



Transportation Master Plan (TMP) Update Process

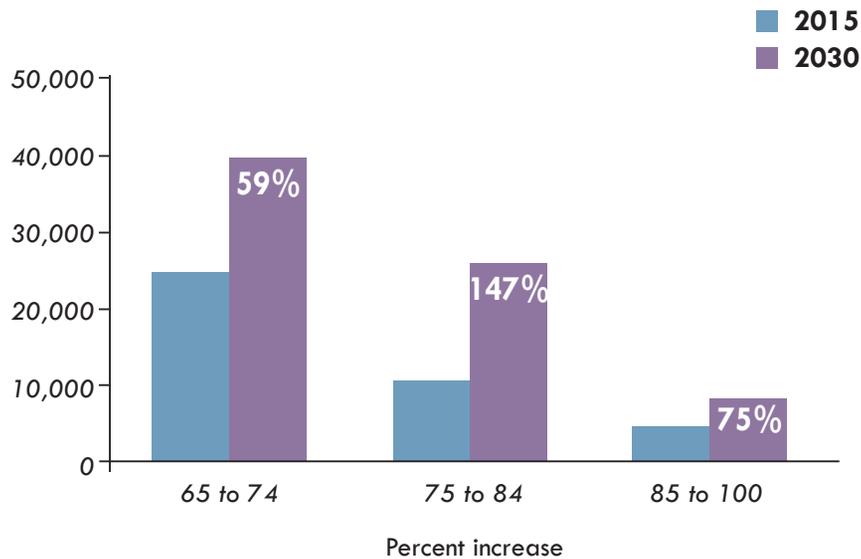
Update data/analysis from previous TMP and gather new data regarding existing conditions and future considerations





Demographic Context

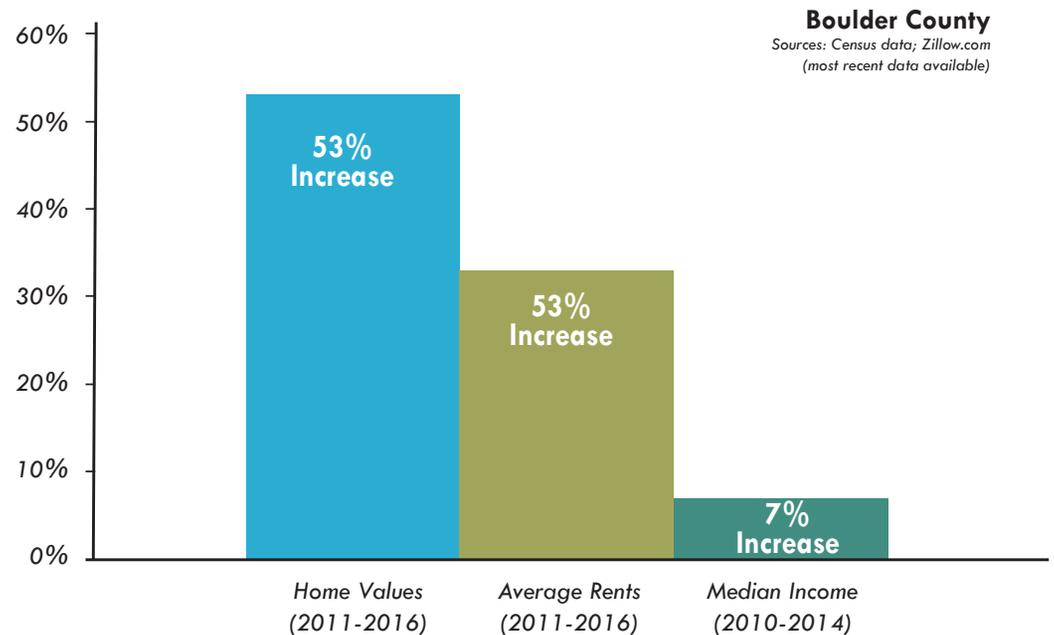
Boulder Age Forecast for the 65+



With a large increase in the number of older adults in Boulder County, expanded mobility options for older adults should be considered.

As home and rental prices increase in Boulder County, more people are moving to surrounding counties to find more affordable housing. This leads to increased transportation costs as well as more people coming to Boulder County from further away. Programs to address housing and transportation costs should be integrated.

Growth in Housing Costs vs. Growth Income





Technology and Resiliency Considerations

Technology Major Proposed Recommendations:

Boulder County would like to incorporate the use of new technologies when appropriate:

- Develop policy to consider technology improvements within projects
- When implementing new projects, investigate new technologies that may cost more but may be an improved product

Mobility Solutions



The entire region is experiencing new advanced mobility solutions at a fast pace. In an effort to organize dock-less bikes and scooters, RTD created this bike and scooter parking at their Civic Center Station in Denver

First and Final Mile Solutions



Autonomous vehicles first and final mile as well as longer distance trips are anticipated to be part of our future transportation system

Autonomous Vehicles



Resiliency Major Proposed Recommendations:

After experiencing multiple natural disasters in the past, Boulder County is experienced in recovering from those incidents:

- Transportation System Resiliency Study (bocoresiliencystudy.org) is currently being completed by the Transportation Department to identify ways to make the transportation system more resilient
- Recommendations from the study will be incorporated in the TMP

Coordinating Efforts



Multiple departments coordinated together to offer funding for recovery projects

Flood Recovery Center



Bridge Recovery



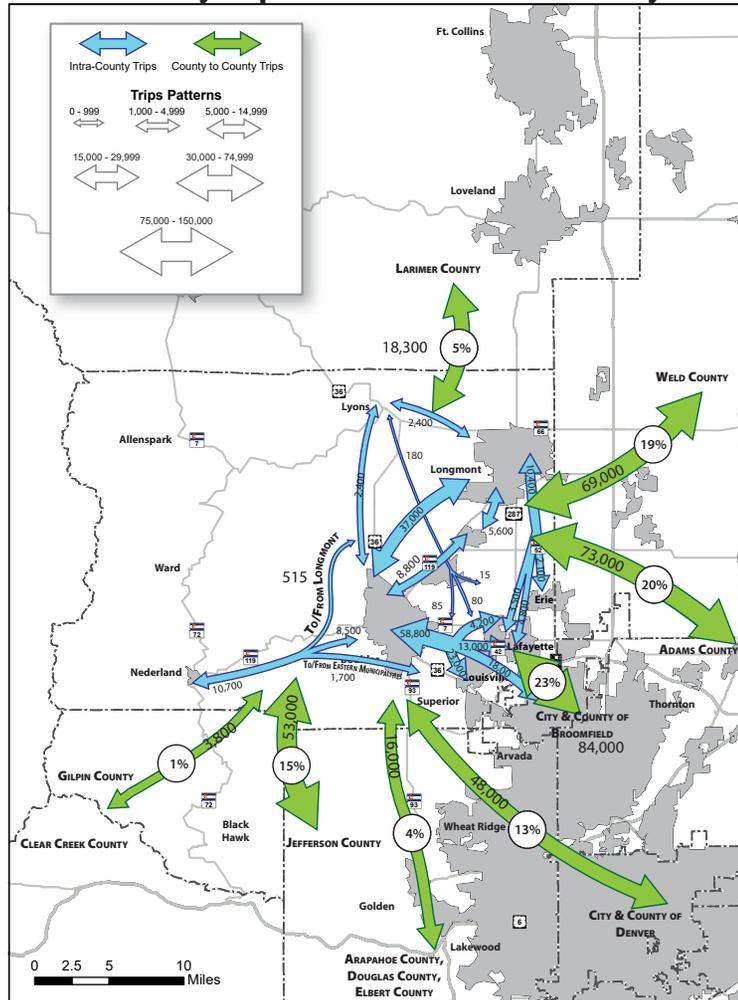
Bridge recovery in place to repair damage after the 2013 flood



