

Traffic Impact Study
Multi-Development
Driggs, ID

Prepared for:

City of Driggs

Planning & Building Department

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Definitions

Approach Delay: The component of delay that results when traffic factors cause traffic flow to reduce speed or to stop; it is measured by comparison with the uncontrolled condition. It can be thought of as the wait time of an intersection. It is a factor in determining the LOS.

Level of Service (LOS): should be interpreted as a standard by which the transportation system performance may be judged. An intersection can be given a grade from A to F, indicating the quality of operating conditions

V/C ratio: The ratio of volume of cars per hour divided by the capacity of the intersection. It is a factor in determining the LOS grade. The V/C Ratio must be less than 1 to be acceptable

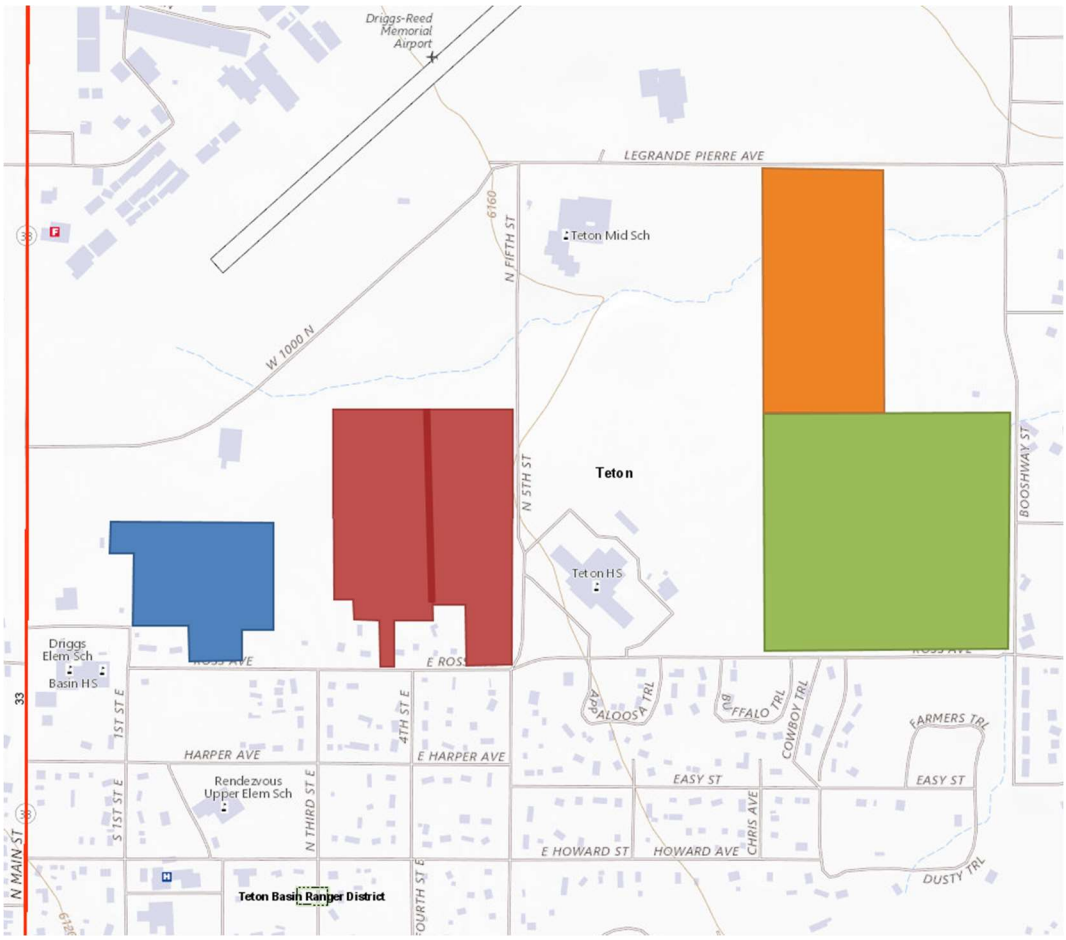
Warrants: a warrant describes a threshold condition based upon average or normal conditions that, if found to be satisfied as part of an engineering study, shall result in analysis of other traffic conditions or factors to determine whether a traffic control device or other improvement is justified. Warrants are not a substitute for engineering judgment. The fact that a warrant for a particular traffic control device is met is not conclusive justification for the installation of the device, change of modality, or change of the intersections geometric design. (U.S Department of Transportation Federal Highway Administration , 2012)

1 Introduction

1.1 Intent

HLE, Inc. has been contracted to prepare a joint Traffic Impact Study (TIS) for five proposed housing developments approximately located in agricultural lands and rural housing just north of E Ross Ave. in Driggs, Idaho. The locations of these developments are shown below in Figure 1: Project Vicinity Map. The intent of this study is to determine the traffic impacts resulting from said projects and identify mitigation measures required Collectively and provide the contribution of each development respectfully.

Figure 1: Project Vicinity Map



1.2 Executive Summary

This traffic impact study analyzes and reports the effect of five proposed developments to be built in Driggs, Idaho over the next 20 years. These subdivisions are Rivers West, Belle Vue, The Edge, Epic Endeavors, and Hemming. Each subdivision and corresponding land are owned by a different developer.

The Hemming development is marked in blue, the Edge and Epic Endeavors developments are marked in red, the Rivers West development is marked in green, and the Belle Vue development is marked in orange. Locations are approximate and based on zoning maps.

In the interest of the City of Driggs and the developers, this traffic study considers the impact of the future growth of the city, and the impact of each of these subdivisions individually and jointly. Twenty-five intersections within the City of Driggs were deemed applicable by the City of Driggs Engineer. Initial traffic data on each intersection was collected over 24-hour periods on either a Tuesday, Wednesday, or Thursday by camera. Radars were set for one week. All Equipment was placed by HLE personnel.

The videos recorded by the intersection cameras were processed by Spack Solutions to generate the traffic volume data. The data from the hour with highest traffic volume is called peak hour traffic. AM and PM peaks are used to calculate the Level of Service. The data was modeled as a network using a traffic modeling and engineering program called PTV-Vistro. PTV-Vistro's modeling and calculations are based on the Highway Capacity Manual and is used by multiple state transportation departments to model complex studies. (PTV Group, 2021). PTV-Vistro generated reports are in the appendices.

Using the traffic volume data from the twenty-five intersections, signal and turn lane warrants, as outlined in MUTCD, AASHTO, and MTES, were considered for improvement recommendations for existing and future projections of traffic conditions.

The existing traffic conditions, including LOS, approach delay, and V/C ratio are listed in Section 2. Possible improvements for failing intersections were then modeled in PTV-Vistro and used to create recommendations mentioned in Section 2.27. Though a few intersections are close to failing due to high approach delay times, all passed the minimum LOS requirement of a level C. Four intersections, however, met traffic warrant qualifications. By "meeting" a traffic warrant, an intersection possibly warrants an improvement. Most warrants were deemed unnecessary, except for the intersection of N Main St and LeGrande Pierre Ave. Due to both the low LOS grade and the number of signal warrants met from existing traffic data, traffic light installation is recommended regardless of development impact.

Analysis of future conditions at the designated intersections were performed, Within 20 years seven intersections are predicted to have an LOS below a C grade and seven will qualify for Auxiliary Lane warrants.

Mitigation recommendations are given in section 3.27. Recommendations are based on PTV-Vistro simulation and include installing additional traffic lights along N Main St and along Easy Ave. A roundabout is recommended for the intersection of N 5th St and E Ross Ave.

The additional traffic caused by the new developments is called "site generated traffic." Site generated traffic is the estimation of future traffic the new development will create based upon how many dwelling units (i.e.: homes, apartments, etc.) they are adding to the city. The calculations for site generated traffic are explained in Section 4.2.1. The generated traffic from each development is analyzed individually and added to the future traffic volumes calculated previously. This helps determine the responsibility the developers hold in improving road conditions.

When existing or future conditions are below the acceptable threshold of operation, the cost of improvement to correct the deficiency should be borne by the agency responsible for maintaining the roadways, and not by the developer. Traffic condition changes resulting from site generated traffic that

reduce LOS below minimum standards or create excessive delay should be corrected by the developer(s). (U.S Department of Transportation Federal Highway Administration , 2012)

The developments are analyzed separately and then cumulatively to determine the full-build impact on Driggs. Once combined site generated traffic is added to future traffic conditions, two additional intersections fail. This brings the total failing intersections to nine. Final recommendations are listed in Table 1 below. Recommendations were based off warrant criteria and PTV-Simulation.

Table 1: Final Recommendations to Improve LOS and Remove Warrants

Recommendations to Improve LOS and Remove Warrants: Future + Site Generated Traffic	
N Main St. & LeGrande Pierre Ave.	• Install semi-actuated light that is coordinated with the existing light located at N Main St & Little Ave. • Add a northbound right turning lane to satisfy warrant and increase traffic flow. • Add a southbound left turning lane to satisfy warrant and increase traffic flow.
N Main St. & E Ross Ave.	• Possible location for: semi-actuated light that is coordinated with the existing light, additional study recommended after a light is installed at N Main and Legrand Pierre. Variance will be required. • Add a northbound right turning lane to satisfy warrant. • Add a southbound left turning lane to satisfy warrant.
N Main St. & Harper Ave.	• Possible location for: semi-actuated light that is coordinated with the existing light additional study recommended after a light is installed at N Main and Legrand Pierre. Variance will be required. • Add a northbound right turning lane to satisfy warrant. • Add a southbound left turning lane to satisfy warrant
N Main St. & E Howard Ave.	• Possible location for: semi-actuated light that is coordinated with the existing light additional study recommended after a light is installed at N Main and Legrand Pierre. Variance will be required. • Add a northbound right turning lane to satisfy warrant. • Add a southbound left turning lane to satisfy warrant.
N Main St. & E Little Ave.	• Adjust timing and coordinate with other lights along N Main St when installed.
1st St. & E Little Ave.	• Install semi-actuated light that is coordinated with the existing light located at N Main St & Little Ave. • Add left turning lane in both eastbound and westbound directions to satisfy left turning lane warrants.
5th St & E Little Ave.	• Install semi-actuated light that is coordinated with the existing light located at N Main St & Little Ave. • Add left turning lane in eastbound direction to satisfy turning lane warrants.
N 5th St. & LeGrande Pierre Ave.	• Add a southbound right turning lane to satisfy warrants and increase LOS to passing. Will improve LOS from F to C and approach delay from 72 seconds to 19 seconds.
N 5th St. & E Ross Ave.	• Add a single lane roundabout.

Detailed explanations on each recommendation are found in Section 8.28 after Table 172. Of the failing intersections, each subdivision is responsible for a percentage of the approach delay increase and volume of additional traffic. This is shown in Table 179 and Table 181 in Section 9. These tables show that, within the failing intersections, the site generated traffic impacts approach time delay much less than the estimated future generated traffic of 4% each year. Using the city's estimated growth rate of 4% each year, the current traffic volume will almost double (180%) by 2042. This growth, and not the proposed site generated traffic accounts for the majority of needed improvements.

Recommendations will change if plans of developments change. Information used was the best available or what was given upon request.

1.3 Location Overview Map

The location of the various sites lies within the bounds of the following roads: North of E Ross Ave., South of LeGrande Pierre Ave., West of Booshway St., and East of N Main St. The sites sit among rural housing, agricultural fields, and surround the High School, Elementary, and Middle School as shown in **Figure 1**.

The Hemming development is marked in blue, the Edge and Epic Endeavors developments are marked in red, the Rivers West development is marked in green, and the Belle Vue development is marked in orange. Locations are approximate and based on zoning maps.

2 Existing Conditions for Overall Study Area

2.1 Overview

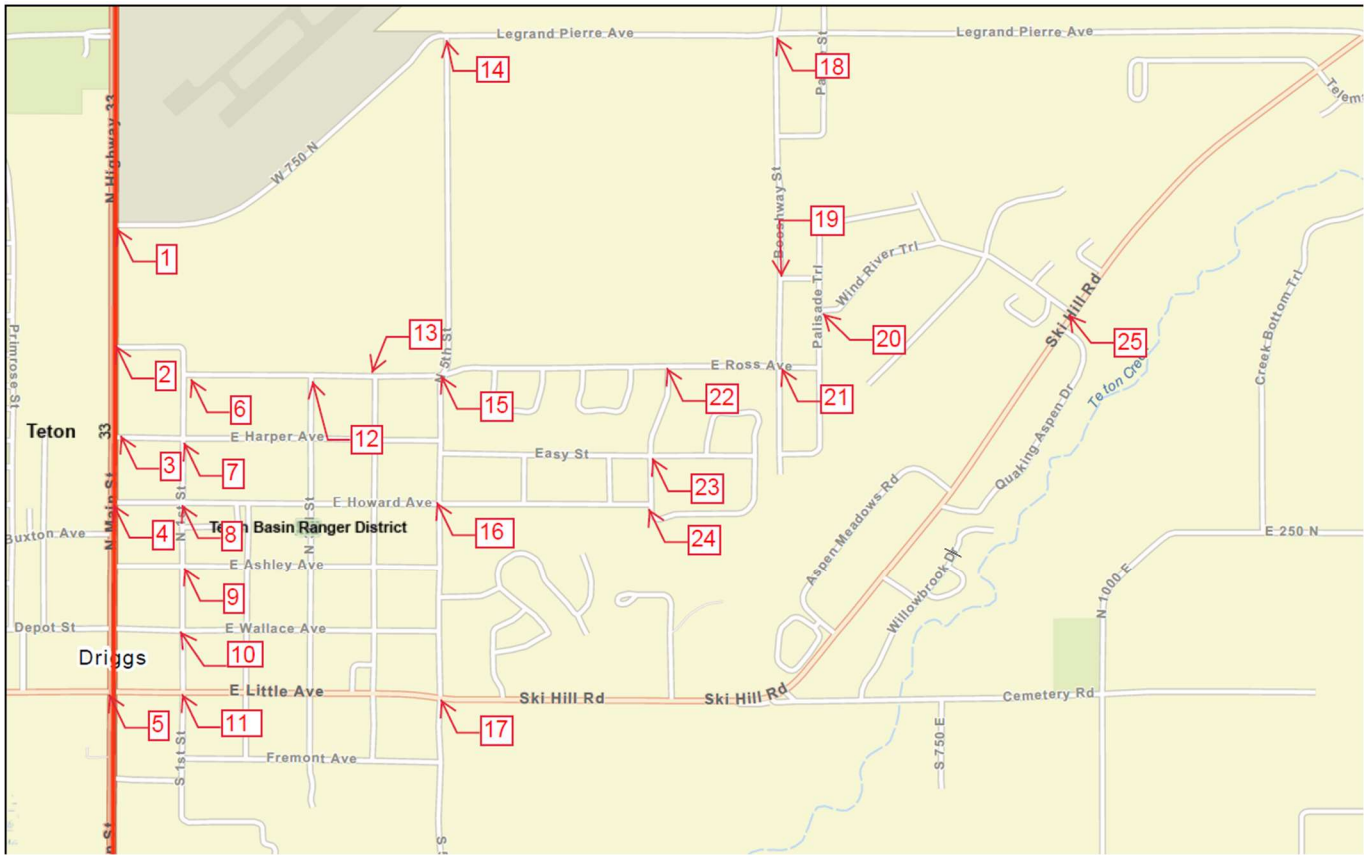
Analysis of existing, future, and future plus site conditions is essential in any Traffic Impact Study to determine roadway issues and causes for those issues. Site generated conditions are shown in Sections 4 through 7. Due to the overlap of affected intersections between the different developments, the existing intersection condition data is shown individually per intersection. These conditions are determined by observation of the roadways and intersections in question. The following twenty-five intersections were identified by the city engineer to be evaluated as part of this Traffic Impact Study:

1. N Main St. & LeGrande Pierre Ave.
2. N Main St. & E Ross Ave.
3. N Main St. & Harper Ave.
4. N Main St. & E Howard Ave.
5. N Main St. & Little Ave.
6. N 1st St. & E Ross Ave.
7. N 1st St. & Harper Ave
8. N 1st St. & E Howard Ave.
9. N 1st St. & Ashely Ave.
10. N 1st St. & Wallace Ave.
11. N 1st St. & Little St
12. N 3rd St & E Ross Ave.
13. N 4th St. and E Ross Ave.
14. N 5th St. & LeGrande Pierre Ave.

15. N 5th St. & E Ross Ave.
16. N 5th St. & E Howard Ave.
17. N 5th St. & Little St.
18. Booshway St. & LeGrande Pierre Ave
19. Booshway. St. & Commanche Trl.
20. Palisade Trl. and Wind River Trl.
21. Booshway St. and E Ross Ave.
22. Cowboy Trl. & E Ross Ave.
23. Easy St & Cowboy Trl
24. Cowboy Trl & E Howard Ave.
25. Powder Valley Rd. & Ski Hill Rd.

Figure 2 shows the map of the entire network to be analyzed with the preceding intersections labeled by number.

Figure 2:Traffic Network



The various intersections of note are found North of Little Ave/Ski Hill Road, On and South of LeGrande Pierre Ave, On and West of Palisade Trl., and On and East of N Main St. These intersections are located more than half a mile from the proposed developments but were deemed applicable by the City of Driggs Engineer. A vicinity map showing the related intersections can be found in Appendix W. Traffic counts were conducted on December 14th-December 16th, 2021 and March 1st -March 3rd, 2022 via

intersection cameras and radar. Fifteen-minute traffic volumes and turning movement data was compiled and tabulated by Spack Solutions from intersection cameras placed by HLE, Inc.

2.2 N 5th St. & LeGrande Pierre Ave.

Existing level of service, traffic approach delay, and the V/C ratio were determined using PTV Vistro and equations outlined in MTES. The intersection information is outlined below in Table 3. PTV Vistro reports for existing intersection conditions can be found in Appendix A and B for AM and PM traffic peaks. Raw Data can be found in Appendix U.

Level of service (LOS) grades are used to determine intersection quality of operating conditions. Grades are between A to F with anything below a Grade C considered a failing intersection. A lower LOS means modification to the approach or intersection should be performed. A failing level of service on an intersection is any LOS that lowers below a C. The LOS Grade is based on volume to capacity ratio and observed or calculated average weight time per vehicle. On a signalized intersection and a four way stop controlled intersection the LOS is based on a weighted average of each traffic movement. On a two way stop controlled the LOS reported for an intersection is based on the worst vehicle movement on one of the minor legs of the intersection. The Corresponding wait times are shown in Table 2 as required by the Highway Capacity Manual 7th Edition.

Table 2: Level of Service Delay and Vehicle to Capacity Ratio

Level of Service Criteria for Motorized Vehicles		
	LOS by Volume to Capacity Ratio	
Control Delay (Sec/Veh)	0 < V/C < 1.0	V/C > 1.0
0 - 10	A	F
10 - 15	B	F
15 - 25	C	F
25 - 35	D	F
35 - 50	E	F
50+	F	F

Warrants are thresholds that define when a change of modality or structure of an intersection should be considered. According to the Manual on Uniform Traffic Control Devices (MUTCD), “Warrants are not a substitute for engineering judgment. The fact that a warrant for a particular traffic control device is met is not conclusive justification for the installation of the device.” Like LOS grades, warrants help traffic engineers know when an improvement or change may be added to an intersection. Using the traffic volume data from the twenty-five intersections, signal and turn lane warrants, as outlined in MUTCD, AASHTO, and MTES, were considered for improvement recommendations.

In the event an existing or future condition is determined to be below the acceptable threshold of operation the cost of improvement to correct the deficiency should be borne by the agency responsible for maintaining the roadways, and not by the developer. If a change occurs between the future and future + site conditions that reduce LOS below minimum standards or creates excessive delay the developer bears the cost of improvement (U.S Department of Transportation Federal Highway Administration , 2012). Crash frequency is a principal factor for signal warrants. Crash data was collected

from the Local Highway Technical Assistance Council (LHTAC) website http://gis.lhtac.org/safety/. Data used is shown in Appendix V. The following intersections are analyzed in an identical manner as described here.

For this intersection, peak traffic time was determined to be between 7:30 and 8:30 am. The lowest LOS grade for this intersection is A with the highest approach delay being 10.46 seconds.

This intersection is stop controlled in all four directions. Signalization Warrants 1, 2, and 3 are met with 20 years of 4 percent annual growth. Existing Aproach conditions are shown in Table 3

Table 3: N 5th St. & LeGrande Pierre Ave. Existing Conditions

Intersection	21: N 5th St & LeGrande Pierre Ave			
Intersection Type	Three Leg All Way stop controlled intersection			
	AM		PM	
Reported Intersection LOS	A		A	
Intersection Leg/Approach	Approach Delay	LOS	Approach Delay	LOS
North Bound	8.86	A	8.00	A
East Bound	10.46	B	7.33	A
West Bound	8.97	A	8.56	A

2.3 Booshway St. & LeGrande Pierre Ave.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 2:30 and 3:30 pm. The lowest LOS grade for this intersection is A with the highest approach delay being 8.73 seconds.

This intersection is stop controlled in all four directions. No turn lane or signalization warrants are met for this intersection.

Level of service and traffic approach delay are shown below in Table 3.

Table 4:Booshway St. & LeGrande Pierre Ave. Existing Conditions

Intersection	22: Booshway St. & Legrande Pierre Ave				
Intersection Type	Four Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	8.74	A	8.81	A
	Through	9.24	A	9.30	A
	Right	8.50	A	8.54	A
South Bound	Left	8.61	A	8.73	A
	Through	9.19	A	9.38	A
	Right	8.33	A	8.34	A
East Bound	Left	7.22	A	7.22	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound	Left	7.27	A	7.34	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

2.4 Booshway St. & Commanche Trl.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 2:00 and 3:00 pm. The lowest LOS grade for this intersection is A with the highest approach delay being 8.43 seconds.

Westbound traffic is stop controlled on Commanche Trail. A northbound right turn warrant is met after 20 years of 4 percent annual growth and all subdivisions have been fully built, according ITD Standards in the Idaho Traffic Manual.

No signalization warrants are met for this intersection.

Level of service and traffic approach delay are shown below in Table 5.

Table 5: Booshway St. & Commanche Trl. Existing Conditions

Intersection	25: Booshway St & Commanche Trail				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound	Left	7.26	A	7.26	A
	Through	0.00	A	0.00	A
West Bound	Left	8.83	A	9.00	A
	Right	8.43	A	8.40	A

2.5 Booshway St. & E Ross Ave.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 7:30 and 8:30 am. The lowest LOS grade for this intersection is A with the highest approach delay being 9.34 seconds.

Eastbound and Westbound traffic is stop controlled on E Ross Ave. No turn lane or signalization warrants are met for this intersection.

