

### Montarise Village Traffic Impact Study

Flathead County, Montana



Prepared For:

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RECEIVED

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Flathead County Planning and Zoning Office

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# Montarise Village Traffic Impact Study Flathead County, Montana

#### A. EXECUTIVE SUMMARY

The Montarise Village Subdivision is a 155.9-acre residential and commercial project located west of Highway 93 just north of KM Ranch Road in Flathead County, Montana. At full build-out, the project would produce 3,066 new daily vehicle trips in this area and Phase 1 of the project will produce 788 daily vehicle trips. As proposed, the Montarise Village Subdivision will create capacity issues at the two planned approach locations onto Highway 93 (Bowdish Road and KM Ranch Road). The project may be developed through Phase 1 but may need to create intersection improvements to further develop the property depending on the ongoing growth patterns in the area. The Montana Department of Transportation (MDT) corridor plan will likely establish which of these approaches should be improved to provide access to the greater areas around the Highway 93 corridor.

### B. PROJECT DESCRIPTION

This document studies the possible effects on the surrounding road system from a proposed residential and commercial development located west of Highway 93 four miles south of Whitefish, Montana at KM Ranch Road. The document provides information regarding possible traffic impacts in the area and identifies traffic mitigation efforts that the development may require. The development would include 268 residential units an RV park, church, and 3.2 acres intended for a mixed-use business park.

### C. EXISTING CONDITIONS

The proposed development property consists of a 155.9-acre parcel of land located west of U.S. Highway 93 just north of KM Ranch Road. The property currently consists of an undeveloped woodland. The Flathead County Landfill is located ½ mile south of the site. The surrounding area is comprised of a rural residential developments and agricultural properties adjacent to the Highway 93 corridor. See **Figure 1** for a location map of the proposed development.

### Adjacent Roadways

**US Highway 93** is a four-lane north/south principal arterial roadway which extends north from Kalispell to Whitefish. Near KM Ranch Road the roadway has a rural cross-section with center medians and left-turn lanes at major intersections. The posted speed-limit on Highway 93 is 65 MPH south of Whitefish. Abelin Traffic Services acquired traffic data collected by MDT that indicates the roadway carried 18,000 VPD north of KM Ranch Road in 2021.

**KM Ranch Road** is a two-lane east/west route which extends west from Highway 93 to provide access to the rural area west of the highway. The route has a rural cross-section with a total paved width of 24 feet. The posted speed limit on KM Ranch Road is 35 MPH. Data obtained by ATS from Flathead County indicates that the roadway carried 1,152 VPD west of Highway 93 in 2019.

Figure 1- Proposed Development Site

Montarise Village
Subdivision

Google Earth

**Bowdish Road** is an east/west route that intersects Highway 93 to 1,500 feet north of KM Ranch Road and provides access to the agricultural and residential areas east of Highway 93. The road has a gravel surface width of 20-24 feet and a posted speed limit of 25 MPH. Bowdish Road is STOP controlled at the intersections with Highway 93. Bowdish Road currently carries less than 1,000 VPD.

### **Traffic Data**

In February 2022 Abelin Traffic Services and APEC Engineering collected traffic data at area intersections to evaluate current operations characteristics. These counts included peak-hour turning movement counts at nearby intersections. The peak-hour turning movement counts were performed at the intersections of Highway 93 with KM Ranch Road and Bowdish Road.

The raw data collected for this project was adjusted for seasonal variation in accordance with the data collected from MDT's annual count station located on US Highway 2 west of Kalispell (Station A-24). This count station data indicated that data collected in January 2022 is approximately 81% of the Average Annual Daily Traffic (AADT) in this area. The raw traffic counts were factored up by 19% to account for the seasonal traffic variations in this area. Based on the MDT data it is likely that summer traffic volumes along this section of Highway 93 are 20-30% higher than the annual average.

