

AGENDA
Special Meeting
December 29, 2023 at 9:00 AM
Legion Hall – Below City Hall
216 East Park Street
McCall, ID
AND MS TEAMS Virtual

#### **ANNOUNCEMENT:**

American with Disabilities Act Notice: The City Council Meeting room is accessible to persons with disabilities. If you need assistance, please contact City Hall at 634-7142 at least 48 hours prior to the meeting. Council Meetings are available for in person and virtual attendance. Any member of the public can join and listen only to the meeting at 5:30 pm by calling in as follows: Dial 208-634-8900 when asked for the Conference ID enter: 353 662 502#

Or you may watch live by clicking this link:

 $\underline{https://youtube.com/live/pr0Kli584L4?feature=share}$ 

#### **BUSINESS AGENDA**

AB 23-266 Request to Approve Resolution 23-30 - Southeast McCall Buildout Transportation Recommendations (ACTION ITEM)

AB 23-265 Request to Approve Resolution 23-29 – Adopting a Revised Roadways Functional Classifications Map and Update the Transportation Master Plan (ACTION ITEM)

#### **WORK SESSION**

AB 23-267 Transportation and Land Use

#### **ADJOURN**

# McCALL CITY COUNCIL AGENDA BILL

216 East Park Street McCall, Idaho 83638

Number AB 23-266

Meeting Date December 29, 2023

	AGENDA ITEM INFO	RMATION		
SUBJECT:  Request to Approve Resolution 23-30 - Southeast  McCall Buildout Transportation		Department Approvals	Initials	Originator or Supporter
		Mayor / Council		
		City Manager	ABS	
Recommendations	Clerk			
		Treasurer		
		Community Development		
		Police Department		
		Public Works	me Ins	Originator
		Golf Course		
COST IMPACT:	N/A	Parks and Recreation		
<b>FUNDING</b>	N/A	Airport		
SOURCE:		Library		
TIMELINE:	ASAP	Information Systems		
		Grant Coordinator		

#### **SUMMARY STATEMENT:**

Horrocks Engineers, in collaboration with City engineering and planning staff have developed the *Southeast McCall Buildout Transportation Recommendations* memorandum (see attached). This report evaluates various opportunities to expand existing transportation facilities throughout the southeast region of the City to meet anticipated future traffic volumes from both infill and new development.

The resulting report identifies that extensions of Samson Trail, Floyde Street, Davis Street and Deinhard Lane will improve traffic to and from the study area. These extensions will also require significant intersection improvements at all major intersections. However, by building these transportation facilities, over time, and in collaboration with future developments, some mitigation of traffic congestion on 3<sup>rd</sup> Street (north of Deinhard) can be achieved. Equally important, more efficient transportation routes (for both vehicle and multi-modal users) in the southeast area of town will be made.

Staff presented this draft report to Council on April 28, 2023. Council requested Staff to finalize the report in preparation for formal adoption. Since then, Staff worked with Horrocks to finalize the report (see attached). No significant changes were made from the April draft. Once adopted the report will serve as a planning tool to further support the goals in the Transportation Master Plan and the Comprehensive Plan.

#### **RECOMMENDED ACTION:**

Approve Resolution 23-30 adopting the Southeast McCall Buildout Transportation Recommendations Memorandum, dated September 5, 2023 as a supplemental document to the City's Transportation Master Plan.

RECORD OF COUNCIL ACTION					
<b>MEETING DATE</b>	ACTION				
April 28, 2023	None, For Council discussion and to gain input and direction for finalizing the report for				
	formal adoption				



A RESOLUTION OF THE CITY OF McCALL, VALLEY COUNTY, STATE OF IDAHO, APPROVING THE SOUTHEAST MCCALL BUILDOUT TRANSPORTATION RECOMENNDATIONS MEMORANDUM, AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, Resolution 17-27 adopted the 2017 Transportation Master plan that was prepared by Logan Simpson and sub-consultants Kittleson Associates; and

WHEREAS, the City Council of the City of McCall has determined that additional information and engineering would benefit future land development, transportation planning, and future capital projects; and

WHEREAS, Horrocks has an engineering services agreement with the City of McCall; and

WHEREAS, Horrocks has worked with the City of McCall on traffic data collection and evaluations to determine future buildout conditions of McCall generally south of Wooley Avenue and east of State Highway 55; and

WHEREAS, Horrocks has compiled the data collected and provided a technical memorandum of recommendations that will be utilized as a supplemental document to the adopted Transportation Master Plan; and

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF McCALL, IDAHO, AS FOLLOWS:

Section 1: That Southeast McCall Buildout Transportation Recommendations Memorandum, dated September 5, 2023 is adopted as a supplemental document to the City's Transportation Master Plan and attached hereto as Exhibit A.

Section 2: This resolution shall be in full force and effect immediately upon its adoption and approval.

PASSED and approved by the City Council of the City of McCall this 29 day of December 2023.

	CITY OF MCCALL Valley County, Idaho	
ATTEST:	Robert S. Giles, Mayor	
BessieJo Wagner, City Clerk		



## **MEMORANDUM**

**TO:** Brian Parker, City Planner

Morgan Stroud, Staff Engineer

Nathan Stewart, Public Works Director, City Engineer

**FROM:** Aron Baker, P.E.

**DATE:** September 5, 2023

SUBJECT: Southeast McCall Buildout Transportation Recommendations

#### INTRODUCTION

Horrocks Engineers has been working with the City of McCall, Idaho to determine a plan to enhance its transportation system in the growing southeast segment of the city. With schools in operation, and plans to develop larger areas for residential and commercial uses, a transportation system needs to meet the demands that growth presents.

A traffic model was built using Vistro 2022 traffic analysis software, and a sample of roadway segments and intersections were analyzed to determine the weak points of the roadway network. The purpose of this memo is to report on the findings of the traffic model and recommend improvements accordingly.

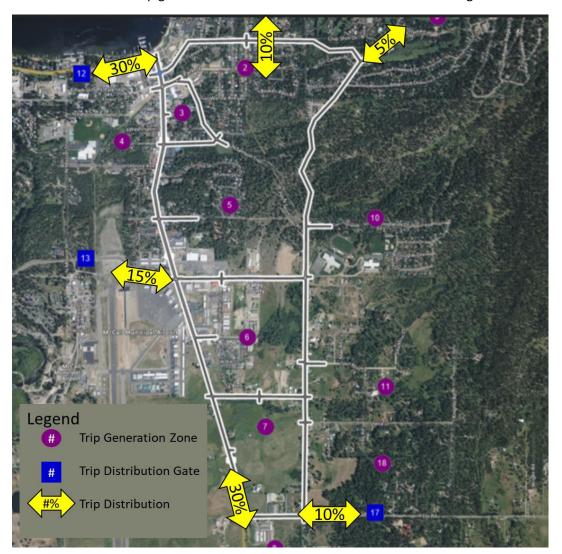
#### **METHODOLOGY**

Existing conditions in McCall were modeled by collecting turning movement count data from StreetLight InSight and ground counts performed by the City of McCall. StreetLight is a data collection company that uses Bluetooth devices throughout North America to estimate vehicle and pedestrian counts in a study area and evaluates the origins and destinations of the traffic. The collected data is anonymized and validated against permanent traffic counting stations in the area. The processed data from StreetLight includes intersection turning movement counts and origin/destination analysis. As part of this study, StreetLight data compiled from 2021 was used to estimate turning movement counts at four study intersections:

- North 3<sup>rd</sup> Street & Railroad
- Wooley Avenue & Samson Trail
- Samson Trail & Deinhard Lane
- North 3<sup>rd</sup> Street & Elo Road

The turning movement counts were compared with the daily traffic counts that were collected by the City of McCall in 2022. StreetLight data also provided an estimated trip distribution throughout the City of McCall using an origin/destination analysis. With the StreetLight data and the counts from the City of McCall an existing traffic model was built using PTV Vistro 2022 traffic modeling software.

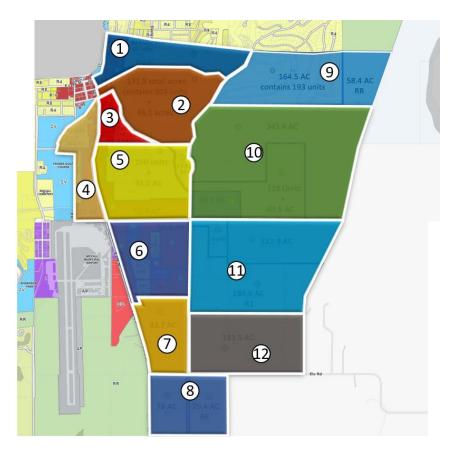
The Vistro model is built with trip generation zones and trip distribution gates. Each zone is assigned a number of trips, then the trip distribution is used to distribute the trips to the gates. The estimated trip distribution and the trip generation zones used in this model are shown in Figure 1.



**Figure 1-Trip Distribution** 

The existing counts and trip distribution through the southeast side of McCall were used as a base for the buildout volumes. The buildout volumes were assumed based on existing traffic patterns, land areas, and zoning densities. Land uses were discussed with city staff to allow conversation on what zoning densities are envisioned for the undeveloped areas.

The City of McCall Zoning map was divided into traffic analysis zones (TAZ) and used to estimate maximum buildout densities by zone. Figure 2 shows the TAZ map in southeast McCall. The acreage of the zone was multiplied by the anticipated density from the zoning map, and added to any existing units, if applicable.



**Figure 2-Traffic Analysis Zones** 

Understanding that not every zone would be able to meet its maximum density because of topography, ownership, and other factors, staff provided information on how much of each zone they expected to be built as a percentage. After the initial analysis by Horrocks Engineers, the full buildout of southeast McCall was determined to be higher than what is realistically expected in McCall. The volumes were larger than expected for the buildout of McCall as many of the homes in McCall are second homes and are only used periodically. To account for second homes in McCall and reduce the buildout volumes to a reasonably expected buildout for the study area, it was recommended by City staff that the maximum buildout volumes be reduced to represent 60 percent occupancy of the residential units in the buildout condition. The buildout densities and volumes by TAZ are provided in the Appendix.

To confirm the accuracy of the estimated buildout volumes, the volumes from this analysis were compared with the 2040 volume projections Horrocks developed for ITD in their design of the SH-55 and Deinhard Lane intersection which is being constructed in Summer 2023. It was confirmed that the buildout volumes from this study at the intersection of Deinhard Lane and SH-55 were comparable to the 2040 volumes anticipated in the Deinhard Lane and SH-55 intersection study.

Finally, to improve the traffic projections for TAZ 10 and TAZ 11, input was received from a potential future development to the east, which plans to construct residential units east of Samson Trail. The potential development also provided an expected trip distribution for any potential development of their land. The expected trip distribution for each TAZ and the volumes from the potential future development were implemented in the 60 percent buildout model.

#### **TRAFFIC ANALYSIS**

#### **Future Build Scenarios**

The projected buildout volumes were applied to multiple scenarios with potential future roadway connections through McCall. Five roadway network scenarios were analyzed as described below:

#### 1. No Improvements

a. Assumes 60 percent buildout occupancy with no additional connections or extensions of the existing roadway network

#### 2. Floyde Street Connection

- a. Assumes 60 percent buildout occupancy
- b. Assumes the extension of Floyde Street to the east to connect with the intersection of Woodlands Drive and Samson Trail as a two-way or four-way stop.
- 3. Floyde Street, Samson Trail, and Davis Avenue Connections
  - a. Assumes 60 percent buildout occupancy
  - b. Assumes the extension of Floyde Street to the east to connect with the intersection of Woodlands Drive and Samson Trail as a two-way or four-way stop.
  - Assumes the extension of Samson Trail from the intersection of Samson Trail and Colorado Street to the southeast to connect with the extension of Floyde Street as a Tintersection.
  - d. Assumes the extension of Davis Avenue to the south to connect with the extension of Samson Trail as a T-intersection.

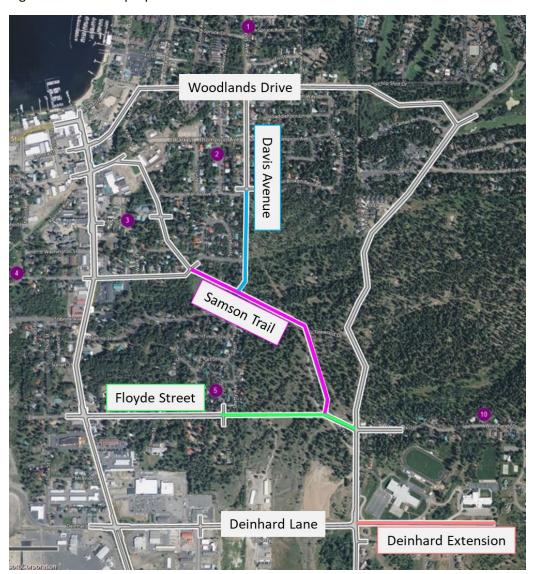
### 4. Deinhard Lane Extension

- a. Assumes 60 percent buildout occupancy
- b. Assumes Deinhard Lane is extended to the east from its intersection with Samson Trail to provide access to the future development to the east as well as the existing schools
  - i. Assumes that approximately 50 percent of the future development traffic east of Samson Trail will use the Deinhard Lane Extension
- 5. Floyde Street, Samson Trail, and Davis Avenue Connections with the Deinhard Lane Extension
  - a. Assumes 60 percent buildout occupancy
  - b. Assumes the extension of Floyde Street to the east to connect with the intersection of Woodlands Drive and Samson Trail as a two-way or four-way stop.
  - Assumes the extension of Samson Trail from the intersection of Samson Trail and Colorado Street to the southeast to connect with the extension of Floyde Street as a Tintersection.



- d. Assumes the extension of Davis Avenue to the south to connect with the extension of Samson Trail as a T-intersection.
- e. Assumes Deinhard is extended to the east from its intersection with Samson Trail to provide access to the future development traffic to the east of Samson Trail as well as the existing schools
  - i. Assumes 45 to 50 percent of the future development traffic will use the Deinhard Lane Extension

Figure 3 shows the proposed connections for the buildout scenarios.



**Figure 3-Proposed Connections for Buildout Scenarios** 

Table 1 shows a summary of the five scenarios and the roadway connections that are included in each scenario.

**Table 1- Buildout Scenario Summary** 

Projects	Existing	No Improvements	Floyde St Connection	Floyde St, Samson Tr, Davis Ave Connections	Deinhard Ln Extension	Floyde St, Samson Tr, Davis Ave Connections, AND Deinhard Ln Extension
Floyde Street Connection			x	x		x
Samson Trail Connection				x		x
Davis Connection				x		х
Deinhard Extension					х	х

#### **Roadway Segment Operations**

To evaluate the operation of the roadway segments in each scenario, each scenario was analyzed using the daily volume of the study roadways. The daily roadway volumes for southeast McCall were estimated by multiplying the PM peak hour volumes by ten, which is the standard method for calculating daily volumes for a high-level planning analysis.

Table 2 compares the daily roadway volumes for each scenario to the "No Improvements" scenario. Yellow represents an increase in volume from the "No Improvements" scenario and blue represents a decrease in volume from the "No Improvements" scenario. Darker shades of blue and yellow are volume changes that are greater than +/- 25%. Gray shading demonstrates relatively little change in volume compared to the "No Improvements" scenario. The "Existing" scenario stands alone and serves as a base comparison.

**Table 2- Daily Roadway Volumes by Segment** 

2040 Daily Roadway Volumes	Existing	No Improvements	Floyde St Connection	Floyde St, Samson Tr, Davis Ave Connections	Deinhard Ln Extension	Floyde St, Samson Tr, Davis Ave Connections, AND Deinhard Ln Extension
N 3rd Street, north of Park Street	12,000	20,800	17,800	16,300	18,100	17,900
N 3rd Street, north of Colorado Street	12,300	24,000	23,400	17,700	23,000	20,500
N 3rd Street, north of Floyde Street	12,400	24,400	23,500	18,700	23,600	20,400
N 3rd Street, north of Deinhard Lane	12,600	24,600	22,000	19,200	24,300	20,000
N 3rd Street, north of Krahn Lane	10,900	17,700	15,600	17,800	17,100	15,200
N 3rd Street, north of Elo Road	10,300	18,200	15,700	14,600	16,600	14,900
Wooley Ave, east of N 3rd Street	7,700	10,700	11,000	7,800	11,000	8,700
Wooley Ave, west of Spring Mtn Ranch	2,400	3,700	3,900	3,200	4,200	3,600
Davis Street, south of Wooley Ave	Local Road	n/a	n/a	3,800	n/a	1,400
Spring Mtn Ranch, south of Wooley Ave	2,600	5,500	5,400	4,900	5,400	5,200
Spring Mtn Ranch, north of Woodlands	2,600	5,600	5,400	4,800	5,400	5,300
Samson Trail, north of Deinhard Lane	3,400	6,900	7,700	10,000	6,000	9,300
Samson Trail, north of Krahn Lane	3,600	7,800	9,900	10,900	8,500	10,500
Samson Trail, north of Elo Road	3,800	8,500	10,300	11,400	9,400	11,100
Samson Trail, west of Spring Mtn Ranch	n/a	n/a	n/a	5,600	n/a	3,400
Floyde Street, west of Samson Trail	n/a	n/a	5,000	4,900	5,000	6,300
Deinhard Lane, east of N 3rd Street	5,000	15,400	11,300	9,600	15,400	10,700
Deinhard Lane, west of Samson Trail	3,000	9,300	6,900	5,700	9,300	6,400
Deinhard Lane, east of Samson Trail	Local Road	n/a	n/a	n/a	5,500	4,600
Fox Ridge Lane, east of Samson Trail	Local Road	2,100	2,100	2,100	530	940
Stockton Drive, east of Samson Trail	Local Road	3,400	3,400	3,200	2,200	2,300
Sheila Lane, east of Samson Trail	Local Road	1,100	1,100	1,100	1,400	1,500
Krahn Lane, east of N 3rd Street	880	2,500	1,800	1,200	1,300	1,200
Elo Road, east of N 3rd Street	1,300	2,800	3,300	3,800	3,800	3,800

The daily volumes were then compared to Table 3 to determine the Level of Service of the roadway segment. It was assumed that all of the roadways in McCall are two lanes, except for North 3<sup>rd</sup> Street north of Colorado Street. Additional roadway capacity tables are included in the Appendix for reference. Roadway capacity is described as the Level of Service (LOS) with LOS A being free-flowing traffic, and LOS E being unacceptable delays and congestion.

**Table 3-Roadway Segment Level of Service-Daily Traffic Capacity** 

	Rural						
2 Lane			3 Lane				
	Freeway	Arterial	Collector		Freeway	Arterial	Collector
LOS A	NA	5,300	3,700	LOS A	NA	5,800	4,200
LOS B	NA	8,900	5,800	LOS B	NA	9,500	6,300
LOS C	NA	12,900	8,100	LOS C	NA	14,000	9,100
LOS D	NA	17,000	10,500	LOS D	NA	18,300	11,800
LOS E	NA	21,000	12,900	LOS E	NA	22,600	14,500

#### **NO IMPROVEMENTS**

Without any improvements, North 3<sup>rd</sup> Street is expected to have between 20,000 and 24,000 vehicles, which would be a LOS E or F based on Table 3. The City of McCall and ITD are not planning to widen North 3<sup>rd</sup> Street beyond three lanes, so any mitigations to the area will need to be based on additional connections through McCall or intersection-related improvements.

#### **FLOYDE STREET CONNECTION**

With the addition of the Floyde Street connection, the volumes on North 3<sup>rd</sup> Street decreased as shown in Figure 4. The addition of a connection between Samson Trail and North 3<sup>rd</sup> Street allows more vehicles to stay on Samson Trail and use the Floyde Street connection instead of Deinhard Lane. The volumes on Deinhard also decrease by 2,000-4,000 vehicles.

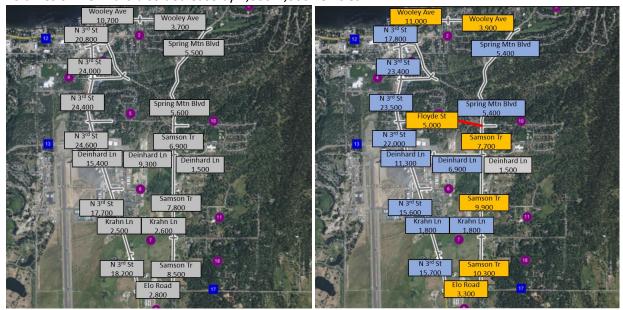


Figure 4- Roadway Volume Comparison with Floyde Connection

#### FLOYDE STREET, DAVIS AVENUE, AND SAMSON TRAIL CONNECTIONS

Figure 5 shows the comparison for the No Improvement volumes and the Floyde Street, Davis Avenue, and Samson Trail connections. These connections reduce the volumes on North 3<sup>rd</sup> Street by 4,000 to 6,000 vehicles per day, which improves the LOS from LOS E or F to LOS D. The volumes on Deinhard Lane are also reduced by 3,000 to 6,000 vehicles per day.



