MONTANA 3 BILLINGS
CORRIDOR STUDY

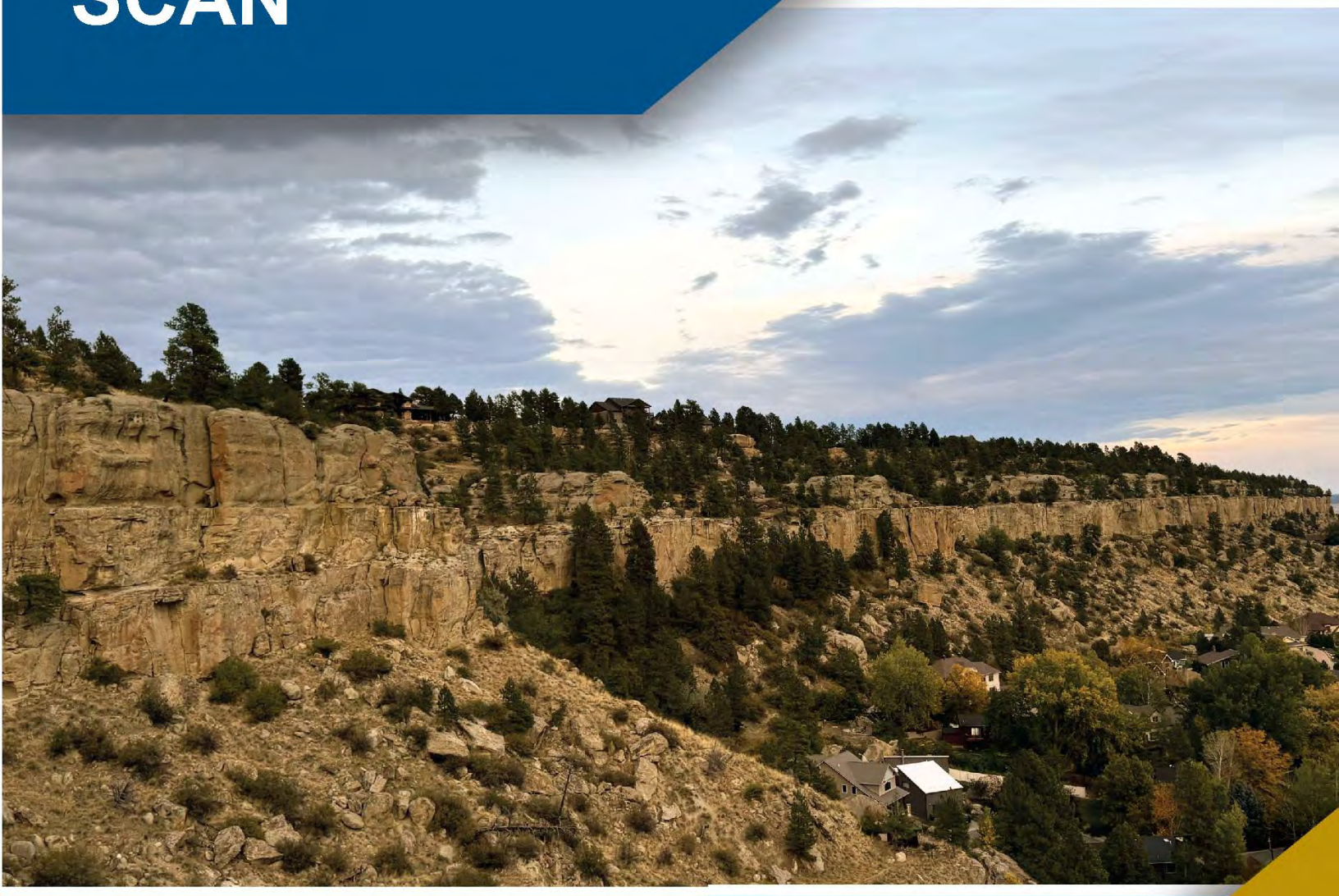
# Appendix C

## Environmental Scan

MONTANA 3 BILLINGS
CORRIDOR STUDY

DECEMBER 2025

# ENVIRONMENTAL SCAN



*Prepared for:*

MONTANA MDT DEPARTMENT OF TRANSPORTATION

*Prepared by:*

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# ACRONYMS

| | |
|---|---|
| CECRA | Comprehensive Environmental Cleanup and Responsibility Act |
| CWA | Clean Water Act |
| DNRC | Montana Department of Natural Resources and Conservation |
| EO | Executive Order |
| ESA | Endangered Species Act |
| FEMA | Federal Emergency Management Agency |
| FHWA | Federal Highway Administration |
| FPPA | Farmland Protection Policy Act |
| HUC | Hydrologic Unit Code |
| LWCF | Land and Water Conservation Fund |
| MAAQS | Montana Ambient Air Quality Standards |
| MBMG | Montana Bureau of Mines and Geology |
| MBOGC | Montana Board of Oil and Gas Conservation |
| MBTA | Migratory Bird Treaty Act |
| MDEQ | Montana Department of Environmental Quality |
| MDT | Montana Department of Transportation |
| MEPA | Montana Environmental Policy Act |
| MPDES | Montana Pollutant Discharge Elimination System |
| MS4 | Municipal Separate Storm Sewer System |
| MSATs | Mobile Source Air Toxics |
| MT 3 | Montana Highway 3 |
| MTNHP | Montana Natural Heritage Program |
| NAAQS | National Ambient Air Quality Standards |
| NEPA | National Environmental Policy Act |
| 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 |
| PM | Particulate Matter |
| RP | Reference Post |
| SHPO | State Historic Preservation Office |
| SIP | State Implementation Plan |
| SOC | Species of Concern |
| USACE | United States Army Corps of Engineers |
| USCB | United States Census Bureau |
| USDA | United States Department of Agriculture |
| USEPA | United States Environmental Protection Agency |
| USFWS | United States Fish and Wildlife Service |
| UST | Underground Storage Tank |

# 1.0 INTRODUCTION

The Montana Department of Transportation (MDT) initiated a corridor study of Montana Highway 3 (MT 3) between the highway's intersection with Apache Trail and the Airport Road/North 27th Street intersection. The study's goal focuses on developing a comprehensive long-range plan for managing the corridor and determining what could be done to improve the corridor based on needs, public and agency input, and financial feasibility. This is a collaborative process with local jurisdictions, resource agencies, MDT, Federal Highway Administration (FHWA), and the public to identify transportation needs and potential solutions given environmental and funding constraints.

This environmental scan report provides a planning-level overview of physical, biological, social, and cultural resources and identifies potential constraints and opportunities within the MT 3 study limits. This scan is not a detailed environmental investigation. If specific improvement options are advanced from this study, a Phase I feasibility study and an analysis for compliance with the National and Montana Environmental Policy Acts (NEPA and MEPA) and other applicable state and federal regulations will be completed as part of the MDT project development process. Information provided in this report may be forwarded into the NEPA and/or MEPA process, at that time.

## 1.1 Study Corridor Area

The study area for the MT 3 corridor planning study is in the northwest part of Billings, within Yellowstone County, Montana. The study corridor includes 5.1 miles of MT 3 beginning at the intersection with Apache Trail (Reference Post [RP] 8.1) and continues east to the intersection with Airport Road/North 27th Street (RP 3.0). For the purposes of this planning study, the study limits include a 0.25-mile buffer from the centerline of the MT 3 roadway, except in portions south of the road where the Rimrocks mark the boundary. The study corridor area is represented in **Exhibits 1 and 2 (Attachment 1)** and occurs within or partially within the following legally described areas:

- Sections 20, 21, 25, 26, 27, and 28 of Township 1 North, Range 25 East
- Section 30 of Township 1 North, Range 26 East

## 1.2 Study Background

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

## 1.3 Information Sources

Information presented in the various sections of this report was obtained from publicly available reports, websites, data, and documentation from federal, state, and local agencies and from an on-site field review conducted in January 2025. The information presented includes the most recent available data as of February 2025. It is appropriate to review and update this information during future environmental analyses completed for any projects that may be forwarded from this study.

# 2.0 PHYSICAL ENVIRONMENT

## 2.1 Land Ownership and Land Use

Land within the study corridor area is predominantly privately owned; however, a considerable portion is managed by the State of Montana, City of Billings, and MDT. One small parcel within the confines of the Billings Logan International Airport is under federal jurisdiction. No conservation easements are found within the area. **Exhibit 3 (Attachment 1)** shows existing public land ownership within and adjacent to the study corridor area.

The western half of the study corridor area is primarily developed for residential and crop production, and the eastern half is developed mainly for commercial purposes. The Billings Logan International Airport is the largest parcel. 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 (City of Billings 2025a). **Exhibit 4 (Attachment 1)** shows the zoning designations and land uses as outlined below.

- **Yellowstone County Zoning** encompasses the western third of the study corridor area from Zimmerman Trail to the west. The majority of zoning in this area is agriculture (A), with Zimmerman Park designated as open space, parks, recreation (P1).
- **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 (P2). The remainder of city-designated zoning north of MT 3 is predominantly agriculture (A), heavy commercial (CX), and public - campuses - medical, civic, educational (P3). The southern side of MT 3 is mostly a mix of open space, parks, recreation (P1) and suburban neighborhood (N3).

The Billings Logan International Airport Area of Influence covers nearly the entire eastern extent of the study corridor area until approximately RP 5.3. A height and hazard limitation zone is included within this area (City of Billings 2025b)

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 or easements on adjacent lands, new access points, or changes in access be required.

## 2.2 Soil Resources and Prime Farmland

The importance of farmlands to the national and local economy requires consideration of impacts from activities to, or on land adjacent to, prime or unique farmlands. Congress enacted the Farmland Protection Policy Act (FPPA) (7 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. Prime farmland can be either non-irrigated or lands that would be considered prime if irrigated. Farmland of statewide importance is land, in addition to prime and unique farmlands, that is of statewide importance for the production of 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). Soil information from the NRCS soil survey (MT111) for Yellowstone County, Montana was reviewed to determine the presence of prime and unique farmland within the study corridor area and vicinity to demonstrate compliance with the FPPA. **Exhibit 5 (Attachment 1)** contains a map and descriptions of the farmland classification types found in the study corridor area and general vicinity. Within the study corridor area limits, approximately 34.4 acres (2.5 percent) of land are classified as prime farmland if irrigated, and 473.4 acre (35 percent) of land within the study corridor area limits is classified as farmland of statewide importance. The remainder of soils are not classified as prime or unique farmland. Of the 507.8 acres classified as either prime farmland if irrigated or farmland of statewide importance, only 182.4 acres are committed (zoned) to agricultural or suburban agriculture. The remaining acreage has already been developed or is zoned for future non-agricultural use.

Improvement options carried forward from this study that become federally-funded projects, must consider impacts to farmland and farmland infrastructure and potential effects if farmland is permanently removed from production or converted to non-agricultural uses. Coordination with the NRCS is required to determine the necessary processing requirements. This may require completion of a CPA-106 Farmland Conversion Impact Rating Form for Corridor Type Projects. The NRCS uses information from the impact rating form to keep an inventory of prime and important farmlands within each state and conversion of farmland to non-agricultural use. Projects planned and completed without the assistance of a federal agency are not subject to the FPPA.

## 2.3 Geologic Resources and Hazards

The study corridor area and Billings are located in the Yellowstone River valley on mostly 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 Rimrock 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 that generally dips to the northeast at approximately 3 to 5 degrees (Alt and Hyndman 1986). The Eagle Sandstone, a light brownish-gray to yellowish-brown massive sandstone, is very fine-grained to fine-grained, well-cemented, cross-bedded, contains some sandy shale beds up to 50 feet thick, and overall, this geologic unit is 250 to 350 feet thick in the region (Lopez 2002). The Eagle Sandstone represents an offshore sandbar or barrier island environment that stood between a coastal lagoon and the shallow inland sea (Cretaceous Seaway) that flooded much of the Great Plains approximately 80 million years ago. It typically contains marine fossils and

evidence of bioturbation (the process by which organisms rework soil and sediments). Underlying the Eagle Sandstone is the Upper Cretaceous Telegraph Creek Formation, a brownish to dark-gray 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.

**Exhibit 6 (Attachment 1)** presents the surface geology within the study corridor area as depicted on the Billings 30' x 60' Quadrangle (Lopez 2000). The study corridor area consists almost entirely of Upper Cretaceous sandstone (Ke).

Montana is a seismically active state, with most of the seismic activity concentrated in the mountainous western third of the state. According to Montana Bureau of Mines and Geology (MBMG) data, there are no active faults mapped within the study corridor area. Only one magnitude 2.2 earthquake has been documented within the Yellowstone Valley, and this 2014 event was located over 7 miles east of the study corridor area (MBMG 2025a). In addition, the study corridor area is located within a Seismic Hazard Zone that is less likely to experience significant ground shaking (MBMG 2025b).

Geotechnical investigations would be required for reconstruction or significant improvements to MT 3 to determine potential stability, erosion, and settlement concerns posed by surface geology and soil conditions.

## 2.4 Hazardous Substances

The Montana Department of Environmental Quality (MDEQ) administers and enforces the state's hazardous waste management rules and works to identify and clean up contaminated properties throughout the state. The most current database information on potentially hazardous sites and sources within Yellowstone County was 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). **Exhibit 7 (Attachment 1)** depicts the location of hazardous or potentially hazardous sites or sources within the study corridor area. **Table 1** and the following text provide additional information on these hazardous sites. 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.

**Table 1. Hazardous Sites within Study Corridor Area**

| Hazardous Site | Name | Description | Location | Status |
|---|---|---|---|---|
| Hazardous Waste Generators | US FAA Billings Sector Office | Conditionally Exempt Small Quantity Generator | 1737 MT 3 – RP 4.3 | Inactive |
| | Corporate Air East | Conditionally Exempt Small Quantity Generator | Aviation Place – RP 3 | Inactive |
| | Billings Logan International Airport | Small Quantity Generator | 1901 Terminal Circle – RP 3.2 | Active |
| Underground Storage Tanks | Billings Logan International Airport | 1 Gasoline Tank<br>1 Diesel Tank<br>1 Waste Oil Tank | 1901 Terminal Circle – RP 3.2 | Active |

| Hazardous Site | Name | Description | Location | Status |
|---|---|---|---|---|
| Underground Storage Tanks (cont.) | Air Traffic Control Tower | 1 Diesel Tank | 1907 Terminal Circle – RP 3.3 | Active |
| | Rental Car Wash | 1 Gasoline Tank | 3301 Overlook Drive – RP 4.2 | Active |
| Petroleum Release Tanks | Billings Logan International Airport | Release 402 | 1901 Terminal Circle – RP 3.2 | Resolved |
| | Northwest Airlines Inc | Release 169 | 1901 Terminal Circle – RP 3.2 | Resolved |
| | West End Logan International Airport | Release 4007 | West of Billings Logan International Airport – RP 4.1 | Resolved |
| | | Release 3230 | | Resolved |
| | Lynch Flying Service | Release 631 | 1691 Aviation Place – RP 3 | Resolved |
| | Corporate Air Logan International Airport | Release 1927 | Aviation Place – RP 3 | Resolved |
| | | Release 662 | | Resolved |
| | Montana National Guard Armory #3938 | Release 3938 | 1961 MT 3 – RP 4.6 | Resolved |

## National Priority List (Superfund) Sites

The National Priority List is the list of hazardous waste sites throughout the United States eligible for long-term remedial action financed under the Federal Superfund program. A Superfund site is any land that has been contaminated by hazardous waste and identified by the USEPA as a candidate for cleanup because it poses a risk to human health and/or the environment. No Superfund sites exist in or near the study corridor area.