Level of service and traffic approach delay are shown below in Table 6.

Table 6: Booshway St. & E Ross Ave. Existing Conditions

Intersection	34: Booshway St. & E Ross Ave.				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	7.26	A	7.30	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound	Left	0.00	A	7.26	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound	Left	8.97	A	9.00	A
	Through	9.23	A	9.47	A
	Right	8.47	A	8.50	A
West Bound	Left	8.84	A	9.00	A
	Through	9.34	A	9.48	A
	Right	8.49	A	8.40	A

2.6 N Main St. & E Ross Ave.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 7:45 and 8:45 am. The lowest LOS grade for this intersection is C with the highest approach delay being 15.42 seconds.

Westbound traffic is stop controlled on E Ross Ave at this intersection. This intersection meets the warrants for a left turn lane in the southbound direction and a right turn lane in the northbound direction according to ITD Requirements during weekday peak AM hours. Therefore, turn lanes are recommended for this location.

Signalization Warrants 1, 2, and 3 are met with 20 years of 4 percent annual growth.

Level of service and traffic approach delay are shown below in Table 7.

Table 7: N Main St. & E Ross Ave. Existing Conditions

Intersection	2: N Main St & E Ross Ave				
Intersection Type	Three Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		C		C	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	8.14	A	8.45	A
	Through	0.00	A	0.00	A
West Bound(SC)	Left	17.82	C	17.11	C
	Right	11.89	B	11.81	B

2.7 N Main St. & E Howard Ave.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 7:45 and 8:45 am. The lowest LOS grade for this intersection is C, with the highest approach delay being 15.8 seconds.

Westbound traffic is stop controlled on E Howard Ave. This intersection meets the warrants for a left turn lane in the southbound direction and a right turn lane in the northbound direction according to ITD Requirements found in the Idaho Traffic Manual during weekday peak hours.

Signalization warrants 1, 2, and 3 are met with 20 years of 4 percent annual growth.

Level of service and traffic approach delay are shown below in Table 8.

Table 8: N Main St. & E Howard Ave. Existing Conditions

Intersection	4: N Main St & E Howard Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		C		C	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	8.44	A	8.67	A
	Through	0.00	A	0.00	A
West Bound(SC)	Left	19.51	C	18.52	C
	Right	11.35	B	12.92	B

2.8 N Main St. & Harper Ave.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 7:45 and 8:45 am. The lowest LOS grade for this intersection is C with the highest approach delay being 15.42 seconds.

This intersection met warrants for a northbound right turn lane and southbound left turn lane under existing + future conditions, according to ITD requirements found in the Idaho Traffic Manual .

Signalization warrants 1, 2, and 3 are met with 20 years of 4 percent annual growth.

This intersection is uncontrolled. Level of service and traffic approach delay are shown below in Table 9.

Table 9: N Main St. & Harper Ave. Existing Conditions

Intersection	3: N Main St & Harper Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		C		C	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	8.14	A	8.56	A
	Through	0.00	A	0.00	A
West Bound(SC)	Left	17.82	C	16.78	C
	Right	11.89	B	12.19	B

2.9 N Main St. & Little Ave.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 3:00 and 4:00 pm. The lowest LOS grade for this intersection is B with the Average delay per vehicle of 16.1 Sec.

This intersection is signalized, and no additional warrants are met for this intersection.

Level of service and traffic approach delay are shown below in Table 10.

Table 10: N Main St. & E Little Ave. Existing Conditions

Intersection	14: N Main St. & Little Ave				
Intersection Type	Four Leg Signalized				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg /Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	4.66	A	7.39	A
	Through	8.84	A	12.81	B
	Right	8.84	A	12.81	B
South Bound	Left	5.47	A	8.06	A
	Through	7.54	A	11.85	B
	Right	7.54	A	11.85	B
East Bound	Left	32.44	C	32.11	C
	Through	34.84	C	29.35	C
	Right	34.84	C	29.35	C
West Bound	Left	36.81	D	33.84	C
	Through	36.37	D	31.81	C
	Right	36.37	D	31.81	C

2.10 N Main St. & LeGrande Pierre Ave.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 7:45 and 8:45 am. The lowest LOS grade for this intersection is C with the highest approach delay being 21.86 seconds.

This intersection meets the qualifications for Signal Warrant #1 “Eight Hour Vehicular Volume” and #2 “Four Hour Vehicular Volume” according to MUTCD guidelines (U.S Department of Transportation Federal Highway Administration , 2012).

It also meets the warrants for a right turn lane in the northbound direction and a left turn lane in the southbound direction under existing conditions according to ITD requirements found in the Idaho Traffic Manual .

Peak hour signalization Warrant 3 was met for this intersection with the peak hours being 3 and 4 pm.

Level of service and traffic approach delay are shown below in Table 11.

Table 11: N Main St. & LeGrande Pierre Ave. Existing Conditions

Intersection	1: N Main St. & Legrande Pierre Ave				
Intersection Type	Three Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		C		C	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Through	0.00	A	0.01	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	8.20	A	8.47	A
	Through	0.00	A	0.00	A
West Bound(SC)	Left	21.86	C	17.03	C
	Right	13.34	B	11.77	B

2.11 N 1st St. & E Ross Ave.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 3:00 and 4:00 pm. The lowest LOS grade for this intersection is A with the average approach delay being 7.3 seconds.

This intersection is all way stop-controlled on N 1st Street and E Ross Ave. The west bound leg of this intersection is access to the adjacent property. No turn lane warrants were met for this intersection. After 20 years of 4 percent annual growth, and all subdivisions have been fully built out, this intersection meets Warrant 2 for signalization.

Level of service and traffic approach delay are shown below in Table 12.

Table 12: N 1st St. & E Ross Ave. Existing Conditions

Intersection	13: 1st St. & E. Ross Ave.			
Intersection Type	Four Leg All Way stop controlled intersection			
	AM		PM	
Reported Intersection LOS	A		A	
Intersection Leg /Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	6.67	A	6.86	A
South Bound	7.73	A	7.48	A
East Bound	6.80	A	6.87	A
West Bound	7.14	A	7.31	A

2.12 N 1st St. & Harper Ave.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 7:30 and 8:30 am. The lowest LOS grade for this intersection is A with the highest approach delay being 9.95 seconds.

This intersection is stop-controlled on E Harper Ave. No turn lane or signalization warrants are met for this intersection.

Level of service and traffic approach delay are shown below in Table 13.

Table 13: N 1st St. & Harper Ave. Existing Conditions

Intersection	12: N 1st St. & E Harper Ave.				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg /Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.27	A	7.35	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	7.27	A	7.25	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	9.65	A	9.58	A
	Through	9.55	A	9.69	A
	Right	8.63	A	8.75	A
West Bound (SC)	Left	9.66	A	9.69	A
	Through	9.95	A	9.99	A
	Right	9.02	A	8.80	A

2.13 N 1st St. & Ashley Ave.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 3:00 and 4:00 pm. The lowest LOS grade for this intersection is A with the highest approach delay being 9.69 seconds.

This intersection is stop-controlled on Ashley Ave. A north and southbound right turn warrant is met after 20 years of 4 percent annual growth and all subdivisions have been fully built, according to ITD requirements found in the Idaho Traffic Manual.

No signalization warrants are met for this intersection.

Level of service and traffic approach delay are shown below in Table 14.

Table 14: N 1st St. & Ashely Ave. Existing Conditions

Intersection	10: N 1st St. and E Ashley Ave				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg /Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.32	A	7.34	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	7.29	A	7.26	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	9.19	A	9.33	A
	Through	9.61	A	9.67	A
	Right	8.64	A	8.80	A
West Bound (SC)	Left	9.24	A	9.48	A
	Through	9.63	A	9.69	A
	Right	8.57	A	8.55	A

2.14 N 1st St. & Wallace Ave.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 2:30 and 3:30 pm. The lowest LOS grade for this intersection is B with the highest approach delay being 10.02 seconds.

This intersection is stop controlled on Wallace Ave. A southbound right turn warrant is met after 20 years of 4 percent annual growth and all subdivisions have been fully built, according to ITD requirements found in the Idaho Traffic Manual.

No signalization warrants are met for this intersection.

Level of service and traffic approach delay are shown below in Table 15.

Table 15: N 1st St. & Wallace Ave. Existing Conditions

Intersection	9: N 1st St. and E Wallace Ave				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		B	
Intersection Leg /Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.32	A	7.37	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	7.29	A	7.26	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	9.51	A	9.71	A
	Through	9.85	A	10.02	B
	Right	8.66	A	8.91	A
West Bound (SC)	Left	9.53	A	9.76	A
	Through	9.82	A	9.87	A
	Right	8.60	A	8.53	A

2.15 N 1st St. & E Howard Ave.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 7:30 and 8:30 am. The lowest LOS grade for this intersection is B with the highest approach delay being 10.6 seconds.

This intersection is stop-controlled on N 1st St. An eastbound right turn warrant is met after Phase 1 of Rivers West is completed, according to ITD Standards in the Idaho Traffic Manual.

No signalization warrants are met for this intersection.

Level of service and traffic approach delay are shown below in Table 16.

Table 16: N 1st St. & E Howard Ave. Existing Conditions

Intersection	11: N 1st St. & E Howard Ave				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		A	
Intersection Leg /Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	10.33	B	9.68	A
	Through	10.25	B	9.83	A
	Right	9.22	A	8.89	A
South Bound(SC)	Left	10.40	B	9.68	A
	Through	10.60	B	9.95	A
	Right	8.85	A	8.70	A
East Bound (Free)	Left	7.26	A	7.27	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (Free)	Left	7.52	A	7.37	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

2.16 N 1st St. & E Little Ave.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 3:00 and 4:00 pm. The lowest LOS grade for this intersection is B with the highest approach delay being 11.08 seconds.

This intersection is stop-controlled on E Little Ave. A westbound right turn warrant is met with existing + future, an eastbound right turn warrant is met after Phase 1 of Rivers West is completed, and an eastbound left turn warrant is met with existing + future, according to ITD Standards in the Idaho Traffic Manual.

Signalization Warrants 1 and 2 are met with 20 years of 4 percent annual growth.

Level of service and traffic approach delay are shown below in Table 17.

Table 17: N 1st St. & Little Ave Existing Conditions

Intersection	8: N 1st St. & Little Ave				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		C	
Intersection Leg /Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	13.24	B	15.32	C
	Through	12.76	B	14.05	B
	Right	9.62	A	9.78	A
South Bound(SC)	Left	13.31	B	14.61	B
	Through	12.81	B	14.49	B
	Right	9.98	A	11.00	B
East Bound (Free)	Left	7.71	A	7.95	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (Free)	Left	7.59	A	7.65	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

2.17 N 3rd St & E Ross Ave.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 7:30 and 8:30 am. The lowest LOS grade for this intersection is A, with the highest approach delay being 7.59 seconds.

This intersection is three-way stop controlled. No turn lane or signalization warrants are met for this intersection.

Level of service and traffic approach delay are shown below in Table 18.

Table 18: N 3rd St & E Ross Ave. Existing Conditions

Intersection	17: N 3rd st. and E Ross Ave.			
Intersection Type	Three Leg All Way stop controlled intersection			
	AM		PM	
Reported Intersection LOS	A		A	
Intersection Leg /Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	6.80	A	6.67	A
East Bound	7.59	A	7.22	A
West Bound	8.97	A	7.56	A

2.18 N 4th St. and E Ross Ave.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 7:45-8:45 am. The lowest LOS grade for this intersection is A, with the highest approach delay being 9.03 seconds.

This intersection is stop controlled on N 4th Street. An eastbound right turn warrant is met after 20 years of 4 percent annual growth and all subdivisions have been fully built, according to ITD Standards in the Idaho Traffic Manual.

No signalization warrants are met for this intersection.

Level of service and traffic approach delay are shown below in Table 19.

Table 19: N 4th St. and E Ross Ave. Existing Conditions

Intersection	18: N 4th st. and E Ross Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg /Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	9.62	A	9.40	A
	Right	8.98	A	8.54	A
East Bount(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (Free)	Left	7.48	A	7.32	A
	Through	0.00	A	0.00	A

2.19 N 5th St. & E Ross Ave.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 7:45 and 8:45 am. The lowest LOS grade for this intersection is A with the highest approach delay being 9.75 seconds.

This intersection is stop controlled in all four directions. No turn lane warrants are met for this intersection. Signalization Warrants 1, 2, and 3 are met with 20 years of 4 percent annual growth.

Level of service and traffic approach delay are shown below in Table 20.

Table 20: N 5th St. & E Ross Ave. Existing Conditions

Intersection Intersection Type	19: N 5th St and E Ross Ave. Four Leg All Way stop controlled intersection			
	AM		PM	
Reported Intersection LOS	A		A	
Intersection Leg /Approach	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	8.66	A	7.86	A
South Bound	9.75	A	8.62	A
East Bound	9.11	A	8.15	A
West Bound	8.49	A	8.60	A

2.20 N 5th St. & E Howard Ave.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 7:30 and 8:30 am. The lowest LOS grade for this intersection is A, with the highest approach delay being 8.10 seconds.

This intersection is stop controlled in all four directions. No turn lane or signalization warrants are met for this intersection.

Level of service and traffic approach delay are shown below in Table 21.

Table 21: N 5th St. & E Howard Ave. Existing Conditions

Intersection Intersection Type	20: N 5th St & E Howard Ave Four Leg All Way stop controlled intersection			
	AM		PM	
Reported Intersection LOS	A		A	
Intersection Leg /Approach	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	7.95	A	7.50	A
South Bound	8.10	A	8.04	A
East Bound	8.00	A	7.83	A
West Bound	7.85	A	7.76	A

2.21 N 5th St. & Little St.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 3:00 and 4:00 pm. The lowest LOS grade for this intersection is B with the highest approach delay being 12.07 seconds.

This intersection is stop controlled on N 5th Street. East and Westbound right turn warrants are met with existing + future, and an eastbound left turn warrant is met after Phase 1 of Rivers West is completed according to ITD Standards in the Idaho Traffic Manual.

Signalization Warrants 1, 2, and 3 are met with 20 years of 4 percent annual growth.

Level of service and traffic approach delay are shown below in Table 22.

Table 22: N 5th St. & Little St. Existing Conditions

Intersection	32: N 5th St. & Little St				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg /Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	13.66	B	14.49	B
	Through	12.65	B	12.79	B
	Right	9.44	A	9.22	A
South Bound(SC)	Left	13.16	B	13.64	B
	Through	12.95	B	13.75	B
	Right	9.84	A	10.65	B
East Bound (Free)	Left	7.60	A	7.73	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (Free)	Left	7.49	A	7.51	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

2.22 Cowboy Trl. & E Ross Ave.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 7:30 and 8:30 am. The lowest LOS grade for this intersection is A, with the highest approach delay being 8.60 seconds.

This intersection is stop controlled on Cowboy Trail. No turn lane or signalization warrants are met for this intersection.

Level of service and traffic approach delay are shown below in Table 23.

Table 23: Cowboy Trl. & E Ross Ave. Existing Conditions

Intersection	24: Cowboy Trl. & E Ross Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg /Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	8.96	A	9.17	A
	Right	8.44	A	8.60	A
East Bount(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (Free)	Left	7.25	A	7.34	A
	Through	0.00	A	0.00	A

2.23 Cowboy Trl & E Howard Ave.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 7:30 and 8:30 am. The lowest LOS grade for this intersection is A, with the highest approach delay being 8.56 seconds.

This intersection is not stop controlled in any direction. No turn lane or signalization warrants are met for this intersection.

Level of service and traffic approach delay are shown below in Table 24.

Table 24: Cowboy Trl & E Howard Ave Existing Conditions

Intersection	31: Cowboy Trail and E Howard Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg /Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.23	A	7.23	A
	Through	0.00	A	0.00	A
South Bound(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound(SC)	Left	8.59	A	8.61	A
	Right	8.36	A	8.37	A

2.24 Cowboy Trl. & Easy St.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 7:30 and 8:30 am. The lowest LOS grade for this intersection is A with the highest approach delay being 9.1 seconds.

This intersection is stop controlled on Cowboy Trail. No turn lane or signalization warrants are met for this intersection.

Level of service and traffic approach delay are shown below in Table 25.

Table 25: Easy St. & Cowboy Trl. Existing Conditions

Intersection	30: Cowboy Trail and Easy St.				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg /Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	8.73	A	8.71	A
	Through	9.17	A	9.15	A
	Right	8.36	A	8.37	A
South Bound(SC)	Left	8.70	A	8.70	A
	Through	9.18	A	9.16	A
	Right	8.37	A	8.37	A
East Bound (Free)	Left	7.23	A	7.23	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (Free)	Left	7.23	A	7.23	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

2.25 Palisade Trl. and Wind River Trl.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 7:30 and 8:30 am. The lowest LOS grade for this intersection is A with the highest approach delay being 8.65 seconds.

This intersection is stop controlled on Wind River Trail. No signalization or turn lane warrants are met for this intersection.

Level of service and traffic approach delay are shown below in Table 26.

Table 26: Palisade Trl. and Wind River Trl. Existing Conditions

Intersection	35: Palisades Trail and Wind River Trail				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg /Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	7.25	A	7.28	A
	Through	0.00	A	0.00	A
West Bound(SC)	Left	8.79	A	8.84	A
	Right	8.47	A	8.45	A

2.26 Ski Hill Rd. & Powder Valley Rd.

Identical analysis was performed for this intersection as noted in Section 2.2. Peak traffic time was determined to be between 3:00 and 4:00 pm. The lowest LOS grade for this intersection is A with the highest approach delay being 9.32 seconds.

This intersection is stop controlled on Powder Valley Road. A southbound right turn warrant is met after the completion of Phase 1 of River West, according to ITD Standards in the Idaho Traffic Manual.

No signalization warrants are met for this intersection.

Level of service and traffic approach delay are shown below in Table 27.

Table 27: Ski Hill Rd. & Powder Valley Rd.

Intersection	31: Cowboy Trail and E Howard Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg /Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.42	A	7.58	A
	Through	0.00	A	0.00	A
South Bound(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound(SC)	Left	10.01	A	10.32	A
	Right	8.82	B	9.35	B

2.27 Recommendations

The intersection of Main St and Little Ave received a failing LOS grade. This can be addressed by adjusting the light timing. PTV-Vistro simulation estimates LOS improvement from D to C. Data for recommendation simulations is found in Appendix X. For all traffic lights, coordinate with ITD for optimum phase timing.

Though the LOS grades for all other intersections are above failing, several warrants were met where N Main St. intersects Ross, Harper, Howard, and LeGrande Pierre Ave. It is recommended that a traffic light be placed at the intersection of N Main St. and LeGrand Pierre Ave with a southbound left turning lane and a northbound right turning lane. This will accommodate current conditions and mitigate the impact of future and site generated traffic. Based upon traffic warrants of current conditions, northbound right turning warrants are met where N Main St. intersects with LeGrande Pierre Ave., Harper Ave., and Howard Ave. Adding right turning lanes at these locations would neither reduce approach delay nor improve intersection LOS and are not recommended.

Southbound left turning lane warrants are met where N Main St. intersects with LeGrande Pierre Ave., Ross Ave., Harper Ave., and Howard Ave. Added left turning lanes would have insignificant impact on approach delay and are not recommended.

2.28 Conclusions

This traffic study includes twenty-five intersections located on and North of E Little Ave in Driggs, Idaho. Data for existing traffic conditions and volumes was gathered through cameras and radar set up at each intersection. Data was analyzed and formatted using Spack Solutions and PTV-Vistro. Of the twenty-five intersections analyzed for this report, all meet minimum LOS requirements for current conditions.

Three intersections meet the qualifications for turning lane warrants under existing conditions:

- N Main St & LeGrande Pierre (Right turn NB and Left turn SB)
- N Main St & E Ross Ave (Right turn NB and Left turn SB)
- N Main St & E Howard Ave (Right turn NB and Left turn SB)

No additional intersections meet signalization warrants under existing conditions.

General recommendations have been given to satisfy signal and turning lane warrants.

3 Future Conditions

3.1 Overview

As communities grow, traffic volumes will increase and traffic conditions will worsen. Twenty-year future conditions were calculated to model the future growth of the City of Driggs. HLE was directed by the City Engineer to use a growth rate of 4%. The simple growth factor method was used to determine population growth. A growth factor of 1.8 (4% x 20 years) was applied to the traffic count of all intersections. The Exponential Growth Method would give a growth factor of 2.19 but was not used as it was assumed that the five developments included in this report will make up growth difference between the two. As before, AM and PM peaks were analyzed, and the highest traffic volumes were reported(either AM or PM). Using the above population growth rate and no change to access use, the 20-year future level of service for these intersections without site generated traffic is calculated.

Raw Data can be found in Appendix U. Detailed future condition forms for each intersection are found in Appendices C and D.

Between AM and PM Peak, the highest traffic volume was used for LOS calculations shown below. For future LOS conditions for both AM and PM peak, see Appendices C and D.

3.2 N 5th St. & LeGrande Pierre Ave.

The future level of service was calculated as described in Section 3.1

The future LOS is shown in Table 28.

This intersection meets the qualifications for Warrant #1, #2, and #3 according to data analyzed by PTV Vistro using MUTCD guidelines (U.S Department of Transportation Federal Highway Administration , 2012).

Table 28: N 5th St. & LeGrande Pierre Ave. Future

Intersection Intersection Type	21: N 5th St and LeGrande Pierre Ave Three Leg All Way stop controlled intersection			
	AM		PM	
Reported Intersection LOS	F		B	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	12.88	B	9.27	A
East Bound	77.09	F	8.18	A
West Bound	12.95	B	11.11	B

3.3 Booshway St. & LeGrande Pierre Ave

The future level of service was calculated as described in Section 3.1

The future LOS is shown in Table 29.

This is a stop-controlled intersection. No warrants were met for this intersection.

Table 29: Booshway St. & LeGrande Pierre Ave. Future

Intersection	22: Booshway St. and Legrande Pierre Ave				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	8.91	A	9.64	A
	Through	9.41	A	9.37	A
	Right	8.63	A	8.37	A
South Bound(SC)	Left	8.69	A	9.24	A
	Through	9.31	A	9.70	A
	Right	8.34	A	8.72	A
East Bound (Free)	Left	7.23	A	7.23	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (Free)	Left	7.31	A	7.25	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

3.4 Booshway St. & Comanche Trl.

The future level of service was calculated as described in Section 3.1

The future LOS is shown in Table 30.

No warrants were met for this intersection.

Table 30: Booshway St. & Comanche Trl. Future

Intersection	25: Booshway St and Commanche Trail				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound (Free)	Left	7.29	A	7.29	A
	Through	0.00	A	0.00	A
West Bound (SC)	Left	9.10	A	9.43	A
	Right	8.52	A	8.48	A

3.5 Booshway St. & E Ross Ave.

The future level of service was calculated as described in Section 3.1

The future LOS is shown in Table 31.

