



# Indirect and Cumulative Effects Analysis

## ***Northwest Billings Connector and Marathon Trail Project***

*Yellowstone County, Montana*  
September 1, 2021

Prepared for:



Prepared by:



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# 1 Introduction

In 2020, the City of Billings was awarded \$11.7 million in funding from the Federal Better Utilizing Investments to Leverage Development, or BUILD, Transportation Discretionary Grant program to fund transportation improvements in the northwest Billings area. The overall scope of the project includes design and construction of five miles of new collector roadway and eight miles of trails.

The Billings Metropolitan Planning Organization (MPO) identified the need to conduct a corridor planning study for the future Inner Belt Loop Corridor in Billings and Yellowstone County. The Inner Belt Loop Corridor Planning Study was completed in November 2020 and involved a public planning and design process for the project area that was used to identify future land use planning and regulations, transportation elements, and plans for amenities through community and stakeholder engagement. The analysis and recommendations within the Inner Belt Loop Corridor Study will inform the final design and construction of the roadway and set the stage for land development to occur along the corridor in a way that is consistent with the principles outlined in the 2016 City of Billings Growth Policy.

As a federally funded project, the proposed Northwest Billings Connector and Marathon Trail Project is required to comply with the requirements of the National Environmental Policy Act, or NEPA. The proposed project is anticipated to meet the criteria for approval as a Categorical Exclusion (CE) under the provisions of 23 CFR 771.117. The environmental document will utilize the standard CE Documentation form developed by the Montana Department of Transportation (MDT). The proposed project has potential to result in induced growth effects due to the nature of the project. The purpose of this technical report is to assess the potential indirect effects of induced growth that may occur as a result of the federally funded project and provide the detailed analysis as referenced in Part 6.11, Induced Growth Analysis, of the MDT CE form.

## 1.1 Project Location

The project area is located on the northern edge of Billings, Montana and is partially located within the City of Billings limits. The project area is approximately bound by the Alkali Creek Road on the east and Montana Highway 3 (MT-3) to the south. The project area is located within portions of Section 18 of Township 1 North, Range 26 East and Sections 13, 14, 15, 22, and 27 of Township 1 North, Range 25 East. Figure 1-1 shows the project area and specific project elements.

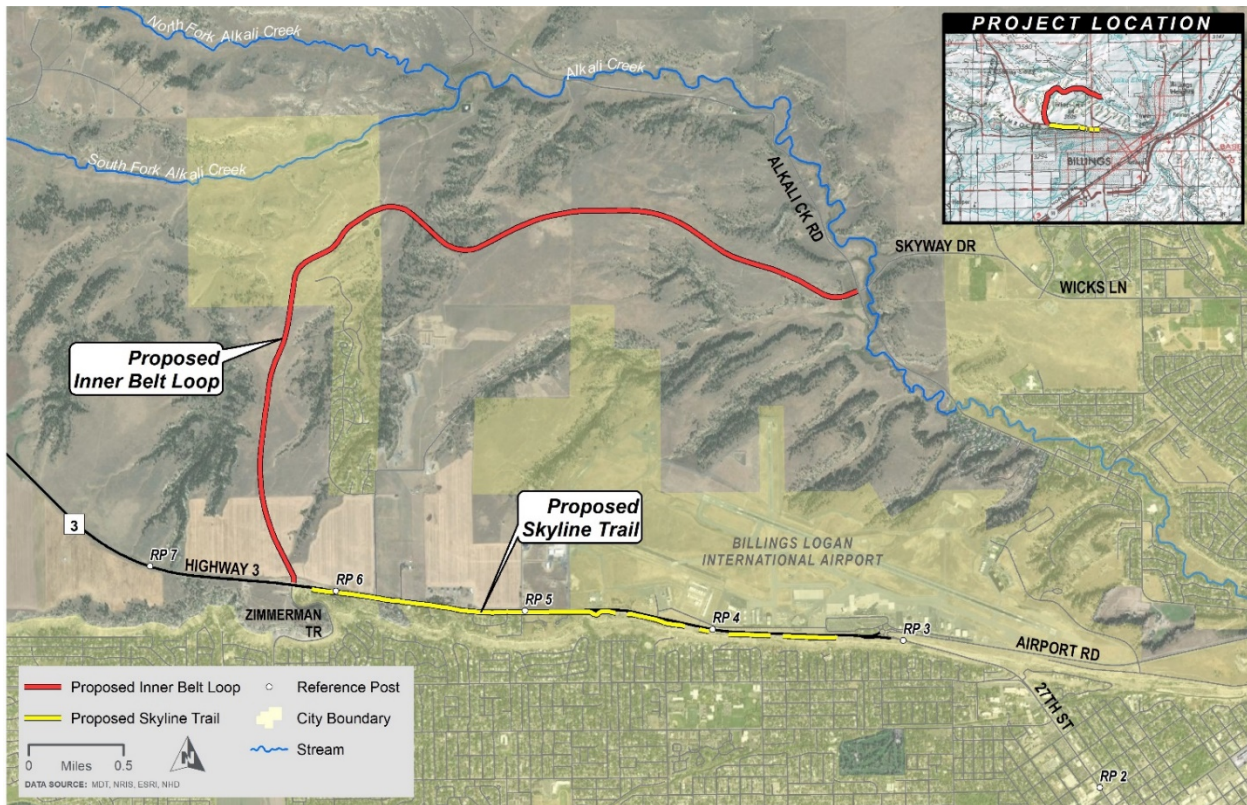


Figure 1-1. Northwest Billings Connector and Marathon Trail Project Area

## 1.2 Project Purpose

The project purpose as outlined in the 2020 BUILD grant application is to use federal funds to construct the transportation infrastructure needed to:

- Enhance movement of goods and people between the two developing areas of Billings, while reducing traffic and congestion on existing roads connecting the downtown area with Billings Heights (especially the constrained Main Street artery).
- Create an additional emergency route for the northern Billings Heights neighborhoods, which currently lacks the means to evacuate in the event of a disaster.
- Strengthen multimodal transportation infrastructure and provide safe non-motorized transportation options.
- Provide improved access to future development areas in northwest Billings to guide development closer to the city center rather than the western fringe of the city.

## 1.3 Project Elements

The proposed Northwest Billings Connector and Marathon Trail Project includes two main project elements—the Inner Belt Loop and the Skyline Trail—as described in the 2020 grant application (see Figure 1-1 above) and are described below.

1. **The Inner Belt Loop:** This is a five-mile stretch of two-lane rural section roadway connecting MT-3/Zimmerman Trail Road to Alkali Creek Road/Skyway Drive accompanied by a separated multi-use trail. It will create a new connection between the Heights and West End.

This proposed road has also been referred to as the Northwest Billings Connector. The proposed Inner Belt Loop road consists of approximately five miles of two-lane roadway with two 12-foot lanes and six-foot shoulders. The paved surface width is 28 feet and the roadway section is 36 feet wide. A separated 10-foot-wide multi-use path is proposed along the entire length of the Inner Belt Loop. The proposed roadway will begin at the existing roundabout at MT-3 and Zimmerman Trail and connect to the Alkali Creek Road at its intersection with the recently constructed Skyway Drive. The right-of-way width for the new road and trail is generally 90 feet wide.