## Remediation Response Sites

The State Superfund Unit uses the Comprehensive Environmental Cleanup and Responsibility Act (CECRA) to investigate and clean up hazardous substances at sites not addressed by Federal Superfund. Historical waste disposal activities at these sites caused contamination of air, surface water, groundwater, sediments, and/or soils with hazardous or deleterious substances. Under CECRA, sites are ranked based on potential risks to human health and the environment. 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

Many businesses/industries generate hazardous waste. Generators of hazardous waste are regulated to ensure wastes are managed in ways that protect human health and the environment. Generators of hazardous waste are regulated based on the amount of hazardous waste they generate in a calendar month. MDEQ has listed two conditionally exempt small quantity generators and one small quantity generator within or near the study corridor area. A Conditionally Exempt Small Quantity Generator is a category of hazardous waste generator defined by USEPA that generates no more than 220 pounds (100 kilograms) of hazardous waste per month. A Small Quantity Generator generates more than 220 pounds (100 kilograms) but less than 2,200 pounds (1,000 kilograms) of hazardous waste per month. The Billings Logan International Airport is listed

by MDEQ as a small quantity generator located north of MT 3 at 1901 Terminal Circle. The USEPA, however, identifies this location as a very small quantity generator.

## Underground Storage Tanks

There are several regulated underground storage tanks (USTs) within the study corridor area, all of which are active.

- Three active USTs exist at the **Billings Logan International Airport** (RP 3.2). There is one tank each of gasoline, diesel, and waste oil.
- One active UST containing diesel is located at the **Air Traffic Control Tower** (RP 3.3).
- One active UST containing gasoline is located at the **Rental Car Wash** (RP 4.2).

## Petroleum-Tank Releases

Several petroleum-tank releases have occurred within or adjacent to the study corridor area, all of which have been resolved.

- **Billings Logan International Airport** (Facility ID #29743) located at 1901 Terminal Circle (RP 3.2), had a petroleum release identified in 1988. The incident was resolved in 1994.
- **Northwest Airlines** (Facility ID #29781) located at 1901 Terminal Circle (RP 3.2), had a petroleum release identified in 1989. The incident was resolved in 2015.
- **West End Billings Logan International Airport** (Facility ID #29876) located west of Billings International Airport (RP 4.1), had two petroleum releases identified, one in 1997 and the other in 2001. Both incidents were resolved in 2012.
- **Lynch Flying Service** (Facility ID #30200) located at 1691 Aviation Place (RP 3), had a petroleum release identified in 1991 and was resolved the same year.
- **Corporate Air Logan International Airport** (Facility ID #30329) located at 1901 Terminal Circle (RP 3.2), had two petroleum releases identified. The first release was identified in 1991 and resolved in 1993. The second release was identified in 1993 and resolved in 1994.
- **Montana Army National Guard Armory #3938** (Facility ID #31148) located at 1961 MT 3 (RP 4.6), had a petroleum release identified in 1998. The incident was resolved in 2010.

## Landfills and Solid Waste Facilities

Landfills are facilities designed to receive specific kinds of waste, including municipal solid waste, construction and demolition debris, and hazardous waste. There are no active landfills within the study corridor area.

## Pipelines

The National Pipeline Mapping System contains information on hazardous liquid and gas transmission pipelines under the jurisdiction of the PHMSA. 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 permits 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. An opencut mine for sandstone was permitted adjacent to the study corridor area at 3655 AJ Way in 2008 and reclaimed in 2009. The property has since been developed commercially.

## 2.5 Air Quality

In accordance with the Clean Air Act of 1970, as amended, the USEPA is required to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The USEPA has set standards for six criteria pollutants, including carbon monoxide, nitrogen dioxide, ozone, particulate matter (PM) ($PM_{10}$ and $PM_{2.5}$), sulfur dioxide, and lead.

Montana has also established air quality standards for criteria pollutants, as well as for settleable particulate matter and visibility. These Montana Ambient Air Quality Standards (MAAQS) are found in the Administrative Rules of Montana 17.8.210-17.8.230 and establish statewide targets for acceptable levels of ambient air pollutants.

The USEPA and MDEQ are charged with regulating air quality and may designate areas as attainment or nonattainment based on their history of meeting the NAAQS or MAAQS for pollutants of concern. Areas where air pollution levels do not exceed the air pollution thresholds established in the NAAQS and MAAQS are designated as “attainment” areas. “Nonattainment areas" are localities where air pollution levels persistently exceed the NAAQS or MAAQS, or that contribute to ambient air quality in a nearby area that fails to meet standards. 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.

Transportation conformity is required by the Clean Air Act to ensure that federal funding and approval are given to transportation projects that are consistent with the air quality goals established by a State Implementation Plan (SIP). Conformity to the SIP means that transportation activities will not cause new air quality violations, worsen existing violations, or delay timely attainment of NAAQS. 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. In addition, depending on the scope of improvements being considered within the study corridor area, 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.

## 2.6 Surface Waters

The study corridor area is found entirely within the United States Geological Survey 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 eventually convey into Alkali Creek. MT 3 does not cross any surface waters. **Exhibit 8 (Attachment 1)** presents identified surface waters within the study corridor area.

Road construction and reconstruction activities such as bridge or culvert installation or replacement, placement of fill, or bank stabilization have potential impacts to surface waters. Coordination with federal, state, and local agencies would be necessary to determine the appropriate permits based on the improvement options forwarded from this study. Impacts to surface waters should be avoided and minimized to the maximum extent practicable. Impacts to streams and other surface waters may trigger compensatory mitigation requirements.

### *2.6.1 Water Quality*

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

As directed by the Montana Water Quality Act, MDEQ prepares an Integrated Report every two years listing the status of water quality for waterbodies under state jurisdiction. The MDEQ biennial Integrated Reports include 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. This typically involves the development of a Total Maximum Daily Load in which MDEQ determines the sources of pollutants and sets the maximum amount of pollutants that each source can discharge to a waterbody.

None of the drainages within the study corridor area have been assessed due to their ephemeral nature.

**Stormwater Management**

Section 402 of the CWA established the National Pollutant Discharge Elimination System (NPDES), which regulates, amongst other discharges, stormwater runoff from construction sites that disturb one or more acres. The USEPA administers the NPDES stormwater permitting program for Indian Country within the State of Montana. 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 in Montana 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. 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 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 with projects disturbing one or more acre or projects having the potential to adversely affect water quality. Incorporation of PESC measures will typically be limited to projects in proximity to sensitive resources, such as impaired waterways, or with scopes related to rehabilitation or reconstruction. The applicability of PESC measures would need to be reviewed for any projects carried forward from the corridor study.

### *2.6.2 Wild and Scenic Rivers*

The Wild and Scenic Rivers Act, created by Congress in 1968, protects certain rivers and their immediate environments that possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, or cultural resources, or other similar values. In Montana, portions of the North, South, and Middle Forks of the Flathead River and portions of the Missouri River downstream of Fort Benton were designated by Congress in 1976 as wild, scenic, or recreational components of the National Wild and Scenic River System. In 2018, East Rosebud Creek was added to the System. None of these rivers are within or near the study corridor area.

## 2.7 Irrigation Features

The 2017 USDA agricultural census shows Yellowstone County had 1,186 farms totaling 1,433,440 acres, with the average farm size at 1,209 acres. In 2022, the number of farms had decreased by 10, and land in farms had decreased by 11 acres, with the average farm size at 1,208 acres. Of the 1,433,440 total farmed acres in the county, only 48,166 acres were irrigated using both surface water and groundwater (USDA 2022).

Within the study corridor area, the majority of the land west of Zimmerman Trail is zoned agriculture, and several agricultural fields are located to the north and south of MT 3. Maps from the Yellowstone County Montana Water Resources Survey (1943), prepared by the Department of Natural Resources and Conservation (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). Groundwater data also indicates only one groundwater well in the area is used for stockwater (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.

## 2.8 Groundwater

Groundwater is found beneath the ground surface in the soil and rock. Gravity pulls excess soil moisture downward to a point where the spaces in the soil and rock become saturated. The top of this saturation zone is called the water table. Groundwater can be found in deep aquifers with little porosity, where it moves very slowly, or in highly porous material close to the surface, where it may move more rapidly. Groundwater is an important source for drinking water, agricultural, livestock, and industrial use.

The study corridor area is entirely within the 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 and domestic water. The Eagle Sandstone contains multiple sandstone layers separated by shale, with thicknesses up to 50 feet. The aquifer's depth varies, with some wells reaching over

1,000 feet below the surface. The median well depth is 180 feet. Unlike much of the area below the Rimrocks, which is mostly influenced by the Yellowstone River, groundwater recharge within the Eagle Aquifer depends on precipitation and snowmelt (Madison, et al. 2014).

According to the MBMG Groundwater Information Center, there are over 20 wells located within 0.25 miles of the study corridor area, 10 of which were identified below the Rimrocks. Wells mapped on top of the Rimrocks were drilled to depths ranging from 22 to 320 feet, with an average depth of 133 feet. The majority of the wells are for domestic use. Wells mapped below the Rimrocks were drilled to depths ranging from 14 to 285 feet, with an average depth of 70 feet. The majority of the wells are for monitoring or domestic use. Static water levels on top of the Rimrocks range from 5 to 170 feet and average 71 feet below the 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 1 mile southeast at Athletic Park. Public water supply wells have a setback requirement from MDEQ of a 100-foot isolation zone in which no source of pollutant can be located. Public water supply wells are also typically deeper and require a higher volume of water to be discharged.

The study corridor area is not located within a water or sewer district.

**Exhibit 8 (Attachment 1)** shows the location of recorded groundwater wells and aquifer extents within the study corridor area. Impacts to the groundwater supply should be considered in any improvement option that may be brought forward from the planning study.

## 2.9 Floodplains and Floodways

A floodplain is any land susceptible to being inundated by floodwaters from any source. This can include low-lying areas that fill with water during storm events or snow melt or land adjacent to rivers or creeks that flood when waters within those channels rise out of the channel banks. 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 be taken to reduce the risk of flood loss; minimize the impacts of floods on human safety, health, and welfare; and restore and preserve the natural and beneficial values served by floodplains. The natural and beneficial values of floodplains include providing habitat for fish, wildlife, plants, open space, natural flood moderation, water quality maintenance, and groundwater recharge. EO 11988 requires projects undertaken or funded by federal agencies to avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative.

To comply with the EO, a proposed project and its alternatives must be evaluated to determine the effects of any encroachments on the base floodplain. The base floodplain is the area covered by water from the 100-year flood and is a regulatory standard used by federal agencies and states to administer floodplain management programs. The 100-year flood is defined as a flood event that has a 1 percent chance of being equaled or exceeded in any given year.

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). Flood zones are presented in **Exhibit 9 (Attachment 1**).

## 2.10 Wetlands

The United States Army Corps of Engineers (USACE) defines wetlands as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands can typically be identified by the existence of three indicators: a dominance of hydrophytic vegetation, hydric soils, and prolonged periods of inundation or saturation. Wetlands examples include swamps, marshes, bogs, seasonal wet meadows, and fringe areas along streams and rivers.

The United States Fish and Wildlife Service (USFWS) is the principal federal agency that provides information to the public on the extent and status of the nation's wetlands. The USFWS has compiled mapping to show wetlands and deepwater habitats in the US, including many parts of Montana, and has made this mapping available through access to the National Wetland Inventory (NWI). NWI wetlands are identified in general accordance with USFWS's publication Classification of Wetlands and Deepwater Habitats of the United States (FGDC 2013). NWI maps do not define wetlands for regulatory purposes since the wetlands are identified through aerial photo interpretation. The NWI definition of wetlands requires one or more of the three attributes of wetlands (wetland hydrology, vegetation, or soils) be present to be a wetland.

NWI mapping for the study corridor area is presented in **Exhibit 10 (Attachment 1)**. Wetlands were not 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 that could potentially impact wetlands. 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.

# 3.0 BIOLOGICAL RESOURCES

## 3.1 Vegetation

The study corridor area is located within the Montana Central Grasslands ecoregion of the Northwestern Great Plains. This ecoregion is comprised of an unglaciated plain that is dissected by many small, ephemeral or intermittent streams, underlain by noncarbonate, fine-grained sedimentary rock of the Tertiary Fort Union Formation. 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 itself, 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 can be found 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*).

**Table 2** presents the types of land cover within the study corridor area, as determined by Montana Natural Heritage Program (MTNHP) online mapping and the MTNHP Environmental Summary prepared for the study corridor area (MTNHP 2025a). Sub-systems with cover less than one percent of the study corridor area are not included in the table. Land cover composition for the study corridor area is depicted in **Exhibit 11 (Attachment 1)**.

**Table 2. Land Cover Composition within Study Corridor Area**

| System and Sub-System | % |
|---|---|
| Human Land Use | 61% |
| Commercial/Industrial | 18% |
| Low Intensity Residential | 13% |
| Other Roads | 12% |
| Cultivated Crops | 10% |
| Developed, Open Space | 6% |
| High Intensity Residential | 2% |
| Grassland | 19% |
| Great Plains Mixed-Grass Prairie | 11% |
| Great Plains Sand Prairie | 8% |
| Shrubland, Steppe, and Savanna | 11% |
| Big Sagebrush Steppe | 11% |
| Forest and Woodland | 7% |
| Great Plains Ponderosa Pine Woodland and Savanna | 7% |

### *3.1.1 Noxious Weeds*

Noxious weeds are weeds designated by federal, state, or local government officials that directly or indirectly cause problems or harm for 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.

The State of Montana (MDOA 2019) and Yellowstone County have established lists that designate specific weeds as priority noxious weeds. The Yellowstone County Noxious Weed List includes five priority weeds. These include poison hemlock (*Conium maculatum*), common teasel (*Conium maculatum*), puncture-vine (*Tribulus terrestris*), common mullein (*Verbascum thapsus*), and scotch thistle (*Onopordum acanthium*). The Yellowstone County Weed Management Plan (Yellowstone County 2018) provides guidance for managing noxious weeds in Yellowstone County and outlines the County Weed District's roles and responsibilities.

The Montana Weed Control Board has identified three prioritization groups to categorize noxious weeds. Priority 1 weeds are not present or have very little presence in Montana. No Priority 1A and 1B noxious weeds have been documented within the study corridor area. Priority 2A

management includes eradication or containment where less abundant. Priority 2B weeds are abundant in Montana and widespread in many counties. Management of 2A and 2B species is prioritized by local weed districts. Priority 3 are regulated plants, not Montana-listed noxious weeds, but have the potential to generate significant negative impacts.

**Table 3** summarizes the list of noxious weeds known to be present within the vicinity of the study corridor area according to the Environmental Summary compiled by MTNHP (MTNHP 2025a).

**Table 3. Land Cover Composition within Study Corridor Area Vicinity**

| Priority Level | | Description |
|---|---|---|
| 1A | Very Little/No Presence | None |
| 1B | Limited Presence | None |
| 2A | Common in Isolated Areas | Common Buckthorn |
| 2B | Abundant and Widespread | Dalmatian Toadflax, Common Tansy, Whitetop, Spotted Knapweed, Common Hound's-tongue, Field Bindweed, Russian Knapweed, Canada Thistle, Leafy Spurge, Sulphur Cinquefoil, Oxeye Daisy |
| 3 | Regulated Plants: Not Montana Listed Noxious Weeds | Cheatgrass, Russian Olive |

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 General Wildlife Species

A majority of the study corridor area has been heavily disturbed by various agricultural practices and commercial and residential development. These changes to the landscape have negatively impacted the amount and quality of suitable wildlife habitat. 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 specimens of native vegetation that was likely present in this area before its conversion to agriculture and urban/residential development and various species still seek shelter in these corridors today. Zimmerman Park also provides suitable habitat for a variety of species.