No warrants were met for this intersection.

Table 31: Booshway St. & E Ross Ave. Future

Intersection	34: Booshway St. and E Ross Ave.				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.29	A	7.38	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	0.00	A	7.23	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	9.39	A	9.61	A
	Through	9.42	A	9.86	A
	Right	8.61	A	8.99	A
West Bound (SC)	Left	9.13	A	9.52	A
	Through	9.62	A	9.76	A
	Right	8.66	A	8.51	A

3.6 N Main St. & E Ross Ave.

The future level of service was calculated as described in Section 3.1

The future LOS is shown in Table 32.

This intersection meets the qualifications for Signal Warrants #1, #2, and #3 according to data analyzed by PTV Vistro using MUTCD guidelines (U.S Department of Transportation Federal Highway Administration , 2012).

This intersection meets the warrants for a right turn lane in the northbound direction and a left turn lane in the southbound direction according to MUTCD Guidelines (U.S Department of Transportation Federal Highway Administration , 2012) and ITD Standards in the Idaho Traffic Manual.

Table 32: N Main St. & E Ross Ave. Future

Intersection	2: N Main Street & E. Ross Ave				
Intersection Type	Three Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		F		E	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound (Free)	Left	9.17	A	9.92	A
	Through	0.00	A	0.00	A
West Bound (SC)	Left	56.59	F	45.33	E
	Right	18.63	C	22.83	C

3.7 N Main St. & E Howard Ave.

The future level of service was calculated as described in Section 3.1

The future LOS is shown in Table 33.

This intersection meets the qualifications for Signal Warrants #1, #2, and #3 according to data analyzed by PTV Vistro using MUTCD guidelines (U.S Department of Transportation Federal Highway Administration , 2012).

This intersection meets the warrants for a right turn lane in the northbound direction and a left turn lane in the southbound direction according to MUTCD Guidelines (U.S Department of Transportation Federal Highway Administration , 2012) ITD Standards in the Idaho Traffic Manual.

Table 33: N Main St. & E Howard Ave. Future

Intersection	4: N Main St & E Howard Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		F		F	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound (Free)	Left	9.88	A	10.51	B
	Through	0.00	A	0.00	A
West Bound (SC)	Left	67.90	F	72.78	F
	Right	27.05	D	47.96	E

3.8 N Main St. & Harper Ave.

The future level of service was calculated as described in Section 3.1

The future LOS is shown in ITD Standards in the Idaho Traffic Manual.

Table 34.

This intersection meets the qualifications for Signal Warrant #1, #2, and #3 according to data analyzed by PTV Vistro using MUTCD guidelines (U.S Department of Transportation Federal Highway Administration , 2012).

This intersection meets the warrants for a right turn lane in the northbound direction and a left turn lane in the southbound direction according to MUTCD Guidelines (U.S Department of Transportation Federal Highway Administration , 2012) and ITD Standards in the Idaho Traffic Manual.

Table 34: N Main St. & Harper Ave. Future

Intersection	3: N Main St & Harper Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		F		E	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound (Free)	Left	9.16	A	10.23	B
	Through	0.00	A	0.00	A
West Bound (SC)	Left	97.97	F	44.65	E
	Right	75.00	F	26.52	D

3.9 N Main St. & Little Ave.

The future level of service was calculated as described in Section 3.1

The future LOS is shown in Table 35.

This is a signalized intersection. During the Peak PM conditions this intersection fails in the northbound and southbound at future conditions.

Table 35: N Main St. & Little Ave. Future

Intersection	14: N Main St. & Little Ave				
Intersection Type	Four Leg Signalized				
		AM		PM	
Reported Intersection LOS		D		F	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	12.71	B	23.91	C
	Through	64.03	E	445.28	F
	Right	64.03	E	445.28	F
South Bound	Left	27.55	C	32.44	C
	Through	20.58	C	180.87	F
	Right	20.58	C	180.87	F
East Bound	Left	25.56	C	28.08	C
	Through	25.34	C	19.09	B
	Right	25.34	C	19.09	B
West Bound	Left	32.82	C	35.90	D
	Through	25.88	C	21.75	C
	Right	25.88	C	21.75	C

3.10 N Main St. & LeGrande Pierre Ave.

The future level of service was calculated as described in Section 3.1.

The future LOS for this intersection is shown in Table 36.

This intersection meets the qualifications for Signal Warrants #1, #2, and #3 according to MUTCD guidelines (U.S Department of Transportation Federal Highway Administration , 2012).

This intersection also meets the warrants for a right turn lane in the northbound direction and a left turn lane in the southbound direction according to MUTCD Guidelines (U.S Department of Transportation Federal Highway Administration , 2012) and ITD Standards in the Idaho Traffic Manual.

Table 36: N Main St. & LeGrande Pierre Ave.

Intersection	1: N Main St. & Legrande Pierre Ave				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		F		E	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound (Free)	Left	9.24	A	9.98	A
	Through	0.00	A	0.00	A
West Bound (SC)	Left	1679.75	F	43.30	E
	Right	1636.55	F	21.35	C

3.11 N 1st St. & E Ross Ave.

The future level of service was calculated as described in Section 3.1

The future LOS is shown in Table 37.

No warrants were met for this intersection.

Table 37: N 1st St. & E Ross Ave. Future

Intersection	13: 1st St. and E. Ross Ave.			
Intersection Type	Four Leg All Way stop controlled intersection			
	AM		PM	
Reported Intersection LOS	A		A	
Intersection Leg/Approach	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	6.98	A	7.18	A
South Bound	8.38	A	7.92	A
East Bound	7.11	A	7.09	A
West Bound	7.61	A	8.01	A

3.12 N 1st St. & Harper Ave.

The future level of service was calculated as described in Section 3.1

The future LOS is shown in Table 38.

No warrants were met for this intersection.

Table 38: N 1st St. & Harper Ave. Future

Intersection	12: N 1st St. and E Harper Ave.				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.32	A	7.46	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	7.30	A	7.27	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	10.93	B	10.77	B
	Through	10.09	B	10.38	B
	Right	9.00	A	9.20	A
West Bound (SC)	Left	10.97	B	11.07	B
	Through	11.04	B	11.13	B
	Right	9.92	A	9.49	A

3.13 N 1st St. & Ashley Ave.

The future level of service was calculated as described in Section 3.1

The future LOS is shown in Table 39.

No warrants were met for this intersection.

Table 39: N 1st St. & Ashely Ave. Future

Intersection	10: N 1st St. and E Ashley Ave				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.41	A	7.45	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	7.35	A	7.29	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	9.85	A	10.18	B
	Through	10.17	B	10.29	B
	Right	8.94	A	9.20	A
West Bound (SC)	Left	9.96	A	10.37	B
	Through	10.21	B	10.36	B
	Right	8.83	A	8.81	A

3.14 N 1st St. & E Wallace Ave.

The future level of service was calculated as described in Section 3.1

The future LOS is shown in Table 40.

No warrants were met for this intersection.

Table 40: N 1st St. & Wallace Ave. Future

Intersection	9: N 1st St. and E Wallace Ave				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.40	A	7.50	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	7.35	A	7.29	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	10.56	B	10.95	B
	Through	10.67	B	11.05	B
	Right	9.02	A	9.55	A
West Bound (SC)	Left	10.61	B	11.08	B
	Through	10.61	B	10.67	B
	Right	8.90	A	8.72	A

3.15 N 1st St. & E Howard Ave.

The future level of service was calculated as described in Section 3.1

The future LOS is shown in Table 41.

No warrants were met for this intersection.

Table 41: N 1st St. & E Howard Ave. Future

Intersection	11: N 1st St. & E Howard Ave				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	12.68	B	10.92	B
	Through	11.58	B	10.63	B
	Right	10.09	B	9.40	A
South Bound(SC)	Left	12.84	B	10.83	B
	Through	12.67	B	10.89	B
	Right	9.86	A	9.18	A
East Bound (Free)	Left	7.30	A	7.32	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (Free)	Left	7.78	A	7.48	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

3.16 N 1st St. & E Little St.

The future level of service was calculated as described in Section 3.1

The future LOS is shown in Table 42.

This intersection meets the qualifications for Signal Warrants #1, #2, and #3 according to data analyzed by PTV Vistro using MUTCD guidelines (U.S Department of Transportation Federal Highway Administration , 2012).

This intersection meets the warrants for a left turn lane in the both the eastbound and westbound directions according to AASHTO standards (American Association of State Highway and Transportation Officials "AASHTO", 2018)

Table 42: N 1st St. & E Little St. Future

Intersection	8: N 1st St. & Little Ave				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		C		E	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	22.74	C	35.78	E
	Through	19.17	C	26.00	D
	Right	12.11	B	15.42	C
South Bound(SC)	Left	23.75	C	29.89	D
	Through	19.82	C	27.05	D
	Right	13.47	B	18.21	C
East Bound (Free)	Left	8.19	A	8.68	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (Free)	Left	7.92	A	8.03	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

3.17 N 3rd St & E Ross Ave.

The future level of service was calculated as described in Section 3.1

The future LOS is shown in Table 43.

No warrants were met for this intersection.

Table 43: N 3rd St & E Ross Ave. Future

Intersection	17: N 3rd st. and E Ross Ave.			
Intersection Type	Three Leg All Way stop controlled intersection			
	AM		PM	
Reported Intersection LOS	A		A	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	7.19	A	6.95	A
East Bound	8.31	A	7.48	A
West Bound	7.80	A	8.21	A

3.18 N 4th St. and E Ross Ave.

The future level of service was calculated as described in Section 3.1

The future LOS is shown in Table 44.

No warrants were met for this intersection.

Table 44: N 4th St & E Ross Ave. Future

Intersection	18: N 4th st. and E Ross Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	10.77	B	10.23	B
	Right	9.64	A	8.71	A
East Bount(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (Free)	Left	7.72	A	7.39	A
	Through	0.00	A	0.00	A

3.19 N 5th St. & E Ross Ave.

The future level of service was calculated as described in Section 3.1

This intersection meets the qualifications for Signal Warrants #1 and #2 according to data analyzed by PTV Vistro using MUTCD guidelines (U.S Department of Transportation Federal Highway Administration , 2012).

The future LOS is shown in Table 45.

Table 45: N 5th St. & E Ross Ave. Future

Intersection Intersection Type	19: N 5th St and E Ross Ave. Four Leg All Way stop controlled intersection			
	AM		PM	
Reported Intersection LOS	C		B	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	14.08	B	9.79	A
South Bound	18.97	C	12.14	B
East Bound	13.20	B	9.65	A
West Bound	11.13	B	11.22	B

3.20 N 5th St. & E Howard Ave.

The future level of service was calculated as described in Section 3.1

The future LOS is shown in Table 46.

No warrants were met for this intersection.

Table 46: N 5th St. & E Howard Ave. Future

Intersection Intersection Type	20: N 5th St & E Howard Ave Four Leg All Way stop controlled intersection			
	AM		PM	
Reported Intersection LOS	A		A	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	9.32	A	8.24	A
South Bound	10.19	B	9.81	A
East Bound	8.95	A	8.60	A
West Bound	8.71	A	8.46	A

3.21 N 5th St. & E Little Ave.

The future level of service was calculated as described in Section 3.1.

The future LOS is shown in Table 47.

This intersection meets the qualifications for Signal Warrants #1, #2, and #3 according to data analyzed by PTV Vistro using MUTCD guidelines (U.S Department of Transportation Federal Highway Administration , 2012).

This intersection meets the left turn lane warrant in the eastbound direction and meets the right turn lane warrant in the east and westbound directions according to ITD Standards in the Idaho Traffic Manual.

Table 47: N 5th St. & E Little St. Future

Intersection	32: N 5th St. & Little St				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		D		D	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	25.55	D	30.80	D
	Through	19.81	C	20.25	C
	Right	12.60	B	12.06	B
South Bound(SC)	Left	23.23	C	26.49	D
	Through	20.81	C	25.27	D
	Right	13.90	B	18.08	C
East Bound (Free)	Left	7.94	A	8.18	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (Free)	Left	7.73	A	7.77	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

3.22 Cowboy Trl. & E Ross Ave.

The future level of service was calculated as described in Section 3.1

The future LOS is shown in Table 48.

No warrants were met for this intersection.

Table 48: Cowboy Trl. & E Ross Ave. Future

Intersection	24: Cowboy Trl. & E Ross Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (SC)	Left	9.35	A	9.79	A
	Right	8.54	A	8.84	A
East Bound (Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (Free)	Left	7.28	A	7.44	A
	Through	0.00	A	0.00	A

3.23 Cowboy Trl & E Howard Ave.

The future level of service was calculated as described in Section 3.1

The future LOS is shown in Table 49.

No warrants were met for this intersection.

Table 49: Cowboy Trl & E Howard Ave. Future

Intersection	31: Cowboy Trl. & E Howard Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (Free)	Left	7.25	A	7.24	A
	Through	0.00	A	0.00	A
South Bound (Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	8.65	A	8.69	A
	Right	8.40	A	8.41	A

3.24 Cowboy Trl. & Easy St.

The future level of service was calculated as described in Section 3.1

The future LOS is shown in Table 50.

No warrants were met for this intersection.

Table 50: Cowboy Trl. & Easy St. Future

Intersection	30: Cowboy Trl. & Easy St.				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (SC)	Left	8.91	A	8.86	A
	Through	9.29	A	9.26	A
	Right	8.40	A	8.41	A
South Bound (SC)	Left	8.86	A	8.86	A
	Through	9.31	A	9.26	A
	Right	8.41	A	8.41	A
East Bound (Free)	Left	7.24	A	7.24	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (Free)	Left	7.23	A	7.23	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

3.25 Palisade Trl. and Wind River Trl.

The future level of service was calculated as described in Section 3.1

The future LOS is shown in Table 51.

No warrants were met for this intersection.

Table 51: Palisade Trl. and Wind River Trl. Future

Intersection	35: Palisade Trl. & Wind River Trl.				
Intersection Type	Three Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound (Free)	Left	7.28	A	7.34	A
	Through	0.00	A	0.00	A
West Bound (SC)	Left	9.03	A	9.13	A
	Right	8.60	A	8.56	A

3.26 Powder Valley Rd. & Ski Hill Rd.

The future level of service was calculated as described in Section 3.1

The future LOS is shown in Table 52.

No warrants were met for this intersection.

Table 52: Powder Valley Rd. & Ski Hill Rd. Future

Intersection	29: Ski Hill Rd. & Powder Valley Rd.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (Free)	Left	7.58	A	7.92	A
	Through	0.00	A	0.00	A
South Bound (Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	11.71	B	12.64	B
	Right	9.35	A	10.62	B

3.27 Recommendations

An intersection can be given a grade from A to F, indicating the quality of operating conditions. One of the factors used to determine the Level of Service (LOS) is the control delay. Generally accepted practice in traffic engineering is to mitigate intersections with an approach less than LOS C.

Due to the increased traffic using an estimated population growth of 4% annually over 20 years, many intersections develop failing LOS grades.

These include the following intersections:

- N 5th St & Legrande Pierre Ave
- N Main St. & E Ross Ave,
- N Main St. & E Howard Ave,
- N Main St. & Harper Ave,
- N Main St. & LeGrande Pierre Ave,
- N Main St. & Little Ave, and
- N 1st St. & E Little Ave

The following intersections will meet warrants due to future conditions:

- N 5th & LeGrande Pierre Ave,
- N Main St. & E Ross Ave,
- N Main St. & E Howard Ave,
- N Main St. & Harper Ave,
- N Main St. & E Little Ave,
- N Main St. & LeGrande Pierre Ave,
- N 1st St. & E Little Ave,
- N 5th St. & E Ross Ave, and
- N 5th St & E Little Ave

The intersection of Main St & Little Ave remains failing from existing traffic conditions.

Recommendations for each intersection are listed in Table 53.

Table 53: Recommendations to Improve LOS and Remove Warrants: Future Traffic

Recommendations to Improve LOS and Remove Warrants: Future Traffic	
N Main St. & LeGrande Pierre Ave.	• *Install semi-actuated light that is coordinated with the existing light located at N Main St & E Little Ave. • Add a northbound right turning lane to satisfy warrant. • Add a southbound left turning lane to satisfy warrant.
N Main St. & E Ross Ave.	• **Possible location for: semi-actuated light that is coordinated with the existing light additional study recommended after a

	light is installed at N Main and Legrand Pierre. Variance will be required. • Add a northbound right turning lane to satisfy warrant. • Add a southbound left turning lane to satisfy warrant.
N Main St. & Harper Ave.	• **Possible location for: semi-actuated light that is coordinated with the existing light additional study recommended after a light is installed at N Main and Legrand Pierre. Variance will be required. • Add a northbound right turning lane to satisfy warrant. • Add a southbound left turning lane to satisfy warrant
N Main St. & E Howard Ave.	• **Possible location for: semi-actuated light that is coordinated with the existing light additional study recommended after a light is installed at N Main and Legrand Pierre. Variance will be required. • Add a northbound right turning lane to satisfy warrant. • Add a southbound left turning lane to satisfy warrant.
N Main St. & E Little Ave.	• ***Adjust timing and coordinate with other lights along N Main St.
1st St. & E Little Ave.	• Install semi-actuated light that is coordinated with the existing light located at N Main St & Little Ave. • Add left turning lane in both eastbound and westbound directions to satisfy turning lane warrants.
5th St & E Little Ave.	• Install semi-actuated light that is coordinated with the existing light located at N Main St & Little Ave. While LOS is passing, this intersection qualifies for 3 signal warrants. • Add left turning lane in eastbound direction to satisfy turning lane warrants.
N 5th St. & LeGrande Pierre Ave.	• Add a southbound right turning lane to satisfy warrants and increase LOS to passing. Will improve LOS from F to C and approach delay from 72 seconds to 19 seconds.
N 5th St. & E Ross Ave.	• ****Add a single lane roundabout.

*The intersection of N Main St. And LeGrande Pierre Ave. would be ideal for a traffic light. PTV-Vistro simulation estimates only adding turning lanes would not increase the LOS of Westbound traffic turning onto N Main St. A traffic light will potentially change the LOS from an F to a D, decreasing the maximum control time from 28 minutes to 41 seconds. Data for recommendation simulations is found in Appendix X.

**It is recommended that one or two additional lights be placed between the N Main St & LeGrande Pierre Ave intersection and Main St & Little Ave intersection. Other possible locations include N Main St. & E Ross Ave, N Main St. & E Howard Ave, N Main St. & Harper Ave, N Main St. & Ashley Ave, and N Main St. & Wallace Ave. Correct traffic light timing and coordination would affect all intersections between Little Ave. and LeGrande Pierre Ave. Data for recommendation simulations is found in Appendix X.

***The intersection of Main St. and Little Ave. would be improved by adjusting peak hour timing and coordinating with other traffic lights along Main St. PTV-Vistro simulation estimates LOS improvement from F to C and maximum approach delay from 415 seconds to 32 seconds. Data for recommendation simulations is found in Appendix X.

**** While turning lane warrants could be satisfied by adding additional right turn and left turn lanes to the southbound traffic movement, this would increase confusion and possible accidents within a 4-way stop-controlled intersection. For this reason, a roundabout is recommended. This will also be capable of handling increased traffic conditions past the time period considered for this study. Data for recommendation simulations is found in Appendix X.

For all traffic lights, coordinate with ITD for optimum phase timing.

3.28 Conclusions

Future traffic conditions of the twenty-five intersections were calculated using a 4% growth rate over a 20-year period. Of the twenty-five intersections analyzed, the future traffic conditions cause failing LOS grades in seven intersections and another seven intersections meet signal or traffic warrants. General recommendations have been stated to bring LOS ratings as high as possible given reasonable design constraints and to satisfy warrants.

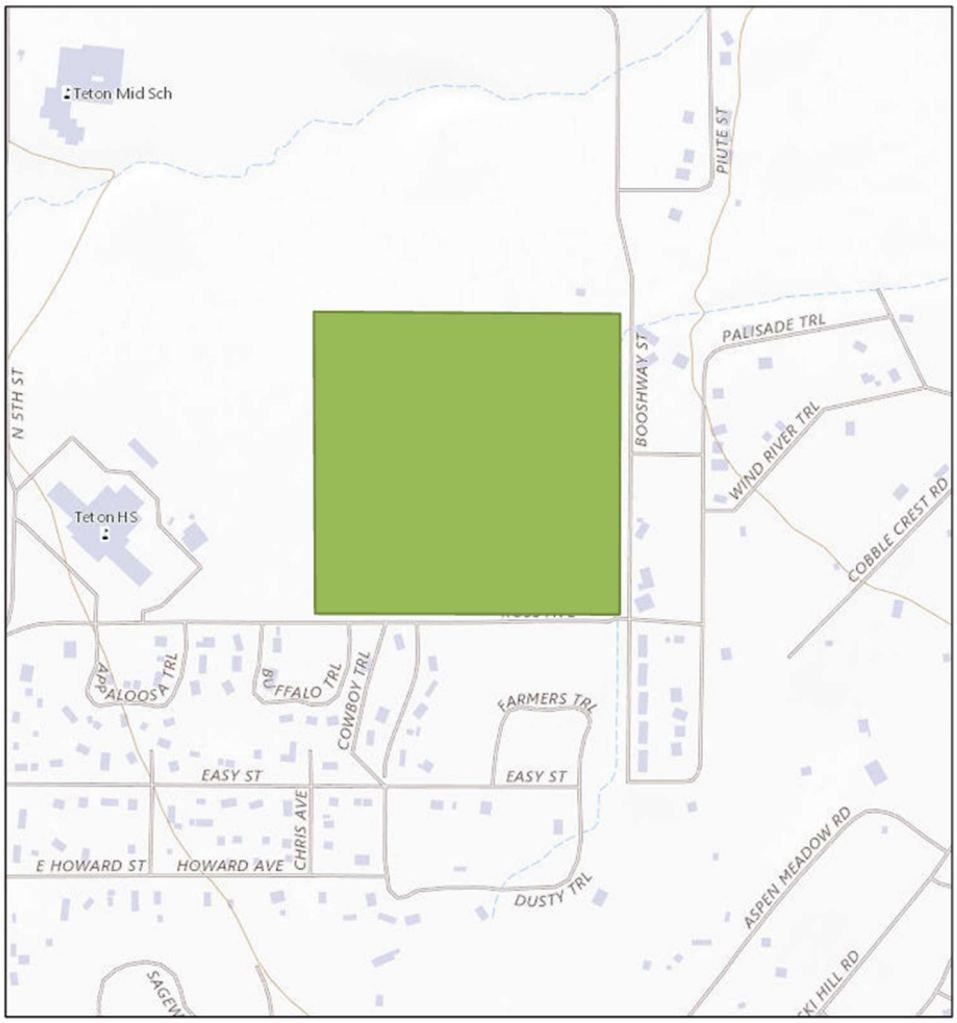
4 Rivers West Subdivision

4.1 Proposed Development

4.1.1 Site Location

Rivers West Subdivision is near the intersection of Booshway St. and E Ross Ave on the Northwest corner as shown in **Figure 2.**

Figure 3: Rivers West Vicinity Map



4.1.2 Current Use

Project site is currently a field with unimproved accesses.