2. **The Skyline Trail:** This is a 10-foot-wide multi-use path that will begin at the existing multi-use trail at the existing MT-3/Zimmerman Trail roundabout and extend approximately three miles eastward on the south side of MT-3 to connect with an existing trail system located near the entrance to the Billings Logan International Airport.

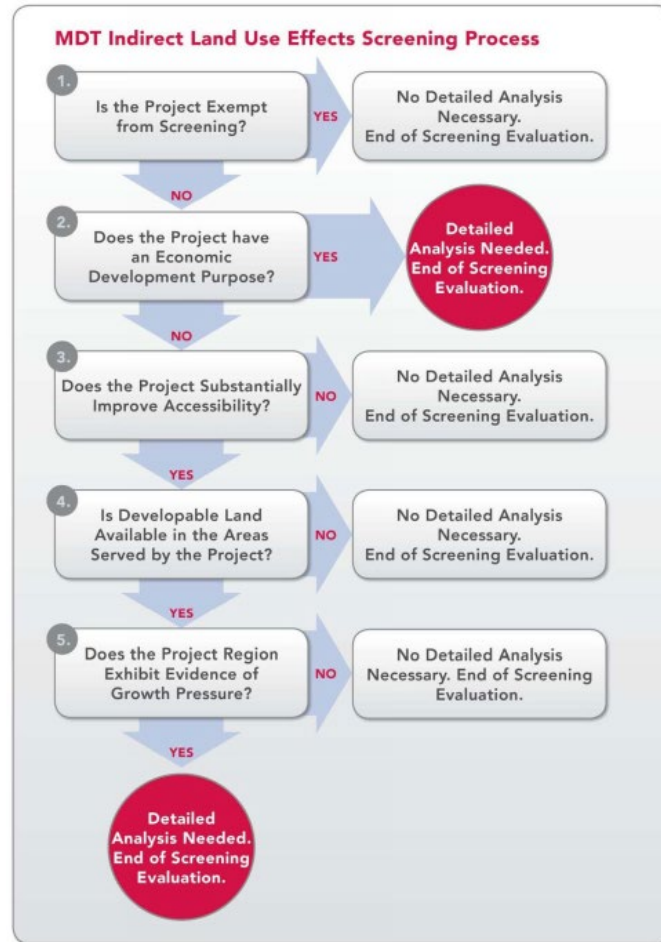
## 2 Indirect Land Use Effects

The proposed project was assessed for its potential for project-influenced growth (e.g., increased population and/or traffic, changes in land use, etc.). Potential indirect land use effects resulting from the proposed project were evaluated consistent with the MDT publication *Assessing the Extent and Determinants of Induced Growth* (Tidd et al. 2013).

### 2.1 Indirect Effects Screening Process

Tidd et al. provides a screening process to assess a project's potential to result in indirect changes in land use. Particularly, the Indirect Effects Desk Reference (in Appendix 1 of the report) provides an initial screening framework to determine if the proposed project warrants further evaluation of indirect effect issues. Figure 2-1 provides the flowchart to the indirect land use effects screening process. The screening process is designed to continue through the flowchart until a box is reached stating no further analysis is needed or that a detailed analysis is needed.





**Figure 2-1. MDT Indirect Land Use Effects Screening Process (Source: MDT)**

The following includes a step-wise screening analysis assessing the proposed project's potential for induced growth effects.

**Step #1:** Is the Project exempt from screening? **Answer: NO.**

The proposed project is not a project type represented in Table 1, Projects Exempt from Indirect Effects Screening found in Appendix 1 of *Assessing the Extent and Determinants of Induced Growth*. The proposed project involves constructing new roads to connect to the existing road system, which will increase capacity by adding new lanes and intersections.

**Step #2:** Does the Project have an economic development purpose? **Answer: YES.**

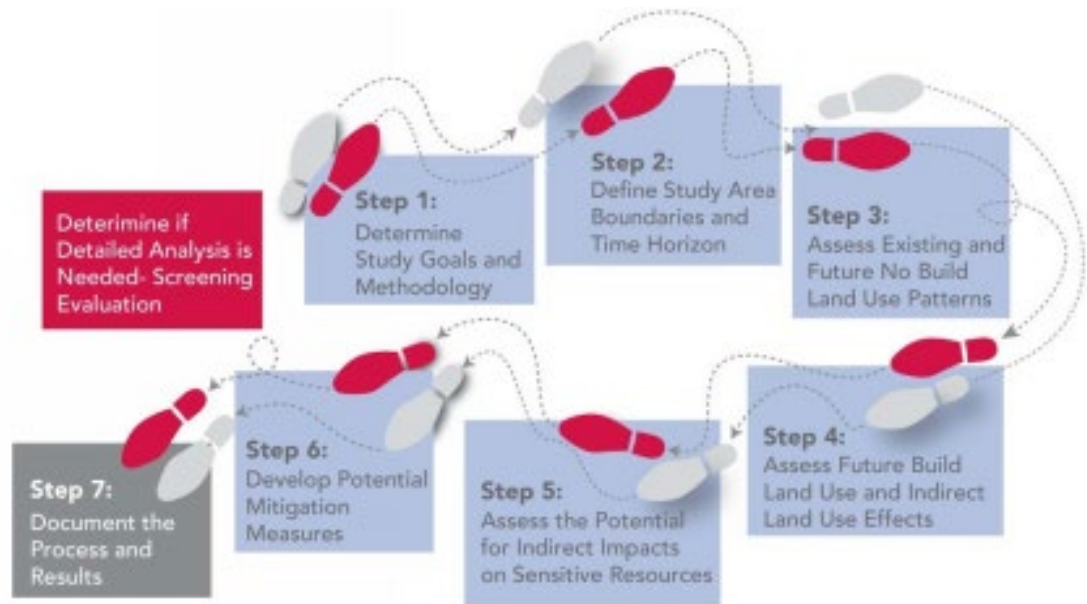
The proposed project has a stated economic development purpose as described in the 2020 BUILD grant application. Per the 2020 BUILD grant application and grant feasibility study, the proposed project would:

- Potentially generate approximately \$59.5 million per year in new economic output across the industrial, retail and service sectors.
- Create industrial sector jobs in energy and manufacturing.

Based on the answer of "yes" to Step 2, and as illustrated in Figure 2-1, a detailed analysis is required and the screening evaluation is complete. The detailed analysis is provided in the subsequent sections.

## 2.2 Detailed Analysis Framework

The detailed analysis framework is organized around the seven steps as illustrated in Figure 2-2. Notably, the MDT process differs from many national and state-specific guidance due to the inclusion of a step devoted to the assessment of the future No Build condition land use. This step was identified in Tidd et al. as an essential step to properly establish a “clean” No Build condition to forecast the potential indirect land use effects of transportation projects.



**Figure 2-2. Indirect Effects Detailed Analysis Process (Source: MDT)**

### 2.2.1 Study Goals and Methodology

The goal of this study is to provide a detailed induced growth analysis to supplement the findings within the CE environmental document. Per Part 6.11 of the CE form, a detailed analysis is necessary to identify and disclose the induced growth effects resulting from the proposed project. The proposed project is intended to generate economic growth by providing the backbone transportation infrastructure necessary to spur new residential and commercial development. To gain a better perspective on the potential for indirect effects of the project, the goals of the study include:

- Identify the potential induced residential, commercial, and industrial growth (number of houses, jobs, etc.);
- Identify the potential for induced traffic impacts and benefits on conjoining roads due to the proposed densities; and
- Identify potential mitigation measures to address changes in land use, population, and employment.

