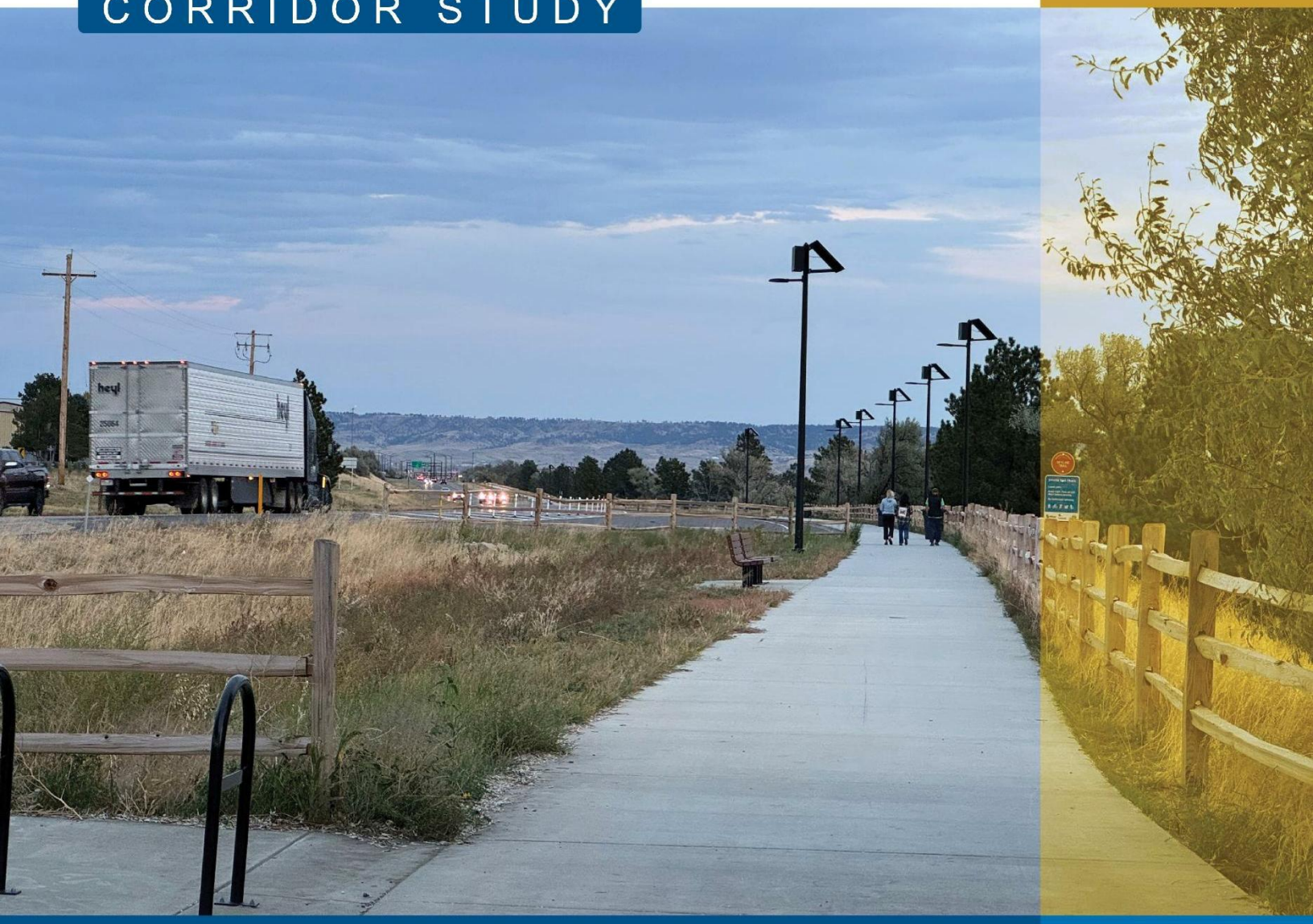
MONTANA 3 BILLINGS
CORRIDOR STUDY



January 2026

CORRIDOR STUDY REPORT

Prepared For

MONTANA
Department of Transportation

Prepared By

DOWL

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ACKNOWLEDGEMENTS

Many individuals participated in the successful completion of this study. The following people and agencies provided support and guidance throughout the study process.

Technical Oversight Committee

Montana Department of Transportation

Mitch Buthod – Planning
Jackson Lang – Planning
Samantha Wood – Planning
Michael Taylor – District Administrator
Kurtis Schnieber – District Preconstruction Engineer
Kyle Shuck – District Projects Engineer
Zach Kirkemo – District Traffic Engineer
Jeff Heidner – District Hydraulic Engineer
Ted Thronson – District Construction Engineer
Walt Houghton – District Maintenance Chief
Tommy Griffeth – District Environmental Engineer
Dan Kluth – District Geotechnical Manager
Stan Brelin – Traffic and Safety
Joe Zody – Traffic and Safety
Jon Burnett – Access Management
LeRoy Wosoba – Systems Impact Action Process
Brittany Cotton – Systems Impact Action Process

City of Billings

Dakota Martonen – Public Works/Engineering
Lora Mattox – Transportation Planning
Elyse Monat – Transportation Planning
Jeff Roach – Aviation and Transit
Rusty Logan – Transit Manager
Wyeth Friday – Planning and Community Services
Mike Hayes – Multimodal Planner

Yellowstone County

Monica Plecker – Public Works Director

Montana Department of Military Affairs

Joel Miller – Plans and Programming Bureau Chief

Federal Highway Administration

Katie Potts – Statewide and Urban Planner

Resource and Regulatory Agencies

Montana Fish, Wildlife and Parks
Montana Department of Environmental Quality
Montana Department of Natural Resources and Conservation
Western Federal Lands Division
U.S. Fish and Wildlife Service
U.S. Army Corps of Engineers

Consultant Team

DOWL assisted MDT and its partners in developing this plan.

Sarah Patterson – Project Manager
Cody Salo – Senior Advisor
Emily Peterson – Environmental Manager
Cameron Sapp – Environmental Specialist
Nate Perius – Transportation Engineer
Dominic Vernon – Transportation Engineer
Lisa Olmsted – Public Involvement

ACRONYMS

AADT	Annual average daily traffic
ADT	Average daily traffic
BIL	Billings Logan International Airport
BRIC	Billings Readiness and Innovation Campus
CECRA	Comprehensive Environmental Cleanup and Responsibility Act
CERCLA/Superfund	Comprehensive Environmental Response, Compensation, and Liability Act
CMAQ	Congestion Mitigation and Air Quality Improvement Program
CWA	Clean Water Act
DMA	Montana Department of Military Affairs
DNRC	Montana Department of Natural Resources and Conservation
EO	Executive Order
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FPPA	Farmland Protection Act Policy
FHWA	Federal Highway Administration
GIS	Geographic Information Systems
HSIP	Highway Safety Improvement Program
HUC	Hydrologic Unit Code
LOS	Level of Service
LWCF	Land and Water Conservation Fund
MBMG	Montana Bureau of Mines and Geology
MBOGC	Montana Board of Oil and Gas Conservation
MDEQ	Montana Department of Environmental Quality
MDT	Montana Department of Transportation
MEPA	Montana Environmental Policy Act
MPDES	Montana Pollutant Discharge Elimination System
mph	miles per hour
MPO	Metropolitan Planning Organization
MS4	Municipal Separate Storm Sewer System
MSAT	Mobile Source Air Toxics
MT 3	Montana Highway 3
MTNHP	Montana Natural Heritage Program
NAAQS	National Ambient Air Quality Standards
NCHRP	National Cooperative Highway Research Program

NEPA	National Environmental Policy Act
NH	National Highway System (Non-Interstate)
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
PESC	Permanent Erosion and Sediment Control
PHMSA	Pipeline and Hazardous Materials Safety Administration
PMT	Project Management Team
ROW	Right-of-way
RP	Reference Post
RRFB	Rectangular rapid flashing beacon
SOC	Species of Concern
TA	Transportation Alternatives Program
TAF	Terminal Area Forecast
TDM	Travel Demand Management
TOC	Technical Oversight Committee
TWLTL	Two-way left-turn lane
TWSC	Two-way stop-controlled
U.S.	United States
USACE	United States Army Corps of Engineers
U.S.C.	United States Code
USCB	United States Census Bureau
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
vpd	vehicles per day
WFLD	Western Federal Lands Division (Federal Highway Administration)
YLCP	Yellowstone Landing Commercial Park

EXECUTIVE SUMMARY

The Montana Department of Transportation (MDT) completed the Montana Highway 3 (MT 3) Corridor Study in Billings, for the highway between the intersection with Apache Trail and the East Airport Road/North 27th Street intersection. The purpose of the study was to develop a comprehensive long-range plan for the corridor considering identified transportation needs and potential improvement options given environmental constraints, financial feasibility, constructability, and corridor context.

The corridor study used a collaborative process with MDT, Federal Highway Administration, local jurisdictions, resource agencies, key stakeholders, and the public. The study followed MDT's planning guidelines and evaluated existing conditions, projected growth, traffic operations, safety, and environmental impacts. Short- and long-term recommendations were identified to address corridor needs through 2045, allowing for informed funding decisions during development of future projects.

An Access Management Plan was also developed as part of the corridor study, which is intended to improve corridor safety and preserve mobility by managing existing and future access on MT 3.

Figure ES-1 depicts the corridor study limits. MT 3 is the northwestern gateway to Billings. Within the 5.1-mile study limits, the corridor transitions from rural highway on the west end to urban arterial on the east end. The land use along the corridor varies and includes agricultural, residential, commercial, and aviation land uses. Connecting Great Falls to Billings, the corridor is part of the National Highway System and Strategic Highway Network, highlighting the importance of the route for defense mobility and truck traffic. The corridor also serves several residential housing subdivisions and provides access to trails and open spaces along the Rimrocks. This study builds on past planning efforts to establish a corridor vision and recommended improvements.

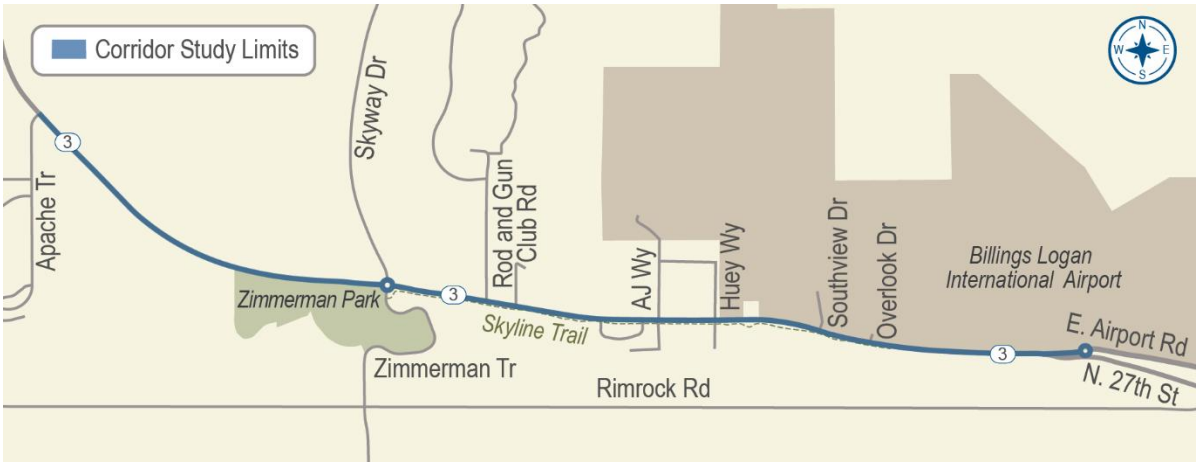


Figure ES-1: Corridor Study Limits

Public and Stakeholder Outreach

A vital part of the planning study process is maintaining consistent and meaningful public engagement. To support this, education and outreach efforts were prioritized throughout the study. The following engagement methods were employed during the study, to help the study team identify areas of concern and evaluate corridor improvements.

Website and Interactive Commenting Map: A study website was created to share information and study documents. The website included a link to an online commenting map, used to collect feedback from stakeholders and the public.

Public Informational Meetings: Two sets of public meetings were held, with each meeting having a virtual mid-day option and an in-person evening open house. Extensive outreach encouraged meeting participation, to identify areas of concern and develop recommended improvements options.

Technical Oversight Committee: A technical oversight committee was formed, including 30 key stakeholders from MDT, Montana Department of Military Affairs, Federal Highway Administration, City of Billings, Yellowstone County, and the Billings-Yellowstone County Metropolitan Planning Organization. This committee met regularly to review deliverables and provide guidance.

Resource Agency Coordination: A meeting was held with eight resource agencies in attendance, to confirm the accuracy of study evaluation efforts and engage agencies in an open discussion on environmental areas of concern.

Stakeholder Meetings: Meetings were held throughout the study process with key stakeholders and neighborhood groups to solicit their input and share progress updates.



Stakeholders and public participation at in-person open house

Environmental Setting

The corridor study identified conditions of the physical environment, biological resources, and social and cultural resources that may affect, or be affected by, future improvements to the MT 3 corridor. Key findings are summarized below. Project-level environmental analyses would be required for any improvements forwarded from the corridor study.

Physical Environment

- The study corridor area contains lands classified as prime farmland and farmland of statewide importance.
- Hazardous substances within or near the study area corridor include four remediation response sites, three hazardous waste generator sites, six resolved petroleum storage tank release sites, and five active underground storage tanks.
- The study corridor falls within the designated limits of the air quality carbon monoxide maintenance area (per the Clean Air Act) between Reference Posts 3.1 and 6.8.
- Multiple ephemeral drainages are found within the study corridor area. No National Wetland Inventory mapped wetlands were identified within or adjacent to the study corridor area. An onsite wetland delineation would be needed if improvements are forwarded from the corridor study.

Biological Resources

- Two federally listed threatened and endangered species are identified as potentially occurring within a 0.5-mile radius around the study corridor area, the monarch butterfly and Suckley's cuckoo bumble bee.
- 25 terrestrial Species of Concern and one plant Species of Concern have documented occurrences within the study corridor area or within a 2-mile radius around the study corridor area.
- Bald and golden eagles are Montana special status species that are protected under the Bald and Golden Eagle Protection Act of 1940. No bald or golden eagle nests have been identified within a 2-mile radius of the study corridor area.

Social and Cultural Resources

- Multiple recreational resources exist south the study corridor area, including Zimmerman Park, Skyline Trail, and several public parcels.
- The study corridor area includes 17 cultural resources sites that are eligible for listing in the National Register of Historic Places, and 16 other sites that are undetermined for eligibility. A cultural resources on-site survey would be warranted to assess current condition of known sites and survey for unrecorded historic and archaeological materials or sites.
- Sensitive noise receptors were identified within the study corridor area and primarily include adjacent residential properties and parks. Future corridor improvements may require noise analysis.

Transportation System

The following key concerns or conditions were identified during the corridor study, related to physical features, geometric conditions, traffic conditions, and traffic safety.

Physical Features and Characteristics

- The pavement conditions on the study corridor are rated as good (average overall performance index score of 68 out of 100). The pavement on MT 3 was milled and overlaid in 2017 between Zimmerman Trail and East Airport Road.
- Access density is relatively low on the west end of the corridor. However, the nature of the corridor changes east of Zimmerman Trail, where there are more residential developments with direct access onto MT 3.
- The speed limit is 70 miles per hour on the west end of the corridor but decreases to 50 miles per hour just west of Zimmerman Trail, then decreases to 45 miles per hour just west of the East Airport Road/North 27th Street roundabout.
- The study corridor has limited stormwater and drainage facilities. The area lies directly north of the Rimrocks, and the residential areas below the Rimrocks are considered high-risk for flooding and erosion-related issues. For most of the corridor area, runoff is conveyed and discharged through a series of open ditches and culverts.
- Several utilities run parallel to and intersect the study corridor. Public utilities include the municipal water system, sanitary sewer facilities, and underground storm drain facilities. Private utilities include overhead power lines, buried power lines, communications, and natural gas.
- Several bicycle and pedestrian facilities exist in the study corridor area, including Skyline Trail on the south side of MT 3 and the multi-use trail along the east side of Skyway Drive. Providing safe crossings for non-motorized users is key, given the number of regional trails which intersect in the study corridor area.



MT 3 east of Zimmerman Trail roundabout

Geometric Conditions

- East of the Zimmerman Trail roundabout, the typical roadway section on MT 3 consists of two 12-foot-wide travel lanes with one travel lane in each direction, 3.5-foot-wide shoulders, and roadside ditches (no curb or gutter). The 3.5-foot shoulder width does not meet baseline design criteria, as the minimum shoulder width for a principal arterial is 6 feet.
- The horizontal alignment of the roadway in the study corridor is relatively straight with four curves and complies with current geometric design standards. The vertical alignment is generally flat and complies with current geometric standards.

Traffic Conditions

- Traffic volumes are projected to grow at a rate of 2.1% annually through 2045 based on existing and forecasted annual average daily traffic on MT 3.
- With no capacity improvements, the Apache Trail intersection and East Airport Road / North 27th Street roundabout are expected to operate at Level of Service B in 2045. All other intersections are expected to degrade to a failing Level of Service during both the AM and PM peak hour by 2045.
- The critical movement at the stop-controlled intersections are the southbound left-turns. This movement competes with eastbound and westbound vehicles for an adequate gap in traffic to access MT 3.

Safety

- A total of 115 crashes were reported on MT 3 from 2019 through 2023. Of the 115 total crashes, 29 crashes resulted in minor injury, while three crashes resulted in serious and/or fatal injuries.
- When analyzed by intersection, the crash frequency and crash rate is significantly higher at the Zimmerman Trail and East Airport Road / North 27th Street roundabouts, compared to all other study corridor intersections. These intersections have the highest traffic volumes on the corridor, which typically results in a higher crash frequency. However crashes at roundabouts tend to be lower speed and have a lower incident angle, which improves overall intersection safety by reducing crash severity.

Corridor Needs and Improvement Options

Traffic safety and traffic operations were identified as the primary corridor needs and were prioritized when developing improvement options. Other important considerations include potential impacts to environmental resources, drainage impacts and stormwater management, constructability, utilities, funding, maintenance, and consideration of local plans and development.

Recommended improvement options for the study corridor are listed in Table ES-1. Figure ES-2 depicts the improvement options graphically. Improvement options include intersection improvements, roadway widening, multimodal improvements, access management, and travel demand management.

Table ES-1: Recommended Improvement Options

Improvement Option		Description	Implementation Timeframe[1]	Potential Funding Source	Cost [2] Estimate
Intersection Improvements					
S1	Zimmerman Trail	Install two-lane roundabout	Long-Term	NH, HSIP, CMAQ	$18.7 M
S2	Rod and Gun Club Road	Install single-lane roundabout	Mid- to Long-Term	NH, HSIP, CMAQ, Private	$14.5 M
S3	AJ Way	Install single-lane roundabout with westbound right-turn lane	Mid-Term	NH, HSIP, CMAQ, DMA, Private	$13.0 M
S4	Huey Way	Install eastbound left-turn, westbound right-turn, and westbound left-turn lanes	Short-Term	NH, HSIP, Private	$5.5 M
Roadway Widening					
R1	MT 3 east of Rod and Gun Club Road	Widen MT 3 to accommodate 6-foot shoulder width and 14-foot center turn lane (2.3 miles)	Mid- to Long-Term	NH, Local, Private	$39.8 M
Multimodal Improvements					
M1	MT 3 / Zimmerman Trail Underpass	Construct pedestrian and bicycle underpass on east leg of the Zimmerman Trail roundabout	Long-Term	NH, HSIP, TA	$4.1 M
M2	Skyline Trail Crossing Improvements	Monitor safety concerns and clear sight distance where Skyline Trail intersects with side-street approaches	Short-Term	HSIP, Local	Variable
Travel Demand Management					
T1	Travel Demand Management	Encourage large employers to use travel demand management strategies	Short-Term	Local, Private	Variable
Access Management					
A1	Side Street and Approach Movement Restriction	Restriction of side-street movements through signing or channelized islands	Short-Term	Local, Private	$56,000 per approach
A2	Approach Consolidation	Consolidate closely spaced driveways to improve traffic operations	Mid-Term	Local, Private	Variable

[1] **Implementation Timeframe:** The timing and ability to implement improvement options depends on factors including the availability of funding, right-of-way needs, and other project delivery elements. Implementation timeframes are not a commitment to developing recommendations.
Short-Term: 0-5 years; Mid-Term: 5-10 years; Long-Term: 10-20 years

[2] Cost estimates are not reported in current dollars but reflect costs anticipated in the year of construction.

NH = National Highway System (non-interstate)
HSIP = Highway Safety Improvement Program
CMAQ = Congestion Mitigation and Air Quality Improvement Program
TA = Transportation Alternatives Program
DMA = Montana Department of Military Affairs



Figure ES-2: Summary of Corridor Improvement Options

Additional Considerations and Next Steps

This study lists improvement options and strategies for consideration as funding becomes available. The list will assist implementing partners in targeting the most critical needs and allocation of resources. To date, no funding has been identified and secured to complete any of the recommended improvement options. Project development requires the following steps:

- Identify and secure funding source(s)
- Follow MDT guidelines for project nomination and development for MDT-led projects, including a public involvement process and environmental documentation
- Coordinate with MDT via the Systems Impact Action Process, or other appropriate collaborative processes, for projects developed by others

Successful implementation of recommendations may require cooperation and effort from multiple entities with the resources, funding, jurisdictional authority, or expertise required. Implementation agencies and partners playing a role in recommended improvement options include MDT; Yellowstone County; City of Billings; Billings-Yellowstone County Metropolitan Planning Organization; federal, state, and local agencies; local businesses and community groups; private landowners and developers; and other parties with interest or authority. MDT will continue to look for partnering opportunities for funding, communications, maintenance, strategy identification, and infrastructure improvements to meet the needs and objectives of the MT 3 Corridor.

MONTANA 3 BILLINGS
CORRIDOR STUDY

1.0 Introduction

1.0 INTRODUCTION

The Montana Department of Transportation (MDT) has completed the Montana Highway 3 (MT 3) Billings Corridor Study (study), between the intersection with Apache Trail and the East (E.) Airport Road/North (N.) 27th Street intersection. **Figure 1** depicts an aerial of the corridor study area. The goal of the corridor study was to develop a comprehensive long-range plan for the corridor considering identified transportation needs and potential solutions given environmental constraints, financial feasibility, constructability, and corridor context. Development of the corridor study is a collaborative process with local jurisdictions, resource agencies, MDT, Federal Highway Administration (FHWA), and the public.

An *Access Management Plan* was also developed as part of the corridor study, which aims to improve corridor safety and preserve mobility, by managing existing and future access on MT 3. The *Access Management Plan* is provided in **Appendix A**.

1.1 Study Process

The study followed the 2009 Montana Business Process to Link Planning and National Environmental Policy Act (NEPA) and Montana Environmental Policy Act (MEPA) Reviews, MDT's guideline for conducting planning studies. The process is intended to facilitate a smooth and efficient transition from early transportation planning to project development and may be used to help determine the level and scope of required environmental review should a project advance.

The planning process evaluated existing and projected conditions, including demographic characteristics, physical roadway features, geometric and traffic conditions, crash history and safety performance, and environmental conditions of the MT 3 corridor. The study also identified needs and objectives; provided opportunities for engagement with the public, stakeholders, and resource agencies; and identified a package of feasible short-, mid-, and long-term recommendations to address the needs of the roadway over the 20-year planning horizon, to year 2045. The planning process documents potential environmental impacts and constraints and discloses information to the public, stakeholders, resource agencies, and transportation officials before funding decisions are made. The corridor planning process does not replace the need for environmental documentation, and it is not a design or construction project.