4.1.3 Development Details/Zoning

In preparation, the development site has been zoned for RS-7 single- and two-family residential homes. When completed, Rivers West subdivision will be composed of 172 housing lots. The site exhibit used for the following traffic analysis is included in Appendix W.

4.1.4 Phasing and Timing

The development will begin with lot development in the Southeast corner in Phase 1, continuing as outlined in the site exhibit found in Appendix W.

4.1.5 Access Geometrics

The site will be accessed via an entrance on the east and south side. Comanche Way and Cowboy Trail will continue through the development, providing access. Cowboy Trail will continue north into the neighboring development, Belle Vue. Turning movements from these major roadways into the project site will not be hindered by internal site circulation. Sight distances for the access must be in accordance with AASHTO Geometric Design of Highways and Streets and access spacing must be in accordance with Teton County published standards.

4.2 Impact of Individual Subdivisions/ Site Generated Conditions

4.2.1 Overview

In this section, site generated traffic conditions are first modeled based on the impacts of each individual development. To predict the impact of the sites on the requested intersections, trip ends are generated using the Institute of Transportation Engineers: Trip Generation Manual, 10th Edition (TGM). Analysis is performed using the Residential Land Use Code 210 for Single-Family Detached Housing (Institute of Transportation Engineers, 2017). Calculations are based on the number of dwellings, and where more than one result is provided for any given peak period, the greater result is used for analysis. Trip ends are divided between accesses based on proximity and internal layout at the direction of the Developer. In section 8, the total impact of all subdivisions combined is modeled.

The traffic generated by each phase of Rivers West is best split into 2 zones when determining the directional modeling for each intersection. The zones are split depending on what exit the residents are most likely to use. The first zone includes the units most likely to enter/exist the subdivision onto Booshway, and the units entering/exiting onto Ross Ave as the second zone. The traffic generated by the two zones is shown below in Table 54 through Table 61 for each off the 4 phases. This Data was used to add additional future traffic to the existing conditions for each intersection.

Table 54: Site Generated Trips Phase 1: Booshway St.

Trip Generation	Phase 1 Units on Booshway					
Unit Type	Single Family attached					
Land Use Code	220					
Units	11					
Percentages, Averages, and Best fit equations taken from ITE Trip Generation 10th Edition Volume 2						
			Use Larger Generation			
	Entering	Exiting	Average	Fitted	#Entering	#Exiting
Street Peak 7-9	23%	77%	5	6	1	5
Street Peak 4-6	63%	37%	6	8	5	3
Generator Peak AM	28%	72%	7	8	3	6

Generator Peak PM	59%	41%	9	10	6	5

Table 55: Site Generated Trips Phase 1: Ross Ave.

Trip Generation	Phase 1 Units on Ross Ave.					
Unit Type	Single Family attached					
Land Use Code	220					
Units	13					
Percentages, Averages, and Best fit equations taken from ITE Trip Generation 10th Edition Volume 2						
				Use Larger Generation		
	Entering	Exiting	Average	Fitted	#Entering	#Exiting
Street Peak 7-9	23%	77%	6	7	2	5
Street Peak 4-6	63%	37%	7	10	6	4
Generator Peak AM	28%	72%	7	8	2	6
Generator Peak PM	59%	41%	9	10	6	4

Table 56: Site Generated Trips Phase 2: Booshway St.

Trip Generation	Phase 2 Units on Booshway					
Unit Type	Single Family attached					
Land Use Code	220					
Units	39					
Percentages, Averages, and Best fit equations taken from ITE Trip Generation 10th Edition Volume 2						
				Use Larger Generation		
	Entering	Exiting	Average	Fitted	#Entering	#Exiting
Street Peak 7-9	23%	77%	18	19	4	15
Street Peak 4-6	63%	37%	22	26	16	9
Generator Peak AM	28%	72%	22	23	7	17
Generator Peak PM	59%	41%	26	27	16	11

Table 57: Site Generated Trips Phase 2: Ross Ave

Trip Generation	Phase 2 Units on Ross Ave.					
Unit Type	Single Family attached					
Land Use Code	220					
Units	51					
Percentages, Averages, and Best fit equations taken from ITE Trip Generation 10th Edition Volume 2						
				Use Larger Generation		
	Entering	Exiting	Average	Fitted	#Entering	#Exiting
Street Peak 7-9	23%	77%	23	25	6	19
Street Peak 4-6	63%	37%	29	32	20	12
Generator Peak AM	28%	72%	29	30	8	22
Generator Peak PM	59%	41%	34	35	21	14

Table 58: Site Generated Trips Phase 3: Booshway St.

Trip Generation	Phase 3 Units on Booshway					
Unit Type	Single Family attached					
Land Use Code	220					
Units	74					
Percentages, Averages, and Best fit equations taken from ITE Trip Generation 10th Edition Volume 2						
				Use Larger Generation		
	Entering	Exiting	Average	Fitted	#Entering	#Exiting
Street Peak 7-9	23%	77%	34	36	8	28
Street Peak 4-6	63%	37%	41	45	28	17
Generator Peak AM	28%	72%	41	43	12	31
Generator Peak PM	59%	41%	50	50	30	21

Table 59: Site Generated Trips Phase 3: Ross Ave

Trip Generation	Phase 3 Units on Ross Ave.					
Unit Type	Single Family attached					
Land Use Code	220					
Units						
Percentages, Averages, and Best fit equations taken from ITE Trip Generation 10th Edition Volume 2						
				Use Larger Generation		
	Entering	Exiting	Average	Fitted	#Entering	#Exiting
Street Peak 7-9	23%	77%	41	43	10	33
Street Peak 4-6	63%	37%	50	54	34	20
Generator Peak AM	28%	72%	50	51	14	37
Generator Peak PM	59%	41%	60	61	36	25

Table 60: Site Generated Trips Phase 4: Booshway St.

Trip Generation	Phase 4 Units on Booshway					
Unit Type	Single Family attached					
Land Use Code	220					
Units	74					
Percentages, Averages, and Best fit equations taken from ITE Trip Generation 10th Edition Volume 2						
				Use Larger Generation		
	Entering	Exiting	Average	Fitted	#Entering	#Exiting
Street Peak 7-9	23%	77%	34	36	8	28
Street Peak 4-6	63%	37%	41	45	28	17
Generator Peak AM	28%	72%	41	43	12	31
Generator Peak PM	59%	41%	50	50	30	21

Table 61: Site Generated Trips Phase 4: Ross Ave.

Trip Generation	Phase 4 Units on Ross Ave.					
Unit Type	Single Family attached					
Land Use Code	220					
Units	131					
Percentages, Averages, and Best fit equations taken from ITE Trip Generation 10th Edition Volume 2						
				Use Larger Generation		
	Entering	Exiting	Average	Fitted	#Entering	#Exiting
Street Peak 7-9	23%	77%	60	62	14	47
Street Peak 4-6	63%	37%	73	75	47	28
Generator Peak AM	28%	72%	73	73	21	53
Generator Peak PM	59%	41%	88	88	52	36

Section 4.4.2 addresses the intersections affected by the development of the Rivers West Subdivision.

4.2.2 N 5th St. & LeGrande Pierre Ave.

The generated traffic of each phase and the future traffic at the time of phase completion will affect the LOS and Approach Delay of the following intersections. These 11 intersections were deemed applicable to this subdivision by the City of Driggs Engineer. A vicinity map showing the related intersections can be found in Appendix W. The anticipated LOS and Control delay from site generated traffic are estimated using the methods described in Sections 2.2 and 3.2.1 and in accordance with HCM7. Where there are differences between Am and PM peak traffic the highest traffic volume is displayed here. Detailed reports were created using PTV Vistro. These reports can be found in Appendices E-L.

Please note: these LOS figures were calculated based on the site generated traffic from individual phases (where applicable) and individual developments. The combined effect of all developments on traffic conditions is displayed in Section 7.

Also note: Due to the complex nature of the formulas used and how each turning movement effects one another, it is not uncommon for the approach delay of an intersection to decrease slightly in a succeeding phase while others increase despite increased traffic volume.

The site generated + future LOS of Phase 1 is shown in Table 62. Future conditions were calculated on an estimated phase completion time of 2 years.

Table 62: N 5th St. & LeGrande Pierre Ave. Phase 1

Intersection Intersection Type	21: N 5th St and LeGrande Pierre Ave Phase 1 Three Leg All Way Stop Controlled Intersection			
	AM		PM	
Reported Intersection LOS	B		A	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	9.12	A	8.10	A
East Bound	11.23	B	7.40	A
West Bound	9.21	A	8.73	A

The site generated + future LOS of Phase 2 is shown in Table 63. Future conditions were calculated on an estimated phase completion time of 8 years.

Table 63: N 5th St. & LeGrande Pierre Ave. Phase 2

Intersection Intersection Type	21: N 5th St and LeGrande Pierre Ave Phase 2 Three Leg All Way Stop Controlled Intersection			
	AM		PM	
Reported Intersection LOS	B		A	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	10.03	B	8.45	A
East Bound	14.87	B	7.63	A
West Bound	10.07	B	9.35	A

The site generated + future LOS of Phase 3 is shown in Table 64. Future conditions were calculated on an estimated phase completion time of 15 years.

Table 64: N 5th St. & LeGrande Pierre Ave. Phase 3

Intersection Intersection Type	21: N 5th St and LeGrande Pierre Ave Phase 3 Three Leg All Way Stop Controlled Intersection			
	AM		PM	
Reported Intersection LOS	C		A	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	11.50	B	8.90	A
East Bound	27.79	D	7.94	A
West Bound	11.52	B	10.28	B

The site generated + future LOS of Phase 4 is shown in Table 65. Future conditions were calculated on an estimated phase completion time of 20 years.

Table 65: N 5th St. & LeGrande Pierre Ave. Phase 4

Intersection Intersection Type	21: N 5th St and LeGrande Pierre Ave Phase 4 Three Leg All Way Stop Controlled Intersection			
	AM		PM	
Reported Intersection LOS	F		B	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	13.26	B	9.31	A
East Bound	86.47	F	8.20	A
West Bound	13.25	B	11.24	B

4.2.3 Booshway St. & Le Grand Pierre Ave.

The future level of service was calculated as described in Section 3.2.2

The site generated + future LOS of Phase 1 is shown in Table 66. Future conditions were calculated on an estimated phase completion time of 2 years.

Table 66: Booshway St. & LeGrande Pierre Ave. Phase 1

Intersection Intersection Type		22: Booshway St. & LeGrande Pierre Ave. Phase 1 Four Leg Minor Streets Stop Controlled(TWSC)			
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	8.76	A	9.28	A
	Through	9.26	A	9.28	A
	Right	8.52	A	8.34	A
South Bound(SC)	Left	8.62	A	9.02	A
	Through	9.20	A	9.50	A
	Right	8.33	A	8.58	A
East Bound(Free)	Left	7.22	A	7.22	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound(Free)	Left	7.28	A	7.24	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

The site generated + future LOS of Phase 2 is shown in Table 67. Future conditions were calculated on an estimated phase completion time of 8 years.

Table 67: Booshway St. & LeGrande Pierre Ave. Phase 2

Intersection	22: Booshway St. & LeGrande Pierre Ave. Phase 2				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	8.84	A	9.44	A
	Through	9.34	A	9.33	A
	Right	8.58	A	8.35	A
South Bound(SC)	Left	8.64	A	9.12	A
	Through	9.25	A	9.59	A
	Right	8.33	A	8.64	A
East Bound(Free)	Left	7.23	A	7.22	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound(Free)	Left	7.29	A	7.25	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

The site generated + future LOS of Phase 3 is shown in Table 68. Future conditions were calculated on an estimated phase completion time of 15 years.

Table 68: Booshway St. & LeGrande Pierre Ave. Phase 3

Intersection	22: Booshway St. & LeGrande Pierre Ave. Phase 3				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	8.95	A	9.76	A
	Through	9.44	A	9.45	A
	Right	8.67	A	8.37	A
South Bound(SC)	Left	8.69	A	9.33	A
	Through	9.31	A	9.79	A
	Right	8.34	A	8.73	A
East Bound(Free)	Left	7.23	A	7.23	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound(Free)	Left	7.31	A	7.26	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

The site generated + future LOS of Phase 4 is shown in Table 69. Future conditions were calculated on an estimated phase completion time of 20 years.

Table 69: Booshway St. & LeGrande Pierre Ave. Phase 4

Intersection	22: Booshway St. & LeGrande Pierre Ave. Phase 4				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	8.94	A	9.40	A
	Through	9.44	A	9.86	A
	Right	8.66	A	8.77	A
South Bound(SC)	Left	8.70	A	9.88	A
	Through	9.32	A	9.48	A
	Right	8.34	A	8.37	A
East Bound(Free)	Left	7.23	A	7.23	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound(Free)	Left	7.31	A	7.26	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

4.2.4 Booshway St. & Commanche Trl.

The future level of service was calculated as described in Section 3.2.2

The site generated + future LOS of Phase 1 is shown in Table 70. Future conditions were calculated on an estimated phase completion time of 2 years.

Table 70: Booshway St. & Comanche Trl. Phase 1

Intersection	25: Booshway St. & Commanche Trl. Phase 1				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (Free)	Left	7.26	A	7.33	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound (Free)	Left	7.26	A	7.26	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	8.91	A	9.28	A
	Through	9.32	A	9.71	A
	Right	8.42	A	8.59	A
West Bound (SC)	Left	8.86	A	9.27	A
	Through	9.34	A	9.71	A
	Right	8.43	A	8.43	A

The site generated + future LOS of Phase 2 is shown in Table 71. Future conditions were calculated on an estimated phase completion time of 8 years.

Table 71: Booshway St. & Comanche Trl. Phase 2

Intersection	25: Booshway St. & Commanche Trl. Phase 2				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (Free)	Left	7.28	A	7.35	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound (Free)	Left	7.27	A	7.27	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	9.14	A	9.42	A
	Through	9.53	A	9.84	A
	Right	8.51	A	8.64	A
West Bound (SC)	Left	9.09	A	9.41	A
	Through	9.50	A	9.84	A
	Right	8.47	A	8.45	A

The site generated + future LOS of Phase 3 is shown in Table 72. Future conditions were calculated on an estimated phase completion time of 15 years.

Table 72: Booshway St. & Comanche Trl. Phase 3

Intersection	25: Booshway St. & Commanche Trl. Phase 3				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (Free)	Left	7.29	A	7.39	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound (Free)	Left	7.28	A	7.29	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	9.37	A	9.76	A
	Through	9.70	A	10.11	B
	Right	8.61	A	8.77	A
West Bound (SC)	Left	9.29	A	9.73	A
	Through	9.63	A	10.11	B
	Right	8.51	A	8.51	A

The site generated + future LOS of Phase 4 is shown in Table 73. Future conditions were calculated on an estimated phase completion time of 20 years.

Table 73: Booshway St. & Comanche Trl. Phase 4

Intersection	25: Booshway St. & Commanche Trl. Phase 4				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (Free)	Left	7.32	A	7.40	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound (Free)	Left	7.29	A	7.29	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	9.74	A	9.81	A
	Through	10.06	B	10.17	B
	Right	8.62	A	8.80	A
West Bound (SC)	Left	9.76	A	9.79	A
	Through	9.97	A	10.17	B
	Right	8.52	A	8.52	A

4.2.5 Booshway St. and E Ross Ave.

The future level of service was calculated as described in Section 3.2.2

The site generated + future LOS of Phase 1 is shown in Table 74. Future conditions were calculated on an estimated phase completion time of 2 years.

Table 74: Booshway St. and E Ross Ave. Phase 1

Intersection	34: Booshway St. & E Ross Ave. Phase 1				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.26	A	7.32	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	7.22	A	7.22	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	9.00	A	9.20	A
	Through	9.23	A	9.54	A
	Right	8.48	A	8.74	A
West Bound (SC)	Left	8.86	A	9.11	A
	Through	9.36	A	9.48	A
	Right	8.51	A	8.43	A

The site generated + future LOS of Phase 2 is shown in Table 75. Future conditions were calculated on an estimated phase completion time of 8 years.

Table 75: Booshway St. and E Ross Ave. Phase 2

Intersection	34: Booshway St. & E Ross Ave. Phase 2				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.29	A	7.35	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	7.22	A	7.23	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	9.20	A	9.37	A
	Through	9.36	A	9.68	A
	Right	8.57	A	8.85	A
West Bound (SC)	Left	9.01	A	9.27	A
	Through	9.51	A	9.59	A
	Right	8.57	A	8.46	A

The site generated + future LOS of Phase 3 is shown in Table 76. Future conditions were calculated on an estimated phase completion time of 15 years.

Table 76: Booshway St. and E Ross Ave. Phase 3

Intersection	34: Booshway St. & E Ross Ave. Phase 3				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.31	A	7.38	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	7.22	A	7.23	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	9.36	A	9.59	A
	Through	9.44	A	9.86	A
	Right	8.64	A	8.99	A
West Bound (SC)	Left	9.12	A	9.44	A
	Through	9.64	A	9.74	A
	Right	8.63	A	8.49	A

The site generated + future LOS of Phase 4 is shown in Table 77. Future conditions were calculated on an estimated phase completion time of 20 years.

Table 77: Booshway St. and E Ross Ave. Phase 4

Intersection	34: Booshway St. & E Ross Ave. Phase 4				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.35	A	7.39	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	7.23	A	7.23	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	9.71	A	9.73	A
	Through	9.70	A	9.96	A
	Right	8.88	A	9.08	A
West Bound (SC)	Left	9.31	A	9.57	A
	Through	9.84	A	9.82	A
	Right	8.70	A	8.53	A

4.2.6 Palisade Trl. and Wind River Trl.

The future level of service was calculated as described in Section 3.2.2

The site generated + future LOS of Phase 1 is shown in Table 78. Future conditions were calculated on an estimated phase completion time of 2 years.

Table 78: Palisade Trl. and Wind River Trl. Phase 1

Intersection	35: Palisade Trl. & Wind River Trl. Phase 1				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	7.25	A	7.29	A
	Through	0.00	A	0.00	A
West Bound(SC)	Left	8.83	A	8.91	A
	Right	8.48	A	8.47	A

The site generated + future LOS of Phase 2 is shown in Table 79. Future conditions were calculated on an estimated phase completion time of 8 years.

Table 79: Palisade Trl. and Wind River Trl. Phase 2

Intersection	35: Palisade Trl. & Wind River Trl. Phase 2				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	7.27	A	7.31	A
	Through	0.00	A	0.00	A
West Bound(SC)	Left	8.92	A	9.00	A
	Right	8.52	A	8.51	A

The site generated + future LOS of Phase 3 is shown in Table 80. Future conditions were calculated on an estimated phase completion time of 15 years.

Table 80: Palisade Trl. and Wind River Trl. Phase 3

Intersection	35: Palisade Trl. & Wind River Trl. Phase 3				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	7.28	A	7.33	A
	Through	0.00	A	0.00	A
West Bound(SC)	Left	9.07	A	9.15	A
	Right	8.58	A	8.56	A

The site generated + future LOS of Phase 4 is shown in Table 81. Future conditions were calculated on an estimated phase completion time of 20 years.

Table 81: Palisade Trl. and Wind River Trl. Phase 4

Intersection	35: Palisade Trl. & Wind River Trl. Phase 4				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	7.29	A	7.35	A
	Through	0.00	A	0.00	A
West Bound(SC)	Left	9.09	A	9.23	A
	Right	8.63	A	8.60	A

4.2.7 N 5th St. & E Ross Ave.

The future level of service was calculated as described in Section 3.2.2

The site generated + future LOS of Phase 1 is shown in Table 82. Future conditions were calculated on an estimated phase completion time of 2 years.

Table 82: N 5th St. & E Ross Ave. Phase 1

Intersection Intersection Type	19: N 5th St. & E Ross Ave. Phase 1 Four Leg All Way Stop Controlled Intersection			
	AM		PM	
Reported Intersection LOS	A		A	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	8.96	A	8.04	A
South Bound	10.06	B	8.90	A
East Bound	9.37	A	8.33	A
West Bound	8.70	A	8.85	A

The site generated + future LOS of Phase 2 is shown in Table 83. Future conditions were calculated on an estimated phase completion time of 8 years.

Table 83: N 5th St. & E Ross Ave. Phase 2

Intersection Intersection Type	19: N 5th St. & E Ross Ave. Phase 2 Four Leg All Way Stop Controlled Intersection			
	AM		PM	
Reported Intersection LOS	B		A	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	10.10	B	8.53	A
South Bound	11.78	B	9.70	A
East Bound	10.36	B	8.73	A
West Bound	9.43	A	9.50	A

The site generated + future LOS of Phase 3 is shown in Table 84. Future conditions were calculated on an estimated phase completion time of 15 years.

Table 84: N 5th St. & E Ross Ave. Phase 3

Intersection Intersection Type	19: N 5th St. & E Ross Ave. Phase 3 Four Leg All Way Stop Controlled Intersection			
	AM		PM	
Reported Intersection LOS	B		B	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	12.14	B	9.31	A
South Bound	15.29	C	11.08	B
East Bound	11.94	B	9.37	A
West Bound	10.52	B	10.57	B

The site generated + future LOS of Phase 4 is shown in Table 85. Future conditions were calculated on an estimated phase completion time of 20 years.

Table 85: N 5th St. & E Ross Ave. Phase 4

Intersection Intersection Type	19: N 5th St. & E Ross Ave. Phase 4 Four Leg All Way Stop Controlled Intersection			
	AM		PM	
Reported Intersection LOS	C		B	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	15.02	C	10.03	B
South Bound	21.58	C	12.65	B
East Bound	13.88	B	9.95	A
West Bound	11.89	B	11.65	B

4.2.8 N 5th St. & E Howard Ave.

The future level of service was calculated as described in Section 3.2.2

The site generated + future LOS of Phase 1 is shown in Table 86. Future conditions were calculated on an estimated phase completion time of 2 years.

