

# FINAL REPORT

## AUGUST 2017



Photo by L&K Real Estate

*The Big Sky Transportation Study was made possible thanks to the generous support of the Big Sky Resort Area District Tax Board, Gallatin County and Madison County.*



PREPARED FOR:



**BIG \* SKY**  
CHAMBER OF COMMERCE

Adopted by:  
Madison County Commission on October 10, 2017  
Resolution No. 2017-34  
Gallatin County Commission on November 7,  
2017 Resolution No. 2017-108

**SANDERSON**   
**STEWART**

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# INTRODUCTION

# 1



## Background

Big Sky, Montana is a world class mountain resort community. The census-designated place that straddles both Gallatin and Madison Counties is home to approximately 3,100 full-time residents. Population growth has averaged 5.3% per year since the year 2000 according to the Big Sky Housing Development Plan (Economic & Planning Systems, Inc., 2014). With a significant part-time resident population and an influx of individuals with vacation homes, Big Sky hosts upwards of 15,000 people at times.

Located along U.S. Highway 191 and Montana Highway 64 (Lone Mountain Trail) in south-central Montana, Big Sky encompasses the “Canyon” area which lies in the Gallatin Canyon and runs along the Gallatin River on U.S. 191, the alpine valley “Meadow” area, and the “Mountain” area including Big Sky Resort and Moonlight Basin Resort, along with the private clubs of Spanish Peaks and Yellowstone Club. The intersection of the two highways is located approximately 45 miles equidistant in the north and south direction between Bozeman and West Yellowstone, Montana respectively.

Big Sky is a growing community and a highly desirable tourist destination with its proximity to Yellowstone National Park in the summer, and home to the Biggest Skiing in America and some of the world’s best Nordic ski trails in the winter.

In 2016, Gallatin County and the Big Sky Resort Area experienced the following:

- U.S. Census Bureau again ranked Gallatin County among the fastest-growing in the nation, estimating its July 2016 population at 104,502 people — a 4,000-resident increase since 2010. (Source: U.S. Census Bureau)
- Bozeman Yellowstone International Airport (BZN) handled over 1.1 million passengers and is the eighth busiest airport in the seven state Northwest Region of the country. (Source: Bozeman Yellowstone International Airport)
- Montana saw over 12 million non-resident visitors in 2016 who spent \$3.5 billion, directly supported 38,300 jobs statewide and generated \$194 million in state & local taxes. For Gallatin County specifically, that equated to 4.8 million visitors with \$668 million in spending in the County. (Source: Montana Office of Tourism and Business Development and UM Institute for Tourism & Recreation Research)

- Visitation in Yellowstone National Park set a new record with a total of 4,257,177 million visits which represents a 4% increase over 2015 and a 21% increase over 2014. Over 40% of the total visitation came into Yellowstone through the Park's west entrance, which also saw the greatest percentage increase in visits among the Park's five entrance gates, up more than 21% from 2014. Yellowstone National Park reported a traffic count on US 191 of over 1 million vehicles in 2016. (Source: Yellowstone National Park)
- Montana State University (MSU) reported a new enrollment record of 16,440 students in fall 2016 for the 12th time out of the last 14 years. (Source: Montana State University)
- Boyne Resorts announced its Big Sky 2025 plan committing to make more than \$150 million in improvements over the next decade that will transform Big Sky Resort and all that surrounds its iconic Lone Peak. (Source: Boyne Resorts)
- Additionally, the resort communities of Yellowstone Club, Moonlight Basin, Spanish Peaks, as well as the Big Sky Town Center are continuing the respective build-out of their planned community developments.

With this level of growth, comes many challenges. One of the primary challenges is the lack of affordable workforce housing in Big Sky. As a result, 83 percent of workers commute in from other locations, primarily northern parts of Gallatin County, such as Bozeman and Belgrade according to the Big Sky Housing Development Plan (Economic & Planning Systems, Inc., 2014).

This statistic is directly related to another primary challenge that the community is facing, which is its ability to keep up with growing demand on its roads and the rest of the transportation system supporting it. Montana Highway 64 is owned and maintained by the Montana Department of Transportation (MDT), but is classified as an off-system route; therefore, it has maintenance funds, but no dedicated source for highway improvements. This, coupled with recent growth, presents a unique situation wherein the community does not have a dedicated source of funding for transportation improvements on one of its two main roads.

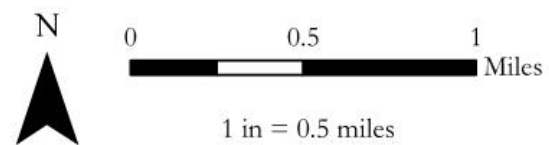
The Big Sky Chamber of Commerce, through a series of community meetings, identified the need to conduct a transportation study in the Big Sky area, primarily focused along the Highway 64 corridor. As illustrated in Figure 1 on the following page, the extents of the study area are from Highway 191 on the east end to the terminus of Highway 64 near Moonlight Basin Resort, approximately 10 miles to the west. The scope of the study is to provide an evaluation of existing and future conditions for the corridor, including traffic safety and operations; bike, pedestrian and transit accommodations; wildlife interactions along the highway; and other areas of concern that have been identified by the community.



Figure 1: Study Area

Legend

- Study Corridor
- Study Intersections



## Study Area Description

Montana Highway 64 is classified as a rural major collector in MDT's functional classification system from its intersection with Highway 191 west to its intersection with Sitting Bull Road (just west of Big Sky Resort Road) where it changes to a local street classification. All other roadways in the Big Sky area are classified as local streets.

Highway 64 generally runs east to west providing access to several local streets, residential and commercial developments along the 10-mile length. Currently, the facility has a single travel lane in each direction with existing left-turn lanes at its intersections with Highway 191, Little Coyote Road (East) and Ousel Falls Road. The existing MDT right-of-way varies throughout the length of the study corridor, but generally extends approximately 50 feet on either side of the existing centerline for a total right-of-way width of 100 feet.

The posted speed limit along Highway 64 varies from 35 miles-per-hour (mph) to 50 mph. As shown in Figure 3 on page 8, the speed limit is 35 mph beginning at the Highway 191 intersection and extending to the west approximately 1,200 feet, where it increases to 40 mph. It then increases to 50 mph another 1,200 feet to the west. Finally, the speed limit reduces back down to 45 mph approximately 350 feet west of Huntley Drive and stays at 45 mph until it's terminus at the top of the mountain. These existing speed limits will be re-evaluated in a speed study conducted by MDT during the summer of 2017.

## Goals & Objectives

The Big Sky Transportation Study provides an opportunity to address many transportation system challenges within the Big Sky area. The following project objectives were identified by the Big Sky Chamber of Commerce at the onset of this study based on community input received at two neighborhood meetings held in January and February 2016.

- 1. Compile crash data and identify trends.**
- 2. Evaluate turn lane warrants and prioritization.**
- 3. Document wildlife interaction along the corridor and recommend improvements.**
- 4. Identify short-term and long-term recommendations for improvement.**
- 5. Estimate cost of improvements and identify potential funding sources.**
- 6. Request input from Gallatin County, Madison County and MDT regarding their policies and funding sources.**



Photo by L&K Real Estate

## Public Participation Process

The public participation process for the Big Sky Transportation Study began with a series of neighborhood meetings hosted by the Big Sky Chamber of Commerce in January and February 2016. Facilitated by the Western Transportation Institute (WTI), the purpose of these meetings was to seek input from local residents about Big Sky's transportation needs and priorities, including roadway capacity, short-term maintenance needs, speed limits, and trails. Input received during these meetings was summarized by WTI in a document entitled Big Sky Transportation Review (March 30, 2016). This document has been provided in Appendix A for easy reference.

The Big Sky Chamber hosted a community forum on July 18, 2017 with representatives from the Big Sky Transportation District and the Big Sky Community Organization. Sanderson Stewart presented the findings of the study and requested input from the public on the recommended improvements. Twenty-two (22) people attended the meeting, including public safety officers, business owners, developers and many other Big Sky stakeholders. Comments from that meeting are summarized in Appendix H.

Finally, a series of public hearings will take place for review and adoption of the study by Gallatin County and Madison County. It is anticipated that those public hearings will consist of the following:

- Gallatin Canyon/Big Sky Zoning Advisory Committee
- Gallatin County Planning and Zoning Commission
- Gallatin County Commission
- Madison County Planning Board
- Madison County Commission

The Big Sky Transportation Study DRAFT Report is available online for review and public comment at [www.bigskychamber.com/about/projects/transportation/](http://www.bigskychamber.com/about/projects/transportation/)

## Related Projects

The following projects are related to the Big Sky Transportation Study. They are currently underway or will be in the near future.

### MT Highway 64 & Ousel Falls Road Traffic Signal.

A new traffic signal has been installed at the intersection of Highway 64 and Ousel Falls Road/Two Moons Road. In fact, the signal was under construction at the time of this draft report. As such, the evaluation of both existing and future conditions completed for this study includes a traffic signal as the baseline for analysis. The project also includes new ADA ramps and pedestrian push buttons on all four corners of the intersection with connections to existing trails near the intersection.

**Highway 64 Speed Study.** Both Gallatin County and Madison County recently requested a speed study from MDT on the Highway 64 corridor, which is consistent with the process required by state law for any changes in speed limit on state highways. MDT is committed to completing this study during the summer months of 2017. It will be completed soon after the signal is installed at the intersection of Highway 64 and Ousel Falls Road, since a new traffic signal will likely affect existing speeds in the area. In addition to reducing the speed limit where warranted, it is recommended that MDT re-evaluate speeds along the entire corridor and reduce the number of speed zone changes where possible to decrease confusion. A similar speed study was recently completed for Highway 191 and is included in Appendix B for reference.

**Big Sky Parks & Open Space Plan.** The Big Sky Community Organization is currently working on a new Parks & Open Space Plan document that will address increased recreational use and the growth of the Big Sky community. The June 2017 Public Draft of the Big Sky Parks & Open Space Plan is provided for reference in Appendix C.

**Big Sky Master Trails Plan.** The Big Sky Community Organization is also just beginning the process of updating the Big Sky Master Trails Plan and writing a new Parks and Trails Operations Plan. These documents will identify existing and future trails in the area and will serve as a guiding document for future trail development with a focus on connectivity to parks and other trails. This project is anticipated to be complete no later than June 2018.



# EXISTING CONDITIONS

## 2

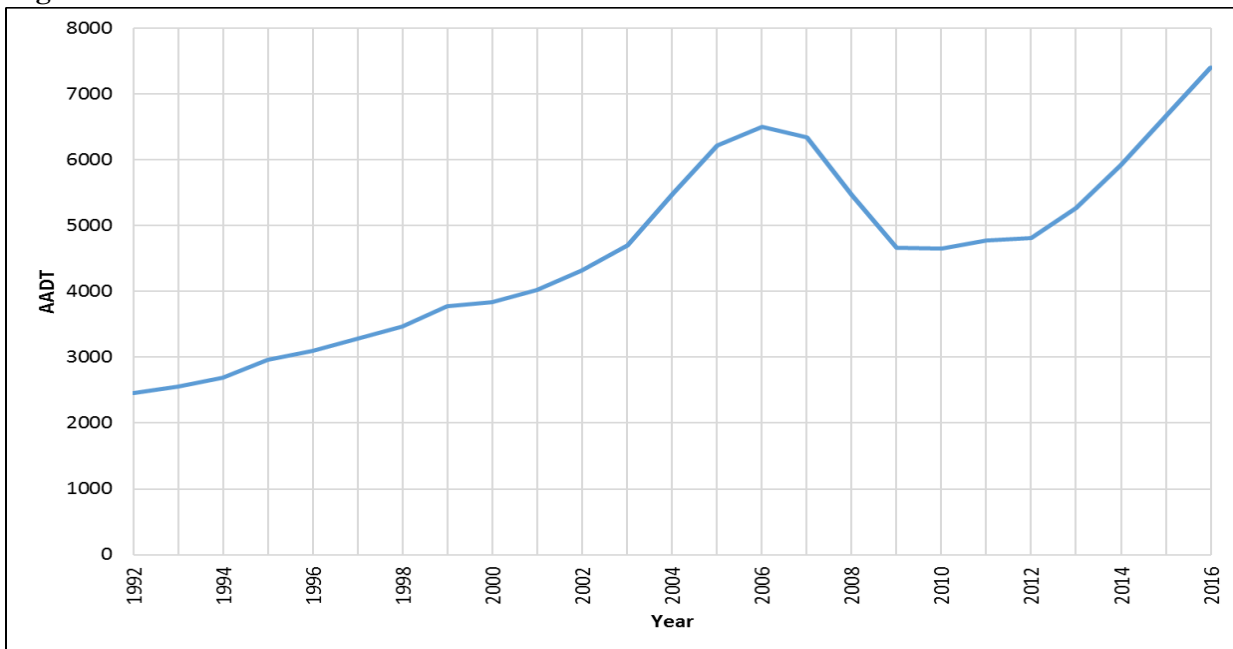


A thorough evaluation of existing conditions relative to traffic operations and safety was conducted to establish a baseline for this study. It included a review of available historic traffic data from MDT, collection of new peak hour turning movement counts at major intersections, and review and analysis of crash data provided by MDT for the past 10 years.

### Traffic Volumes

Historic traffic volumes on Highway 64 were acquired from MDT’s database in the form of average annual daily traffic (AADT) volumes. Figure 2 presents a summary of the data obtained from MDT’s permanent count station (A-064) located to the east of Meadow Village at reference post (RP) 1.6.

**Figure 2: Historic Traffic Volumes**



As shown in Figure 2, traffic volumes recorded in 2015 and 2016 surpassed the pre-recession peak traffic volume of 2006, indicating that traffic volumes have fully recovered after the recession and are again growing at a high rate. The overall average growth rate from 1992 to 2016 is equal to 4.7%. Over just the past five years since 2011, the average growth rate is 9.2%.