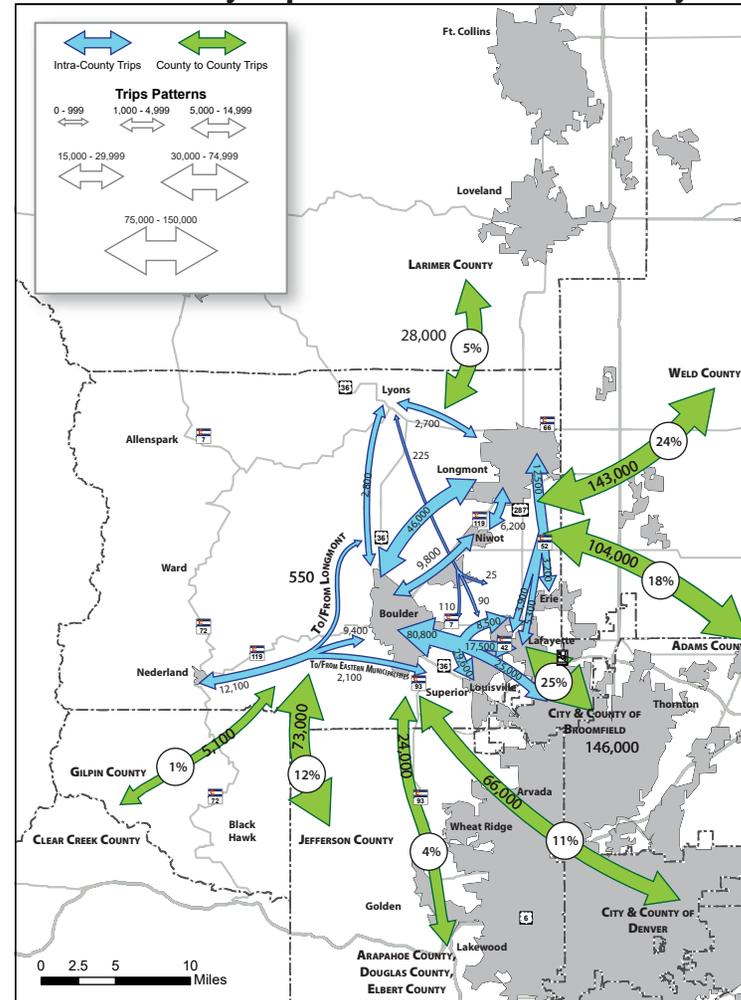
Travel Patterns (2015 and 2040)

Travel patterns based on the DRCOG model

2015 Daily Trips: To/From Boulder County



2040 Daily Trips: To/From Boulder County

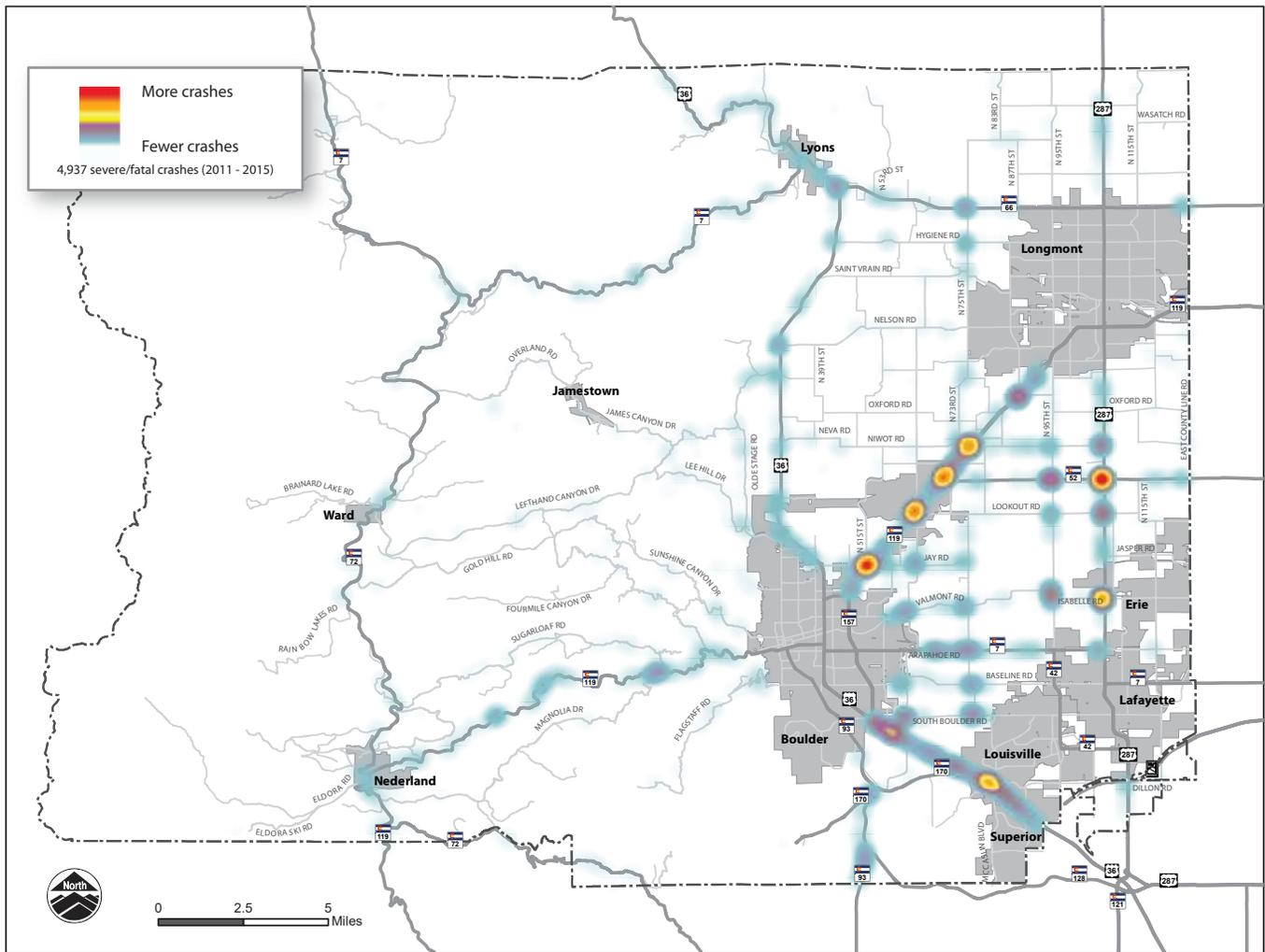


Source for both maps: DRCOG and David Evans and Associates, Inc.