The methodology uses the guidance developed by the MDT in their publication *Assessing the Extent and Determinants of Induced Growth* (Tidd et al. 2013).

## 2.2.2 Project area Boundaries and Time Horizon

The project area utilized in this analysis is shown in Figure 1-1. The time horizon is 2040, which corresponds to the long-term transportation planning analysis conducted by the Billings Metropolitan Planning Organization (MPO). The MPO has recently updated their transportation demand model (TDM) for the long-range transportation plan to include updated population, housing, and employment projections for the project area, as well as the future transportation network of committed projects. The TDM uses the socio-economic conditions for 2040 to predict future transportation demand for the urban area. Based on the current MPO TDM update, the time horizon of 2040 is appropriate for this analysis.

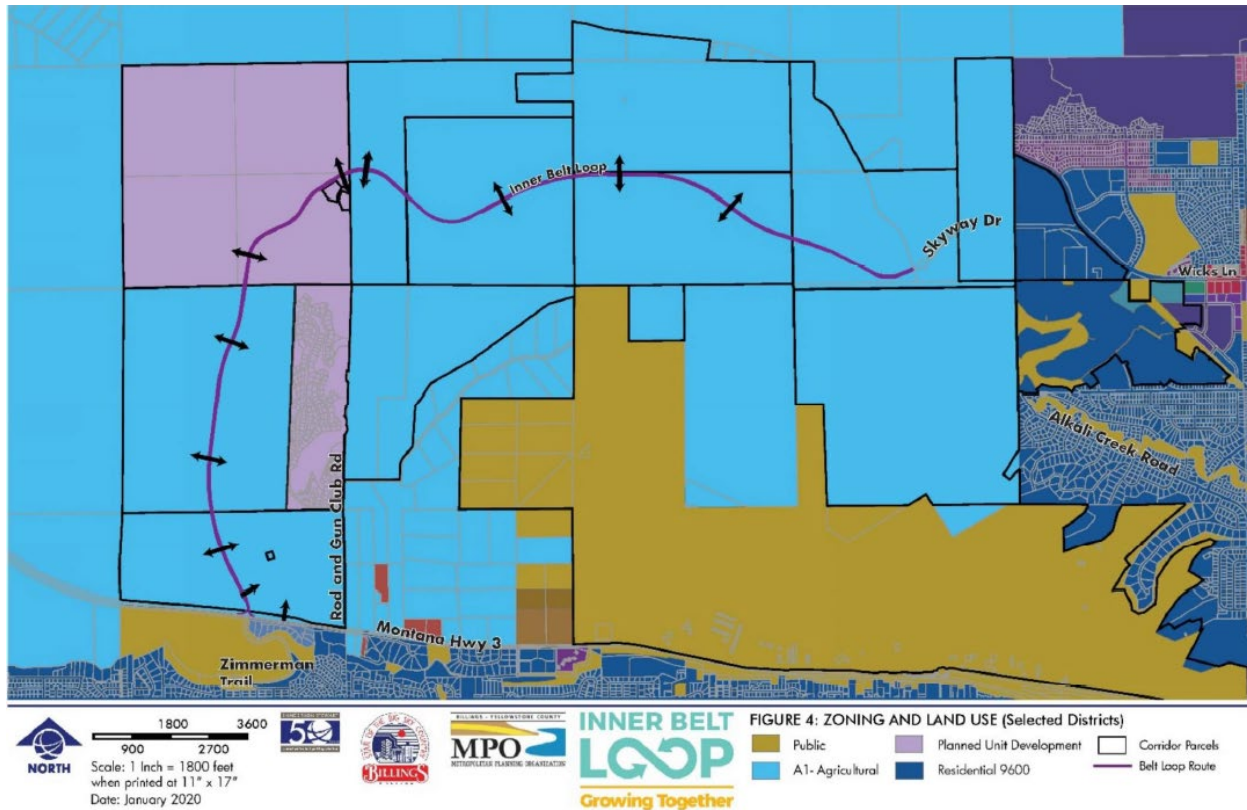
## 2.2.3 Existing and Future No Build Land Use Patterns

Billings is one of Montana's fastest growing cities and developable land to support the city's growing population is becoming increasingly scarce. The project area has long been recognized and targeted by the City as an area of future growth due to its location on the edge of the city boundary and adjacency to a range of infrastructure and transportation options. The proposed project is of regional significance and planning for the corridor dates back to the Inner Beltloop Connection Planning Study completed in 2006. Many subsequent city and regional plans have identified the future growth opportunities within the project area.

Based on population projections, the Billings area population could grow by approximately 42,649 by the year 2040 (MPO 2019). The northwest Billings area adjacent to the proposed project could grow by 5,551 people by the year 2040 increasing the housing demand by 2,327 new homes and resulting in an employment growth of 1,827 new jobs (City of Billings 2020).

Existing land uses in the project area include a mix of agriculture and open rangeland and planned use development. Residential development is present at each end of the proposed roadway. Land along the corridor is primarily agricultural and grazing lands. While much of the land adjacent to the corridor is undeveloped and located within unincorporated Yellowstone County, there is some existing residential development in Rehberg Ranch. The Billings Logan International Airport is located just to the south of the corridor. To the east of the proposed project is the Billings Heights area, an existing residential development and future growth area. Existing zoning and land use designations are shown in Figure 2-3.





**Figure 2-3. Zoning and Land Use Designations (Source: Sanderson Stewart)**

Future land development opportunities are constrained within the project area primarily due to lack of access. During development of the 2016 Growth Policy, public input showed a strong preference for future growth to occur in the project vicinity and Heights area. Under a future no build condition, and in absence of the federal BUILD funds, it would be expected that development would continue to steadily occur within the project area in areas adjacent to MT-3 and Alkali Creek Road, areas most readily accessible by exiting roadways, or further from the city center within the West Billings or Heights areas. In time, it would be expected that the City would secure the necessary funding to construct the Inner Belt Loop roadway.

The City of Billings adopted an Annexation Policy (Resolution No. 17-10618) that establishes policies and procedures for annexing property into the City. The area north of MT-3 in the vicinity of the Inner Belt Loop is identified within the Long Range Urban Planning Area, which are areas not immediately ready for City services but likely to be annexed at a future date.

