Broomfield and serves Broomfield residents age 60+ and/or those with disabilities. Easy Ride operates within the County boundaries and provides limited service for medical trips outside of Broomfield.

Map 7. Existing Human Services Transportation



LEGEND

- Highways
- Streets
- Railroad
- Creeks, Ditches, and Canals
- Waterbody
- Easy Ride/Seniors' Resource Center Service Area
- City and County of Broomfield

Source: Broomfield GIS Department; CDOT

NOTE:
Easy Ride is operated by the City and County of Broomfield and serves Broomfield residents age 60+ and/or those with disabilities. Easy Ride operates within the County boundaries and provides limited service for medical trips outside of Broomfield.

E. BICYCLE AND PEDESTRIAN SYSTEM

The current bicycle system in Broomfield includes multiuse paths, on-street bike lanes, and unpaved trails. The community trails, identified in **Map 8**, are extensive, well used, and highly valued by the community. The trail system includes many grade-separated crossings of major roads, enabling safe and efficient crossings for bicyclists. The recently constructed U.S. 36 Bikeway extends from Boulder to Westminster, providing a regional "highway for cyclists" parallel to U.S. Highway 36. The Broomfield Trail is the spine of the trail system. Ultimately the Broomfield Trail will provide connections from the southwestern to northeastern areas of Broomfield. The alignment follows the community ditch corridor and offers scenic and wildlife viewing opportunities. Access to major shopping centers, employment centers, schools, city hall, parks, recreation centers, and open space are provided along the route (22 miles upon completion). The extensive trail network and wayfinding in Broomfield (as envisioned in the Open Space, Parks, Recreation, and Trails Master Plan) presents an opportunity to create a cohesive bicycle network that integrates on-street bikeways with the trail system, serving bicyclists of all ages and abilities. Other major community trails include the Lake Link Trail, which connects water features throughout Broomfield (10.5 miles completed), and the Southeast Community Loop Trail, which connects the Civic Center to the southwestern edge of the city and to the new neighborhoods to the north (11 miles upon completion).

Broomfield's Existing Bicycle Network

72 miles of on-street bike lanes

88 miles of multiuse paths

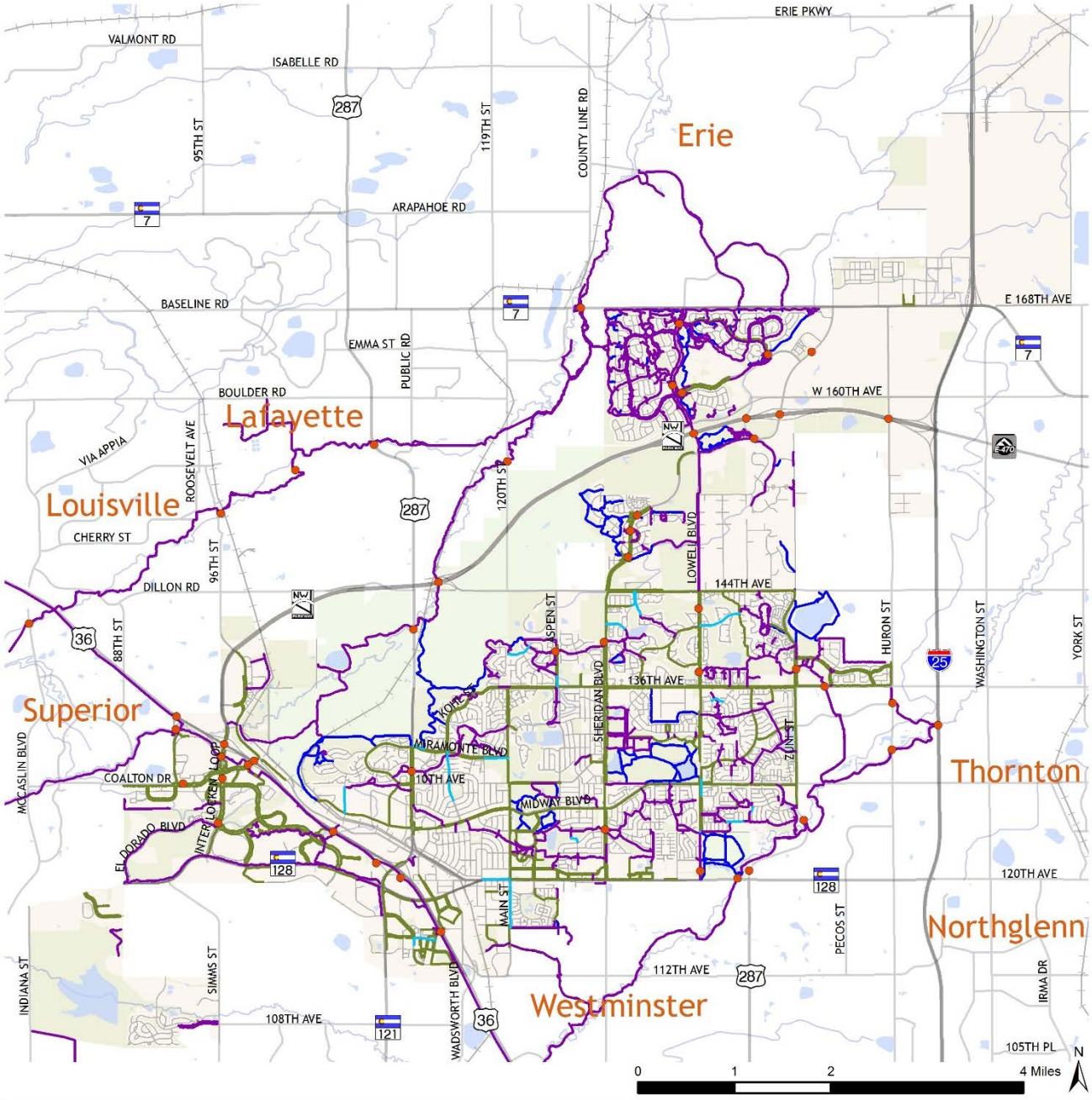
26 miles of unpaved trails

36 grade-separated trail crossings

Map 9 shows that 71 percent of Broomfield's arterial street system includes bike lanes providing excellent point A to B opportunities for travel. Broomfield looks for opportunities to expand the on-street network during construction of new roads and when repaving existing roads to create new and improved lanes. Broomfield's current street standards include bike lanes for minor and major arterial streets, and connector streets through multifamily residential and commercial areas.

Broomfield's pedestrian network includes multiuse trails and sidewalks and is used for recreation, as a means of transportation, and as a way to access transit. As Broomfield continues to grow, development standards are guiding new development to ensure that adequate pedestrian infrastructure is included. These requirements have successfully created more walkability and connectivity in residential and commercial areas, improving the overall mobility for residents and employees.

Map 8. Existing Trail Network (Excluding On-Street Bike Lanes)

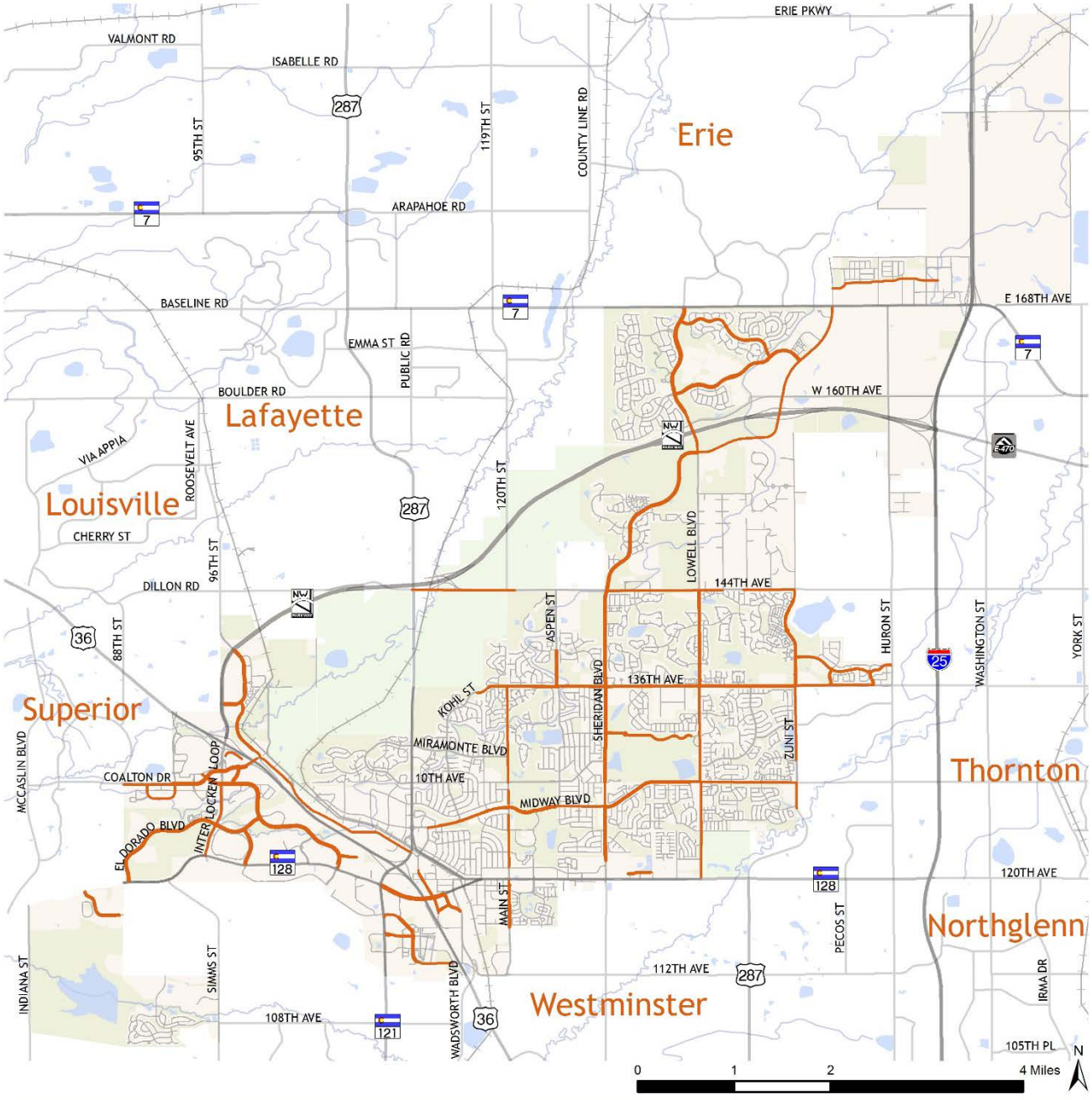


LEGEND

Source: Broomfield GIS Department; DRCOG; CDOT

- Existing Bike/Ped Underpass/Overpass
- Existing 8ft Attached Sidewalk
- Existing 8ft Detached Sidewalk
- Existing Multi-Use Path
- Existing Soft Surface Trail
- Highways
- Streets
- Railroad
- Creeks, Ditches, and Canals
- Waterbody
- Open Lands
- City and County of Broomfield

Map 9. Existing On-Street Bike Network



LEGEND

Source: Broomfield GIS Department; DRCOG; CDOT

- Existing On-street Bike Lane
- Highways
- Streets
- Railroad
- Creeks, Ditches, and Canals
- Waterbody
- Open Lands
- City and County of Broomfield

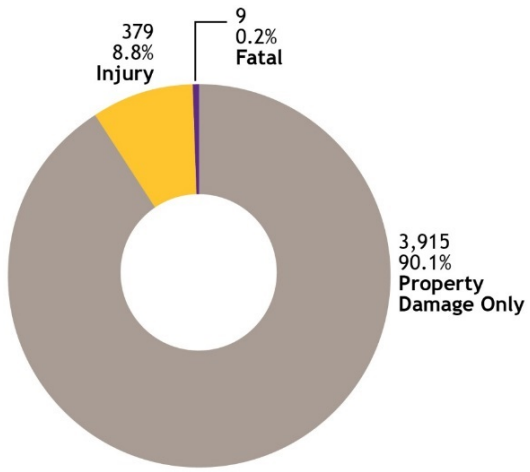
SHORT TRIP DEMAND

The DRCOG regional travel model can be used as a tool to identify travel paths with a high portion of short-distance trips. The propensity to consider riding a bicycle may be expected for trips less than 3 miles and trips less than 1 mile for walking trips. Error! Not a valid bookmark self-reference. and **Map 11** on the following pages show three color bandwidths reflecting trips less than 1 mile (white), 1 to 2 miles (light blue), and 2 to 3 miles (dark blue). The wider the band, the more short-distance trips there are on a particular route. This analysis can be paired with the map of the existing bicycle and pedestrian network to identify areas with the greatest potential to add facilities to accommodate potential biking and walking trips. Many of the arterial streets have constraints and may have limited appeal to bicyclists and pedestrians, but providing facilities along parallel streets could vastly benefit the bicycle and pedestrian network.