### *3.2.1 Mammals*

The MTNHP database records and maps documented observations of species in a known location (MTNHP 2025a). Over 35 species of mammals have been recorded within a 2-mile radius around 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 these species include big brown bat (*Eptesicus fuscus*), eastern fox squirrel (*Sciurus niger*), yellow-bellied marmot (*Marmota flaviventris*), raccoon (*Procyon lotor*), red fox (*Vulpes vulpes*), 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.

Animal carcass data for the past 10 years was reviewed, and no 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 was reviewed, indicating 16 wildlife-related crashes during that period. However, additional, unrecorded incidents may exist. Scoring based on the Montana Wildlife & Transportation Partnership Planning Tool indicates the study corridor area ranks between 41-59 out of 100 and averages 52 based on the need assessment criteria (higher values equate to greater need) (MDT 2025) refer to **Exhibit 12 (Attachment 1)**. Between RP 3 and RP 6 on MT 3, 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 on MT 3, there may be a correlation between wildlife-vehicle crashes and the segments with forested drainages to the north and agricultural lands to the south.

Montana Fish, Wildlife, and Parks distribution mapping for larger mammals shows the study corridor area as general range for mule deer and pronghorn (*Antilocapra americana*). The study corridor area east of RP 4.2 is identified as general wintering range for white-tailed deer (*Odocoileus virginianus*).

Improvement projects advanced from the corridor study will require coordination with fish and wildlife biologists from state and federal agencies to gain further insight into issues related to the management of these species and to identify measures for avoiding, minimizing, or mitigating adverse effects on species and habitat. The needs and feasibility of wildlife accommodations require consideration in projects forwarded from this study in accordance with MDT's Wildlife Accommodation Process.

### *3.2.2 Birds*

The 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 listed as species of concern (SOC) or special status species (discussed in Section 3.4 below). The most commonly observed birds include American Robin (*Turdus migratorius*), Black-capped Chickadee (*Poecile atricapillus*), House Finch (*Haemorhous mexicanus*), House Sparrow (*Passer domesticus*), and Northern Flicker (*Colaptes auratus*).

Compliance with the USFWS Migratory Bird Treaty Act (MBTA) guidance would be required, and disruption to nesting birds and disturbance of active nests avoided. Measures would need to be implemented to avoid the taking of migratory birds, their eggs, hatchlings, or fledglings during construction. This may include removing any suitable nesting habitats (i.e., trees and shrubs) existing within the construction limits, or those affected by construction, outside of the nesting season (August 16 to April 15).

Any improvements carried forward from this study would consider possible project constraints that may result from seasonal nesting of migratory birds.

### *3.2.3 Amphibians, Reptiles, and Invertebrates*

According to the MTNHP database, amphibian and reptile species documented as occurring within the study corridor area and 2-mile vicinity include, but are not limited to, common sagebrush lizard (*Sceloporus graciosus*), gophersnake (*Pituophis catenifer*), and western milksnake (*Lampropeltis gentilis*). Over 200 invertebrate species have been observed in the study area corridor vicinity.

### 3.2.4 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.

## 3.3 Threatened and Endangered Species

Section 7(a)(2) of the Endangered Species Act (ESA), as amended, directs that all federal agencies must ensure the actions they authorize, fund, or carry out do not jeopardize the continued existence of endangered or threatened species and that such actions do not destroy or adversely modify designated critical habitat.

The federal list of threatened and endangered species is maintained by the USFWS. Species on this list receive protection under the ESA. An endangered species is in danger of extinction throughout all or a significant portion of its range. A threatened species is likely to become endangered in the foreseeable future. The USFWS also maintains a list of species that are candidates or proposed for possible addition to the federal list. **Table 4** shows the federally listed threatened and endangered species identified as potentially occurring within a 0.5-mile radius around the study corridor area. No critical habitat was identified within 0.5 mile of the study corridor area.

**Table 4. Threatened and Endangered Species**

| Group | Species Name | Federal Status | Habitat Requirements |
|---|---|---|---|
| **Invertebrate Species** | Monarch Butterfly *Danaus plexippus* | Proposed Threatened | Often found in open areas like native prairies, foothills, valley bottoms, weedy fields, roadsides, pastures, marshes, and suburban areas. They require milkweeds to lay eggs and blooming flowers for nectar during their breeding and migration seasons. Additionally, monarchs need trees for roosting during their migration. |
| | Suckley's Cuckoo Bumble Bee *Bombus suckleyi* | Proposed Endangered | The historical distribution of this species includes prairies, grasslands, meadows, urban and agricultural areas, and woodlands. Regardless of habitat type, this species cannot successfully reproduce without suitable host colonies and requires a diversity of native floral species for nutrition. |

Source: MTNHP Field Guide (MTNHP 2025b)

Both of the identified species have the potential to occur within the study corridor area. Despite human uses such as agriculture and commercial/residential development, some habitat in the study corridor area is suitable habitat for these species.

**Monarch Butterfly**: Weedy fields, roadsides, and suburban areas are all found within the study corridor area and vicinity. Additionally, milkweed (*Asclepias sp.*) has also been documented within the general vicinity of the study corridor area.

**Suckley's Cuckoo Bumble Bee**: While the Suckley's cuckoo bumble bee has not been documented in Yellowstone County, as an obligate social parasite, many of the known host species, including white-shouldered bumble bee (*Bombus appositus*), yellow bumble bee (*Bombus fervidus*), Nevada bumble bee (*Bombus nevadensis*), Western bumble bee (*Bombus occidentalis*), and red-belted bumble bee (*Bombus rufocinctus*), have been observed within 2 miles of the study corridor area (MTNHP 2025b).

Any improvements forwarded from the corridor study must undergo review for compliance with the provisions of the ESA. Because the listing status of species and critical habitat can change over time, an up-to-date list of potentially affected federally listed species and designated critical habitat must be reviewed for any project carried forward from this study.

## 3.4 State Species of Concern and Special Status Species

Montana SOCs 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. Rather, these designations provide information that helps resource managers make proactive decisions regarding species conservation and data collection priorities.

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. The Bald Eagle is also no longer considered a Montana SOC; however, both species are still protected under the Bald and Golden Eagle Protection Act of 1940.

According to the environmental summary provided by 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 2025a). **Table 5** presents the SOC documented in the area, including their state rank and habitat needs. **Exhibit 13 (Attachment 1)** shows the locations of these species in relation to the study corridor area.

**Table 5. Species of Concern**

| Group | Species Name | State Rank | Habitat Description |
|---|---|---|---|
| Mammal Species | Black-tailed Prairie Dog *Cynomys ludovicianus* | S3 | Colonies are found on flat, open grasslands and shrub/grasslands with low, relatively sparse vegetation. Occupied habitat is dominated by western wheatgrass, blue grama, and big sagebrush. Fine to medium textured soils are preferred. |
| | Little Brown Myotis *Myotis lucifugus* | S3 | Commonly found in forested lands near water. Forages over water. Summer day roosts include attics, barns, bridges, snags, loose bark, and bat houses. Maternity roosts are primarily buildings. Hibernacula include caves and mines. |

| Group | Species Name | State Rank | Habitat Description |
|---|---|---|---|
| Mammal Species(cont.) | Long-eared Myotis<br>*Myotis evotis* | S3 | Occupy a wide range of rocky and forested habitats over a broad elevation gradient. Summer day roosts include abandoned buildings, bridges, hollow trees, stumps, under loose bark, and rock fissures. Hibernacula include caves and abandoned mines. |
| | Long-legged Myotis<br>*Myotis Volans* | S3 | Occurs mostly in forested mountain regions and river bottoms, also at high elevations. Summer day roosts include trees, rock crevices, fissures in stream banks, and abandoned buildings. Hibernacula include caves and mines. |
| | Northern Hoary Bat<br>*Lasiurus cinereus* | S3B | Typically occupies forested areas during the summer. They are often found foraging over water sources within forested terrain, including both conifer and hardwood forests, as well as along riparian corridors. They are reported over a broad elevation range from (1,900 to 9,100 feet) and are probably most common at lower elevations throughout the summer. |
| | Spotted Bat<br>*Euderma maculatum* | S4 | Typically found in open arid habitats with Utah juniper and sagebrush, sometimes mixed with limber pine or Douglas-fir, or in grassy meadows within ponderosa pine savannah. They are often associated with cliffs, rocky outcrops, and water sources. These bats roost in caves and crevices in cliffs and canyons and are known to forage near isolated ponds and large limestone escarpments. Their winter habitat is not well documented. |
| | Townsend's Big-eared Bat<br>*Corynorhinus townsendii* | S3 | Habitat includes Douglas-fir, lodgepole pine, and ponderosa pine forests, juniper-sagebrush scrub, and cottonwood bottomland. Maternity roosts and hibernacula include caves and abandoned mines. |
| Bird Species | Bobolink<br>*Dolichonyx oryzivorus* | S3B | Ground nesting birds that prefer tall grass and mixed-grass prairies. Prefers fields with high grass-to-legume ratio that were historically hay fields. |
| | Brewer's Sparrow<br>*Spizella breweri* | S3B | Mostly in sagebrush and grassland areas. They primarily breed in shrub-steppe habitats dominated by sagebrush. In central Montana, they will breed in sagebrush averaging 16 inches high. |

| Group | Species Name | State Rank | Habitat Description |
|---|---|---|---|
| Bird Species (cont.) | Burrowing Owl<br>*Athene cunicularia* | S3B | Found in open grasslands, where abandoned burrows dug by mammals such as ground squirrels (*Spermophilus* spp.), prairie dogs (*Cynomies* spp.) and badgers (*Taxidea taxus*) are available. Black-tailed prairie dog (*Cynomys ludoviscianus*) and Richardson's ground squirrel (*Spermophilus richardsonii*) colonies provide the primary and secondary habitat. |
| | Cassin's Finch<br>*Haemorhous cassinii* | S3 | Occurs in major forest and timber-harvest regime habitats, including riparian communities; however, prefers ponderosa pine and postfire forests. Has also been known to occur in lodgepole pine, sagebrush, and grassland habitats, but less often. |
| | Great Blue Heron<br>*Ardea herodias* | S3 | Marshes, swamps, shores, and tideflats. Very adaptable. Forages in any kind of calm fresh waters or slow-moving rivers, also in shallow coastal bays. Nests in trees or shrubs near water, sometimes on ground in areas free of predators. |
| | Greater Sage-Grouse<br>*Centrocercus urophasianus* | S2 | Closely associated with sagebrush habitat types. Adapted to a broad mosaic throughout its range, including relatively tall sagebrush, relatively low sagebrush, forb-rich mosaics with low and tall sagebrush, riparian meadows, steppe, scrub, willow, and sagebrush savanna. |
| | Lewis's Woodpecker<br>*Melanerpes lewis* | S2B | Open forest and woodland, often logged or burned, including oak, coniferous forest (primarily ponderosa pine), riparian woodland, and orchards, less commonly in pinyon-juniper. In the Bozeman area, known to occur in river bottom woods and forest edge habitats. |
| | Loggerhead Shrike<br>*Lanius ludovicianus* | S3B | Open landscapes with short vegetation, including pastures with fence rows, mowed roadsides, agricultural fields, riparian areas, and open woodlands. |
| | Mountain Plover<br>*Anarhynchus montanus* | S2B | Prefers breeding habitats similar to other areas within their range, primarily using prairie dog colonies and shortgrass prairie sites. These colonies offer greater visibility, more bare ground, and numerous burrows. During the breeding season, they favor heavily grazed shortgrass prairies dominated by native plants like blue grama and prairie junegrass (*Koeleria cristata*). They often select areas grazed by prairie dogs, sheep, or cattle. |

| Group | Species Name | State Rank | Habitat Description |
|---|---|---|---|
| Bird Species (cont.) | Pinyon Jay *Gymnorhinus cyanocephalus* | S3 | Low-elevation ponderosa pine and limber pine-juniper woodlands. |
| | Red-headed Woodpecker *Melanerpes erythrocephalus* | S3B | Typically found in riparian forests along major rivers, open savannahs with sufficient ground cover, snags, and canopy cover, as well as large burns. For nesting, they excavate holes at various heights in live trees, dead stubs, utility poles, or fence posts, and often reuse the same tree or cavity in successive years. |
| | Sage Thrasher *Oreoscoptes montanus* | S3B | Primarily breeds in areas dominated by big sagebrush (*Artemisia tridentata*). Their abundance increases with more sagebrush cover and decreases with more grass cover. During spring and fall migration, they use sagebrush habitats, grasslands, and other semi-arid areas, while avoiding human-inhabited regions. |
| | Sprague's Pipit *Anthus spragueii* | S3B | Requires native prairies with medium to intermediate height grasses and can often be found in areas with taller grasses. This species is more abundant in these areas compared to exotic vegetation. It is area-sensitive, needing large expanses of suitable habitat. Additionally, this species breeds in alkaline meadows and around the edges of alkaline lakes. |
| | Veery *Catharus fuscescens* | S3B | In Montana, they are mostly in willow thickets and cottonwoods along streams and lakes. They can be found in riparian areas, valleys, and low-mountain canyons. Important plant habitat includes box elder, alder, aspen, cottonwood, lodgepole pine, and willows. |
| | Yellow-billed Cuckoo *Coccyzus americanus* | S3B | Prefers breeding habitats such as open woodlands with thick undergrowth, parks, and deciduous riparian woodlands. They typically nest in tall cottonwood and willow riparian woodlands, with nests found in trees, shrubs, or vines, usually 1 to 3 meters above the ground. The western subspecies specifically require dense riparian forests of at least 10 hectares with a canopy cover of at least 50% in both the understory and overstory. These birds are rarely found at higher elevations. |

| Group | Species Name | State Rank | Habitat Description |
|---|---|---|---|
| Reptile Species | Greater Short-horned Lizard *Phrynosoma hernandesi* | S3 | Inhabits sagebrush and grassland habitats, sedimentary rock outcrops, glacial drift, and open stands of Limber Pine, Utah Juniper, or Ponderosa Pine. They prefer open, bare ground and loose, sun-baked soils. Additionally, they inhabit short-grass and mixed-grass prairies, sagebrush, other shrublands, and open coniferous forests with sparse ground-level vegetation and easy access to sunlight. Soil substrates vary from rocky to sandy but usually include loose soils. |
| | Plains Hog-nosed Snake *Heterodon nasicus* | S2 | Prefers dry, sandy, or gravelly areas in grassland, open sand prairies, or sand dunes. Sometimes utilizes mixed forest habitats and cropland. |
| | Western Milksnake *Lampropeltis gentilis* | S2 | Prefers areas of open sagebrush-grassland habitat and ponderosa pine savannah with sandy soils, most often in or near areas of rocky outcrops and hillsides or badland scarps, sometimes within city limits. |
| Plant Species | Bractless Hedge-hyssop *Gratiola ebracteata* | S2 | Drying mud around ponds in the foothills and on the plains |

Source: MTNHP Field Guide (MTNHP 2025b)

Bald and Golden Eagles are protected under the MBTA and the Bald and Golden Eagle Protection Act of 1940, which prohibits anyone, without a permit issued by the Secretary of the Interior, from taking Bald Eagles, including their parts, nests, or eggs. The Act defines “take” as pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb. According to data provided by MTNHP, no Bald or Golden Eagle nests have been identified within a 2-mile radius of the study corridor area.

The Greater Sage Grouse is also a Montana SOC protected under the Montana Greater Sage-Grouse Habitat Conservation Program. 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). Therefore, consultation under the Montana Sage Grouse Habitat Conservation Program would not be required for any project carried forward from this study.