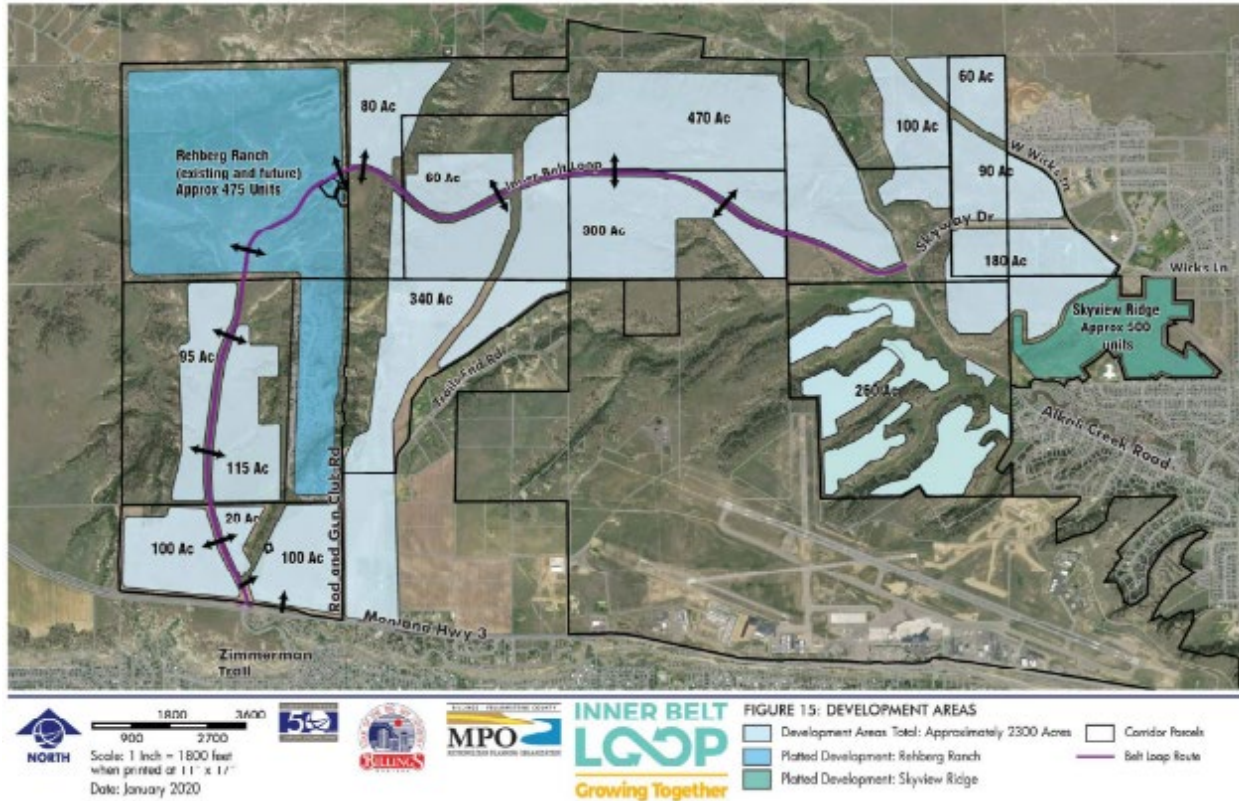
The existing population distribution northeast of the city center (Heights area) and the existing limited transportation options have resulted in substantial congestion and safety issues along the constrained artery of Main Street (see figure 2-4). Under the no build condition, traffic congestion and delay along Main Street and other intersecting roads is projected to worsen. Moreover, the geographic constraint of the Rims limits options for improving access and traffic conditions.



**Figure 2-4. Constrained Transportation Corridor along Main Street (Source: City of Billings)**

## 2.2.4 Future Build Condition, Land Use Conditions and Indirect Land Use Effects

The future build condition as a result of the federal BUILD grant will construct the Inner Belt Loop and Skyline Trail as identified in Section 1.3. The Inner Belt Loop at its western terminus will tie into the existing roundabout at MT-3 and Zimmerman Trail, thus providing an important alternative connection to West Billings. As previously noted, the project area has been identified as an area for future growth and city annexation and coordination between the City/County has been ongoing to ensure the area develops consistent with regional growth goals and policies. Figure 2-5 shows the potential developable areas and acreages within the project area. As such, the future build condition is anticipated to result in future land use conditions consistent with existing adopted planning documents, including the current LRTP and the City of Billings Growth Policy. In essence, the future land use conditions in the project area are likely to be similar under the no build condition and the future build condition, with the exception that the federal BUILD grant will provide the funding to implement transportation improvements much sooner than would occur under the no build condition.



**Figure 2-5. Development Areas in the Project Area (Source: Sanderson Stewart)**

Indirect land use effects resulting from the proposed project are likely to include new residential, commercial, and industrial development, which are anticipated to occur sooner under the build condition than under the no build condition. The proposed project is an opportunity for the City to improve access to destinations northwest of downtown, which will guide development closer to the city center and existing services rather than the western fringe of the city. The potential land use changes resulting from implementation of the proposed project are studied in detail within the 2020 Inner Belt Loop Corridor Planning Study. Two different development scenarios were evaluated: a baseline scenario and an aggressive growth scenario. These two iterations of land use projections vary by area of the corridor developed and the density of development. The land development projections assume that developing properties would annex into the City and develop at commensurate densities as well as assuming that public water and sewer service would be available. The baseline scenario assumes a six percent capture of residential development and includes the complete buildout of Rehberg Ranch and half of Skyview Ridge. Additionally, some commercial development is anticipated, primarily at the intersection of the Inner Belt Loop and MT-3. Figure 2-6 shows the baseline development scenario.

The aggressive growth scenario forecasts all of the development under the baseline scenario to occur but also includes additional commercial and residential development along MT-3, residential and very limited commercial development along Alkali Creek Road and west on the Inner Belt Loop, and the buildout of the remainder of Skyview Ranch Subdivision. Importantly, the land use forecasts were developed based on an assumption that public sewer and water would be provided for at least portions of the Inner Belt Loop corridor. If no such facilities are extended, land development densities and traffic projections are likely to be considerably lower even relative to the baseline scenario.