Table 86:N 5th St. & E Howard Ave. Phase 1

Intersection Intersection Type	20: N 5th St. & E Howard Ave. Phase 1 Four Leg All Way Stop Controlled Intersection			
	AM		PM	
Reported Intersection LOS	A		A	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	8.07	A	7.57	A
South Bound	8.27	A	8.22	A
East Bound	8.09	A	7.94	A
West Bound	7.96	A	7.91	A

The site generated + future LOS of Phase 2 is shown in Table 87.Future conditions were calculated on an estimated phase completion time of 8 years.

Table 87:N 5th St. & E Howard Ave. Phase 2

Intersection Intersection Type	20: N 5th St. & E Howard Ave. Phase 2 Four Leg All Way Stop Controlled Intersection			
	AM		PM	
Reported Intersection LOS	A		A	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	8.48	A	7.79	A
South Bound	8.85	A	8.68	A
East Bound	8.40	A	8.16	A
West Bound	8.31	A	8.12	A

The site generated + future LOS of Phase 3 is shown in Table 88. Future conditions were calculated on an estimated phase completion time of 15 years.

Table 88: N 5th St. & E Howard Ave. Phase 3

Intersection Intersection Type	20: N 5th St. & E Howard Ave. Phase 3 Four Leg All Way Stop Controlled Intersection			
	AM		PM	
Reported Intersection LOS	A		A	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	9.06	A	8.12	A
South Bound	9.71	A	9.38	A
East Bound	8.77	A	8.47	A
West Bound	8.76	A	8.46	A

The site generated + future LOS of Phase 4 is shown in Table 89. Future conditions were calculated on an estimated phase completion time of 20 years.

Table 89:N 5th St. & E Howard Ave. Phase 4

Intersection Intersection Type	20: N 5th St. & E Howard Ave. Phase 4 Four Leg All Way Stop Controlled Intersection			
	AM		PM	
Reported Intersection LOS	A		A	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	9.55	A	8.39	A
South Bound	10.45	B	10.01	B
East Bound	9.06	A	8.71	A
West Bound	9.05	A	8.71	A

4.2.9 Cowboy Trl. & Easy St.

The future level of service was calculated as described in Section 3.2.2

The site generated + future LOS of Phase 1 is shown in Table 90. Future conditions were calculated on an estimated phase completion time of 2 years.

Table 90: Cowboy Trl. & Easy St. Phase 1

Intersection Intersection Type		30: Cowboy Trl.& Easy St. Phase 1 Four Leg Minor Streets Stop Controlled(TWSC)			
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	8.77	A	8.81	A
	Through	9.19	A	9.20	A
	Right	8.37	A	8.42	A
South Bound(SC)	Left	8.73	A	8.82	A
	Through	9.21	A	9.19	A
	Right	8.38	A	8.40	A
East Bound (Free)	Left	7.23	A	7.23	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (Free)	Left	7.23	A	7.23	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

The site generated + future LOS of Phase 2 is shown in Table 91. Future conditions were calculated on an estimated phase completion time of 8 years.

Table 91: Easy St. & Cowboy Trl. Phase 2

Intersection	30: Easy St. & Cowboy Trl. Phase 2				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	8.90	A	8.87	A
	Through	9.24	A	9.24	A
	Right	8.40	A	8.44	A
South Bound(SC)	Left	8.85	A	8.87	A
	Through	9.28	A	9.23	A
	Right	8.44	A	8.42	A
East Bound (Free)	Left	7.24	A	7.23	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (Free)	Left	7.23	A	7.23	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

The site generated + future LOS of Phase 3 is shown in Table 92.Future conditions were calculated on an estimated phase completion time of 15 years.

Table 92: Easy St. & Cowboy Trl. Phase 3

Intersection	30: Easy St. & Cowboy Trl. Phase 3				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	9.05	A	9.01	A
	Through	9.30	A	9.33	A
	Right	8.43	A	8.49	A
South Bound(SC)	Left	8.98	A	9.02	A
	Through	9.38	A	9.30	A
	Right	8.51	A	8.47	A
East Bound (Free)	Left	7.24	A	7.24	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (Free)	Left	7.23	A	7.23	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

The site generated + future LOS of Phase 4 is shown in Table 93. Future conditions were calculated on an estimated phase completion time of 20 years.

Table 93: Easy St. & Cowboy Trl. Phase 4

Intersection	30: Easy St. & Cowboy Trl. Phase 4				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	9.13	A	9.11	A
	Through	9.35	A	9.38	A
	Right	8.45	A	8.53	A
South Bound(SC)	Left	9.04	A	9.13	A
	Through	9.44	A	9.35	A
	Right	8.53	A	8.50	A
East Bound (Free)	Left	7.25	A	7.24	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (Free)	Left	7.24	A	7.23	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

4.2.10 Cowboy Trl. & E Ross Ave.

The future level of service was calculated as described in Section 3.2.2

The site generated + future LOS of Phase 1 is shown in Table 94. Future conditions were calculated on an estimated phase completion time of 2 years. Note: Development will create a South bound lane at this intersection.

Table 94: Cowboy Trl. & E Ross Ave. Phase 1

Intersection	24: Cowboy Trl. & E Ross Ave. Phase 1				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (Free)	Left	9.11	A	9.53	A
	Right	8.45	A	8.66	A
South Bound (Free)	Left	9.11	A	9.49	A
	Through	9.51	A	9.93	A
	Right	8.56	A	8.57	A
East Bound (SC)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (SC)	Left	7.26	A	7.37	A
	Through	0.00	A	0.00	A

The site generated + future LOS of Phase 2 is shown in Table 95. Future conditions were calculated on an estimated phase completion time of 8 years.

Table 95: Cowboy Trl. & E Ross Ave. Phase 2

Intersection	24: Cowboy Trl. & E Ross Ave. Phase 2				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (Free)	Left	9.44	A	9.75	A
	Right	8.50	A	8.73	A
South Bound (Free)	Left	9.43	A	9.70	A
	Through	9.77	A	10.12	A
	Right	8.69	A	8.61	A
East Bound (SC)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (SC)	Left	7.27	A	7.40	A
	Through	0.00	A	0.00	A

The site generated + future LOS of Phase 3 is shown in Table 96. Future conditions were calculated on an estimated phase completion time of 15 years.

Table 96: Cowboy Trl. & E Ross Ave. Phase 3

Intersection	24: Cowboy Trl. & E Ross Ave. Phase 3				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (Free)	Left	9.83	A	10.20	B
	Right	8.55	A	8.85	A
South Bound (Free)	Left	9.75	A	10.09	B
	Through	10.05	B	10.46	B
	Right	8.85	A	8.73	A
East Bound (SC)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (SC)	Left	7.29	A	7.44	A
	Through	0.00	A	0.00	A

The site generated + future LOS of Phase 4 is shown in Table 97. Future conditions were calculated on an estimated phase completion time of 20 years.

Table 97: Cowboy Trl. & E Ross Ave. Phase 4

Intersection	24: Cowboy Trl. & E Ross Ave. Phase 4				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (Free)	Left	10.14	B	10.50	B
	Right	8.60	A	8.90	A
South Bound (Free)	Left	10.18	B	10.32	B
	Through	10.45	B	10.68	B
	Right	9.16	A	8.85	A
East Bound (SC)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (SC)	Left	7.30	A	7.46	A
	Through	0.00	A	0.00	A

4.2.11 Cowboy Trl & E Howard Ave.

The future level of service was calculated as described in Section 3.2.2

The site generated + future LOS of Phase 1 is shown in Table 98. Future conditions were calculated on an estimated phase completion time of 2 years.

Table 98: Cowboy Trl & E Howard Ave. Phase 1

Intersection	31: Cowboy Trl. & E Howard Ave. Phase 1				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.24	A	7.25	A
	Through	0.00	A	0.00	A
South Bound(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound(SC)	Left	8.60	A	8.67	A
	Right	8.37	A	8.43	A

The site generated + future LOS of Phase 2 is shown in Table 99. Future conditions were calculated on an estimated phase completion time of 8 years.

Table 99: Cowboy Trl & E Howard Ave. Phase 2

Intersection	31: Cowboy Trl. & E Howard Ave. Phase 2				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.26	A	7.25	A
	Through	0.00	A	0.00	A
South Bound(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound(SC)	Left	8.66	A	8.70	A
	Right	8.42	A	8.44	A

The site generated + future LOS of Phase 3 is shown in Table 100. Future conditions were calculated on an estimated phase completion time of 15 years.

Table 100: Cowboy Trl & E Howard Ave. Phase 3

Intersection	31: Cowboy Trl. & E Howard Ave. Phase 3				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.28	A	7.27	A
	Through	0.00	A	0.00	A
South Bound(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound(SC)	Left	8.71	A	8.77	A
	Right	8.47	A	8.50	A

The site generated + future LOS of Phase 4 is shown in Table 101. Future conditions were calculated on an estimated phase completion time of 20 years.

Table 101: Cowboy Trl & E Howard Ave. Phase 4

Intersection	31: Cowboy Trl. & E Howard Ave. Phase 4				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.29	A	7.28	A
	Through	0.00	A	0.00	A
South Bound(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound(SC)	Left	8.75	A	8.83	A
	Right	8.50	A	8.54	A

4.2.12 Powder Valley Rd. & Ski Hill Rd.

The future level of service was calculated as described in Section 3.2.2

The site generated + future LOS of Phase 1 is shown in Table 102. Future conditions were calculated on an estimated phase completion time of 2 years.

Table 102: Powder Valley Rd. & Ski Hill Rd. Phase 1

Intersection	29: Ski Hill Rd. & Powder Valley Rd. Phase 1				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (Free)	Left	7.43	A	7.62	A
	Through	0.00	A	0.00	A
South Bound (Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	10.17	B	10.56	B
	Right	8.88	A	9.49	A

The site generated + future LOS of Phase 2 is shown in Table 103. Future conditions were calculated on an estimated phase completion time of 8 years.

Table 103: Powder Valley Rd. & Ski Hill Rd. Phase 2

Intersection	29: Ski Hill Rd. & Powder Valley Rd. Phase 2				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (Free)	Left	7.48	A	7.72	A
	Through	0.00	A	0.00	A
South Bound (Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	10.67	B	11.17	B
	Right	9.05	A	9.84	A

The site generated + future LOS of Phase 3 is shown in Table 104. Future conditions were calculated on an estimated phase completion time of 15 years.

Table 104: Powder Valley Rd. & Ski Hill Rd. Phase 3

Intersection	29: Ski Hill Rd. & Powder Valley Rd. Phase 3				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.55	A	7.85	A
	Through	0.00	A	0.00	A
South Bound(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound(SC)	Left	11.32	B	12.04	B
	Right	9.29	A	10.34	B

The site generated + future LOS of Phase 4 is shown in Table 105. Future conditions were calculated on an estimated phase completion time of 20 years.

Table 105: Powder Valley Rd. & Ski Hill Rd. Phase 4

Intersection	29: Ski Hill Rd. & Powder Valley Rd. Phase 4				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	7.59	A	7.94	A
	Through	0.00	A	0.00	A
South Bound	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound	Left	11.82	B	12.78	B
	Right	9.46	A	10.76	B

4.3 Conclusion

Of the twenty-five intersections analyzed in this traffic study, only eleven are considered for the future and site generated traffic of the Rivers West subdivision. Seven intersections received failing LOS grades due to future traffic conditions generated from the 4% annual population growth over 20 years. Of the seven failing intersections, none fail due to the site generated impact of Rivers West. Warrants remain the same as stated in section 3.27.

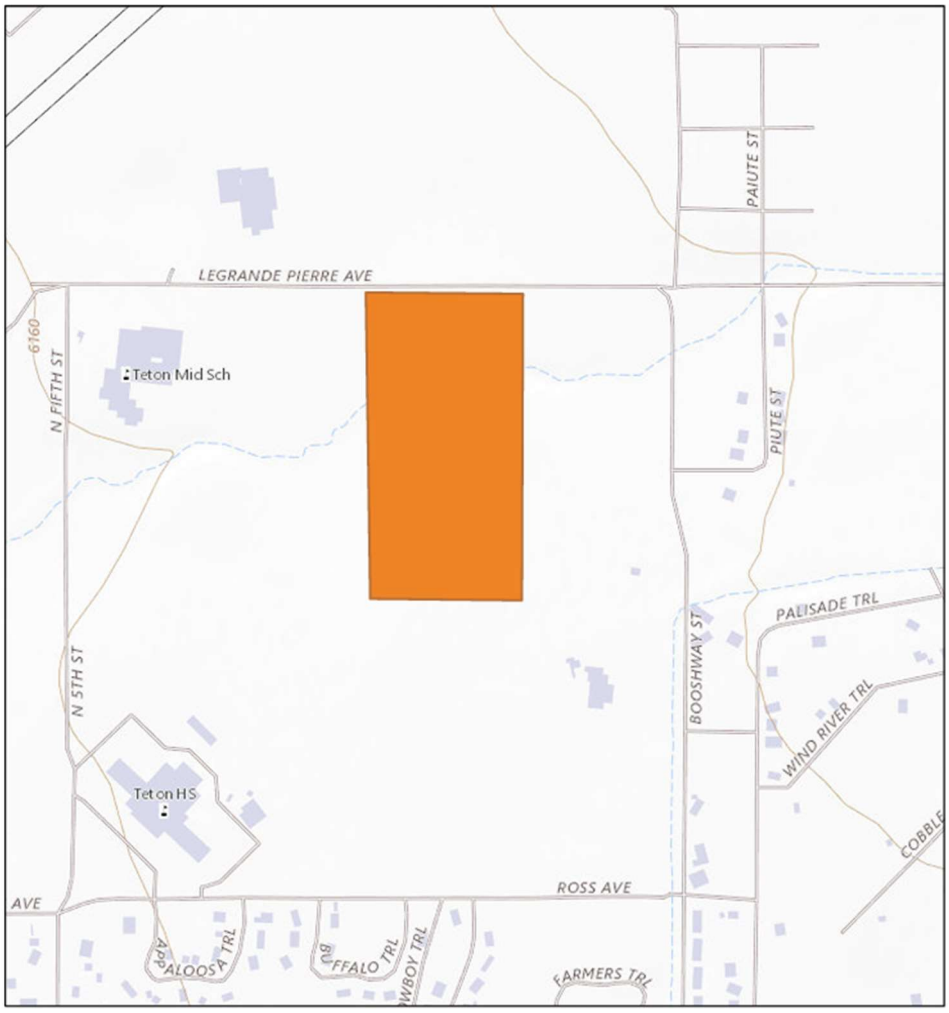
5 Bell Vue Subdivision

5.1 Proposed Development

5.1.1 Site Location

The Bell Vue subdivision borders the south side of LeGrande Pierre Ave between Booshway St on the East and N 5th St. on the West as shown in Figure 4.

Figure 4: Bell Vue Vicinity Map



5.1.2 Current Use

Project site is currently a field with unimproved accesses.

5.1.3 Development Details/Zoning

In preparation for the development, the site has been zoned for RS-7 single- and two-family residential homes. When completed, Belle Vue subdivision will be composed of 172 housing lots. The site exhibit used for the following traffic analysis is included in Appendix W.

5.1.4 Phasing and Timing

The site will be developed in one phase.

5.1.5 Access Geometrics

The site will be accessed through one main entrance on the North side of the development accessing LeGrande Pierre Ave. A secondary entrance will be located on the South side continuing Cowboy Trail into the Rivers West subdivision. The North access will be a three-legged intersection with LeGrande Pierre Ave. Sight distances for the access must be in accordance with AASHTO Geometric Design of Highways and Streets and access spacing must be in accordance with Teton County published standards.

5.2 Impact of Individual Subdivisions/ Site Generated Conditions

Identical analysis was performed for the following intersections as noted in Section 4.2.1. Trip generation data is show in Table 106.

Table 106: Belle Vue Site Generated Trips

Trip Generation	Units Entering/ Exiting onto LeGrande Pierre Ave.					
Unit Type	Single Family					
Land Use Code	220					
Units	66					
Percentages, Averages, and Best fit equations taken from ITE Trip Generation 10th Edition Volume 2						
				Use Larger Generation		
	Entering	Exiting	Average	Fitted	#Entering	#Exiting
Street Peak 7-9	23%	77%	30	32	7	25
Street Peak 4-6	63%	37%	37	41	26	15
Generator Peak AM	28%	72%	37	38	11	28
Generator Peak PM	59%	41%	44	45	27	18

The twelve intersections below were deemed applicable to this subdivision by the City of Driggs Engineer. Where there are differences between AM and PM peak traffic the highest traffic volume is displayed here. Detailed reports were created using PTV Vistro. These reports can be found in Appendices Q-R.

5.2.1 Booshway St. & Le Grand Pierre Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 107. Future conditions were calculated on an estimated development completion time of 20 years.

Table 107: Booshway St. & LeGrande Pierre Ave. Site Gen. + Future for Belle Vue

Intersection	22: Booshway St. and LeGrande Pierre Ave.				
Intersection Type	Four Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	8.94	A	7.26	A
	Through	9.43	A	0.00	A
	Right	8.66	A	0.00	A
South Bound	Left	8.71	A	7.23	A
	Through	9.34	A	0.00	A
	Right	8.34	A	0.00	A
East Bound	Left	7.23	A	9.34	A
	Through	0.00	A	9.80	A
	Right	0.00	A	8.74	A
West Bound	Left	7.32	A	9.78	A
	Through	0.00	A	9.45	A
	Right	0.00	A	8.37	A

5.2.2 Booshway St. & Commanche Trl.

LOS grades for each intersection, including future estimated traffic and site generated traffic, were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 108. Future conditions were calculated on an estimated development completion time of 20 years.

Table 108:Booshway St. & Commanche Trl. Site Gen. + Future for Belle Vue

Intersection	25: Booshway St. and Commanche Trail				
Intersection Type	Four Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	7.29	A	7.37	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound	Left	7.30	A	7.30	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound	Left	9.25	A	9.52	A
	Through	9.59	A	9.93	A
	Right	8.48	A	8.67	A
West Bound	Left	9.17	A	9.51	A
	Through	9.65	A	9.97	A
	Right	8.53	A	8.50	A

5.2.3 Booshway St. and E Ross Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 109. Future conditions were calculated on an estimated development completion time of 20 years.

Table 109: Booshway St. & E Ross Ave. Future Site Gen. + Future for Belle Vue

Intersection	34: Booshway St. and E Ross Ave				
Intersection Type	Four Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	7.30	A	7.38	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound	Left	7.23	A	7.23	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound	Left	9.40	A	9.64	A
	Through	9.43	A	9.89	A
	Right	8.63	A	9.01	A
West Bound	Left	9.15	A	9.53	A
	Through	9.64	A	9.77	A
	Right	8.66	A	8.51	A

5.2.4 N Main St. & LeGrande Pierre Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 110. Future conditions were calculated on an estimated development completion time of 20 years.

Table 110:N Main St. & LeGrande Pierre Ave. Site Gen. + Future for Belle Vue

Intersection	1: N Main St. & Legrande Pierre Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		F		E	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound	Left	9.26	A	10.02	B
	Through	0.00	A	0.00	A
West Bound	Left	1810.00	F	45.05	E
	Right	1766.00	F	22.10	C

5.2.5 Palisade Trl. & Wind River Trl.

LOS grades for each intersection, including future estimated traffic and site generated traffic, were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 111. Future conditions were calculated on an estimated development completion time of 20 years.

Table 111:Palisade Trl. & Wind River Trl. Site Gen. + Future for Belle Vue

Intersection	35: Palisade Trail & Wind River Trail				
Intersection Type	Three Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound	Left	7.28	A	7.34	A
	Through	0.00	A	0.00	A
West Bound	Left	9.08	A	9.17	A
	Right	8.61	A	8.57	A

5.2.6 N 5th St. & LeGrande Pierre Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 112. Future conditions were calculated on an estimated development completion time of 20 years.

Table 112: N 5th St. & LeGrande Pierre Ave. Site Gen. + Future for Belle Vue

Intersection Intersection Type	21: N 5th St. & LeGrande Pierre Ave. Three Leg All Way stop controlled intersection			
	AM		PM	
Reported Intersection LOS	F		B	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	13.08	B	9.36	A
East Bound	90.63	F	8.35	A
West Bound	13.50	B	11.32	B

5.2.7 N 5th St. & E Ross Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 113. Future conditions were calculated on an estimated development completion time of 20 years.

Table 113:N 5th St. & E Ross Ave. Site Gen. + Future for Belle Vue

Intersection Intersection Type	19: N 5th St. & E Ross Ave Four Leg All Way stop controlled intersection			
	AM		PM	
Reported Intersection LOS	C		B	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	14.20	B	9.80	A
South Bound	20.03	C	12.22	B
East Bound	13.29	B	9.67	A
West Bound	11.20	B	11.24	B

5.2.8 N 5th St. & E Howard Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 114. Future conditions were calculated on an estimated development completion time of 20 years.

Table 114: N 5th St. & E Howard Ave. Site Gen. + Future for Belle Vue

Intersection	20: N 5th St. & E Howard Ave			
Intersection Type	Four Leg All Way stop controlled intersection			
	AM		PM	
Reported Intersection LOS	B		A	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	9.33	A	8.24	A
South Bound	10.29	B	9.85	A
East Bound	8.97	A	8.61	A
West Bound	8.72	A	8.47	A

5.2.9 Cowboy Trl. & E Ross Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 115. Future conditions were calculated on an estimated development completion time of 20 years.

Table 115:Cowboy Trl. & E Ross Ave. Site Gen. + Future for Belle Vue

Intersection	24: Cowboy Trail & E Ross Ave.				
Intersection Type	Four Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		A		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	9.49	A	10.02	B
	Through	0.00	A	0.00	A
	Right	8.55	A	8.86	A
South Bound	Left	9.53	A	9.99	A
	Through	9.84	A	10.40	B
	Right	8.70	A	8.64	A
East Bound	Left	0.00	A	0.00	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound	Left	7.28	A	7.45	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

5.2.10 Cowboy Trl & E Howard Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 116. Future conditions were calculated on an estimated development completion time of 20 years.

Table 116:Cowboy Trl & E Howard Ave. Site Gen. + Future for Belle Vue

Intersection	31: Cowboy Trail & E Howard Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	7.25	A	7.24	A
	Through	0.00	A	0.00	A
South Bound	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound	Left	8.65	A	8.69	A
	Right	8.40	A	8.41	A

5.2.11 Cowboy Trl. & Easy St.

LOS grades for each intersection, including future estimated traffic and site generated traffic, were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 117. Future conditions were calculated on an estimated development completion time of 20 years.

