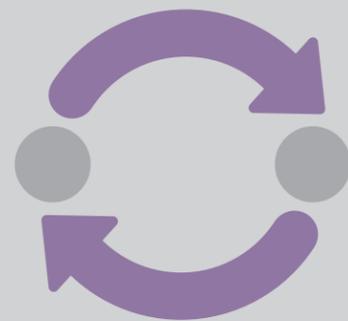
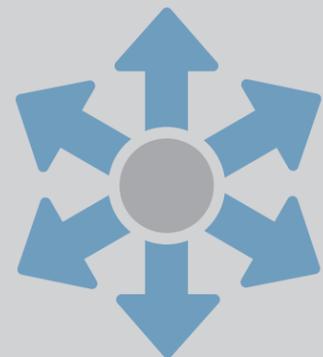
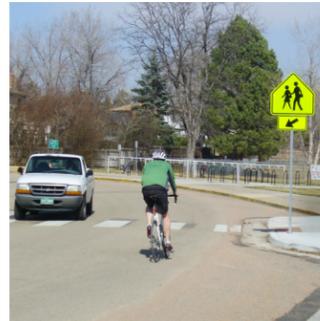




Boulder County Transportation Master Plan

SUMMARY VERSION
ADOPTED FEBRUARY 18, 2020



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Table of Contents



SH 119 and Airport Road underpass



Introduction	1
Strategy 1: Develop a Multimodal Transportation System	7
Strategy 2: Create the Complete Trip	21
Strategy 3: Invest in Key Regional Transportation Corridors	23
Strategy 4: Increase Accessibility	27
Strategy 5: Enhance Mountain Area Connections	29
Plan Implementation	31

Introduction - Planning Context

Vision

BOULDER COUNTY COMPREHENSIVE PLAN (BCCP)

Provide high quality, safe, sustainable, and environmentally responsible transportation infrastructure and services across all modes, to meet the mobility and access needs of all users.

Goals

TRANSPORTATION MASTER PLAN

Goal 1 – Ensure Effective and Efficient Management of the Existing Transportation System: Manage and maintain existing transportation infrastructure and services in a cost-effective manner.

Goal 2 – Minimize Environmental Impacts: Minimize the negative environmental impacts of the transportation system such as air pollution, greenhouse gas (GHG) emissions, noise pollution, water pollution, land and wildlife habitat fragmentation, land disturbance, and resource consumption.

Goal 3 – Ensure Safety for All Modes: Provide for transportation system development and operations that result in safe and secure travel by all modes and that enable prompt and effective emergency response.

Goal 4 – Support a Healthy and Sustainable Economy: Develop a transportation system that supports a robust economy and increases resiliency to economic fluctuations.

Goal 5 – Ensure Equitable Access to the Transportation System: Ensure that adequate transportation exists for all users regardless of age, income, or ability.

Goal 6 – Enhance County Identity and Community Character: Promote a transportation system that preserves, highlights, and enhances the county's diverse rural character and the history and culture of its unique communities.

Boulder County's Transportation vision, goals, and policies provide the framework to help meet and manage the demands placed on the county's multimodal transportation system in a way that recognizes transportation's important role in creating sustainable ways of living. All recommendations in the TMP are consistent with the transportation goals and objectives outlined in the Boulder County Comprehensive Plan (BCCP), Boulder County Commissioners (BOCC) Strategic Priorities, and other related planning documents.

PLAN UPDATE AND PURPOSE

Boulder County first adopted a Transportation Master Plan (TMP) in December 2012. Since that time, there have been changes in the community that impact how people use the county's transportation system. Changes include local and regional land use, travel patterns, demographics, and emerging changes to transportation-related technology. In addition, the 2013 flood damaged a significant amount of transportation infrastructure across the county. As a result, the Transportation Department has dedicated significant time and resources to repairing roadways, bridges, culverts, and trails that were damaged or destroyed in the flood. The 2013 flood highlighted the need for Boulder County to focus on improving the resilience of the county's transportation infrastructure to prevent damage from future disasters.

The primary purpose of the 2019 TMP is to update the current plan to reflect the work that has been completed since 2012 and include new or trending transportation-related technology and address changes in demographics, land use, and travel patterns, opportunities for infrastructure and economic resiliency, and funding challenges and opportunities.

The goal of the 2019 TMP is to provide a clear short, medium, and long-term vision for the Transportation Department. The TMP serves as a guide for the Transportation Department when determining how to seek and invest funding and deploy staff resources. The recommendations in the TMP are consistent with the Boulder County Comprehensive Plan and other county plans relevant to the multimodal transportation system. The TMP promotes human-centered mobility and access strategies by removing barriers and increasing transportation system capacity for all community members including older adults, people with disabilities, low-income households, and families and youth. The TMP prioritizes safety and includes recommendations based on detailed analysis of recent crash data. Performance metrics and specific investment priorities are included to help measure progress towards the transportation vision. The Board of County Commissioners is the adoption body for the TMP.



In memory of Julie Anne McKay

Julie McKay served as the Boulder County Transportation Department's Planning Division Manager from 2008-2018. Julie loved working in transportation because transportation connects people to each other. She was instrumental in the development of the county's first TMP, which was adopted in 2013. Her vision of connecting communities and connecting people throughout Boulder County helped shape this master plan as well. Julie's positive impact on our community will continue to be felt by Boulder County residents and Boulder County's Transportation Department far into the future. This TMP is dedicated to her memory.

As the county continues to experience changes in demographics, travel patterns, constrained fiscal environment and a greater awareness of the impacts of individual and collective actions on the global and local environment, it is clear that roads and cars alone can no longer meet all our travel needs. Boulder County must consider new ways of providing safe, reliable, convenient and affordable travel options that take the needs of both current and future generations into account. Boulder County has identified future trends and assumptions that must be understood if we are

to provide an effective transportation system that accommodates future demand in a sustainable manner. From analysis of these future trends and assumptions, five categories of strategies have been developed: 1. Develop a Multimodal Transportation System, 2. Create the Complete Trip, 3. Invest in Key Transportation Corridors, 4. Increase Accessibility, and 5. Enhance Mountain Area Connections. Within each strategy, the county lists implementation actions.

Identifying Strategies

Future Trends and Assumptions

- Current land use patterns within the county will continue, with growth centered in and adjacent to existing communities separated by open spaces.
- Residential and employment growth in Larimer, Weld, Jefferson and Broomfield counties will exceed growth in Boulder County, resulting in an increase in average commute lengths.
- The majority of Boulder County residents and employees will continue to live and work in different communities, with an increasing proportion commuting in from outside of the county.
- Travel demand will increase in all existing corridors, however the greatest growth in travel will occur between the eastern county and Boulder communities, between Weld/Larimer counties and Longmont, and between Jefferson, Broomfield/southern Weld and Boulder County communities.
- Regional travel to recreational destinations in and adjacent to Boulder County will continue to increase.
- Vulnerable populations, including older adults, will put unique challenges on the transportation system.
- Climate change and reliance on fossil fuels will continue to be a concern, resulting in new technologies that reduce reliance on fossil fuels (and a corresponding reduction in gas tax revenues).
- Transportation revenue will not keep pace with inflation or demand.
- Public health concerns will increase the need to reduce barriers to active living and transportation.
- There are many new and emerging mobility technologies that have the potential to significantly change the way that people travel.

Strategy 1
Develop a Multimodal Transportation System



Strategy 2
Create the Complete Trip



Strategy 3
Invest in Key Transportation Corridors



Strategy 4
Increase Accessibility



Strategy 5
Enhance Mountain Area Connections



What needs do future conditions create

Strategies that address need

Demand for more travel options and system capacity between (and through) county communities, recreational destinations and the entire region, particularly Weld, Larimer and Broomfield counties.



Increased need for more affordable, convenient and flexible travel options and choices.



Focus on cost effective operational improvements that maximize use of the existing transportation system (roads, transit, bikes and pedestrian).



Increased focus on maintaining and reconstructing existing infrastructure and services before considering expansion.



New methods of funding for transportation system maintenance, operations, and expansion.



New methods to manage transportation demand and improve access by all users.



Introduction - Elements of the County Multimodal System

Boulder County Transportation incorporates many elements to create a multimodal system for all users. The items below define items included in implementation actions throughout the master plan.

Some elements include multiple modes while others focus on one mode. All of these must work together and support one another to create a successful multimodal transportation system.



Bicycle and Pedestrian Crossing Amenity: Intersection improvements to make crossing easier for bicyclists and pedestrians

Bike-n-Ride Shelter: Secure bike parking located at major transit stations to make improved connections to transit

Bicycle Waiting Area: Paved waiting area provides a safe waiting area for bicyclists while maintaining traffic flow

Bikeable Shoulder: Shoulders allow bicycles and vehicles to safely use the road simultaneously

Bus Rapid Transit (BRT): High-frequency bus service that operates in a manner similar to a fixed-rail system (fast service in exclusive right of way)

Bus Stop Enhancement: Benches, waiting areas, shelters, transit information, and bicycle parking



Commuter Rail: Rail service providing reliable and fast service with exclusive right of way

EcoPass: All access, unlimited transit passes on the RTD system

Enhanced bicycle facility: Shoulder or multiuse path with separation from motor vehicles

Intersection Improvement: Signal or roundabout installation, geometric changes (turn & bike lanes, pedestrian connections), upgrades at existing signals (leading pedestrian interval, dynamic timing)

Local Transit Connection: Connecting regional transit to local connectors to provide a complete trip in an efficient manner

Managed Lane: Exclusive lanes for buses, carpools and single occupant vehicles (with toll)



Multiuse Path: A paved, wide path to accommodate bicyclists and pedestrians

Passing/Slow Moving Vehicle Lane: Vehicle travel flow improves by allowing slower vehicles to use the right most lane

Queue Jump Lane: An additional travel lane at an intersection approach that allows buses to bypass congestion

Regional Trail: Used for both transportation and recreation, separated trails from roadways

Sidewalk Connection: Pedestrian connections to make walking a more viable mode of transportation

Transit Signal Priority: Time local traffic signals to give priority to transit, reduce bus wait times and increase reliability

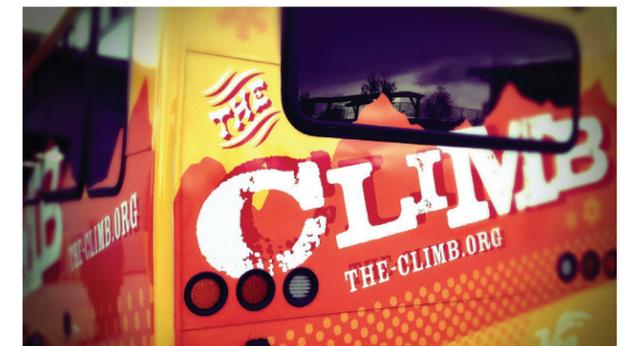


Transportation Demand Management: Programs to encourage and increase alternative mode usage that relieves transportation demand, particularly during peak periods