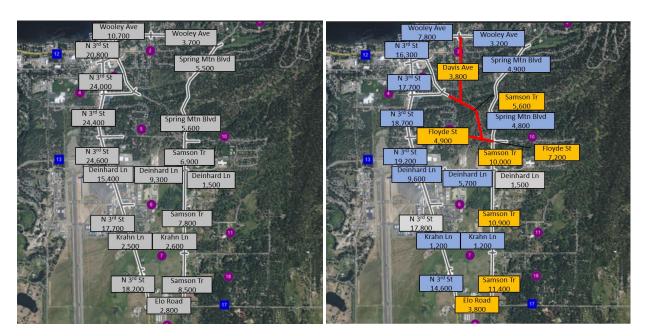


Figure 5- Roadway Volume Comparison with Floyde Street, Davis Avenue, and Samson Trail Connections

#### **DEINHARD EXTENSION**

In the model trip distribution, it was assumed that the school traffic on the Deinhard Lane Extension would be 25 percent of the total traffic from the area east of Samson Trail. No other development or residential areas were assumed to use the Deinhard Lane Extension except for the school. Figure 6 shows the trip distribution used in the model without the Deinhard Extension.

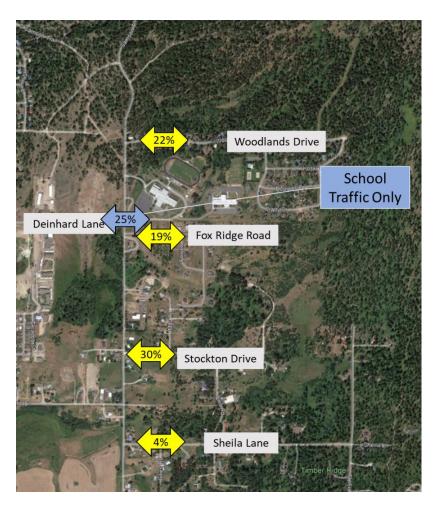


Figure 6-Future Development in East McCall Trip Distribution without the Deinhard Extension

With the proposed trip distribution, the traffic from any development to the east of Samson Trail is expected to use the local roadways to access Samson Trail. The majority of the traffic will use Stockton Drive, Fox Ridge Road, and Woodlands Drive. The school traffic will be the only traffic expected on Deinhard Lane east of Samson Trail.

With the addition of the Deinhard extension, it was assumed that fifty percent of the traffic on the east side of Samson Trail would use Deinhard Lane, which concentrates the traffic to Deinhard Lane instead of spreading it to Stockton Lane, Sheila Lane, and Woodlands Drive, which are all classified as local roads. Impacting these roadways with new development traffic may not be in the city's and these neighborhoods' best interest as these smaller streets likely were not intended to accommodate higher volumes of traffic, so concentrating the traffic to Deinhard Lane, a collector road, may be an acceptable strategy. The trip distribution with the Deinhard Lane Extension is shown in Figure 7. The direct impact of development to the east on Stockton Lane, Sheila Lane, and Woodlands Drive should be analyzed as a part of any traffic impact studies that are done for incoming development.

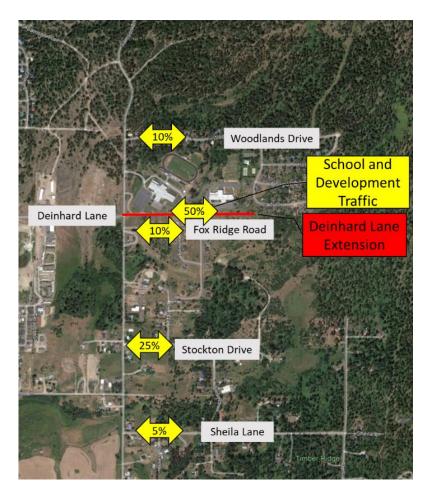


Figure 7- Future Development in East McCall Trip Distribution with the Deinhard Lane Extension

Figure 8 shows the traffic volumes for the Deinhard Extension scenario. Traffic on Samson Trail continues to use Deinhard Lane to cross to North 3<sup>rd</sup> Street, so an extension at Deinhard does not decrease the volumes on Deinhard Lane or North 3<sup>rd</sup> Street by itself. While the Deinhard Lane Extension does not decrease the volumes, it concentrates the traffic from any development to the east of Samson Trail to one collector road instead of allowing it to spread to other local roads like Woodland Drive, Stockton Drive, and Sheila Lane.



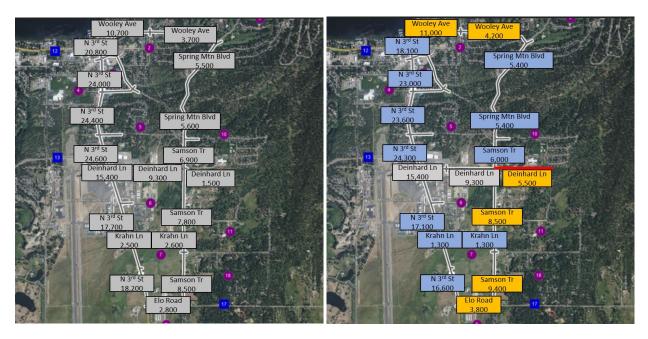


Figure 8-Roadway Volume Comparison with Deinhard Extension

With all of the proposed connections, the volumes on North 3<sup>rd</sup> Street decreased by 3,000 to 5,000 vehicles per day, as shown in Figure 9. The traffic on Samson Trail increases as vehicles can stay on Samson Trail to use Floyde Street or Samson Trail to access North 3<sup>rd</sup> Street. With approximately 10,000-11,000 vehicles on South Samson Trail, the LOS is expected to be LOS D or LOS E. With three lanes, Samson Trail would operate at LOS C or LOS D. Improvements to the intersections on Samson Trail may improve the delays at the intersections, but without being widened, Samson Trail will be at capacity. More mitigation and improvements may be needed as more traffic is routed to Samson Trail. North 3<sup>rd</sup> Street is not planned to be widened, so spreading the traffic to another route is a way to reduce delays on North 3<sup>rd</sup> Street.

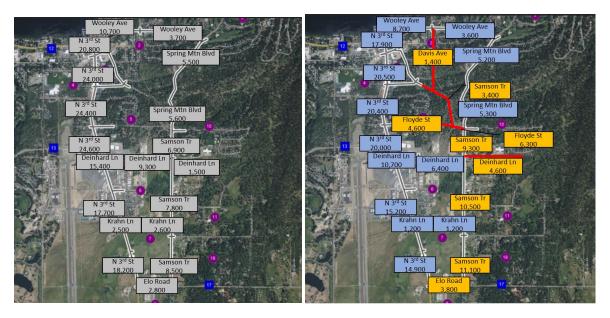


Figure 9- Roadway Volume Comparison with Floyde Street, Davis Avenue, and Samson Trail Connections and Deinhard Extension

#### **Intersection Operations**

In addition to the daily volumes, nine study intersections were analyzed to determine the Level of Service. Intersection Level of Service is based on average delay per vehicle at an intersection. For each scenario, it was assumed that the study intersections were mitigated to achieve an acceptable amount of delay (LOS A thru D). Table 4 shows the intersection LOS classifications based on the delay and the average delay per vehicle at an intersection. The mitigations required to achieve an acceptable LOS at the study intersections are shown in Table 5.

**Table 4-Intersection Level of Service-Average Delay per Vehicle** 

Seconds of Delay	Average Control Delay (sec/veh)		
Seconds of Delay	Signalized	Unsignalized	
LOS A	≤ 10	≤ 10	
LOS B	>10-20	>10-15	
LOS C	>20-35	>15-25	
LOS D	>35-55	>25-35	
LOS E	>55-80	>35-50	
LOS F	>80	>50	

**Table 5-Required Traffic Control to Achieve Acceptable LOS** 

Minimum Required Traffic Control	No Improvements	Deinhard Ln Extension Only	Floyde St, Samson Tr, Davis Ave Connections	Floyde St, Samson Tr, Davis Ave Connections, AND Deinhard Ln Extension
Railroad Avenue & 3rd Street	Signalized, Dedicated Left- Turn Lanes	Signalized, Dedicated Left-Turn Lanes	Signalized, Dedicated Left- Turn Lanes	Signalized, Dedicated Left-Turn Lanes
Floyde Street & 3rd Street	Signalized, Dedicated Left- Turn Lanes	Signalized, Dedicated Left-Turn Lanes	Signalized, Dedicated Left- Turn Lanes	Signalized, Dedicated Left-Turn Lanes
Deinhard & 3rd Street	Signalized, To Be Upgraded	Signalized, To Be Upgraded	Signalized, To Be Upgraded	Signalized, To Be Upgraded
Krahn Lane & 3rd Street	Signalized	Signalized	Signalized	Signalized
Wooley Avenue & Spring Mountain Ranch	No Changes	No Changes	No Changes	No Changes
Woodlands Drive/Floyde Street & Spring Mountain Ranch	No Changes	No Changes	All Way Stop	All Way Stop
Samson Trail & Deinhard Lane	Signalized, Dedicated Left- Turn Lanes	Signalized, Dedicated Left-Turn Lanes	Signalized, Dedicated Left- Turn Lanes	Signalized, Dedicated Left-Turn Lanes
Samson Trail & Stockton Drive	No Changes	No Changes	All Way Stop	All Way Stop
Samson Trail & Sheila Lane	No Changes	No Changes	No Changes	No Changes

To achieve the minimum acceptable LOS, following were recommended at the study intersections:

• The study intersections on North 3<sup>rd</sup> Street will need to be signalized and improved to include dedicated left turn lanes. As growth occurs on North 3<sup>rd</sup> Street and the side streets, signal

warrant analyses should be performed to determine when each intersection should be signalized.

- The intersection of Wooley Avenue and Spring Mountain Boulevard is not expected to need improvements. Analysis of the traffic conditions may be needed in the future to confirm.
- The intersections of Woodlands Drive/Floyde Street and Spring Mountain Boulevard/Samson Trail and Samson Trail and Stockton Lane are expected to require all-way stops.
- The intersection of Samson Trail and Deinhard Lane is planned to be signalized with dedicated left-turn lanes. The alignment of the existing intersection is not ideal as the intersection is offset east/west. This introduces possible conflicts as cars travel in opposite directions, as they need to move over while traveling through the intersection. Improvements to the intersection will need to include realignment of either the east or west leg to remove the offset. A roundabout is also an acceptable solution to improve the delay, however, challenges in topography, the east/west offset, and the location of Fox Ridge Road may restrict the possibility of a roundabout. Further study would need to be employed to establish how a roundabout could be configured in this location.

The mitigations recommended are based on a high-level analysis of the study area. Additional microanalysis of each intersection is recommended in the future as traffic increases to confirm that the recommended mitigations will function as expected in this analysis. Table 6 shows the LOS for each study intersection assuming it has been improved to the standards discussed previously.

**Table 6- Average Delay per Vehicle at the Mitigated Study Intersections** 

2040 Average Delay per Vehicle	No Improvements	Deinhard Ln Extension Only	Floyde St, Samson Tr, Davis Ave Connections	Floyde St, Samson Tr, Davis Ave Connections, AND Deinhard Ln Extension
Railroad Avenue & 3rd Street (Signalized)	48.3	44.2	20.5	53.4
Floyde Street & 3rd Street (Signalized)	15.9	15.2	12.2	56.8
Deinhard & 3rd Street (Signalized)		٠	•	•
Krahn Lane & 3rd Street (Signalized)	7.8	5.8	5.2	7.7
Wooley Avenue & Spring Mountain Boulevard (Unsignalized)	16.5	18.5	15.6	17.3
Woodlands Drive/Floyde Street & Spring Mountain Boulevard (Unsignalized)	14.4	13.1	14.9	13.1
Samson Trail & Deinhard Lane (Signalized)	9.3	8.7	8.2	8.6
Samson Trail & Stockton Drive (Unsignalized)	34.0	26.5	27.8	21.4
Samson Trail & Sheila Lane (Unsignalized)	20.7	24.2	30.3	32.2

<sup>\*</sup>Deinhard Lane and 3<sup>rd</sup> Street will be upgraded in 2023. The improvements are expected to improve the operations to an acceptable LOS.



#### **CONCEPTUAL INTERSECTION IMPROVEMENTS**

In the previous study performed by Horrocks Engineers, the traffic operations at the intersection of Deinhard Lane and North 3<sup>rd</sup> Street were analyzed using existing and projected 2040 volumes, and a concept design was provided based on the need of the intersection. In cooperation with ITD, the intersection is planned to be improved in 2023 based on the recommendations from that report. The improvements are expected to improve the LOS at the intersection through 2040.

The scenario with the lowest overall delays is the Floyde Street, Samson Trail, Davis Avenue Connections scenario. In this scenario, the additional connections provide relief to North 3<sup>rd</sup> Street.

Figure 10 shows the proposed mitigation for the intersection of Floyde Street and North 3<sup>rd</sup> Street. It is expected that all of the signalized intersections on North 3<sup>rd</sup> Street will need dedicated left turn lanes. With all of the proposed connections and the Deinhard Lane Extension, the intersection of Floyde Street and North 3rd Street is expected to operate at LOS E as a signalized intersection with left turn lanes. In the traffic model, the Deinhard Lane extension concentrates the daily traffic to the proposed connections at Floyde Street and Samson Trail and does not use Deinhard Lane as frequently as when the traffic accesses South Samson Trail. In reality, vehicles will find ways to reroute around congested areas if an intersection like Floyde Street and North 3rd Street has high delays. North 3<sup>rd</sup> Street is not planned to be widened to five lanes, so the delay may not be mitigated any further by widening North 3<sup>rd</sup> Street.



Figure 10-Intersection of Floyde Street and North 3<sup>rd</sup> Street

Figure 11 shows the proposed mitigation at the intersection of the Floyde Street Connection/Woodlands Drive and Samson Trail/Spring Mountain Boulevard. To achieve the minimum LOS at this intersection with the proposed connections with Floyde Street and Samson Trail, a four-way stop with dedicated left-turn lanes is recommended. A signal or a roundabout would also mitigate the delays at this intersection.



This intersection may be a good candidate for a roundabout. It is approximately 650 feet from the intersection of Samson Trail and Deinhard Lane, which is planned to be signalized, and the spacing may be too close for an additional signal. As an all-way stop with the Floyde Street and Samson Trail connections, the intersection is expected to operate at LOS B.



Figure 11-Intersection of Woodlands Drive/Floyde Street and Samson Trail

Figure 12 shows the intersection of Samson Trail and Deinhard Lane as a signalized intersection. As a signalized intersection it is expected to operate at LOS A under all of the study scenarios. It is recommended that the west leg of the intersection be realigned to eliminate the offset with the east leg of the intersection. Fox Ridge Road is approximately 150 feet to the south of the intersection, which may interfere with queuing at the intersection.



Figure 12-Intersection of Deinhard Lane and Samson Trail

A roundabout may also mitigate the delay at this intersection, however other factors may make a roundabout impractical. The change in grade and offset between the east and west legs of the intersection and the grade of the east leg may restrict the roundabout geometry. Pedestrian safety is also a concern, as this is an intersection with school crossings and a pedestrian path on the north and east sides of the intersection. The path would also have to be realigned with the west leg of the intersection.

#### **PROJECT ESTIMATES**

Planning-level estimates for three of the recommended projects are included in the Appendix. Each of the estimates include costs for right-of-way at an assumed \$150,000 per acre (which could be removed if it is determined to be unnecessary), percentages for drainage, mobilization, traffic control, contingency, and engineering costs. Planning level estimates are expected to be

#### **FLOYDE STREET ESTIMATE**

The first is the Floyde Street Connection. The estimate assumes a rural Collector cross-section with a 70-foot right of way, roadside ditches, and no curb/gutter. On Floyde Street, a separated path is planned alongside the roadway alignment. Additional ROW will be needed for a separated path. The Floyde Street Connections is estimated to cost approximately 1.8 million dollars.

#### **SAMSON TRAIL ESTIMATE**

The second estimate is for the connection of Samson Trail to Colorado Street. The estimate assumes a rural cross-section with a 70-foot right of way. A separated paved path is included alongside the roadway alignment. Additional ROW will be needed for a separated path. The Samson Trail connection is estimated to cost approximately 2.1 million dollars.



#### **DEINHARD LANE ESTIMATE**

The third estimate is for the extension of Deinhard Lane to the east of Samson Trail. The McCall Transportation Master Plan defines Deinhard Lane east of 3<sup>rd</sup> Street as a Major Collector with a 70-foot right of way, three lanes, and a separated, paved path. The Deinhard Lane Extension is estimated to cost approximately 1.9 million dollars.

#### SAMSON TRAIL AND DEINHARD LANE INTERSECTION ESTIMATE

A planning estimate is not included for improvements at the intersection of Samson Trail and Deinhard Lane. The realignment of the west leg of the intersection and the replacement of the paved trail are expected to cost between \$300,000 and \$400,000. The installation of a traffic signal is expected to cost approximately \$500,000. A roundabout was also discussed at this intersection. Roundabouts have variable costs depending on the topography, the diameter of the inner island, the type of landscaping on the island, etc. A roundabout at the intersection of Samson Trail and Deinhard Lane may cost between \$700,000 and \$1.2 Million.

#### **SUMMARY AND RECOMMENDATIONS**

The volumes used for this analysis were based on the PM peak hour volumes. According to the roadway segment and intersection LOS analysis, mitigation on North 3<sup>rd</sup> Street will be needed under all of the scenario conditions. It is recommended that the intersections on North 3<sup>rd</sup> street be signalized as needed, with the understanding that delays may be longer during peak periods. North 3<sup>rd</sup> Street is not planned to be widened, so additional routes may provide the needed relief to North 3<sup>rd</sup> Street.

The proposed connections at Floyde Street, Samson Trail, and Davis Avenue will balance and distribute traffic onto Samson Trail, which will require additional mitigation to accommodate the additional traffic volumes. Additional mitigation is expected on Samson Trail as it becomes another major north/south route through southeast McCall as a parallel route to North 3<sup>rd</sup> Street.

The addition of the future development traffic impacts the roadway network as a whole with the most pressure on the east/west connections like Deinhard Lane and Krahn Lane as vehicles make their way to North 3<sup>rd</sup> Street. Any development to the east of Samson Trail should provide traffic analysis for Stockton Drive and Sheila Lane to monitor the mitigation needed at those intersections on Samson Trail. As growth occurs, Stockton Drive and Sheila Lane should be monitored and may need to be widened and improved to accommodate additional traffic to those roadways.

The Deinhard Extension will provide access to future development to the east and will make it so fewer vehicles travel through local roads in the surrounding neighborhoods to access Samson Trail, thereby, enhancing critical circulation in the region. It would serve the existing and future school traffic and any future development traffic on a Collector road instead of a series of local roads. Although the LOS and capacities of the surrounding roadways do not improve with the Deinhard Lane extension, there is a benefit to the extension in the circulation of traffic as discussed above.

With all of the proposed connections and the Deinhard Lane Extension, it is recommended that the intersection of Floyde Street and North 3<sup>rd</sup> Street be signalized, the intersection of Woodlands Drive/Floyde Street be an all-way stop, and the intersection of Samson Trail and Deinhard Lane be signalized.

Based on the findings in this report, implementing the proposed connections at Floyde Street, Samson Trail, and Davis Avenue is recommended to provide improved connectivity through McCall and enhance circulation for both north/south and east/west traffic. This will also reduce the miles traveled by the traveling public when vehicles don't have to head out of direction to get to where they're going. The proposed connections will also provide relief to North 3<sup>rd</sup> Street, which is not planned to be widened. The extension of Deinhard Lane to the east is also recommended to provide a Collector road for future development to the east. This extension would enhance traffic circulation and reduce the traffic that would route through Woodlands Drive, Stockton Drive, Sheila Lane, and Fox Ridge Road, and the impacts through these existing neighborhoods. As development occurs east of Samson Trail, it is recommended that Traffic Impact Studies be prepared to identify the impacts to the local roadways and to recommend mitigations based on the proposed land uses in the future. Any improvements that are recommended outside of the jurisdiction of the City in Valley County will need to be approved by Valley County.

