

EAST MISSOULA HIGHWAY 200 CORRIDOR PLAN

East Broadway



East Missoula



Sha-Ron/Marshall

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Acronyms/Abbreviations

The following guide lists abbreviations and acronyms that appear in this Corridor Plan.

5339	Buses and Bus Facilities Program	MRA	Missoula Redevelopment Agency
ADA	The Americans with Disabilities Act of 1990	MRL	Montana Rail Link
Bike/ped	Bicycle and pedestrian	MS4	Municipal Separate Storm Sewer System
BMPs	Best Management Practices	NEPA	National Environmental Policy Act
BUILD	Better Utilizing Investments to Leverage Development	NRCS	Natural Resources Conservation Service
CAPS	Missoula County Community and Planning Services	PROWAG	Public Right-of-Way Accessibility Guidelines
CIP	Capital Improvement Plan	PSI	Pounds per Square Inch
City	City of Missoula	ROW	Right-of-Way
CMAQ	Congestion Mitigation & Air Quality	RRFB	Rectangular Rapid Flashing Beacon
County	Missoula County	RTP	Recreational Trails Program
DEQ	Montana Department of Environmental Quality	SOC	Species of Concern
DU	Dwelling Unit	STPU	Surface Transportation Program - Urban
EA	Environmental Assessment	TA	Transportation Alternative
FEMA	Federal Emergency Management Agency	TIF	Tax Increment Financing
FLAP	Federal Lands Access Program	TWLTL	Two-Way Left-Turn Lane
FWP	Fish, Wildlife & Parks	UM	University of Montana
GIS	Geographic Information Services	URD	Urban Renewal District
GPM	Gallons per Minute	USFWS	U.S. Fish and Wildlife Service
HSIP	Highway Safety Improvement Program	WGM Group	WGM Group, Inc.
I-90	Interstate 90		
LOS	Level of Service		
LRTP	Long Range Transportation Plan		
LWCF	Land and Water Conservation Fund		
MDT	Montana Department of Transportation		
MEPA	Montana Environmental Policy Act		
MMPO	Missoula Metropolitan Planning Organization		
MPH	Miles per Hour		

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Introduction

The East Missoula Highway 200 Corridor Plan addresses Highway 200 east of Missoula in three segments: East Broadway Segment (from Van Buren Street to I-90), East Missoula

Segment (from I-90 to Brickyard Hill), and Sha-Ron/Marshall Segment (from Brickyard Hill to Tamarack Road). The Corridor Plan Area encompasses over four-and-a-half miles

of roadway that ranges from the urban East Broadway Segment to the “main street” of the East Missoula Segment to the rural Sha-Ron/Marshall Segment.

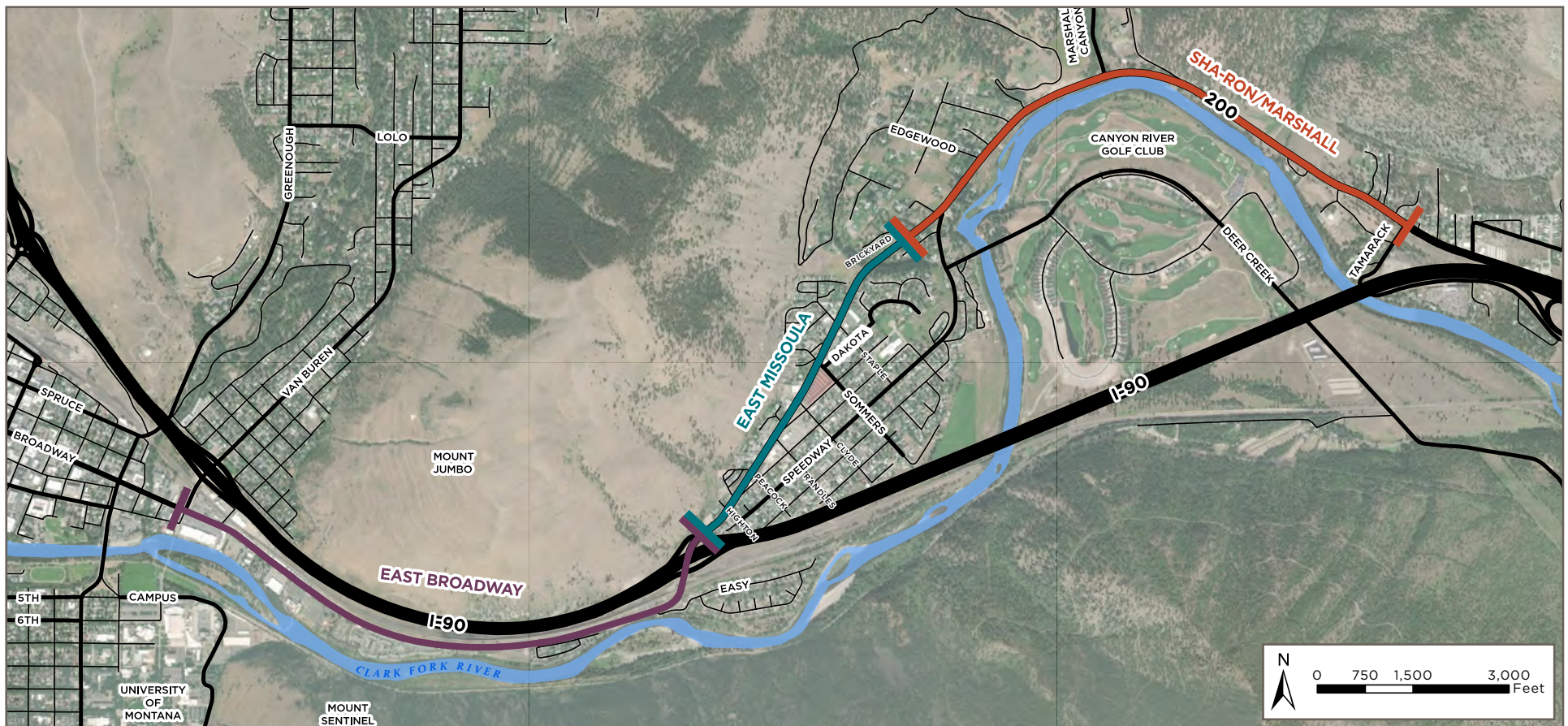


Figure 1-1: Corridor Plan Area and Corridor Segments

The Missoula Metropolitan Planning Organization (MMPO) identified the need for improvements to Highway 200 in and around East Missoula and initiated the work on this corridor plan. The MMPO is the regional transportation planning body for the City of Missoula and adjacent urban areas of Missoula County. The mission of the MMPO is to plan and program a safe and efficient transportation system that increases access and mobility through multimodal options. The MMPO's Long Range Transportation Plan identifies the East Missoula Highway 200 corridor as one of the region's highest priority projects. In 2019, the MMPO contracted with WGM Group, Inc. (WGM Group) to assist in preparing the plan for this stretch of Highway 200.

A corridor plan is a long-range plan for a highway that looks to connect places and strengthen communities through the integration of transportation systems with land use. The focus is on needed infrastructure improvements within the right-of-way (ROW), with consideration for adjacent and surrounding land uses.

Land uses and transportation are interconnected – decisions regarding either can positively or negatively affect the other. Transportation corridor planning, including highway corridor plans, is intended to improve safety and create better connections among motorized and non-motorized transportation, land uses, and utilities.

Public Involvement

From the start, the project included a robust process for involving the community and key agency stakeholders. The intent of this effort was to:

- Ensure an understanding of issues from a variety of perspectives
- Clarify concerns and desires of those who own property, reside, or recreate in or near the corridor, do business in the corridor, or who use the corridor to travel in vehicles, on bikes, on foot, or use public transit
- Coordinate with agencies responsible for resources or projects within the corridor
- Identify alternative approaches to concerns and desires
- Provide an initial gauge of public receptiveness to corridor projects and overall vision

An Advisory Committee of key stakeholders provided guidance throughout the process of developing this plan. They met approximately every other month to advise on various draft documents. The committee included representatives of East Missoula, University of Montana, Montana Rail Link, Missoula Redevelopment Agency, Mountain Line Transit, Montana Department of Transportation (MDT), and other local and state agencies for transportation, parks, recreation, trails, and land use planning.

A Resource Agency Group provided oversight on the "Pre-NEPA" report, an initial examination of resources that might be affected by projects in the East Missoula-Highway 200 corridor. All federally funded highway projects need to be examined for their effect on the environment to ensure compliance with the National Environmental Policy Act (NEPA). Participants in the group included agencies responsible for wildlife, water quantity and quality, historic and cultural resources, air quality, and socio-economic considerations.

General public outreach and involvement began early in the project, with initial information on a project website, hosted by the MMPO, and updated throughout the project.

Notices on upcoming meetings and comment periods were sent to MMPO mail lists and project mail lists via email and the MMPO newsletter. Twice during the project, postcard notices were sent to more than 1,000 surrounding landowners via the U.S. Postal Service. Flyers were posted along the corridor prior to upcoming meetings. Media outlets received news releases at key points in the process.

MMPO and WGM Group consultants provided updates to the East Missoula and Bonner Community Councils as well as other key stakeholder groups, including Three Rivers Collaborative, via email and attendance at council meetings.

Additional information on the public involvement process, project website content, advisory committee agendas and meeting minutes, and a map of the properties notified during the process are included in Appendices A-D.

Phase 1: Issue Identification

The purpose of public participation in Phase 1, “Issue Identification” was to clarify public issues and concerns and determine if issues had changed from previous studies and plans. More than 100 comments were received in Phase 1. Approximately 30 people attended Open House #1 on February 6, 2020. The project website included an interactive map where individuals could tap on a location and insert their comment and view what others had written. The interactive map had 1,184 visits and 94 comments. The project team sent a questionnaire on recreation and business needs and concerns to key stakeholders identified by the Advisory Committee.

Phase 2: Design Alternatives

The intent of public participation in Phase 2 was to have the public identify preferences for specific components of various design alternatives. Approximately 200 comments

were received in Phase 2. In the last week of June, the project team sent more than 1,000 postcards to nearby landowners, providing notice of the design alternatives and Open House #2. Approximately 30 people attended Open House #2 on July 14, 2020. The project website included a presentation on the design alternatives and interactive preference surveys. The survey received 1,276 visits and 196 comments in addition to completed surveys. Due to COVID-19, all public involvement in Phases 2 and 3 was held virtually.

Phase 3: Preferred Design Alternative

The intent of public participation in Phase 3 was to identify what, if any, changes the public wanted in the Preferred Design. Approximately two dozen comments were received in Phase 3 via the Open House and other methods. In the week preceding the Open House, the project team sent more than 1,000 postcards to nearby landowners, providing notice of the preferred

design and Open House #3. Approximately 20 people attended Open House #3 on October 22, 2020. The project website included the preferred alternative and encouraged people to respond with comments via email. A dozen comments were received via email and from discussion at a meeting of the East Missoula Community Council.

Phase 4: Final Plan

The focus of public participation in Phase 4 was to determine any needed changes to the plan before adoption. Approximately 10 comments were received during the comment period. As the project moves into engineering design, additional public involvement will be needed to keep the public informed and engaged in design decisions. Additional coordination and approval from MDT will also be required.



Project Goals & Objectives

The plan for the corridor is intended to meet six project goals. A set of project objectives further define how each goal will be achieved. The project goals conform to Federal and State standards for corridor plans and to the directives of MMPO's current transportation plans.

1. Improve safety for all users

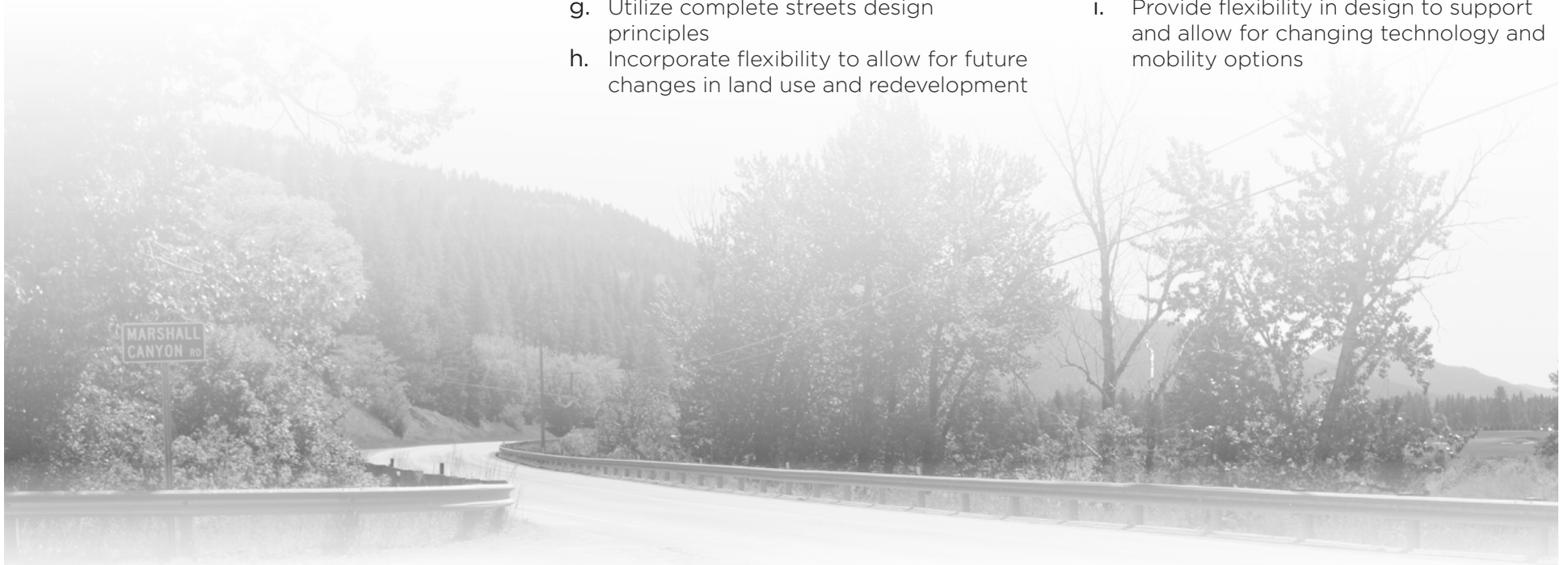
- a. Reduce frequency and severity of future crashes
- b. Reduce potential conflicts for all modes
- c. Increase development of safe pedestrian and bicycle facilities

2. Improve roadway operation and better manage access

- a. Preserve roadway capacity
- b. Coordinate land use and transportation needs to provide safe and convenient access between public roadways and adjacent land
- c. Develop parking solutions along the roadway
- d. Educate landowners on the need and benefits of access management
- e. Reduce intersection congestion for existing and future demands
- f. Create designated spaces for non-motorized modes of transportation
- g. Utilize complete streets design principles
- h. Incorporate flexibility to allow for future changes in land use and redevelopment

3. Expand multimodal transportation

- a. Improve pedestrian facilities
- b. Improve bicycle facilities
- c. Reduce potential conflicts between transportation modes
- d. Provide accessible transportation facilities that improve mobility
- e. Improve connections to and between businesses, neighborhoods, recreational amenities, and downtown
- f. Provide improved transit stop amenities
- g. Facilitate pedestrian access to transit
- h. Minimize adverse impacts on traffic flow and intersection operations
- i. Provide flexibility in design to support and allow for changing technology and mobility options



4. Preserve, protect, and enhance the unique character of each corridor segment

- a. Recognize the environmental, cultural, recreational, and agricultural nature of individual segments
- b. Consider attractive, pedestrian-friendly design features
- c. Focus on place and place making
- d. Increase public spaces and amenities
- e. Support the economic vitality and growth of the commercial and residential areas

5. Provide cost-effective, feasible, and maintainable improvements

- a. Consider total cost of public infrastructure
- b. Help attract funding sources
- c. Provide opportunities to phase projects
- d. Align with planned City/County/MDT projects
- e. Leverage private investment
- f. Minimize the need for additional right-of-way
- g. Consider the resources and obligations for maintaining new improvements
- h. Consider feasibility of constructing improvements
- i. Provide innovative and sustainable solutions

6. Protect environmentally sensitive areas and natural features from negative impacts

- a. Consider potential adverse impacts to the environment that may result from improvement options
- b. Avoid adverse environmental impacts to air or water quality, wetlands, and endangered species



Project Process

The design process for the Corridor Plan included four phases along with public involvement. The first phase was a review of existing, completed studies to form the foundation of the plan. This phase, “Planning Framework,” summarized relevant information from previous plans and studies and identified information gaps.

The second phase, “Technical Analysis,” provided a detailed analysis of current conditions building on previous studies to identify key issues to be addressed during design. The first public open house presented the Introductory Framework and Technical Analysis to introduce the project and obtain initial feedback on concerns and issues within the corridor. This phase included a “Pre-NEPA” environmental summary along with transportation, right-of-way, utilities, and land use analysis. The “Pre-NEPA” document provides an initial look at the environment and what might be affected by projects for the Highway 200 corridor.

The third phase included the development of design alternatives. To establish an understanding of the issues within the corridor, comments were

considered from the general public, focus groups, individuals, and agencies along with relevant elements from previous studies and the technical analysis. Project goals and objectives were identified to guide the evaluation of the alternatives. Three corridor-wide alternatives providing transportation

infrastructure updates were developed. Additionally, four focus areas were identified as specific areas of concern and detailed options were developed for these areas. These options were presented to the public at a second public open house.

In the fourth phase, a preferred alternative was developed that took into consideration comments regarding design alternative preferences and suggested modifications from the public and agencies. The alternatives were evaluated based on their ability to meet the project goals and public preferences. A preferred alternative was developed through mixing and matching elements from the alternatives to respond to the unique character of each segment of the corridor. The preferred alternative was presented at a third public open house.

With the preferred alternative and cost estimates, the corridor plan provides the detailed design concepts necessary for securing project funding for implementation.

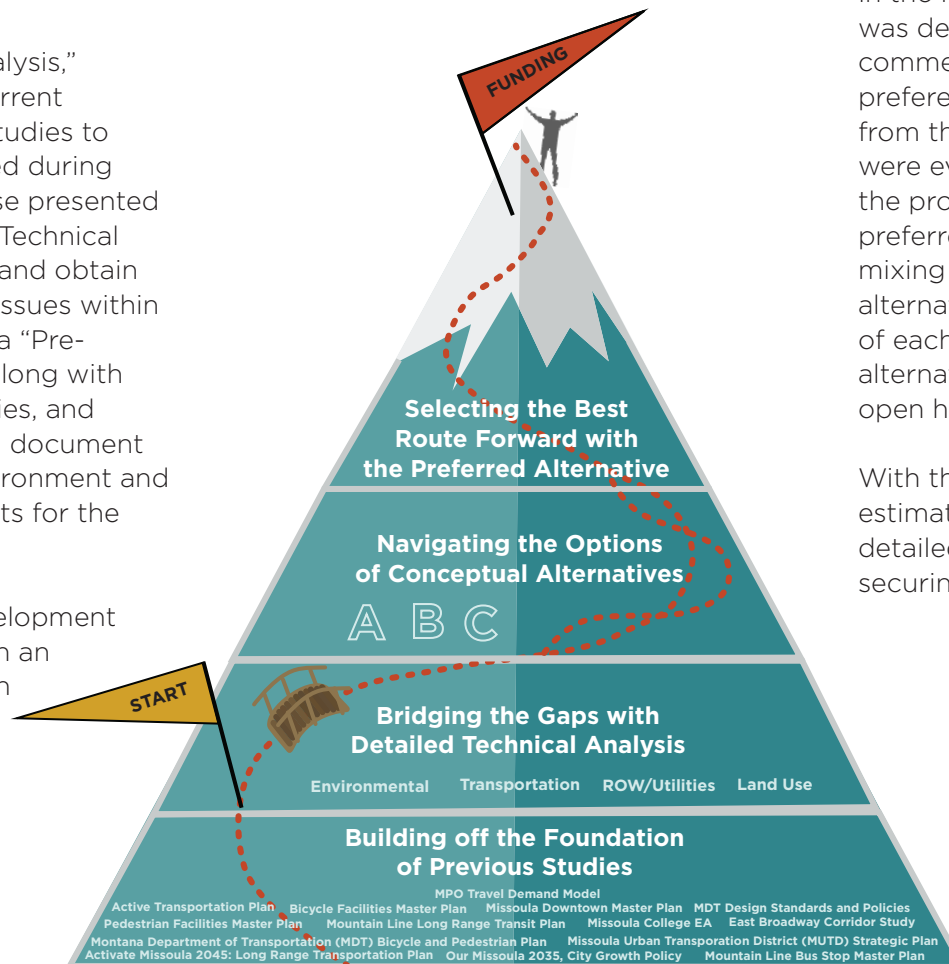


Figure 1-2: Corridor Plan Process

Planning Framework

The Planning Framework provides the foundation for the Corridor Plan that includes a review of previous plans and studies while identifying information gaps.

1

Compilation of findings from previous studies

2

Evaluation of existing plans for consistency with individual needs and unique characteristics of each segment

3

Identification of conflicting recommendations between plans and potential conflicts with proposed concepts

4

Evaluation of existing plans based on requirements for likely funding sources, particularly Better Utilizing Investments to Leverage Development (BUILD) grant requirements

5

Identification of information gaps:

- a. Access Management
- b. Mobility
- c. Parking
- d. Transit Options
- e. Safety
- f. Multi-Modal Connections
- g. Circulation Issues of All Modes of Transportation
- h. Infrastructure - Utilities - Right-of-Way
- i. Environmental Analysis Components
- j. Other



Previous Plans & Studies

A total of 16 different transportation plans and studies have been completed in the past eight years that touch on the East Missoula Highway 200 Corridor Plan Area. In general, the studies address the entire area covered by the MMPO,

which is significantly larger than the Corridor Plan Area. Of the three separate segments in the Corridor Plan Area, the East Missoula segment has been the subject of the most planning studies relevant to this project. The

Sha-Ron/Marshall segment from Brickyard Hill to Tamarack Road has been the least studied or planned for component of the Plan Area.

	Existing Document/Name	Study Emphasis/Brief Synopsis	Geographic Focus
Comprehensive Plans	1. Our Missoula City Growth Policy 2035 (adopted 2015)	City Growth Policy to guide growth and development over next 20 years. Subtitle is "Focus Inward," and the plan does focus on promoting compact development, mixed-use and dense development along major transportation corridors, connectivity multi-modal transportation system, and pedestrian scale design.	City-wide and larger urban area
	2. Missoula Area Land Use Element (2019) County Growth Policy	The "Future Land Use" amendment to the Growth Policy. It is the guide for land use and character over the next 20 years with a map and land use designations – it is based on a "One Community" approach for planning for the entire Missoula Area, intended to coordinate with city efforts.	County-wide
	3. Missoula Downtown Master Plan (2019)	Master Plan for Downtown, a vision and detailed future land use document for multiple sub-area neighborhoods including "East Broadway Gateway."	Downtown Area (includes East Broadway)
	4. East Missoula Corridor Vision and Redevelopment (2015)	The document was prepared with New Mobility West grant funds to address issues of transportation planning and community development. Includes community vision, a market summary, implementation recommendations and funding options. The document includes detailed conceptual plans and street sections. The document has not been officially adopted by Missoula County.	Easy Street to Speedway Avenue
Transportation Plans	5. Activate Missoula 2045 (adopted 2017)	Multi-modal long range transportation plan (LRTP) -- Appendices include full project list, revenue projections, community outreach documentation, air quality conformity analysis, and travel demand model documentation.	Missoula Urbanized Area and broader study area
	6. Montana Pedestrian and Bicycle Plan 2019 (MDT)	MDT's statewide plan for pedestrians and bicycling. Goals and strategies are broad and comprehensive, and include general steps such as analysis, exploration, and developing design guidance.	Statewide
	7. Bicycle Facilities Master Plan (2017 with Activate Missoula 2045)	The MMPO's plan, strategy and project list for biking -- provides information on a variety of facility types, safer intersection crossings, a chart for selecting types of bike facilities in context of vehicle traffic and speed, wayfinding, includes cost estimates of various bikeway types.	Urban area

	Existing Document/Name	Study Emphasis/Brief Synopsis	Geographic Focus
Transportation Plans	8. Missoula Pedestrian Facilities Master Plan (2018) part of Activate Missoula 2045	MMPO's plan for providing connected, safe, accessible pedestrian network for users of all ages and abilities, the report includes review of existing conditions, priority pedestrian needs analysis, and implementation strategies. Recommended measures for uncontrolled intersections, ADA transition plan, and sidewalk condition rating system. Appendices include buffer maps for key locations, e.g., parks or independent living centers, etc.	Urban area
	9. 2011 Missoula Active Transportation Plan	MMPO plan, amended into the 2005 Missoula County Growth Policy, provides overall vision for bike/ped, design concepts and priorities, transit interface.	Urban area
	10. Missoula Urban Transportation District (Mountain Line) 2018 Strategic Plan	Update to their previous long range transportation plan, provides for increased service plans in short term and long term.	Missoula Urban Transit (Mountain Line) district
	11. Missoula Urban Transportation District 2018 Strategic Plan - Appendix 1	Transit Choices Report -- more detailed information for the Strategic Plan.	Missoula Urban Transit (Mountain Line) district
	12. Mountain Line Bus Stop Master Plan (adopted 2015)	This plan provides guidelines for bus stop locations on various routes.	Missoula Urban Transit (Mountain Line) district
	13. Mountain Line Long Range Transit Plan (2012)	This long range transit plan establishes goals for public (bus) transit within Missoula and certain corridors of Missoula. This plan discusses benefits, costs, etc., and provides guidelines for bus stop design and placement.	Missoula Urban Transit (Mountain Line) district
	14. East Missoula (MT200) Road Safety Audit (2015)	MDT conducted a Road Safety Audit for Highway 200 (Robert Peccia & Associates, October 30, 2015) addressing that portion of the corridor between Easy Street and Speedway Avenue and traffic crashes occurring between January 2004 and December 2014 (11 years). This study addressed 85 crashes, identifying crash trends and areas of concern, and identified a detailed list of engineering recommendations to improve roadway safety through the corridor.	1.5 miles between Easy Street and Speedway Avenue
Other	15. I-90 Missoula East-West Corridor Study (phase 1) (2004)	Study of geometrics, ramp traffic volumes, traffic operations, deficiencies, forecast traffic conditions through 2025.	I-90 interchanges (MP94 to MP 110)
	16. Draft Missoula College East Broadway Site Draft Environmental Assessment (2014)	Environmental Assessment for relocating Missoula College to 1205 E Broadway from previous locations on South Avenue East and South Avenue West.	Missoula College and adjoining street area

Overview Description of Entire Plan Area

From west to east, the corridor transitions from more intensive city-level development from Van Buren Street to Missoula College, to less intensive development and older highway commercial in East Missoula, and to rural-level development from Brickyard Hill to Tamarack Road. There is little traffic congestion in the study area, except near Van Buren Street and at the East Missoula I-90 interchange (queues on the off-ramps).

Road infrastructure is more complete on the far west end, with street striping, curb and gutter, and sidewalk. From Easy Street (just south of I-90) through to Tamarack Road, there is no sidewalk or designated bike lanes, and no curb or gutter. The lack of street definition and non-motorized facilities is especially noticeable in East Missoula. It is less noticeable on the Sha-Ron/Marshall segment due to that area's more rural environment.

The entire Corridor Plan Area was identified as a "Proposed Future Corridor of Travel for Bicycle and Pedestrians" in the 2011 Missoula Active Transportation Plan. The 2017 Bicycle Facilities Master Plan identified the entire Corridor Plan Area as "Not Comfortable" for bike traffic and proposed a bike lane from Van Buren to approximately the Sha-Ron fishing access, and a shared use path recommended from there to Tamarack Road.

There is bus service along the entire corridor except from Highton Street to Staple Street, where the routes divert to Speedway Avenue, a parallel route to the southeast. As reported in the Mountain Line 2018 Strategic Plan, it has hourly headways and does not run between 11 am and 1 pm on weekdays. Weekend service is limited in the same way as other Mountain Line Routes. Large segments of the route between Van Buren Street and Tamarack are Flag Stop only with no scheduled stops.

Major features that run the length of the corridor include the Clark Fork River, the railroad, and I-90. The railroad and Interstate are most evident on the East Broadway segment, where they run parallel to Highway 200 and are separated by a city block or less. The railroad and I-90 intersect Highway 200 between the East Broadway and East Missoula segments of the Plan Area. The river is within sight in the Sha-Ron/Marshall and East Broadway segments, but is out of sight in the East Missoula segment.



East Broadway Segment

Van Buren Street to I-90

Studies and Plans specific to this segment:

- *Missoula Downtown Master Plan (2019)*
- *Missoula College East Broadway Site Draft EA (2014)*

Vision

Missoula Downtown Master Plan

East Broadway Gateway is a commercial corridor that is an important gateway into Greater Downtown Missoula. It includes:

- **Technology Hub:** Missoula College and Montana Technology Enterprise Center should elevate to create a complete tech campus hub. Student Housing on the Corridor: The corridor provides excitement and rental housing for students.

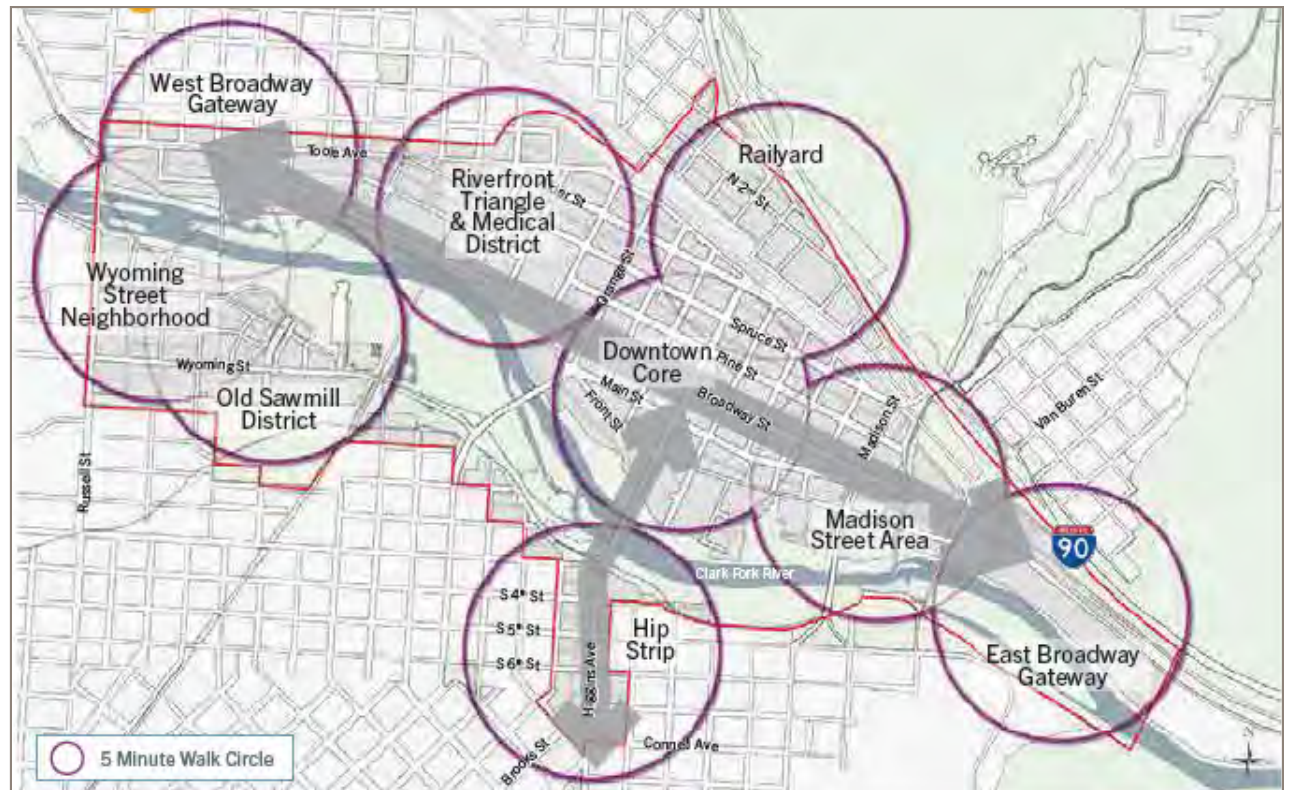


Figure 2-1: East Broadway Gateway Neighborhood in Context of Other Downtown Neighborhoods, *The Missoula Downtown Master Plan (2019)*

East Broadway Segment

- **Civic Square and Transit Stop:** A neighborhood green is a centerpiece for the neighborhood, a gathering place within a 5-minute walk from homes and businesses. Multi-story townhouses and live-work units front the green. A transit stop at the edge of the civic square connects the tech hub to the center of downtown. The transit stop area could also be used as a park-and-ride, using the transit stop as a link to downtown for large events.
- **Consolidated Parking:** New mixed-use buildings wrap around a parking garage covered with an amenity deck.
- **New Pedestrian Bridge and Trail Extension:** An improved public face toward the river could be formed, along with a pedestrian bridge connecting Missoula College to the University on the eastern end of the river front trail network loops.



Figure 2-2: Illustrative Plan for the East Broadway Street Gateway Area, The Missoula Downtown Master Plan (May 2019)

Future Land Uses

Our Missoula City Growth Policy 2035 (2015)

- Urban Center: Downtown uses – mixed uses, including residential, supportive of 24/7 services
- Neighborhood Mixed-Use: provide local services within a neighborhood, give identity to individual or groupings of neighborhood
- Gateways at Van Buren and I-90



Figure 2-3: East Broadway Street Proposed Conditions Around the Missoula College River Campus, *The Missoula Downtown Master Plan (2019)*

Existing Conditions

Traffic Volumes

Activate Missoula 2045 (2018)

- The East Broadway segment of the study area has more congestion than the rest of the study area. Congestion is projected to intensify by 2045 at the intersection of East Broadway and Van Buren and at the I-90 interchange.

I-90 Missoula East-West Corridor Study (2004)

- East Missoula interchange eastbound off-ramp backs up (AM Peak Hour) from ramp terminus to just onto mainline. Queue approximately 600 feet.

Crash Data

Activate Missoula 2045 (2018)

- Two vehicle fatalities
- One pedestrian fatality
- Intersection at East Broadway and Van Buren has the third highest crash rate in the Missoula Metropolitan Planning Area.



Figure 2-4: Current (2015) Congestion on Existing Roadways, *Activate Missoula 2045 (2017)*



Figure 2-5: Projected 2045 Congestion on Existing Roadways and Committed Projects, *Activate Missoula 2045 (2017)*

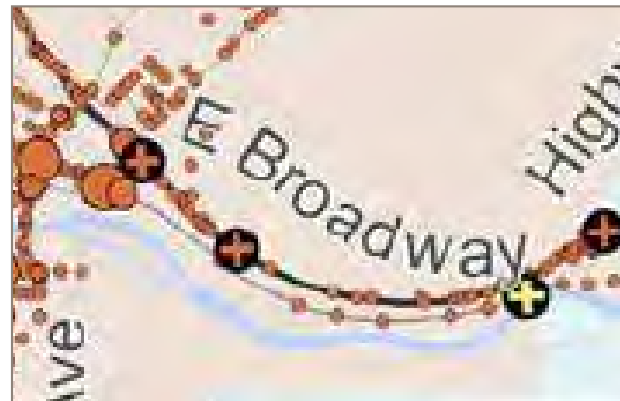


Figure 2-6: Motor Vehicle Crash Locations, *Activate Missoula 2045 (2017)*

East Broadway Segment

Bicycle Facilities

Bicycle Facilities Master Plan (2018)

- Bike lanes exist on East Broadway from Van Buren to just west of Easy Street
- The trail along the river has no logical termini behind the Cobblestone Subdivision
- Bicycle Level of Traffic Stress on Highway 200 in this segment: Level 4 (worst rating) “Not Comfortable”
- Bike Collision Frequency 2010-2014: three - five collisions at Van Buren and East Broadway and six - eight collisions, just east of the intersection
- Manual bicycle counts are taken at Van Buren and East Broadway on odd years

2011 Missoula Area Active Transportation Plan

- A bicycle collision was recorded between 2005-2010 near the Creekside Apartments

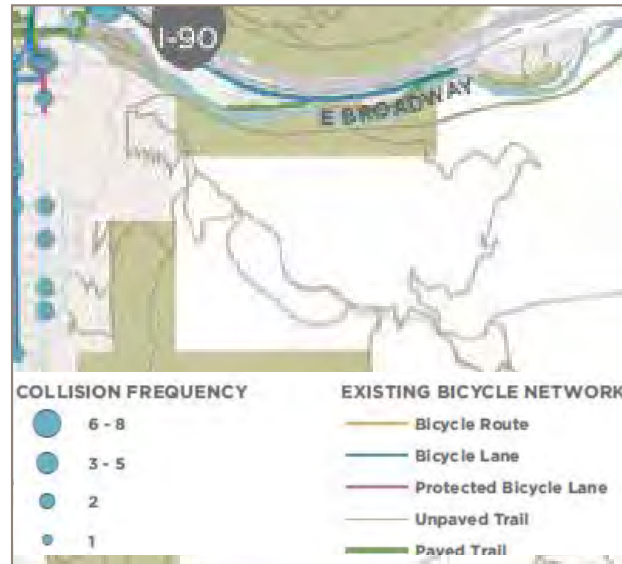


Figure 2-7: Bicycle Collision Frequency 2010-2014, *The Missoula Bicycle Facilities Master Plan (2017)*



Figure 2-8: Bicycle Level of Traffic Stress, *The Missoula Bicycle Facilities Master Plan (2017)*



Figure 2-9: Proposed Bicycle Facilities, *The Missoula Bicycle Facilities Master Plan (2017)*

East Broadway Segment



Figure 2-10: Pedestrian-Involved Crash Locations, *Pedestrian Facilities Master Plan (2018)*



Figure 2-11: Priority Pedestrian Needs Map, *Pedestrian Facilities Master Plan (2018)*



Figure 2-12: Priority Intersections Map, *Pedestrian Facilities Master Plan (2018)*

Pedestrian

Pedestrian Facilities Master Plan (2018)

- Pedestrian crashes 2007-2017: Three at or near the intersection of Van Buren and Broadway, four-plus near train underpass, making this location one of only nine in the entire Missoula Metropolitan Planning area with more than four pedestrian crashes
- Low to moderate priority score for pedestrian needs
- Priority intersections are at Van Buren and on the east end by I-90 and the railroad.

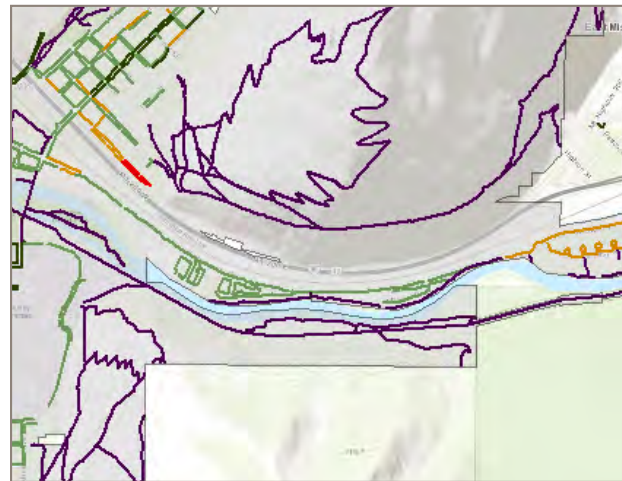


Figure 2-13: Sidewalk Condition Map, *Pedestrian Facilities Master Plan (2018)*





Figure 2-14: Mountain Line Route 4, Bus Stop Master Plan (2015)

2011 Missoula Active Transportation Plan

- There is a sidewalk on the south side of Highway 200 from Van Buren to Easy Street.
- Of 11 pedestrian crashes in the Missoula Metropolitan Area from 2005-2010, one was southwest of the East Missoula Interstate interchange.

Transit

Missoula Urban Transportation District 2018 Strategic Plan

- U-Dash G line every 15 minutes between Missoula College and main campus; long term capital improvements – pedestrian crossing at Missoula College and nearby apartments on East Broadway
- Mountain Line Bus Route
 - › Current service every 60 minutes
 - › Little or no midday service
 - › Over the short-term, routes will include consistent service every 60 minutes
 - › Over the long-term, routes will include consistent service every 30 minutes for East Broadway segment

Parking

Missoula Downtown Master Plan (2019)

- This plan envisions off-street parking structures.

Draft Missoula College East Broadway Site Environmental Assessment (2014)

- This project created off-street surface parking on the south side of East Broadway. The proposed site improvements included parking on railroad lands on the north side of Highway 200, which has not been realized.



Figure 2-15: Missoula College - Proposed Site Improvements, Draft Missoula College East Broadway Site Environmental Assessment (2014)

East Broadway Segment

Identified Concerns, Needs, and Strategies

East Missoula (MT200) Road Safety Audit (2015)

- Railroad Underpass
 - › Narrow width
 - › No multi-modal accommodations
- I-90 Eastbound Off-ramp
 - › Limited sight distances
 - › Skewed approach angle
 - › Increased special event use

I-90 Missoula East-West Corridor Study (Phase 1) (2004)

- Interchange Level of Service by 2045: F

East Missoula (MT200) Road Safety Audit (2015)

Railroad Underpass/I-90 Eastbound Off-ramp

- Reduce sight obstructions
- Intersection evaluation
- Underpass reconstruction

Note: Refer to Figures 2-14a, 14b, and 14c, Engineering Recommendations from the *East Missoula (MT200) Road Safety Audit*.

Activate Missoula 2045 (Long Range Transportation Plan) (2017)

- Complete North Bank Riverfront Trail from Eastgate to Easy Street at an estimated cost of \$0.8M; no funding source identified (second highest ranked recommended project on the LRTP Non-Motorized Projects List)
- Street Improvements to East Broadway (Van Buren to Easy Street) – to include sidewalks, grade separated trails, crosswalks, pedestrian buttons, dedicated bike lanes, bike routes, and sharrows; to be funded by Assessments

Bicycle Facilities Master Plan (2017)

- East Broadway and Van Buren - Provide leading pedestrian interval for trail users to get them out in front of turning traffic. Include blank-out sign for cars to reinforce no right turn when leading interval is active. Leading interval should be at least seven seconds. (Cost \$3,000-\$5,000)

Missoula College East Broadway Site EA (2014)

- Planning for 350 vehicle and bike parking

on north side of East Broadway. Pedestrian crossings to be well-lit, signed, and with pedestrian flags.

- University of Montana would work with MDT to reduce speed limit on this portion of East Broadway from 45 to 35 mph
- Transit stop to be constructed at Missoula College and “Park n’ Ride” parking lot on north side of East Broadway
- UM would work with the City to widen the existing sidewalks on the south side of Broadway to accommodate a two-way bike/pedestrian path between Missoula College and Van Buren Street pedestrian bridge over the Clark Fork River.



East Missoula Segment

I-90 to Brickyard Hill

Studies and Plans specific to this segment:

- *East Missoula Corridor Vision and Redevelopment (2015)*
- *East Missoula (MT200) Road Safety Audit (2015)*

Vision

The *East Missoula Corridor Vision and Redevelopment* report provides the only written vision for East Missoula (from Easy Street to Speedway Avenue).

“The vision for Highway 200 is to create a safe walkable corridor that includes lighting, sidewalks, and bicycle lanes. There is a strong preference for a center left turn lane, particularly in the core of East Missoula near the Ole’s convenience store at the intersections of Highway 200, Randles Street, and Michigan Avenue. It is also desired by the community that a variety of neighborhood oriented services locate here.”

Future Land Uses

The *Our Missoula City Growth Policy 2035* and the *Missoula Area Land Use Element*, an amendment to the County’s Growth Policy, have different land uses for this area. The County’s plan also identifies the East Missoula area as a neighborhood, an area with a distinct identity that contains “essential elements of a livable community, such as walkability, a mix of housing types, businesses, and opportunities for employment.” This description of a neighborhood aligns with the East Missoula Corridor Vision and Redevelopment report.