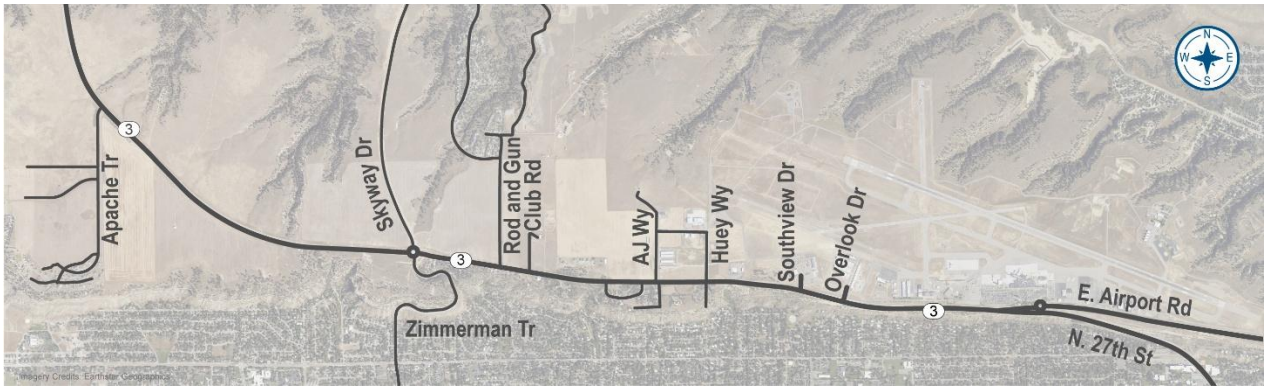


Figure 1: Aerial of Corridor Study Area

1.2 Study Area Limits

The MT 3 study corridor area is in the northwest part of Billings, within Yellowstone County, Montana. The study corridor includes 5.1 miles of MT 3 between the intersection with Apache Trail (Reference Post [RP] 8.1) and the intersection with E. Airport Road and N. 27th Street (RP 3.0). The study corridor area includes a 0.25-mile buffer from the centerline of the roadway, except in portions south of the road where the Rimrocks mark the boundary. **Figure 2** depicts the study corridor area and the system designation for roads in the area.

Highway system designation is established based on the functional classification of the route. The system designation is important as it affects methods and sources of funding for roadway improvements. MT 3 is designated as a Non-Interstate National Highway System route and connects Billings to Great Falls. Zimmerman Trail and E. Airport Road are designated as urban routes.

1.3 Study Area Background

MT 3 is the northwestern gateway to Billings. Within the project extent, the study corridor transitions from rural highway on the west end to urban arterial on the east end. The corridor has several residential housing subdivisions with trails and open spaces along the Rimrocks providing scenic overlooks of Billings. MT 3 is a high-volume corridor and traffic volumes are expected to rise with increases in employment and population growth expected north of the corridor. The land use along the corridor varies and includes agricultural, residential, commercial, and aviation land uses. Connecting Great Falls to Billings, the corridor is part of the National Highway System and Strategic Highway Network, highlighting the importance of the route for defense mobility and truck traffic.



Roundabout at Intersection of MT 3, E. Airport Road, and N. 27th Street

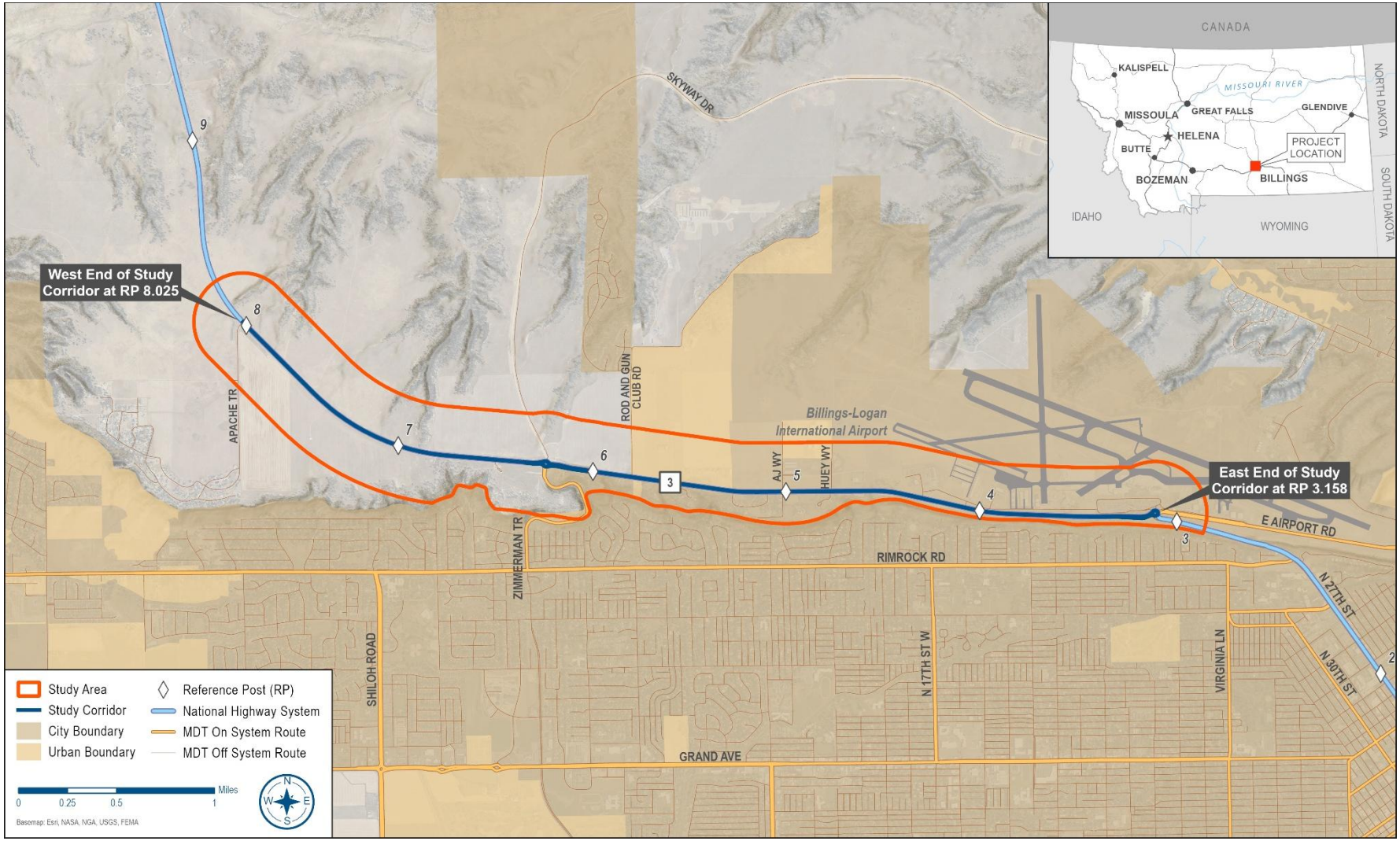


Figure 2: Study Area and System Designation

1.3.1 Related Plans and Studies

Several local transportation and land use plans include the corridor study area. The local plans and regulations include land use policy and transportation guidance. The following documents were reviewed to provide context for the corridor study and identify considerations relevant to improvement options on MT 3.

- City of Billings Growth Policy (City of Billings 2016)
- Billings Urban Area Long Range Transportation Plan (Billings-Yellowstone County Metropolitan Planning Organization [MPO] 2023)
- Billings Area Bikeway and Trails Master Plan (Billings-Yellowstone County MPO 2017)
- Highway 3 Corridor Study (Billings-Yellowstone County MPO 2015)
- Inner Belt Loop Corridor Study (Billings-Yellowstone County MPO 2020)
- Molt Road/Highway 3 Collector Road Planning Feasibility Study (City of Billings 2004)



Pedestrians on Skyline Trail on the southern side of MT 3

1.3.2 Projects Under Development

There are several projects and developments planned or under consideration within the study corridor limits. Planned improvements include the following two trail projects.

Stagecoach Trail: This trail connection is committed and will provide an 8-foot-wide pedestrian and bicycle path on the east side of Zimmerman Trail, from Rimrock Road to MT 3. This project is in design and construction is planned for 2028. This connection is part of the future Marathon Loop, a 26-mile multi-use paved path around Billings.

Yellowjacket Trail: This trail connection is proposed and will provide a pedestrian and bicycle path along N. 27th Street, from the E. Airport Road roundabout to Rimrock Road. Billings TrailNet is conducting a high-level feasibility study to identify the recommended configuration for this non-motorized connection (Billings Trailnet 2025).

The following developments are planned near the study corridor north of MT 3. Traffic impacts from these developments were considered in the development of corridor improvement options.

- The **Billings Readiness and Innovation Campus (BRIC)** (Montana Department of Military Affairs 2023) is a planned development on the north side of MT 3 off AJ Way. The campus will consist of training and aviation support facilities for the Montana Army National Guard. The campus will be built in several phases, with opening year in 2026 and full build expected in 2050. The BRIC will accommodate drill weekend trainings, which will occur seven to 12 weekends per year.
- The **Yellowstone Landing Commercial Park (YLCP)** (Performance Engineering 2021) development is planned on the north side of MT 3 with access provided via the AJ Way and Huey Way intersections. The development will consist of nine lots with commercial and light industrial land uses; full build-out is expected by 2029.
- The **Billings Logan International Airport (BIL) Draft Master Plan** (City of Billings 2025) shows that development is expected at the airport including terminal expansion, an additional runway and taxiway, a new parking garage and shuttle lot, and additional general aviation hangars. The airport also has plans to provide a frontage road connection north of MT 3 in the future, connecting Huey Way east to Southview Drive. Although still in the planning stage, airport developments are expected to impact traffic at the Southview Drive, Overlook Drive, and Huey Way intersections.



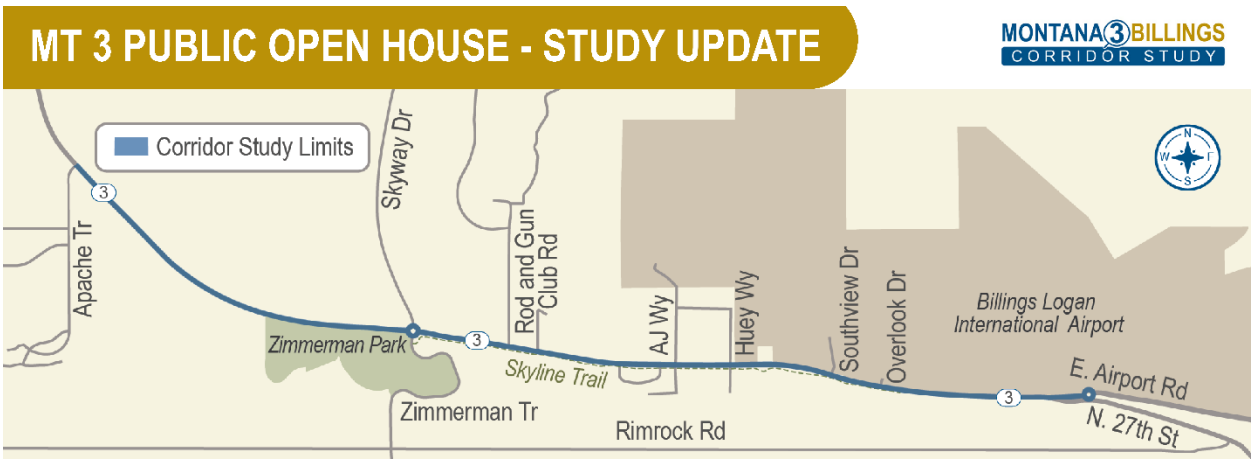
Mural in pedestrian underpass on the southern leg of Zimmerman Trail roundabout

MONTANA 3 BILLINGS
CORRIDOR STUDY

2.0 Public and Stakeholder Engagement

2.0 PUBLIC AND STAKEHOLDER ENGAGEMENT

A vital part of the planning study process is maintaining consistent and meaningful public engagement. To support this, education and outreach efforts were prioritized throughout the study. A Public Involvement Plan was developed to make sure the study team provides relevant, accurate, and consistent study information to local jurisdictions, stakeholders, and the general public while collecting perspectives through the facilitation of engagement-oriented conversations. Effective involvement and communication supported the study establishing community support, cooperation, and engagement. This chapter summarizes the outreach and engagement activities conducted as part of the study. Additional materials are available in **Appendix B**.



Postcards distributed to advertise corridor study public meetings

2.1 Stakeholder Outreach and Coordination

Team coordination and collaboration was critical to the corridor study process. The input from the Project Management Team (PMT), Technical Oversight Committee (TOC), and resource agencies helped confirm that the process was thorough, considering and discussing all perspectives, and the final study touches on relevant challenges and offers actionable recommendations. The knowledge and experience offered by these individuals supported a well-informed process to achieve options that are both technically feasible and appropriate for the community.

2.1.1 Project Management Team Meetings

The PMT was comprised of MDT Planning staff and members of the consultant team working on the corridor study. Meetings were held on a bi-weekly basis with as needed check-ins while working on specific deliverables. This workflow supported study tasks, deliverables, and reviews, resulting in the overall study also being delivered on schedule.

2.1.2 Technical Oversight Committee Meetings

Six virtual TOC meetings were held, coinciding with project milestones. TOC members discussed study progress, analyzed methodologies, and collaborated to address any issues or concerns that arose during the study. The TOC also reviewed study documentation before publication. Representatives from MDT, FHWA, Montana Department of Military Affairs, Billings

Logan International Airport, City of Billings, Yellowstone County, and Billings-Yellowstone County MPO participated in the oversight committee.

2.1.3 Resource Agency Coordination

A one-hour virtual resource agency meeting was held on July 31, 2025. Participating agencies provided input on environmental considerations, offered area-specific insights, and suggested potential future funding opportunities. Participating agencies included:

- MDT
- City of Billings
- Montana Fish, Wildlife and Parks
- Montana Department of Environmental Quality (MDEQ)
- Montana Department of Natural Resources and Conservation (DNRC)
- U.S. Army Corp of Engineers (USACE)
- U.S. Fish Wildlife Service (USFWS)
- Western Federal Lands Division (WFLD)

2.1.4 Stakeholder Outreach

Meetings were held throughout the study process with key stakeholders to solicit their input and share progress updates. For example, meetings were held to coordinate with the adjacent landowners, Rimrock Neighborhood Task Force, MDT Billings District Transportation Commissioner, and the Montana Department of Military Affairs. The *Access Management Plan* was also presented to the Yellowstone County Commission and Billings City Council members.

Stakeholder meetings addressed corridor concerns, the study process, corridor and access management plan recommendations, and parcel-specific challenges. The open houses and virtual public meetings were heavily attended by Rimrock Neighborhood Task Force members and other stakeholder group representatives.

Stakeholders and resource agencies involved in corridor study process

2.2 Public Engagement Strategies

This section summarizes engagement strategies employed, to help the study team provide transparent communication and gather community feedback.

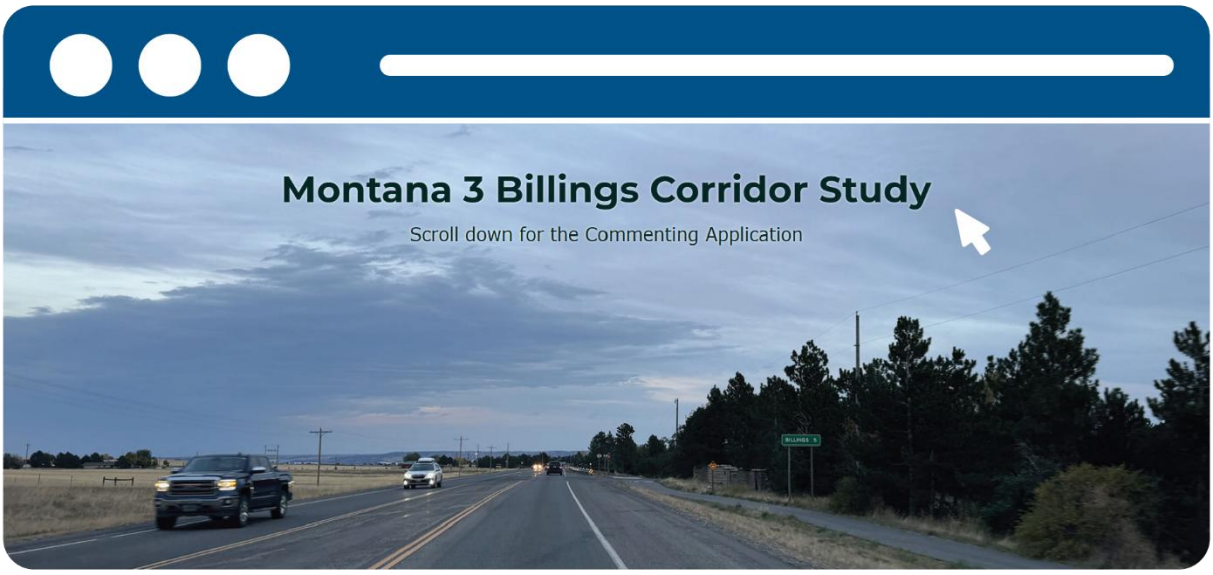
2.2.1 Study Website

The study website was developed and hosted on the MDT website. The page provided updates about the study, information about and a link to pre-register for the virtual public meeting, and links for study documents. The website also provided contact information for the PMT and a link to the general MDT comment platform.

https://www.mdt.mt.gov/pubinvolve/hwy3billings/

2.2.2 Interactive Commenting Map

The MDT Geographic Information Systems (GIS) team developed an ArcGIS StoryMap-based interactive map that was linked on the study page. The map provided an interactive platform for the public and stakeholders to provide geographically specific comments. Eleven comments were posted onto the map and five received "thumbs-ups" from other users.



Interactive commenting map allowed for geographically specific comments

2.2.3 Public Information Meetings

The study team facilitated a total of two in-person informational open houses and two virtual public meetings. The virtual meetings were held mid-day and the in-person open houses were held in the evening to allow flexibility for participants.

- **Meeting #1:** Virtual public meeting on June 4, 2025, and in-person open house on June 5, 2025. These meetings presented an overview of the study process and highlights from the *Existing and Projected Conditions* report (**Appendix D**). Approximately 30 people attended the virtual event and approximately 20 attended the in-person event.

- **Meeting #2:** Virtual public meeting on November 19, 2025, in-person open house on November 20, 2025. These meetings presented recommendations from the *Improvement Options* report (**Appendix E**) and *Access Management Plan*. Approximately 30 people attended the virtual event and approximately 15 attended the in-person event.

The public meeting format provided an overview of study findings and allowed participants an opportunity to comment. Content from the virtual meetings and the in-person open houses was recorded and posted on the MDT website. The virtual public meetings and open houses were promoted on the MDT website and with display advertisements in the *Billings Gazette* and *Yellowstone County News*, a media release, and via direct mail.



Study team members chat with attendees at the in-person open house on June 5, 2025

2.3 Public and Stakeholder Feedback

Active participation and community outreach were emphasized during the planning process. Comments were solicited from stakeholders to identify areas of concern and help develop recommended improvement options. A formal public review period for the *Access Management Plan* was held from November 5 through December 4, 2025. The public review period for the *Corridor Study Report* was held from January 23 through February 23, 2026.

To solicit input and notify the public, the study team issued press releases, placed display advertisements, posted information on the website, and sent postcards to the study mailing list. Certified letters were also sent to adjacent landowners. Individual comments and responses are provided in **Appendix B**. A summary of the concerns expressed is provided below by topic:

- **Airport Access**: Need for improvements at intersections on MT 3 accessing the airport (e.g., Overlook Drive, Southview Drive)
- **Development and Traffic Growth:** Expected traffic growth along the corridor, including expected traffic associated with planned commercial, residential, and National Guard development
- **Pedestrian/Bicycle Safety:** Safety at side-street approaches due to turning vehicles and crossing pedestrians/bicyclists on Skyline Trail
- **Traffic Noise and Speeds:** Semi-truck noise and speeding along the corridor
- **Turn Lanes:** Need for additional turn lanes at heavily trafficked approaches
- **Sight Distance:** Snow storage and tall grass limits sight distance for side-street traffic entering MT 3

MONTANA 3 BILLINGS
CORRIDOR STUDY

3.0 Environmental Setting

3.0 ENVIRONMENTAL SETTING

The environmental setting includes naturally occurring features and populations as well as human influences and characteristics. These elements provide context for transportation projects and may serve as potential constraints or opportunities during the project development process.

If improvement options are forwarded from this study into project development, an analysis for compliance with the NEPA and MEPA must be completed as part of the project development process. Information contained in the corridor study documents may be used to support further environmental documentation. Additional information is provided in the *Environmental Scan Report* (**Appendix C**).



View of the Rimrocks which form the southern extent of the study corridor area

3.1 Physical Environment

3.1.1 Soil Resources and Prime Farmland

Congress enacted the Farmland Protection Policy Act (FPPA) (7 United States Code [U.S.C.] 4201 et. seq.) as a subtitle of the 1981 Farm Bill. The FPPA is intended “to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to non-agricultural uses, and to assure that federal programs are administered in a manner that, to the extent practicable, are compatible with state, unit of local government, and private programs and policies to protect farmland.”

The term “farmland” refers to prime farmland; some prime if irrigated farmland; unique farmland; and farmland, other than prime or unique farmland, that is of statewide importance. Prime farmland soils are those that have the best combination of physical and chemical characteristics for producing food, feed, and forage; the area must also be available for these uses. Farmland of statewide importance is land, in addition to prime and unique farmlands, of statewide importance for producing food, feed, forage, and oilseed crops. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land. However, projects that occur on farmland already in urban development or committed to urban development or are used for water storage are not subject to FPPA.

Soil surveys, which provide data on land classifications, including farmland, are available from the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) (NRCS 2025). Within the study corridor area, approximately 34.4 acres (2.5%) of land are classified as prime farmland if irrigated, and 473.4 acres (35%) of land within the study corridor area limits is classified as farmland of statewide importance. Of the 507.8 acres classified as either prime farmland if irrigated or farmland of statewide importance, only 182.4 acres (36%) are committed (zoned) to agricultural or suburban agriculture. The remaining acreage has already been developed or is zoned for future non-agricultural use.



Agricultural land near Apache Trail intersection on the western side of the MT 3 corridor

3.1.2 Geology

The study corridor area, and Billings in general, are in the Yellowstone River valley mainly on alluvial (river, fan and slopewash) and colluvial (gravity) deposits overlying Cretaceous shoreline and marine formations of sandstone and shale. The prominent sandstone cliffs (locally called the Rimrocks or the “Rims”) that define the northern skyline of Billings and form the bluffs along the eastern margin of the river through Billings, are composed of Upper Cretaceous Eagle Sandstone (Alt and Hyndman 1986) a massive fine-grained sandstone up to 350 feet thick with some sandy shale beds up to 50 feet thick (Lopez 2002). Underlying the Eagle Sandstone is the Upper Cretaceous Telegraph Creek Formation, a shale to sandy shale with thin, interbedded sandstone beds that become thicker as it grades into the Eagle Sandstone. This unit is about 150 feet thick and outcrops locally at the base of the cliffs, southwest of the study corridor area.

3.1.3 Surface Waters

The study corridor area is entirely within the United States Geological Survey (USGS)-delineated Upper Yellowstone-Lake Basin Watershed (hydrologic unit code [HUC] 10070004) and the Blue Creek-Yellowstone River Sub Watershed (HUC 100700410).

Within the study corridor area, there are multiple ephemeral drainages north of MT 3 that ultimately discharge into Alkali Creek. MT 3 does not cross any perennial surface waters.

Road construction and reconstruction activities such as bridge or culvert installation or replacement, placement of fill, or bank stabilization have potential to impact surface waters. Impacts to surface waters should be avoided and minimized to the maximum extent practicable. Permitting and compensatory mitigation requirements may be necessary due to impacts to streams and other surface waters.



Ephemeral drainages north of MT 3, which ultimately drain into Alkali Creek

3.1.3.1 Water Quality

The Clean Water Act (CWA) is the principal federal legislation for water quality protection. MDEQ is the state agency responsible for implementing components of the CWA outside of Reservation lands.

MDEQ prepares an Integrated Report every two years listing the status of water quality for waterbodies under state jurisdiction. The report includes a list of all surface waters where pollutants have impaired the beneficial uses of water for drinking, recreation, aquatic habitats, and other uses. The CWA requires the development and implementation of cleanup plans for waterbodies that fail to meet state water quality standards.

No drainages within the study corridor area have been assessed for pollutants due to their ephemeral nature.

3.1.3.2 Stormwater Management

Section 402 of the CWA established the National Pollutant Discharge Elimination System (NPDES), which regulates, among other discharges, stormwater runoff from construction sites that disturb one or more acres. On non-tribal lands in Montana, stormwater management is regulated by MDEQ through the Montana Pollutant Discharge Elimination System (MPDES), which provides coverage for stormwater discharges through the MPDES Stormwater Construction General Permit. The applicability of the MPDES permit would need to be reviewed for any projects brought forward from the corridor study.