In summary, the following roadway connections are recommended:

- Floyde Street from Timm Street to Samson Trail
- Samson Trail from Colorado Street to Floyde Street
- Davis Avenue from Wanda Avenue to Samson Trail
- Deinhard Lane Extension

The following intersection improvements are recommended:

- Intersection of Floyde Street and North 3<sup>rd</sup> Street be signalized
- Intersection of Woodlands Drive/Floyde Street be an all-way stop
- Intersection of Samson Trail and Deinhard Lane be signalized



# **APPENDIX**

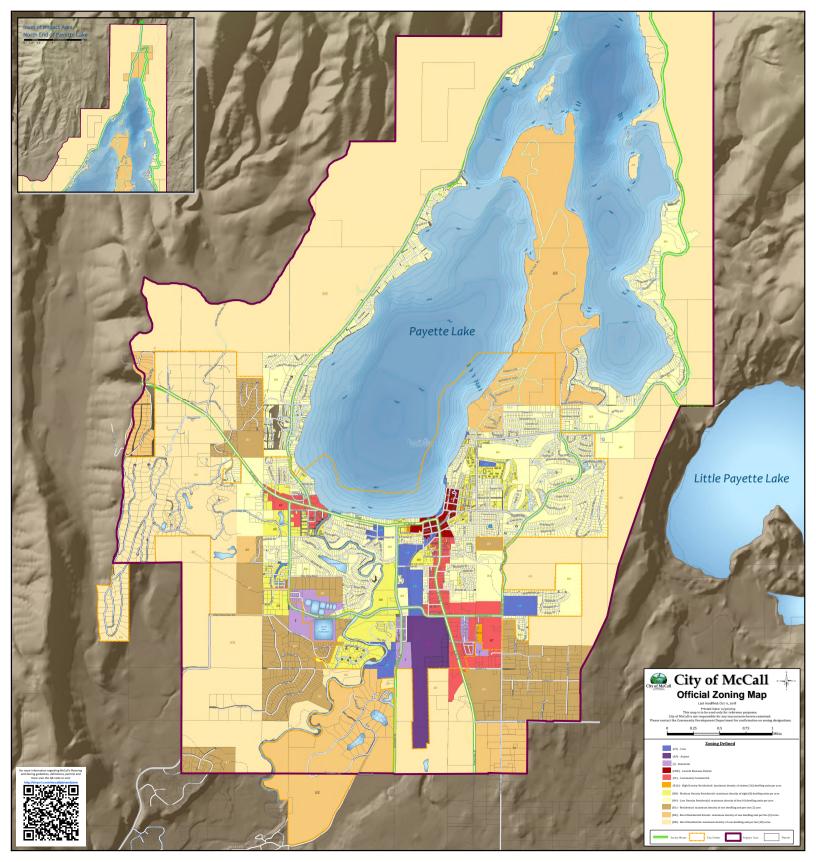
McCall Zoning Map

**Trip Generation Tables** 

Roadway Capacities and Level of Service

Vistro Reports

Estimates



# Existing Trip Generation by TAZ

	9				PM Peak Hour		
o Zone	ITE Land Use		Units	ITE Rate	Trips In	Trips Out	Tota
	210: Single Family Detached Housing	261	units	0.94	155	91	245
1	210: Single Family Detached Housing	58	units	0.94	35	20	55
	821: Shopping Plaza	49	1000 sq ft	5.19	124	129	253
	Total				313	240	553
	210: Single Family Detached Housing	303	units	0.94	179	105	285
2	210: Single Family Detached Housing	9	units	0.94	5	3	8
	210: Single Family Detached Housing	10	units	0.94	6	3	9
	Total				190	112	302
	210: Single Family Detached Housing	21	units	0.94	12	7	20
3	215: Multifamily Housing (Low-Rise)	10	units	0.57	3	2	6
	821: Shopping Plaza	27	1000 sq ft	5.19	68	71	139
	Total		2000 34 10	3.13	84	81	165
	210: Single Family Detached Housing	62	units	0.94	37	22	58
	210: Single Family Detached Housing	17	units	0.94	10	6	16
4	210: Single Family Detached Housing	0	units	0.94	0	0	0
	820: Shopping Center	0	1000 sq ft	3.4	0	0	0
	•	U	1000 Sq 1t	3.4	47		74
	Total					27	
	210: Single Family Detached Housing	150	units	0.94	89	52	141
_	821: Shopping Plaza	47	1000 sq ft	5.19	120	124	244
5	210: Single Family Detached Housing	6	units	0.94	4	2	6
	215: Multifamily Housing (Low-Rise)	0	units	0.57	0	0	0
	820: Shopping Center	0	1000 sq ft	3.4	0	0	0
	Total				212	179	391
	110: General Light Industrial	73	1000 sq ft	0.65	7	41	47
	215: Multifamily Housing (Low-Rise)	49	units	0.57	16	12	28
	820: Shopping Center	10	1000 sq ft	3.4	17	18	35
	210: Single Family Detached Housing	8	units	0.94	5	3	7
6	820: Shopping Center	18	1000 sq ft	3.4	30	33	63
	210: Single Family Detached Housing	73	units	0.94	43	25	69
	110: General Light Industrial	47	1000 sq ft	0.65	4	26	31
	210: Single Family Detached Housing	62	units	0.94	37	22	58
	416: Campground/Recreational Vehicle Park	41	Occupied Sites	0.21	3	6	9
	Total				161	185	346
7	210: Single Family Detached Housing	75	units	0.94	44	26	70
	Total				44	26	70
8	210: Single Family Detached Housing	25	units	0.94	15	9	24
	Total				15	9	24
	210: Single Family Detached Housing	193	units	0.94	114	67	181
9	210: Single Family Detached Housing	6	units	0.94	3	2	5
	Total		units	0.54	118	69	187
	210: Single Family Detached Housing	34	units	0.94	20	12	32
	210: Single Family Detached Housing	78	units	0.94	46	27	73
10						39	72
	520: Elementary School 522: Middle School/Junior High School	450 400	students students	0.16 0.15	33 29	39	60
		400	students	0.15	128		
	Total			204		109	237
11	210: Single Family Detached Housing	2	units	0.94	1	1	2
11	210: Single Family Detached Housing	39	units	0.94	23	14	37
_	210: Single Family Detached Housing	74	units	0.94	44	26	69
	Total				68	40	108
18	210: Single Family Detached Housing	92	units	0.94	54	32	86
	Total				54	32	86

# Buildout Trip Generation by TAZ

uildo	ut Trip Generation by TAZ				PM Peak I	Hour	
stro Zon	e ITE Land Use		Units	ITE Rate	Trips In	Trips Out	Total
	210: Single Family Detached Housing	343	units	0.94	203	119	323
1	210: Single Family Detached Housing	97	units	0.94	58	34	92
	821: Shopping Plaza	81	1000 sq ft	5.19	206	215	421
	Total				468	368	836
	210: Single Family Detached Housing	487	units	0.94	289	170	458
2	210: Single Family Detached Housing	12	units	0.94	7	4	11
	210: Single Family Detached Housing	13	units	0.94	8	4	12
	Total				303	178	481
	210: Single Family Detached Housing	54	units	0.94	32	19	51
3	215: Multifamily Housing (Low-Rise)	200	units	0.57	65	49	114
	821: Shopping Plaza	54	1000 sq ft	5.19	137	142	279
	Total		· · · · · · · · · · · · · · · · · · ·		234	210	444
	210: Single Family Detached Housing	143	units	0.94	85	50	134
	210: Single Family Detached Housing	46	units	0.94	27	16	43
4	210: Single Family Detached Housing	128	units	0.94	76	45	120
	820: Shopping Center	160	1000 sq ft	3.4	261	283	544
	Total	100	1000 39 10	5.4	449	393	842
	210: Single Family Detached Housing	477	units	0.94	283	166	449
	821: Shopping Plaza		1000 sq ft			124	
_	•	47 16	•	5.19	119		243
5	210: Single Family Detached Housing	16	units 	0.94	10	6	15
	215: Multifamily Housing (Low-Rise)	423	units	0.57	137	104	241
	820: Shopping Center	265	1000 sq ft	3.4	432	468	899
	Total				981	867	1848
	110: General Light Industrial	121	1000 sq ft	0.65	11	68	79
	215: Multifamily Housing (Low-Rise)	488	units	0.57	158	120	278
	820: Shopping Center	203	1000 sq ft	3.4	332	359	691
	210: Single Family Detached Housing	79	units	0.94	47	28	74
6	820: Shopping Center	184	1000 sq ft	3.4	300	325	625
	210: Single Family Detached Housing	73	units	0.94	43	25	69
	110: General Light Industrial	315	1000 sq ft	0.65	29	176	205
	210: Single Family Detached Housing	62	units	0.94	37	22	58
	416: Campground/Recreational Vehicle Park	41	Occupied Sites	0.21	3	6	9
	Total				960	1128	2088
7	210: Single Family Detached Housing	94	units	0.94	55	33	88
	Total				55	33	88
8	210: Single Family Detached Housing	31	units	0.94	19	11	30
	Total				19	11	30
	210: Single Family Detached Housing	658	units	0.94	390	229	619
9	210: Single Family Detached Housing	6	units	0.94	3	2	5
	Total		units	0.0 .	393	231	624
	210: Single Family Detached Housing	35	units	0.94	20	12	32
	210: Single Family Detached Housing	388	units	0.94	230	135	365
10	520: Elementary School	450	students	0.16	33	39	72
	•						
	522: Middle School/Junior High School	525	students	0.15	38	41	79 E 48
	Total	500		0.04	321	227	548
	210: Single Family Detached Housing	500	units	0.94	296	174	470
11	210: Single Family Detached Housing	39	units	0.94	23	14	37
	210: Single Family Detached Housing	185	units	0.94	109	64	174
	Total				429	252	680
18	210: Single Family Detached Housing	184	units	0.94	109	64	172
	Total				109	64	172

# 60% Buildout Trip Generation by TAZ

		,		PM Peak Hour				
istro Zone	ITE Land Use		Units	ITE Rate	Trips In	Trips Out	Tota	
	210: Single Family Detached Housing	343	units	0.94	203	119	323	
1	210: Single Family Detached Housing	97	units	0.94	58	34	55	
	821: Shopping Plaza	81	1000 sq ft	5.19	206	215	253	
	Total Reduced				281	221	378	
	210: Single Family Detached Housing	487	units	0.94	289	170	458	
2	210: Single Family Detached Housing	12	units	0.94	7	4	11	
	210: Single Family Detached Housing	13	units	0.94	8	4	12	
	Total Reduced				182	107	289	
	210: Single Family Detached Housing	54	units	0.94	32	19	51	
3	215: Multifamily Housing (Low-Rise)	200	units	0.57	65	49	114	
	821: Shopping Plaza	54	1000 sq ft	5.19	137	142	279	
	Total Reduced				140	126	266	
	210: Single Family Detached Housing	143	units	0.94	85	50	134	
4	210: Single Family Detached Housing	46	units	0.94	27	16	43	
7	210: Single Family Detached Housing	128	units	0.94	76	45	120	
	820: Shopping Center	160	1000 sq ft	3.4	261	283	544	
	Total Reduced				269	236	505	
	210: Single Family Detached Housing	477	units	0.94	283	166	449	
	821: Shopping Plaza	47	1000 sq ft	5.19	119	124	243	
5	210: Single Family Detached Housing	16	units	0.94	10	6	15	
	215: Multifamily Housing (Low-Rise)	423	units	0.57	137	104	241	
	820: Shopping Center	265	1000 sq ft	3.4	432	468	899	
	Total Reduced				588	520	1109	
	110: General Light Industrial	121	1000 sq ft	0.65	11	68	79	
	215: Multifamily Housing (Low-Rise)	488	units	0.57	158	120	278	
	820: Shopping Center	203	1000 sq ft	3.4	332	359	691	
	210: Single Family Detached Housing	79	units	0.94	47	28	74	
6	820: Shopping Center	184	1000 sq ft	3.4	300	325	625	
	210: Single Family Detached Housing	73	units .	0.94	43	25	69	
	110: General Light Industrial	315	1000 sq ft	0.65	29	176	205	
	210: Single Family Detached Housing	62	units	0.94	37	22	58	
	416: Campground/Recreational Vehicle Park	41	Occupied Sites	0.21	3	6	9	
	Total Reduced		·		576	677	125	
7	210: Single Family Detached Housing	94	units	0.94	55	33	88	
	Total Reduced				33	20	53	
8	210: Single Family Detached Housing	31	units	0.94	19	11	30	
	Total Reduced				11	7	18	
	210: Single Family Detached Housing	658	units	0.94	390	229	619	
9	210: Single Family Detached Housing	6	units	0.94	3	2	5	
	Total Reduced		units	0.5 1	236	139	374	
	210: Single Family Detached Housing	35	units	0.94	20	12	32	
	210: Single Family Detached Housing	442	units	0.94	262	154	415	
10	520: Elementary School	450	students	0.16	33	39	72	
	522: Middle School/Junior High School	525	students	0.15	38	41	79	
_	Total Reduced	323	Staucits	0.15	353	246	599	
	210: Single Family Detached Housing	290	units	0.94	172	101	273	
11	210: Single Family Detached Housing	39	units	0.94	23	14	37	
11	210: Single Family Detached Housing	185	units	0.94	109	64	174	
	Total Reduced	100	units	0.94	251	148	399	
18		101	units	0.04	109	64		
19	210: Single Family Detached Housing	184	units	0.94	109	64	172	

Percent of Buildout 60%



# **Maximum Daily Traffic Capacity Estimate**

	Suburban				
	2 L	ane			
	Freeway	Arterial	Collector		
LOS A	NA	5,800	5,300		
LOS B	NA	7,900	7,400		
LOS C	NA	10,800	9,700		
LOS D	NA	13,400	12,100		
LOS E	NA	16,100	14,500		

Rural				
2 Lane				
	Freeway	Arterial	Collector	
LOS A	NA	5,300	3,700	
LOS B	NA	8,900	5,800	
LOS C	NA	12,900	8,100	
LOS D	NA	17,000	10,500	
LOS E	NA	21,000	12,900	

Urban/CBD				
	2 L	ane		
	Freeway	Arterial	Collector	
LOS A	NA	6,800	5,800	
LOS B	NA	7,900	6,800	
LOS C	NA	9,100	8,100	
LOS D	NA	10,200	9,100	
LOS E	NA	11,300	10,200	

3 Lane				
	Freeway	Arterial	Collector	
LOS A	NA	7,400	5,800	
LOS B	NA	9,500	7,900	
LOS C	NA	12,400	10,800	
LOS D	NA	15,100	13,400	
LOS E	NA	17,700	16,100	

3 Lane				
	Freeway	Arterial	Collector	
LOS A	NA	5,800	4,200	
LOS B	NA	9,500	6,300	
LOS C	NA	14,000	9,100	
LOS D	NA	18,300	11,800	
LOS E	NA	22,600	14,500	

3 Lane				
	Freeway	Arterial	Collector	
LOS A	NA	7,900	6,800	
LOS B	NA	10,000	8,900	
LOS C	NA	12,900	11,300	
LOS D	NA	15,600	13,800	
LOS E	NA	18,300	16,100	

4 Lane				
	Freeway	Arterial	Collector	
LOS A	31,000	14,700	10,500	
LOS B	45,500	20,500	15,200	
LOS C	60,000	26,900	20,400	
LOS D	70,000	31,200	24,200	
LOS E	89,000	39,600	30,600	

	4 Lane				
	Freeway	Arterial	Collector		
LOS A	20,500	8,900	7,400		
LOS B	35,000	15,200	12,100		
LOS C	50,000	22,000	17,200		
LOS D	63,000	28,000	22,000		
LOS E	80,000	35,500	27,400		

4 Lane				
	Freeway	Arterial	Collector	
LOS A	36,500	13,700	10,000	
LOS B	49,500	18,400	13,100	
LOS C	63,000	23,700	17,200	
LOS D	73,000	28,000	20,400	
LOS E	90,000	33,900	24,700	

5 Lane				
	Freeway	Arterial	Collector	
LOS A	NA	15,200	12,600	
LOS B	NA	21,500	17,300	
LOS C	NA	28,500	23,100	
LOS D	NA	32,800	26,900	
LOS E	NA	40,300	33,900	

5 Lane				
	Freeway	Arterial	Collector	
LOS A	NA	10,000	8,400	
LOS B	NA	16,300	13,700	
LOS C	NA	23,700	19,400	
LOS D	NA	30,100	24,200	
LOS E	NA	37,600	30,600	

5 Lane				
	Freeway	Arterial	Collector	
LOS A	NA	17,900	14,200	
LOS B	NA	23,600	18,900	
LOS C	NA	30,100	24,200	
LOS D	NA	34,900	28,000	
LOS E	NA	42,500	34,400	

6 Lane											
Freeway Arterial Collector											
LOS A	51,000	19,400	NA								
LOS B	72,500	27,800	NA								
LOS C	95,000	37,600	NA								
LOS D	112,000	43,500	NA								
LOS E	140,000	55,900	NA								

6 Lane											
Freeway Arterial Collecto											
LOS A	29,500	13,100	NA								
LOS B	50,500	22,600	NA								
LOS C	72,000	32,800	NA								
LOS D	91,000	41,900	NA								
LOS E	115,000	52,700	NA								

6 Lane											
Freeway Arterial Collect											
LOS A	58,500	21,500	NA								
LOS B	79,000	28,900	NA								
LOS C	100,000	37,600	NA								
LOS D	118,000	43,500	NA								
LOS E	142,000	53,800	NA								

7 Lane											
Freeway Arterial Collector											
LOS A	NA	22,600	NA								
LOS B	NA	32,000	NA								
LOS C	NA	43,000	NA								
LOS D	NA	50,500	NA								
LOS E	NA	63,400	NA								

7 Lane											
Freeway Arterial Collecto											
LOS A	NA	14,200	NA								
LOS B	NA	24,200	NA								
LOS C	NA	35,500	NA								
LOS D	NA	45,200	NA								
LOS E	NA	57,000	NA								

/ Lane											
	Freeway	Arterial	Collector								
LOS A	NA	26,300	NA								
LOS B	NA	35,200	NA								
LOS C	NA	45,200	NA								
LOS D	NA	52,700	NA								
LOS E	NA	64,000	NA								

8 Lane											
Freeway Arterial Collector											
LOS A	66,500	NA	NA								
LOS B	92,000	NA	NA								
LOS C	120,000	NA	NA								
LOS D	140,000	NA	NA								
LOS E	174,000	NA	NA								

8 Lane											
Freeway Arterial Collecto											
LOS A	NA	NA	NA								
LOS B	NA	NA	NA								
LOS C	NA	NA	NA								
LOS D	NA	NA	NA								
LOS E	NA	NA	NA								

8 Lane											
Freeway Arterial Collect											
LOS A	78,000	NA	NA								
LOS B	102,000	NA	NA								
LOS C	127,000	NA	NA								
LOS D	148,000	NA	NA								
LOS E	176,000	NA	NA								

Scenario 1 Existing PM Peak Hour

Vistro File: S:\...\McCall Traffic Model\_Pine Creek

Ranch.vistro

Report File: S:\...\Existing.pdf

### **Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
4	3rd Street & Floyde Street	Two-way stop	HCM 6th Edition	WB Left	0.336	43.5	Е
5	3rd Street & Deinhard Lane	Signalized	HCM 6th Edition	EB Left	3.481	88.6	F
7	3rd Street & Krahn Lane	Two-way stop	HCM 6th Edition	WB Left	0.045	26.2	D
8	3rd Street & Elo Road	Two-way stop	HCM 6th Edition	WB Left	0.084	24.7	С
9	3rd Street & Lenora Street	Two-way stop	HCM 6th Edition WB Left		1.565	409.9	F
10	Wooley Avenue & Samson Trail	Two-way stop	HCM 6th Edition	EB Left	0.108	11.3	В
11	Samson Trail & Woodlands Drive	Two-way stop	HCM 6th Edition	WB Left	0.067	10.6	В
12	Deinhard Lane & Samson Trail	All-way stop	HCM 6th Edition	NB Thru	0.244	8.8	Α
13	Samson Trail & Stockton Drive	Two-way stop	HCM 6th Edition	WB Left	0.016	11.6	В
14	Samson Trail & Krahn Lane	Two-way stop	HCM 6th Edition	EB Left	0.013	11.8	В
15	Samson Trail & Sheila Lane	Two-way stop	HCM 6th Edition	WB Left	0.028	12.5	В

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Scenario 1 Existing PM Peak Hour

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# **Turning Movement Volume: Summary**

ID.	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	ıd	V	/estbour	nd	Total
ID	D Intersection Name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
4	3rd Street & Floyde Street	0	638	55	42	524	0	0	0	0	46	0	33	1338

ID.	Intersection Name		orthbou	nd	Sc	outhbou	nd	Е	astboun	ıd	W	estbour/	nd	Total
טו	ID Intersection Name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
5	3rd Street & Deinhard Lane	101	441	67	135	369	67	125	66	130	59	49	127	1736

ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	ıd	W	estbour/	nd	Total
טו	intersection Name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
7	3rd Street & Krahn Lane	0	539	9	42	484	0	0	0	0	8	0	28	1110

ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astbour	ıd	V	estbour/	nd	Total
טו	intersection Name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
8	3rd Street & Elo Road	0	500	27	39	444	0	0	0	0	17	0	45	1072

Ī	ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	ıd	W	estbour/	nd	Total
	טו	intersection name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
	9	3rd Street & Lenora Street	20	321	300	149	337	0	5	32	70	164	18	134	1550

	ID	Intersection Name	Northl	bound	South	bound	Eastb	ound	Total
	טו	intersection name	Left	Thru	Thru	Right	Left	Right	Volume
Ī	10	Wooley Avenue & Samson Trail	56	92	61	67	72	49	397

ID	Intersection Name	Northl	bound	South	bound	West	oound	Total
טו	intersection name	Thru	Right	Left	Thru	Left	Right	Volume
11	Samson Trail & Woodlands Drive	140	53	10	100	47	7	357

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ID	Intersection Name	N	orthbou	nd	So	outhbou	nd	Е	astboun	ıd	W	estbour/	nd	Total
ID	intersection Name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
12	Deinhard Lane & Samson Trail	50	109	26	10	76	61	77	28	61	20	28	7	553