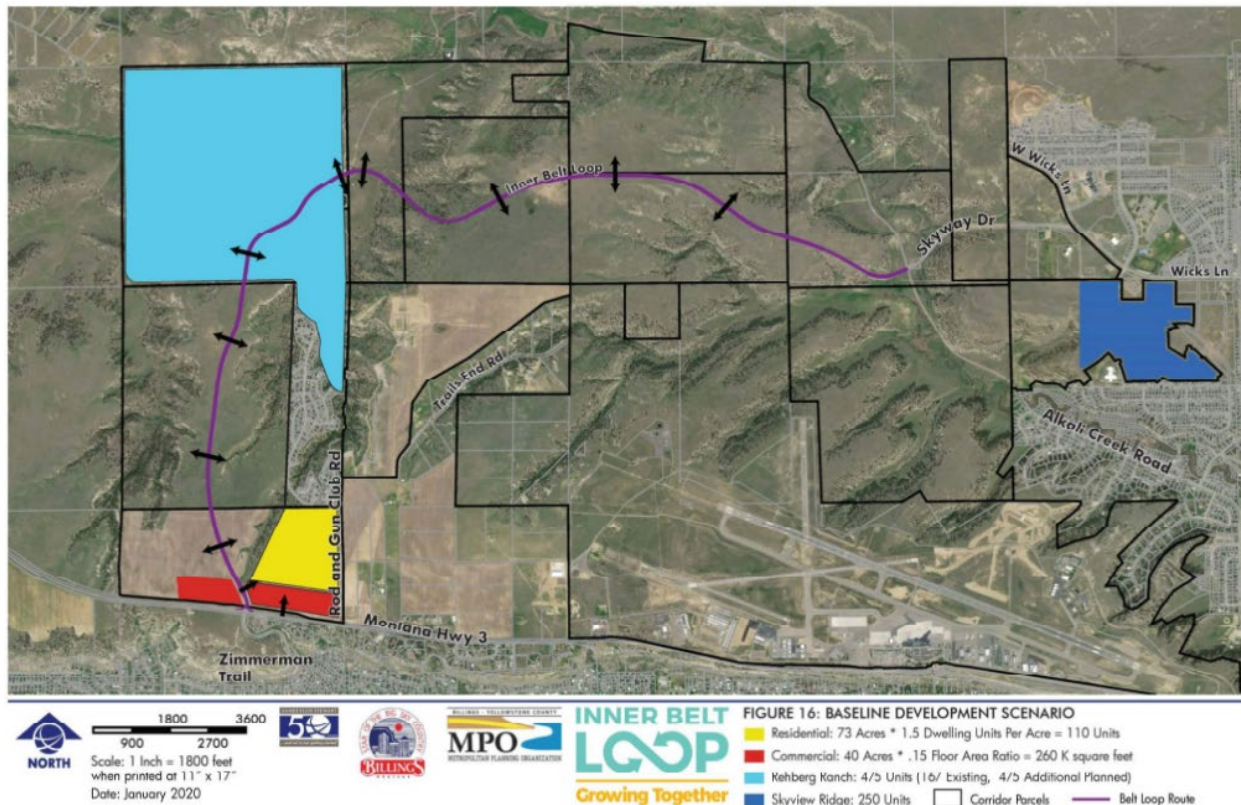


Figure 2-6. Baseline Development Scenario (Source: Sanderson Stewart)

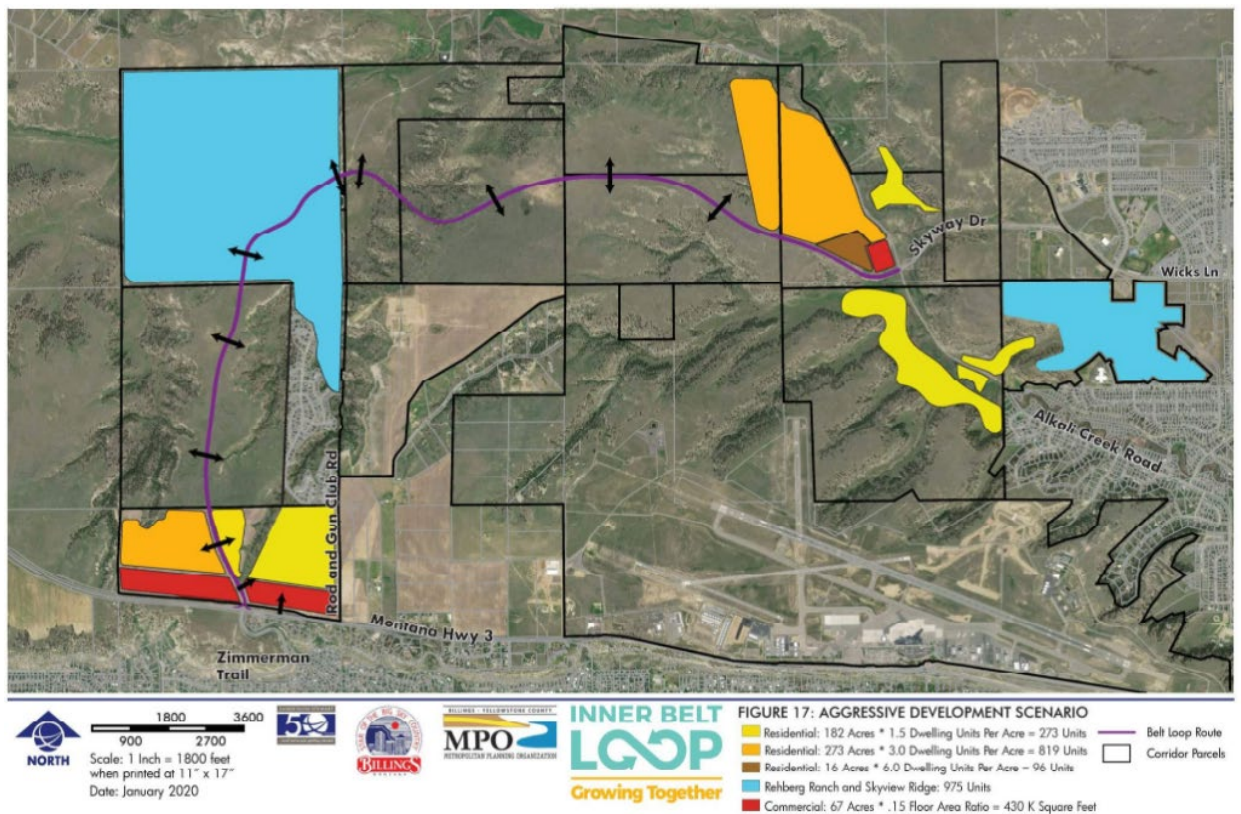
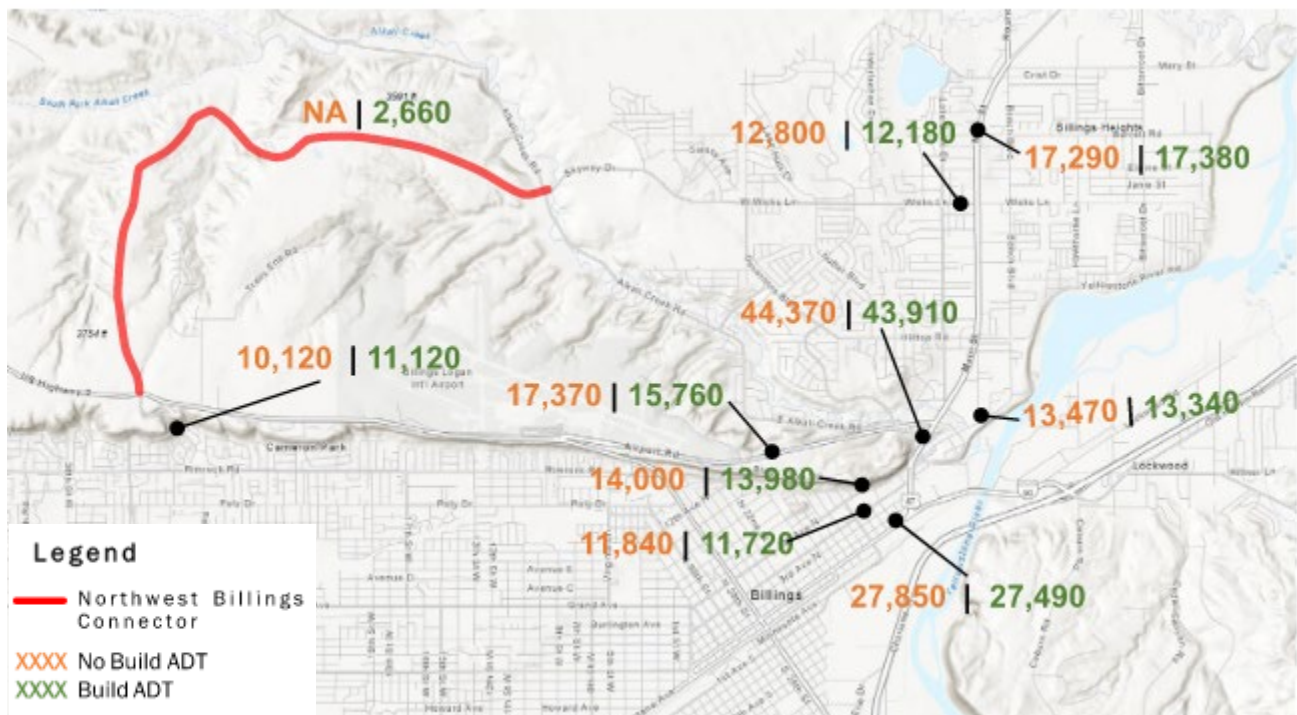