Small Municipal Separate Storm Sewer Systems (MS4s) for incorporated cities with a population of at least 10,000 people are regulated under MPDES General Permit MTR040000. Under this General Permit, MS4s are required to apply for and obtain authorization to discharge stormwater into state waters per requirements of the General Permit. The City of Billings is a designated MS4 area. The majority of the study corridor area, extending east from Zimmerman Trail at RP 6.25, is within the Billings MS4 boundary and is regulated under the MS4 permit and included in the Billings Stormwater Management Program (City of Billings 2024).

As outlined in MDT's *Permanent Erosion and Sediment Control* (PESC) *Design Guidelines*, PESC measures must be considered for projects disturbing one or more acre or projects having the potential to adversely affect water quality. The applicability of PESC measures would need to be reviewed for any projects carried forward from the corridor study.

3.1.3.3 Irrigation Features

Within the corridor study area, the majority of the land west of Zimmerman Trail is zoned agriculture, and several agricultural fields are to the north and south of MT 3. Maps from the Yellowstone County Montana Water Resources Survey (1943), prepared by the DNRC, show no irrigation ditches, laterals, or canals within or adjacent to the study corridor area that can supply irrigation water to these fields (DNRC 1943). Data indicate only one groundwater well in the area is used for stock water (MBMG 2025c). Based on aerial imagery, agricultural land within the study corridor area appears to be dryland farming.

To help avoid or minimize impacts to agricultural operations, coordination with affected landowners is required if irrigation facilities, such as pumps, pivots or sprinkler systems, are identified and affected by improvement options carried forward from this planning study.

3.1.4 Groundwater

Groundwater is water beneath the ground surface held in soil or pores or cracks in rock. Excess moisture soaks into the ground to a point where the spaces in the soil and rock become saturated. The top of this saturation zone is called the water table.

The study corridor area is entirely within the areal extent of the Eagle Aquifer, which consists of water-saturated sandstone layers within the Eagle Sandstone and the underlying Telegraph Creek Formation. The Eagle Aquifer in west-central Yellowstone County is an important source for stock water and domestic water. Groundwater recharge within the Eagle Aquifer depends on precipitation and snowmelt (Madison et al. 2014).

According to the Montana Bureau of Mines and Geology (MBMG) Groundwater Information Center, there are over 20 wells within 0.25 miles of the study corridor area. Wells mapped on top of the Rimrocks had an average drill depth of 133 feet. Most wells are for domestic use. Wells mapped below the Rimrocks had an average drill depth of 70 feet. Most wells are for

monitoring or domestic use. Static groundwater levels on top of the Rimrocks average 71 feet below ground surface. Information regarding static water levels below the Rimrocks was not readily available. Only six wells are mapped within the study corridor area (MBMG 2025c).

There are no public water supply wells mapped within the study corridor area. The closest public water supply well is approximately one mile southeast at Athletic Park. Public water supply wells have a MDEQ setback requirement 100 feet from a pollutant source. Public water supply wells are also typically deeper and require a higher volume of water to be discharged.

A portion of the corridor study area is served by the City of Billings municipal water and sewer systems.

3.1.5 Floodplains and Floodways

A floodplain is land susceptible to being inundated by floodwaters from any source. The regulatory floodway is found within a floodplain and is defined as the channel of the river or other watercourse and the land area directly adjacent to the channel, where encroachment is prohibited, that is needed in order to discharge base flood flows without cumulatively increasing the water-surface elevation by more than a designated height (FEMA 2023).

Executive Order (EO) 11988, Floodplain Management, requires efforts to minimize flood risks, protect human safety, and preserve the natural benefits of floodplains such as habitat, water quality, and groundwater recharge. EO 11988 requires projects undertaken or funded by federal agencies to avoid, to the extent possible, long- and short-term adverse impacts to floodplains and avoid direct and indirect impact that could be caused by floodplain development whenever there is a practicable alternative.

Federal Emergency Management Agency (FEMA)-issued flood insurance rate maps for Yellowstone County, Montana, indicate the study corridor area is entirely outside of designated flood zones. The nearest designated Flood Zone is associated with Alkali Creek, approximately 1 mile northeast of the study corridor area (FEMA 2025).

3.1.6 Wetlands

The USACE defines wetlands as areas inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support plants and animals adapted to these conditions. Wetland examples include swamps, marshes, bogs, seasonal wet meadows, and fringe areas along streams and rivers.

The USFWS National Wetlands Inventory (NWI) maps are compiled through aerial photo interpretation and in general accordance with USFWS publication *Classification of Wetlands and Deepwater Habitats of the United States* (FGDC 2013). NWI maps do not define wetlands for regulatory purposes. No NWI mapped wetlands were identified within or adjacent to the study corridor area (USFWS 2025).

Field-based wetland delineations would be required if improvement options are forwarded from the study. Future improvements would need to incorporate project design features to avoid and minimize adverse impacts to wetlands to the maximum extent practicable. Unavoidable impacts to wetlands may require compensatory mitigation in accordance with USACE regulatory requirements and requirements of EO 11990 (Protection of Wetlands). State and federal permits may also be required to construct improvements within wetlands, including CWA Section 404 authorization and CWA Section 401 certification.



Airport hangars north of MT 3 and Overlook Drive intersection

3.1.7 Hazardous Substances

The most current database information on potentially hazardous sites and sources within Yellowstone County is provided by MDEQ (MDEQ 2025). Additional information was also obtained from the United States Environmental Protection Agency (USEPA) (USEPA 2025), Montana Board of Oil and Gas Conservation (MBOGC) database (MBOGC 2024), and the National Pipeline Mapping System administered by the Pipeline and Hazardous Materials Safety Administration (PHMSA) (PHMSA 2025). Additional investigation regarding locations of hazardous sites and potentially contaminated soils and/or groundwater may be warranted if improvement options are forwarded from this study.

- **Superfund Sites** – No federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) sites exist in or near the study corridor.

- **Remediation Response Sites** – The MDEQ Superfund Unit uses the Comprehensive Environmental Cleanup and Responsibility Act (CECRA) to investigate and clean up hazardous substances at sites not federally addressed by CERCLA. Four remediation response sites were identified within or near the study corridor area. The Billings Logan International Airport is identified as a Location of Interest to the program, but it is not identified as under a legal order.
- **Hazardous Waste Generators** – MDEQ lists two Conditionally Exempt Small Quantity Generators (less than 220 pounds [100 kilograms] of hazardous waste per month) and one Small Quantity Generator (more than 200 pounds [100 kg] but less than 2,200 pounds [1,000 kg] per month) within or near the study corridor area. MDEQ lists Billings Logan International Airport as a Small Quantity Generator. However, USEPA identifies the location as a Very Small Quantity Generator.

- **Underground Storage Tanks –** There are five regulated underground storage tanks within the study corridor area, all of which are active.
- **Petroleum Tank Releases –** Several petroleum tank releases have occurred within or adjacent to the study corridor area. Five are associated with the airport and one with the Montana Army National Guard. All releases have been resolved.
- **Landfills and Solid Waste Facilities –** There are no active landfills within the study corridor area.
- **Pipelines –** Based on information from the National Pipeline Mapping System, no hazardous liquid or gas transmission pipelines cross the study corridor area.
- **Abandoned and Inactive Mine Sites** – No mining prospects or abandoned/inactive mines are located within the study corridor area.
- **Opencut Permits** – Opencut permits are required for opencut mining and processing of materials such as bentonite, clay, scoria, soil materials, peat, sand, or gravel. No active, permitted opencut mine sites are located within or near the study corridor area.

3.1.8 Air Quality

The Clean Air Act of 1970 established air pollution control programs, with USEPA setting National Ambient Air Quality Standards (NAAQS) for six pollutants to protect public health and welfare. Montana also has state-level air quality standards. Areas that meet the air quality standards are designated as “attainment” areas, while those exceeding standards are “nonattainment.” An area that has been designated as nonattainment in the past, but that now complies with the NAAQS, is classified as a “maintenance” area.

A carbon monoxide maintenance area has been designated within the Billings Area (MDEQ 2025, USEPA 2025). The study corridor area falls within the designated limits of the carbon monoxide maintenance area from RP 3.1 to approximately RP 6.8.

Improvement options carried forward from this study would need to examine the current air quality status and determine if a project is subject to conformity requirements under the Clean Air Act and is consistent with the air quality goals of a State Implementation Plan. In addition, an evaluation of mobile source air toxics (MSATs) may be required. MSATs are compounds emitted from highway vehicles and off-road equipment that are known or suspected to cause cancer or other serious health and environmental effects.

3.1.9 Noise

Project construction and operation of a traffic facility can increase noise levels that may affect sensitive noise receptors in the area. Sensitive noise receptors within the study corridor area primarily include adjacent residential properties and parks. These receptors are found from approximately RP 3 to RP 7 on the south side of MT 3.

Improvement options carried forward from this study may require a noise analysis, consistent with MDT noise policies. Noise abatement measures would be considered if noise levels approach or substantially exceed noise abatement criteria.



Residential development located on the southern side of the MT 3 corridor

3.2 Biological Resources

3.2.1 Vegetation

The study corridor area is within the Montana Central Grasslands ecoregion of the Northwestern Great Plains. Natural vegetation is primarily grama–needlegrass–wheatgrass species and supports mostly rangeland with some irrigated and unirrigated farms in the Yellowstone Valley (Woods 2002).

Within the study corridor area, the landscape has been heavily altered through commercial development and agricultural practices. Vegetation within the corridor is dominated by cultivated crops, landscape plants, and common roadside reclamation species. Small pockets of native vegetation occur within the study corridor area, particularly at Zimmerman Park, the southern extent of the study corridor area along the Rimrocks, and at the northwestern extent of the study corridor area. Additionally, a “living snow fence” has been planted along the south side of MT 3 near Apache Trail. Native vegetation within the study corridor area likely includes ponderosa pine (*Pinus ponderosa*), western wheatgrass (*Elymus smithii*), blue grama (*Bouteloua gracilis*), and needle-and-thread (*Stipa comata*).

3.2.1.1 Noxious Weeds

Noxious weeds are designated by federal, state, or local government that directly or indirectly cause problems or harm to agriculture, natural resources, wildlife, recreation, navigation, public health, or the environment. Noxious weeds can be invasive or non-native and are generally highly aggressive. They can degrade native vegetative communities, damage riparian areas, compete with native plants, create fire hazards, degrade agricultural and recreational lands, and pose threats to the viability of livestock, humans, and wildlife.

According to Montana Natural Heritage Program (MTNHP) several abundant and widespread weeds, including dalmatian toadflax, common tansy, whitetop, spotted knapweed, hound’s tongue, field bindweed, Canada thistle, Russian knapweed, leafy spurge, and oxeye daisy occur within the study corridor area vicinity.

Proposed projects carried forward from this study would implement applicable best management practices as outlined in the MDT Standard Specifications and the Yellowstone County Weed Management Plan.

3.2.2 General Wildlife Species

Agricultural practices and commercial and residential development have greatly changed the landscape and negatively impacted the amount and quality of suitable wildlife habitat within the study corridor area. In general, the less developed extents of the study corridor area west of Zimmerman Trail are more likely to provide suitable habitat. In particular, the forested drainages on the north side of MT 3 provide shelter and habitat. These wooded corridors and surrounding habitat still possess native vegetation that was likely present in this area before its conversion to agriculture and urban/residential development. Zimmerman Park also provides suitable habitat for a variety of species.

3.2.2.1 Mammals

Over 35 species of mammals have been recorded within a two-mile radius of the study corridor area. Most of these species rely on rangeland, ponderosa pine woodland, or tend to be generalists and are able to adapt to a wide range of environments and are more tolerant of human activities and land use changes. Some of the species include big brown bat (*Eptesicus fuscus*), raccoon (*Procyon lotor*), and mule deer (*Odocoileus hemionus*). Aerial imagery and MTNHP data confirm there are several black-tailed prairie dog (*Cynomys ludovicianus*) colonies at the northwest extent of the study corridor area. The study corridor area is general range for mule deer and pronghorn (*Antilocapra americana*). The study corridor area east of RP 4.2 is a general wintering range for white-tailed deer (*Odocoileus virginianus*).

No animal carcasses have been recorded within the study corridor area. However, carcass data may not accurately reflect animal-vehicle conflicts throughout the corridor, and not all carcasses result from vehicle collisions. Crash data between 2010 and 2019 indicated 16 wildlife-related crashes. However, additional, unrecorded incidents may exist. Between RP 3 and RP 6, wildlife-vehicle crashes do not appear concentrated but may be associated with segments of residential development to the south and agricultural development to the north. Between RP 6 and RP 8, there may be a correlation between wildlife-vehicle crashes and the segments with forested drainages to the north and agricultural lands to the south.

Improvement projects advanced from the corridor study will require coordination with fish and wildlife biologists from state and federal agencies to identify measures for avoiding, minimizing, or mitigating adverse effects on species and habitat. The needs and feasibility of wildlife accommodations would also require consideration in accordance with MDT's Wildlife Accommodation Process.

3.2.2.2 Birds

The Montana Natural Heritage Program (MTNHP) database indicates there are nearly 270 species of birds documented with the potential to occur and nest in the vicinity of the study corridor area. These species include representative songbirds, birds of prey, and waterfowl, including several state-listed Species of Concern (SOC) or special status species. The USFWS Migratory Bird Treaty Act requires avoidance of disturbance to nesting birds and active nests. Any improvements carried forward from this study would need to consider possible project constraints that may result from seasonal nesting of migratory birds.



Forested drainages on the northern side of MT 3, west of Zimmerman Trail roundabout

3.2.2.3 Fisheries

While numerous fish species have been identified within streams and rivers in the vicinity of the study corridor area, there are no streams or rivers within the study corridor area.

3.2.2.4 Amphibians, Reptiles, and Invertebrates

According to the MTNHP database, amphibian and reptile species documented as occurring within the study corridor area and two-mile vicinity include, but are not limited to, common sagebrush lizard (*Sceloporus graciosus*), gopher snake (*Pituophis catenifer*), and western milksnake (*Lampropeltis gentilis*). Over 200 invertebrate species have been observed in the study area corridor vicinity.

3.2.3 Threatened and Endangered Species

The Endangered Species Act (ESA) requires all federal agencies to ensure that actions do not jeopardize the continued existence of endangered or threatened species and that such actions do not destroy or adversely modify designated critical habitat. Two federally listed threatened and endangered species are identified as potentially occurring within a 0.5-mile radius around the study corridor area, the monarch butterfly (*Danaus plexippus*) and Suckley's cuckoo bumble bee (*Bombus suckleyi*). No critical habitat was identified within 0.5 miles of the study corridor area. Despite human uses such as agriculture and commercial/residential development, some habitat in the study corridor area is suitable for these species.

3.2.4 State Species of Concern and Special Status Species

Montana SOC are native animals or plants that are at-risk due to declining population trends, threats to their habitats, and restricted distribution, among other factors. Designation as a SOC is based on the Montana Status Rank and is not a statutory or regulatory classification. According to MTNHP, 25 terrestrial SOC and one plant SOC have documented occurrences within the study corridor area or within a 2-mile radius around the study corridor area (MTNHP, 2025).

Montana special status species are species that have some legal protections in place but are otherwise not Montana SOC. Bald and golden eagles are special status species because these birds are no longer protected under the ESA. Both species are protected under the Bald and Golden Eagle Protection Act of 1940. No bald or golden eagle nests have been identified within a 2-mile radius of the study corridor area.

A review of the Montana Sage Grouse Habitat Conservation Program shows the study corridor area falls outside the core, general, or connectivity habitat for sage grouse (DNRC 2025).

Should projects be carried forward from this corridor study, additional review of databases and an evaluation of habitats near proposed projects must be completed to determine suitability for SOC and special status species.

3.3 Social and Cultural Resources

3.3.1 Recreational Resources

There are multiple recreational resources within the study corridor area, primarily south of MT 3, including Zimmerman Park, Skyline Trail, and several public parcels along the southern side of MT 3. Zimmerman Park is a 71.85-acre public park with several miles of trails. Skyline Trail is a popular 10-foot-wide paved trail between Zimmerman Park and Swords Park. In addition, a separate, paved multi-use path parallels Skyway Drive starting at the intersection of Skyway Drive and MT 3 and extending north beyond the limits of the study corridor area.



Zimmerman Park southwest of the Zimmerman Trail roundabout

3.3.2 Cultural and Historic Resources

The National Historic Preservation Act (NHPA) of 1966 establishes requirements for projects with the potential to affect historic or archaeological sites, including those listed or eligible for the objects included on, or eligible for inclusion on, the National Register of Historic Places (NRHP), as well as artifacts, records, and remains related to such properties.

Forty-two cultural sites within the study corridor area have been identified through desktop literature review. Seventeen sites are eligible for listing in the NRHP, nine are ineligible, and the remaining 16 are undetermined (SHPO 2025). If improvement options are forwarded from this study, a cultural resources field survey of the area of potential affect is warranted to assess current condition of known sites and survey for unrecorded historic and archaeological materials or sites.

3.3.3 Section 4(f) Resources

Section 4(f) of the United States Department of Transportation Act of 1966 protects public parks, recreation areas, wildlife and waterfowl refuges, and public and private historic sites of local, state, and national significance. There are multiple public open spaces, one park, and several trails/multi-use paths within the study corridor area. Additionally, there are 17 NRHP-listed sites and multiple NRHP-eligible or undetermined sites within the study corridor area. These sites may all be considered 4(f) properties.

If improvement options are forwarded from this study, a determination of effects will be made under Section 106 of the NHPA for cultural resources. Furthermore, minimization and/or avoidance measures should be evaluated for impacts to parks and/or trails. If impacts to parks or trails are deemed unavoidable, an evaluation of Section 4(f) use will be necessary.

3.3.4 Section 6(f) Resources

Section 6(f) of the National Land and Water Conservation Fund (LWCF) Act protects public recreational sites purchased or funded by the LWCF. The Secretary of the Interior must approve conversion of a LWCF property to a non-recreational use. No Section 6(f) properties/resources were identified in the study corridor area. Future LWCF grant funding will need to be reviewed if projects move forward to ensure no Section 6(f) sites are impacted.

3.3.5 Visual Resources

The visual resources include natural and cultural features that give the landscape its visual character and aesthetic qualities. The study corridor area is primarily agricultural or undeveloped lands to the northwest, with mid-density residential areas to the south. The Billings Logan International Airport (BIL) is along the northeastern extent of the study corridor area and surrounded by commercial and industrial use. Billings and the Beartooth Range are visible in the distance to the southwest and the Pryor Mountains to the south. Potential projects carried forward from this study must consider effects on visual resources, particularly projects that may be located on a new alignment, involve expansion, or involve other changes that would alter the character of the existing landscape.



View from Skyline Trail looking south

3.4 Area Demographics

Socioeconomic and community demographic information was used to determine recent trends in population, age, employment, economic status, and commuting characteristics. Historical and recent population trends in the area help define existing conditions and aid in forecasting, as there is a direct correlation between motor vehicle use and socioeconomic indicators.

3.4.1 Population

Demographics were reviewed within the nine census tracts near the study corridor area (shown in **Figure 3**, including tracts 5, 6, 7.04, 12, 13, 14.02 18.01, 18.05, and 18.06), hereinafter referred to as the study area tracts. These tracts are located within two-miles of the study corridor and were analyzed to understand demographics in the project vicinity. Results of the review help recognize historical trends in population and population characteristics relevant to transportation planning.

3.4.1.1 Historical and Recent Population Trends

Between 1980 and 2020, Billings and Yellowstone County outpaced the growth rate of both Montana and the United States (U.S.) with compound annual growth rates of approximately 1.41% and 1.06%, respectively. In contrast, Montana and the U.S. grew at compound annual growth rates of 0.81% and 0.96%, respectively.

3.4.1.2 Population Projections

Figure 4 depicts the actual percent change in population from 2010 to 2023 and the anticipated growth to 2040. Since 2010, the population growth rate of Yellowstone County and Billings has slightly exceeded the state's growth rate. This trend is expected to continue through 2040. Of note, the population of Billings experienced minor declines in 2017 and 2018 (0.3% average decrease) followed by a minor increase in 2019 (0.3%). Since 2020, Billings' population growth has rebounded and now slightly outpaces the state's growth rate, mirroring Yellowstone County's growth rate. On average, Yellowstone County's population is expected to grow at a rate of 1.2% per year from 2024 to 2040. This aligns with the 1.2% annual average population growth rate forecasted in the Billings-Yellowstone County MPO travel demand model.

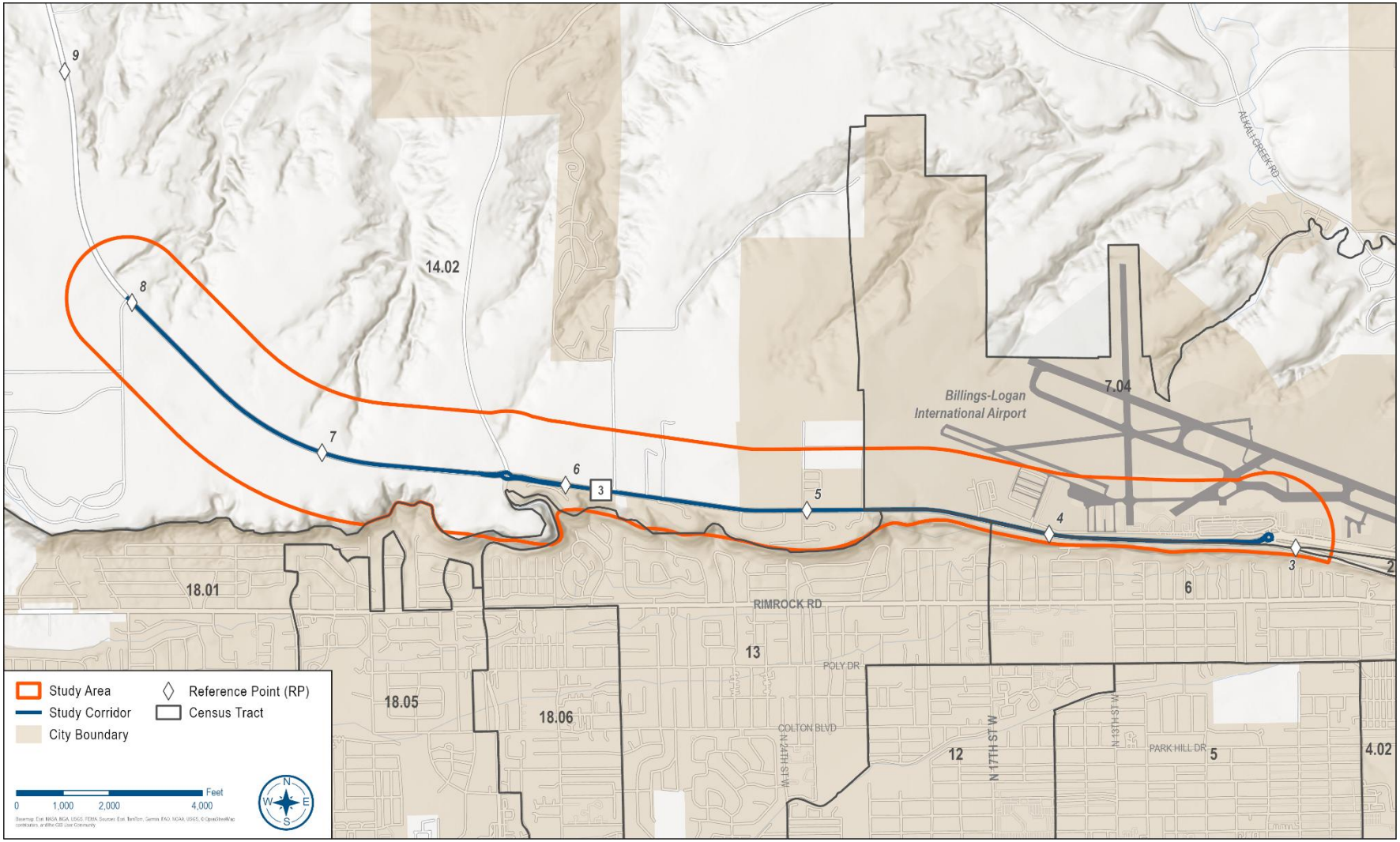
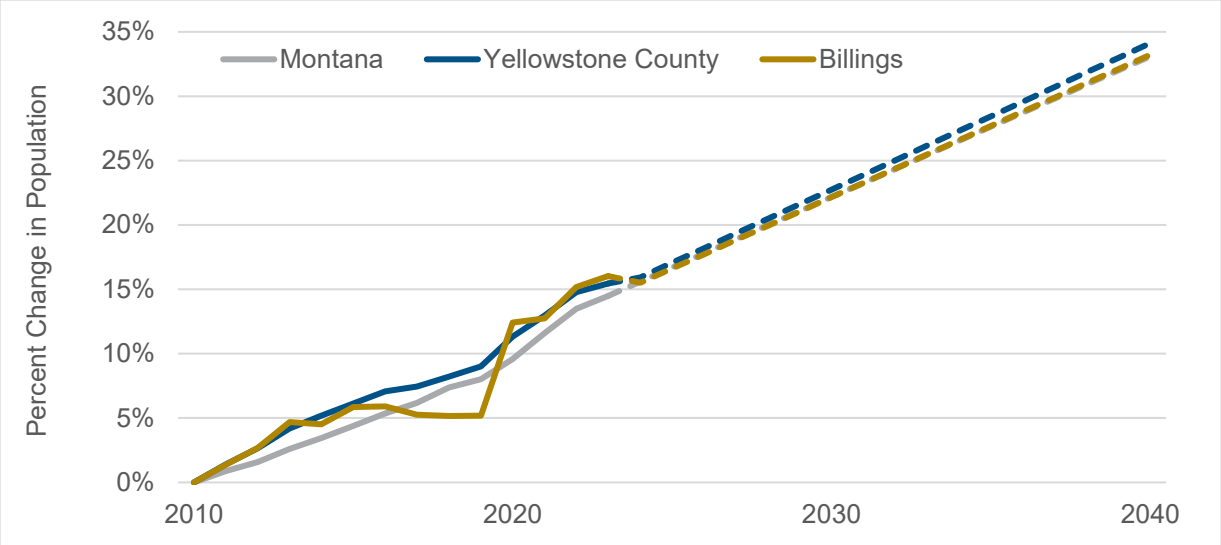


Figure 3: Study Area Census Tracts



Source: MDT, U.S. Census Bureau – ACS 1-Year and 5-year Estimates, Decennial Census

Figure 4: Population Growth from 2010 to 2040

3.4.1.3 Study Area Population Characteristics

Billings and Yellowstone County are slightly more racially diverse than the state overall, most notably with a higher proportion of those of Hispanic descent. However, the study area tracts are a less diverse area than Billings and Yellowstone County as a whole. Based on United States Census Bureau (USCB) data (USCB 2023b), African American, American Indian, Asian, Hispanic or Latino, or multiracial identities represent 10% of residents in study area tracts, but represent 16-17% of residents in Billings, Yellowstone County, and Montana.