ID	Intersection Name	N	orthbou	nd	So	outhbou	nd	Е	astboun	ıd	W	estbour/	nd	Total
טו	intersection name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
13	Samson Trail & Stockton Drive	10	171	18	18	138	0	0	0	11	9	0	14	389

ın	Intersection Name	N	orthbou	nd	So	outhbou	nd	Е	astboun	ıd	W	/estbour	nd	Total
ID	intersection name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
14	Samson Trail & Krahn Lane	29	192	0	0	154	4	7	0	36	0	0	0	422

D	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	d	W	estbour/	nd	Total
טו	intersection name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
15	Samson Trail & Sheila Lane	6	197	27	37	153	1	1	0	4	14	0	23	463

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Scenario 9 Mitigated Buildout PM Peak Hour All Connections

1/17/2023

#### **Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
4	3rd Street & Floyde Street	Signalized	HCM 6th Edition	NB Thru	0.705	56.8	Е
5	3rd Street & Deinhard Lane	Signalized	HCM 6th Edition	WB Thru	4.074	331.6	F
6	3rd Street & Jacob Street	Two-way stop	HCM 6th Edition	WB Left	1.265	458.2	F
7	3rd Street & Krahn Lane	Signalized	HCM 6th Edition	WB Right	0.479	7.7	Α
8	3rd Street & Elo Road	Two-way stop	HCM 6th Edition	WB Left	0.914	192.6	F
9	3rd Street & Lenora Street	Signalized	HCM 6th Edition	NB Thru	0.699	53.4	D
10	Wooley Avenue & Samson Trail	Two-way stop	HCM 6th Edition	EB Left	0.279	17.3	С
11	Samson Trail & Woodlands Drive	All-way stop	HCM 6th Edition	NB Thru	0.468	13.1	В
12	Deinhard Lane & Samson Trail	Signalized	HCM 6th Edition	WB Left	0.384	8.5	Α
14	Samson Trail & Krahn Lane	Two-way stop	HCM 6th Edition	EB Left	0.047	27.6	D
16	Elo Road & Samson Trail	Two-way stop	HCM 6th Edition	SB Left	1.777	707.9	F
33	New Intersection	Signalized	HCM 6th Edition		0.000	0.0	Α
34	New Intersection	Two-way stop	HCM 6th Edition	SB Left	0.030	8.7	Α

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

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Scenario 9 Mitigated Buildout PM Peak Hour All Connections

1/17/2023

## **Turning Movement Volume: Summary**

	ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	d	V	/estbour	nd	Total
	טו	intersection name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
ĺ	4	3rd Street & Floyde Street	0	930	137	163	828	0	0	4	0	108	4	121	2295

ſ	ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	ıd	W	estbour/	nd	Total
	טו	intersection name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
Ī	5	3rd Street & Deinhard Lane	135	650	141	243	569	124	198	189	158	126	156	219	2908

ID	Intersection Name	North	bound	South	bound	West	oound	Total
טו	intersection name	Thru	Right	Left	Thru	Left	Right	Volume
6	3rd Street & Jacob Street	707	72	200	653	85	219	1936

ID	Intersection Name	N	orthbou	nd	So	outhbou	nd	Е	astboun	ıd	V	/estbour	nd	Total
l ID	intersection Name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
7	3rd Street & Krahn Lane	0	750	26	41	696	0	0	0	0	25	0	30	1568

ĺ	ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	d	W	/estbour	nd	Total
	טו	intersection name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
Ī	8	3rd Street & Elo Road	0	691	137	81	633	0	0	0	0	74	0	83	1699

ID.	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	d	W	estbour/	nd	Total
ID	intersection name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
9	3rd Street & Lenora Street	27	680	356	122	846	0	5	46	80	199	16	132	2509

ID	Intersection Name	Northl	oound	South	bound	Eastb	ound	Total
טו	intersection Name	Left	Thru	Thru	Right	Left	Right	Volume
10	Wooley Avenue & Samson Trail	89	224	161	102	117	52	745

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ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	nd	W	estbour/	nd	Total
טו	intersection name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
11	Samson Trail & Woodlands Drive	220	253	29	7	170	36	55	44	241	18	32	5	1110

Ī	ID	Intersection Name	N	orthbou	nd	So	outhbou	nd	Е	astboun	nd	W	estbour/	nd	Total
	טו	intersection name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
Ī	12	Deinhard Lane & Samson Trail	143	328	92	84	277	68	109	99	156	54	64	66	1540

ID.	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	nd	V	/estbour	nd	Total
ID	intersection Name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
14	Samson Trail & Krahn Lane	50	579	0	0	456	5	8	0	61	0	0	0	1159

ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	ıd	W	estbour/	nd	Total
טו	intersection name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
16	Elo Road & Samson Trail	0	277	6	186	219	71	131	86	0	3	85	225	1289

ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	ıd	V	estbour/	nd	Total
טו	intersection rvame	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
33	New Intersection	0	55	0	0	41	27	16	0	0	0	0	0	139

ī	Interesting Name	North	bound	South	bound	Total
ID	Intersection Name	Thru	Right	Left	Thru	Volume
34	New Intersection	538	24	30	457	1049

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Scenario 8 Mitigated PM Peak Hour Deinhard Extension

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1/17/2023

#### **Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
4	3rd Street & Floyde Street	Signalized	HCM 6th Edition	WB Left	0.784	15.2	В
5	3rd Street & Deinhard Lane	Signalized	HCM 6th Edition	EB Left	38.625	556.1	F
6	3rd Street & Jacob Street	Two-way stop	HCM 6th Edition	WB Left	2.180	960.5	F
7	3rd Street & Krahn Lane	Signalized	HCM 6th Edition	WB Right	0.511	5.8	Α
8	3rd Street & Elo Road	Two-way stop	HCM 6th Edition	WB Left	1.238	352.0	F
9	3rd Street & Lenora Street	Signalized	HCM 6th Edition	SB Left	0.847	44.2	D
10	Wooley Avenue & Samson Trail	Two-way stop	HCM 6th Edition	EB Left	0.314	18.5	С
11	Samson Trail & Woodlands Drive	Two-way stop	HCM 6th Edition	WB Left	0.067	13.1	В
12	Deinhard Lane & Samson Trail	Signalized	HCM 6th Edition	WB Left	0.400	8.7	Α
14	Samson Trail & Krahn Lane	Two-way stop	HCM 6th Edition	EB Left	0.035	21.8	С
15	Samson Trail & Sheila Lane	Two-way stop	HCM 6th Edition	WB Left	0.087	24.2	С
16	Elo Road & Samson Trail	Two-way stop	HCM 6th Edition	SB Left	0.940	229.9	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Scenario 8 Mitigated PM Peak Hour Deinhard Extension

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#### **Turning Movement Volume: Summary**

ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astbour	nd	V	/estbour	nd	Total
טו	intersection Name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
4	3rd Street & Floyde Street	0	1112	151	116	1037	0	0	0	0	134	0	95	2645

ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astbour	ıd	V	estbour/	nd	Total
טו	intersection name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
5	3rd Street & Deinhard Lane	137	702	201	445	597	128	195	193	158	179	151	366	3452

ID	Intersection Name	North	bound	South	bound	West	oound	Total
טו	intersection name	Thru	Right	Left	Thru	Left	Right	Volume
6	3rd Street & Jacob Street	811	72	193	742	85	229	2132

ID	Intersection Name	N	orthbou	nd	So	outhbou	nd	Е	astbour	nd	V	/estbour	nd	Total
ID	intersection Name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
7	3rd Street & Krahn Lane	0	846	23	50	776	0	0	0	0	23	0	38	1756

ĺ	ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	ıd	W	/estbour	nd	Total
	טו	intersection name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
Ī	8	3rd Street & Elo Road	0	784	140	78	714	0	0	0	0	75	0	82	1873

ID.	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	ıd	W	estbour/	nd	Total
ID	intersection name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
9	3rd Street & Lenora Street	20	662	467	162	827	0	5	35	70	257	22	150	2677

ID	Intersection Name	Northl	bound	South	bound	Eastb	ound	Total
טו	intersection Name	Left	Thru	Thru	Right	Left	Right	Volume
10	Wooley Avenue & Samson Trail	101	212	152	111	129	73	778

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Ī	ID	Intersection Name	North	bound	South	bound	West	bound	Total
	טו	intersection name	Thru	Right	Left	Thru	Left	Right	Volume
	11	Samson Trail & Woodlands Drive	302	53	11	215	32	11	624

ID	Intersection Name	N	orthbou	nd	So	outhbou	nd	Е	astboun	d	W	estbour/	nd	Total
טו	intersection name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
12	Deinhard Lane & Samson Trail	162	183	117	31	117	99	149	186	205	67	126	24	1466

ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astbour	ıd	V	estbour/	nd	Total
טו	intersection Name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
14	Samson Trail & Krahn Lane	56	475	0	0	362	4	8	0	66	0	0	0	971

ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	ıd	W	/estbour	nd	Total
טו	intersection name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
15	Samson Trail & Sheila Lane	5	501	35	51	376	1	1	0	3	18	0	31	1022

ID	Intersection Name	No	orthbou	nd	So	outhbou	nd	Е	astbour	ıd	W	estbour/	nd	Total
טו	intersection name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
16	Elo Road & Samson Trail	0	180	6	189	136	73	135	83	0	3	85	226	1116

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Scenario 10 Mitigated Buildout PM Peak Hour Floyde and Samson Connection

1/17/2023

#### **Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
4	3rd Street & Floyde Street	Signalized	HCM 6th Edition	WB Left	0.641	12.2	В
5	3rd Street & Deinhard Lane	Signalized	HCM 6th Edition	EB Left	35.919	514.5	F
6	3rd Street & Jacob Street	Two-way stop	HCM 6th Edition	WB Left	1.409	508.0	F
7	3rd Street & Krahn Lane	Signalized	HCM 6th Edition	WB Right	0.447	5.2	А
8	3rd Street & Elo Road	Two-way stop	HCM 6th Edition	WB Left	0.944	198.0	F
9	3rd Street & Lenora Street	Signalized	HCM 6th Edition	WB Left	0.634	20.5	С
10	Wooley Avenue & Samson Trail	Two-way stop	HCM 6th Edition	EB Left	0.250	15.6	С
11	Samson Trail & Woodlands Drive	All-way stop	HCM 6th Edition	EB Right	0.574	14.9	В
12	Deinhard Lane & Samson Trail	Signalized	HCM 6th Edition	WB Left	0.364	8.2	Α
14	Samson Trail & Krahn Lane	Two-way stop	HCM 6th Edition	EB Left	0.054	27.9	D
15	Samson Trail & Sheila Lane	Two-way stop	HCM 6th Edition	WB Left	0.090	30.3	D
16	Elo Road & Samson Trail	Two-way stop	HCM 6th Edition	SB Left	2.185	915.9	F
31	New Intersection	Two-way stop	HCM 6th Edition	SB Left	0.079	9.0	Α

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

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Scenario 10 Mitigated Buildout PM Peak Hour Floyde and Samson Connection

1/17/2023

#### **Turning Movement Volume: Summary**

ı,	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	nd	V	/estbour	nd	Total
טו	intersection name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
4	3rd Street & Floyde Street	0	868	149	127	786	0	0	4	0	117	4	88	2143

ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astbour	ıd	V	estbour/	nd	Total
טו	intersection mame	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
5	3rd Street & Deinhard Lane	137	632	121	214	559	130	206	180	160	116	149	179	2783

ID	Intersection Name	North	bound	South	bound	Westl	oound	Total
טו	intersection name	Thru	Right	Left	Thru	Left	Right	Volume
6	3rd Street & Jacob Street	686	72	196	640	85	203	1882

ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astbour	nd	V	/estbour	nd	Total
טו	intersection Name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
7	3rd Street & Krahn Lane	0	731	26	38	687	0	0	0	0	25	0	27	1534

ID	Intersection Name	N	orthbou	nd	So	outhbou	nd	Е	astboun	ıd	V	/estbour	nd	Total
ا ا	intersection name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
8	3rd Street & Elo Road	0	677	150	79	627	0	0	0	0	79	0	79	1691

ID	Intersection Name	N	orthbou	nd	So	outhbou	nd	Е	astbour	ıd	W	estbour/	nd	Total
טו	intersection name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
9	3rd Street & Lenora Street	27	655	256	122	813	0	5	79	80	150	41	132	2360

	ID	Intersection Name	North	oound	South	bound	Eastb	ound	Total
	טו	intersection name	Left	Thru	Thru	Right	Left	Right	Volume
ĺ	10	Wooley Avenue & Samson Trail	59	224	161	102	117	44	707



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ID	Internaction Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	ıd	W	estbour/	nd	Total
טו	Intersection Name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
11	Samson Trail & Woodlands Drive	254	230	65	12	161	32	44	81	251	39	57	9	1235

ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	ıd	V	/estbour	nd	Total
טו	intersection Name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
12	Deinhard Lane & Samson Trail	149	412	35	24	353	73	120	34	165	22	26	17	1430

ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	ıd	V	estbour/	nd	Total
טו	intersection Name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
14	Samson Trail & Krahn Lane	48	598	0	0	450	5	9	0	58	0	0	0	1168

ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	ıd	W	estbour/	nd	Total
טו	intersection Name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
15	Samson Trail & Sheila Lane	5	619	27	39	468	2	1	0	3	14	0	26	1204

ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	d	V	/estbour	nd	Total
טו	intersection rvaine	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
16	Elo Road & Samson Trail	0	278	6	188	220	77	144	84	0	3	82	229	1311

ID	Intersection Name	North	bound	South	bound	Total
טו	intersection name	Thru	Right	Left	Thru	Volume
31	New Intersection	543	51	78	462	1134

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Scenario 7 Mitigated Buildout PM Peak Hour

1/17/2023

#### **Intersection Analysis Summary**

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
4	3rd Street & Floyde Street	Signalized	HCM 6th Edition	WB Left	0.803	15.9	В
5	3rd Street & Deinhard Lane	Signalized	HCM 6th Edition	EB Left	33.007	420.4	F
6	3rd Street & Jacob Street	Two-way stop	HCM 6th Edition	WB Left	2.412	1,085.9	F
7	3rd Street & Krahn Lane	Signalized	HCM 6th Edition	WB Left	0.597	8.0	Α
8	3rd Street & Elo Road	Two-way stop	HCM 6th Edition	WB Left	0.975	273.6	F
9	3rd Street & Lenora Street	Signalized	HCM 6th Edition	SB Left	0.860	48.3	D
10	Wooley Avenue & Samson Trail	Two-way stop	HCM 6th Edition	EB Left	0.283	16.5	С
11	Samson Trail & Woodlands Drive	Two-way stop	HCM 6th Edition	WB Left	0.186	14.4	В
12	Deinhard Lane & Samson Trail	Signalized	HCM 6th Edition	WB Left	0.407	9.3	Α
14	Samson Trail & Krahn Lane	Two-way stop	HCM 6th Edition	EB Left	0.340	27.0	D
16	Elo Road & Samson Trail	Two-way stop	HCM 6th Edition	SB Left	0.656	83.3	F
27	New Intersection	Two-way stop	HCM 6th Edition	WB Left	0.083	20.9	С

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Ranch.vistro

Report File: S:\...\Mitigated Buildout.pdf

#### Scenario 7 Mitigated Buildout PM Peak Hour

1/17/2023

### **Turning Movement Volume: Summary**

ID.	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	ıd	V	/estbour	nd	Total
ID	Intersection Name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
4	3rd Street & Floyde Street	0	1148	151	116	1083	0	0	0	0	134	0	95	2727

ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astbour	ıd	V	estbour/	nd	Total
טו	intersection mame	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
5	3rd Street & Deinhard Lane	135	709	220	483	606	128	195	135	156	197	105	396	3465

ID	Intersection Name	North	bound	South	bound	West	oound	Total
טו	intersection name	Thru	Right	Left	Thru	Left	Right	Volume
6	3rd Street & Jacob Street	834	72	193	766	85	229	2179

ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astbour	nd	V	estbour/	nd	Total
טו	intersection Name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
7	3rd Street & Krahn Lane	0	864	94	57	794	0	0	0	0	69	0	42	1920

ĺ	ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	d	W	/estbour	nd	Total
	טו	intersection name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
Ī	8	3rd Street & Elo Road	0	874	77	77	778	0	0	0	0	48	0	82	1936

ID	Intersection Name	N	orthbou	nd	Sc	outhbou	nd	Е	astboun	ıd	W	estbour/	nd	Total
טו	intersection name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
9	3rd Street & Lenora Street	20	724	442	167	880	0	5	37	70	250	24	154	2773

ID	Intersection Name	Northl	oound	South	bound	Eastb	ound	Total
טו	intersection Name	Left	Thru	Thru	Right	Left	Right	Volume
10	Wooley Avenue & Samson Trail	72	212	152	111	129	56	732

### Generated with PTV VISTRO

Version 2022 (SP 0-0)

Ī	ID	Intersection Name	Northl	bound	South	bound	West	oound	Total
	טו	intersection name	Thru	Right	Left	Thru	Left	Right	Volume
	11	Samson Trail & Woodlands Drive	273	138	16	192	89	10	718

ID	Intersection Name	N	orthbour	nd	Sc	outhbou	nd	Е	astboun	ıd	W	estbour/	nd	Total
טו	intersection Name	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
12	Deinhard Lane & Samson Trail	225	195	40	12	130	139	208	36	294	28	25	9	1341

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound		Total				
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
14	Samson Trail & Krahn Lane	56	419	0	0	327	54	86	0	67	0	0	0	1009

ID	Intersection Name	Northbound		Southbound		Eastbound		Westbound		Total					
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume	
	16	Elo Road & Samson Trail	0	184	6	189	141	45	72	83	0	3	85	226	1034

ID	Intersection Name	Northbound		Southbound		Westl	Total	
	intersection name	Thru	Right	Left	Thru	Left	Right	Volume
27	New Intersection	399	35	94	358	21	61	968

# City of McCall 2023 Roadway Estimate

#### Floyde Street from Timm Street to Spring Mountain Ranch Blvd.

Collector Rural

(0.28 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (4.0 inches)	ton	\$180.00	1,000	\$180,000.00
Base Course (4.0 inches)	cu yd	\$64.00	700	\$44,800.00
Granular Borrow (13.0 inches)	cu yd	\$50.00	3,800	\$190,000.00
10' Separated Paved Path	sq ft	\$4.00	15,000	\$60,000.00
10' Right-of-Way for Paved Path	acre	\$150,000.00	0.3	\$51,652.89
Right - of - Way	acre	\$150,000.00	3	\$450,000.00

SUBTOTAL \$976,452.89

SUBTOTAL	\$976,452.89
Drainage (10%)	\$97,646.00
Mobilization (10%)	\$97,646.00
Traffic Control (10%)	\$97,646.00
Subtotal	\$1,269,390.89
Construction Contingency (20%)	\$253,879.00
Bid-Contingency (0%)	\$0.00
Subtotal	\$1,523,269.89
Engineering (20%)	\$253,879.00
GRAND TOTAL	\$1,777,148.89

#### **Assumptions**

**Existing Conditions** New roadway

Separated 10' paved path No curb and gutter No sidewalk

4.00 inch Thick Asphalt Pavement Width of 34.00 ft Right-Of-Way of 70.00 ft 4.00 inch Thick Base Course 13.00 inch Thick Granular Borrow Added 10' Right-Of-Way for path



### City of McCall

### 2023 Roadway Estimate

#### Samson Trail from 600 feet East of Colorado Street to Floyde

Collector Rural

(0.38 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (4.0 inches)	ton	\$180.00	1,800	\$324,000.00
Base Course (4.0 inches)	cu yd	\$64.00	600	\$38,400.00
Granular Borrow (13.0 inches)	cu yd	\$50.00	3,600	\$180,000.00
10' Wide Separated Path	sq ft	\$5.00	20,000	\$100,000.00
10' Right-of-Way for Separated Path	acre	\$150,000.00	0.5	\$68,870.52
Right - of - Way	acre	\$150,000.00	3	\$450,000.00

SUBTOTAL \$1,161,270.52

0
0
0
2
0
0
2
0
2

#### <u>Assumptions</u>

Existing Conditions
New roadway

No curb and gutter No sidewalk

4.00 inch Thick Asphalt
Pavement Width of 34.00 ft
Right-Of-Way of 70.00 ft
4.00 inch Thick Base Course
13.00 inch Thick Granular Borrow
Added 10' Right-Of-Way for path

Separated 10' path on one side



### city of McCall

### 2023 Roadway Estimate

#### Deinhard Lane Extension from Samson Trail to the East 1,600'

Collector Rural

(0.30 Miles)

Description	Unit	Unit Cost	Quantity	Total
Asphalt (4.0 inches)	ton	\$180.00	1,500	\$270,000.00
Base Course (4.0 inches)	cu yd	\$64.00	700	\$44,800.00
Granular Borrow (12.0 inches)	cu yd	\$50.00	4,100	\$205,000.00
10' Wide Separated Path	sq ft	\$5.00	16,000	\$80,000.00
30" High Back Curb & Gutter	ft	\$35.00	-	\$0.00
Right - of - Way	acre	\$150,000.00	3	\$450,000.00

SUBTOTAL \$1,049,800.00

	SUBTOTAL	\$1,049,800.00
	Drainage (10%)	\$104,980.00
	Mobilization (10%)	\$104,980.00
Existing Conditions	Traffic Control (10%)	\$104,980.00
New roadway	Subtotal	\$1,364,740.00
Separated 10' path on one side	Construction Contingency (20%)	\$272,948.00
No curb and gutter	Bid-Contingency (0%)	\$0.00
No sidewalk	Subtotal	\$1,637,688.00
	Engineering (20%)	\$272,948.00
	GRAND TOTAL	\$1,910,636.00

#### <u>Assumptions</u>

4.00 inch Thick Asphalt
Pavement Width of 34.00 ft
Right-Of-Way of 70.00 ft
4.00 inch Thick Base Course
12.00 inch Thick Granular Borrow



# McCALL CITY COUNCIL AGENDA BILL

216 East Park Street McCall, Idaho 83638

Number AB 23-265

Meeting Date December 29, 2023

	AGENDA ITEM INFORMATION								
SUBJECT:		Department Approvals	Initials	Originator or Supporter					
Request to App	prove Resolution 23-29 – Adopting a	Mayor / Council							
Revised Roadw	Revised Roadways Functional Classifications Map		ABS						
and Update the Transportation Master Plan		Clerk							
<b>I</b>		Treasurer							
		Community Development							
		Police Department							
		Public Works	NTS m	Originator					
		Golf Course							
COST IMPACT:	N/A	Parks and Recreation							
<b>FUNDING</b>	N/A	Airport							
SOURCE:		Library							
TIMELINE:	ASAP	Information Systems							
		Grant Coordinator							

#### **SUMMARY STATEMENT:**

The Transportation Master Plan was adopted in 2017 and defines a mission, vision, and goal for the community for the transportation networks in McCall. It is standard for reports and plans to be periodically updated as conditions change, or minor edits need to occur. The proposed updates to the Transportation Master Plan would be classified as minor edits and include upgrading four local roadway sections to the *Minor Collector* classification. These roadways are currently listed as *Local* roadway but function as *Minor Collectors* in relationship to their adjoining road networks. These roadways collect adjacent *Local* roadways and connect surrounding residential traffic to the higher capacity roadway network (*Major Collectors* or *Arterial* roadways). With this update, the attached, revised Functional Classification Map will be adopted.