F. SAFETY

Over the past three years, there have been more than 4,300 crashes in Broomfield. The vast majority of these crashes (more than 90 percent) have resulted in property damage only. However, nearly 380 crashes have resulted in injury, and 9 crashes involved fatalities as identified in **Chart 2**.

Chart 2. Crash History in Broomfield (2012-2014)



Broomfield's engineering staff regularly monitors the crash rates and patterns throughout the City and County to identify countermeasures to improve the safety for drivers, bicyclists, and pedestrians. **Map 12** and **Map 13** illustrate the intersections with the highest crash rates over a three-year period and the locations of bicycle and pedestrian crashes respectively. The intersections with the highest crash rates were:

1. U.S. Highway 36 & Wadsworth Boulevard
2. 160th Avenue & Huron Street
3. 136th Avenue & Zuni Street
4. 120th Avenue & Wadsworth Boulevard
5. U.S. Highway 36 & Flatiron Crossing Drive

Crashes Involving Bicyclists or Pedestrians (2012-2014)

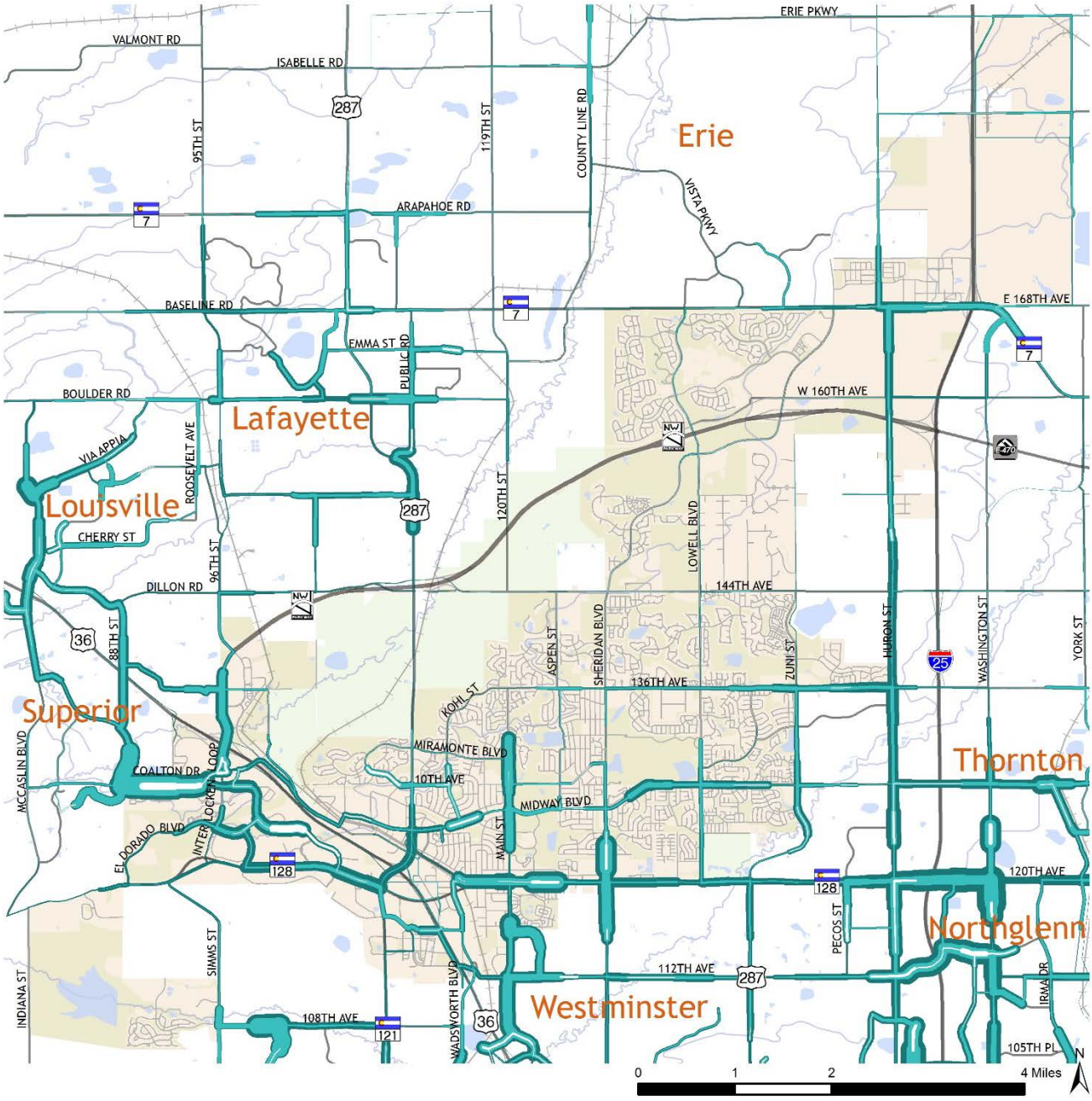
16 Crashes involved a pedestrian

27 Crashes involved a bicyclist

7% of injury crashes involved a bicyclist or pedestrian

22% of fatal crashes involved a bicyclist or pedestrian

Map 10. 2015 Vehicular Trip Demand Within 1, 2, and 3 Miles



LEGEND

- Highways
- Streets
- Creeks, Ditches, and Canals
- Waterbody
- Open Lands
- City and County of Broomfield

Source: Broomfield GIS Department; DRCOG; CDOT; FHU GIS Department

2015 Vehicular Trip Demand within 1, 2, and 3 Miles

1 MILE

0 3,500 7,000

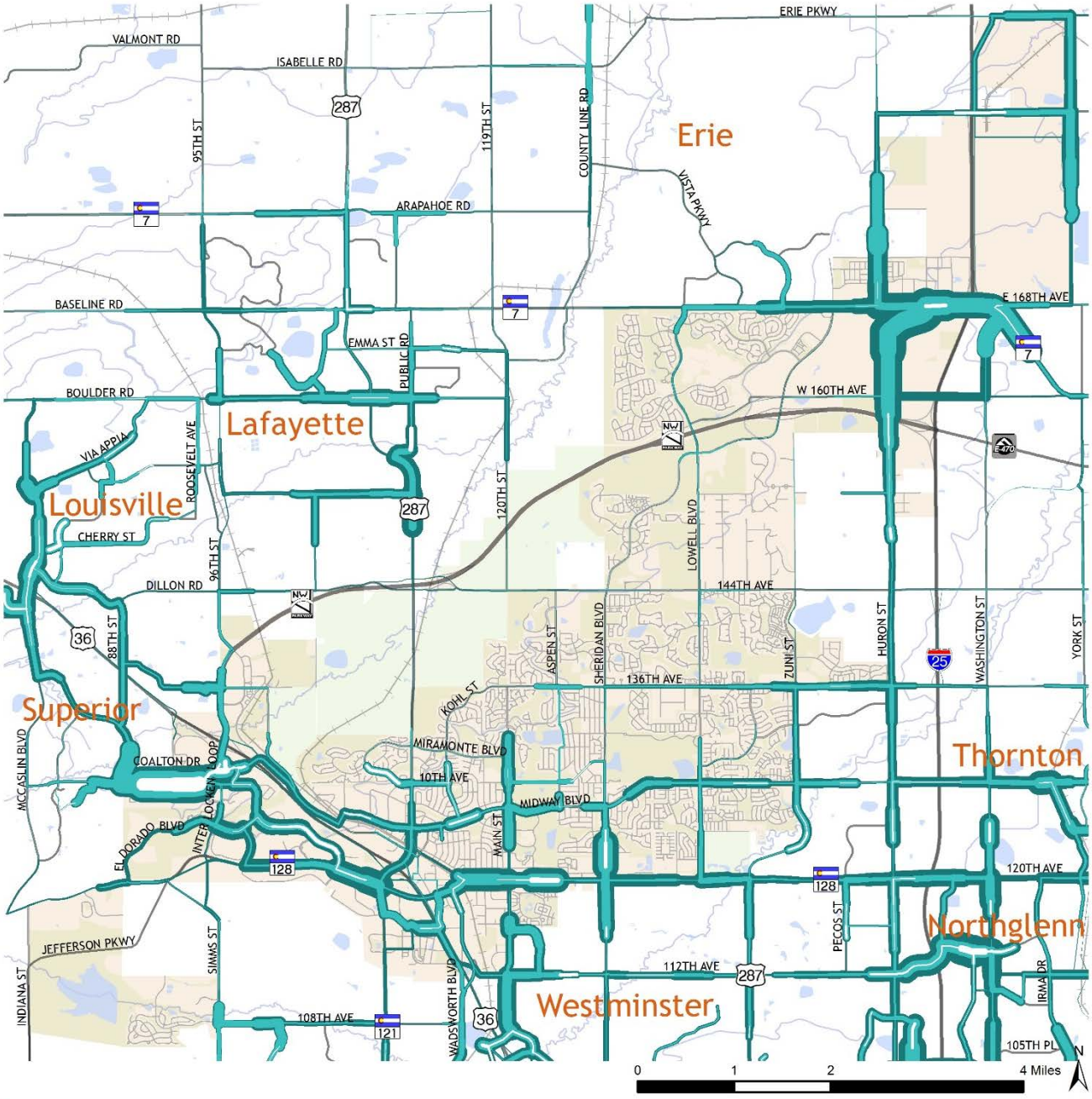
2 MILE

0 5,000 10,000 15,000

3 MILE

0 5,000 10,000 15,000 20,000

Map 11. 2040 Vehicular Trip Demand Within 1, 2, and 3 Miles

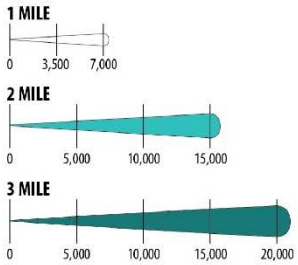


LEGEND

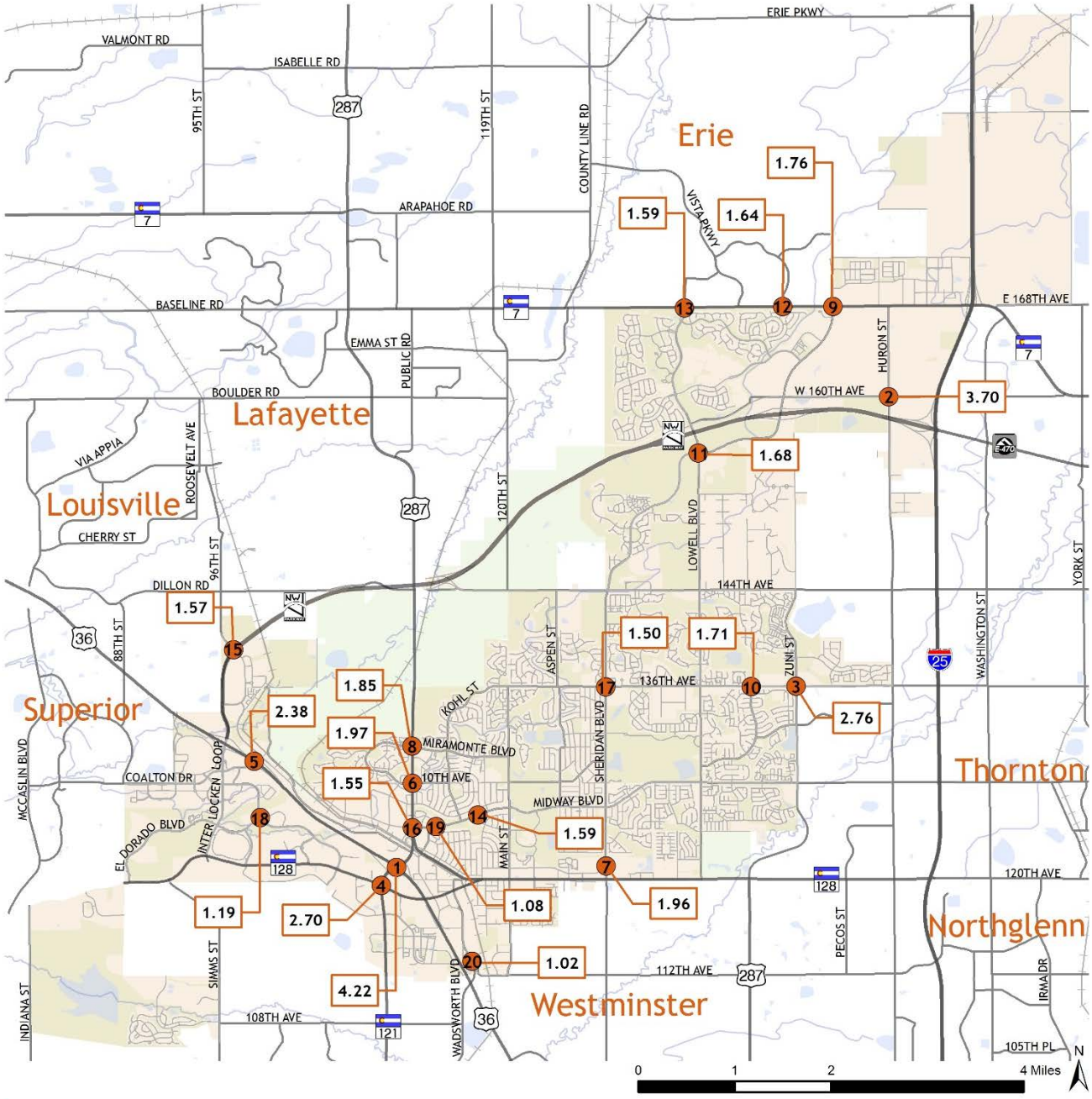
- Highways
- Streets
- Creeks, Ditches, and Canals
- Waterbody
- Open Lands
- City and County of Broomfield