### Historic Traffic Data

ATS obtained historic traffic data for the surrounding road network from the MDT. This data is presented in **Table 1**. The traffic data history shows that traffic volumes on Highway 93 have increased at a rate of 2% annually over the last ten years.

|   | Tab    | 1 <del>0</del> 1 – 1 | 11510116 | Hailic | Data I | Source | , ועושו |        |        |        |
|---|--------|----------------------|----------|--------|--------|--------|---------|--------|--------|--------|
| Location                                    | 2012   | 2013                 | 2014     | 2015   | 2016   | 2017   | 2018    | 2019   | 2020   | 2021   |
| US 93 S of MT 40<br>#15-4A-007              | 17,260 | 17,520               | 16,770   | 20,140 | 20,845 | 20,511 | 17,223  | 17,667 | 16,112 | 18,243 |
| US 93 N of KM<br>Ranch<br>#15-4A-042        | 14,250 | 13,230               | 14,140   | 14,320 | 15,909 | 15,654 | 16,898  | 17,708 | 16,150 | 17,962 |
| US 93 N of West<br>Reserve St<br>#15-7B-018 | 15,670 | 16,970               | 16,220   | 16,550 | 16,961 | 20,215 | 19,742  | 23,165 | 21,126 | 22,027 |

Table 1 - Historic Traffic Data (Source: MDT)

### Other Planned Projects

The Ridge Run Baseball Stadium is currently planned for construction one mile south of the proposed Montarise Village property. The project would include the development of a minor league baseball stadium with approximately 3,545 seats and a parking lot with approximately 571 parking spaces. Access to the site would be provided through connections to McDermott Lane and Schrade Road. The project has the potential to create high levels of traffic during events. The developers are working with MDT to provide event traffic controls and plan for major improvements to provide road access to the site in the future.

MDT is also in the beginning stage of preparing an access management plan for the Highway 93 corridor between Kalispell and Whitefish to help establish where highway access will be provided in the future and what types of access control, traffic management, and intersection improvements may be needed in future. This plan is in the very early stages and will not likely be completed for several years.

### Level of Service

Using the data collected for this project, ATS conducted a Level of Service (LOS) analysis at area intersections. This evaluation was conducted in accordance with the procedures outlined in the Transportation Research Board's *Highway Capacity Manual (HCM) - Special Report 209* and the Highway Capacity Software (HCS) version 7.9. Intersections are graded from A to F representing the average delay that a vehicle entering an intersection can expect. Typically, a LOS of C or better is considered acceptable for peak-hour conditions.

|                               | AM Peak      | Hour | PM Peak      | Hour |
|-------------------------------|--------------|------|--------------|------|
| Intersection                  | Delay (Sec.) | LOS  | Delay (Sec.) | LOS  |
| Highway 93 & Bowdish<br>Road* | 16.3/22.6    | C/C  | 18.7/16.5    | C/C  |
| Highway 93 & KM Ranch         | 17.0         | C    | 22.7         | C    |

Table 2 - 2022 Level of Service Summary

**Table 2** shows the existing 2022 LOS for the AM and PM peak hours without the traffic from the proposed development. The LOS calculations are included in **Appendix C**. The table shows that most of the intersections in this area are functioning at an acceptable level of service, but have limited capacity for future traffic volume increases. It is likely that these intersections currently function at LOS D during peak summer traffic conditions when overall traffic volumes can increase by 20-30%, but there is not currently sufficient traffic to warrant the installation of a traffic signal at these locations at this time.

### **Area Crash Data**

Road

ATS collected crash data from MDT's public crash site to assess intersections for geometric, traffic control, and roadway characteristic deficiencies. Generally, crashes are expressed as a rate of crashes per million vehicles entering (MVE). Crash rates at rural and urban intersections in Montana typically range from 0.5 to 1.5 crashes per MVE. The 5-year MDT data indicates that eight crashes were recorded at the intersection of KM Ranch Road and Highway 93 over the last five years and five crashes occurred at the intersection Bowdish Road and Highway 93. The crash rates for these intersections are 0.3 crashes per MVE and 0.2 crashed per MVE respectively. The crash rates indicate that no geometric, roadway characteristic, or traffic control deficiencies exist in the area and no roadway improvements are necessary to improve traffic safety at this time.

<sup>\*</sup> Eastbound/Westbound LOS & Delay.