Our Missoula City Growth Policy 2035 (2015)

- Neighborhood Mixed Use
- Residential Medium Density (3-11 Units/Acre)
- Residential Low Density (1-2 Units/Acre)

Missoula Area Land Use Element (2019)

- Neighborhood Center – mixed use, single and multi-family residential
- Live/Make Neighborhood – single family residential and small manufacturing
- Residential – single family residential

Existing Conditions

The *East Missoula Corridor Vision and Redevelopment* report identified existing zoning consisting of neighborhood commercial, general commercial and residential uses (C-C2 & C-R3). Existing zoning may not comply with the recently adopted County Growth Policy land use amendment, particularly the Live/Make Neighborhood land use type.



Opportunities

A market analysis was conducted for the *East Missoula Corridor Vision and Redevelopment* report. It includes information on demographics, trends, and market opportunities.

MARKET SUMMARY

Population & Area Demographics

- Population: 2,677
- Approximately 950 housing units
- 33% of residents between 15-34 years old
- 33% of residents have children
- 35% of residents have an associates degree or higher
- 75% of workers drive alone
- 70% commute 10-20 minutes
- Median household income \$47,000/year

Local Development Trends

- Rental residential very strong now (36% of E. Missoula housing units are rental)
- Walkable, transit-accessible neighborhoods command a premium
- Less demand for storefront retail
- Retail expansion niches align well with spending potential and community vision

Key Market Opportunities

- Residential: Multi-family rental units
- Commercial: Unmet demand for eating/drinking amenities: \$2 million gap between supply and demand
- Commercial: destination and franchise retail and service business including a small sporting goods store (may not be feasible in today's market)
- Industrial: Artisan manufacturing and repair

Figure 2-16: Market Analysis Data, *East Missoula Corridor Vision and Redevelopment Report*

Traffic Volume

East Missoula (MT200) Road Safety Audit (2015)

Traffic volumes in the East Missoula segment, with the exception of the I-90 interchange are forecast to remain uncongested through 2045.

LOCATION		2010	2011	2012	2013	2014
West of Easy Street	RP 1.49	5,970	6,280	5,640	5,440	5,130
Northeast of I-90 Interchange	RP 1.83	8,410	8,810	8,120	7,890	7,390
East of Staple Street	RP 2.59	4,000	4,080	3,910	3,850	4,880

Figure 2-17: Traffic Volumes In/Around East Missoula, *East Missoula (MT 200) Road Safety Audit (2015)*



Figure 2-18: Current (2015) Congestion on Existing Roadways, *Activate Missoula 2045 (2017)*



Figure 2-19: Projected (2045) Congestion on Existing Roadways and Committed Projects, *Activate Missoula 2045 (2017)*

Crash Data

East Missoula (MT200) Road Safety Audit (2015)

- Six incapacitating injury crashes and three fatalities between 2004-2014, as shown in Figure 2-20a.
- Crash locations of all types between 2004-2014 are shown in Figure 2-20b.



Figure 2-20a: Severe Crash Locations, East Missoula (MT200) Road Safety Audit (2015)



Figure 2-20b: Crash Locations, East Missoula (MT200) Road Safety Audit (2015)

Bicycle Facilities

Missoula Bicycle Facilities Master Plan (2017)

- No existing bikeways
- No count stations
- Bicycle level of traffic stress is “Not Comfortable” the least bike-friendly category
- One bike collision 2010-2014 1 (not on Highway 200)

2011 Missoula Active Transportation Plan

- Between 2005 and 2010, there was a bicycle fatality near Highton Street intersection

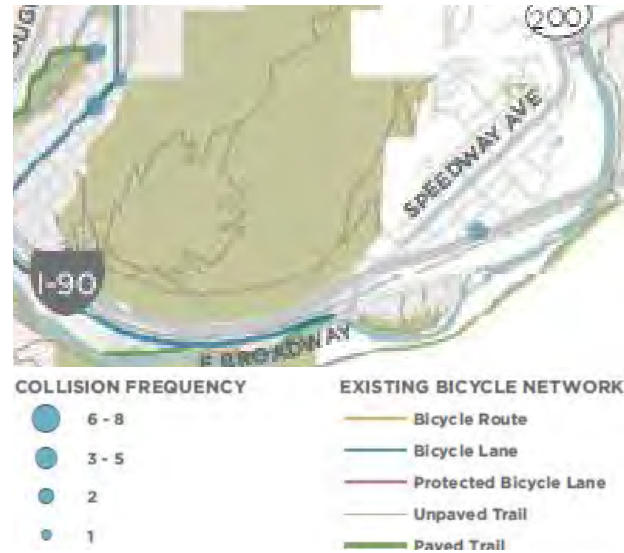


Figure 2-21: Bicycle Collision Frequency 2010-2014, *The Missoula Bicycle Facilities Master Plan (2017)*



Figure 2-22: Bicycle Level of Traffic Stress, *The Missoula Bicycle Facilities Master Plan (2017)*



Figure 2-23: Proposed Bicycle Facilities, *The Missoula Bicycle Facilities Master Plan (2017)*

East Missoula Segment

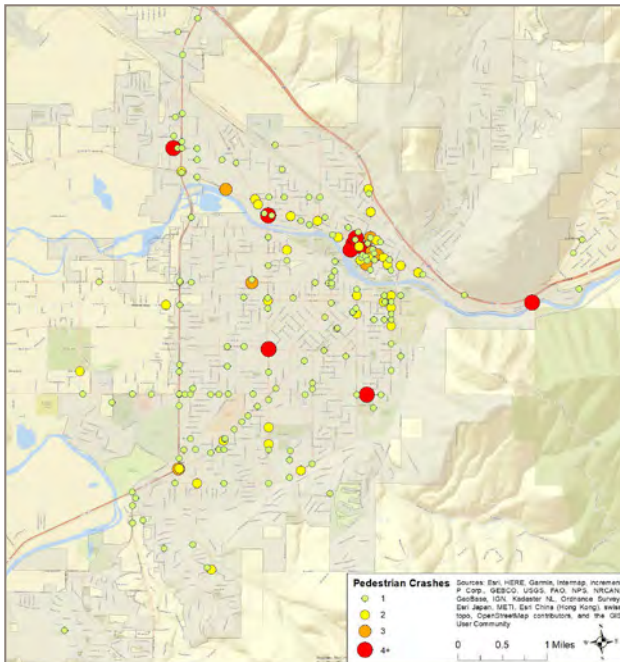


Figure 2-24: Pedestrian Crashes, The Missoula Pedestrian Facilities Master Plan (2018)

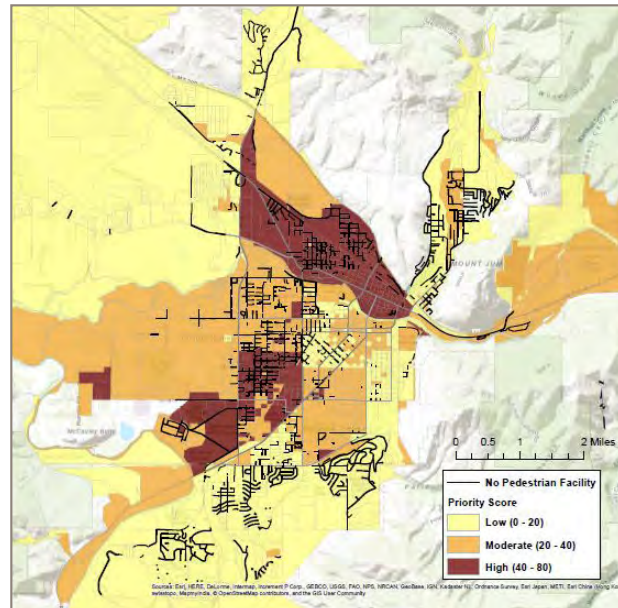


Figure 2-25: Pedestrian Facilities, The Missoula Pedestrian Facilities Master Plan (2018)

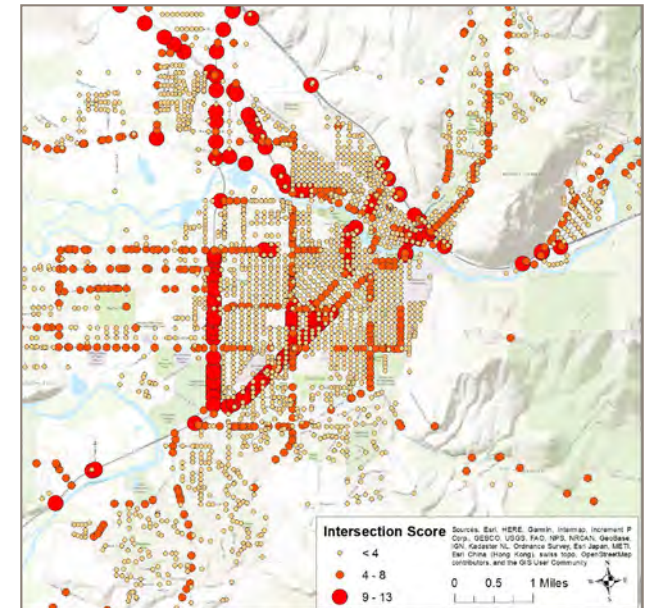


Figure 2-26: Intersection Scores, The Missoula Pedestrian Facilities Master Plan (2018)

Pedestrian

Missoula Pedestrian Facilities Master Plan (2018)

- Two crashes on Highway 200
- Moderate priority for pedestrian needs
- Highway 200 intersection priority scores are predominately mid-range, with higher priority where Highway 200 intersects with I-90

2011 Missoula Active Transportation Plan

- Of 11 crashes from 2005-2010 in the Missoula Metropolitan Planning Area, one was in East Missoula near Clyde Street

Transit

Missoula Urban Transportation District 2018 Strategic Plan

- Current service every 60 minutes
- Little or no midday service
- Over the short-term, routes will include consistent service every 60 minutes
- Over the long-term, routes will include consistent service every 30 minutes for East Missoula.

Mountain Line Bus Stop Master Plan (2015)

- Five bus stops were proposed to be eliminated in East Missoula resulting in an increase in bus stop spacing from 0.40 miles to a new average of 1.07 miles
- The bus stops proposed for elimination were Peacock Street (2), Clyde Street (1), and Staple Street (2).

Proposed Stop Changes – Route 4

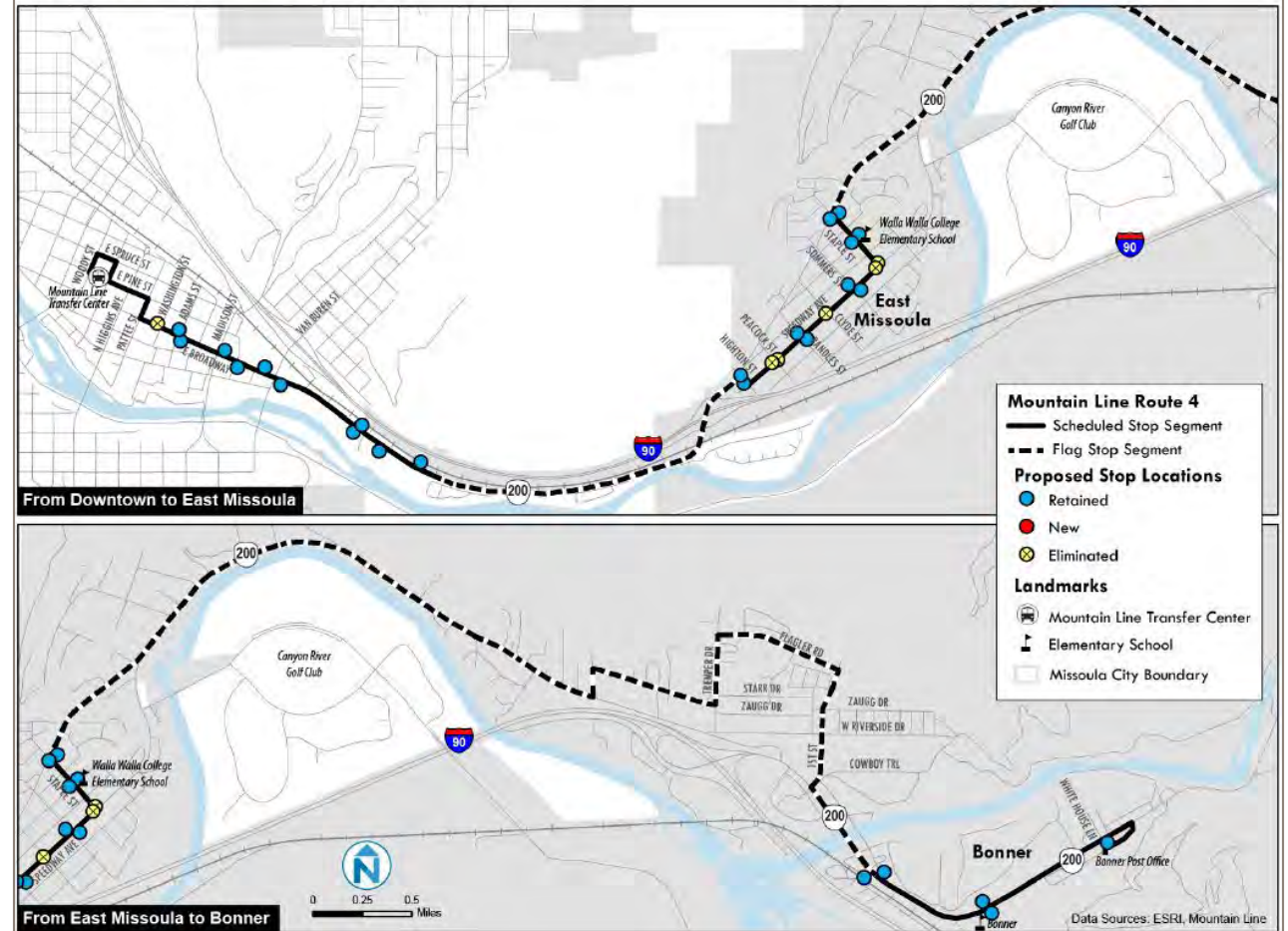


Figure 2-27: Mountain Line Route 4, Mountain Line Bus Stop Master Plan (2015)

East Missoula Segment

Identified Concerns, Needs, and Strategies

East Missoula Corridor Vision and Redevelopment (2015)

- Streets intersect with Highway 200 at odd angles
- No sidewalks or crosswalks
- No street or pedestrian lighting
- Need for bicycle and pedestrian friendly corridor
- Most parking is head-in on-street parking – dangerous for backing out
- Storm drainage challenges
- Actual right-of-way (80') and usable right of way differ due to years of private use and parking encroachment
- No designated or controlled driveways

East Missoula (MT200) Road Safety Audit (2015)

- Easy Street to Speedway
 - Intersection related crashes
 - Increased summertime traffic
- Urban Area (I-90 Interchange to Sommers Street)
 - No access control

- Poor roadway and intersection delineation and definition
- No multi-modal accommodations
- Skewed intersection approaches

East Missoula Corridor Vision and Redevelopment (2015)

(More detail on short-term, mid-term, and long-term strategies in document)

- Striped delineation of lanes and access points
- Curb, gutter, and sidewalks for most of the corridor
- Consolidate parking access where possible
- Left turn lanes at key intersections
- Traffic light(s) if warranted
- Pedestrian scale street lighting for the entire corridor
- Pedestrian crosswalks at Peacock, Randle, Staple, and Sommers Streets
- Striped bike lanes on Highway 200 and bike route signs on Speedway Avenue
- Gateway treatments at the west end near the I-90 interchange and at the top of the hill just east of Staple Street
- A triggered signal for emergency response vehicles at Peacock Street
- Street trees and low maintenance

- landscaping in strategic areas
- Wayfinding signage for access to Open Space trails
- Trail connection from Easy Street to Deer Creek Road, connect to short Water's Edge Trail south of Bandmann Bridge
- Work with property owner east of Canyon View Park to create a river access trail

East Missoula (MT200) Road Safety Audit (2015)

- Striping and delineation
- Access control plan
- Street lighting
- Reconstruction of highway to address access control plan, provide for left turn lanes, turn bays at major intersections, multi-modal accommodations, and improved drainage

Activate Missoula 2045 (Long Range Transportation Plan) (2018)

Highway 200 – Complete street reconstruction at an estimated cost of \$3.5 million (third highest ranking recommended project on the LRTP roadway improvements list)

East Missoula Corridor Vision and Redevelopment (2015) – Conceptual Plans

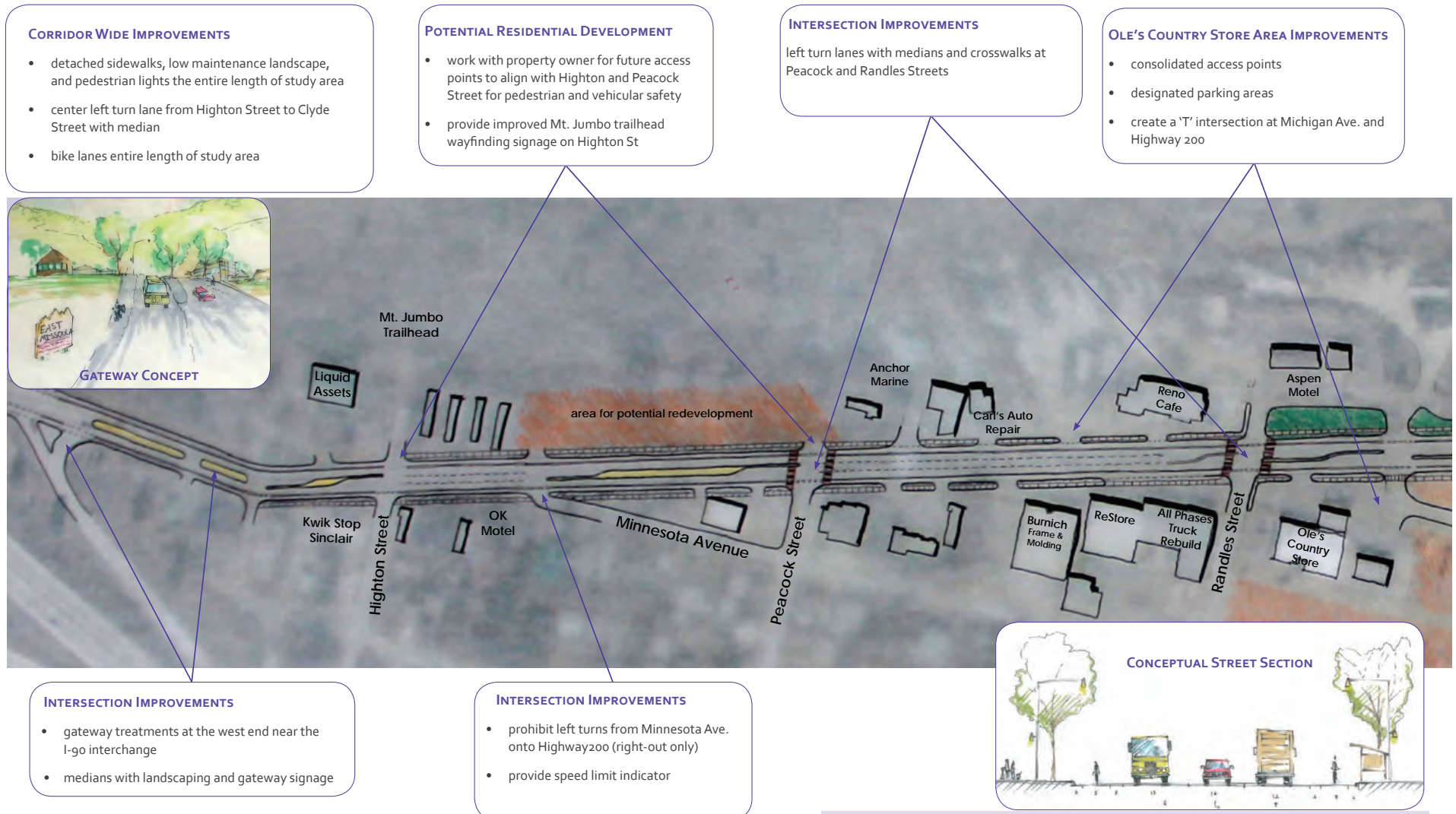
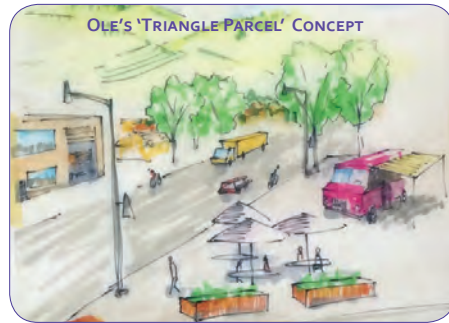


Figure 2-28a: East Missoula Corridor Vision and Redevelopment Conceptual Plan, East Missoula Corridor and Redevelopment (2015)

East Missoula Corridor Vision and Redevelopment (2015) – Conceptual Plans



BUSINESS ACCESS

consolidated access points with curb and gutter

INTERSECTION IMPROVEMENTS

- left turn lanes with medians and crosswalks at Sommers and Staples Streets
- gateway treatments at Staples Street
- provide speed limit indicator

CORRIDOR WIDE IMPROVEMENTS

- detached sidewalks, low maintenance landscape, and pedestrian lights the entire length of study area
- center left turn lane from Highton Street to Clyde Street with median
- bike lanes entire length of study area



OLE's 'TRIANGLE PARCEL' IMPROVEMENTS

temporary/'pop-up' uses on the Ole's Country Store triangle parcel such as: food trucks, fruit stand, tables & benches, temporary planters with trees, farmers market, community garden, community library boxes



Figure 2-28b: East Missoula Corridor Vision and Redevelopment Conceptual Plan, East Missoula Corridor and Redevelopment (2015)

Engineering Recommendations from the East Missoula (MT200) Road Safety Audit (2015)

ID	Recommendation	Description	Follow-up	Timeframe
RAILROAD UNDERPASS / I-90 EASTBOUND OFF-RAMP				
E.1	Reduce sight obstructions	<p>Motorists traveling down the eastbound off-ramp suffer from limited sight distances due to the railroad and I-90 structures. In addition, there are multiple signs south of the intersection which may be distracting and restrict sight lines. It is recommended that the placement and need for the signs be evaluated to determine if sight lines may be improved.</p> <p><i>Following the audit, the cell phone use sign was relocated to help reduce sign clutter and improve sight lines.</i></p>	MDT, Missoula MPO	<p>Short-term</p> <p><i>Partially Completed</i></p>
E.2	Intersection Evaluation	<p>There is a trend of crashes at the I-90 eastbound off-ramp intersection attributed to drivers not seeing conflicting traffic, particularly coming from the railroad underpass. It is recommended an intersection evaluation be completed to determine if a modification to the intersection is warranted. Options to be evaluated would include, but not be limited to:</p> <ul style="list-style-type: none"> • Intersection conflict warning system (ITS solution) to warn motorists on the eastbound off-ramp of conflicting traffic along MT 200 to the south; • Roundabout or Mini-Roundabout; and • Traffic Signal. 	MDT, Missoula MPO	Short-term
E.3	Railroad underpass reconstruction	The existing railroad underpass is narrow and restricts sight distances. It is recommended that the underpass be reconstructed to increase sight distances and provide additional width to accommodate multi-modal use.	MDT, Missoula MPO, Missoula County	Long-term

Figure 2-29a: Engineering Recommendations, East Missoula (MT200) Road Safety Audit (2015)

Engineering Recommendations from the East Missoula (MT200) Road Safety Audit (2015)

URBAN AREA (I-90 INTERCHANGE TO SOMMERS STREET)				
E.4	Striping and delineation	The MT 200 corridor through East Missoula has an undefined wide shoulder and unmarked access points. It is recommended that the corridor be striped and delineated to better define the shoulders and access points.	MDT	Short-term
E.5	Access control plan	A trend of access-related crashes was identified through the urban area of East Missoula. The corridor currently lacks definition for accesses. It is recommended that an Access Control Plan be developed to define where access points should exist.	MDT, Missoula MPO	Mid-term
E.6	Street lighting	MT 200 through East Missoula is unlit and difficult to see at night. It is recommended that street lighting be evaluated along the corridor to improve nighttime visibility for motorists and pedestrians.	MDT, Missoula MPO	Mid-term
E.7	Reconstruction	The MT 200 corridor is wide, lacks defined access points, has poor drainage, and has deteriorating surfacing. It is recommended that the MT 200 corridor through East Missoula be reconstructed to incorporate recommendations made in the proposed Access Control Plan and to provide for a TWLTL, turn bays at major intersections, multi-modal accommodations, and improved drainage.	MDT, Missoula MPO	Long-term

Figure 2-29b: Engineering Recommendations, East Missoula (MT200) Road Safety Audit (2015)

Engineering Recommendations from the East Missoula (MT200) Road Safety Audit (2015)

BRICKYARD HILL				
E.8	Speed limit sign	The existing 35 mph speed zone ends at the top of Brickyard Hill. The Transportation Commission approved the speed zone to extend to the bottom of Brickyard Hill. It is recommended that the 35 mph speed zone be extended to incorporate Brickyard Hill.	MDT	Short-term
E.9	Warning sign	Brickyard Hill receives little sunlight during the winter months. The lack of sunlight and steep grade make inclement weather conditions particularly hazardous at this location. It is recommended that the installation of additional warning signs (ITS or static) advising of potential poor road conditions be evaluated at this location.	MDT	Short-term (static) Mid-term (ITS)
SPEEDWAY AVENUE				
E.10	Delineation	<p>The intersection lacks definition and has a mountable median which is difficult to see. It is recommended that the median be painted and delineation be added to improve visibility and definition of the intersection.</p> <p><i>Following the audit, the median perimeter was painted, flexible delineation was installed, the centerline was repainted, and the signing was improved.</i></p>	MDT	Short-term <i>Already completed</i>

Figure 2-29c: Engineering Recommendations, East Missoula (MT200) Road Safety Audit (2015)

Sha-Ron/Marshall Segment

Brickyard Hill to Tamarack Road

Studies and Plans specific to this segment:

- None

Vision

No vision statement has yet been created for the Sha-Ron/Marshall segment.

Future Land Uses

Our Missoula Growth Policy 2035 (2015)

- Open and Resource: Intended to protect important resource land and areas of natural hazard while recognizing they may be in private ownership
- Residential Medium Density (3-11 Units/Acre)
- Residential Low Density (1-2 Units/Acre)

Missoula Area Land Use Element (2019)

- Rural Residential and Agriculture – low density residential, agriculture, and timber
- Rural Residential and Small Agriculture – low density residential (1-2 DU/acre), agriculture, and timber
- Residential – Single family residential

Existing Conditions

Traffic Volume

None of the 16 reports provide detailed information on traffic volume in this segment.

Crash Data

East Missoula (MT200) Road Safety Audit (2015)

- Two fatal head-on crashes on Brickyard Hill (2004-2014) - See Figures 2-20a and 2-20b

Bicycle and Pedestrian Facilities

Bicycle Facilities Master Plan (2017)

- Bike lane proposed to Sha-Ron fishing access and a shared use path recommended from there to connect to Bonner

Transit

The Missoula Urban Transportation District 2018 Strategic Plan

- Current service every 60 minutes
- Little or no midday service
- Over the short-term, routes will include consistent service every 60 minutes



Figure 2-30: Mountain Line Route 4, Bus Stop Master Plan (2015)

Sha-Ron/Marshall Segment

Identified Concerns, Need, and Strategies

East Missoula (MT200) Road Safety Audit (2015)

- Brickyard Hill
 - › Two fatal head on crashes
 - › Icy road conditions
- Speedway Avenue Intersection
 - › Poor intersection visibility
 - › Recreational use
- Northeast of Staple Street
 - › Speed zone ends at the top of Brickyard Hill

East Missoula (MT200) Road Safety Audit (2015)

Brickyard Hill

- Speed limit sign, extend 35 mph speed zone to include Brickyard Hill
- Warning sign – evaluate installation of warning signs (ITS or static) advising of potential poor road conditions

Note: Refer to Figures 2-29a, 2-29b, and 2-29c, Engineering Recommendations from the *East Missoula (MT200) Road Safety Audit*.
Activate Missoula 2045

(Long Range Transportation Plan) (2017)

- Highway 200 Multi-use path from Sha-Ron fishing access point to Tamarack at an estimated cost of \$4.95 million (13th highest ranked recommended project on the LRTP Non-motorized Projects List)

2011 Active Transportation Plan

- Project #141 East Missoula to Bonner Bike/Ped Trail – install from bottom of Brickyard Hill to Bonner; no funding source

Summary Evaluation of Existing Plans and Reports

Consistency of Existing Plans

East Broadway Segment

- Existing plan needs and recommendations do not conflict with the vision in the Downtown Master Plan document or City Growth Policy future land use designation.

East Missoula Segment

- Existing plan needs and recommendations generally align with the vision in the East Missoula Corridor Vision and Redevelopment document, and future land use designations.
- The boundary of East Missoula Corridor Vision and Redevelopment document and this Highway 200 Corridor are not the same – The East Missoula Corridor Vision extends west to Easy Street; Highway 200 Corridor East Missoula segment extends west to I-90.

Sha-Ron/Marshall Segment

- There is no vision or description of unique characteristics of this segment, other than the future land use designations, and plans for extending non-motorized trail connections from East Missoula to Bonner. The existing plan needs and recommendations do not conflict with those characteristics.

Conflicts Among Recommendations and Proposed Concepts

East Broadway Segment

- No conflicts identified.

East Missoula Segment

- The only potential conflict is the difference in future land use designations from the City and the County; however, the County's designations are more recent and are intended to coordinate with City intentions.

Sha-Ron/Marshall Segment

- The only potential conflict is the difference in future land use designations from the City and the County; however, the County's designations are more recent and are intended to coordinate with City intentions.

BUILD Grant Requirements

BUILD grants are evaluated for potential to achieve the following goals:

1. Reduce the number and rate of crashes, fatalities, and injuries
2. Improve the efficiency and mobility of goods and people
3. Improve access/connectivity to jobs, health care, and other critical destinations
4. Increase economic productivity of land, capital and/or labor
5. Create long-term jobs
6. Attract private economic development
7. Reduce congestion-related emissions
8. Increase transportation choices
9. Provide environmental benefits in the form of ground water recharge and storm water mitigation

Several of the plans and studies have relevant information, but it is typically at a scale much broader than the Highway 200 Corridor Plan area.

Information Gaps

1. Access Management

Detailed access management plans are lacking. The East Missoula Corridor Vision and Redevelopment, East Missoula (MT200) Safety Audit, and Missoula College EA have the most detailed information regarding access management.

Information Gaps:

- Location and type of private access points
- Inventory of access that can be closed or combined

2. Mobility

ADA mobility information is not well-detailed in any of the three segments. The Missoula Pedestrian Facilities Master Plan includes an appendix with walking distance buffer maps for a variety of origin/destination locations. Several of the other documents include ADA information, but not specific to this plan area.

Information Gaps:

- Assessment of ADA accessibility needs
- Inventory of existing ADA accessibility features

3. Parking

Existing and future parking demand and supply is not addressed in any of the three segments, with the exception of the East Broadway segment. The Downtown Master

Plan and Missoula College EA provide parking information for the East Broadway segment.

Information Gaps:

- Field review of number and location of vehicles parked in Highway 200 right-of-way
- Count of vehicles parked in railroad right-of-way at Missoula College
- Extent to which floaters use the corridor roadside for parking and their effect on the corridor

4. Transit Options

The Mountain Line plans and studies provide detailed information and maps. Existing transit stops in the plan area will need to be verified.

Information Gaps:

- Confirm most current routes, stops, headways, and schedules
- Inventory bus stop facilities

5. Safety

A major focus of all of the reports is safety, with a particular emphasis on the safety of pedestrians and bicyclists. There is a general lack of information on vehicular safety. Only the East Missoula Segment has a Road Safety Audit. The East Broadway segment safety issues are identified with crash data and other information in existing plans. Information on safety-related issues is lacking in the Sha-Ron/Marshall Segment – the existing plans do not include the area in safety-related map information.

Information Gaps:

- Inventory existing crosswalks
- Identify other pedestrian crossing locations
- Inventory existing turn lanes
- Inventory existing street luminaries
- Number, location, and severity of crashes
- Crash rates
- Pedestrian crashes (if any)
- Bike crashes (if any)
- Consider updating the data in the East Missoula segment (from the Road Safety Audit) as it is now five years old

6. Multi-Modal Connections

The multi-modal connections are the railroad underpass, I-90 on/off-ramps, and connections among bikes, pedestrians, and transit. The Mountain Line studies address bike and pedestrian connections to transit.

Information Gaps:

- No specific gaps in information identified at this time, other than planning for extensions of bike/pedestrian connections from Van Buren Street to Bonner

7. Circulation Issues of All Modes of Transportation

Existing and projected vehicle traffic volumes and related circulation issues are lacking, with the exception of the existing and 2045 projections for vehicle congestion in the Activate Missoula 2045 plan. The East Missoula segment has the most detailed information regarding traffic issues and potential solutions. In all of the reports, the emphasis is on non-motorized circulation. There is little information on vehicular circulation issues.

Information Gaps:

- ADT volumes on Highway 200 should be updated with information available from MDT
- Intersection volume should be collected at critical intersections to evaluate intersection improvement options such as turn lanes or roundabouts, if considered
- Existing queuing information
- Traffic growth rates
- Bike counts from City of Missoula (East Broadway segment only - information gap for the other segments)

8. Infrastructure – Utilities – Right-of-Way

Right-of-way information is lacking, other than in the East Missoula segment where right-of-way encroachment was identified as a problem. There is no specific information on rights-of-way for any

segment. The general location of water, sewer, storm water infrastructure and utilities is included in maps only for the East Broadway segment (in the Downtown Master Plan).

Information Gaps:

- Inventory and map of existing right-of-way in the corridor
- Identification of existing or potential issues with rights-of-way (e.g., such as confusing or missing recorded information, conflicting use, etc.)

9. Environmental Analysis Components

With the exception of the East Missoula segment, socio-economic and demographic information specific to the Highway 200 Corridor Plan area is lacking in existing studies. Activate Missoula 2045 has an urban area-wide map of sensitive areas, and several of the reports include socio-economic information.

Information Gaps:

- Baseline information on the environment and socio-economic conditions of the Plan Area

Technical Analysis

Utilizing the Planning Framework as a foundation, additional detailed analysis was completed that is specific to the corridor Plan Area. This analysis is intended to provide a better understanding of the corridor and to

fill data gaps from the Planning Framework while providing the necessary information for funding applications and identifying opportunities and issues to be addressed during design alternative development. The

analysis is focused on four key topic areas: transportation, right-of-way and utilities, land use, and environmental/Pre-NEPA..



Transportation Analysis

The existing transportation network was evaluated to identify issues related to access management, intersection design, safety,

transit, bicycle and pedestrian facilities, and parking. In addition to evaluating the components individually, it is also important to

evaluate how each of these elements function together. The following information reports our findings from inventory conducted in fall 2019.



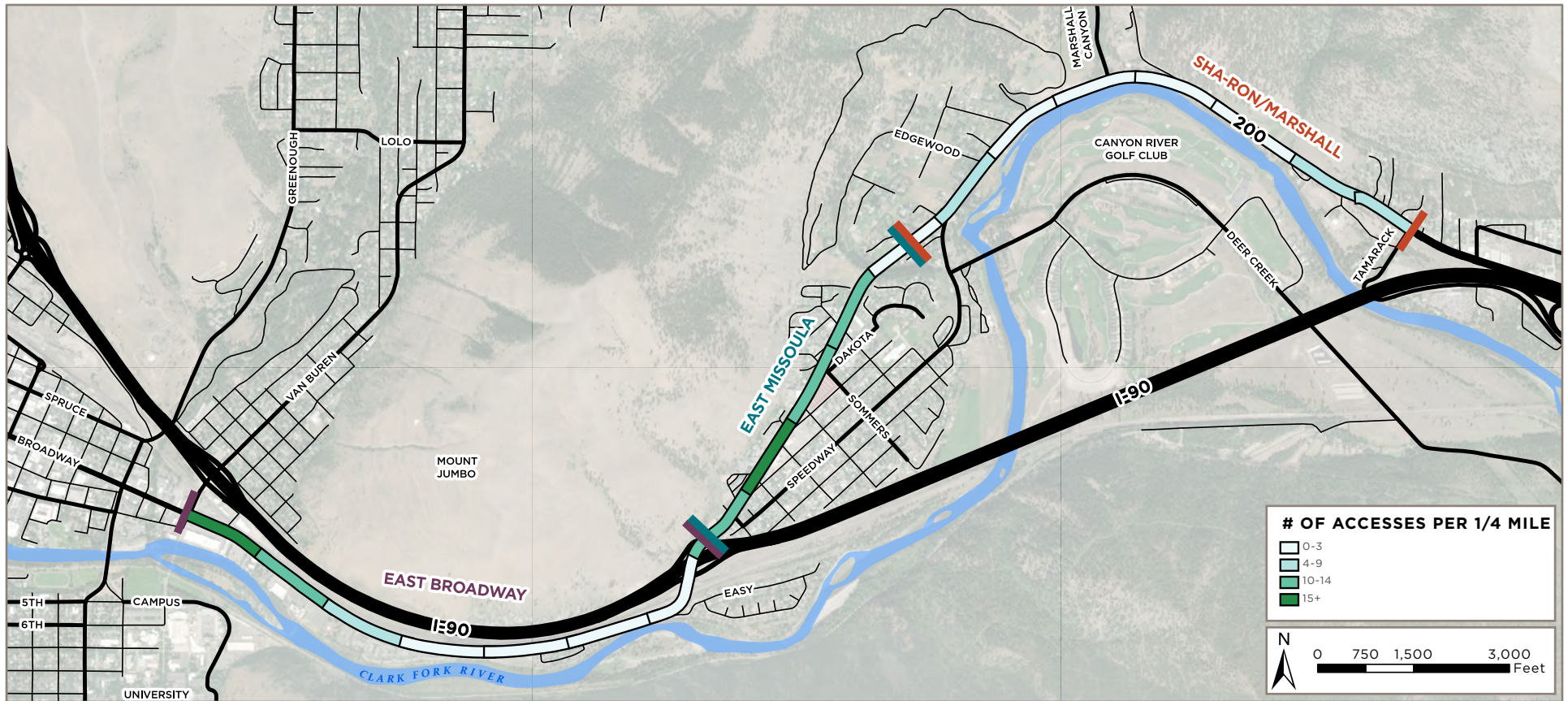


Figure 3-1: Access Points per 1/4 Mile (Data Source: WGM Group)

Access Management

Access along the Highway 200 corridor includes public streets, private residential driveways, commercial driveways and parking. Managing access points and spacing along the corridor can improve the safety, function and overall operation of the roadway. Figure 3-1 shows the number of access points per 1/4 mile generally indicating where access points are concentrated within the corridor. The areas

with a high concentration of access points are adjacent to commercial uses which generate more traffic than residential uses. Reducing the number of access points through the use of curb or other means of access management can improve circulation and safety in these areas. For the areas with a low concentration of access points, access management is likely unnecessary.

East Broadway Segment

Starting with the first corridor segment,

traveling east, there is established curb, gutter, and sidewalk on the south side of the road clearly identifying and defining access points on the south side of the road. On the north side, lay down curb and gutter in front of 1010, 1020, 1032 E. Broadway provides a segment of unrestricted, open access, representing poor access management. Beginning at the location across from the new Missoula College, Highway 200 lacks curb and gutter on the north side of the road through the end of the segment. This results in a large number of vehicles parking

along the railroad.

The primary deficiency in this segment is located on the north side; the long distance of unrestricted access, combined with the parking demand for the apartments and Missoula College, suggests the need to formalize parking lots and consolidate access points.

In the eastern portion of this segment on the north side of the highway, the railroad tracks and I-90 have limited development which minimizes the need for access management.

East Missoula Segment

The middle segment of the project has the highest concentration of access points with the least delineation along the corridor. The lack of curb, gutter, and sidewalk, combined with numerous approaches and large areas of continuously paved property abutting the road result in nearly continual access with few restrictions in places. Some areas have lost all definition of where the road ends and the parking lots begin. For example, Michigan Avenue has little to no delineation

of its right-of-way as it approaches Highway 200 through the Ole's gas station parking lot. Additionally, multiple businesses sharing unrestricted, open access use pull-in parking, creating dangerous maneuvers when backing/ exiting on the segment corridor. There is a need for delineation of lanes, access points, and parking in this area. This may include the consolidation of access points and parking access.

Sha-Ron/Marshall Segment

As the corridor continues east, the land use becomes less dense and accesses are better defined. Many individual homes have larger lots that access side streets, which then access Highway 200 at well-defined intersections. The topography limits access, with the river to the south and the mountain on the north side. Summer recreational river usage along Tamarack Road and at the Sha-Ron fishing access results in a large amount of vehicles parked along the road shoulder. Improved sight distance, formalized parking, and bus service may be needed in this area.

Non-Motorized Mobility

The non-motorized mobility analysis performed an inventory analysis of bicycle and pedestrian facilities, trails, and pedestrian crossings to identify connectivity deficiencies, including ADA and PROWAG compliance. Figure 3-2 shows the existing bicycle and pedestrian facilities in the corridor.

East Broadway Segment

Starting at the beginning of the Plan Area, complete curb, gutter, and a 7-foot attached sidewalk exists from Van Buren Street east to Easy Street, forming a pedestrian route on the south side of the road. Existing sidewalk on the north side extends from Van Buren through the 900 block of Broadway but does not exist through the remainder of this segment as there are no pedestrian generators. Bicycle lanes run in both directions from Van Buren until just west of Easy Street. A trail also exists on the south side of the road, extending east of Missoula College to Easy Street. On the north, the existing railroad underpass is too narrow to facilitate pedestrian or bicycle



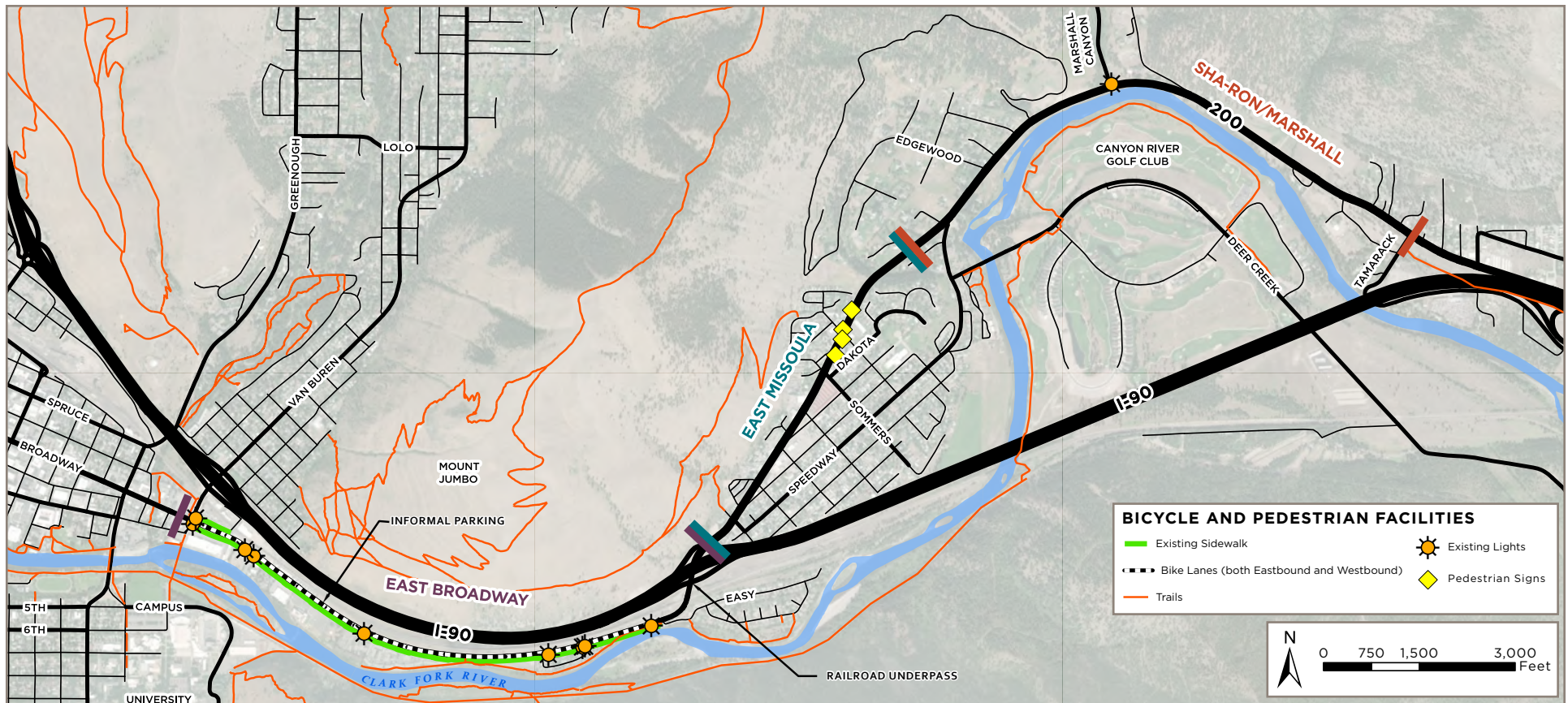


Figure 3-2: Existing Bicycle and Pedestrian Facilities (Data Source: WGM Group)

facilities. With no safe pedestrian or bicycle connection through the interchanges, there is a significant gap in connectivity. This connection is important for linking the East Missoula and Missoula communities. No formal crossings exist from the informal parking and transit stops on the north side and land uses on the south side of the road.