Table 117: Cowboy Trl. & Easy St. Site Gen. + Future for Belle Vue

Intersection	30: Cowboy Trail & Easy Street				
Intersection Type	Four Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	8.91	A	8.86	A
	Through	9.29	A	9.26	A
	Right	8.40	A	8.41	A
South Bound	Left	8.86	A	8.86	A
	Through	9.31	A	9.26	A
	Right	8.41	A	8.41	A
East Bound	Left	7.24	A	7.24	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound	Left	7.23	A	7.23	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

5.2.12 Ski Hill Rd. & Powder Valley Rd.

LOS grades for each intersection, including future estimated traffic and site generated traffic, were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 118. Future conditions were calculated on an estimated development completion time of 20 years.

Table 118: Ski Hill Rd. Powder Valley Rd. Site Gen. + Future for Belle Vue

Intersection	29: Ski Hill Rd. & Powder Valley Rd.				
Intersection Type	Three Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	7.59	A	7.92	A
	Through	0.00	A	0.00	A
South Bound	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound	Left	11.75	B	12.69	B
	Right	9.39	A	10.67	B

5.3 Conclusion

Of the twenty-five intersections analyzed in this traffic study, only twelve are considered for the future and site generated traffic of the Belle Vue subdivision. Seven intersections received failing LOS grades due to the city's projected 4% annual growth rate over 20 years for future traffic conditions. Of that number, no intersections fail due to the site generated impact of Belle Vue. Warrants remain the same as stated in section 3.27.

6 Epic Endeavors and The Edge Subdivisions

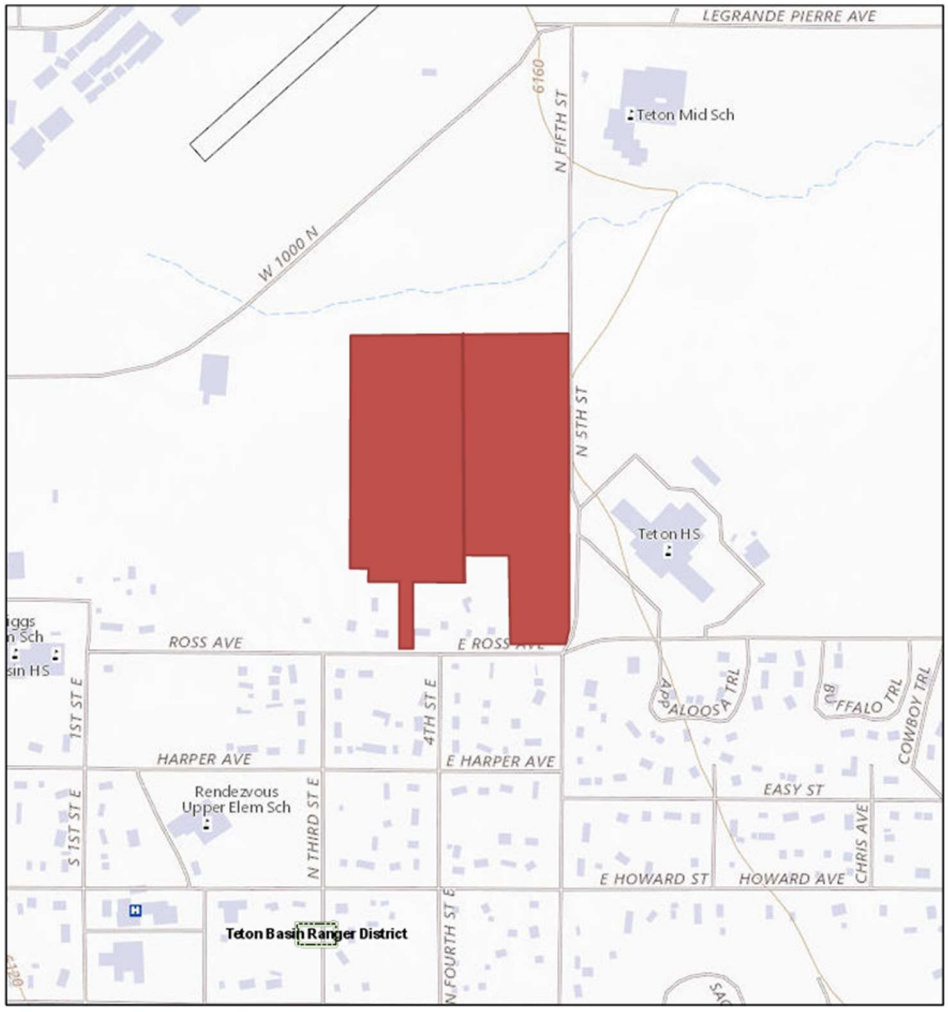
6.1 Proposed Development

Due to proximity and shared access points, the traffic impact of these two subdivisions is modeled jointly.

6.1.1 Site Location

Epic Endeavors and The Edge developments are located along the North side of E Ross Ave. and the West side of N 5th St. as shown in Figure 5. The Edge development borders the East side of Epic Endeavors.

Figure 5: Epic Endeavors and The Edge Vicinity Map



6.1.2 Current Use

Project site is currently composed of a field and agricultural outbuilding with unimproved access.

6.1.3 Development Details/Zoning

The development site has been zoned for RM-2 residential multi-family units. When completed, Epic Endeavors subdivision will be composed 31 buildings with 124 units (4 units per building), and The Edge

subdivision will be composed of 16 buildings with 64 units (4 units per building). In total, there will be 47 buildings and 188 units. The site exhibits used for the following traffic analysis are included in Appendix W.

6.1.4 Phasing and Timing

The site will be developed in one phase.

6.1.5 Access Geometrics

The site will be accessed through two entrances on the East end of the development connecting to N 5th St. Turning movements from these major roadways into the project site will not be hindered by internal site circulation. Both accesses will be three-leg intersections with their respective roadways. Sight distances for the access must be in accordance with AASHTO Geometric Design of Highways and Streets and access spacing must be in accordance with Teton County published standards.

6.2 Impact of Individual Subdivisions/ Site Generated Conditions

Identical analysis was performed for the following intersections as noted in Section 3.2.1.

Epic Endeavors and The Edge will be developed in one phase. Site generated traffic will be entering/exiting onto Booshway street from a north and south entrance. The zones are split depending on what exit the residents are most likely to use. The first zone includes the units most likely to enter/exit the subdivision through the northern entrance. The second zone includes the units entering/exiting through the southern entrance. The traffic generated by the two zones is shown below in Table 119. This data was used to analyze additional future traffic to the existing conditions for each intersection.

Table 119: Epic/Edge Site Generated Trips

Trip Generation	Units Using Northern Exit/Entrance					
Unit Type	Single Family attached					
Land Use Code	220					
Units	24					
Percentages, Averages, and Best fit equations taken from ITE Trip Generation 10th Edition Volume 2						
				Use Larger Generation		
	Entering	Exiting	Average	Fitted	#Entering	#Exiting
Street Peak 7-9	23%	77%	11	12	3	9
Street Peak 4-6	63%	37%	13	17	10	6
Generator Peak AM	28%	72%	13	15	4	11
Generator Peak PM	59%	41%	16	17	10	7
Trip Generation	Units Using Southern Exit/Entrance					
Unit Type	Single Family attached					
Land Use Code	220					
Units	164					
Percentages, Averages, and Best fit equations taken from ITE Trip Generation 10th Edition Volume 2						
				Use Larger Generation		
	Entering	Exiting	Average	Fitted	#Entering	#Exiting
Street Peak 7-9	23%	77%	75	76	18	59
Street Peak 4-6	63%	37%	92	92	58	34
Generator Peak AM	28%	72%	92	90	26	66
Generator Peak PM	59%	41%	110	110	65	45

The twelve intersections below were deemed applicable to these subdivisions by the City of Driggs Engineer:

A vicinity map showing the related intersections can be found in Appendix W. Where there are differences between AM and PM peak traffic the highest traffic volume is displayed here. Detailed reports were created using PTV Vistro. These reports can be found in Appendices M-N.

6.2.1 N Main St. & LeGrande Pierre Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, was calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 120. Future conditions were calculated on an estimated development completion time of 20 years.

Table 120: N Main St. & LeGrande Pierre Ave. Site Gen+ Future for Epic/Edge

Intersection	N Main St. & Legrande Pierre Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		F		E	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound	Left	9.29	A	10.02	B
	Through	0.00	A	0.00	A
West Bound	Left	1813.69	F	45.13	E
	Right	1768.63	F	21.91	C

6.2.2 N Main St. & E Ross Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, was calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 121. Future conditions were calculated on an estimated development completion time of 20 years.

Table 121: N Main St. & E Ross Ave. Site Gen+ Future for Epic/Edge

Intersection	N Main St. & E Ross Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		F		E	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound	Left	9.18	A	9.93	A
	Through	0.00	A	0.00	A
West Bound	Left	57.75	F	48.49	E
	Right	18.51	C	23.73	C

6.2.3 N Main St. & Harper Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, was calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 122. Future conditions were calculated on an estimated development completion time of 20 years.

Table 122: N Main St. & Harper Ave. Site Gen + for Future Epic/Edge

Intersection	N Main St. & Harper Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound	Left	9.16	A	10.23	A
	Through	0.00	A	0.00	A
West Bound	Left	97.97	A	44.65	A
	Right	75.00	A	26.52	A

6.2.4 N Main St. & E Howard Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, was calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 123. Future conditions were calculated on an estimated development completion time of 20 years.

Table 123: N Main St. & E Howard Ave. Site Gen + Future for Epic/Edge

Intersection	N Main St. & E Howard Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		F		F	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound	Left	9.88	A	10.51	B
	Through	0.00	A	0.00	A
West Bound	Left	67.90	F	72.78	F
	Right	27.05	D	47.96	E

6.2.5 N Main St. & Little Ave

LOS grades for each intersection, including future estimated traffic and site generated traffic, was calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 124. Future conditions were calculated on an estimated development completion time of 20 years.

Table 124: N Main St. & Little Ave. Site Gen + Future for Epic/Edge

Intersection	N Main St. & Little Ave.				
Intersection Type	4 way signalized intersection				
		AM		PM	
Reported Intersection LOS		D		F	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	13.16	B	23.96	C
	Through	69.26	E	500.99	F
	Right	69.26	E	500.99	F
South Bound	Left	27.96	C	32.47	C
	Through	21.43	C	215.12	F
	Right	21.43	C	215.12	F
East Bound	Left	25.60	C	28.32	C
	Through	25.34	C	19.10	B
	Right	25.34	C	19.10	B
West Bound	Left	32.82	C	36.35	D
	Through	25.88	C	21.75	C
	Right	25.88	C	21.75	C

6.2.6 N 1st St. & E Howard Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, was calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 125. Future conditions were calculated on an estimated development completion time of 20 years.

Table 125: N 1st St. & E Howard Ave. Site Gen + Future for Epic/Edge

Intersection	N 1st St. & E Howard Ave.				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	13.27	B	11.15	B
	Through	11.68	B	10.67	B
	Right	10.19	B	9.44	A
South Bound	Left	13.39	B	11.01	B
	Through	13.08	B	11.03	B
	Right	10.27	B	9.32	A
East Bound	Left	7.30	A	7.32	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound	Left	7.78	A	7.48	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

6.2.7 N 1st St. & E Harper Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, was calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 126. Future conditions were calculated on an estimated development completion time of 20 years.

Table 126: N 1st St. & E Harper Ave. Site Gen + Future for Epic/Edge

Intersection	N 1st St. & E Harper Ave.				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	8.81	A	7.49	A
	Through	9.30	A	0.00	A
	Right	8.54	A	0.00	A
South Bound	Left	8.73	A	7.28	A
	Through	9.38	A	0.00	A
	Right	8.34	A	0.00	A
East Bound	Left	7.22	B	10.94	B
	Through	0.00	B	10.51	B
	Right	0.00	A	9.29	A
West Bound	Left	7.34	B	11.27	B
	Through	0.00	B	11.29	B
	Right	0.00	B	9.56	A

6.2.8 N 1st St. & E Ross Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, was calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 127. Future conditions were calculated on an estimated development completion time of 20 years.

Table 127: N 1st St. & E Ross Ave. Site Gen + Future for Epic/Edge

Intersection Intersection Type	N 1st St. & E Ross Ave. Four Leg All Way Stop Controlled Intersection			
	AM		PM	
Reported Intersection LOS	A		A	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	7.12	A	7.27	A
South Bound	8.57	A	8.11	A
East Bound	7.19	A	7.17	A
West Bound	7.96	A	14.75	A

6.2.9 N 3rd St. & E Ross Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, was calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 128. Future conditions were calculated on an estimated development completion time of 20 years.

Table 128: N 3rd St & E Ross Ave. Site Gen + Future for Epic/Edge

Intersection Intersection Type	N 3rd St. & E Ross Ave. Three Leg All Way Stop Controlled Intersection			
	AM		PM	
Reported Intersection LOS	A		A	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	7.30	A	7.03	A
East Bound	8.48	A	7.60	A
West Bound	8.06	A	8.41	A

6.2.10 N 4th St. & E Ross Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, was calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 129. Future conditions were calculated on an estimated development completion time of 20 years.

Table 129: N 4th St & E Ross Ave. Site Gen + Future for Epic/Edge

Intersection	N 4th St. & E Ross Ave.				
Intersection Type	Tree Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	11.15	B	10.50	B
	Right	9.72	A	8.78	A
East Bound	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound	Left	7.75	A	7.42	A
	Through	0.00	A	0.00	A

6.2.11 N 5th St. & E Ross Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, was calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 130. Future conditions were calculated on an estimated development completion time of 20 years.

Table 130: N 5th St. & E Ross Ave. Site Gen + Future for Epic/Edge

Intersection	N 5th St. & E Ross Ave.			
Intersection Type	Four Leg All Way Stop Controlled Intersection			
	AM		PM	
Reported Intersection LOS	C		B	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	14.99	B	10.46	B
South Bound	24.64	C	13.36	B
East Bound	14.19	B	10.18	B
West Bound	11.58	B	11.79	B

6.2.12 N 5th St. & E Little Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, was calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 131. Future conditions were calculated on an estimated development completion time of 20 years.

Table 131: N 5th St. & Little St. Site Gen + Future for Epic/Edge

Intersection	5th St. & E Little Ave.				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		D		D	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	25.55	D	33.70	D
	Through	19.81	C	21.78	C
	Right	12.60	B	12.58	B
South Bound	Left	23.23	C	28.76	D
	Through	20.81	C	27.29	D
	Right	13.90	B	19.12	C
East Bound	Left	7.94	A	8.20	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound	Left	7.73	A	7.77	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

6.3 Conclusion

Of the twenty-five intersections analyzed in this traffic study, only twelve are considered for the future and site generated traffic of The Edge and Epic Endeavors subdivisions. Eight intersections received failing LOS grades due to the city's projected annual growth of 4% over 20 years for future traffic conditions. Of that number, one additional intersection failed due to the site generated impact of The Edge and Epic Endeavors subdivisions. The intersection of N 5th St and E Ross Ave goes from LOS C to D with approach delay going from 20 seconds to 25 seconds. Warrants remain the same as stated in section 3.27.

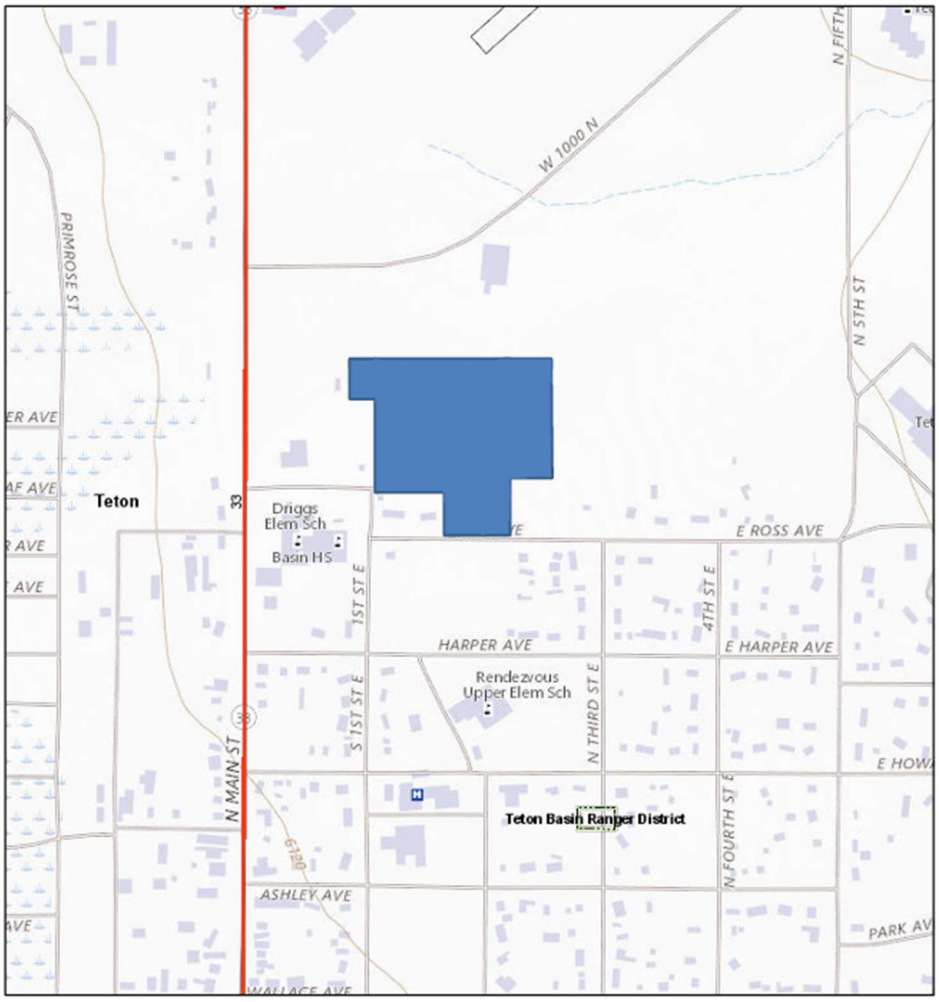
7 Hemming Subdivision

7.1 Proposed Development

7.1.1 Site Location

The Hemming subdivision is East of N Main St. between LeGrand Pierre Ave. and E Ross Ave as shown in **Figure 6.**

Figure 6: Hemming Subdivision Vicinity Map



7.1.2 Current Use

Project site is currently a composed of a field with agricultural outbuildings and unimproved access.

7.1.3 Development Details/Zoning

Currently, the proposed development is zoned partly for light industry and partly for RM-2 residential multi-family units. The preliminary site plan calls for 28 buildings with 184 units. The site exhibits used for the following traffic analysis are included in Appendix W.

7.1.4 Phasing and Timing

The site will be developed in one phase.

7.1.5 Access Geometrics

The site will be accessed through Two entrances: on the South side connecting to E Ross Ave; on the Southwest side connecting to the Northern intersection of E Ross Ave and N 1st St.at some future date an access on the North side connecting to LeGrande Pierre Ave should be added to increase the functionality of flow generally but is not included in this analysis. All accesses will be three-leg intersections with their respective roadways. Sight distances for the access must be in accordance with AASHTO Geometric Design of Highways and Streets and access spacing must be in accordance with Teton County published standards.

7.2 Impact of Individual Subdivisions/ Site Generated Conditions

Identical analysis was performed for the following intersections as noted in Section 3.2.1.

The Hemming Subdivision will be developed in 1 phase. Site generated traffic will be entering/exiting onto Ross Ave from a southern and southwestern entrance and onto LeGrande Pierre Ave from a northern entrance. The zones are split depending on what exit the residents are most likely to use. The first zone includes the units most likely to enter/exist the subdivision through the southern entrance. The second zone includes the units entering/exiting through the southwestern entrance. The traffic generated by the two zones is shown below in Table 132. This data was used to add additional future traffic to the existing conditions for each intersection.

Table 132: Hemming Site Generated Trips

Trip Generation	Units Using Southern Exit/Entrance					
Unit Type	Single Family attached					
Land Use Code	220					
Units	76					
Percentages, Averages, and Best fit equations taken from ITE Trip Generation 10th Edition Volume 2						
			Use Larger Generation			
	Entering	Exiting	Average	Fitted	#Entering	#Exiting
Street Peak 7-9	23%	77%	35	37	8	28
Street Peak 4-6	63%	37%	43	46	29	17
Generator Peak AM	28%	72%	43	44	32	12
Generator Peak PM	59%	41%	51	52	21	30
Trip Generation	Units Using Southeastern Exit/Entrance					
Unit Type	Single Family attached					
Land Use Code	220					
Units	48					
Percentages, Averages, and Best fit equations taken from ITE Trip Generation 10th Edition Volume 2						
			Use Larger Generation			
	Entering	Exiting	Average	Fitted	#Entering	#Exiting
Street Peak 7-9	23%	77%	22	24	5	18
Street Peak 4-6	63%	37%	27	31	19	11
Generator Peak AM	28%	72%	27	28	8	20
Generator Peak PM	59%	41%	32	33	20	14

The fourteen intersections below were deemed applicable to this subdivision by the City of Driggs Engineer.

A vicinity map showing the related intersections can be found in Appendix W. Where there are differences between AM and PM peak traffic the highest traffic volume is displayed here. Detailed reports were created using PTV Vistro. These reports can be found in Appendices O-P.

7.2.1 N Main St. & LeGrande Pierre Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 133. Future conditions were calculated on an estimated development completion time of 20 years. The AM Peak Hour is the worst case for this intersection. The LOS of this intersection will be at an F

Table 133: N Main St. & LeGrande Pierre Ave. Site Gen + Future for Hemmings

Intersection	1: N Main St & LeGrande Pierre Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		F		E	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound	Left	9.30	A	10.03	B
	Through	0.00	A	0.00	A
West Bound	Left	1818.88	F	45.12	E
	Right	1773.77	F	21.99	C

7.2.2 N Main St. & E Ross Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 134. Future conditions were calculated on an estimated development completion time of 20 years.

Table 134: N Main St. & E Ross Ave. Future Site Gen + Future for Hemmings

Intersection	2: N Main St & E Ross Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		F		F	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound	Left	9.19	A	9.96	A
	Through	0.00	A	0.00	A
West Bound	Left	61.54	F	51.35	F
	Right	21.87	C	25.90	D

7.2.3 N 1st St. & E Ross Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 135. Future conditions were calculated on an estimated development completion time of 20 years.

Table 135: N 1st St. & E Ross Ave. Site Gen + Future for Hemmings

Intersection	13: N 1st St. & E Ross Ave			
Intersection Type	Four Leg All Way stop controlled intersection			
	AM		PM	
Reported Intersection LOS	A		A	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	7.16	A	7.30	A
South Bound	8.59	A	8.12	A
East Bound	7.19	A	7.20	A
West Bound	7.86	A	8.30	A

7.2.4 N 3rd St. & E Ross Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 136. Future conditions were calculated on an estimated development completion time of 20 years.