#### D. PROPOSED DEVELOPMENT

The Montarise Village Subdivision is proposed for development on 155.9 acres of land located west of Highway 93 just north of KM Ranch Road. The development would include 92 new single-family residential lots and up to 176 multi-family residential units. The project would also include an RV park, a church, and 3.2 acres intended for a mixed-use business park. The project would have three primary approaches/entries: two west of the intersection of KM Ranch Road with US Highway 93 and one at the intersection with Bowdish Road and US Highway 93 to the north. The Montarise Village site plan is shown in **Figure 2**. The project would be constructed in three phases over the next three to five years based on market demand. Phase 1 of the project would include 31 new single-family residential lots, 48 multi-family residential units, and 36 RV park units.

#### E. TRIP GENERATION AND ASSIGNMENT

ATS performed a trip generation analysis to determine the anticipated future traffic volumes from the proposed developments using the trip generation rates contained in *Trip Generation* (Institute of Transportation Engineers, Tenth Edition). These rates are the national standard and are based on the most current information available to planners. A vehicle "trip" is defined as any trip that either begins or ends at the development site. ATS determined that the critical traffic impacts on the intersections and roadways would occur during the weekday morning and evening peak hours. According to the ITE trip generation rates, Phase 1 of the development would produce 54 AM peak hour trips, 73 PM peak hour trips, and 788 daily trips. At full build-out the development would produce 234 AM peak hour trips, 284 PM peak hour trips, and 3,066 daily trips. See **Tables** 3 & 4 for detailed trip generation information.

Table 3 - Trip Generation Rates Phase 1

|          |          |        |          |         | acioni i tat |         |          |           |
|----------|----------|--------|----------|---------|--------------|---------|----------|-----------|
|          |          |        | AM Trip  |         | PM Trip      |         | Trip     |           |
|          |          |        | Ends per | AM Trip | Ends per     | PM Trip | Ends per | Weekday   |
| Land Use | ITE Code | Units  | Unit     | Ends    | Unit         | Ends    | Unit     | Trip Ends |
| Single-  |          | 31     |          |         |              |         |          |           |
| Family   | 210      | Units  | 0.74     | 23      | 0.99         | 31      | 9.44     | 293       |
| Multi-   |          | 48     |          |         |              |         |          |           |
| Family   | 220      | Units  | 0.46     | 22      | 0.56         | 27      | 7.32     | 351       |
| RV       |          | 36     |          |         |              |         |          |           |
| Park*    | 416      | Spaces | 0.25     | 9       | 0.41         | 15      | 4        | 144       |
| TOTAL    |          |        |          | 54      |              | 73      |          | 788       |

MANAGE TO THE STATE OF THE STAT 9

Figure 2 – Proposed Montarise Village Subdivision

479

3,066

**AM Trip PM Trip** Trip Ends per **AM Trip** Ends per **PM Trip** Ends per Weekday Land Use ITE Code Units Unit **Trip Ends** Ends Unit **Ends** Unit Single-92 Family 0.74 210 Units 68 0.99 91 9.44 868 Multi-176 Family 220 Units 0.46 81 0.56 99 7.32 1,288 RV73 Park\* 416 Spaces 0.25 0.41 30 4 292 18 20 Church 560 **KSF** 0.33 7 0.49 10 6.95 139 **Business** 3.2

60

234

18.86

Table 4 - Trip Generation Rates Full Buildout

### F. TRIP DISTRIBUTION

770

Acres

Park

**TOTAL** 

The traffic distribution and assignment for the proposed subdivision was based upon the existing ADT volumes along the adjacent roadways. Drivers are expected to distribute onto the surrounding road network as shown on **Figure 3**.