The following roadway sections will be upgraded to a Minor Collector:

- Pinedale Street from Boydstun Street to Rio Vista Boulevard
- Carico Road from Lick Creek Road to Flynn Lane
- Pilgrim Cove Road from Lick Creek Road to Southern intersection of John Alden Road
- Majestic View from Spring Mountain Boulevard to the end of the roadway.

Ongoing coordination with Idaho Transportation Department (ITD) will continue to implement these changes to the Federal Functional Classification designations, which will allow these newly classified Collector roadways to be eligible for grant funding.

#### **RECOMMENDED ACTION:**

Approve Resolution 23-29 to adopt revised to the Functional Classification map and update the Transportation Master Plan and authorize the Mayor to sign all necessary documents.

RECORD OF COUNCIL ACTION								
<b>MEETING DATE</b>	ACTION							
11/30/2017	Approve resolution 17-27 to adopt the McCall Area Transportation Plan and authorize the Mayor to sign all necessary agreements.							



A RESOLUTION OF THE CITY OF McCALL, VALLEY COUNTY, STATE OF IDAHO, APPROVING REVISIONS TO THE ROADWAYS FUNCTIONAL CLASSIFICATIONS MAP; UPDATES TRANSPORTATION MASTER PLAN; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, Resolution 17-27 adopted the 2017 Transportation Master plan that was prepared by Logan Simpson and sub-consultants Kittleson Associates; and

WHEREAS, the City Council of the City of McCall has determined that with routine updates to the Transportation Masterplan minor revisions need to occur and adopts certain roadway functional classifications defined in this resolution:

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF McCALL, IDAHO, AS FOLLOWS:

#### Section 1:

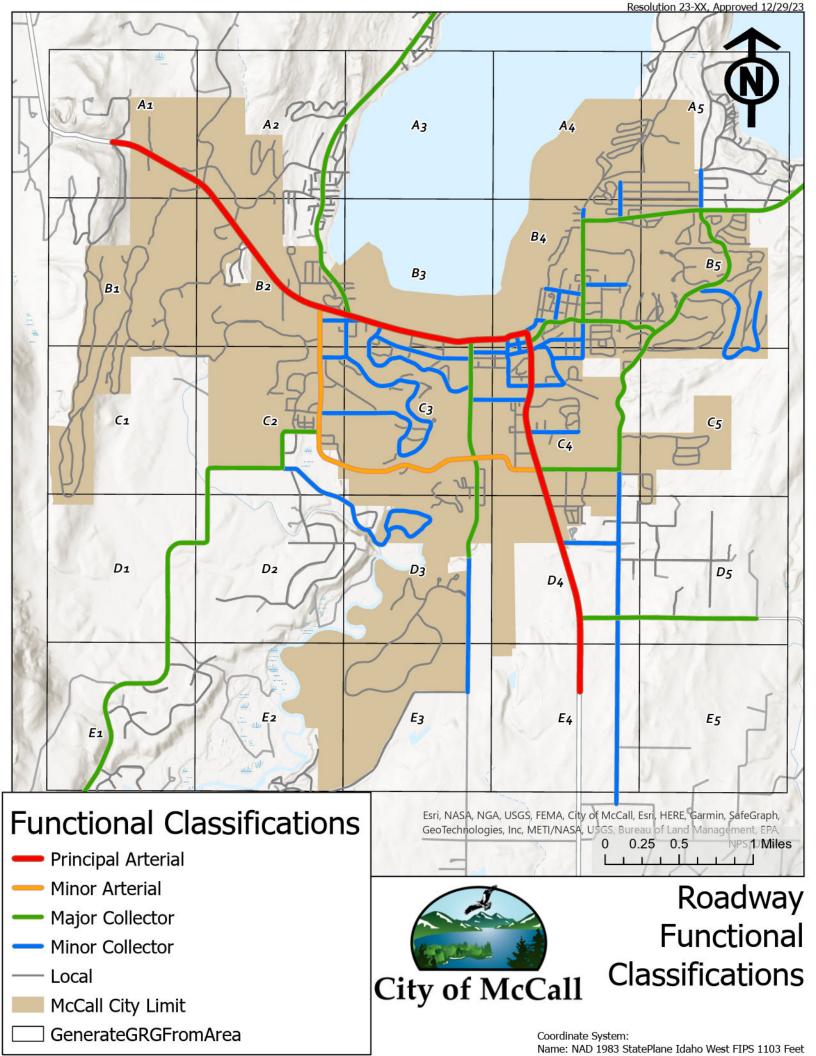
The following additions to Appendix C of the Technical Memorandum #2, in the Transportation Master Plan section 2.0 "Functional Classification", Upgrades from Local to Minor Collector:

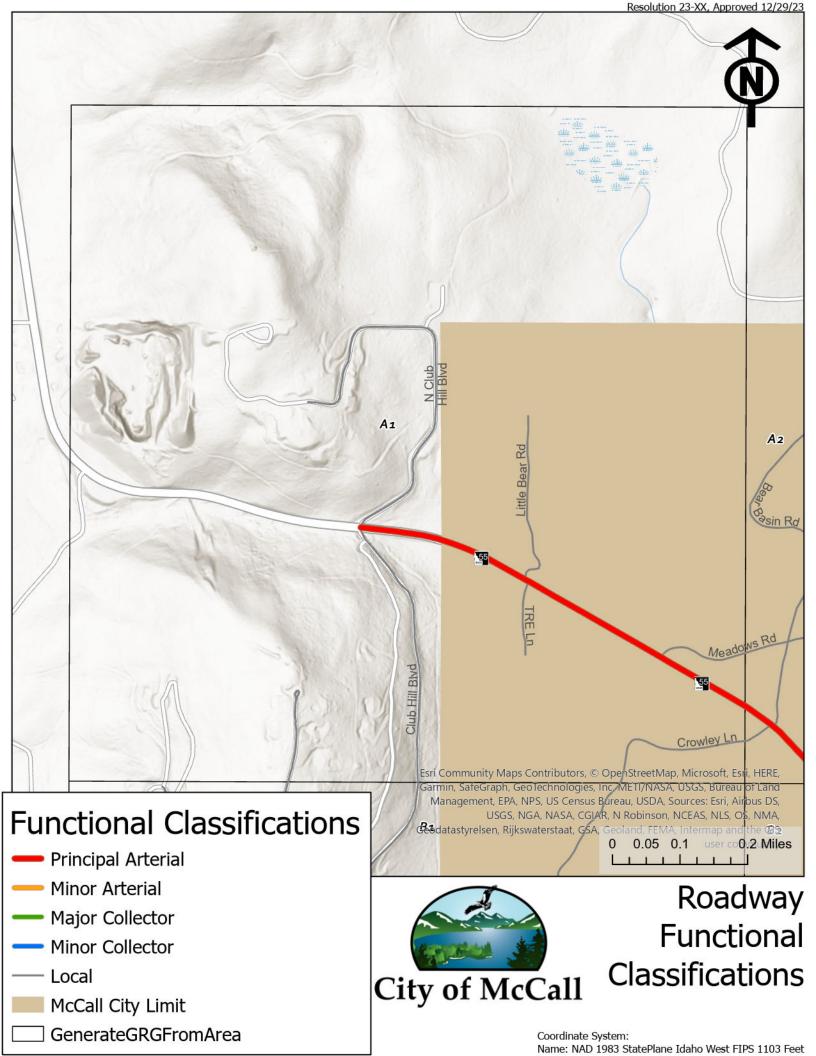
- Pinedale Street, Boydstun Street Rio Vista Boulevard
  - This roadway acts as a collector because it is a primary connection for the existing neighborhoods to reach Rio Vista Boulevard, Carmen Drive, and Ernesto Drive.
- Carico Road, Lick Creek Road Flynn Lane
  - This roadway acts as a collector because it is a primary connection for the existing neighborhoods to reach Lick Creek Road.
- Pilgrim Cove Road, Lick Creek Road Southern intersection of John Alden Road.
  - This roadway acts as a collector because it is a primary connection for the existing neighborhoods to reach Lick Creek Road.
- Majestic View Drive
  - This roadway acts as a collector because it is a primary connection for the existing neighborhoods to reach Spring Mountain Boulevard.

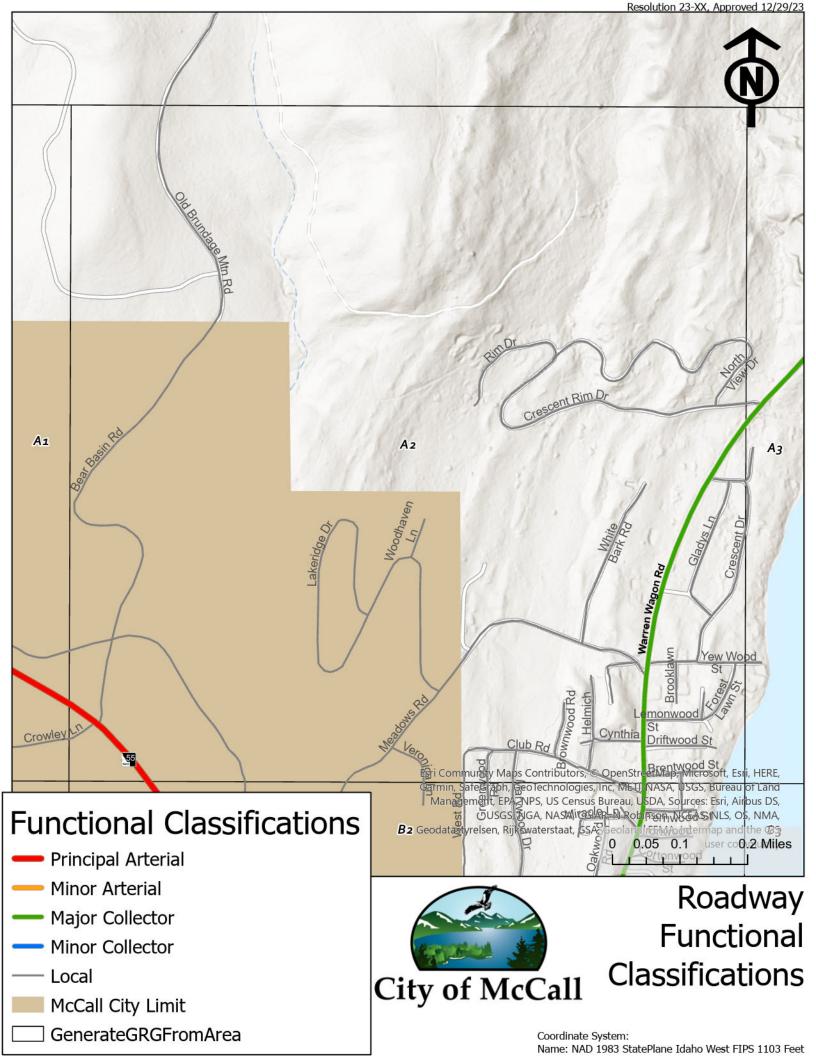
Section 2: This resolution shall be in full force and effect immediately upon its adoption and approval.

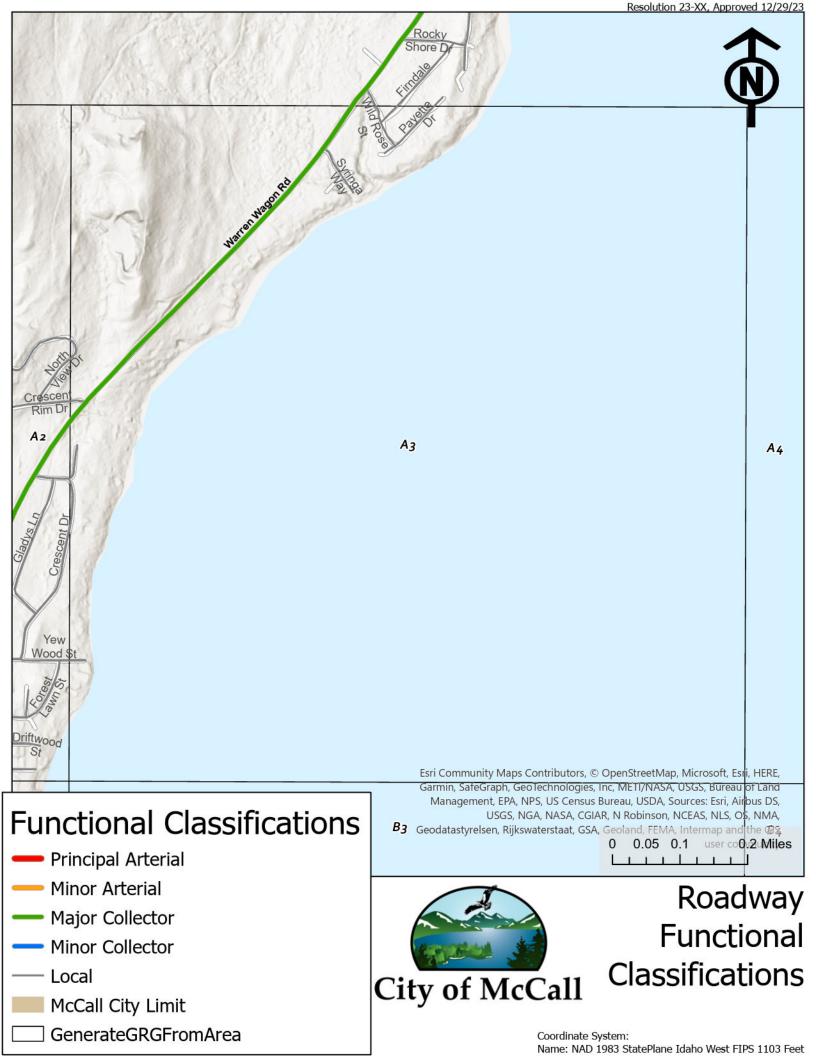
PASSED and approved by the City Council of the City of McCall this 29 day of December 2023.

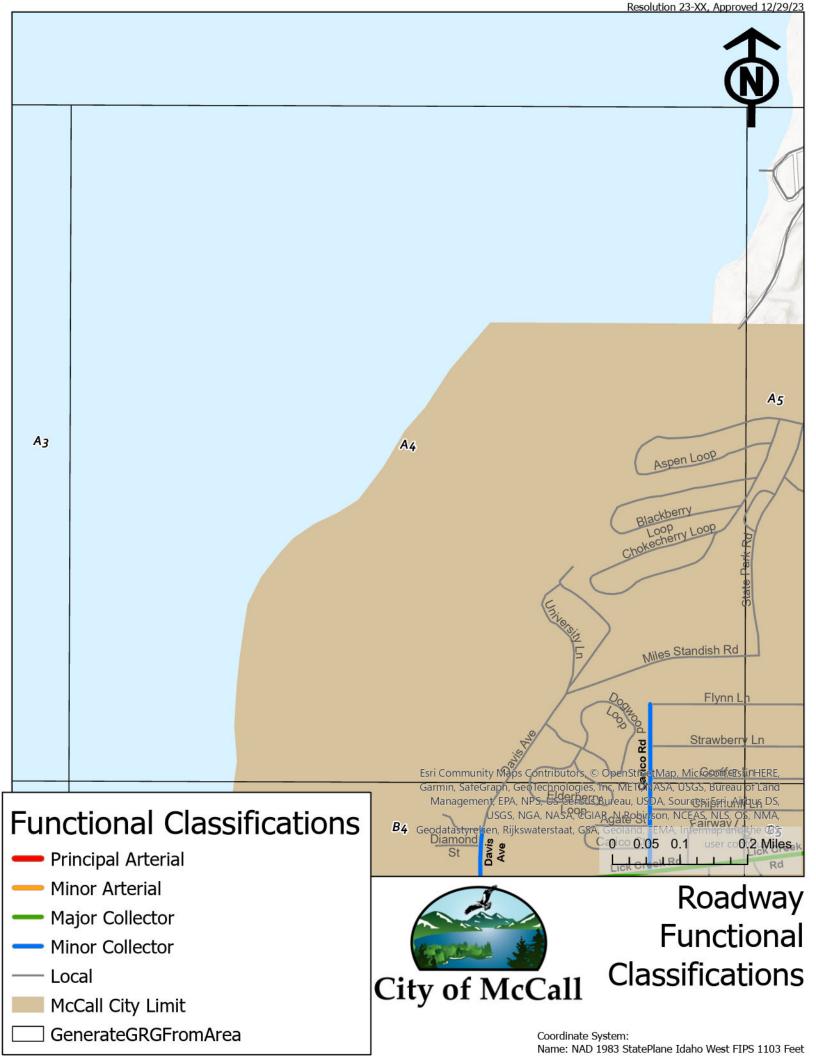
	CITY OF MCCALL Valley County, Idaho	
ATTEST:	Robert S. Giles, Mayor	
BessieJo Wagner, City Clerk		