Table 136: N 3rd St & E Ross Ave. Site Gen + Future for Hemmings

Intersection	17: N 3rd St. & E Ross Ave			
Intersection Type	Three Leg All Way stop controlled intersection			
	AM		PM	
Reported Intersection LOS	A		A	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	7.32	A	7.06	A
East Bound	8.68	A	7.64	A
West Bound	7.95	A	8.48	A

7.2.5 N 4th St. & E Ross Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 137. Future conditions were calculated on an estimated development completion time of 20 years.

Table 137: N 4th St & E Ross Ave. Site Gen + Future for Hemmings

Intersection	18: N 4th St. and E Ross Ave				
Intersection Type	Three Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	11.21	B	10.59	B
	Right	9.89	A	8.81	A
East Bound	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound	Left	7.81	A	7.43	A
	Through	0.00	A	0.00	A

7.2.6 N 5th St. & E Ross Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic, were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 138. Future conditions were calculated on an estimated development completion time of 20 years.

Table 138: N 5th St. & E Ross Ave. Site Gen + Future for Hemmings

Intersection	19: N 5th St. and E Ross Ave			
Intersection Type	Four Leg All Way stop controlled intersection			
	AM		PM	
Reported Intersection LOS	A		B	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	15.38	C	10.15	B
South Bound	22.44	C	12.83	B
East Bound	15.06	C	10.08	B
West Bound	11.77	B	11.94	B

7.2.7 N Main St. & Harper Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 139. Future conditions were calculated on an estimated development completion time of 20 years.

Table 139: N Main St. & Harper Ave. Site Gen + Future for Hemmings

Intersection	3: N Main St. & Harper Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		F		E	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound	Left	9.18	A	10.25	B
	Through	0.00	A	0.00	A
West Bound	Left	102.72	F	45.44	E
	Right	79.33	F	26.97	D

7.2.8 N 1st St. & Harper Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 140. Future conditions were calculated on an estimated development completion time of 20 years.

Table 140: N 1st St. & Harper Ave. Site Gen + Future for Hemmings

Intersection	12: N 1st St. & E Harper Ave.				
Intersection Type	Four Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	7.35	A	7.48	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound	Left	7.32	A	7.31	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound	Left	11.22	B	11.08	B
	Through	10.29	B	10.61	B
	Right	9.13	A	9.30	A
West Bound	Left	11.28	B	11.42	B
	Through	11.32	B	11.43	B
	Right	10.07	B	9.67	A

7.2.9 N Main St. & E Howard Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 141. Future conditions were calculated on an estimated development completion time of 20 years.

Table 141: N Main St. & E Howard Ave. Site Gen + Future for Hemmings

Intersection	4: N Main St. & E Howard Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		F		F	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound	Left	9.89	A	10.54	B
	Through	0.00	A	0.00	A
West Bound	Left	69.25	F	74.84	F
	Right	27.61	D	49.56	E

7.2.10 N 1st St. & E Howard Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 142. Future conditions were calculated on an estimated development completion time of 20 years.

Table 142: N 1st St. & E Howard Ave. Site Gen + Future for Hemmings

Intersection	11: N 1st St. & E Howard Ave.				
Intersection Type	Four Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	13.17	B	11.25	B
	Through	11.67	B	10.80	B
	Right	10.18	B	9.57	A
South Bound	Left	13.30	B	11.17	B
	Through	13.00	B	11.02	B
	Right	10.20	B	9.31	A
East Bound	Left	7.30	A	7.32	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound	Left	7.78	A	7.48	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

7.2.11 N 1st St. & Ashely Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 143. Future conditions were calculated on an estimated development completion time of 20 years.

Table 143: N 1st St. & Ashely Ave. Site Gen + Future for Hemmings

Intersection	10: N 1st St. & Ashley Ave.				
Intersection Type	Four Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	7.45	A	7.47	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound	Left	7.37	A	7.32	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound	Left	10.05	B	10.43	B
	Through	10.35	B	10.51	B
	Right	9.04	A	9.28	A
West Bound	Left	10.17	B	10.64	B
	Through	10.40	B	10.58	B
	Right	8.88	A	8.92	A

7.2.12 N 1st St. & Wallace Ave.

LOS grades for each intersection, including future estimated traffic and site generated traffic were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 144. Future conditions were calculated on an estimated development completion time of 20 years.

Table 144: N 1st St. & Wallace Ave. Site Gen + Future for Hemmings

Intersection	9: N 1st St. & E Wallace Ave.				
Intersection Type	Four Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	7.44	A	7.52	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound	Left	7.35	A	7.32	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound	Left	10.80	B	11.25	B
	Through	10.88	B	11.31	B
	Right	9.20	A	9.66	A
West Bound	Left	10.79	B	11.39	B
	Through	10.76	B	10.90	B
	Right	8.91	A	8.83	A

7.2.13 N Main St. & Little Ave

LOS grades for each intersection, including future estimated traffic and site generated traffic were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 145. Future conditions were calculated on an estimated development completion time of 20 years.

Table 145: N Main St. & Little Ave. Site Gen + Future for Hemmings

Intersection	14: N Main St. & Little Ave.				
Intersection Type	Four Leg Signalized				
		AM		PM	
Reported Intersection LOS		D		F	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	13.34	B	23.93	C
	Through	89.01	F	501.78	F
	Right	89.01	F	501.78	F
South Bound	Left	28.34	C	32.47	C
	Through	21.88	C	189.95	F
	Right	21.88	C	189.95	F
East Bound	Left	24.96	C	28.26	C
	Through	24.62	C	19.13	B
	Right	24.62	C	19.13	B
West Bound	Left	32.99	C	38.03	D
	Through	25.19	C	21.79	C
	Right	25.19	C	21.79	C

7.2.14 N 1st St. & E Little Ave

LOS grades for each intersection, including future estimated traffic and site generated traffic were calculated as explained in Section 4.4.2.

The site generated + future LOS is shown in Table 146. Future conditions were calculated on an estimated development completion time of 20 years.

Table 146: N 1st St. & E Little St. Future for Hemmings

Intersection	8: N 1st St. & E Little Ave.				
Intersection Type	Four Leg Minor Streets Stop Controlled (TWSC)				
		AM		PM	
Reported Intersection LOS		C		E	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	23.55	C	40.58	E
	Through	19.20	C	28.57	D
	Right	12.14	B	16.80	C
South Bound	Left	24.03	C	32.70	D
	Through	20.11	C	29.41	D
	Right	13.76	B	19.39	C
East Bound	Left	8.19	A	8.70	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound	Left	7.92	A	8.03	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

7.3 Conclusion

Of the twenty-five intersections analyzed in this traffic study, only fourteen are considered for the future and site generated traffic from the Hemming subdivision. Seven intersections received failing LOS grades due to the city's projected 4% annual growth rate over 20 years for future traffic conditions. No additional intersections fail due to the site generated impact of Hemming. Warrants remain the same as stated in Section 3.27.

8 Impact of All Subdivisions + Future Traffic

8.1 Overview

In this section, the combined network including site generated traffic of all five subdivisions (Rivers West, The Edge, Epic Endeavors, Hemmings, and Belle Vue), are considered alongside the estimated 20-year future conditions. Where there are differences between AM and PM peak traffic the highest traffic volume is displayed here. Detailed reports for the following information were created using PTV Vistro. These reports can be found in Appendices S-T.

8.2 N 5th St. & Legrande Pierre Ave.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 147.

This intersection meets the qualifications for Signal Warrants #1, #2, and #3 according to MUTCD guidelines (U.S Department of Transportation Federal Highway Administration , 2012).

Table 147:N 5th St. & LeGrande Pierre Ave. Entire Network + Future

Intersection	21: N 5th St and LeGrande Pierre Ave			
Intersection Type	Three Leg All Way stop controlled intersection			
	AM		PM	
Reported Intersection LOS	F		B	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	14.04	B	9.70	A
East Bound	146.90	F	8.61	A
West Bound	14.34	B	12.38	B

8.3 Booshway St. & Legrande Pierre Ave

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 148.

Table 148:Booshway St. & LeGrande Pierre Ave. Entire Network + Future

Intersection	22: Booshway St. and Legrande Pierre Ave				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	8.97	A	10.00	B
	Through	9.46	A	9.56	A
	Right	8.68	A	8.37	A
South Bound(SC)	Left	8.71	A	9.49	A
	Through	9.35	A	9.95	A
	Right	8.34	A	8.78	A
East Bound(Free)	Left	7.23	A	7.23	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound(Free)	Left	7.32	A	7.27	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

8.4 Booshway St. & Commanche Trl.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 149.

Table 149:Booshway St. & Commanche Trl. Entire Network + Future

Intersection	25: Booshway St and Commanche Trail				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.32	A	7.40	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	7.30	A	7.30	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound(SC)	Left	9.83	A	9.91	A
	Through	10.13	B	10.24	B
	Right	8.63	A	8.81	A
West Bound(SC)	Left	9.85	A	9.87	A
	Through	10.05	B	10.25	B
	Right	8.53	A	8.55	A

8.5 B

8.6 ooshway St. & E Ross Ave.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 150.

Table 150:Booshway St. & E Ross Ave. Entire Network + Future

Intersection	34: Booshway St. and E Ross Ave.				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.36	A	7.40	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	7.23	A	7.23	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	9.89	A	9.97	A
	Through	9.82	A	10.07	B
	Right	9.00	A	9.19	A
West Bound (SC)	Left	9.49	A	9.78	A
	Through	9.89	A	9.93	A
	Right	8.74	A	8.63	A

8.7 N Main St. & E Ross Ave.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 150.

This intersection meets the qualifications for Signal Warrants #1, #2, and #3 according to MUTCD guidelines (U.S Department of Transportation Federal Highway Administration , 2012). This intersection meets the warrants for a right turn lane in the northbound direction and a left turn lane in the southbound direction according to MUTCD Guidelines (U.S Department of Transportation Federal Highway Administration , 2012) and ITD Standards in the Idaho Traffic Manual.

Table 151: N Main St. & E Ross Ave. Entire Network + Future

Intersection	2: N Main St. & E. Ross Ave				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		F		F	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	9.22	A	10.03	B
	Through	0.00	A	0.00	A
West Bound(SC)	Left	65.76	F	62.20	F
	Right	22.50	C	30.35	D

8.8 N Main St. & E Howard Ave.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 151.

This intersection meets the qualifications for Signal Warrants #1, #2, and #3 according to MUTCD guidelines (U.S Department of Transportation Federal Highway Administration , 2012). This intersection meets the warrants for a right turn lane in the northbound direction and a left turn lane in the southbound direction according to MUTCD Guidelines (U.S Department of Transportation Federal Highway Administration , 2012) and ITD Standards in the Idaho Traffic Manual.

Table 152:N Main St. & E Howard Ave. Entire Network + Future

Intersection	4: N Main St. & E Howard Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		F		F	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	9.91	A	10.58	B
	Through	0.00	A	0.00	A
West Bound(SC)	Left	70.21	F	76.83	F
	Right	28.03	D	51.17	F

8.9 N Main St. & Harper Ave.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 152.

This intersection meets the qualifications for Signal Warrant #1, #2, and #3 according to MUTCD guidelines (U.S Department of Transportation Federal Highway Administration , 2012). This intersection meets the warrants for a right turn lane in the northbound direction and a left turn lane in the southbound direction according to MUTCD Guidelines (U.S Department of Transportation Federal Highway Administration , 2012) and ITD Standards in the Idaho Traffic Manual.

Table 153:N Main St. & Harper Ave. Entire Network + Future

Intersection	3: N Main St. & Harper Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		F		E	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	9.19	A	10.29	B
	Through	0.00	A	0.00	A
West Bound(SC)	Left	106.29	F	46.17	E
	Right	82.62	F	27.44	D

8.10 N Main St. & Little Ave.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 154.

This intersection is currently signalized according to MUTCD guidelines (U.S Department of Transportation Federal Highway Administration , 2012).

This intersection also meets the warrants for an additional right turn lane in the northbound direction and an additional left turn lane in the southbound direction according to MUTCD Guidelines (U.S Department of Transportation Federal Highway Administration , 2012) and ITD Standards in the Idaho Traffic Manual.

Table 154:N Main St. & Little Ave. Entire Network + Future

Intersection	14: N Main St. & Little Ave				
Intersection Type	Four Leg Signalized				
		AM		PM	
Reported Intersection LOS		F		F	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound	Left	15.47	B	23.97	C
	Through	224.95	F	634.63	F
	Right	224.95	F	634.63	F
South Bound	Left	28.22	C	32.53	C
	Through	26.21	C	227.05	F
	Right	26.21	C	227.05	F
East Bound	Left	22.61	C	28.82	C
	Through	22.41	C	19.19	B
	Right	22.41	C	19.19	B
West Bound	Left	32.63	C	42.80	D
	Through	23.02	C	21.86	C
	Right	C	D	21.86	C

8.11 N Main St. & LeGrande Pierre Ave.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 154.

This intersection meets the qualifications for Signal Warrants #1, #2, and #3 according to MUTCD guidelines (U.S Department of Transportation Federal Highway Administration , 2012). This intersection also meets the warrants for a right turn lane in the northbound direction and a left turn lane in the southbound direction according to MUTCD Guidelines (U.S Department of Transportation Federal Highway Administration , 2012) and ITD Standards in the Idaho Traffic Manual.

Table 155: N Main St. & LeGrande Pierre Ave. Entire Network + Future

Intersection	1: N Main St. & Legrande Pierre Ave				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		F		F	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	9.42	A	10.16	B
	Through	0.00	A	0.00	A
West Bound(SC)	Left	2270.90	F	51.31	F
	Right	2220.69	F	24.36	C

8.12 N 1st St. & E Ross Ave.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 156.

This intersection meets the qualifications for Signal Warrants #2 according to MUTCD guidelines (U.S Department of Transportation Federal Highway Administration , 2012).

Table 156: N 1st St. & E Ross Ave. Entire Network + Future

Intersection	13: 1st St. and E. Ross Ave.			
Intersection Type	Four Leg All Way stop controlled intersection			
	AM		PM	
Reported Intersection LOS	A		A	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	7.23	A	7.45	A
South Bound	8.83	A	8.49	A
East Bound	7.27	A	7.33	A
West Bound	7.88	A	8.74	A

8.13 N 1st St. & Harper Ave.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 157.

Table 157: N 1st St. & Harper Ave. Entire Network + Future

Intersection	12: N 1st St. and E Harper Ave.				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.35	A	7.51	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	7.32	A	7.31	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	11.22	B	11.27	B
	Through	10.29	B	10.75	B
	Right	9.13	A	9.39	A
West Bound (SC)	Left	11.28	B	11.64	B
	Through	11.32	B	11.61	B
	Right	10.07	B	9.75	A

8.14 N 1st St. & Ashely Ave.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 158.

Table 158: N 1st St. & Ashely Ave. Entire Network + Future

Intersection	10: N 1st St. and E Ashley Ave				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.45	A	7.50	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	7.37	A	7.33	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	10.05	B	10.60	B
	Through	10.35	B	10.65	B
	Right	9.04	A	9.37	A
West Bound (SC)	Left	10.17	B	10.80	B
	Through	10.40	B	10.72	B
	Right	8.88	A	8.95	A

8.15 N 1st St. & Wallace Ave.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 159.

Table 159: N 1st St. & Wallace Ave. Entire Network + Future

Intersection	9: N 1st St. and E Wallace Ave				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(Free)	Left	7.44	A	7.55	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound(Free)	Left	7.35	A	7.32	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	10.80	B	11.37	B
	Through	10.88	B	11.41	B
	Right	9.20	A	9.74	A
West Bound (SC)	Left	10.79	B	11.47	B
	Through	10.76	B	11.01	B
	Right	8.91	A	8.83	A

8.16 N 1st St. & E Howard Ave.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 160.

Table 160: N 1st St. & E Howard Ave. Entire Network + Future

Intersection	11: N 1st St. & E Howard Ave				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	13.17	B	11.50	B
	Through	11.67	B	10.86	B
	Right	10.18	B	9.63	A
South Bound(SC)	Left	13.30	B	11.37	B
	Through	13.00	B	11.17	B
	Right	10.20	B	9.46	A
East Bound (Free)	Left	7.30	A	7.32	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (Free)	Left	7.78	A	7.48	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

8.17 N 1st St. & E Little St.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 160.

This intersection meets the qualifications for Signal Warrants #1, #2, and #3 according to MUTCD guidelines (U.S Department of Transportation Federal Highway Administration , 2012).

Table 161: N 1st St. & E Little St. Entire Network + Future

Intersection	8: N 1st St. & Little Ave				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		D		E	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	26.23	D	46.58	E
	Through	20.85	C	32.28	D
	Right	12.68	B	19.15	C
South Bound(SC)	Left	26.97	D	36.65	E
	Through	22.13	C	32.56	D
	Right	14.96	B	21.06	C
East Bound (Free)	Left	8.33	A	8.77	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (Free)	Left	7.96	A	8.14	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

8.18 N 3rd St & E Ross Ave.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 162.

Table 162: N 3rd St & E Ross Ave. Entire Network + Future

Intersection	17: N 3rd st. & E Ross Ave.			
Intersection Type	Three Leg All Way stop controlled intersection			
	AM		PM	
Reported Intersection LOS	A		A	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	7.38	A	7.21	A
East Bound	8.75	A	7.89	A
West Bound	8.13	A	8.85	A

8.19 N 4th St. and E Ross Ave.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 163.

Table 163: N 4th St & E Ross Ave. Entire Network + Future

Intersection	18: N 4th st. & E Ross Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	11.44	B	11.12	B
	Right	9.91	A	8.98	A
East Bount(Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (Free)	Left	7.82	A	7.50	A
	Through	0.00	A	0.00	A

8.20 N 5th St. & E Ross Ave.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 164.

This intersection meets the qualifications for Signal Warrants #1, #2, and #3 according to MUTCD guidelines (U.S Department of Transportation Federal Highway Administration , 2012).

Table 164: N 5th St. & E Ross Ave. Entire Network + Future

Intersection Intersection Type	19: N 5th St & E Ross Ave. Four Leg All Way stop controlled intersection			
	AM		PM	
Reported Intersection LOS	C		B	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	17.87	C	11.24	B
South Bound	35.83	E	15.22	C
East Bound	16.69	C	11.14	B
West Bound	13.20	B	13.32	B

8.21 N 5th St. & E Howard Ave.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in

Table 165.

Table 165: N 5th St. & E Howard Ave. Entire Network + Future

Intersection Intersection Type	20: N 5th St & E Howard Ave Four Leg All Way stop controlled intersection			
	AM		PM	
Reported Intersection LOS	B		A	
Intersection Leg/Approach	Approach Delay(Sec/Veh)	LOS	Approach Delay(Sec/Veh)	LOS
North Bound	9.73	A	8.61	A
South Bound	11.03	B	10.16	B
East Bound	9.18	A	8.79	A
West Bound	9.17	A	8.79	A

8.22 N 5th St. & E Little Ave.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 165.

This intersection meets the qualifications for Signal Warrants #1, #2, and #3 according to MUTCD guidelines (U.S Department of Transportation Federal Highway Administration , 2012).

This intersection meets the warrant for a left turn lane in the eastbound direction according to AASHTO standards (American Association of State Highway and Transportation Officials “AASHTO”, 2018).

Table 166: N 5th St. & Little Ave. Entire Network + Future

Intersection	32: N 5th St. & Little St				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		D		D	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound(SC)	Left	30.51	D	33.15	D
	Through	21.58	C	20.76	C
	Right	13.57	B	10.25	B
South Bound(SC)	Left	25.90	D	32.77	D
	Through	23.11	C	30.94	D
	Right	15.41	C	21.47	C
East Bound (Free)	Left	7.96	A	8.23	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (Free)	Left	7.73	A	7.77	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

8.23 Cowboy Trl. & E Ross Ave.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 167.

Table 167: Cowboy Trl. & E Ross Ave. Entire Network + Future

Intersection	24: Cowboy Trl. & E Ross Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (SC)	Left	10.36	B	10.76	B
	Right	8.68	A	8.97	A
East Bound (Free)	Through	10.64	B	10.91	B
	Right	9.23	A	8.94	A
West Bound (Free)	Left	7.33	A	7.48	A
	Through	0.00	A	0.00	A

8.24 Cowboy Trl & E Howard Ave.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 168.

Table 168: Cowboy Trl & E Howard Ave. Entire Network + Future

Intersection	31: Cowboy Trl. & E Howard Ave.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (Free)	Left	7.29	A	7.28	A
	Through	0.00	A	0.00	A
South Bound (Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	8.75	A	8.83	A
	Right	8.50	A	8.54	A

8.25 Easy St. & Cowboy Trl.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 169.

Table 169: Easy St. & Cowboy Trl. Entire Network + Future

Intersection	30: Cowboy Trl. & Easy St.				
Intersection Type	Four Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (SC)	Left	9.13	A	9.11	A
	Through	9.35	A	9.38	A
	Right	8.45	A	8.53	A
South Bound (SC)	Left	9.04	A	9.13	A
	Through	9.44	A	9.35	A
	Right	8.53	A	8.50	A
East Bound (Free)	Left	7.25	A	7.24	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
West Bound (Free)	Left	7.24	A	7.23	A
	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A

8.26 Palisade Trl. and Wind River Trl.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 170.

Table 170: Palisade Trl. and Wind River Trl. Entire Network + Future

Intersection	35: Palisade Trl. & Wind River Trl.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		A		A	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
South Bound (Free)	Left	7.33	A	7.37	A
	Through	0.00	A	0.00	A
West Bound (SC)	Left	9.21	A	9.38	A
	Right	8.71	A	8.72	A

8.27 Powder Valley Rd. & Ski Hill Rd.

The future level of service was calculated as described in Section 3.1

The LOS of the entire network plus future traffic conditions is shown in Table 171.

Table 171: Powder Valley Rd. & Ski Hill Rd. Entire Network + Future

Intersection	29: Ski Hill Rd. & Powder Valley Rd.				
Intersection Type	Three Leg Minor Streets Stop Controlled(TWSC)				
		AM		PM	
Reported Intersection LOS		B		B	
Intersection Leg/Approach	Movement	Approach Delay (Sec/Veh)	LOS	Approach Delay (Sec/Veh)	LOS
North Bound (Free)	Left	7.60	A	7.98	A
	Through	0.00	A	0.00	A
South Bound (Free)	Through	0.00	A	0.00	A
	Right	0.00	A	0.00	A
East Bound (SC)	Left	12.11	B	13.12	B
	Right	9.74	A	11.07	B

8.28 Recommendations

Recommendations listed in this section are based off future traffic conditions as well as site generated conditions from all proposed developments. Recommendations have been adjusted based upon the

increased traffic and are given in Table 172. Where traffic conditions remain unchanged or the intersections remained already failing, the same recommendations are given as in Section 3.27.

