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TRAFFIC IMPACT STUDY

FOR THE

**PAYETTE LAKES MIDDLE SCHOOL
&
BARBARA MORGAN ELEMENTARY SCHOOL
CAMPUS**

NOVEMBER 17, 2021

**Prepared By:
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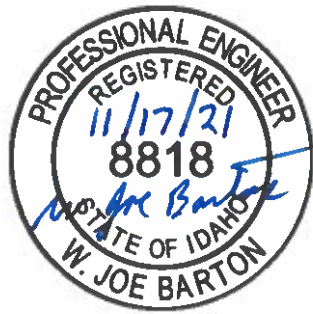
TRAFFIC IMPACT STUDY

FOR THE

PAYETTE LAKES MIDDLE SCHOOL
&
BARBARA MORGAN ELEMENTARY SCHOOL

COMPLETED FOR THE

McCall-Donnelly School District



November 17, 2021

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**PAYETTE LAKES MIDDLE SCHOOL
&
BARBARA MORGAN ELEMENTARY SCHOOL
TRAFFIC IMPACT STUDY**

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1.0 Executive Summary

The McCall-Donnelly School District (MDSD) Plans to remodel and expand the Payette Lakes Middle School to accommodate five additional classrooms. The Payette Lakes Middle School shares a common campus with the Barbara Morgan Elementary School. The school campus is located northeast of the E Deinhard Lane and S Samson Trail (Spring Mountain Blvd) intersection. The addition of five middle school classrooms is anticipated to expand the school enrollment capacity by 125 students based on 25 students per classroom.

The Payette Lakes Middle School expansion also includes site construction of the following significant features:

- Realign the on-campus intersection of the Barbara Morgan Elementary School access road and the Payette Lakes Middle School north parking lot access road to accommodate better traffic flow to the elementary school
- Regrade the playground area located between the south and east wings of the Payette Lakes Middle School to accommodate a more useful activity area for the students
- Relocate the handicap parking at the Payette Lakes Middle School and expand the available student pick-up and drop-off area
- Modify the existing campus entrance at the intersection of E Deinhard Lane and S Samson Trail (Spring Mountain Blvd) to accommodate pedestrian and bicycle access from the public pathway system to the internal middle school and elementary school pathways

1.1 Summary of Report Findings

Existing Conditions

All intersections and school campus approaches to the public roadway system (E Deinhard Ln and S Samson Trail intersection, school campus middle exit and school campus north exit) operate at acceptable levels under the current traffic and school enrollment conditions.

On campus traffic circulation and on campus vehicle queueing currently has minimal to no impact on the public roadway system and intersections. However, under some circumstances, the student drop-off and pick-up vehicle queue at the Payette Lakes Middle School has the potential to spill back and impact the E Deinhard Lane and S Samson Trail intersection. Therefore, expanding the available student drop-off and pick-up area at the Payette Lakes Middle School will reduce the potential for this queueing to spill back to the intersection.

Pedestrian and bicycle access to the school campus is currently available at the following locations:

- Near the northwest corner of the school property, to the public pathway along S Samson Trail
- Near the northeast corner of the school property, to the Woodlands Subdivision
- Midway along the south school property boundary, to the Fox Ridge Subdivision

However, direct bicycle and pedestrian access to the campus internal pathways is not available near the E Deinhard Ln and S Samson Trail intersection, resulting in some bicycle and pedestrian traffic within the vehicle travel areas.

Future Conditions

All intersections and school campus approaches to the public roadway system will continue to operate at acceptable levels up to the current school student capacities. Therefore, no campus access improvements are necessary until current enrollment grows by another 120 students, to an enrollment of 850 students on campus. Furthermore, the campus access and circulation plan modifications identified in the July 26, 2019, Payette Lakes Middle School & Barbara Morgan Elementary School Traffic Flow Analysis report

will also operate at acceptable levels up to a student enrollment of 850 students on the campus. These modifications include converting the campus north exit to two-way traffic for direct access to the Middle School and prohibiting left turns at the Middle School parking lot connection to the Elementary School access road.

Growing beyond the enrollment of 850 students on the campus will necessitate improvements within the public roadways and intersections. The following improvements will operate at acceptable levels through the Payette Lakes Middle School remodel capacity (adding 125 students to the current campus capacity of 850 students) plus 25% growth of the local traffic:

- Widening the campus north approach to S Samson Trail to accommodate two-way traffic into and out of the Middle School parking lot
- Constructing a physical barrier to restrict left turn movements at the Middle School parking lot approach to the Elementary School access road
- E Deinhard Lane and S Samson Trail intersection
 - Convert the existing southbound to westbound right turn lane to a free running right which operates outside the stop sign requirements on the southbound approach. Merge the free running right receiving lane on E Deinhard Lane with the existing travel lane west of the intersection.
- S Samson Trail
 - Widen S Samson Trail to extend three lanes from the E Deinhard Lane and S Samson Trail intersection to north of the school campus property.

As available ground to the south and east of the school property develops, the development should extend a public roadway to the school property boundary and provide a parking area or turnaround. Bicycle and pedestrian access to/from the school property to the parking area or turnaround should be constructed.

Expanding the available student drop-off and pick-up area at the Payette Lakes Middle School should be included with the Middle School remodel/expansion site work to reduce the potential for vehicle queueing to spill back to the public roadway system.

Site work associated with the Payette Lakes Middle School remodel/expansion should include modifying the existing campus entrance at the intersection of E Deinhard Lane and S Samson Trail (Spring Mountain Blvd) to accommodate pedestrian and bicycle access from the public pathway system to the internal middle school and elementary school pathways, therefore completing bicycle and pedestrian access to all quadrants of the school property.

2.0 Introduction

Paragon Consulting, Inc. has been retained to provide a Traffic Impact Study for the proposed improvements at the existing Payette Lakes Middle School and Barbara Morgan Elementary School campus, near the intersection of E Deinhard Lane and S Samson Trail in McCall, Idaho. This TIS evaluates the potential traffic impacts resulting from the proposed work at the school campus and provides information related to campus access, student drop-off and pick-up areas, bicycle and pedestrian access and other associated items.

2.1 Project Description

The McCall-Donnelly School District (MDSD) operates the Payette Lakes Middle School and the Barbara Morgan Elementary School on a common school campus located northeast of the E Deinhard Lane and S Samson Trail (Spring Mountain Blvd) intersection.

The MDSD contracted with Paragon Consulting, Inc. to complete a Traffic Flow Analysis in 2019. The purpose of the analysis was to identify potential internal, on-site, campus traffic flow issues and

recommend possible mitigation to accommodate vehicle queueing during student drop-off and pick-up times. The Traffic Flow Analysis was completed in July 2019 and provides a good starting base line for the traffic analysis associated with the expansion plans at the Payette lakes Middle School.

The MDSD is currently working towards construction of a building expansion at the Payette Lakes Middle School to add five classrooms, along with associated site construction. The MDSD intends to construct the building expansion and associated site work in the 2022 construction season. Site work construction includes the following:

- Realign the on-campus intersection of the Barbara Morgan Elementary School access road and the Payette Lakes Middle School north parking lot access road to accommodate better traffic flow to the elementary school
- Regrade the playground area located between the south and east wings of the Payette Lakes Middle School to accommodate a more useful activity area for the students
- Relocate the handicap parking at the Payette Lakes Middle School and expand the available student pick-up and drop-off area
- Modify the existing campus entrance at the intersection of E Deinhard Lane and S Samson Trail (Spring Mountain Blvd) to accommodate pedestrian and bicycle access from the public pathway system to the internal middle school and elementary school pathways

The MDSD has future (beyond 2022) plans for additional site improvements at the school campus. The date of future improvements and the order in which future improvements are prioritized will depend on available budget/funding and continued monitoring of campus use, area traffic and student enrollment. Some of the future site improvements may include the following:

- Reconstructing the asphalt surface within the Middle School parking lot
- Widening the campus north approach to S Samson Trail to accommodate two-way traffic into and out of the Middle School parking lot
- Constructing a physical barrier to restrict left turn movements at the Middle School parking lot approach to the Elementary School access road
- Constructing additional vehicle queueing area at the Elementary School to better accommodate student drop-off and pick-up
- Partnering with the City of McCall to widen S Samson Trail to accommodate three vehicle lanes from E Deinhard Land to north of the school property

2.2 Scope of This Report

This Traffic Impact Study analyzes the transportation related elements associated with the existing Payette Lakes Middle School and Barbara Morgan Elementary School campus and future impacts associated with increases in student enrollment and the proposed increase in student capacity at the Middle School. The following key elements are included within this Traffic Impact Study:

- Analysis of existing intersections and school access locations
 - E Deinhard Lane & S Samson Trail (campus south access)
 - Campus middle access to S Samson Trail
 - Campus north access to S Samson Trail
 - Middle School parking lot approach to the Elementary School access road
- Bicycle and pedestrian access to the school campus
- Site traffic circulation and vehicle queueing associated with student drop-off and pick-up
- Future traffic projections
- Analysis of intersections and school access locations under future traffic conditions
- Additional considerations items identified in Idaho Code 67-6519(3) for school facilities

2.2 Intersection Performance Criteria

Roadway intersection and school approach performance is measured using the *Highway Capacity Manual* procedures. The *Highway Capacity Manual* procedures identify a Level of Service (LOS) based on the average delay of vehicles traveling through an intersection. The LOS ranges from LOS A, representing the best conditions, to LOS F, representing the worst or failing conditions. For this Traffic Impact Study, a minimum LOS of D is considered acceptable, as this is typical in urban or semi-urban areas.

It should be noted that when completing intersection analysis using the *Highway Capacity Manual* procedures, the analysis is based on the peak 15-minute traffic within the analysis peak hour. This results in a worst-case traffic scenario, indicating the intersection will likely experience better conditions during all other periods of the day. Traffic around school sites is typically condensed around the student drop-off and pick-up times. As a result, the peak 15-minute traffic near school sites results in quite conservative results with respect to LOS. Therefore, outside the peak 15-minute traffic period, intersections are anticipated to perform with considerably less delay to the vehicles traveling through the intersection.

3.0 Existing Conditions

The existing conditions at the Payette Lakes Middle School and the Barbara Morgan Elementary School are analyzed to provide an understanding of what significant elements are impacting traffic flow on the school campus and campus access locations.

3.1 School Enrollment & Capacities

Payette Lakes Middle School

The Payette Lakes Middle School was initially constructed on the school campus and opened in 1996. The Middle School currently has a student capacity of 400 students based on 16 classrooms and 25 students per classroom. The current 2021/2022 school year student enrollment at the Middle School is 323 students. This is a slight increase over the student enrollment of 312 for the 2019/2020 school year.

Barbara Morgan Elementary School

The Barbara Morgan Elementary School was added to the school campus in 2007. The Elementary School currently has a student capacity of 450 students based on 18 classrooms and 25 students per classroom. The current 2021/2022 school year student enrollment at the Elementary School is 410 students. This is a slight decrease over the student enrollment of 414 for the 2019/2020 school year.

School Campus

The school campus, with the Middle School and the Elementary School, has a current student capacity of 850 students and a current student enrollment of 733 students. Therefore, approximately 120 additional students may be enrolled on the campus before existing student capacity is exhausted.

3.2 Existing Roadway, Bicycle & Pedestrian facilities

Roadways and Vehicular Access

The Payette Lakes Middle School and Barbara Morgan Elementary school campus is currently accessed via three public roadway approaches along S Samson Trail (Spring Mountain Boulevard). All entering vehicles, including school staff, parents, buses and delivery vehicles, enter the campus approach at the E Deinhard Lane and S Samson Trail intersection. This single entrance lane provides access to the Middle School and Elementary School parking lots as well as access to the rear of the Middle School and Elementary School.

All vehicles exiting the school campus to S Samson Trail via the campus middle approach and the campus north approach. The campus middle approach primarily serves vehicles exiting from the Middle School and the campus north approach primarily serves vehicles exiting from the Middle School as well as vehicles exiting from the rear to the Middle School and the Elementary School.

Additional descriptions and exhibits relative to the internal campus roadways and traffic flows are provided in the July 26, 2019, Payette Lakes Middle School & Barbara Morgan Elementary School Traffic Flow Analysis report.

Figure 1 shows the existing vehicle lane configuration and the intersection control (stop sign locations) for the three campus approaches to the public roadway system.

Bicycle and Pedestrian Facilities

The City of McCall maintains a public bicycle and pedestrian pathway system along E Deinhard Lane and along S Samson Trail. The pathway extends to Highway 55, to the west. The pathway along S Samson Trail extends from Fox Ridge Road, approximated 200 feet south of the school campus, across the school campus frontage and continues north of the campus.

The on-campus bicycle and pedestrian facilities currently have direct access to the public pathway system at the north campus approach. However, the location of this campus access is not conducive to use by pedestrians and bicycles approaching the school from the west or south. This results in pedestrians and cyclists using the vehicle access at the E Deinhard Lane & S Samson Trail approach, intermixing pedestrians, bicycles and vehicles.

Additional pedestrian and bicycle access to the school campus is currently available near the northeast corner of the school property, to the Woodlands Subdivision. This on-campus pathway provides direct access to the Woodland Subdivision recreation center parking lot.

Finally, a third bicycle and pedestrian access to the school campus is located midway along the south school property boundary, to the Fox Ridge Subdivision. This access extends to Fox Ridge Road.

Figure 2 depicts the existing bicycle and/or pedestrian access to the school campus as well as proposed bicycle and/or pedestrian facilities proposed for construction with the Middle School remodel/expansion project.

3.3 Existing Site Traffic Circulation & Queueing

The July 26, 2019, Payette Lakes Middle School & Barbara Morgan Elementary School Traffic Flow Analysis report provides relative information and exhibits for the on-site traffic circulation and vehicle queueing. The discussion in this section highlights and expands on some of the information presented in the 2019 report.

General Site Circulation

All school campus traffic, including parents, school staff, school buses and delivery vehicles currently enter the school campus at the intersection of E Deinhard Lane and S Samson Trail (campus south approach). Once on campus, drivers have the option of proceeding straight to the Elementary School or turning left into the Middle School parking lot.

The 2019 report identified the left turn movement into the Middle School parking lot as a potential issue during inclement weather and slick road conditions. Although this left turn movement functions well during dry roadway conditions, some drivers may have difficulty getting their vehicle moving after stopping to make the left turn during slick roadway conditions.