Sanderson Stewart conducted AM and PM peak hour turning movement counts at the major intersections in March 2017 and those counts were supplemented by data that Sanderson Stewart had from previous studies in the area. The supplemental data was available for the PM peak hour only at Ousel Falls Road, Andesite Road, and Little Coyote Road West. The resulting peak hour turning movements at the key intersections are shown in Figure 3 on the following page. Sanderson Stewart also conducted an origin-destination (OD) survey that shows the general distribution of ingress and egress traffic on Highway 64 from and to Highway 191. The results of the OD survey are shown in Figure 4 on page 9. Detailed traffic count data is included in Appendix D.

## Traffic Operations

Capacity calculations were performed for the study area intersections using Synchro 8, which is based on the 2010 Highway Capacity Manual (HCM2010) (Transportation Research Board, 2010) methodologies. The HCM2010 defines level of service (LOS) as “a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, comfort, and convenience.” LOS for an intersection is a qualitative measure of performance with values ranging from LOS A, indicating good operation and low vehicle delays, to LOS F, which indicates congestion and longer vehicles delays. MDT generally considers LOS C as the minimum standard for acceptable peak hour intersection operations.

Figure 3 on the following page shows the results of the capacity calculations performed for existing conditions. These results show that all of the study area intersections currently operate at LOS C or better during both peak hours. In fact, only one of the individual intersection approaches currently operates below LOS C. This one exception is the northbound approach at the Conoco/Chamber of Commerce intersection to the west of Highway 191, which currently operates at LOS D during the AM peak hour. This is likely due to a high northbound left-turn volume and a high opposing westbound through volume, which are also affected by the close proximity to the Highway 191 intersection. Detailed capacity calculation worksheets are provided in Appendix E.

## Turn Lane Warrants

Auxiliary right and left-turn lane warrants were evaluated based on the methodology outlined in MDT’s Traffic Engineering Manual (November 2007) for the study area intersections using existing traffic volumes. It was determined that turn lanes should be considered at the following intersections based on existing traffic volumes:

- Westbound left-turn and eastbound right-turn lane at Conoco/Chamber of Commerce
- Eastbound left-turn lane at Powder Light Subdivision (Ace Hardware)
- Westbound left-turn and eastbound right-turn lane at Huntley Drive (Roxy’s)
- Westbound left-turn and eastbound right-turn lane at Big Pine Drive
- Westbound left-turn lane at Andesite Road
- Westbound left-turn lane at Big Sky Resort Road

It should be noted that these warrant calculations were completed for the existing speed limits. If MDT’s speed study results in any changes in speed limit, then some of the turn lane warrants may need to be reevaluated. A more detailed summary of turn lane warrant calculations is presented in Appendix F.

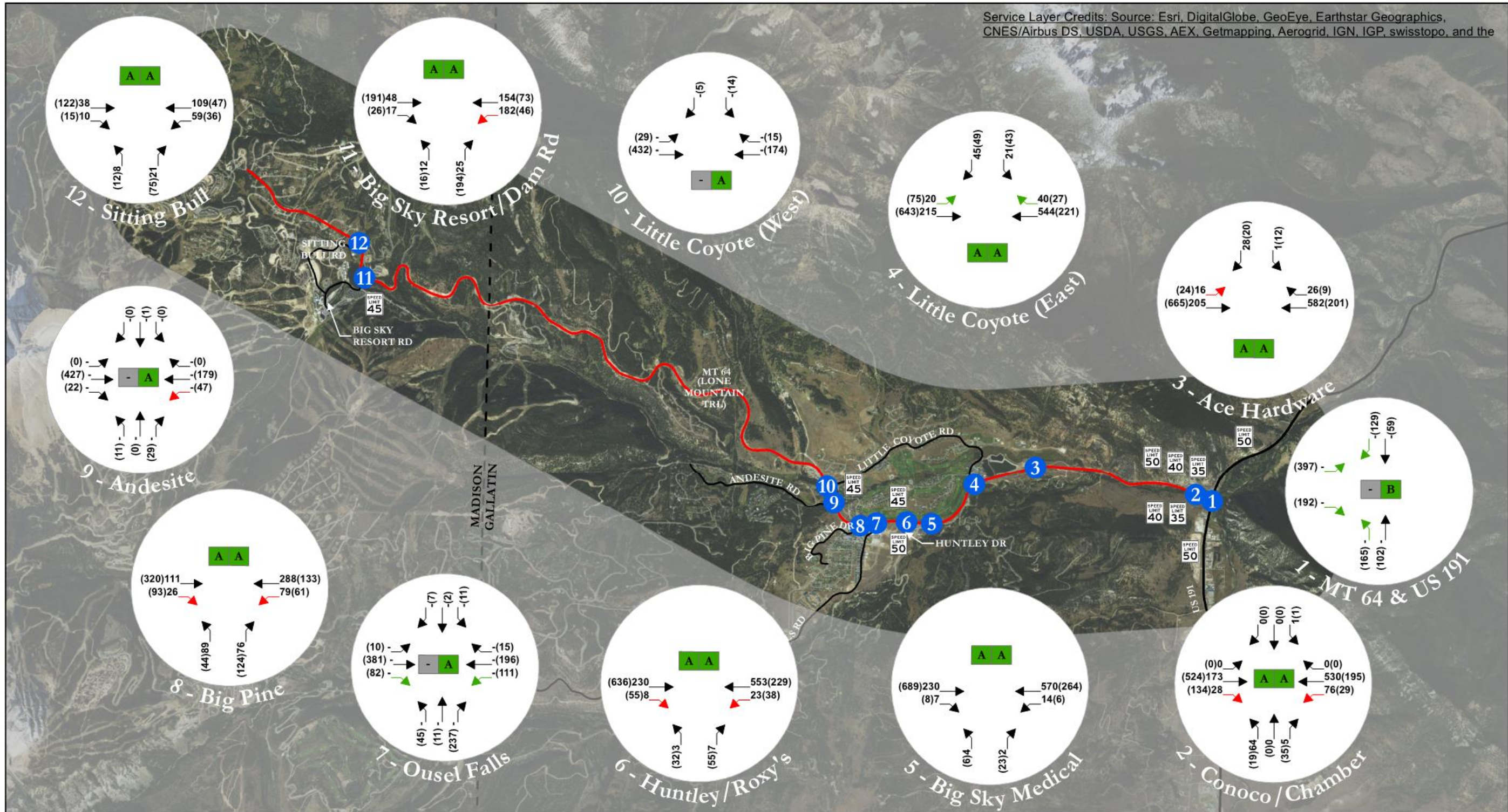
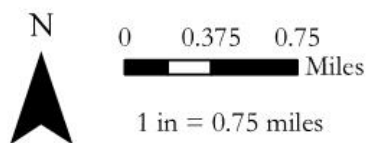
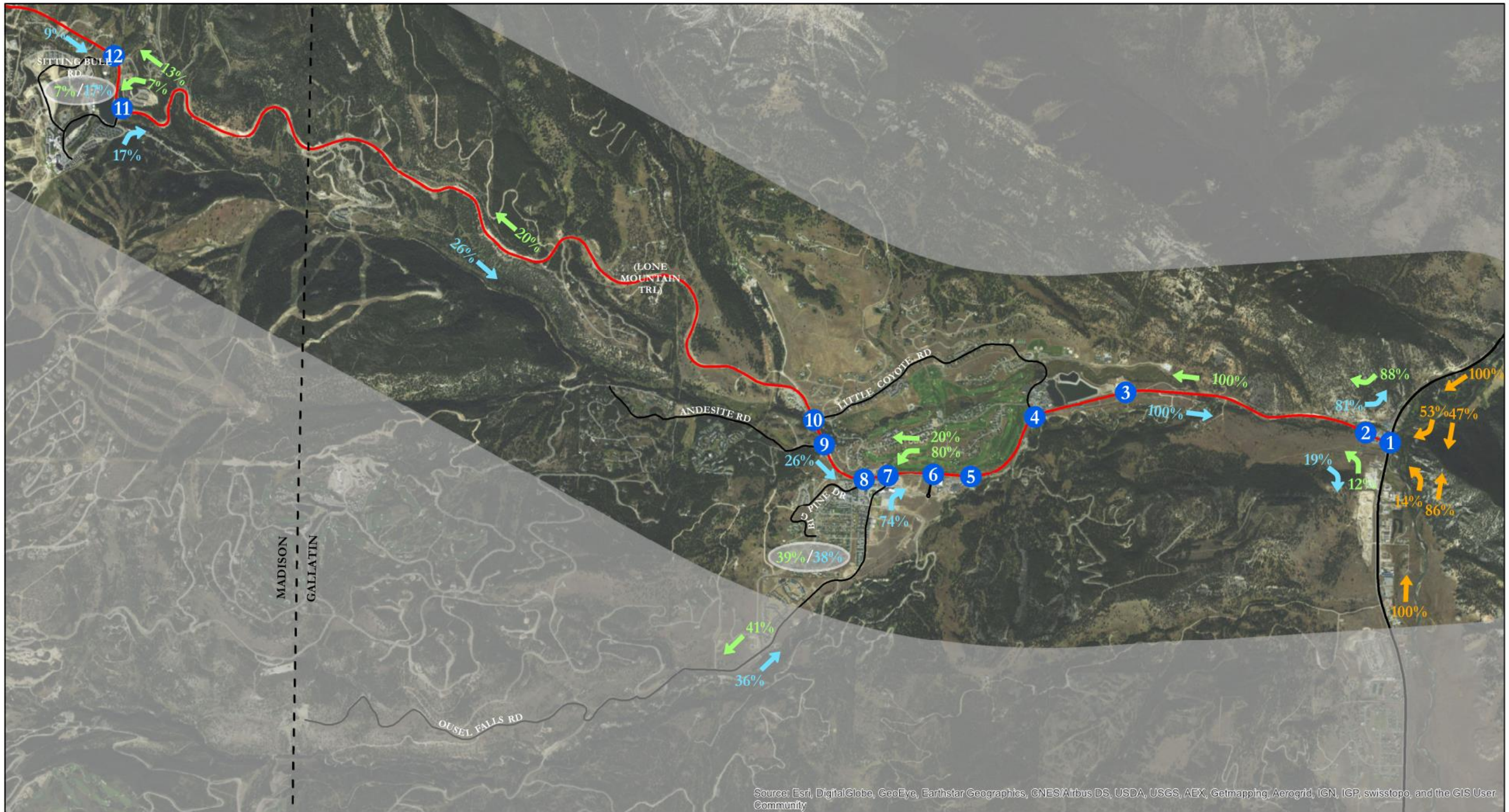


Figure 3: Existing Conditions

Legend

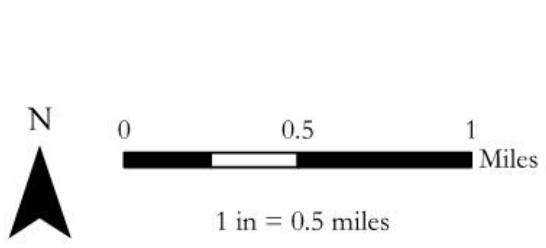
- Study Corridor
  - Study Intersections
  - Traffic Volumes  
AM(PM)
  - No Turn Lane Warranted
  - Turn Lane Warranted
  - Existing Turn Lane
  - Level of Service
  - C - D
  - A A - B
  - E E - F
- Note: Volumes have been adjusted for seasonal variation.





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Figure 4: MT 64 OD Survey



- Legend**
- Study Corridor
  - Study Intersections
  - ↗###% US 191 Distribution
  - ↘###% MT 64 Egress Distribution
  - ↖###% MT 64 Ingress Distribution



## Crash Data

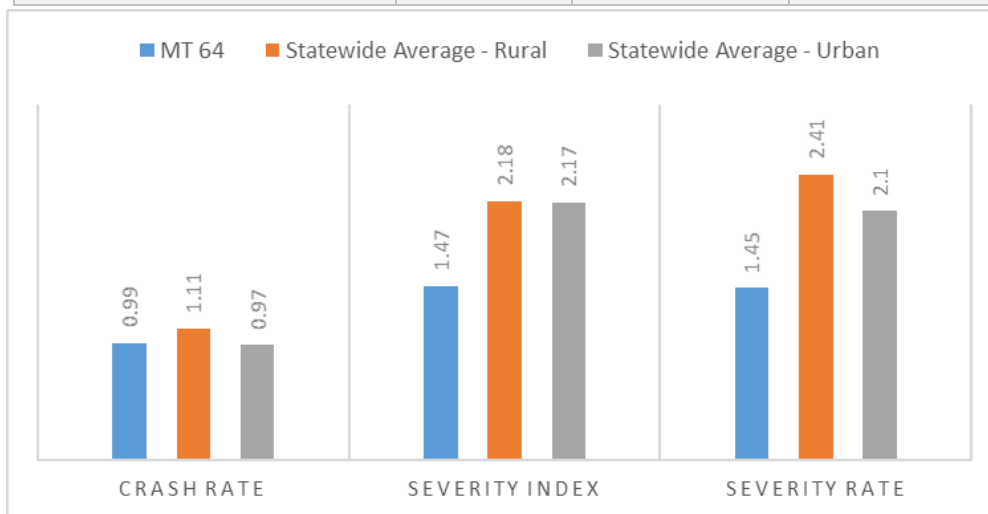
A crash history analysis was conducted for Highway 64 from milepost 0.0 to milepost 9.8. Historical crash data was obtained from MDT for the ten-year period from July 1, 2006 through June 30, 2016. During this time period, 182 crashes were reported including 3 fatal crashes, 30 injury crashes, and 149 property-damage-only crashes.

Three crash rate statistics were calculated to analyze the crash history: crash rate, severity index, and severity rate. The crash rate is defined as the number of crashes per million vehicle miles. The severity index is defined as the weighted average by crash severity, including fatal, injury, and property-damage-only crashes. Severity rate is defined as the crash rate multiplied by the severity index.