Source: Broomfield GIS Department; DRCOG; CDOT; FHU GIS Department

2040 Vehicular Trip Demand within 1, 2, and 3 Miles



Map 12. Intersections with Highest Crash Rates

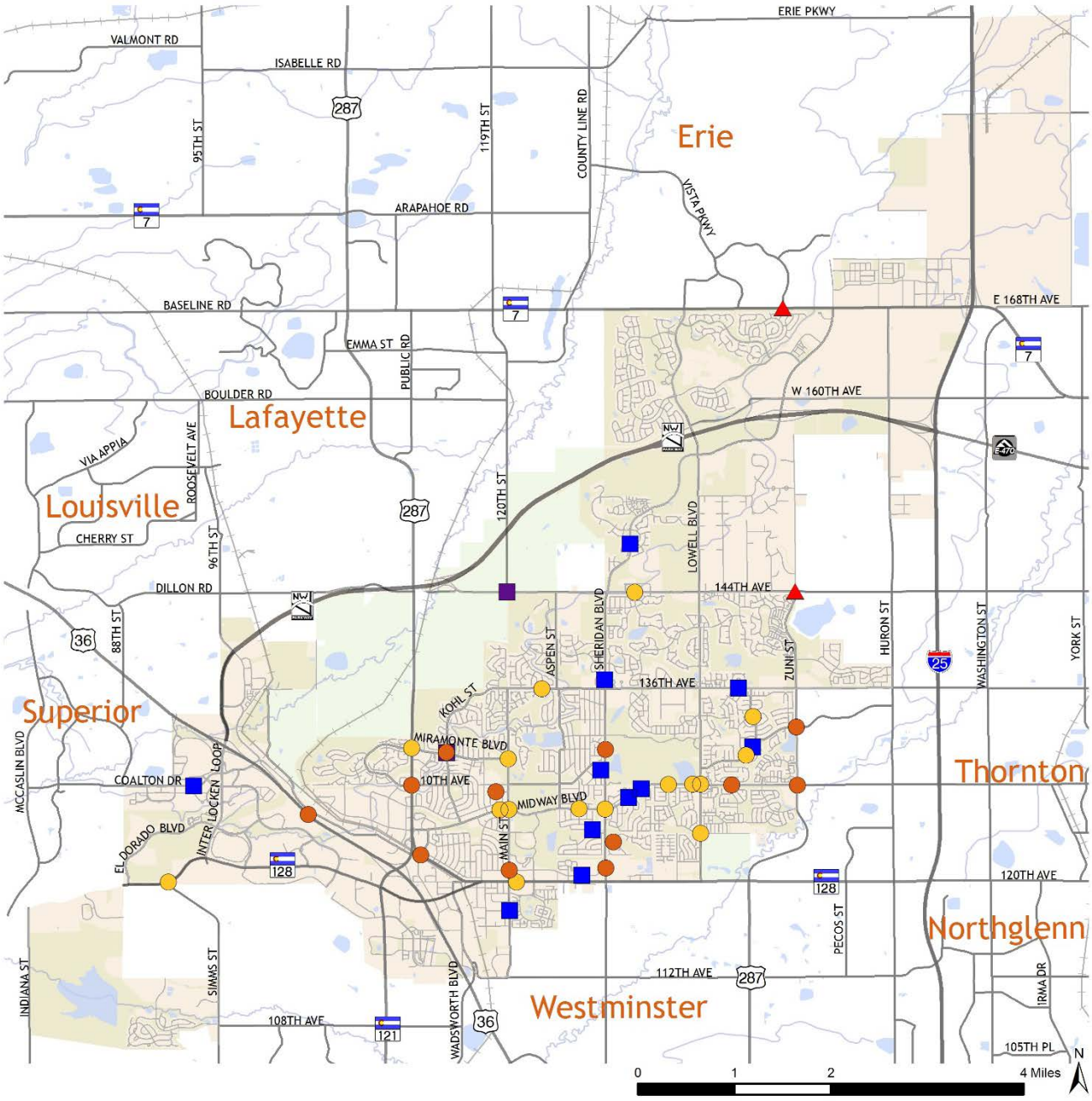


Source: Broomfield GIS Department; CDOT

LEGEND

- (#) Highest Ranked Crash Intersection (2012-2014)
- [X.XX] Crashes Per Million Entering Vehicle (Weighted Average Over 3 Years)
- Highways
- Streets
- Railroad
- Creeks, Ditches, and Canals
- Waterbody
- Open Lands
- City and County of Broomfield

Map 13. Pedestrian and Bicycle Crashes



LEGEND

Source: Broomfield GIS Department; CDOT

Crash Severity (2012-2014)

- Fatality Involving Pedestrian (2)
- Injury Involving Pedestrian (12)
- Injury Involving Bicycle (16)
- Property Damage Involving Pedestrian (2)
- Property Damage Involving Bicycle (11)

- Highways
- Streets
- Railroad
- Creeks, Ditches, and Canals

- Waterbody
- Open Lands
- City and County of Broomfield

Transportation Framework Recommendations

A. TRANSPORTATION OPPORTUNITIES

ALTERNATIVE FUELS

More than a dozen alternative fuels are in production or under development for use in alternative fuel vehicles and vehicles with advanced technology. Government and private-sector fleets have been the primary users of alternative fuels and vehicles. Moving forward, it is likely that more consumers will be interested in these alternatives and there will be an increase in demand. Alternative fuels and technologies reduce vehicle emissions and minimize dependence on fossil fuels. Alternatives include diesel, hydrogen (fuel-cell vehicles), natural gas, ethanol (flex-fuel vehicles), propane, and electricity.

EMERGING TECHNOLOGY

Technology is changing at a rapid pace and is likely to change the landscape of transportation planning, transportation infrastructure, and how people make travel choices in the years to come. However, the rapidity of technological advances will require a flexible approach to planning and delivering transportation infrastructure and services. Broomfield will need to track and consider emerging technology to meet the mobility needs of a diverse cross section of the population. Transportation trends that deserve consideration to support the evolution of the transportation network include:

- Real-time traveler information (transit, traffic, bike/carshare availability, parking)
- Transportation Network Companies (TNCs) such as Lyft and Uber
- Autonomous vehicles

- Electronically "connected" vehicles
- Traffic management solutions (including CDOT's RoadX initiative)

CHANGING DEMOGRAPHICS

Moving forward, existing and upcoming generations have an opportunity to consider living a car-optional lifestyle. While Broomfield and the Denver metropolitan area have largely developed around the automobile over the last 60 years, it is clear that Millennials and older adults are placing more emphasis on how and where they live based on travel options. Having a variety of available transportation options allows people to choose whether or not they want to own a vehicle or perhaps consider becoming a one-car household. More people are likely to support this type of lifestyle if the transportation network is seamlessly integrated and transportation options are readily available, safely accessible, time competitive and provide first- and last-mile connectivity.

PARKING

With an increased interest and availability of transportation options, Broomfield may need to reconsider the way that it thinks about parking. Parking could potentially be reduced in certain developments based on land use, the availability of car sharing, bike sharing, shared-use mobility options, transit, and other strategies. However, parking also provides considerable connectivity between modes and is especially important for those that chose to park and ride public transit. As development and re-development occurs throughout Broomfield, there will be a need to address peak parking demands at key activity centers (e.g., shopping centers, major employers, schools, recreation facilities) within the community. A key area where parking needs are unmet today is at the 1STBANK Center. RTD's plans include construction of an additional parking structure on the northeast side of the Broomfield BRT station, which could also accommodate parking for large events.

PARTNERSHIPS

As the costs of providing public infrastructure projects continue to rise, public-private partnerships (PPP) continue to gain momentum as an innovative way to fund transportation improvements. Examples of successful PPPs are the $500 million U.S. Highway 36 P3 Project as well as RTD's Eagle P3 project, a $2.2 billion project comprising the East Rail/A Line and Gold/G Line and the first segment of the Northwest Rail/B Line to Westminster. Partnerships, to include public/private, should be considered for a variety of projects and multimodal enhancements, such as sidewalks, trails, bike facilities, transit, parking, and shared-use mobility. An example of a successful local PPP is the partnership between the City of Lone Tree, Denver South Transportation Management Association and major employers. These entities partnered to fund a local circulator shuttle, providing service to area businesses around the Lincoln Station in Lone Tree.

SHARED-USE MOBILITY

Since 2012, the concept of shared-use mobility has been on the rise and has opened the door to thinking about mobility in a new way. Entities such as Uber and Lyft have helped improve mobility on an on-demand basis using technology to make the service efficient and cost-effective. RTD has recently started working with Lyft to look at opportunities to maximize Lyft service as a first- and last-mile connectivity opportunity.

Additionally, shared-use mobility is being looked at as an opportunity to help meet the needs of vulnerable populations, including those with low incomes, people with disabilities, young people and older adults, and to help fill spatial and temporal service gaps for all populations.

VARIABLE PRICING

East-west travel in Broomfield during rush hour is increasing on major arterials. With major employment centers and ongoing population growth, congestion is expected to increase. A viable alternative for consideration includes using the existing Northwest Parkway and the future Jefferson Parkway to alleviate rush hour travel through variable pricing. This could be a PPP to maximize travel and mobility both locally and regionally.

B. ROADWAY PLAN

FUNCTIONAL CLASSIFICATION

Streets generally provide two important functions: mobility and land access. These functions conflict with each other—more land access generally leads to reduced traffic carrying capacity and mobility, and vice versa. Each roadway type is specifically designed to operate with certain characteristics based on the adjoining land uses, level of continuity, and proximity and connections to other facilities.

A street's functional classification describes these characteristics, and the street design standards identify specific design parameters, right-of-way needs, and other measures for each classification. Broomfield's Roadway Plan includes the functional classifications described below.

Freeways/Tollways have the highest level of mobility, providing unimpeded high-speed regional and interstate connections. Freeways are limited access divided highways that link major urban areas. Interstate 25 and U.S. Highway 36 are the two freeways in Broomfield, with Interstate 25 serving north-south interstate travel through Colorado's Front Range and U.S. Highway 36 providing a freeway connection between Denver and Boulder. Interstate 25 and U.S. Highway 36 are under the jurisdiction of Federal Highway Administration (FHWA) and CDOT. Northwest Parkway is a tollway that extends from Interstate 25 to U.S. Highway 36. Jefferson Parkway is a planned completion of the Denver metropolitan area ring road.

Regional Arterials include state highway facilities that commonly provide longer distance travel between communities. For the purpose of Broomfield's Roadway Plan, the state highways in the area (U.S. Highway 287, State Highway 7, State Highway 121, and State Highway 128 (120th Avenue)) are categorized separately because they are under the jurisdiction of CDOT; Broomfield's design and access standards do not apply to these facilities.