East Missoula Segment

In this segment, Highway 200 acts as a barrier to the East Missoula community, as there are no striped crossings or pedestrian facilities along the roadway. This section of the corridor also lacks any formal bicycle infrastructure. There is no street lighting and limited pedestrian signage along this segment.

Sha-Ron/Marshall Segment

No bicycle or pedestrian infrastructure exists along this corridor segment.

Transit

Mountain Line provides free bus service to all three segments of the subject corridor with bus Route 4. Route 4 provides service Monday through Saturday with one hour headways from approximately 6:15 a.m. to 7:30 p.m. Mountain Line has stated that there is interest in shifting the bus route through East Missoula from Speedway to Highway 200.

The 2015 Bus Stop Master Plan utilizes density of population and employment as criteria for spacing between stops with the goal of maximizing speed, reliability and customer access to the bus stops. These guidelines suggest that either high density (1/4 mile) or medium density (1/2 mile) spacing is appropriate for this corridor. The high density 1/4 mile spacing was used for the East Broadway and East Missoula segments with the medium density 1/2 mile spacing being used for the Sha-Ron/Marshall segment.

All of the stop locations are provided with the same service hours and headways throughout all segments of the project; however, the amenities provided are dependent upon the ridership at each location. This is identified by the tier system for each stop that in general includes the following amenities:

- Tier 1 – Bus Shelter with 6-8 ft. bench and Bus Stop Signage
- Tier 2 – 6-8 ft. Bench and Bus Stop Signage
- Tier 3 – Bus Stop Signage

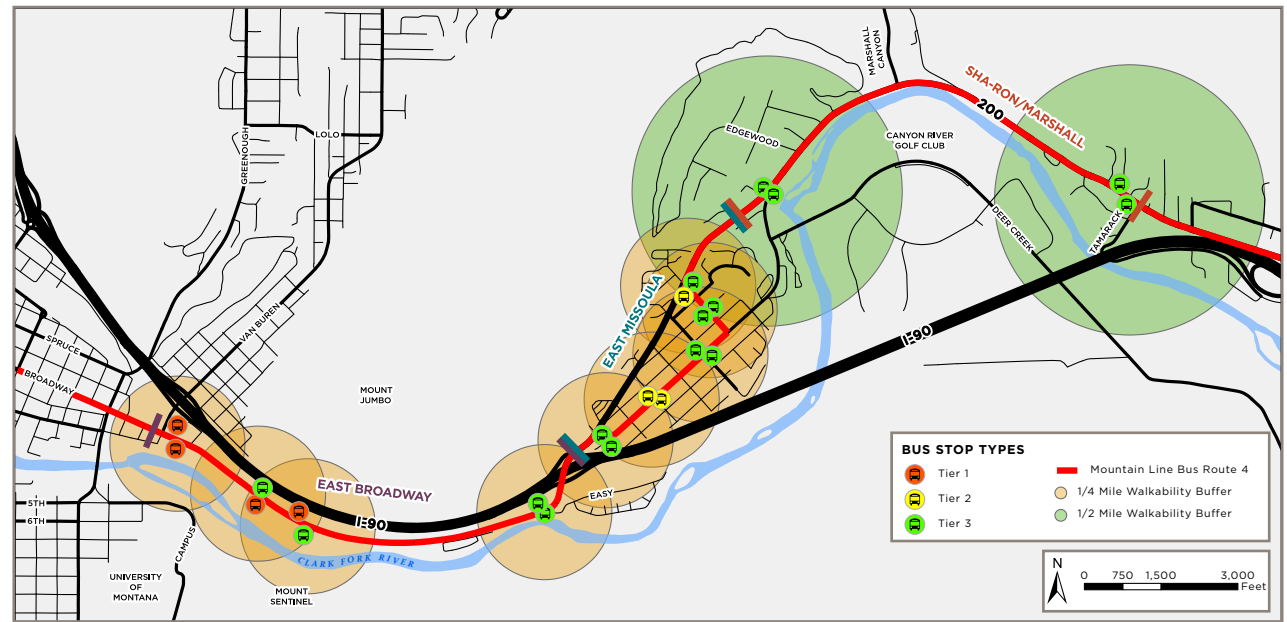


Figure 3-3: Transit (Data Source: WGM Group)

Stop locations were mapped and classified based on their amenities. Spacing criteria was then utilized to show the 1/4 and 1/2 mile influence areas for each of the current bus stop locations as shown in Figure 3-3. This clearly shows that the East Missoula segment is well served with the existing bus stops, however gaps exist in both the East Broadway and Sha-Ron/Marshall Segments. These gaps may however be due to the lack of demand for service in these areas given the current development levels. As development occurs

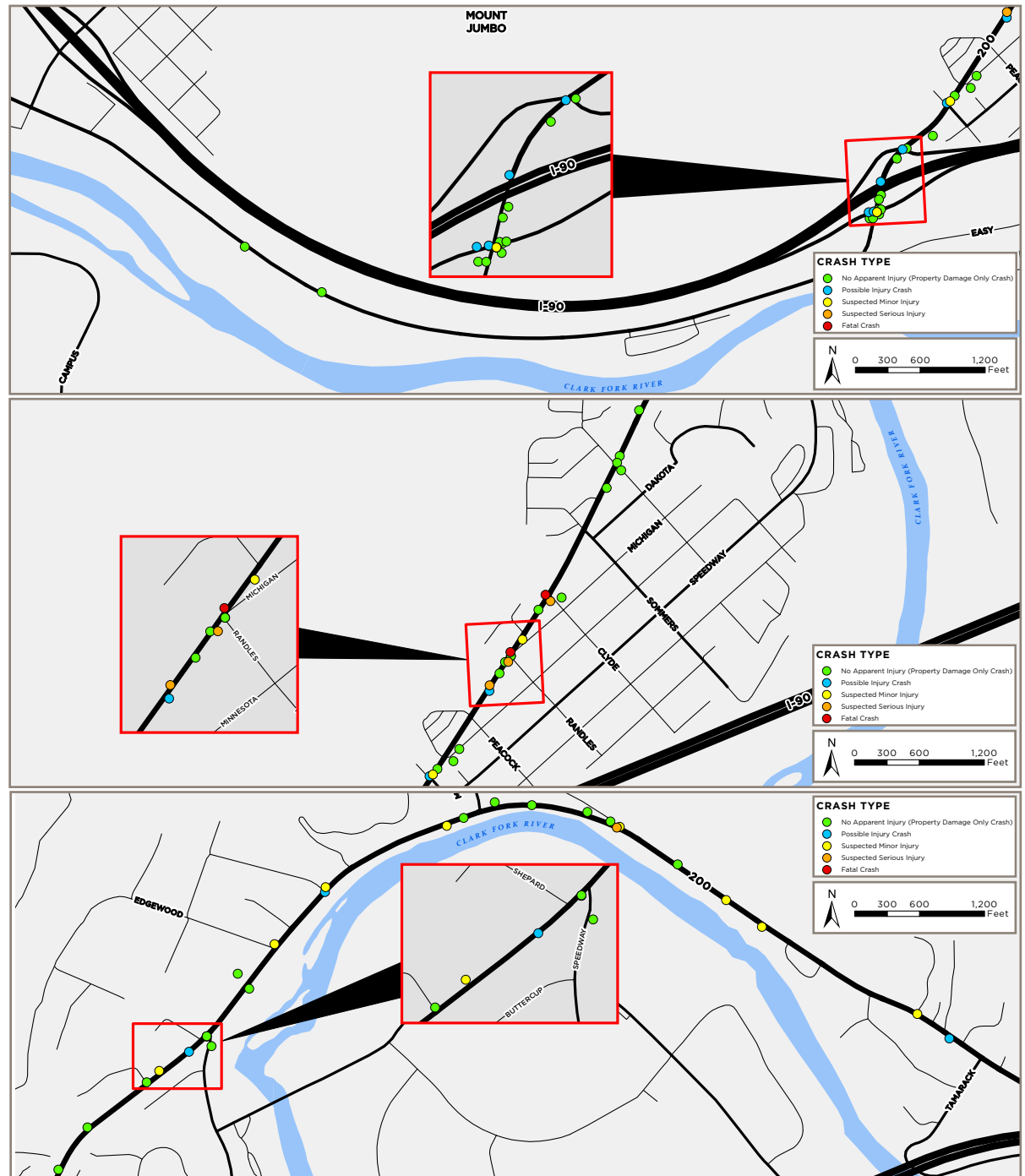
in these areas and reductions in barriers (sidewalks, ADA facilities, crosswalks, etc.) to access the bus stops occur, additional ridership may spur the need for new stops in areas of deficient service. Reduction in service headways (i.e., more frequent bus service) may become necessary as travel demand increases between Missoula and East Missoula. The convenience provided by reduced headways might also result in increased ridership for current residents.

Safety

MDT provided WGM Group with updated traffic crash data for reported crashes within the study area for the ten-year period from January 2009 through December 2018. WGM Group filtered these crashes to eliminate those related to icy road conditions, impaired drivers, and animals in the roadway as these crashes are difficult to mitigate through design, leaving the 74 crashes shown in Figures 3-4 though 3-6. As with the former MDT road safety audit, the two areas with the highest concentration of reported crashes are the I-90 eastbound ramps intersection, and the area between Highton and Clyde Streets in East Missoula.

The concerns and recommendations presented in the Road Safety Audit and discussed in the Planning Framework continue to be appropriate. In addition, the study corridor would benefit from well delineated and appropriately signed pedestrian crosswalks at key locations in East Missoula, as well as potentially at locations between Van Buren Street and Easy Street where parking is located on the north side of the street (primarily at Missoula College and at the apartment complexes east of Missoula College). These crossings could be made safer still with the addition of rectangular rapid flashing beacons (RRFBs) to notify drivers that pedestrians are actively crossing the highway.

Figures 3-4, 3-5, and 3-6, top to bottom: Vehicle Crashes 2009-2018, East Broadway Segment; Vehicle Crashes 2009-2018, East Missoula Segment; Vehicle Crashes 2009-2018, Sha-Ron/ Marshall Segment. (Data Source: MDT)



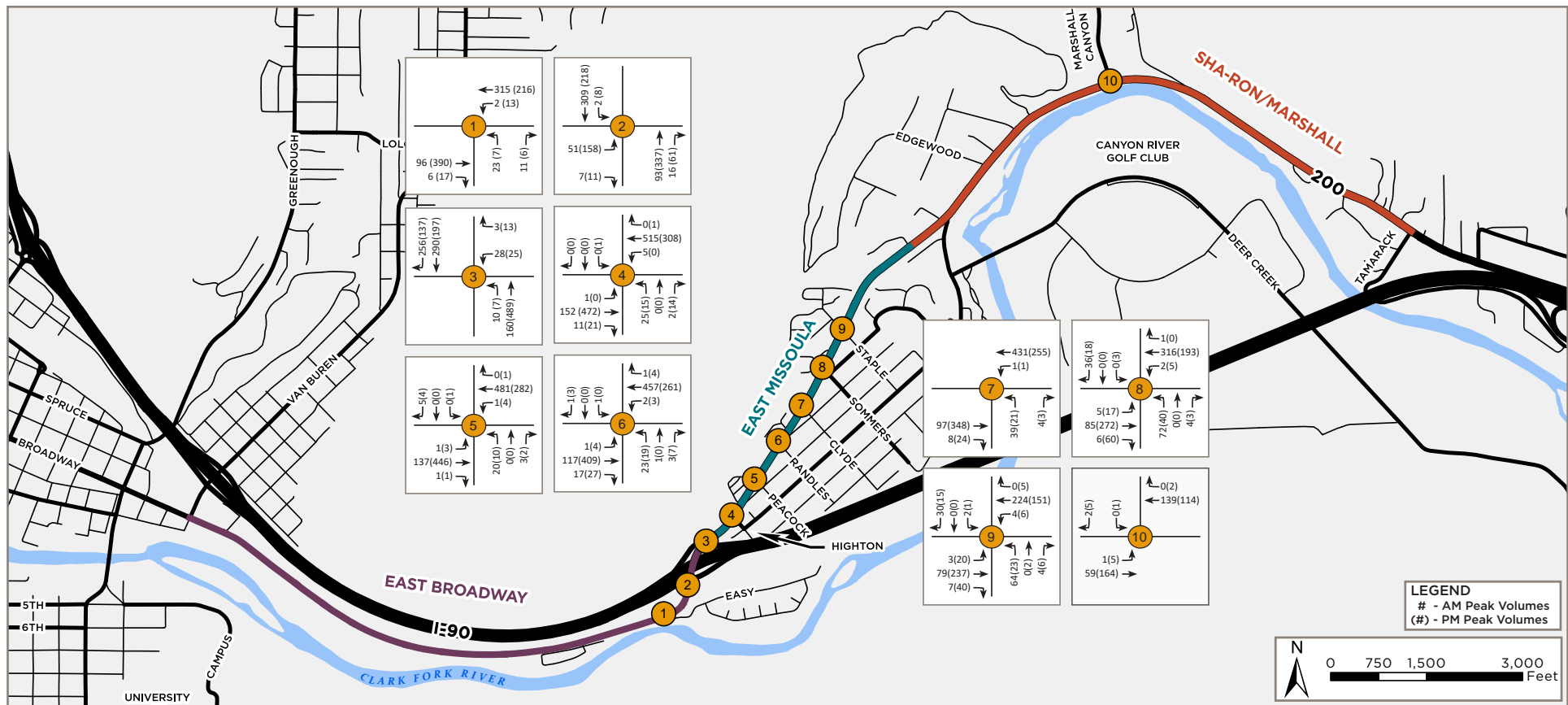


Figure 3-7: Existing Traffic Volumes (Data Source: MMPO)

Intersections

Existing traffic volumes were counted at 10 key intersections in the study area. These counts were conducted on Tuesday, Wednesday, and Thursday, November 5, 6, and 7, 2019. The morning counts were conducted from 7 to 9 AM and the afternoon counts were conducted from 4 to 6 PM. This data was then analyzed to identify the AM and PM existing “peak hour” traffic volumes for each key intersection

illustrated in Figure 3-7. (The Van Buren Street intersection was also counted, but not included in the following analysis because it is an outlier within the study area – a signalized intersection in a highly urbanized area of Missoula on the fringe of the study area far from any other study intersection, rather than an unsignalized intersection in the East Missoula area bunched with the other study intersections.)

Each of the key intersections operate as a two-way stop, with stop-sign control on the side streets, and no control on Highway 200. With two exceptions, all approaches at each of the key intersections are comprised of a single lane. The two exceptions are at Easy Street, where eastbound Highway 200 provides a separate right-turn lane and westbound Highway 200 a separate left-turn lane; and

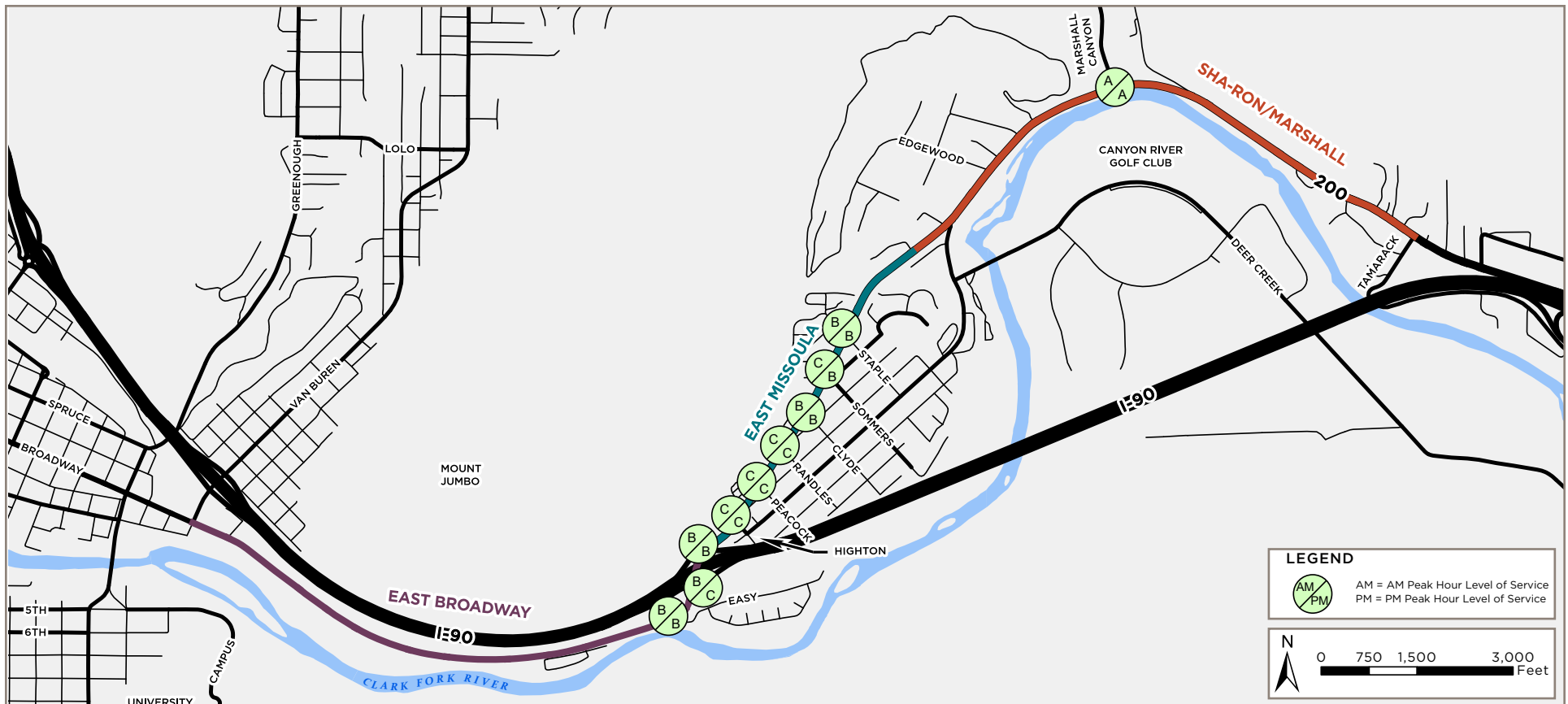


Figure 3-8: Existing Intersection Level of Service (Data Source: WGM Group)

at the Westbound I-90 ramps where the westbound ramp approach provides two lanes, one for left-turns and one for right-turns.

Capacity analysis was conducted for each of the key intersections to model intersection operations and determine the level of service (LOS) provided at each location under prevailing 2019 existing conditions. Figure 3-8

summarizes the existing conditions analysis, showing the LOS on the stop-controlled side-street approaches during the AM and PM peak hours. LOS for unsignalized intersections is determined by the amount of “control delay” experienced by drivers on the stop-controlled side-street approaches. Control delay is defined as the total delay experienced by a driver and includes initial deceleration delay, queue move-

up time, stopped delay, and final acceleration delay. The key feature contributing to control delay is the number of “acceptable gaps” in the main street traffic, which in turn is influenced primarily by traffic volume. LOS values range from A to F with A being the best and F being the worst.

As shown in Figure 3-8, the computer model

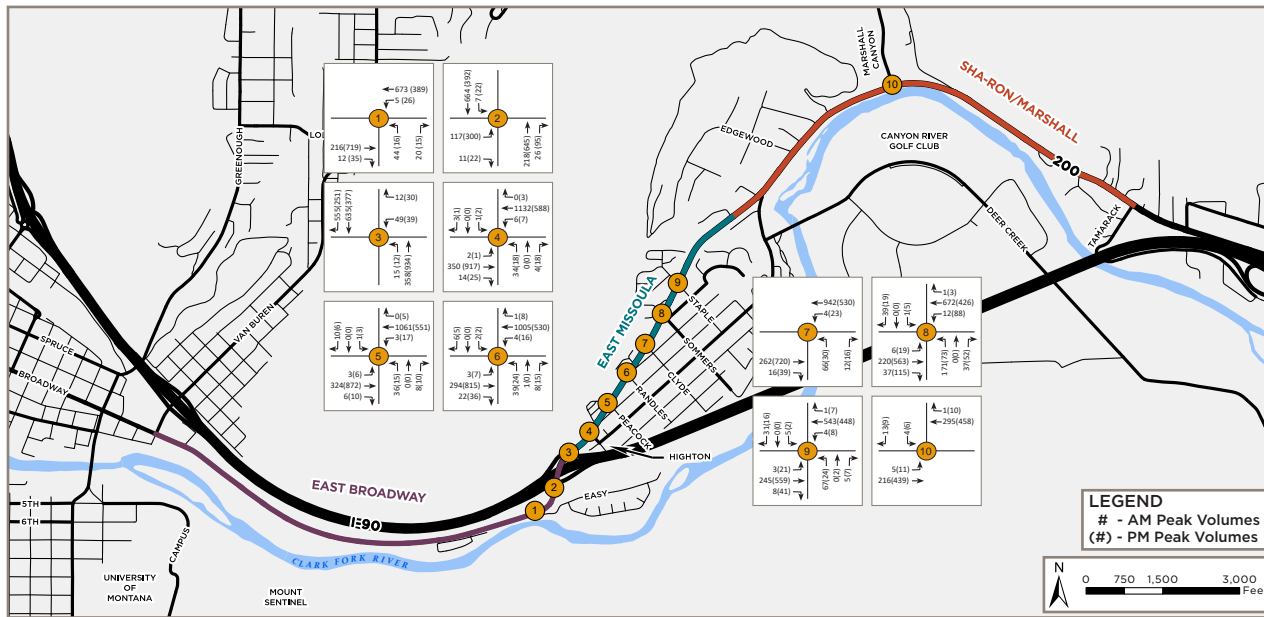


Figure 3-9: Future Traffic Volumes (Data Source: WGM Group)

analysis suggests that each of the key intersections currently operate at LOS C or better during both the AM and PM peak hours. This is considered an acceptable service level.

As part of a concurrent exercise conducted as part of this study, forecasts were made for growth changes anticipated within the study area over the next 20 years (see Figure 3-20). These changes will each result in increased traffic volumes accessing Highway 200 from the side streets and traveling through the study area. Peak hour traffic generation estimates were prepared for each of these land uses, and distributed throughout the roadway network. In addition, a background growth rate of two percent per year is anticipated for through traffic on Highway 200 and all traffic on the I-90 ramps. This two percent annual growth reflects the impact of general increases in development and population throughout the region, and is typical of a facility such as Highway 200. Together, these volume increases result in the 20-year planning horizon traffic volumes shown in Figure 3-9.

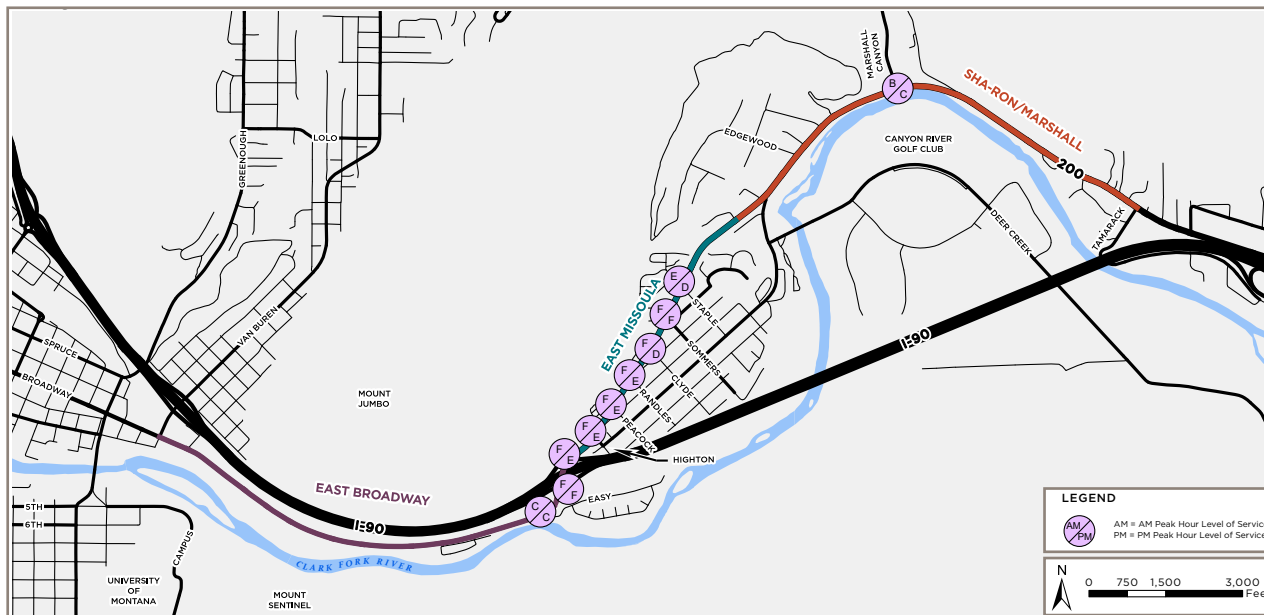


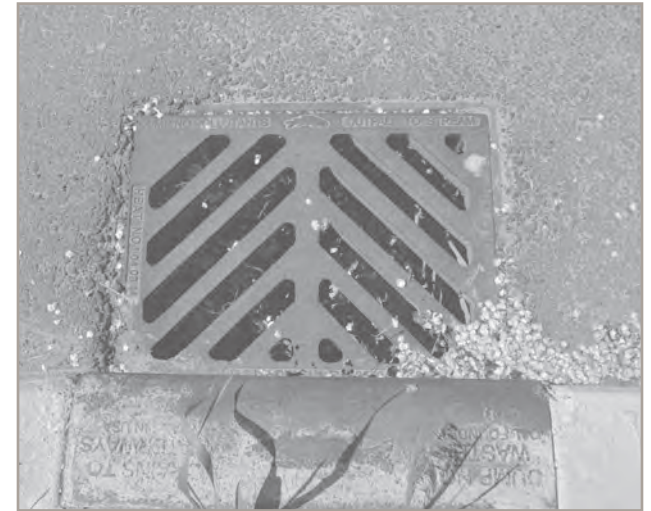
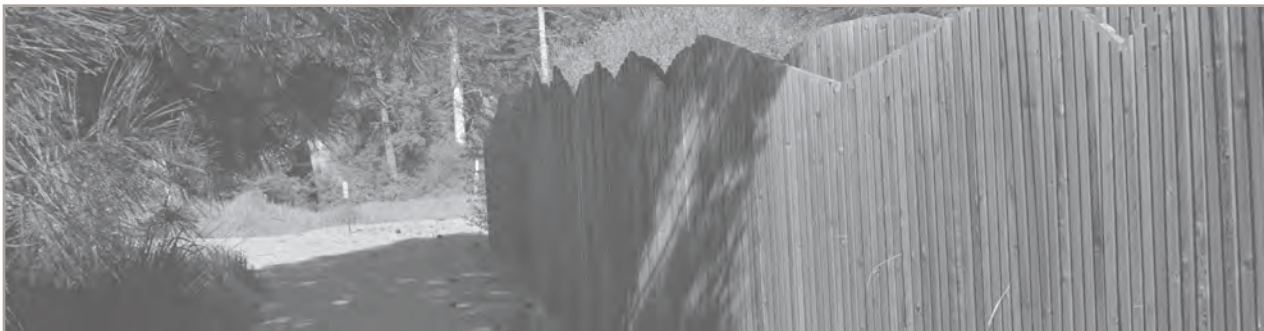
Figure 3-10: Future Intersection Level of Service (Data Source: WGM Group)

The intersection capacity analysis calculations were repeated using the future traffic volume estimates. The results of this future planning analysis, as illustrated in Figure 3-10, predict poor LOS E or F during one or both peak hours for each of the key intersections with the exceptions of Easy Street and Marshall Canyon Road. This drop in LOS indicates that intersection capacity improvements should be considered at these locations.

Right-of-Way & Utilities Analysis

The existing right-of-way and utility infrastructure were analyzed to identify any deficiencies and assess capacity relative to future growth and anticipated transportation

needs. The utility analysis includes the review of sewer, water, storm water, and electrical, gas, and communications.



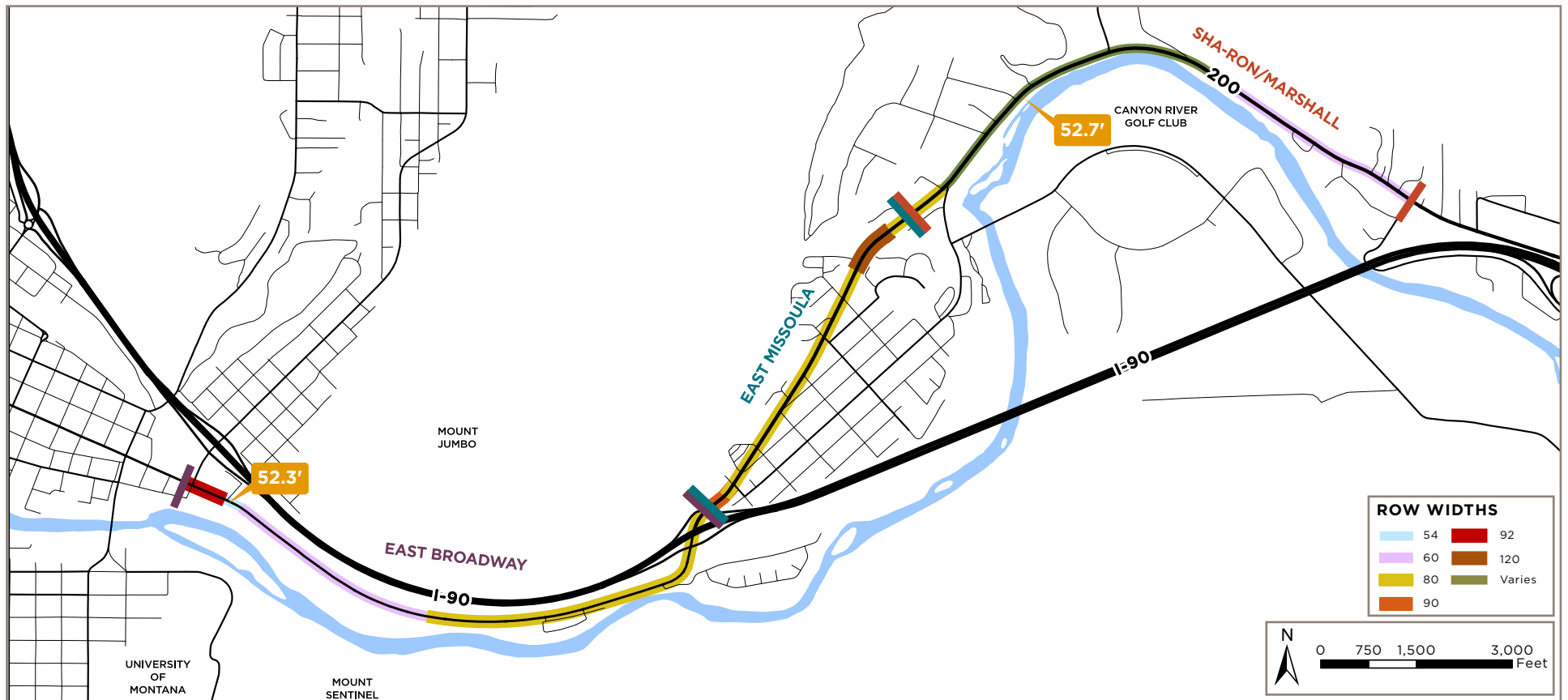


Figure 3-11: Existing Right-of-Way Widths (Data Source: WGM Group/Missoula County)

Right-of-Way

The existing width of right-of-way (ROW) was researched to determine the area available for improvements. ROW research included GIS analysis and review of existing surveys along the corridor. A complete survey of the right-of-way was not completed as part of this project.

The ROW for Highway 200 through the Plan Area varies in width as shown in Figure 3-11.

In the East Broadway Segment, the right-of-way is mostly 60 feet or 80 feet wide. East of Van Buren Street, there is a short section where the ROW is 92 wide and a short section where it is less than 53 feet wide. Through the East Missoula Segment, the ROW is mostly 80 feet wide with a 120 foot wide section near the eastern end of the Segment. Through the Sha-Ron/Marshall Segment, a large portion of the ROW is approximately 60 feet wide with some variation and the narrowest point being 52.7 feet wide. Along the eastern portion of the

segment the ROW becomes 60 feet wide.

A typical ROW width for a minor arterial street similar to Highway 200 through the Plan Area might be 80 to 100 feet, depending on the road section. Without acquiring additional ROW, the limited existing ROW through the Plan Area will restrict the type of road improvements that can be constructed for a complete street.

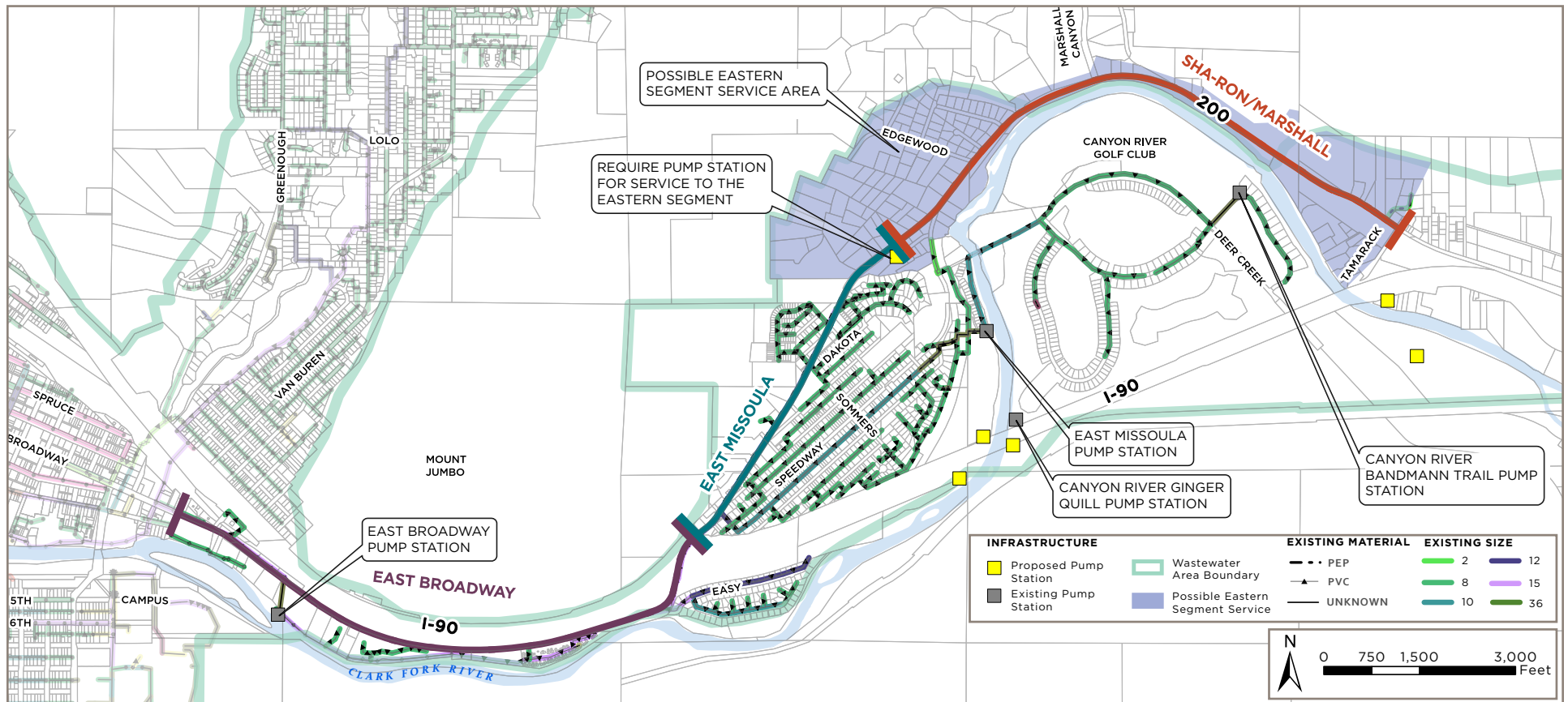


Figure 3-12: Sewer Infrastructure (Data Source: City of Missoula)

Sewer

Sewer infrastructure for the plan is shown in Figure 3-12. The Plan Area is within the City of Missoula Wastewater Service Boundary. In general, sewer service within the East

Broadway Segment and East Missoula Segment is provided by the City of Missoula and the Sha-Ron/Marshall Segment is served by individual on-site sewer systems. The City of Missoula Sewer System includes four pump stations within the Plan Area: East Broadway; East Missoula; Canyon River Bandmann Trail; and Canyon River Ginger Quill. An existing

15-inch sewer main within the Highway 200 right-of-way conveys wastewater from the East Missoula area to the City of Missoula. Depending on the type and level of future development within the Plan Area, this main may reach capacity in the future. If the Sha-Ron/Marshall Segment is to be served by City sewer, a new pump station and force main

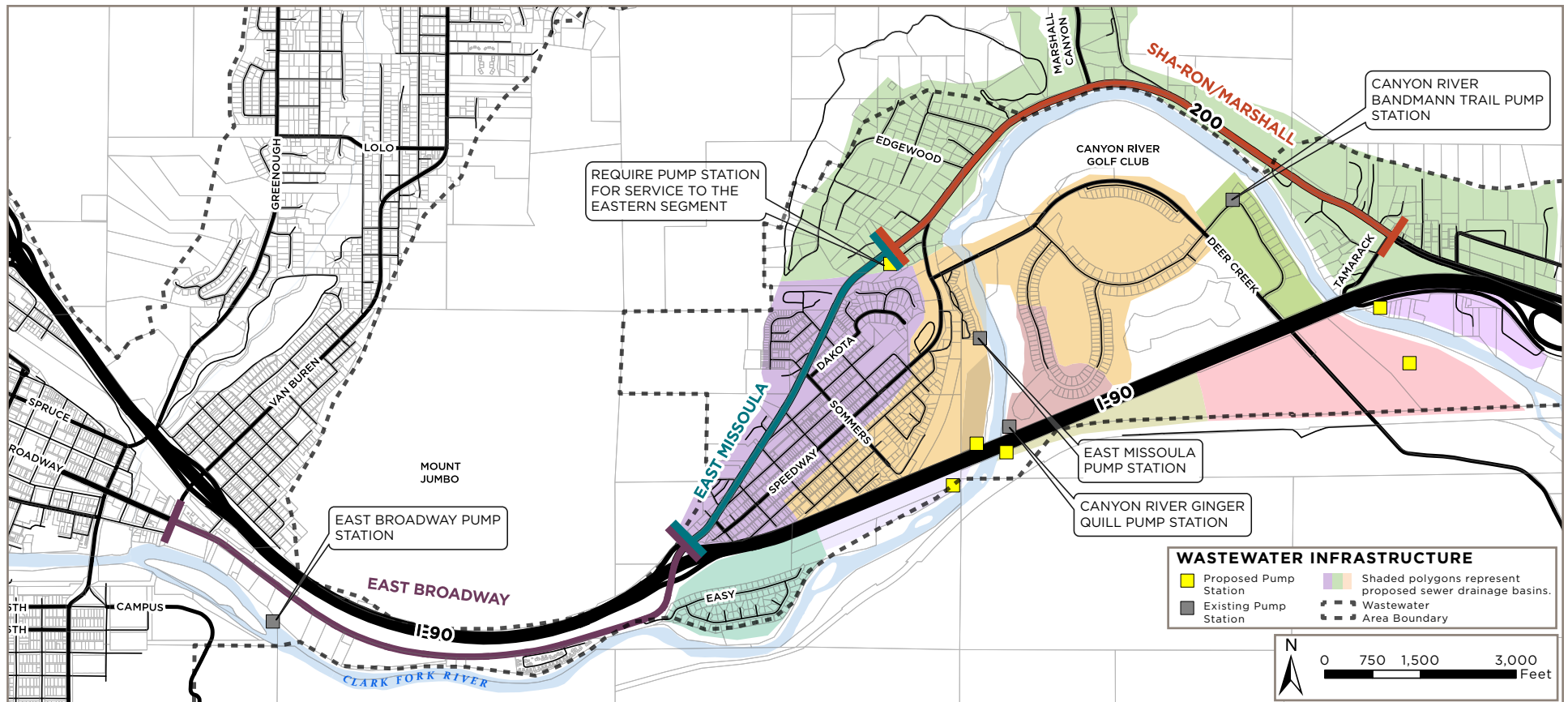


Figure 3-13: Sewer Drainage Basins (Data Source: WGM Group/City of Missoula)

would be required for this area. The force main would likely be located within the Highway 200 right-of-way. As designs are completed for Highway 200 surface improvements, consideration should be given to allow a

corridor for a future force main. Figure 3-13 shows the drainage basins for sewer collection and associated pump stations that may be required for service. The City of Missoula Public Works Department should be formally

notified that future surface improvements are planned within the Highway 200 right-of-way so they can further evaluate the capacity of their sewer system and plan for any necessary improvements.