Should projects be carried forward from this corridor study, additional review of databases documenting SOC and special status species occurrences must be conducted, and an evaluation of habitats near proposed projects must be completed to determine suitability for SOC and special status species. Measures to avoid or minimize impacts to these species and their habitat would be incorporated into project designs and implementation.

# 4.0 SOCIAL AND CULTURAL RESOURCES

## 4.1 Socioeconomics and Community Demographics

Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, which directed federal programs, policies, and activities to avoid disproportionately high and adverse human health and environmental effects on minority and low-income populations, has been rescinded. However, evaluation of impacts to communities and differing socioeconomic classes, including the data and assessments previously stipulated under EO 12898, have been provided for the study corridor area and are discussed in the following section.

Nine census tracts that intersect or are near the study corridor area were reviewed **Exhibit 14 (Attachment 1**). **Tables 6 and 7** provide census data information on socioeconomic characteristics and community demographics.

**Table 6. Populations Below Poverty Level in Study Area Census Tracts**

| Geographic Unit | Total Population | Below Poverty Level |
|---|---|---|
| Montana | 1,079,200 | 129,998 / 12.0% |
| Yellowstone County | 163,620 | 16,737 / 10.2% |
| Census Tract 5 | 4,557 | 363 / 8.0% |
| Census Tract 6* | 1,996 | 211 / 10.6% |
| Census Tract 7.04* | 3,417 | 199 / 5.8% |
| Census Tract 12 | 3,561 | 627 / 17.6% |
| Census Tract 13* | 6,336 | 223 / 3.5% |
| Census Tract 14.02* | 7,176 | 289 / 4.0% |
| Census Tract 18.01* | 7,771 | 166 / 2.1% |
| Census Tract 18.05 | 3,890 | 298 / 7.7% |
| Census Tract 18.06 | 2,225 | 21 / 0.9% |

*Census Tracts that intersect with the Study Corridor Area

According to the United States Census Bureau (USCB) data (USCB 2023a), the percentage of people in poverty within the study corridor area vicinity ranges from approximately 0.9% in Census Tract 18.06 to 17.6% in Census Tract 12. The percentage in Tract 12 is higher than the Yellowstone County average (10.2%) and State of Montana average (12.0%); however, the vast majority of census tracts within the study corridor area fall below the state and county averages.

According to USCB data (USCB 2023b), less than 4% of the population within the study corridor area vicinity identified as Black or African American individuals. Similar percentages were observed for individuals identifying as Asian alone and American Indian and Alaska Native. Less than 1% of the population identified as Native Hawaiian or Pacific Islander. The percentages for Hispanic or Latino range from 1.2% in Census Tract 18.06 to 10.7% within Census Tract 12. These demographic percentages are consistent with, or slightly higher than, corresponding percentages for either Yellowstone County or the State of Montana shown below:

- Yellowstone County: 0.5% Black or African American, 3.8% American Indian and Alaska Native, 0.8% Asian alone, 0.0% Native Hawaiian or Pacific Islander, and 6.4% Hispanic or Latino
- State of Montana: 0.5% Black or African American, 5.5% American Indian and Alaska Native, 0.8% Asian alone, 0.0% Native Hawaiian or Pacific Islander, and 4.8% Hispanic or Latino

**Table 7. Demographics in Study Area Census Tracts**

| Geographic Unit | Total Population | White alone | Black or African American | American Indian and Alaska Native | Asian alone | Native Hawaiian or Pacific Islander | Hispanic or Latino | Other |
|---|---|---|---|---|---|---|---|---|
| Montana | 1,105,072 | 929,206 / 84.1% | 5,243 / 0.5% | 60,745 / 5.5% | 8,944 / 0.8% | 481 / 0.0% | 53,233 / 4.8% | 48,519 / 4.4% |
| Yellowstone County | 167,340 | 140,456 / 83.9% | 824 / 0.5% | 6,385 / 3.8% | 1294 / 0.8% | 74 / 0.0% | 10,717 / 6.4% | 7,590 / 4.5% |
| Census Tract 5 | 4,572 | 3,838 / 83.9% | 10 / 0.2% | 93 / 2.0% | 35 / 0.8% | 0 / 0.0% | 385 / 8.4% | 211 / 4.6% |
| Census Tract 6* | 2,680 | 2,425 / 90.5% | 39 / 1.5% | 43 / 1.6% | 9 / 0.3% | 3 / 0.1% | 49 / 1.8% | 112 / 4.2% |
| Census Tract 7.04* | 3,417 | 2,866 / 83.9% | 3 / 0.1% | 35 / 1.0% | 30 / 0.9% | 0 / 0.0% | 202 / 5.9% | 281 / 8.2% |
| Census Tract 12 | 3,597 | 3,198 / 87.2% | 0 / 0.0% | 1 / 0.0% | 11 / 0.3% | 0 / 0.0% | 384 / 10.7% | 63 / 1.8% |
| Census Tract 13* | 6,428 | 5,869 / 91.3% | 0 / 0.0% | 56 / 0.9% | 13 / 0.2% | 0 / 0.0% | 157 / 2.4% | 333 / 5.2% |
| Census Tract 14.02* | 7,251 | 6,439 / 88.8% | 0 / 0.0% | 54 / 0.7% | 11 / 0.2% | 0 / 0.0% | 642 / 8.9% | 105 / 1.4% |
| Census Tract 18.01* | 7, 805 | 7,328 / 93.9% | 0 / 0.0% | 15 / 0.4% | 30 / 0.4% | 0 / 0.0% | 133 / 1.7% | 227 / 2.9% |
| Census Tract 18.05 | 4,184 | 3,749 / 89.6% | 0 / 0.0% | 15 / 0.4% | 141 /3.4% | 0 / 0.0% | 65 / 1.6% | 214 / 5.1% |
| Census Tract 18.06 | 2,328 | 2,195 / 94.3% | 75 / 3.2% | 21 / 0.9% | 8 /0.3% | 0 / 0.0% | 29 / 1.2% | 0 / 0.0% |

*Census Tracts that intersect with the Study Corridor Area

The census data was retrieved from the USCB American Community Survey 2018 – 2023 5-Year Estimates Detailed Tables. Some estimates presented come from sample data and, thus, have sampling errors that may render some apparent differences between geographies statistically indistinguishable.

Actions carried forward from this corridor study should take into consideration potential effects and impacts to communities adjacent to the study corridor area.

## 4.2 Recreational Resources

Land ownership within the study corridor area is primarily private, with land use dominated by agricultural, residential, and commercial/industrial development. There are multiple recreational resources located within the study corridor area, primarily south of MT 3.

Zimmerman Park was identified as the only public park located within the study corridor area **Exhibit 15 (Attachment 1).** Zimmerman Park is a 71.85-acre public park with several miles of trails. The park is located south of MT 3 in the central portion of the study corridor area (Yellowstone County 1984). In addition, multiple parcels owned by the City of Billings or Yellowstone County are found along the south side of MT 3. These public parcels are designated recreational open spaces that extend the length of Skyline Trail as well as from the top of the Rimrocks to residential areas below.

Skyline Trail is a popular 10-foot-wide paved trail extending from Zimmerman Park to Swords Park and into downtown Billings. Skyline Trail, within the study corridor area, runs parallel to MT 3 on the south side of the roadway. A portion of the Skyline Trail from Skyway Drive to Rimrock Road overlaps with Rimrock Trail. Skyline and Rimrock Trails are paved trails with multiple access

points along MT 3, which include viewpoints and parking areas along the roadway (City of Billings 2025c). Additionally, a separated, paved multi-use path is located parallel to Skyway Drive, beginning at the intersection of Skyway Drive and MT 3 and extending north beyond the limits of the study corridor area.

## 4.3 Cultural Resources

Cultural resources are properties that reflect the heritage of local communities, states, and nations. The National Historic Preservation Act (NHPA) of 1966, as amended, defines historic properties as sites, buildings, structures, districts (including landscapes), and 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.

To be considered eligible for listing on the NRHP, a property must meet at least one of the following criteria:

- A: Is associated with events that have made a significant contribution to the broad patterns of our history.
- B: Is associated with the lives of persons significant in our past.
- C: Embodies the distinctive characteristics of a type, period, or method of construction or that represents the work of a master, or that possess high artistic values, or that represents a significant distinguishable entity whose components may lack individual distinction.
- D: Yielded, or may likely yield, information important in prehistory or history (36 Code of Federal Regulations Part 60.4).

Section 106 of the NHPA requires federal agencies to consider the effects that a subject undertaking may have on eligible historic properties, determine methods to avoid and minimize or mitigate any adverse effects, and to consult with the State Historic Preservation Office (SHPO) or Tribal Historic Preservation Office regarding those effect determinations.

In addition to the NHPA, federal directives, such as Section 4(f) of the United States Department of Transportation Act, the Archaeological Resources Protection Act, and the Native American Graves Protection and Repatriation Act, and Montana directives, including the Montana Antiquities Act and the Montana Human Skeletal Remains and Burial Site Protection Act, outline requirements regarding effects of proposed undertakings on historic and archaeological resources and paleontological sites.

As part of this corridor study, a file search was conducted through the Montana SHPO for each section of land the study corridor area intersects. In addition, the NRHP database was searched (NPS 2025). In total, 42 sites were identified. In terms of eligibility for listing on the NRHP, 17 sites are eligible, 9 are ineligible, and the remaining 16 are undetermined (SHPO 2025). NRHP listed sites within the vicinity of the study corridor area are shown on **Exhibit 16 (Attachment 1)**. If improvement options are forwarded from this study, a cultural resources survey of the area of potential affect will be completed for unrecorded historic and archaeological properties. Potential direct and indirect effects to NRHP-eligible properties within the area of potential effect would be considered under Section 106 of the NHPA.

## 4.4 Section 4(f) Resources

Section 4(f) of the United States Department of Transportation Act of 1966, was enacted to protect publicly-owned parks, recreation areas, wildlife and waterfowl refuges, and public and private historic sites of local, state, and national significance. Before approving a federally-funded project that uses a Section 4(f) property, FHWA must determine that there is no feasible and prudent alternative that avoids the Section 4(f) resource and that the project includes all possible planning to minimize harm; or FHWA makes a finding that the project has a de minimis (minor) impact on the Section 4(f) property. Acquisition of new right-of-way is one type of use of a Section 4(f) property that will trigger a Section 4(f) review if publicly-owned resources or historic properties are present.

There are multiple public open spaces, one park, and several trails/multi-use paths within the study corridor area; however, no wildlife and waterfowl refuges were identified. Additionally, there are 17 NRHP-listed sites and multiple NRHP-eligible or undetermined sites within the study corridor area. If improvement options are forwarded from this study, a determination of effects will be made under Section 106 of the NHPA. A Section 106 determination of "no adverse effect" or "no historic properties affected" would result in a de minimis impact. An "adverse effect" determination is a Section 4(f) use that triggers additional FHWA evaluation. Furthermore, should an action result from this study, 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 would be necessary, and a determination of temporary occupancy, de minimis, or adverse effect would be made, all of which would require additional MDT and/or FHWA evaluation.

## 4.5 Section 6(f) Resources

The National Land and Water Conservation Fund (LWCF) Act, or Section 6(f), was enacted to preserve, develop, and assure the quality and quantity of outdoor recreation resources. Section 6(f) protection applies to all projects that impact recreational lands purchased or improved with LWCF funds. The Secretary of the Interior must approve any conversion of a LWCF property to a use other than public, outdoor recreation.

The Montana State Parks list of projects funded by LWCF within Yellowstone County was reviewed, and no Section 6(f) properties/resources were identified. The closest Section 6(f) site is Dick Logan Park (also identified as Billings Logan Park), which is approximately 1.6 miles east of the study corridor area. Future LWCF grant funding would need to be reviewed if projects move forward to ensure no Section 6(f) sites are impacted.

## 4.6 Noise

Project construction and operation of a traffic facility can cause increases in noise levels that may affect sensitive noise receivers in the area. Type I projects involve construction of a highway on a new location or the physical alteration of an existing highway, which significantly changes either the horizontal or vertical alignment or increases the number of through-traffic lanes. These types of projects can potentially increase noise impacts in an 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.

## 4.7 Visual Resources

The visual resources of an area include landforms, vegetation, water features, and physical modifications caused by human activities that give the landscape its visual character and aesthetic qualities. Visual resources are typically assessed based on the landscape character (what is seen), visual sensitivity (human preferences and values regarding what is seen), scenic integrity (degree of intactness and wholeness in landscape character), and landscape visibility (relative distance of seen areas) of a geographically defined view shed.

The study corridor area is characterized as primarily agricultural or undeveloped lands to the northwest, with mid-density residential areas to the south. The Billings Logan International Airport is located along the northeastern extents of the study corridor area, which is surrounded by commercial and industrial areas. Distant views of Billings and Beartooth Range are visible far 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.

# 5.0 CONCLUSIONS

This environmental scan report identifies physical, biological, social, and cultural resources within the study corridor area that may be affected by potential future improvements. Project-level environmental analysis would be required for any improvements forwarded from this study. Information contained in this report may be used to support future NEPA/MEPA environmental documentation.