Major Arterials provide a high degree of mobility and serve corridor movements with longer trip lengths. While adjoining land uses can be served directly, access is limited to emphasize mobility. Broomfield's Major Arterials include Sheridan Boulevard, a portion of Zuni Street, Huron Street, a portion of Lowell Boulevard, and 144th Avenue/Dillon Road.

Minor Arterials provide trips of moderate length and offer connectivity to streets of higher functional classification. Minor Arterials provide intra-community continuity and a higher degree of land access than Major Arterials without penetrating neighborhoods.

Connectors gather traffic from local streets and funnel them to the arterial network. Connectors provide a balance between access and mobility and retain continuity through neighborhoods. Travel speeds are moderate, and travel distances are short to medium. Broomfield should continue to work with developers to identify future connector street alignments and to encourage a system of connectors that enhance the grid network, minimizing discontinuous, curvilinear alignments. Connectors should be located opposite each other at arterial intersections to avoid offset T-intersections along arterial corridors.

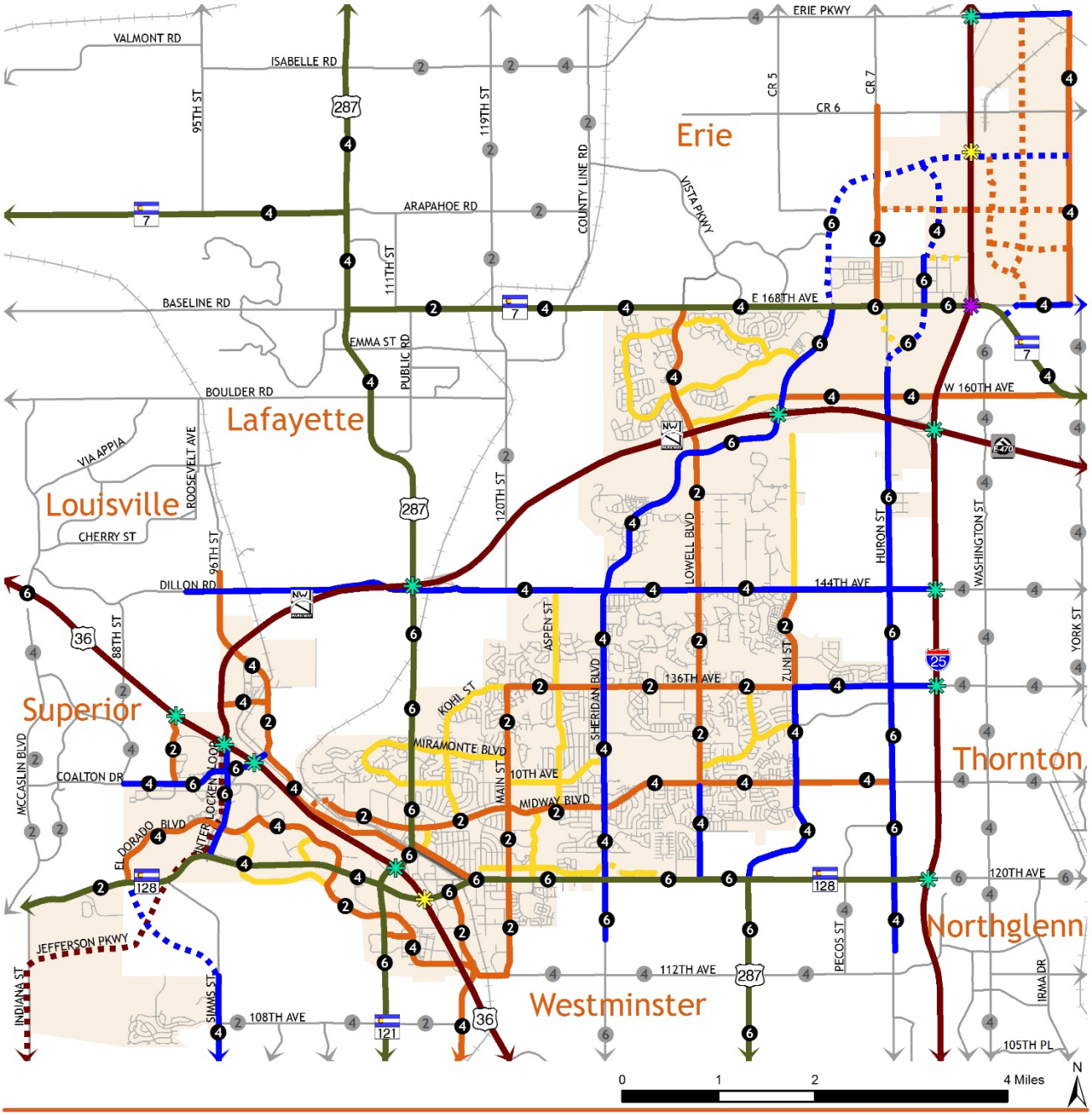
Local Streets serve the highest level of access, providing direct driveway access to adjacent properties and carrying traffic to the connectors. Local Streets can be of limited continuity and may be designed to discourage through traffic. Local Streets are typically identified through development plans.

The functional classification of a street reflects its role in the road network and forms the basis for access management, corridor preservation, and street design guidelines and standards. Existing streets may not meet all of the desired characteristics described by their defined functional classification but can be upgraded as improvements to the streets are made. The functional classification should be viewed as the desired condition and should not change over time. While the level of traffic is typically highest on higher level functional classifications like freeways and principal arterials, traffic volumes are a result of a street's function rather than a delineator between functional classifications.

FUTURE LANE REQUIREMENTS

In addition to defining functional classifications, the Roadway Plan shown on **Map 14** identifies the through lane requirements to meet the 2040 travel demands. Broomfield's Standards and Specifications (2012) include typical cross sections based on a street's functional classification and through lane configuration. The Roadway Plan, along with the standard cross sections, should be used for the purpose of preserving right-of-way for the future roadway needs and for planning roadway capital improvement projects.

Map 14. Roadway Plan



LEGEND

Source: Broomfield GIS Department; CDOT; FHU GIS Department

- Existing Interchange
- Future Diverging Diamond Interchange (DDI)
- Future Interchange
- No. of Lanes
- Freeway/Tollway
- Future Freeway/Tollway
- Regional Arterial (State or U.S. Highway)
- Major Arterial
- Future Major Arterial
- Minor Arterial
- Future Minor Arterial
- Connector (2 Lanes Unless Otherwise Noted)
- Future Connector
- Streets
- Railroad
- City and County of Broomfield

C. TRANSIT

The future transit network identifies the core transit services envisioned to help improve overall mobility in Broomfield. The transit network includes fixed-route bus service, rail, Call-n-Ride, shared-use mobility, and human services transportation.

FIXED-ROUTE BUS SERVICE

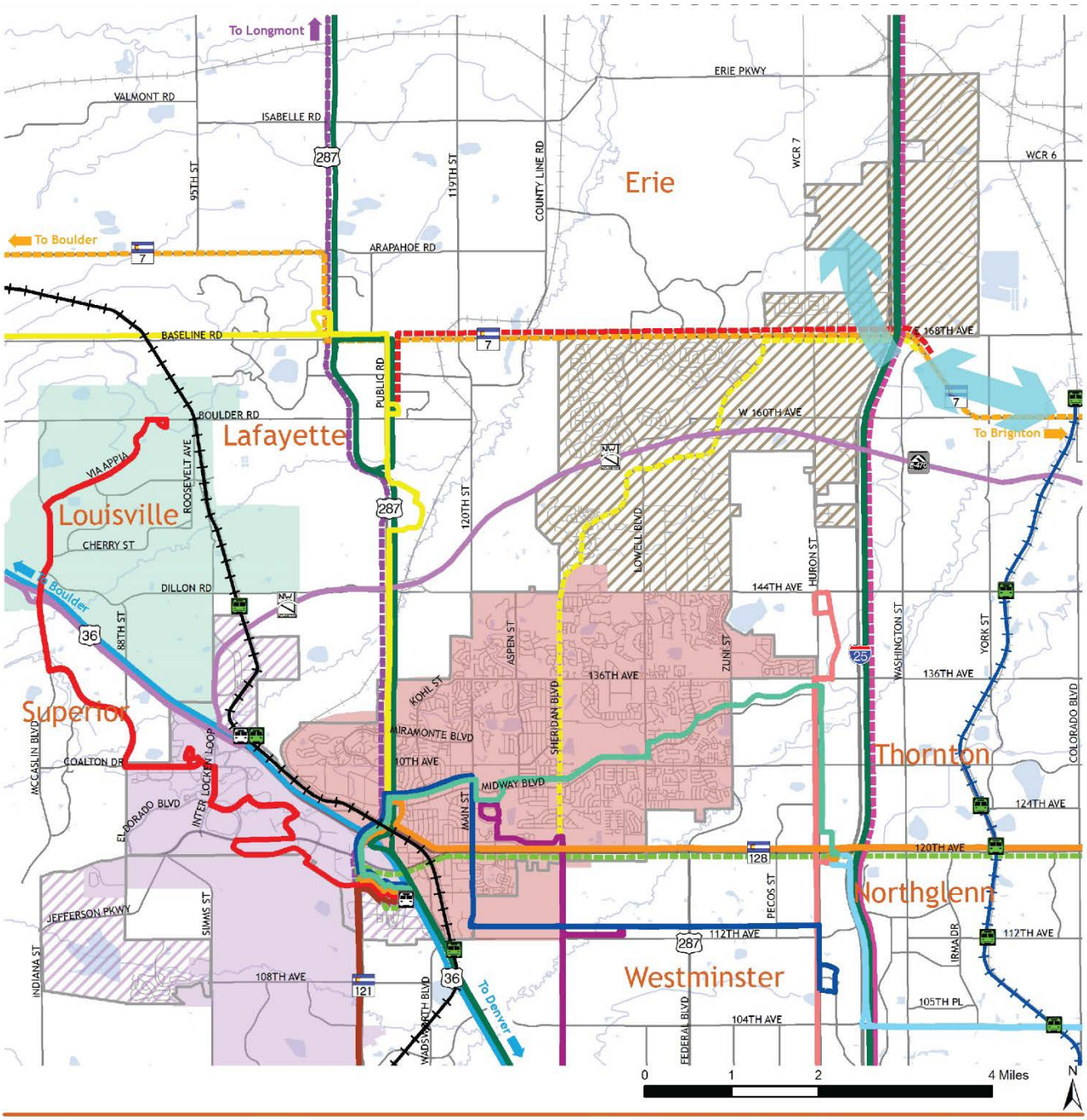
With the addition of the Flatiron Flyer BRT on U.S. Highway 36 in January 2016 and the opening of additional RTD FasTracks rail lines throughout 2016 (A, B, G, and R Lines), Broomfield is well positioned for regional access to Boulder, Denver, Denver International Airport, and other parts of the Denver metropolitan area. Overall, the number of fixed-routes serving the community is limited, but RTD's North Area Mobility Study (NAMS), completed in 2014, identifies three potential arterial BRT corridors that would serve Broomfield. Arterial BRT is high-frequency, high-quality transit service that is travel-time competitive and can use a variety of rights-of-way - including mixed traffic, dedicated lanes, and separate busways. U.S. Highway 36 bus service is BRT, it runs in the express lanes on U.S. Highway 36 and there are six Flatiron Flyer routes that have differing stop patterns to improve service efficiency. Within Broomfield, BRT is identified for three major corridors: U.S. Highway 287, 120th Avenue, and State Highway 7. Each line serves existing emerging activity centers key to Broomfield's future. The BRT corridors and key characteristics identified in the NAMS are identified in **Table 4** and illustrated on **Map 15**.

Table 4. North Area Mobility Study – Potential BRT Corridors

Potential BRT Corridor	Service Characteristics	Length (miles)	Number of Stations
120th Avenue	East-west connection from Broomfield to Interstate 25/Adams County Government Center	16.3	18
U.S. Highway 287	Direct connection from Longmont to U.S. Highway 36 – Lafayette and Broomfield	21.8	34
State Highway 7	East-west connection from Boulder to northern areas of Lafayette and Broomfield	17.9	44

The extension of RTD's Sheridan Boulevard/Route 51 north to State Highway 7 that would terminate at the future State Highway 7/Interstate 25 mobility hub is also shown as an additional fixed-route service. The extension of this fixed-route bus route would help provide critical north-south mobility and minimize passenger transfers. Local bus service along State Highway 7 connecting Broomfield (particularly the Anthem neighborhood) to Lafayette and the RTD system is desired as an interim service prior to the State Highway 7 BRT service. Broomfield has successfully worked with RTD in the past on completing the Flatiron Flyer, expanding fixed-routes, and extending Call-n-Ride service. Broomfield should coordinate with RTD to begin discussions about these route addition/extensions and eventual implementation.