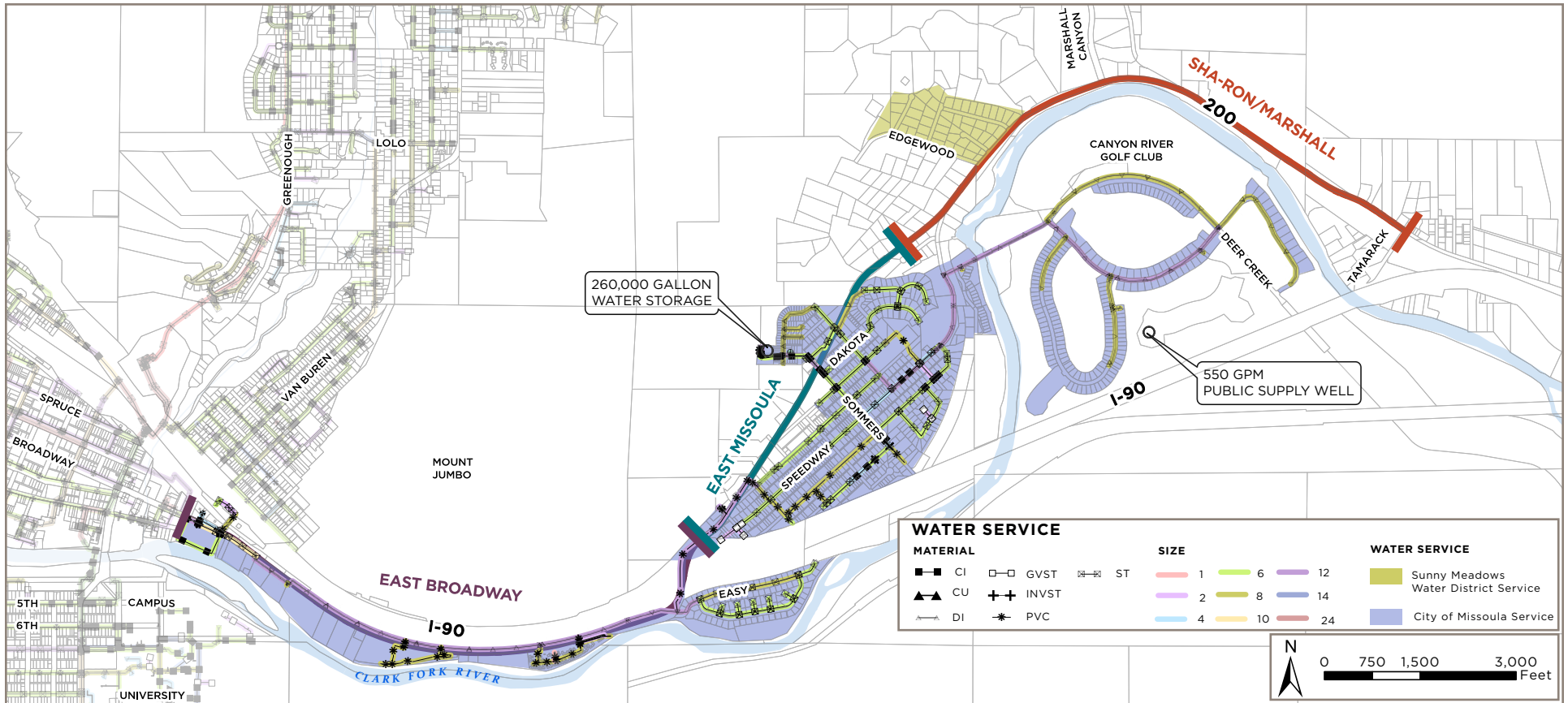


Figure 3-14: Existing Water Infrastructure (Data Source: City of Missoula)

Water

Water infrastructure for the plan area is shown in Figure 3-14. Public water supply within the Plan Area is provided by either the City of Missoula, private individual wells, or a County Water District. In general, the East Broadway Segment and East Missoula Segment are served by the City of Missoula and the Sha-Ron/Marshall Segment is served by either

the Sunny Meadows Water District or private individual wells.

The City of Missoula water system is supplied by multiple groundwater wells, including a 550 gpm well in the Canyon River development and 260,000 gallons of elevated storage in East Missoula. An existing 12-inch water main located within the Highway 200 right-of-way extends from the western part of East Missoula to the City of Missoula; however, there is no water main within the Highway 200 right-of-

way through East Missoula. City static water pressure in the East Missoula area ranges from 50 psi to 90 psi. Several fire hydrants are located off the existing water mains. Flow tests on these hydrants range from 1,500 gpm to 3,000 gpm. The City of Missoula water system likely has capacity to serve additional development within the Plan Area. Anticipated infrastructure within the Highway 200 right-of-way includes extension of the existing 12" main to the east to improve supply and distribution. The City of Missoula Public Works Department

should be formally notified that future surface improvements are planned within the Highway 200 right-of-way so they can further evaluate the capacity of their water system and plan for any necessary improvements.

The Sunny Meadows Water District serves approximately 54 residential lots between East Missoula and Marshall Canyon Road. This water system is supplied by two public supply wells, each producing about 100 gpm and an elevated 136,000-gallon storage reservoir. This

system is designed to serve the residential lots within the water district and likely does not have additional capacity for large scale expansion.

Electrical, Gas, and Communications

Electric and gas service for the Plan Area is provided by NorthWestern Energy. Electrical service in East Missoula is generally provided with overhead lines while the newer residential areas are served with underground lines. Existing gas mains are located throughout the Plan Area with the gas main along Highway 200 being a four-inch line. In addition to the existing NorthWestern Energy gas and electric lines, an existing petroleum line, owned by the Yellowstone Pipeline Company, crosses the Plan Area from east to west. This pipeline is within an existing easement and is likely not feasible to relocate.

There are several communication providers in the Plan Area that have overhead and/or buried lines including CenturyLink, Charter Communications Inc., Blackfoot Communication, and AT&T. There are fiber broadband lines along Highway 200 that will



need to be considered if the road grade is changed with future improvements.

Existing utilities within the Highway 200 right-of-way will likely need to be relocated with future surface improvements. NorthWestern Energy and other service providers should be formally notified that future surface improvements are planned within the Highway 200 right-of-way so they can further evaluate the capacity of their system and plan for any necessary improvements.

Storm Water

Future road improvements within the Highway 200 right-of-way will need to evaluate storm water collection, disposal, and treatment alternatives. There are no regional storm drain collection or treatment systems serving the Plan Area that could be utilized. Current storm water management is primarily achieved using individual infiltration sumps dispersed throughout the Plan Area as shown in Figure 3-15. Soil maps published by the Natural Resources Conservation Service (NRCS) indicate that the majority of the Plan Area contains gravelly loam soils with a few isolated pockets of silty clay. The widespread use of sumps and dominant gravelly soils indicate that conditions are likely conducive to the use of infiltration practices for storm water management

The Plan Area lies within the boundary of the City of Missoula and Missoula County small Municipal Separate Storm Sewer System (MS4). The MS4 program is derived from the Clean Water Act and it is enforced through DEQ's General Permit for Storm Water Discharges Associated with Small MS4s. New projects that create greater than one acre of disturbance are required to provide permanent post-construction best management practices (BMPs) to treat storm water runoff. Further, to help avoid causing or exacerbating storm drainage issues, both City and County regulations typically require projects to control runoff peak flows by providing storage systems. The City has recently created a city-wide storm water utility to help address storm water

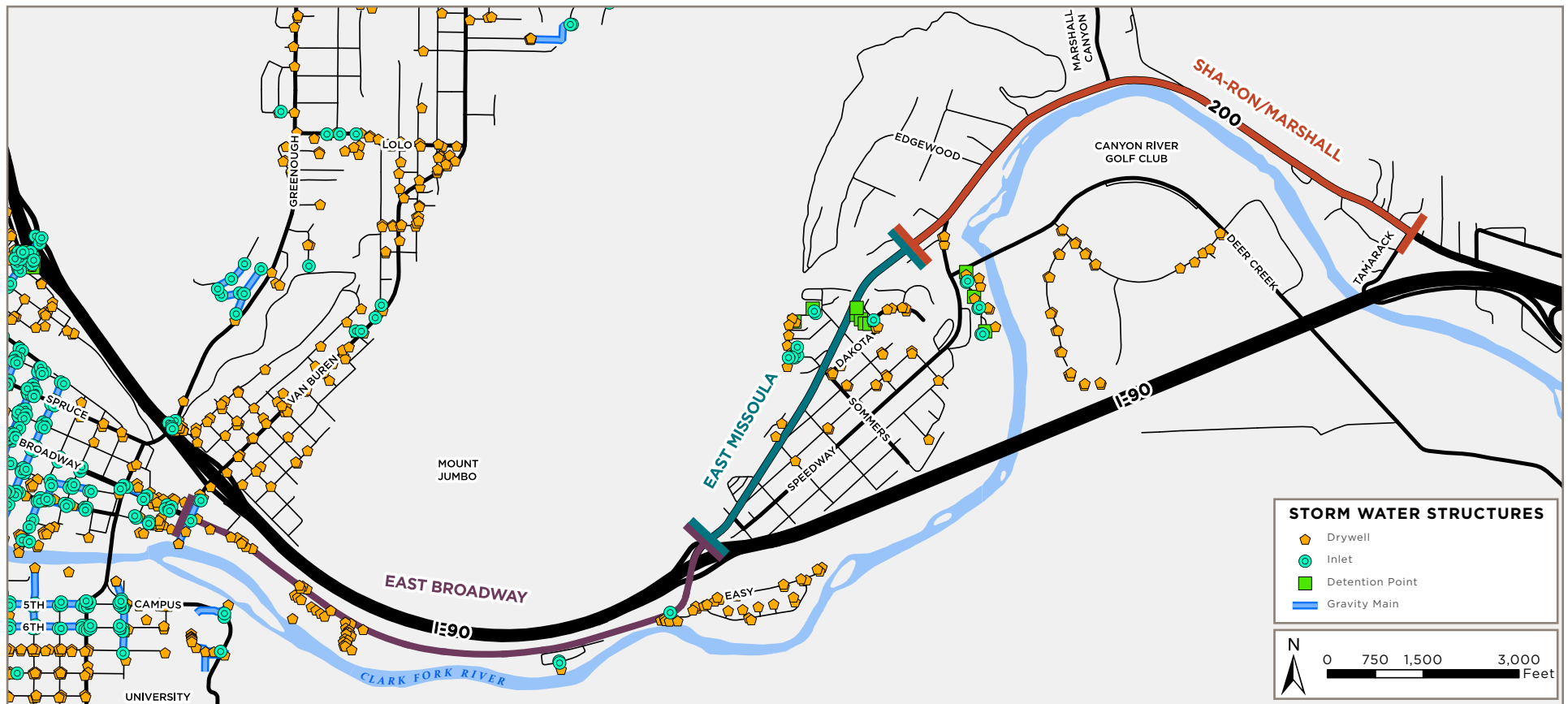


Figure 3-15: Storm Water Structures (Data Source: City of Missoula)

management, satisfy requirements of the MS4 program, and assist in maintaining public storm water systems. The portions of the Plan Area that are within the City limits are assessed a fee for the City Storm Water Utility.

The standard City/County drywell design is

generally the preferred method for storm water management in the Missoula area because it is cost effective, space efficient, and can meet all current regulatory requirements. If treatment for larger drainage areas is necessary, storm drain systems and centralized dry infiltration ponds may also be a potential solution for

the Plan Area. A detailed investigation of soils and depth to high groundwater elevation to validate soil infiltration capabilities and refine storm water management alternatives is recommended for any future improvement plans.

Land Use Analysis

The land use analysis evaluated the land capability and suitability to determine the potential for future development. The physical capability analysis included evaluating slopes and floodplain. Further analysis of the land

that was determined to be physically capable took into consideration the cultural suitability including ownership, the growth policy recommendations, expectations for infill development, and sewer and water service.



Slopes

Slopes were evaluated to determine the buildable areas in the Plan Area. Areas with slopes over 25% are considered not buildable. Special considerations are needed for building on slopes over 15%. Areas with slopes under 15% are desirable for building. Slopes of 8% or less allow for road infrastructure to be built at any location while minimizing cut and fill. Figure 3-16 shows the slopes in the Plan Area and flow arrows generally depicting the direction water will drain.

East Missoula is located in the valley between Mount Jumbo and Mount Sentinel. Much of the land containing slopes over 25% is in public ownership. Larger parcels of land held in private ownership exist North of Zaugg Drive and west of Tremper Drive, however, approximately half of the acreage in this area contains steep slopes and is not buildable. The land at the base of Mount Sentinel is constrained by Interstate 90 and the Clark Fork River, leaving minimal acreage available for development. Larger parcels of vacant land exist off of Deer Creek Road that are within the 0-15% slope range. These parcels could be developed in the future, though development may be limited due to other contributing factors such as the Deer Creek Shooting Center. There is private land on the northern boundary of the Plan Area, accessed off of Old Marshall Grade with slopes in excess of 15%.

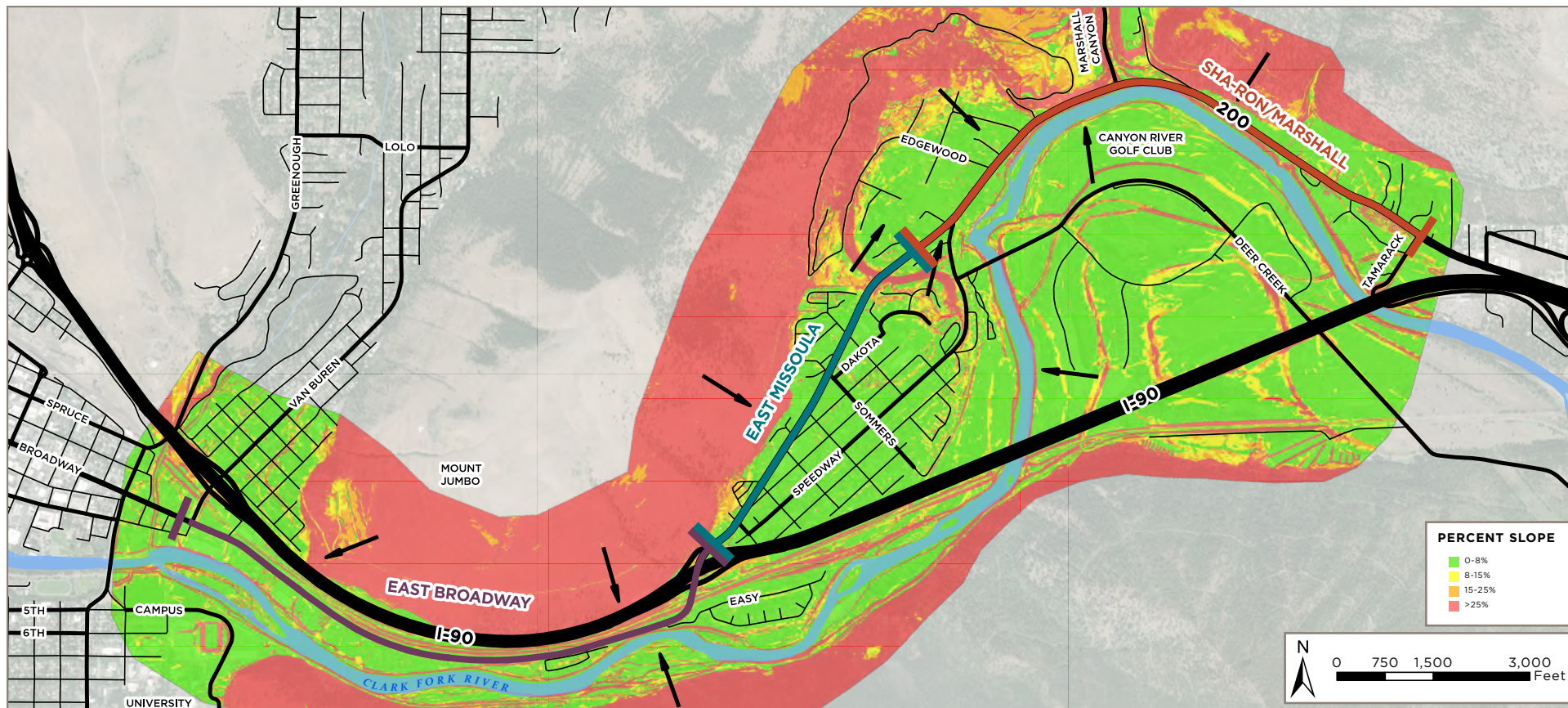


Figure 3-16: Slopes (Data Source: Missoula County)

Generally, these parcels of land are developed with one single-family home per parcel. Further development of these parcels is not anticipated based on the slopes.

The Highway 200 corridor is relatively flat with the exception of Brickyard Hill located east of Staple Street and west of Brickyard Road. At

Brickyard Hill, there are steep slopes on both sides of Highway 200 that may affect design options in this area because of limitations in the width of the street section.

Much of the Sha-Ron/Marshall Segment is located directly adjacent to the Clark Fork River with the shoulder sloping towards the

river. Between Old Marshall Grade Road and Marshall Canyon Road there is a large cut on the north side of the road. This area is constrained by the slope on the north side of the road and the river bank on the south side of the road. This could limit the width of the road section and additional amenities such as a trail.

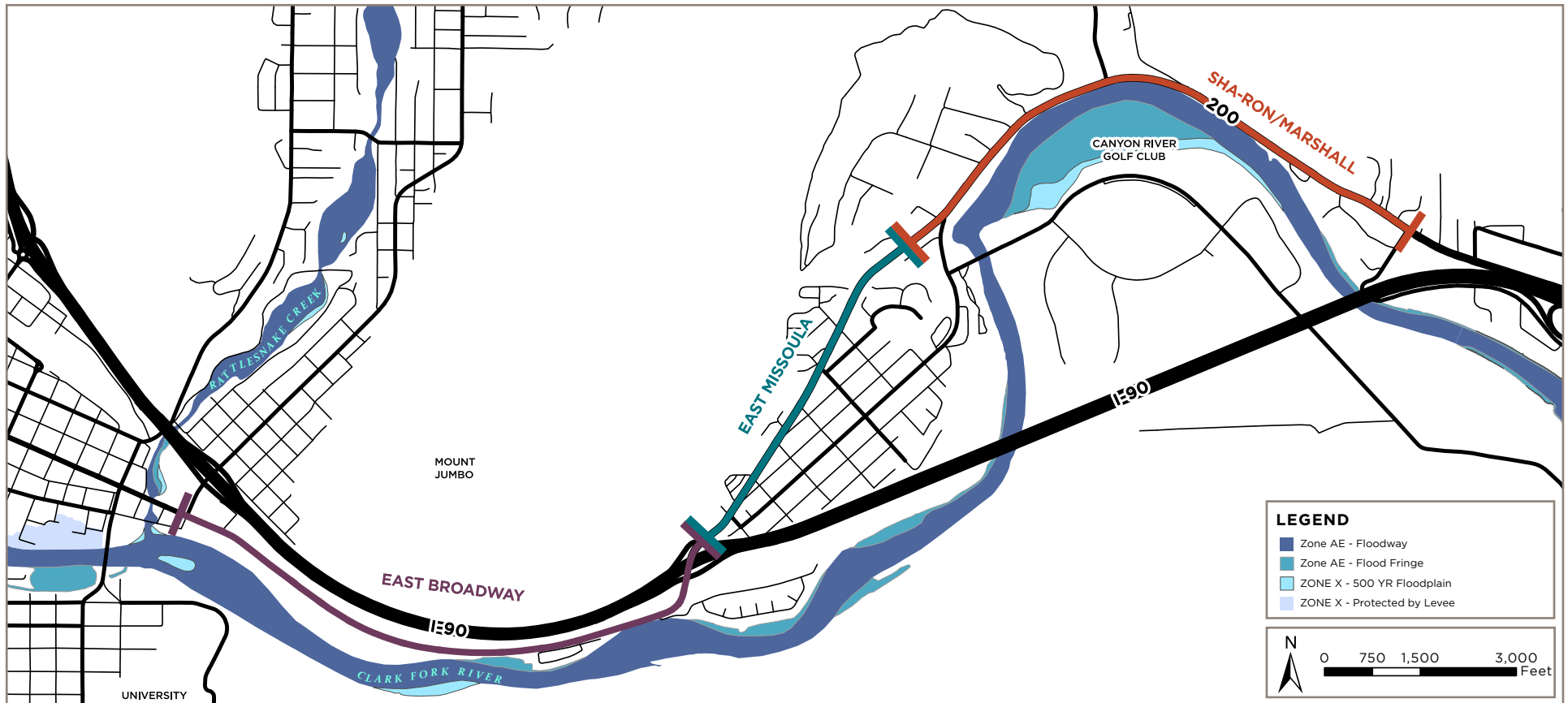


Figure 3-17: Floodplain (Data Source: Missoula County)

Floodplain

The Plan Area contains portions of the regulatory floodplain for the Clark Fork River, as shown in Figure 3-17. The mapped floodplain contains 100-year Zone AE (with floodway and flood fringe) and 500-year (Zone X)

designations. Residential and commercial development is heavily restricted in the Zone AE flood fringe and prohibited in Zone AE floodway. However, utility, transportation, and recreation infrastructure is typically allowed in the Zone AE flood fringe if it does not affect floodplain functions and follows applicable floodplain design standards.

The mapped floodplain is generally contained within the banks of the river; however, a large area of land south of the main river bend is within Zone AE and Zone X. This property has already been developed with the Canyon River Golf Course and redevelopment of this property is unlikely.

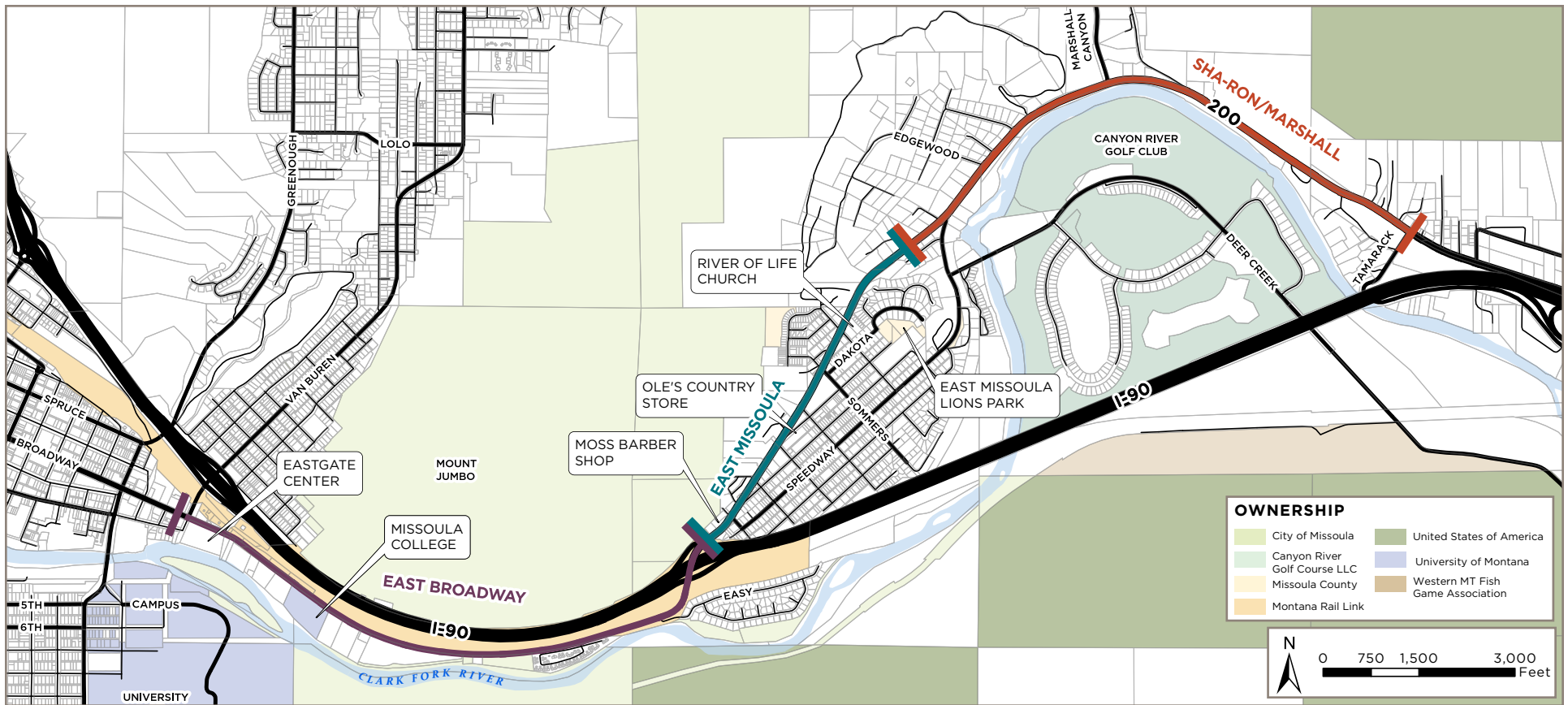


Figure 3-18: Major Public Land Owners (Data Source: Missoula County)

Ownership

Ownership was evaluated to identify the lands on public ownership and other large parcel property owners. These are shown in Figure 3-18. The existing developed areas in East Missoula are bordered by public lands either owned by the City of Missoula or the Forest Service. The City owns much of Mount Jumbo, and the Forest Service owns most of Mount Sentinel. The City owns a stretch of property at the base of Mount Sentinel where the Kim

Williams Trail has been built. Montana Rail Link operates a rail line running from Bonner to Missoula. The rail is located south of I-90 and north of the Kim Williams Trail. Other major landowners in East Missoula include Canyon River Golf Course LLC, Missoula County, Robert Deschamps, and Albert and Beverly Bellusci. The Canyon River Golf Course is located south of the river and north of I-90 and consists of 275 acres which is developed as a public golf course. Missoula County owns several park properties in the area. The Lion's Club

helped develop and maintain the 3.5-acre park northeast of the school, known as the East Missoula Lions Park. Albert and Beverly Bellusci own 97 acres on the Mount Jumbo hillside. This property is not currently developed. Robert Deschamps owns approximately 89 acres west of Marshall Canyon Road; all but 15.5 acres are held in a conservation easement with Five Valleys Land Trust. Five Valleys Land Trust also holds a conservation easement on land owned by the City located on the west side of the Plan Area.

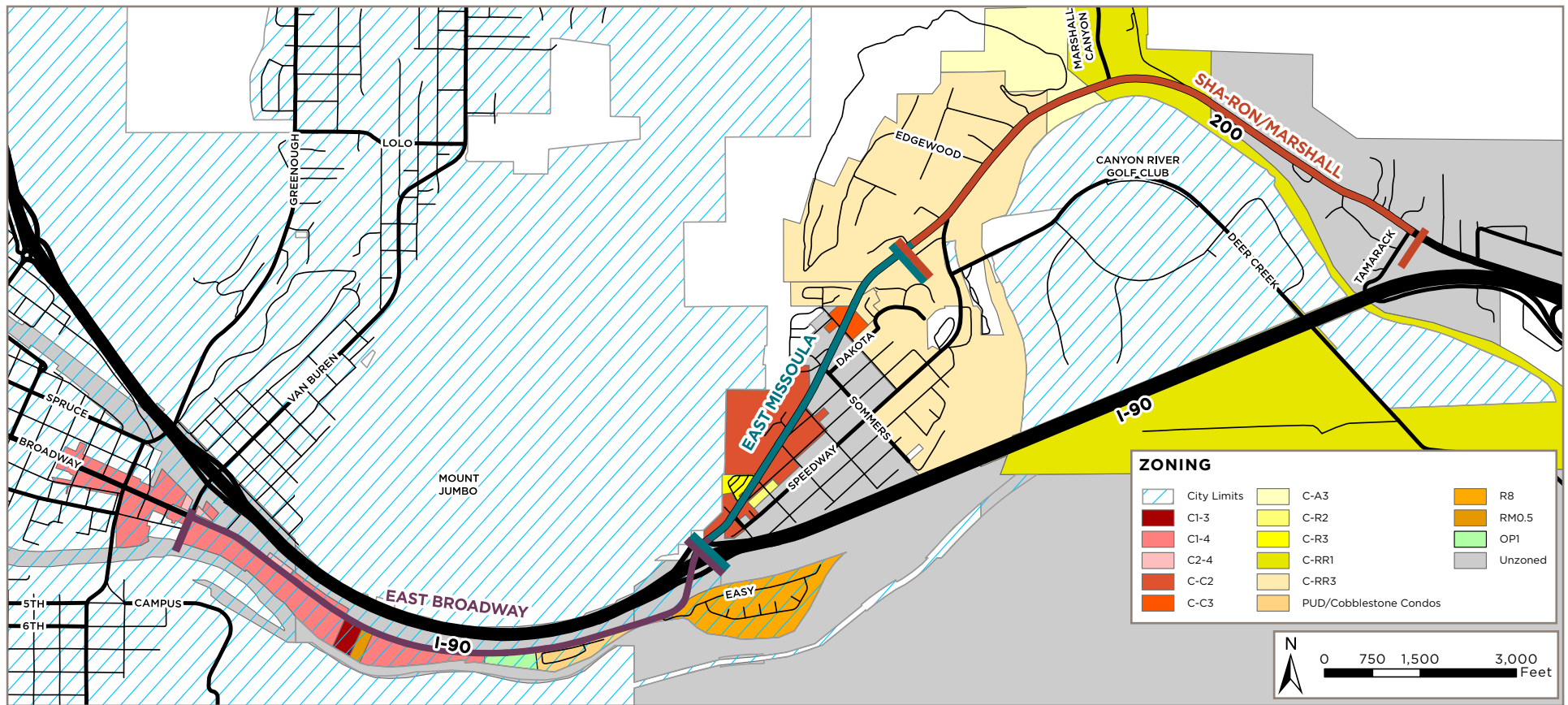


Figure 3-19: Zoning (Data Source: Missoula County)

Zoning

Zoning in the Plan Area includes City and County zoning districts as shown in Figure 3-19, which only shows the zoning districts adjacent to the corridor. The City of Missoula, Title 20, Zoning Ordinance, and the Missoula County Zoning Regulations are in place to implement the policies contained within the respective growth policies. The city zoning currently applies to two parcels at the eastern

end of the Plan Area and the Canyon Creek Subdivision and Golf Course. These parcels are all zoned residential with the Canyon Creek Subdivision zoned RT10 and designed as a cluster development, utilizing the Golf Course as open space. The two parcels at the eastern edge of the Plan Area are zoned R20 and R40. The maximum residential density within these zones is four dwelling units per acre and one dwelling unit per acre respectively.

The remaining area within the plan boundary

is outside of the city limits and either unzoned or zoned commercial or residential. The northwestern area of the plan is designated C-C2, General Commercial. This zone allows for residential development at a density of 43 units per acre, retail sales, eating and drinking establishments, contractor businesses, commercial uses of low intensity which may require a large area of land. The core of East Missoula is currently unzoned, though the County is undergoing a substantial zoning code update with the plan to develop a zone

and then apply it to this area to implement the Live/Make Neighborhood designation within the Growth Policy. This would allow three to eleven dwelling units per acre; however, upon further investigation based on block size and lot size, eight dwelling units per acre is more probable. The current build-out in this area is approximately six dwelling units per acre.

Moving further east and down Brickyard Hill, a large amount of land is zoned C-RR3, Residential, with a density of four dwelling units per acre. The C-RR3 zone allows for single-family and two-family housing at a moderate density if served by public sewer and water. Other privately owned land in the Plan Area is zoned C-A1, C-A3, and C-RR1 with densities of one dwelling unit per 40 acres, one dwelling unit per five acres, and one dwelling unit per acre, respectively. The C-A1 and C-A3 zones encourage the protection of open space land and the protection of natural resources. Low-density residential development is suitable within the C-A3 zone. The C-RR1 zone provides for transitional low-density residential development while recognizing environmental concerns. Areas currently unzoned would need to be zoned in compliance with the Growth Policy for increased development.

Reasonable Expectations for Entitlements

Entitlements cover the range of compliance and approvals needed to move a development project forward. Entitlements primarily include growth policies, zoning, subdivisions, and conditional uses. However, the availability of public sewer and public water affect the intensity of development. The Corridor Plan covers land in Missoula County, both inside and outside of the city. For portions of the East Broadway Segment, that are within the city limits, the Our Missoula 2035, Growth Policy (adopted in 2015) guides land use and municipal zoning regulates land development. For the lands outside of the city, the Missoula County Growth Policy (adopted in 2016) and the Missoula County Land Use Element Plan (adopted in 2019) guide land use and county zoning regulates land development. Refer to the Planning Framework for exhibits showing the Land Use Designations for the City and County Growth Policies. The primary public water system in place is Missoula Water and the primary public sewer is Missoula Sewer.

Beginning with the East Broadway Segment, Interstate 90, Montana Rail Link, and Highway 200 dominate the corridor. Along Highway 200, the primary land uses consist of commercial uses, offices, multi-family housing, and Missoula College. Less noticeable but important to the East Broadway Segment are the existing trails and parks along the Clark Fork River. In summer months, the East Broadway Segment is heavily used for access to the Clark Fork River. River

floaters who take out of the river along this corridor are likely to have put in the river at Sha-Ron or other upstream locations in the study area. It also serves recreationists whose destination is the Kim William's Trail, Mount Sentinel or Mount Jumbo. In addition, this segment of the corridor handles traffic and parking associated with major events at Washington Grizzly Stadium. Portions of the East Broadway Segment are also in the Hellgate Urban Renewal District (URD) that runs from Madison Street to Riverside Health Care. The URD provides financial incentives to development. The land use designations for the East Broadway Segment include Gateway to Missoula and East Missoula, Urban Center, and Neighborhood Mixed Use from Our Missoula 2035 Growth Policy. The land use intensities range from high-intensity commercial at the west to neighborhood-scale commercial uses and multi-family residential uses in the Neighborhood Mixed-Use area. Within Urban Center, horizontal and vertical mixed uses of retail, service, office, and high-density residential in the range of 24 units per acre to 43 units per acre are expected. Within the Neighborhood Mixed-Use retail, offices, entertainment, professional services, eating and drinking, shopfront retail that serves a small scale neighborhood need, and residential uses at a density of 12 units per acre to 23 units per acre are expected. We expect the land uses in the East Broadway Segment to develop within the vision of the planning documents.

In the East Missoula Segment, Highway 200 bisects the area from the Montana Rail Link underpass through to Brickyard Hill. Along Highway 200, the uses include highway oriented commercial, gasoline sales,

automotive repair, eating and drinking, self-storage, neighborhood commercial, and residential uses including recent multi-family development. As you move away from the highway, the uses are dominated by single-family residential uses, both new and existing, interspersed with commercial uses. School District No. 1 still maintains but does not use the Mount Jumbo School. Public sewer and public water that allow for higher intensity residential land uses serve the East Missoula Segment. The land use designations for the East Missoula Segment include Neighborhood Center, Live/Make Neighborhood, and Residential from the Missoula County Land Use Element Plan. The land use intensities range from large scale commercial to mixed-use with a residential density of eight units or greater along the Highway 200 corridor in the Neighborhood Center area to residential densities of three units per acre to eleven units per acre in the Residential area and the Live/Make Neighborhood. Small-scale manufacturing and commercial uses as a secondary use exist and are expected to continue within the Live/Make Neighborhood.

The Sha-Ron/Marshall Segment begins as you head down Brickyard Hill northeast out of East Missoula. Highway 200 dominates this area. Land uses on both sides of the highway are low to medium density residential uses until the river pinches down the developable terraces against the foothills as you approach Marshall Canyon Road. Access to the Clark Fork River on the eastern side of Deer Creek Bridge and at Sha-Ron create parking and traffic congestion. There is congestion in terms of traffic, both pedestrian and vehicular, and parking along both sides of all public roads.

Marshall Mountain is once again becoming a recreational destination for mountain biking and other activities. Just beyond Marshall Canyon, there are agricultural uses on the flats that lead up to open hillsides that transition into residential uses in clusters of medium density until Tamarack Drive. There are scattered commercial uses in this area as well. There is also the outlying land south of Interstate 90, which contains longtime uses like the Deer Creek Shooting Range, and open land that is transitioning with development such as the self-storage units along Deer Creek Road.

The land use designations for the Sha-Ron/Marshall Segment include Working Lands, Rural Residential and Agriculture, Rural Residential and Small Agriculture, Residential, Open Resource and Recreation from the Missoula County Land Use Element Plan, and Residential Low Density from Our Missoula 2035 Growth Policy. The privately-owned lands on the northern hillsides are generally designated Working Lands and Rural Residential and Agriculture. Residential densities range between one unit per 10 acres and one unit per two acres in the Rural Residential and Agriculture area with most of the undeveloped area in timberland or in a relatively natural state. Working lands includes those areas that are expected to develop in the low density ranges between one unit per 160 acres to one unit per 40 acres. Limited development is expected in these areas. The area west of Brickyard Hill designated Residential is largely developed with single-family homes. If served by public sewer and water in the future, intensity of three dwelling units per acre to 11 dwelling units per acre could be expected. Properties north of Highway 200, near Marshall

Canyon Road, are designated Rural Residential and Small Agriculture. Densities in this area range from one unit per acre to two units per acre. Continued low-density development and small agricultural operations are expected to continue in this area. Once past the Marshall Canyon pinch point, continued residential development in the area designated Residential can be expected at a density of three dwelling units per acre to 11 dwelling units per if served by public sewer and water.

Moving south of the Clark Fork River and north of the Interstate, the Canyon River Golf Course and the associated subdivision dominate the land, which is designated Residential Low Density with a density range of one unit per acre to two units per acre. Entitled lots within this subdivision are expected to develop over the next few years.

Areas south of the Interstate are designated Residential, Rural Residential and Small Agriculture, Open, Resource and Recreation. The areas designated Open, Resource, and Recreation are public lands where development is not likely. Immediately south of the Interstate, the land is designated Residential at a density of three units per acre to 11 units per acre. These lands are partially developed with the storage units mentioned above. This area is not currently served by public sewer or water, which in combination with the location south of the Interstate and adjacent shooting range, limit future growth and development. The vacant land south of the Interstate and east of Deer Creek Road, designated Residential Low Density, gained entitlements through the preliminary plat approval for a subdivision; however, this subdivision has since expired.

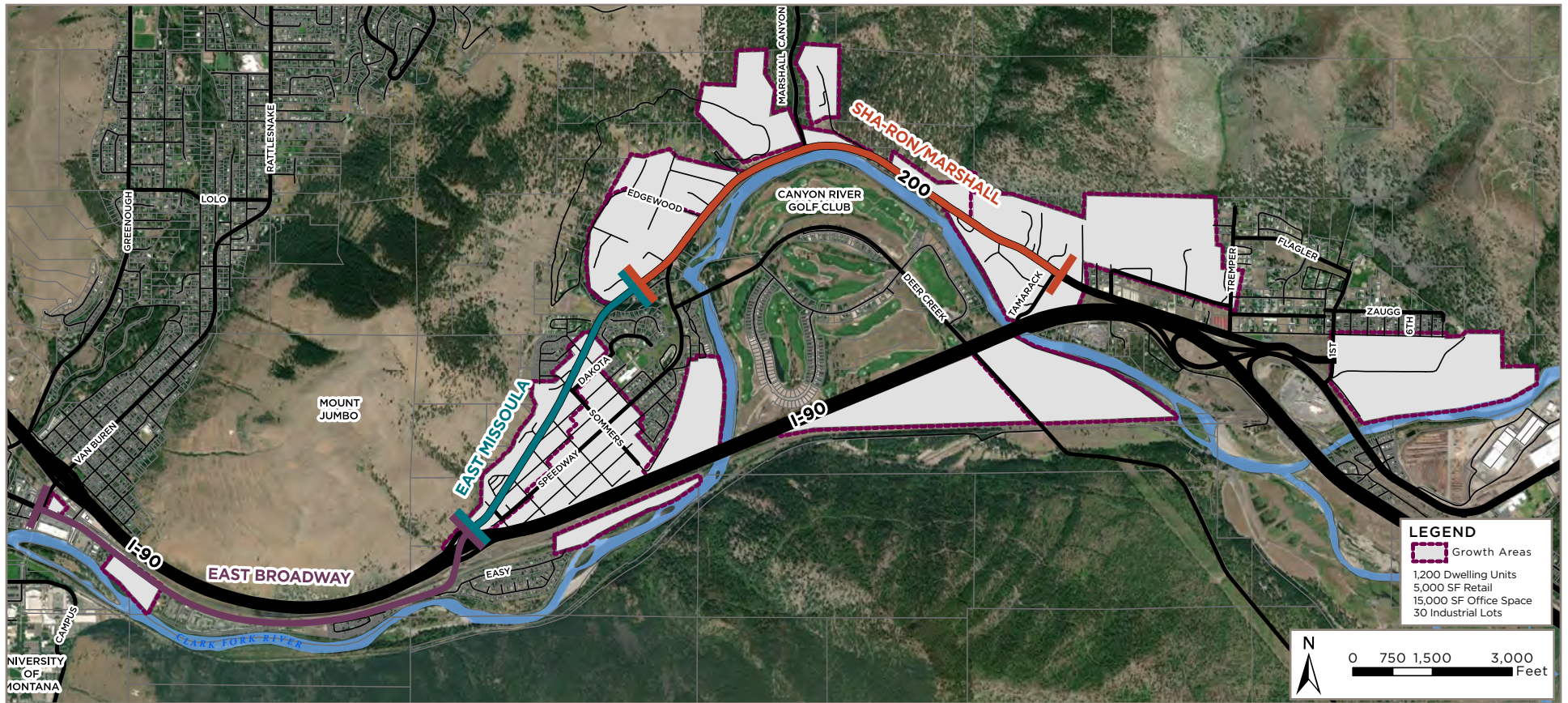


Figure 3-20: Projected Growth Areas (Data Source: WGM Group)

Residential Low Density has an intensity of one dwelling unit per acre to two dwelling units per acre. This area is expected to develop within this density range. The shooting range is designated Rural Residential and Small Agriculture with a density range of one unit per acre to two units per acre. This is an active range and redevelopment of this site is unlikely.

In Figure 3-20, the areas most likely to experience growth are shown to help plan for growth within the corridor over the next 20 years. These areas were determined by

looking at the physical capability of the land followed by the cultural suitability to determine where development is feasible in the future. This eliminated areas where development is unlikely to happen such as areas with slopes over 25%, areas within the floodplain, and properties owned by public agencies. Next, properties were evaluated to determine their capacity for growth based on whether or not the properties have previously been developed, existing development patterns, and the likelihood for infill development while taking into consideration the density allowed

by the growth policy. Additionally, WGM Group utilized their familiarity with past projects and development in the areas to inform the analysis. Projections for residential, commercial, and industrial growth were quantified to analyze the impact on intersection level of service (Figure 3-10). This includes 1,200 dwelling units, 5,000 square feet of retail space, 15,000 square feet of office space, and 30 industrial units. These are projections only based on current regulations and building trends.

Environmental/Pre-NEPA Planning

An environmental review was conducted for the Highway 200 corridor between Van Buren Street in Missoula and Tamarack Road between East Missoula and Bonner. The purpose of the review is to evaluate environmental resources and potential impacts, constraints, and opportunities throughout the Plan Area to support development of recommended improvements and accompanying future NEPA/MEPA document preparation. Baseline

environmental data was collected and compiled for the Plan Area for physical and cultural characteristics including farmland, groundwater and surface water, wetlands, visual analysis, socioeconomic conditions, biological resources, and cultural and historic sites; further, potential impacts to these resources were assessed and mitigation measures recommended. In addition, past and present activities that may result in

contaminated soil, soil vapor, surface water, or groundwater were reviewed; properties that may need future investigation were identified as having a “potential environmental impact.” Refer to the tables on the following pages for a summary of potential short-term and long-term impacts on resources and recommendations on avoiding and minimizing impacts. Refer to the Pre-NEPA Environmental Report for additional information.