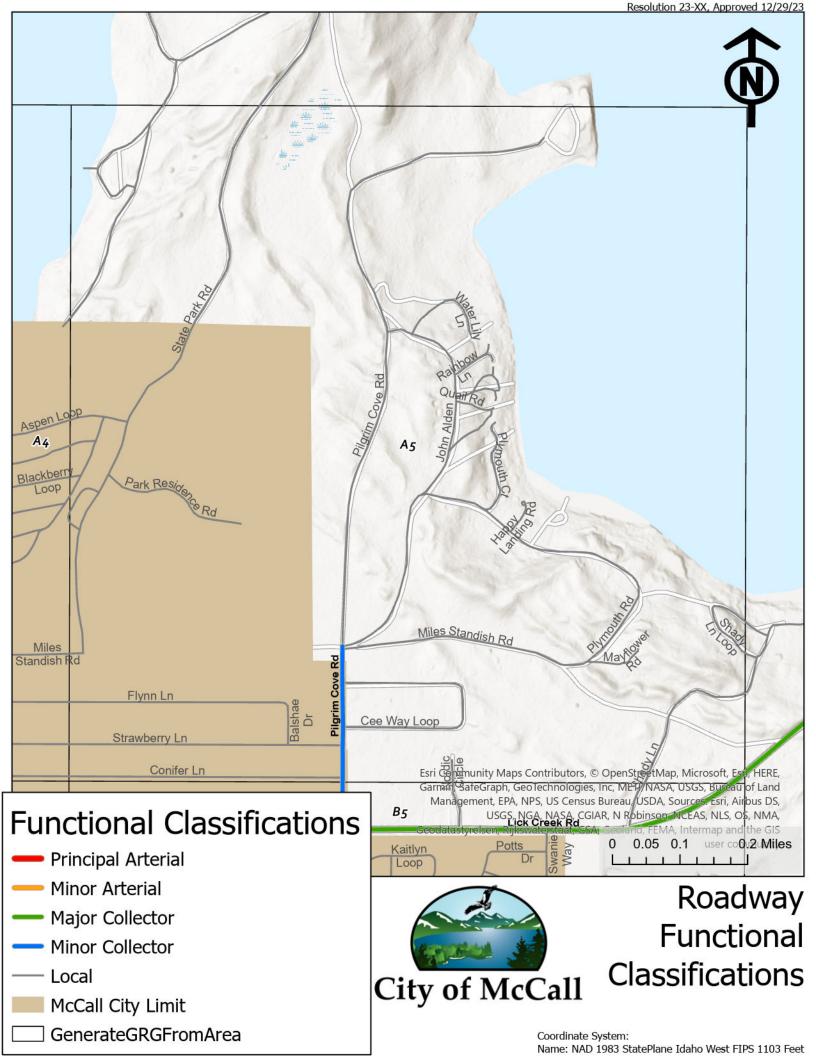


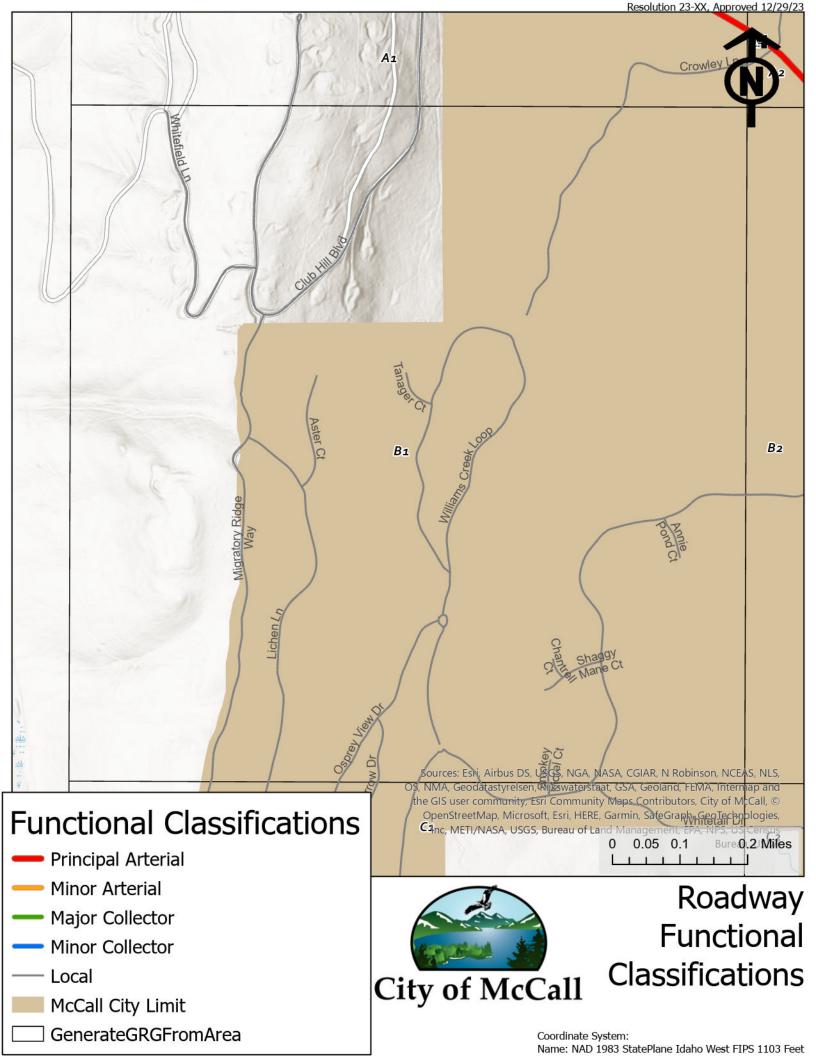


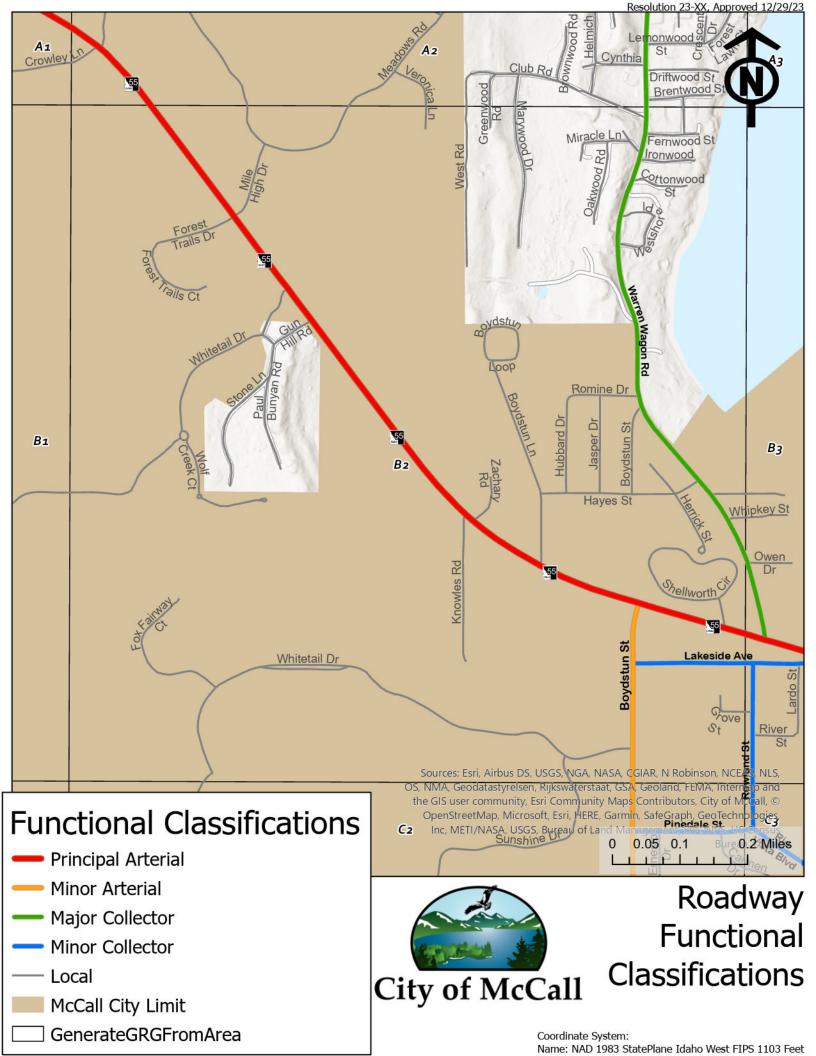


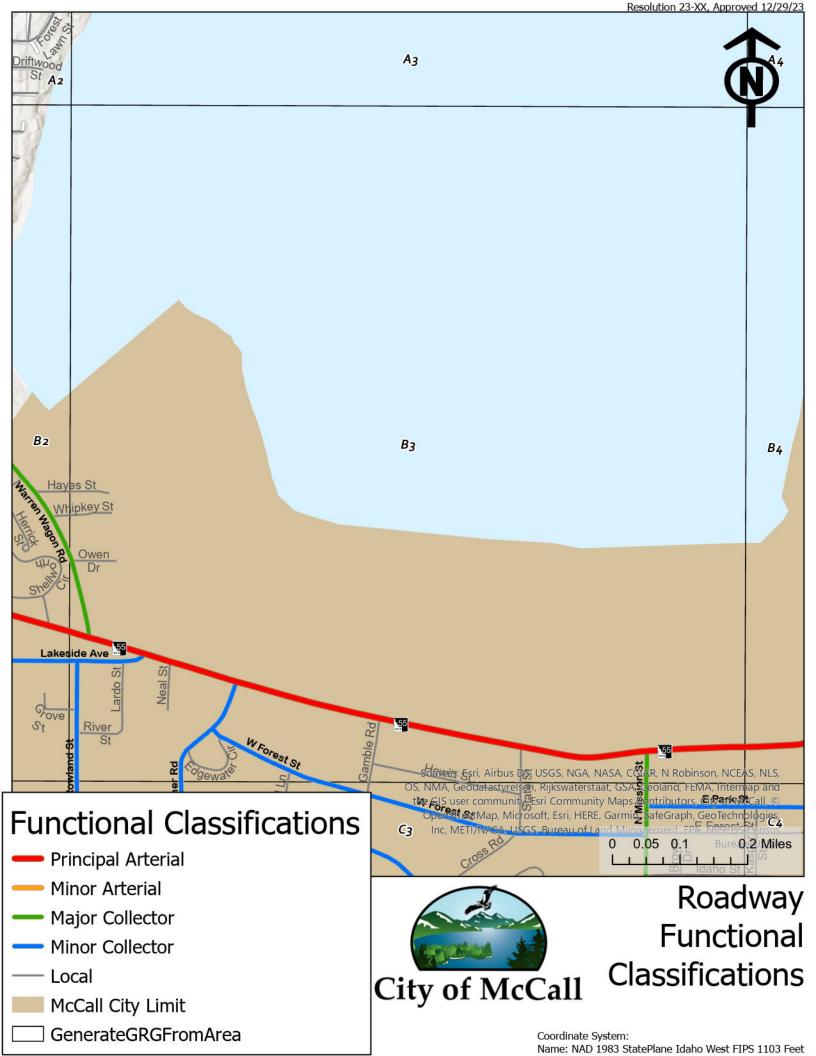


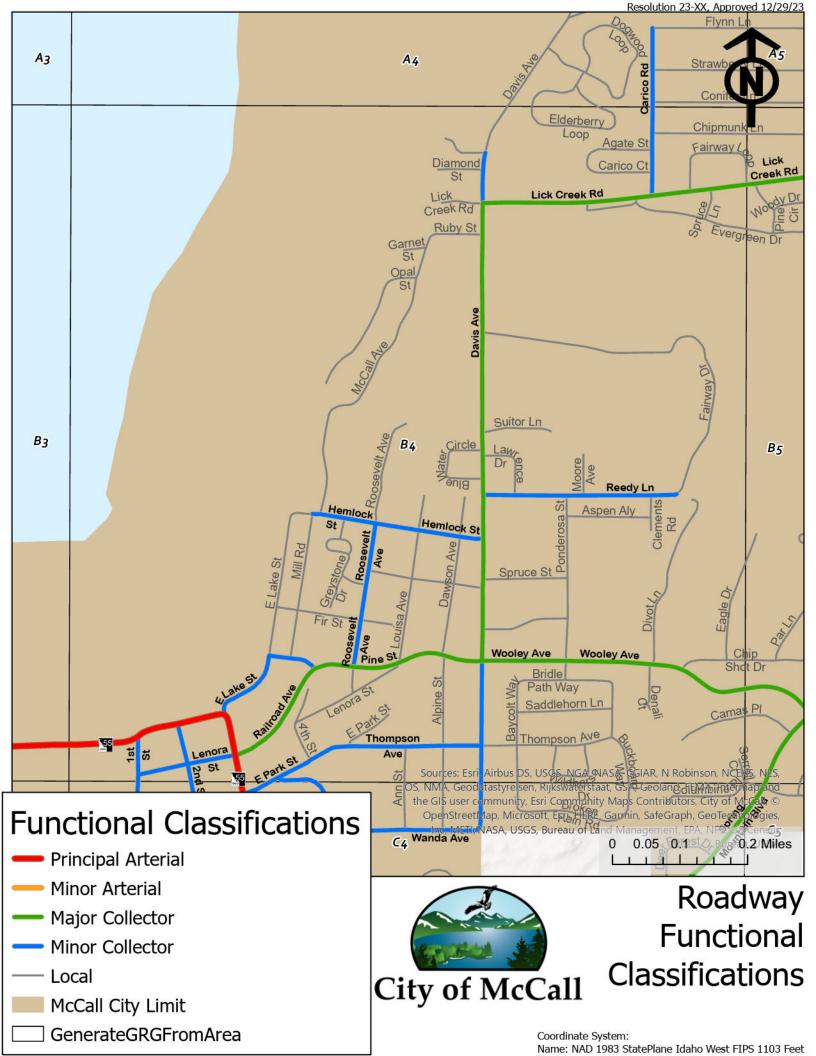


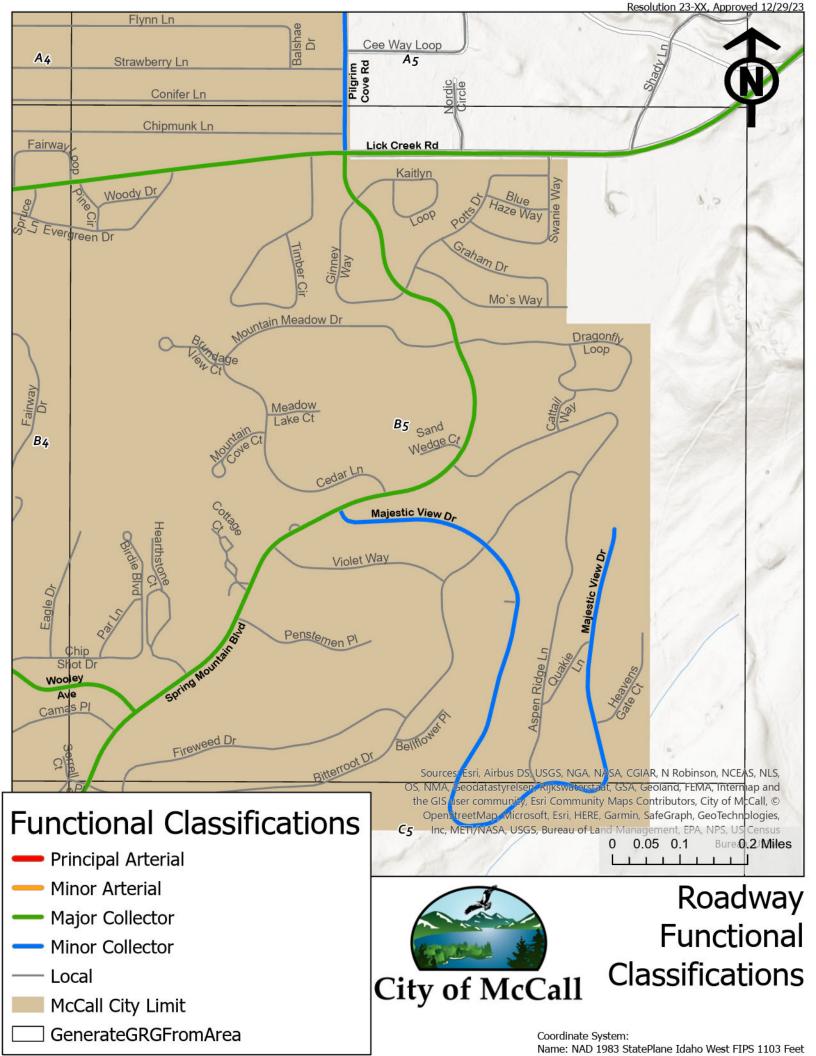


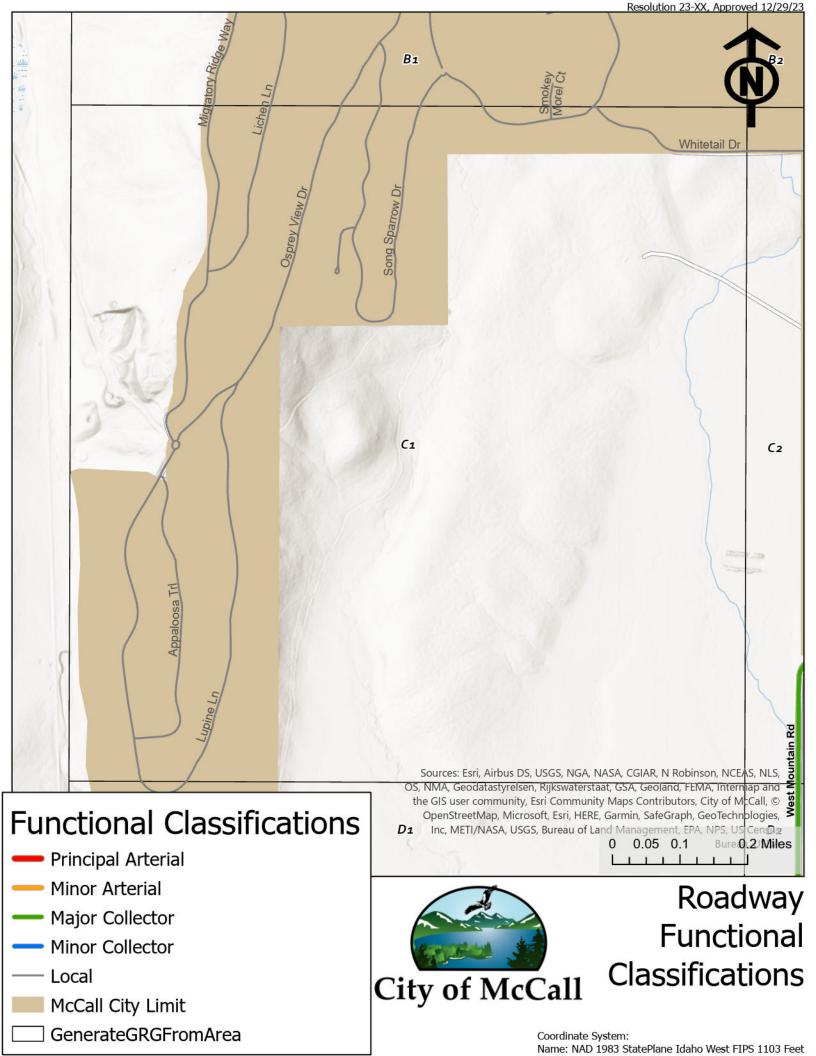


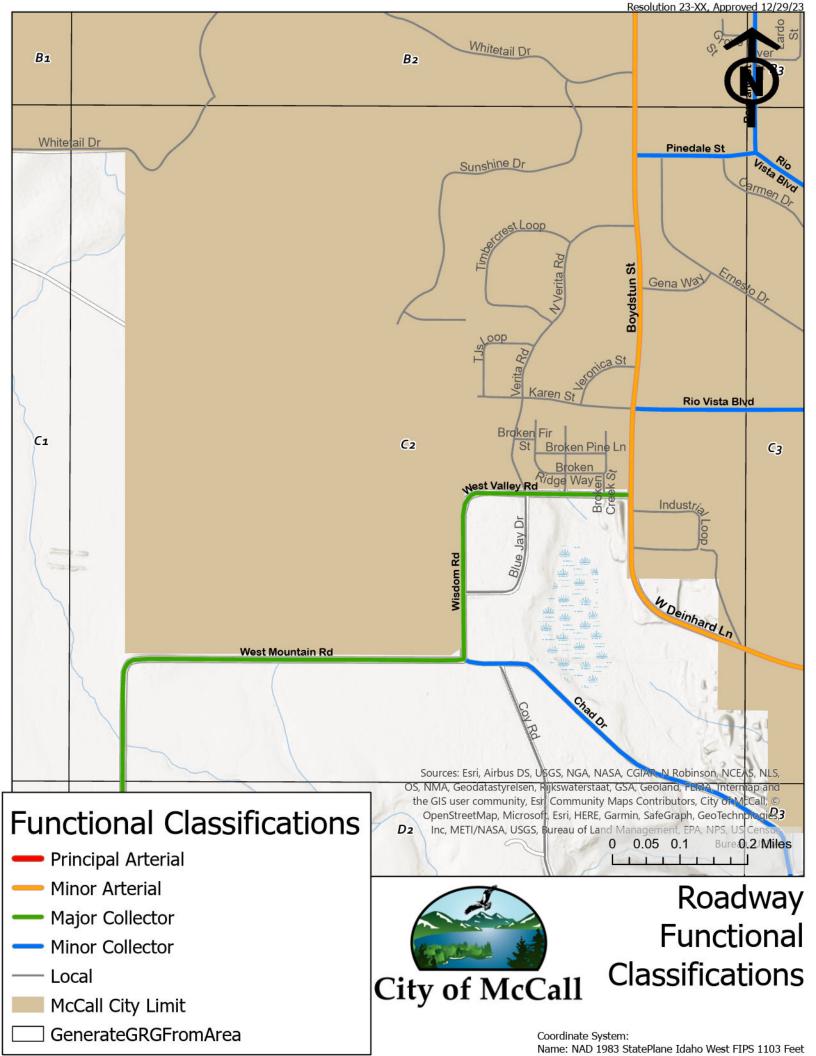


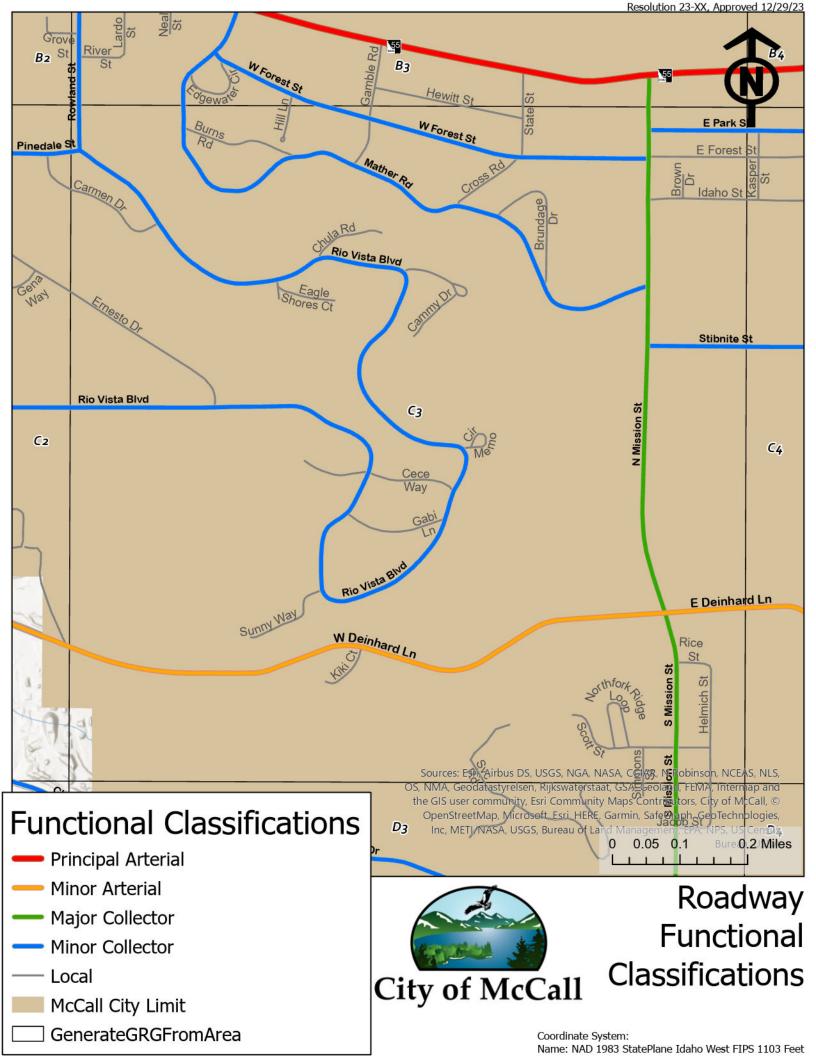


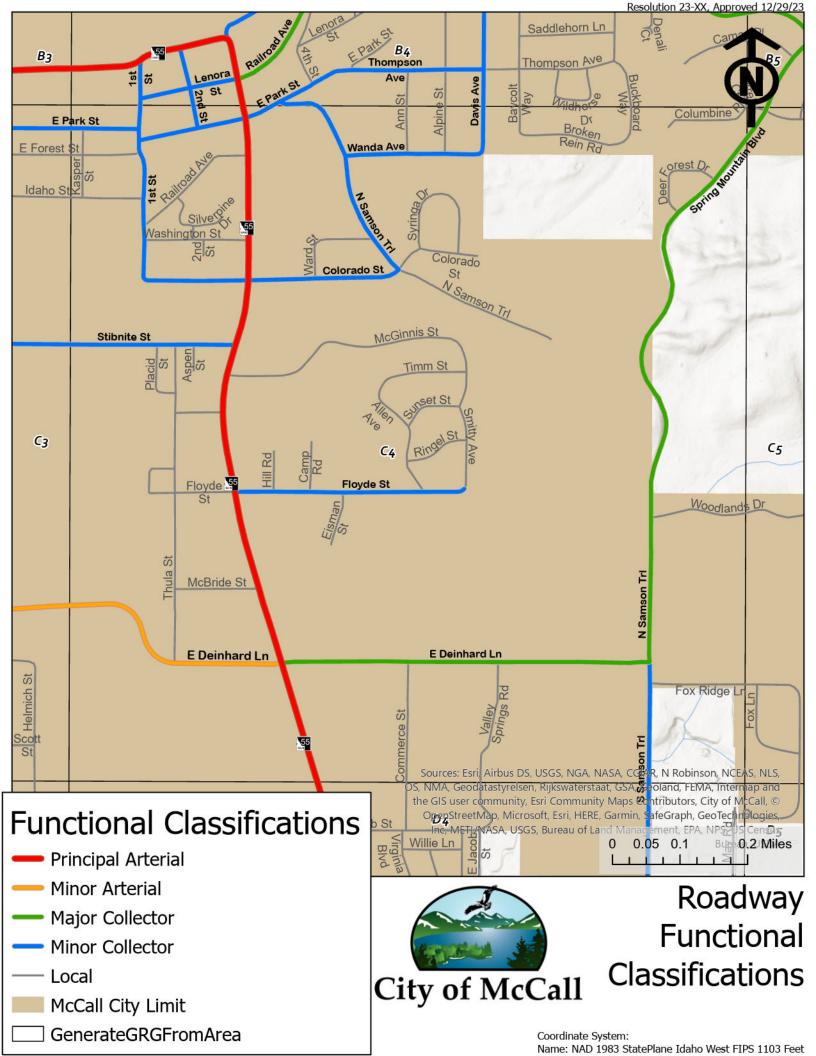


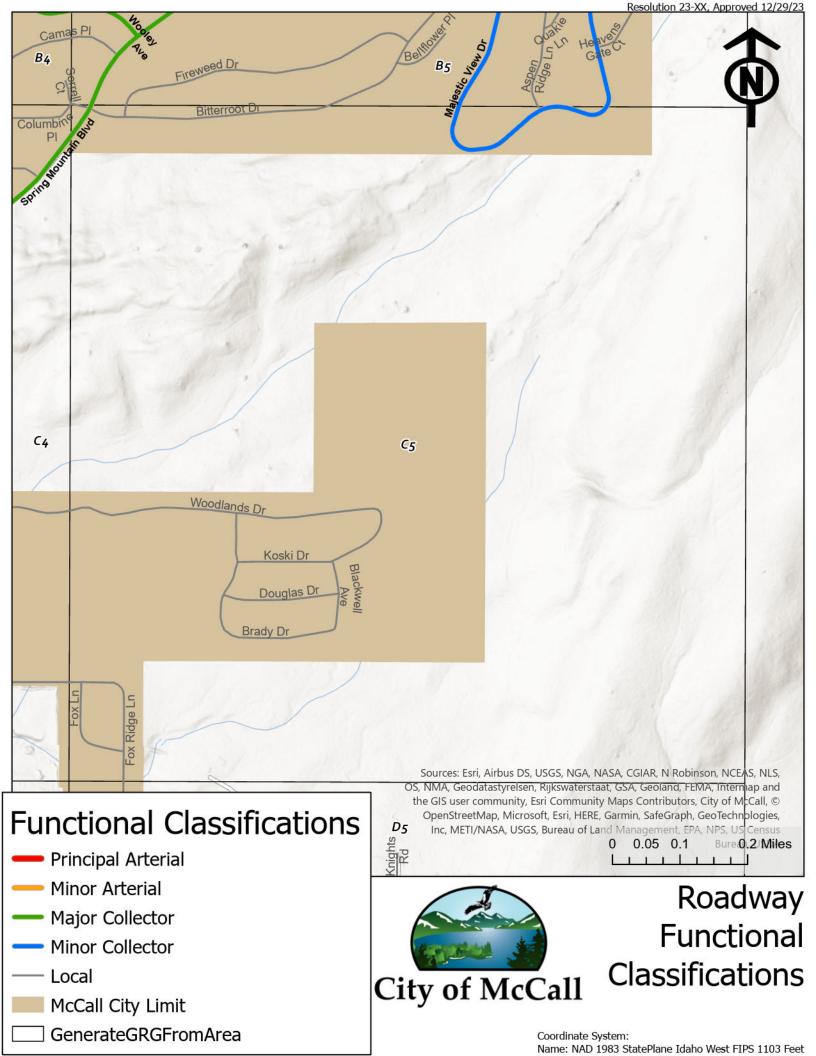


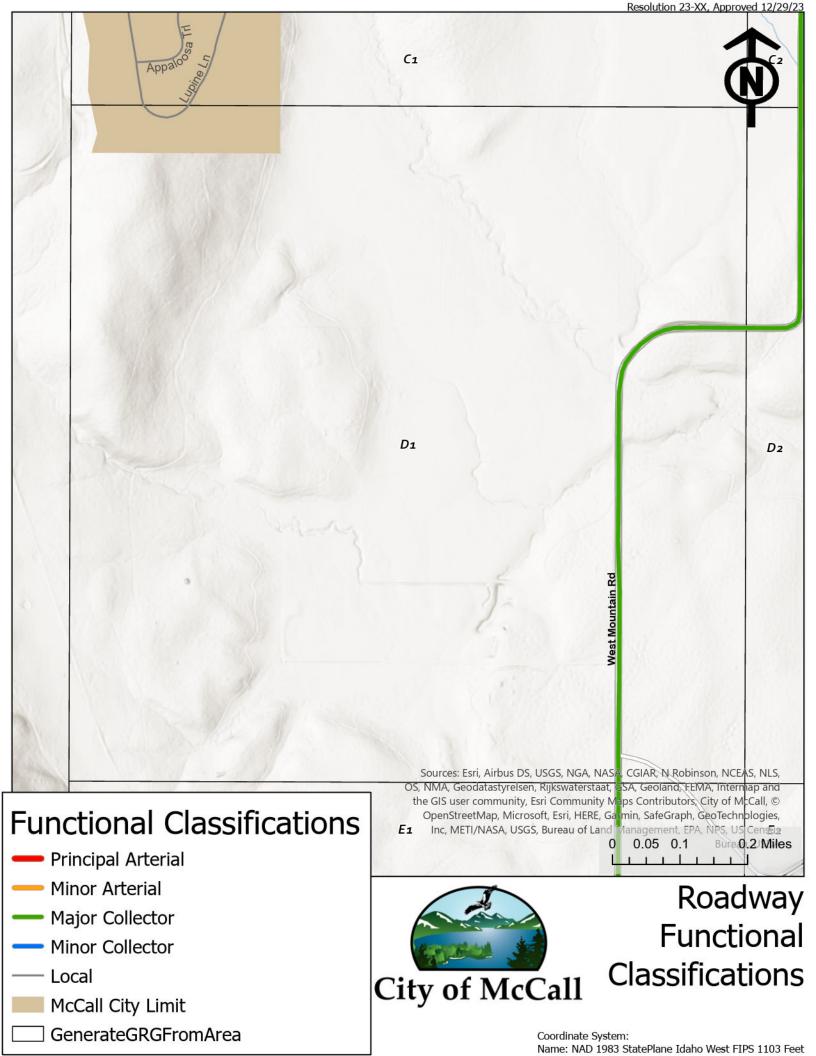


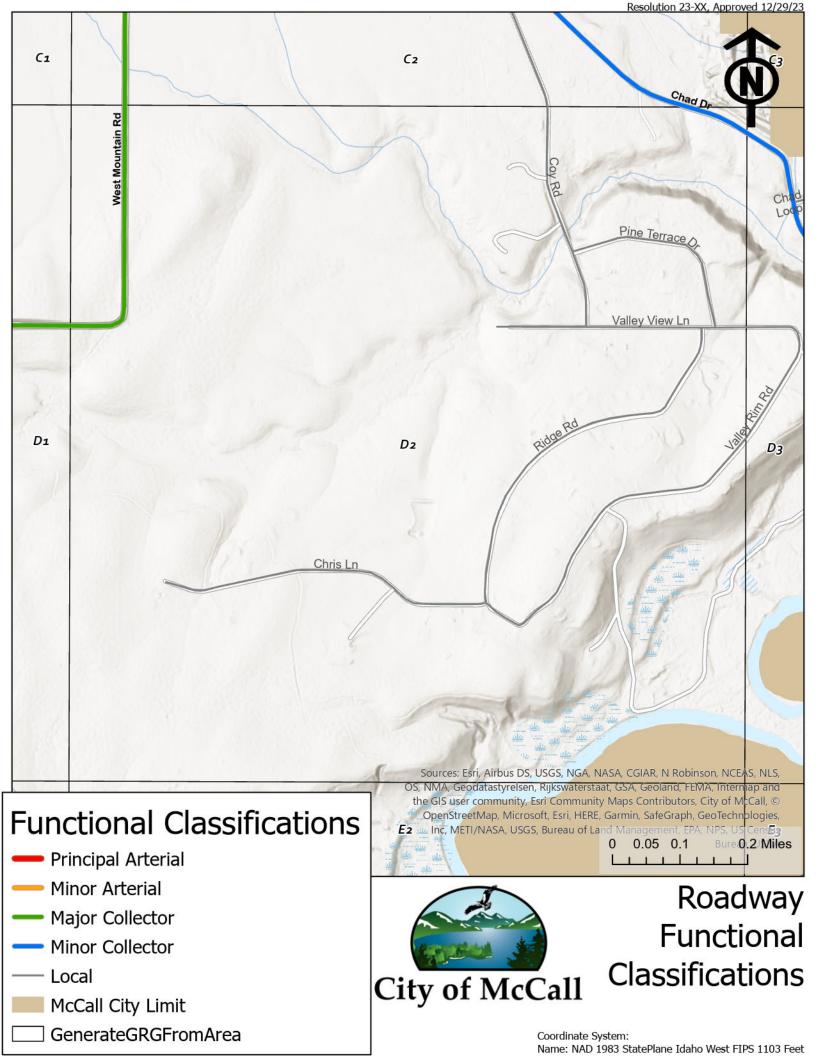


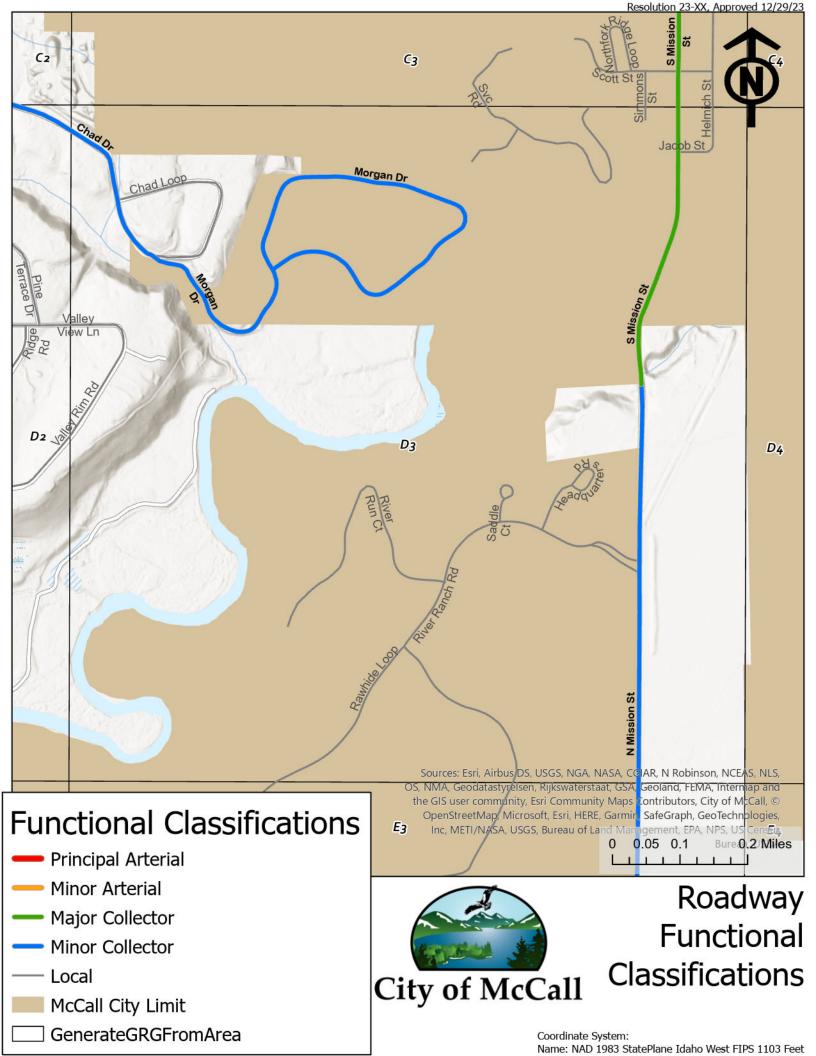


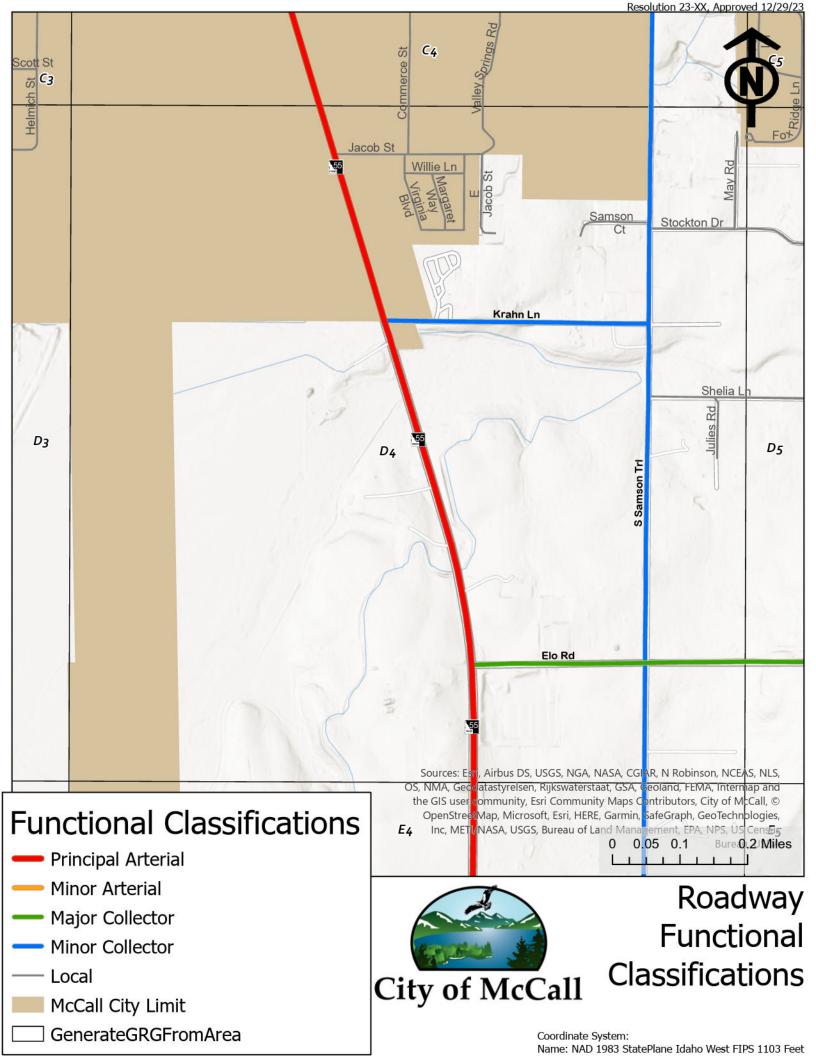


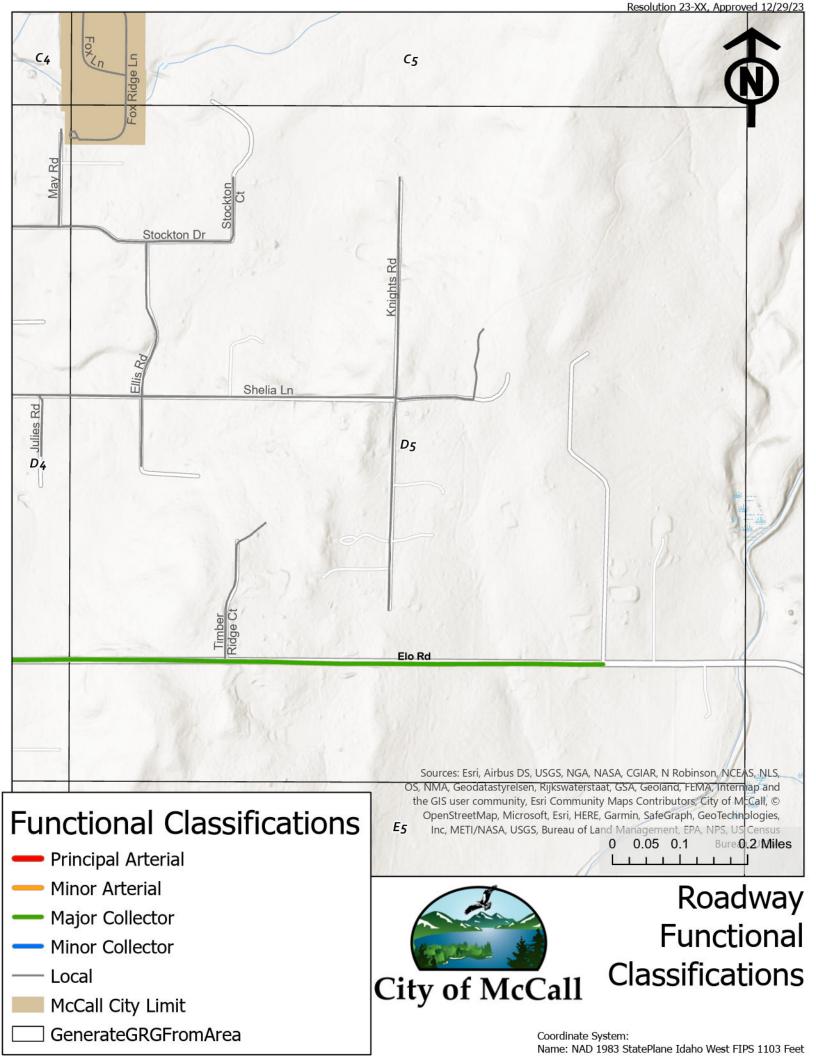


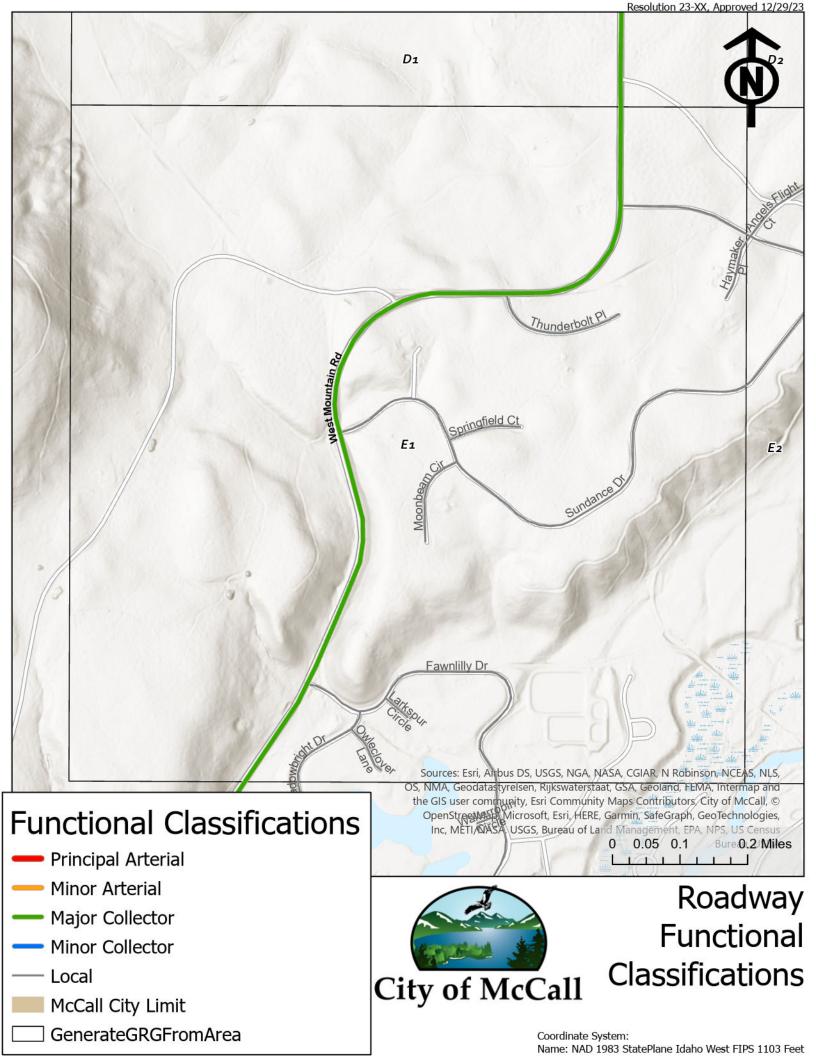


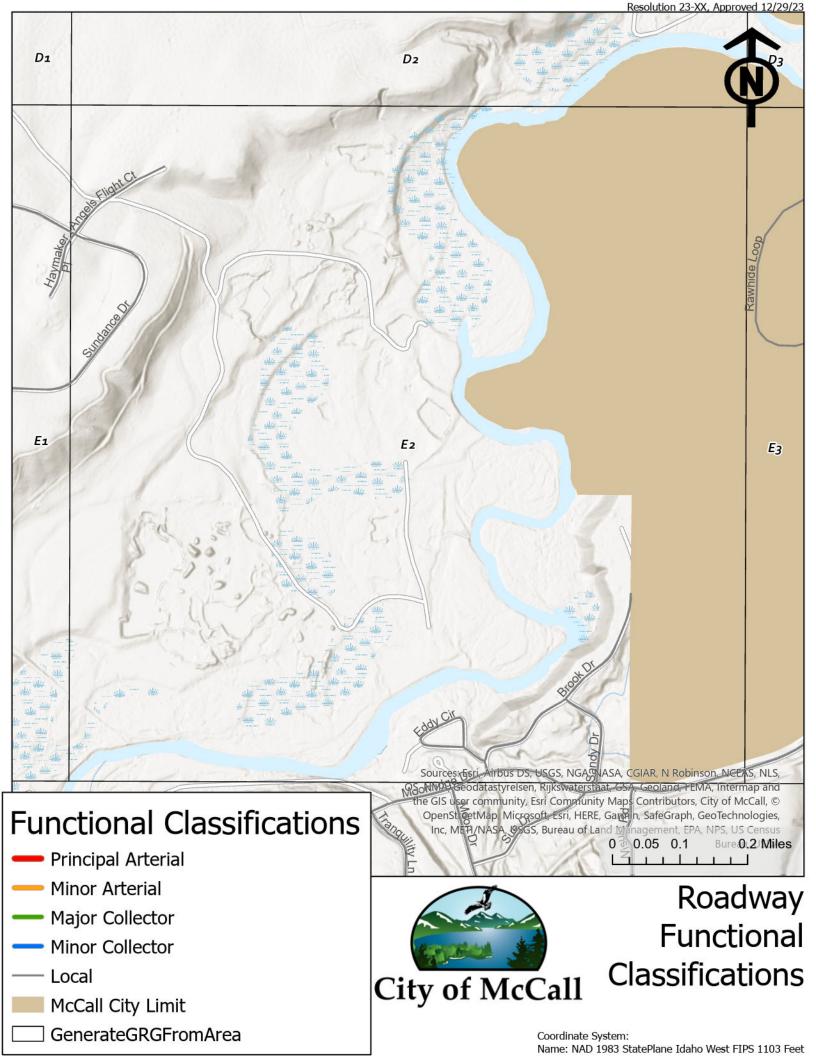


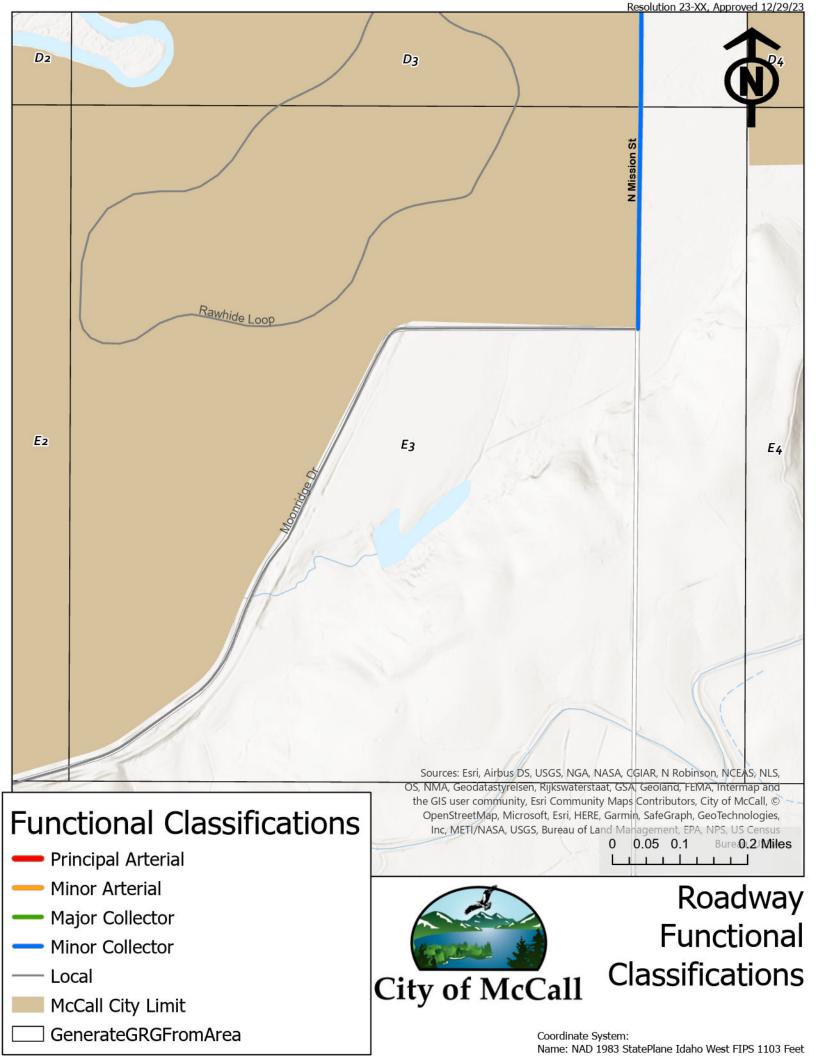


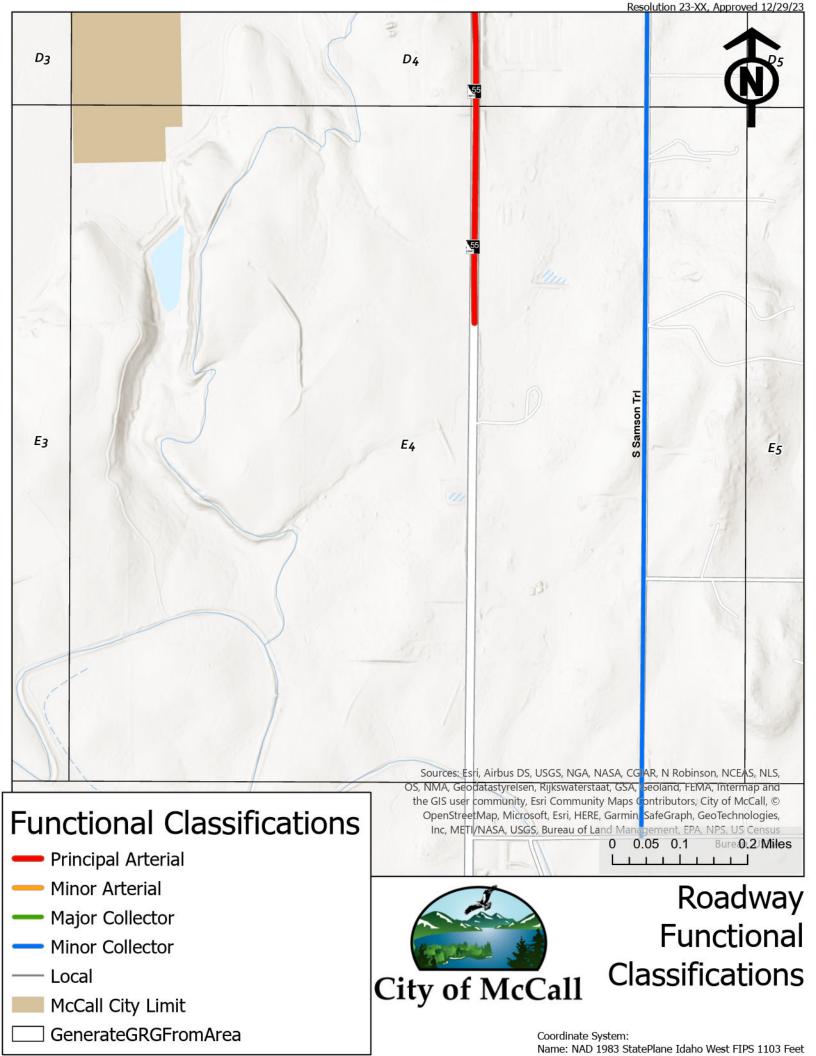


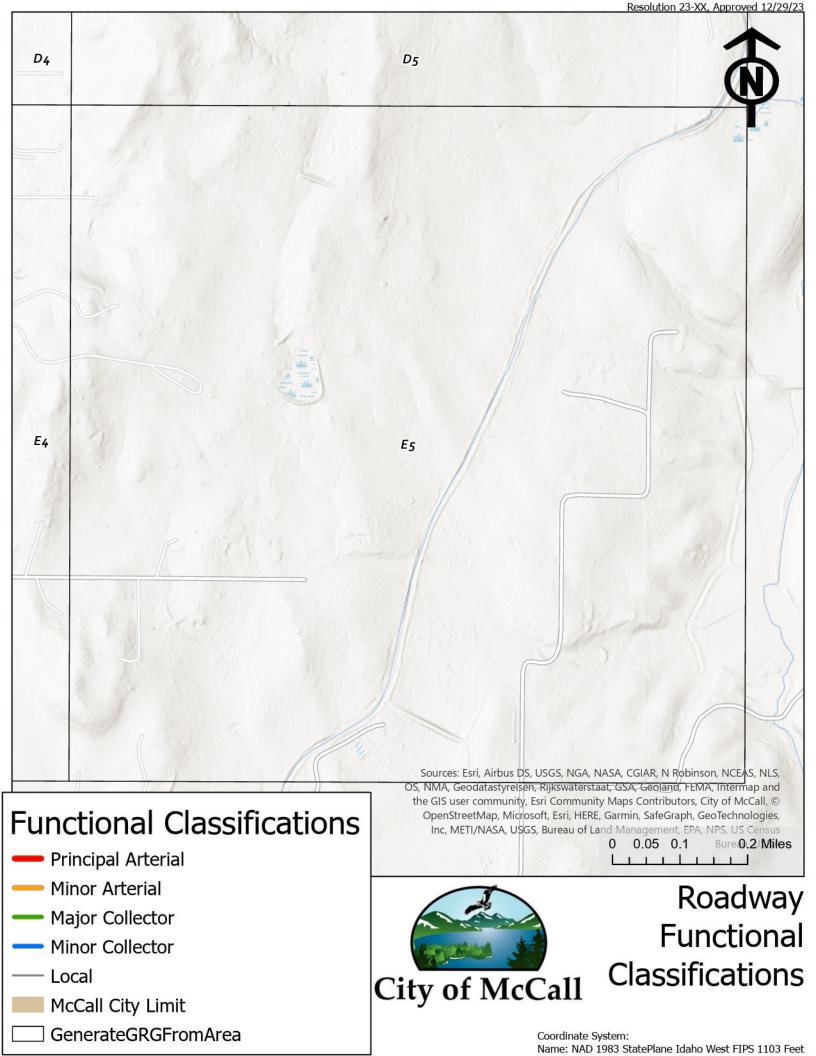












# McCALL CITY COUNCIL AGENDA BILL

216 East Park Street McCall, Idaho 83638

**Number AB 23-267** 

Meeting Date December 29, 2023

AGENDA ITEM INFORMATION				
SUBJECT:		Department Approvals	Initials	Originator or Supporter
Work session – Transportation and Land Use		Mayor / Council		
	•	City Manager	ABS	
		Clerk		
		Treasurer		
		Community Development	BP/	Originator
		Police Department	119	
		Public Works	m	Originator
		Golf Course		
COST IMPACT:	N/A	Parks and Recreation		
FUNDING	N/A	Airport		
SOURCE:		Library		
TIMELINE:	2024	Information Systems		
		Grant Coordinator		

#### **SUMMARY STATEMENT:**

City Engineering and Planning Staff have identified areas within our code that need more definition and direction as it relates to transportation and traffic impact studies. The current practice includes staff guiding applicants to show compliance with traffic-related code findings, without any specific standards for traffic analysis as defined by City Code. The City has relied on industry standards and the expertise of our consultants to provide feedback on applications to determine appropriate and proportional mitigations for traffic impacts predicted in these studies.

As Staff and our consultants have worked through many traffic impact analyses of various projects, it has become apparent that there are issues with industry standards being applied within McCall. There are various methods available to analyze traffic and impacts and each have strengths and weaknesses. Therefore, Staff would like to work towards utilizing a methodology that better reflects the traffic patterns and transportation needs of McCall.

With this work session, Staff has a few goals that we would like to present to the Council as outlined in the attached memo. These goals include creating standards for when a traffic analysis is required, establishing a methodology that is McCall specific, work towards a more holistic evaluation, and establishing a method for proportional transportation mitigations.

#### **RECOMMENDED ACTION:**

Informational only- no action required.

RECORD OF COUNCIL ACTION				
<b>MEETING DATE</b>	<b>ACTION</b>			



**PUBLIC WORKS** 

216 East Park Street McCall, Idaho 83638

#### Phone 208-634-5580

Main 208-634-7142 Fax 208-634-4170