Additionally, the study area tracts have a higher elderly population in relation to Billings, Yellowstone County, and Montana averages. Approximately 23% of residents are age 65 and over in study area tracts, whereas 18-20% of residents are age 65 and over in Billings, Yellowstone County, and Montana.

3.4.1.4 Housing Characteristics

In 2023, Yellowstone County had the greatest number of housing units compared to all counties in Montana. Likewise, Billings has the most housing units (comprising about 15%) of all cities and towns in Montana. The study area tracts contain approximately 24% of all housing units in Billings (of note, the study area tracts encompass a large area and most of the housing units in the tracts are located south of the Rimrocks). Over the 10-year period 2013 to 2023, there has been higher growth in the number of housing units in study area tracts (14.6% increase), in Billings (15.7% increase), and in Yellowstone County (14.2% increase) than the state average (8.2% increase). From 2013 to 2023, the share of occupied housing units in the study area tracts has slightly decreased but is considerably higher than the state average.

3.4.2 Personal Travel and Commuting Characteristics

The USCB provides estimates of the total share of workers aged 16 and older who commute or work at home, transportation modes used by commuters, and mean travel times for commuters. Between 2018 and 2023, most commuting workers in the study area tracts (over 72%) drove to work alone in personal vehicles. Workers had substantially shorter commute time compared to the other geographic areas presented, taking an average of 14.6 minutes.

3.4.3 Income Characteristics

3.4.3.1 Income and Poverty Rate

The median household income is significantly higher in Yellowstone County ($74,400), Billings ($71,855), and the study area tracts ($101,575) than the state ($69,922) as of 2023. According to the USCB (USCB 2023a), population in poverty for the study area tracts ranges from approximately 0.9% to 17.6%, with an average of 6.7% across all study area tracts.

The poverty rate is lower in Yellowstone County (10.2%), Billings (10.6%), and the study area tracts (6.7%) than the state (12%) as of 2023.

3.4.3.2 Employment Status

As of 2023, Billings and Yellowstone County have a higher percentage of its eligible workforce (defined as the population age 16 and over) in the labor force (66.2% and 66.1%, respectively) than the state (62.8%). However, the study area tracts have less labor force participants (62.0%). This is consistent with the study area tracts having a higher elderly population (individuals 65 and over) in relation to Billings, Yellowstone County, and Montana.

Despite the lower percentage in the labor force, the study area tracts have a slightly higher share of their labor force employed (97.2%) than the state (95.6%). Likewise, Billings and Yellowstone County have slightly higher shares of their labor force employed (96.5% in both areas) than the state. Additionally, the unemployment rate in the study area tracts (2.8%), Billings (3.5%), and Yellowstone County (3.4%) are lower than the state average (3.8%). These employment characteristics have changed over the period 2013 to 2023. Notably, in all areas, unemployment rates have significantly decreased as well as the labor force percentage, and the percent of labor force employed has increased.

3.4.3.3 Employment Industries

A review of the percentage of the population employed by industry area for the study area tracts show most of the employment in Educational Services, Health Care, and Social Assistance; Retail Trade; and Professional, scientific, management, and administration industries. From 2013 to 2023, employment in the Educational Services, Health Care, and Social Assistance Industry and the Construction Industry had the greatest growth (increases of 4% and 2%, respectively). Conversely, Wholesale Trade Industry and Retail Trade Industry had the greatest decline in employment share (1.4% decrease and 3% decrease, respectively).

MONTANA 3 BILLINGS
CORRIDOR STUDY

4.0 Transportation System

4.0 TRANSPORTATION SYSTEM

The study evaluated the existing transportation system and anticipated future conditions in the corridor. This information may be used to support future, detailed project-level analyses if any improvement options advance from this study. Additional information on these topics is provided in the *Existing and Projected Conditions Report* (**Appendix D**).

4.1 Physical Features and Characteristics

This section describes existing physical features in the study corridor including land use, roadway characteristics, geotechnical conditions, drainage conditions, utilities, and alternative transportation modes

4.1.1 Land Use and Right-of-Way

Zoning districts within the study corridor are demarcated by the Billings city limits at Zimmerman Trail (RP 6.25). Districts east of Zimmerman Trail fall within Billings city limits, while those west of Zimmerman Trail are designated by Yellowstone County. The existing zoning designations and land uses are shown in **Figure 5** and described below.

- **Yellowstone County Zoning** encompasses the western one-third of the study corridor from Zimmerman Trail to the west. The majority of zoning in this area is agriculture, with Zimmerman Park designated as open space, parks, and recreation.
- **City of Billings Zoning** encompasses the eastern extent of the study corridor from Zimmerman Trail to the east. The Billings Logan International Airport and associated facilities are zoned primarily public-civic and institutional. The remainder of City-designated zoning north of MT 3 is predominantly agriculture, heavy commercial, and public campus. The southern side of MT 3 is mostly a mix of open space, parks, recreation, and suburban neighborhood.

Improvement options carried forward from this study would need to consider potential impacts to adjacent private landowners, as well as potential impacts to adjacent land use, should new right-of-way (ROW) or easements on adjacent lands, new access points, or changes in access be required. Based on historical ROW plans, existing MDT ROW along MT 3 varies from 100 to 140 feet wide within the study corridor area (MDT 2025).

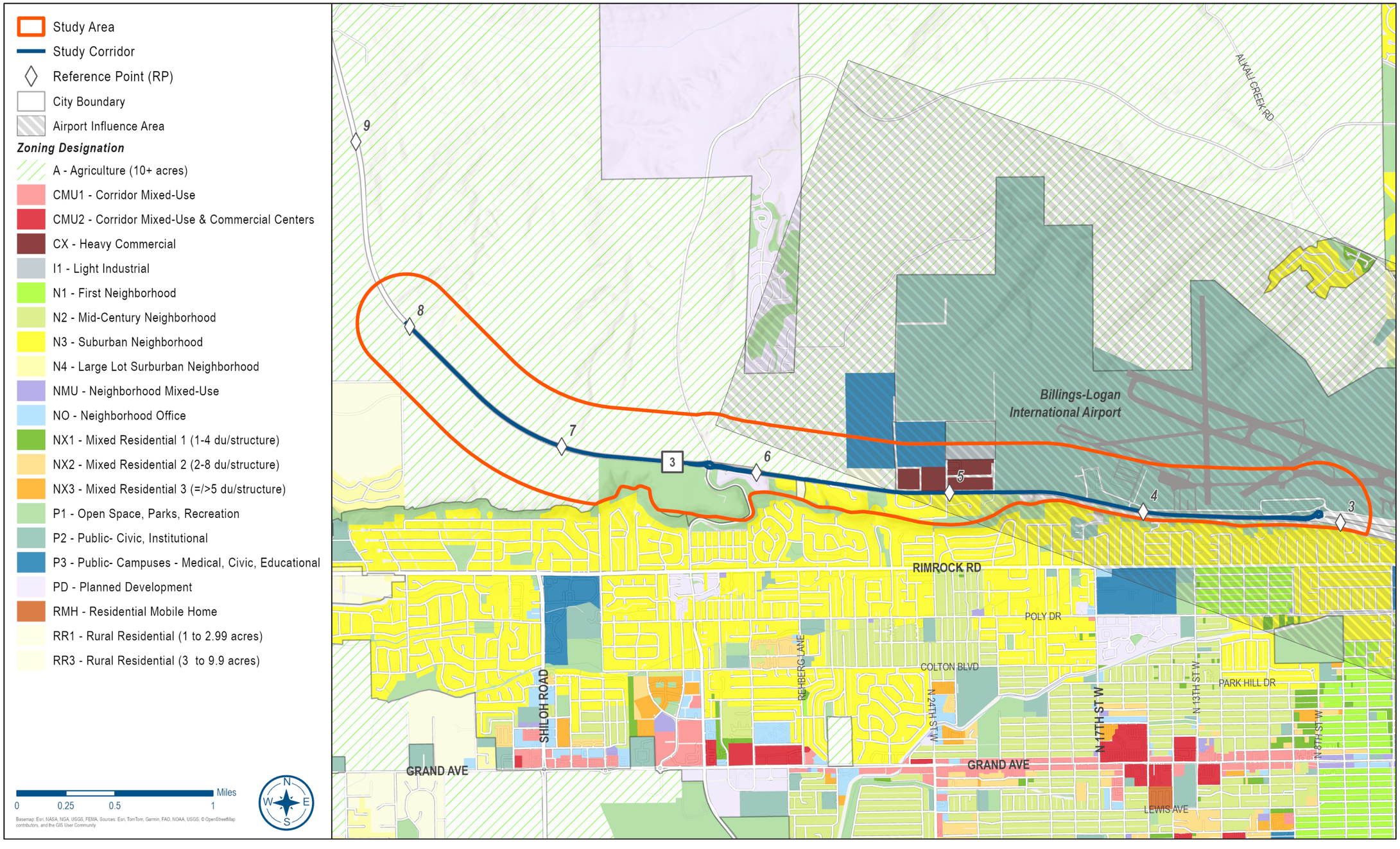


Figure 5: Zoning Designations

4.1.2 Functional Classification and Highway System Designation

Functional classification is a hierarchical system used to classify a road based on the relative emphasis on mobility versus land access. Arterials provide the greatest mobility but are intended to have limited access (i.e., higher travel speeds and volumes primarily serving long-distance travel). Local roads focus on land access and have limited mobility (i.e., lower travel speeds and volumes primarily serving adjacent land uses). Collector roads are an intermediate classification and provide a more balanced blend between mobility and access. MT 3 is classified as a principal arterial, while Zimmerman Trail and E. Airport Road are classified as minor arterials through MDT's classification system (which differs from the Billings-Yellowstone County MPO functional classification system).

Highway system designation is established based on the functional classification of the route. The system designation is important as it affects methods and sources of funding for roadway improvements. MT 3 is designated as a Non-Interstate National Highway System route. Zimmerman Trail and E. Airport Road are designated as urban routes.

4.1.3 Posted Speed Limits

Figure 6 depicts the posted speed limits in the study corridor area. The speed limit is 70 miles per hour (mph) on the west end of the corridor but decreases to 50 mph just west of Zimmerman Trail, then decreases to 45 mph just west of the E. Airport Road/N. 27th Street roundabout. The speed limit on Zimmerman Trail is 25 mph, while the speed limit on Skyway Drive is 45 mph.



Figure 6: Posted Speed Limits

4.1.4 Access Density and Access Control

Access density is the number of driveways and minor intersections along a corridor; more access points can increase potential crashes and conflicts. For the study, the corridor was divided into 0.25-mile segments and approaches and intersections were counted on each segment. Access density is relatively low on the west end of the corridor. However, the nature of the corridor changes east of Zimmerman Trail, where there are more residential developments with direct access onto MT 3. MDT implemented access control on MT 3 in 1990 (MDT 1990). The access control begins 0.3 miles east of Zimmerman Trail and extends west past the study corridor area at Apache Trail. The *Access Management Plan* covers the entire corridor, superseding all previous resolutions.

4.1.5 Roadway Surfacing

MDT Road Log data on roadway surfacing includes widths and thicknesses along state routes. The typical section on MT 3 consists of two 12-foot-wide travel lanes with one travel lane in each direction, variable shoulder widths, and roadside ditches (no curb or gutter). MDT conducts annual pavement monitoring. A variety of conditional assessments are conducted by MDT, including the overall performance index, which is a summary of the pavement's general condition. The pavement condition on this section of the MT 3 corridor is rated as good (average overall performance index score of 68 out of 100). The MT 3 corridor pavement was milled and overlaid in 2017 from Zimmerman Trail to E. Airport Road.

4.1.6 Maintenance and Operations

MDT is responsible for maintenance of MT 3 within the study corridor area. Responsibilities include repairs and preventative maintenance of the roadway, structures, and signs within the highway ROW.

4.1.6.1 Winter Operations

MDT maintenance personnel are responsible for winter snowplowing and sanding of MT 3. The MDT *Maintenance Operations and Procedures Manual* (MDT 2009) provides classification of winter maintenance areas. MT 3, east of Zimmerman Trail, qualifies as a Level I facility. Level I facilities include roadways within or adjacent to a three-mile radius of towns or cities with an average daily traffic (ADT) greater than 5,000 vehicles per day (vpd). These routes may receive continuous snowplowing and anti-icing/de-icing operations throughout a storm event.

MT 3, west of Zimmerman Trail, qualifies as a Level I-A facility. This facility type includes interstate and other MDT-maintained roadways with an ADT greater than 3,000 vpd but less than 5,000 vpd. These routes may receive coverage up to 19 hours per day during a storm event, typically between the hours of 5:00 AM and 12:00 AM. Coverage of these facilities is at the discretion of the Area Maintenance Chief. The primary objective is to keep the roadway open to traffic and provide an intermittent bare pavement surface in the main driving lane as soon as possible.

Gates exist on the southern leg of the Zimmerman Trail roundabout to allow for road closures during icy conditions or snow events.



Road closure gates on the southern leg of Zimmerman Trail roundabout

4.1.6.2 Emergency Services

Yellowstone County Disaster and Emergency Services coordinates public safety agencies. Services include law enforcement, fire, ambulance, public works, volunteers, and other groups associated with an emergency response.

Fire Station 1 of the City of Billings Fire Department responds to downtown Billings and north of the Rimrocks for fire, emergency medical services, and rescue calls. Station 1 is on the northern side of downtown Billings.

Law enforcement is provided by the City of Billings Police Department and Yellowstone County Sheriff Department within the study corridor area. As a state route, the MT 3 corridor is patrolled by local law enforcement and Montana Highway Patrol.

Emergency response is provided by the local fire department, and medical services are provided by Billings Clinic Hospital and St. Vincent Regional Health. Both medical facilities are on the northern side of downtown Billings, within two miles of the MT 3 corridor.

MT 3 is part of the Strategic Highway Network and National Highway System, indicating the route may be used for emergency defense mobilization or evacuation.

4.1.7 Geotechnical Conditions

Soil in the area is residual from weathered sandstone of the Rimrocks. Soils are typically fine-grained silty/sandy soils. Competent bedrock has been encountered as shallow as 10 feet below the ground surface. The depth to competent bedrock may vary within a few feet of a location depending on the depth and degree of weathering of the bedrock.

Within the study corridor area, soils are likely frost-susceptible when moisture is present. Soil types often require additional subgrade preparation, and compaction may be more difficult during wet seasons when the subgrade soil exceeds its optimum moisture.

Rockfall from the Rimrocks has been a significant issue in Billings and has caused damage to public and private property. Stabilization techniques, such as rock dowels or bolts, have been locally used to reduce rockfall risk. The study corridor area is not expected to be at risk of rockfall incidents as the project location is north of the rim of the cliffs. However, care should be taken to make sure construction does not disturb possibly loose or weak rock.

Montana is seismically active, especially in the western part of the state. According to Montana Bureau of Mines and Geology (MBMG) data, there are no active faults mapped within the study corridor area and only one magnitude 2.2 earthquake was documented in 2014 within the Yellowstone Valley over seven miles east of the study corridor area (MBMG 2025a). The study corridor area is within a USGS-defined Seismic Hazard Zone that is less likely to experience significant ground shaking (MBMG 2025b).

Site-specific geotechnical investigations would be required for reconstruction or significant improvements to the study corridor to determine subsurface conditions and potential issues related to stability, erosion, subgrade support, and settlement.

4.1.8 Drainage Conditions

The study corridor has limited stormwater and drainage facilities. The area is directly north of the Rimrocks, and the residential areas below the Rimrocks are considered high-risk for flooding and erosion-related issues. It is critical that stormwater discharge over the Rimrocks is not increased. Drainage features near the study corridor area are depicted in **Figure 7** and **Figure 8**. For most of the corridor area, runoff is conveyed and discharged through a series of open ditches and culverts, ranging in diameter from 18 to 30 inches.

West of the Zimmerman Trail roundabout, the topography slopes from south to north toward Alkali Creek. Five culverts cross under MT 3 in this section to drain areas south of the road into the Alkali Creek drainage to the north. Seven culverts convey drainage from the roadside ditches through the approaches and driveways in this area. The intersection of MT 3 and Zimmerman Trail features a stormwater detention pond. Overflow from the pond flows east before discharging over the Rimrocks to the City/County Drain basin.

East of the Zimmerman Trail roundabout, nine culverts discharge over the Rimrocks into drainages that ultimately contribute to the City/County Drain and Yegen Drain basins. A rock check dam was installed in 2023 to attenuate stormwater flows and reduce sediment transport before discharging into the City/County Drain basin. Toward the east end of the study area, the roadside ditch includes energy dissipators that slow runoff and reduce erosion. There are three paved parking lots in the east section with curb and gutter systems that outfall to the roadside ditches. There is a stormwater system associated with the E. Airport Road/N. 27th Street roundabout that includes curb and gutter, subsurface storm drain, and detention ponds that collect and convey water to an open ditch to the east along E. Airport Road.



Stormwater detention pond northeast of the Zimmerman Trail roundabout

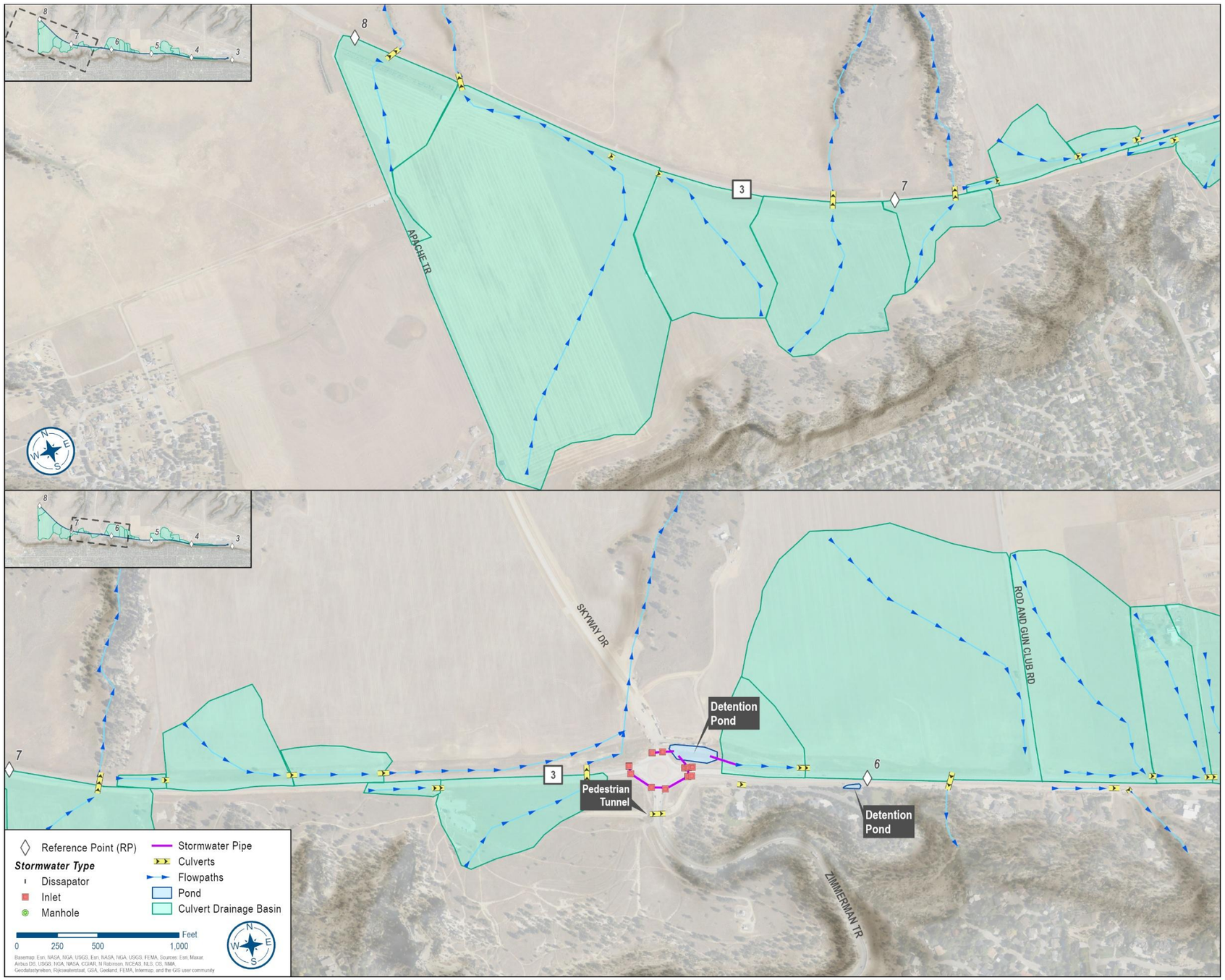


Figure 7: Existing Drainage Features (Western Half of Study Corridor Area)



Figure 8: Existing Drainage Features (Eastern Half of Study Corridor Area)

4.1.9 Utilities

The following three sources of data were used to identify the utilities present in the study corridor area. The level of detail from each of these sources varies.

- **City of Billings GIS data:** This data provided detailed mapping of water, sanitary sewer, and storm drain facilities. Specific attributes of these facilities are available, such as pipeline sizes and material types.
- **MDT utility permit database records**: A tabular list of utility occupancy and encroachment permits was obtained within the MT 3 ROW.
- **Montana 811 one-call utility locate system:** An information-only request was made to simply identify the utility companies and utility types within the study corridor area.

4.1.9.1 Public Utilities

Figure 9 shows the existing water, sanitary sewer, and storm drain facilities in the study corridor area, along with the existing water tanks and pump stations. Of note, most of the existing storm drain and water pipelines in the airport parking and terminal areas are not shown for clarity.