Short-Term, Construction-Related Impacts		
RESOURCE	POTENTIAL IMPACT	AVOIDANCE/MINIMIZATION
Surface Water	Erosion, sedimentation, or disturbance of Marshall and Mittower Creeks or the Clark Fork River, especially in locations where there may be additions of or modification to existing culverts, or widening toward the Clark Fork River.	Use best management practices as part of erosion control planning to limit introduction of sediment into waterways. Comply with the DEQ Storm water Construction General Permit requirements if proposed disturbance areas total more than one acre, and federal Section 404 permit and DEQ Section 401 certification requirements if future proposed project design excavates or fills any wetlands or waters of the state.
Groundwater Resources	Existing wellheads and storm drywells providing a pathway for groundwater contamination from spills, contaminants in storm water runoff from adjacent land uses, and de-icing operations.	Use erosion and sediment control best management practices, especially with respect to existing sumps and wells, to limit pathways to groundwater. The City requires a five-foot physical separation from bottom of sump to high groundwater so that the existing soil can provide water quality benefits before run-off and contaminants reach the groundwater.
Visual Resources	Construction impacts include dust and debris, traffic congestion, construction equipment and materials in staging and construction areas, and disturbed areas pending revegetation.	Require the use of dust suppression, choose re-vegetation plant material compatible with existing vegetation.
Socioeconomic	Positive impacts include improved safety and non-motorized connectivity, decreased congestion, increases in property values, and better delivery of community services. Adverse impacts include potential for loss of affordable housing as East Missoula Segment redevelops.	Outside of design measures, community decision for future developers to include units for low-income populations in residential redevelopment.
Threatened & Endangered Species	Disrupted local travel patterns between areas of preferred habitat during construction activity. The potential impact to Bull Trout from Plan Area improvements is habitat loss in the Clark Fork River due to construction practices increasing sediment loading, which in turn degrades habitat.	Minimize total project footprint. For terrestrial species, avoid creating human-generated attractants by promptly cleaning up any project-related spills, litter, garbage, and debris; appropriately storing and handling food, drinks, petroleum products, and other attractants; and notifying project managers of any animal carcasses found in the area. For aquatic species, maintain a minimum five-foot buffer along streambanks to prevent destabilization and sedimentation; site staging areas outside of riparian areas; limit unnecessary removal of toe material; plant revegetation in contact with the low water table to encourage survival, rapid growth, and effective bank reinforcement; and use best management practices as part of erosion control planning to limit introduction of sediment into waterways.

Short-Term, Construction-Related Impacts		
RESOURCE	POTENTIAL IMPACT	AVOIDANCE/MINIMIZATION
Animal Species of Concern	Short-term displacements of animal SOC who may be occupying habitat in the proposed construction area. Due to the proximity of a Bald Eagle nest to the project corridor, there is the potential for disturbance via short-term construction activity and noise.	<p>Carefully select construction staging areas and/or opt for a fall construction schedule that avoids bird species nesting seasons.</p> <p>For road infrastructure projects, Montana guidelines recommend a combination of seasonal restrictions and visual buffers to provide the best protection for Bald Eagles. Seasonal restrictions recommend that no road construction or maintenance, including use of loud construction machinery, be performed in the direct line of sight of an active nest between February 1 and August 15. Visual buffers within a quarter-mile of nest sites are recommended to be enhanced if possible and not removed; specifically, new construction (i.e. proposed safety improvements) should only be placed in locations that maintain the quarter-mile buffer. Further, tree removals should be avoided and no pesticides used as part of the project. USFWS guidelines recommend the following buffers for linear infrastructure construction, assuming there is no similar activity within one mile of the nests. If activity is not visible from the nest, 330 feet to construction activity. If activity is not visible from the nest, clearing, external construction and landscaping between 330 feet and 660 feet should be done outside the breeding season. If activity will be visible from the nest, 660 feet to construction activity, with landscape buffers recommended.</p>
General Wildlife	Short-term displacements of wildlife with limited mobility who may be occupying habitat in the proposed construction area. Short-term sediment runoff to water bodies hosting aquatic species.	Assess potential habitat areas, and minimize disturbance to the extent possible to reduce impacted area occupied by mammals, reptiles, and amphibians. Follow migratory-bird conservation measures, including seasonal clearing/grubbing outside the nesting season. Design to minimize or avoid work in waterways, including best management practices in erosion control planning to limit introduction of sediment into waterways.
Plant SOC	Disturbance of plant SOC by construction activity and staging outside of existing right-of-way.	Perform plant surveys as part of design; should plant SOC be identified, carefully site construction staging areas and improvements to avoid or minimize impacts.
Noxious Weeds	Land disturbance during construction creating new suitable habitat for noxious weeds to establish.	Minimize disturbance to the extent possible to reduce area that may be infested by noxious weeds. Use best management practices to limit noxious weed introduction by construction equipment and to re-seed disturbed areas with an appropriate seed mix post-construction.

Long-Term Impacts		
RESOURCE	POTENTIAL IMPACT	AVOIDANCE/MINIMIZATION
Farmland	Loss of prime farmland or farmlands of local importance from agricultural production.	If right-of-way acquisition is proposed, the NRCS Farmland Conversion Impact Rating Form should be used as a tool to evaluate impact, with mitigation measures proposed if appropriate.
Surface Water	Erosion, sedimentation, or disturbance of Marshall and Mittower Creeks or the Clark Fork River, especially in locations where there may be additions of or modification to existing culverts, or widening toward the Clark Fork River.	Design improvements intentionally to minimize or avoid work in waterways.
Groundwater Resources	New storm drainage sumps providing a pathway for groundwater contamination from spills, contaminants in storm water runoff from adjacent land uses, and de-icing operations.	Design storm drainage systems using best management practices and requirements.
Irrigation	Impacts to historic irrigation structures or buried lines as a part of road widening or new trail construction.	Coordinate with irrigation facility owners to limit impact to operations.
Wetlands	Filling of wetlands, especially in locations where there may be additions of or modification to existing culverts, or widening toward the Clark Fork River.	<p>The February 2013 Montana Stream Mitigation Procedure issued by the US Army Corps of Engineers requires the following sequence of preferred mitigation as follows:</p> <ol style="list-style-type: none"> 1. Avoid the impact altogether by design decision. 2. Minimize impacts by limiting degree or magnitude of the action. 3. Rectify the impact by repair, rehabilitation, or restoration of the affected environment. 4. Reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action. 5. Compensate for the impact via mitigation, which could include credit banking, in-lieu fee, permittee-responsible mitigation, or a combination of these.
Visual Resources	New roadway signage, changes in road section adding multi-modal travel, changes in road section resulting in new cut/fill sections, and clearer definition of vehicular lanes vs non-motorized corridors.	Design intentional placement and aesthetic of features, minimization of cut and fill, provisions for landscaping, and light shielding.
Socioeconomic	Beneficial impacts – improved safety and non-motorized connectivity. Adverse impacts - defined pathways and driveways may limit access to some East Missoula Segment businesses, and improved safety may result in further redevelopment, which could displace low-income populations.	Outside of design measures, community decision for future developers to include units for low-income populations in residential redevelopment.
Section 4(f)	Use of Sha-Ron property for Plan Area improvements.	Mitigation and Section 4(f) evaluation level dependent on extent of use.

Summary

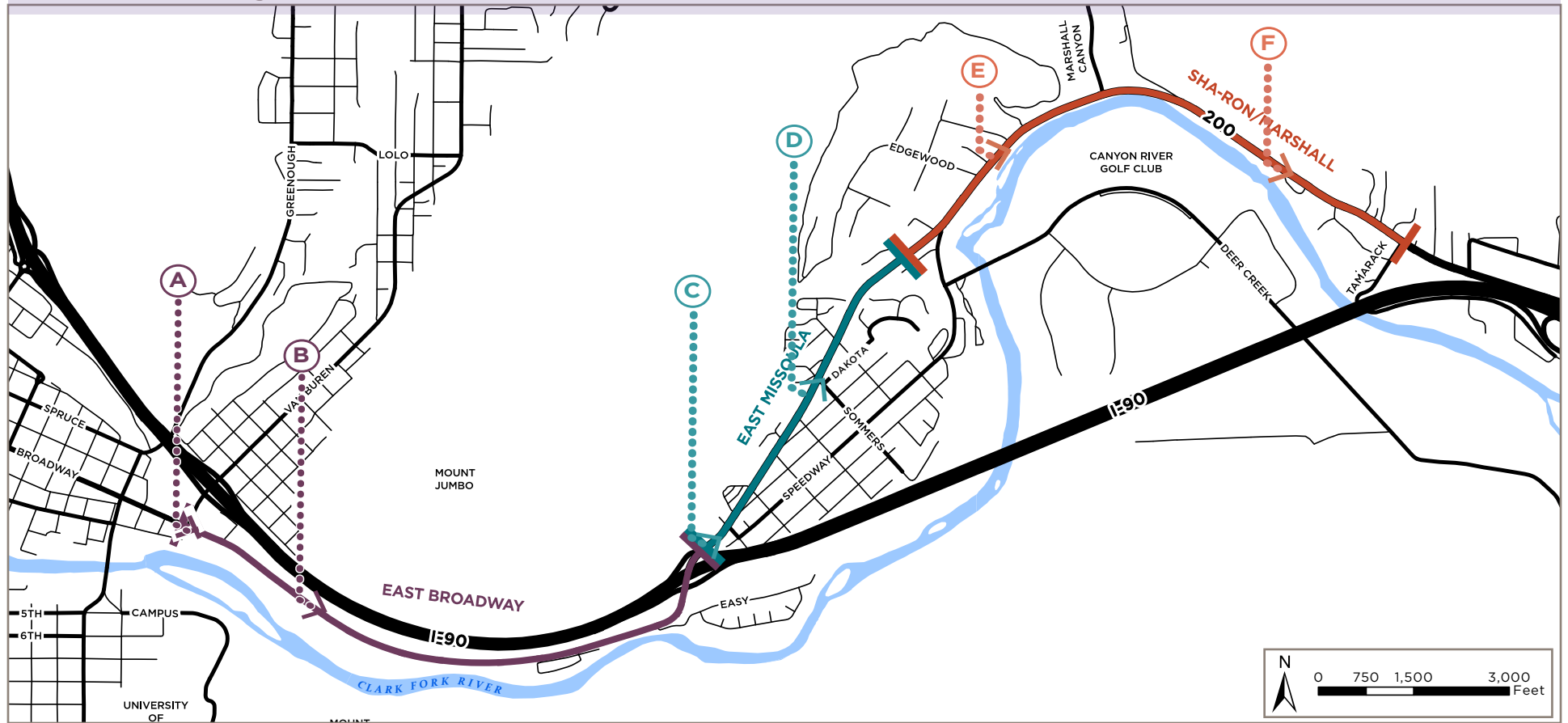


Figure 3-21: Summary of Key Findings Photo Key

The three segments in the Corridor Plan, East Broadway Segment, East Missoula Segment, and Sha-Ron/Marshall Segment, each have unique characteristics that were

identified during the analysis of the corridor. A summary of the key findings and distinctive characteristics are summarized on the following pages for each segment of the

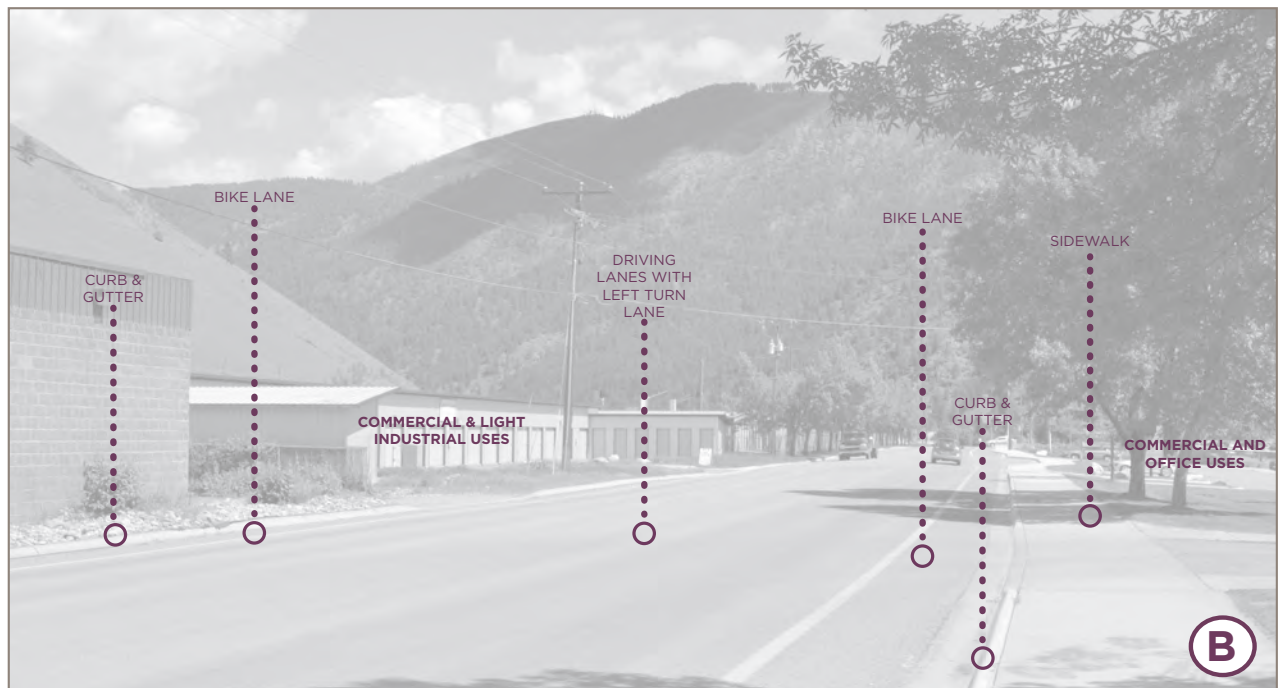
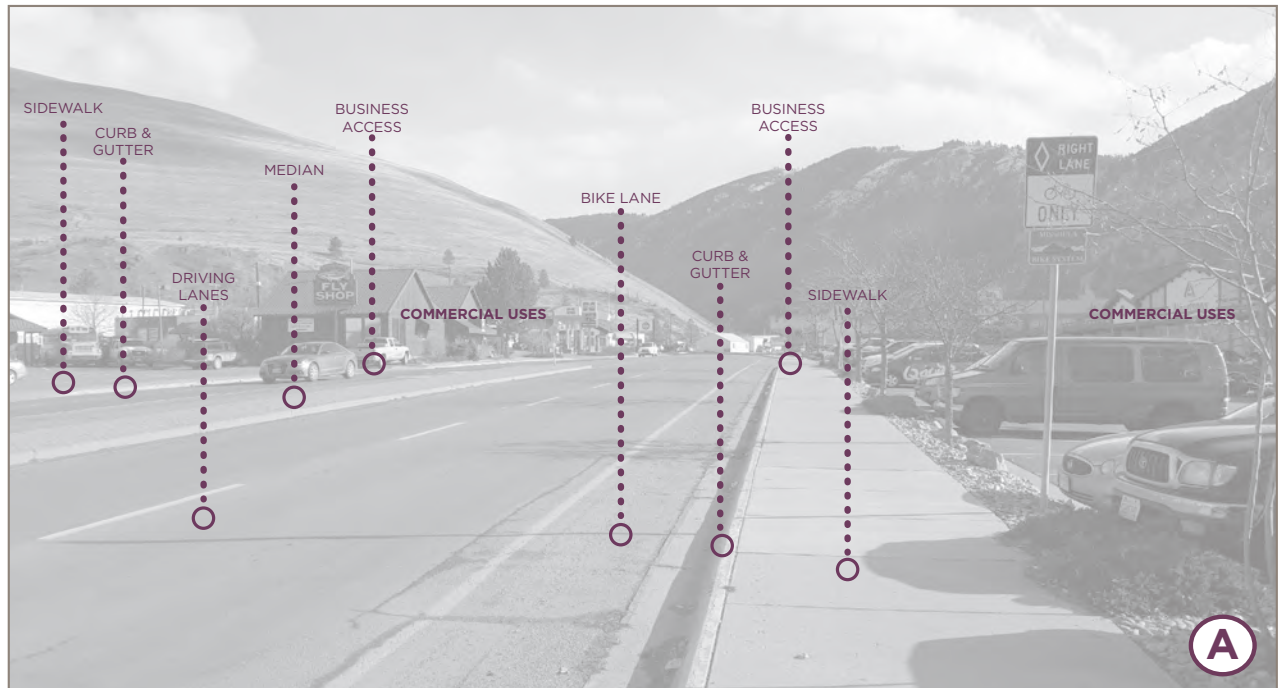
corridor. Figure 3-21 shows the Plan Area and the location of the photos included in the summary of key findings.

East Broadway Segment

The East Broadway Segment is the corridor's most urban, with commercial and office uses, mixed-use housing, and institutional uses such as Missoula College. The corridor is constrained by Mount Jumbo, I-90, the Montana Rail Link Main Line to the north, and the Clark Fork River to the south. This area faces increasing bicycle and pedestrian traffic that conflicts with numerous managed and unmanaged access points.

Key Issues Identified:

- Areas of unrestricted access, limited curb, gutter, and sidewalk, and the need for consolidated access points
- Informal parking lots
- Incomplete trail connection
- Narrow railroad underpass limiting bicycle and pedestrian facilities
- Lack of pedestrian crossings
- Safety concerns at I-90 eastbound ramp
- Intersection capacity improvements should be considered to accommodate future growth
- Traffic and parking issues associated with recent growth and events
- Limited right-of-way width including a short area less than 53 feet wide
- Utilities may need to be relocated with future improvements
- Potential impacts to Bull Trout habitat, making the minimization of the construction footprint an important consideration
- Impacts from construction activity on animal and plant species of concern and noxious weed establishment

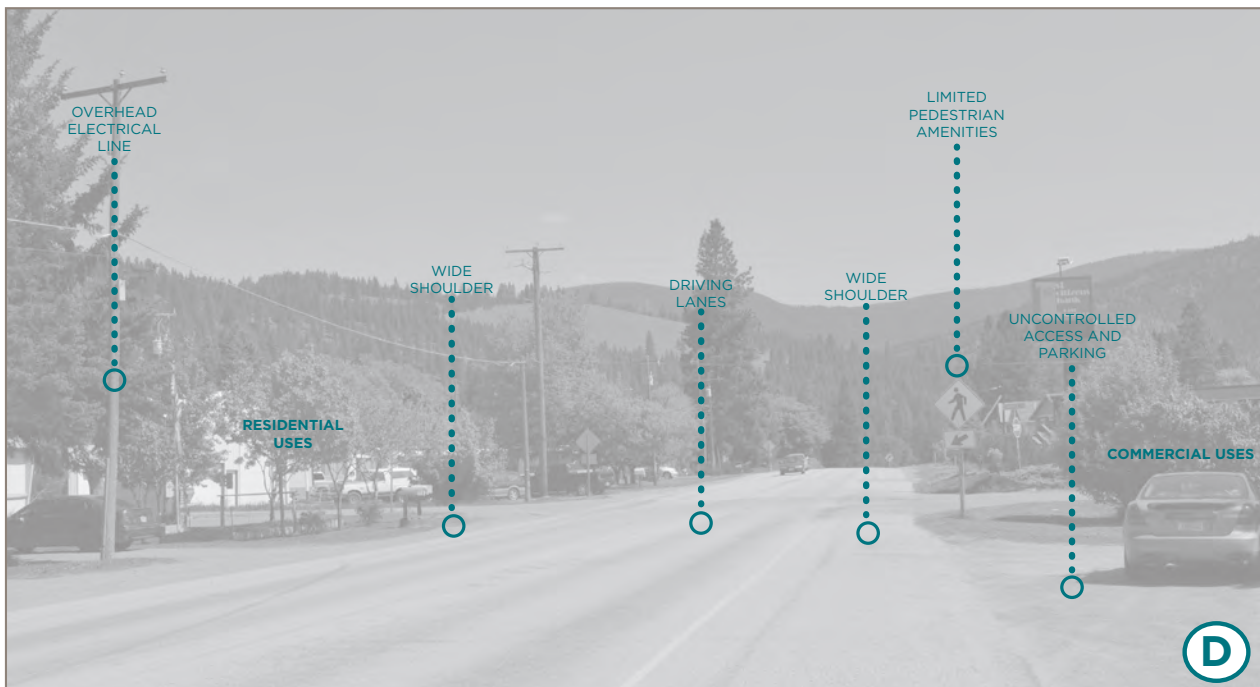


East Missoula Segment

The East Missoula Segment is the heart of the Corridor and the “main street” of the East Missoula community. East Missoula is increasingly providing workforce and student housing to the greater Missoula area and University of Montana with the segment including a mix of single and multi-family housing, commercial, and light industrial uses. This area lacks a clear identity due in part to the lack of a streetscape including access control, non-motorized facilities, lighting, and safety features.

Key Issues Identified:

- Limited to no access management and unrestricted parking causing safety concerns
- No bicycle and pedestrian facilities
- Limited street lighting
- Signed and striped pedestrian crossings are needed
- Safety concerns at the area between Highton and Clyde Streets
- Intersection capacity improvements should be considered to accommodate future growth
- Slopes at Brickyard Hill limit options for future improvements along Highway 200
- Utilities may need to be relocated with future improvements
- Impacts from construction activity on animal and plant species of concern and noxious weed establishment



Sha-Ron/Marshall Segment

The Sha-Ron/Marshall Segment is the rural portion of the Corridor and includes access to recreational opportunities including Canyon River Golf Course, Milltown State Park, Sha-Ron access to the Clark Fork River, and Marshall Mountain. With the increased recreational use and incomplete multi-modal connections, there are more conflicts between vehicles, pedestrians, and cyclists along with parking issues. There are also physical constraints in this segment with the existing topography and adjacency of the river.

Key Issues Identified:

- Lack of appropriate parking for recreational access
- No non-motorized infrastructure
- Parking issues and congestion
- Intersection capacity improvements should be considered to accommodate future growth
- Constrained width for improvements between Old Marshall Grade Road and Marshall Canyon Road
- Limited right-of-way width including a short area less than 53 feet wide
- Growth is limited by sewer and water service
- Utilities may need to be relocated with future improvements
- Potential erosion, sedimentation, or disturbance impacting surface water with construction along Mittower Creek, Marshall Creek, and the Clark Fork River
- Potential impacts to Bull trout habitat, making the minimization of the construction footprint an important consideration
- Impacts from construction activity on animal and plant species of concern and noxious weed establishment



Design Alternatives

After establishing an understanding of the issues within the corridor, three corridor-wide alternatives were developed along with detailed options for four focus areas: Van Buren, Railroad Crossing & I-90 Interchanges, East Missoula, and Sha-Ron. The planning framework and technical analysis highlighted issues in the corridor from existing studies and data, clarifying the need to address the corridor in its entirety and to provide unique approaches for the three unique segments.

Public participation also made it clear that improving safety, particularly for bicyclists and pedestrians, is very important throughout the corridor. Comments stated that improvements

should fit with and reflect the unique character of each of the three segments. There was a wide range of comments about where to place bike/ped road crossings, types of cycle facilities, shared-use paths, sidewalks, fixes for the congestion near the Van Buren intersection and at Sha-Ron, and how to improve safety at the railroad crossing and I-90 interchange. People generally supported the concepts of improving East Missoula's appearance and street layout, as identified in the *2015 East Missoula Corridor Vision and Redevelopment* report.

The design alternatives presented in this chapter were intended to provide a wide range

of options to reflect public comment, factual data, existing plans, and project feasibility. The design alternatives identify pedestrian and bicycle amenities, bus stop locations, on-street parking areas, access management areas, pedestrian crossings, and locations for intersection improvements. There are three distinct segments within the corridor, so the alternatives transition to match the character of each segment. The alternatives were developed with the idea that elements from the different corridor-wide alternatives would be mixed and matched to develop the preferred alternative.

The opinion of probable costs for the design alternatives is included in Appendix E.



Alternative A

Alternative A incorporates many elements typically found in a complete street including sidewalks, landscape boulevards, raised cycle tracks, and on-street bike lanes, providing the most opportunity for landscape and aesthetic improvements.

Key Characteristics

- Boulevard Sidewalks and On-Street Bike Lanes or Raised Cycle Tracks
- On-Street Parking at Strategic Locations
- Shared Use Path Connection to Tamarack

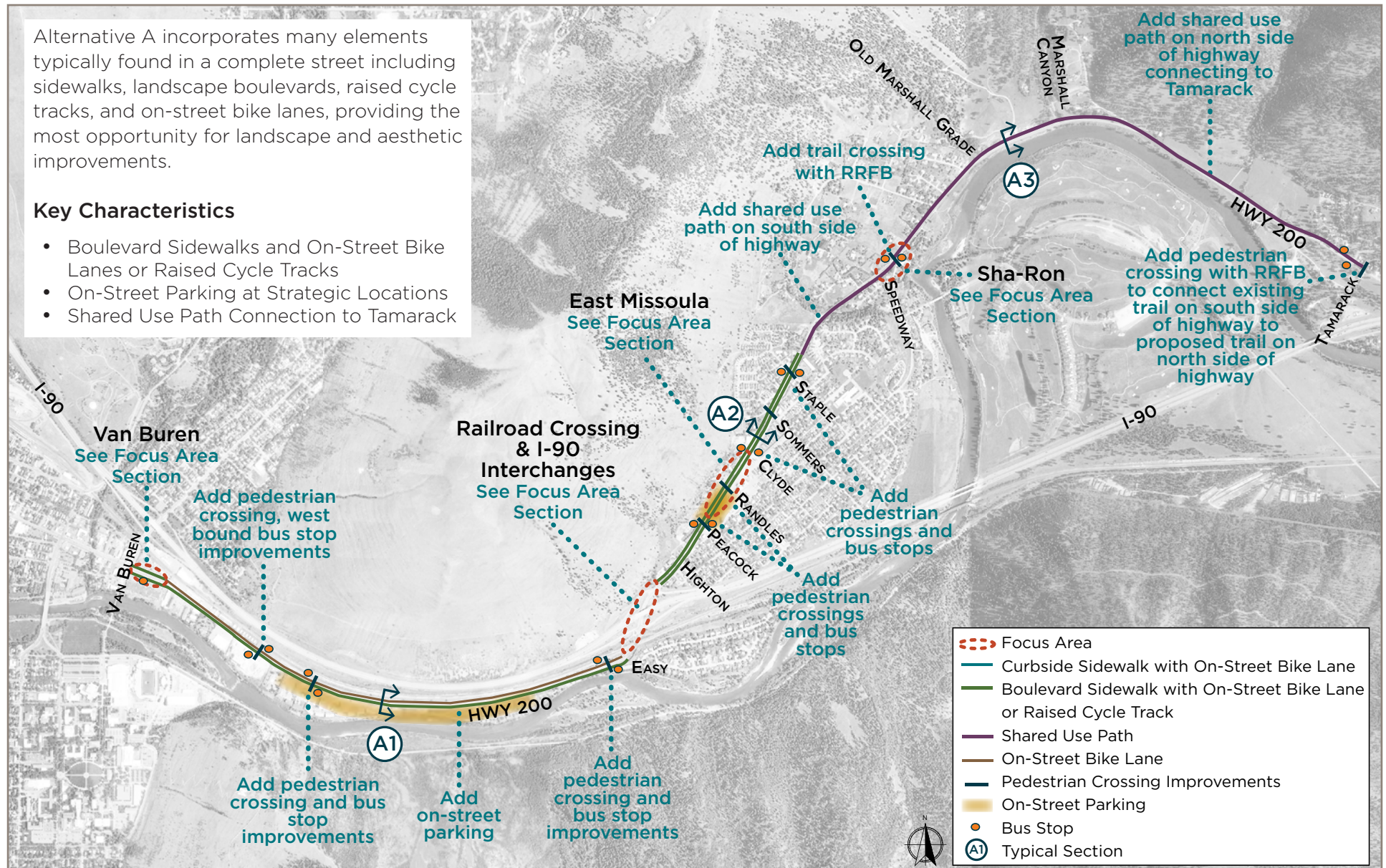


Figure 4-1: Alternative A Plan

Alternative A - East Broadway Segment

A sidewalk is provided from Van Buren to Easy Street on the south side of the highway along with an on-street bike lane. On the north side of the highway, an on-street bike lane is provided without a sidewalk except near Van Buren where there is a curbside sidewalk. This alternative provides options for on-street parking in strategic locations where additional parking is needed for businesses and multi-family housing. Additional pedestrian crossing and bus stop improvements have also been identified.



On-Street Bike Lane



Boulevard Sidewalk

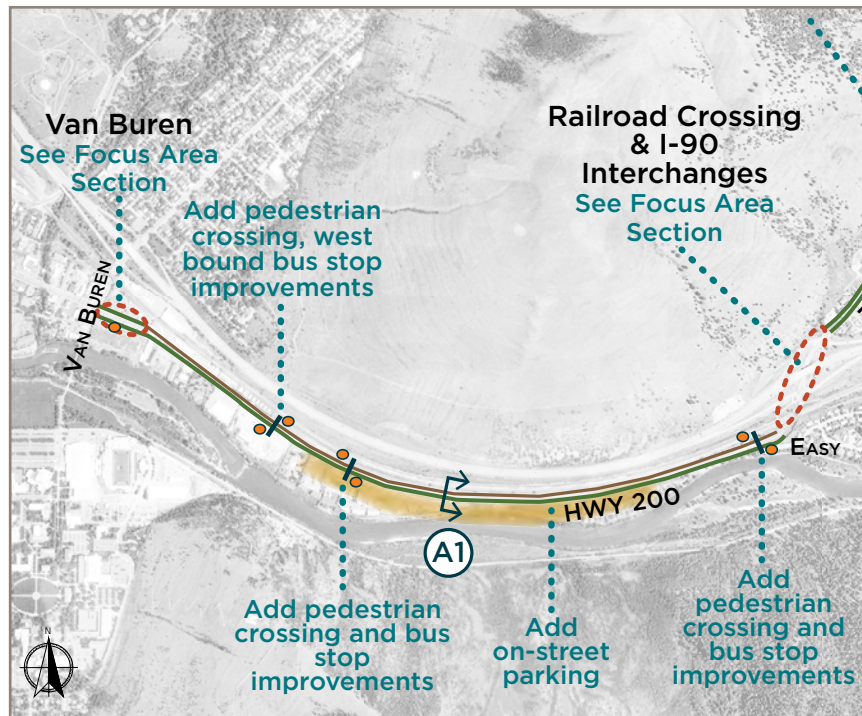


Figure 4-2: Alternative A Plan - East Broadway Segment

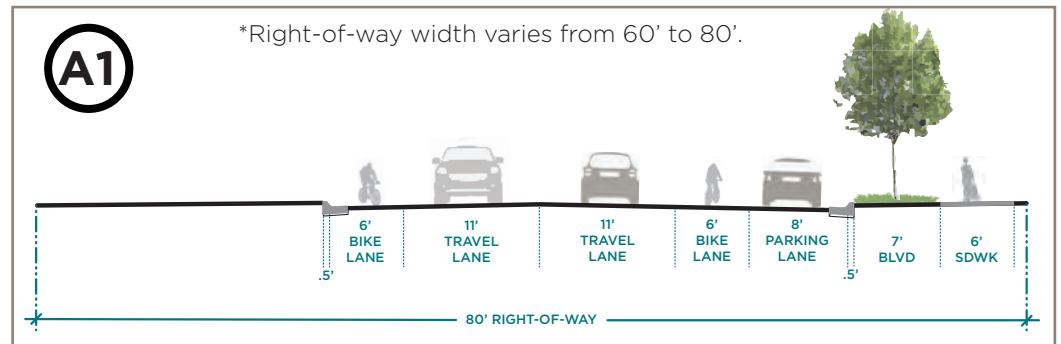


Figure 4-3: Alternative A Typical Section - East Broadway Segment Looking East

- Focus Area
- Curbside Sidewalk with On-Street Bike Lane
- Boulevard Sidewalk with On-Street Bike Lane or Raised Cycle Track
- Shared Use Path
- On-Street Bike Lane
- Pedestrian Crossing Improvements
- On-Street Parking
- Bus Stop
- A1 Typical Section

Alternative A - East Missoula Segment

Through East Missoula, sidewalks are shown on both sides of the street with an on-street bike lane or raised cycle track. With the street improvements in East Missoula, the entire 80' right-of-way will be utilized. This will affect parking for some businesses that currently use the right-of-way for parking. In these areas, on-street parking can be accommodated by eliminating the landscaped boulevards.



Raised Cycle Track



Boulevard Sidewalk

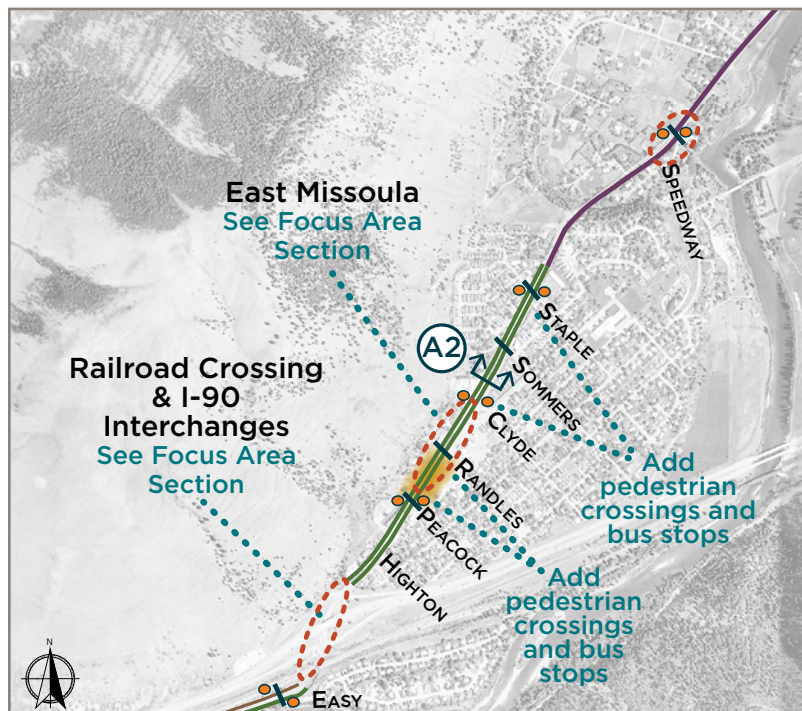


Figure 4-4: Alternative A Plan - East Missoula Segment

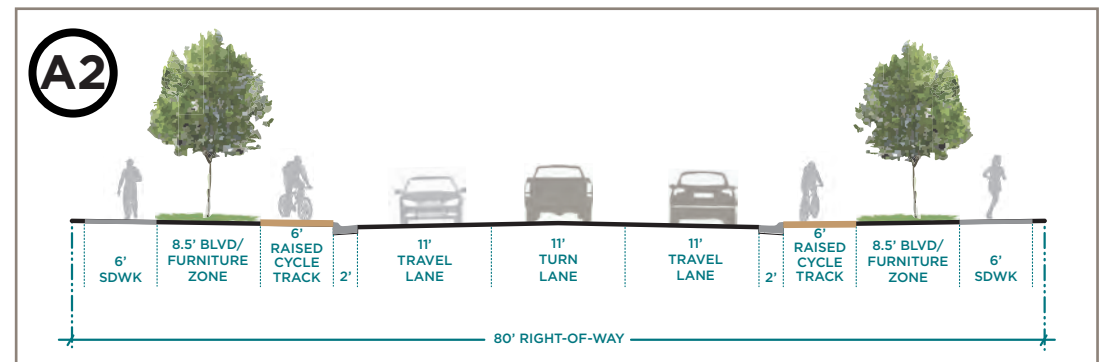
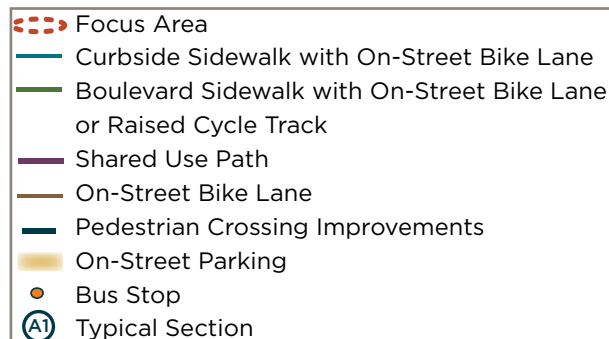


Figure 4-5: Alternative A Typical Section - East Missoula Segment Looking East



Alternative A - Sha-Ron/Marshall Segment

A shared use path connects East Missoula to Tamarack. From East Missoula to Sha-Ron the path is on the south side of the highway. At Sha-Ron, there is a crossing as the path shifts to the north side of the highway to provide better access to existing residences and to address construction feasibility issues where there is limited space between the river and hillside.



Shared Use Path



Rectangular Rapid Flash Beacon (RRFB)

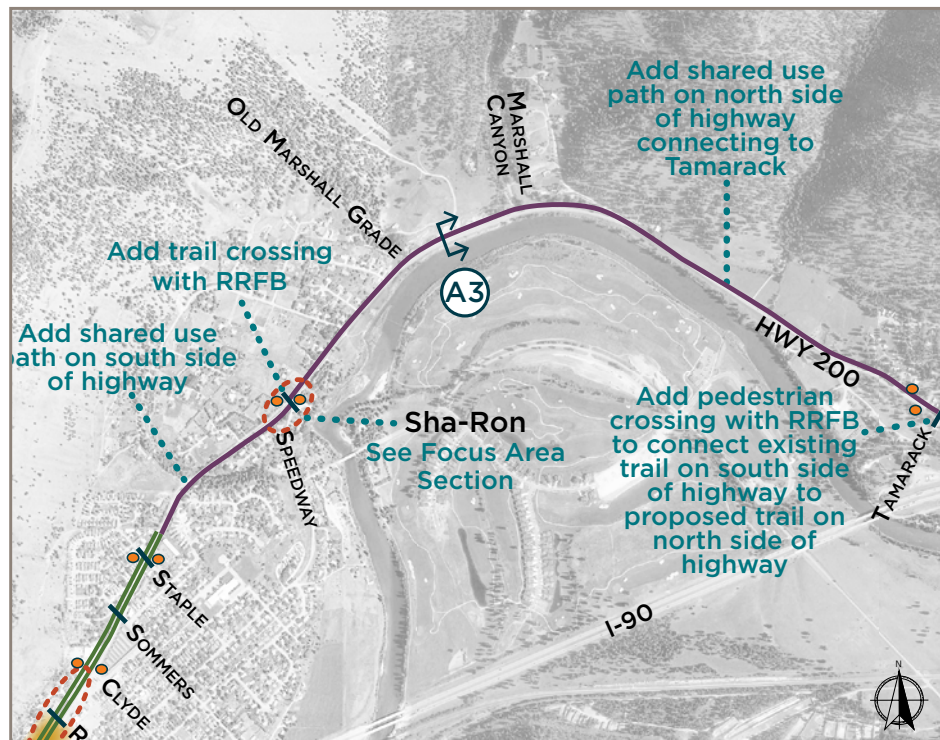


Figure 4-6: Alternative A Plan - Sha-Ron/Marshall Segment

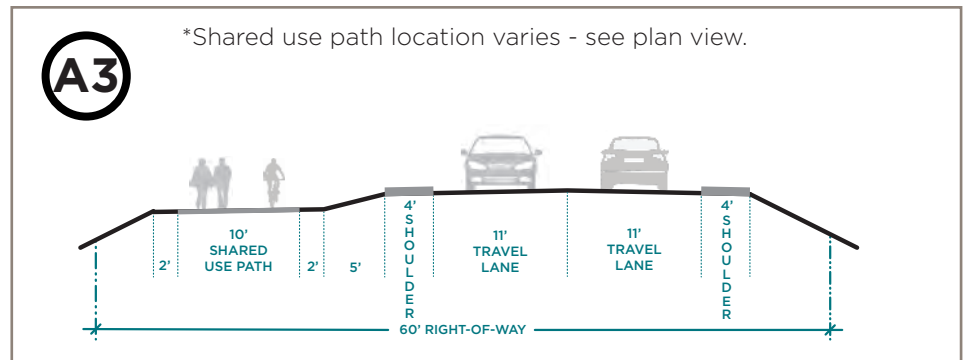
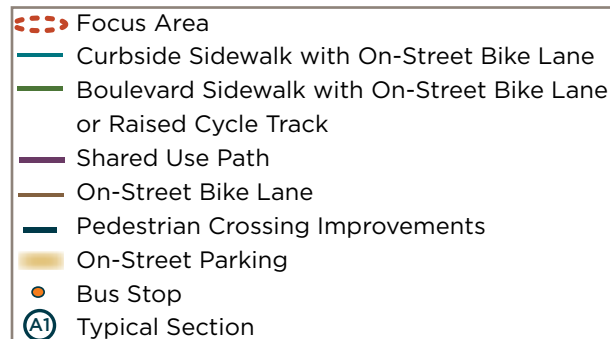


Figure 4-7: Alternative A Typical Section - Sha-Ron/Marshall Segment Looking East



Alternative B

The second corridor-wide alternative is Alternative B which has a shared use path connection throughout the corridor that accommodates a range of users.

Key Characteristics

- Shared Use Path Connection from Tamarack to Van Buren along the base of Mount Jumbo and Shared Use Path from Van Buren to Easy Street
- On-Street Parking at Strategic Locations

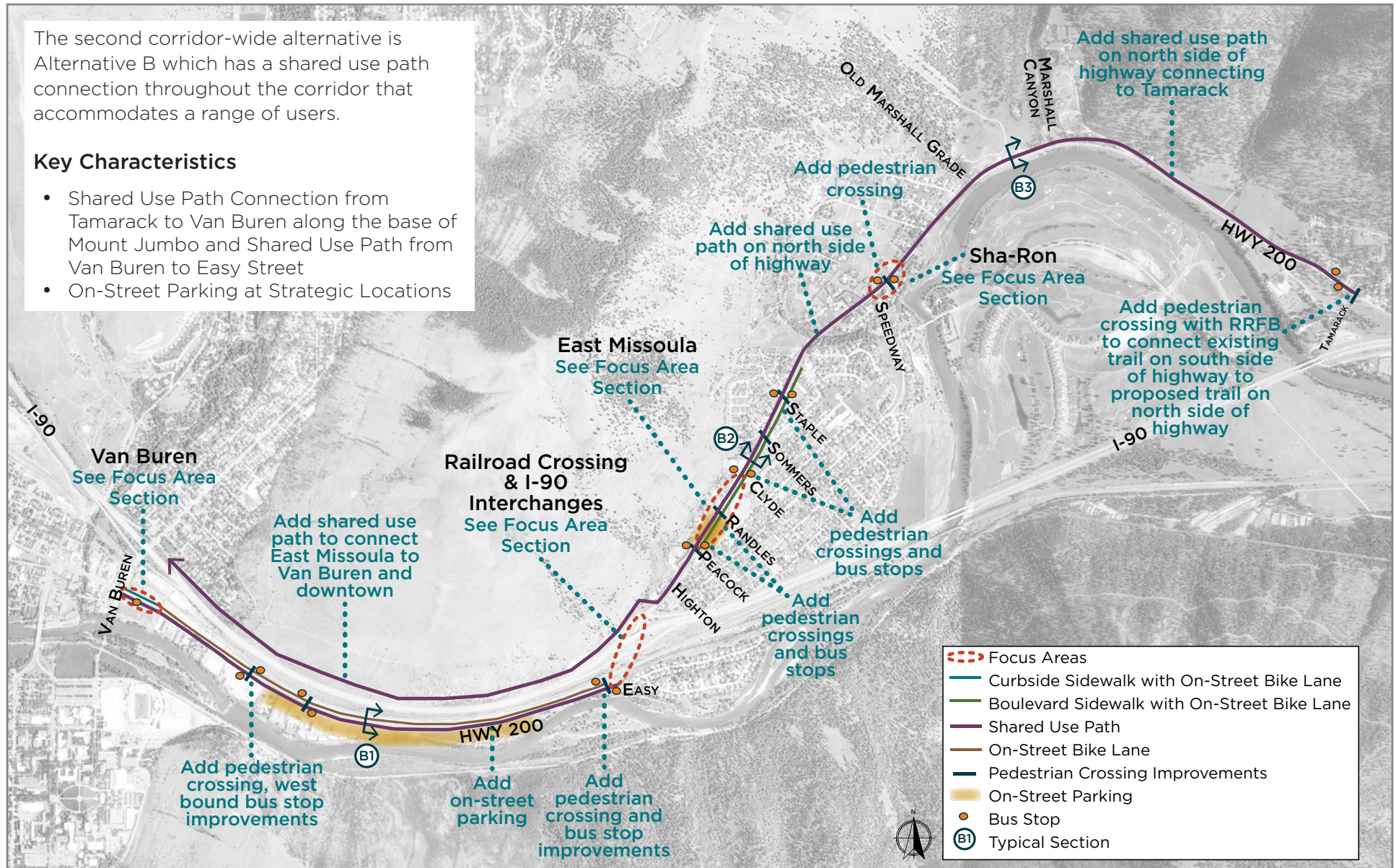


Figure 4-8: Alternative B Plan

Alternative B - East Broadway Segment

The East Broadway segment includes a shared use path from Van Buren to Easy Street and a shared use path that connects Van Buren and downtown to East Missoula extending along the base of Mount Jumbo parallel to I-90 and along the north side of Highway 200 from East Missoula to Tamarack Road. There is a sidewalk on the south side of the highway through East Missoula. On the north side of the highway, an on-street bike lane is provided without a sidewalk, except near Van Buren where there is a curbside sidewalk. This alternative provides options for on-street parking in strategic locations where additional parking is needed.