Transit Safety: Vision Zero

Category	Strategy
Policy	Adopt a policy of achieving zero injury or fatal traffic crashes in unincorporated Boulder County by 2035
Planning	Complete safety report every five years. When planning capital program prioritize safety Emphasis on vulnerable roadway users- pedestrians and cyclists Biennial report card on progress Review and update multimodal standards as necessary
Collaboration	Work with CDOT/RTD/municipal partners to coordinate safety improvements
Engineering	Consider safety within all capital projects Emphasis on a system approach On-site debrief after every fatal crash with all relevant partners Evaluation of county speed limits

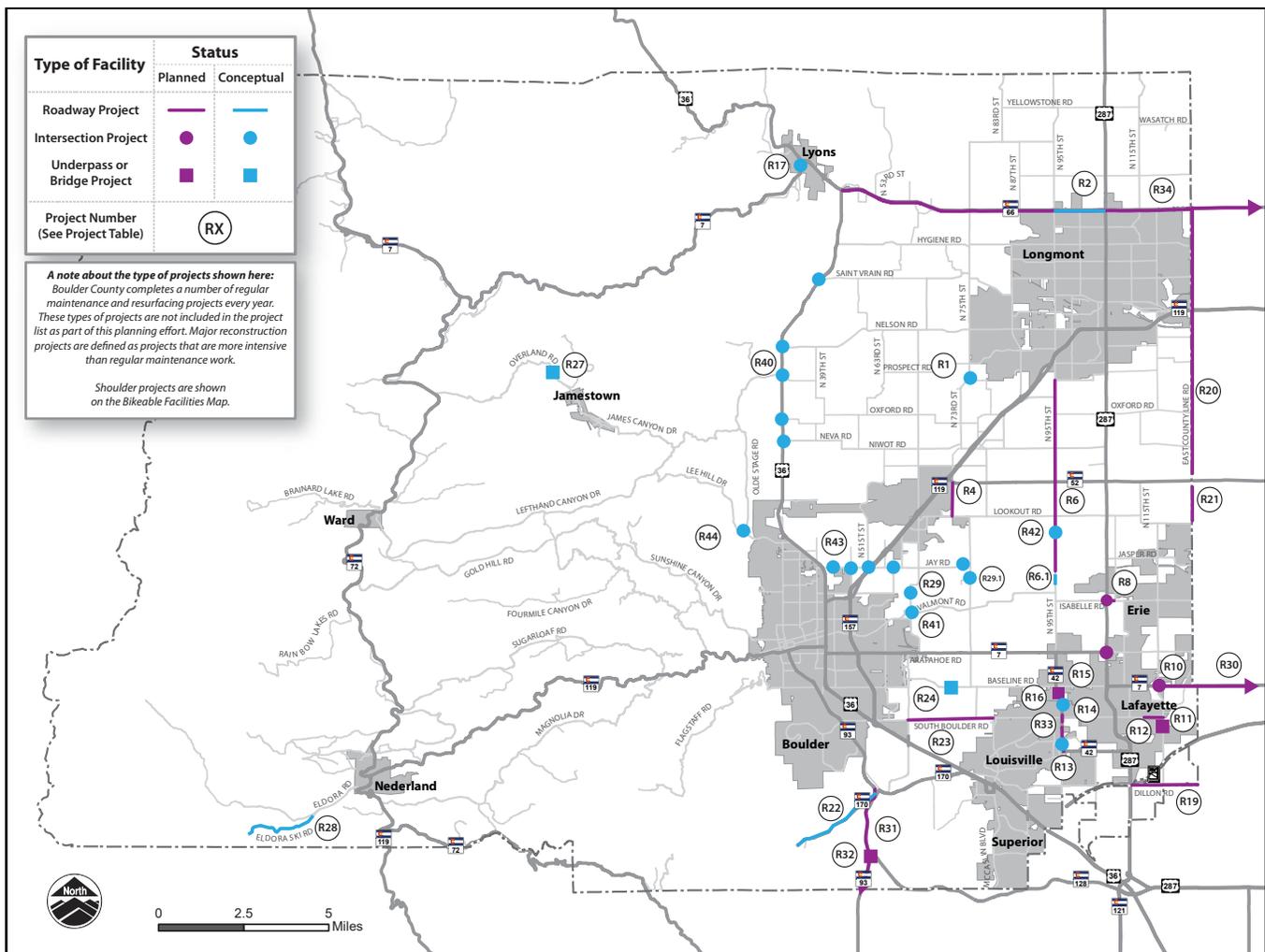




Roadway

Major Proposed Recommendations:

- Adopt a Vision Zero Safety Policy
- Add bikeable shoulders with reconstruction of roads where feasible
- No new general purpose lanes: Focus on intersections for capacity/safety improvements
- Partner to support shuttles to recreational destinations/first and final mile improvements
- Shoulders/center turn/passing lanes for safety/bikes/managed/BRT
- ADA Compliance/Bike/Pedestrian Improvements in urbanized areas