Wayfinding Signage: Signage indicates the directions and popular destinations

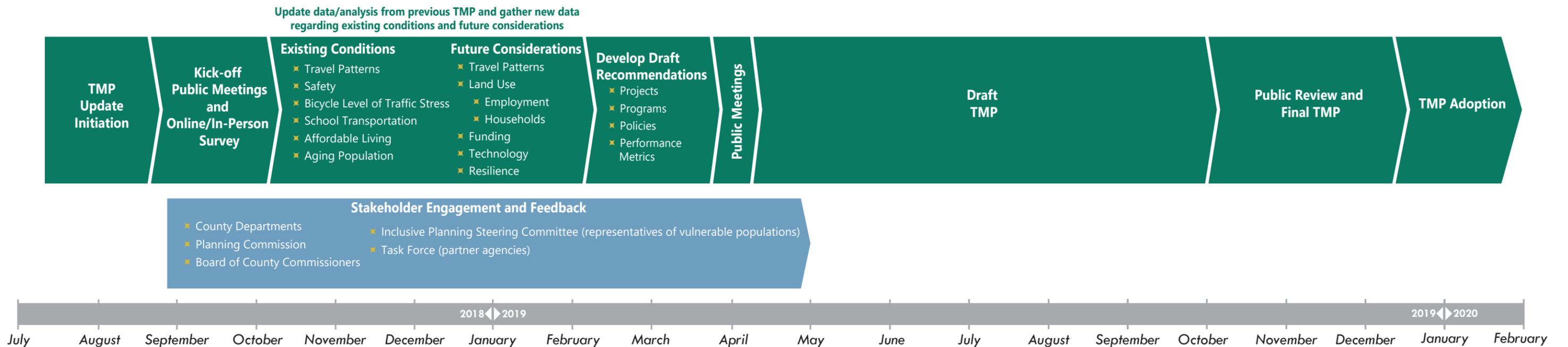
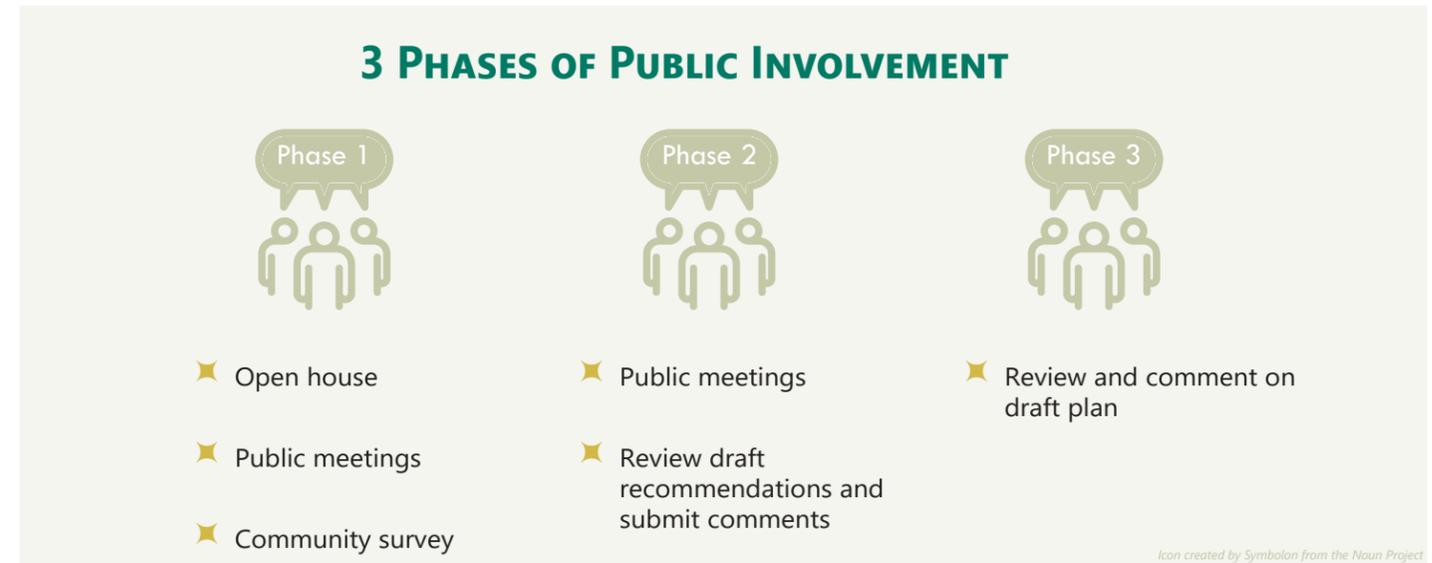
Technology Improvement: First/final mile solutions that help people more easily connect to transit

Traffic Calming/Median Treatment: Treatment to improve safety and slow neighborhood traffic



Transportation Master Plan Process

The TMP planning process began in July 2018 and adoption of the final plan is anticipated in January 2020. The project began with public meetings and a community survey to ask Boulder County residents, employees, and visitors about concerns and priorities related to transportation. The project team analyzed existing conditions and future considerations, which provided the foundation for the draft recommendations. These draft recommendations were then presented at public meetings and online for public review. After reviewing feedback from the public, stakeholders and Boulder County staff, the initial recommendations were modified, and the plan was developed. After review by Boulder County staff, the TMP Technical Report was finalized and the TMP Summary, a shorter document focused on future improvements, policies, and programs was developed. This phase included a final opportunity for the public to comment on the draft plan online or through the public hearing as part of the Planning Commission meeting. The plan is then anticipated to be adopted by the Board of County Commissioners (BOCC).



Introduction

Current and Projected Travel Patterns

Travel forecast models show that between 2015 and 2040 there will be large increases in the proportion of trips that cross into and out of Boulder County. The majority of Boulder County residents and employees will continue to live and work in different communities, with particular increase to travel to and from Weld, Broomfield, and Adams counties. The daily trip maps on the corresponding page illustrate in-county and regional trip patterns for the current (2015) and 2040 time periods. The magnitude of travel demand within Boulder County will continue to increase, although at a lower rate than the overall Denver metropolitan region. As shown in the Daily Person Trips table, in-county trips and regional trips are expected to increase from 2015 to 2040. Details for each county is shown in the Regional Trips table.

Boulder County Daily Person Trips

Trip Type	2015	2040	2015–2040 Percent Change
Intra-county	127,480	163,325	+ 28%
Regional	377,800	604,100	+ 60%
Total	505,280	767,425	+ 52%

Source: DRCOG 2015/2040 Regional Travel Demand Model, FOCUS statewide model, and David Evans and Associates, Inc.

Regional Trips

County	2015		2040		Percent Increase
	Trips	Percent	Trips	Percent	
Adams	73,000	19%	104,000	17%	42%
Arapahoe	16,000	4%	24,000	4%	50%
Broomfield ¹	84,000	22%	146,000	24%	74%
Denver	48,000	13%	66,000	11%	38%
Gilpin	3,800	1%	5,100	1%	34%
Jefferson	53,000	14%	73,000	12%	38%
Larimer ²	31,000	8%	43,000	7%	39%
Weld	69,000	18%	143,000	24%	107%
Total	377,800	100%	604,100	100%	60%

Source: DRCOG 2015/2040 Regional Travel Demand Model, FOCUS statewide model, and David Evans and Associates, Inc.

¹ The majority of trips within Broomfield County are located in "South Broomfield", TAZs located south of 144th Avenue.
² This data comes from the FOCUS statewide model. The 2040 numbers were interpolated from the 2015 and 2045 model runs.

Key takeaways of the current and projected trip patterns for the 2019 TMP update:

- Regional trips will account for a greater percentage of trip types in Boulder County in 2040 than in 2015
- The greatest increase in regional trips will be between counties to the east (Weld, Adams and Broomfield County)
- The greatest increase in in-county trips will be between Boulder and eastern Boulder County communities (most notably between Boulder and Erie)
- By 2040, the number of person trips starting, ending, or remaining within Boulder County is projected to increase by about 50% to just over 750,000 trips per day



Bicycling in Niwot



Boarding the bus at Boulder Transit Center

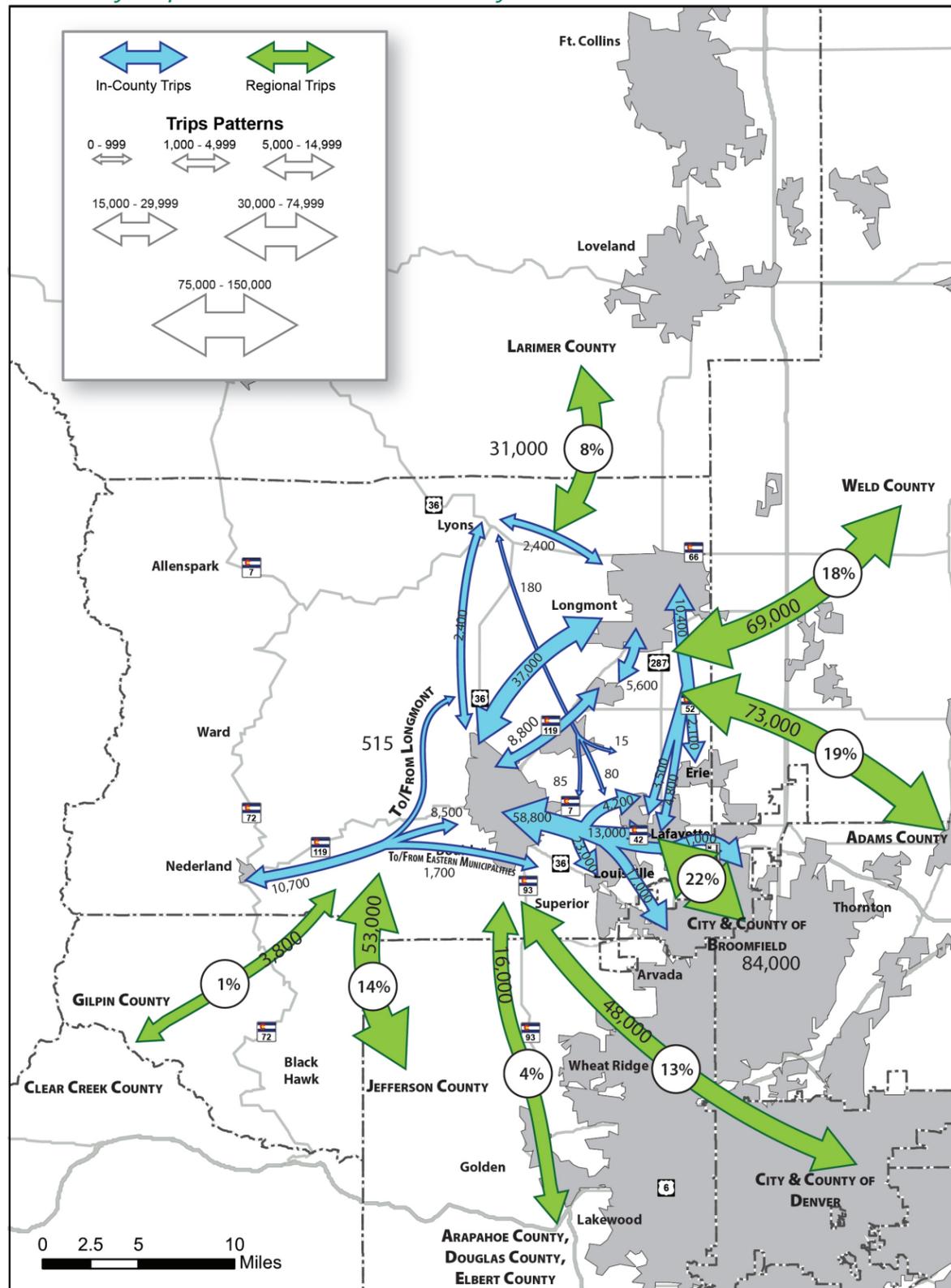


Congestion along SH 119 occurs on a daily basis, on a directional and peak time periods

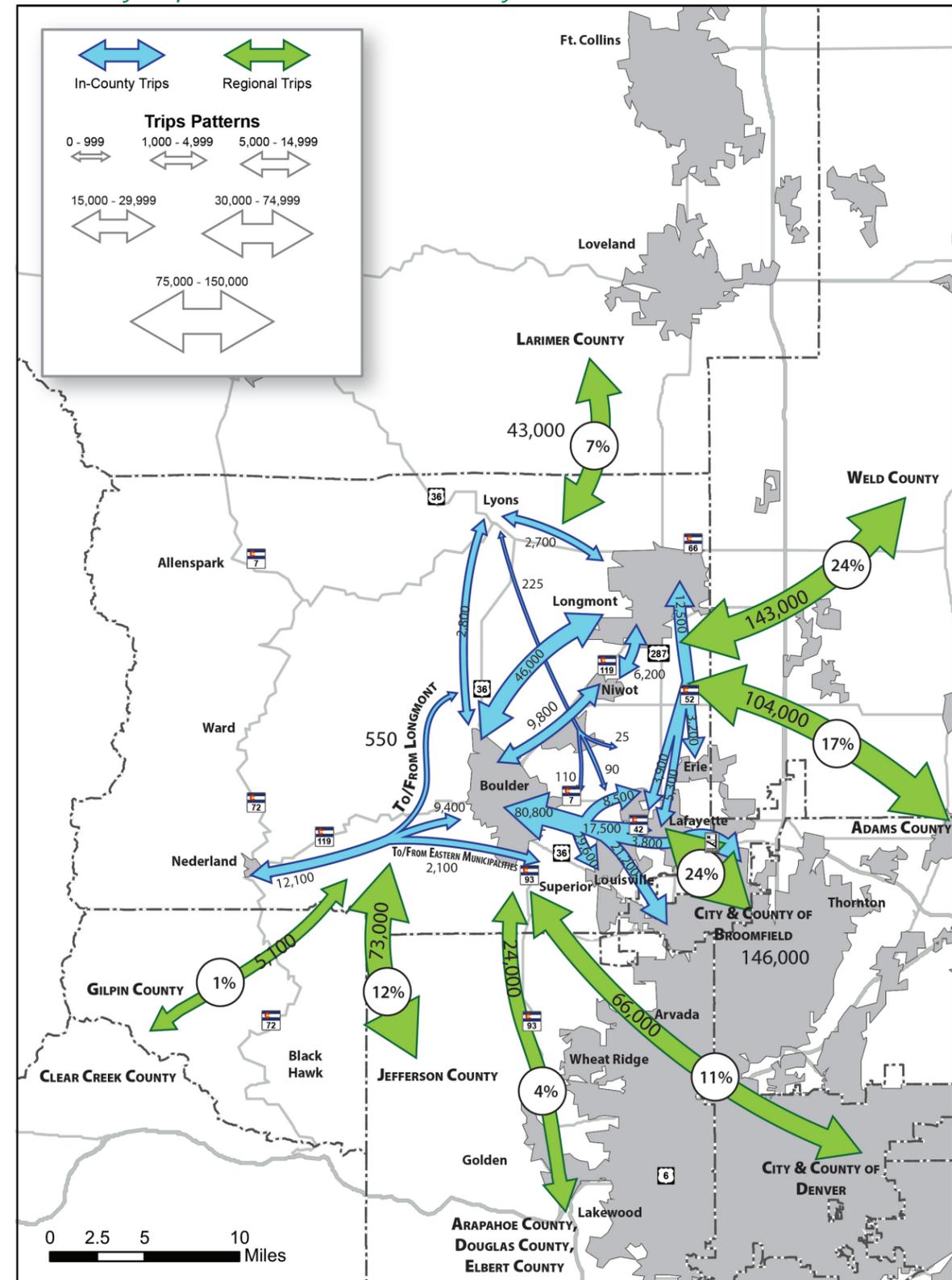


Bicycling along a multiuse path is comfortable enough for children

2015 Daily Trips: To/From Boulder County



2040 Daily Trips: To/From Boulder County



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Strategy 1: Develop a Multimodal Transportation System

Boulder County’s transportation network consists of roadways, on-street bicycle facilities, transit services and facilities, sidewalk / pedestrian facilities, shared use paths and structures that together move people safely and efficiently between communities within Boulder County and to the surrounding region. As part of its commitment to cost effectiveness, efficiency, and minimizing community impacts, Boulder County will identify and implement appropriate low-cost interim

solutions before implementing more expensive and disruptive measures. The implementation actions for developing the multimodal system include plans for improvements to the roadway, bicycle, and pedestrian facilities and transit networks. It is imperative to continue on-going facility improvements to meet current and future network demands.