The crash rate statistics for the Highway 64 corridor are calculated based on AADT volumes measured during the ten-year period from 2006 through 2016. The crash rate for the 10-mile section of roadway was calculated at 0.99, the severity index at 1.47, and the severity rate at 1.45. As shown in Table 1, these numbers are compared to statewide average crash rates provided by MDT for the years 2008-2012. The average rates are used by MDT to help gauge the need for safety improvements for a roadway. The crash data statistics calculated for Highway 64 are all lower than the statewide average statistics for rural roads.

**Table 1. Corridor Crash Data Statistics**

	<b>Crash Rate</b>	<b>Severity Index</b>	<b>Severity Rate</b>
<b>Highway 64</b>	0.99	1.47	1.45
<b>Statewide Average – Rural</b>	1.11	2.18	2.41
<b>Statewide Average – Urban</b>	0.97	2.17	2.10



As a general rule, intersections with a crash rate greater than 1.0 crashes per million-entering-vehicles should be monitored further to determine if an inherent safety concern exists. For this study, crash rates were calculated for the intersections of Highway 64/Highway 191, Highway 64/Ousel Falls Road, and Highway 64/Big Sky Resort Road. These intersection crash data statistics are summarized in Table 2 on the following page. All the intersection crash rates shown in Table 2 are below the value suggested by MDT for monitoring (1.0) and would not be eligible for MDT’s safety funding.

**Table 2. Intersection Crash Data Statistics**

Intersection	Crash Rate	Severity Index	Severity Rate
<b>MT 64/US 191</b>	0.81	1.45	1.18
<b>MT 64/Ousel Falls Rd</b>	0.52	1.57	0.81
<b>MT 64/Big Sky Resort Rd</b>	0.33	1.22	0.41

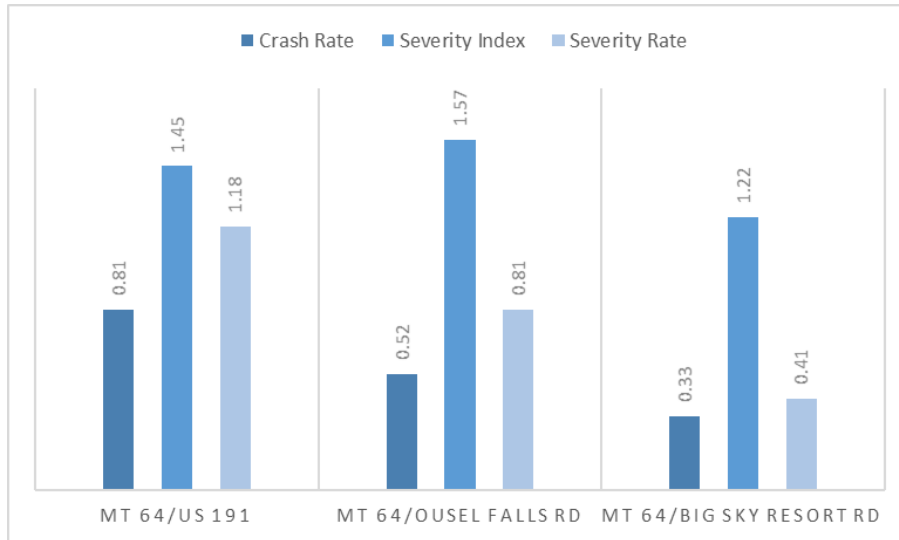


Table 3 on the following page summarizes crash data for the corridor based on various characteristics such as location, weather and road conditions, crash type, and vehicle type. The majority of crashes along the corridor were non-intersection related crashes (80.2%) and only involved a single vehicle (68.1%), which is consistent with statewide statistics for rural highways. It does not appear that snow and ice conditions were as much of a contributing factor as one might expect in this mountainous terrain. Figure 5 on page 13 provides a graphical representation of the same crash data by location along the corridor.

During the ten-year analysis period, three (3) fatal crashes were reported. The first fatal crash was a single-vehicle rollover collision where an impaired driver ran off the road while negotiating a curve. The second fatal crash was the result of a distracted driver crossing the centerline while negotiating a curve and colliding head-on with another vehicle. The third fatal crash was a single-vehicle rollover collision where the driver exceeded the posted speed limit and ran off the road when trying to make a right-hand turn. Through the course of analyzing the fatal crashes, no conclusive trends were identified that point toward specific traffic control improvements as an obvious mitigation measure.

There were twenty-five (25) reported crashes involving a wild animal over the ten-year period, making up 13.7% of the total crashes. The community has noted concerns about animal-vehicle collisions, so those crashes have been broken out on a separate graph in Figure 5. There is a clear concentration of animal-vehicle collisions that occurred within the first 1.5 miles west of Highway 191. There is a known issue in this location with Big Horn Sheep being attracted to the salt on the roadway during winter months, but it appears there have been as many or more deer, elk and moose collisions on this segment as well. Montana Fish, Wildlife & Parks was also contacted to see if their roadside salvage permits would provide any additional information, but it was determined that all animal-vehicle collisions identified through this process would already be in MDT’s database.



**Table 3. Crash Data Summary**

Month	Crashes	%
January	28	15.4%
February	24	13.2%
March	17	9.3%
April	14	7.7%
May	4	2.2%
June	6	3.3%
July	7	3.8%
August	14	7.7%
September	13	7.1%
October	13	7.1%
November	19	10.4%
December	23	12.6%
Totals	182	100.0%

Day	Crashes	%
Sunday	21	11.5%
Monday	23	12.6%
Tuesday	15	8.2%
Wednesday	26	14.3%
Thursday	30	16.5%
Friday	41	22.5%
Saturday	26	14.3%
Totals	182	100.0%

Junc. Relation	Crashes	%
Intersection	32	17.6%
Driveway/Alley	4	2.2%
Non-Junction	146	80.2%
Totals	182	100.0%

Milepost	Crashes	%
0.0 - 0.5	32	17.6%
0.5 - 1.0	21	11.5%
1.0 - 1.5	10	5.5%
1.5 - 2.0	8	4.4%
2.0 - 2.5	10	5.5%
2.5 - 3.0	15	8.2%
3.0 - 3.5	7	3.8%
3.5 - 4.0	8	4.4%
4.0 - 4.5	8	4.4%
4.5 - 5.0	6	3.3%
5.0 - 5.5	5	2.7%
5.5 - 6.0	13	7.1%
6.0 - 6.5	7	3.8%
6.5 - 7.0	5	2.7%
7.0 - 7.5	6	3.3%
7.5 - 8.0	5	2.7%
8.0 - 8.5	11	6.0%
8.5 - 9.0	4	2.2%
9.0 - 9.8	1	0.5%
Totals	182	100.0%

Weather	Crashes	%
Clear	72	39.6%
Cloudy	56	30.8%
Snow	43	23.6%
Sleet	1	0.5%
Rain	2	1.1%
Fog	1	0.5%
Blowing Snow	5	2.7%
Unknown	2	1.1%
Totals	182	100.0%

Road Conditions	Crashes	%
Dry	84	46.2%
Wet	22	12.1%
Ice	20	11.0%
Snow/Slush	55	30.2%
Unknown	1	0.5%
Totals	182	100.0%

Year	Crashes	%
2006	6	3.3%
2007	9	4.9%
2008	3	1.6%
2009	21	11.5%
2010	20	11.0%
2011	14	7.7%
2012	13	7.1%
2013	26	14.3%
2014	24	13.2%
2015	27	14.8%
2016	19	10.4%
Totals	182	100.0%

Crash Severity	Crashes	%
Fatal	3	1.6%
Injury Crash	30	16.5%
Prop. Damage Only	149	81.9%
Totals	182	100.0%

**Note:** Crash data summarized from 7/1/06 through 6/30/16

Collision Type	Crashes	%
Head On	4	2.2%
Rear End	28	15.4%
Right Angle	16	8.8%
Sideswipe SD	3	1.6%
Sideswipe OD	3	1.6%
Roll Over	37	20.3%
Left Turn OD	2	1.1%
Fixed Object	56	30.8%
Not Fixed Object	6	3.3%
Wild Animal	25	13.7%
Rear to Front	2	1.1%
Totals	182	100.0%

Vehicle Type	Vehicles	%
Motorcycle	2	1.1%
Passenger Car	60	33.0%
SUV	71	39.0%
Van	7	3.8%
Pickup	31	17.0%
Bus	1	0.5%
Truck/Tractor	8	4.4%
Other	2	1.1%
Totals	182	100.0%

Light Conditions	Crashes	%
Dawn	2	1.1%
Daylight	103	56.6%
Dusk	5	2.7%
Dark-Lighted	4	2.2%
Dark-Not Lighted	68	37.4%
Totals	182	100.0%

Time of Day	Crashes	%
Before 6:00 am	28	15.4%
6:00 am - 9:00 am	31	17.0%
9:00 am - 12:00 pm	26	14.3%
12:00 pm - 3:00 pm	23	12.6%
3:00 pm - 6:00 pm	31	17.0%
6:00 pm - 9:00 pm	22	12.1%
After 9:00 pm	21	11.5%
Totals	182	100.0%

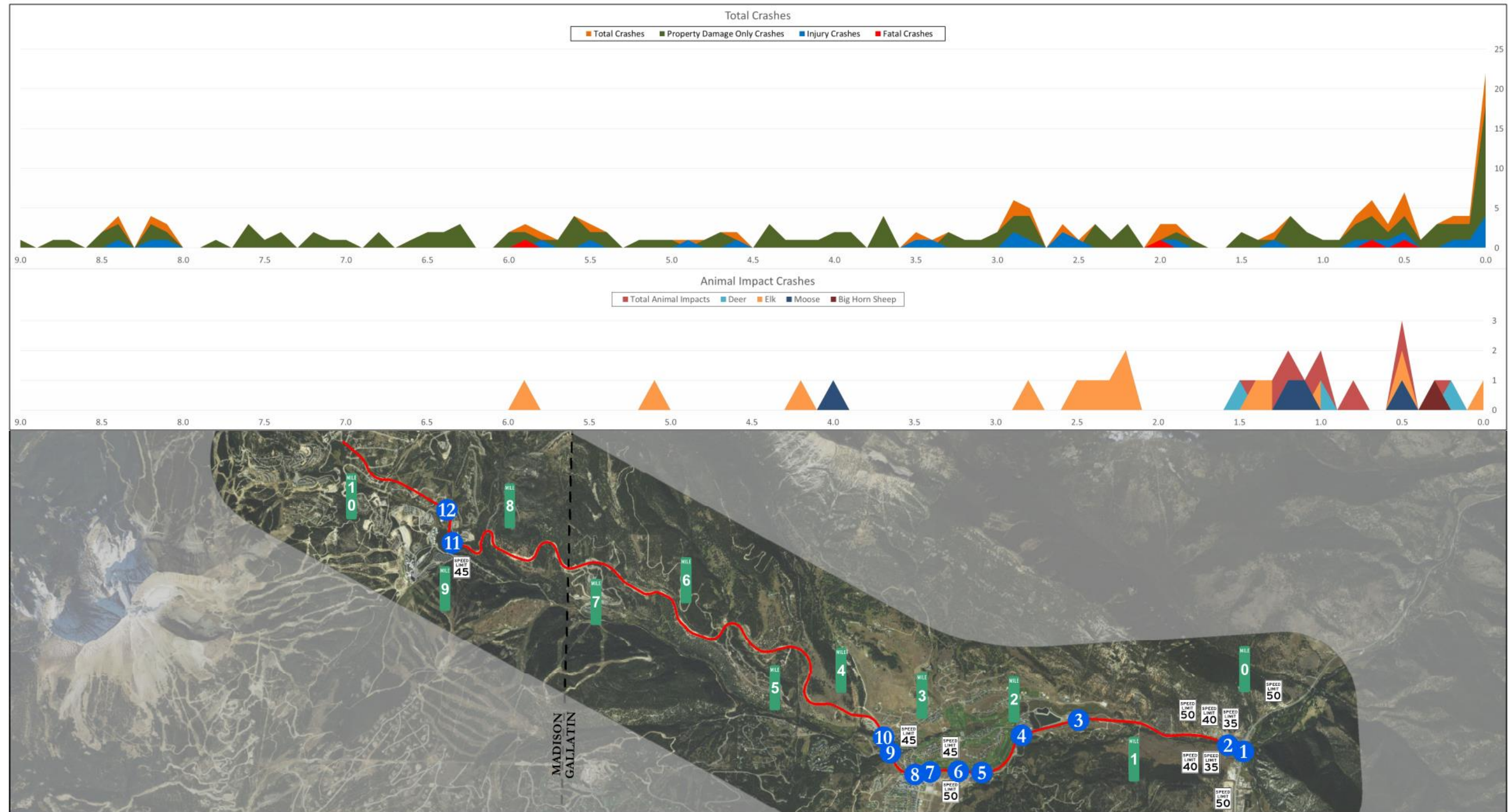
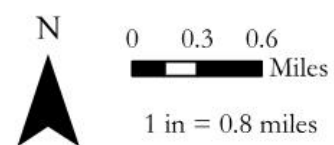


Figure 5: HWY 64 Crash Data Summary (2006-2016)



- Legend**
- Study Intersections
  - Study Corridor



## Bike & Pedestrian Facilities

The Big Sky community currently has over 60 miles of trails, 50 miles of groomed cross-country ski trails and 95 acres of parkland. The Big Sky Community Organization (BSCO) is a non-profit organization that raises funds to develop and manage public parks, trails and recreation programs for the Big Sky area. They are funded by grants, the Big Sky Resort Tax (3% on luxury items) and private donations/fundraisers. BSCO applies for funding from the Big Sky Resort Tax on an annual basis.