ROADWAY PROJECTS

Map ID	Project Name	Project Extents	Project Status	Funding Status
R1	75 th Street – Plateau Road Intersection Improvements	At intersection	Conceptual – On-hold*	Programed in RST but Not Funded (sales tax)
R2	SH 66 Improvements	Main Street to Hover Street	Conceptual*	Programed in RST
R4	71 st Street Improvements (w/ Multiuse Path)	SH 52 to Lookout Road	Planned - Under Construction	FY19 Funding (sales tax & federal)
R6	95 th Street Reconstruction	Lookout Road to City of Longmont	Planned - Under Construction	FY19 Funding (sales tax)
R6.1	95 th Street Reconstruction & Resiliency Improvements	Boulder Creek to Lookout Road	Conceptual – On Hold*	Programed but only Partially Funded (sales tax & UDFCD)
R8	US 287 and Isabelle Road Intersection Safety Improvements	At intersection	Designed – In Design	Funded (sales tax & CDOT safety funding)
R10	SH 7 and N 119 th Street Intersection	At intersection (CDOT, Town of Erie & Lafayette)	Conceptual - Designed	Programed in RST but only Partially Funded (sales tax)
R11	South Boulder Road Widening	Mallory Drive to 120 th Street	Planned - Under Construction	FY19 Funding (City, federal & sales tax)
R12	120 th Street Bridge over Coal Creek (Lafayette)	South Boulder Road to Horizon Ave	Conceptual - Designed	Programed in RST but not (sales tax)
R13	SH 42 Improvements (Louisville)	Pine Street to Lock Street and Intersection	Conceptual – On-hold*	Not Funded (sales tax)
R14	SH 42 Improvements (Louisville)	Hecla Drive Intersection	Conceptual – On-hold*	Not Funded (sales tax)
R15	SH 42 Improvements (Louisville)	Short Street to Pine Street	Conceptual*	Programed in RST but only Partially Funded (sales tax)
R16	SH 42 Pedestrian Underpass	South of Paschal Drive	Planned - Designed	FY20 Funding (City & sales tax)
R17	SH 7 Bike lanes (Lyons)/US 36	5 th Avenue to Broadway in Lyons	Conceptual – On-hold*	Not Funded (sales tax)
R19	Dillon Road Improvements & Multiuse Path (City of Broomfield)	Sheridan Ave to US287	Planned - Under Construction	FY19 C&C of Broomfield Funding
R20	East County Line Road Improvements	St Vrain Creek to Highway 52	Conceptual – Master Plan underway*	Programed in RST but Partially Funded
R21	East County Line Road Improvements	Highway 52 to Jay Road (Erie)	Conceptual – Master Plan underway*	Programed in RST but Partially Funded
R22	SH 170 Connection	SH 93 to Eldorado Springs	Conceptual – Master plan underway*	Programed in RST but Not Funded
R23	South Boulder Road Reconstruction	Boulder to Louisville	Designed - In design	Partially Funded
R24	Baseline Road Structure Replacement & Potential Pedestrian Underpass	At Dry Creek Trailhead	Conceptual – Master Plan underway*	Not Funded
R27	Overland Road Bridge Replacement	St Vrain Creek (west of Jamestown)	Conceptual*	Potential resiliency improvement
R28	Eldora Ski Road Reconstruction	County Road 130 to Eldora Ski Hill	Conceptual*	Not Funded
R29	Bridge at 61 st Street and Boulder Creek	At water crossing	Conceptual*	Not Funded
R29.1	Bridge at 75 th Street and Boulder Creek	At water crossing	Conceptual*	Not Funded
Projects Identified by PELs				
R30	SH 7 Road Expansion to Two Lanes	119 th Street to County Line Road	Planned - Adopted in SH 7 PEL Study	Not Funded
R31	SH 93 Intersection Improvements	SH 170 south past the county boundary	Planned - Adopted in WestConnect PEL Study	Not Funded
R32	SH 93 and SH 128 Underpass	At the intersection	Planned - Adopted in WestConnect PEL Study	Not Funded
R33	SH 42 Improvements	Pascal Drive to Lock Street	Planned - Adopted in 42 Gateway PEL Study	Not Funded
R34	SH 66 PEL Passing Lanes	Lyons to County Road 19	Conceptual – Preferred Alternative in SH 66 PEL Study	Not Funded
Safety Focused Improvements				
R40	US 36 Intersection Safety Improvements with Striping and/or Green Pavement Treatments	At the intersections	Conceptual – Safety analysis*	Not Funded
R41	Valmont Road/61 st Street Phasing Considerations	At the intersection	Conceptual – Safety analysis*	Not Funded
R42	95 th Street/Gunbarrel Ridge Striping and Signage Improvements	At the intersection	Conceptual – Safety analysis*	Not Funded
R43	Jay Road Improvements: Green striping and signage primarily at intersections	At the intersections and curve near 75 th Street	Conceptual – Safety analysis*	Not Funded
R44	Lee Hill Drive and Olde Stage Road Striping Improvements	At the intersection	Conceptual – Safety analysis*	Not Funded

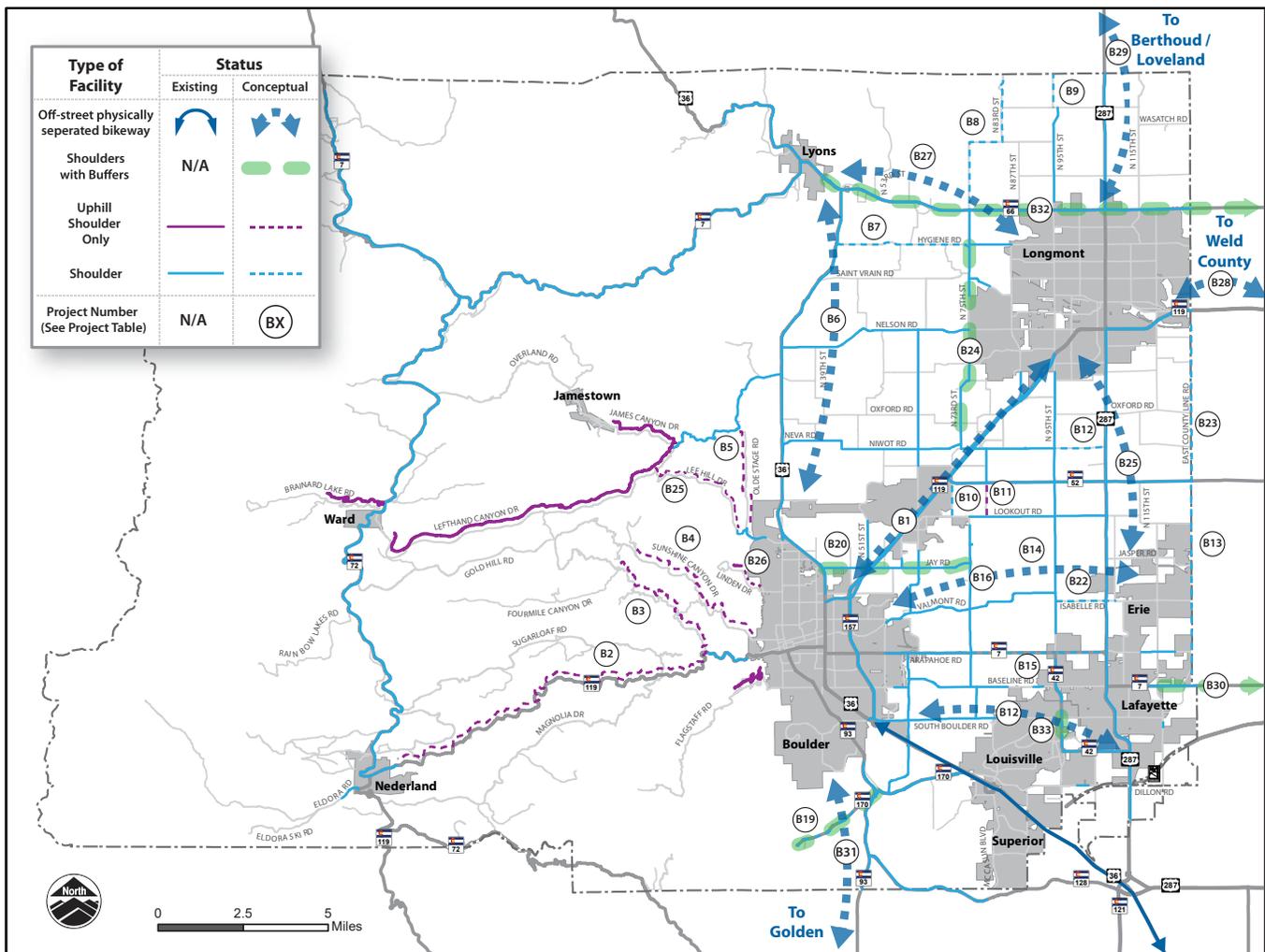
* Indicates that more study needs to be completed to evaluate the feasibility of implementation