Roadway Implementation Actions

The Boulder County roadway network, which includes bridges and intersections provides the infrastructure backbone for mobility throughout both the plains and mountains. Residents, commuters, recreational travelers, and deliveries of goods and services utilize the county road system. County facilities are multimodal and enable travel by both motorized and non-motorized means. Boulder County transportation investments focus on maintaining quality, improving safety, and expanding multimodal capabilities of the roadway system.

Implementation Actions - Roadway

- » Focus on operational improvements – including vehicle capacity expansion – at intersections. This can include additional turn lanes and through lanes. [Included within Strategies 1 & 3]
- » Working through CDOT, consider additional managed lanes on all corridors in the Northwest Area Mobility Study to be used for transit and high occupancy vehicles (HOVs) [Included within Strategies 1 & 3]
- » Improve intersections to assist with user safety and convenient access to transit stops and bike and pedestrian facilities
- » Integrate comprehensive project considerations such as safety, resiliency, advanced mobility, and equity into planning and design of capital projects
- » Implement Vision Zero Policy to increase safety
- » Add facilities to corridors shown on Multiuse Paths and Bikeable Shoulders vision map (page 18). Adding shoulders to identified corridors does not preclude adding them to other county roadways.

Implementation Actions - Rehabilitation and Maintenance

- » Maintain roadways, bicycle and pedestrian, and transit facilities with the highest priority on regional connections, destinations, and corridors that serve the most people
- » Repair, rehabilitate and replace bridges in a cost effective manner with a goal of preserving current structural sufficiency and improving the functionality in regards to road width and flood resiliency
- » Maintain safety for all travel modes on the county’s transportation system
- » Maintain a five-year Resurfacing Plan with the goal of pavement quality index (PQI) of 7 on a scale of 1 (poor) to 10 (excellent) on primary county connections
- » Adequately maintain county road shoulders, drainage systems, and regional trails in partnership with state and local agencies
- » Pursue electrification of county vehicle fleet as new vehicles are purchased



Signalized intersection of SH 119 and Jay Road



Apple Valley Bridge in Lyons



Boulder County Transportation is responsible for maintenance activities on their roadways

Strategy 1: Develop a Multimodal Transportation System

Roadway Network Vision

This map identifies the locations of 31 recommended road projects. Projects include intersection treatments, road reconstructions, structure replacements, and restriping on both county roads and state highways.



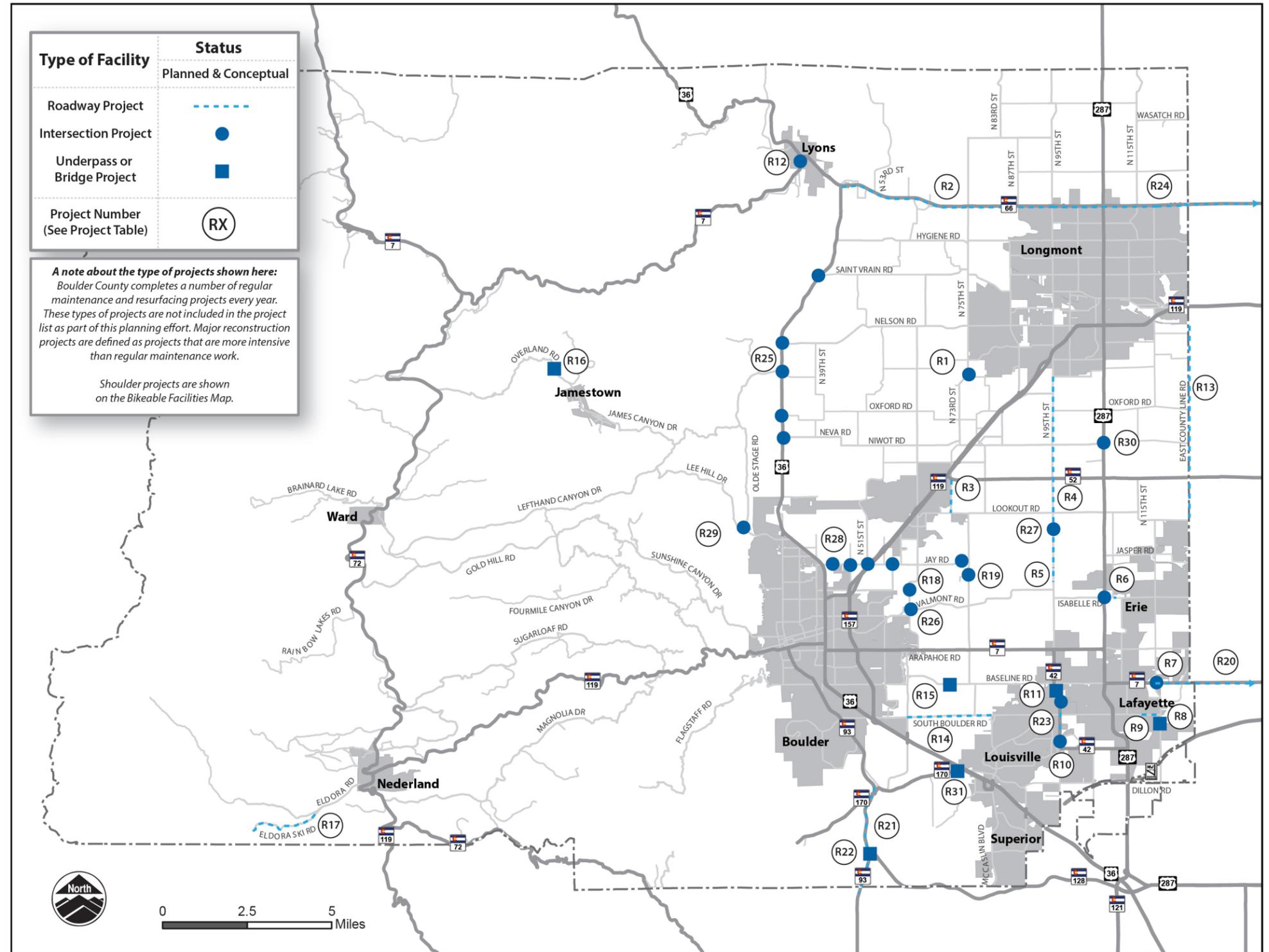
Superior roundabout



Bikeable shoulders allow vehicles and bicyclists to use the roadway



Regional trails are used for recreational and transportation purposes



Strategy 1: Develop a Multimodal Transportation System



Map ID	Project Name	Project Description	Project Status	Funding Status	Potential Funding Source+	Cost++
R1	75th Street/Plateau Road Intersection Improvements	Safety improvements to realign curves and reduce bottle-neck that transitions to 75th Street.	Conceptual	Not Funded	CST	\$\$
R2	SH 66 Improvements – Main Street to Hover Street	Widen 1.5 miles of SH 66 from Main Street to Hover Street and reconstruct SH 66/East County Line Road intersection.	Conceptual*	Programmed in CST	Muni, Fed, CST	\$\$\$\$\$
R3	71st Street Reconstruction – Lookout Road to SH 52	Reconstruct 71st Street to improve safety, create shoulders, add a multiuse path, and improve multimodal crossings.	Current Project- Under Const.	Programmed in CST	CST	\$\$
R4	95th Street Reconstruction – Lookout Road to City of Longmont	Reconstruct 95th Street to improve user safety and mobility.	Current Project- Under Const.	Costs associated with current projects can be found on the county website		
R5	95th Street Resiliency Improvements – Boulder Creek to Lookout Road	Elevate 95th Street out of the Boulder Creek 100-year events. Requires 220 foot long bridge.	Conceptual	Not Funded	Resiliency	\$\$\$\$
R6	US 287/Isabelle Road Intersection Improvements	Reconstruct CDOT intersection to improve safety, widen Isabelle Road and add shoulders.	Conceptual – In Design	Funded	Muni, Fed, CST	\$\$\$
R7	SH 7/119th Street Intersection improvements (Lafayette)	Reconstruct City / CDOT intersection to improve safety and operations.	Conceptual – In Design	Partially Funded	Muni, State, CST	\$\$\$\$\$
R8	South Boulder Road Reconstruction – Mallory Drive to 120th Street (Lafayette)	Widen South Boulder Road, signalize intersection and add 10-foot multi-use path along south side of the roadway.	Current Project- Under Const.	Costs associated with current projects can be found on the county website		
R9	120th Street Bridge over Coal Creek (Lafayette)	Replace current three span bridge with larger structure to pass the 100-year event and allow for improved multimodal access.	Conceptual	Programed in CST	CST, Fed, Muni	\$\$\$\$
R10	SH 42 Improvements – Lock Street to Hecla Drive (Louisville)	Widening of SH 42, including intersection safety and pedestrian access.	Conceptual – Some Phases in Const.	Partially Funded	Muni, State CST	\$\$\$\$\$
R11	SH 42 Pedestrian Underpass – South of Paschal Drive	Pedestrian underpass of SH 42 to improve safety and access.	Current Project- Under Const.	Funded	Muni, CST	\$
R12	SH 7/US 36 Intersection Improvements (Lyons)	Reconfigure intersections and striping on CDOT highway to accommodate bike lanes through downtown Lyons.	Conceptual	Not Funded	CST, Muni, Fed	\$\$
R13	East County Line Road Reconstruction – Longmont to Erie	Reconstruct East County Line Road to improve user safety, access and resiliency. Includes three bridge replacements.	Conceptual – Master Plan in Process	Partially Funded	Muni, CST	\$\$\$\$\$
R14	South Boulder Road Reconstruction – City of Boulder to Cherryvale Road	Reconstruct south boulder road from City of Boulder to Cherryvale Road including operational and safety improvements at the intersection.	Conceptual – In Design	Not Funded	CST	\$\$\$\$\$
R15	Baseline Road Regional Trail Underpass – at Dry Creek Trailhead	Replace existing structure with new facility large enough to accommodate larger storm events and potentially the future East Boulder Regional Trail.	Conceptual – In Design*	Not Funded	CST, Muni, Fed	\$\$
R16	Overland Road Bridge Replacement – St Vrain Creek (west of Jamestown)	Replace existing structure that floods often with larger structure to accommodate larger storm events.	Conceptual – In Design*	Not Funded	Resiliency	\$\$
R17	Eldora Ski Road Reconstruction – County Road 130 to Eldora Ski Hill	Reconstruct road to reduce erosion damage and road stability.	Conceptual – In Design*	Not Funded	CST	\$\$\$\$
R18	61st Street Bridge over Boulder Creek	Replace existing structure to improve functionality and accommodate larger flood events.	Conceptual*	Not Funded	Resiliency	\$\$\$
R19	75th Street Bridge over Boulder Creek	Replace existing structure and improve flood channel to improve resiliency.	Conceptual*	Not Funded	Resiliency	\$\$\$\$
R20	SH 7 Widening – 119th Street to County Line Road	Road widening to have four travel lanes with widened shoulder and shared use path.	Planned - SH 7 PEL	Not Funded	Fed, Muni, CST	\$\$\$\$\$
R21	SH 93/SH 170 Intersection Improvements	At-grade intersection improvements: bus queue jump and transit signal priority, bus stop improvements and improved crossings for pedestrians/bicyclists.	Planned - WestConnect PEL Study	Not Funded	Fed, Muni, CST	\$\$\$\$
R22	SH 93/SH 128 Underpass	Pedestrian/bicycle underpass.	Planned -WestConnect PEL	Not Funded	Fed, Muni, CST	\$
R23	SH 42 Improvements – Pascal Drive to Lock Street	SH 42 improvements from Pine to Lock Street, including a roundabout at Lock Street.	Planned - 42 Gateway PEL	Not Funded	Fed, Muni, CST	\$\$\$
R24	SH 66 Widening – Lyons to Weld County Road 19	Passing lanes (center turn lane) and frontage road with bike facility.	Conceptual – Preferred Alternative in SH 66 PEL	Not Funded	Fed, Muni, CST	\$\$\$\$\$
R25	US 36 Intersection Safety North of Boulder	Striping and/or green pavement treatments to assist motorists and bicyclists at intersections.	Conceptual*	Not Funded	CST, Fed	\$
R26	61st Street/Valmont Road Intersection Improvements	Reconstruct intersection to improve user safety.	Conceptual*	Not Funded	County R&B, CST	\$\$
R27	95th Street/Gunbarrel Ridge Intersection Improvements	Signage and striping improvements.	Conceptual*	Not Funded	CST	\$
R28	Jay Road Improvements – 63rd Street to 75th Street	Signage and green striping primarily at intersections.	Conceptual*	Not Funded	CST	\$
R29	Lee Hill Drive/Olde Stage Road Intersection Improvements	Striping and paint a triangle to create the illusion of a more constrained intersection.	Conceptual*	Not Funded	County R&B	\$
R30	US 287 Intersection Improvements (exact locations to be determined)	Intersection improvements to make east-west bicycling crossings of US 287 more comfortable.	Conceptual*	Not Funded	County R&B	\$
R31	SH 170 Underpass - US 36 Davidson Mesa Underpass to south of Marshall Road	This project would construct an underpass of Marshall Road to accommodate a pedestrian/bicycle facility.	Planned - TIP	Funded	DRCOG Subregional, Muni	\$\$

Notes: Planned projects are recommended in an approved facility master plan or capital program. Conceptual projects are new ideas or concepts introduced in the TMP or elsewhere.