Figure 2-7. Aggressive Growth Scenario (Source: Sanderson Stewart)

The proposed project ties into two existing intersections: the MT-3/Zimmerman Road intersection, which is identified as a Level of Service (LOS) E in 2017, and the Alkali Creek Road/Skyway Drive intersection, which is identified as no data in 2017. These two intersections affected by the proposed project are projected to operate at an acceptable LOS ("D" or better) under year 2040 conditions with the proposed two-lane Inner Belt Loop. With the proposed Inner Belt Loop in place, the MT-3/Zimmerman Road intersection improves to LOS C or better in 2040 and the Alkali Creek Road/Skyway Drive intersection operates at a LOS C or better.

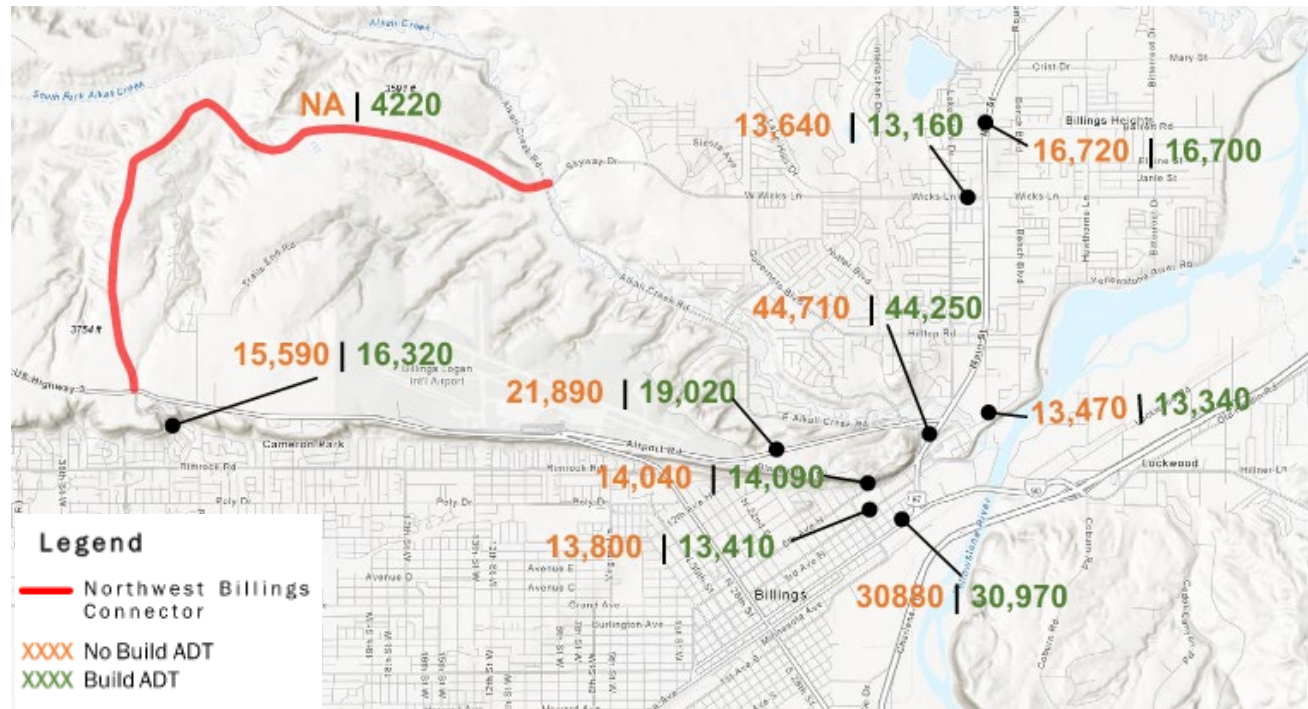
Additional traffic analyses were conducted by the MPO to evaluate the effect the proposed Inner Belt Loop would have on vicinity roadways based on existing and future traffic volumes. Two scenarios, a no build scenario without the proposed Inner Belt Loop and a build scenario with the proposed Inner Belt Loop, were evaluated based on existing roadway configurations using current (2017) and future (2040) traffic volumes. Figure 2-6 and Figure 2-7 show the current and future forecasted daily traffic results, respectively, and call out daily traffic volumes for important roadways currently experiencing congestion.

As reported by the City in the 2020 BUILD grant application, the addition of the Inner Belt Loop was found to slow the growth of vehicle miles of travel (VMT) and vehicle hours of travel (VHT) relative to conditions without the Inner Belt Loop. Figure 6 shows that the immediate impact of building the Inner Belt Loop would be to lower daily traffic in already-developed parts of the city, including the Heights and downtown Billings. Figure 2-7 shows that this effect will continue into 2040. Importantly, the addition of the Inner Belt Loop is shown to have a positive effect in reducing daily traffic volumes along the congested Main Street and connecting streets.



**Figure 2-8. Current (2017) Daily Traffic – With and Without the Inner Belt Loop (NW Billings Connector)**





**Figure 2-9. Forecasted (2040) Daily Traffic – With and Without the Inner Belt Loop (NW Billings Connector)**

As reported in the 2020 BUILD grant application, the proposed Inner Belt Loop is anticipated to result in positive economic benefits. Future growth in areas directly adjacent to the proposed Inner Belt Loop would add approximately 700 new employees (City of Billings 2020), which is estimated to generate approximately \$59.5 million per year in new economic output across the industrial, retail and service sectors. Additional short-term economic benefits would be expected from construction of the proposed project as well as future construction of housing, commercial, and industrial development.

The construction of the multi-use trail paralleling the Inner Belt Loop and the proposed Skyline Trail would have immediate benefit on city recreational opportunities as well as close existing gaps in the trail network. This is expected to improve non-motorized safety by providing alternatives to bicycling on high volume, higher speed routes, as well increase tourist and recreation economic activity.

## 2.2.5 Potential Mitigation Measures

This section provides potential mitigation measures intended to minimize adverse indirect effects. Adverse indirect effects are anticipated to be not significant because future development will occur in accordance with the established plans and studies with overlapping jurisdictions to the project area. These include the 2016 City of Billings Growth Policy, City Annexation Plan, 2018 LRTP, and the 2020 Inner Belt Loop Corridor Planning Study. Adverse indirect effects are anticipated to be mitigated through the implementation of the corridor vision recommendations for future land use and transportation elements as identified in the 2020 Inner Belt Loop Corridor Planning Study. The planning study was completed following a substantial public involvement process. Following construction of the Inner Belt Loop, as development occurs in the project area, the City and County would be expected to follow the guidance specific to residential and commercial land use, i.e., setback, building orientation, and landscaping recommendations. The corridor vision for

transportation elements include recommendations for access management and roadway/intersection environment.