Bikeable Facilities (Existing and Conceptual)

Major Proposed Recommendations:

- Create a network of road-separated, hard-surface, year-round bicycle facilities that connect regional destinations:
 - Primary network of low-stress, hard-surface, year-round bicycle facilities that connect regional destinations in Boulder County
 - Secondary network of lower-stress, on-street bicycle facilities that connect key destinations in Boulder County
 - Tertiary network of bicycle facilities on roads that provides cyclists and motorists their own lanes
- Work with communities to integrate regional bike and open space goals



BIKEABLE FACILITIES PROJECTS

Map ID	Project Name	Project Extents	Project Status	Funding Status
Primary Network of Low-stress, Hard-surface, Year-round bicycle facilities				
B1	Boulder to Longmont	TBD	Conceptual*	Not Funded
B6	Boulder to Lyons	TBD	Conceptual*	Not Funded
B12	Boulder to north Louisville/Lafayette	TBD	Conceptual*	Not Funded
B16	Boulder to Erie	TBD	In Planning	Not Funded
B25	Lafayette/Erie to Longmont	TBD	Conceptual*	Not Funded
B27	Longmont to Lyons	TBD	Conceptual*	Not Funded
B28	Longmont to Weld County	TBD	Conceptual*	Not Funded
B29	Longmont to Berthoud/Loveland	TBD	Conceptual*	Not Funded
B30	SH 7 Multi-use Path	119 th Street to East County Line Road	Conceptual – Adopted in SH 7 PEL Study	Not Funded
B31	SH 93 Multi-use Path	SH 170 south past the county boundary	Conceptual – Adopted in WestConnect PEL Study	Not Funded
B32	SH 66 Frontage Road/Bike facility	Lyons to County Road 19	Conceptual – Preferred Alternative in SH 66 PEL Study	Not Funded
Secondary Network of Lower-stress, On-street bicycle facilities				
B8	Hygiene to Larimer County	83 rd Street/75 th Street	Conceptual*	Not Funded
B19	Eldorado Springs Drive/SH 170	SH 93 to Eldorado Springs	Conceptual*	Partially Funded (sales tax)
B20	Jay Road	US 36 to 75 th Street	Conceptual*	Not Funded
B24	73 rd Street/75 th Street	Niwot Road to Hygiene Road	Conceptual*	Not Funded
B33	SH 42 Bike Lanes	Pascal Drive to Lock Street	Conceptual – Adopted in 42 Gateway PEL Study	Not Funded
Tertiary Network of On-Street Facilities				
B2	Boulder Canyon Uphill Shoulder	Fourmile Canyon Drive to Sugarloaf	Conceptual*	Not Funded
B3	Fourmile Canyon Drive Uphill Shoulder	Boulder Canyon to Salina	Conceptual*	Not Funded
B4	Sunshine Canyon Drive Shoulder	Boulder to County Road 83 (end of pavement?)	Conceptual*	Not Funded
B5	Olde Stage Road Uphill Shoulders for both sides of hill	Top of hill to Lefthand Canyon Drive	Conceptual*	Not Funded
B7	Hygiene Road Shoulder	US 36 to 75 th Street	Conceptual*	Funded (sales tax)
B9	95 th Street Shoulder	Yellowstone Road to county boundary	Conceptual*	Not Funded
B10	71 st Street Shoulder	SH 52 to Lookout Road	Conceptual*	Not Funded
B11	79 th Street Uphill Shoulder	SH 52 to Lookout Road	Conceptual*	Not Funded
B12	Niwot Road Shoulder	95 th Street to US 287	Conceptual – In Design	Funded (sales tax)
B13	East County Line Road Shoulder	SH 52 to Jasper Road	Conceptual – In Erie TMP and listed within sales tax*	Sales Tax Funded
B15	SH 7 Shoulder	75 th Street to US 287	Conceptual*	Not Funded
B22	Isabelle Road Shoulder	95 th Street to Erie	Conceptual*	Funded (sales tax)
B23	East County Line Road Shoulder	SH 52 to Longmont	Conceptual*	Funded (sales tax)
B25	Lee Hill Road Uphill Shoulder	False summit, then true summit	Conceptual*	Not Funded
B26	Linden Avenue Shoulder	Boulder to North Cedar Brook	Conceptual – Lower priority*	Not Funded

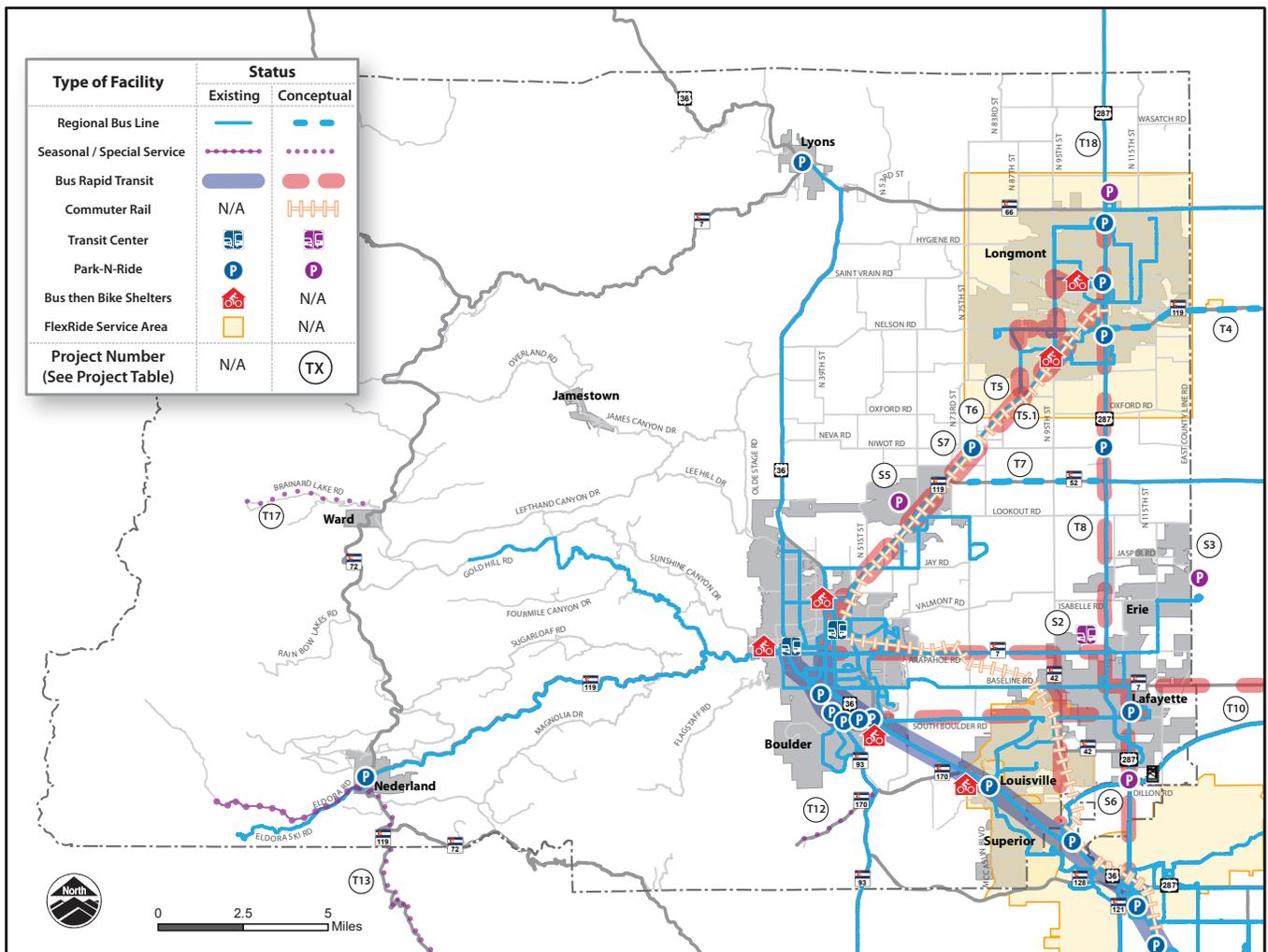
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Transit Service (Existing and Conceptual)