Figure 6 on the following page illustrates the existing trails and open space along the Highway 64 corridor. Existing paved trails are shown in orange, gravel trails are shown in yellow and natural trails are shown in black. There are two existing crosswalks across Highway 64 with flashing beacons located at Little Coyote Road (East) and Ousel Falls Road, the second of which was just replaced by a traffic signal with pedestrian push buttons. While Highway 64 does not have traditional pedestrian sidewalks, there is a fairly significant system of trails within the area that could be enhanced to provide better connectivity and safer facilities along and across the corridor as the system expands in the future.

The close proximity of the Highway 64 corridor to this extensive system of parks and trails makes this corridor very unique. This is why the multi-modal components of this study are so important.

## Transit

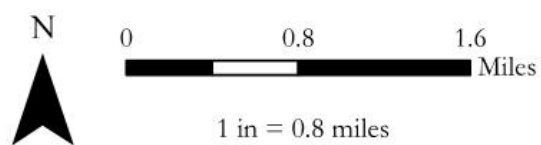
Big Sky has a year-round bus service called Skyline. It includes the Link Express service, which provides a transit connection between Bozeman and Big Sky with several stops in each location, as well as the Canyon-Mountain service, which provides local service around the Big Sky area from the Canyon up to Big Sky Resort and Moonlight Basin with several stops in between. Skyline service is provided seven days a week during winter and summer seasons and Monday-Friday during the off-season (April-May and September-November). Ridership in 2017 is anticipated to be approximately 200,000 rides, which is about 9% higher than last year. If the needed funding is available in the future, it is projected that ridership would increase by about 5% per year. Skyline's current operating budget is approximately \$1.7 million per year.





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**Figure 6: Existing Bike & Pedestrian Facilities**



**Legend**

- Study Corridor
- - - Existing Gravel Trail
- A Trailhead
- - - Existing Paved Trail
- - - Existing Natural Trail



## FUTURE CONDITIONS

# 3



Future conditions on the Highway 64 corridor were estimated using trip generation estimates for future development and were compared to historic background growth rates on the corridor. The following paragraphs describe the methodologies used in greater detail.

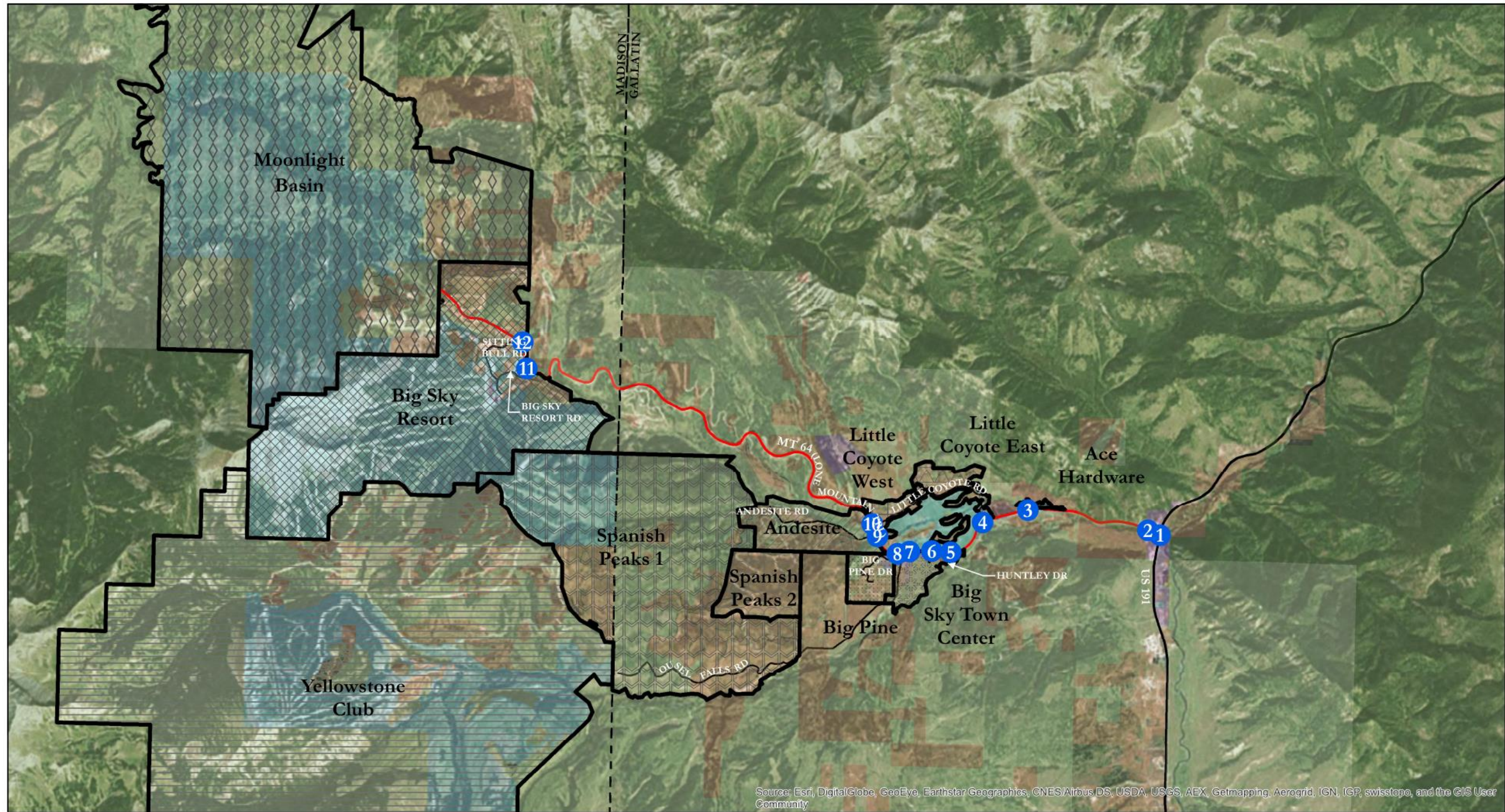
### Traffic Volume Projections

The first step in projecting future traffic volumes was to evaluate the remaining development potential along Highway 64 within the Big Sky area. This involved several discussions with local stakeholders, area developers, Gallatin County and Madison County Planning Departments. Table 4 on the following page presents a summary of the development areas that have not yet been built out. The development areas identified in Table 4 correspond directly to the development areas shown in Figure 7 on page 18. Overall, it is anticipated that full buildout of these area developments could result in 3,200 additional residential units. This would essentially double the number of residential units that exist in the Big Sky area today.

Table 4 also shows a summary of projected trip generation for each of these developments based on the rates recommended for Big Sky in the Capital Improvement Plan (CIP) for Gallatin Canyon/Big Sky Planning and Zoning District (December 2011). These recommended trip generation rates are based on 50% of the rates in the Trip Generation Manual published by the Institute of Transportation Engineers (ITE). The reduction accounts for lower occupancy rates and fewer trips per day per household associated with vacation homes. The results of this exercise show that the area developments are projected to generate approximately 1100 new trips in the AM peak hour and 1600 new trips in the PM peak hour. These trip generation totals account for reductions made for internal capture trips (trips that begin and end internally within a mixed-use development) and pass-by trips (trips already on the adjacent street that will be detoured into the new development as an intermediate stop between a primary origin and destination). Overall trip generation was also reduced by a factor of 10% to account for future bike, pedestrian and transit trips based on mode share data for Gallatin County presented in the Bozeman Transportation Master Plan (April 2017).

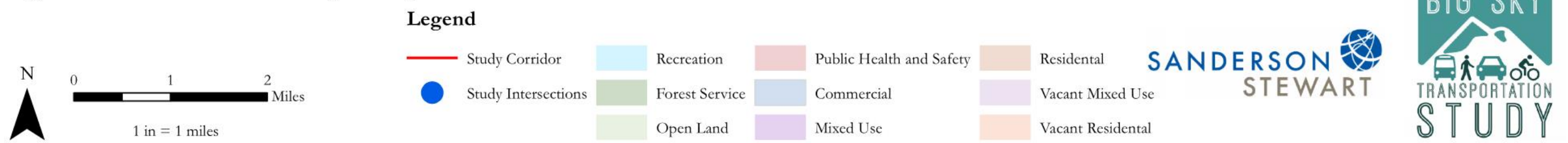
**Table 4. Highway 64 Development Summary**

Development	Planned/Assumed Land Use	Trip Generation					
		AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
1 Big Sky Resort	55 Single-Family Lots, 789 Condo Units, 150-room Hotel	59	177	236	178	100	278
2 Moonlight Resort	1198 Remaining Units	193	95	288	294	173	467
3 Yellowstone Club	196 Remaining Units	31	16	47	48	28	76
4 Spanish Peaks	368 Remaining Units	59	29	88	91	53	144
5 Spanish Peaks 2	30 Remaining Units	5	2	7	8	4	12
6 Big Sky Town Center	60% Remaining of total 491 Residential Units, 335,118 SF Commercial, 150-room Hotel, & 36,078 SF Public	148	123	271	247	290	537
7 Powder Light Subdivision (Ace Hardware)	36 Residential Units, 3000 SF Commercial, Coffee Shop/Bank, Gym, & 2000 SF Office Storage	58	52	110	38	39	77
8 Andesite Access Development	50 Remaining Units (40 to the South, 10 to the North)	8	4	12	13	7	20
9 Little Coyote (West) Area Development	26 Remaining Units	4	2	6	6	4	10
10 Little Coyote (East) Area Development	80 Remaining Units	13	6	19	20	11	31
11 Big Pine Area Development	90 Remaining Units	15	7	22	22	13	35
12 Big Sky/Moonlight Day Skier Growth	Skier-Day AGR = 4.9% (2014-2017)						
13 US 191 Background Growth	ADT AGR = 6.75% (Count Site A-43 from 2011-2015)						



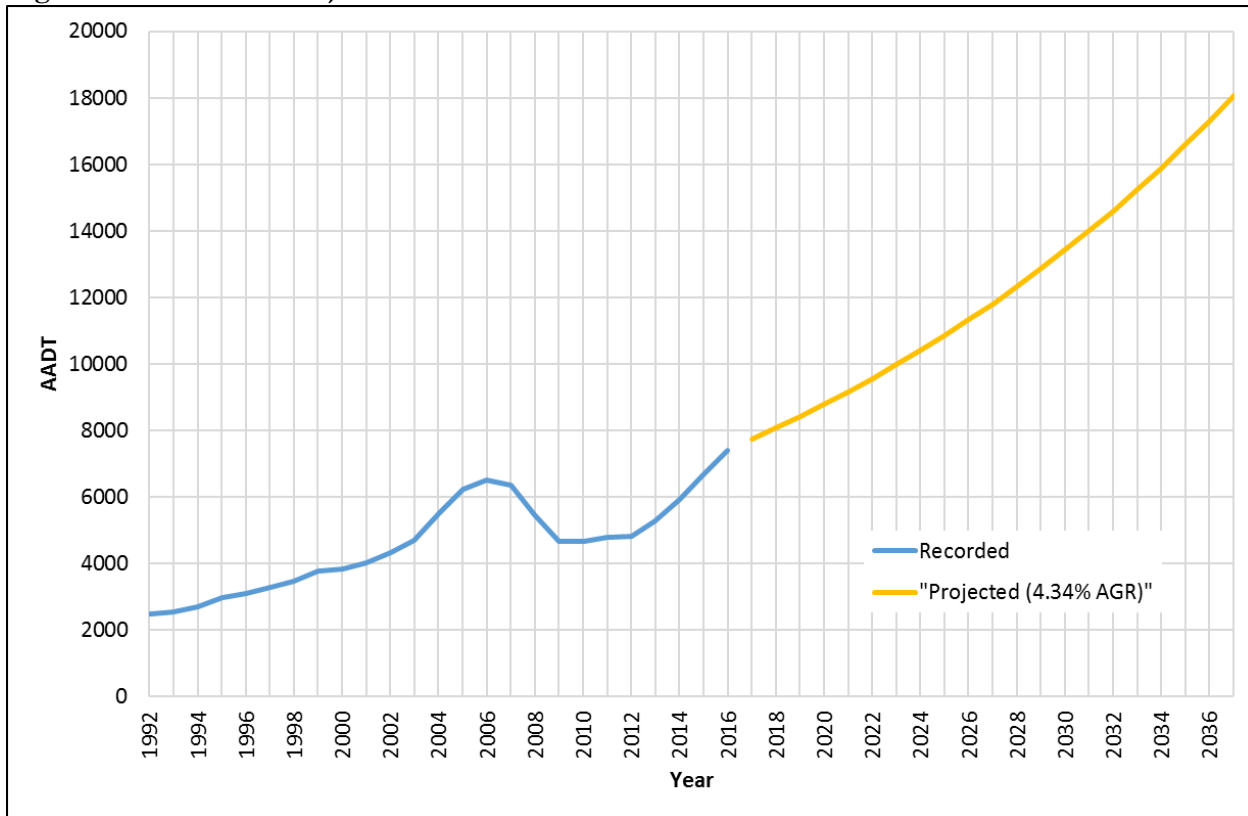
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Figure 7: Land Use and Community Developments



For the purposes of this study, it has been assumed that these areas will build out within the 20-year planning horizon used for this project. As an order of magnitude check for the accuracy of the assumptions used, the resulting annual growth rate associated with this level of development occurring over the course of the next 20 years was compared to historic background growth rates at MDT’s permanent count station on Highway 64. The results of this comparison are shown in Figure 8.

**Figure 8: Historic vs. Projected Traffic Volumes**



The blue line shown in Figure 8 represents the same historic traffic data shown in Figure 2. The calculated annual growth rate associated with this historic data is 4.7%. Using the traffic volume projection methodology outlined in this study, we arrive at an annual growth rate of 4.34%. This is relatively close to the historic growth rate, especially given the reduction used for future increases in bike, pedestrian and transit use. The resulting 20-year AADT volume is approximately 18,000 vehicles per day.