++The costs are broken into five different categories: \$: less than \$500,000 | \$\$: \$500K-\$2 million | \$\$\$: \$2 million- \$5 million | \$\$\$\$: \$5 million- \$10 million | \$\$\$\$\$: Over \$10 million

+ The following potential funding sources have been identified: CST: Countywide Transportation Sales Tax formed in 2007 to fund road, transit and trails projects throughout the county. Includes both current list of project and potential future projects that fit the goals and objectives of the program. Fed: State, federal, and/or other outside agencies such as urban drainage and flood control districts and the Regional Transit District (RTD). Muni: Local project partners including incorporated jurisdictions and/or other Counties.

* Indicates that more study needs to be completed to evaluate the feasibility of implementation.

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Transit Implementation Actions

Boulder County’s transit system strives to connect communities with key activity centers including education, employment, healthcare, human services, recreation and retail and gives travelers a reliable and convenient transportation option for everyday travel needs. Boulder County’s transit network provides more than eight million annual trips across all of its local and regional transit services. These services included fixed-route bus service (regional, local, and express) and FlexRide service.

- » Invest in transit improvements that are likely to increase countywide transit ridership
- » Invest in county transit service through new route development, service buy ups, technological enhancements and operations support while promoting long-term stability of the existing transit system
- » Support development of BRT in regional corridors connecting Boulder County communities to the region
- » Focus on completion of Northwest Commuter Rail, including analysis of Peak Service Plan
- » Focus transit investments on programs that reduce vehicle miles traveled, provide service to underserved communities, and enhance corridor service in key travel corridors
- » Enhance north/south transit connections along the Front Range, connecting the Denver metro area to the communities along US 36 and Interstate 25 (I-25) corridors, extending north to Northern Colorado communities
- » Enhance east/west connections from communities in east and central Boulder County to the I-25 corridor

- » Implement transit service and other mobility services, improvements, and expansion to and among mountain
- » Enhance bus stop facilities, including benches, concrete pads, shelters, bike racks as well as route or schedule information to increase safety, comfort, and utilization
- » Investigate additional seasonal/special services to meet travel demands that have concentrated peaks of demand
- » Work with transit providers to optimize bus stop locations, which may include adding, removing or relocating stops
- » Develop partnerships with communities with anticipated increased travel to and from Boulder County (i.e. Larimer, Weld, Adams Counties, and the municipalities within them) to improve mobility
- » Evaluate and pursue alternate transit service delivery options to provide increased transit service within the RTD service area and in areas outside of the RTD service area



Pedestrian bridge at McCaslin Park-n-Ride



Flatiron Flyer provides service between Boulder and Denver



Longmont Coffman & 8th Park-n-Ride

Strategy 1: Develop a Multimodal Transportation System

Transit Network Vision

This map identifies the locations of 18 recommended transit projects. Improvements include expansion of existing services, new services, and bus stop amenities.



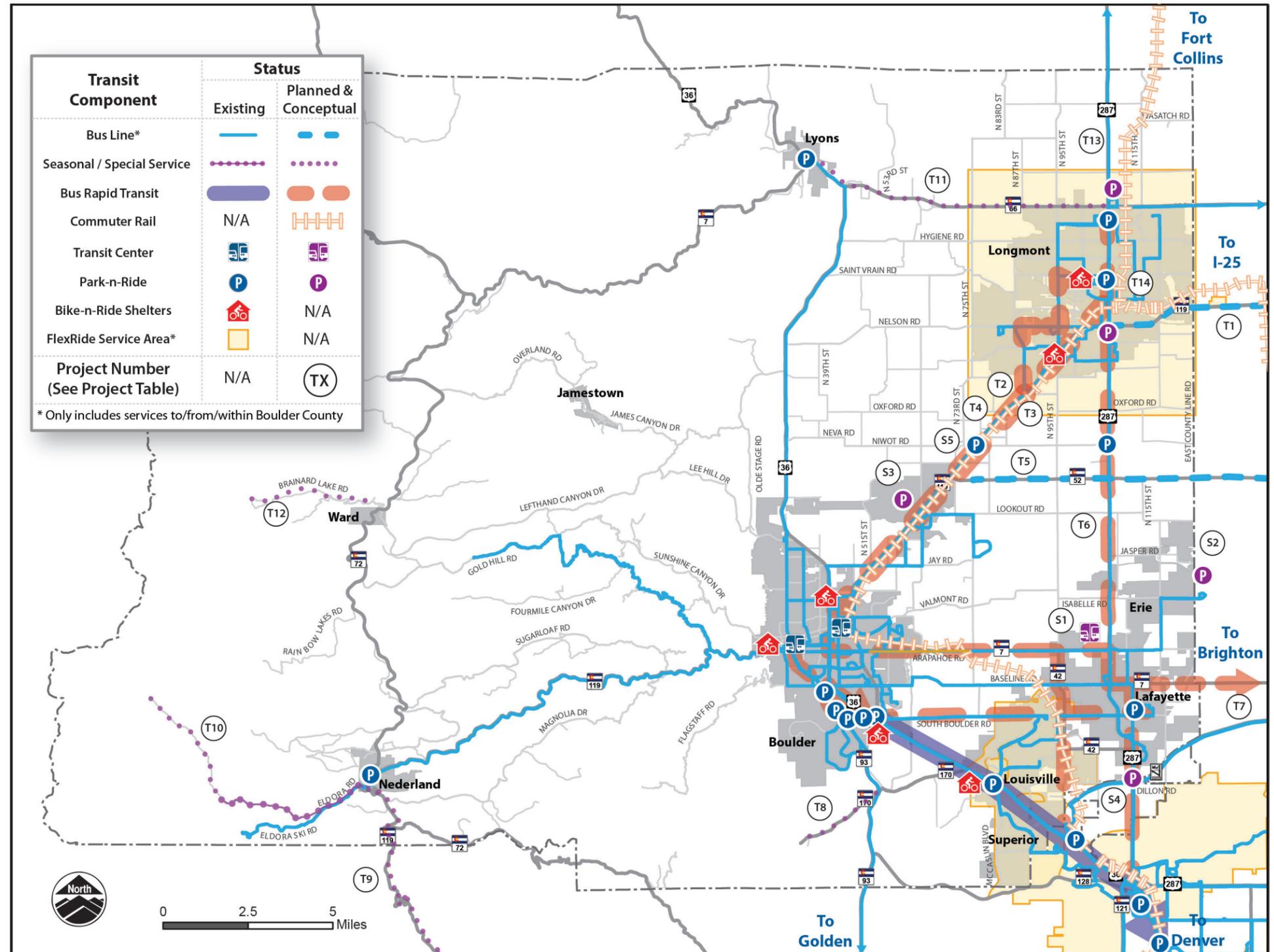
The Lafayette Park-n-Ride provides important transit connections in Lafayette



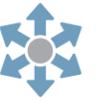
The CLIMB provides service between Boulder and mountain communities



JUMP bus provides service between Boulder, Lafayette, and Erie



Strategy 1: Develop a Multimodal Transportation System



Map ID	Project Name	Project Description	Project Status	Funding Status	Potential Funding Sources+	Capital Cost++	Cost (Annual Operating)+++
T1	SH 119 Regional Service Extension – US 287 to SH 119 and I-25 Park-n-Ride	Extend regional bus service east along SH 119 to I-25 Park-n-Ride.	Conceptual*	Not Funded	CST, Muni	\$	\$\$ (highly dependent on service levels)
T2	Northwest Corridor Commuter Rail – Denver to Longmont	Commuter rail service that provides service between Denver, Boulder, to Longmont.	Conceptual – In NAMS	Not Funded	CST, Muni, RTD, Fed	\$\$\$\$\$+	\$\$\$\$\$
T3	Peak Service for Northwest Corridor Commuter Rail – Denver to Longmont	Limited rail service along the northwest corridor commuter rail.	Conceptual – In Analysis	Not Funded	CST, Muni, RTD, Fed	\$\$\$\$\$+	\$\$\$\$\$
T4	SH 119 BRT – Boulder to Longmont	Implementation of BRT between Boulder and Longmont.	Conceptual – In NAMS, In Design	Partially Funded	CST, TIP Regional Share, RTD, Muni, Fed	\$\$\$\$\$	\$\$\$\$\$ (BRT + expanded Longmont local)
T5	SH 119 Regional Service Extension to I-25 via SH 52 – I-25/SH 52 via SH 52 then SH 119	Extend regional bus service to I-25 along SH 52.	Conceptual	Not Funded	CST, Muni, Fed	\$	\$\$ (highly dependent on service levels)
T6	US 287 BRT – Broomfield to Longmont	Implementation of BRT between Broomfield and Longmont.	Conceptual – In NAMS	Not Funded	CST, Muni, RTD, Fed	\$\$\$\$\$	\$\$\$\$\$
T7	SH 7 BRT – Lafayette to east of county boundary	Implementation of BRT between Lafayette and Brighton.	Conceptual – In NAMS	Not Funded	CST, Muni, RTD, Fed	\$\$\$\$\$	\$\$\$
T8	Eldorado Canyon Seasonal Shuttle – City of Boulder to Eldorado Canyon State Park	Shuttle service between City of Boulder and Eldorado Canyon State Park during weekends.	Conceptual*	Not Funded	CST, Muni, Fed	\$	\$
T9	Nederland to Black Hawk Special Service	Limited/on-demand service to and from Nederland.	Conceptual*	Not Funded	CST, Fed	\$	\$\$ (highly dependent on service levels)
T10	Hessie Trailhead Fourth of July Seasonal Shuttle Extension – extension past current shuttle terminus	Extend service to provide seasonal service to Fourth of July Campground.	Conceptual*	Not Funded	CST	\$	\$\$ (assuming same level of service as existing Hessie)
T11	Lyons to Longmont Special Service	Limited/on-demand service to and from Lyons to Longmont.	Conceptual*	Not Funded	CST, Muni	\$	\$\$ (highly dependent on service levels)
T12	Brainard Lake Seasonal Shuttle	Seasonal service from Brainard Lake Winter Lot to Brainard Lake.	Conceptual*	Not Funded	CST, Muni, Fed	\$	\$\$\$\$
T13	FLEX service expansion – Fort Collins to Boulder via Longmont	Increase existing service	Conceptual*	Partial Funding	CST, TIP Regional Share), Muni, Fed	\$	\$\$\$\$ (highly dependent on service levels)
T14	Northwest Extension Commuter Rail	Commuter rail service that provides service between Longmont and Thornton.	Conceptual – In North I-25 EIS	Not Funded	CDOT, Muni	\$\$\$\$\$+	\$\$\$\$\$
S1	US 287 and Arapahoe Park-n-Ride	Creation of a new transit center.	Conceptual*	Not Funded	CST, RTD, Muni, Fed	\$\$	\$
S2	Erie Park-n-Ride – Erie Community Center	Formalization of Park-n-Ride at the Erie Community Center.	Conceptual*	Not Funded	CST, RTD, Muni, Fed	\$\$	\$
S3	SH 119/63rd Street Park-n-Ride	Creation of a Park-n-Ride at the intersection.	Conceptual –(SH 119 project)*	Not Funded	CST, RTD, Fed	N/A**	\$
S4	US 287/Northwest Parkway Park-n-Ride	Creation of a Park-n-Ride at the intersection.	Conceptual*	Not Funded	CST, RTD, Muni, Fed	\$\$	\$
S5	Niwot Park-n-Ride Expansion – at existing PnR at Niwot Rd or 2nd Ave	Increased vehicle and bicycle parking at the existing Park-n-Ride.	Conceptual –(SH 119 project)*	Not Funded	CST, RTD, Fed	N/A**	\$

Notes: Planned projects are recommended in an approved facility master plan or capital program. Conceptual projects are new ideas or concepts introduced in the TMP or elsewhere.