Figure 1

Existing Intersection Control & Lane Configuration

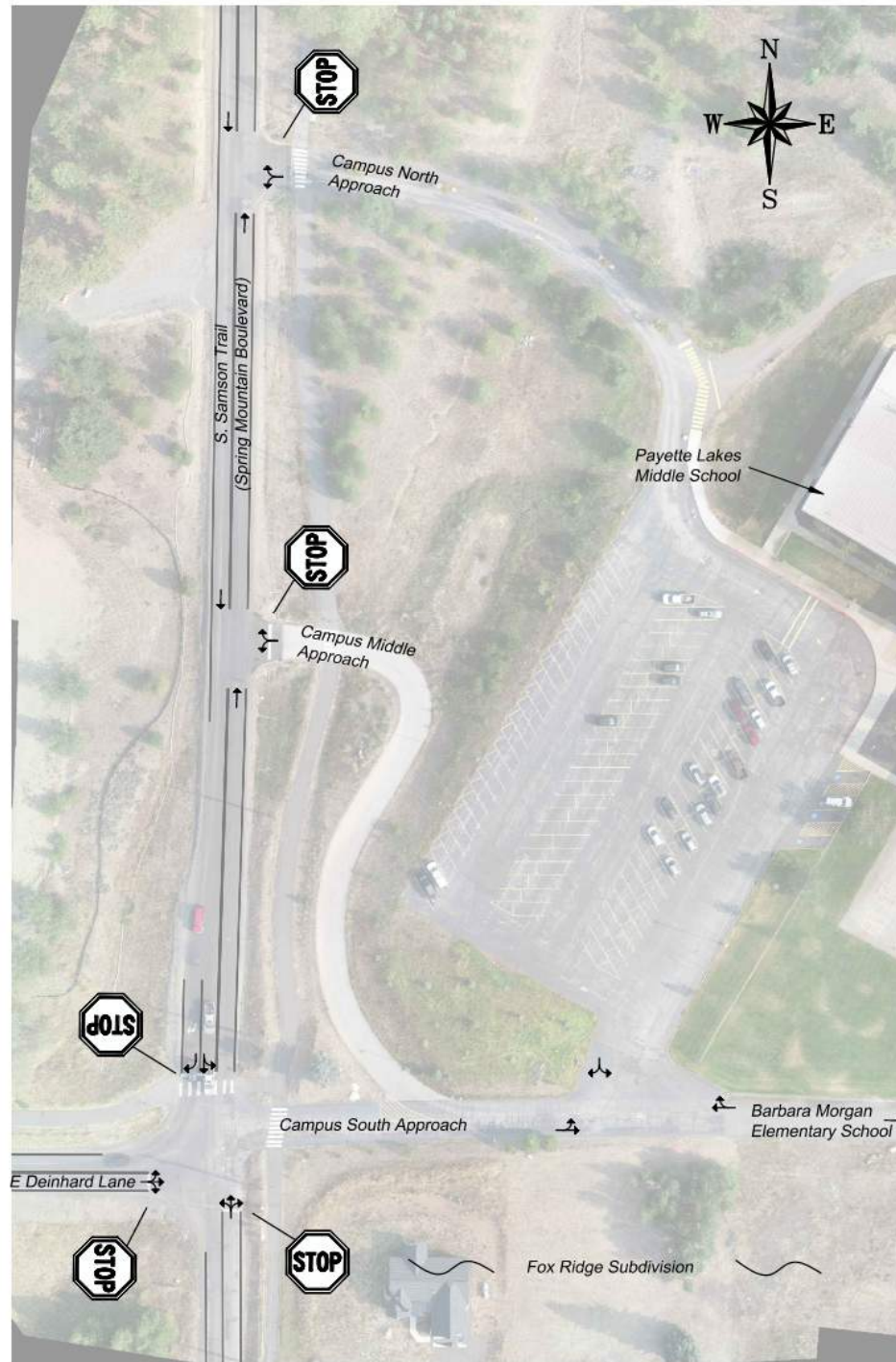
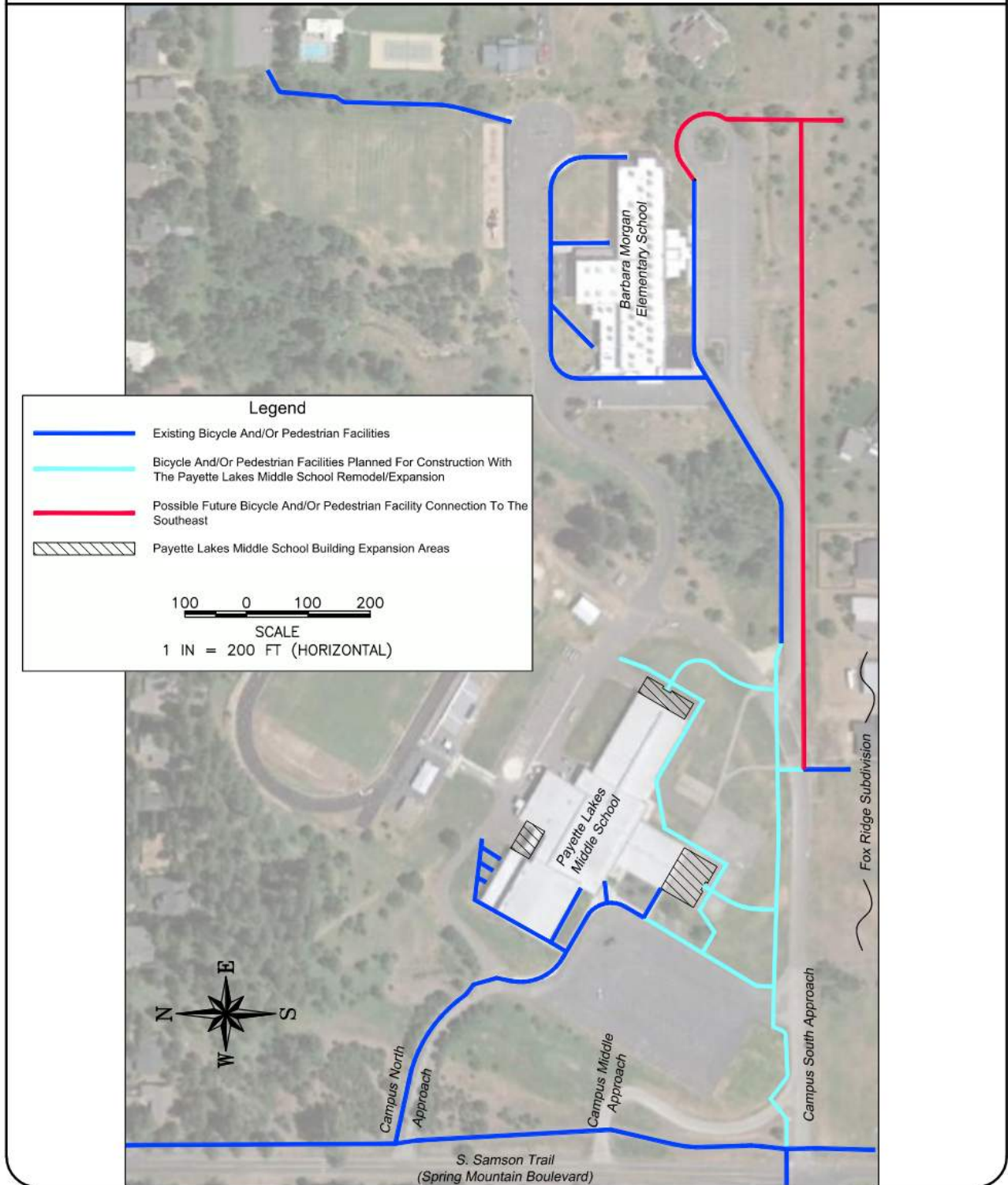


Figure 2

Payette Lakes Middle School & Barbara Morgan Elementary School
Campus Bicycle & Pedestrian Access Plan



Traffic exiting the campus has the option of using the campus middle approach or the campus north approach from either the Elementary School or the Middle School. However, almost all Elementary School traffic currently exits at the campus middle approach and almost all Middle School traffic currently exits at the campus north approach.

Payette Lakes Middle School Vehicle Queueing

During student drop-off and pick-up at the Payette Lakes Middle School, vehicles are staged along the drive isle on the east side of the Middle School parking lot. However, there is currently limited area with adjacent sidewalk available for the drop-off and pick-up zone. Additionally, drivers do not typically block the handicap parking area, therefore reducing the available vehicle queueing area.

School administration and staff indicated that the Middle School vehicle staging occasionally backs up to the Elementary School access road. This queueing backup has the potential to spill back onto the Elementary School access road which could then impact traffic at the campus south approach (E Deinhard Lane and S Samson Trail).

The proposed site construction planned with the Middle School remodel/expansion includes relocating the handicap parking at the Payette Lakes Middle School and expanding the available student pick-up and drop-off area by extending the sidewalk out to the Elementary School access road. This will significantly improve the efficiency of the Middle School student drop-off and pick-up lane.

Barbara Morgan Elementary School Queueing

During student drop-off and pick-up at the Barbara Morgan Elementary School, vehicles are staged along the curb in front of the school and in the parking stalls on the south side of the school. The vehicle staging line has been observed to back up around the traffic circle, through the parking lot and down the hill towards the Middle School.

Although the vehicle queueing at the Elementary School presents some difficulties at the Elementary School, this vehicle queueing currently has no impacts to the public roadway system or the traffic circulation near the Middle School.

The MDSD would like to complete some future on-site improvements to adjust where the vehicles are queued with respect to the parking area and access road. However, it is unlikely that current budgets will allow improvements near the Elementary School.

School Bus Circulation & Loading

Bus traffic on the campus is currently mixed with the vehicular traffic. Currently, buses proceed to the Elementary School where they stage adjacent to the parking stalls on the west side of the school, while additional buses proceed directly to the backside (northeast side) of the Middle School. Following release of the Elementary School students in the afternoon, the buses staged at the Elementary School proceed to the backside of the Middle School where some students must change buses prior to departing the campus. Approximately twelve school buses entered and exited the school campus in the peak hour traffic counts completed on September 22, 2021.

The July 26, 2019, Payette Lakes Middle School & Barbara Morgan Elementary School Traffic Flow Analysis report includes some suggestions for separating the campus bus traffic from the general traffic. These recommendations were based on bus route and time logistics in that separating the bus traffic reduced the potential for buses to get hung up in the general traffic, therefore throwing off route times. Separating bus traffic from general traffic on the internal campus site is not anticipated to have an impact to traffic conditions on the public roadway intersections.

School buses exit the campus via the campus north approach, intermixed with the general traffic exiting primarily from the Middle School.

3.4 Existing Traffic & Traffic Adjustments

Traffic Counts

Traffic counts were taken on Monday, April 15, 2019 to support the analysis completed in the July 26, 2019, Payette Lakes Middle School & Barbara Morgan Elementary School Traffic Flow Analysis report. Information pertaining to the 2019 traffic counts can be found in the referenced report.

Updated traffic counts were taken to support the analysis completed within this Traffic Impact Study. These counts were taken on September 22, 2021. The weather during the traffic count was sunny with temperatures in the morning around 40 degrees and temperatures in the afternoon around 70 degrees. The roadways were dry and weather was not a factor impacting traffic flow.

The morning drop-off traffic count revealed the a.m. peak hour of traffic was from 7:30 a.m. to 8:30 a.m. with the peak 15 minutes occurring between 7:45 a.m. and 8:00 a.m. No significant traffic congestion was observed on the morning of the traffic count.

The afternoon pick-up traffic count revealed the p.m. peak hour of traffic was from 2:30 p.m. to 3:30 p.m. with the peak 15 minutes occurring between 3:00 p.m. and 3:15 p.m. As with the a.m. traffic count, no significant traffic congestion was observed on the afternoon of the traffic count.

Heavy vehicles (school buses, dump truck, large deliver vehicles, semi-trucks, etc.) were counted separately from general traffic. There were 32 heavy vehicles counted during the a.m. peak hour, comprising of approximately 4.3% of the total traffic at the E Deinhard Lane and S Samson Trail intersection. There were 28 heavy vehicles counted during the p.m. peak hour, comprising of approximately 4.6% of the total traffic at this intersection. Based on this data, 5.0% heavy vehicles were used for all intersection analysis within this report.

In addition to the vehicle traffic, there were eight pedestrians/bicycles that crossed the S Samson Trail crosswalk at E Deinhard Lane during the a.m. peak hour and eleven pedestrians/bicycles that used the crosswalk during the afternoon peak hour.

A summary of the a.m. and p.m. peak hour traffic counts collected on September 22, 2021 is presented in Figure 3. A breakdown of the traffic counts, with 15-minutes increments, is included in Appendix A.

Traffic Estimates for Current School Capacities

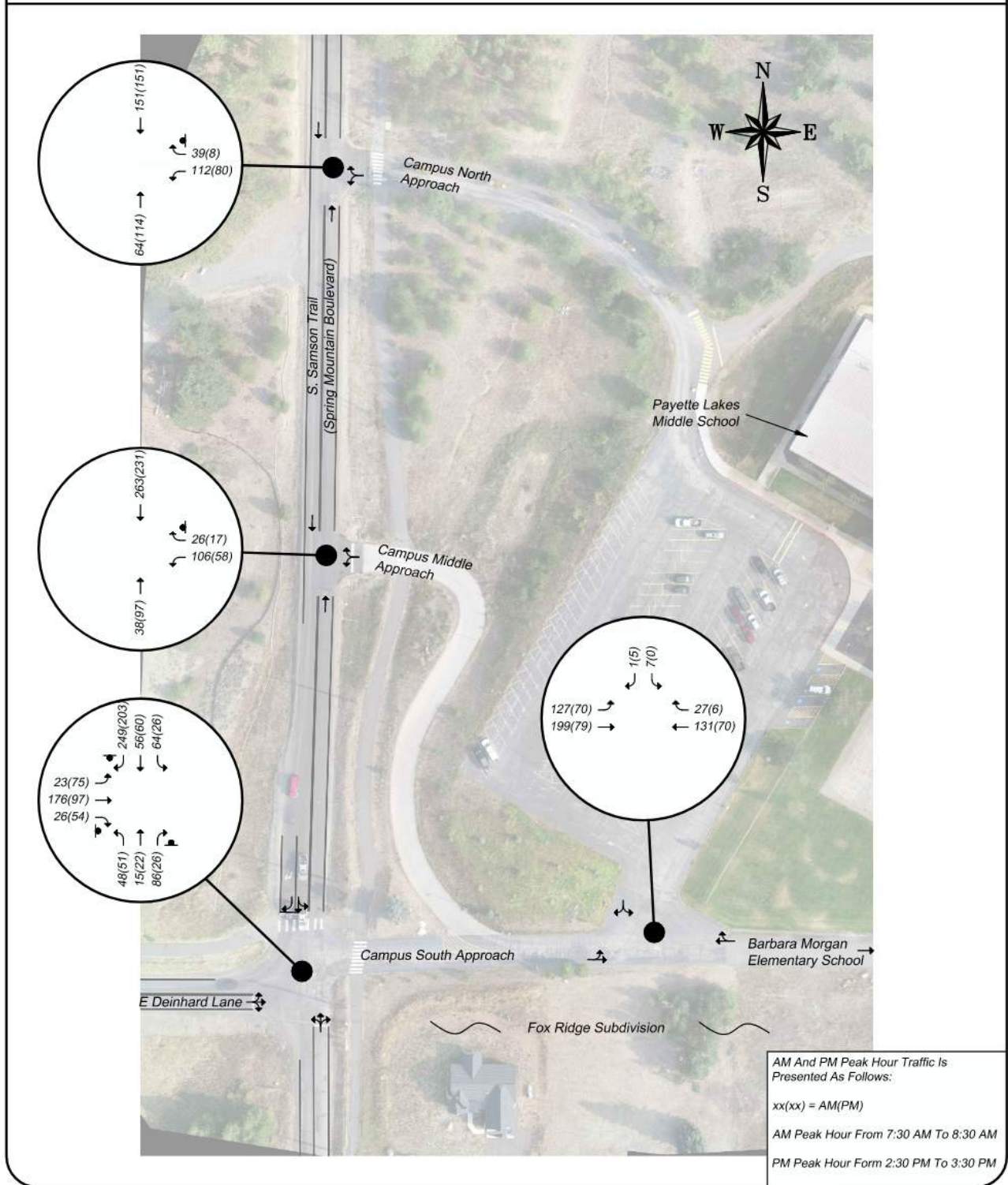
Along with the current student enrollments and school capacities presented in Section 3.1, the MDSD provided additional student attendance information for September 22, 2021 (the day the most recent traffic counts were completed). This attendance information included the following:

- Payette Lakes Middle School
 - 32 students were reported absent
 - Approximately 100 students stayed after school for athletics
- Barbara Morgan Elementary School
 - 39 students were reported absent
 - Approximately 24 students stayed after school for after school programs

Incorporating this attendance data, the a.m. traffic count would be representative for 291 students in attendance at the Middle School and the p.m. traffic count would be representative for 191 students in attendance at the Middle School. Similarly, the a.m. traffic count would be representative for 371 students in attendance at the Elementary School and the p.m. traffic count would be representative for 347 students in attendance at the Elementary School.

Figure 3

September 22, 2021 Traffic Count Data



To ensure the existing conditions analysis represents the worst-case scenario, the traffic counts that were collected on September 22, 2021 were factored up to be representative of the current student capacity at each school. For example, traffic associated with the Middle School in the a.m. period were factored up by 1.37 (400 student capacity/291 students represented during the a.m. count).

The results of factoring the September 22, 2021 traffic count up to current school capacities is shown in Figure 4.

Traffic Redistribution

The July 26, 2019, Payette Lakes Middle School & Barbara Morgan Elementary School Traffic Flow Analysis report suggests modifying the campus access to allow entering the campus at the campus north approach. The report also suggests prohibiting left turns at the Middle School parking lot intersection with the Elementary School access road.