Map 15. Future Transit Services Framework



Source: Broomfield GIS Department; CDOT; RTD; FHU GIS Department

LEGEND

- Existing BRT Station
- Future Rail Station

RTD Bus Routes

- Route 8
- Route 51
- Route 76
- Route 112
- Route 120
- Route 128
- Route 225
- Route 228
- Route AA
- Route AB
- Route L
- I-25 Express Lanes/BRT
- Future I-25 Express Lanes/BRT
- Flatiron Flyer BRT (FF1-FF6)
- Potential SH7 BRT
- Potential 120th Avenue BRT
- Potential US 287 BRT
- Potential Route 51/ Sheridan Blvd Extension
- Potential SH 7 Local Bus Route
- Future North Metro Rail
- Potential North Metro Rail Extension
- Future Northwest Rail
- City and County of Broomfield

Call-n-Ride Areas

- Broomfield
- Interlocken/Westmoor
- Interlocken/ Westmoor Expansion
- Louisville
- Future Shared-Use Mobility Area

RAIL NETWORK

The first 13 miles of RTD's North Metro Rail/N Line is currently under construction. However, due to funding limitations, the line will open in segments, with the first segment from Denver Union Station to Northglenn scheduled to open in 2018. Funding is currently not available to extend the line to State Highway 7, but it is the desire of Broomfield to continue to advocate for and to participate in the full buildout of this commuter rail line. Extending the North Metro Rail/N Line to connect with the Interstate 25/State Highway 7 mobility hub is also desired. Developing areas in northeastern Broomfield would benefit from extending rail service to employment hubs and connecting to regional activity in the northern part of the state.

Similarly, RTD's Northwest Rail/B Line is not fully funded and is being constructed in segments. The first segment from Denver Union Station to south Westminster opened in July 2016. The full extension of the Northwest Rail/B Line, which will extend from Westminster-Broomfield-Louisville-Boulder-Longmont, is a critical link for Broomfield and will provide critical regional access to and from Broomfield. The full buildout of this rail line will help support and improve mobility options and improve connectivity.

CALL-N-RIDE

The Broomfield, Interlocken/Westmoor, and Louisville Call-n-Rides currently serve Broomfield. The 2016 expansion of the Broomfield Call-n-Ride service, a partnership of Broomfield and RTD, is helping to fill a need for transit and is expanding the reach of public transit to a larger portion of the community. Maintaining existing Call-n-Rides is important, as is expanding the reach of this type of on-demand transportation solution. This plan recommends the expansion of the Interlocken/Westmoor Call-n-Ride to fully cover the southern portion of Broomfield and the area just north of U.S. Highway 36 at Via Varra. This expansion would provide additional service to areas such as Great Western Park, Water Walk Hotel, and the Overlook office complex. Because RTD currently operates Call-n-Ride, this type of expansion would require a partnership to understand demand, identify funding, and implement the expansion. Call-n-Ride service should also be considered as an element of the future shared-use mobility area of Broomfield north of 144th Avenue.

SHARED-USE MOBILITY

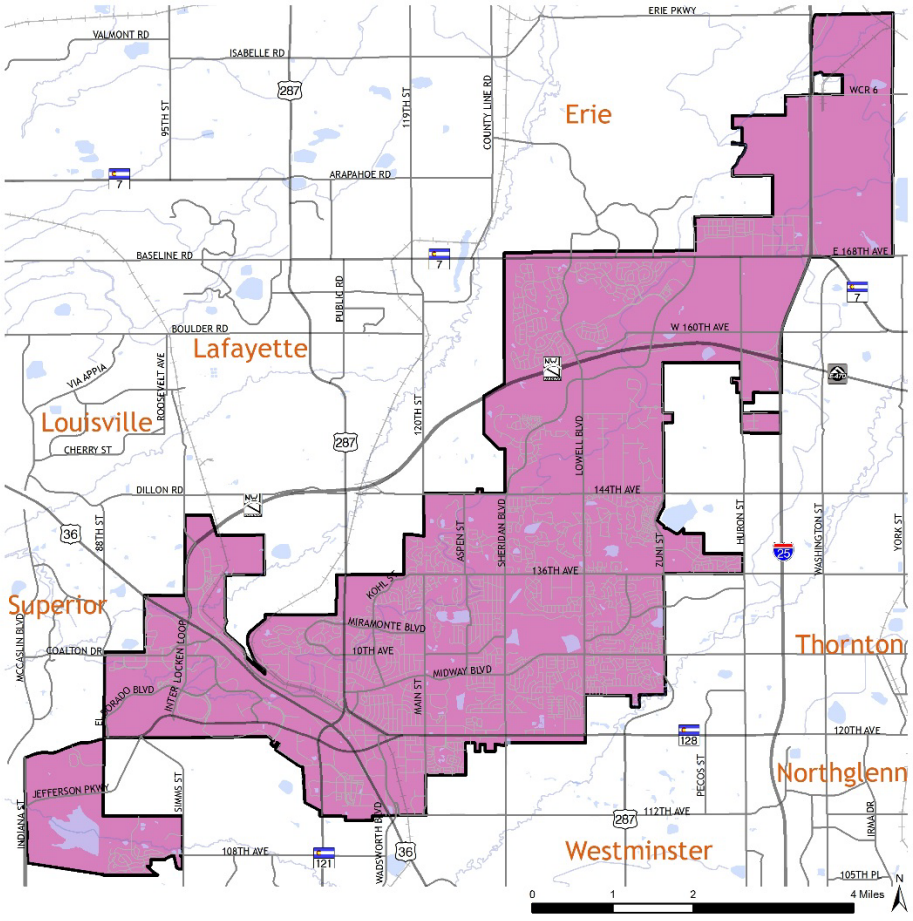
With the movement of the private sector to provide shared use mobility (e.g., Uber and Lyft), known broadly as Transportation Network Companies (TNCs), Broomfield has an opportunity to examine creative solutions that may be implemented to help service Broomfield and, in particular, the northeast portion of the community. For instance, in partnership with Anthem, Broomfield and the private sector could craft a transportation solution to specifically meet the needs of residents in this area. Additionally, as the State Highway 7 BRT comes on line, there will be a need for creative solutions for first- and last-mile transportation to help Broomfield residents and employees access critical transit bus and rail lines. By tracking emerging technology and working with regional partners, Broomfield can position itself to capitalize on creative solutions to provide mobility for residents and employees traveling to, from, and within Broomfield such as shared-use mobility and driverless vehicles. RTD Call-n-Ride service could be an element of the shared-use mobility strategy.

HUMAN SERVICES TRANSPORTATION

Transportation alternatives are especially important for young people, older adults, people with disabilities, and low-income individuals in Broomfield. As of 2013, approximately 10 percent of the population in Broomfield is 65 years and older, with this number expected to double by 2040. Preparing for the Millennials' shift to using alternative modes and the need for alternative transportation for older adults in the decades to come will be critical to Broomfield's success.

Currently, seven specialized transportation providers operating in Broomfield that offer transportation services for older adults, low-income individuals, people with disabilities, and young people. Easy Ride, Seniors' Resource Center, and RTD Access-a-Ride all help fill some of this need today, but most providers are operating at capacity and have limited resources. Additional funding for Easy Ride service, shown on **Map 16**, will be needed in the future so that the service can continue to grow, meet demand, and efficiently service the entire City and County of Broomfield. Proactively looking for new opportunities for creative transportation funding and solutions to meet human services needs will be imperative as demographics shift. Partnering with the private sector to meet needs will be important.

Map 16. Future Human Services Transportation Framework



LEGEND

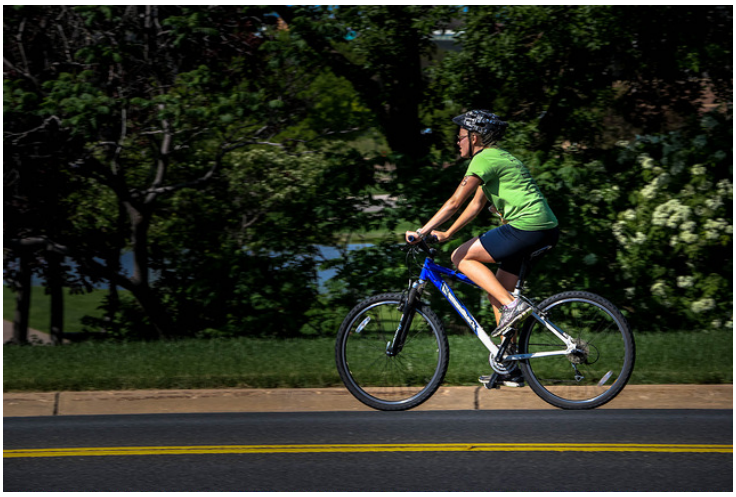
- Highways
- Streets
- Railroad
- Creeks, Ditches, and Canals
- Waterbody
- Easy Ride/Seniors' Resource Center Service Area
- City and County of Broomfield

Source: Broomfield GIS Department; CDOT

NOTE:
Easy Ride is operated by the City and County of Broomfield and serves Broomfield residents age 60+ and/or those with disabilities. Easy Ride operates within the County boundaries and provides limited service for medical trips outside of Broomfield.

D. BICYCLE AND PEDESTRIAN NETWORK

BICYCLE NETWORK OPPORTUNITIES



The extensive trail network in Broomfield (as envisioned in the Open Space, Parks, Recreation, and Trails Master Plan) presents an opportunity to create a cohesive bicycle network that integrates on-street bikeways with the trail system, serving bicyclists of all ages and abilities. Interest from a group of diverse cyclists will help develop new options to provide opportunities for families and more tentative cyclists to travel in the community.

Bicycling is a simple everyday solution to travel that can be fun and efficient in addition to providing personal health and financial benefits. For a bicycle network to appeal to a broad cross section of the population, it should be a low stress experience. That is, the network should provide routes between origins and destinations that do not require riders to exceed their tolerance for traffic stress and that do not require excessive out of direction routing. A low stress bike network may include a combination of trails (see **Map 17**) and on-street bike facilities (see **Map 18**). Broomfield's existing and proposed trail network, will provide a strong foundation for a low stress bike network. Wayfinding signage and connections between the existing on-street bike and trail network will help to create seamless and fun travel throughout the community. Examples of the types of facilities that may be considered to complete a low stress bike network in Broomfield include:

Bike Boulevards: Streets with low motorized traffic volumes and speeds, designated and designed to give bicycle travel priority. Bicycle Boulevards use signs, pavement markings, and speed and volume management measures to discourage through trips by motor vehicles and to create safe, convenient bicycle crossings of busy arterial streets.[1]

Source: National Association of City Transportation Officials

Buffered Bike Lanes: Conventional bicycle lanes paired with a designated buffer space separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane. A buffered bike lane is allowed as per the Manual for Uniform Traffic Control Devices (MUTCD) guidelines for buffered preferential lanes (Section 3D-01).[1]

[1] National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide, Second Edition.