The final step in projecting future traffic volumes is traffic assignment. This is the procedure whereby development-generated vehicle trips are assigned to study area streets and intersections based on an estimated trip distribution. Trip distributions can be calculated via several methods ranging from computerized travel demand models to the simple inspection of existing area traffic patterns. For this study, the assignment of new trips was based on the existing directional traffic volume splits for the corresponding peak hours. The resulting future traffic volumes are shown in Figure 9 for 10-year volume projections and Figure 10 for 20-year volume projections.

## Traffic Operations

Capacity calculations were performed for future conditions, again using Synchro 8, which is based on Highway Capacity Manual (HCM) methodologies. LOS results for the no-build scenario (existing lane configurations and traffic control) are illustrated in Figures 9 and 10. These results show a clear degradation in level of service as traffic volumes increase if no improvements are made. Capacity calculation results for the no-build scenario are also summarized in Tables 8 and 9 on pages 27-28.

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the

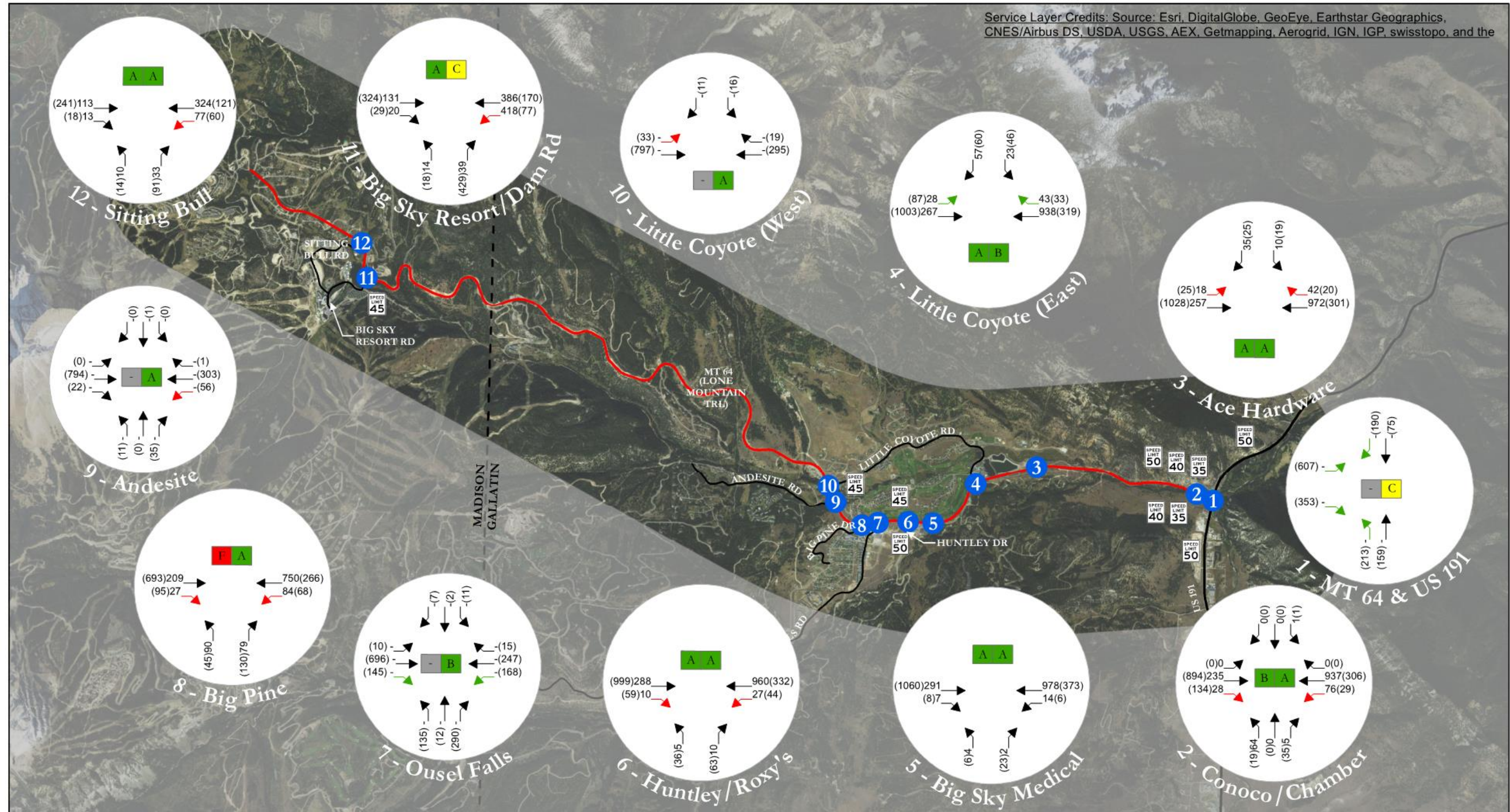
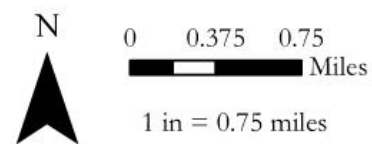


Figure 9: 10-Year Future Conditions (No Build)

Legend

- Study Corridor
- Study Intersections
- No Turn Lane Warranted
- Turn Lane Warranted
- Existing Turn Lane
- Level of Service
- C - D
- A - B  E - F
- AM | PM

Note: Volumes have been adjusted for seasonal variation.



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the

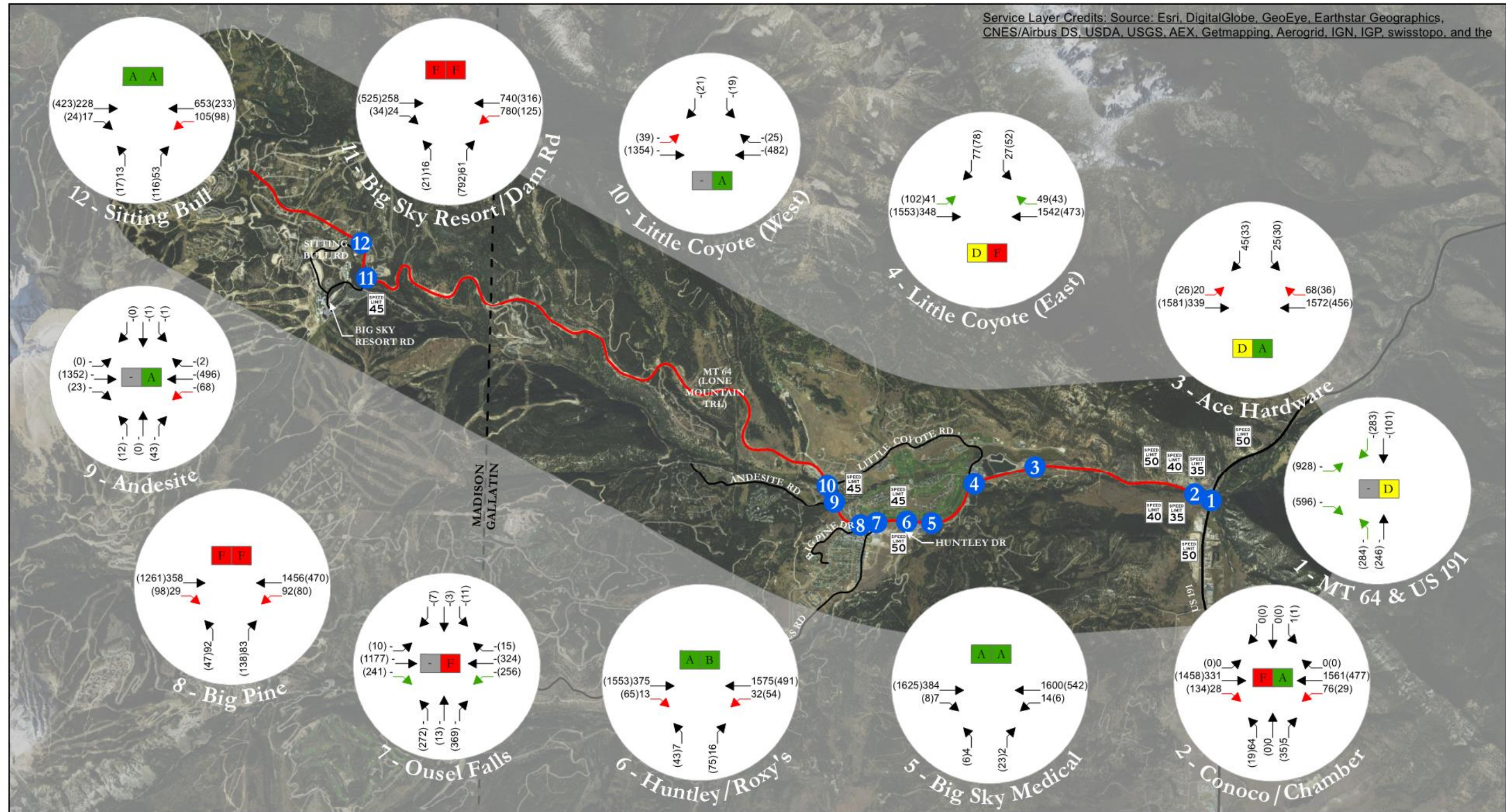
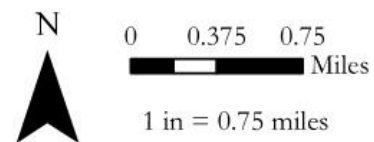


Figure 10: 20-Year Future Conditions (No Build)

Legend

- Study Corridor
- Study Intersections
- No Turn Lane Warranted
- Turn Lane Warranted
- Existing Turn Lane
- Level of Service
- Grey box: -
- Yellow box: C - D
- Green box: A - B
- Red box: E - F
- Box with AM/PM: AM/PM

Note: Volumes have been adjusted for seasonal variation.





## Turn Lane Warrants

Auxiliary right and left-turn lane warrants were once again evaluated based on the methodology outlined in MDT’s Traffic Engineering Manual (November 2007), but this time using 10-year and 20-year volume projections. It was determined that turn lanes should be considered at the intersections shown in Table 5 based on future traffic volumes. A more detailed summary of turn lane warrant calculations is presented in Appendix F.

**Table 5. Turn Lane Warrant Summary**

TURN LANE WARRANTS		MT 64 & Conoco/Chamber	MT 64 & Powder Light Sub (Ace Hardware)	MT 64 & Little Coyote (East)	MT 64 & Big Sky Medical	MT 64 & Huntley	MT 64 & Big Pine	MT 64 & Andesite	MT 64 & Little Coyote (West)	MT 64 & Big Sky Resort	MT 64 & Sitting Bull
2017 Volumes	EB Right-Turn Lane	✓	--	--	x	✓	✓	x	--	x	x
	EB Left-Turn Lane	x	✓	✓	--	--	--	x	--	--	--
	WB Right-Turn Lane	x	x	x	--	--	--	x	x	--	--
	WB Left-Turn Lane	✓	--	--	x	✓	✓	✓	x	✓	x
2027 Volumes	EB Right-Turn Lane	✓	--	--	x	✓	✓	x	--	x	x
	EB Left-Turn Lane	x	✓	✓	--	--	--	x	--	--	--
	WB Right-Turn Lane	x	✓	✓	--	--	--	x	x	--	--
	WB Left-Turn Lane	✓	--	--	x	✓	✓	✓	✓	✓	✓
2037 Volumes	EB Right-Turn Lane	✓	--	--	x	✓	✓	x	--	x	x
	EB Left-Turn Lane	x	✓	✓	--	--	--	x	--	--	--
	WB Right-Turn Lane	x	✓	✓	--	--	--	x	x	--	--
	WB Left-Turn Lane	✓	--	--	x	✓	✓	✓	✓	✓	✓

✓ = Turn-Lane Warranted

x = Turn-Lane Not Warranted

## RECOMMENDED IMPROVEMENTS

# 4



The preceding evaluation of existing conditions and analysis of projected future traffic operations have resulted in many recommended improvements for the Highway 64 corridor. Those recommendations have been organized into the following key project elements: Turn Lanes, Intersection Control, Bike & Pedestrian Facilities, Transit Facilities and Other Improvements. The combination of all of these improvements are illustrated in Figure 11 on the following page and are summarized in Table 6 on page 25.

The proposed corridor improvements were based on the 10-year and 20-year traffic volume projections, the resulting capacity calculations, and other considerations previously discussed in the report. In general, all design elements should be implemented with the ultimate goal of constructing a cohesive corridor that operates safely and efficiently for all modes of travel. The improvements should be designed to MDT, AASHTO, MUTCD, and other standards as appropriate.

### Turn Lanes

The preceding analysis included the evaluation of turn lane guidelines at each of the study area intersections using existing, 10-year and 20-year volumes. Turn lanes are warranted at many of the study area intersections based on existing volumes. Additional turn lanes will become warranted with each incremental increase in traffic volume up to the point where they are essentially all warranted for 20-year future volume projections.

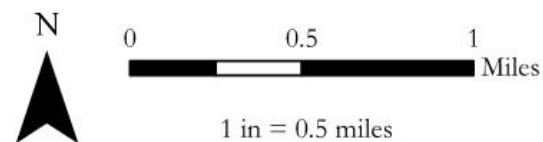
It is recommended that Gallatin County and Madison County encourage participation in the installation of turn lanes with new development whenever possible. In locations where that is no longer a possibility, it is recommended that larger projects be considered to widen the corridor and add the left-turn lanes as a series of projects. Larger projects of this nature could likely be funded by a Rural Improvement District (RID) or some other combination of public and private funding. All of the turn lanes shown in Table 5 (on the previous page) should be considered for installation. Recommendations for how they could be combined and when they should be constructed are shown in Table 6.