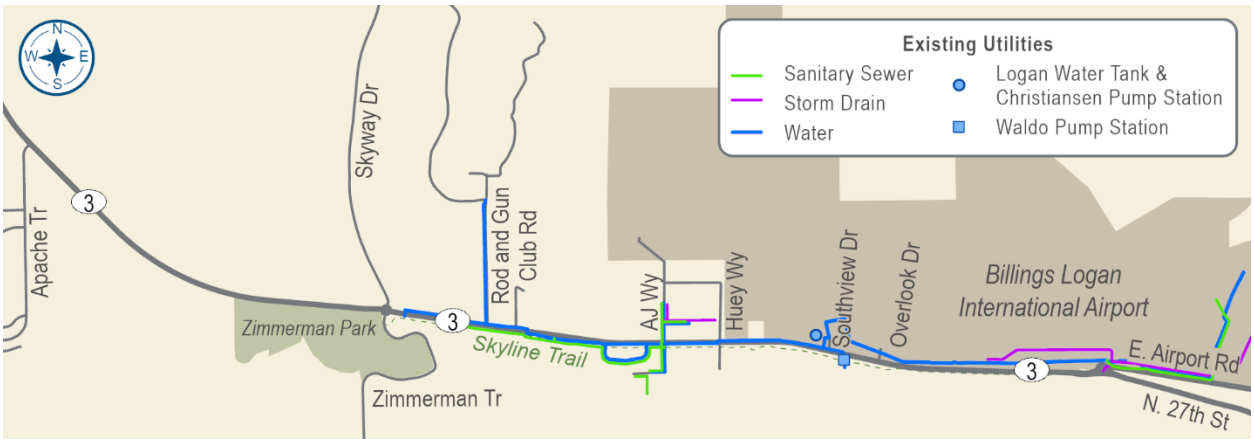


Figure 9: Existing Water, Sanitary Sewer, and Storm Drain Facilities

Water

The City of Billings operates the municipal water system that services the corridor segment from E. Airport Road to Zimmerman Trail. A 12-inch-diameter ductile iron water transmission main is installed from Waldo Pump Station, 120 feet south of MT 3 near the west edge of the airport, to Rod and Gun Club Road. At Rod and Gun Club Road, the water main transitions to 16-inch diameter and continues both north to serve the Rehberg Ranch subdivision and west to Zimmerman Trail. A 100,000-gallon elevated steel water tank and the Christensen Pump Station are present approximately 200 feet north of MT 3 near the western edge of the airport.

Sanitary Sewer

The sanitary sewer facilities within the study corridor area consist primarily of a low-pressure sewer system serving the residential developments south of MT 3 between Masterson Circle and Zimmerman Trail, as well as private airport hangars north of MT 3 adjacent to AJ Way. The eastern edge of the corridor has 8-inch-diameter gravity sewer mains that collect wastewater from the primary airport buildings. There are limited rural residential and commercial buildings north of MT 3 between AJ Way and Zimmerman Trail outside the Billings city limits that are served by individual septic tanks and drain fields.

Storm Drain

Underground storm drain facilities in the study corridor area are limited to the system of storm inlets, pipelines, and manholes throughout the developed areas of the airport north of MT 3. Drainage improvements that convey stormwater runoff along the highway itself consist of roadside ditches and culvert crossings throughout the entire corridor.

4.1.9.2 Private Utilities

Several private utilities exist in the study area including overhead power lines, buried power lines, communications, and natural gas. Determination of exact utility locations would require identification by a qualified utility location service.

Power

NorthWestern Energy and Yellowstone Valley Electric Co-operative both have electrical power facilities in the study corridor area. Overhead power lines and power poles are along the northern edge of the MT 3 ROW from Apache Trail to Rod and Gun Club Road and start again at Southview Drive for 1,900 feet east. Overhead power lines and power poles are along the southern edge of the MT 3 ROW from the Zimmerman Park entrance to Stoney Ridge Road and start again at Skyranch Drive for 700 feet east. Overhead power lines cross MT 3 in six locations. Buried power lines are also present parallel to and crossing MT 3 in the study area.

Communications

Entities owning communication utilities in the study corridor area include Lumen (formerly, or doing business as CenturyLink, Qwest, US West, and others), AT&T, and Charter Communications. The communication facilities are primarily underground fiber optic and copper cables. Some communication cables may share overhead utility poles.

Natural Gas

Montana Dakota Utilities owns natural gas facilities parallel to and crossing MT 3 within the study area. These facilities are known to include 2-inch- to 4-inch-diameter gas main pipelines and smaller-diameter services.



Elevated steel water tank near Billings Logan International Airport

4.1.10 Additional Transportation Facilities

4.1.10.1 Transit

Figure 10 depicts existing transit routes within the study corridor area. The City of Billings MET Transit operates the Downtown Circulator bus route, which passes through the east end of the study corridor area. The Downtown Circulator provides a connection between downtown Billings and the airport terminal. The route extends to the Skyline Trail bus stop, seasonally from May 1 to September 30. The Downtown Circulator typically operates on weekdays with a 15-minute interval between buses from 5:45 AM to 8:00 PM.

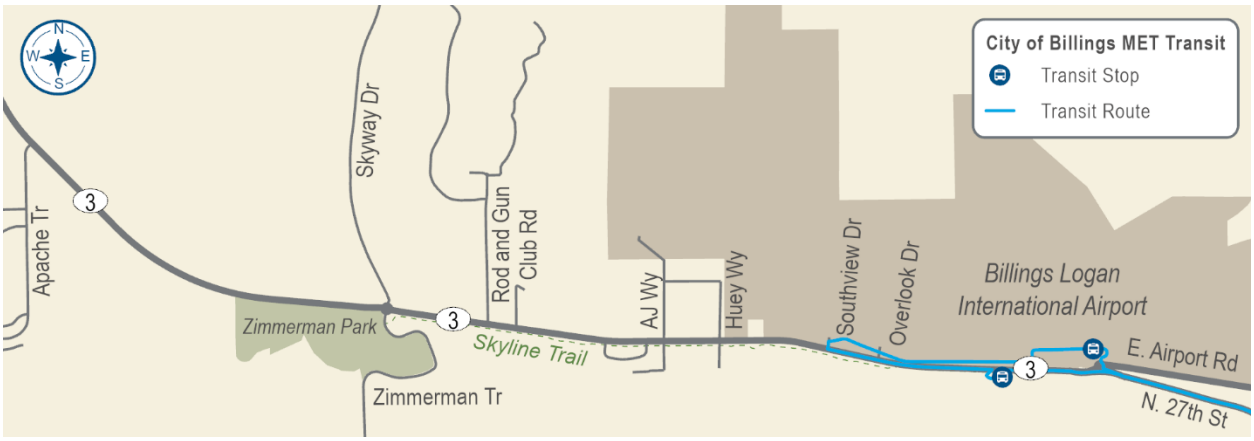


Figure 10: Transit Routes

4.1.10.2 Pedestrian and Bicycle Facilities

Figure 11 depicts the existing pedestrian and bicycle facilities within the study corridor area. Skyline Trail exists on the southern side of MT 3 from Zimmerman Park east to Swords Park, east of the airport. A multi-use path also exists along the east side of Skyway Drive and connects to the Heights Neighborhood. A Rectangular Rapid Flashing Beacon (RRFB) exists on the eastern leg of the Zimmerman Trail roundabout to facilitate north-south pedestrian crossings. Two pedestrian/bicycle underpasses exist in the study corridor area, on the southern leg of the Zimmerman Trail roundabout and the southern leg of the E. Airport Road roundabout. Four paved parking areas exist south of MT 3 between Huey Way and E. Airport Road for visitors and trail users.



Figure 11: Pedestrian and Bicycle Facilities

A trail count on Skyline Trail (one mile west of Airport Road) from September 25 to October 14, 2024 estimated an average of 179 pedestrians/bicyclists per day (ranging from 90 to 400 users per day). A trail count on the Skyway Drive path, just north of Zimmerman Trail, estimated an average of 53 pedestrians/bicyclists per day from September 11 to 18, 2024 (ranging from 10 to 160 users per day).

4.1.10.3 Aviation Facilities

Aviation facilities along the study corridor include Billings Flying Service and BIL. Billings Flying Service is on AJ Way and provides aerial firefighting and heavy-lift services. BIL is a busy commercial service airport on MT 3 near the E. Airport Road roundabout. The existing and projected aviation demand at BIL has been characterized using actual reported activity levels from the past 20 years and the Federal Aviation Administration Terminal Area Forecast (TAF). The TAF indicates BIL is expected to experience modest 1% annual growth in aircraft operations and 2% annual growth in passenger enplanements over the next ten years.

The *Billings Logan International Airport Draft Master Plan* shows that development is expected at the airport including terminal expansion, an additional runway and taxiway, a new parking garage and shuttle lot, and additional general aviation hangars. Although still in the planning stage, these developments are expected to impact traffic at the Southview Drive, Overlook Drive, and Huey Way intersections.



Access to Billings Logan International Airport on the eastern end of the study corridor

4.2 Geometric Conditions

Existing roadway geometrics were evaluated and compared to current MDT baseline design criteria. The analysis was completed based on a review of public information, MDT as-built drawings, GIS data, and field observations.

4.2.1 Design Criteria

The MDT *Road Design Manual* (MDT 2016a) and *Baseline Criteria Practitioner's Guide (*MDT 2021*)* establish design controls and general design criteria that influence the overall roadway design approach. A balanced design incorporates the baseline design criteria, adjusted to context of the facility as appropriate, while meeting the desired outcome of a project and being mindful of impacts related to the project. MDT classifies MT 3 as a principal arterial which is designed to accommodate higher traffic volumes, longer trip lengths, and provide fewer access points compared to a minor arterial or collector road. The geometric design criteria for the study corridor are based on current MDT standards for rural and urban principal arterials. MT 3 is designated a rural principal arterial west of Zimmerman Trail, with a 70-mph design speed. MT 3 is designated as urban principal arterial east of Zimmerman Trail, with a 55-mph design speed. Posted speeds may differ from design speed.

4.2.2 Roadway Typical Section

For most of the corridor, the roadway has a two-lane typical section, with one travel lane in each direction, and no curb or gutter. West of the Zimmerman Trail roundabout, the existing typical section includes two 12-foot-wide travel lanes and 8-foot-wide shoulders, providing a roadway surface width of 40 feet. East of the Zimmerman Trail roundabout, the roadway surface width decreases to 31 feet, including two 12-foot-wide travel lanes and 3.5-foot-wide shoulders. The 3.5-foot shoulder width east of Zimmerman Trail does not meet baseline design criteria, as the minimum shoulder width for a rural and urban principal arterial is 6 feet.

4.2.3 Horizontal and Vertical Alignment

A horizontal alignment consists of a series of straight lines, known as tangents, and curves to change direction. The horizontal alignment of the roadway in the study corridor is relatively straight with four curves and complies with current geometric design standards. A vertical alignment consists of a series of straight grades and vertical curves, or changes in elevation. The vertical alignment is generally flat and complies with current geometric standards. Proposed improvements carried forward from the corridor study should make sure that current alignment standards are met and consider design speed and terrain type.

4.3 Traffic Conditions

This section documents traffic conditions on the study corridor, including a review of existing and historical traffic volumes, anticipated future growth, and intersection operations with existing and future 2045 traffic volumes.

4.3.1 Daily Traffic Volumes and Projected Growth

Figure 12 depicts the existing and forecasted 2045 annual average daily traffic (AADT) on MT 3. A 2.1% annual growth rate was used to develop 2045 traffic volumes based on traffic growth forecast in the Billings-Yellowstone County MPO travel demand model. Corridor traffic volumes are highest between Zimmerman Trail and E. Airport Road, with an existing AADT of 12,300 vpd and a forecasted AADT of 19,400 vpd. Daily traffic volumes significantly reduce west of

Zimmerman Trail. For reference, the planning-level capacity of a two-lane urban arterial is 18,300 vpd (Transportation Research Board 2022).

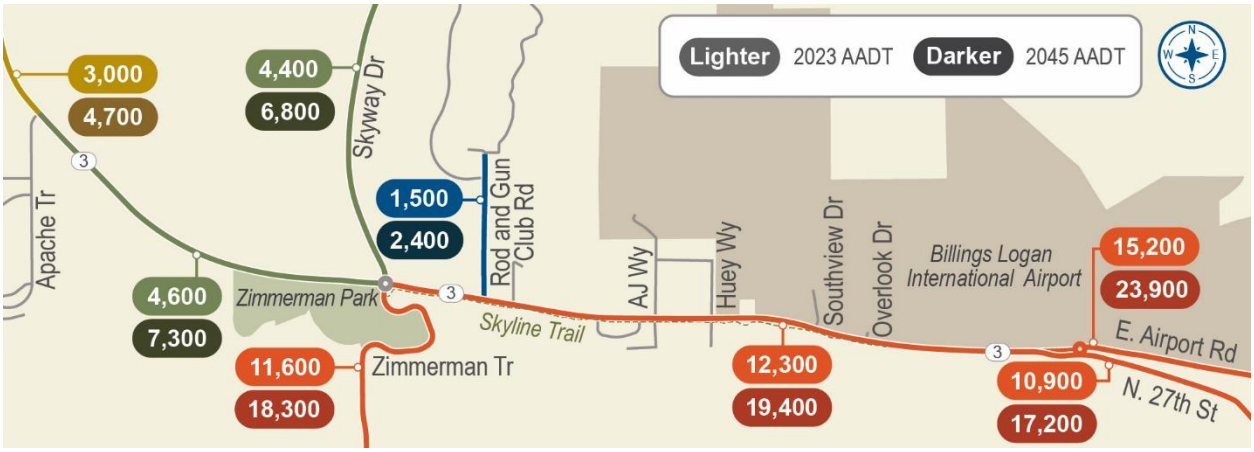


Figure 12: 2023 AADT and Projected 2045 AADT

Figure 13 depicts historical traffic growth on MT 3 from 2004 to 2023, as well as the projected traffic with a 2.1% growth rate. AADT on this section of MT 3 has grown at an annual average growth rate of 2.6% per year over the past 20 years. However, a growth rate of 2.1% per year was used to forecast 2045 traffic volumes based on the MPO travel demand model. The 2.1% growth estimated in the travel demand model is considered a better predictor of future traffic, compared to extrapolating historical growth trends.

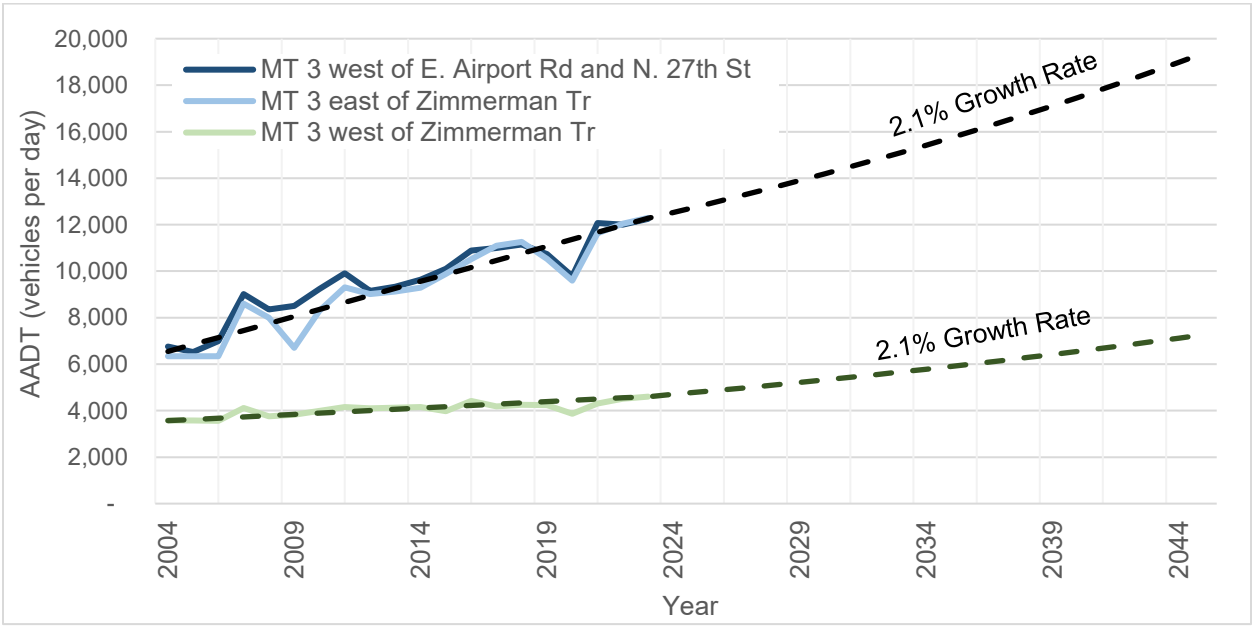


Figure 13: Historical and Projected AADT on MT 3

4.3.2 Heavy Vehicle Traffic

Heavy vehicles generally include buses, delivery trucks, and semi-trailer trucks. There are 13% heavy vehicles on MT 3 west of Apache Trail, while there are only 3% heavy vehicles on E. Airport Road east of the E. Airport Road / N. 27th Street roundabout.

4.3.3 Seasonal and Daily Variation

The seasonal variation in traffic volumes at the nearest MDT permanent count station (on Main Street north of Hilltop Road) indicates that the spring and summer months (April to September) have the highest traffic volumes (e.g., August traffic volumes are 6% higher than annual average traffic volumes). Traffic volumes on MT 3 are expected to follow a similar trend, peaking during the summer months.

Based on corridor traffic counts, the AM peak hour generally occurs from 7:15 to 8:15 AM and the PM peak hour occurs from 4:30 to 5:30 PM. Weekend traffic volumes peak in the middle of the day between 11:30 AM and 1:30 PM.

4.3.4 Directional Traffic Patterns

Volumes are relatively balanced on MT 3 east of Zimmerman Trail, with about 52% of traffic heading eastbound during the AM peak and 54% heading westbound during the PM peak. However, directional traffic volumes are less balanced during the peak hours on MT 3 west of Apache Trail where about 65% of traffic is heading eastbound during the AM peak and 62% of traffic is heading westbound during the PM peak.

4.3.5 Existing Traffic Control and Intersection Operations

Figure 14 shows the existing traffic control and intersection configuration at the six study intersections. Roundabouts exist at the Zimmerman Trail and E. Airport Road intersections. The Apache Trail, Rod and Gun Club Road, AJ Way, and Huey Way intersections are two-way stop-controlled (TWSC) intersections. Intersection level of service (LOS) was analyzed at the study intersections using December 10, 2024 traffic counts. LOS defines how well vehicle traffic flows along a street or road. LOS is graded from A to F, with LOS A representing free-flow conditions and LOS F representing severe congestion with stop-and-go flow conditions. Given the principal arterial classification and roadway context, the desired design year intersection LOS threshold is LOS D or better (MDT 2007).

The Apache Trail intersection, Zimmerman Trail roundabout, and E. Airport Road roundabout operate at LOS A in the existing AM and PM peak hours. The Huey Way intersection operates at LOS C during peak hours, while the Rod and Gun Club Road and AJ Way intersections operate at LOS D during either the AM or PM peak hour. Delay is reported for the side street approach lane with the highest delay at TWSC intersections. The highest delay occurs on the southbound approach at the AJ Way and Huey Way intersections. The overall intersection delay is reported at roundabouts.

4.3.6 2045 Projected Intersection Operations

Year 2045 traffic volumes were developed assuming a projected growth rate of 2.1% per year, while also including expected AM and PM peak hour traffic associated with the BRIC and YLCP developments. The BRIC and YLCP full-build development traffic volumes were obtained from the BRIC traffic impact study; origins and destinations for these new trips were assigned based on existing traffic patterns.

With no capacity improvements, the Apache Trail intersection and E. Airport Road / N. 27th Street roundabout are expected to operate at LOS B in 2045. All other intersections are expected to degrade to a failing LOS during both the AM and PM peak hour in 2045. The critical movement at the TWSC intersections are the southbound left-turns. This movement competes with eastbound and westbound vehicles for an adequate gap in traffic to access MT 3.

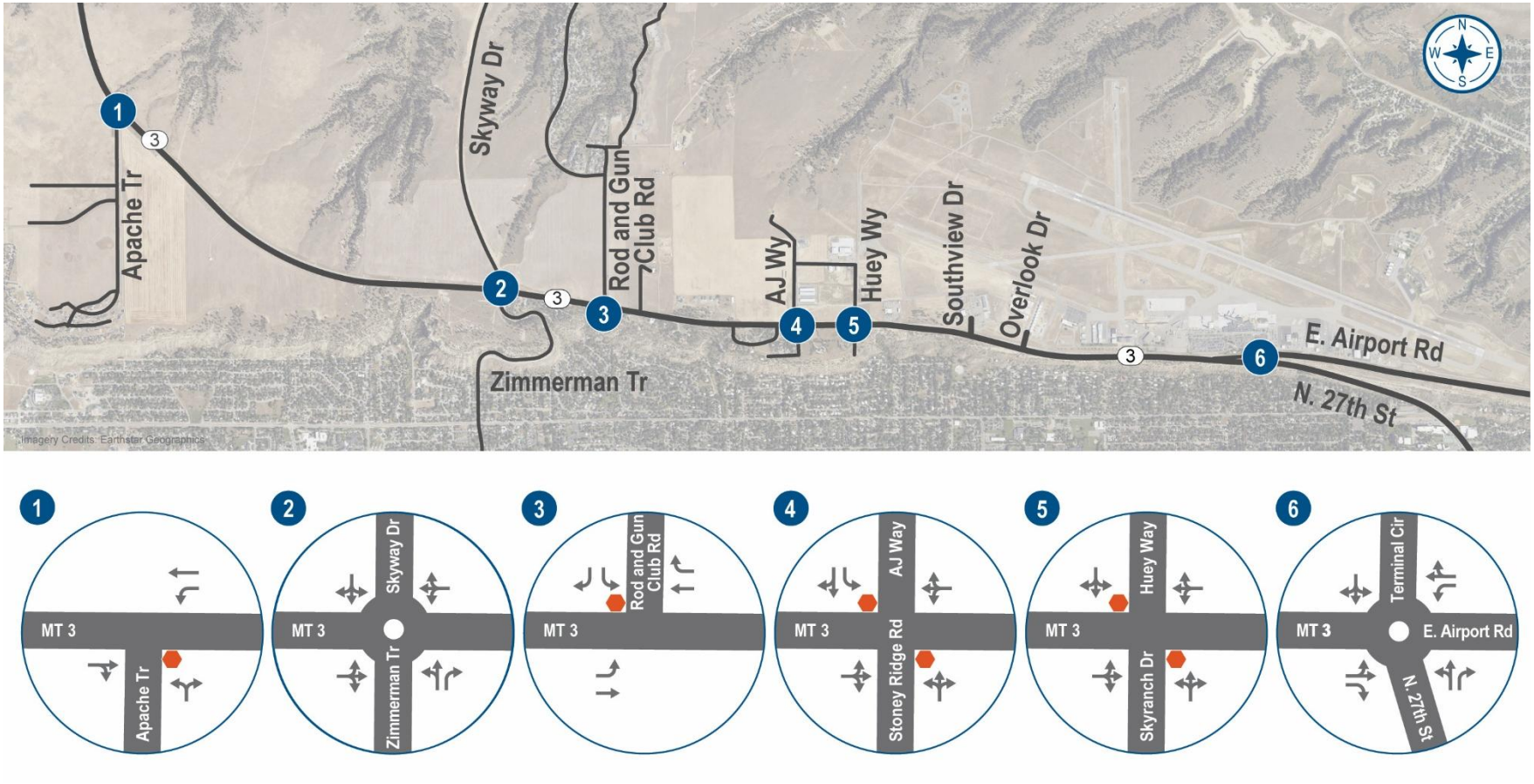


Figure 14: Existing Traffic Control and Intersection Configuration

4.4 Safety

Five years of crash data along the study corridor were analyzed (January 1, 2019, to December 31, 2023). A total of 115 crashes were reported over the five years. Crash data is obtained from crash reports completed by police officers at the time of the crash. The data can be incomplete or inaccurate, as many crashes go unreported and the reporting of crash information can vary, depending on the reporting officer.