16.84

54

284

149.79

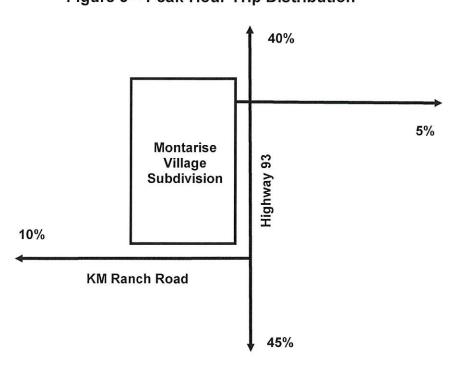


Figure 3 – Peak-Hour Trip Distribution

7

### G. TRAFFIC IMPACTS OUTSIDE OF THE DEVELOPMENT

Using the trip generation and trip distribution rates, ATS determined the future LOS for the area intersections. The anticipated intersection LOS with the proposed development is shown in **Tables 5 & 6**. The LOS calculations are included in **Appendix C** of this report. The table indicates that the construction of the Montarise Village Subdivision will create intersection capacity issues at the approaches onto Highway 93 from the proposed development site. The intersections should function adequately through Phase 1 of the development except for some minor delay issues at the Bowdish Road intersection in the PM peak hours. In order to minimize the traffic impacts from the proposed development, both the Bowdish Road approach and the KM Ranch Road approaches should be widened to include separated right and left/thru lanes. These intersections may not function past Phase 1 with the existing two-way STOP controls. The development should limit development past phase 1 until a higher form or traffic control such as a traffic signal or other traffic controls can be developed along this section of Highway 93 in accordance with the upcoming MDT Access Management Plan which will likely only allow intersection improvements at one of these two locations.

Table 5 - Projected Level of Service with Phase 1 of the Development

|                               | AM Pea       | ak Hour | PM Pea       | ak Hour |
|-------------------------------|--------------|---------|--------------|---------|
| Intersection                  | Delay (Sec.) | LOS     | Delay (Sec.) | LOS     |
| Highway 93 & Bowdish<br>Road* | 20.8/24.9    | C/C     | 27.2/17.5    | D/C     |
| Highway 93 & KM Ranch<br>Road | 19.1         | С       | 24.0         | С       |

<sup>\*</sup> Eastbound/Westbound LOS & Delay.

Table 6 - Projected Level of Service Full Buildout

|                               | AM Pea       | ık Hour | PM Pea       | ak Hour |
|-------------------------------|--------------|---------|--------------|---------|
| Intersection                  | Delay (Sec.) | LOS     | Delay (Sec.) | LOS     |
| Highway 93 & Bowdish<br>Road* | 25.7/29.2    | D/D     | 35.1/19.6    | E/C     |
| Highway 93 & KM Ranch<br>Road | 25.0         | С       | 42.7         | Е       |

<sup>\*</sup> Eastbound/Westbound LOS & Delay.

ATS reviewed the left- and right-turn lane warrants for the approach intersections of Highway 93 with KM Ranch Road and Bowdish Road based on the recommended practices from the MDT Road Design Manual with the anticipated traffic from the Montarise Village Development. Currently Highway 93 has a dedicated left-turn lanes at these intersections. This analysis showed

that the projected traffic volumes will be below the recommended threshold for the installation of right-turn deceleration lanes at the two approaches. The turn-lane warrant calculations are included in **Appendix D** of this report.

### H. IMPACT SUMMARY & RECOMMENDATIONS

As proposed, the Montarise Village Subdivision will create capacity issues at the two planned approach locations onto Highway 93 (Bowdish Road and KM Ranch Road). The project may be developed through Phase 1 but may need to create intersection improvements to further develop the property depending on the ongoing growth patterns in the area. The Montana Department of Transportation (MDT) corridor plan will likely establish which of these approaches should be improved to provide access to the greater areas around the Highway 93 corridor.

## **APPENDIX A**

**Traffic Data** 

Summary of Turning Movement Counts - from Traffic Count on iOS Study Na Traffic Study Observer

Location Highway 93 & KM Ranch

Weather

Comments 3/1/2022

Streets NB SB EB WB

Cars

| N            | orth | bound |       |       |       | South | bound |       |         |      | Eastb | ound |       |       |       | West | bound |       |         |       |           |
|--------------|------|-------|-------|-------|-------|-------|-------|-------|---------|------|-------|------|-------|-------|-------|------|-------|-------|---------|-------|-----------|
| Start Tim Le | eft  | Thru  | Right | UTurn | Total | Left  | Thru  | Right | UTurn T | otal | Left  | Thru | Right | UTurn | Total | Left | Thru  | Right | UTurn 7 | Total | Total All |
| 7:20 AM      | 2    | 184   | 0     | 0     | 3     | C     | 206   | 3     | 0       | 3    | 2     | 0    | 8     | 0     | 10    | C    | 0     | 0     | 0       | 0     | 421       |
| 7:35 AM      | 4    | 244   | 0     | 0     | 4     | C     | 205   | 5     | 0       | 5    | 7     | 0    | 8     | 0     | 15    | 5    | 0     | 1     | 0       | 6     | 509       |
| 7:50 AM      | 1    | 177   | 0     | 0     | 1     | C     | 169   | 5     | 0       | 5    | 13    | 0    | 8     | 0     | 21    | 5    | 0     | 4     | 0       | 9     | 418       |
| 8:05 AM      | 5    | 191   | 0     | 0     | 5     | 1     | 190   | 3     | 0       | 4    | 8     | 1    | 0     | 0     | 9     | 2    | 0     | 1     | 0       | 3     | 423       |
| Total        | 13   | 1     | 0     | 0     | 14    | 1     | . 0   | 16    | 0       | 17   | 33    | 1    | 24    | 0     | 58    | 14   | 0     | 6     | 0       | 20    | 109       |