On-Street Bike Lane



Shared Use Path

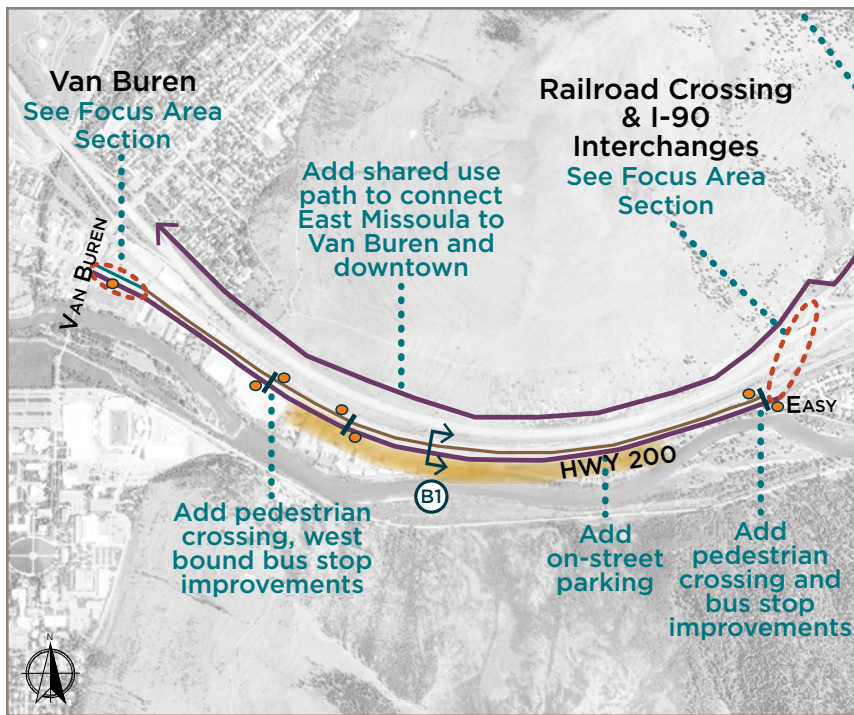


Figure 4-9: Alternative B Plan - East Broadway Segment

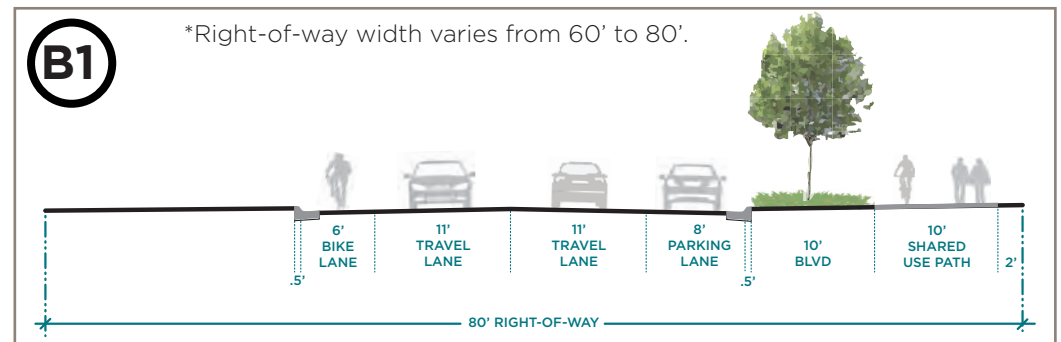
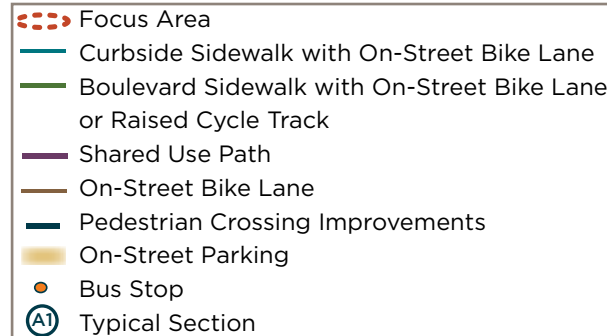


Figure 4-10: Alternative B Typical Section - East Broadway Segment Looking East



Alternative B - East Missoula Segment

With the East Missoula segment, there is a shared use path on the north side of the highway connecting to the trail along the base of Mount Jumbo and extending to the east to Sha-Ron. On the south side of the highway, an on-street bike lane is paired with a boulevard sidewalk. Similarly to Alternative A, boulevards can be replaced with on-street parking to accommodate this need for businesses.



Boulevard Sidewalk



Shared Use Path

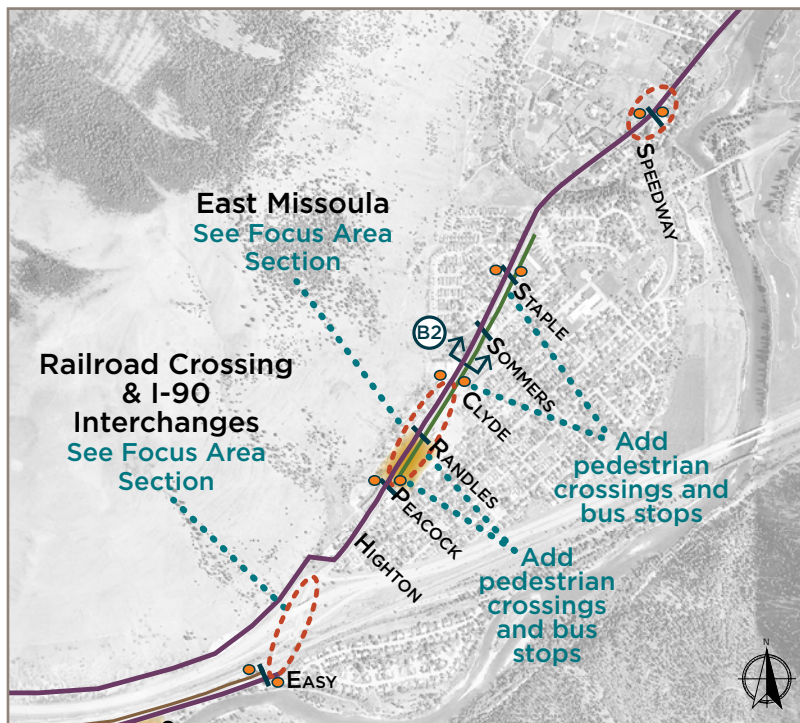


Figure 4-11: Alternative B Plan - East Missoula Segment

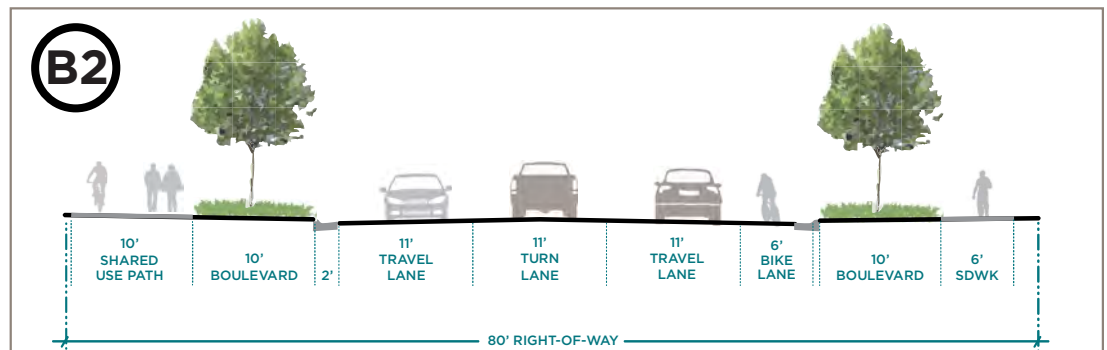
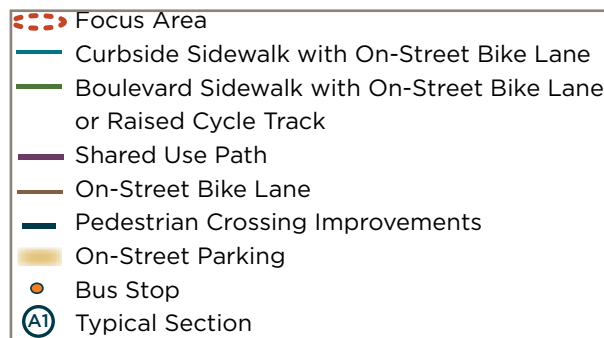


Figure 4-12: Alternative B Typical Section - East Missoula Segment Looking East



Alternative B - Sha-Ron/Marshall Segment

A shared use path connects East Missoula to the existing path east of Tamarack road. The path is located on the north side consistent with the shared use path through East Missoula and along Mount Jumbo. Crossings are provided at Sha-Ron for access to the river and transit stop and at Tamarack to connect to the existing trail as well as transit stops.



Shared Use Path



Rectangular Rapid Flash Beacon (RRFB)

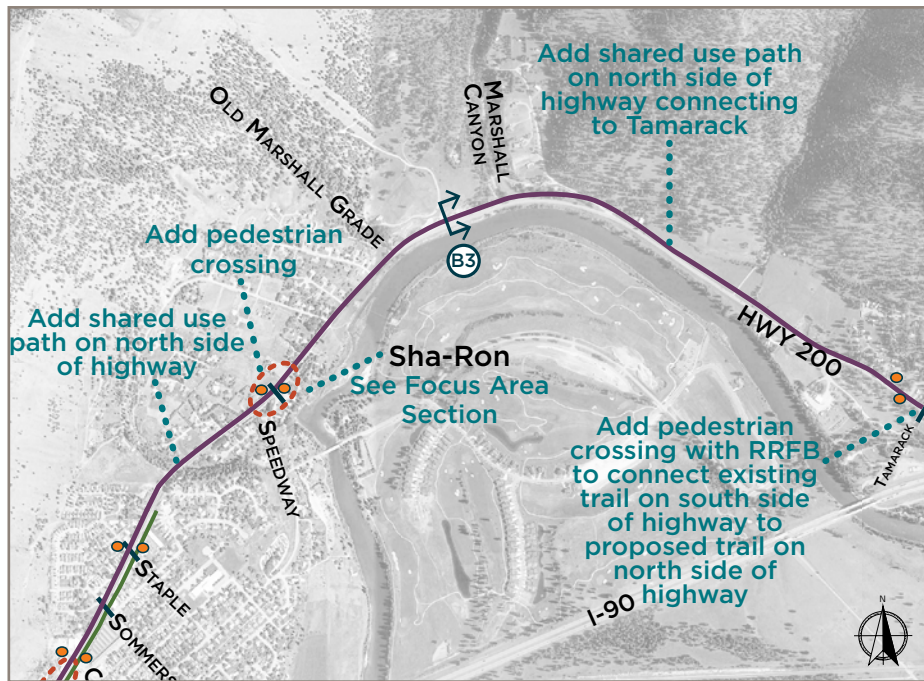


Figure 4-13: Alternative B Plan - Sha-Ron/Marshall Segment

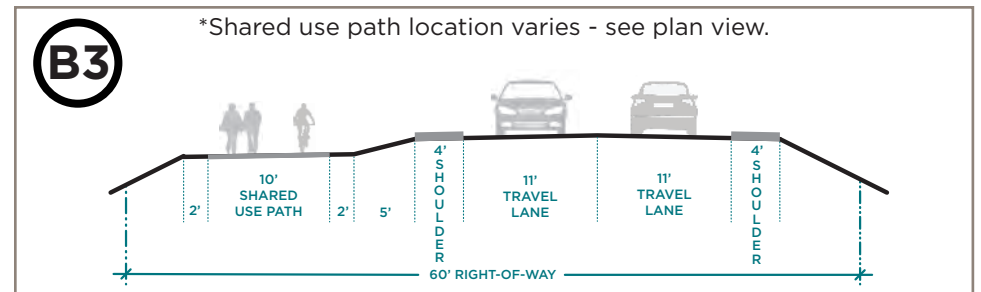
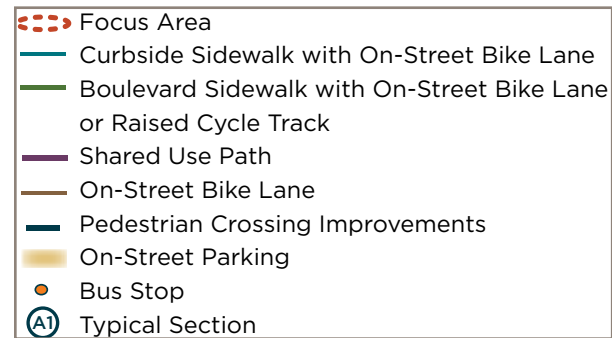


Figure 4-14: Alternative B Typical Section - Sha-Ron/Marshall Segment Looking East



Alternative C

Alternative C maximizes parking throughout the East Broadway and East Missoula segments while providing sidewalks and on-street bike lanes. There are minimal opportunities for landscaping and boulevards.

Key Characteristics

- Curbside Sidewalks and On-Street Bike Lanes
- Maximized On-Street Parking
- Shared use Path Connection to Old Marshall Grade

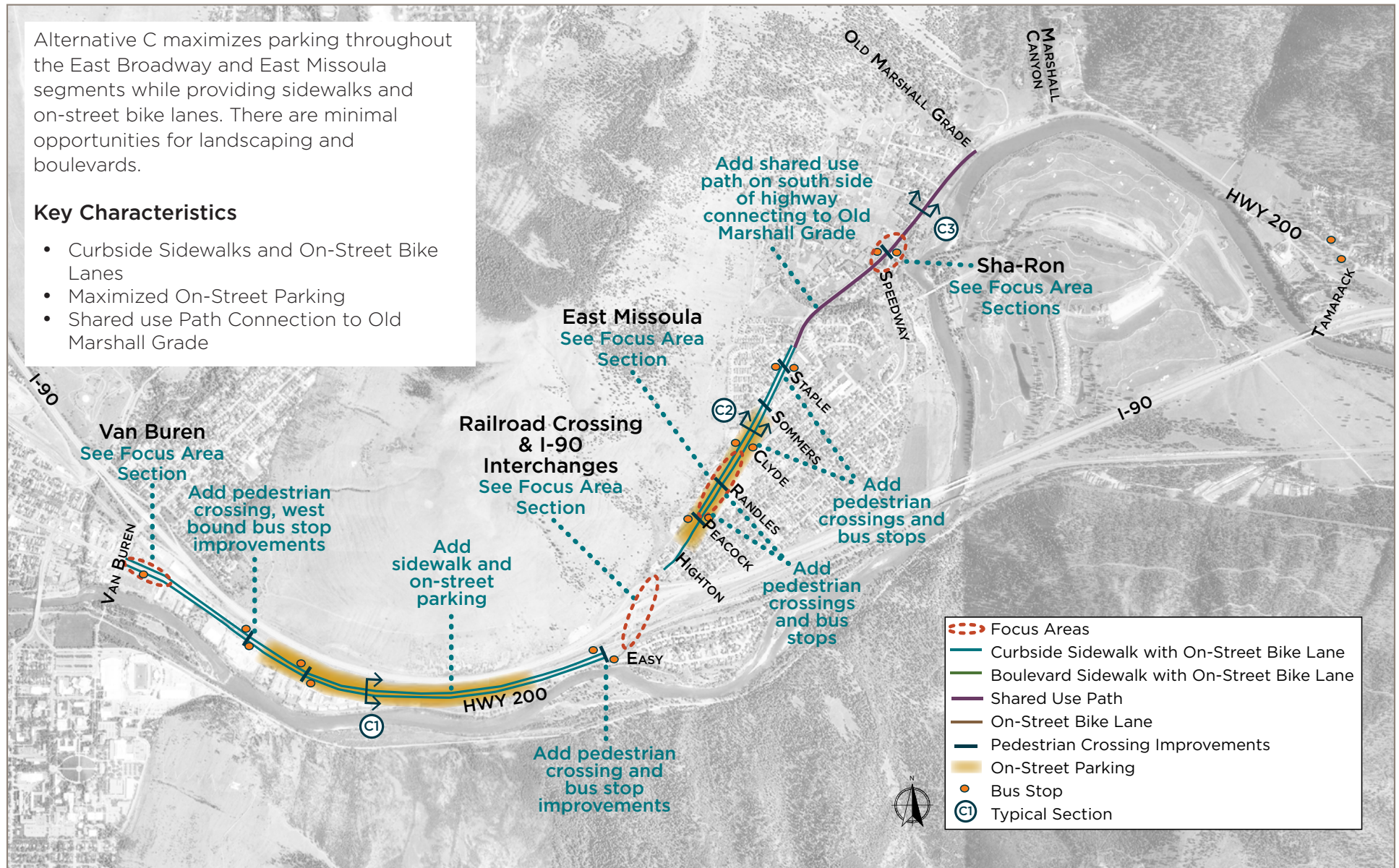


Figure 4-15: Alternative C Plan

Alternative C - East Broadway Segment

This alternative limits the opportunity for landscaping and boulevards by creating space for parallel parking on both sides of the street. With the additional parking on the north side of the highway through the East Broadway segment, this alternative includes a sidewalk along the north side of the highway from Van Buren to Easy Street.



On-Street Bike Lane



Boulevard Sidewalk

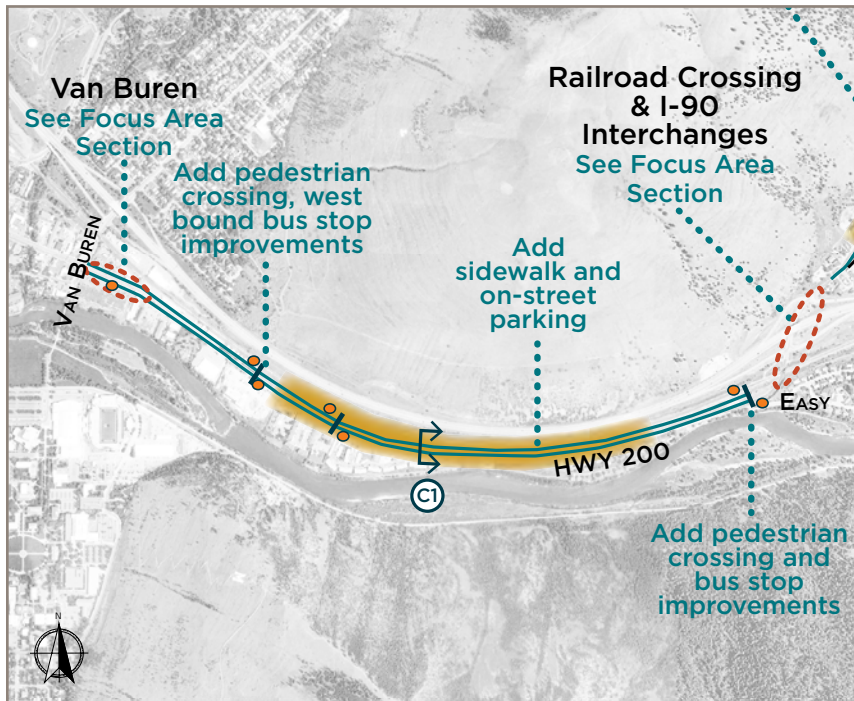


Figure 4-16: Alternative C Plan - East Broadway Segment

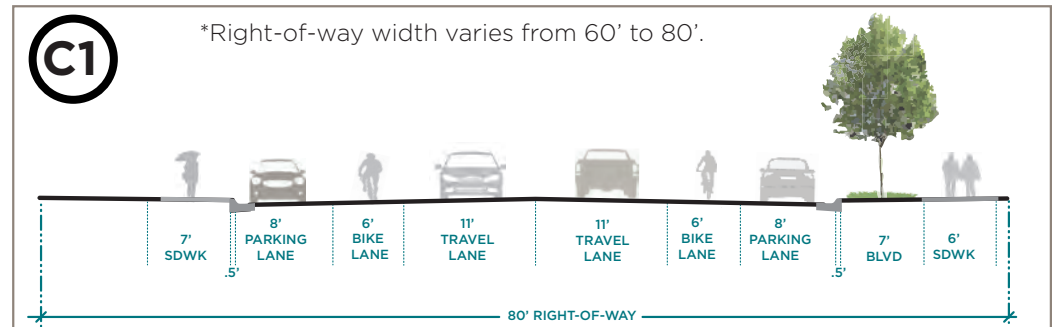
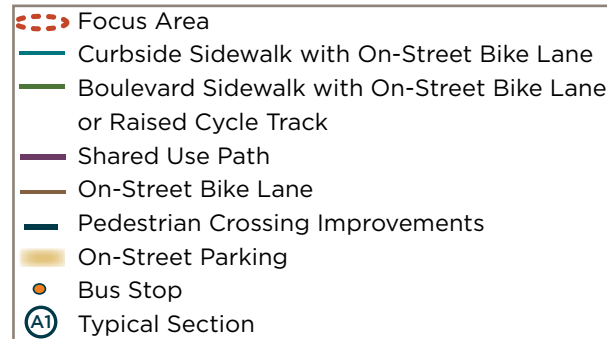


Figure 4-17: Alternative C Typical Section - East Broadway Segment Looking East



Alternative C - East Missoula Segment

Through East Missoula, there are curbside sidewalks and on-street bike lanes. Since this alternative does not include boulevards, on-street parking can be provided the length of East Missoula.



Curbside Sidewalk



On-Street Bike Lane

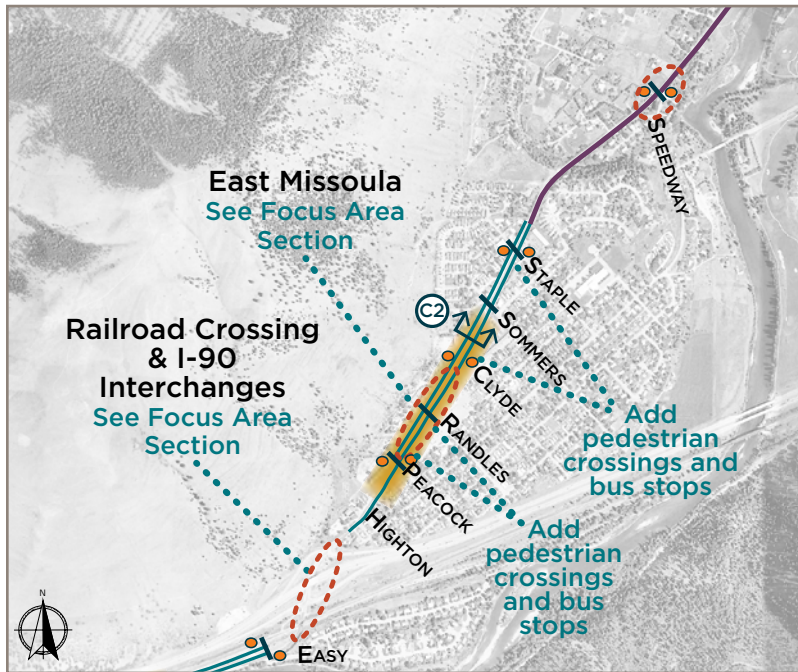


Figure 4-18: Alternative C Plan - East Missoula Segment

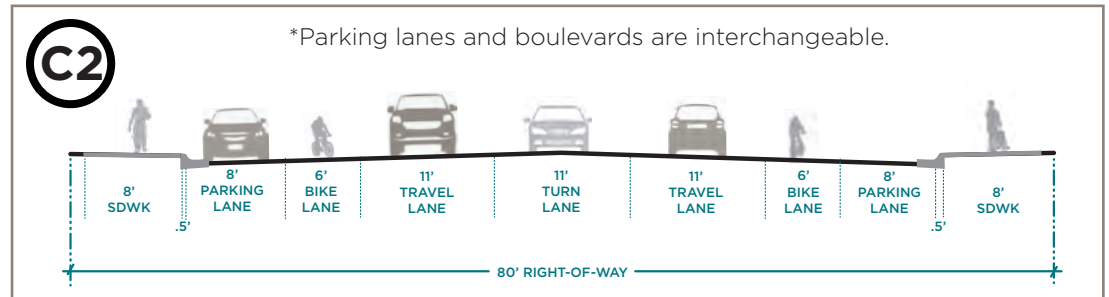
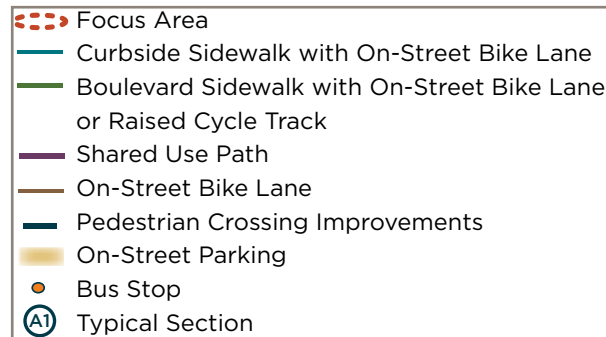


Figure 4-19: Alternative C Typical Section - East Missoula Segment Looking East



Alternative C - Sha-Ron/Marshall Segment

A shared use path is located on the south side of the highway connecting East Missoula to Sha-Ron and Old Marshall Grade. This alternative does not connect the shared use path between Old Marshall Grade and Tamarack Road.



Shared Use Path

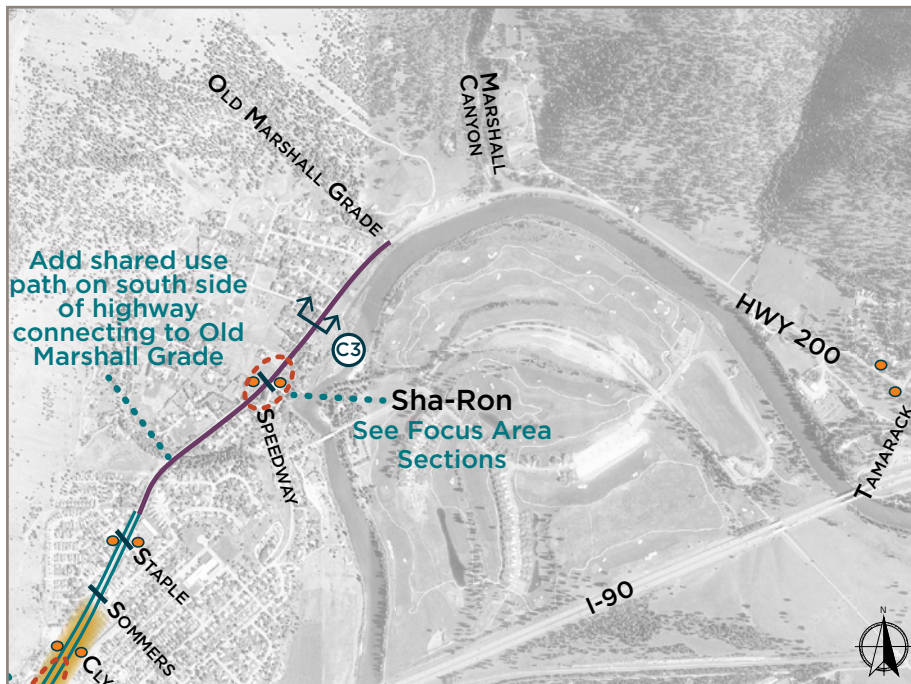
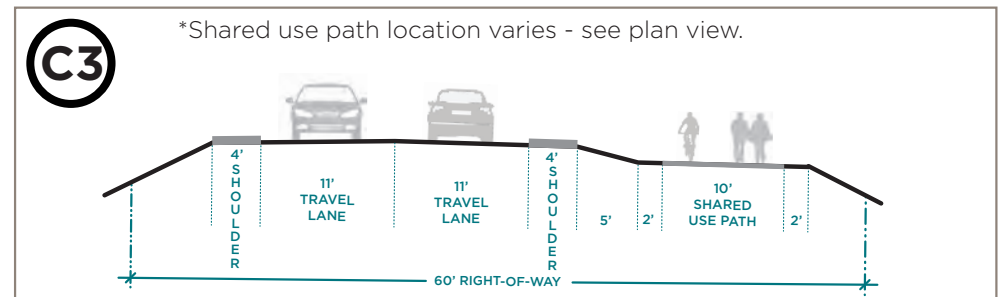
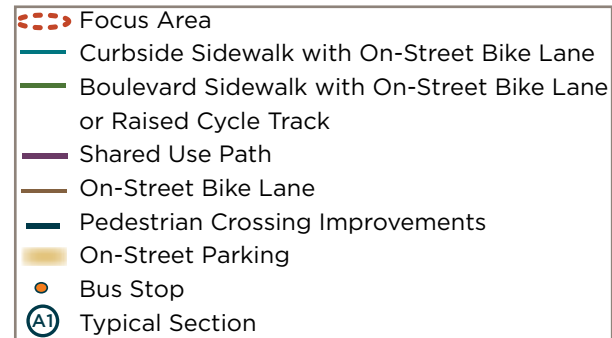


Figure 4-20: Alternative C Plan - Sha-Ron/Marshall Segment



*Shared use path location varies - see plan view.

Figure 4-21: Alternative C Typical Section - Sha-Ron/Marshall Segment Looking East



Focus Areas

There were four focus areas that were specific areas of concern. Detailed options were developed for these areas

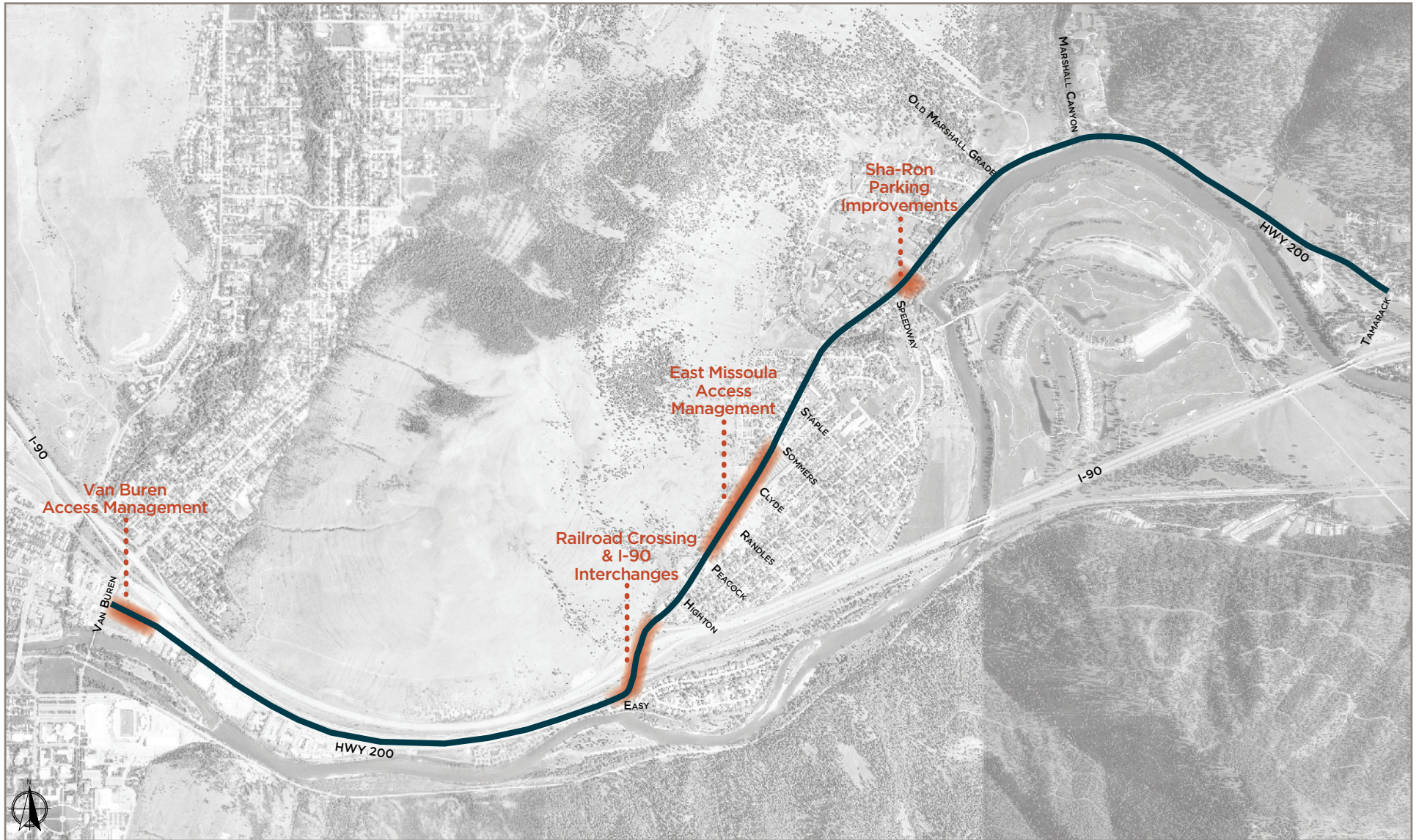


Figure 4-22: Focus Areas

Van Buren Focus Area

The Van Buren Focus Area experiences safety issues stemming from merging and expanding driving lanes associated with the Van Buren intersection and access to businesses. To address these safety issues, the median will be extended to the east and a left turn lane added for access to the Green Hanger and Kingfisher Fly Shop. The access to Diamond Jim's Casino and the Lewis and Clark Trail Adventures will become right-in/right-out access only.

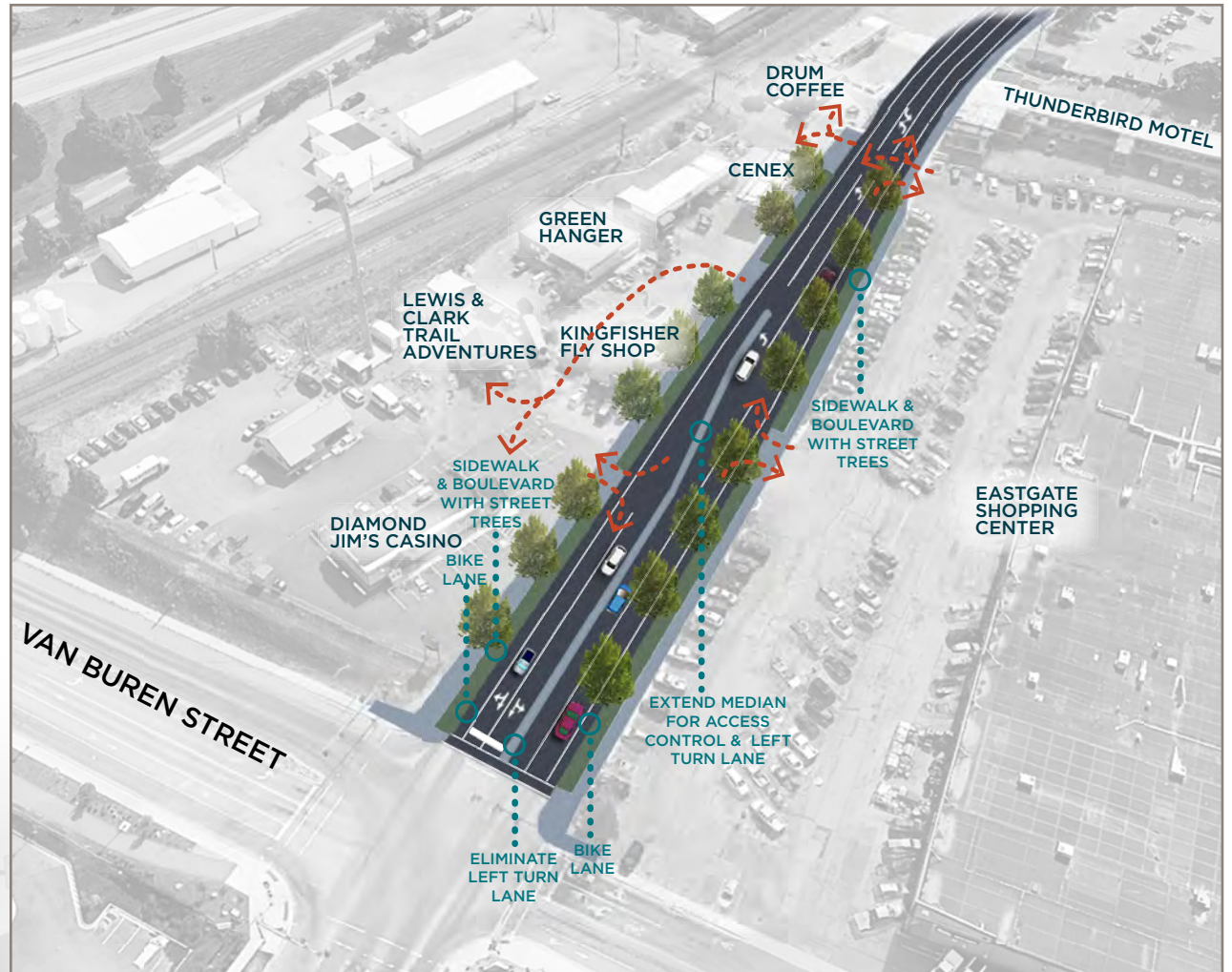


Figure 4-23: Van Buren Focus Area



Railroad Crossing & I-90 Interchanges Focus Area

The Railroad Crossing and I-90 Interchanges Focus Area lacks pedestrian and bicycle amenities which are limited by the narrow railroad underpass. The width of the railroad underpass along with the geometry of the I-90 interchanges limits sight distances causing safety issues. This is a challenging area limited by the existing railroad infrastructure and maintaining railroad operations during construction. Many different options were explored and the options included were determined to be the most feasible options.

The first option includes two roundabouts, one at each I-90 interchange. The roundabouts improve the safety and intersection operations while addressing the challenging geometry of the intersections. This option also includes a new railroad bridge that is a wider structure to accommodate bikes and pedestrians adjacent to the roadway.

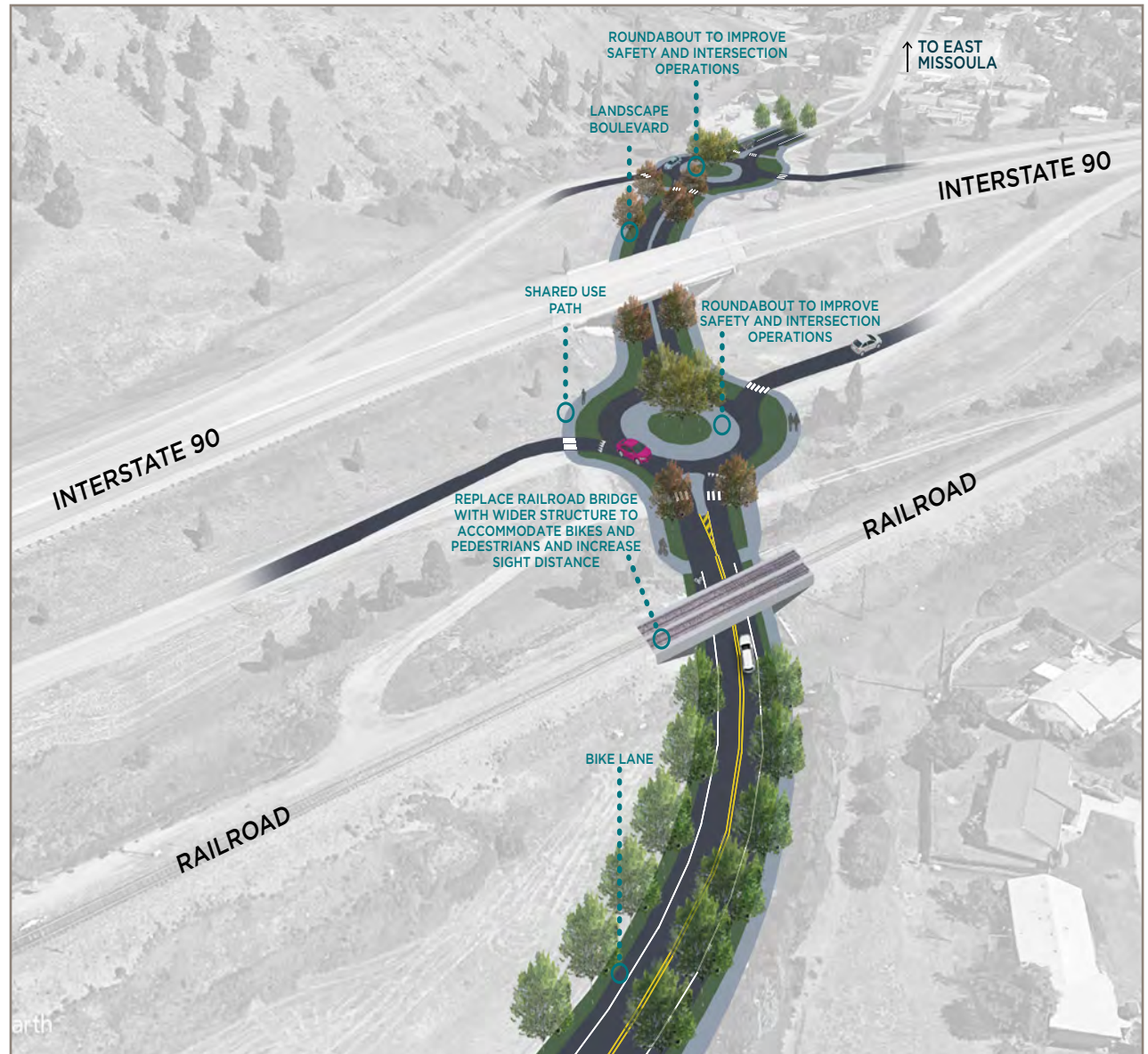


Figure 4-24: Option 1 Railroad Crossing & I-90 Interchanges Focus Area

The second option is to go around the existing railroad underpass with a shared use path that connects East Missoula to Van Buren and downtown along the base of Mount Jumbo

parallel to I-90. The path design would be constructed within MDT right-of-way or within the Mount Jumbo conservation easement. The design would need to mitigate impacts

to Mount Jumbo within the conservation easement. There are no improvements to the I-90 interchanges included in this option.