+ The following potential funding sources have been identified: CST: Countywide Transportation Sales Tax formed in 2007 to fund road, transit and trails projects throughout the county. Includes both current list of project and potential future projects that fit the goals and objectives of the program. Fed: State, federal, and/or other outside agencies such as urban drainage and flood control districts and the Regional Transit District (RTD). Muni: Local project partners including incorporated jurisdictions and/or other Counties.

++The costs are broken into five different categories: \$: less than \$500,000 | \$\$: \$500K-\$2 million | \$\$\$: \$2 million- \$5 million | \$\$\$\$: \$5 million- \$10 million | \$\$\$\$\$: Over \$10 million

+++These estimates depend greatly on service details associated with the transit service. The cost estimates here are assumed to be a 20 year operating life span.

* Indicates that more study needs to be completed to evaluate the feasibility of implementation.

**Indicates that cost is already included within the cost of a larger transit project.

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Regional Trail, Bicycle, and Pedestrian Implementation Actions

Boulder County’s bicycle and pedestrian network provides a physical environment and convenient opportunities for travel and recreation, both of which promote active lifestyles and sustainable travel. Boulder County’s bicycle and pedestrian networks are a combination of on-street bikeable shoulders, intersection and crossing treatments, off-street shared-use paths and trails, and sidewalks. These facilities are located in neighborhood, rural, and semi-rural environments and allow for mobility by foot, bicycle, and in certain locations, horseback. Together the different types of facilities provide opportunities for individuals with various comfort, skill, and ability levels.

- » Update the on-street bikeways plan map as part of the comprehensive plan based on the multiuse path and bikeable shoulders map
- » Modify the Multimodal Transportation Standards to include design standards (specifically: buffered shoulders, protected shoulders, green pavement markings, and managed lanes) and clarify multiuse path, regional trail, and shared use path
- » Prioritize roadway safety, signage and shoulder improvements to address unsafe conditions on primary on-road cycling corridors that separate bikes from cars and lower bicycle level of stress
- » Improve intersections for safe and convenient access to transit stops and bike and pedestrian facilities
- » Add/improve shoulders, trail connections, bike and pedestrian infrastructure to provide safe connections to primary cycling corridors, transit facilities, and park-n-rides
- » Develop a network of bicycle facilities maintained year round that connect regional destinations
- » Continue implementation of the regional trails priorities as adopted in 2003 and modified annually, as listed in the most recent Transportation Sales Tax phasing plan

- » Improve on-street bicycle facilities, trail connections, bike and pedestrian infrastructure as opportunities arise, to provide safe and convenient connections to transit facilities and Park-n-Rides
- » Pave downhill pull outs and small sections of downhill shoulder to allow low stress passing lanes where possible
- » Build uphill shoulders on roadways with limited right-of-way where feasible
- » Work with open space property owners to identify strategies to best support recreational and commuter uses of regional trails and multiuse paths.
- » Collaborate with county, state and municipal agencies to improve wayfinding signage along regional trails with a priority on wayfinding signage on the county’s regional trails and local connectors



Pedestrian crossing in Lyons



Pedestrian push button



Underpass as part of the Longmont-Boulder (LoBo) Trail provides access under 63rd Street

Strategy 1: Develop a Multimodal Transportation System

Regional Trail Vision

This map identifies the locations of 13 recommended regional trail projects. Improvements include filling gaps for missing links of existing regional trails.

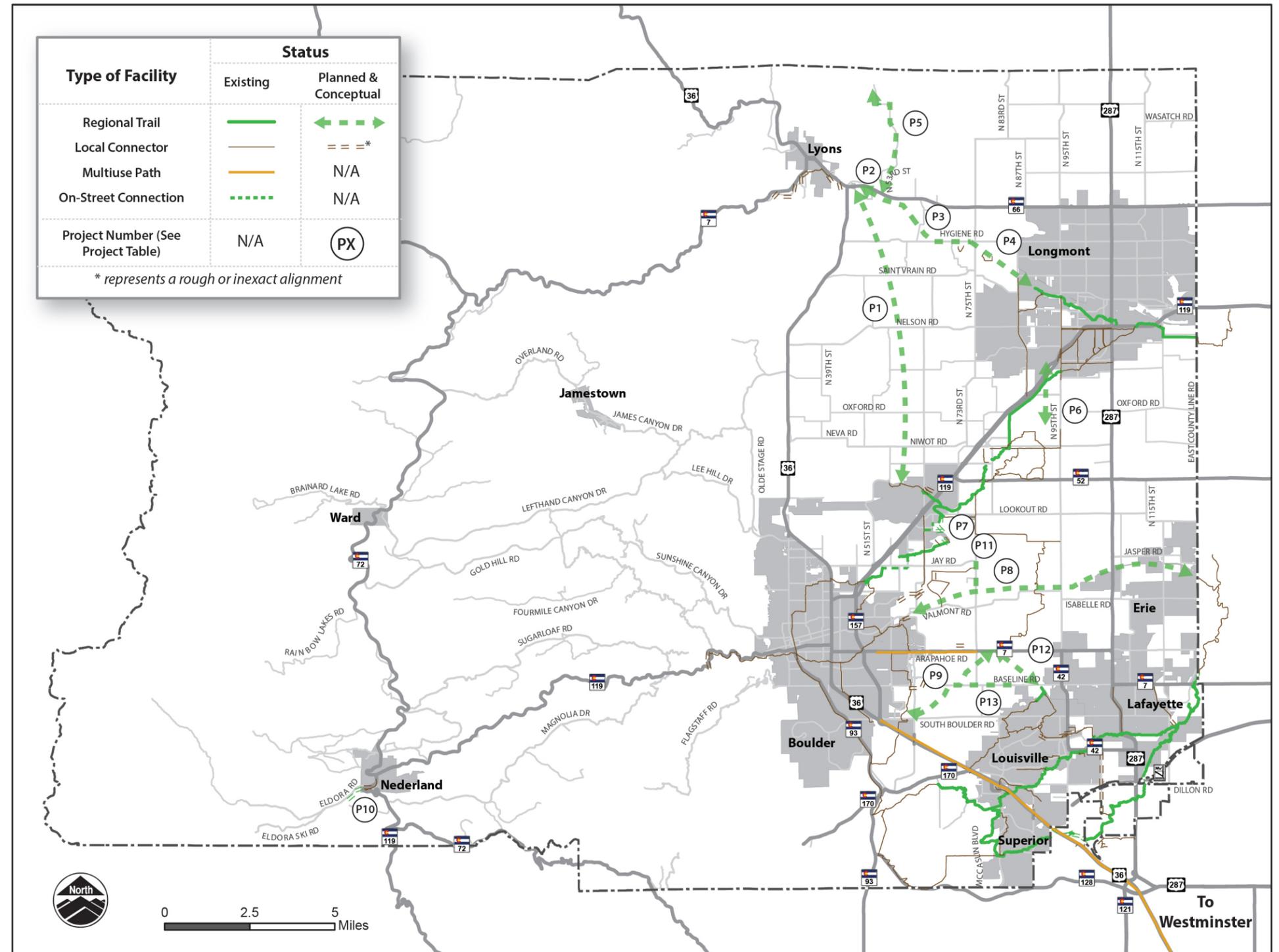
Note, there is some duplication of proposed projects shown on this map and the multiuse paths and bikeable shoulders vision map. It is Boulder County's intention to pave projects on the multiuse paths and bikeable shoulders map. The vision for multiuse paths and bikeable shoulders is that they are plowable and maintained year round. If a proposed regional trail meets that criteria, then an additional facility is not required.



A couple walks along an off-street trail



Cottonwood Trailhead



Strategy 1: Develop a Multimodal Transportation System



Map ID	Project Name	Project Description	Project Status	Funding Status	Potential Funding Source ⁺	Cost ⁺⁺
P1	Lyons Trail Connection	Trail between Lyons and Gunbarrel.	Conceptual*	Not Funded	CST, Muni, Fed	\$\$
P2	St. Vrain Greenway – Phase II: 61st Street to US 36	Connection of the St. Vrain Greenway.	Conceptual*	Funded	CST	\$\$
P3	St. Vrain Greenway – Phase III: Pella to 61st Street	Connection of the St. Vrain Greenway.	Conceptual – On-hold*	Not Funded	CST	\$\$
P4	St. Vrain Greenway: Phase I: Golden Ponds to Pella	Connection of the St. Vrain Greenway.	Planned – In Design	Funded	CST, Muni	\$\$
P5	Rabbit Mountain Open Space Link	Connection to Rabbit Mountain Open Space from US 36 and Hwy 66.	Conceptual*	Not Funded	CST	\$\$
P6	Dry Creek Extension	Connection from local connectors to the LOBO Trail.	Planned	Not Funded	CST	\$\$
P7	LOBO Trail - William's Fork Connector	Connection of the LOBO Trail.	Planned – In Design	Funded	CST, Fed, Muni	\$\$\$
P8	RTD Rail Trail – Erie to Boulder	Trail between Erie and Boulder.	Planned	Funded	CST, Fed, Muni	\$\$\$\$
P9	East Boulder Trail	Trail between south Boulder and east of Lafayette.	Conceptual	Not Funded	CST, Fed, Muni	\$\$\$\$
P10	County Road 130 Trail – Nederland to Nederland High School	Trail connection.	Conceptual	Not Funded	CST, Fed	\$\$
P11	75th Street Trail Connection – RTD tracks to Jay Road	Trail connection from RTD Rail Trail to Heatherwood Trail and 75th Street facilities.	Conceptual	Not Funded	CST	\$\$
P12	Callahan Trail Extension – Baseline Road to East Boulder Trail	Connection from Lafayette to East Boulder Trail.	Conceptual	Not Funded	CST	\$\$
P13	Trail Connection via Baseline Road	Trail connection between north Louisville/Lafayette and Boulder.	Conceptual	Not Funded	CST	\$

Notes: Planned projects are recommended in an approved facility master plan or capital program. Conceptual projects are new ideas or concepts introduced in the TMP or elsewhere.

+ The following potential funding sources have been identified: CST: Countywide Transportation Sales Tax formed in 2007 to fund road, transit and trails projects throughout the county. Includes both current list of project and potential future projects that fit the goals and objectives of the program. Fed: State, federal, and/or other outside agencies such as urban drainage and flood control districts and the Regional Transit District (RTD). Muni: Local project partners including incorporated jurisdictions and/or other Counties.

++The costs are broken into five different categories: \$: less than \$500,000 | \$\$: \$500K-\$2 million | \$\$\$: \$2 million- \$5 million | \$\$\$\$: \$5 million- \$10 million | \$\$\$\$\$: Over \$10 million

* Indicates that more study needs to be completed to evaluate the feasibility of implementation.

Strategy 1: Develop a Multimodal Transportation System

Multiuse Paths and Bikeable Shoulders Vision

This map identifies the locations of 30 recommended multiuse paths and bikeable shoulder projects. Improvements include expansion of existing facilities, new facilities, and enhancement of existing facilities.