Some of the right-turn lanes could be considered at that time also, but the right-turn lanes would require further consideration by MDT before installation. Right-turn lanes can introduce a sight-distance impediment to vehicles stopped on the minor approach, so MDT typically evaluates these installations on a case-by-case basis to ensure they are only installed where absolutely needed.



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Figure 11: Recommended Improvements



Legend

- Study Corridor
- Signage/Other Upgrades
- Study Intersections
- Auxiliary Turn Lanes
- Future Traffic Signal or Roundabout



**Table 6. Summary of Recommended Improvements**

<b>Improvement</b>	<b>Timeframe</b>	<b>Opinion of Probable Cost</b>	<b>Potential Funding Sources</b>
<b>Turn Lanes</b>			
Install left-turn lanes at Big Sky Resort Rd and Sitting Bull Rd	Short-Term (0-5 years)	\$800,000 per left-turn lane	STPX, County Funds, RID, Resort Tax, Private Funds
Install left-turn lanes west Conoco Access/Chamber Access (requires relocation of access)	Mid-Term (5-10 years)	\$800,000 per left-turn lane	STPX, County Funds, RID, Resort Tax, Private Funds
Install auxiliary left-turn lanes at Powder Light Subdivision (Ace Hardware)	Mid-Term (5-10 years)	\$800,000 per left-turn lane	STPX, County Funds, RID, Resort Tax, Private Funds
Install auxiliary left-turn lanes or two-way left-turn lane from Little Coyote (East) to Big Pine Drive	Mid-Term (5-10 years)	\$800,000 per left-turn lane	STPX, County Funds, RID, Resort Tax, Private Funds
Install auxiliary left-turn lanes at Andesite Rd and Little Coyote Rd (West)	Mid-Term (5-10 years)	\$800,000 per left-turn lane	STPX, County Funds, RID, Resort Tax, Private Funds
<b>Intersection Control</b>			
Install NB lead left-turn phasing, lane designation signs, and SB shoulder hatching at Highway 191	Short-Term (0-5 years)	\$10,000	STPX, County Funds, RID, Resort Tax, Private Funds
Install traffic signal or roundabout at Little Coyote Rd (East)	Mid-Term (5-10 years)	\$500,000 (Signal) \$1.5 Million (Rndbt)	STPX, County Funds, RID, Resort Tax, Private Funds
Install traffic signal or roundabout at Huntley Drive	Mid-Term (5-10 years)	\$500,000 (Signal) \$1.5 Million (Rndbt)	STPX, County Funds, RID, Resort Tax, Private Funds
Install traffic signal or roundabout at Big Pine Drive	Long-Term (10-20 years)	\$500,000 (Signal) \$1.5 Million (Rndbt)	STPX, County Funds, RID, Resort Tax, Private Funds
Install NB right-turn slip lane at Big Sky Resort Road	Long-Term (10-20 years)	\$200,000	STPX, County Funds, RID, Resort Tax, Private Funds
Install additional thru lanes in each direction (five-lane cross section) from Little Coyote (East) to Big Pine Drive	Long-Term (10-20 years)	\$2.5 million	STPX, County Funds, RID, Resort Tax, Private Funds
<b>Bike &amp; Pedestrian Facilities</b>			
Extend existing paved trail south side of Hwy 64 to Andesite Road (1/3 mile)	Short-Term (0-5 years)	\$200,000	TA, RTP, FLAP, Resort Tax
Grade-separated crossing at Little Coyote (East)	Short-Term (0-5 years)	\$1.0 million	TA, RTP, FLAP, Resort Tax
New paved trail north side of Hwy 64 - Powder Light Subdivision to Lone Mountain Ranch (3 miles)	Mid-Term (5-10 years)	\$1.5 million	TA, RTP, FLAP, Resort Tax
Grade-separated crossing east end of Powder Light Subdivision	Mid-Term (5-10 years)	\$1.0 million	TA, RTP, FLAP, Resort Tax
Enhance existing grade-separated crossing at Lone Mountain Ranch for public use	Long-Term (10-20 years)	\$500,000	TA, RTP, FLAP, Resort Tax
<b>Transit Facilities</b>			
Expand existing transit service to meet future demand	Short-Term (0-5 years)	\$3.5 million/year	PTP, Resort Tax, County Funds
<b>Other Improvements</b>			
Eliminate on-street parking on Highway 64	Short-Term (0-5 years)	\$400,000	STPX, RID, Resort Tax, Private
Upgrade existing wildlife warning signage and add pull-outs	Short-Term (0-5 years)	\$1,000 per sign \$50,000 per pull-out	STPX, HSIP, County Funds
Upgrade existing curve warning signage	Short-Term (0-5 years)	\$1,000 per sign	STPX, HSIP, County Funds
Upgrade existing bridges	Short-Term (0-5 years)	\$1 million to \$5 million	STPB, NHPB
Relocate Conoco/Chamber access to west side of property	Mid-Term (5-10 years)	\$200,000	Resort Tax, Private
Ousel Falls traffic calming/crosswalk enhancements	Mid-Term (5-10 years)	\$1,000 per sign or \$100,000 per intersection	RID, TA, Resort Tax

## Intersection Control

There are existing traffic signals at the intersection of Highway 64/Highway 191 and the intersection of Highway 64/Ousel Falls Road. Additional future signals were evaluated based on the warrant criteria outlined in the Manual on Uniform Traffic Control Devices (MUTCD). The MUTCD presents a number of different warrants that can be considered, including various volume warrants, school crossings, crash history, etc. For the purposes of this analysis, Warrant 3 - Peak Hour Warrant was used as a cursory review of additional intersections where signal warrants may be met. The results of this analysis are summarized below in Table 7 and detailed calculations are provided in Appendix G. This signal warrant analysis provides a cursory review of future signals based on the Peak Hour Warrant only. A more comprehensive signal warrant analysis including a review of all warrants and current volumes should be completed prior to signal installation. Per MDT’s standard policy, roundabouts should also be considered wherever traffic signal warrants are met.

**Table 7. Traffic Signal Warrant Summary**

TRAFFIC SIGNAL WARRANTS		MT 64 & Little Coyote (East)	MT 64 & Huntley	MT 64 & Big Pine	MT 64 & Andesite	MT 64 & Little Coyote (West)	MT 64 & Big Sky Resort
3. Peak Hour (2017 Volumes)		x	x	x	x	x	x
3. Peak Hour (2027 Volumes)		✓	x	✓	x	x	✓
3. Peak Hour (2037 Volumes)		✓	✓	✓	x	x	✓
Signal Warranted	Yes	✓	✓	✓			✓
	No				x	x	

✓ = Signal Warranted

x = Signal Not Warranted

Based on this analysis, it is recommended that the following intersections be monitored for future signals as traffic volumes increase in the future:

- Highway 64 & Little Coyote Road (East)
- Highway 64 & Huntley Drive
- Highway 64 & Big Pine Drive

This analysis shows that a signal could also be warranted at Big Sky Resort Road with future traffic volumes, but this is a challenging location for the installation of a signal and the LOS deficiency on the northbound approach is primarily due to a high volume of right-turning traffic. As an alternative to signalization, a northbound right-turn slip lane would provide acceptable traffic operations. A change in stop control from the northbound approach to the eastbound approach or a change to three-way stop-control could also be considered. It was noted that Big Sky Resort may be considering changes on site that could result in a shift of entering/exiting traffic from Big Sky Resort Road to Sitting Bull Road. Therefore, any changes in traffic control at either of these intersections should account for the possible redistribution of traffic volumes.

The following improvements are recommended to the existing signalized intersection of Highway 191 and Highway 64:

- Install lead left-turn phasing for northbound left-turning traffic.
- Install overhead lane designation signage on the existing signal mast arms.
- Provide hatching along shoulder adjacent to southbound right-turn lane. The shoulder is wide enough that it has been mistaken for the right-turn lane in the past and recently resulted in a crash at this intersection.
- Consider protected southbound right-turn phasing in conjunction with the eastbound green phase.

In order to achieve LOS C for 20-year volumes, it will also be necessary to consider an additional through lane in each direction resulting in a five-lane section from Little Coyote Road (East) to Big Pine Drive. The existing signal at Highway 64/Ousel Falls Road will require some upgrades in the future as well, as a long-term solution to accommodate future volumes. This will consist of additional lanes and signal phasing/timing modifications. Capacity calculation results for the no-build and recommended improvement scenarios are presented in Table 8 (10-year volumes) and Table 9 (20-year volumes).

**Table 8. Capacity Calculation Summary – 10-Year Volumes**

Intersection	Approach	Future Conditions (2027) - No Build						Future Conditions (2027) - Improved					
		AM Peak			PM Peak			AM Peak			PM Peak		
		Avg Delay (s/veh)	LOS	Max Queue (veh)	Avg Delay (s/veh)	LOS	Max Queue (veh)	Avg Delay (s/veh)	LOS	Max Queue (veh)	Avg Delay (s/veh)	LOS	Max Queue (veh)
<i>Intersection Control</i>		<i>Signalized</i>						<i>Signalized</i>					
MT 64 & US 191	EB	--	--	--	22.8	C	18	--	--	--	22.8	C	18
	NB	--	--	--	20.9	C	8	--	--	--	20.9	C	8
	SB	--	--	--	17.3	B	3	--	--	--	17.3	B	3
	Intersection	--	--	--	21.3	C	--	--	--	--	21.3	C	--
<i>Intersection Control</i>		<i>Two-way (NB/SB) Stop Control</i>						<i>Two-way (NB/SB) Stop Control</i>					
MT 64 & Conoco/Chamber	EB	0.0	A	0	0.0	A	0	0.0	A	0	0.0	A	0
	WB	0.6	A	1	1.0	A	1	0.3	A	1	1.0	A	1
	NB	219.5	F	7	38.6	E	2	219.5	F	7	38.2	E	2
	SB	57.2	F	1	62.1	F	1	57.2	F	1	61.2	F	1
	Intersection	12.3	B	--	1.9	A	--	12.3	B	--	1.9	A	--
<i>Intersection Control</i>		<i>One-way (SB) Stop Control</i>						<i>One-way (SB) Stop Control</i>					
MT 64 & Ace Hardware	EB	0.7	A	1	0.2	A	1	0.7	A	1	0.2	A	1
	WB	0.0	A	0	0.0	A	0	0.0	A	0	0.0	A	0
	SB	33.7	D	2	29.5	D	2	26.4	D	1	25.8	D	1
	Intersection	1.9	A	--	1.1	A	--	1.5	A	--	1.0	A	--
<i>Intersection Control</i>		<i>One-way (SB) Stop Control</i>						<i>One-way (SB) Stop Control</i>					
MT 64 & Little Coyote (East)	EB	1.0	A	1	0.7	A	1	1.0	A	1	0.7	A	1
	WB	0.0	A	0	0.0	A	0	0.0	A	0	0.0	A	0
	SB	38.3	E	3	110.8	F	8	28.7	D	1	62.9	F	5
	Intersection	2.4	A	--	11.2	B	--	1.9	A	--	6.5	A	--
<i>Intersection Control</i>		<i>One-way (NB) Stop Control</i>						<i>One-way (NB) Stop Control</i>					
MT 64 & Big Sky Medical	EB	0.0	A	0	0.0	A	0	0.0	A	0	0.0	A	0
	WB	0.1	A	0	0.2	A	0	0.1	A	0	0.2	A	0
	NB	26.2	D	1	26.3	D	1	26.2	D	1	26.3	D	1
	Intersection	0.4	A	--	0.7	A	--	0.4	A	--	0.7	A	--
<i>Intersection Control</i>		<i>One-way (NB) Stop Control</i>						<i>One-way (NB) Stop Control</i>					
MT 64 & Huntley	EB	0.0	A	0	0.0	A	0	0.0	A	0	0.0	A	0
	WB	0.2	A	1	1.4	A	1	0.2	A	1	1.3	A	1
	NB	19.7	C	1	36.2	E	2	19.0	C	1	33.6	D	2
	Intersection	0.4	A	--	2.6	A	--	0.4	A	--	2.4	A	--
<i>Intersection Control</i>		<i>Signalized</i>						<i>Signalized</i>					
MT 64 & Ousel Falls Road/ Two Moons Road	EB	--	--	--	15.2	B	24	--	--	--	15.2	B	24
	WB	--	--	--	9.2	A	6	--	--	--	9.2	A	6
	NB	--	--	--	22.9	C	8	--	--	--	22.9	C	8
	SB	--	--	--	21.3	C	2	--	--	--	21.3	C	2
	Intersection	--	--	--	15.7	B	--	--	--	--	15.7	B	--
<i>Intersection Control</i>		<i>One-way (NB) Stop Control</i>						<i>One-way (NB) Stop Control</i>					
MT 64 & Big Pine	EB	0.0	A	0	0.0	A	0	0.0	A	0	0.0	A	0
	WB	0.8	A	1	2.2	A	1	0.8	A	1	2.1	A	1
	NB	454.6	F	18	63.5	F	7	150.1	F	9	27.0	D	2
	Intersection	58.0	F	--	8.3	A	0	19.5	C	--	3.8	A	--
<i>Intersection Control</i>		<i>Two-way (EB/WB) Stop Control</i>						<i>Two-way (EB/WB) Stop Control</i>					
MT 64 & Andesite Road	EB	--	--	--	0.0	A	0	--	--	--	0.0	A	0
	WB	--	--	--	1.6	A	1	--	--	--	1.6	A	1
	NB	--	--	--	25.6	D	1	--	--	--	25.3	D	1
	SB	--	--	--	33.6	D	1	--	--	--	32.9	D	1
	Intersection	--	--	--	1.7	A	--	--	--	--	1.7	A	--
<i>Intersection Control</i>		<i>One-way (SB) Stop Control</i>						<i>One-way (SB) Stop Control</i>					
MT 64 & Little Coyote (West)	EB	--	--	--	0.3	A	1	--	--	--	0.3	A	1
	WB	--	--	--	0.0	A	0	--	--	--	0.0	A	0
	SB	--	--	--	23.5	C	1	--	--	--	23.0	C	1
	Intersection	--	--	--	0.9	A	--	--	--	--	0.9	A	--
<i>Intersection Control</i>		<i>One-way (NB) Stop Control</i>						<i>One-way (NB) Stop Control</i>					
MT 64 & Big Sky Resort	EB	0.0	A	0	0.0	A	0	0.0	A	0	0.0	A	0
	WB	5.0	A	3	2.7	A	1	5.0	A	3	2.7	A	1
	NB	124.6	F	4	47.3	E	12	49.2	E	2	35.4	E	10
	Intersection	9.6	A	--	19.9	C	--	6.3	A	--	15.0	C	--
<i>Intersection Control</i>		<i>One-way (NB) Stop Control</i>						<i>One-way (NB) Stop Control</i>					
MT 64 & Sitting Bull	EB	0.0	A	0	0.0	A	0	0.0	A	0	0.0	A	0
	WB	1.5	A	1	2.7	A	1	1.5	A	1	2.7	A	1
	NB	11.9	B	1	12.6	B	2	11.7	B	1	12.6	B	2
	Intersection	1.8	A	--	4.0	A	--	1.8	A	--	4.0	A	--