The traffic counts shown in Figure 4, representing the current campus student capacity, were redistributed to reflect the suggested modifications to the campus access. These changes would result in all Elementary School traffic entering at the campus south approach (E Deinhard Lane) and exiting at the campus middle approach. All Middle School traffic would enter and exit at the campus north approach.

This traffic redistribution would reduce the total intersection traffic volume at E Deinhard Lane and S Samson Trail by redistributing the traffic entering the Middle School to the campus north approach, effectively removing all traffic coming from the north and going to the Middle School from the intersection.

Redistribution of the traffic representing the current campus capacity provides the opportunity to analyze the suggested modifications to ensure there are no operational deficiencies with the existing lane configuration and controls on the public roadways.

Figure 5 shows the results of redistributing the Figure 4 traffic as described.

Figure 4

Traffic Projection
2021 Traffic Count Projection To Current Campus Capacity
(450 Elementary Students And 400 Middle School Students)

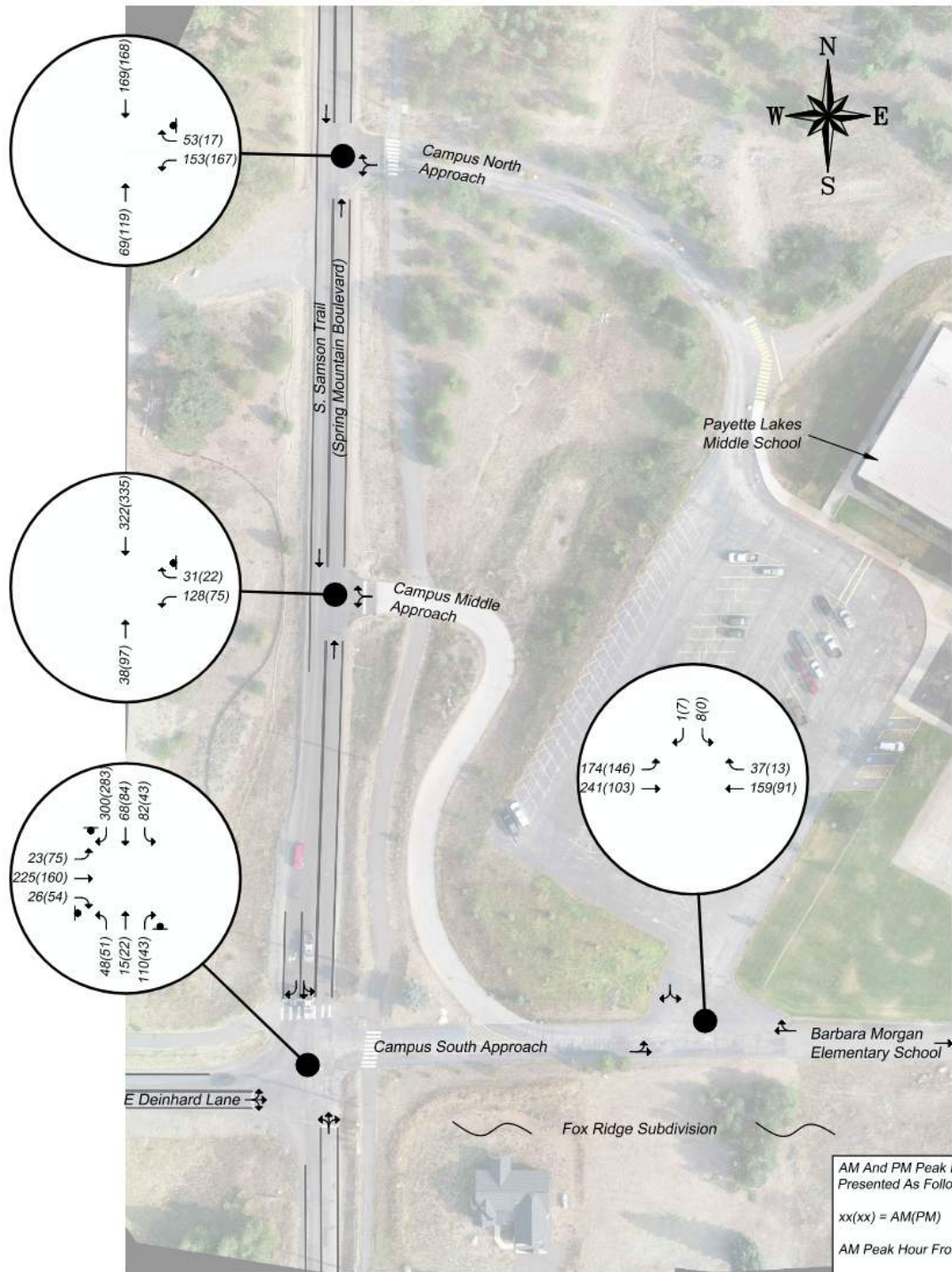
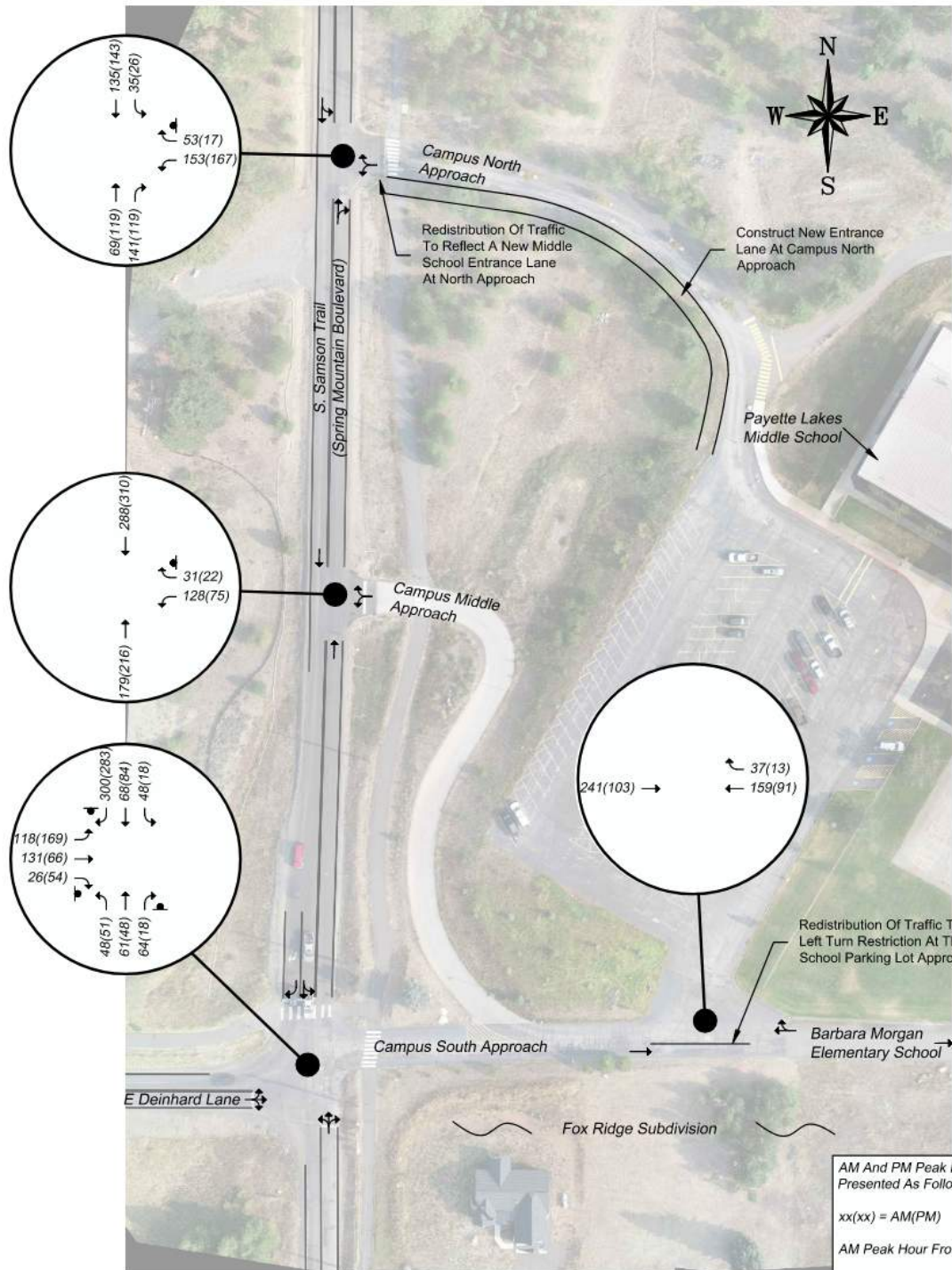


Figure 5

Traffic Projection & Redistribution
 2021 Traffic Count Projected To Current Campus Capacity (450 Elementary Students And 400 Middle School Students)
 Redistribution Associated With A New Middle School Entrance At The Campus North Approach



3.5 Existing Traffic Analysis

Analysis of Traffic Estimates for Current School Capacities

The traffic volumes representing the current campus student capacity, as shown in Figure 4, were analyzed under the existing lane configuration and intersection control, as shown in Figure 1. The results of these analysis are shown in Table 1. Appendix B includes copies of the analysis worksheets.

Table 1 - Intersection Analysis for Current School Capacities and Existing Lane Configurations and Intersection Control					
Intersection	Lane Group	School AM Peak Hour		School PM Peak Hour	
		LOS	Delay (sec.)	LOS	Delay (sec.)
E Deinhard Lane & S Samson Trail (Campus South Approach)	NB-LTR	C	16.0	B	10.7
	SB-LT	C	16.2	B	11.2
	SB-R	D	32.0	B	13.8
	EB-LTR	D	30.4	C	15.8
S Samson Trail & Campus Middle Approach	WB-LR	C	17.8	C	16.2
S Samson Trail & Campus North Approach	WB-LR	B	14.7	B	14.8
PLMS Approach to BMES Access Road	SB-LR	F	56.1	A	9.3
	EB-LT	A	9.4	A	8.4

As shown in Table 1, all intersections operate at acceptable levels except the southbound Middle School parking lot approach to the Elementary School access road. The Middle School south parking lot exit was only used by nine vehicles during the a.m. peak hour traffic count. Furthermore, the analysis indicates this lane is operating at a volume to capacity level of 0.2 and has only a single vehicle queued at any given time waiting to enter the Elementary School access road. Therefore, no mitigation for this vehicle movement is recommended.

It is also noteworthy that the analysis of the southbound Middle School parking lot approach to the Elementary School access road indicates that only two vehicles are typically queued at the eastbound approach, while a vehicle waits to turn left into the Middle School parking lot. This indicates that the Middle School parking lot entrance is not spilling back into the E Deinhard Lane & S Samson Trail intersection. Additional discussion of the potential for this approach to spill back into the public roadway intersection is included in Section 3.5, Existing Site Traffic Circulation & Queueing.

Analysis of Traffic Redistribution

As described in Section 3.3, Existing Traffic & Traffic Adjustments, the traffic representing the current campus student capacity was redistributed to reflect the July 26, 2019, Payette Lakes Middle School & Barbara Morgan Elementary School Traffic Flow Analysis report suggested modifications to the campus access.

The redistributed traffic volumes, as shown in Figure 5, were analyzed with the suggested changes to the campus access locations, including modifying the campus north access to include a campus entry lane for the Middle School. The results of these analysis are shown in Table 2. Appendix C includes copies of the analysis worksheets.

Table 2 - Intersection Analysis for Current School Capacities Redistributed for a Campus North Approach Entry Lane					
Intersection	Lane Group	School AM Peak Hour		School PM Peak Hour	
		LOS	Delay (sec.)	LOS	Delay (sec.)
E Deinhard Lane & S Samson Trail (Campus South Approach)	NB-LTR	C	16.7	B	10.9
	SB-LT	B	13.8	B	10.5
	SB-R	D	32.7	B	13.9
	EB-LTR	D	31.7	C	15.9
S Samson Trail & Campus Middle Approach	WB-LR	D	25.7	C	20.3
S Samson Trail & Campus North Approach	WB-LR	C	20.9	C	18.8
	SB-LT	A	8.1	A	8.0

As shown in Table 2, all intersections operate at acceptable levels under the traffic representing the current campus student capacity and traffic redistribution to accommodate an entry lane at the campus north approach.

Note Table 2 does not include analysis results at the Middle School parking lot approach to the Elementary School access road. The proposed redistribution of traffic would include eliminating left turn movements at this location, effectively reducing any delay to minimal amounts.

Existing Traffic Conclusions

Based on site observations and the traffic analysis presented above, it is apparent the intersection of E Deinhard Lane and S Samson Trail will function at acceptable levels until the campus student enrollment reached 850 students, an increase of approximately 120 students over the current 2021/2022 school year enrollment. This intersection will also function at acceptable levels, up to a student enrollment of 850 students on campus, if the traffic was redistributed to reflect the July 26, 2019, Payette Lakes Middle School & Barbara Morgan Elementary School Traffic Flow Analysis report suggested modifications to the campus access.

Additionally, both the campus middle approach and the campus north approach will function at acceptable levels up to a student enrollment of 850 students on the campus. The campus approaches will function acceptable under the existing campus access scenario or the suggested modifications to the campus access.

4.0 *Future Conditions*

The following sections provide an overview of anticipated improvements on the Payette Lakes Middle School and Barbara Morgan Elementary school campus as well as an analysis of the potential impacts of future student enrollment and local traffic growth.

4.1 School Expansion & Site Construction

2022 Construction Plans

The MDSD plans to complete remodel/expansion construction at the Payette Lakes Middle School in 2022. The school expansion will add five middle school classrooms, expanding the school enrollment capacity by 125 students based on 25 students per classroom.

The Payette Lakes Middle School expansion also includes site construction of the following significant features:

- Realign the on-campus intersection of the Barbara Morgan Elementary School access road and the Payette Lakes Middle School north parking lot access road to accommodate better traffic flow to the elementary school
- Regrade the playground area located between the south and east wings of the Payette Lakes Middle School to accommodate a more useful activity area for the students
- Relocate the handicap parking at the Payette Lakes Middle School and expand the available student pick-up and drop-off area
- Modify the existing campus entrance at the intersection of E Deinhard Lane and S Samson Trail (Spring Mountain Blvd) to accommodate pedestrian and bicycle access from the public pathway system to the internal middle school and elementary school pathways
- Miscellaneous site construction necessitated by the Middle School building expansion limits

Potential Future Campus Improvements

The July 26, 2019, Payette Lakes Middle School & Barbara Morgan Elementary School Traffic Flow Analysis report identified possible future campus improvements beyond those identified for construction with the Middle School remodel/expansion. The date of future improvements and the order in which future improvements are prioritized will depend on available budget/funding and continued monitoring of campus use, area traffic, student enrollment and the ongoing maintenance requirements of the existing infrastructure. Some of the future site improvements may include the following:

- Reconstructing the asphalt surface within the Middle School parking lot
- Widening the campus north approach to S Samson Trail to accommodate two-way traffic into and out of the Middle School parking lot (see Section 4.2, Future Site Access for additional information)
- Constructing a physical barrier to restrict left turn movements at the Middle School parking lot approach to the Elementary School access road
- Constructing additional vehicle queueing area at the Elementary School to better accommodate student drop-off and pick-up
- Constructing additional bicycle and pedestrian connections to the currently undeveloped land south and east of the campus (see Section 4.3, Future Bicycle & Pedestrian Access for additional information)

4.2 Future Site Access

Modification to Existing Campus Access

The July 26, 2019, Payette Lakes Middle School & Barbara Morgan Elementary School Traffic Flow Analysis report identified possible future campus access modifications to improve on campus traffic circulation and reduce the potential for on campus traffic to spill back onto the public roadway system. The significant campus access modification identified in the 2019 report include the following:

- Widening the campus north approach to S Samson Trail to accommodate two-way traffic into and out of the Middle School parking lot
- Constructing a physical barrier to restrict left turn movements at the Middle School parking lot approach to the Elementary School access road

When implemented, these two modifications should be constructed at the same time to effectively separate Middle School and Elementary School traffic entering the school campus. Some of the results of implementing these access changes include the following:

- All drivers visiting the Elementary School would enter the campus at the campus south approach (E Deinhard Lane & S Samson Trail) and the majority of this traffic would exit the campus at the campus middle approach
- All drivers visiting the Middle School would enter the campus at the campus north approach and the majority of this traffic would also exit the campus at the campus north approach
- Providing a vehicle entry lane at the campus north approach would reduce overall intersection traffic at E Deinhard Lane and S Samson Trail
- Vehicles exiting the school campus would be somewhat balanced between the campus middle approach and the campus north approach
- Left turn movements at the Middle School parking lot connection to the Elementary School access road would be eliminated, removing the potential for this traffic movement to spill back into the intersection of E Deinhard Lane and S Samson Trail
 - The frequency of stopping on the hill, entering the campus from E Deinhard Lane and S Samson Trail, would be significantly reduced or eliminated resulting in fewer vehicles having difficulty in this area during slick roadway conditions

As discussed in Section 3, either the existing campus approach layout or the approach modifications identified in the July 26, 2019, Payette Lakes Middle School & Barbara Morgan Elementary School Traffic Flow Analysis report will function at acceptable levels up to a campus student enrollment of 850 students (an increase of 120 students over the current 2021/2022 school year enrollment). Therefore, the MDSD should plan on implementing the campus approach modification when the campus student enrollment reaches 850 students, or sometime before that threshold.