#### www.mccall.id.us

TO: McCall City Council

Staff Engineer Morgan Stroud and City FROM:

Planner Brian Parker

December 29, 2023 DATE:

RE: Transportation and Land Use Work Session

This memo is intended to provide a high-level overview of the current practices on integrating transportation analysis in the land use process, known challenges associated with the process, and options on how to improve the process. Currently there are few transportation and traffic specifications in Titles III or IX of McCall City Code. City Engineering and Planning Staff work with applicants on how they can show compliance with the existing traffic related standards. Our current practice utilizes industry standards. Working through these studies with applicants and our consultants, we have been learning that there are downfalls to the industry standards in a community like McCall. Many transportation analysis tools have been created in various communities around the country and could be used as a springboard for future implementation tools for Staff and applicants to utilize.

#### Related Comprehensive Plan Goals and Policies:

- TRANSPORTATION GOALS + POLICIES Goal 1: Foster a transportation system for current and future year-round needs that is safe, convenient, accessible, economical, and consistent with McCall's character.
  - Policy 1.1 Recognize the seasonal change in McCall traffic and prioritize strategies and projects that manage peak demand (e.g., enhancing transit service, walking and bicycling facilities, carpooling and employee incentives, parking management) over major capacity-enhancing roadway projects (e.g., road widening, intersection widening, and signalization).
  - Policy 1.2 When major roadway projects are implemented, opportunities to link them with other goals (e.g., green infrastructure, gateway treatments, public art) should be explored and incorporated when possible.
  - Policy 1.3 Develop streets that are designed and operate to be safe, comfortable, and convenient for all users, including people walking, bicycling, driving, and riding transit.

- TRANSPORTATION GOALS + POLICIES Goal 3: Increase mode choices (bike, walking, Nordic)
  and route choices (connectivity of routes) to increase travel options and reduce reliance on
  automobile travel.
  - Policy 3.1 In future developments, <u>plan for sidewalks</u>, <u>trails</u>, <u>and bicycle</u> <u>infrastructure</u> that connect with the City's existing systems.

## Policy 3.2 <u>Complete and improve the pathway and sidewalk network in the City</u>.Recommendations:

Staff has identified opportunities for improvement in our current practices on assessing the transportation related impacts of developments. Specifically:

- 1. Establishing standards for the contents of a TIS based on the scale of development. At a high level, these standards would include:
  - o Requiring a pre-study meeting with staff
  - Analysis of impacts (see methodology discussion below)
  - o Existing roadway conditions, including bicycle and pedestrian facilities
- 2. Creating a system for converting analysis into actual mitigation measures that are useful for the community and proportional to the scale of development.