Crash Data Disclaimer: Pursuant to 23 U.S.C. § 407, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 of Title 23, U.S.C., or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing federal-aid highway funds shall not be subject to discovery or admitted into evidence in a federal or state court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data. This publication is not intended to waive any of the State of Montana rights or privileges under 23 U.S.C. § 407.

4.4.1 Crash Severity

Crashes were categorized based on the severity of injuries reported. The most severe injury defines the severity of the crash**. Figure 15** depicts the distribution of crash severity on the corridor. Of the 115 total crashes, 29 crashes resulted in minor injury, while 3 crashes resulted in serious and/or fatal injuries.

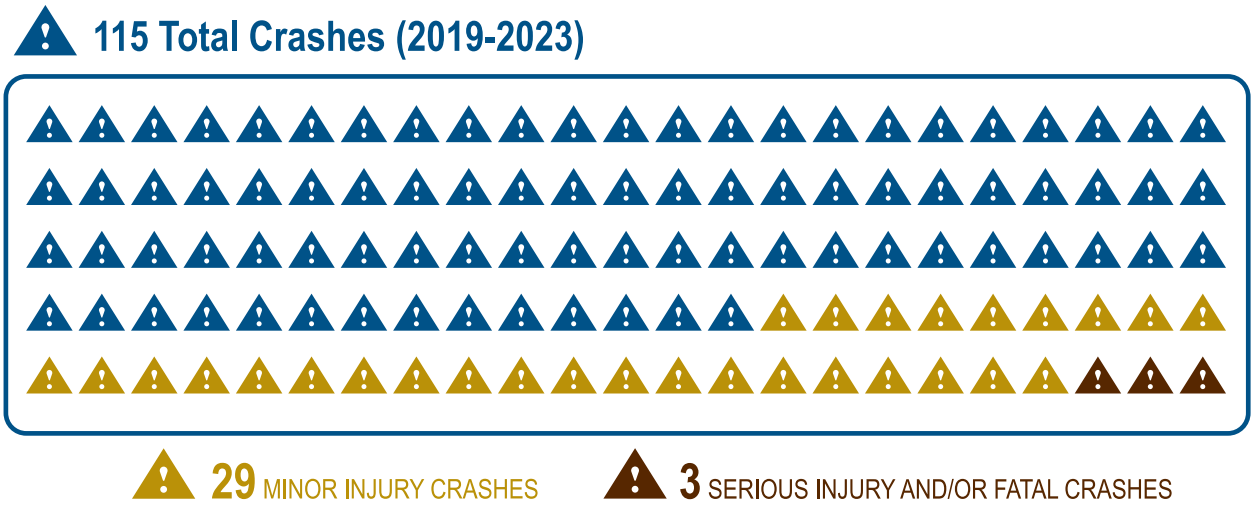


Figure 15: Crash Severity (2019 – 2023)

4.4.2 Crash Trends

From 2019 to 2023, crashes increased by 73% while AADT increased by about 14%. The increase in crashes can be partially attributed to increased traffic on MT 3. In addition, the Zimmerman Trail intersection was upgraded from a TWSC intersection to a roundabout in 2019. Roundabouts tend to have a higher crash frequency compared to stop controlled and signalized intersections. However, crashes at roundabouts tend to be lower speed and have a lower incident angle, which improves overall intersection safety by reducing crash severity (FHWA 2025).

When analyzed by time of day, crashes occur most often during typical commuting hours in the morning and afternoon, with 18% of all crashes occurring from 7:00 to 10:00 AM and 21% occurring from 3:00 to 6:00 PM. These periods coincide with heaviest weekday traffic volumes. When analyzed by day of week, Fridays had the highest number of crashes. There was no clear trend in crash frequency when analyzed by month or season; overall, May and October had the highest number of crashes.

4.4.3 Crash Locations

Figure 16 depicts the density of crashes along the corridor and the location of fatal and injury crashes. About 51% of crashes occurred at intersections or were intersection-related. The crash density was highest at the Zimmerman Trail and E. Airport Road / N. 27th Street roundabouts. One fatal crash occurred at the E. Airport Road / N. 27th Street roundabout in August 2022.

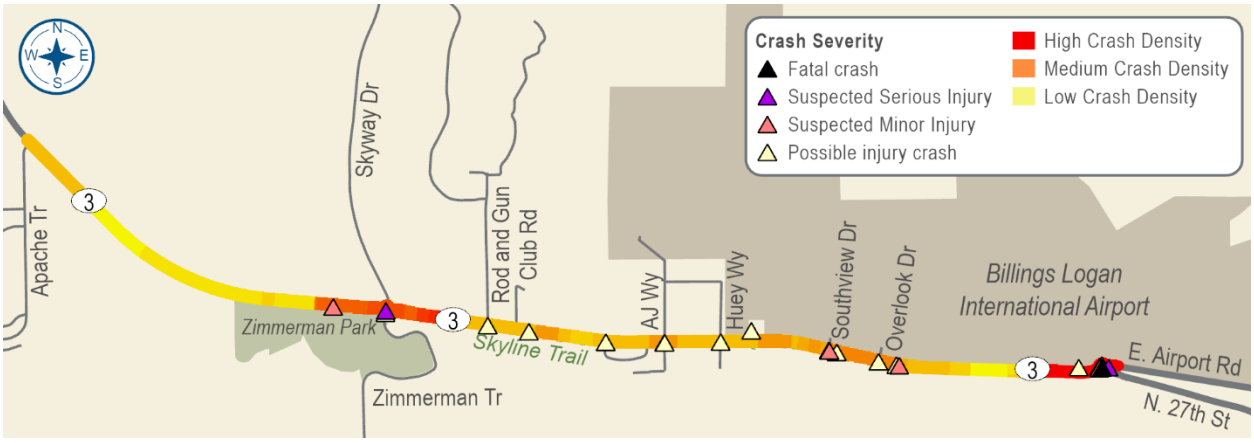


Figure 16: Crash Density (2019 – 2023)

4.4.4 Crash Types

Figure 17 illustrates the types of crashes occurring on the corridor. Rear-end collisions account for about 25% of crashes. Fixed-object collisions were the second most common crash type, typically occurring at intersections. One bicycle crash was reported on the corridor over the five-year period, occurring at the MT 3 and E. Airport Road / N. 27th Street roundabout. The majority of the wildlife-vehicle collisions occurred on MT 3 west of Zimmerman Trail.

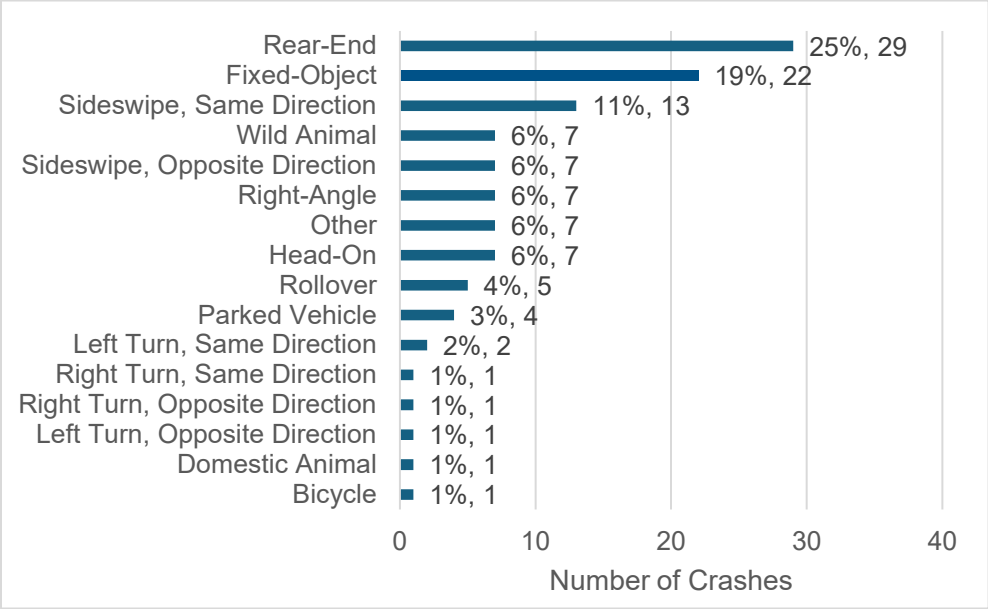


Figure 17: Crash Types (2019 – 2023)

4.4.5 Road and Lighting Conditions

Figure 18 illustrates the road and lighting conditions during the crashes. About 29% of crashes occurred during wet, snowy, or icy road conditions. About 36% of crashes occurred during dawn, dusk, or dark conditions. Intersection lighting only exists at the Zimmerman Trail and E. Airport Road roundabouts.

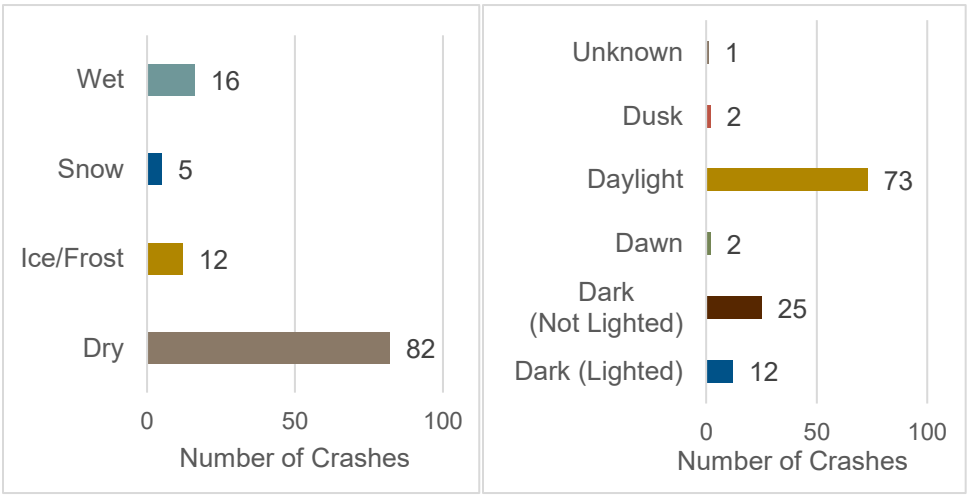


Figure 18: Road and Lighting Conditions (2019 – 2023)

4.4.6 Intersection Crash Severity

Table 1 lists the total number of crashes and the crash severity at each of the study corridor intersections. The E. Airport Road / N. 27th Street roundabout experienced the highest number of crashes, followed by the Zimmerman Trail roundabout. The Zimmerman Trail roundabout had one suspected serious injury crash, involving a sideswipe opposite direction collision. The E. Airport Road / N. 27th Street roundabout had one fatal crash involving a sideswipe opposite direction collision and one suspected serious injury crash involving driving too fast for conditions.

Table 1: Crash Severity at Study Corridor Intersections (2019 – 2023)

Intersection	Property Damage Only	Minor or Possible Injury	Suspected Serious Injury	Unknown	Fatal	Total
MT 3 / Apache Tr	4	0	0	0	0	**4**
MT 3 / Zimmerman Tr	18	3	1	3	0	**25**
MT 3 / Rod and Gun Club Rd	4	1	0	0	0	**5**
MT 3 / AJ Way	0	1	0	0	0	**1**
MT 3 / Huey Way	2	1	0	1	0	**4**
MT 3 / Airport Rd / 27th St	25	10	1	4	1	**41**

4.4.7 Intersection Crash Rates

Table 2 lists the crash rate at each study corridor intersection. The crash rate provides more information than crash frequency alone, as it factors in the number of vehicles entering an intersection. This makes the crash rate an effective tool for comparing the relative safety of one intersection to another. The crash rate equation is provided below. Intersection crash rate is the number of crashes occurring per million entering vehicles.

Overall, the intersection crash rate is significantly higher at the Zimmerman Trail and E. Airport Road / N. 27th Street roundabouts, compared to all other study corridor intersections. However crashes at roundabouts tend to be lower speed and have a lower incident angle, which improves overall intersection safety by reducing crash severity.

$$\textit{Intersection Crash Rate} = \frac{Total\ Number\ of\ Crashes * 1{,}000{,}000\ Vehicles}{Vehicles\ per\ Day * Number\ of\ Years * 365\ Days\ per\ Year}$$

Table 2: Crash Rates at Study Corridor Intersections (2019 – 2023)

Intersection	Total Crashes	Vehicles per Day *	Crash Rate
MT 3 / Apache Tr	4	3,884	0.56
MT 3 / Zimmerman Tr	25	12,710	1.08
MT 3 / Rod and Gun Club Rd	5	10,623	0.26
MT 3 / AJ Way	1	10,217	0.05
MT 3 / Huey Way	4	9,972	0.22
MT 3 / Airport Rd / 27th St	41	18,508	1.21

* Vehicles per day were estimated based on AADT estimates at MDT short term count stations or recent traffic counts, assuming 10% of daily traffic occurs in the peak hour.

MONTANA 3 BILLINGS
CORRIDOR STUDY

5.0 Improvement Options

5.0 IMPROVEMENT OPTIONS

Recommended improvement options were identified to address issues and areas of concern within the corridor study area. The improvement options reflect input from stakeholders and the public, as well as information gathered from a thorough evaluation of the existing and projection conditions of the corridor. This information was used to identify needs and objectives for the corridor and develop improvement options addressing the corridor's needs and objectives.

Descriptions of the improvement options, implementation considerations, implementation agencies, implementation timeline, and estimated costs are provided in subsequent sections. Additional detail regarding development of the recommendations is provided in the *Improvement Options Report* (**Appendix E**).

5.1 Corridor Needs and Objectives

Needs and objectives for the MT 3 corridor planning study were developed based on the social, environmental, and engineering conditions; input from the public, key stakeholders, and resource agencies; review of local plans; and coordination with the technical oversight committee. Improvement options identified in this section address the needs and objectives to the extent feasible within the other limiting considerations listed below. As projects are advanced from this study, needs and objectives may be incorporated in purpose and need statements for future NEPA and MEPA documentation. Needs, objectives, and considerations are not listed in order of priority.



Need 1: Improve the Safety of the Corridor

- Reduce fatalities and serious injuries in support of Vision Zero
- Reduce vehicle conflicts
- Improve safety at non-motorized crossings



Need 2: Improve the Corridor Transportation Operations

- Accommodate existing and future travel demand
- Improve intersection operations and level of service
- Improve non-motorized mobility and accessibility
- Maintain reasonable access to adjacent businesses and residences



Other Considerations

- Impacts to environmental resources
- Drainage impacts and Storm Water Management Program requirements
- Constructability and related impacts
- Public and private utilities
- Funding availability
- Maintenance operations, responsibility, and cost
- Consistency with local plans and developments



Wayfinding signs on Skyline Trail south of MT 3

5.2 Project Implementation

Implementation of improvement options depends on factors including project size, availability of funding, environmental review, ROW needs, and other factors. A preliminary evaluation of project implementation agencies and partners, timeframes, costs, and other project development considerations was conducted for each recommended improvement option. Each improvement option can be implemented independent of other options or combined as a larger project. Grouping options into larger projects may result in cost savings and efficiencies.

5.2.1 Project Development Considerations

Improvement options forwarded from this study will be subject to MDT's standard project development process. This process typically includes project-specific design activities such as stakeholder coordination, environmental impact analysis and permitting, utility conflict mitigation, traffic and safety analysis, hydraulic and geotechnical investigations, and ROW acquisition based on project location and design features. For projects initiated by entities other than MDT that may substantially and permanently impact the transportation system, the MDT Systems Impact Action Process may apply. Notable project development considerations are listed for each option such as potential stakeholder interests, resources and site features, indirect effects, and other factors to be addressed during project development.

If improvements are forwarded from this study, detailed analyses would be required during the project development process to quantify specific resource impacts, and identify associated permits, laws, and regulations that may apply. Information contained in this report may be used to support future project development and environmental documentation.

5.2.2 Implementation Agency and Funding Sources

Successful implementation of improvements may require cooperation and effort from multiple entities. The lead agency(s) responsible for each improvement option are identified, however coordination with other entities may be necessary. Implementation agencies include MDT, city and local agencies, federal and state agencies, transit operators, school districts, wildlife organizations, private landowners and developers, and other parties with interest or authority.

The ability to advance recommendations from this study and develop projects on MT 3 depends on the availability of existing and future federal, state, local, and private funding sources. Recommendations identified in this study may be eligible for funding through a variety of programs and sources. Currently, no funding has been identified or dedicated to completing any of the recommended improvement options contained in this study. Refer to Section 6 for more information on potential funding mechanisms.

5.2.3 Implementation Timeframe

An implementation timeline was identified in this report for each improvement option based on minimum LOS thresholds, considering the time necessary for design, ROW acquisition, and utility relocation. The implementation timeframes are as follows.

- **Short-term:** within 0 to 5 years (by 2030)
- **Mid-term:** within 5 to 10 years (by 2035)
- **Long-term:** within 10 to 20 years (by 2045)

5.2.4 Cost Estimates

Planning-level cost estimates were developed for each improvement option using average bid prices from MDT's AASHTOWare Project™ Estimation software. MDT Cost Estimation Procedures (MDT 2016b) were followed for estimating costs related to preliminary engineering, construction engineering, traffic control, mobilization, contingency/miscellaneous items, indirect costs, ROW, incidental construction/utility relocation, and inflation. The cost estimates are provided in **Appendix E**. Each cost estimate represents cost during the construction year and represents that improvement option alone (i.e., cost estimate is independent of other improvement options). Present value (2025) cost is also included for planning and programming purposes.



This study identified a

RANGE OF IMPROVEMENT OPTIONS

to address the corridor

NEEDS AND OBJECTIVES

5.3 Recommended Improvement Options

Recommended improvement options are intended to address needs and objectives for the MT 3 corridor. The options are grouped as intersection improvements, roadway widening improvements, multimodal improvements, travel demand management, and access management improvements. The recommended improvements can be developed as stand-alone projects, or, in some cases, combined as larger projects as appropriate. There may be cost savings and efficiencies gained by combining improvement options together.

5.3.1 Intersection Improvement Options

Improvement options in this section address operations, capacity, and safety concerns at intersections. **Figure 19** depicts a summary of the recommended improvements. Speed studies will be conducted on MT 3 as intersection and roadway improvements occur, to identify when reductions in the speed limit may be warranted.

It is recommended that traffic counts be collected at the Southview Drive, Overlook Drive, and Zimmerman Park trailhead intersections to better understand traffic demand and the need for future improvements at these intersections. It is recommended that the Molt Road/Highway 3 feasibility study from 2004 be updated, as the south leg of the Zimmerman Trail is expected to operate near capacity in 2045. The Molt Road/Highway 3 Connector would improve connectivity between the west end of Billings and the airport/downtown area and is expected to relieve traffic demand on Zimmerman Trail.



Figure 19: Summary of Corridor Improvement Options

S1. Zimmerman Trail Intersection

The MT 3 and Zimmerman Trail roundabout provides access to the Heights neighborhood via Skyway Drive and access to west Billings via Zimmerman Trail. Residential areas exist south of the roundabout. The Stagecoach Trail project will provide a multi-use path along the east side of Zimmerman Trail. The intersection currently operates at LOS A in the AM and PM peak hours. The intersection is forecasted to operate at LOS F in 2045.

Recommendation
Provide a two-lane approach roundabout at MT 3 and Zimmerman Trail in the long-term (within 20 years). Re-evaluate roundabout laneage as development occurs on Skyway Drive to better understand future traffic patterns.

Key Considerations

- MT 3 / Zimmerman pedestrian and bicycle underpass (see **M1**) would be completed as part of this modification.
- The detention pond in the northeast quadrant may be impacted due to the increased size of the roundabout.
- ROW acquisition is expected to impact one parcel.

Implementation Partners	MDT
Implementation Timeframe / Estimated Cost	Long-term: $18.7 M
Potential Funding Sources	NH, HSIP, CMAQ

Figure 20 depicts the proposed intersection laneage (of note, figures are conceptual, not-to-scale, and do not show roundabout geometry or splitter islands). The two-lane approach roundabout is expected to operate at LOS E or better in the AM and PM peak hours in 2045. Roundabout metering could be considered to further improve traffic operations at the Zimmerman Trail roundabout in 2045.

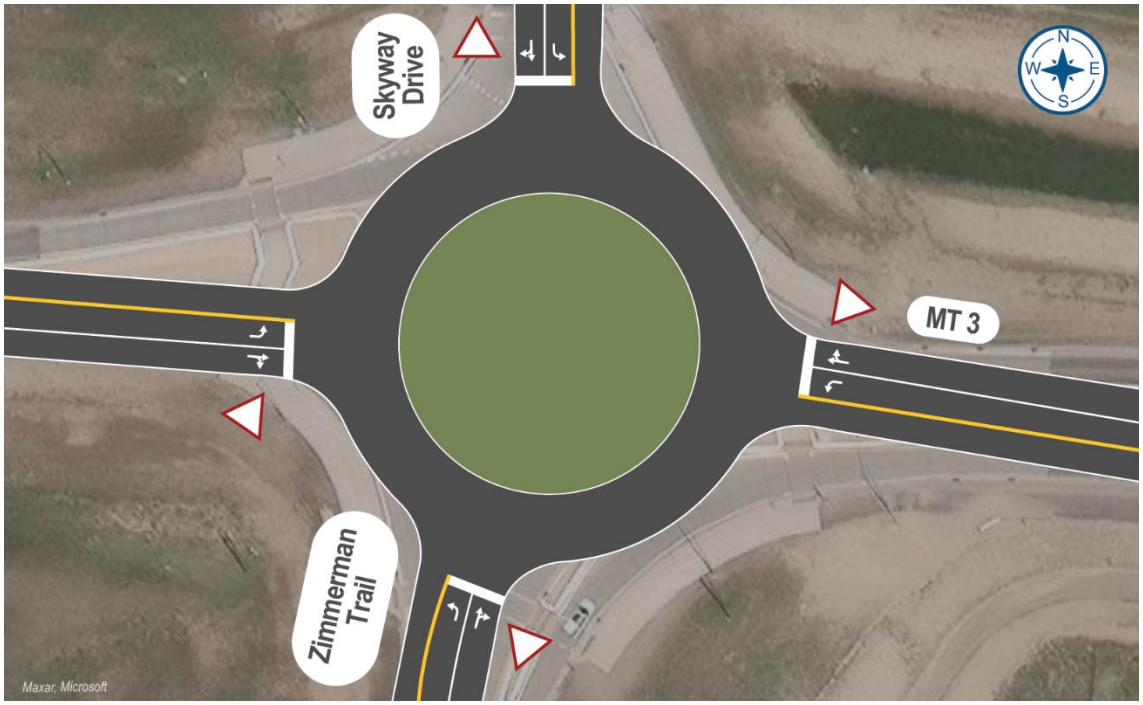


Figure 20: Zimmerman Trail Proposed Intersection Improvements

S2. Rod and Gun Club Road Intersection

Rod and Gun Club Road is a TWSC intersection 0.43 miles east of Zimmerman Trail. Exclusive eastbound left- and westbound right-turn lanes are provided at the intersection in the existing condition. The north leg provides access to the Rod and Gun Club and Rehberg Ranch Subdivision, while the south leg is a private residential driveway. The intersection currently operates at LOS D during the PM peak hour and is forecasted to fail in the 2035 and 2045 peak hours.

Recommendation

Provide a single-lane roundabout at MT 3 and Rod and Gun Club Road in the mid- to long-term (within 20 years).

Key Considerations

- Shift roundabout north to avoid conflicts with Skyline Trail on the south side.
- Consolidation is required for the two driveways on the south leg of the roundabout.
- Drainage improvements are required due to the increase in impervious areas.
- ROW acquisition is expected to impact four parcels.

Implementation Partners	MDT
Implementation Timeframe / Estimated Cost	Mid- to Long-Term: $14.5 M
Potential Funding Sources	NH, HSIP, CMAQ

Figure 21 depicts the proposed intersection laneage. Two driveways exist on the south leg of the intersection with 65-foot spacing; it is recommended that these closely spaced driveways be consolidated with the intersection improvement. A single-lane roundabout is expected to operate at LOS B in 2045 AM and PM peak hours.