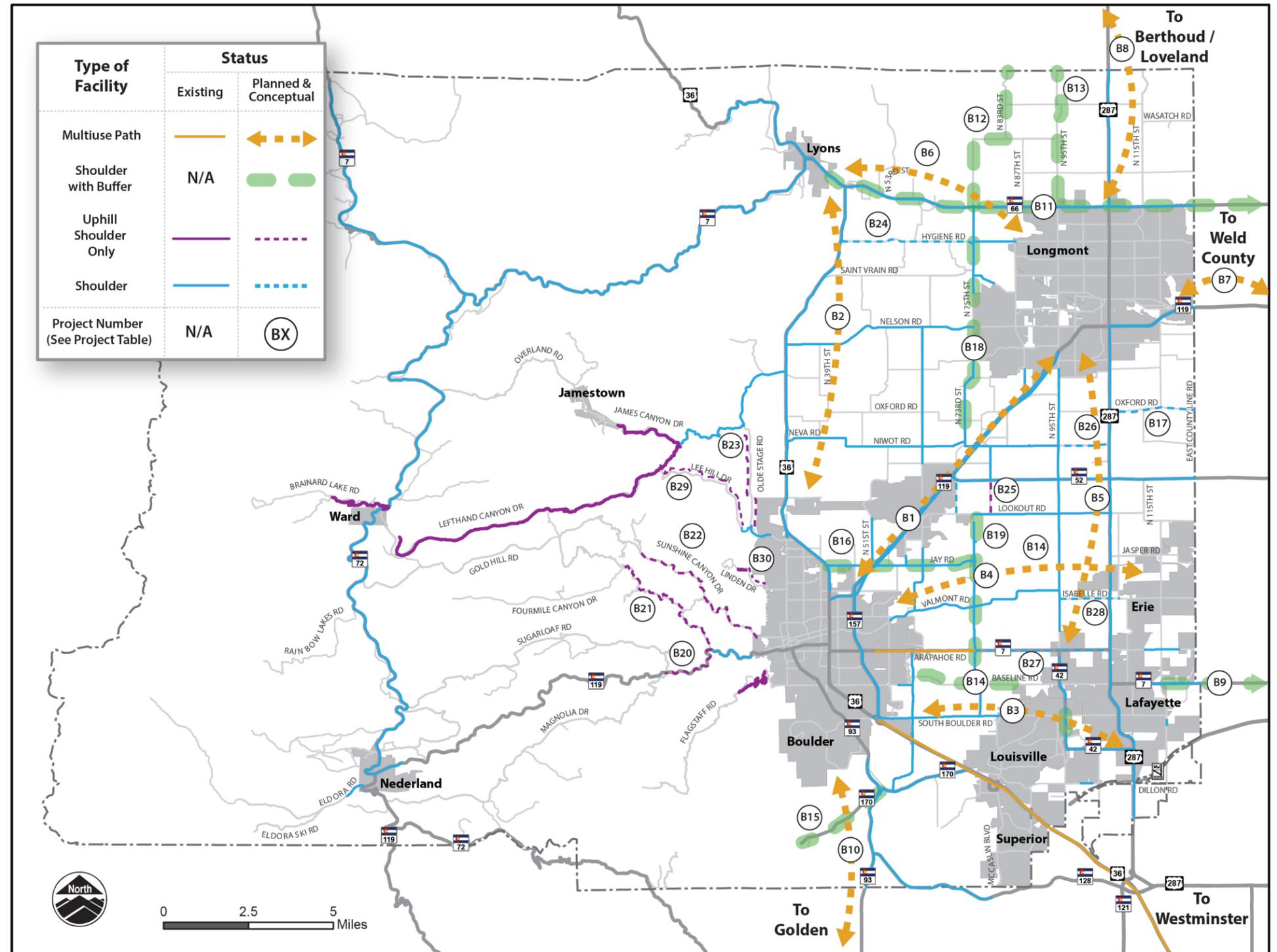
Note, there is some duplication of proposed projects shown on this map and the regional trails vision map. It is Boulder County's intention to pave projects on the multiuse paths and bikeable shoulders map. The vision for multiuse paths and bikeable shoulders is that they are plowable and maintained year round. If a proposed regional trail meets that criteria, then an additional facility is not required.



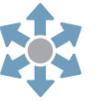
Two bicyclists ride along a multiuse path



Tube bicycle counter



Strategy 1: Develop a Multimodal Transportation System



Map ID	Project Name	Project Status	Funding Status	Potential Funding Source+	Cost++
Multiuse paths					
B1	Boulder to Longmont	Conceptual*	Not Funded	CST, Muni, Fed	\$\$
B2	Boulder to Lyons	Conceptual*	Not Funded	CST, Muni, Fed	\$\$\$\$
B3	Boulder to north Louisville/Lafayette	Conceptual*	Not Funded	CST, Muni, Fed	\$\$\$
B4	Boulder to Erie	In Planning	Not Funded	CST, Muni, Fed	\$\$\$
B5	Lafayette/Erie to Longmont	Conceptual*	Not Funded	CST, Muni, Fed	\$\$\$
B6	Longmont to Lyons	Conceptual*	Not Funded	CST, Muni, Fed	\$\$\$
B7	Longmont to Weld County	Conceptual*	Not Funded	CST, Muni, Fed	\$\$
B8	Longmont to Berthoud/Loveland	Conceptual*	Not Funded	CST, Muni, Fed	\$\$\$
B9	SH 7 Multi-use Path – 119th Street to East County Line Road	Conceptual – SH 7 PEL	Not Funded	CST, Muni, Fed	\$\$\$
B10	SH 93 Multi-use Path – SH 170 south past the county boundary	Conceptual – WestConnect PEL	Not Funded	CST, Muni, Fed	\$\$\$
B11	SH 66 Frontage Road/Bike facility – Lyons to County Road 19	Conceptual – Preferred Alternative in SH 66 PEL Study	Not Funded	CST, Muni, Fed	\$\$\$\$\$
Shoulders with buffer					
B12	Hygiene to Larimer County – 83rdStreet/75th Street	Conceptual*	Not Funded	CST	\$\$\$\$
B13	95th Street Shoulder – Yellowstone Road to county boundary	Conceptual*	Not Funded	CST	\$\$
B14	Baseline Road – Cherryvale Road to 95th Street	Conceptual*	Not Funded	CST	\$\$\$\$
B15	Eldorado Springs Drive/SH 170 – SH 93 to Eldorado Springs	Conceptual*	Partially Funded	CST	\$\$\$\$
B16	Jay Road – US 36 to 75th Street	Conceptual*	Not Funded	CST, Muni	\$\$\$\$
B17	Oxford Road – US 287 to East County Line Road	Conceptual*	Not Funded	CST	\$\$\$
B18	73rd Street/75th Street – Niwot Road to Hygiene Road (includes Longmont section and assumes that bridge structures remain in place)	Conceptual*	Not Funded	CST, Muni	\$\$\$\$
B19	75th Street – Lookout Road to Baseline Road	Conceptual*	Not Funded	CST, Muni	\$\$
Shoulders					
B20	Boulder Canyon Uphill Shoulder – Fourmile Canyon Drive to Sugarloaf	Conceptual*	Not Funded	CST	\$\$\$\$\$
B21	Fourmile Canyon Drive Uphill Shoulder – Boulder Canyon to Salina	Conceptual*	Not Funded	CST	\$\$\$\$\$
B22	Sunshine Canyon Drive Shoulder – Boulder to County Road 83	Conceptual*	Not Funded	CST	\$\$\$\$
B23	Olde Stage Road Uphill Shoulder – Top of hill to Lefthand Canyon Drive (includes reconfiguration of Six Mile Creek)	Conceptual*	Not Funded	CST	\$\$\$
B24	Hygiene Road Shoulder – US 36 to 75th Street (reconstruct road to include paved shoulders and replace three stream crossings)	Conceptual*	Funded	CST	\$\$\$\$
B25	79th Street Shoulder – SH 52 to Lookout Road	Conceptual*	Not Funded	CST	\$\$
B26	Niwot Road Shoulder – 95th Street to US 287	Conceptual – In Design	Funded	CST	\$\$\$
B27	SH 7 Shoulder – 75th Street to US 287	Conceptual*	Not Funded	CST	\$\$\$
B28	Isabelle Road Shoulder –95th Street to Erie (includes safety improvements to US 287/Isabelle Road Intersection)	Conceptual*	Funded	CST	\$\$\$
B29	Lee Hill Road Uphill Shoulder – end of current shoulder to Deertrail Drive (add paved shoulder to uphill lane to improve safety for all users)	Conceptual*	Not Funded	CST	\$\$\$\$
B30	Linden Avenue Shoulder – Boulder to North Cedar Brook (includes reconstruction of road)	Conceptual*	Not Funded	CST	\$\$\$

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Strategy 2: Create the Complete Trip

Boulder County improves infrastructure, supports regional transit, connects the first and final mile portions of trips, and establishes transportation demand management programs. These investments strive to provide county residents with complete mobility options, providing people with a viable option to driving alone. Making bicycle, bus, and pedestrian travel more convenient reduces

greenhouse gas emissions and roadway congestion, conserves natural resources, lessens dependence on fossil fuels, promotes public health, and increases the mobility of the youth and older adult population.

Completing the Trip Components

Main Trip

Improving and streamlining travel for all modes allowing users to get to and from local transit — easily and safely



Buffered shoulder provides separation between vehicles and bicyclists



A wide shoulder provides area for bicyclists to ride

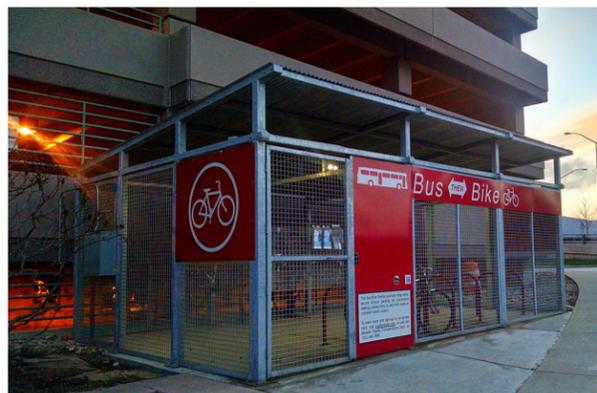


Regional transit provides important connections



Separated multiuse path provides a more comfortable riding experience

First and Final Mile Connections Transit within and outside of Boulder County



Bike-n-ride shelters provide secure bicycle storage



Shuttle services can provide important connections



Bicycle maintenance classes educate bicyclists about how to repair their bike

Transportation Demand Management (TDM) Incentives and alternatives that reduce congestion



Pass programs provide subsidies to make riding transit easier and more affordable

Strategy 2: Create the Complete Trip

Implementation Actions

- » Add/improve shoulders, multiuse path and trail connections, bike and pedestrian infrastructure to provide safe and convenient connections to transit facilities and park-n-rides
- » Partner to support shuttles to recreation destinations/first and final mile improvements
- » Provide accessibility and compliance with the Americans with Disabilities Act
- » Adopt project considerations process to consider possible improvements within the project development phase for all modes
- » Develop policy for addressing technology considerations within projects
- » Expand and supplement existing Boulder County Business and Community EcoPass programs with the goal of a countywide community pass program serving all county residents and employees
- » Support RTD in the implementation of a low-income pass program
- » Install variable message signs and smartphone applications that provide real-time transit information
- » Increase bicycle carrying capacity on transit vehicles
- » Conduct marketing and outreach activities to educate the public on available travel options
- » Support new fare payment options and RTD's development of mechanisms for governments to subsidize passes via these new fare payment methods
- » Encourage transit and bicycle connections by providing Bike-n-Ride Shelters and bicycle facilities at identified locations
- » Support communities, TMOs and other service providers to coordinate service delivery, share resources, collaborate on marketing & outreach, and offer multimodal corridor services
- » Support chambers of commerce and large employer TDM programs
- » Promote active living, and associated public health benefits, by providing infrastructure that enables walking and bicycling to and from bus stops and local destinations
- » Support TDM services along multimodal travel corridors, prioritizing geographic areas and major employers without existing programs or services
- » Coordinate with housing authorities to consider transportation in new housing development
- » Incorporate the Transportation strategies identified in the Sustainability Plan into the Transportation Department processes, program, policies, etc. as appropriate

ADVANCED MOBILITY

There is much uncertainty associated with these new technologies surrounding cost, negative externalities, longevity of the product and/or company, as well as community reception. New mobility technologies offer opportunities to provide new mobility options, but also present challenges to achieving Boulder County's transportation goals. The table below describes some of the opportunities and challenges of current technologies:

Mobility Technologies	Opportunities	Challenges
Electric bicycles/ Electric Scooters	<ul style="list-style-type: none"> • Accessible for people with a wider range of physical abilities than non-electric bicycles • Longer range than non-electric bicycles could increase use as a method of transportation 	<ul style="list-style-type: none"> • Users traveling at faster speeds than pedestrians could lead to conflicts and safety concerns • Facility considerations such as width of multiuse paths
Electric Vehicles	<ul style="list-style-type: none"> • Accessible for people with a wider range of physical abilities than non-electric bicycles • Longer range than non-electric bicycles could increase use as a method of transportation 	<ul style="list-style-type: none"> • Does not improve congestion • Impact to road infrastructure without gas tax revenue
Autonomous Vehicles	<ul style="list-style-type: none"> • Improve safety • Provide mobility for older adults, people with disabilities, and others with mobility challenges 	<ul style="list-style-type: none"> • Potential to increase Vehicle Miles Traveled (VMT) • Potential for inequitable access
Ridehailing	<ul style="list-style-type: none"> • Provide mobility for older adults, people with disabilities, and others with mobility challenges 	<ul style="list-style-type: none"> • Potential for inequitable access • Increase in VMT