Source: National Association of City Transportation Officials

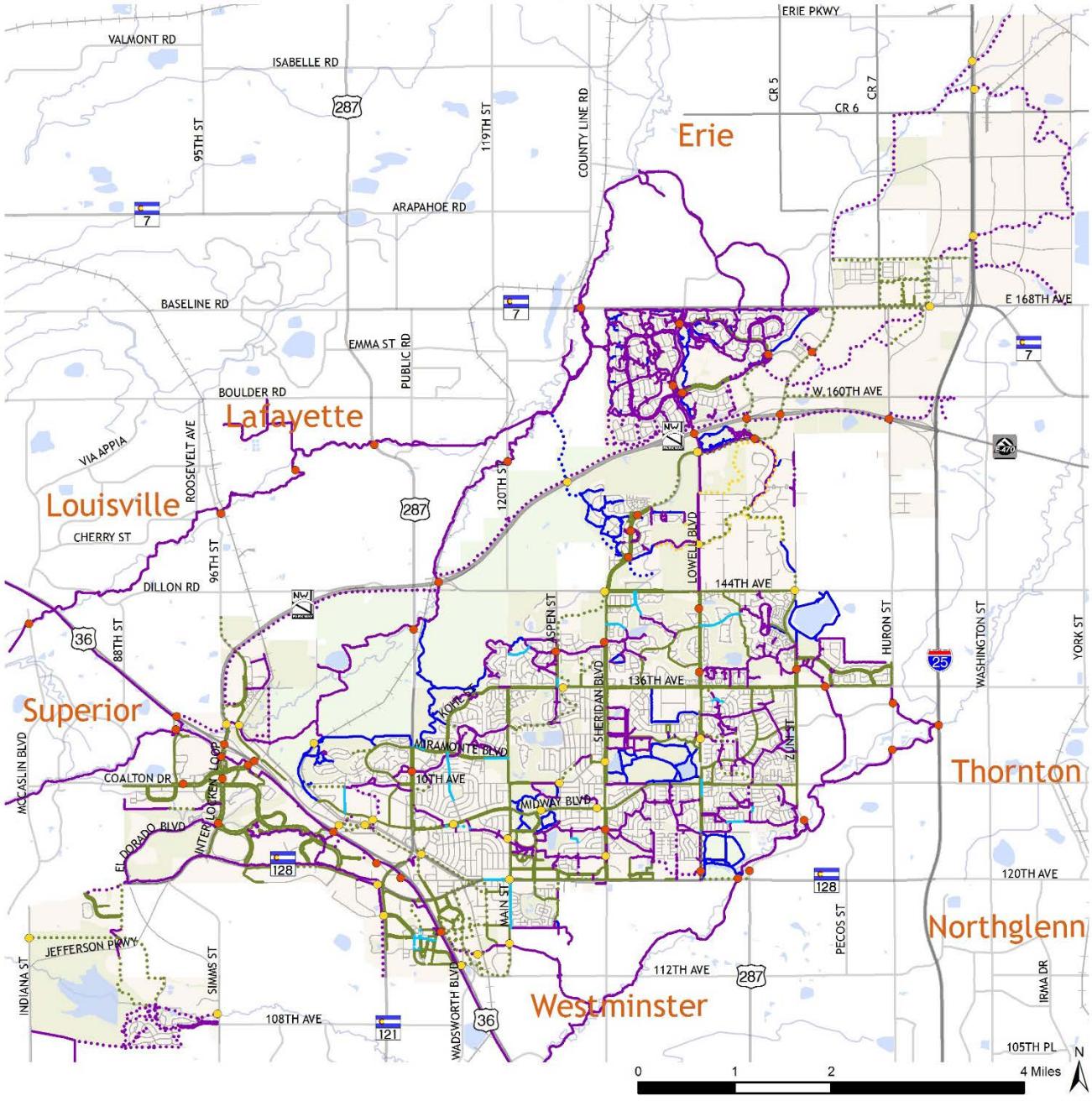
Protected Bikeways (also known as Cycle Tracks): Exclusive bike facilities that combine the user experience of a separated path with the on-street infrastructure of a conventional bike lane. A cycle track is physically separated from motor traffic and distinct from the sidewalk. Cycle tracks have different forms but all share common elements—they provide space that is intended to be exclusively or primarily used for bicycles and are separated from motor vehicle travel lanes, parking lanes, and sidewalks. In situations where on-street parking is allowed, cycle tracks are located to the curb-side of the parking (in contrast to bike lanes).[1]

Wayfinding: A bicycle wayfinding system consists of comprehensive signing and/or pavement markings to guide bicyclists to their destinations along preferred bicycle routes. Signs are typically placed at decision points along bicycle routes, typically at the intersection of two or more bikeways and at other key locations leading to and along bicycle routes.[1] Technology-based wayfinding solutions (such as a smartphone application and/or kiosks with QR codes) should be considered.

Underpasses/Overpasses: A grade-separated crossing of a major barrier such as a waterway, railroad, highway, or Major Arterial that can considerably improve the safety, level of comfort, and efficiency of the bicycle network.

Protected Crossings: A street crossing that includes elements of protection for the bicyclists such as full signalization, hybrid signalization (e.g., HAWK signal), bike detection, bike signal heads, and bike phasing (e.g., lead time or an exclusive phase).

Map 17. Existing and Proposed Trail Network (Excluding On-Street Bike Lanes)

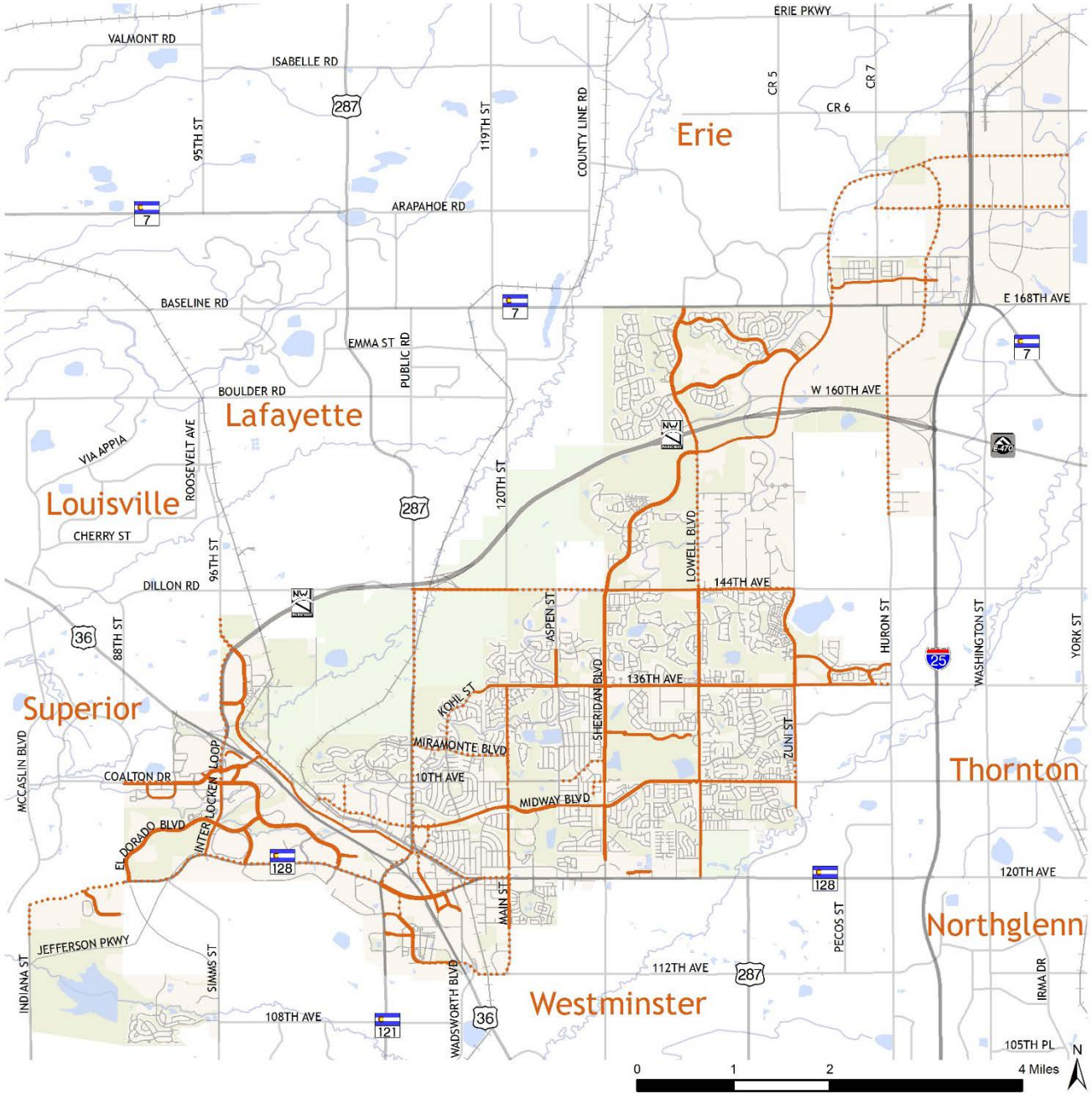


Source: Broomfield GIS Department; DRCOG; CDOT

LEGEND

- Existing Bike/Ped Underpass/Overpass
- Proposed Bike/Ped Underpass/Overpass
- Existing 8ft Attached Sidewalk
- Proposed 8ft Attached Sidewalk
- Existing 8ft Detached Sidewalk
- Proposed 8ft Detached Sidewalk
- Proposed Equestrian
- Existing Multi-Use Path
- Proposed Multi-Use Path
- Existing Soft Surface Trail
- Proposed Soft Surface Trail
- Highways
- Streets
- Railroad
- Creeks, Ditches, and Canals
- Waterbody
- Open Lands
- City and County of Broomfield

Map 18. Existing and Proposed On-Street Bike Network



LEGEND

Source: Broomfield GIS Department; DRCOG; CDOT

- Existing On-street Bike Lane
- Proposed On-street Bike Lane
- Highways
- Streets
- Railroad
- Creeks, Ditches, and Canals
- Waterbody
- Open Lands
- City and County of Broomfield

PEDESTRIAN NETWORK OPPORTUNITIES

At some point during all trips, whether bicycle, transit, or automobile, everyone is a pedestrian. Safe pedestrian movement is critical whether it is students walking to school, residents or employees accessing public transit, or people simply recreating and navigating the network of sidewalks and trails.

Broomfield's pedestrian network includes multiuse trails and sidewalks and is used for recreation, as a means of transportation, and to access transit. As Broomfield continues to grow, development standards are guiding new development to ensure that adequate pedestrian infrastructure is included. These requirements have successfully created more walkability and connectivity in residential and commercial areas, improving the overall mobility for residents and employees.

Broomfield has an opportunity to re-purpose streets as road maintenance and reconstruction occurs, resulting in improved sidewalks, curb ramps, and crosswalks. It is important that all sidewalks have appropriate curb cuts to meet Americans with Disabilities Act (ADA) requirements and to ensure the safe crossing of all ages and abilities. Pedestrian improvements will enhance connectivity in the community and first- and last-mile connections to transit and other alternative modes.

Pedestrian crossings of the street system are critical to creating a walkable community that feels safe for a broad range of the population. The following list of pedestrian crossing treatments should be used as a toolbox; the appropriate crossing treatment should be identified based on the context of a particular crossing location.

Advance Yield Lines: Solid white triangles pointing toward approaching vehicles. Yield lines increase the upcoming pedestrian crossing's visibility to motorists and can reduce the number of vehicles encroaching on a crosswalk. This treatment is useful at mid-block crossing locations where pedestrian visibility is low and/or in areas with aggressive drivers.

Raised Crosswalks: Marked crosswalks that are raised to act simultaneously as a traffic calming device. This treatment can improve the safety for pedestrians with increased yielding by drivers. Raised crosswalks are particularly effective where heavily used trails cross a road. Operations and maintenance implications must be considered prior to implementation.

Median Pedestrian Island: Raised islands are placed in the center of a street, separating opposing lanes of traffic with a median opening along the pedestrian path, providing a refuge for pedestrians crossing. This measure allows pedestrians to focus on each direction of traffic separately, and the refuge provides pedestrians with a better view of oncoming traffic. This treatment can be used at intersections or at mid-block crossings.

Source: National Association of City Transportation Officials

Source: National Association of City Transportation Officials

Curb Extensions: A traffic calming measure meant to slow traffic and increase driver awareness of the pedestrian crossing. The treatment consists of an extension of the curb into the street, making the pedestrian space (sidewalk) wider and the crossing distance shorter.

Rectangular Rapid Flashing Beacon: Rapid flashing LED lamps in combination with pedestrian crossing signage and striping. The beacons are typically push-button activated and are often powered by solar panels to reduce energy costs. The treatment has a high driver yielding compliance and is particularly effective on two-lane roadways.

Pedestrian Hybrid Signal: Pedestrian-actuated signal (also referred to as a HAWK) that displays a yellow (warning) indication followed by a solid red light. During the pedestrian clearance, the driver sees a flashing red pattern until the clearance interval has ended and the signal goes dark. Pedestrian hybrid signals reduce pedestrian-vehicle conflicts and have high driver yielding compliance. This treatment is useful in areas where it is difficult for pedestrians to find gaps in automobile traffic but where normal signal warrants are not met; they can be used on higher speed multilane roads.

Source: National Association of City Transportation Officials

Underpasses/Overpasses: A grade-separated crossing of a major barrier such as a waterway, railroad, highway, or Major Arterial that can considerably improve the safety and level of comfort for pedestrians.