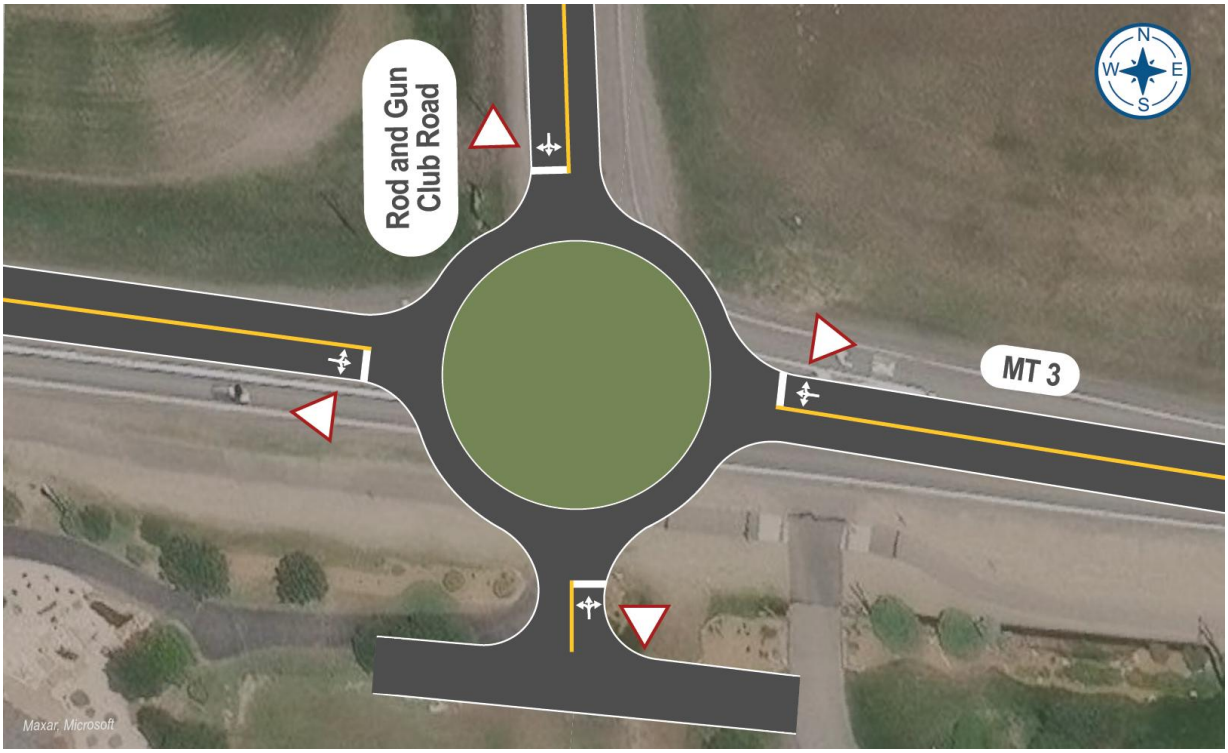


Figure 21: Rod and Gun Club Road Proposed Intersection Improvements

S3. AJ Way Intersection

MT 3 and AJ Way is a TWSC intersection approximately 0.75 miles east of Rod and Gun Club Road. The BRIC and YLCP developments are planned on the north leg of the intersection, with AJ Way providing access to/from MT 3. The intersection currently operates at LOS D in the AM peak hour and is forecasted to fail in the 2035 and 2045 peak hours with the existing TWSC.

Recommendation

Provide a single-lane roundabout at MT 3 and AJ Way with westbound right-turn lane in the mid-term (within 10 years).

Key Considerations

- Shift roundabout north to avoid conflicts with Skyline Trail on the south side of MT 3.
- Masterson Circle approach west of AJ Way would require restricted right-in, right-out access due to roundabout approach median.
- Traffic exiting Huey Way could also use the AJ Way roundabout to facilitate U-turns.
- Drainage improvements are required due to the increase in impervious areas.
- ROW acquisition is expected to impact six parcels.

Implementation Partners	MDT, Private
Implementation Timeframe / Estimated Cost	Mid-Term: $13.0 M
Potential Funding Sources	NH, HSIP, CMAQ, Montana Department of Military Affairs, Private

Figure 22 depicts the proposed intersection configuration. The roundabout is expected to operate at LOS A in the 2035 peak hours and LOS B in the 2045 peak hours. A westbound right-turn lane is recommended to prevent queuing due to traffic volumes associated with ingress during BRIC drill weekend trainings (occurring seven to 12 weekends per year). Implementation timeline may be pushed out depending on funding availability, resulting in consideration of interim turn-lane improvements.

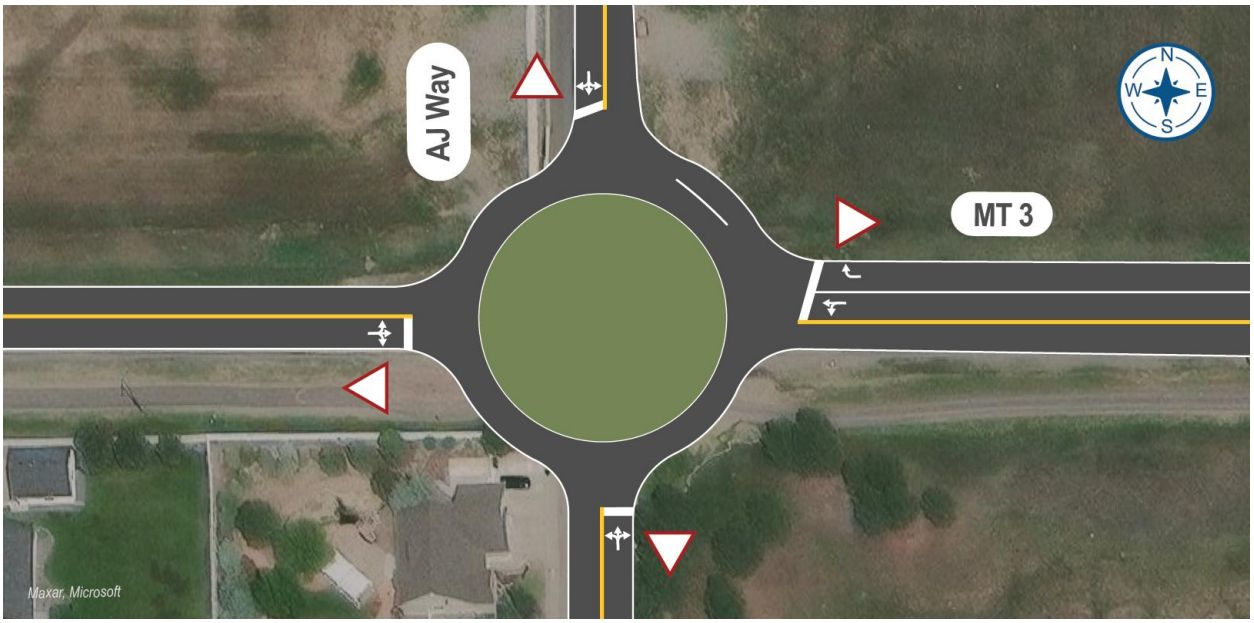


Figure 22: AJ Way Proposed Intersection Improvements

S4. Huey Way Intersection

MT 3 and Huey Way is a TWSC intersection approximately 0.25 miles east of AJ Way. The BRIC and YLCP developments are expected north of the intersection, with Huey Way providing secondary access to AJ Way, given the east-west road (Supercub Way) that will connect AJ Way and Huey Way north of MT 3. The intersection currently operates at LOS C in the peak hours and is forecasted to fail in the 2035 and 2045 peak hours with the existing TWSC.

Recommendation

Add eastbound left, westbound left, and westbound right turn lanes at MT 3 and Huey Way in the short-term (within 5 years). However, the construction timeline for this improvement may be connected to the timeline for AJ Way intersection improvements.

Key Considerations

- Widen to the north to avoid conflicts with Skyline Trail on the south side of MT 3.
- Consider restricting side street left and through movements when warranted in the future.
- Drainage improvements are required due to the increase in impervious areas.
- ROW acquisition is expected to impact six parcels.

Implementation Partners	MDT, Private
Implementation Timeframe / Estimated Cost	Short-Term: $5.5 M
Potential Funding Sources	NH, HSIP, Private

Figure 23 depicts the proposed intersection configuration. The proposed condition is expected to operate at LOS F in the 2045 AM and PM peak hours. It is important to note that traffic would re-reroute from Huey Way to use the roundabout at AJ Way when side-street delay is high. Supercub Way will provide an east-west connection, between Huey Way and AJ Way, allowing traffic to re-route to AJ Way to access MT 3.

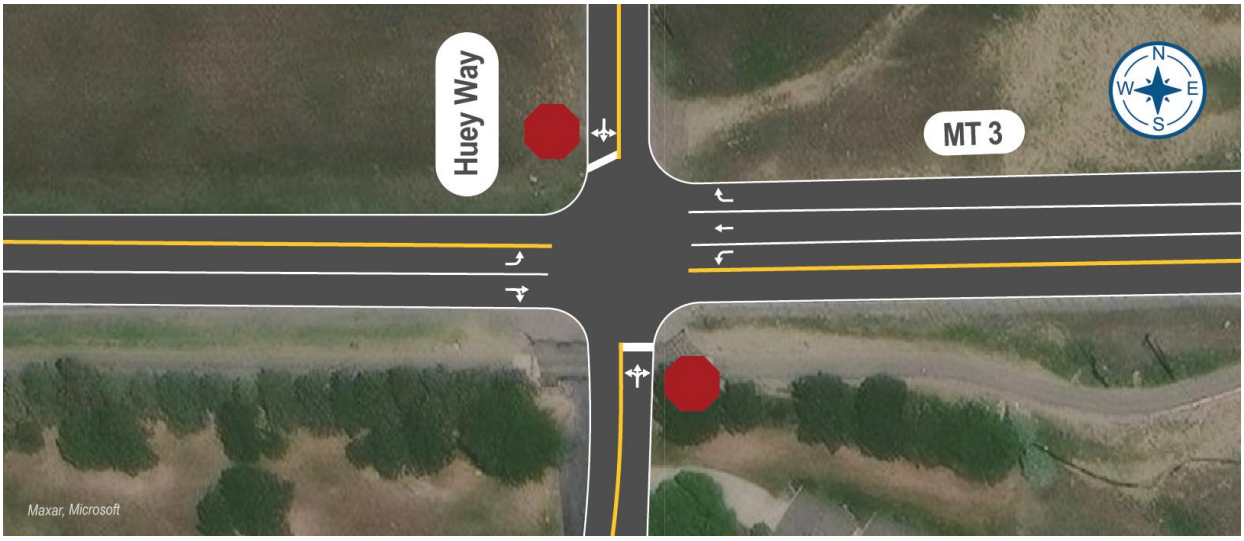


Figure 23: Huey Way Proposed Intersection Improvements

Southview Drive and Overlook Drive Intersection Improvements

The Southview Drive and Overlook Drive intersections are TWSC intersections providing access to the west side of Billings Logan International Airport; the intersections are approximately 0.5 miles and 0.7 miles east of Huey Way, respectively. Traffic counts were not collected at either intersection; however, these intersections were noted as intersections of concern given their use by airport visitors and staff. It is recommended that eastbound left-turn lanes be added at the two intersections, with the proposed corridor widening project (**R1**) which would add a center turn lane on MT 3 east of Rod and Gun Club Road (mid- to long-term improvement).

Figure 24 depicts the proposed laneage with eastbound left-turn lanes. Further improvements at these intersections should be re-evaluated after traffic impact studies are completed for planned airport development.

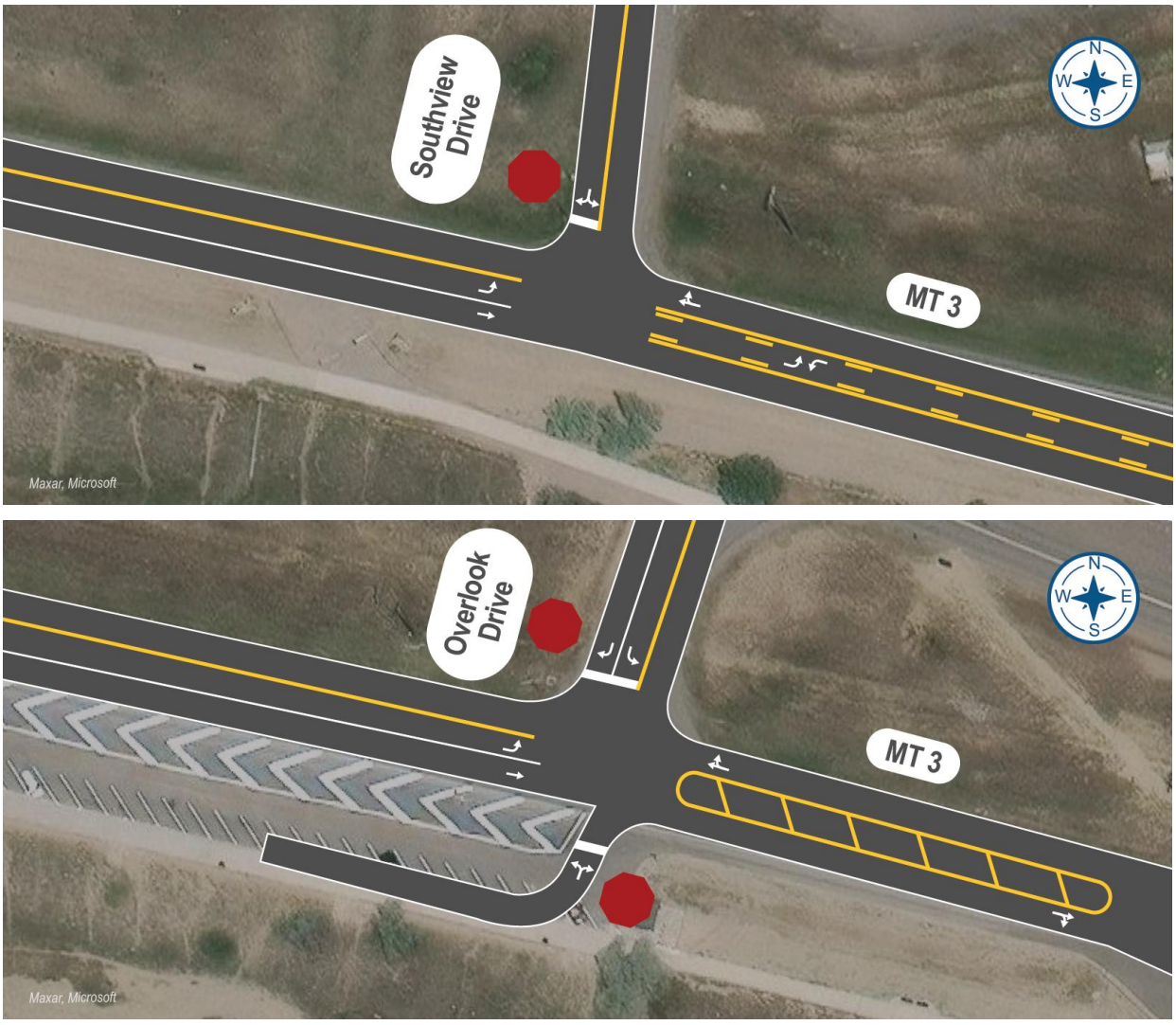


Figure 24: Southview Drive and Overlook Drive Proposed Intersection Improvements

5.3.2 Road Widening

R1. Widening of MT 3 East of Rod and Gun Club Road

A two-lane cross-section currently exists from east of Rod and Gun Club Road intersection to the E. Airport Road / N. 27th Street intersection. A center turn lane is recommended on MT 3 east of Rod and Gun Club Road to improve traffic operations and traffic safety. It is also recommended that the existing 3.5-foot shoulder be widened to 6-feet on this section of MT 3, to align with the baseline design criteria for an urban principal arterial. A raised median is not recommended on MT 3 at this time; however, corridor traffic volumes should be monitored to determine if a raised median would be appropriate in the future.

Recommendation

Widen MT 3 to a three-lane cross-section from Rod and Gun Club Road to west of the E. Airport Road / N. 27th Street roundabout (2.3 miles).

Key Considerations

- Widen to the north to reduce impacts to residential properties, multi-use path, and utilities located south of the corridor.
- ROW acquisition is expected to impact 19 parcels.
- Phased widening could provide interim benefits if funding is constrained; however, phased widening slightly increases overall costs due to reduced efficiency of construction.
- 8-foot-wide shoulders (4-feet of additional ROW acquisition) could be considered on MT 3 to accommodate a potential future raised median, beyond the 20-year planning horizon.
- There are currently two school bus stops on MT 3; a permanent 10-foot-wide bus pullout could be considered on MT 3 (pullout location to be identified based on long-term need).

Implementation Partners	MDT
Implementation Timeframe / Estimated Cost	Mid- to Long-Term: $39.8 M
Potential Funding Sources	NH, Local, Private

Figure 25 depicts the proposed cross-section east of Rod and Gun Club Road, which provides 6-foot shoulders with a 14-foot center two-way left-turn lane (TWLTL). Of note, the striping would vary throughout the widened section; some sections would provide designated left-turn lanes, while other sections would provide a striped median in the center turn lane to prohibit left-turn movements. Left-turn lanes are anticipated at the intersections with Huey Way, the MDT Maintenance Facility, Southview Drive, Overlook Drive, and at the Rimrock View pull-outs.

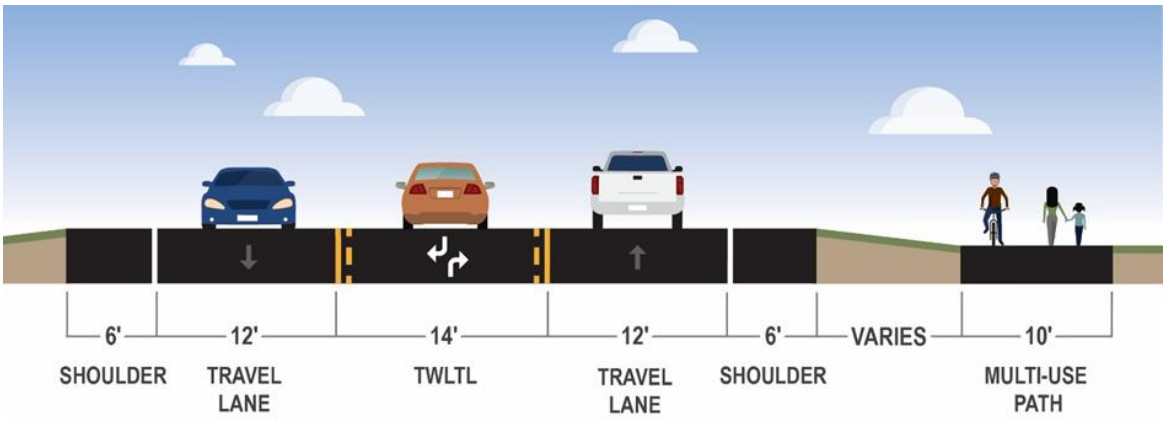


Figure 25: Proposed Cross Section on MT 3, East of Rod and Gun Club Road

5.3.3 Multimodal Improvements

M1. MT 3 / Zimmerman Trail Underpass

A RRFB currently facilitates north-south crossings on the east leg of the MT 3 and Zimmerman Trail roundabout. There are pedestrian crossing safety concerns at the existing RRFB.

Recommendation

Provide a pedestrian and bicycle underpass on the east leg of Zimmerman Trail roundabout to improve multimodal connectivity between Skyline Trail and multi-use path along Skyway Drive.

Key Considerations

- Implemented with two-lane roundabout at MT 3 / Zimmerman Trail **(S1)**
- Improves connectivity between existing regional multi-use paths.
- Underpass could be shifted east of the detention pond if there are constructability concerns.
- It is recommended that future north-south pedestrian crossing needs be evaluated corridor-wide, particularly as the north side of the corridor develops.

Implementation Partners	MDT, Yellowstone County, City of Billings, Billings MPO
Implementation Timeframe / Estimated Cost	Long-Term: $4.1 M
Potential Funding Sources	NH, HSIP, TA



Existing RRFB on the eastern leg of the Zimmerman Trail roundabout



Existing underpass on the southern leg of the Zimmerman Trail roundabout

M2. Skyline Trail Crossing Improvements

There are safety concerns at the Skyline Trail crossings on the south side of MT 3, related to conflicts between vehicles and non-motorized trail users. The City of Billings recently made improvements at these trail crossings, including striped crosswalks and "crossing ahead" warning signs / pavement markings for non-motorized users. Tall vegetation and snow piles can block the visibility of approaching vehicles or trail users.

Recommendation

Continue to monitor safety concerns and improve sight distance at the ten Skyline Trail crossings on the south side of MT 3.

Key Considerations

- Most approaches do not provide enough room to store a stopped vehicle north of the crosswalk, given the proximity of Skyline Trail to MT 3.
- Westbound left-turn vehicles will have a turn pocket with the future center turn lane, which would improve safety by providing a lane to stop and yield to pedestrians.
- Eastbound right-turn lanes are likely not warranted at trail crossing intersections based on existing and forecasted right-turn volumes (less than three right-turning vehicles per hour).
- Consider an 8-foot widened shoulder on the south side of MT 3 in the section where eastbound right-turning vehicles may be stopped and waiting for non-motorized users in the crosswalk.

Implementation Partners	MDT, City of Billings
Implementation Timeframe / Estimated Cost	Short-Term: Variable cost
Potential Funding Sources	HSIP, Local



Recent pedestrian crossing treatments added on Skyline Trail

5.3.4 Travel Demand Management

T1. Travel Demand Management Strategies

Travel demand management (TDM) strategies are recommended to improve corridor traffic operations. The overarching goal of TDM is to reduce peak hour vehicle trips on the corridor. TDM strategies could include encouraging employers to allow flexible work hours, compressed work weeks, and telecommuting. In addition, encouraging transit, carpooling, and non-motorized travel also reduces peak hour vehicle demand. Lastly, strategies should be developed to manage traffic during special events in the corridor (e.g., future Montana Army National Guard training events or drill weekends).

Recommendation

Employ TDM strategies to reduce peak hour travel demand.

Key Considerations

- Collaborate with large employers to allow for and incentivize TDM strategies.

Implementation Partners	City of Billings, Yellowstone County, National Guard, Private
Implementation Timeframe / Estimated Cost	Short-Term: Variable cost
Potential Funding Sources	Local, Private

5.3.5 Access Management

A1. Side Street and Approach Movement Restriction

The *Access Management Plan* for the study corridor identifies locations where restricted side-street access should be considered (e.g., prohibiting left-turn or through movements from the side street). This plan should be referenced for specific recommendations regarding approach restriction.

Recommendation

Prohibit side-street through and left-turn movements at locations of concern by adding a raised median and signing.

Key Considerations

- Reduces delay for right-turning vehicles on side street approaches and enhances intersection safety.
- Lighting would be required for raised medians on side street approaches.
- Some drivers may attempt to maneuver around raised islands, resulting in safety concerns.

Implementation Partners	MDT, City of Billings, Yellowstone County, Private
Implementation Timeframe / Estimated Cost	Short-Term: $56,000 per approach for raised median with signing
Potential Funding Sources	Local, Private

A2. Approach Consolidation

The *Access Management Plan* for the study corridor identifies locations where consolidation of closely spaced approaches should be considered to improve corridor safety. This plan should be referenced for specific recommendations regarding approach consolidation. **Figure 26** depicts examples of access management strategies to consolidate or eliminate approaches.

Recommendation

Recommend consolidation of closely spaced approaches on MT 3.

Key Considerations

- Improves traffic safety by reducing the number of conflict points along the corridor.
- Conflicts can arise in the TWLTL at closely spaced intersections when opposing northbound/southbound left-turn vehicles attempt to make left turns at the same time.