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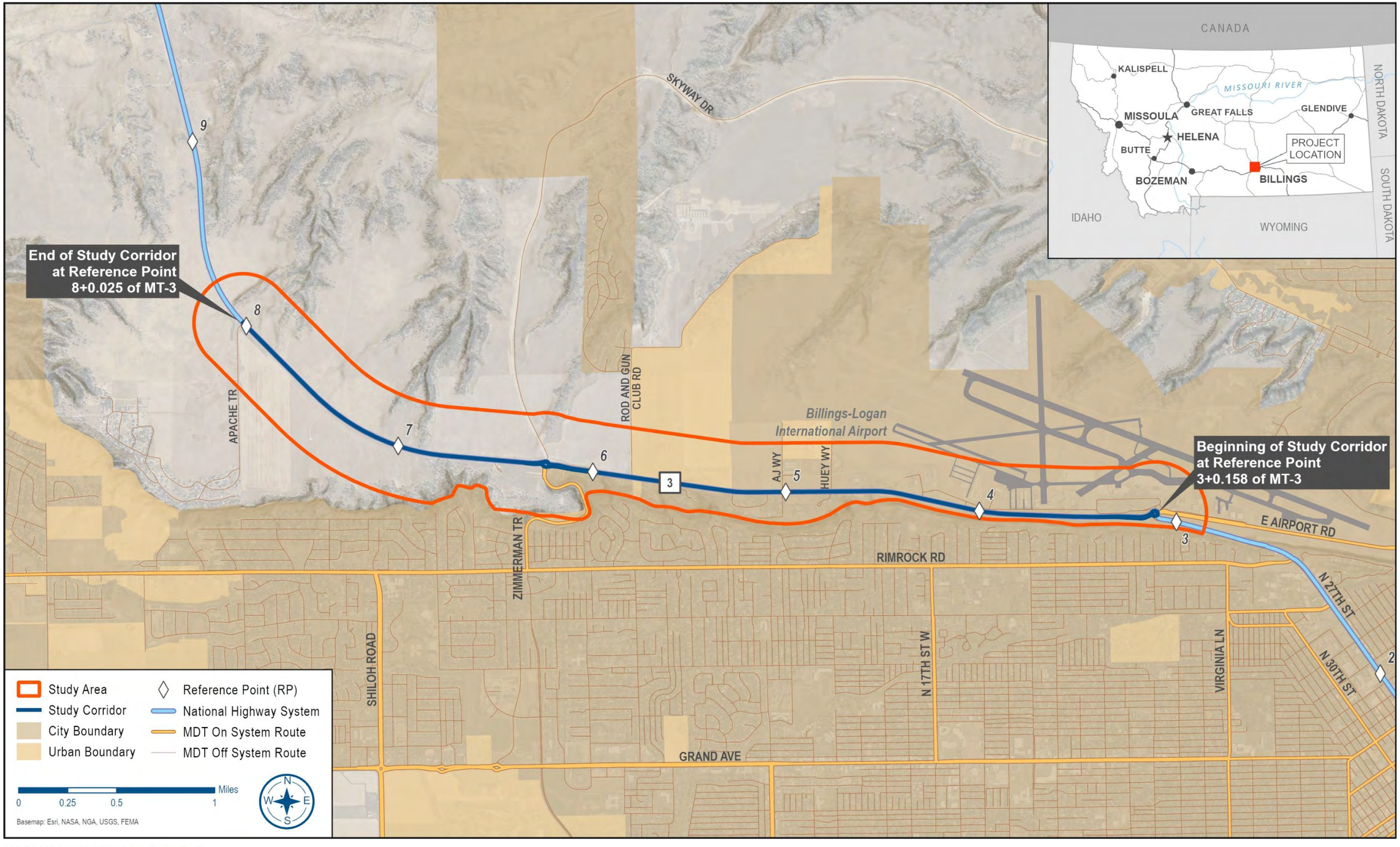
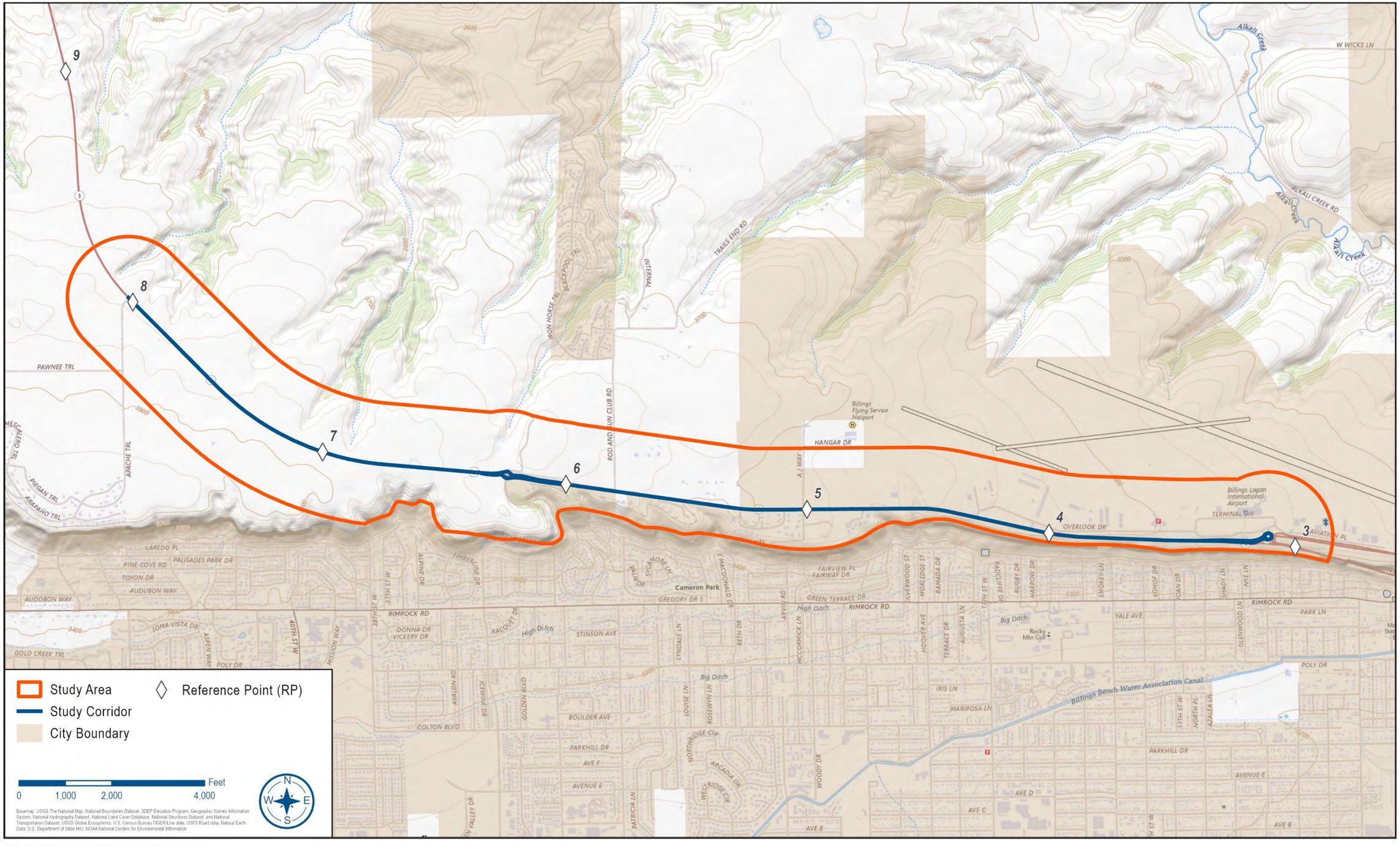
# ATTACHMENT 1: STUDY CORRIDOR AREA EXHIBITS




MONTANA 3 BILLINGS CORRIDOR STUDY

**Exhibit 1 – Study Corridor Location**




MONTANA 3 BILLINGS CORRIDOR STUDY

**Exhibit 2 – Study Corridor Topography**

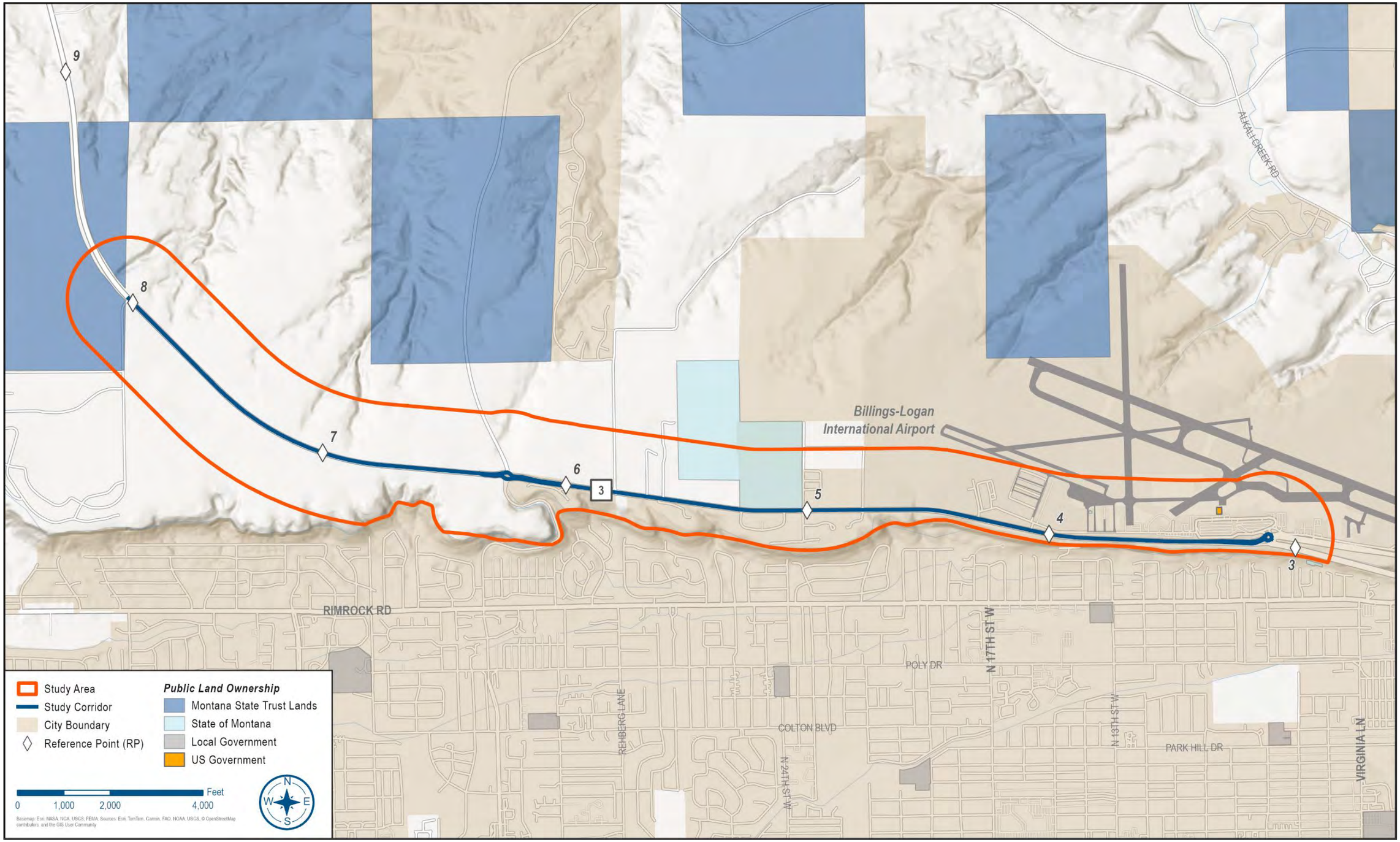





**Exhibit 3 – Public Land Ownership**

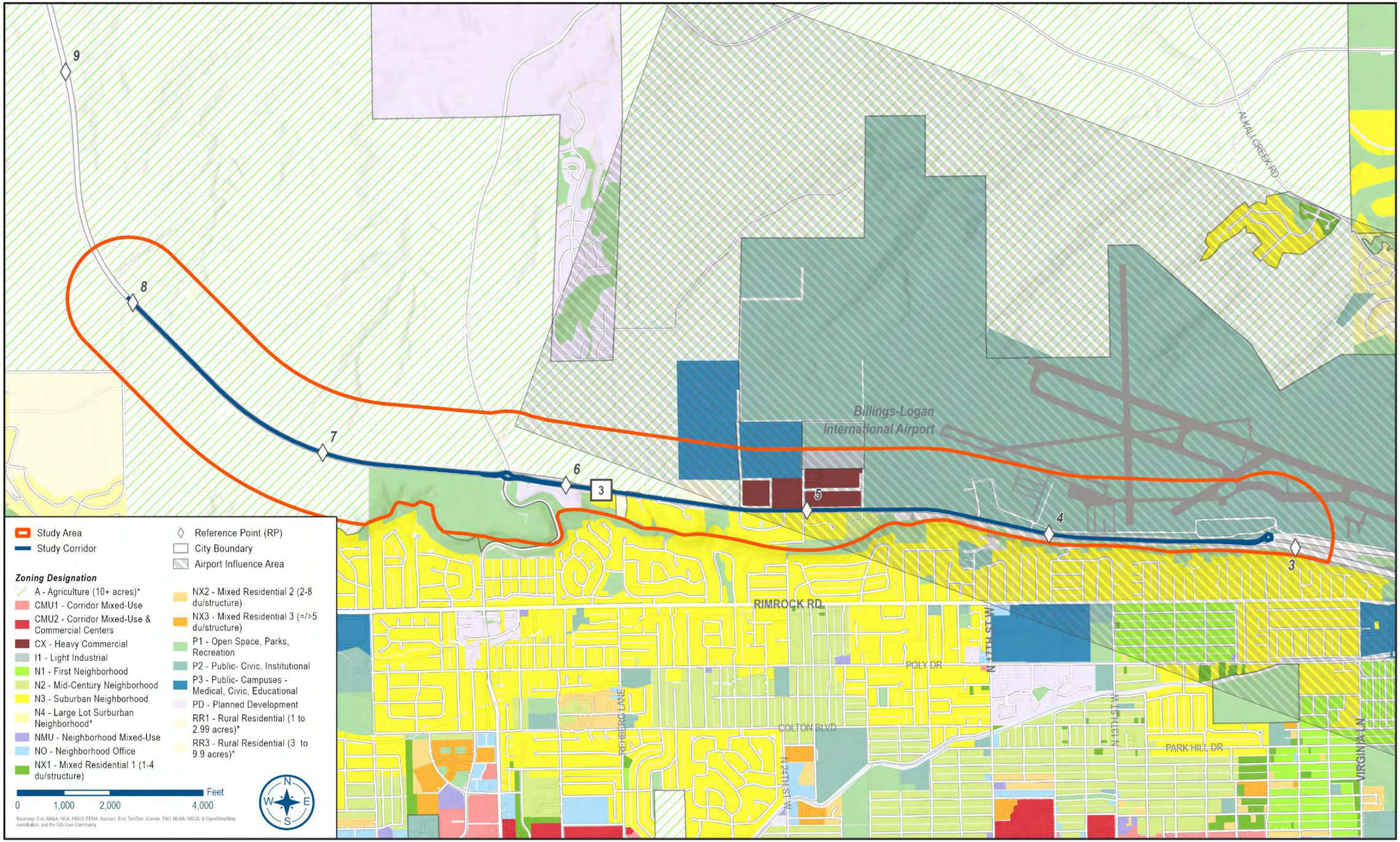
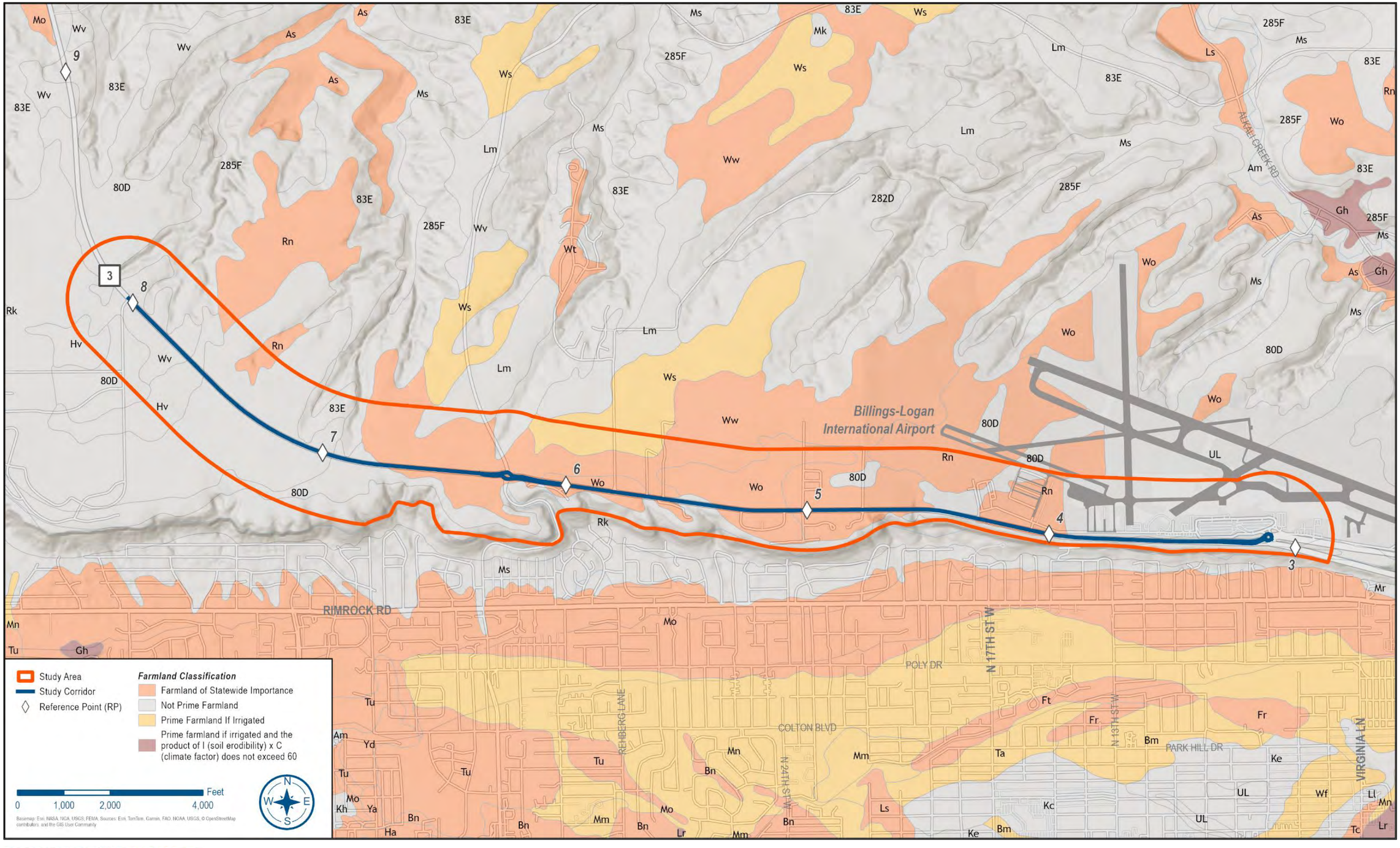