**Table 9. Capacity Calculation Summary – 20-Year Volumes**

Intersection	Approach	Future Conditions (2037) - No Build						Future Conditions (2037) - Improved					
		AM Peak			PM Peak			AM Peak			PM Peak		
		Avg Delay (s/veh)	LOS	Max Queue (veh)	Avg Delay (s/veh)	LOS	Max Queue (veh)	Avg Delay (s/veh)	LOS	Max Queue (veh)	Avg Delay (s/veh)	LOS	Max Queue (veh)
<i>Intersection Control</i>		<i>Signalized</i>						<i>Signalized</i>					
MT 64 & US 191	EB	--	--	--	31.8	C	36	--	--	--	42.1	D	44
	NB	--	--	--	118.5	F	15	--	--	--	71.5	E	13
	SB	--	--	--	49.7	D	4	--	--	--	14.6	B	5
	Intersection	--	--	--	53.7	D	--	--	--	--	43.6	D	--
<i>Intersection Control</i>		<i>Two-way (NB/SB) Stop Control</i>						<i>Two-way (NB/SB) Stop Control</i>					
MT 64 & Conoco/Chamber	EB	0.0	A	0	0.0	A	0	0.0	A	0	0.0	A	0
	WB	0.4	A	1	1.1	A	1	0.4	A	1	1.1	A	1
	NB	1563.3	F	11	258.9	F	4	1563.3	F	11	258.9	F	4
	SB	213.1	F	1	589.2	F	1	213.1	F	1	518.1	F	1
	Intersection	56.2	F	--	8.0	A	--	56.2	F	--	7.8	A	--
<i>Intersection Control</i>		<i>One-way (SB) Stop Control</i>						<i>One-way (SB) Stop Control</i>					
MT 64 & Ace Hardware	EB	0.9	A	1	0.1	A	1	0.9	A	1	0.1	A	1
	WB	0.0	A	0	0.0	A	0	0.0	A	0	0.0	A	0
	SB	644.4	F	13	288.1	F	7	190.1	F	5	188.6	F	4
	Intersection	33.3	D	--	9.1	A	--	9.8	A	--	6.0	A	--
<i>Intersection Control</i>		<i>One-way (SB) Stop Control</i>						<i>Signalized</i>					
MT 64 & Little Coyote (East)	EB	1.8	A	1	0.6	A	1	2.9	A	2	12.4	B	13
	WB	0.0	A	0	0.0	A	0	5.2	A	10	6.0	A	3
	SB	520.9	F	11	1210.2	F	23	21.7	C	2	17.9	B	2
	Intersection	25.6	D	--	97.2	F	--	5.5	A	--	11.4	B	--
<i>Intersection Control</i>		<i>One-way (NB) Stop Control</i>						<i>One-way (NB) Stop Control</i>					
MT 64 & Big Sky Medical	EB	0.0	A	0	0.0	A	0	0.0	A	0	0.0	A	0
	WB	0.1	A	0	0.2	A	1	4.1	A	0	0.4	A	1
	NB	77.7	F	1	74.2	F	2	26.2	D	1	37.9	F	1
	Intersection	0.6	A	--	1.3	A	--	3.4	A	--	0.7	A	--
<i>Intersection Control</i>		<i>One-way (NB) Stop Control</i>						<i>Signalized</i>					
MT 64 & Huntley	EB	0.0	A	0	0.0	A	0	2.1	A	1	4.7	A	10
	WB	0.2	A	1	1.8	A	1	4.2	A	7	2.7	A	2
	NB	49.2	E	1	288.2	F	6	18.1	B	1	21.1	C	2
	Intersection	0.9	A	--	14.7	B	--	3.9	A	--	5.1	A	--
<i>Intersection Control</i>		<i>Signalized</i>						<i>Signalized</i>					
MT 64 & Ousel Falls Road/ Two Moons Road	EB	--	--	--	100.9	F	64	--	--	--	49.7	D	22
	WB	--	--	--	80.3	F	17	--	--	--	23.9	C	9
	NB	--	--	--	114.2	F	20	--	--	--	38.6	D	12
	SB	--	--	--	49.9	C	2	--	--	--	24.5	C	1
	Intersection	--	--	--	98.9	F	--	--	--	--	40.9	D	--
<i>Intersection Control</i>		<i>One-way (NB) Stop Control</i>						<i>Signalized</i>					
MT 64 & Big Pine	EB	0.0	A	0	0.0	A	0	2.2	A	2	5.0	A	9
	WB	0.5	A	1	2.6	A	1	7.0	A	9	3.9	A	6
	NB	3624.2	F	30	1166.3	F	22	28.4	C	3	32.4	C	4
	Intersection	276.7	F	--	94.1	F	--	7.9	A	--	6.9	A	--
<i>Intersection Control</i>		<i>Two-way (EB/WB) Stop Control</i>						<i>Two-way (EB/WB) Stop Control</i>					
MT 64 & Andesite Road	EB	--	--	--	0.0	A	0	--	--	--	0.0	A	0
	WB	--	--	--	1.7	A	1	--	--	--	1.7	A	1
	NB	--	--	--	234.8	F	6	--	--	--	208.6	F	6
	SB	--	--	--	275.0	F	2	--	--	--	229.3	F	1
	Intersection	--	--	--	9.0	A	--	--	--	--	8.0	A	--
<i>Intersection Control</i>		<i>One-way (SB) Stop Control</i>						<i>One-way (SB) Stop Control</i>					
MT 64 & Little Coyote (West)	EB	--	--	--	0.3	A	1	--	--	--	0.3	A	1
	WB	--	--	--	0.0	A	0	--	--	--	0.0	A	0
	SB	--	--	--	155.5	F	4	--	--	--	98.6	F	4
	Intersection	--	--	--	4.3	A	--	--	--	--	2.8	A	--
<i>Intersection Control</i>		<i>One-way (NB) Stop Control</i>						<i>One-way (NB) Stop Control w/ NB Slip Lane</i>					
MT 64 & Big Sky Resort	EB	0.0	A	0	0.0	A	0	0.0	A	0	0.0	B	0
	WB	17.9	C	18	2.9	A	1	17.9	B	18	2.9	A	1
	NB	1688.8	F	12	688.8	F	76	--	F	--	39.4	E	1
	Intersection	73.0	F	--	297.0	F	--	15.2	B	--	1.9	A	--
<i>Intersection Control</i>		<i>One-way (NB) Stop Control</i>						<i>One-way (NB) Stop Control</i>					
MT 64 & Sitting Bull	EB	0.0	A	0	0.0	A	0	0.0	A	0	0.0	A	0
	WB	1.2	A	1	2.7	A	1	1.2	A	1	2.7	A	1
	NB	24.3	C	2	22.8	C	4	20.6	B	1	22.8	C	4
	Intersection	2.0	A	--	5.3	A	--	1.8	A	--	5.3	A	--

## Bike & Pedestrian Facilities

As noted on page 5 of this report, the Big Sky Community Organization is just beginning the process of updating the Big Sky Master Trails Plan, which will serve as the blue print for future expansion of the trail system. This Transportation Study was therefore focused primarily on proposed bike and pedestrian facilities located along and across the Highway 64 corridor. The recommendations made herein should ideally be incorporated into the Master Trails Plan as well for consistency.

The following improvements are recommended to enhance bike and pedestrian safety and accessibility *along* the Highway 64 corridor:

- Extend existing paved multi-use trail along the south side of Highway 64 to the west of Big Pine Drive. Ideally, this trail would be extended all the way to Andesite Road, but it may be a challenging installation due to terrain.
- Construct a paved multi-use trail along the north side of Highway 64 that extends through the Meadow area at a minimum. The minimum extents should be the Powder Light Subdivision (additional lots east of Ace Hardware) on the east end to the existing grade-separated crossing near Lone Mountain Ranch on the west end. If proximity to the golf course is a concern in this location, an alternate alignment along Little Coyote Road provides east-west connectivity, but a path along the highway would be desirable as well for better connectivity.

In addition to the improvements recommended along the Highway 64 corridor, the following improvements are recommended to enhance bike and pedestrian safety and accessibility *across* the Highway 64 corridor:

- Install a grade-separated crossing at the east end of Powder Light Subdivision (additional lots east of Ace Hardware). A 100-foot wide trail easement is being dedicated as part of the subdivision platting process for this purpose.
- Install a grade-separated crossing at Little Coyote Road (East). This is a project that the community has been working on for some time, including a recent application for funding through the

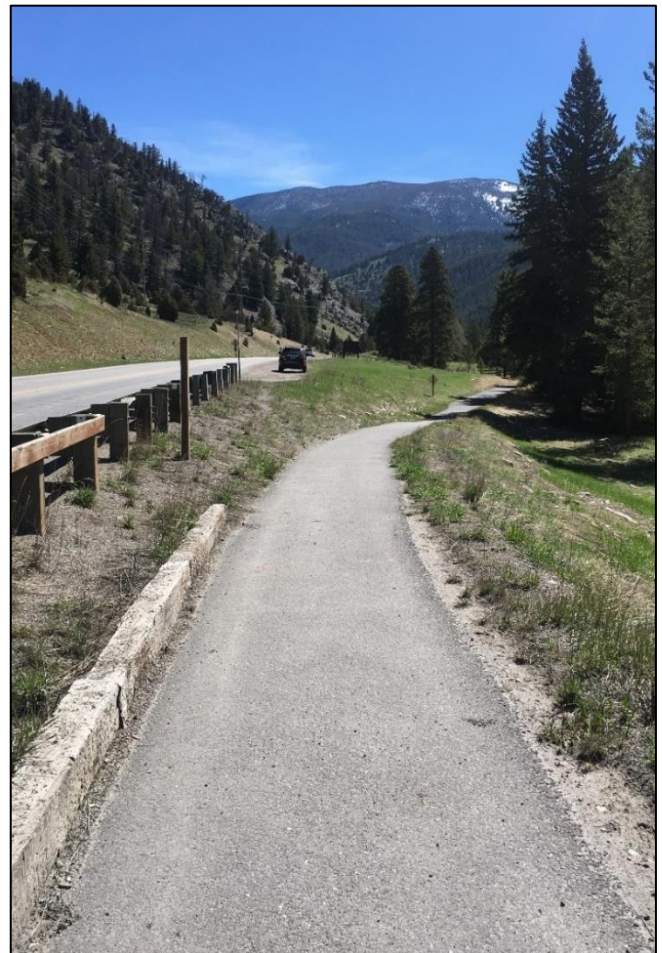
Transportation Alternatives program administered by MDT.

- Enhance the existing grade-separated crossing at Lone Mountain Ranch for public use or relocate to the bridge west of Andesite Road with a future bridge replacement project.

These three grade-separated crossings, along with the signal at Ousel Falls Road, would provide four (4) different safe crossing locations equally spaced along the corridor through the Meadow.

Although it's outside the core study area being considered for this Transportation Study, it is also recommended that a grade separated crossing be considered on Highway 191 south of Highway 64. This crossing location would provide access between Ophir School on the west side of Highway 191 and the Porcupine Creek Trailhead on the east side.

Theses proposed bike and pedestrian facilities are shown in Figure 12 on the following page.





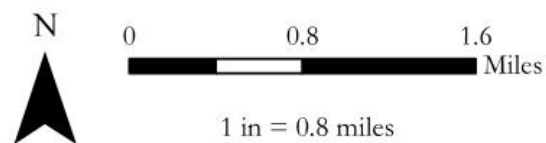


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Figure 12: Proposed Bike & Pedestrian Facilities

Legend

- Study Corridor
- - - Proposed Trail
- - - Existing Gravel Trail
- - - Existing Paved Trail
- - - Existing Natural Trail
- Trailhead
- Signalized Crossing
- Proposed Grade Separated Crossing



## Transit Facilities

The existing Skyline transit service, both the Link Express service to/from Bozeman and the Canyon-Mountain service, will require continued expansion to accommodate increases in rider demand and to further reduce congestion on the roadway network. As noted previously, if the needed funding is available in the future, projected ridership should increase by about 5% per year. Skyline's current operating budget is approximately \$1.7 million per year. The Big Sky Transportation District would like to double that budget to get to a level of service that would address projected demands. Therefore, as noted in Table 6, it is recommended that the community plan for an operating budget of approximately \$3.5 million per year in the future.

## Other Improvements

Throughout the course of this Transportation Study, and through public input provided at the neighborhood meetings that preceded it, there have been several transportation-related issues identified throughout the corridor. The following additional improvements should be considered.