A detailed traffic analysis has been conducted that examined existing and projected traffic conditions. Based on results presented in the 2020 Inner Belt Loop Corridor Planning Study, the existing roundabout at MT-3/Zimmerman Trail is projected to function at a LOS C or better under the baseline scenario. However, if future densities are instead aligned with the aggressive growth scenario, this intersection may need exclusive lanes for westbound and southbound left turns to improve poor PM peak period LOS and function at an acceptable LOS. Relative to roadway corridor LOS, the majority of the corridor is projected to operate at a LOS C; however, the segment of the Inner Belt Loop just north of the MT-3/Zimmerman Trail roundabout is projected to operate a LOS D under both the baseline and aggressive growth scenarios. Depending upon the progression of development in the corridor, the City will need to evaluate whether a LOS D is acceptable versus potentially widening to four or more lanes to increase capacity.

The 2020 planning study concludes with several recommendations to ensure the project area develops in a manner consistent with the vision established for the corridor. The City and County are steadily making strides to address these topics, as summarized below.

1. Intergovernmental Agreement. The City and County will be working collaboratively to coordinate on city annexation and comprehensive zoning goals for the future.
2. Limits of Annexation Map. The Limit of Annexation Map was last updated October 2020 and include the Inner Belt Loop and surrounding lands. Areas adjacent to MT-3 are included within the City Annexation Petition Area and slated for near-term annexation. The greater Inner Belt Loop area is included in the Long Range Urban Planning Area and would be evaluated for city annexation as warranted by future development.
3. Right-of-Way Acquisition. The City is moving forward on securing the necessary right-of-way for the entire corridor, which will allow for development within the transportation corridor to occur in accordance with the 2020 planning study.
4. Phasing. The City was successful in securing a federal BUILD grant, which provides the opportunity to construct the Inner Belt Loop corridor in its entirety in a single phase. This will in turn allow for a more comprehensive and organized approach to future development of the corridor.
5. Water and Sewer Infrastructure. The City is in the process of updating their water and wastewater master plan. The analyses are incorporating future population projections and growth factors consistent with the projections developed for the TDM. The master plan update will provide the framework for providing water and sewer infrastructure in accordance with the City's overall water infrastructure management goals.

## 3 Cumulative Effects

### 3.1 Introduction to Cumulative Impacts

Council on Environmental Quality (CEQ) regulations require an assessment of cumulative impacts. As defined in CEQ's regulations for implementing the National Environmental Policy Act (NEPA; 40 CFR § 1508.7):

“Cumulative impact” is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place during a period of time.

The following analysis uses the multi-step process outlined in the CEQ handbook, *Considering Cumulative Effects under the National Environmental Policy Act* (1997).

## 3.2 Resources Assessed for Cumulative Impacts

Determining cumulative environmental consequences requires delineating the cause-and-effect relationships between the multiple actions and the resources, ecosystems, and human communities of concern. One of the first steps is to identify the cumulative effects issues for the project and which resources are important from a cumulative effects perspective. The resources evaluated for cumulative impacts in this technical report are based on sensitive resources and/or resources known to exist in the project area and include:

- Farmland
- Air Quality
- Water Quality
- Biological Resources
- Visual Resources
- Traffic and Access
- Economic

## 3.3 Geographic Scope and Timeframe of Cumulative Impacts Analysis

The geographic area of analysis used to assess cumulative impacts is approximately the project area described in Section 1.1. In some cases, the geographic areas of analysis are expanded to include a broader area to effectively assess the cumulative effects on a particular resource (e.g. threatened and endangered species). The geographic areas of analysis are used to assess the effects of other past, present, and reasonably foreseeable future actions to determine if those actions, combined with project impacts, have a cumulative effect to that resource.

### 3.3.1 Timeframe Scope of Analysis

The timeframe for this analysis, i.e., temporal boundary, extends roughly 20 years into the past and into the future, so approximately 2000 to 2040. The environmental reference point of 2000 predates many infrastructure improvements that have since occurred in the project area vicinity. The temporal boundary for future development is based on the transportation planning horizon for the LRTP, which is 2040. RFFAs and cumulative effects are considered through that time, approximately 20 years from the anticipated opening of the proposed project.

## 3.4 Past, Present, and Reasonably Foreseeable Future Actions

This section identifies relevant past and present projects as well as known or programmed projects that are reasonably foreseeable to occur in the project area vicinity. Existing plans (and planning

boundaries) that overlap the project area or have a jurisdictional relevance to the proposed project were reviewed to identify projects that, in consideration with the proposed project, have potential to result in cumulative impacts.

Several past projects have been completed in the vicinity of the project area. These include:

- Skyway Drive Improvements (2014)
- MT-3/Zimmerman Trail Roundabout and Trail Improvements (2018)
- Zimmerman Trail Reconstruction (2017)

Reasonably foreseeable future developments in the project area are identified in the 2020 planning study. There are two platted subdivisions in the project area that are projected to accommodate some of Billings' future population growth:

- Rehberg Ranch: Currently built out at the southern end, this subdivision is projected to increase by a minimum of 475 dwelling units.
- Skyview Ridge: Located along West Wicks Lane, this planned subdivision is projected to accommodate a minimum of 250 new dwelling units.

The MDT Active Projects web application was reviewed on June 14, 2021, to identify other roadway projects occurring in the vicinity of the proposed project. No projects were identified in the immediate vicinity of the project area.

### 3.5 Cumulative Impacts

The following section includes an assessment of potential cumulative impacts on project area resources.

**Farmland:** The project area includes soils designated as prime or unique farmland or farmland of statewide or local importance, which are subject to the requirements of the Farmland Protection Policy Act (FPPA). Right-of-way acquisition and construction of the proposed project would result the direct conversion of soils meeting Important Farmland classification to non-agricultural uses. Projects resulting in the irreversible conversion of farmland, either directly or indirectly, are subject to FPPA requirements.

Conversion of prime farmland to transportation and urban uses in the project area vicinity would continue to adversely affect the availability of prime farmland in Yellowstone County. The proposed project, in addition to future projects identified in the project area vicinity, would result in incremental losses of prime farmland. In accordance with the FPPA, a Farmland Conversion Impact Rating for Corridor Type Projects Form (NRCS-CPA-106) has been processed for the proposed project in consultation with the NRCS and significant adverse effects were not identified and mitigation is not required.

Any future federally funded project impacting farmlands would be developed in accordance with the Farmland Protection Policy Act. Future development in the project area vicinity would occur in accordance with adopted land use plans and growth policies.