- 3. Ensuring that mitigations and improvements are supporting our Adopted Plans and Documents, particularly:
  - o McCall Area Comprehensive Plan,
  - o McCall in Motion Transportation Master Plan,
  - Parks Recreation and Open Space Plan (PROS Plan),
  - ADA Transition Plan,
  - o Pavement Management,
  - o All Other Planning Documents: https://www.mccall.id.us/plans-documents-1

#### Two Types of Methodology:

Generally, there are two common models for assessing impacts of new development, level of service (LOS), and transportation demand management. Other evaluation methods may be identified as we work through this process of refining a method that will properly reflect impacts in McCall.

#### Level of Service Analysis (LOS)

#### Process:

- Count existing vehicles and turn movements at key locations near a proposed development.
- Estimate the additional trips generated by the development based on standardized trip generation estimates for daily, AM peak hour, and PM peak hour.
- Estimate future background traffic based on existing conditions times an annual growth rate.
- 4. Input data into traffic model and get the amount of congestion and delay at critical points.
- LOS is generated and mitigation measures proposed for any "failing" intersections/roadways.

**Primary unit: Peak Hour Trips** 

#### Benefits:

- Industry standard
- Can be prepared quickly

#### Challenges:

- Geared towards large urban areas
- Traditional AM/PM Peak Hours
- Typically focuses on vehicle delay, other impacts frequently not accounted for
- Based on national standards, local peculiarities are difficult to integrate into model effectively.
- Mitigations are generally for peak hours, so excess roadway capacity is a common outcome.

#### **Transportation Demand Management (TDM)**

#### **Process**

- 1. Proposed development location analyzed for proximity to other land uses that a person would travel to from the development.
- 2. The distance from the development would be multiplied times the anticipated number of annual vehicle trips to/from the development for a given land use to estimate the annual Vehicle Miles Traveled.
- 3. Mitigation measures would be ways to reduce the demand for vehicle trips.

Primary unit: Vehicle Miles Traveled

#### Benefits:

- Can be locally tailored
- Incentivize other modes of travel
- Environmental considerations
- Clearer relationship to impact fees
- More useful data

#### **Challenges:**

- More complex analysis
- Fewer Idaho firms with this experience
- Newer to Idaho
- May need to couple with another analysis type

#### **Next Steps:**

City Engineering and Planning Staff will work to create a transportation analysis methodology that will appropriately reflect the City of McCall. This process will take some time for Staff to create and implement and will have milestones along the way to reach the end goal while still working with applicants on proportional and mitigations on their projects. Below are a few high-level milestones that Staff is working towards:

- 1. Establishing LOS based standards for Traffic Impact Study types and requirements
- 2. Transition to a Transportation Demand Model
- 3. Develop appropriate implementation tools