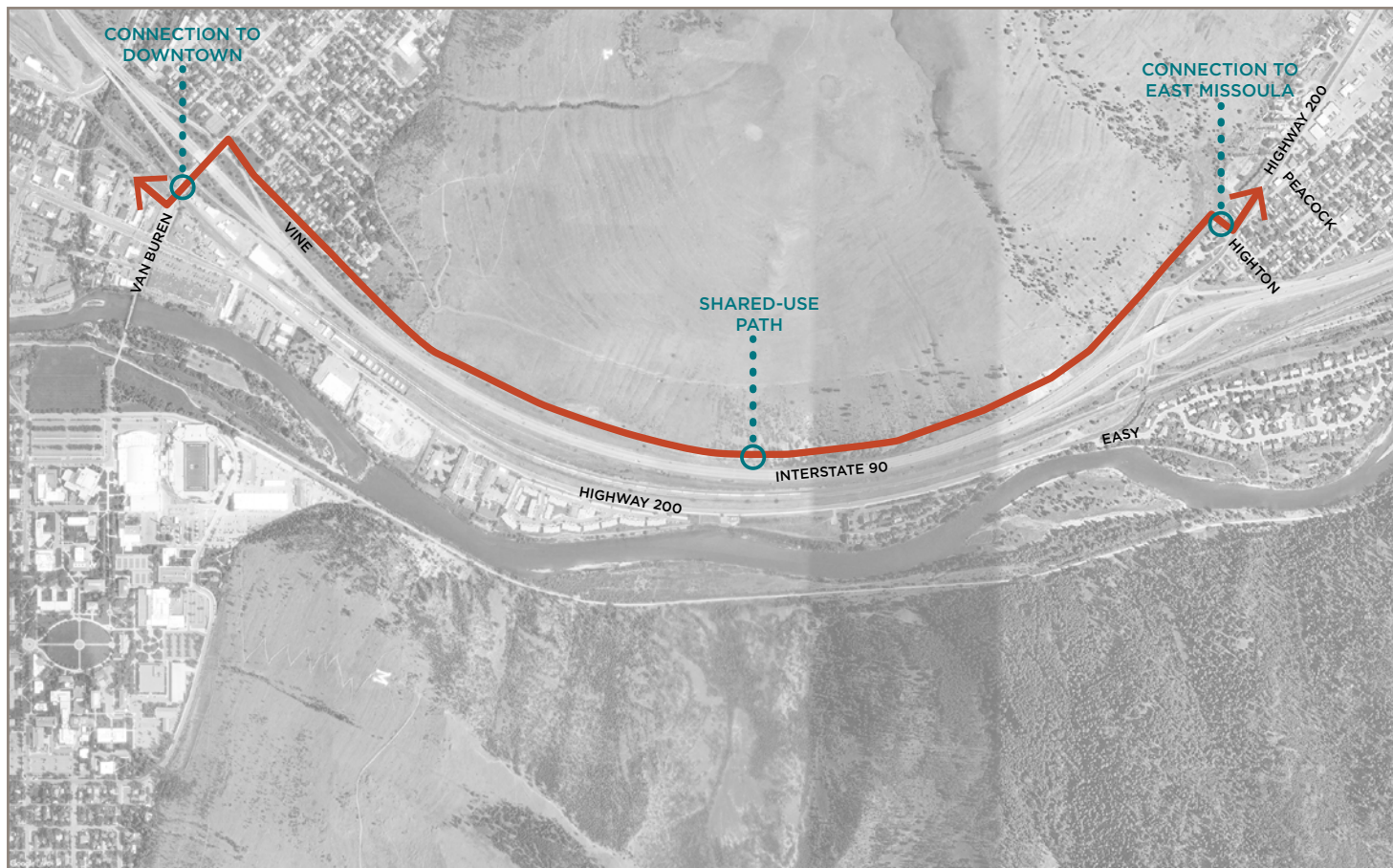


Figure 4-25: Option 2 Railroad Crossing & I-90 Interchanges Focus Area

The third option includes one roundabout at the eastbound I-90 interchange to improve safety and intersection operations as there are more safety concerns associated with the eastbound I-90 interchange than the westbound I-90 interchange. This option does not include any improvements for bicyclists and pedestrians between Easy Street and Highton Street.

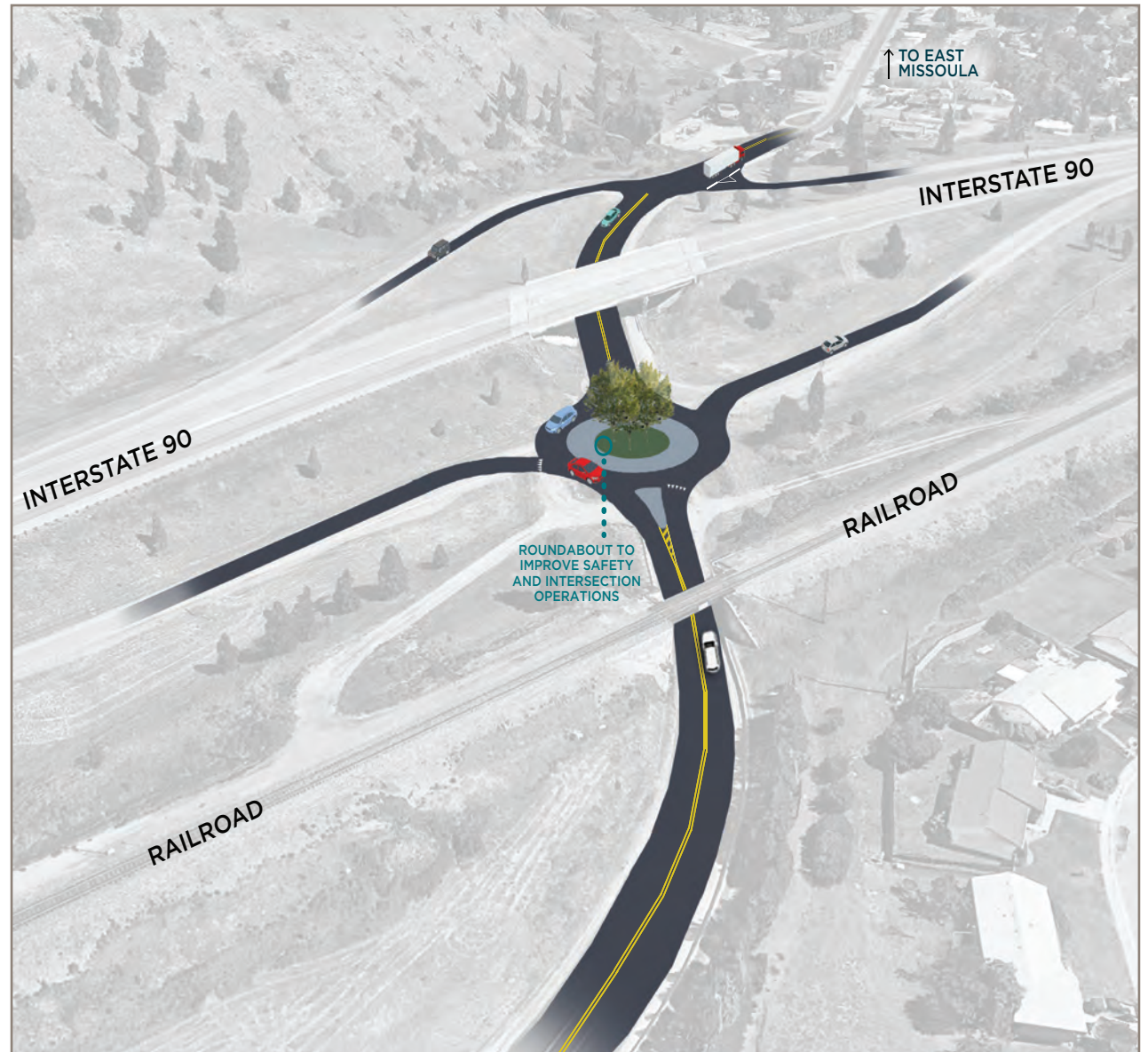


Figure 4-26: Option 3 Railroad Crossing & I-90 Interchanges Focus Area

East Missoula Focus Area

This area lacks curb, gutter, and sidewalk as well as having numerous approaches and large areas of continuously paved property abutting the road that result in nearly continual access with few restrictions in place. This causes safety and storm water issues. To address these issues, we're proposing improvements

that includes curb and gutter along the entire length of Highway 200 through East Missoula. This will address storm water and drainage issues and delineate access to businesses and residences as well as street connections. A two-way left turn lane is shown through most of East Missoula which removes stopped or

slow left-turning vehicles from the through lanes and stores those vehicles in the median area until an acceptable gap in opposing traffic is available. Additional driveway access is provided to existing businesses and residences.

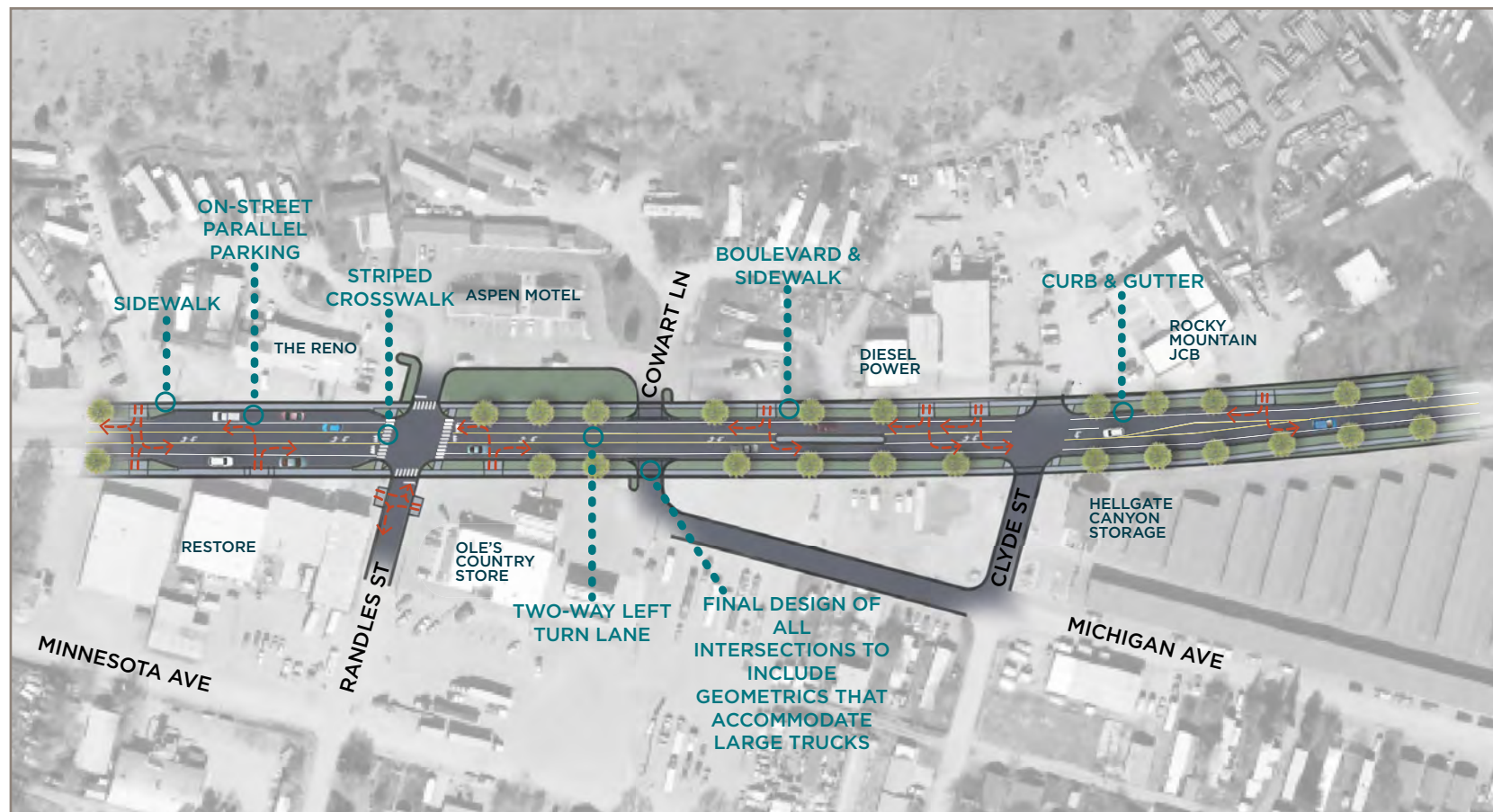


Figure 4-27: East Missoula Access Management

Sha-Ron Focus Area

This area experiences heavy use during the summer months and “tubing” season. The existing parking area is not large enough to accommodate parking for all the users so parking overflows along the shoulder of Highway 200 creating safety and congestion issues. This project is working on solutions that address the overflow parking that occurs within the Highway 200 right-of-way. Future management of the Sha-Ron fishing access

site may change, but management of the site is outside the scope of this project. With that in mind, two options were created for additional parking within the right-of-way to improve safety within the corridor.

The first option adds parallel parking spaces on the south side of the highway to the west of the existing parking area. The parking spaces are protected with a median to provide

separation between the pedestrians and roadway. This option also includes a variable speed limit zone reducing the speed limit during periods of high usage. A bus pullout is provided, along with an air compressor to inflate tubes, encouraging river users to ride the bus rather than drive to the river access. This option does not require purchasing private property, but the road will need to be lowered to mitigate slope impacts on private property.

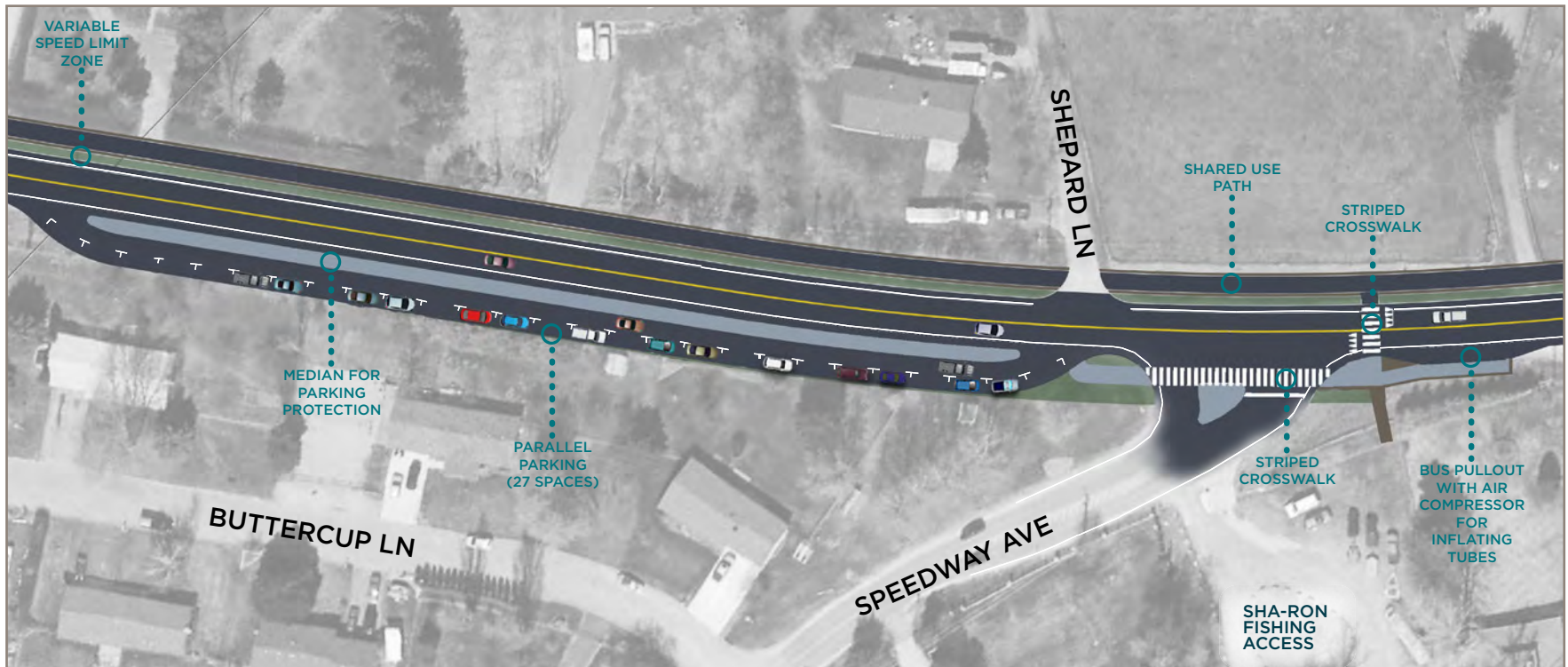


Figure 4-28: Option 1 Sha-Ron Focus Area

The second option develops a new parking lot which is just under a quarter of a mile to the east of the existing parking area. The parking lot would be located in existing right-of-way and connected to the Sha-Ron fishing access with a shared use path.



Figure 4-29: Option 2 Sha-Ron Focus Area

Speed Limits

During the public involvement process, there were several comments about reducing speed limits within the corridor. Speed limits have historically been set based on the 85th percentile speed. This can lead to higher than desired speed limits because it is based on the speed of vehicles at the time of the study. While this practice is generally acceptable in rural conditions where the 85th percentile

speed represents a good correlation between the highway geometrics and driver comfort, this practice does not account for the higher number of access points, competing user types (i.e. pedestrians, bicyclists, and transit stops), and general safety of speeds in urban conditions. Therefore, the state of the practice for setting speed limits in urban conditions is currently in flux, and new guidelines are

anticipated to be coming out on this topic in the near future. If the speed limits were studied with current guidelines, it is unlikely that the speed limit would be changed. However, this plan recommends the speed limits on Highway 200 be revisited once the new guidelines are published and adopted by the governing agencies.



Preferred Alternative

The Advisory Committee evaluated and ranked the alternatives based on their ability to achieve the project goals, which include improving safety, improving operation and addressing access management, expanding multi-modal options, enhancing the unique character of each segment, being cost-effective, feasible, and maintainable, and protecting the environment from adverse impacts. Public support was part of the

evaluation, but it was not the only factor used in developing the preferred alternative.

Public comment on the design alternatives provided clear direction for many aspects of the preferred alternative. These include the continuous bike/ped facilities throughout the length of the corridor, shared-use path, boulevard sidewalks in certain locations, pedestrian crossing facilities, bus stop

locations, on-street parallel parking instead of angle parking in East Missoula, a wider tunnel under the railroad, and the Sha-Ron east parking lot option. Elements were mixed and matched from the three alternatives for the preferred alternative in response to the unique character of each segment of the corridor.

The opinion of probable costs for the preferred alternative is included in Appendix F.



Preferred Alternative

The Preferred Alternative enhances connectivity throughout the East Missoula Highway 200 Corridor with multi-modal improvements. In response to the unique character of each segment of the corridor, multi-modal improvements include a shared use path, on-street bike lanes, raised cycle tracks, and sidewalks as well as bus stop improvements. Additional improvements include replacing the railroad bridge with a wider structure, a roundabout at the eastbound I-90 interchange, and parking improvements at Sha-Ron Fishing Access.

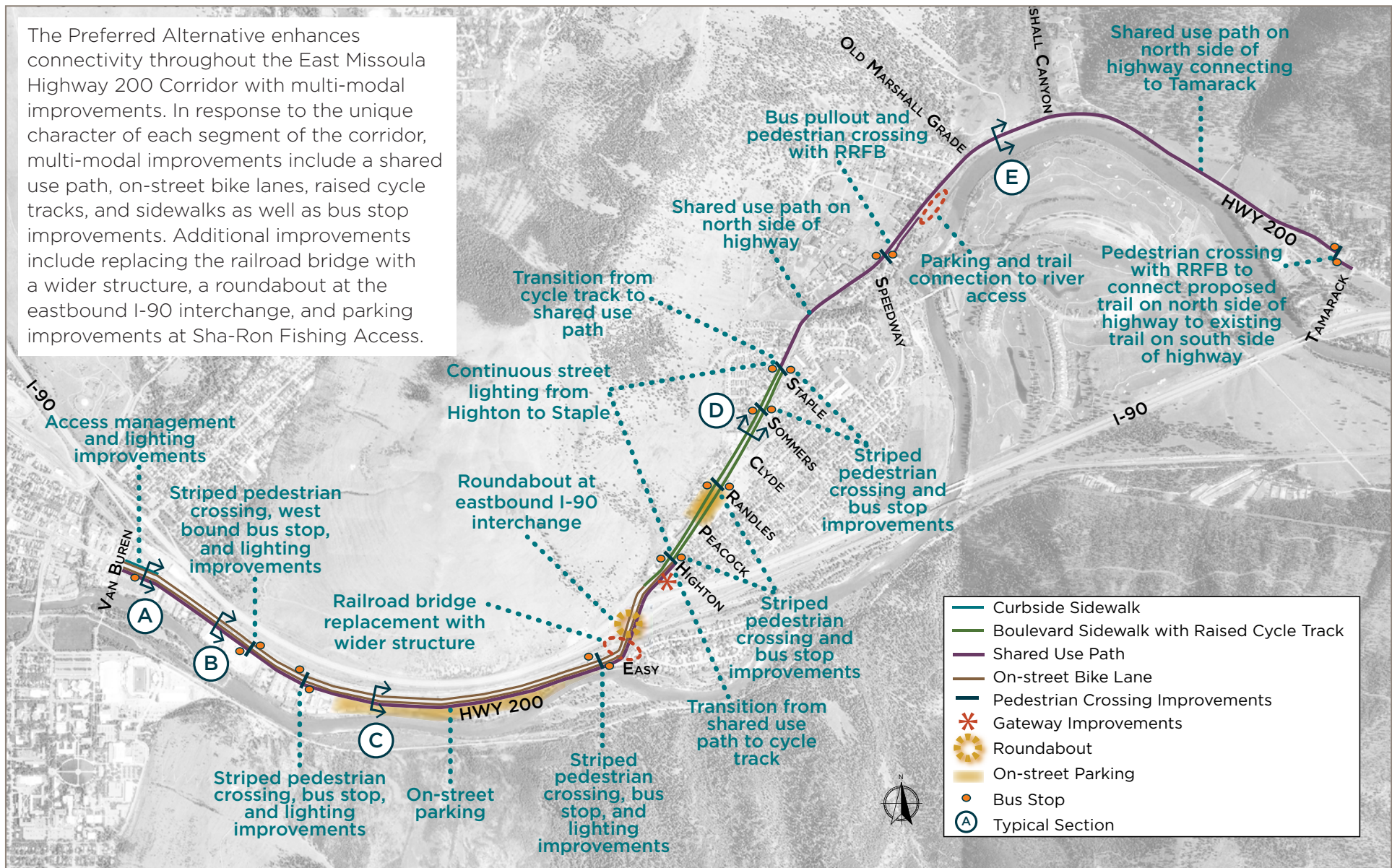


Figure 5-1: Preferred Alternative

East Broadway Segment

A shared use path and on-street bike lanes are provided from Van Buren to I-90. The shared use path provides a two-way connection for users that only want to access locations on the south side of Highway 200, such as students living in apartments along the river and going to classes at the University. The on-street bike lanes cater to commuter bicyclists from East Missoula traveling into Downtown for work.

This area is unique in that almost all of the activity and land uses are located on the south side of the highway necessitating the need for a two-way shared use path so users don't have to cross Highway 200 to access the westbound

bike lane. However, improved connectivity to East Missoula for commuter bicyclists is also needed so on-street bicycle lanes are provided. Additionally, there is potential for a riverfront trail that would run parallel to the proposed shared use path. A shared use path along Highway 200 and the riverfront trail may be duplicative and the feasibility and necessity of each should be evaluated before implementation. Utilization of the existing curb and gutter should be considered during final design to reduce costs.

With there being a number of driveways along the shared use path, best practices should

be implemented to minimize safety concerns from drivers crossing the path. These may include raising the path as it crosses driveways, changing the color and texture of the path as it crosses driveways, a stop sign for motorists before they cross the path, and consolidating driveways.

On-street parking is provided where existing right-of-way width allows, providing overflow parking for apartment complexes and events. Street crossings and bus stops are improved. Continuous lighting is not proposed for this segment. Instead, lighting is included at crossings and bus stops for improved safety. The railroad bridge will be replaced with a wider structure. While the option for a trail along the base of Mount Jumbo connected East Missoula with Downtown, it didn't provide improved connectivity between the East Broadway segment and East Missoula as well as having feasibility concerns. However, if the railroad bridge option proves to be cost prohibitive, the Mount Jumbo trail option should be further studied.

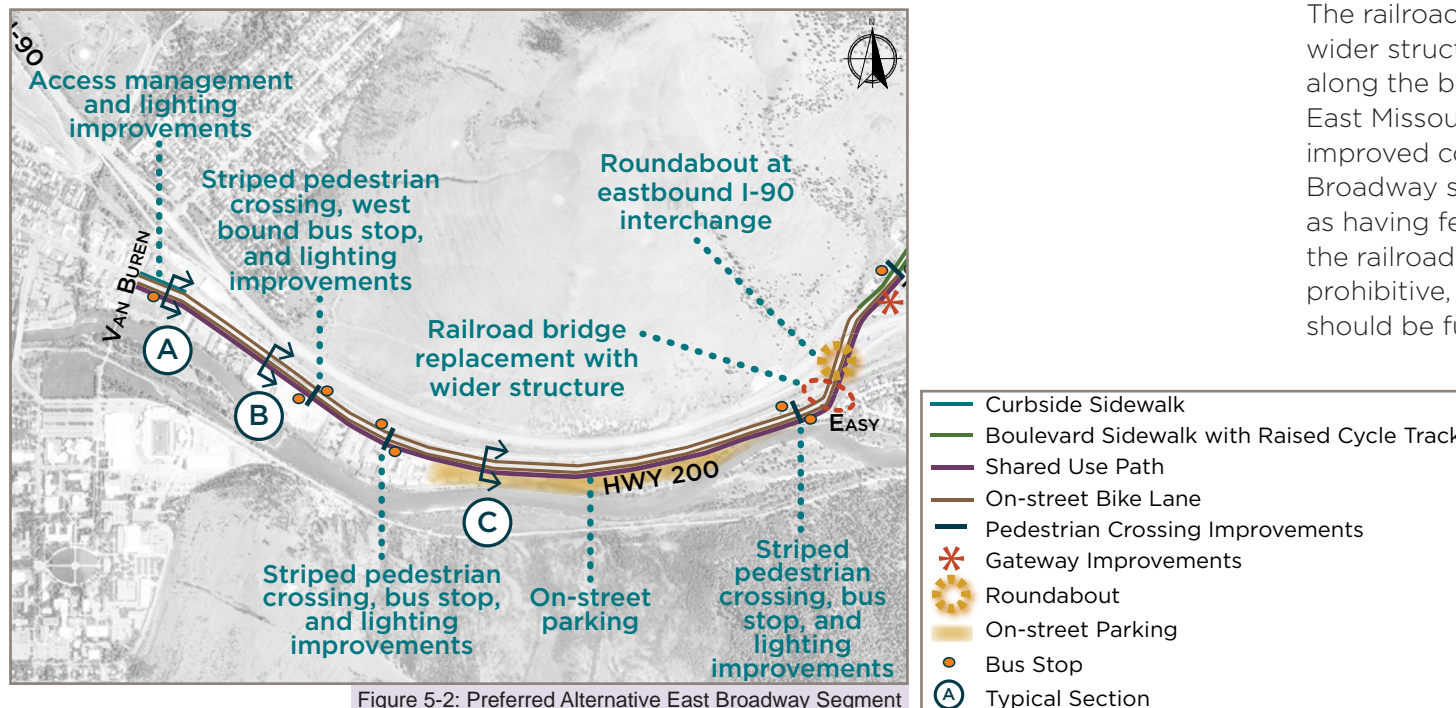


Figure 5-2: Preferred Alternative East Broadway Segment

The right-of-way width varies throughout the East Broadway segment. Near Van Buren as shown in Figure 5-4, there is a 92' right-of-way width that provides for space travel lanes, bike lanes, boulevards, and a shared use path to accommodate traffic at the Van Buren intersection and the surrounding commercial uses. Moving east, the right-of-way narrows to a 60' width. As shown in Figure 5-5, the typical section include two travel lanes, bike lanes, a boulevard and shared use path on the south side of the highway. This matches the surrounding land uses with development primarily on the southern side of the highway. The right-of-way widens to 80' in the eastern portion of the segment. This allows for the addition of on-street parking.

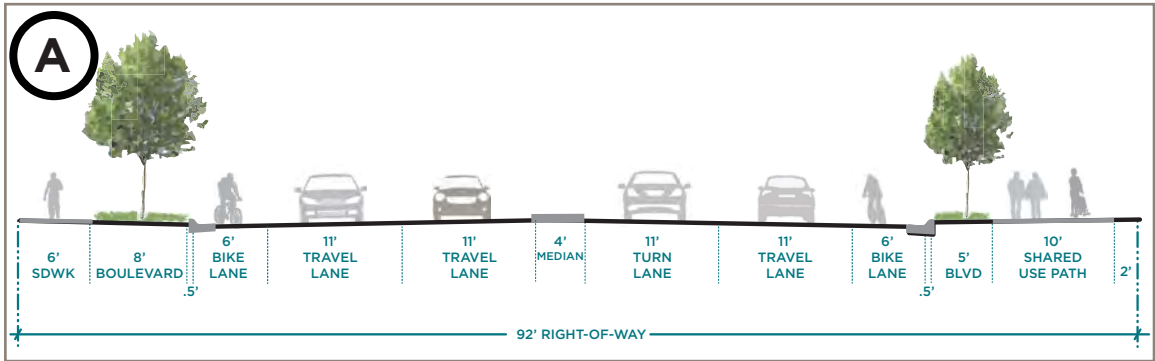


Figure 5-4: Preferred Alternative East Broadway Segment 'A' Typical Section Looking East

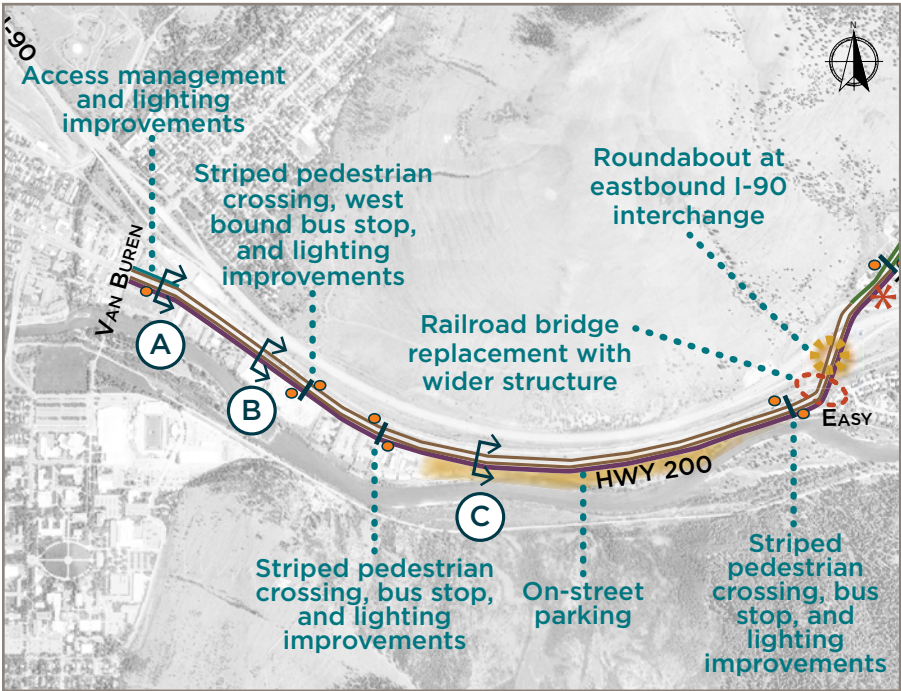


Figure 5-3: Preferred Alternative East Broadway Segment

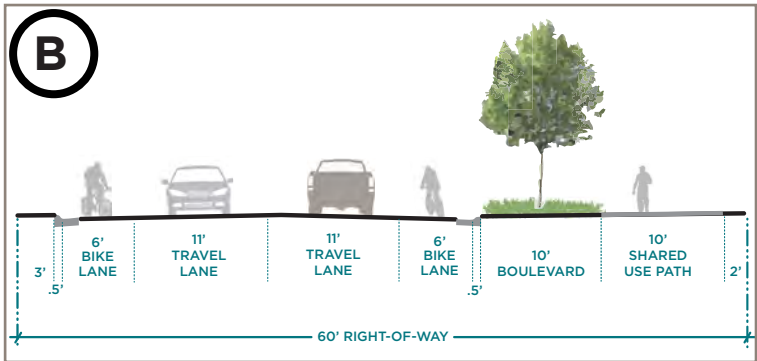


Figure 5-5: Preferred Alternative East Broadway Segment 'B' Typical Section Looking East

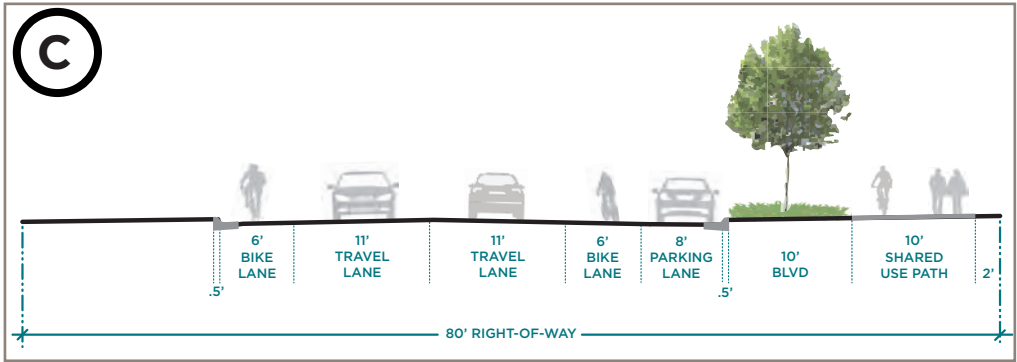


Figure 5-6: Preferred Alternative East Broadway Segment 'C' Typical Section Looking East

Van Buren Improvements

Access management near Van Buren is addressed by extending the median to the east and eliminating the left turn lane at Van Buren for vehicles traveling west. This allows for better access control while creating space for improved bicycle and pedestrian amenities.

While this corridor plan only extends to Van Buren Street, it is important that improvements connect and transition to existing bicycle and pedestrian amenities at the Van Buren and Broadway intersection. Additional improvements may be necessary adjacent to the corridor plan area.

As redevelopment occurs in this area, accesses should be combined, if possible, to reduce driveways. Changes to access may require access easements.

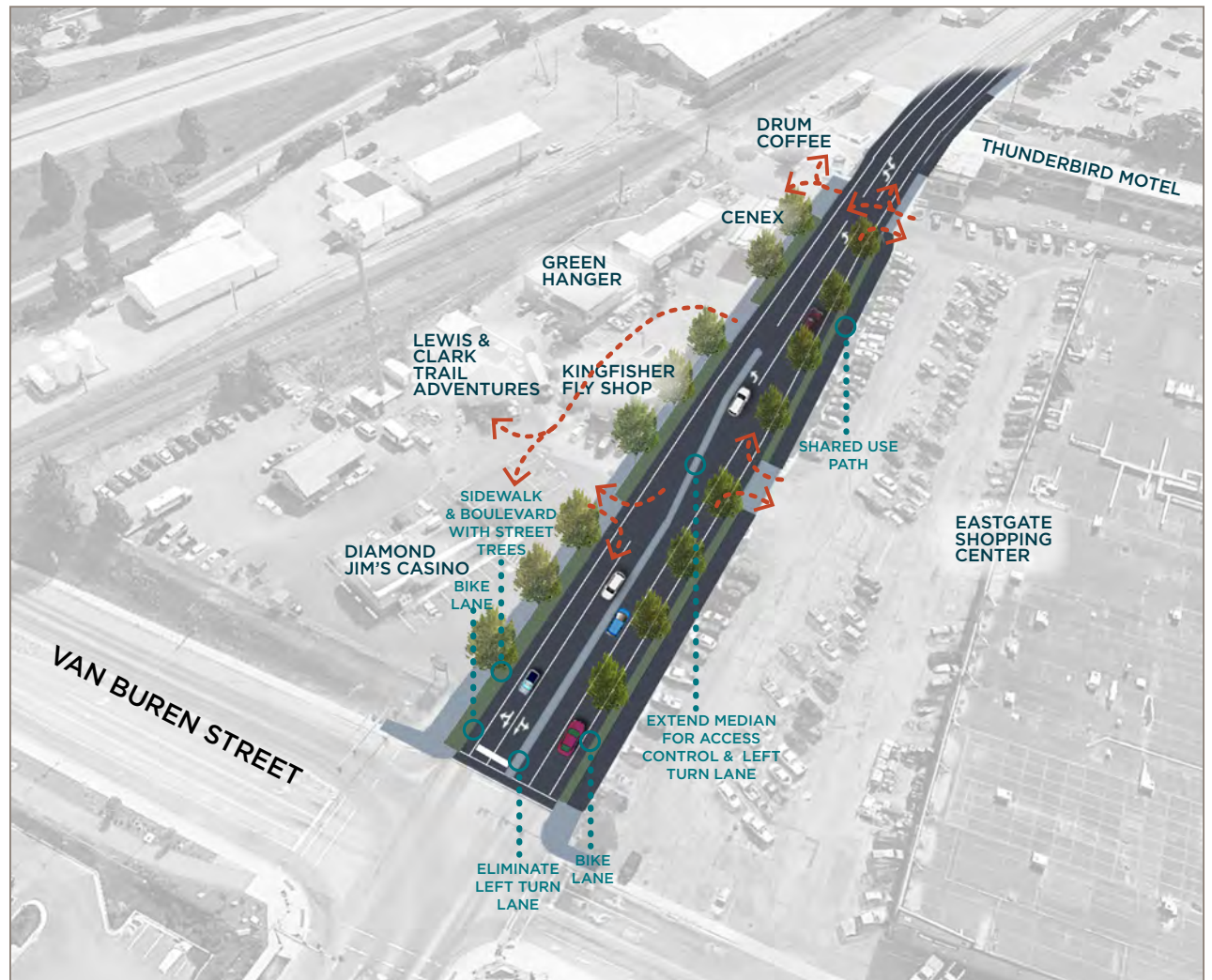


Figure 5-7: Preferred Alternative Van Buren Improvements

Railroad Bridge Improvements

The railroad bridge is replaced to accommodate on-street bike lanes and a shared use path. The roundabout at the eastbound I-90 interchange improves safety and intersection operations while addressing the challenging geometry of the intersection. While a second roundabout for the westbound I-90 interchange is not included in the preferred alternative, if there is a need for a second roundabout, it can be accommodated in the future.



Existing Railroad Bridge



Figure 5-8: Proposed Railroad Bridge Replacement and Roundabout at Eastbound I-90 Interchange

East Missoula Segment

Improvements through East Missoula include sidewalks, landscaped boulevards, raised cycle tracks, intersection alignment improvements, and curb and gutter on both sides of Highway 200. Continuous street lighting is provided from Highton Street to Staple Street. Bus stop and striped crossing improvements are planned for Highton Street, Randles Street, Sommers Street, and Staple Street. This shifts

the Mountain Line transit route off Speedway to Highway 200 to provide a more efficient route with safe facilities. Moving bus stops from Speedway to Highway 200 will require coordination, analysis, and approval from MDT.

With the street improvements, the entire 80' right-of-way will be utilized. This will affect parking for some businesses that currently use

the right-of-way for parking. In these areas, on-street parking can be accommodated by eliminating the landscaped boulevards.

Gateway improvements are located west of Highton Street at the entry to East Missoula. This can include the existing entry sign or be upgraded with a new sign and landscaping.

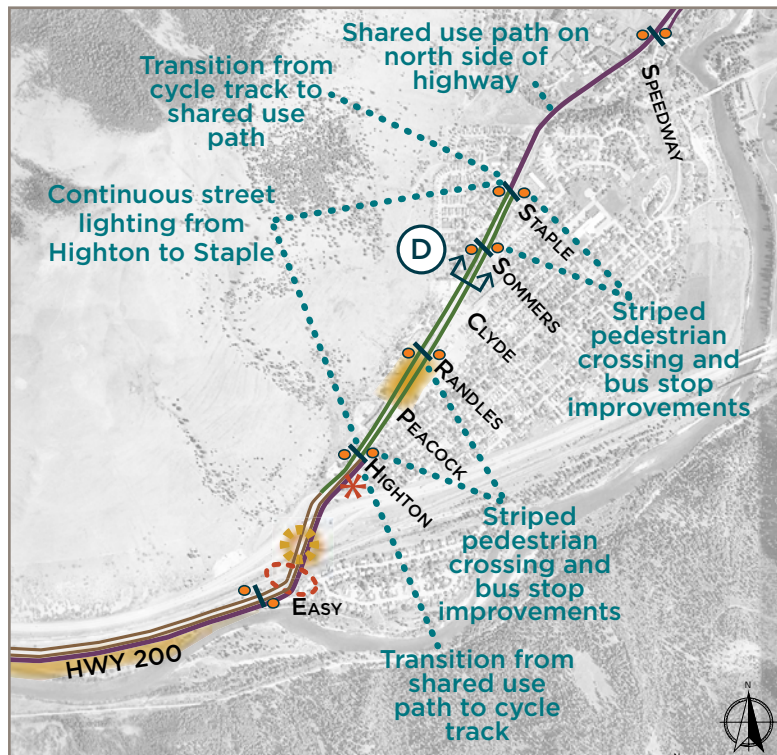


Figure 5-9: Preferred Alternative East Missoula Segment

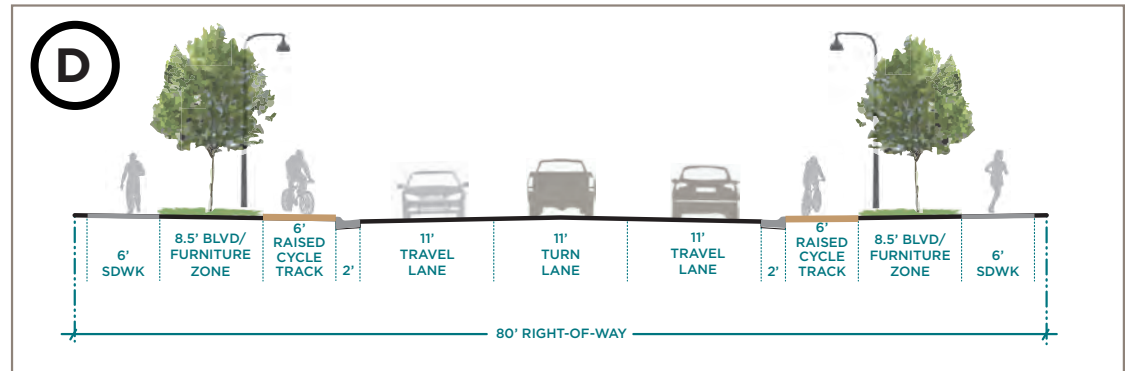


Figure 5-10: Preferred Alternative East Missoula Typical Section Looking East



Highton Street Crossing

The two-way shared use path will transition to one-way raised cycle tracks on the north and south of Highway 200 through East Missoula. This transition includes a bicycle and pedestrian crossing at Highton Street with a refuge island for traffic calming. Westbound left turns will be restricted at this intersection

to limit conflicts with vehicles turning left and shared use path users. Bus stops are located at this intersection, so users have access to the street crossing.

Bus stops are shown at ideal locations, but a traffic study will be needed along with

additional analysis and coordination with MDT for final siting. Bus stops are located along Highway 200, shifting them off Speedway. This will help Mountain Line maintain headways as ridership increases.