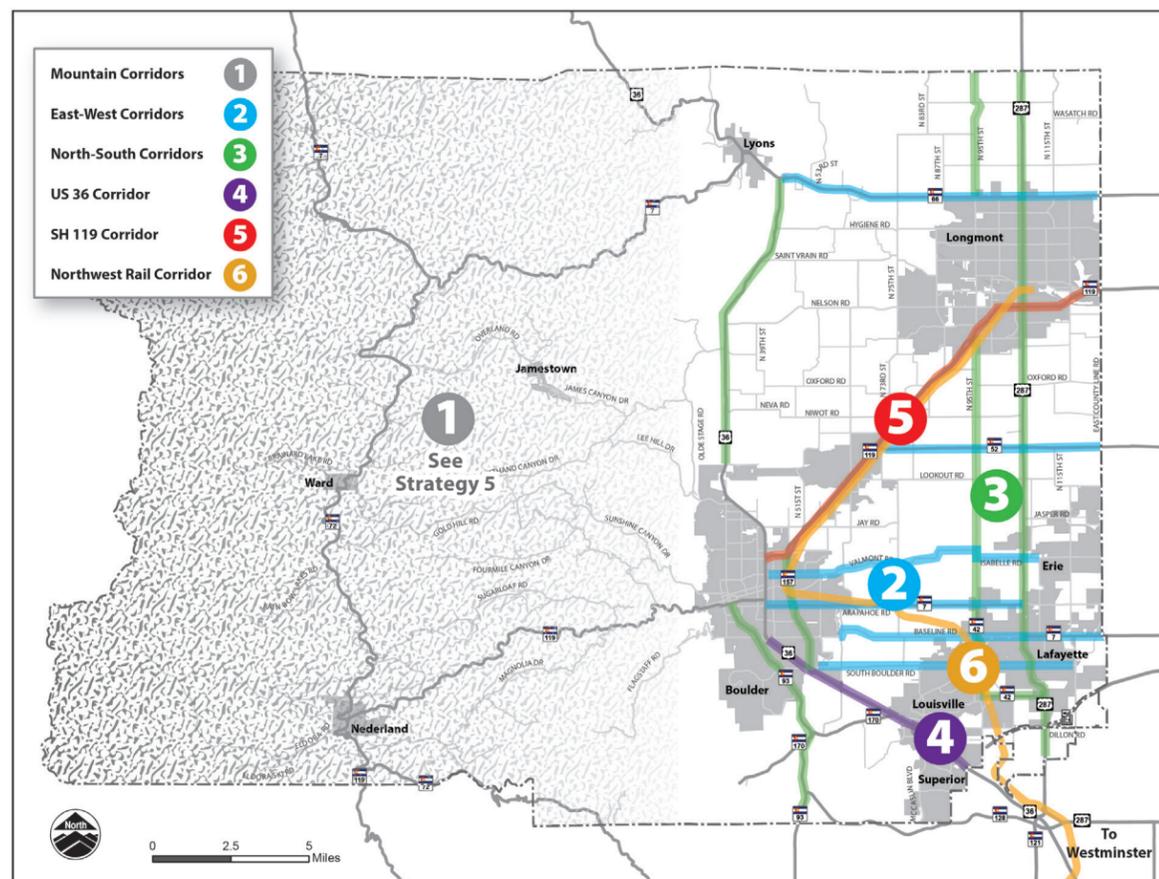
Strategy 3: Invest in Key Regional Transportation Corridors

Boulder County travel corridors include local and regional transportation elements that form an integrated transportation system. The implementation actions draw from existing regional planning documents and visions achieved through interagency coordination. Boulder County considers each

travel corridor as a geographic area encompassing all available and future modes. These multimodal corridors create the backbone of the Boulder County transportation system and play a critical role in addressing the 20-year travel demand.

Primary Travel Corridors

Six primary travel corridors are identified as key regional corridors in this plan. Each corridor consists of facilities and programs that serve different modes and trip types. The transportation system for each corridor consists of a unique combination of different types of roadways and facilities for multimodal users. The transportation system relies on the land use and development decisions made by local governments both within and outside of the county. While the vision and strategies identified for these corridors were developed in collaboration with each agency, none of these agencies have necessarily adopted or committed to implementing the strategies or improvements identified.



- » Prioritize moving people, not cars
- » Explore options to increase revenue necessary to implement the identified regional project priorities
- » Provide alternatives/choice on major corridors
 - Improved transit service
 - Bicycle infrastructure improvements
 - Managed lanes
 - Shoulders
- » Focus on operational improvements--including vehicle capacity expansion--at intersections. This can include additional turn lanes and through lanes. [Included within Strategies 1 & 3]
- » Working through CDOT, consider additional managed lanes on all corridors in the Northwest Area Mobility Study to be used for transit and high occupancy vehicles (HOVs). [Included within Strategies 1 & 3]
- » Support Northern Area Mobility Study (NAMS) corridor recommendations for:
 - Hwy 119
 - Hwy 7
 - Hwy 287
 - Hwy 42
 - South Boulder Road
 - Northwest Rail

Strategy 3: Invest in Key Regional Transportation Corridors

2 | East-West Corridors

Implementation Actions	Valmont Rd/ Isabelle Rd	SH 66	SH 52 (Mineral Rd)	SH 7 (Arapahoe Rd)	Baseline Rd	South Boulder Rd	Implementation Notes
Transit							
BRT/High frequency bus service				●	●	●	
Commuter rail				●			Commuter rail identified in FasTracks and NAMS
Local transit connections			●	●	●	●	Includes transit continuation from SH 119
New Park-n-Ride facilities		●	●				Park-n-Ride facilities located at SH 66/US 287 and I-25
Park-n-Ride capacity improvements				●	●	●	
Bus stop enhancements/First and final mile amenities						●	
Queue jump lanes				●	●	●	
Bike storage							
Transit signal priority (TSP)							
Feasibility study							
Regional Trails, Bicycle and Pedestrian							
Regional trail connections	●	●	●	●	●	●	Regional trail connections along the RTD Rail Corridor (Boulder-to-Erie) and St. Vrain, (include primary network bicycle connection from Lafayette/N Louisville to Boulder via SH 7, Baseline and/or BNSF corridor)
Bikeable shoulders	●	●	●	●	●		
Multiuse paths							
Grade-separated crossings for bicyclists and pedestrians	●	●	●	●	●	●	Grade separations at key roads and rail crossings and connections to local system
Study for preferred alignment	●	●	●	●	●		Study for preferred alignment for east-west low-stress bicycle and pedestrian facilities (Baseline, Arapahoe, BNSF)
System Management							
Intersection improvements for multimodal safety and operations	●	●	●	●	●	●	Operational improvements to both 61st and US287 to improve intersection safety on Valmont Rd/Isabelle Rd. Signal timing on SH 52.
Signal detection	●	●	●	●	●	●	
Crossing improvements	●	●	●	●	●	●	
Frontage road / Cycling area	●	●	●	●	●		
Turn lanes	●	●	●	●	●	●	
Managed lanes							
Evaluate existing conditions							

Strategy 3: Invest in Key Regional Transportation Corridors

3 | North South Corridors

Implementation Actions	North Foothills Hwy/US 36	SH 42 (N. 95th St)	US 287	South Foothills Hwy/SH 93	Implementation Notes
Transit					
BRT/High frequency bus service		●			BRT identified in NAMS
Commuter rail		●	●		Commuter rail identified in FasTracks, NAMS, and North I-25 EIS
Local transit connections		●	●	●	Improved transit between Golden and Boulder
New Park-n-Ride facilities			●	●	Park-n-Ride at SH 93 & SH 170
Park-n-Ride capacity improvements		●	●	●	
Bus stop enhancements/ First and final mile amenities		●	●	●	
Queue jump lanes		●	●	●	
Bike storage		●	●	●	
Transit signal priority (TSP)		●	●	●	
Feasibility study			●		Feasibility study for bus rapid transit/ North Front Range Connection
Regional Trails, Bicycle and Pedestrian					
Regional trail connections					
Bikeable shoulders		●	●	●	
Multiuse paths	●	●	●	●	Separated bikeway from SH 170 to Golden
Grade-separated crossings for bicyclists and pedestrians		●	●	●	Includes waterways, roads, and highways
System Management					
Intersection improvements for multimodal safety and operations	●	●	●	●	
Signal detection		●	●	●	
Crossing improvements		●	●	●	
Frontage road / Cycling area					
Turn lanes					
Managed lanes					
Evaluate existing conditions					

4 | US 36 Corridor

Implementation Actions	US 36	Implementation Notes
Transit		
BRT/High frequency bus service		
Commuter rail	●	Commuter rail identified in FasTracks and NAMS
Local transit connections	●	
New Park-n-Ride facilities		
Park-n-Ride capacity improvements	●	Improvements to Table Mesa Park-n-Ride
Bus stop enhancements/First and final mile amenities	●	Downtown Boulder Station improvements
Queue jump lanes	●	Queue jump/transit lanes within City of Boulder
Bike storage	●	
Transit signal priority (TSP)	●	TSP in coordination with local governments and CDOT
Feasibility study		
Regional Trails, Bicycle and Pedestrian		
Regional trail connections		
Bikeable shoulders		
Multiuse paths		
Grade-separated crossings for bicyclists and pedestrians	●	Grade separations at key roads and rail crossings and connections to local system
Evaluate existing conditions	●	
System Management		
Intersection improvements for multimodal safety and operations		
Signal detection	●	
Crossing improvements		
Frontage road / Cycling area		
Turn lanes		
Managed lanes		
Evaluate existing conditions	●	

Strategy 3: Invest in Key Regional Transportation Corridors

5 | SH 119 Corridor

Implementation Actions	SH 119	Implementation Notes
Transit		
BRT/High frequency bus service	●	
Commuter rail	●	Commuter rail identified in FasTracks, NAMS, and North I-25 EIS
Local transit connections	●	
New Park-n-Ride facilities	●	
Park-n-Ride capacity improvements	●	
Bus stop enhancements/First and final mile amenities	●	
Queue jump lanes		
Bike storage	●	
Transit signal priority (TSP)	●	
Feasibility study		
Regional Trails, Bicycle and Pedestrian		
Regional trail connections	●	Longmont-to-Boulder Trail connections (William's Fork/Twin Lakes, Jay Road, Four Mile Creek)
Bikeable shoulders		
Multiuse path	●	Paved, plowed, and separated bikeway, parallel to SH 119
Grade-separated crossings for bicyclists and pedestrians	●	
System Management		
Intersection improvements for multimodal safety and operations	●	Support for a cost effective solution at SH 52 Intersection enhancements to improve safety for all modes and reduce congestion
Signal detection	●	
Crossing improvements	●	
Frontage road / Cycling area		
Turn lanes		
Managed lanes	●	
Evaluate existing conditions		

6 | Northwest Rail Corridor

Implementation Actions	Northwest Rail	Implementation Notes
Transit		
BRT/High frequency bus service		
Commuter rail	●	Commuter rail identified in FasTracks, NAMS, and North I-25 EIS
Local transit connections	●	
New Park-n-Ride facilities	●	
Park-n-Ride capacity improvements		
Bus stop enhancements/First and final mile amenities	●	
Queue jump lanes		
Bike storage	●	
Transit signal priority (TSP)	●	
Feasibility study		
Regional Trails, Bicycle and Pedestrian		
Regional trail connections		
Bikeable shoulders		
Multiuse path		
Grade-separated crossings for bicyclists and pedestrians		
System Management		
Intersection improvements for multimodal safety and operations	●	
Signal detection		
Crossing improvements	●	
Frontage road / Cycling area		
Turn lanes		
Managed lanes		
Evaluate existing conditions		

Boulder County implements transportation strategies to expand personal mobility, improve job and educational access, and increase transportation options. Boulder County will expand support programs to make transportation more accessible to mobility-challenged and vulnerable populations.

Programs to Increase Accessibility

As Boulder County's demographics change it will become even more important for transportation infrastructure to include features designed to assist persons with mobility challenges. Mobility impairments include financial, physical and cognitive challenges and can occur at any phase of life. The ability to navigate the community in a safe, efficient and comfortable manner is key to maintaining livability and independence for all county residents.

Groups Served

- ✦ People with low-incomes
- ✦ People with disabilities
- ✦ Older adults
- ✦ People who do not speak English



Older adults getting into a car in winter

- » Incorporate affordable transportation in affordable living programs
 - Consider access to affordable transportation options when developing affordable housing
 - Improve access to more affordable fuel efficient vehicles for low-income households
 - Pursue mobility-as-a-service options for low-income and mobility disadvantaged populations

- » Expand transportation options
 - Expand and enhance accessible, affordable, and equitable mobility options for youth and families, older adults, people with disabilities, individuals with low income, and others living with mobility limitations
 - Increase bike-to-transit workshop and earn-a bike programs to provide transportation options and make bus travel more accessible

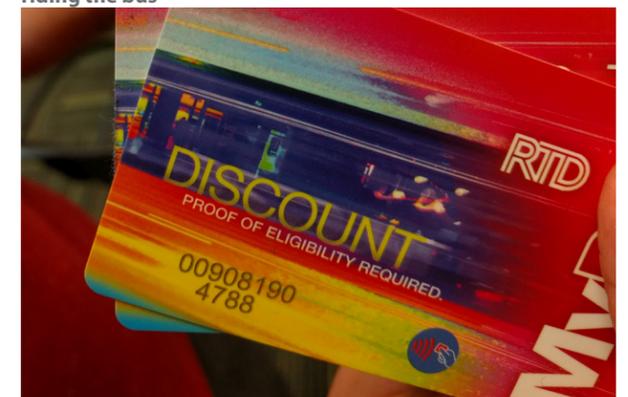
- » Increase transportation education
 - Provide individual and group travel training to teach people with limited mobility how to safely and confidently use public transportation
 - Publish and distribute maps and other information to educate all groups about the availability of transportation options
 - Create centralized trip booking and dispatch center for coordinated human services transportation providers
 - Support 'one-call' information and referral services to help those faced with mobility challenges
 - Develop technology curriculum for older adults and people with disabilities to access transportation-related mobile applications, such as RTD Mobile Ticketing, Google Maps Multimodal Trip Planning, Uber, Lyft, etc.