Implementation Partners	City of Billings, Yellowstone County, Private
Implementation Timeframe / Estimated Cost	Short-Term: Variable cost
Potential Funding Sources	Local, Private

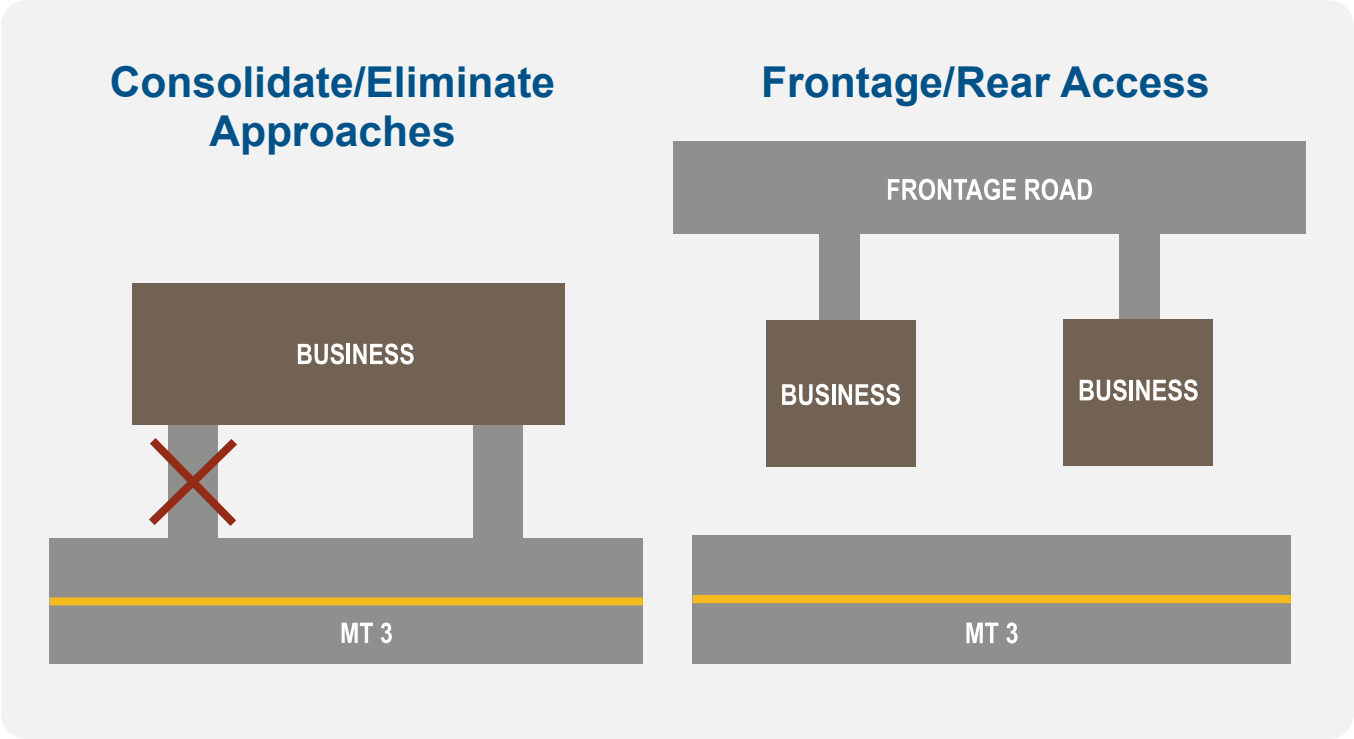


Figure 26: Example Access Management Strategies

5.4 Options Eliminated from Further Consideration

The intent of the study is to provide feasible improvement options that meet the needs and objectives within the 20-year planning horizon. Many improvement options were considered through the process with the intent of addressing the needs and objectives of the study corridor. Through review of these improvement options with stakeholders and the public, and comparison of performance and ability to meet the needs and objectives of the corridor, some options were eliminated from the study. The following provides background for the options that were considered but are not recommended for further consideration.

Frontage Road north of MT 3

A frontage road was considered along the north side of MT 3 to connect AJ Way and Rod and Gun Club Road. This option was not recommended as there are safety and operational concerns with frontage road intersections close to MT 3. In addition, this improvement option appears to conflict with the National Guard development planned north of MT 3.

Raised Median providing Right-in / Right-out or Three-Quarter Access

The 2015 *Highway 3 Corridor Planning Study* recommended access control be considered on MT 3, with a raised or depressed median extending from Zimmerman Trail to E. Airport Road. As a result, several intersections would be limited to three-quarter access where left- and right-turn movements are allowed onto the side street, but access to MT 3 from the side street is limited to right turns only (see example in **Figure 27**).

MT 3 has an existing AADT of 12,300 vehicles per day, with 19,400 vehicles per day expected in 2045. In general, the use of a raised median is considered when AADT is greater than 20,000 vehicles per day. This is based on prior research from *NCHRP Report 395*, which found that raised medians result in fewer crashes, especially if the AADT is greater than 20,000 vehicles per day (NCHRP 1997). A raised median is not recommended at this time; however, corridor traffic volumes should be monitored to determine if a raised median would be appropriate in the future.

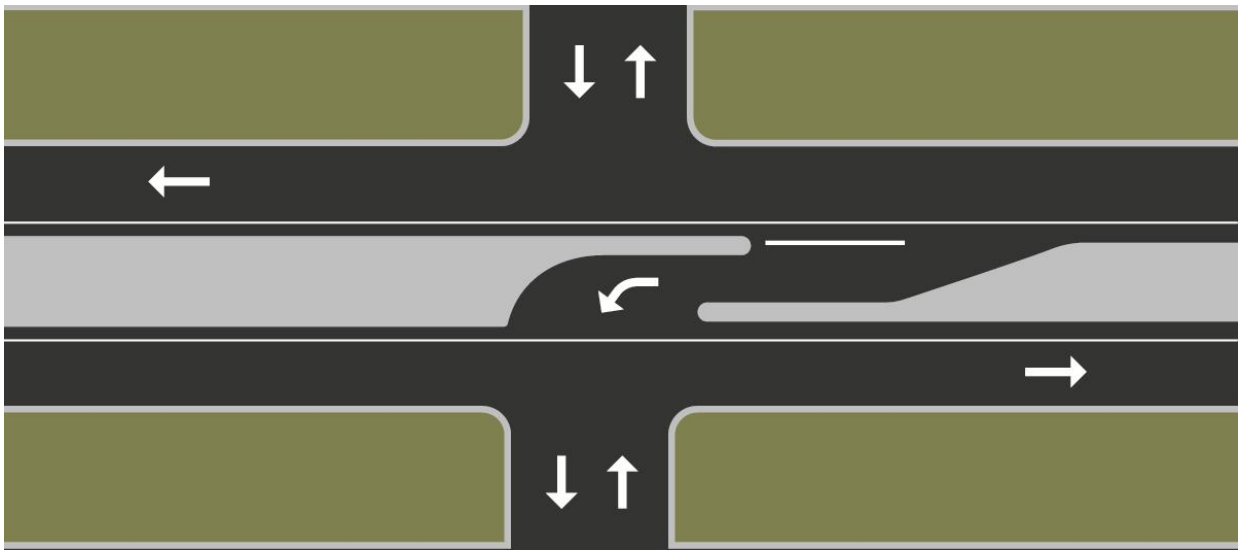


Figure 27: Example Raised Median to Prohibit Turning Movements

5.5 Summary of Improvement Options

A summary of recommended improvement options is provided in **Table 3**. These improvement options were developed to meet the needs and objectives of the corridor considering the 20-year study horizon. While the recommended improvements have been considered independently, it may be feasible to combine options if funding becomes available. This may result in cost savings and other efficiencies in the project delivery process.

Table 3: Recommended Improvement Options

Improvement Option		Description	Implementation Timeframe[1]	Potential Funding Source	Cost [2] Estimate
Intersection Improvements					
S1	Zimmerman Trail	Install two-lane roundabout	Long-Term	NH, HSIP, CMAQ	$18.7 M
S2	Rod and Gun Club Road	Install single-lane roundabout	Mid- to Long-Term	NH, HSIP, CMAQ, Private	$14.5 M
S3	AJ Way	Install single-lane roundabout with westbound right-turn lane	Mid-Term	NH, HSIP, CMAQ, DMA, Private	$13.0 M
S4	Huey Way	Install eastbound left-turn, westbound right-turn, and westbound left-turn lanes	Short-Term	NH, HSIP, Private	$5.5 M
Roadway Widening					
R1	MT 3 east of Rod and Gun Club Road	Widen MT 3 to accommodate 6-foot shoulder width and 14-foot center turn lane (2.3 miles)	Mid- to Long-Term	NH, Local, Private	$39.8 M
Multimodal Improvements					
M1	MT 3 / Zimmerman Trail Underpass	Construct pedestrian and bicycle underpass on east leg of the Zimmerman Trail roundabout	Long-Term	NH, HSIP, TA	$4.1 M
M2	Skyline Trail Crossing Improvements	Monitor safety concerns and clear sight distance where Skyline Trail intersects with side-street approaches	Short-Term	HSIP, Local	Variable
Travel Demand Management					
T1	Travel Demand Management	Encourage large employers to use TDM strategies	Short-Term	Local, Private	Variable
Access Management					
A1	Side Street and Approach Movement Restriction	Restriction of side-street movements through signing or channelized islands	Short-Term	Local, Private	$56,000 per approach
A2	Approach Consolidation	Consolidate closely spaced driveways to improve traffic operations	Mid-Term	Local, Private	Variable

[1]**ImplementationTimeframe:** The timing and ability to implement improvement options depends on factors including the availability of funding, ROW needs, and other project delivery elements. Implementation timeframes are not a commitment to developing recommendations. Short-Term: 0-5 years; Mid-Term: 5-10 years; Long-Term: 10-20 years

[2]Cost estimates are not reported in current dollars but reflect costs anticipated in the year of construction.

NH = National Highway System (non-interstate)
HSIP = Highway Safety Improvement Program
CMAQ = Congestion Mitigation and Air Quality Improvement Program
TA = Transportation Alternatives Program
DMA = Montana Department of Military Affairs

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6.0 Additional Considerations and Next Steps

6.0 ADDITIONAL CONSIDERATIONS AND NEXT STEPS

This study evaluated the section of MT 3 from Apache Trail to E. Airport Road, to understand corridor needs, objectives, constraints, and opportunities and develop improvement options to address study findings. The purpose of the study was to develop a comprehensive long-range plan for managing the corridor and to identify feasible improvement options to address needs identified by the public, study partners, and resource agencies.

After completing a comprehensive review of available information, this study identified multiple short-, mid-, and long-term recommendations to address corridor needs and objectives. These recommendations will assist implementing agencies in targeting the most critical needs and allocation of resources. This study provides a diverse list of improvement options and strategies that may be considered as funding becomes available.

6.1 Additional Considerations

Several additional considerations will need to be addressed, should a project proceed to future development phases. Project development and funding considerations are summarized in the sections below.

6.1.1 Project Development Considerations

Final decisions regarding intersection configurations, multimodal facilities, and impacts to adjacent properties will be made during subsequent design phases. The following aspects will need to be evaluated, should a project move forward.

Traffic Growth and Development: The traffic growth assumptions for this corridor study were based on historical growth, while also considering projected growth associated with known planned development. Actual future growth and development may diverge from these assumptions and recommended lane configurations will need to be re-evaluated and confirmed during project development.

Landowner Coordination and Access Management: Improvement options carried forward from this study would need to consider potential impacts to adjacent private landowners, as well as potential impacts to adjacent land use, should new ROW or easements on adjacent lands, new access points, or changes in access be required. Landowner coordination will be key during the design phase of any project advanced from this study. Ongoing landowner coordination will also be essential throughout the implementation of the *Access Management Plan,* which provides corridor-specific access management recommendations.

Balancing Multimodal Needs: The needs of all road users will be considered during future project development, including truck traffic, passenger vehicles, transit riders, bicyclists, and pedestrians. Future projects should prioritize motorized and non-motorized safety, while considering mobility for through-traffic, impacts to economic development, and neighborhood livability.

6.1.2 Funding Considerations

The ability to advance recommendations from this study and develop projects within the study area depends on the availability of existing and future federal, state, local, and private funding sources. Currently, no funding has been identified and secured to complete any of the recommended improvement options developed in this study.

Federal Funding

Federal transportation revenues are generated from gasoline and diesel fuel taxes and apportioned to states according to specific transportation programs, eligible fund uses, and required state participation (or match percentage), which is determined based on population and miles of federal-aid highway within each state. Most federal transportation expenditures in Montana require approximately 13% state matching funds, with approximately 87% of project costs covered by federal dollars. Improvements to MT 3 may be eligible for funding through the following federal programs administered by MDT.

- **National Highway System [Non-Interstate] (NH):** Provides funding for highway and bridge projects to rehabilitate, restore, resurface, and reconstruct Non-Interstate National Highway System routes. Funds in this program are allocated by Montana's Transportation Commission.
- **Highway Safety Improvement Program (HSIP):** Provides funding to help states implement data-driven and strategic approaches for improving safety on all public roads and bicycle/pedestrian pathways or trails. Local government applications are prioritized by MDT and approved by the Montana Transportation Commission.
- **Congestion Mitigation and Air Quality Improvement Program (CMAQ):** Provides funding to state and local governments for transportation programs to meet the requirements of the Clean Air Act. Funding is provided to reduce congestion and improve air quality in areas not meeting National Ambient Air Quality Standards for ozone, carbon monoxide, or particulate matter.
- **Transportation Alternatives Program (TA):** Funding for smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, and environmental mitigation related to stormwater and habitat connectivity. Funding is awarded to projects through a competitive process.

State Funding

- **State Fuel Tax:** Funding provided for construction, reconstruction, maintenance, and repair of local roadways, allocated to incorporated cities and towns based on population and street mileage ratios across the state.
- **State Special Revenue:** Funding provided for projects to preserve the condition and extend the service life of state-maintained highways that are not eligible for federal funds. MDT District priorities are approved by the Montana Transportation Commission.

Local Funding

Yellowstone County generates revenues through intergovernmental transfers (including state gas tax apportionment and motor vehicle fees) and a mill levy assessed against county residents living outside cities and towns.

- **Road Fund:** Funding for construction, maintenance, and repair of county roads outside the corporate limits of cities and towns.
- **Special Revenue Funds:** Funding legally restricted to a specific purpose, such as major capital improvements, rural special improvement districts, special bond funds, or specialized transportation funds.

Private Funding, Grants, and Other Partnerships

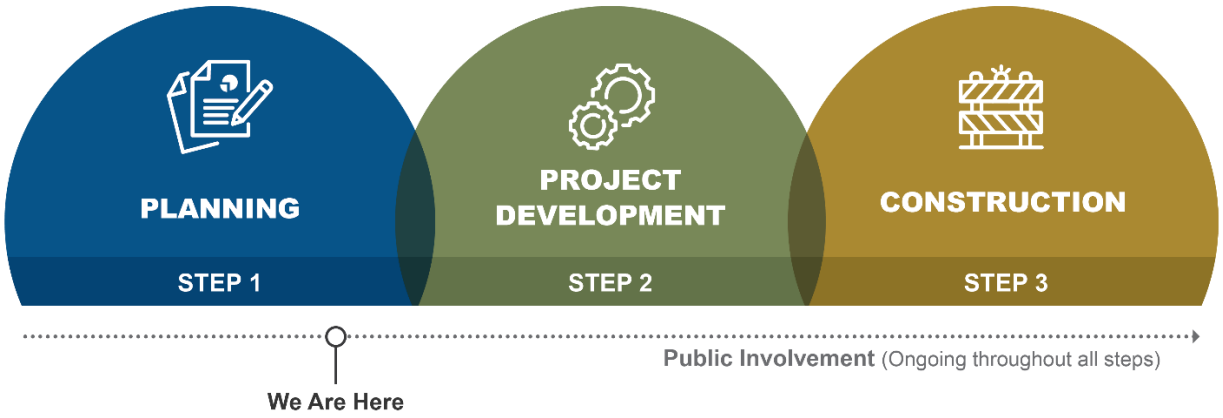
Improvements could be partially funded through various forms of private financing, such as right-of-way donations, cost-sharing, impact fees, and improvement districts. Private developers may help fund infrastructure improvements or mitigation measures to address traffic concerns related to their development. Non-profit organizations may have access to grants or donations, which could support trails and non-motorized improvements.

Lastly, FHWA discretionary grant funding could be considered to fund corridor improvement options, with grant funds awarded on a competitive basis.

6.2 Next Steps

To continue with development of projects, funding sources must be identified and secured. MDT guidelines for project nomination and development must be followed, including the public involvement process and environmental documentation requirements. Projects that are not developed by MDT must be coordinated with MDT through a collaborative process via the Systems Impact Action Process.

The purpose and need statement for any future project should be consistent with and address one or more of the needs and objectives contained in this study. This corridor study will be used as the basis for determining the impacts and subsequent mitigation for improvement options in future environmental documentation. Any future project must comply with Code of Federal Regulations Title 23 Part 771 and Administrative Rules of Montana 18, sub-chapter 2, which outline the requirements for documenting environmental impacts on highway projects.



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7.0 REFERENCES

Alt, David D., and Donald W. Hyndman. 1986. *Roadside Geology of Montana.* Mountain Press.

Billings TrailNet. 2025. Yellowjacket Trail. https://www.billingstrailnet.org/yellowjacket-trail/

Billings-Yellowstone County Metropolitan Planning Organization (MPO). 2023. *Billings Urban Area Long Range Transportation Plan.* July 2023. https://www.billingsmt.gov/3262/Billings-Metropolitan-Planning-Organization

—. 2020. *Inner Belt Loop Corridor Study*. November 2020. https://www.billingsmt.gov/Docum (MPentCenter/View/45108/2020-Inner-Belt-Loop-Corridor-Study_Final

—. 2017. *Billings Area Bikeway and Trails Master Plan*. 2017. https://www.billingsmt.gov/DocumentCenter/View/34091/Billings-Bikeway-and-Trails-Master-Plan

—. 2015. *Highway 3 Corridor Study.* April 2015. https://www.billingsmt.gov/DocumentCenter/View/26772/Hwy-3-Study

City of Billings. 2025. *Billings Logan International Airport Draft Master Plan*. 2025 https://www.flybillings.com/1412/Master-Plan

—. 2024. *Storm Water Management Program*. 2024. https://www.billingsmtpublicworks.gov/DocumentCenter/View/945/City-of-Billings-SWMP

—. 2016. *City of Billings Growth Policy.* August 2016. https://www.billingsmt.gov/DocumentCenter/View/33048/2016-City-of-Billings-Growth-Policy---adopted?bidId=

—. 2004. *Road/Highway 3 Collector Road Planning Feasibility Study*. June 2004. https://www.billingsmt.gov/DocumentCenter/View/1993/Molt-Hwy-3-Final-Study-Report

DNRC. 1943. *Maps Showing Irrigated Area in Yellowstone County by Source of Supply.* State Engineer's Office, Billings Commercial Club. Accessed February 2025. https://dnrc.mt.gov/_docs/water/Survey-Books/YellowstoneCountyIrrigatedAreaMaps_1943.pdf

—. 2025. *Montana Sage Grouse Habitat Conservation Program.* Accessed January 2025. https://sagegrouse.mt.gov/

FGDC. 2013. *Classification of Wetlands and Deepwater Habitats of the United States*. Wetlands Subcommittee, USFWS. https://www.fws.gov/sites/default/files/documents/Classification-of-Wetlands-and-Deepwater-Habitats-of-the-United-States-2013.pdf

FEMA. 2023. *Guidance for Flood Risk Analysis and Mapping - Floodway Analysis and Mapping*. https://www.fema.gov/sites/default/files/documents/fema_rm-floodway-analysis-and-mapping-nov-2023.pdf

—. 2025. *National Flood Hazard Layer Viewer.* Accessed January 2025. https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd

FHWA. 2025. Crash Modification Factor Clearinghouse, *Conversion of Intersection to Roundabout*. https://cmfclearinghouse.fhwa.dot.gov/results.php?qst=roundabout

Lopez, D. A. 2002. *Geologic map of the Billings area, Yellowstone County, Montana.* https://www.mbmg.mtech.edu/mbmgcat/public/ListCitation.asp?pub_id=10216&#gsc.tab=0

Madison, James P., John I. LaFave, Thomas W. Patton, Larry N. Smith, and John L. Olson. 2014. *Groundwater Resources of the Middle Yellowstone River Area: Treasure and Yellowstone Counties, Montana.* Montana Ground Water Assessment Atlas No. 3, Montana Bureau of Mines and Geology. Accessed February 2025. https://mbmg.mtech.edu/pdf-publications/GWAA03A.pdf

MBMG. 2025a. *Montana's Seismic Hazards.* Accessed February 2025. https://gis-data-hub-mbmg.hub.arcgis.com/apps/e0f8920816624dd1934196bcf8eea793/explore.

—. 2025b. *Earthquake Maps.* Accessed February 2025. https://gis-data-hub-bmg.hub.arcgis.com/apps/655d7f4b3c074ac182396bd0a0569f14/explore

—. 2025c. Groundwater Information Center. Accessed January 2025. https://mbmggwic.mtech.edu/home.asp

MBOGC. 2024. *Montana Data Miner.* Accessed December 2024. https://bogapps.dnrc.mt.gov/dataminer/NewGis/ExperimentalMap.aspx

MDEQ. 2025. *Discover DEQ's Data.* Accessed January 2025. https://discover-mtdeq.hub.arcgis.com/

MDT. 2025. Montana Department of Transportation, *Right of Way Projects Map*. https://mdt.maps.arcgis.com/apps/mapviewer/index.html?webmap=d3eef1ea580144e9973558de6d192ad0&extent=-124.6497,40.2424,-92.196,52.6802

—. 2021. Montana Department of Transportation, *Baseline Criteria Practitioner's Guide*. March 2021. https://www.mdt.mt.gov/other/webdata/external/cadd/RDM/STANDARDS/BASELINE-CRITERIA-PRACTITIONERS-GUIDE.pdf

—. 2016a. Montana Department of Transportation, *Road Design Manual*. September 2016. https://www.mdt.mt.gov/other/webdata/external/cadd/RDM/50-RDM-COMPLETE.pdf

—. 2016b. *Cost Estimation Procedure for Highway Design Projects*. November 2016. https://www.mdt.mt.gov/other/webdata/external/cadd/report_templates_guidance/costest_procedure.pdf

—. 2009. Montana Department of Transportation, *Maintenance, Operations, and Procedures Manual*. December 2009. https://www.mdt.mt.gov/publications/docs/manuals/mmanual/chapt9c.pdf

—. 2007. Montana Department of Transportation, *Traffic Engineering Manual, Chapter 30*. https://www.mdt.mt.gov/other/webdata/external/traffic/manual/chapter_30.pdf

—. 1990. Montana Department of Transportation, Access Control Map. Designation of Limited Access Highway, Project Number F 53-1(8)6, Billings-Northwest. January 1990. https://www.arcgis.com/apps/mapviewer/index.html?webmap=9c222004955944a286c736e268112842

Montana Department of Military Affairs. 2023. *Billings Readiness & Innovation Campus (BRIC) Traffic Impact Study*. December 2023.

National Cooperative Highway Research Program (NCHRP). 1997. Report 395, Capacity and Operational Effects of Midblock Left-Turn Lanes. 1997. https://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_395.pdf

NRCS. 2025. *Custom Soil Resource Report for Yellowstone County, Montana*.

Performance Engineering 2021. *Yellowstone Landing Commercial Park (YLCP) Traffic Impact Study*. April 2021.

PHMSA. 2025. *National Pipeline Mapping System.* Accessed January 2025. https://www.npms.phmsa.dot.gov/

SHPO (Montana State Historic Preservation Office). 2025. "File Search Request for SHPO Project#: 20250130004."

Transportation Research Board. 2022. Transportation Research Board, *Highway Capacity Manual 7th Edition: A Guide for Multimodal Mobility Analysis*. January 2022.

USCB. 2023a. *C17002 Ratio of Income to Poverty Level in the Past 12 months.* Accessed January 2025. https://data.census.gov/table/ACSDT5Y2023.C17002?q=C17002&g=040XX00US30_050XX00US30111_1400000US30111000500,30111000600,30111000704,30111001200,30111001300,30111001402,30111001801,30111001805,30111001806

—. 2023b. *B03002.* Accessed January 2025. https://data.census.gov/table/ACSDT5Y2023.B03002?q=B03002&g=040XX00US30_050XX00US30111_1400000US30111000500,30111000600,30111000704,30111001200,30111001300,30111001402,30111001801,30111001805,30111001806

USEPA. 2025. *EnviroAtlas.* Accessed January 2025. https://enviroatlas.epa.gov/enviroatlas/interactivemap/

USFWS. 2025. National Wetland Inventory. Accessed January 2025. https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper

Woods, Alan J., Omernik, James, M., Nesser, John A., Shelden, J., Comstock, J.A., Azevedo, and Sandra H. 2002. *Ecoregions of Montana, 2nd edition (*color poster with map, descriptive text, summary tables, and photographs). Map scale 1:1,500,000.