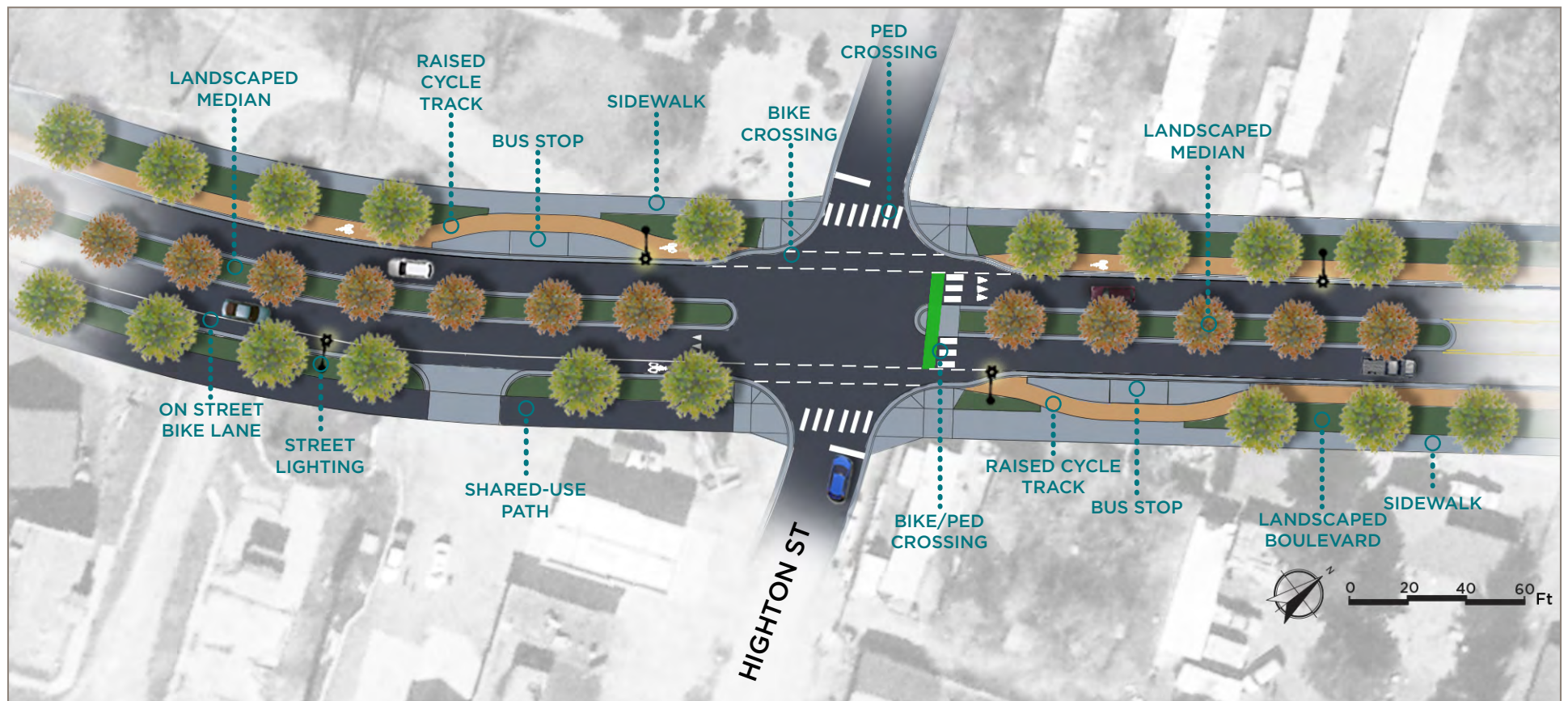


Figure 5-11: Preferred Alternative Highton Street Crossing

The skewed intersections along Highway 200 through the urban core of East Missoula introduce operational and safety issues associated with turning speed and ability to easily see oncoming traffic. The angle of these intersections makes it difficult for drivers trying to access Highway 200 to look back over their shoulders and see conflicting traffic. The East Missoula Safety Audit identified right-angle and rear-end crashes as the predominant crash type along this corridor. The right-angle crash types could be associated with the angles of the intersections because drivers could be having a difficult time looking back and judging the speed of the conflicting traffic on Highway 200. The rear end crashes could be associated

with vehicles turning off Highway 200 onto the side streets needing to slow down more than is typically expected for the sharp turns.

The existing right-of-way for the side streets through East Missoula is only 50 feet wide, which makes completely squaring the intersection up to a standard 4-legged intersection difficult without acquiring right-of-way from the adjacent landowners. One option would be to bend each leg of the intersection so that it approaches Highway 200 at exactly 90 degrees, however this would create two separate offset T-intersections near one another. This option would introduce more conflicting turning movements along

the corridor, and likely reduce safety, so it is not recommended. Another option would be a balance between the existing skew and the previous option. The side streets can be realigned within the existing right-of-way widths and built with curb radii as shown in Figure 5-12. This option will allow for consistent turning speeds and reduce awkward sight lines and potentially insufficient sight distances. Due to the existing right-of-way constraints, this option is recommended. As the project progresses from the planning stages to the design phase, options could be explored to obtain additional right-of-way to make these as close to 90 degrees as possible.

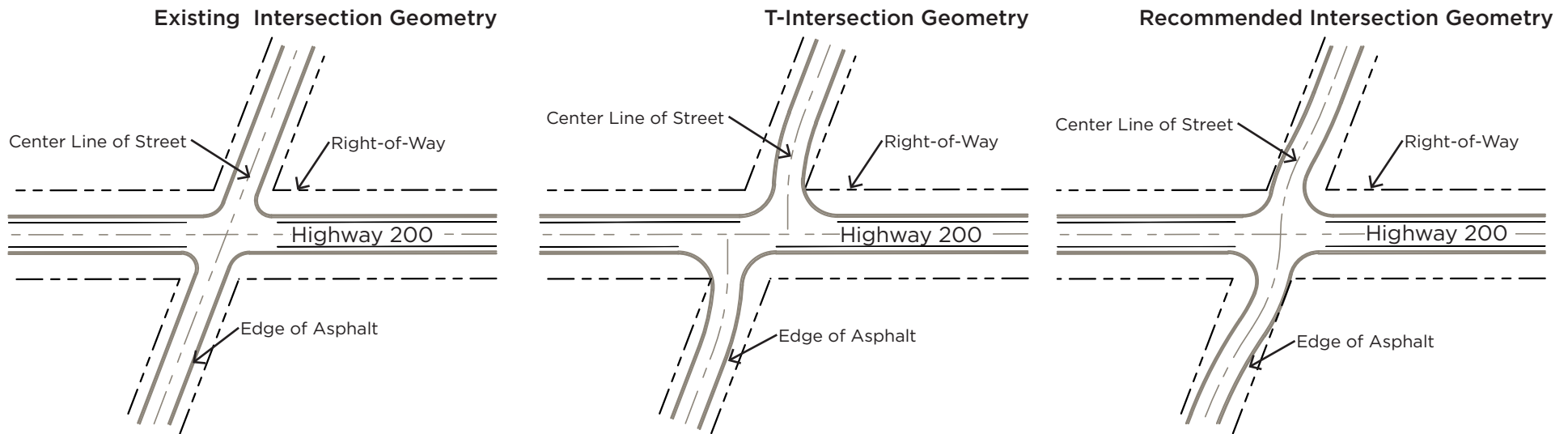


Figure 5-12: East Missoula Skewed Intersection Options

East Missoula Improvements

Improvements through East Missoula include raised cycle tracks, landscaped boulevards, sidewalks, and street lighting. This will create a new look for East Missoula while improving safety for vehicles, pedestrians, and bicyclists.



Existing Highway 200 Improvements through East Missoula



Figure 5-13: Proposed Highway 200 Improvements through East Missoula

East Missoula Access Management

Safety, storm water, drainage, and skewed intersection issues are addressed with curb and gutter through East Missoula. With curb and gutter, access will be delineated. Intersecting streets will be better aligned for more perpendicular street intersections. The alignment of the intersecting streets should be balanced with the need to acquire right-of-way to provide perpendicular intersections. On-street parking is shown between Peacock

and Randles for existing businesses that currently use the right-of-way for parking. A two-way left-turn lane is shown through most of East Missoula, which removes stopped or slow left-turning vehicles from the through lanes and stores those vehicles in the median area until an acceptable gap in opposing traffic is available. This addresses the need for additional capacity on Highway 200 through East Missoula. In areas where a two-way left-

turn lane is not needed, it can be replaced with a center landscaped median.

If growth warrants intersection capacity improvements, a roundabout at Sommers should be considered and reviewed by MDT. Additional driveway access is provided to existing businesses and residences.

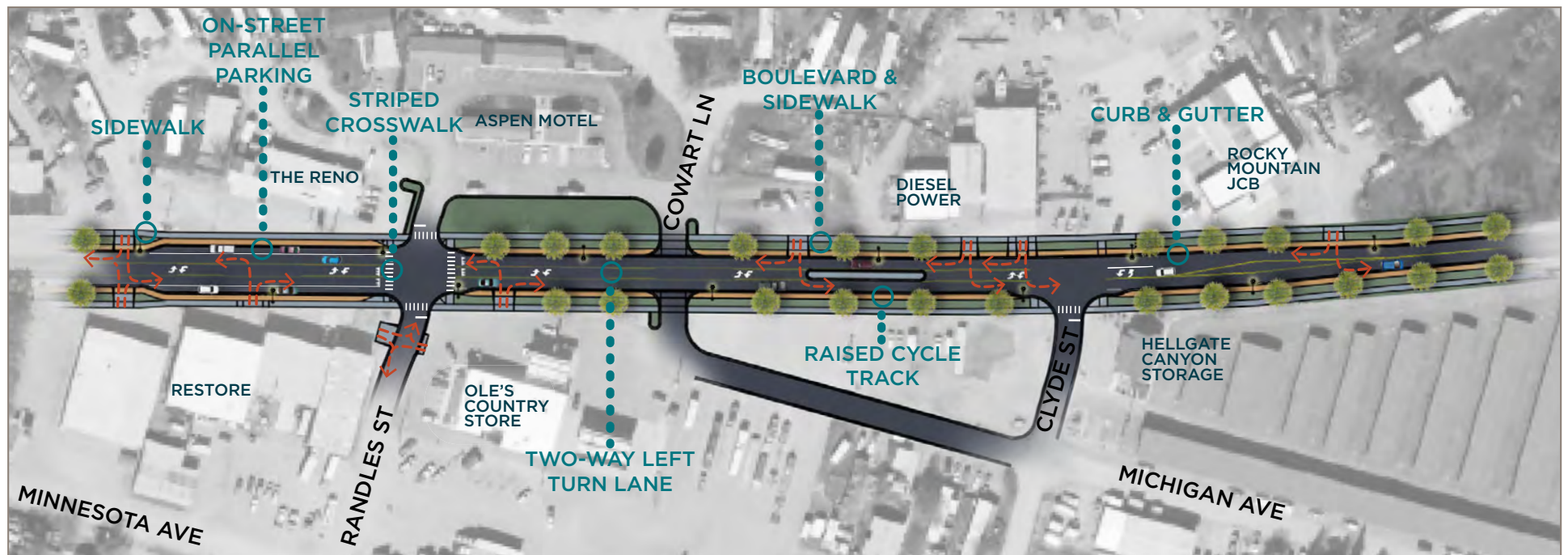


Figure 5-14: Preferred Alternative East Missoula Access Management

Staple Street Crossing

At Staple Street, the raised cycle tracks transition to a shared use path on the north side of the highway. This transition includes a bicycle and pedestrian crossing with a refuge

island for traffic calming and pedestrian safety. Bus stops are located at this intersection, so users have access to the street crossing.

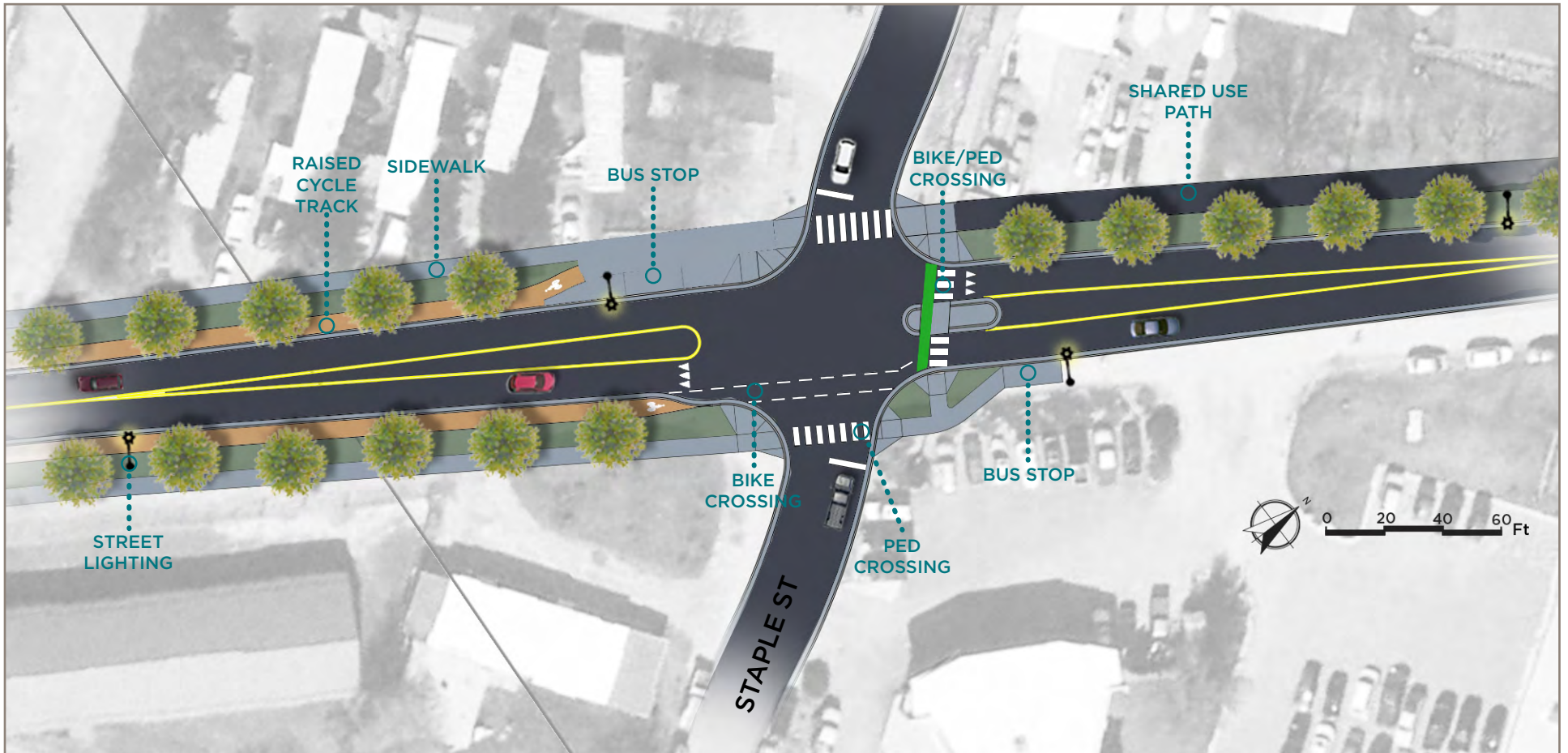


Figure 5-15: Preferred Alternative Staple Street Crossing

Sha-Ron/Marshall Segment

A shared use path is located on the north side of the highway through the Sha-Ron/Marshall segment connecting to the existing path at Tamarack. The path is located on the north side of the highway to provide better access to existing residences and to address construction feasibility issues where there is limited space between the river and hillside. Due to the limited right-of-way in some areas, the trail may need to be closely aligned to the highway requiring additional improvements to ensure safety. A rectangular rapid flashing beacon (RRFB) is provided at the Sha-Ron crossing and near Tamarack for users to cross Highway 200 and connect to the existing trail east of Tamarack.

A new parking lot is provided east of the Sha-Ron fishing access with a trail connecting

parking to the river access. If feasible, access to the river should be provided at the new parking lot rather than providing a trail to the Sha-Ron fishing access. A bus pullout is also provided at Sha-Ron that can accommodate shuttle service. If the full river access is moved to the new parking lot location, moving the bus stop to this location should be considered. Improvements to the Speedway intersection

were explored, but the existing right-of-way limits the ability to better align Speedway with Highway 200. There is also a well located in the area where Speedway would be moved if right-of-way is required. Due to these constraints, there are no improvements to the Speedway intersection included in the Preferred Alternative.

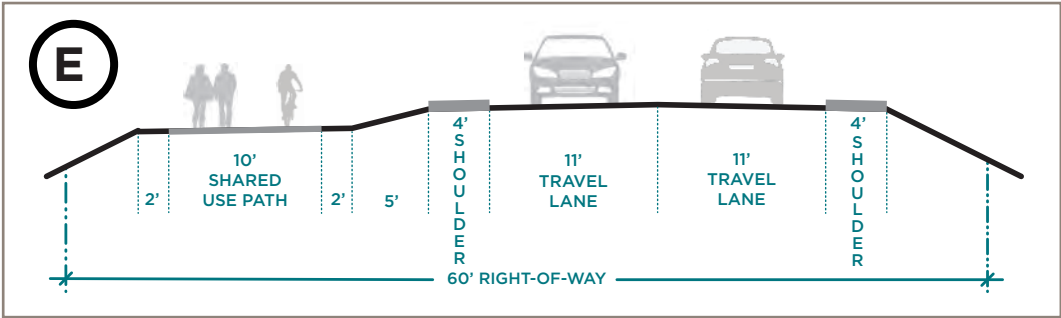


Figure 5-17: Preferred Alternative Sha-Ron/Marshall Typical Section Looking East

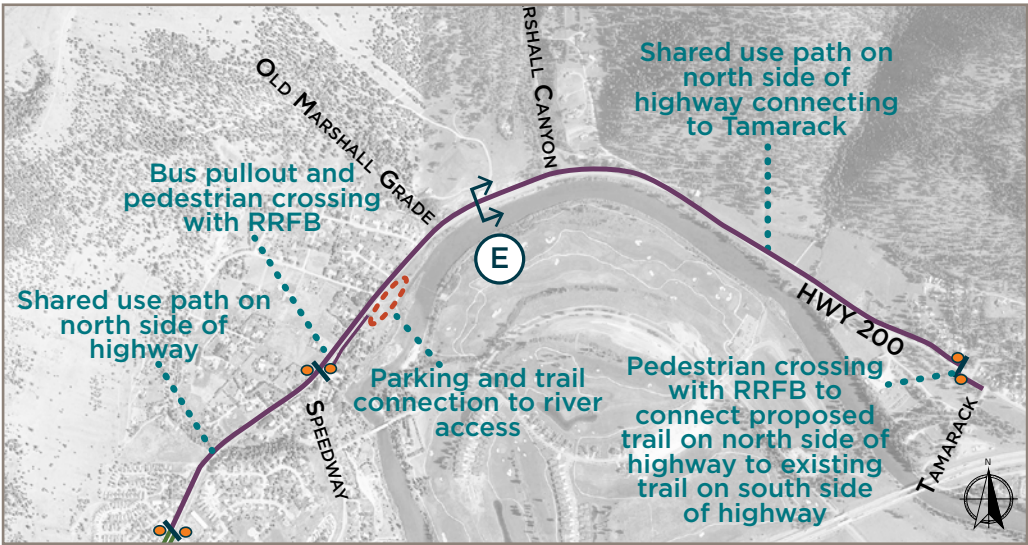
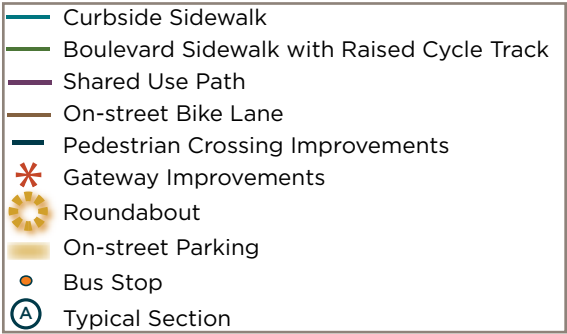


Figure 5-16: Preferred Alternative Sha-Ron/Marshall Segment



Sha-Ron Bus Pullout & Tamarack Crossing

At the Sha-Ron fishing access, a bus pullout is provided to serve Mountain Line as well as to provide shuttle service for “tubers” accessing the river. An air compressor will be provided at the bus pullout for inflating tubes. A trail will connect to a new parking lot located east of Sha-Ron to minimize parking along Highway

200. A striped crossing with a rectangular rapid flashing beacon connects the shared use path on the north side of Highway 200 to Sha-Ron. The bus pullout and crossing location should be considered as changes to Sha-Ron fishing access develop.

To transition the shared use path from the north side of Highway 200 to the existing trail east of Tamarack on the south side of Highway 200, a striped crossing is provided with a rectangular rapid flashing beacon to alert drivers to users crossing the highway. The crossing is coordinated with bus stop locations.

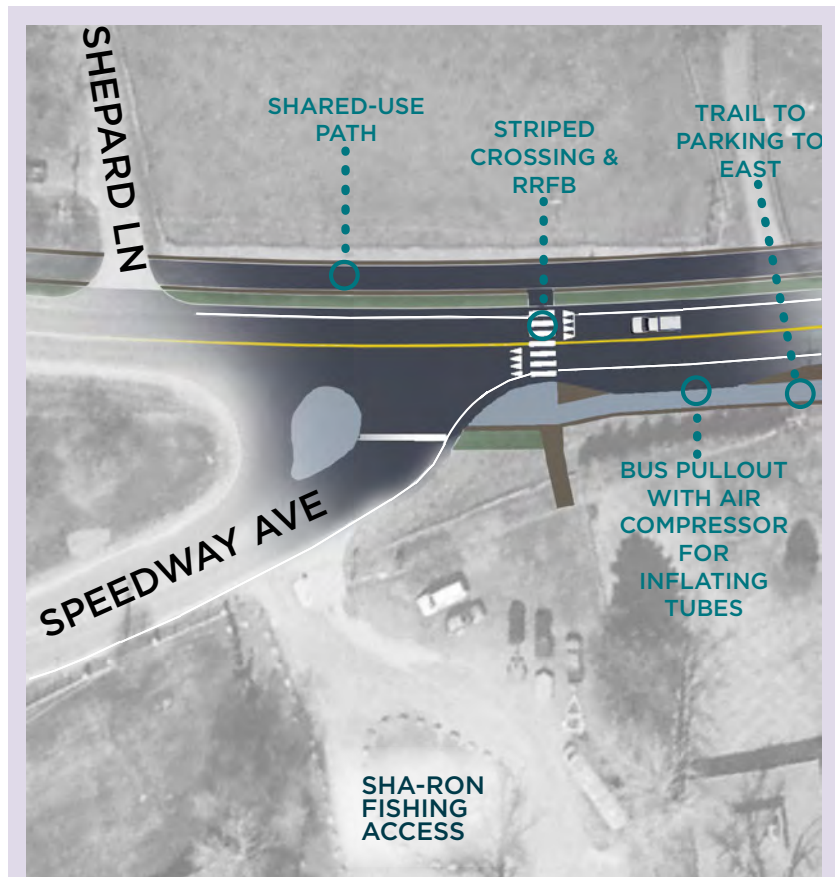


Figure 5-18: Sha-Ron Bus Pullout

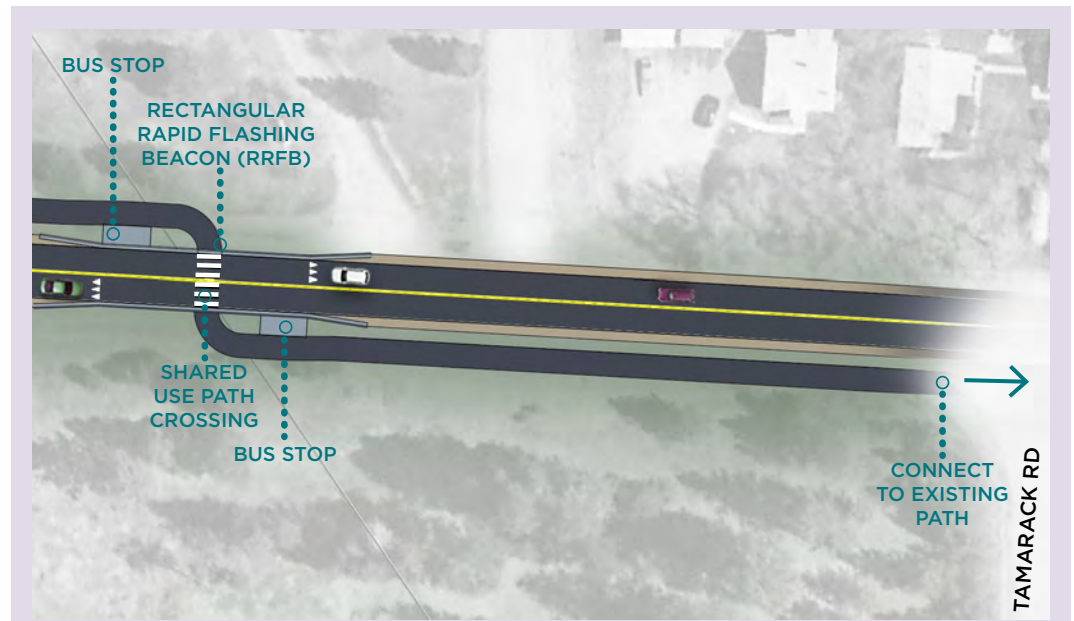


Figure 5-19: Tamarack Crossing

Implementation

This chapter provides information on how the general design of this plan will be realized with on-the-ground changes.

The plan is too big and too costly to be designed and implemented as a single project, ready for construction barring a major federal grant. Realizing this plan involves multiple

major improvements, such as the expansion of the tunnel under the railroad, that have high costs and technical complexity. It also includes other less costly or complex projects, such as curb, gutter, and sidewalks in some locations. This plan's general design for the extent of the East Missoula Highway 200 corridor helps get all the projects closer to “shovel-ready” by

providing clearer direction for how individual projects fit within the entire corridor.

This chapter provides a general overview of the process for project implementation as well as funding, timing, and initial next steps.



How Projects are Implemented

Figure 6-1, Steps to Moving a Project to Completion, is a generalized schematic of basic steps to achieve projects on the ground. The East Missoula-Highway 200 Corridor Plan is a first step, as shown in the first bar.

The next step is “Pre-Construction,” as shown in the next two bars. Securing funding is often a first step, especially if other pre-construction

activities require resources outside of existing budgets. For basic applications, MMPO, City or County staff may be able to research and submit funding applications. For larger and more complex applications, such as the multi-million dollar BUILD grants, the work may need to be contracted.

Engineering is needed to identify and address any issues that could affect construction. Surveys will clarify the exact location of street right-of-way, easements or other recorded property rights and restrictions, if not already

known. Environmental review will determine if environmental permits are needed for the project. Although this corridor-wide plan’s initial environmental review did not identify any major environmental concerns for the general design, new information may be uncovered at the project level. During this step, as detail is added to designs, there will be additional public participation as well as coordination with MDT.

The intent of this corridor-wide plan was to keep all improvements within the existing

Steps to Moving a Project To Completion

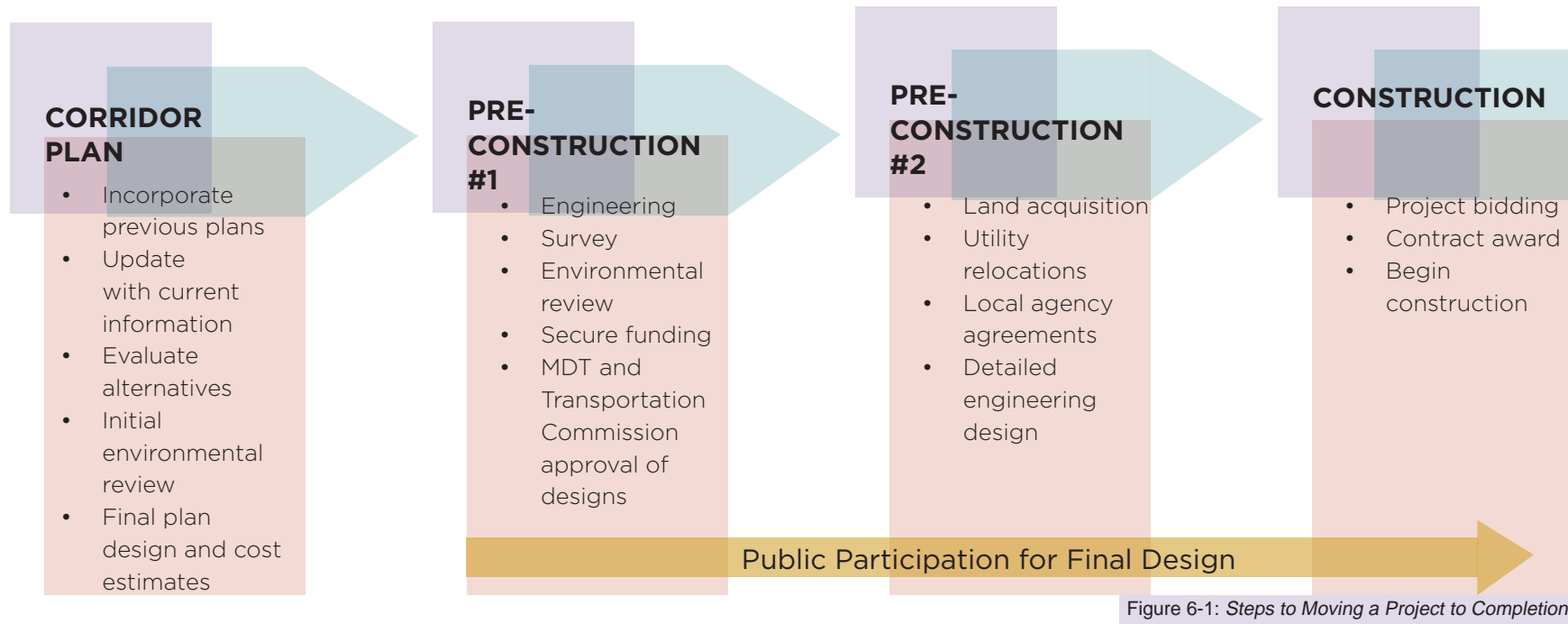


Figure 6-1: Steps to Moving a Project to Completion

right-of-way; however there is a possibility that a project could involve some acquisitions to the right-of-way or include easements. If utility relocations are necessary or desired, it will be determined at the pre-construction phase. Coordinating road construction with planned utility upgrades or extensions is also good practice at the pre-construction phase.

Agency agreements clarify the responsibilities of various jurisdictions or agencies. The MDT must approve all changes within the highway right-of-way. Typically, there is a memorandum of understanding or other similar agreement between the MDT, MRL, the city and/or the county.

A final engineering design will provide the detail necessary for construction. The East Missoula-Highway 200 Corridor Plan is the vision-level document, the plan that identifies the segments and projects and how the pieces fit together into a cohesive whole. Engineering designs include specifics on exactly how the project will be built. Examples include more specifics about buffer strips or boulevards that separate sidewalks or shared use paths from the street, final widths of sidewalks and shared

use paths, surface types (paved or other), impacts to adjacent properties, etc. Details like these are best determined during engineering, surveying, and as other pre-construction tasks are completed.

Overall, the project-level design should comply with the direction and guidance of this Highway 200 Corridor Plan. The typical section(s) presented in this plan represent ideal facilities for all user groups, and should be the primary goal as the project moves from the planning stage to the implementation stage. However, this plan recognizes previous investments in the area and there should be flexibility and/or discretion when implementing the typical section(s) for East Broadway. For instance, if a separate grant were to come through for a riverfront trail, then this typical section could be reduced based on a parallel facility already existing.

The final step in completing a project is the actual construction, as shown in the last bar in the figure. Construction begins by soliciting for proposals from contractors who will bring the equipment and workers to construct the changes.

Project Timing

The time it takes to complete a project is contingent upon all the factors involved in the Pre-Construction and Construction phases (as shown in Figure 6-1 “Steps to Moving a Project to Completion”). A high priority project may not be the first to be completed for a variety of reasons including difficulty in obtaining funding for high-cost projects.

Typically projects that are well defined and supported by the community will happen before other projects. Consequently, continued public involvement and support for projects is important.

Project Funding

The projects needed to complete the East Missoula-Highway 200 Corridor Plan will require grant funding. The projects are too large to be funded with existing state or city/county resources.

State and federal grant funds nearly always require a local match, typically a percentage of the total project cost. The amount of local match varies by type of grant.

Funding types and grant award dollar amounts can vary from one grant cycle to another. A grant cycle is how often the agency grants funds. Some grant cycles are every year, and some are every other year. The rules and award criteria may change between grant cycles. The following provides information about current funding sources that might be used for Highway 200 Corridor projects.

Federal

Surface Transportation Program – Urban

(STPU): Programmed by the MMPO and can be used throughout the region on a broad type of projects. Currently committed to the Russell Street project through at least 2028.

Congestion Mitigation & Air Quality

(CMAQ): Programmed by the MMPO, for projects that can mitigate congestion or air quality impacts. Broadly applicable to safety, active transportation and transit, but it cannot be used solely for vehicle capacity projects. Project elements that could be funded through CMAQ include shared use paths, protected bike lanes, crossing improvements, transit stops, roundabout, and the railroad bridge.

Transportation Alternatives (TA):

Statewide competitive grant program for non-motorized projects. Call for project submittals occurs every one to two years, dependent on available funding. Funding levels are determined by federal and state authorization, apportionment formulas, and allocation at the state level between urban and rural areas.

Highway Safety Improvement Program

(HSIP): Programmed at the state level and administered by MDT. Projects are funded based on a cost-benefit analysis, with the highest scoring projects prioritized. Eligible expenses could include access management, roundabout, crossing improvements, and other safety components of the design.

BUILD Grant: Nationwide competitive grant program for major infrastructure projects. Requires cost-benefit analysis, redevelopment potential, and compelling narrative. Currently, there is a limit of \$25M for rural projects. Also requires substantial local match or other financial commitment. Unclear what the reauthorization will be for this program.

Federal Lands Access Program (FLAP):

Established to improve transportation facilities that provide access to, are adjacent to, or are located within Federal lands. The Access Program supplements State and local resources for public roads, transit systems, and other transportation facilities, with an emphasis on high-use recreation sites and economic generators.

Land and Water Conservation Fund (LWCF):

Provides matching grants to States and local governments for the acquisition and development of public outdoor recreation areas and facilities.

Buses and Bus Facilities Program (5339):

Funding to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities including technological changes or innovations to modify low or no emission vehicles or facilities.

State

Montana Main Street Program:

Communities have the ability to apply for annual grant funding to assist them in planning for revitalization and completing activities and projects in their downtowns. Certified and Designated Communities are not required to provide a local match; Affiliate Communities are required to provide a local match.

Recreational Trails Program (RTP):

Administered by Montana State Parks, the RTP funds come from the Federal Highway Trust Fund. RTP can include federal, tribal, state, county or city agencies, private associations and clubs. Examples of eligible projects include: urban trail development, basic front and backcountry trail maintenance, restoration of areas damaged by trail use, development of trailside facilities, and educational and safety projects related to trails.

Local

Gas Tax: Can be used for general roadway improvements; however, the County would have to prioritize use for this corridor. Most likely to be used as local match due to other maintenance and construction needs and has limited amounts of funding. There are three sources of gas tax funding:

1. State Gas Tax Allocation: Distributed to cities and counties based on a formula that considers both road miles and population.
2. Bridge and Road Safety and Accountability Act (BaRSAA): Increased the state gas tax collected in order to supplement the Highway State Special Revenue Account (HSSRA) and to support additional roadway construction and maintenance activities. Operated through a reimbursement program. Cities and counties must match each \$20 of BaRSAA funds with \$1 in local funding.
3. Local Option Fuel Tax (LOFT): Approved by Missoula County voters in 2019, LOFT revenue is split between the City and County and can be utilized for roadway construction and maintenance activities. The funds are collected directly by the County.

Trail Bond: Could be used as local match for the shared use path portions. The bond funds were considered for local match on the Sha-Ron to Tamarack path in previous TA applications.

Impact Fees: Fees charged to new development. Only applies currently for sections within the City limits. Can be used for capacity expansion, including non-motorized facilities. Typically limited to a portion of the overall project cost, but could be available as local match for a grant, or other supplemental funding needs. Impact fees are prioritized by the City through the Capital Improvement Program, with input from the Impact Fee Advisory Committee.

Road District: Property tax levied by the City of Missoula for roadway improvements and maintenance. Only applies to City portions of the project. Can be used for general roadway improvements, but will need to be prioritized through the City's Capital Improvement Plan (CIP) process.

Rural Special Improvement District: Property tax that could be levied to provide funding to the project. With this option, care must be taken to ensure the persons paying the property tax aren't paying more than their equitable share of the improvements.

Tax Increment Financing (TIF): Applicable only for Urban Renewal Districts or Targeted Economic Development Districts. Currently only applies to Hellgate Urban Renewal District. Can be used for public improvements within the district that will improve the quality of life as well as generate private-sector improvements.

Implementation Projects

Below is a summary of the identified projects within the corridor. Coordination with MDT will be key to implementation including the Shared Use Paths in MDT Right-of-Way policy

that includes a signed maintenance agreement. The costs for the projects are based on the preferred alternative design and 2020 construction dollars. For more information on

the project costs, see the preferred alternative opinion of probable costs in Appendix F.

PROJECT	COST	PROJECT ELEMENTS	FEASIBILITY CONSIDERATIONS	PROJECT GOAL IMPLEMENTATION	PRIORITY	POTENTIAL FUNDING SOURCES
East Missoula Streetscape/ Reconstruction	\$7M	<ul style="list-style-type: none"> • Curb & Gutter • Skewed Intersections • Sidewalks • Landscaped Boulevards • Raised Cycle Tracks • Transit Facilities • Striped Pedestrian Crossings • Lighting 	<ul style="list-style-type: none"> • Multiple property owners involved • Transit stops require future traffic studies and coordination with MDT • Must comply with Shared Use Paths in MDT Right-of-Way Policy 	<ul style="list-style-type: none"> • Improves safety • Addresses access management • Expands multi-modal transportation facilities • Enhances the character of the East Missoula segment • Provides cost-effective, feasible improvements 	High	HSIP BUILD Main Street CMAQ
East Broadway Clark Fork River Bank Stabilization	\$2.3M	<ul style="list-style-type: none"> • Bank Stabilization 	<ul style="list-style-type: none"> • MDT, DEQ, FWP Coordination 	<ul style="list-style-type: none"> • Improves safety • Protection of environmental resources 	High	
Montana Rail Link Bridge Replacement	\$10.8M	<ul style="list-style-type: none"> • On Street Bike Lanes • Shared Use Path • New MRL Bridge 	<ul style="list-style-type: none"> • Requires close coordination with MRL, MDT, City, and County stakeholders • Requires the construction of a shoe fly because rail traffic must remain unimpeded throughout project construction • Cost • Right-of-way coordination with MRL and MDT • Must comply with Shared Use Paths in MDT Right-of-Way Policy 	<ul style="list-style-type: none"> • Improves safety • Improves operation of roadway • Expansion of multi-modal transportation facilities 	High	HSIP BUILD TIF Impact Fees CMAQ
Sha-Ron Parking Improvements	\$325K	<ul style="list-style-type: none"> • Parking Lot • Path from Parking Lot to Sha-Ron River Access 	<ul style="list-style-type: none"> • MDT, Northwestern Energy, FWP Coordination • Must comply with Shared Use Paths in MDT Right-of-Way Policy 	<ul style="list-style-type: none"> • Improves safety • Improves operation of roadway • Expands multi-modal transportation facilities • Preserves, protects, and enhances the corridor character • Provides cost-effective, feasible, maintainable improvements • Protects environmentally sensitive areas 	High	FWP LWCF

PROJECT	COST	PROJECT ELEMENTS	FEASIBILITY CONSIDERATIONS	PROJECT GOALS	PRIORITY	POTENTIAL FUNDING SOURCES
I-90 Eastbound Roundabout	\$3.2M	<ul style="list-style-type: none"> Roundabout Infrastructure 	<ul style="list-style-type: none"> MDT, FHWA, and MRL coordination Impacts to adjacent structures including the I-90 and MRL bridges over Highway 200 Right-of-way considerations 	<ul style="list-style-type: none"> Improves safety Improves operation of roadway Enhances character of corridor 	Mod	BUILD HSIP CMAQ
Sha-Ron to Tamarack Shared Use Path	\$1.8M	<ul style="list-style-type: none"> Shared Use Path Transit Facilities Pedestrian Crossing 	<ul style="list-style-type: none"> Improvements within ROW Future geotechnical analysis and stabilization efforts at Brickyard Hill and near Marshall Canyon road pinch points. Must comply with Shared Use Paths in MDT Right-of-Way Policy 	<ul style="list-style-type: none"> Expands multi-modal transportation facilities Enhances the character of the Sha-Ron-Marshall segment Provides feasible improvements 	Mod	LWCF FLAP Trail Bond RTP CMAQ
Van Buren Intersection Improvements & Eastgate Access Management	\$780K	<ul style="list-style-type: none"> Shared Use Path On-Street Bike Lanes Transit Facilities Striped Pedestrian Crossings Extended Median 	<ul style="list-style-type: none"> Improvements within ROW Requires additional traffic analysis & coordination with MDT for lane reduction at main intersection coming off I-90 Must comply with Shared Use Paths in MDT Right-of-Way Policy 	<ul style="list-style-type: none"> Improves safety Improves the operation of the roadway and addresses access management Expands multi-modal transportation facilities Enhances the character of the East Broadway segment Provides cost-effective, feasible improvements 	Mod	BUILD Impact Fees CMAQ
East Broadway Reconstruction	\$5.6M	<ul style="list-style-type: none"> Shared Use Path On-Street Bike Lanes Transit Facilities Striped Pedestrian Crossings 	<ul style="list-style-type: none"> Improvements within ROW Additional parking could require R/W acquisition, depending on location Must comply with Shared Use Paths in MDT Right-of-Way Policy Safety concerns with driveways crossing shared use path 	<ul style="list-style-type: none"> Improves the operation of the roadway Expands multi-modal transportation facilities Enhances the character of the East Broadway segment Provides cost-effective, feasible, and maintainable improvements 	Low-Mod	BUILD TIF Impact Fees CMAQ

Next Steps

Implementation of the preferred alternative is dependent on the availability of funding. Funding is unlikely to become available for the entire project, so implementation is expected to be piecemeal. While the identified projects are prioritized based on meeting the project goals, any available funding should be utilized as it becomes available for improvements in the corridor. Following are recommended next steps for the corridor as funding is secured.

ACTION	RESPONSIBLE PARTIES	TIMELINE
Sha-Ron Parking Improvements <ul style="list-style-type: none"> Final design of lot with consideration for trailers If river access possible at the site, plan the access Work with FWP on site facilities Track County work time on project as possible in-kind match 	MDT, Missoula County, MMPO, FWP Coordinate with: Three Rivers Collaborative, Adjoining Neighbors, Potential Funders	Immediate – Efforts have started with MDT, FWP and County
Prioritize projects in relevant plans and budgets <ul style="list-style-type: none"> MMPO Long Range Transportation Plan City and County Capital Improvement Plans MDT plans 	MMPO, City, County, MDT	Immediate/Ongoing
East Missoula Segment <ul style="list-style-type: none"> Coordinate with County Planning as new development is proposed Meet with MMPO to coordinate and support next steps 	MMPO, County, East Missoula Community Council	Ongoing Meet with MMPO at least quarterly
East Broadway Segment <ul style="list-style-type: none"> Acknowledge landowners still paying for current sidewalk/curb/gutter improvements Build support for the needed improvements Build and maintain communication with MRL regarding future plans 	City, MMPO Coordinate with landowners, bike/ped groups	Begin efforts in upcoming year
Railroad/I-90 Interchange <ul style="list-style-type: none"> Continue working with MRL and MDT to identify opportunities Identify how the project can improve rail transport (an important consideration for federal grants such as BUILD) 	MMPO, City, County, MDT, Montana Rail Link (MRL)	Ongoing
Build public support (critical for grant and private and non-profit sector funding) <ul style="list-style-type: none"> Attend city/county meetings on budgets and plans and maintain this as high priority Identify opportunities for private/public partnerships and potential funding Provide letters of support for project grant applications 	East Missoula Community Council, Bonner Community Council, Three Rivers Collaborative, bike/ped groups, etc.	Immediate/Ongoing
Be ready to apply for funding <ul style="list-style-type: none"> Collect the necessary data for funding (ongoing data on accidents, traffic, etc.) Build relationships with funders – state and federal grantors, private grantors 	MMPO, City, County	Begin within six months
Develop a maintenance strategy for improvements (e.g., snow removal on sidewalks, shared-use paths, etc.) <ul style="list-style-type: none"> Explore potential for Memorandums of Understanding or other agreements Investigate what other communities do on similar projects 	MMPO, City, County, MDT	Begin within six months