**Air Quality:** The proposed project is located partially within the Billings Carbon Monoxide (CO) and Sulfur Dioxide (SO<sub>2</sub>) Maintenance Areas. It is important to note that the proposed Skyline Trail, a non-motorized trail, intersects the CO and SO<sub>2</sub> Maintenance Areas, while the proposed Inner Belt Loop roadway corridor does not. Therefore, for the purposes of the air quality analysis, the proposed

project is conservatively assumed to be partially within the CO Maintenance Area. As such, the project's potential effect on CO emissions is relevant given the project location.

Based on an air quality analysis conducted for the 2020 BUILD grant benefit-cost analysis, the proposed project is anticipated to benefit regional air quality by reducing VMT in 2043 by approximately 4.7 million miles annually, or approximately 12,930 miles/day, and reducing vehicle hours of travel by approximately 171,197 hours annually, or approximately 470 hours/day (SRF 2020). The reduction of VMT results in a corresponding reduction in CO emissions, which, for the year 2043, is estimated at 451.6 tons.

A project-level air quality conformity analysis will be completed prior to completing the environmental document. State-level transportation conformity consultation requirements and procedures found at ARM 17.8.1305 through 17.8.1306 require interagency consultation to allow air quality agencies to review the analyses and provide comment. The final environmental document will include the dates of agency concurrences once this process has been completed.

A qualitative mobile source air toxins (MSAT) analysis was conducted for the project. In general, MSATs, of which PM-2.5 and PM-10 are of particular concern, are not expected to increase over existing conditions. This is due to the reduction in overall VMT as a result of the project, but also due to EPA's implementation of MSAT reduction programs.

The construction of future actions may result in short-term and localized construction-related impacts on air quality. Additionally, as the area develops, vehicular travel and emissions will increase in the project area vicinity. These future effects when added to the proposed project are not anticipated to result in significant cumulative impacts on air quality because the air quality analyses conducted in relation to the regional travel demand model have been found to be within the budgeted emissions for the urban area and in compliance with the National Ambient Air Quality Standards.

**Water Quality:** Direct effects to water quality due to the project are anticipated to be negligible because no impact to any water body or stream would occur, and only minor impact to wetlands is anticipated. Further, the project is being designed in compliance with MS4 regulations, which include implementing permanent BMPs to reduce the volume of runoff from the project. The construction of future actions would result in new areas of impervious surfaces and runoff rates would be expected to increase in areas of new development. The potential increase in runoff may affect water quality of the nearby Alkali Creek and/or other intermittently flowing drainages. The potential for adverse effects is anticipated to be substantially reduced based on the requirement for new development to comply with local stormwater regulations within the regulated MS4 area.

**Biological Resources:** The open rangeland of the project area supports a variety of mammal species that have been observed in the vicinity of the proposed project according to the Montana Natural Heritage Program (MTNHP) Generalized Observations database (MTNHP 2021b), and include: bobcat, coyote, eastern fox squirrel, eastern gray squirrel, mule deer, raccoon, Richardson's ground squirrel, spotted bat, and western spotted skunk. Bird species in the project area are those adapted to open range and agricultural habitat. Construction of the proposed project would convert open rangeland and agricultural fields to transportation uses. Direct and indirect impacts to wildlife are anticipated to be relatively minor, considering the availability of habitat available elsewhere in the vicinity of the project area.

The proposed project intersects greater sage-grouse general habitat and minor loss of greater sage-grouse habitat would occur as a result of the project. The City of Billings has begun consultation with the MSGHCP by submitting a project application through the MSGHCP Consultation and Review website. Preliminary correspondence with the MSGHCP indicate that compensatory mitigation will



be required to offset impacts to greater sage-grouse general habitat resulting from the project. If required, compensatory mitigation will be paid to the MSGHCP and consultation with the MSGHCP will be completed in a timely manner.

The construction of future actions may result in cumulative loss of habitat as well as short-term and localized construction-related impacts to local wildlife populations. Substantial areas of undeveloped rangeland exist adjacent to the project area and the cumulative incremental loss of habitat is not anticipated to adversely affect any wildlife populations.

**Visual Resources:** Ongoing development in the project area vicinity has gradually affected the visual character through introduction of homes, roads, overhead utilities, and other infrastructure. The presence of the Billings Logan International Airport near the project has long affected the visual environment and soundscape of the project area. While the immediate area surrounding the proposed Inner Belt Loop is largely undeveloped, urbanization has steadily been occurring at the eastern edge (Billings Heights) and western edge (Rehberg Ranch). Future development within the project area will cumulatively change the visual character of the project area from rural agriculture to more urban setting.

The City of Billings recently completed the Inner Belt Loop Corridor Planning Study in 2020, which included a robust public involvement process intended, in part, to help shape design elements affecting the visual environment. Future changes in land use affecting the visual character of the project area would be consistent with existing planning documents and community goals. The inclusion of open space, street landscaping, and other beautification measures are anticipated to mitigate adverse effects on the visual character.

**Traffic and Access:** The proposed project would create a new connection between the two developing areas of Billings, while also reducing traffic and congestion on existing roads connecting the downtown area to the Heights area. The improved access provided by the project is anticipated to create an additional emergency route for the Heights neighborhoods as well as improve access to developable lands in the project area vicinity. The new development and increased residential densities will affect the transportation network by adding vehicular trips to the existing and planned roadway network. Cumulative effects on traffic in the immediate project area will be dependent on the ultimate densities of development in the area; however, traffic forecasts have shown that the proposed project will have net benefit on regional traffic conditions by alleviating congestion and delay along the Main Street corridor. Adverse cumulative effects on traffic and access are not expected because the proposed project and subsequent development of the area will be conducted consistent with the 2020 Inner Belt Loop Corridor Planning Study and LRTP.

**Economic:** The proposed project, in conjunction with present and future projects in the area, would not result in significant adverse cumulative impacts on economic resources. The proposed project, and particularly the proposed Skyline Trail, is anticipated to have a beneficial effect on the local economy by increasing tourism and recreational economic activity. According to projections made by the Big Sky Economic Development, future growth in the project vicinity would add approximately 700 new employees, which was estimated would generate approximately \$59.5 million per year in new economic output across the industrial, retail and service sectors (City of Billings 2020).

## 4 Conclusions

Potential indirect and cumulative effects were evaluated for the proposed Northwest Billings Connector and Marathon Trail Project and no significant impacts were identified. The proposed

project would construct a major arterial roadway that provides the necessary connection to respond to and facilitate organized growth that is projected to occur in the project area (regardless of whether the federal BUILD project gets constructed) and alleviate traffic congestion in constrained portions near downtown. The project area has been identified in numerous plans for future growth and city annexation is anticipated to occur in accordance with the City growth policy, adopted land use plan, and long-term annexation goals. The proposed project is anticipated to increase economic opportunities by improving access to destinations northwest of downtown, which will guide development closer to the city center rather than the western fringe of the city. This will allow future city growth to be more geographically compact, while at the same time result in a multitude of environmental benefits (e.g., preserving prime farmland to the west of the city, reducing congestion and emissions, increase bicycle/pedestrian connections and safety, etc.). The goals and vision of the Inner Belt Loop corridor are well defined in the 2020 planning study and project implementation as well as future development in accordance with the plan is anticipated to mitigate effects resulting from the proposed project.

## 5 References

- CEQ (Council of Environmental Quality). 1997. Considering Cumulative Effects under the National Environmental Policy Act. January 1997.
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