**Exhibit 4 – Zoning Designations**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Study Corridor
Reference Point (RP)
Farmland Classification
Farmland of Statewide Importance
Not Prime Farmland
Prime Farmland If Irrigated
Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
Feet
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Billings-Logan International Airport
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POLY DR
COLTON BLVD
PARK HILL DR
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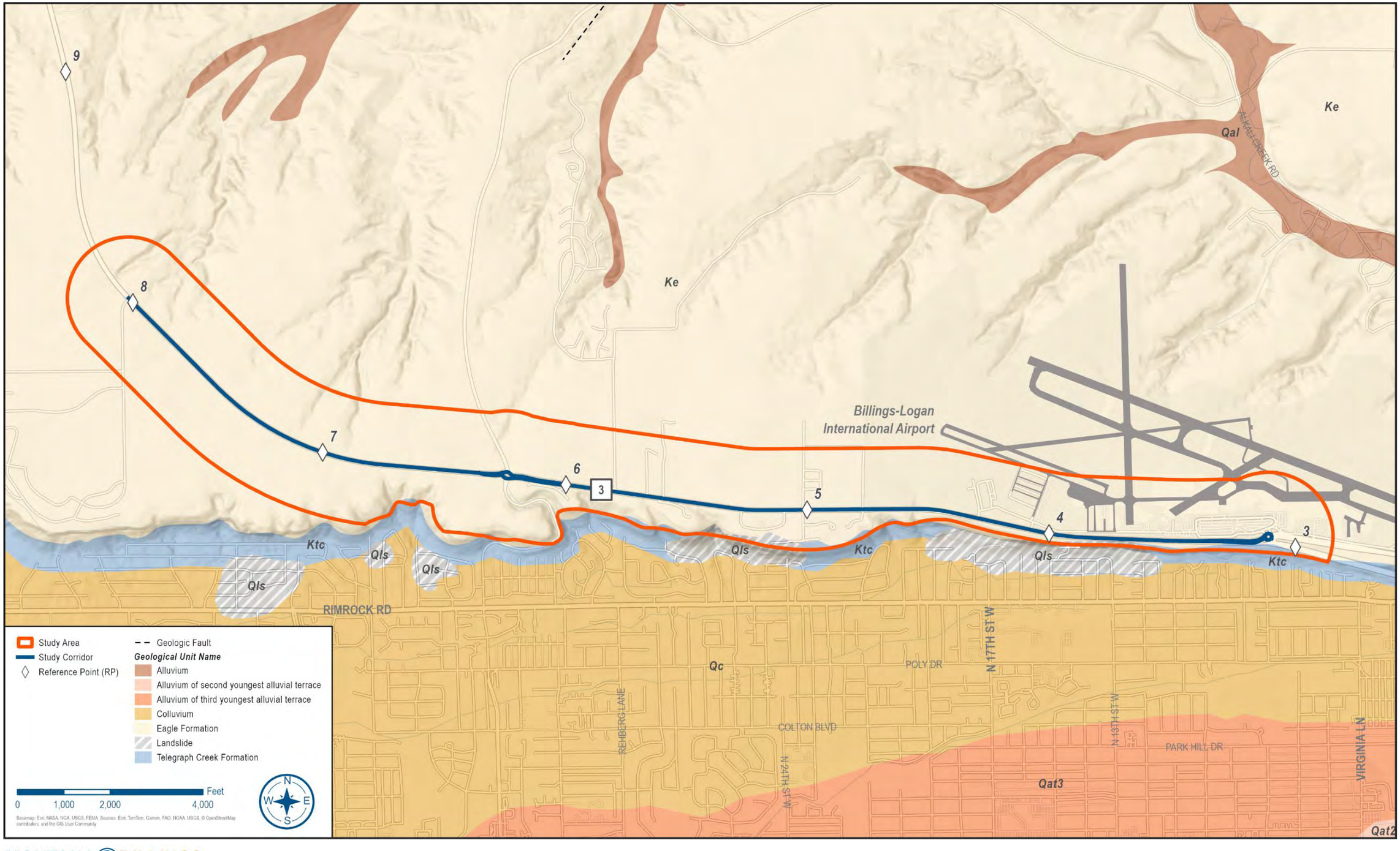
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Study Area
Study Corridor
Reference Point (RP)
Geologic Fault
Geological Unit Name
Alluvium
Alluvium of second youngest alluvial terrace
Alluvium of third youngest alluvial terrace
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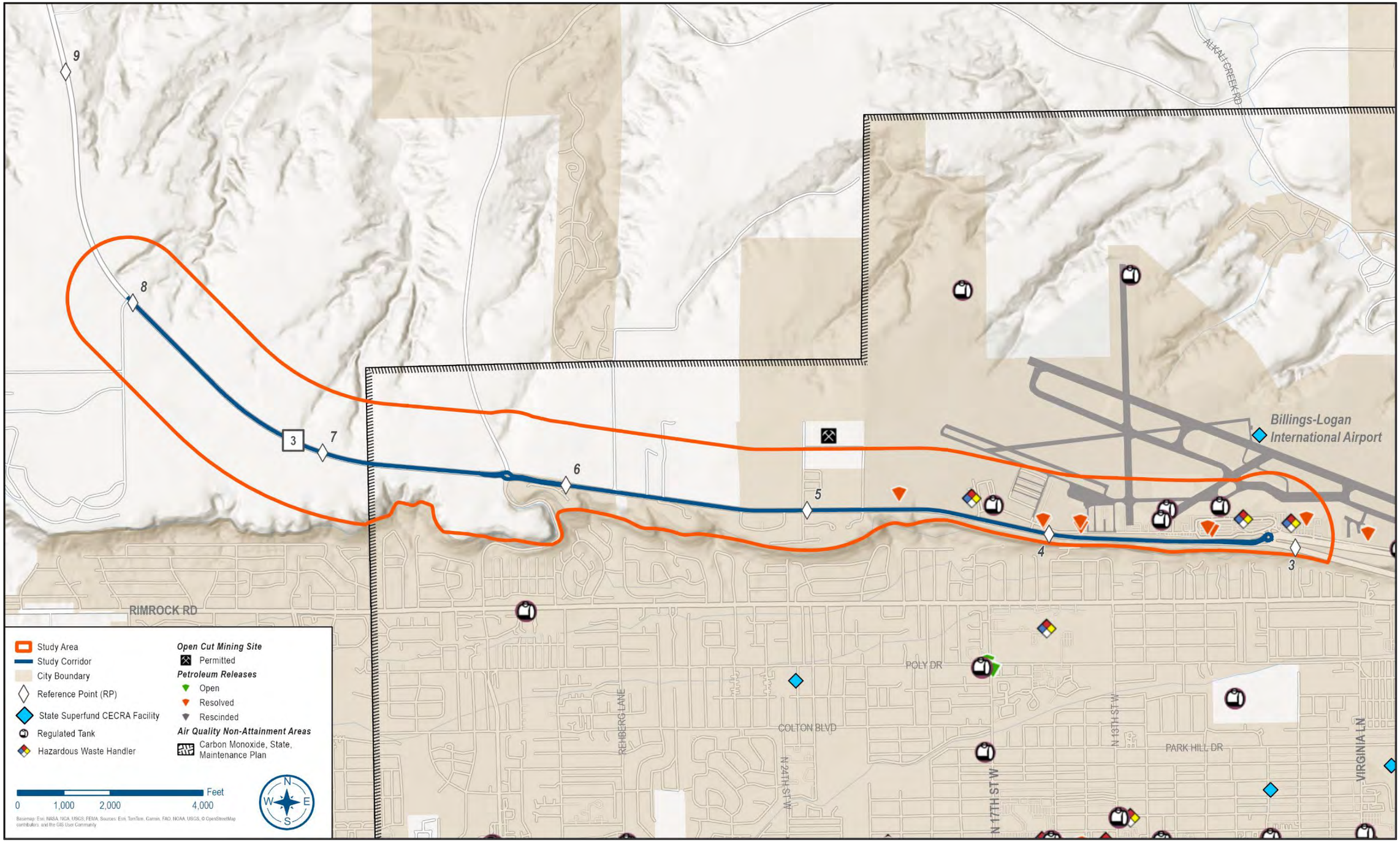
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Study Area
Study Corridor
City Boundary
Reference Point (RP)
State Superfund CECRA Facility
Regulated Tank
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Open Cut Mining Site
Permitted
Petroleum Releases
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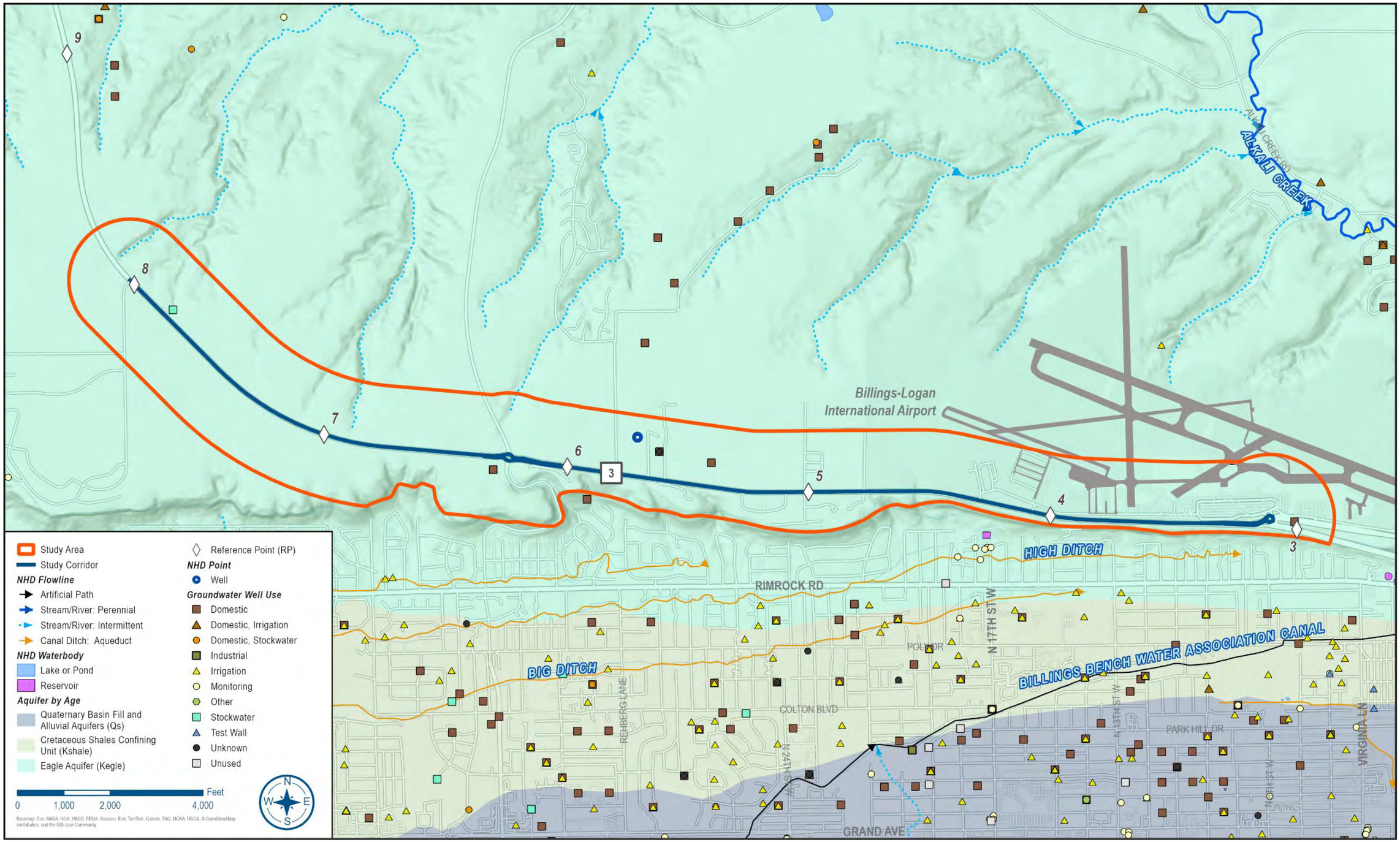
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PARK HILL DR
VIRGINIA LN
GRAND AVE
Study Area
Study Corridor
NHD Flowline
Artificial Path
Stream/River: Perennial
Stream/River: Intermittent
Canal Ditch: Aqueduct
NHD Waterbody
Lake or Pond
Reservoir
Aquifer by Age
Quaternary Basin Fill and Alluvial Aquifers (Qs)
Cretaceous Shales Confining Unit (Kshale)
Eagle Aquifer (Kegle)
Reference Point (RP)
NHD Point
Well
Groundwater Well Use
Domestic
Domestic, Irrigation
Domestic, Stockwater
Industrial
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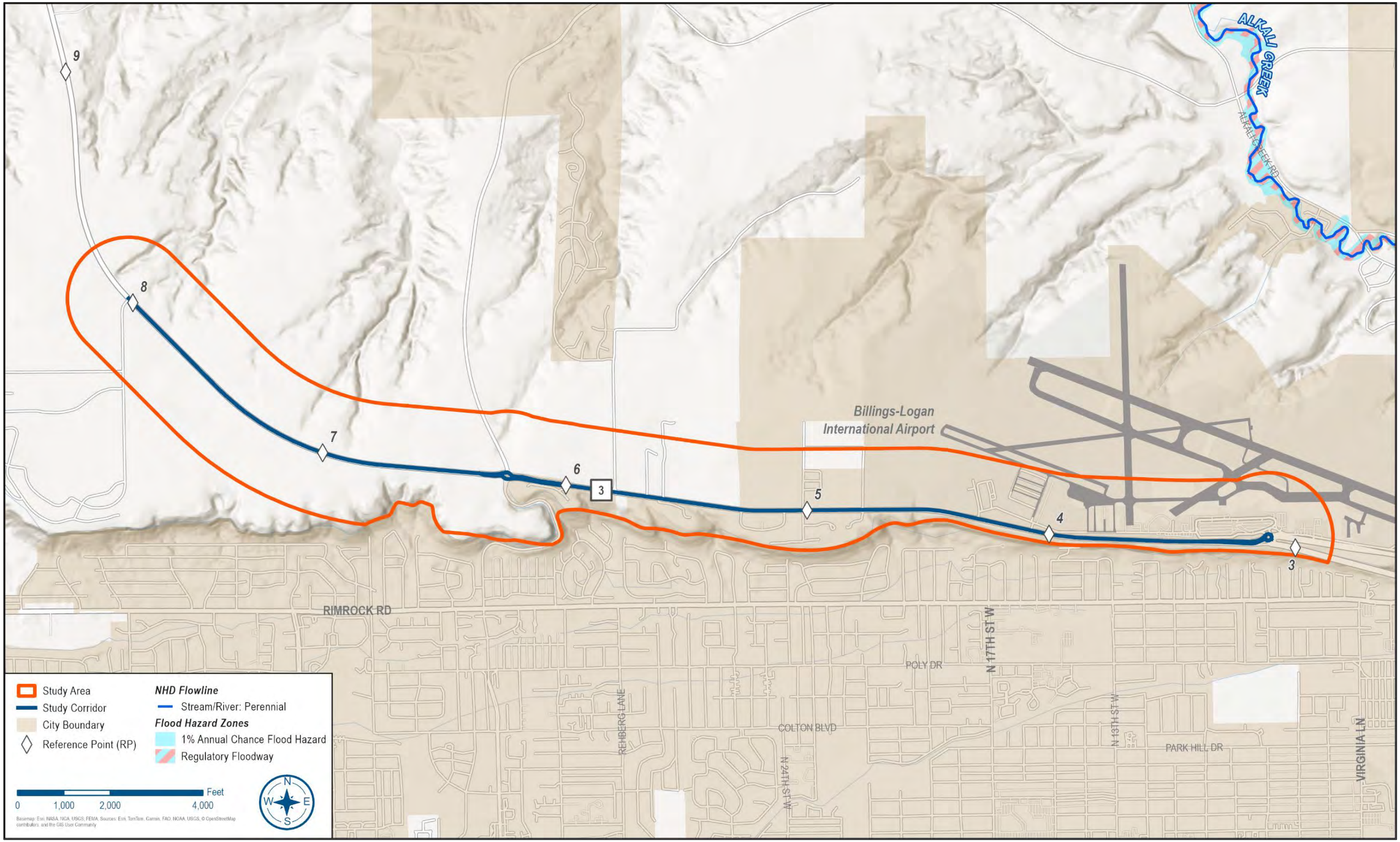
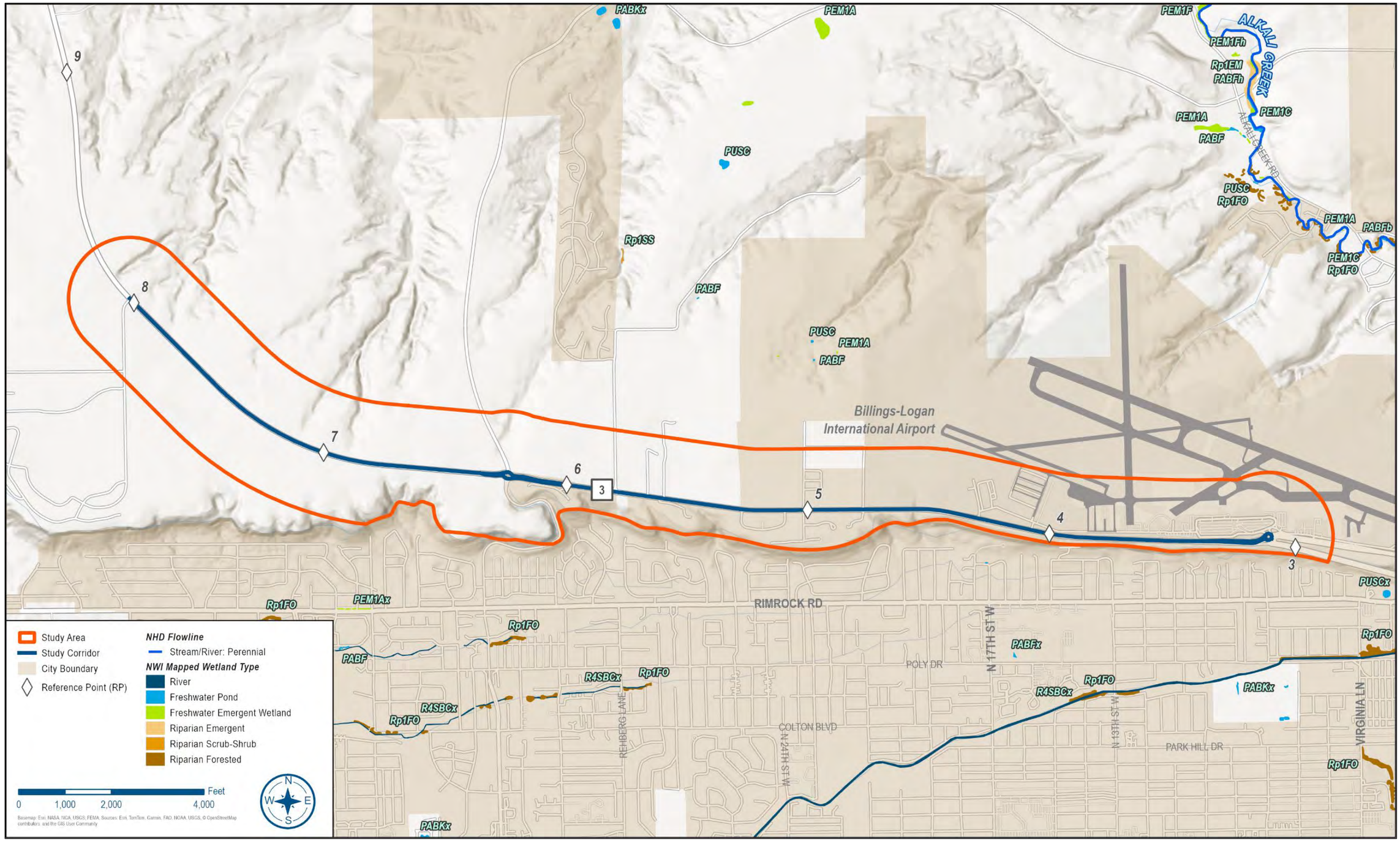