### **Eliminate On-Street Parking on Highway 64**



It is a common occurrence for large trucks to park along both sides of Highway 64 just west of Highway 191 adjacent to the Conoco station (see photo to left). The drivers of those trucks on the north side then cross the highway as pedestrians mid-block to go to the Conoco station. This is an informal parking area and it does not appear that it was intended for this purpose because the surface is rough and uneven. Pedestrian crossings in this location are an obvious concern. The existing light poles in this area have been hit and damaged by the trucks many times and the trucks also limit visibility of the speed limit signs, wildlife crossing warning signs, and the new Big Sky wayfinding signage.

Because of the many safety concerns related to trucks parking in this area, it is recommended that the on-street parking be eliminated. This could be achieved by extending the existing curb and gutter along the Chamber of Commerce and Conoco frontage further to the west or re-grading the shoulder and installing no-parking signs. In order to eliminate this on-street parking, Gallatin County would need to pass an ordinance to restrict parking in this area and request that MDT install no-parking signs.

The Chamber of Commerce property is currently listed for sale. It's possible that the entire corner could be redeveloped in the future, at which time a truck parking area, rest area or possibly another convenience market could be considered. If a designated truck parking area is established on the north side and the only convenience store is on the south side, then a grade-separated pedestrian crossing should be considered. Another valid option may be to reconfigure the Conoco site to better accommodate truck traffic on-site.

## Upgrade Existing Wildlife Warning Signage

As noted previously, there was a fairly high concentration of animal-vehicle collisions reported on Highway 64 within the first 1.5 miles west of Highway 191. Elimination of the on-street truck parking just west of Highway 191 will help to improve the visibility of the existing wildlife crossing sign in this location. However, there are additional measures that could be taken to enhance visibility of the signs at both ends of the wildlife crossing zone.

If curb and gutter were installed to eliminate the on-street truck parking, the wildlife crossing sign could be moved closer to the roadway. A new over-sized sign face could be installed, as well as a yellow flasher on top of the sign to catch drivers' attention and improve visibility.



As part of this project, it is also recommended that pull-outs be considered for designated wildlife viewing areas since many drivers are currently stopping in the middle of the highway to take pictures today. These pull-outs would also allow drivers to pull over to use their cell phones before or after driving through the Canyon where cell phone service is limited. The pull-outs should be considered on both sides of the highway and should be located just west of the bridge that is located 1000 feet west of Highway 191.

Longer-term improvements that would address this wildlife crossing area may consist of fencing to direct wildlife away from the curves so they cross on the straightaways where they are more visible to motorists, or perhaps a grade-separated wildlife crossing or two.

It is also recommended that alternative forms of winter maintenance be considered by MDT to eliminate the salt on the roadway that's attracting big horn sheep and other wildlife.

## Upgrade Curve Warning Signage

MDT has recently been working on a statewide project to re-evaluate horizontal curves relative to current design standards and to upgrade curve warning signs to meet the latest MDT standards. Highway 64 is not included in that statewide effort, but it could certainly benefit from some curve warning signage upgrades. It is recommended that MDT either add this roadway to the statewide effort or that a separate study be conducted to upgrade curve warning signs on Highway 64.

## Upgrade Existing Bridges

There are two bridges along the Highway 64 corridor. One is located approximately 1000 feet west of Highway 191 and the other is located approximately 400 feet west of Andesite Road. The concrete decks on both bridges are in need of repair. It is recommended that they be resurfaced at a minimum, but they should be evaluated for possible bridge deck replacement. MDT currently has bridge work scheduled for Highway 64 during the summer of 2019 that will repair or replace these bridge decks with Bridge Program funding.

## Relocate Conoco/Chamber Accesses to West Side of Property

The Conoco Gas Station and Chamber of Commerce sites are located on either side of Highway 64, just west of the Highway 191 intersection. They each have two existing approaches to Highway 64 and all four approaches are located within approximately 350 feet of the intersection. In order to provide better access and circulation in this area, it is recommended that the western-most access into each of these sites be moved further west, ideally all the way to the western property line of both properties. This would allow for enough room to install a westbound left-turn bay for traffic entering the Conoco site. It would also improve Conoco's ability to accommodate the large trucks on-site rather than on-street on the north and south sides of Highway 64.



## Ousel Falls Road Traffic Calming and Crosswalk Enhancements

Traffic on Ousel Falls Road includes a high volume of construction traffic traveling to and from Yellowstone Club, Spanish Peaks and Town Center. The community has expressed concerns about speeding traffic on this roadway and the conflict with a high volume of pedestrian crossings within the core Town Center area. The posted speed limit on this segment of Ousel Falls Road is 25 mph and there are eight (8) marked crosswalks within 2,000 feet south of Highway 64. The rural improvement district for Ousel Falls Road (RID 395) has previously installed in-street pedestrian crossing signs to reinforce the requirement for motorists to stop for pedestrians in a crosswalk.

Speed data collected on Ousel Falls Road shows that the average speed is 27-28 mph and the 85<sup>th</sup> percentile speed is 32-34 mph. This segment of Ousel Falls Road within Town Center could benefit from traffic calming measures and/or pedestrian crosswalk enhancements. It is recommended that radar driver-feedback signs be installed on the existing 25 mph speed limit signs. Other traffic calming measures that could be considered include pedestrian crossing flags, curb extensions and/or raised crosswalks at the primary crossing locations.

## Potential Funding Sources

The following paragraphs provide a summary of potential funding sources for transportation improvements in the Big Sky area. They are listed in order of federal, statewide and local funding resources. Highway 64 is not currently considered eligible for many of the federal funding sources because it's designated as an off-system route by MDT, but these sources have still been included in this summary for background information. Potential funding sources for each of the recommended improvements have been identified in Table 6 on page 25.

### Federal Funding Sources

#### National Highway Performance Program (NHPP)

The National Highway Performance Program (NHPP) provides funding for the National Highway System (NHS), including the Interstate System and National Highway System highways and bridges. Eligible activities include construction, reconstruction, resurfacing, restoration, and rehabilitation of segments of NHS routes and bridges. The allocation of NHPP funding is determined by the Montana Transportation Commission. Highway 64 is not an NHS route and is therefore ineligible for this funding program.

### **Surface Transportation Block Grant Program (STP)**

The Surface Transportation Block Grant Program is a funding category that may be used to preserve or improve conditions and performance on any federal-aid highway. Funds are federally apportioned to Montana and allocated by the Montana Transportation Commission to various programs including the Surface Transportation Program Primary (STPP), Surface Transportation Program Secondary (STPS), Surface Transportation Program Urban (STPU), Urban Pavement Preservation Program (UPP), Surface Transportation Program Bridge (STPB), Surface Transportation Program for Other Routes (Off-System) (STPX). Highway 64 could be eligible for funding under either of the last two programs because they can be allocated to off-system routes.

### **Highway Safety Improvement Program (HSIP)**

The Highway Safety Improvement Program is a funding category that helps states implement a data-driven and strategic approach to improving highway safety on all public roads. In Montana, the primary focus of the HSIP program involves identifying locations with crash trends where feasible countermeasures exist and prioritizing work according to benefit/cost ratios. MDT also advances systemic improvements to address safety issues at the network level. While no higher-than-average crash trends have been identified on the Highway 64 corridor, this is a funding program that could be considered if a crash trend is identified in the future.

### **Transportation Alternatives (TA) Program**

The TA program provides funding via a set-aside from the Surface Transportation Block Grant Program. It is a federally-funded program that combines activities previously funded by Transportation Enhancements, Recreational Trails, and Safe Routes to School programs from previous transportation bills. The TA program provides assistance to local governments, tribal entities, transit providers, resource agencies or school districts for community improvements deemed eligible for TA funding. Projects are selected for funding through a statewide competitive process. Eligible activities include a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school, community improvements such as historic preservation and vegetation management, and environmental mitigation related to stormwater and habitat connectivity.

### **Recreational Trails Program (RTP)**

The Recreational Trails Program falls under TA, but each state is required to use a specified portion of its TA funds for recreational trail projects. The Montana Department of Fish, Wildlife & Parks (FWP) administers the program and a State Trails Advisory Committee advises FWP on the administration of the program and expenditure of funds. RTP is a federal-aid assistance program for construction and maintenance of recreational trails for motorized and non-motorized recreational trail uses.

### **Federal Lands Access Program (FLAP)**

The Federal Lands Access Program provides funding for projects that improve access to federal lands on infrastructure owned by states and local governments. Transportation facilities that provide access to any federal lands are eligible for this program. States are required to provide a non-federal match for program funds.

### **Public Transportation Program (PTP)**

For Montana's rural areas, the MDT Transit Section issues federal grants and provides oversight of transit programs. Rural transit providers coordinate with the MDT Transit Section through statewide planning activities. The Formula Grants for Rural Areas (Section 5311) Program enhances the access of people in non-urbanized areas by providing public transportation. Federal funds may cover the majority of expenses associated with capital, operations and maintenance costs, but a local match is also required.

## **State Funding Sources**

### **State Gas Tax**

The State of Montana collects a fuel tax that is then allocated to cities and counties based on population and road mileage. Mileage for counties consists of any road exclusive of the National Highway and Primary Systems within the county boundary and outside of any incorporated city limits. Fuel tax funds allocated to city and county governments must be used for road construction or maintenance activities. The funds may also be used to match federal funds allocated to road construction and maintenance projects. The allocation of funds is determined by the local city or county government.

### **State Funded Construction Program (SFC)**

The Highway State Special Revenue Account (HSSRA) funds may be used for State Funded Construction Program projects that are not eligible for federal aid. HSSRA funds are also used to match federal funds and maintain state highways. All state-maintained highways are eligible for this program. Projects are nominated by MDT staff and the Montana Transportation Commission determines the allocations.

## **Local Funding Sources**

### **County Funds**

County road funds come from appropriations from the state gas tax and motor vehicle taxes and a mill levy assessed against county residents living outside of cities and towns. These funds can be used for construction and maintenance of county roads, but have traditionally been used primarily for maintenance. Eligible projects compete for available funding on a countywide basis.

### **Rural Improvement District (RID)**

Montana state law allows county commissioners to create special improvement districts outside the limits of incorporated cities and towns for the purposes of constructing infrastructure improvements, including street projects. Property owners may also petition for the creation of an RID. Additional information regarding RID's is provided in Montana Code Annotated 7-12-2101 through 7-12-2198.

### **Big Sky Resort Tax**

The Big Sky Resort Tax is a 3% sales tax passed in 1992 to improve the community of Big Sky. Since its inception, money raised from the tax has funded a wide variety of programs and projects in the Big Sky area, including many transportation projects. The Big Sky Resort Tax Board just recently approved resort tax appropriations totaling nearly \$7.5 million for the fiscal year 2017-2018. The resort tax has been a primary source of funding for various transportation projects in the past, including the recently constructed traffic signal at Ousel Falls Road & MT Highway 64.

### **Big Sky Transportation District**

The Big Sky Transportation District Board is appointed by the Gallatin and Madison County Commissioners. Board members oversee all aspects of the Skyline services, including budget and routes. The District's tax authority could be a potential funding source for some projects. The District is not currently levying a property tax at this time, and it would take a vote of the people within the District to be able to levy a tax. Additional information regarding Urban Transportation Districts and their ability to tax is provided in Montana Code Annotated 7-14-201 through 7-14-246.

### **Private/Stakeholder Partnerships**

Local stakeholders and developers can be encouraged to participate in the funding for transportation improvements, either by the Counties through the subdivision review process or through public-private partnerships.

## Next Steps

This study outlines a series of projects that will address the transportation needs in the Big Sky area through the 20-year planning horizon. As shown in Table 6, these projects have been broken down into short-term projects (0-5 years), mid-term projects (5-10 years), and long-term projects (10-20 years) as a way of providing a relative prioritization for implementation.

All future improvements located within MDT right-of-way (Highway 64 and Highway 191) will require coordination with MDT's Systems Impact Analysis Section. They will review the desired improvements relative to MDT's current policies. The Systems Impact Analysis process includes coordination with the Montana Transportation Commission for approval of all improvements within state right-of-way.

While this study was primarily focused on the Highway 64 corridor, there were several areas of concern related to Highway 191 that came up throughout the course of the study and at the preceding neighborhood meetings. The comments received during the course of this study are listed in the comment response document included in Appendix H. It is recommended that further analysis be conducted on Highway 191 to address these concerns.

Although there are a variety of funding sources available for transportation improvements, the Big Sky community continues to be challenged by the fact that they are split between Gallatin County and Madison County. This is further complicated by the fact that MDT has designated Highway 64 as an off-system route and they subsequently have no dedicated source of funding available for improvements to the highway. Because of this unique situation, successful project implementation will likely require creative public-private partnerships using a combination of the funding sources outlined above.

It is recommended that additional, on-going discussions take place between local stakeholders, Gallatin County, Madison County and MDT to identify the most appropriate funding source for individual projects and to secure the funding needed to move these projects forward.



### **About the Big Sky Chamber of Commerce**

The Big Sky Chamber of Commerce, founded in 1985, is a 501(c)(6) not-for-profit, membership organization, representing 450+ businesses in Big Sky and throughout southwestern Montana. The Chamber's mission is to serve as the leader in economic development for the Big Sky Resort Area with the goal to make it Montana's premier destination in which to live, work, play and do business.

**[www.bigskychamber.com](http://www.bigskychamber.com) | 406.995.3000**

### **About Sanderson Stewart**

Sanderson Stewart's core purpose is "To Plan and Design Enduring Communities." Since 1969 Sanderson Stewart has provided communities throughout Montana with planning and design services. Today those services include civil engineering, traffic engineering and transportation planning, bike and pedestrian planning and design, land use planning, landscape architecture, land surveying, and graphic design. Based out of their Bozeman office, the Sanderson Stewart team provides a unique combination of nationally-recognized transportation expertise and in-depth knowledge of local land use patterns and past transportation projects in the Big Sky area.

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