Consideration of a New Campus Access to the East

We understand the City of McCall has been approached concerning potential development of available land to the south and east of the Payette Lakes Middle School and Barbara Morgan Elementary School campus. Considering this potential land development, the City and the Developer have requested that the MDSD consider a public roadway through the school property, along the school's southern boundary.

The MDSD has dedicated a 30-foot-wide utility easement along the school's southern property boundary to the City of McCall to allow the City to extend public utilities (specifically domestic water service) through the school property to service land to the south and east of the campus. We are not aware of any dedication of public right-of-way, permanent roadway easement or any prior commitment from the MDSD to extend a public roadway through the school property.

Furthermore, when the Fox Ridge Subdivision was developed to the south of the school property, the detail of possibly extending E Deinhard Lane to the east was apparently missed by all parties involved. Within the Fox Ridge Subdivision, there are no dedicated public right-of-way, permanent roadway easements or building setback restrictions that would accommodate extension of E Deinhard Lane along the common property boundary of the Fox Ridge Subdivision and the MDSD property.

The suggestion of extending E Deinhard Lane through the school property, with the entire roadway and public right-of-way to be within the school property and not shared with the adjacent Fox Ridge Subdivision, is detrimental to the MDSD. It may be possible that there is a feasible solution of extending E Deinhard Lane through the school property, but not without extensive analysis (by the land developer and/or the City of McCall) of the impacts and the on-campus mitigation that would be necessary. Some of the challenges that the developer and/or the City of McCall must address during the analysis of the E Deinhard Lane extension proposal include the following:

- The proximity of an E Deinhard Lane extension to the existing school parking areas, the Middle School playground area and the existing internal campus roadways would necessitate a complete redesign and reconstruction of the entire on-campus vehicle and pedestrian/bicycle infrastructure.
- An E Deinhard Lane extension would effectively eliminate the southern on-campus access road connection between the Middle School and the Elementary School. The existing on-campus northern access road is not currently used as access for the general public. This would further necessitate a rework of the entire on-campus vehicle and pedestrian/bicycle infrastructure.
- As described previously in this report, we recommend a future change to the current campus access that would eliminate left turn movements at the Middle School parking lot connection to the Elementary School access road, therefore removing the potential for this traffic movement to spill back into the intersection of E Deinhard Lane and S Samson Trail. As proposed by the developer/City of McCall, the extension of E Deinhard Lane would include a Middle School parking lot entrance at this location. The distance from the E Deinhard Lane and S Samson Trail intersection to the proposed Middle School parking lot approach is likely insufficient and may result in impeding the E Deinhard Lane and S Samson Trail intersection.
- As described previously in this report, the student drop-off and pick-up staging at the Middle School can back up around the traffic circle, through the parking lot and down the hill towards the Middle School. As proposed by the developer/City of McCall, the extension of E Deinhard Lane would eliminate much of this student drop-off and pick-up queue area which may result in queueing into the new public roadway.

We recognize that as land to the east of the school campus develops, more direct access to those properties is needed, rather than using the public roadways to navigate to the campus access locations along S Samson Trail. Therefore, we recommend that a public roadway be extend from the development area south and east of the school property up to the school property boundary and either a turn around (cul-de-sac) or parking area be provided directly adjacent to the school property. Then a bicycle and pedestrian connection from the end of the public roadway can be provided onto the school campus as described in Section 4.3, Future Bicycle & Pedestrian Access, and as shown on Figure 2. This solution also stages the area to extend the roadway to the E Deinhard Lane and S Samson Trail intersection if the developer and/or City of McCall are able to adequately address and fund all the potential impacts identified above and any other concerns the MDSD may have related to the new roadway and impacts to on-campus facilities.

It should also be noted that any connection of future roadways east of the campus property to the existing internal campus roadway system may induce cut-through traffic on the school campus and is therefore not recommended.

4.3 Future Bicycle & Pedestrian Access

Figure 2, as referenced in Section 3.2, Existing Roadway, Bicycle & Pedestrian facilities, shows the existing bicycle and/or pedestrian facilities on the school campus and adjacent roadways. Additionally, Figure 2 shows two phases of future bicycle and/or pedestrian facilities.

2022 Bicycle & Pedestrian Construction Plans

The bicycle and/or pedestrian facilities planned for construction with the Payette Lakes Middle School remodel/expansion are shown in cyan on Figure 2 and include the following:

- An 8-foot pathway connection from the public pathway system at E Deinhard Lane and S Samson Trail to the new pedestrian and bicycle facilities being constructed at the Middle School and extending along the southern access road to connect to the existing Fox Ridge Subdivision pathway and the existing pathway to the Elementary School
- New 10-foot sidewalk along the Middle School parking lot to accommodate additional student drop-off and pick-up area
- New 8-foot sidewalk around the Middle School south and east wings
- Three sidewalk/pathway connections from the Middle School to the new pathway along the campus southern access road

Potential Future Bicycle & Pedestrian Facilities

The bicycle and/or pedestrian facilities identified as possible future facilities are shown in red on Figure 2 and include the following:

- A new pathway connection to the currently undeveloped land south and east of the campus property, connecting to a future cul-de-sac or parking lot as described in Section 4.2, Future Site Access
- A new pathway connection between the currently undeveloped land south and east of the campus property to the existing pathway that goes between the school campus and the Fox Ridge Subdivision

These potential future bicycle and pedestrian facilities should be constructed when the land to the south and east of the school campus is developed.

4.4 Traffic Projections & Analysis

In order to analyze the traffic associated with the Payette Lakes Middle School expansion, the existing traffic counts are projected to reflect the campus student capacity following the completion of the Middle School remodel/expansion. Additionally, traffic not directly associated with the school campus is also projected to account for future traffic growth in the area.

Traffic Projections

As described in Section 3, the “existing” traffic analysis for the Payette Lakes Middle School and Barbara Morgan Elementary School campus included existing local traffic and school campus traffic projected to account for the current campus student enrollment capacity of 850 students. The Middle School remodel/expansion will add five class rooms to the school, therefore increasing the Middle School student enrolment capacity by 125 students, based on 25 students per classroom.

The traffic information shown in Figure 4 (based on a campus student capacity of 850 students) is projected to included traffic associated with a campus student capacity of 975 student (450 Elementary School students and 525 Middle School Students).

In addition to increasing campus related traffic, the existing local traffic is also projected to account for area traffic growth. For this analysis, the local traffic was increase by 25% over the existing traffic. This

traffic increase would represent an approximate 2.25 % annual traffic growth over the next ten years. For reference, the total AM peak hour intersection count for the E Deinhard Lane and S Samson Trail intersection went from 724 vehicles counted in April of 2019 to 743 vehicles counted in September of 2021. This represents a 1.25% annual traffic growth over the past two years.

Figure 6 shows the future traffic projections for a campus student capacity of 975 students and the local traffic increased by 25%. The distribution of traffic shown on Figure 6 assumes the current campus access and internal circulation remains unchanged.

Future Traffic Redistribution

As discussed in Section 4.2, Future Site Access, the MDSD should plan on implementing campus approach modifications when the campus student enrollment reaches 850 students, or sometime before that threshold. These approach modifications include the following from the July 26, 2019, Payette Lakes Middle School & Barbara Morgan Elementary School Traffic Flow Analysis:

- Widening the campus north approach to S Samson Trail to accommodate two-way traffic into and out of the Middle School parking lot
- Constructing a physical barrier to restrict left turn movements at the Middle School parking lot approach to the Elementary School access road

To properly analyze these approach modifications, the traffic shown in Figure 6 is redistributed to reflect the Elementary School traffic entering at the campus south approach (E Deinhard Lane & S Samson Trail) and exiting the campus at the campus middle approach, and the Middle School traffic entering and exiting at the campus north approach.

Figure 7 shows the redistribution of the future traffic.

Figure 6

Future Traffic Projection
 2021 Traffic Count Projected To Future Campus Capacity
 (450 Elementary Students And 525 Middle School Students) Plus 25% Growth Of Local Traffic

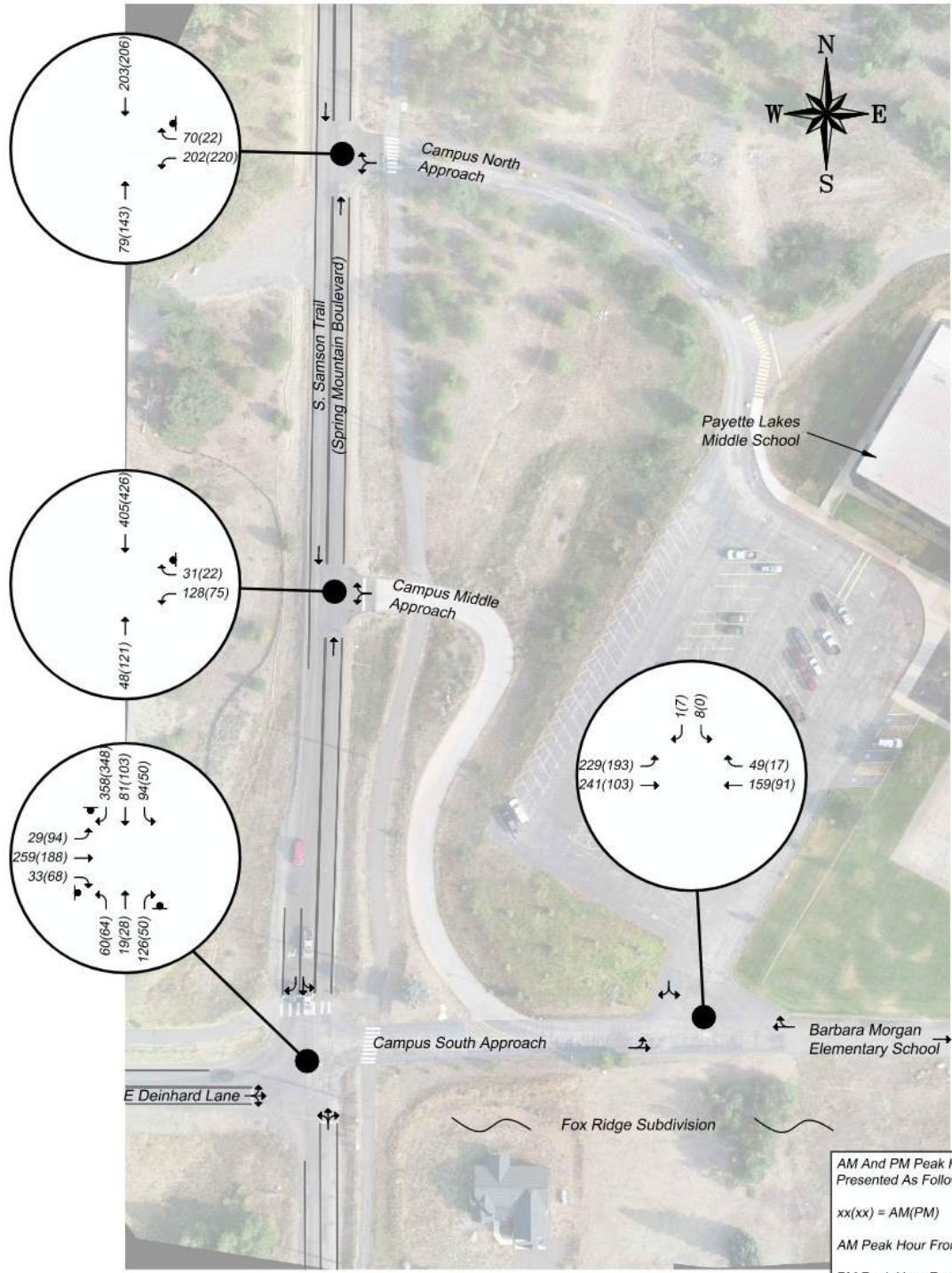
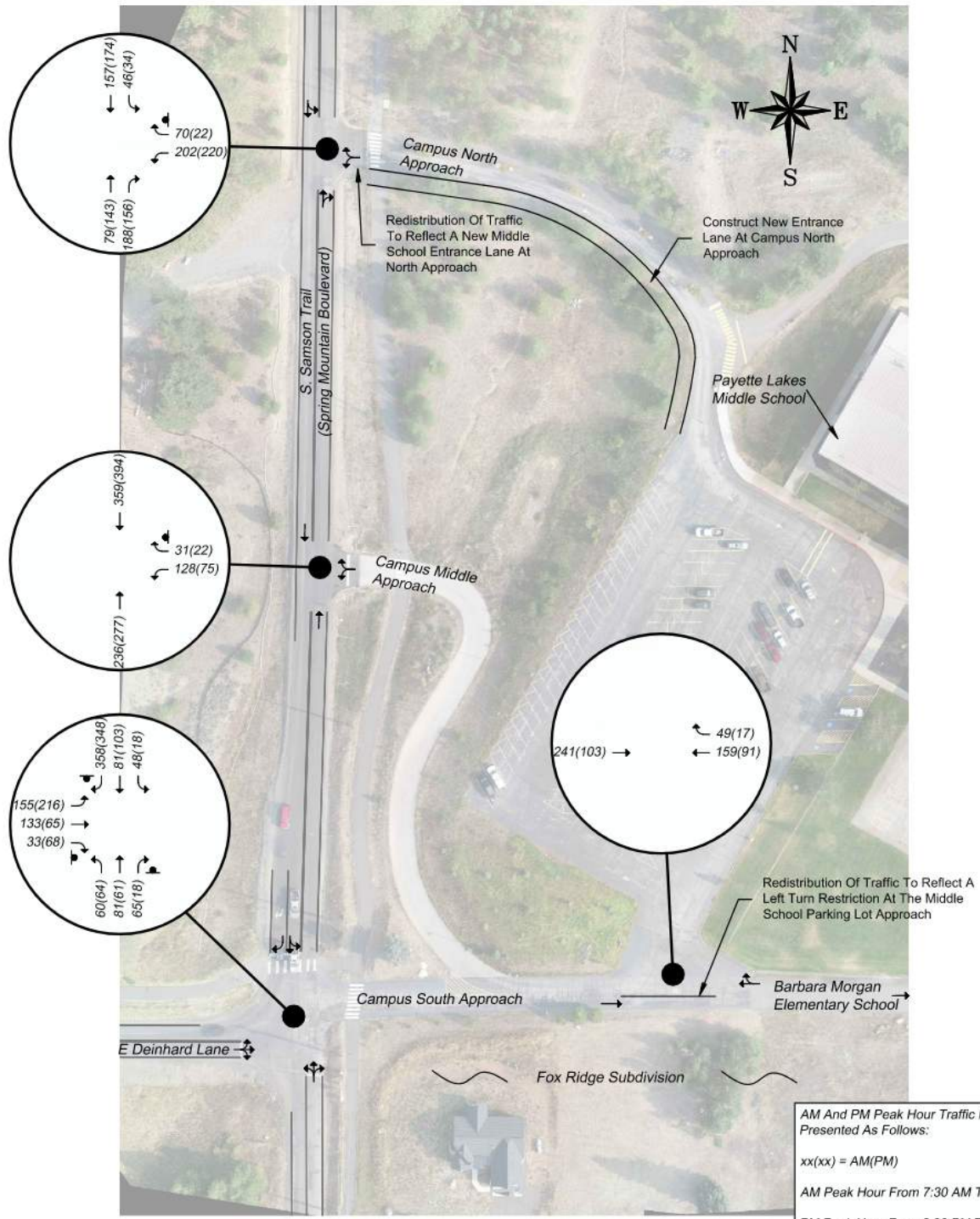


Figure 7

Future Traffic Projection

2021 Traffic Count Projected To Current Campus Capacity
(450 Elementary Students And 525 Middle School Students) Plus 25% Growth Of Local Traffic
Redistribution Associated With A New Middle School Entrance At The Campus North Approach



Analysis of Future Traffic Redistribution

Considering this report recommends modifying the campus circulation and approach configuration once the campus student capacity reaches 850 students, all future traffic analysis assume these modifications have been implemented. Therefore, the redistributed traffic volumes, as shown in Figure 7, were analyzed with the suggested changes to the campus access locations, including modifying the campus north access to include a campus entry lane for the Middle School. The results of these analysis are shown in Table 3. Appendix D includes copies of the analysis worksheets.