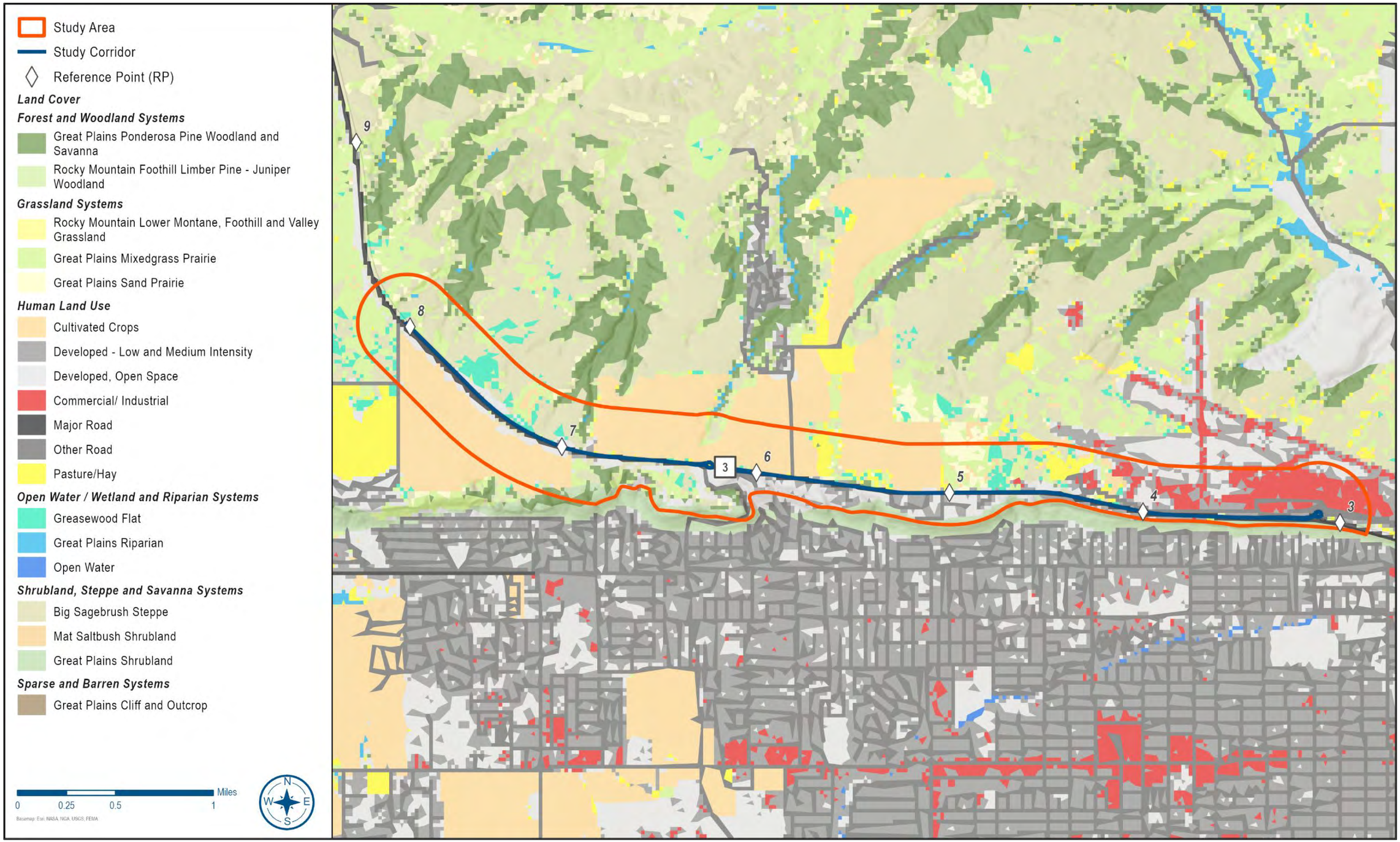

MONTANA 3 BILLINGS CORRIDOR STUDY

**Exhibit 9 - Floodplains**




MONTANA 3 BILLINGS CORRIDOR STUDY

**Exhibit 10 - Wetlands**


Study Area
Study Corridor
Reference Point (RP)
Land Cover
Forest and Woodland Systems
Great Plains Ponderosa Pine Woodland and Savanna
Rocky Mountain Foothill Limber Pine - Juniper Woodland
Grassland Systems
Rocky Mountain Lower Montane, Foothill and Valley Grassland
Great Plains Mixedgrass Prairie
Great Plains Sand Prairie
Human Land Use
Cultivated Crops
Developed - Low and Medium Intensity
Developed, Open Space
Commercial/ Industrial
Major Road
Other Road
Pasture/Hay
Open Water / Wetland and Riparian Systems
Greasewood Flat
Great Plains Riparian
Open Water
Shrubland, Steppe and Savanna Systems
Big Sagebrush Steppe
Mat Saltbush Shrubland
Great Plains Shrubland
Sparse and Barren Systems
Great Plains Cliff and Outcrop
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Basemap: Esri, NASA, NGA, USGS, FEMA
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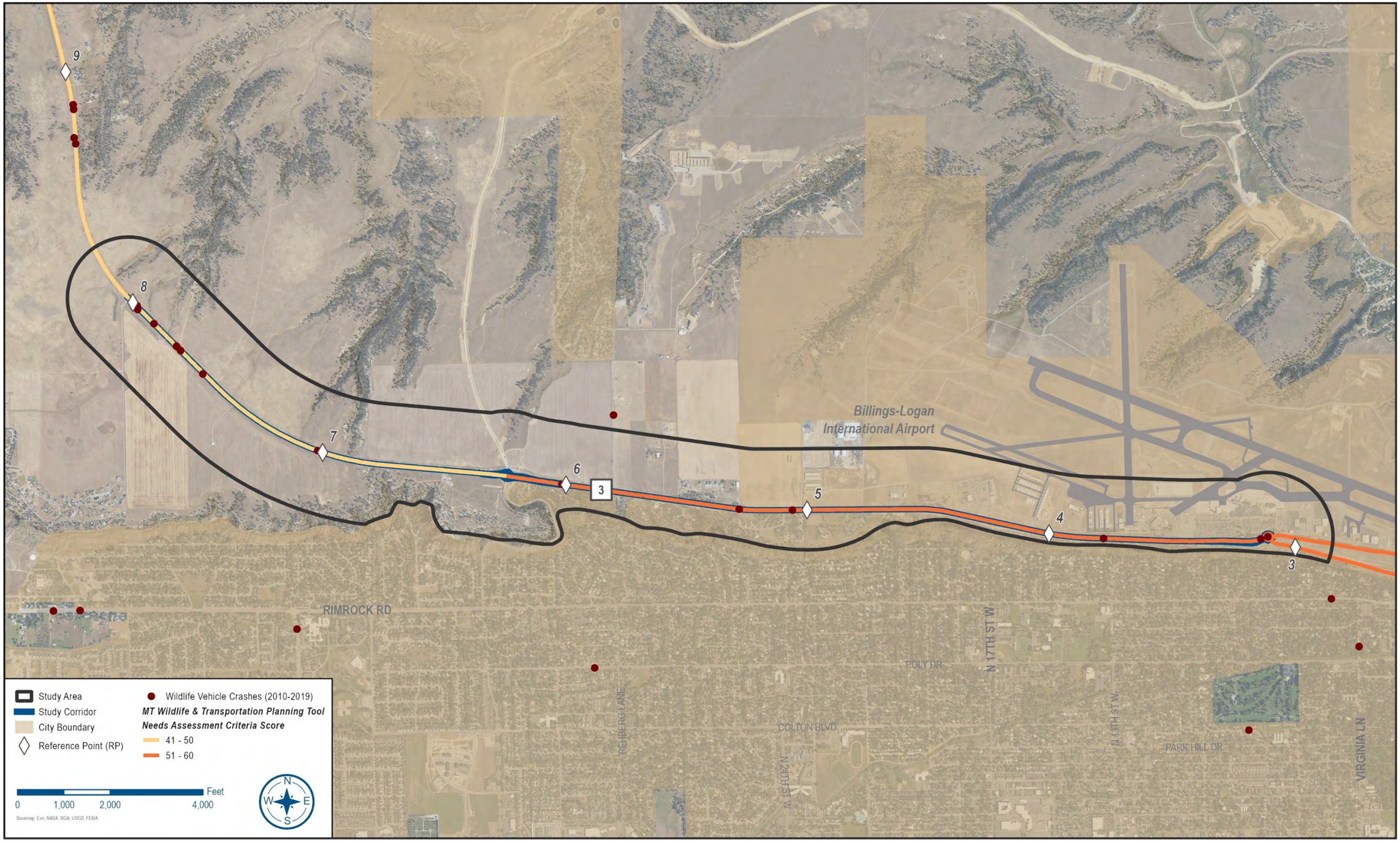
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International Airport
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PARK HILL DR
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N 13TH ST W
N 21ST ST W
REHBERG LANE
VIRGINIA LN