Major Proposed Recommendations to pursue:

- Northwest Rail
- Transit options beyond RTD
- Community pass programs
- First and final mile services
- Shared Ride/Shuttle/Mobility as a Service
- Human Service/Aging Mobility
- Partner to support shuttles to recreational destinations



TRANSIT PROJECTS

Map ID	Project Name	Project Extents	Project Status	Funding Status
T4	SH 119 Regional Service Extension	US 287 to SH 119 and I-25 Park and Ride	Conceptual*	Not Funded
T5	Northwest Corridor Commuter Rail	Denver to Longmont	Conceptual – In NAMS	Not Funded
T5.1	Peak Service for Northwest Corridor Commuter Rail	Denver to Longmont	Conceptual – In Analysis	Not Funded
T6	SH 119 BRT	Boulder to Longmont	Conceptual – In NAMS, In Design	Partially Funded (TIP Regional Share)
T7	SH 119 Regional Service Extension to I-25 via SH 52	I-25/SH 52 via SH 52 then SH 119SH	Conceptual	Not Funded
T8	US 287 BRT	Broomfield to Longmont	Conceptual – In NAMS	Not Funded
T10	SH 7 BRT	Lafayette to east of county boundary	Conceptual – In NAMS	Not Funded
T12	Eldorado Canyon Seasonal Shuttle	SH 93 to Eldorado Canyon	Conceptual*	Not Funded
T13	Nederland to Black Hawk Special Service	Nederland to Black Hawk	Conceptual*	Not Funded
T14	Hessie Trailhead Fourth of July Seasonal Shuttle Extension	Extension past current shuttle terminus	Conceptual*	Not Funded
T15	Lyons to Longmont Special Service	Lyons to Longmont	Conceptual*	Not Funded
T17	Brainard Lake Seasonal Shuttle	TBD	Conceptual*	Not Funded
T18	FLEX service expansion	Existing routing	Conceptual*	Not Funded

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

BUS STOP PROJECTS

Map ID	Project Name	Project Extents	Project Status	Funding Status
S2	Erie Transit Center	Near the intersection of Arapahoe Avenue and US 287	Conceptual*	Not Funded
S3	Erie Park and Ride	Erie Community Center	Conceptual*	Not Funded
S5	63 rd Park and Ride	Near the intersection of SH 119 and 63 rd	Conceptual*	Not Funded
S6	US 287 and Northwest Parkway	At the intersection	Conceptual*	Not Funded
S7	Niwot Park and Ride Expansion	At existing park and ride	Conceptual – As part of SH 119 BRT project	Not Funded

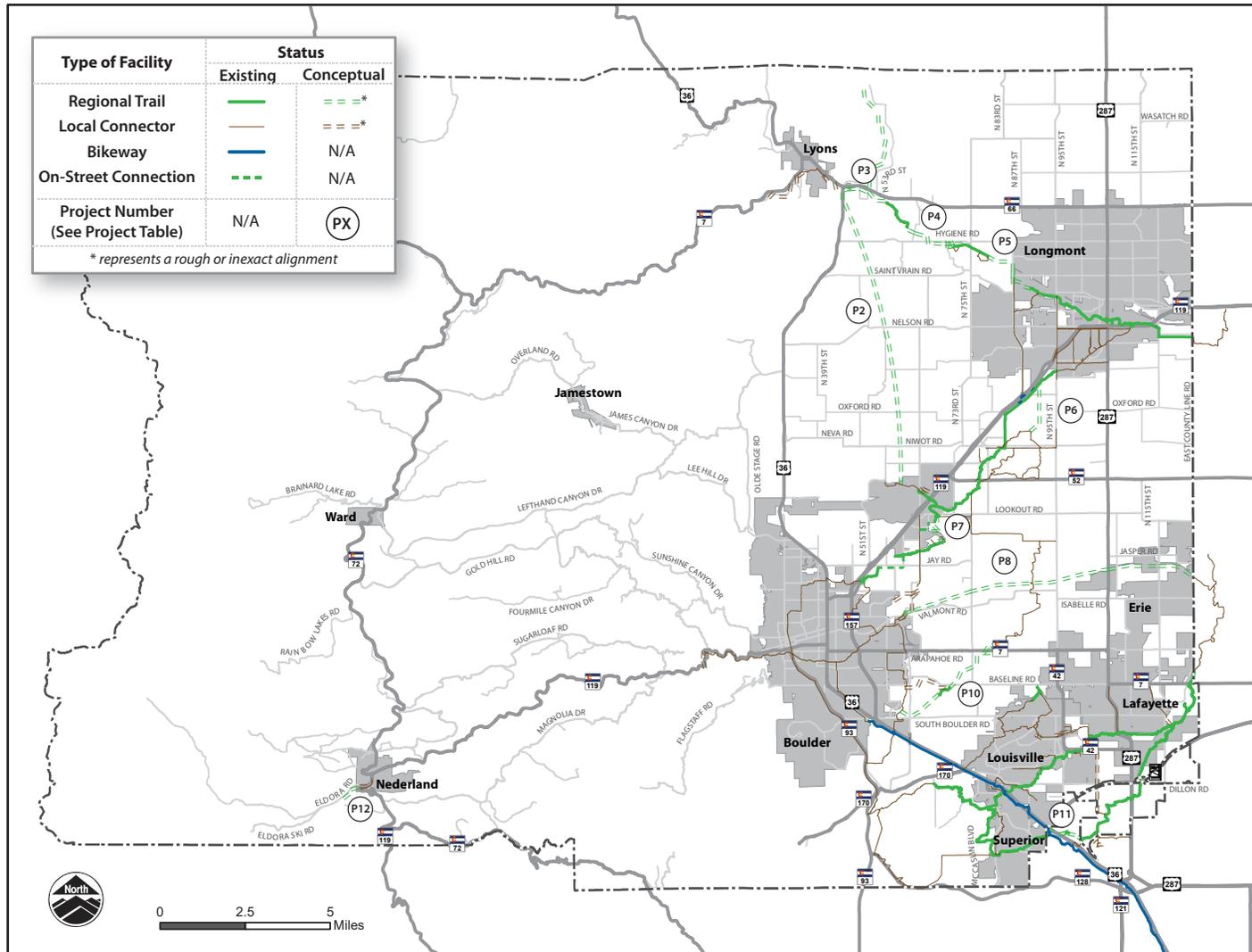
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Regional Trails