Table 3 - Intersection Analysis for Future School Capacities Redistributed for a Campus North Approach Entry Lane					
Intersection	Lane Group	School AM Peak Hour		School PM Peak Hour	
		LOS	Delay (sec.)	LOS	Delay (sec.)
E Deinhard Lane & S Samson Trail (Campus South Approach)	NB-LTR	C	23.4	B	12.7
	SB-LT	C	16.4	B	11.7
	SB-R	F	95.6	C	21.4
	EB-LTR	F	63.2	C	24.5
S Samson Trail & Campus Middle Approach	WB-LR	E	46.6	D	30.6
S Samson Trail & Campus North Approach	WB-LR	F	54.9	E	37.6
	SB-LT	A	8.4	A	8.3

As shown in Table 3, all intersections have lane groups or approaches that operate at unacceptable levels. Therefore, once the school campus enrollment exceeds 850 students, the MDSD and the City of McCall should consider partnering to complete mitigation improvements as discussed below.

Future Traffic Mitigation

Although multiple scenarios of future improvements may mitigate the future traffic delays along the school campus frontage, analysis of the following improvements show satisfactory results (see Figure 8 for a conceptual layout of the described improvements):

- E Deinhard Lane and S Samson Trail intersection
 - Convert the existing southbound to westbound right turn lane to a free running right which operates outside the stop sign requirements on the southbound approach. Merge the free running right receiving lane on E Deinhard Lane with the existing travel lane west of the intersection.
- S Samson Trail
 - Widen S Samson Trail to extend three lanes from the E Deinhard Lane and S Samson Trail intersection to north of the school campus property.

Figure 8

Future Mitigation
Intersection Control & Lane Configuration Along S Samson Trail

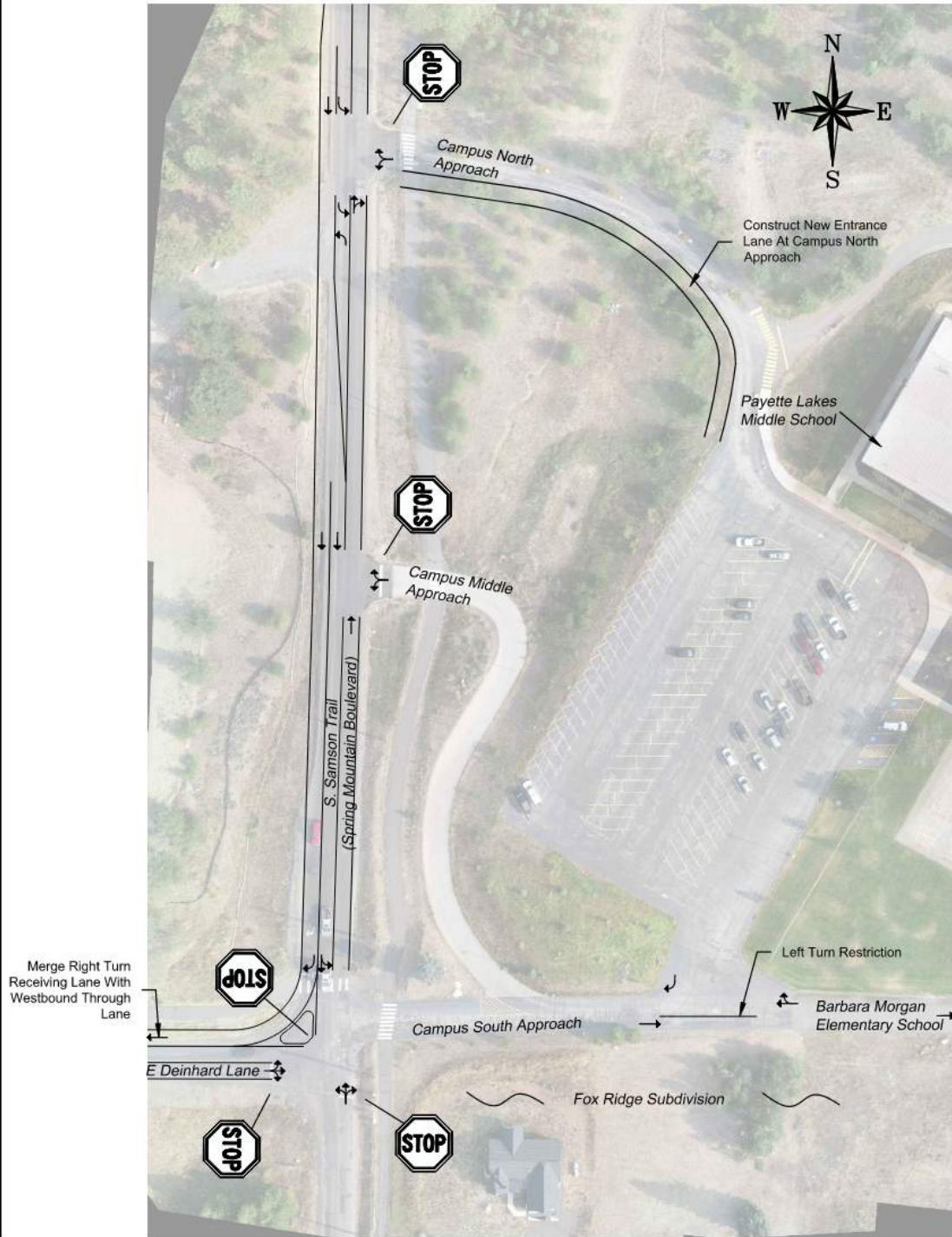


Table 4 shows the analysis results for the future traffic shown in Figure 7 applied to the intersections with mitigation improvements. Appendix E includes copies of the analysis worksheets.

Table 4 - Intersection Analysis for Future School Capacities Redistributed for a Campus North Approach Entry Lane with Mitigation Improvements					
Intersection	Lane Group	School AM Peak Hour		School PM Peak Hour	
		LOS	Delay (sec.)	LOS	Delay (sec.)
E Deinhard Lane & S Samson Trail (Campus South Approach)	NB-LTR	C	16.5	B	13.2
	SB-LT	B	13.3	B	12.4
	EB-LTR	D	32.0	D	32.3
S Samson Trail & Campus Middle Approach	WB-LR	D	25.3	C	21.0
S Samson Trail & Campus North Approach	WB-LR	C	23.7	C	23.4
	SB-LT	A	8.4	A	8.4

As shown in Table 4, all intersections operate at acceptable levels under the future traffic redistribution to accommodate an entry lane at the campus north approach, with mitigation improvements along the public roadways.

5.0 *Special Conditions for School Facilities*

Idaho Code 67-6519(3) identifies specific items to be addressed for school facilities. This Section 5 responds to each of the items identified in Idaho code, as appropriate to the project at the Payette Lakes Middle School and Barbara Morgan Elementary School campus.

5.1 Land Use Master Plan

The MDSD parcel is located in the City of McCall, Valley County, Idaho. The parcel is currently zoned Civic and the City of McCall Future Land Use Plan map indicates no change in zoning is planned. The Civic land use incorporates schools (public or private), including vocational, as allowed land uses under a conditional use permit.

5.2 School Bus Plan

The subject parcel is currently developed with an elementary and middle school which have active busing for students. The current project imposes no changes to the on-campus bus circulation or the off-campus busing plan. Future modifications to the school access and circulation may also modify the on-campus bus circulation.

5.3 Access Safety

Current access to the school campus is via three public roadway approaches along S Samson Trail (Spring Mountain Boulevard). The Local Highway Technical Assistance Council on-line accident mapping was reviewed for potential high accident locations and safety concerns. Within the five years reported on the map, only one, single car, accident was reported in 2016, at the intersection of E Deinhard Lane and S Samson Trail. Therefore, no high accident locations are identified near the school campus and the existing campus access points appear to be functioning safely.

5.4 Pedestrian Plan

See Figure 2 and Sections 3.2 and 4.3 of this report for information relative to the campus pedestrian and bicycle access.

5.5 Crossing Guard Plan

The majority of the existing campus students are either bused to the campus or are dropped off by parents. There are marked crosswalks at the intersection of E Deinhard Lane and S Samson Boulevard. Crossing guards are not currently used at these crosswalks and implementation of crossing guard use is not planned based on the expansion plans at the Middle School.

5.6 Barriers Between the Roadways and the School

The existing Middle School and Elementary School are set back significantly from the public roadway and the campus is elevated with respect to the public roadway. Therefore, no physical barrier is necessary between the public roadway and the schools.

5.7 Location of the School Zone

20 MPH school zone signing is already established along E Deinhard Lane and S Samson Trail for the school campus. No changes to the established school zones are planned with this project.

5.8 Need for a Flashing Beacon

No flashing beacons are currently installed at the roadway crosswalks. Considering the majority of the existing campus students are either bused to the campus or are dropped off by parents, and the proposed Middle School expansion is not expected to change the percentage of students walking or biking to school, no flashing beacons are planned with the project.

5.9 Need for Traffic Control

As discussed within this report, all campus access points are anticipated to function at acceptable levels up to a campus student enrollment of 850 students and will continue to operate at acceptable levels, beyond 850 students, with some mitigation improvements along the campus frontage. No changes to the existing traffic control (i.e. signal installation) is necessary under the mitigation improvements identified within this report.

5.10 Anticipated Future Improvements

See previous sections of this report for information relative to future on-campus and off-campus improvements.

5.11 Speed on Adjacent Roadways

The current posted speed limit on the nearby roadways (E Deinhard Lane and S Samson Trail) is 25 MPH. No change to the current posted speed limit is necessitated by this project.

5.12 Traffic Volumes on Adjacent Roadways

See previous sections of this report for information relative to current traffic volumes and future projected traffic volumes.

5.13 Effect on a Roadway's Level of Service

See previous sections of this report for information relative to current Levels of Service and future projected Levels of Service for the campus access points and adjacent public roadway intersection.

5.14 Need for Acceleration or Deceleration Lanes

Traffic at the school campus approaches and on the public roadway do not warrant acceleration or deceleration lanes.

5.15 Internal Traffic Circulation

See previous sections of this report for information relative to on-campus traffic circulation.

5.16 Anticipated Development on Surrounding Undeveloped Parcels

The existing campus has undeveloped land to the south and east of the MDSD property. See previous sections of this report for information relative to future bicycle and pedestrian facility connections to the undeveloped land. Additionally, previous sections of this report recommend a public roadway be extended to the school property boundary with a cul-de-sac or parking lot to provide access to the school campus via the on-campus bicycle and pedestrian facilities.

5.17 Zoning in the Vicinity

The MDSD school property is located within the City of McCall. Current zoning in the vicinity of the school includes Low Density Residential, Residential (1 Acre), Rural Residential (10 Acres), and Community Commercial.

5.18 Access Control on Adjacent Roadways

The school campus has three existing access locations along S Samson Trail. No change to these existing access locations is proposed with the project. As discussed in previous sections of this report, a future change to the on-campus circulation may modify the function of the existing access location, but would not change the location of the existing access points.

5.19 Required Striping & Signing Modifications

No changes to the off-campus roadway pavement markings or signing are necessary as a result of this project. Signing adjustments on-campus will be necessary to accommodate site construction and will be included with the construction.

See previous sections of this report for information relative to future off-campus modifications along the campus frontage. This report recommends consideration of the off-campus improvements after the campus student enrollment reaches 850 students.

5.20 Funding for Roadway Improvements to Accommodate the Development

The MDSD has approved school bond funding to complete the Middle School remodel/expansion along with the associated site construction elements identified within this report. The MDSD and the City of McCall should collaborate on the future timing and funding of improvements to the public roadway improvements along the campus frontage.

5.21 Proposed Roadway Projects in the Project Vicinity

The City of McCall has identified one planned roadway improvement project in the vicinity of the campus property. The project will reconstruct E Deinhard Lane from State Highway 55 to S Samson Trail. No roadway widening is planned with the project. The E Deinhard Lane construction project is scheduled for the 2022 construction season. Construction traffic control from the roadway project may have detours that impact access to the school campus during construction of the Middle School remodel/expansion and associated site work.

6.0 Conclusions & Recommendations

The McCall-Donnelly School District (MDSD) Plans to remodel and expand the Payette Lakes Middle School to accommodate five additional classrooms. The Middle School expansion also includes site construction of the following significant features:

- Realign the on-campus intersection of the Barbara Morgan Elementary School access road and the Payette Lakes Middle School north parking lot access road to accommodate better traffic flow to the elementary school
- Regrade the playground area located between the south and east wings of the Payette Lakes Middle School to accommodate a more useful activity area for the students
- Relocate the handicap parking at the Payette Lakes Middle School and expand the available student pick-up and drop-off area
- Modify the existing campus entrance at the intersection of E Deinhard Lane and S Samson Trail (Spring Mountain Blvd) to accommodate pedestrian and bicycle access from the public pathway system to the internal middle school and elementary school pathways

All intersections and school campus approaches to the public roadway system (E Deinhard Ln and S Samson Trail intersection, school campus middle exit and school campus north exit) operate at acceptable levels under the current traffic and school enrollment conditions. On campus traffic circulation and on campus vehicle queueing currently has minimal to no impact on the public roadway system and intersections.

All intersections and school campus approaches to the public roadway system will continue to operate at acceptable levels up to the current school student capacities. Therefore, no campus access improvements are necessary until current enrollment grows by another 120 students, to an enrollment of 850 students on campus. Furthermore, the campus access and circulation plan modifications identified in the July 26, 2019, Payette Lakes Middle School & Barbara Morgan Elementary School Traffic Flow Analysis report will also operate at acceptable levels up to a student enrollment of 850 students on the campus.

Growing beyond the enrollment of 850 students on the campus will necessitate improvements to the campus access and within the public roadways and intersections. The following improvements will operate at acceptable levels through the Payette Lakes Middle School remodel capacity (adding 125 students to the current campus capacity of 850 students) plus 25% growth of the local traffic:

- Widening the campus north approach to S Samson Trail to accommodate two-way traffic into and out of the Middle School parking lot

- Constructing a physical barrier to restrict left turn movements at the Middle School parking lot approach to the Elementary School access road
- E Deinhard Lane and S Samson Trail intersection
 - Convert the existing southbound to westbound right turn lane to a free running right which operates outside the stop sign requirements on the southbound approach. Merge the free running right receiving lane on E Deinhard Lane with the existing travel lane west of the intersection.
- S Samson Trail
 - Widen S Samson Trail to extend three lanes from the E Deinhard Lane and S Samson Trail intersection to north of the school campus property.

As available ground to the south and east of the school property develops, the development should extend a public roadway to the school property boundary and provide a parking area or turnaround. Bicycle and pedestrian access to/from the school property to the parking area or turnaround should be constructed.