Study Area
Study Corridor
City Boundary
Reference Point (RP)
Wildlife Vehicle Crashes (2010-2019)
MT Wildlife & Transportation Planning Tool
Needs Assessment Criteria Score
41 - 50
51 - 60
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Basemap: Esri, NASA, NGA, USGS, FEMA
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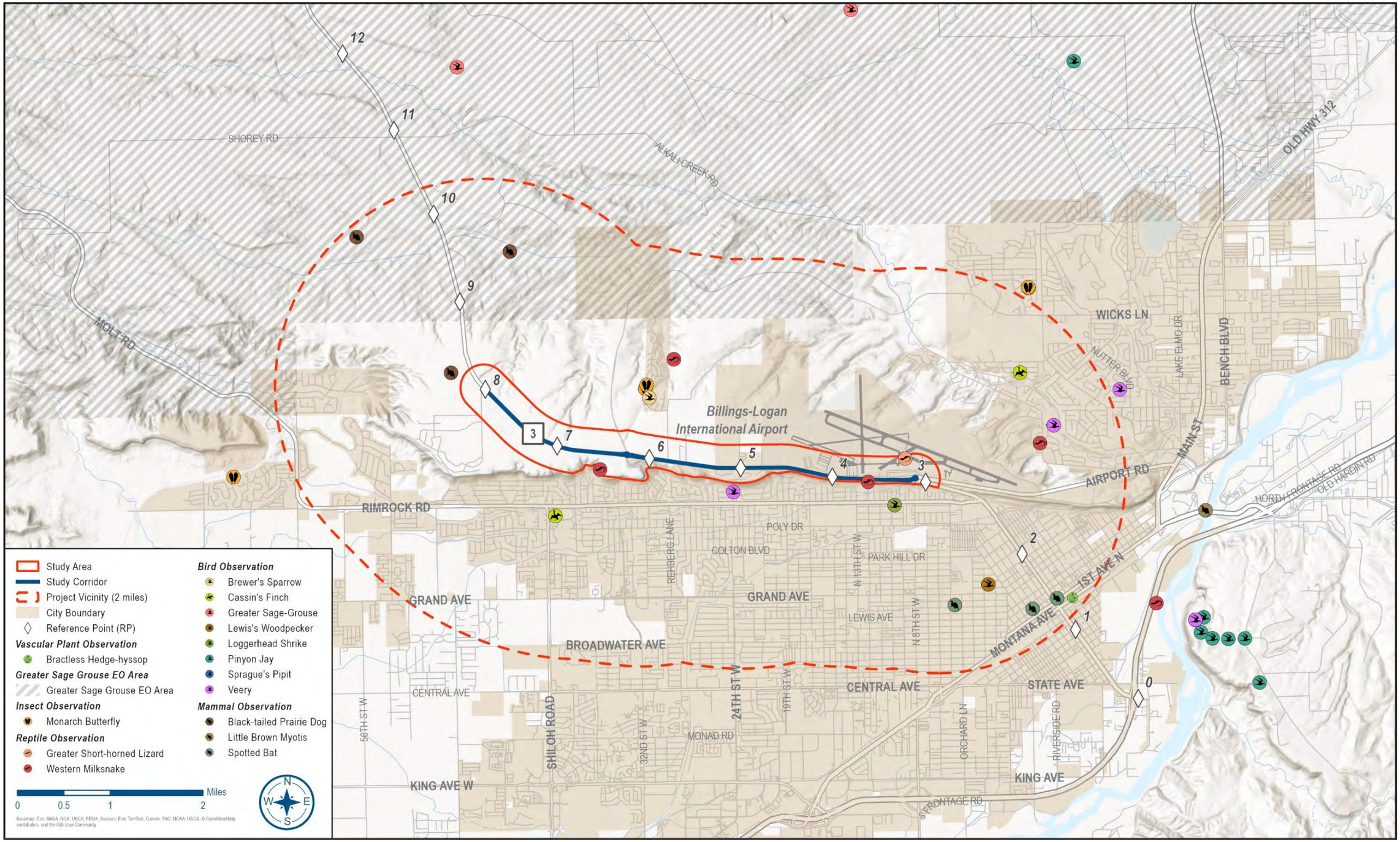
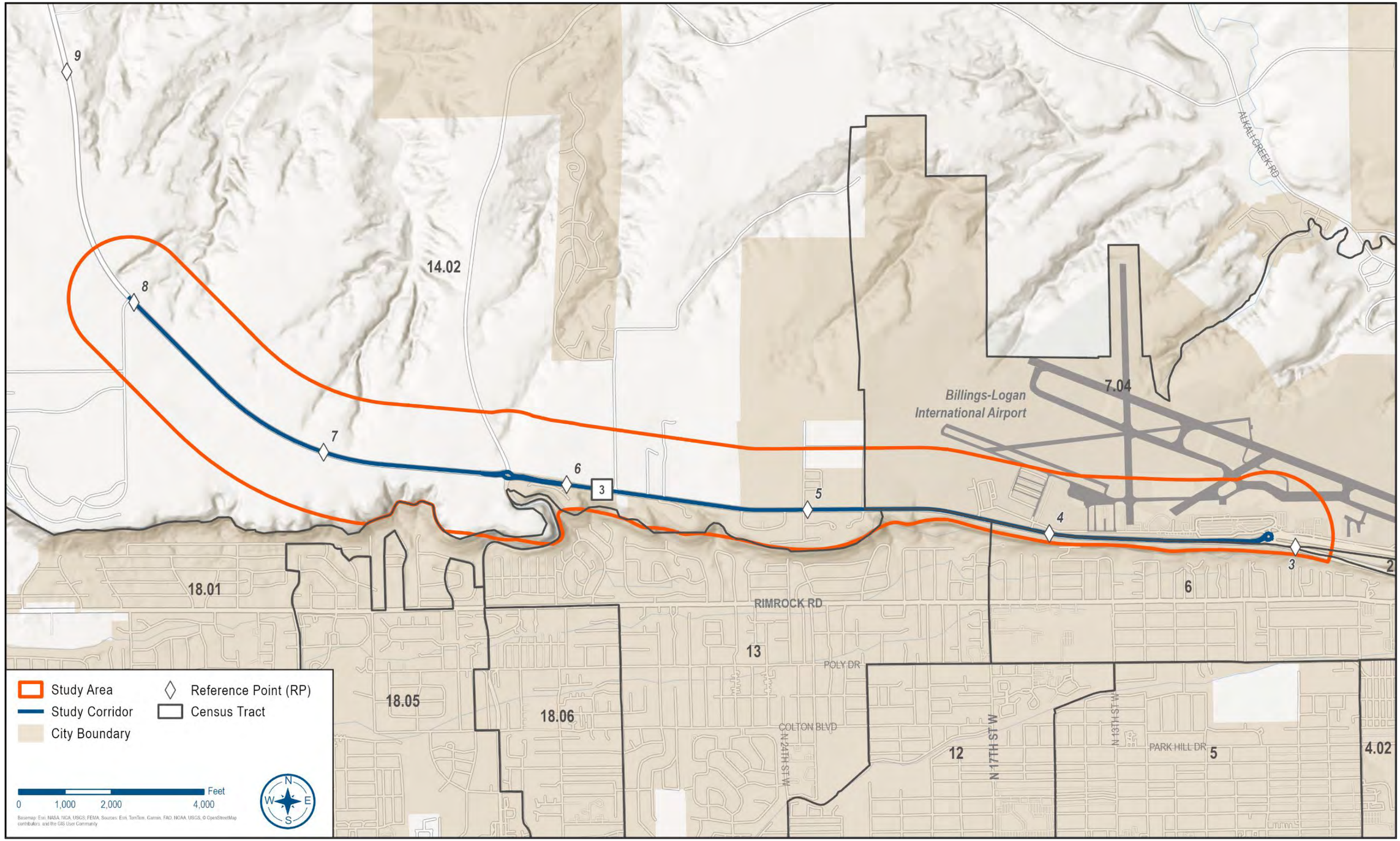


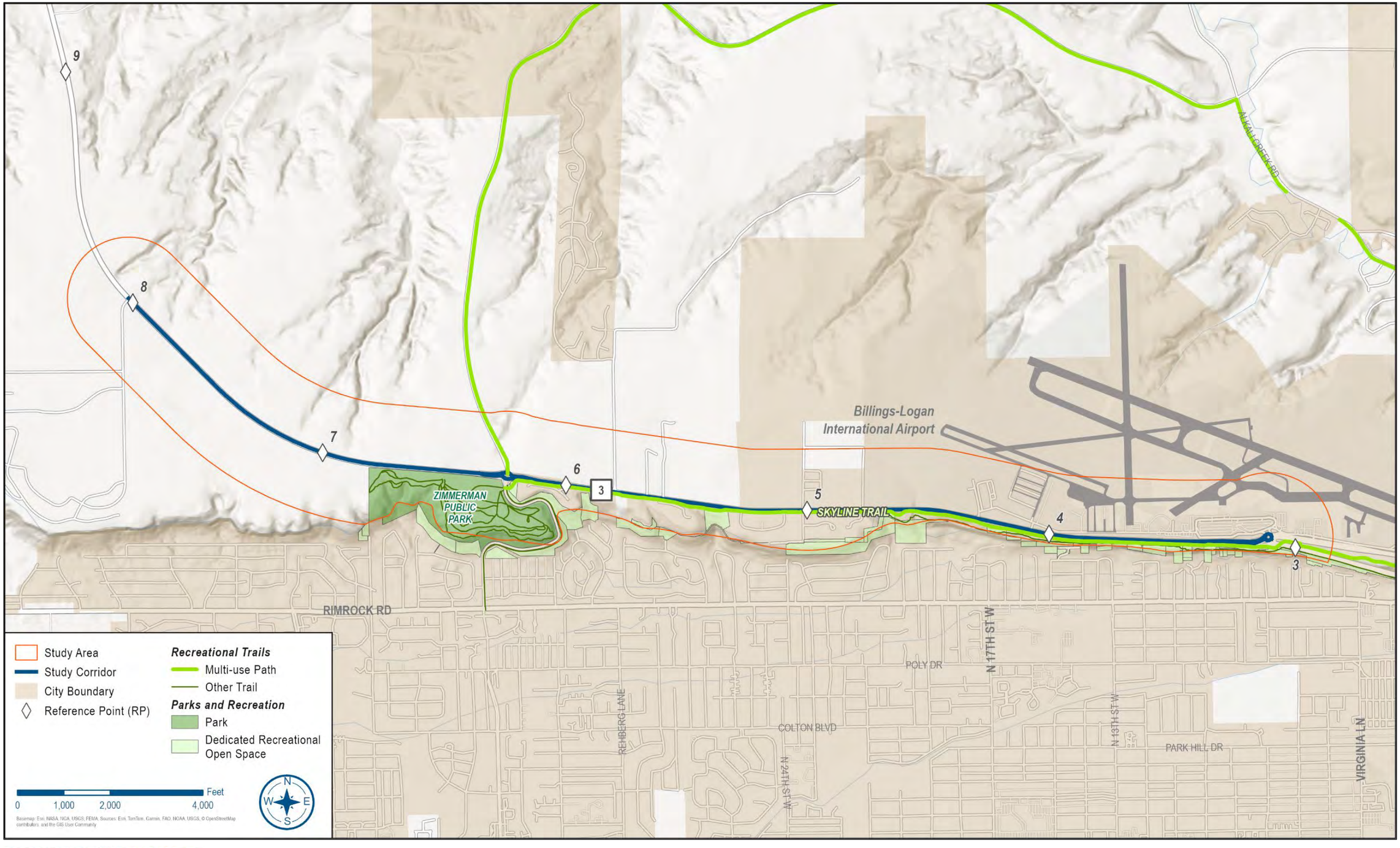



**Exhibit 13 – Species of Concern**




MONTANA 3 BILLINGS CORRIDOR STUDY

**Exhibit 14 – Census Tracts**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ZIMMERMAN PUBLIC PARK
SKYLINE TRAIL
Billings-Logan International Airport
ALKALI CREEK RD
RIMROCK RD
POLY DR
N 17TH ST W
N 13TH ST W
COLTON BLVD
REHBERG LANE
N 24TH ST W
PARK HILL DR
VIRGINIA LN
Study Area
Study Corridor
City Boundary
Reference Point (RP)
Recreational Trails
Multi-use Path
Other Trail
Parks and Recreation
Park
Dedicated Recreational Open Space
Feet
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2,000
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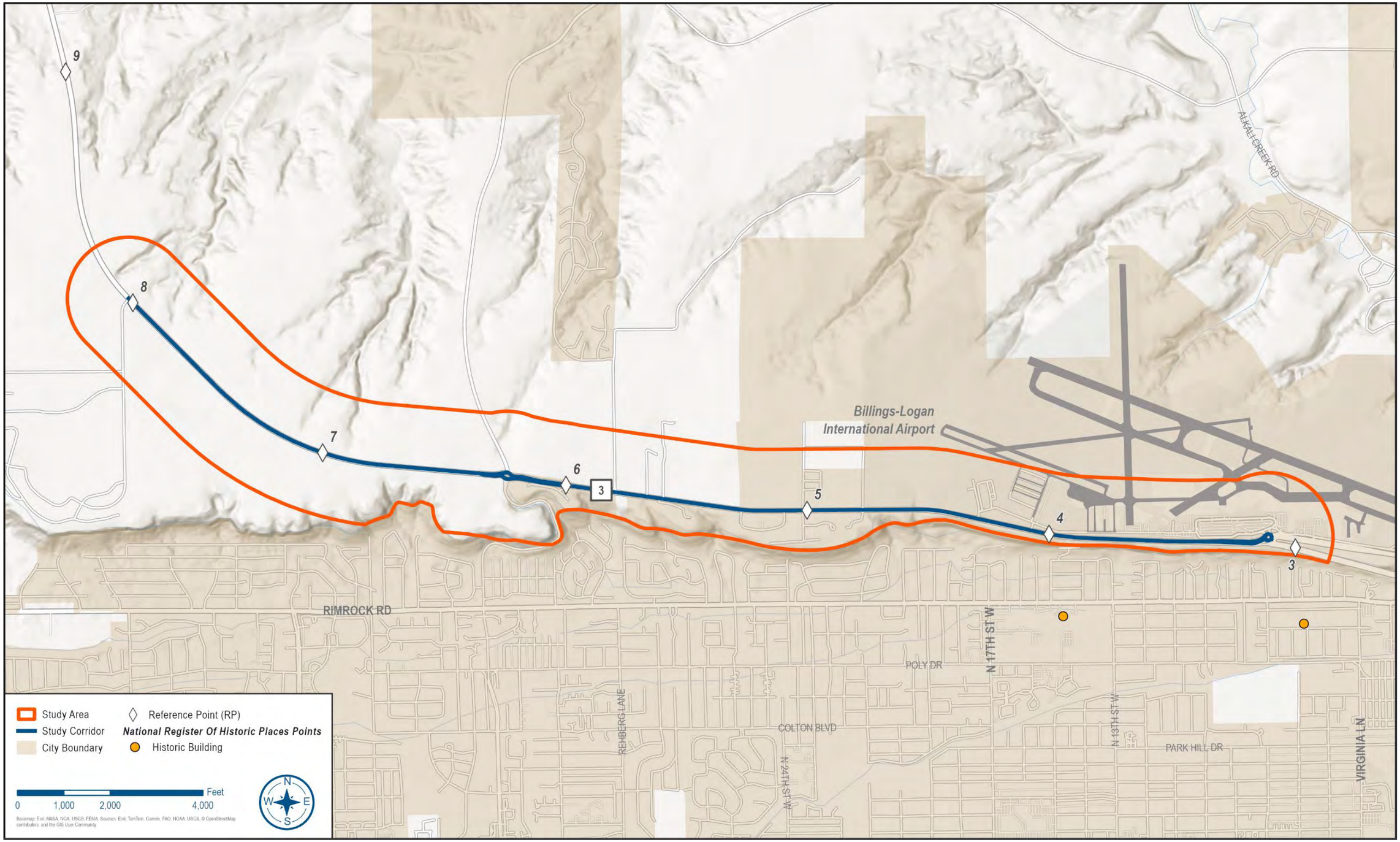
Basemap: Esri, NASA, NGA, USGS, FEMA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community




MONTANA 3 BILLINGS CORRIDOR STUDY

**Exhibit 16 – National Register of Historic Places**