Major Proposed Recommendation:

- Complete regional trails system as adopted in the Boulder County Comprehensive Plan



REGIONAL TRAIL PROJECTS

Map ID	Project Name	Project Extents	Project Status	Funding Status
P2	Lyons Trail Connection	Gunbarrel	Conceptual – Conceptual Trail Alignment in Comp Plan*	Not Funded
P3	St. Vrain Greenway – Phase II: 61 st to US 36	61 st to US 36	Conceptual*	Partially Funded (sales tax)
P4	St. Vrain Greenway – Phase III: Pella to 61 st	Pella to 61 st	Conceptual – On-hold*	Funded (sales tax)
P5	St. Vrain Greenway: Phase I: Golden Ponds to Pella	Golden Ponds to Pella	Designed – In Design	Partially Funded (sales tax)
P6	Unnamed trail connection	Niwot to north LOBO	Conceptual	Not Funded
P7	LOBO Trail - William's Fork Connector	William's Fork Trail	Designed – In Design	Funded (sales tax)
P8	RTD Rail Trail	Erie to Boulder	Conceptual*	Funded (sales tax)
P10	East Boulder Trail	East Boulder Trail	Conceptual	Not Funded
P11	Coal Creek Trail – McCaslin Link	McCaslin Link	Conceptual*	Partially Funded (sales tax)
P12	Nederland Trails	County Road 130	Conceptual – In Design	Partially Funded (sales tax)

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



Create the Complete Trip

Major Proposed Recommendations:

- Community-wide EcoPass/Low Income/Youth Pass Programs
- Provide convenient, safe, affordable modal alternatives/choice on major corridors
 - Improved transit service frequency and service area
 - Improve intersection safety for all modes
 - Improve bike access to/from transit stops/stations
- Support transportation-related elements of the Sustainability Plan

- Integrate technology for advanced/low emitting mobility options
 - Pursue advanced mobility pilots that support community goals
 - Advocate at the State and Federal level for local authority to regulate advanced mobility technology so that it meets community goals including livability, sustainability and equitable access

Infrastructure Improvements

Improving and streamlining travel for all modes

Buffered Shoulder



Boulder, Colorado

Bikeable Shoulder



Unincorporated Boulder County, Colorado

Regional Transit

Transit within and outside of Boulder County

Bus Rapid Transit



Westminster, Colorado

Regional Transit



Longmont, Colorado

A Complete Trip



First and Final Mile

Getting to and from local transit -- easily and safely

Bike-n-Ride



Boulder, Colorado

Call and Ride



Thornton, Colorado

Transportation Demand Management (TDM)

Incentives and alternatives that reduce congestion

Transit Passes



Walk and Roll Week



Unincorporated Boulder County, Colorado

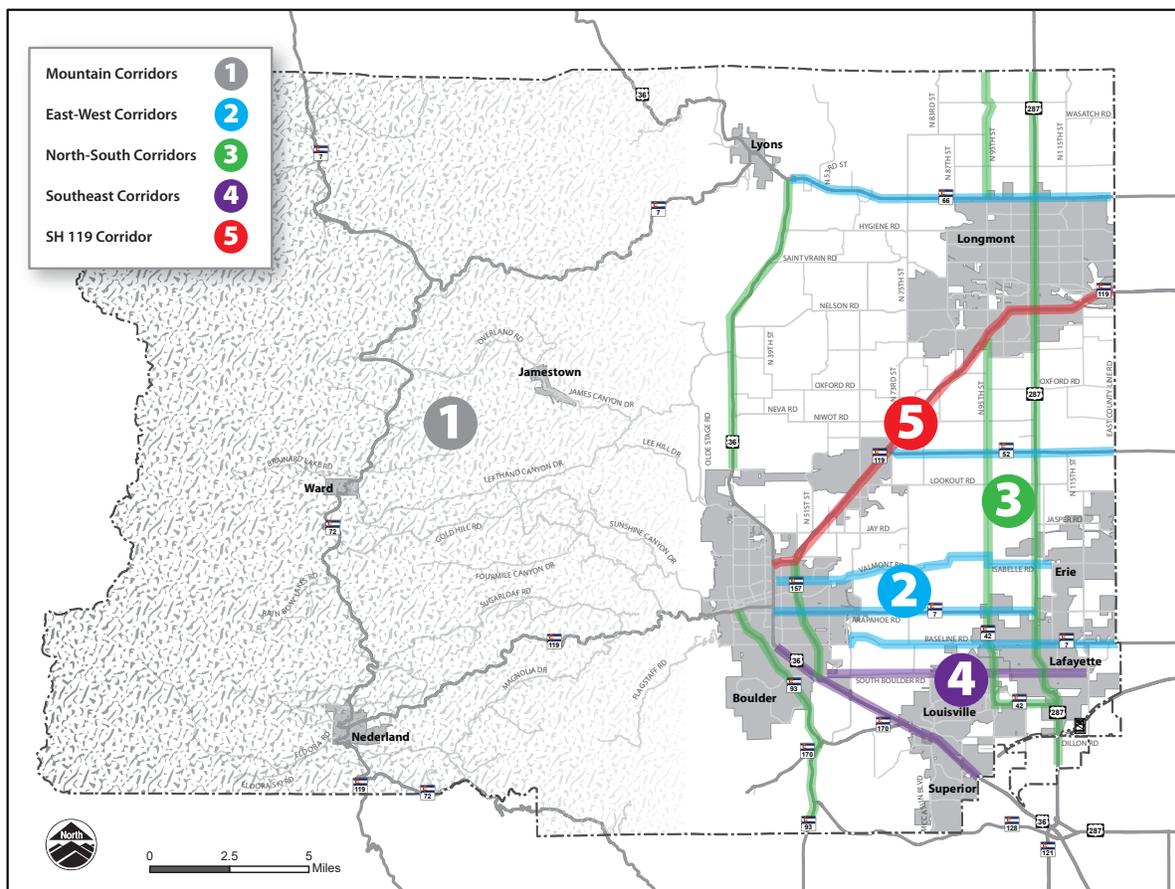


Key Regional Corridors

Major Proposed Recommendations:

- Prioritize moving people, not cars
- Provide alternatives/choice on major corridors
- Support Northern Area Mobility Study (NAMS) corridor recommendations for:
 - Hwy 119
 - Hwy 42
 - Hwy 7
 - Hwy 287
 - South Boulder Road
- Develop partnerships with adjacent county communities to address increased travel to/from these areas to Boulder County

Corridor	Improvements
Northwest Rail	FasTracks commitment
Hwy 119	Managed lanes/BRT Connection to I-25 PnR Separated bikeway Intersection improvements
Hwy 42	BRT/intersection improvements
Hwy 7	Shoulder running BRT Focus on intersections/queue jumps
Hwy 287	BRT/intersection improvements
South Boulder Rd.	BRT/reconstruction
Hwy 93	Shoulders/center passing lane Intersection Improvements Separated bike path
Hwy 66	Intersection Improvements Frontage road that consolidates driveways/bicycle improvements Center left turn lanes
Hwy 52	CDOT planning a PEL study Transit/intersection/shoulder Improvements





Increase Accessibility and Enhance Mountain Area Connections

Increase Accessibility Major Proposed Recommendations:

- Incorporate affordable transportation in affordable living programs
 - Ensure access to affordable transportation options when developing affordable housing
 - Pursue transit pass programs for affordable housing units
 - Improve access to more affordable fuel efficient vehicles for low-income households without transit access
 - Pursue affordable Mobility as a Service (i.e. Lyft, Uber) options for low income/mobility disadvantaged populations
 - Improve community outreach to vulnerable populations

Enhance Mountain Area Connections Proposed Recommendations:

- Explore “on-demand” mobility solutions for mountain residents
- Continue to support and identify partnerships for shuttles to high demand destinations
 - Hessie/4th of July
 - Eldora Mountain Resort
 - Eldorado Canyon
 - Brainard Lake

Regional Bus Accessibility



Regional buses provide access to people with mobility devices with the use of a lift

Paratransit Services



Via Mobility Services (formerly Special Transit) provides transportation solutions throughout Boulder County

Climb Shuttle



Starting in 2009, the Climb serves the mountain communities of western Boulder County

Hessie Trailhead Shuttle



Starting in 2012, the Hessie Trailhead Shuttle provides free service on weekends and holidays to carry passengers from Nederland to the Hessie Trailhead



Performance Metrics Under Consideration

Draft goals of the Boulder County Transportation Plan are listed below. The county will use detailed metrics to measure and monitor achievement of these goals in order to determine how well the transportation system is performing.

Behavioral Performance Metrics

(These behaviors are “Outcomes” that Boulder County can influence, but not directly control)

Cap Vehicle Miles Traveled (VMT) per Capita

Goal: Cap Countywide VMT per capita at 2018 levels

Importance: Minimizing environmental impacts and addressing climate change are key priorities; VMT impacts greenhouse gas emissions

Eliminate Serious Injury and Fatal Traffic Crashes

Goal: Zero serious injury or fatal traffic crashes in unincorporated Boulder County by 2035

Importance: Ensuring safety for all modes of travel is a key priority

Increase Transit Ridership

Goal: Growth in transit ridership will outpace growth in population and employment by a 2:1 ratio

Importance: Transit allows for economic growth without adding congestion, and helps reduce the transportation sector’s reliance on fossil fuels

System Performance Metrics

(“Outputs” that Boulder County can directly control, but do not indicate any behavior change)

Maintain Boulder County Roads*

Goal: Maintain Pavement Quality Index (PQI) of 7 out of 10 for primary network

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

Maintain Boulder County Bridges*

Goal: No Boulder County bridges are structurally deficient or functionally obsolete

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

Increase Accessibility of Boulder County Roads*

Goal: 100% of existing Boulder County sidewalk network meets Americans with Disabilities Act (ADA) standards

Importance: Ensure all persons walking or wheeling have access to the transportation system

Complete the Bike Vision Network

Goal: Complete all intra-county primary bicycle network regional connections

Importance: Bicyclists traveling to regional destinations need safe and comfortable facilities

Affordable Living

Goal: 100% of clients receiving housing assistance from Boulder County have access to subsidized mobility

Importance: Affordable living 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

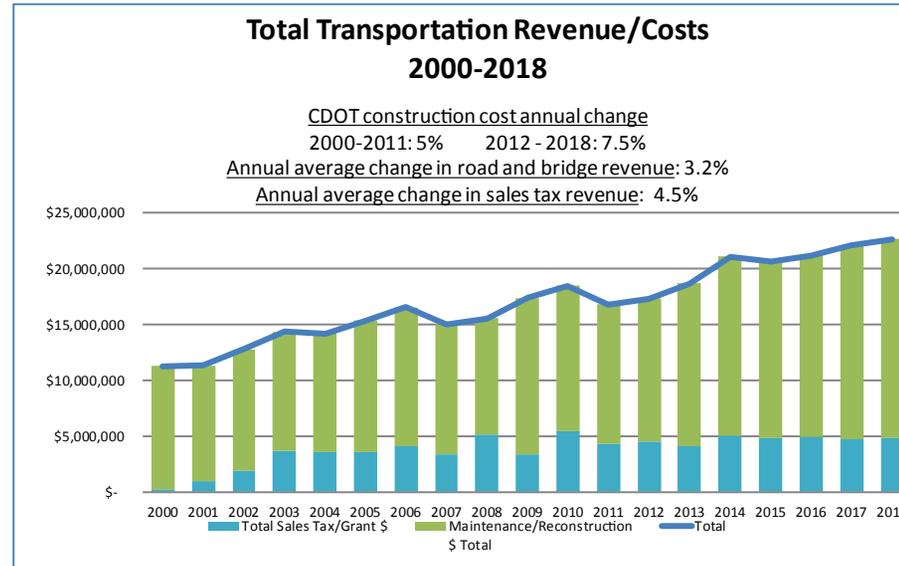
* Includes facilities on the road network that Boulder County is responsible for, not all roads and bridges within the geographic boundaries of Boulder County (which would also include those cities, CDOT, etc. are responsible for).



Funding

Major Proposed Recommendation: Explore options to increase revenue necessary to implement the identified regional project priorities

This chart chronicles the history of funding and construction inflation for road maintenance and reconstruction within Boulder County's system (excluding flood recovery and municipal projects). Funding comes from multiple sources and fluctuates by year.



	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
Key Regional Corridors	SH 119 BRT/Managed Lanes/Bikeway	\$230	\$53	\$177
	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
	28 th St/Broadway BRT	\$26	\$0	\$26
	SH 93 Mobility/Safety Improvements	\$133	\$0	\$133
	SH 66 Mobility/Safety Improvements*			
	Subtotal	\$645	\$78.8	\$566.2
	Northwest Rail	\$1,600	\$0	\$1,600
Key Regional Corridor Total	\$2,245	\$78.8	\$2,166.2	
Grand Total	\$2,490	\$171.8	\$2,318.2	

This table shows the anticipated funding shortfall for planned improvement programs and regional corridor improvements in Boulder County. Flood recovery and municipal project needs are not included in this table.

*Planning and Environmental Linkages Study in process