Appendix A
September 22, 2021 Traffic Count Data

Agency: **McCall-Donnelly School District**
 Location: **Payette Lakes Middle School & Barbara Morgan Elementary School Campus**
 Intersection: **S Sampson Trail & North Campus Approach**
 Count Date: **Wednesday, 9/22/2021**

TRAFFIC COUNT DATA

September 22, 2021 AM TURNING MOVEMENT COUNT

Time Period	S. Samson Trail						North Campus Approach						15 min Intersection Total	1 hr Intersection Total	
	North Bound			South Bound			East Bound			West Bound					
	left	thru	right	left	thru	right	left	thru	right	left	thru	right			
7:15 - 7:30		9			15					3		0	27	-	
7:30 - 7:45		10			43					15		3	71	-	
7:45 - 8:00		25			46					48		22	141	-	
8:00 - 8:15		21			42					42		13	118	357	
8:15 - 8:30		8			20					7		1	36	366	
8:30 - 8:45													0	295	
8:45 - 9:00													0	154	
9:00 - 9:15													0	36	
PH Totals	0	64	0	0	151	0	0	0	0	112	0	39			
													Peak Hour Total		366
													Peak Hour		7:30-8:30 am
													Peak Hour Factor		0.65

September 22, 2021 PM TURNING MOVEMENT COUNT

Time Period	S. Samson Trail						North Campus Approach						15 min Intersection Total	1 hr Intersection Total
	North Bound			South Bound			East Bound			West Bound				
	left	thru	right	left	thru	right	left	thru	right	left	thru	right		
2:15 - 2:30		21			33					3		1	58	-
2:30 - 2:45		22			47					2		0	71	-
2:45 - 3:00		20			45					1		1	67	-
3:00 - 3:15		41			29					48		4	122	318
3:15 - 3:30		31			30					29		3	93	353
3:30 - 3:35													0	282
3:35 - 4:00													0	215
4:00 - 4:15													0	93
PH Totals	0	114	0	0	151	0	0	0	0	80	0	8		
													Peak Hour Total353	
													Peak Hour2:30-3:30 pm	
													Peak Hour Factor0.72	

Agency: **McCall-Donnelly School District**
 Location: **Payette Lakes Middle School & Barbara Morgan Elementary School Campus**
 Intersection: **S Sampson Trail & Middle Campus Approach**
 Count Date: **Wednesday, 9/22/2021**

TRAFFIC COUNT DATA

September 22, 2021 AM TURNING MOVEMENT COUNT

Time Period	S. Samson Trail						Middle Campus Approach						15 min Intersection Total	1 hr Intersection Total	
	North Bound			South Bound			East Bound			West Bound					
	left	thru	right	left	thru	right	left	thru	right	left	thru	right			
7:15 - 7:30		9			18					0		0	27	-	
7:30 - 7:45		10			50					2		0	62	-	
7:45 - 8:00		15			106					38		13	172	-	
8:00 - 8:15		5			82					58		13	158	419	
8:15 - 8:30		8			25					8		0	41	433	
8:30 - 8:45													0	371	
8:45 - 9:00													0	199	
9:00 - 9:15													0	41	
PH Totals	0	38	0	0	263	0	0	0	0	106	0	26			
													Peak Hour Total		433
													Peak Hour		7:30-8:30 am
													Peak Hour Factor		0.63

September 22, 2021 PM TURNING MOVEMENT COUNT

Time Period	S. Samson Trail						Middle Campus Approach						15 min Intersection Total	1 hr Intersection Total
	North Bound			South Bound			East Bound			West Bound				
	left	thru	right	left	thru	right	left	thru	right	left	thru	right		
2:15 - 2:30		19			36					4		3	62	-
2:30 - 2:45		23			49					2		0	74	-
2:45 - 3:00		20			47					2		0	69	-
3:00 - 3:15		23			78					41		16	158	363
3:15 - 3:30		31			57					13		1	102	403
3:30 - 3:35													0	329
3:35 - 4:00													0	260
4:00 - 4:15													0	102
PH Totals	0	97	0	0	231	0	0	0	0	58	0	17		
													Peak Hour Total403	
													Peak Hour2:30-3:30 pm	
													Peak Hour Factor0.64	

Agency: **McCall-Donnelly School District**
 Location: **Payette Lakes Middle School & Barbara Morgan Elementary School Campus**
 Intersection: **S Sampson Trail & Deinhard Lane (South Campus Approach)**
 Count Date: **Wednesday, 9/22/2021**

TRAFFIC COUNT DATA

September 22, 2021 AM TURNING MOVEMENT COUNT

Time Period	S. Samson Trail						Deinhard Lane						15 min Intersection Total	1 hr Intersection Total
	North Bound			South Bound			East Bound			West Bound				
	left	thru	right	left	thru	right	left	thru	right	left	thru	right		
7:15 - 7:30	5	4	6	5	2	11	5	13	2				53	-
7:30 - 7:45	17	4	13	12	6	36	5	36	6				135	-
7:45 - 8:00	9	5	49	33	19	86	10	89	10				310	-
8:00 - 8:15	12	4	24	18	24	99	2	44	4				231	729
8:15 - 8:30	10	2	0	1	7	28	6	7	6				67	743
8:30 - 8:45													0	608
8:45 - 9:00													0	298
9:00 - 9:15													0	67
PH Totals	48	15	86	64	56	249	23	176	26	0	0	0		
										Peak Hour Total			743	
										Peak Hour			7:30-8:30 am	
										Peak Hour Factor			0.60	

September 22, 2021 PM TURNING MOVEMENT COUNT

Time Period	S. Samson Trail						Deinhard Lane						15 min Intersection Total	1 hr Intersection Total
	North Bound			South Bound			East Bound			West Bound				
	left	thru	right	left	thru	right	left	thru	right	left	thru	right		
2:15 - 2:30	14	4	4	2	10	28	15	11	6				94	-
2:30 - 2:45	14	6	1	7	4	41	17	29	6				125	-
2:45 - 3:00	13	2	15	10	11	27	17	29	13				137	-
3:00 - 3:15	13	6	7	6	32	74	17	33	12				200	556
3:15 - 3:30	11	8	3	3	13	61	24	6	23				152	614
3:30 - 3:35													0	489
3:35 - 4:00													0	352
4:00 - 4:15													0	152
PH Totals	51	22	26	26	60	203	75	97	54	0	0	0		
													Peak Hour Total 614	
													Peak Hour 2:30-3:30 pm	
													Peak Hour Factor 0.77	

Agency: **McCall-Donnelly School District**
 Location: **Payette Lakes Middle School & Barbara Morgan Elementary School Campus**
 Intersection: **PLMS Parking Lot & BMES Access Road**
 Count Date: **Wednesday, 9/22/2021**

TRAFFIC COUNT DATA

September 22, 2021 AM TURNING MOVEMENT COUNT

Time Period	PLMS Parking Lot						BMES Access Road						15 min Intersection Total	1 hr Intersection Total	
	North Bound			South Bound			East Bound			West Bound					
	left	thru	right	left	thru	right	left	thru	right	left	thru	right			
7:15 - 7:30				0		0	13	11			0	0	24	-	
7:30 - 7:45				2		1	31	29			3	1	67	-	
7:45 - 8:00				2		0	56	114			52	17	241	-	
8:00 - 8:15				3		0	38	50			68	9	168	500	
8:15 - 8:30				0		0	2	6			8	0	16	492	
8:30 - 8:45													0	425	
8:45 - 9:00													0	184	
9:00 - 9:15													0	16	
PH Totals	0	0	0	7	0	1	127	199	0	0	131	27			
											Peak Hour Total			492	
(Based on all school intersections)											Peak Hour			7:30-8:30 am	
											Peak Hour Factor			0.51	

September 22, 2021 PM TURNING MOVEMENT COUNT

Time Period	PLMS Parking Lot						BMES Access Road						15 min Intersection Total	1 hr Intersection Total
	North Bound			South Bound			East Bound			West Bound				
	left	thru	right	left	thru	right	left	thru	right	left	thru	right		
2:15 - 2:30				0		1	3	14			4	0	22	-
2:30 - 2:45				0		0	5	31			2	1	39	-
2:45 - 3:00				0		0	28	25			2	0	55	-
3:00 - 3:15				0		3	31	17			58	2	111	227
3:15 - 3:30				0		2	6	6			8	3	25	230
3:30 - 3:35													0	191
3:35 - 4:00													0	136
4:00 - 4:15													0	25
PH Totals	0	0	0	0	0	5	70	79	0	0	70	6		
													Peak Hour Total230	
													Peak Hour2:30-3:30 pm	
													Peak Hour Factor0.52	

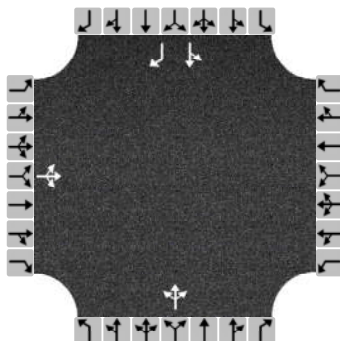
Appendix B
**Traffic Analysis Worksheets (Current Campus
Capacity and Existing Lane Configuration and
Intersection Control)**

HCS7 All-Way Stop Control Report

General Information

Analyst	WJB	Intersection	Samson & Deinhard
Agency/Co.	MDSD	Jurisdiction	City of McCall
Date Performed	11/11/2021	East/West Street	E Deinhard Lane
Analysis Year	2021	North/South Street	S Samson Trail
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.60
Time Analyzed	AM Peak Hour		
Project Description	2021 School Capacity Analysis		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	23	225	26				48	15	110	82	68	300
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR						LTR			LT	R	
Flow Rate, v (veh/h)	457						288			250	500	
Percent Heavy Vehicles	5						5			5	5	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20						3.20			3.20	3.20	
Initial Degree of Utilization, x	0.406						0.256			0.222	0.444	
Final Departure Headway, hd (s)	6.34						6.41			7.01	6.02	
Final Degree of Utilization, x	0.804						0.514			0.487	0.835	
Move-Up Time, m (s)	2.0						2.0			2.3	2.3	
Service Time, ts (s)	4.34						4.41			4.71	3.72	

Capacity, Delay and Level of Service

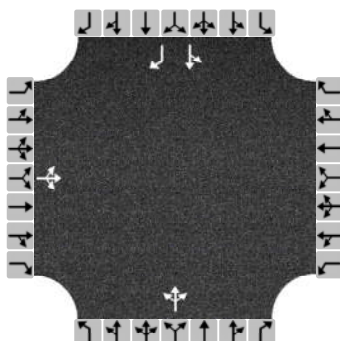
Flow Rate, v (veh/h)	457						288			250	500	
Capacity	568						561			514	598	
95% Queue Length, Q ₉₅ (veh)	7.9						2.9			2.6	8.9	
Control Delay (s/veh)	30.4						16.0			16.2	32.0	
Level of Service, LOS	D						C			C	D	
Approach Delay (s/veh)	30.4						16.0			26.7		
Approach LOS	D						C			D		
Intersection Delay, s/veh LOS	25.8						D					

HCS7 All-Way Stop Control Report

General Information

Analyst	WJB	Intersection	Samson & Deinhard
Agency/Co.	MDSD	Jurisdiction	City of McCall
Date Performed	11/11/2021	East/West Street	E Deinhard Lane
Analysis Year	2021	North/South Street	S Samson Trail
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.77
Time Analyzed	PM Peak Hour		
Project Description	2021 School Capacity Analysis		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	75	160	54				51	22	43	43	84	283
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR						LTR			LT	R	
Flow Rate, v (veh/h)	375						151			165	368	
Percent Heavy Vehicles	5						5			5	5	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20						3.20			3.20	3.20	
Initial Degree of Utilization, x	0.334						0.134			0.147	0.327	
Final Departure Headway, hd (s)	5.53						5.80			6.12	5.24	
Final Degree of Utilization, x	0.576						0.243			0.280	0.535	
Move-Up Time, m (s)	2.0						2.0			2.3	2.3	
Service Time, ts (s)	3.53						3.80			3.82	2.94	

Capacity, Delay and Level of Service

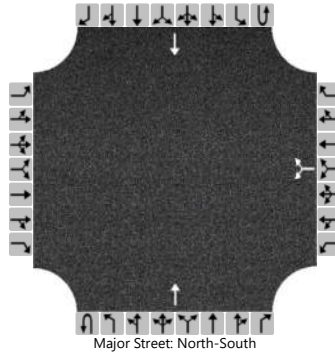
Flow Rate, v (veh/h)	375						151			165	368	
Capacity	652						620			588	687	
95% Queue Length, Q ₉₅ (veh)	3.7						0.9			1.1	3.2	
Control Delay (s/veh)	15.8						10.7			11.2	13.8	
Level of Service, LOS	C						B			B	B	
Approach Delay (s/veh)	15.8						10.7			13.0		
Approach LOS	C						B			B		
Intersection Delay, s/veh LOS	13.6						B					

HCS7 Two-Way Stop-Control Report

General Information

Analyst	WJB	Intersection	Samson & Middle Approach
Agency/Co.	MDSD	Jurisdiction	City of McCall
Date Performed	11/11/2021	East/West Street	Campus Middle Approach
Analysis Year	2021	North/South Street	S Samson Trail
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.63
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	2021 School Capacity Analysis		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR				T				T	
Volume (veh/h)						128		31			38				322	
Percent Heavy Vehicles (%)						5		5								
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2								
Critical Headway (sec)						6.45		6.25								
Base Follow-Up Headway (sec)						3.5		3.3								
Follow-Up Headway (sec)						3.55		3.35								

Delay, Queue Length, and Level of Service

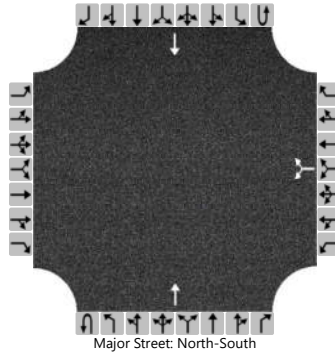
Flow Rate, v (veh/h)						252										
Capacity, c (veh/h)						531										
v/c Ratio						0.48										
95% Queue Length, Q ₉₅ (veh)						2.5										
Control Delay (s/veh)						17.8										
Level of Service (LOS)						C										
Approach Delay (s/veh)					17.8											
Approach LOS					C											

HCS7 Two-Way Stop-Control Report

General Information

Analyst	WJB	Intersection	Samson & Middle Approach
Agency/Co.	MDSD	Jurisdiction	City of McCall
Date Performed	11/11/2021	East/West Street	Campus Middle Approach
Analysis Year	2021	North/South Street	S Samson Trail
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.64
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	2021 School Capacity Analysis		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR				T				T	
Volume (veh/h)						75		22			97				335	
Percent Heavy Vehicles (%)						5		5								
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2								
Critical Headway (sec)						6.45		6.25								
Base Follow-Up Headway (sec)						3.5		3.3								
Follow-Up Headway (sec)						3.55		3.35								

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						152										
Capacity, c (veh/h)						472										
v/c Ratio						0.32										
95% Queue Length, Q ₉₅ (veh)						1.4										
Control Delay (s/veh)						16.2										
Level of Service (LOS)						C										
Approach Delay (s/veh)					16.2											
Approach LOS					C											

HCS7 Two-Way Stop-Control Report

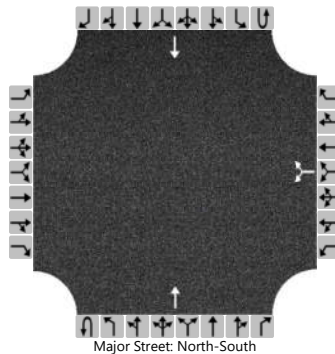
General Information

Analyst	WJB
Agency/Co.	MDSD
Date Performed	11/11/2021
Analysis Year	2021
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	2021 School Capacity Analysis

Site Information

Intersection	Samson & N Approach
Jurisdiction	City of McCall
East/West Street	Campus North Approach
North/South Street	S Samson Trail
Peak Hour Factor	0.65
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR				T				T	
Volume (veh/h)						153		53			69				169	
Percent Heavy Vehicles (%)						5		5								
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2								
Critical Headway (sec)						6.45		6.25								
Base Follow-Up Headway (sec)						3.5		3.3								
Follow-Up Headway (sec)						3.55		3.35								