Key Corridors and Mobility Hubs

A. KEY CORRIDORS

As Broomfield continues to grow and evolve, several key transportation corridors will be important to realizing the community's transportation, land use, housing, and economic goals. Together, these eight corridors address the major themes of the Comprehensive Plan:

- Demographics and growth projections
- Maintenance and improvement of existing facilities and neighborhoods
- Impact of technology
- Multimodal transportation

Each key corridor, discussed in detail below and illustrated on **Map 19**, presents unique opportunities and challenges that will need to be considered strategically as the community grows and evolves.

STATE HIGHWAY 128 (120TH AVENUE) CORRIDOR

THEMES

- Demographics and growth projections
- Maintenance and improvement of existing facilities and neighborhoods
- Impact of technology
- Multimodal transportation

IMPORTANCE

The State Highway 128 (120th Avenue) Corridor provides a regional connection between State Highway 93 and Interstate 25. It is adjacent to several Broomfield employment centers, commercial areas, and residential neighborhoods, including Interlocken, Arista, and the Civic Center. It runs through central Broomfield where redevelopment opportunities exist. As a well-established travel corridor, it will better connect Arista to greater Broomfield when the 120th Avenue connection is complete.

OPPORTUNITIES

The RTD NAMS identifies 120th Avenue for successful BRT. The development of multimodal infrastructure along the corridor will support the potential to generate new sales tax revenues for Broomfield. Adjacent communities (including Westminster) have expressed a strong interest in strengthening the people moving capacity of the corridor. The presence of continuous right turn acceleration and deceleration lanes provides an opportunity to reclaim this space to expand the people moving throughput of the corridor.

CHALLENGES

Sections of 120th Avenue currently operate at over capacity conditions. Completion of the 120th Avenue Connection will bottleneck the capacity from the new tie-in to Main Street. Funding for the right-of-way issues, project design, and construction have not yet been identified. Eastbound access improvements to the Civic Center may be needed in the future. The current bus service along 120th Avenue is not robust, and the right-of-way available for BRT improvements such as queue jump lanes and stations is limited. The current pedestrian connections across 120th Avenue, particularly at the U.S. Highway 287/120th Avenue intersection, are challenging.

STATE HIGHWAY 7

THEMES

- Demographics and growth projections
- Impact of technology
- Multimodal transportation

IMPORTANCE

State Highway 7 is an important regional connection for Broomfield; to the west, it connects Broomfield to Boulder, and to the east, it provides access to Interstate 25 and connection to Thornton, Brighton, and U.S. Highway 85. State Highway 7 supports the emerging economic centers at North Park, Northlands, Palisade, and Highlands and also serves the existing residential neighborhoods including Anthem and Anthem Ranch.

OPPORTUNITIES

CDOT completed a Planning and Environmental Linkage (PEL) study for the corridor to provide a vision for the corridor and guidance for improvements. The CDOT traffic study for the Interstate 25/State Highway 7 interchange completed as a part of the North Interstate 25 Environmental Impact Statement (EIS) Re-evaluation indicates that a diverging diamond interchange (DDI) could work through 2040. This allows the DDI to proceed as the preferred interchange improvement. The Interstate 25/State Highway 7 interchange is a focal point for Broomfield's future development and is envisioned to be a major transportation mobility hub. The traffic study indicates the need to widen State Highway 7 from Interstate 25 to Huron Street. The RTD NAMS calls for BRT on State Highway 7, and the State Highway 7 BRT study is underway. There is strong regional interest in the corridor from the Highway 7 Coalition, North Area Transportation Alliance (NATA), and the North I-25 Coalition. Private development is anticipated to provide significant infrastructure improvements, including BRT components such as queue jump lanes and stations.

CHALLENGES

There is a lack of federal, state, and regional funding for the corridor and interchange improvements, as well as for the completion of the North Metro Rail/N Line to its planned terminus at State Highway 7. Private sector development along State Highway 7 has occurred at a slower pace than expected. There is a need to ensure that the vision for the State Highway 7 corridor and Interstate 25 interchange complements development access needs.

DILLON ROAD/144TH AVENUE

THEMES

- Demographics and growth projections
- Maintenance and improvement of existing facilities and neighborhoods

IMPORTANCE

Dillon Road serves travel by residents internally and to jobs and services outside Bromfield. It also serves as a pass through connection to Louisville's activity and economic centers, such as the Colorado Technology Center.

OPPORTUNITIES

Funding improvements for Dillon Road is a high priority for the City Council. The design work is underway and partial funding has been identified for portions of the roadway, including improved bicycle and pedestrian accommodation.

CHALLENGES

Funding has not been identified for the full infrastructure improvements needed on Dillon Road. The completion of the corridor improvement will occur over time. Dillon Road provides access to Holy Family High School and 144th Avenue provides access to the Orchard in Westminster, which detracts from Broomfield's sales tax revenues.

NORTHWEST PARKWAY/JEFFERSON PARKWAY

THEMES:

- Impact of technology

OPPORTUNITIES

Northwest Parkway currently provides a connection between Interstate 25 and U.S. Highway 36, with access to Sheridan Parkway and jobs in Interlocken. The existing infrastructure will support future traffic growth. There is an opportunity for the Northwest Parkway Authority to maximize the capacity of the tollway to relieve east-west congestion on local streets (e.g., by using variable pricing). The Jefferson Parkway will complete the Denver metro area beltway, supporting economic development in Broomfield. Broomfield should proactively work with partnering agencies to make this a state priority and to pursue funding.

CHALLENGES

Construction of Jefferson Parkway will require private sector investments; the timing of investments is uncertain. Maintenance of local access to existing businesses will be critical in the design of Jefferson Parkway.

STATE HIGHWAY 121 (WADSWORTH BOULEVARD) AND U.S. HIGHWAY 287

THEMES

- Impact of technology
- Multimodal transportation

IMPORTANCE

This State and U.S. Highway corridor provides a key north-south connection to jobs in Interlocken, to commercial activities and events in Arista, and for residents to access jobs and services. It also provides access to the Northwest Parkway and the Rocky Mountain Metro Airport. The Rocky Mountain Metro Airport is an important economic engine for Broomfield, with 141,000 visitors annually coming into the area and by generating $12.7 million in local and state taxes[2].

OPPORTUNITIES

The RTD NAMS identifies Wadsworth/U.S. Highway 287 as a future BRT corridor. Open space has been preserved at the northern gateway to Broomfield.

CHALLENGES

The pedestrian environment along and across the corridor is disjointed. Pedestrian connections are missing between the employment in Interlocken and residential development and the BRT Station in Arista. Westminster's plans to widen Wadsworth Boulevard south of Broomfield could create a bottleneck where transitions down to four lanes occur.

112TH AVENUE/UPTOWN

THEMES

- Demographics and growth projections
- Maintenance and improvement of existing facilities and neighborhoods

OPPORTUNITIES

The 112th Avenue/Uptown corridor provides a key connection to Arista, Interpark, and Jefferson Academy. The Uptown Avenue Bridge over U.S. Highway 36 was built to accommodate an ultimate four-lane section; widening of the corridor is likely needed in the near term.

CHALLENGES

The current configuration of the at-grade crossing of the railroad tracks requires BNSF trains to blow their horns at a high decibel level, impacting the quality of life for people nearby. Planned investments in safety measures should allow train horns to be silenced through a planned quiet zone between 112th Avenue and Brainard Drive. Jefferson Academy's pick up and drop off creates delays during school peak periods of travel. Adding safe pedestrian access to the school is critical.

[2] *The Economic Impact of Rocky Mountain Metropolitan Airport*, Colorado Department of Transportation Division of Aeronautics, 2013.

NORTH METRO RAIL/N LINE

THEMES

- Demographics and growth projections
- Multimodal transportation

OPPORTUNITIES

Construction of a portion of the North Metro Rail/N Line is underway, and it may receive RTD priority for completion as planned in FasTracks, providing connection to State Highway 7. The NATA Coalition is in place to advocate for completion of the line. The potential for an extension of the rail line to North Park would considerably enhance the competitiveness of the State Highway 7 corridor and bring high-quality transit service directly to Broomfield.

CHALLENGES

Funding has not yet been secured for completion of the North Metro Rail/N Line to State Highway 7. Completion of the rail line as planned in FasTracks (to State Highway 7) will increase the competitiveness of Thornton's development and Thornton's access to Denver and Denver Union Station, thus detracting from Broomfield's economic competitiveness. Agreements and funding for an extension of the North Metro Rail/N Line to North Park are not in place.

NORTHWEST RAIL/B LINE

THEMES

- Demographics and growth projections
- Multimodal transportation

OPPORTUNITIES

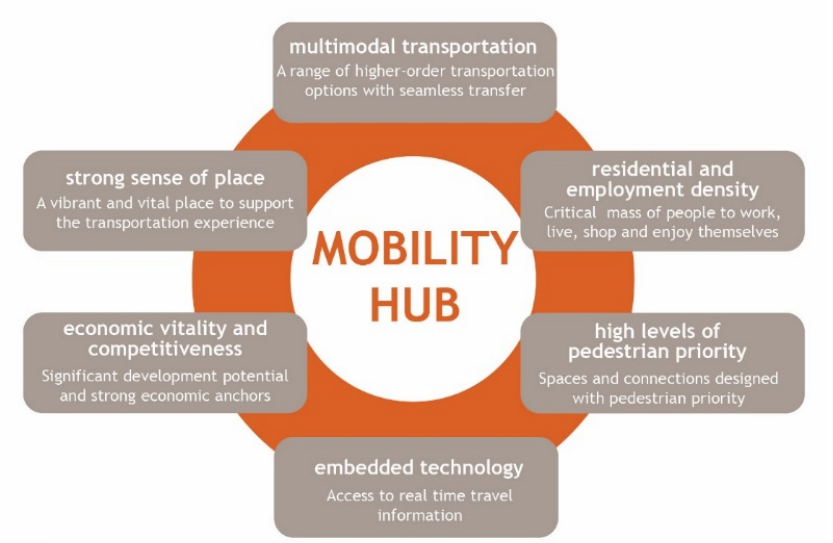
The first segment of the Northwest Rail/B Line to the Westminster Station opened in 2016. The unfunded section of the B Line includes two rail stations in Broomfield. FasTracks includes a station at the Flatiron Park-n-Ride. A second station has been included in subsequent modeling, located at 116th at the BNSF tracks. The U.S. 36 Coalition is in place to advocate for funding of the rail line. Construction of the Northwest Rail/B Line would support economic development in Broomfield.

CHALLENGES

Funding for the Northwest Rail/B Line beyond the Westminster Station is not secured. Implementation of the rail line will require considerable coordination with BNSF. The limited operations plan for the Northwest Rail/B Line will not create a robust ridership.

B. MOBILITY HUBS

For alternative travel modes to be viable, it is critical to have strong connectivity among modes. Intermodal connectivity allows a seamless transportation system facilitating easy and efficient movements among modes. Intermodal connections are most prevalent at locations where a variety of travel modes intersect. An example is the U.S. Highway 36 & Broomfield BRT Station located at U.S. Highway 36 and Arista Place. This location serves as a Park-n-Ride for transit users, provides access to a variety of transit services (Flatiron Flyer BRT, local bus service, and Call-n-Ride), interfaces between the on-street and off-street bicycle network (U.S. 36 Bikeway and on-street bike lanes), has adequate pedestrian infrastructure and provides wayfinding/traveler information. Intermodal connectivity points can also include a variety of public and/or private sector driven mobility options to support community needs such as electric vehicle charging stations, carsharing, and bikesharing.