Table 172: Recommendations to Improve LOS and Remove Warrants:

Recommendations to Improve LOS and Remove Warrants: Future + Site Generated Traffic	
N Main St. & LeGrande Pierre Ave.	• *Install semi-actuated light that is coordinated with the existing light located at N Main St & Little Ave. • Add a northbound right turning lane to satisfy warrant. • Add a southbound left turning lane to satisfy warrant.
N Main St. & E Ross Ave.	• **Possible location for: semi-actuated light that is coordinated with the existing light additional study recommended after a light is installed at N Main and Legrand Pierre. Variance will be required. • Add a northbound right turning lane to satisfy warrant. • Add a southbound left turning lane to satisfy warrant.
N Main St. & Harper Ave.	• **Possible location for: semi-actuated light that is coordinated with the existing light additional study recommended after a light is installed at N Main and Legrand Pierre. Variance will be required. • Add a northbound right turning lane to satisfy warrant. • Add a southbound left turning lane to satisfy warrant
N Main St. & E Howard Ave.	• **Possible location for: semi-actuated light that is coordinated with the existing light additional study recommended after a light is installed at N Main and Legrand Pierre. Variance will be required. • Add a northbound right turning lane to satisfy warrant. • Add a southbound left turning lane to satisfy warrant.
N Main St. & Little Ave.	• ***Adjust timing and coordinate with other lights along N Main St.
1st St. & E Little Ave.	• Install semi-actuated light that is coordinated with the existing light located at N Main St & Little Ave. • Add left turning lane in both eastbound and westbound directions to satisfy left turning lane warrants.
5th St & E Little Ave.	• ****Install semi-actuated light that is coordinated with the existing light located at N Main St & Little Ave, or install roundabout. • Add left turning lane in eastbound direction to satisfy turning lane warrants.
N 5th St. & LeGrande Pierre Ave.	• Add a southbound right turning lane to satisfy warrants and increase LOS to passing. Will improve LOS from F to B and approach delay from 146.9 seconds to 14.75 seconds.
N 5th St. & E Ross Ave.	• *****Add a single lane roundabout.

*The intersection of N Main St. And LeGrande Pierre Ave. would be ideal for a traffic light. PTV-Vistro simulation estimates only adding turning lanes would not increase the LOS of Westbound traffic turning onto N Main St. A traffic light will potentially change the LOS from an F to a D, decreasing the maximum

control time from 28 minutes to 53 seconds. Data for recommendation simulations is found in Appendix X.

**It is recommended that one or two additional lights be placed between these two intersections mentioned above (N Main St & LeGrande Pierre Ave and Main St & Little Ave). Possible locations include N Main St. & E Ross Ave; N Main St. & E Howard Ave; N Main St. & Harper Ave; N Main St. & Ashley Ave; and N Main St. & Wallace Ave. Correct traffic light timing and coordination would affect all intersections between Little Ave. and LeGrande Pierre Ave.

***The intersection of Main St. and Little Ave. would be improved by adjusting light timing and coordinating with other traffic lights along Main St. PTV-Vistro simulation estimates LOS improvement from F to C and maximum approach delay from 415 seconds to 32 seconds. Data for recommendation simulations is found in Appendix X.

**** While the recommendation remains the same for this intersection as in Section 3.27, site generated traffic causes a failing LOS grade of D. A roundabout or traffic light are recommended at the intersection of N 5th St. & E Little Ave. According to PTV-Vistro simulation, a roundabout would improve the LOS from D to A and the approach delay from 26.14 seconds to 7.29 seconds. A traffic light would improve the LOS from D to B and the maximum approach delay from 26.14 to 14.84 seconds. Data for recommendation simulations is found in Appendix X.

***** While the recommendation remains the same for this intersection as in Section 3.27, site generated, and future traffic causes a failing LOS grade of the southbound leg of E and qualifies for signal warrants. While the LOS of the Intersection only drops to a C with an average intersection delay of 24.1 seconds, HLE still recommends a roundabout to be installed in the future. The geometrics of the south bound and westbound leg make lining up through lanes of traffic difficult when adding left and right turn lanes. Especially with adding turn lanes to some of the legs and not all, a roundabout will provide the greatest flow of traffic and eliminate the acute angles in the intersection. Data for recommendation simulations is found in Appendix X.

For all traffic lights, coordinate with ITD for optimum phase timing and locations. ITD an IDAPA has minimum signal spacing requirements. It is suggested that after a traffic signal is installed at Legrande Pierre an additional study is completed to determine if an additional signal is needed and the optimum location.

8.29 Conclusion

The combined network including site generated traffic of all five subdivisions are considered alongside the estimated 20-year future conditions. Future traffic conditions of the twenty intersections were calculated using the city's projected growth rate of 4% over a 20-year period. Site generated conditions were calculated using PTV-Vistro according to TGM guidelines (Institute of Transportation Engineers, 2017). Of the twenty-five intersections analyzed, two additional intersections received failing LOS grades due to site generated traffic. In total, nine intersections have failing LOS Grades. Signal warrants remained unchanged from listed in Section 3.27. General recommendations have been stated to bring LOS ratings as high as possible and to satisfy warrants.

9 Impact of Only Site Generated Traffic

9.1 Overview

In this section, the effect of the site generated traffic alone is analyzed for select intersections. For the sake of brevity and conciseness, only those intersections that will fail within the next 20 years are shown here. The LOS grades, V/C ratio, and approach delay were calculated as described in Section 4.2.1. For detailed information on raw data as well as PTV Vistro Reports, see Appendix Y.

9.2 Rivers West

For the nine intersections that are displayed in Table 173, the traffic leg with the highest approach delay (and therefore the lowest LOS grade) is shown. An asterisk (*) denotes if the intersection was already failing before site generated traffic was added.

Table 173: Rivers West Generated Traffic Only

Rivers West Site Generated Traffic Only			
Intersection	Approach Delay	V/C Ratio	LOS
N Main St. & LeGrande Pierre Ave.	18.81	.29	C
N Main St. & E Ross Ave.	13.80	.06	B
N Main St. & Harper Ave.	15.42	.16	C
N Main St. & E Howard Ave.	15.80	.05	C
N Main St. & Little Ave.	36.12	.58	D*
1st St. & E Little Ave.	13.77	.03	B
5th St & E Little Ave.	14.38	.02	B
N 5th St. & LeGrande Pierre Ave.	10.59	.47	B
N 5th St. & E Ross Ave.	9.77	.32	A

9.3 Epic Endeavors/ The Edge

Identical analysis was performed as described in Section 9.2. Information for the intersections is shown in Table 174.

Table 174: Epic Endeavors/The Edge Generated Traffic Only

Epic Endeavors/ The Edge Generated Traffic Only			
Intersection	Approach Delay	V/C Ratio	LOS
N Main St. & LeGrande Pierre Ave.	18.63	.29	C
N Main St. & E Ross Ave.	13.82	.06	C
N Main St. & Harper Ave.	15.42	.16	C
Main St. & E Howard Ave.	15.80	.05	C
N Main St. & Little Ave.	36.38	.52	D*
1st St. & E Little Ave.	13.55	.03	B
5th St & E Little Ave.	13.49	.02	B
N 5th St. & LeGrande Pierre Ave.	10.67	.47	B
N 5th St. & E Ross Ave.	10.19	.36	B

9.4 Hemming

Identical analysis was performed as described in Section 9.2. Information for the intersections is shown in Table 175.

Table 175:Hemming Site Generated Traffic Only

Hemming Site Generated Traffic Only			
Intersection	Approach Delay	V/C Ratio	LOS
N Main St. & LeGrande Pierre Ave.	18.46	.29	C
N Main St. & E Ross Ave.	14.18	.07	C
N Main St. & Harper Ave.	15.57	.16	C
N Main St. & E Howard Ave.	15.93	.05	C
Main St. & Little Ave.	36.81	.56	D*
1st St. & E Little Ave.	13.92	.04	B
5th St & E Little Ave.	12.88	.02	B
N 5th St. & LeGrande Pierre Ave.	10.75	.48	B
N 5th St. & E Ross Ave.	9.89	.32	A

9.5 Belle Vue

Identical analysis was performed as described in Section 9.2. Information for the intersections is shown in Table 176.

Table 176:Belle Vue Site Generated Traffic Only

Belle Vue Site Generated Traffic Only			
Intersection	Approach Delay	V/C Ratio	LOS
N Main St. & LeGrande Pierre Ave.	18.45	.29	C
N Main St. & E Ross Ave.	13.95	.06	C
N Main St. & Harper Ave.	15.53	.16	C
N Main St. & E Howard Ave.	15.90	.05	C
Main St. & Little Ave.	36.51	.53	D*
1st St. & E Little Ave.	13.29	.03	B
5th St & E Little Ave.	12.89	.02	B
N 5th St. & LeGrande Pierre Ave.	10.67	.47	B
N 5th St. & E Ross Ave.	9.71	.31	A

9.6 Site Generated of All Subdivisions

Here, the site generated traffic of all subdivisions is analyzed. Identical analysis was performed as described in Section 9.2. Information for the intersections is shown in Table 177.

Table 177: All Subdivisions Generated Traffic Only

All Subdivisions Generated Traffic Only			
Intersection	Approach Delay	V/C Ratio	LOS
N Main St. & LeGrande Pierre Ave.	19.83	.32	C
N Main St. & E Ross Ave.	14.41	.06	C
N Main St. & Harper Ave.	15.68	.16	C
N Main St. & E Howard Ave.	16.03	.05	C
Main St. & Little Ave.	36.51	.53	D*
1st St. & E Little Ave.	14.89	.04	B
5th St & E Little Ave.	14.43	.02	B
N 5th St. & LeGrande Pierre Ave.	11.37	.50	B
N 5th St. & E Ross Ave.	11.06	.40	B

9.7 Conclusion

When site generated traffic from each subdivision is analyzed individually, without addition of future growth traffic conditions, no further intersections fail. The intersection of Main St & Little Ave remains failing due to existing conditions. Even when the impact of all site generated traffic from the combined subdivisions is analyzed, no further intersections fail.

10 Recommendation

Recommendations given in this section are based off the cumulative effect of site generated plus future traffic conditions in 20 years. Due to steadily increasing traffic some intersections will reach failure conditions before that. The exact failure date of these intersections is not considered within the scope of this study. Recommendations are shown in Table 178.

Table 178:Recommendations to Improve LOS and Remove Warrants:

Recommendations to Improve LOS and Remove Warrants: Future + Site Generated Traffic	
N Main St. & LeGrande Pierre Ave.	• *Install semi-actuated light that is coordinated with the existing light located at N Main St & Little Ave. • Add a northbound right turning lane to satisfy warrant. • Add a southbound left turning lane to satisfy warrant.
N Main St. & E Ross Ave.	• **Possible location for: semi-actuated light that is coordinated with the existing lights. • Add a northbound right turning lane to satisfy warrant. • Add a southbound left turning lane to satisfy warrant.
N Main St. & Harper Ave.	• **Possible location for: semi-actuated light that is coordinated with the existing lights. • Add a northbound right turning lane to satisfy warrant. • Add a southbound left turning lane to satisfy warrant
N Main St. & E Howard Ave.	• **Possible location for: semi-actuated light that is coordinated with the existing lights. • Add a northbound right turning lane to satisfy warrant. • Add a southbound left turning lane to satisfy warrant.
N Main St. & Little Ave.	• ***Adjust timing and coordinate with other lights along N Main St.
1st St. & E Little Ave.	• Install semi-actuated light that is coordinated with the existing light located at N Main St & Little Ave. • Add left turning lane in both eastbound and westbound directions to satisfy left turning lane warrants.
5th St & E Little Ave.	• ****Install semi-actuated light that is coordinated with the existing light located at N Main St & Little Ave, or install roundabout. • Add left turning lane in eastbound direction to satisfy turning lane warrants.
N 5th St. & LeGrande Pierre Ave.	• Add a Eastbound right turning lane to satisfy warrants and increase LOS to passing. Will improve LOS from F to B and approach delay from 146.9 seconds to 14.75 seconds.
N 5th St. & E Ross Ave.	• *****Add a single lane roundabout.
*The intersection of N Main St. and LeGrande Pierre Ave. would be ideal for a traffic light. PTV-Vistro simulation estimates only adding turning lanes would not increase the LOS of Westbound traffic turning onto N Main St. A traffic light will potentially change the LOS from an F to a D, decreasing the maximum control time from 28 minutes to 53 seconds. Data for recommendation simulations is found in Appendix X.	

**It is recommended that one or two additional lights be placed between these two intersections mentioned above (N Main St & LeGrande Pierre Ave and Main St & Little Ave). Possible locations include N Main St. & E Ross Ave; N Main St. & E Howard Ave; N Main St. & Harper Ave; N Main St. & Ashley Ave; and N Main St. & Wallace Ave. Correct traffic light timing and coordination would affect all intersections between Little Ave. and LeGrande Pierre Ave.

***The intersection of Main St. and Little Ave. would be improved by adjusting light timing and coordinating with other traffic lights along Main St. PTV-Vistro simulation estimates LOS improvement from F to C and maximum approach delay from 415 seconds to 32 seconds. Data for recommendation simulations is found in Appendix X.

**** While the recommendation remains the same for this intersection as in Section 3.27, site generated traffic causes a failing LOS grade of D. A roundabout or traffic light are recommended at the intersection of N 5th St. & E Little Ave. According to PTV-Vistro simulation, a roundabout would improve the LOS from D to A and the approach delay from 26.14 seconds to 7.29 seconds. A traffic light would improve the LOS from D to B and the maximum approach delay from 26.14 to 14.84 seconds. Data for recommendation simulations is found in Appendix X.

***** While the recommendation remains the same for this intersection as in Section 3.27, site generated traffic causes a failing LOS grade of the southbound leg of E and qualifies for signal warrants. While the LOS of the Intersection only drops to a C with an average intersection delay of 24.1 seconds, HLE still recommends a roundabout to be installed in the future. The geometrics of the south bound and westbound leg make lining up through lanes of traffic difficult when adding left and right turn lanes. Especially with adding turn lanes to some of the legs and not all, a roundabout will provide the greatest flow of traffic and eliminate the acute angles in the intersection. Data for recommendation simulations is found in Appendix X.

For all traffic lights, coordinate with ITD for optimum phase timing and locations. ITD and IDAPA has minimum signal spacing requirements. It is suggested that after a traffic signal is installed at Legrande Pierre an additional study is completed to determine if an additional signal is needed and the optimum location.

As mentioned above, nine intersections receive a failing grade due to future and site generated traffic. Based off data discussed in Sections 4 through7, each individual subdivision will increase the approach delay of an intersection. The added time in seconds of the approach delay contributed by each subdivision is shown in Table 179 below. Separately, the approach delay increase of future traffic is also listed in the table. The highest approach delay of each intersection is used.

Table 179: Approach Delay Time Increase

Increase of Approach Delay (seconds)					
	Rivers West	The Edge/ Epic	Hemming	Belle Vue	Future Traffic
N Main St. & LeGrande Pierre Ave.	145	133	134	130	1,643 s or 27 minutes
N Main St. & E Ross Ave.	2.52	2.38	4.65	1.92	14.5
N Main St. & Harper Ave.	0	0	4.58	3.18	73.3
N Main St. & E Howard Ave.	0	0	1.83	1.71	44.6
N Main St. & Little Ave.	55	52	53.2	16.4	382
1st St. & E Little Ave.	2.08	1.12	3.15	0.15	13.6
5th St & E Little Ave.	3.31	2.13	0	0.13	11.5
N 5th St. & LeGrande Pierre Ave.	9.38	15.2	18.9	13.5	66.6
N 5th St. & E Ross Ave.	2.2	5.63	1.41	0	10.6

The volume increase provided by each development, existing traffic and future traffic from other city growth contribute to the dropping LOS of any given intersection the volume and percent share for the peak AM hour traffic is listed in Table 180.

Table 180: Traffic volume per contributor and percent of total traffic for peak AM traffic at failing intersections

AM Traffic Volume Shares								
Traffic Count % of Total	Existing Conditions 2022	Rivers West	The Edge/ Epic	Hemming	Belle Vue	Future Growth 2042	Total Traffic	Total % Growth Per Intersection
N Main St. & LeGrande Pierre Ave.	1048	23	21	22	14	838	1966	188%
	53.3%	1.2%	1.1%	1.1%	0.7%	42.6%	100%	
N Main St. & E Ross Ave.	942	23	18	32	7	754	1776	188%
	53.1%	1.3%	1.0%	1.8%	0.4%	42.4%	100%	
N Main St. & Harper Ave.	960	0	0	10	7	768	1745	182%
	55.0%	0.0%	0.0%	0.6%	0.4%	44.0%	100%	
N Main St. & E Howard Ave.	1030	0	0	10	7	824	1871	182%
	55.1%	0.0%	0.0%	0.5%	0.4%	44.0%	100%	
N Main St. & Little Ave.	1324	34	31	35	13	1059	2496	189%
	53.0%	1.4%	1.2%	1.4%	0.5%	42.4%	100%	
1st St. & E Little Ave.	537	34	31	19	6	430	1057	197%
	50.8%	3.2%	2.9%	1.8%	0.6%	40.7%	100%	
5th St & E Little Ave.	506	34	31	0	6	405	981.8	194%
	51.5%	3.5%	3.2%	0.0%	0.6%	41.2%	100%	
N 5th St. & LeGrande Pierre Ave.	692	16	24	22	24	554	1332	192%
	52.0%	1.2%	1.8%	1.7%	1.8%	41.6%	100%	
N 5th St. & E Ross Ave.	609	39	60	42	6	487	1243	204%
	49.0%	3.1%	4.8%	3.4%	0.5%	39.2%	100%	

The share of Intersection Volume Provided by each development during the afternoon Peak is shown in Table 181 below.

Table 181: Traffic volume per contributor and percent of total traffic for peak PM traffic at failing intersections

PM Traffic Volume Shares								
Traffic Count % of Total	Existing Conditions 2022	Rivers West	The Edge/ Epic	Hemming	Belle Vue	Future Growth 2042	Total Traffic	Total % Growth Per Intersection
N Main St. & LeGrande Pierre Ave.	914	27	25	27	14	731	1738	190%
	52.6%	1.6%	1.4%	1.6%	0.8%	42.1%	100%	
N Main St. & E Ross Ave.	895	27	21	37	9	716	1705	191%
	52.5%	1.6%	1.2%	2.2%	0.5%	42.0%	100%	
N Main St. & Harper Ave.	916	0	0	10	9	733	1668	182%
	54.9%	0.0%	0.0%	0.6%	0.5%	43.9%	100%	
N Main St. & Howard Ave.	1002	0	0	10	9	802	1823	182%
	55.0%	0.0%	0.0%	0.5%	0.5%	44.0%	100%	
N Main St. & Little Ave.	1507	41	40	40	12	1206	2846	189%
	53.0%	1.4%	1.4%	1.4%	0.4%	42.4%	100%	
1st St. & E Little Ave.	640	41	22	30	3	512	1248	195%
	51.3%	3.3%	1.8%	2.4%	0.2%	41.0%	100%	
5th St & E Little Ave.	557	41	22	0	3	446	1069	192%
	52.1%	3.8%	2.1%	0.0%	0.3%	41.7%	100%	
N 5th St. & LeGrande Pierre Ave.	343	8	29	27	22	274	703.4	205%
	48.8%	1.1%	4.1%	3.8%	3.1%	39.0%	100%	
N 5th St. & E Ross Ave.	459	35	73	52	3	367	989.2	216%
	46.4%	3.5%	7.4%	5.3%	0.3%	37.1%	100%	

These tables show that, within the failing intersections, the site generated traffic impacts are much less than the estimated future generated traffic of the rest of the City of Driggs during the peak hours of the day. With the city's projected growth rate of 4% each year, the current traffic volume will almost double (180%) by 2042 not including these developments. This growth, and not the proposed site generated traffic, accounts for the majority of needed improvements.

However, there are inaccuracies within the calculation methods used. This is especially true at excessively high traffic volumes, such as at N Main St. & LeGrande Pierre Ave. This data is merely illustrative and is to be used with proper judgment. This model should not be considered perfectly representative of appropriate funding responsibility. Due to the exponential and complicated nature of this traffic network, it would be almost impossible to determine the exact share of responsibility

between each subdivision and the city. It is left to coordination between the developers and the City of Driggs to determine the sources of funding for intersection improvement.

11 Conclusion

Traffic data was collected and analyzed for twenty-five intersections in Driggs, Idaho to determine traffic conditions. Of the twenty-five intersections analyzed for this report, all meet minimum LOS requirements for current conditions, though the LOS grades for six intersections fall close to failing. These intersections lie along N Main St and E Little Ave. Four intersections meet the qualifications for turning lane warrants and one intersection meets the warrant for a traffic light. General recommendations have been given to satisfy the signal and turning lane warrants. Future traffic conditions of the twenty-five intersections were calculated using a 4% annual growth rate over a 20-year period. Of the twenty-five intersections analyzed, future traffic conditions cause failing LOS grades in seven intersections. Seven intersections meet signal or traffic warrants. General recommendations have been stated to bring LOS ratings as high as possible given reasonable design constraints and to satisfy warrants.

All subdivisions were analyzed individually for their effect on intersection traffic volume. This was done by adding site generated trips to the estimated future traffic conditions. Site generated conditions were calculated using PTV-Vistro according to TGM guidelines (Institute of Transportation Engineers, 2017). While seven intersections remained failing from future traffic conditions, little affect was seen on LOS pass/fail rates by the individual subdivisions. Only the individual site generated trips from Epic Endeavors and The Edge caused the previously passing (Main & LeGrande) intersection to fail. Further details are found in Section 0

The combined network including site generated traffic of all five subdivisions was considered alongside the estimated 20-year future conditions. Future traffic conditions of the twenty-five intersections were calculated using the city's projected 4% annual growth rate over a 20-year period. Site generated conditions were calculated as previously mentioned in this report. Of the intersections analyzed, two additional intersections – N 5th St & E Ross Ave and N 5th St & Little Ave – received failing LOS grades due to site generated traffic. In total, nine intersections received LOS Grades less than LOS C. Signal warrants remained unchanged from listed in Section 3.27. General recommendations have been stated to bring LOS ratings as high as possible and to satisfy warrants.

Most of the anticipated approach delay increase for the failing intersections was caused by the projected 4% annual growth rate for future traffic conditions. With an annual growth rate of 4% each year, the current traffic volume will almost double (180%) by 2042 before any site generated traffic is accounted for.

12 Works Cited

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