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						317										
Capacity, c (veh/h)						686										
v/c Ratio						0.46										
95% Queue Length, Q ₉₅ (veh)						2.4										
Control Delay (s/veh)						14.7										
Level of Service (LOS)						B										
Approach Delay (s/veh)					14.7											
Approach LOS					B											

HCS7 Two-Way Stop-Control Report

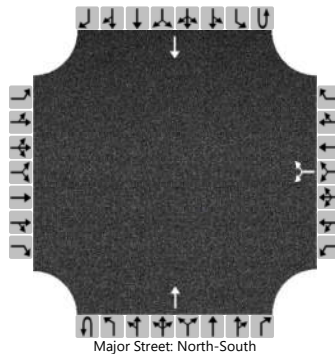
General Information

Analyst	WJB
Agency/Co.	MDSD
Date Performed	11/11/2021
Analysis Year	2021
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	2021 School Capacity Analysis

Site Information

Intersection	Samson & N Approach
Jurisdiction	City of McCall
East/West Street	Campus North Approach
North/South Street	S Samson Trail
Peak Hour Factor	0.72
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR				T				T	
Volume (veh/h)						167		17			119				168	
Percent Heavy Vehicles (%)						5		5								
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2								
Critical Headway (sec)						6.45		6.25								
Base Follow-Up Headway (sec)						3.5		3.3								
Follow-Up Headway (sec)						3.55		3.35								

Delay, Queue Length, and Level of Service

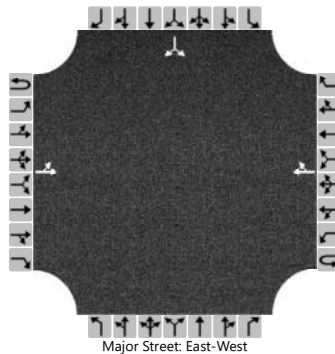
Flow Rate, v (veh/h)						256										
Capacity, c (veh/h)						619										
v/c Ratio						0.41										
95% Queue Length, Q ₉₅ (veh)						2.0										
Control Delay (s/veh)						14.8										
Level of Service (LOS)						B										
Approach Delay (s/veh)					14.8											
Approach LOS					B											

HCS7 Two-Way Stop-Control Report

General Information

Analyst	WJB	Intersection	PLMS & BMES
Agency/Co.	MDSD	Jurisdiction	City of McCall
Date Performed	11/11/2021	East/West Street	BMES
Analysis Year	2021	North/South Street	PLMS
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.51
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	2021 School Capacity Analysis		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		174	241				159	37						8		1
Percent Heavy Vehicles (%)		5												5		5
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.15												6.45		6.25
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.25												3.55		3.35

Delay, Queue Length, and Level of Service

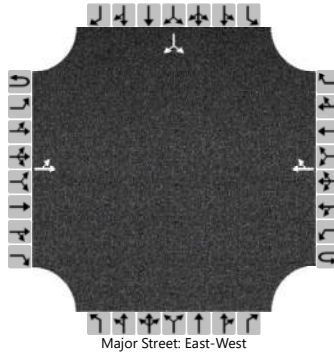
Flow Rate, v (veh/h)		341													18	
Capacity, c (veh/h)		1158													88	
v/c Ratio		0.29													0.20	
95% Queue Length, Q ₉₅ (veh)		1.2													0.7	
Control Delay (s/veh)		9.4													56.1	
Level of Service (LOS)		A													F	
Approach Delay (s/veh)	6.1												56.1			
Approach LOS													F			

HCS7 Two-Way Stop-Control Report

General Information

Analyst	WJB	Intersection	PLMS & BMES
Agency/Co.	MDSD	Jurisdiction	City of McCall
Date Performed	11/11/2021	East/West Street	BMES
Analysis Year	2021	North/South Street	PLMS
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.52
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	2021 School Capacity Analysis		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		146	103				91	13						0		7
Percent Heavy Vehicles (%)		5												5		5
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.15												6.45		6.25
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.25												3.55		3.35

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		281													13	
Capacity, c (veh/h)		1354													847	
v/c Ratio		0.21													0.02	
95% Queue Length, Q ₉₅ (veh)		0.8													0.0	
Control Delay (s/veh)		8.4													9.3	
Level of Service (LOS)		A													A	
Approach Delay (s/veh)	5.7												9.3			
Approach LOS													A			

Appendix C

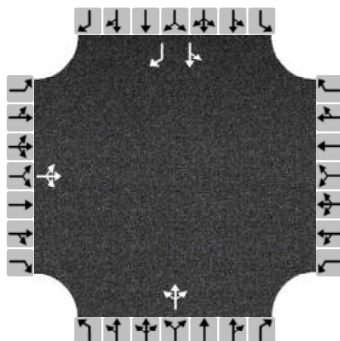
**Traffic Analysis Worksheets (Current Campus
Capacity Redistributed to Reflect a Campus North
Approach Entry Lane to the Middle School)**

HCS7 All-Way Stop Control Report

General Information

Analyst	WJB	Intersection	Samson & Deinhard
Agency/Co.	MDSD	Jurisdiction	City of McCall
Date Performed	11/12/2021	East/West Street	E Deinhard Lane
Analysis Year	2021	North/South Street	S Samson Trail
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.60
Time Analyzed	AM Peak Hour		
Project Description	2021 Redistribution Capacity Analysis		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	118	131	26				48	61	64	48	68	300
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR						LTR			LT	R	
Flow Rate, v (veh/h)	458						288			193	500	
Percent Heavy Vehicles	5						5			5	5	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20						3.20			3.20	3.20	
Initial Degree of Utilization, x	0.407						0.256			0.172	0.444	
Final Departure Headway, hd (s)	6.40						6.58			6.98	6.05	
Final Degree of Utilization, x	0.815						0.527			0.375	0.841	
Move-Up Time, m (s)	2.0						2.0			2.3	2.3	
Service Time, ts (s)	4.40						4.58			4.68	3.75	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	458						288			193	500	
Capacity	562						547			516	595	
95% Queue Length, Q ₉₅ (veh)	8.1						3.1			1.7	9.0	
Control Delay (s/veh)	31.7						16.7			13.8	32.7	
Level of Service, LOS	D						C			B	D	
Approach Delay (s/veh)	31.7						16.7			27.4		
Approach LOS	D						C			D		
Intersection Delay, s/veh LOS	26.6						D					

HCS7 All-Way Stop Control Report

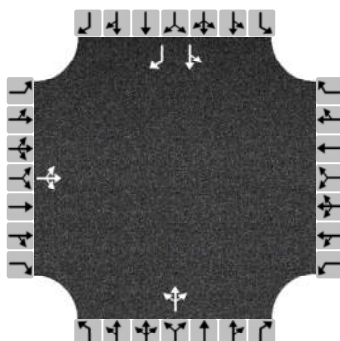
General Information

Analyst	WJB
Agency/Co.	MDSD
Date Performed	11/12/2021
Analysis Year	2021
Analysis Time Period (hrs)	0.25
Time Analyzed	PM Peak Hour
Project Description	2021 Redistribution Capacity Analysis

Site Information

Intersection	Samson & Deinhard
Jurisdiction	City of McCall
East/West Street	E Deinhard Lane
North/South Street	S Samson Trail
Peak Hour Factor	0.77

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	169	66	54				51	48	18	18	84	283
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR						LTR			LT	R	
Flow Rate, v (veh/h)	375						152			132	368	
Percent Heavy Vehicles	5						5			5	5	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20						3.20			3.20	3.20	
Initial Degree of Utilization, x	0.334						0.135			0.118	0.327	
Final Departure Headway, hd (s)	5.56						5.92			6.05	5.25	
Final Degree of Utilization, x	0.579						0.250			0.223	0.536	
Move-Up Time, m (s)	2.0						2.0			2.3	2.3	
Service Time, ts (s)	3.56						3.92			3.75	2.95	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	375						152			132	368	
Capacity	648						609			595	685	
95% Queue Length, Q ₉₅ (veh)	3.7						1.0			0.8	3.2	
Control Delay (s/veh)	15.9						10.9			10.5	13.9	
Level of Service, LOS	C						B			B	B	
Approach Delay (s/veh)	15.9						10.9			13.0		
Approach LOS	C						B			B		
Intersection Delay, s/veh LOS	13.7						B					

HCS7 Two-Way Stop-Control Report

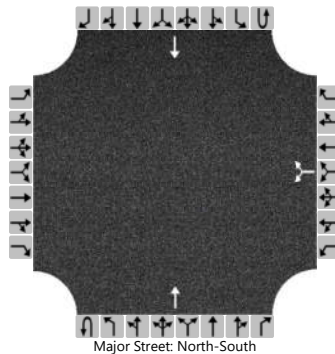
General Information

Analyst	WJB
Agency/Co.	MDSD
Date Performed	11/12/2021
Analysis Year	2021
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	2021 Redistribution Capacity Analysis

Site Information

Intersection	Samson & Middle Approach
Jurisdiction	City of McCall
East/West Street	Campus Middle Approach
North/South Street	S Samson Trail
Peak Hour Factor	0.63
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR				T				T	
Volume (veh/h)						128		31			179				288	
Percent Heavy Vehicles (%)						5		5								
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2								
Critical Headway (sec)						6.45		6.25								
Base Follow-Up Headway (sec)						3.5		3.3								
Follow-Up Headway (sec)						3.55		3.35								

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						252										
Capacity, c (veh/h)						419										
v/c Ratio						0.60										
95% Queue Length, Q ₉₅ (veh)						3.8										
Control Delay (s/veh)						25.7										
Level of Service (LOS)						D										
Approach Delay (s/veh)					25.7											
Approach LOS					D											

HCS7 Two-Way Stop-Control Report

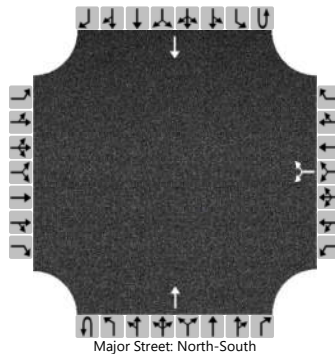
General Information

Analyst	WJB
Agency/Co.	MDSD
Date Performed	11/12/2021
Analysis Year	2021
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	2021 Redistribution Capacity Analysis

Site Information

Intersection	Samson & Middle Approach
Jurisdiction	City of McCall
East/West Street	Campus Middle Approach
North/South Street	S Samson Trail
Peak Hour Factor	0.64
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR				T				T	
Volume (veh/h)						75		22			216				310	
Percent Heavy Vehicles (%)						5		5								
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2								
Critical Headway (sec)						6.45		6.25								
Base Follow-Up Headway (sec)						3.5		3.3								
Follow-Up Headway (sec)						3.55		3.35								

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						152										
Capacity, c (veh/h)						384										
v/c Ratio						0.39										
95% Queue Length, Q ₉₅ (veh)						1.8										
Control Delay (s/veh)						20.3										
Level of Service (LOS)						C										
Approach Delay (s/veh)					20.3											
Approach LOS					C											

HCS7 Two-Way Stop-Control Report

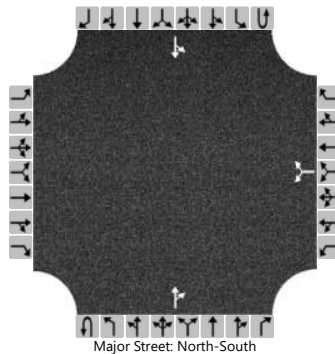
General Information

Analyst	WJB
Agency/Co.	MDSD
Date Performed	11/12/2021
Analysis Year	2021
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	2021 Redistribution Capacity Analysis

Site Information

Intersection	Samson & N Approach
Jurisdiction	City of McCall
East/West Street	Campus North Approach
North/South Street	S Samson Trail
Peak Hour Factor	0.65
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						153		53			69	141		35	135	
Percent Heavy Vehicles (%)						5		5						3		
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.45		6.25						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.55		3.35						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						317								54		
Capacity, c (veh/h)						537								1231		
v/c Ratio						0.59								0.04		
95% Queue Length, Q ₉₅ (veh)						3.8								0.1		
Control Delay (s/veh)						20.9								8.1		
Level of Service (LOS)						C								A		
Approach Delay (s/veh)					20.9								2.0			
Approach LOS					C											

HCS7 Two-Way Stop-Control Report

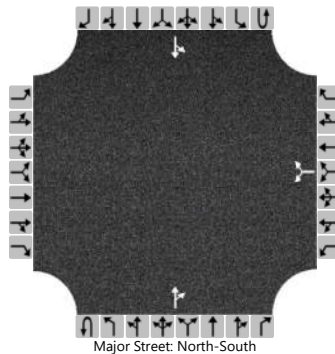
General Information

Analyst	WJB
Agency/Co.	MDSD
Date Performed	11/12/2021
Analysis Year	2021
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	2021 Redistribution Capacity Analysis

Site Information

Intersection	Samson & N Approach
Jurisdiction	City of McCall
East/West Street	Campus North Approach
North/South Street	S Samson Trail
Peak Hour Factor	0.72
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						167		17			119	119		26	143	
Percent Heavy Vehicles (%)						5		5						3		
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.45		6.25						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.55		3.35						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						256								36		
Capacity, c (veh/h)						512								1223		
v/c Ratio						0.50								0.03		
95% Queue Length, Q ₉₅ (veh)						2.7								0.1		
Control Delay (s/veh)						18.8								8.0		
Level of Service (LOS)						C								A		
Approach Delay (s/veh)					18.8								1.5			
Approach LOS					C											

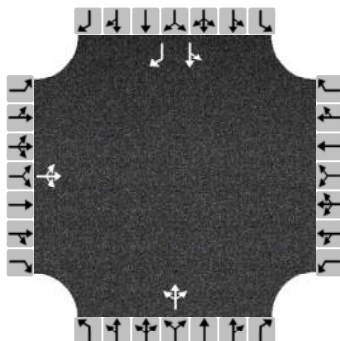
Appendix D
Traffic Analysis Worksheets (Future Campus
Capacity Redistributed to Reflect a Campus North
Approach Entry Lane to the Middle School)

HCS7 All-Way Stop Control Report

General Information

Analyst	WJB	Intersection	Samson & Deinhard
Agency/Co.	MDSD	Jurisdiction	City of McCall
Date Performed	11/12/2021	East/West Street	E Deinhard Lane
Analysis Year	2021	North/South Street	S Samson Trail
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.60
Time Analyzed	AM Peak Hour		
Project Description	2021 Redistribution Future Capacity Analysis		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	155	133	33				60	81	65	48	81	358
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR						LTR			LT	R	
Flow Rate, v (veh/h)	535						343			215	597	
Percent Heavy Vehicles	5						5			5	5	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20						3.20			3.20	3.20	
Initial Degree of Utilization, x	0.476						0.305			0.191	0.530	
Final Departure Headway, hd (s)	6.69						7.06			7.59	6.67	
Final Degree of Utilization, x	0.994						0.673			0.453	1.106	
Move-Up Time, m (s)	2.0						2.0			2.3	2.3	
Service Time, ts (s)	4.69						5.06			5.29	4.37	

Capacity, Delay and Level of Service

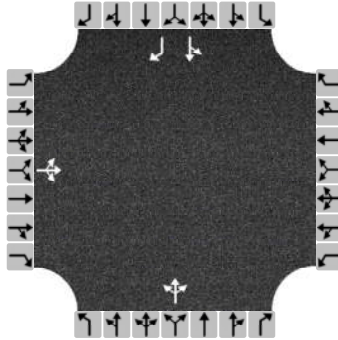
Flow Rate, v (veh/h)	535						343			215	597	
Capacity	538						510			475	540	
95% Queue Length, Q ₉₅ (veh)	14.0						5.0			2.3	19.0	
Control Delay (s/veh)	63.2						23.4			16.4	95.6	
Level of Service, LOS	F						C			C	F	
Approach Delay (s/veh)	63.2						23.4			74.6		
Approach LOS	F						C			F		
Intersection Delay, s/veh LOS	60.6						F					