Source: Metrolinx (Toronto), Mobility Hub Guidelines, 2011

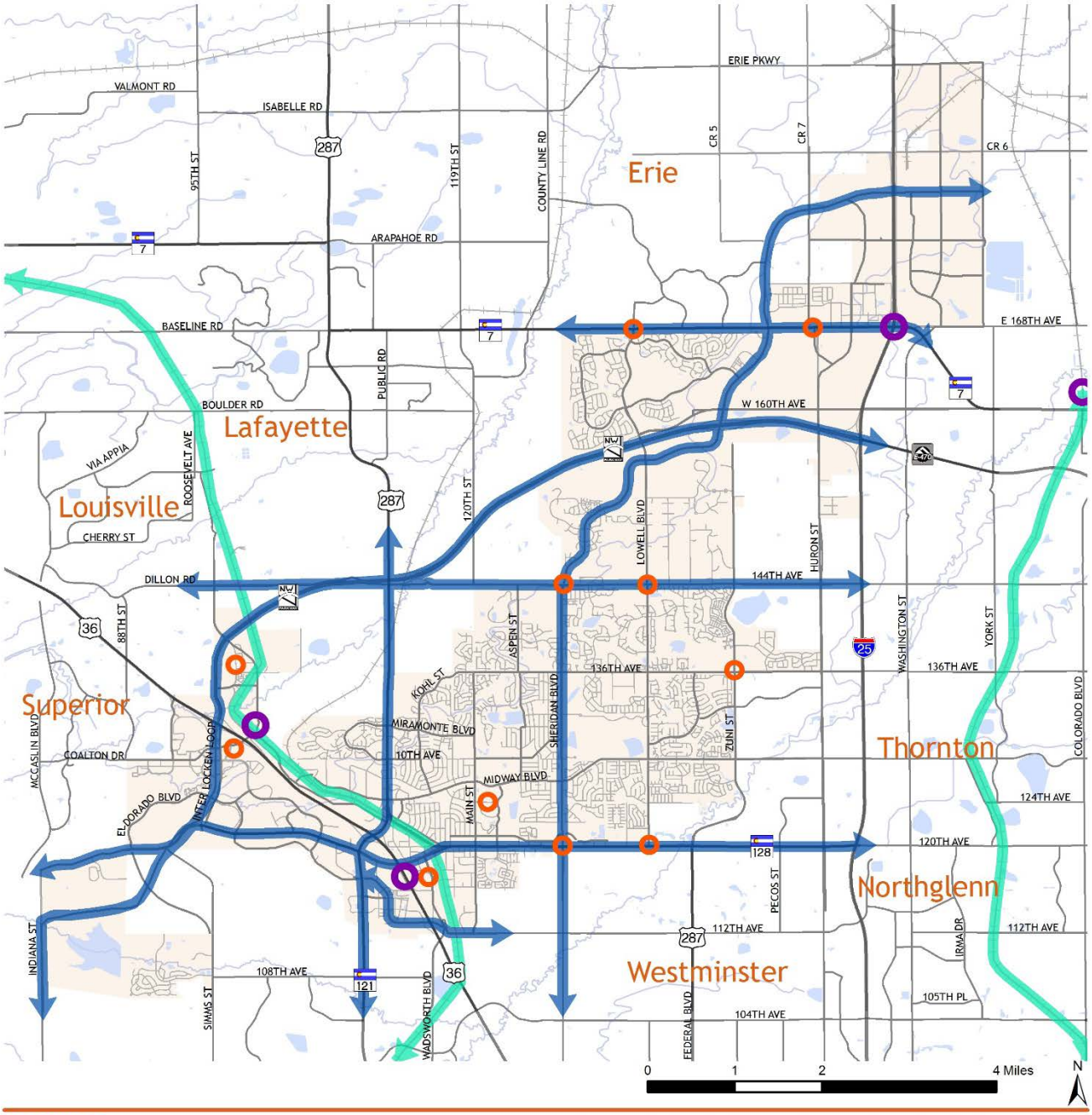
To encourage the use of new mobility options and forthcoming technology changes, there is a need to proactively plan for a strong interface among travel modes, allowing a mix of mobility options that are well connected. Travel time and cost of travel must be competitive with ownership of private vehicles for alternative modes to be competitive.

Fifteen locations in Broomfield have been identified as "major" and "minor" intermodal connectivity locations. For the purposes of this plan, "major" intermodal locations are referred to as mobility hubs, and "minor" intermodal locations are referred to as micro-mobility hubs. Mobility and micro-mobility hubs often emerge to support and provide access to major activity centers such as shopping centers, transit stations, recreation facilities, schools, etc., but are also dependent on land use, amenities, and connectivity options making each hub unique.

- **Mobility Hubs**: These locations include a major transit station area and act as an anchor to the local and regional transportation system.
- **Micro-Mobility Hubs**: These locations are often, but not always, local destinations/activity centers that may or may not have transit service and are an important connection point within the local transportation system.

Map 19 illustrates the mobility hubs and micro-mobility hubs in Broomfield. The hubs will provide a high quality user experience, create a sense of place, focus development activities around transit, and seamlessly integrate all modes to support residents, employees, and visitor travel. These locations will serve as key connection points for a variety of modal options that provide comprehensive integration of all activities in and around a transit facility. Recommended next steps include developing minimum standards for mobility hubs and micro-mobility hubs and actively working with neighboring communities to implement hubs that are close to and/or straddle county boundaries. By providing opportunities for intermodal connectivity throughout the city, first- and last-mile connectivity will be improved. Residents, employees, and visitors will have a choice in how they choose to live, work, and play.

Map 19. Key Corridors and Mobility Hubs



LEGEND

Source: Broomfield GIS Department; CDOT; FHU GIS Department

- Mobility Hub
- Micro-Mobility Hub
- Key Corridors
- Key Rail Corridors
- Highways
- Streets
- Railroad
- Waterbody
- Creeks, Ditches, and Canals
- City and County of Broomfield

Funding Sources

A. FUNDING SOURCES

Broomfield funds transportation improvements through federal, state and local funding. Most federal funding is secured through the Denver Regional Council of Governments (DRCOG). For example, the 120th Avenue Connection project and transit improvements have been funded with federal funding through DRCOG. State funding is received annually through the Highway Users Tax Fund (HUTF) and is allocated to maintain our streets and their appurtenances. The state also provided funding for improvements to Lowell Boulevard through the Funding Advancements for Surface Transportation and Economic Recovery Act of 2009 "FASTER" program. Broomfield has also received state funding for traffic signal equipment and safety improvements. Broomfield's General Fund provides the resources for capital improvements to our multimodal network. Development agreements include funding and construction of new and improved infrastructure.

A variety of funding mechanisms are available to support roadway, bicycle, pedestrian, and transit improvements. The following provides an overview of the most common local, state and federal funding sources.

A. LOCAL

IMPACT FEES

Impact fees can be imposed by a local government on a new or proposed development to pay for all or a portion of the costs of providing services to the new development, including transportation infrastructure and services.

USER FEES

User fees include dollars paid by an individual to access a service or facility. Examples of transportation user fees include parking charges, bike share usage fees, or car for a day fees.

SALES TAX

Local sales and use taxes are a common source of revenue used to fund transportation projects and programs. Revenues derived from sales tax may be dedicated to a specific use, such as transit, multimodal improvements, or roadway improvements. Dedicated assessments commonly range from 0.25 to 1 percent of taxable sales. The use of the revenue can be defined for a specific purpose or can be flexible. In Colorado, formation of any tax policy change resulting in net revenue gains requires voter approval under the TABOR constitutional amendment.

PROPERTY TAX

Property tax is assessed on real and personal property and is based on the value of the property, including land. Property is assessed by local or municipal governments and the revenue generated is used to fund things such as transportation infrastructure, schools, libraries, etc.

B. STATE

FUNDING ADVANCEMENT FOR SURFACE TRANSPORTATION AND ECONOMIC RECOVERY (FASTER)

FASTER funds can be used for bridge, safety, and transit. Additionally, FASTER funds can be used when adding shoulders in combination with a surface treatment project; for bicycle amenities such as bike racks, lockers and bike parking at multimodal stations; or enhanced modal connections such as trails and bike lanes providing access to major transit stations that would enhance transit ridership.

GREAT OUTDOORS COLORADO (GOCO)

GOCO is a state funding program that uses a portion of lottery proceeds for projects that protect and enhance Colorado's trails and open space.

SAFE ROUTES TO SCHOOL (SRTS)

CDOT administers the SRTS program. When funds are available, they are distributed to eligible applicants through a competitive process to develop programs for grades K-8. SRTS allocates funding for both infrastructure and non-infrastructure projects, such as sidewalk and crossing improvements, and education and encouragement programs. School districts, schools, cities, counties, and state entities are eligible applicants.

C. FEDERAL

CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT PROGRAM (CMAQ)

Eligible purposes include planning, engineering design, and evaluation of transit projects and other technical transportation-related studies. Also included are capital investments in bus and bus-related activities such as replacement of buses, overhaul of buses, rebuilding of buses, crime prevention and security equipment and construction of maintenance and passenger facilities. CMAQ also includes capital investments in new and existing fixed guideway systems including rolling stock, overhaul and rebuilding of vehicles, track, signals, communications, and computer hardware and software. All preventive maintenance and some ADA complementary paratransit service costs are considered capital costs. For urbanized areas with populations of 200,000 or more, operating assistance is not an eligible expense. In these areas, at least 1 percent of the funding apportioned to each area must be used for transit enhancement activities such as historic preservation, landscaping, public art, pedestrian access, bicycle access, and enhanced access for people with disabilities.

FEDERAL TRANSIT ADMINISTRATION (FTA) GRANTS

Transit grants, such as Urbanized Area Formula and Capital Investment, can be used to improve bicycle access to transit facilities. Additionally, FTA grant funds are available for transportation improvements and programs that support the needs of seniors and people with disabilities. Funds are obligated based on the annual program of projects included in a statewide grant application.

Eligibility: States are direct recipients. Eligible subrecipients are private non-profit organizations, governmental authorities where no non-profit organizations are available to provide service, and governmental authorities approved to coordinate services.

HAZARD ELIMINATION AND RAILWAY-HIGHWAY CROSSING PROGRAM

This program is a set-aside from the Surface Transportation Program (STP) specifically to correct locations that are unsafe. These funds may be used to address bicycle safety issues.

OLDER AMERICANS ACT (OAA), TITLE III

OAA provides funding to local providers for the transport of seniors and their caregivers. Eligible recipients include transportation services that facilitate access to supportive services or nutrition services. OAA also includes services provided by an area agency on aging, in conjunction with local transportation service providers, public transportation agencies, and other local government agencies, that result in increased

provision of such transportation services for older individuals. Under certain conditions, OAA funds can be used to meet the match requirements for programs administered by the FTA.

FEDERAL HIGHWAY ADMINISTRATION SURFACE TRANSPORTATION PROGRAM

The Surface Transportation Program (STP) is one of the main sources of flexible funding available for transit or highway purposes. STP provides the greatest flexibility in the use of funds. These funds may be used (as capital funding) for public transportation capital improvements, car and vanpool projects, fringe and corridor parking facilities, bicycle and pedestrian facilities, and intercity or intracity bus terminals and bus facilities. As funding for planning, these funds can be used for surface transportation planning activities, wetland mitigation, transit research and development, and environmental analysis. Other eligible projects under STP include transit safety improvements and most transportation control measures.

TRANSPORTATION INVESTMENT GENERATING ECONOMIC RECOVERY (TIGER)

TIGER discretionary grants fund capital investments in surface transportation infrastructure (road, rail, transit, and port) and are awarded on a competitive basis for projects that will have a significant impact on the nation, a metropolitan area, or a region.

SURFACE TRANSPORTATION BLOCK GRANT (STBG)

STBG provides funding for transportation alternatives and includes projects and activities that were previously eligible under the Transportation Alternatives Program. This includes smaller scale projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school, transit-related projects, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, and community improvement activities. STBG replaces the previous Transportation Alternatives program under the Moving Ahead for Progress in the 21st Century Act.

D. OTHER FUNDING SOURCES

KAISER PERMANENTE GRANTS

Kaiser Permanente offers Walk and Wheel and other grants to help communities be more bike-friendly by planning and designing safer, healthier, and more accessible transportation options.

GREEN LANE PROJECT

The Green Lane Project awards grants to help cities expand bicycling through building innovative facilities.

Summary

E. HOW THIS PLAN SHOULD BE USED

This Transportation Plan was developed as a part of the larger update to the City and County of Broomfield's Comprehensive Plan in 2016. This Plan is based on the identified vision, goals, and policies developed for the update of the Transportation Element of the Comprehensive Plan. The Transportation Plan should be treated as a complementary document to the Comprehensive Plan, providing more technical details of the current and future transportation system in Broomfield. While Broomfield plans for future growth and development, this Plan should be used to help guide elected officials and staff in decision making to ensure that efforts are meeting the overall transportation vision of the community. The recommendations and strategies identified in this Plan should be used to guide future subarea plans, development review, transportation investments, and partnerships in the City of Broomfield. This Plan shall be a living document and will likely continue to change and evolve over time. With the ongoing evolution of technology and the way in which people choose to travel, Broomfield will need to be nimble and flexible in helping to meet the mobility needs of the community.