The inclusive planning group directly helped develop recommendations



Bus training can empower people to feel more comfortable riding the bus



Discount MyRide card for riding transit



Accessibility Goals and Implementation Actions

Goals of the Local Coordinating Council

- ✦ Identify and develop solutions for regional and cross county travel, including links between local services
- ✦ Provide opportunities to coordinate service delivery and to efficiently use public and private funding for transportation among different transportation and human services agencies
- ✦ Increase the accessibility of public information about the availability of existing programs and about how to use them through education and outreach
- ✦ Advocate for accessible, affordable, and equitable transportation options
- ✦ Overcome technology barriers to accessing transportation services, such as Uber, Lyft, RTD Mobile Ticketing, and Google Maps multimodal trip planning

Local Coordinating Council Agencies

Local agencies (City of Longmont, City of Boulder)	Focus Reentry
Cultivate	Boulder County Area Agency on Aging
Safehouse Progressive Alliance for Nonviolence	Denver Regional Mobility and Access Council (DRMAC)
Bridge House	Service operators (RTD, Via Mobility Services, zTrip, eGo Car Share)
OUR Center	Colorado Community Health Alliance Center for People with Disabilities
Emergency Family Assistance Association	Peak to Peak Housing and Human Services Alliance
Association for Community Living (ACL)	Boulder Transportation Connections (BTC)
Community Cycles	
Boulder Housing Partners	
Boulder County Housing & Human Services	

- » Provide transit pass assistance
 - Community-wide EcoPasses to enable more transit use
 - Support RTD in the creation of a low-income pass program
- » Support schools in their efforts to promote non-Single Occupancy Vehicle transportation by incorporating multimodal and active transportation education into curriculum
- » Support youth multimodal transportation
 - Conduct a needs assessment/gaps analysis focused on school travel to evaluate how current transportation systems are meeting demand
 - Conduct a crossing guard inventory to conduct an equity analysis, which will result in recommendation to local partners on how to improve safety of routes to schools
 - Assess affordability of subsidizing ride-sharing or mobility on demand options for school related travel needs
 - Collaborate with local governments and school districts to identify local, regional, state, and federal funding sources for infrastructure and non-infrastructure improvements
- » Conduct Spanish-language outreach and public engagement



Via Mobility Services provides access with a shuttle



Access to transportation enables those with physical disabilities to live a more independent and self-sufficient life



A recumbent bicycle can be easier to ride, especially for older adults

Strategy 5: Enhance Mountain Area Connections

Transportation connections are vital for Boulder County communities to function and prosper and for residents and visitors to enjoy the county’s recreational opportunities. The Boulder County Transportation Master Plan highlights Boulder County’s role in addressing local and regional transportation needs in the western portion of the county in several ways. The Transportation Master

Plan identifies major recreational destinations and suggests ways to enhance multimodal access to them. The Transportation Master Plan also identifies strategies to address the unique transportation challenges for residents of the mountain communities.

Mountain Area Communities



Many mountain areas have strong ties to history



The Nederland Park-n-Ride provides important transit access to Boulder



Constrained geographic locations within canyons require multiple modes to share limited space

- » Incorporated communities
 - Support strategies in local agency comprehensive plans that provide a regional travel benefit and support Boulder County transportation policy goals
 - Support the Towns of Lyons and Nederland to identify and implement a permanent funding mechanism for their EcoPass programs
- » Consider providing connections to mountain area recreational destinations
- » Identify areas within Boulder County where increased access to recreational destinations has decreased visitor safety or increased emergency vehicle response rates to dangerous levels
 - Explore a combination of illegal parking enforcement, expanded parking facilities, and new access shuttles to improve safety
- » Implement mobility solutions that are tailored to the unique needs of the county’s mountain communities
 - Develop a volunteer driver program business plan and consider pilot program
 - Continue to offer Vanpool incentives and information
 - Implement the Via Friends and Family program



Eldorado Springs



Ward General Store



Two bicyclists ride in the shoulder along SH 66 just outside of Lyons

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Identifying Priorities

The Transportation Master Plan outlines the strategies and priorities for Boulder County to implement and maintain its multimodal transportation system. These principles will guide the county in identifying and prioritizing projects for county funding each year. Prioritization of improvements may be based on several criteria, including:

- ✦ **Multimodal operations:** Improvements that would address current critical multimodal congestion would rank high in project prioritization
- ✦ **Multimodal safety:** Improvements that would address a documented safety issue would rank high in project prioritization
- ✦ **Cost/benefit and available funding:** Projects with low to moderate cost that could be initiated with known county, local, and/or regional agency funding could rank higher in project prioritization than high cost projects requiring new and/or multiple funding sources
- ✦ **Partnership opportunity:** Multi-jurisdictional and agency support are important criteria
- ✦ **Approval requirements:** Timely approval through local, regional, state, and federal approval and permit requirements would allow projects or programs to be implemented when needed without costly delays
- ✦ **Resiliency:** Improvements that help the county to prevent or respond to shock events such as natural disasters or other stressors

Costs

The magnitude of costs for the projects recommended as part of this plan are listed within Strategy 1—Develop the Multimodal Transportation System. More detailed cost estimates have been developed for specific county programs and selected key regional corridors where completed studies have identified improvement recommendations. The Boulder County funding gap for these projects is approximately \$150 million, while the key regional corridor total is almost \$550 million not including Northwest Rail. Including Northwest Rail, the key regional corridor total funding gap is over \$2.1 billion. Details about these cost estimates can be seen in Cost Estimate table.

Cost Estimates

	Program	Project/Program Estimate (in Millions)	Anticipated Funding (in Millions)	Gap (in Millions)
Boulder County System	Boulder County 5 Year Capital Improvement Program (CIP) 2018-2023	\$83	\$46	\$37
	Boulder County Sales Tax (sunsets 2024)	\$62	\$47	\$15
	Subdivision Local Road Paving	\$100	\$0	\$100
	Boulder County System Total	\$245	\$93	\$152
Selected Key Regional Corridors	SH 119 BRT/Managed Lanes/Bikeway	\$230	\$93	\$137
	SH 7 BRT/Managed Lanes/Bikeway	\$172	\$12	\$160
	SH 287 BRT/Intersections/Bikeway	\$57	\$6	\$51
	SH 42/95th	\$27	\$7.8	\$19.2
	SH 93 Mobility/Safety Improvements	\$133	\$0	\$133
	SH 66 Mobility/Safety Improvements*			
	Subtotal	\$619	\$118.8	\$500.2
	Northwest Rail	\$1,600	\$0	\$1,600
Key Regional Corridor Total	\$2,219	\$118.8	\$2,100.2	
Grand Total		\$2,464	\$211.8	\$2,252.2

Note: Cost estimates will be updated periodically as more detailed information becomes available

* Planning and Environmental Linkages Study in progress



Plan Implementation

Performance Metrics

System performance indicators help monitor and assess the effectiveness of TMP strategies in achieving the county's environmental, social, and economic goals for its transportation system. These goals are included in the Boulder County Comprehensive Plan and discussed at the beginning of this document.

Behavioral Performance Metrics

These behaviors are outcomes that Boulder County can influence, but not directly control.

Cap Vehicle Miles Traveled (VMT) per Capita

Minimizing environmental impacts and addressing climate change are key priorities for Boulder County, and VMT is a proxy for the transportation sector's greenhouse gas emissions.

- ✦ Goal: Cap Countywide VMT per Capita at 2005 levels
- ✦ How to measure: Use traffic counts from CDOT and Boulder County to measure countywide VMT. Use Census, Department of Labor and other federal data to track Boulder County population and employment.

Increase Transit Ridership

Even with the growth of electric, autonomous, and shared vehicles, transit remains the only mode that can transport large numbers of people long distances in a small space. Transit allows for economic growth without adding congestion, and helps reduce the transportation sector's reliance on fossil fuels.

- ✦ Goal: Growth in transit ridership will outpace growth in population and employment by 2:1 ratio
- ✦ How to measure: Use transit boardings data from RTD, and Census, Department of Labor and other federal data to track Boulder County population and employment. Transit ridership/ (population + employment). If population and employment is growing 2% per year, the goal is for transit ridership to grow 4% per year.

Eliminate Serious Injury and Fatal Traffic Crashes

Improving safety for all modes of travel is a key priority for Boulder County.

- ✦ Goal: Zero serious injury or fatal traffic crashes in unincorporated Boulder County by 2035
- ✦ How to measure: Colorado State Patrol and CDOT provide local governments with traffic crash data.

Infrastructure Performance Metrics

These are outputs that Boulder County can directly control, but do not indicate any behavior change.

Maintain County Roads¹

Maintaining the county road network in good condition is important for a healthy economy, and is much more cost effective repairing degraded roads.

- ✦ Goal: Maintain Pavement Quality Index (PQI) of at least 7 out of 10 for each of the three road networks.

Maintain County Bridges¹

Maintaining safe travel throughout the county, bridges can withstand flooding, keep emergency access routes open, etc.

- ✦ Goal: All major structures on the Boulder County road network have a sufficiency rating of 70 or higher.

Complete the Bike Vision Network

Complete low stress bicycle facilities between destinations within Boulder County.

- ✦ Goal: Complete all miles of planned in-county low stress bicycle network regional connections.

Affordable Living

Affordable living (defined as spending no more than 15% of a household's income on transportation and no more than 30% on housing) has increasingly become a challenge for many county residents. Reducing the transportation cost burden is a critical step on the path to self-sufficiency and accessing health and human services.

- ✦ Goal: 100% of Boulder Housing Partners, Longmont Housing Authority, and Boulder County Housing Authority property residents and housing voucher-holders have access to affordable transit and mobility options through programs such as EcoPass, MyRide, or Ride Free Longmont

¹ This includes only roads and bridges on the road network that Boulder County is responsible for maintaining, not all roads and bridges within the geographic boundaries of Boulder County (which would include city, CDOT, etc)

Funding

Boulder County receives transportation funding from five primary sources. Each funding source is allocated in a different manner and includes specific spending limitations. The funding is categorized into two primary purposes: transportation system maintenance and rehabilitation, and specific projects, operations, and expansion.

Current and forecasted funding is insufficient to implement all of the actions outlined in this plan. As a result, Boulder County must establish priorities. Daily maintenance is considered the highest priority of the county transportation system, because maintaining facilities is the most efficient use of limited resources.

Revenues from restricted sources such as sales tax and grant revenue are used to implement specific programs and projects and are used to leverage additional grant funding to the extent possible. Boulder County must also address construction costs that increase much faster than revenue, meaning that existing revenue builds less each year due to inflation.

Overall, as costs increase more quickly than revenue, existing funding sources will not be sufficient, and Boulder County must seek additional funding sources to maintain its current system and implement the vision identified in this plan.

Funding of rehabilitation and reconstruction of subdivision paved roads, is the responsibility of those who benefit, generally local property owners, through creation of improvement districts.

System Maintenance and Rehabilitation

Revenue from the state Highway Users Trust Fund (HUTF), Specific Ownership Tax (SOT), and Property Tax Road and Bridge mill levy are dedicated to daily maintenance and reconstruction of the county transportation system. These activities include:

- ✦ Snow Removal
- ✦ Road Patching and pothole repairs
- ✦ Crack sealing
- ✦ Cleaning ditches and culverts
- ✦ Replacing road signs
- ✦ Sweeping and clearing shoulders
- ✦ Dust suppression
- ✦ Grading and replacing gravel on unpaved roads
- ✦ Repairing sidewalks
- ✦ Clearing and sweeping multi-use paths and transit stops
- ✦ Rehabilitation of bridges and culverts

These funds are also used for rehabilitation and reconstruction of the paved roads, with the priority placed on roads that connect communities and other major destinations and serve the most users.

Specific Projects Operations and Expansion

Revenue from a 0.01 percent sales tax for transportation, first approved by the voters in 2001 and extended for 15 years in 2007, is dedicated to specific projects and programs that were identified in the ballot resolution. Fifteen percent of these funds are dedicated to implementation of the regional trails program, as identified in the ballot resolution. The revenue generated from sales tax has been used to leverage additional funding from other local, state, and federal sources that help implement the listed projects and programs. These projects include construction of shoulders on roads and highways that improve safety for all users, new lanes, bike and pedestrian underpasses, intersection improvements, construction of regional trails, and support for improved transit services and programs.

Cost Inflation and Revenue Trends

Between 2012-2018, the Colorado Construction Cost Index rose 72 percent, while the county's transportation revenue increased by only 53 percent over that same time frame. Construction costs have increased by more than three times the revenue that can be used for road maintenance and rehabilitation. Despite this trend, the county has managed to meet many of its repair and replacement goals primarily due to the fact that revenue from the 2007 Countywide Transportation Sales Tax has kept pace with inflation and due to additional federal revenues resulting from the 2013 Flood. Both have together funded many miles of road reconstruction and structure replacements that would have otherwise gone unfunded. However, the federal flood funding was temporary influx; the sales tax sunset in 2024; and neither can be used for on-going maintenance needs.





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