HCS7 All-Way Stop Control Report

General Information

Analyst	WJB	Intersection	Samson & Deinhard
Agency/Co.	MDSD	Jurisdiction	City of McCall
Date Performed	11/12/2021	East/West Street	E Deinhard Lane
Analysis Year	2021	North/South Street	S Samson Trail
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.77
Time Analyzed	PM Peak Hour		
Project Description	2021 Redistribution Future Capacity Analysis		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	216	65	68				64	61	18	18	103	348
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR						LTR			LT	R	
Flow Rate, v (veh/h)	453						186			157	452	
Percent Heavy Vehicles	5						5			5	5	

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20						3.20			3.20	3.20	
Initial Degree of Utilization, x	0.403						0.165			0.140	0.402	
Final Departure Headway, hd (s)	5.94						6.50			6.49	5.70	
Final Degree of Utilization, x	0.748						0.335			0.283	0.716	
Move-Up Time, m (s)	2.0						2.0			2.3	2.3	
Service Time, ts (s)	3.94						4.50			4.19	3.40	

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	453						186			157	452	
Capacity	606						554			555	632	
95% Queue Length, Q ₉₅ (veh)	6.6						1.5			1.2	6.0	
Control Delay (s/veh)	24.5						12.7			11.7	21.4	
Level of Service, LOS	C						B			B	C	
Approach Delay (s/veh)	24.5						12.7			18.9		
Approach LOS	C						B			C		
Intersection Delay, s/veh LOS	20.0						C					

HCS7 Two-Way Stop-Control Report

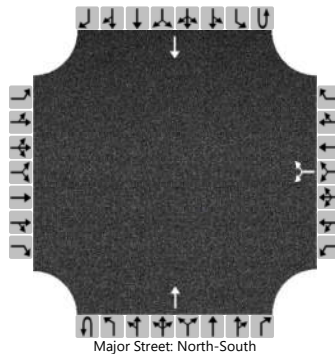
General Information

Analyst	WJB
Agency/Co.	MDSD
Date Performed	11/12/2021
Analysis Year	2021
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	2021 Redistribution Future Capacity Analysis

Site Information

Intersection	Samson & Middle Approach
Jurisdiction	City of McCall
East/West Street	Campus Middle Approach
North/South Street	S Samson Trail
Peak Hour Factor	0.63
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR				T				T	
Volume (veh/h)						128		31			236				359	
Percent Heavy Vehicles (%)						5		5								
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2								
Critical Headway (sec)						6.45		6.25								
Base Follow-Up Headway (sec)						3.5		3.3								
Follow-Up Headway (sec)						3.55		3.35								

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						252										
Capacity, c (veh/h)						323										
v/c Ratio						0.78										
95% Queue Length, Q ₉₅ (veh)						6.3										
Control Delay (s/veh)						46.6										
Level of Service (LOS)						E										
Approach Delay (s/veh)					46.6											
Approach LOS					E											

HCS7 Two-Way Stop-Control Report

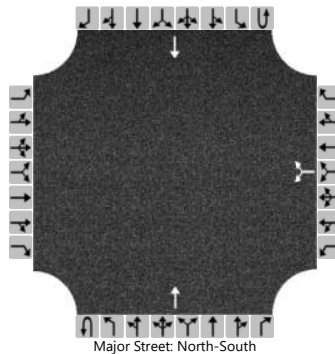
General Information

Analyst	WJB
Agency/Co.	MDSD
Date Performed	11/12/2021
Analysis Year	2021
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	2021 Redistribution Future Capacity Analysis

Site Information

Intersection	Samson & Middle Approach
Jurisdiction	City of McCall
East/West Street	Campus Middle Approach
North/South Street	S Samson Trail
Peak Hour Factor	0.64
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR				T				T	
Volume (veh/h)						75		22			277				394	
Percent Heavy Vehicles (%)						5		5								
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2								
Critical Headway (sec)						6.45		6.25								
Base Follow-Up Headway (sec)						3.5		3.3								
Follow-Up Headway (sec)						3.55		3.35								

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						152										
Capacity, c (veh/h)						288										
v/c Ratio						0.53										
95% Queue Length, Q ₉₅ (veh)						2.9										
Control Delay (s/veh)						30.6										
Level of Service (LOS)						D										
Approach Delay (s/veh)					30.6											
Approach LOS					D											

HCS7 Two-Way Stop-Control Report

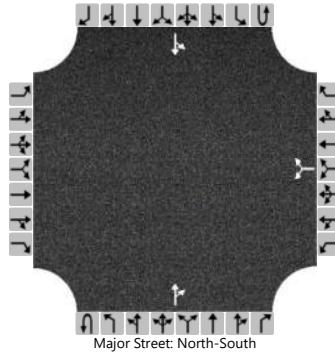
General Information

Analyst	WJB
Agency/Co.	MDSD
Date Performed	11/12/2021
Analysis Year	2021
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	2021 Redistribution Future Capacity Analysis

Site Information

Intersection	Samson & N Approach
Jurisdiction	City of McCall
East/West Street	Campus North Approach
North/South Street	S Samson Trail
Peak Hour Factor	0.65
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						202		70			79	188		46	157	
Percent Heavy Vehicles (%)						5		5						3		
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.45		6.25						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.55		3.35						2.23		

Delay, Queue Length, and Level of Service

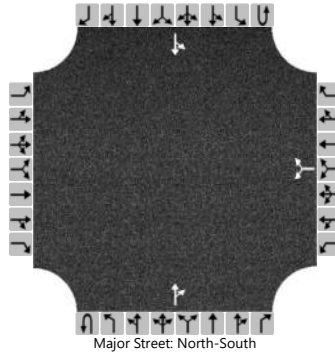
Flow Rate, v (veh/h)						418								71		
Capacity, c (veh/h)						455								1143		
v/c Ratio						0.92								0.06		
95% Queue Length, Q ₉₅ (veh)						10.5								0.2		
Control Delay (s/veh)						54.9								8.4		
Level of Service (LOS)						F								A		
Approach Delay (s/veh)					54.9								2.4			
Approach LOS					F											

HCS7 Two-Way Stop-Control Report

General Information

Analyst	WJB	Intersection	Samson & N Approach
Agency/Co.	MDSD	Jurisdiction	City of McCall
Date Performed	11/12/2021	East/West Street	Campus North Approach
Analysis Year	2021	North/South Street	S Samson Trail
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.72
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	2021 Redistribution Future Capacity Analysis		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						220		22			143	156		34	174	
Percent Heavy Vehicles (%)						5		5						3		
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.45		6.25						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.55		3.35						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						336								47		
Capacity, c (veh/h)						429								1138		
v/c Ratio						0.78								0.04		
95% Queue Length, Q ₉₅ (veh)						6.8								0.1		
Control Delay (s/veh)						37.6								8.3		
Level of Service (LOS)						E								A		
Approach Delay (s/veh)					37.6								1.7			
Approach LOS					E											

Appendix E

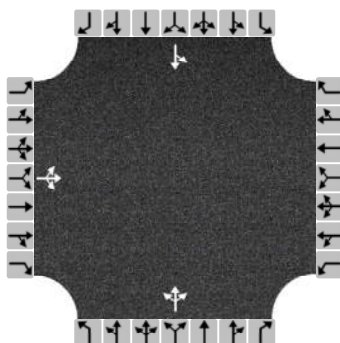
**Traffic Analysis Worksheets (Future Campus
Capacity Redistributed to Reflect a Campus North
Approach Entry Lane to the Middle School and With
Mitigation Along Public Roadways)**

HCS7 All-Way Stop Control Report

General Information

Analyst	WJB	Intersection	Samson & Deinhard
Agency/Co.	MDSD	Jurisdiction	City of McCall
Date Performed	11/12/2021	East/West Street	E Deinhard Lane
Analysis Year	2021	North/South Street	S Samson Trail
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.60
Time Analyzed	AM Peak Hour		
Project Description	2021 Redistribution Future Capacity Mitigation		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	155	133	33				60	81	65	48	81	
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR						LTR			LT		
Flow Rate, v (veh/h)	535						343			215		
Percent Heavy Vehicles	5						5			5		

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20						3.20			3.20		
Initial Degree of Utilization, x	0.476						0.305			0.191		
Final Departure Headway, hd (s)	5.69						5.95			6.38		
Final Degree of Utilization, x	0.845						0.567			0.381		
Move-Up Time, m (s)	2.0						2.0			2.0		
Service Time, ts (s)	3.69						3.95			4.38		

Capacity, Delay and Level of Service

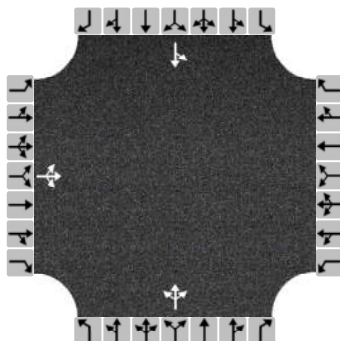
Flow Rate, v (veh/h)	535						343			215		
Capacity	633						605			564		
95% Queue Length, Q ₉₅ (veh)	9.3						3.6			1.8		
Control Delay (s/veh)	32.0						16.5			13.3		
Level of Service, LOS	D						C			B		
Approach Delay (s/veh)	32.0						16.5			13.3		
Approach LOS	D						C			B		
Intersection Delay, s/veh LOS	23.4						C					

HCS7 All-Way Stop Control Report

General Information

Analyst	WJB	Intersection	Samson & Deinhard
Agency/Co.	MDSD	Jurisdiction	City of McCall
Date Performed	11/12/2021	East/West Street	E Deinhard Lane
Analysis Year	2021	North/South Street	S Samson Trail
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.60
Time Analyzed	PM Peak Hour		
Project Description	2021 Redistribution Future Capacity Mitigation		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	216	65	68				64	61	18	18	103	
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR						LTR			LT		
Flow Rate, v (veh/h)	582						238			202		
Percent Heavy Vehicles	5						5			5		

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20						3.20			3.20		
Initial Degree of Utilization, x	0.517						0.212			0.179		
Final Departure Headway, hd (s)	5.33						6.10			6.18		
Final Degree of Utilization, x	0.862						0.404			0.346		
Move-Up Time, m (s)	2.0						2.0			2.0		
Service Time, ts (s)	3.33						4.10			4.18		

Capacity, Delay and Level of Service

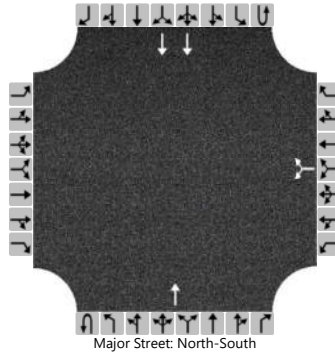
Flow Rate, v (veh/h)	582						238			202		
Capacity	675						590			582		
95% Queue Length, Q ₉₅ (veh)	10.0						1.9			1.5		
Control Delay (s/veh)	32.3						13.2			12.4		
Level of Service, LOS	D						B			B		
Approach Delay (s/veh)	32.3						13.2			12.4		
Approach LOS	D						B			B		
Intersection Delay, s/veh LOS	23.9						C					

HCS7 Two-Way Stop-Control Report

General Information

Analyst	WJB	Intersection	Samson & Middle Approach
Agency/Co.	MDSD	Jurisdiction	City McCall
Date Performed	11/12/2021	East/West Street	Campus Middle Approach
Analysis Year	2021	North/South Street	S Samson Trail
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.63
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	2021 Redistribution Future Capacity Mitigation		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	2	0
Configuration							LR				T				T	
Volume (veh/h)						128		31			236				359	
Percent Heavy Vehicles (%)						5		5								
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.2								
Critical Headway (sec)						6.90		6.30								
Base Follow-Up Headway (sec)						3.5		3.3								
Follow-Up Headway (sec)						3.55		3.35								

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						252										
Capacity, c (veh/h)						424										
v/c Ratio						0.60										
95% Queue Length, Q ₉₅ (veh)						3.8										
Control Delay (s/veh)						25.3										
Level of Service (LOS)						D										
Approach Delay (s/veh)					25.3											
Approach LOS					D											

HCS7 Two-Way Stop-Control Report

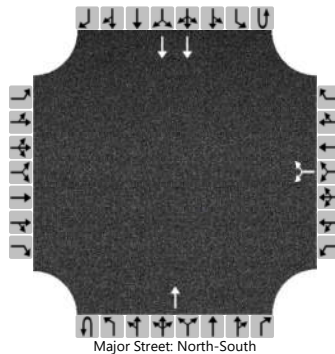
General Information

Analyst	WJB
Agency/Co.	MDSD
Date Performed	11/12/2021
Analysis Year	2021
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	2021 Redistribution Future Capacity Mitigation

Site Information

Intersection	Samson & Middle Approach
Jurisdiction	City of McCall
East/West Street	Campus Middle Approach
North/South Street	S Samson Trail
Peak Hour Factor	0.63
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	2	0
Configuration							LR				T				T	
Volume (veh/h)						75		22			277				394	
Percent Heavy Vehicles (%)						5		5								
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.5		6.2								
Critical Headway (sec)						6.90		6.30								
Base Follow-Up Headway (sec)						3.5		3.3								
Follow-Up Headway (sec)						3.55		3.35								

Delay, Queue Length, and Level of Service

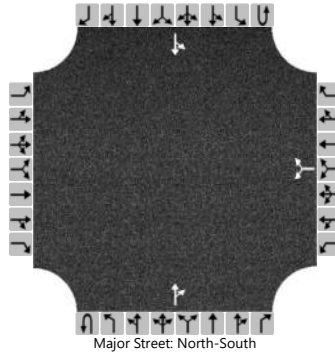
Flow Rate, v (veh/h)						154										
Capacity, c (veh/h)						377										
v/c Ratio						0.41										
95% Queue Length, Q ₉₅ (veh)						1.9										
Control Delay (s/veh)						21.0										
Level of Service (LOS)						C										
Approach Delay (s/veh)					21.0											
Approach LOS					C											

HCS7 Two-Way Stop-Control Report

General Information

Analyst	WJB	Intersection	Samson & North Approach
Agency/Co.	MDSD	Jurisdiction	City of McCall
Date Performed	11/12/2021	East/West Street	Campus North Approach
Analysis Year	2021	North/South Street	S Samson Trail
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.65
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	2021 Redistribution Future Capacity Mitigation		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						202		70			79	188		46	157	
Percent Heavy Vehicles (%)						5		5						3		
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Left Only								2							

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.45		6.25						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.55		3.35						2.23		

Delay, Queue Length, and Level of Service

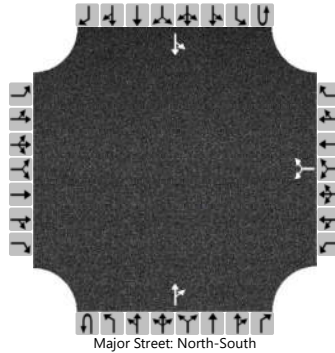
Flow Rate, v (veh/h)						418								71		
Capacity, c (veh/h)						600								1143		
v/c Ratio						0.70								0.06		
95% Queue Length, Q ₉₅ (veh)						5.6								0.2		
Control Delay (s/veh)						23.7								8.4		
Level of Service (LOS)						C								A		
Approach Delay (s/veh)					23.7								2.4			
Approach LOS					C											

HCS7 Two-Way Stop-Control Report

General Information

Analyst	WJB	Intersection	Samson & North Approach
Agency/Co.	MDSD	Jurisdiction	City of McCall
Date Performed	11/12/2021	East/West Street	Campus North Approach
Analysis Year	2021	North/South Street	S Samson Trail
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.65
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	2021 Redistribution Future Capacity Mitigation		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						220		22			143	156		34	174	
Percent Heavy Vehicles (%)						5		5						3		
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Left Only								2							

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.45		6.25						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.55		3.35						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						372								52		
Capacity, c (veh/h)						558								1096		
v/c Ratio						0.67								0.05		
95% Queue Length, Q ₉₅ (veh)						5.0								0.2		
Control Delay (s/veh)						23.4								8.4		
Level of Service (LOS)						C								A		
Approach Delay (s/veh)					23.4								1.8			
Approach LOS					C											