Bicycles

| North          | Northbound South Start Tim Left Thru Right UTurn Total Left |       |       |       |      |      |       |         |      | Eastb | ound |       |         |      | West | bound |       |       |       |           |  |
|----------------|---|-------|-------|-------|------|------|-------|---------|------|-------|------|-------|---------|------|------|-------|-------|-------|-------|-----------|--|
| Start Tim Left | Thru  | Right | UTurn | Total | Left | Thru | Right | UTurn 1 | otal | Left  | Thru | Right | UTurn T | otal | Left | Thru  | Right | UTurn | Total | Total All |  |
| 7:20 AM C      | 0   | 0     | 0     | 0     | (    | 0 0  | 0     | 0       | 0    | C     | 0    | 0     | 0       | 0    | C    | 0     | 0     | 0     | 0     | 0         |  |
| 7:35 AM C      | 0   | 0     | 0     | 0     | (    | O C  | 0     | 0       | 0    | C     | 0    | 0     | 0       | 0    | C    | 0     | 0     | 0     | 0     | 0         |  |
| 7:50 AM 0      | 0   | 0     | 0     | 0     | (    | 0 0  | 0     | 0       | 0    | C     | 0    | 0     | 0       | 0    | C    | 0     | 0     | 0     | 0     | 0         |  |
| 8:05 AM 0      | 0   | 0     | 0     | 0     | (    | 0 0  | 0     | 0       | 0    | C     | 0    | 0     | 0       | 0    | C    | 0     | 0     | 0     | 0     | 0         |  |
| 8:20 AM 0      | 0   | 0     | 0     | 0     | (    | 0 0  | 0     | 0       | 0    | C     | 0    | 0     | 0       | 0    | 0    | 0     | 0     | 0     | 0     | 0         |  |
| Total 0        | 0   | 0     | 0     | 0     | (    | 0 0  | 0     | 0       | 0    | C     | 0    | 0     | 0       | 0    | C    | 0     | 0     | 0     | 0     | 0         |  |

Light Trucks

| Northbo          | Northbound |       |       |       |      |      |       |         |       | Eastb | ound |       |         |      | Westl | oound |       |       |       |           |  |
|------------------|------------|-------|-------|-------|------|------|-------|---------|-------|-------|------|-------|---------|------|-------|-------|-------|-------|-------|-----------|--|
| Start Tim Left T | hru        | Right | UTurn | Total | Left | Thru | Right | UTurn 7 | Γotal | Left  | Thru | Right | UTurn T | otal | Left  | Thru  | Right | UTurn | Total | Total All |  |
| 7:20 AM 0        | 0          | 0     | 0     | 0     | (    | 0 0  | 0     | 0       | 0     | C     | 0    | 0     | 0       | 0    | 0     | 0     | 0     | 0     | 0     | 0         |  |
| 7:35 AM 0        | 0          | 0     | 0     | 0     | (    | 0 0  | 0     | 0       | 0     | C     | 0    | 0     | 0       | 0    | 0     | 0     | 0     | 0     | 0     | 0         |  |
| 7:50 AM 0        | 0          | 0     | 0     | 0     | (    | 0 0  | 0     | 0       | 0     | C     | 0    | 0     | 0       | 0    | 0     | 0     | 0     | 0     | 0     | 0         |  |
| 8:05 AM 0        | 0          | 0     | 0     | 0     | (    | 0 0  | 0     | 0       | 0     | C     | 0    | 0     | 0       | 0    | 0     | 0     | 0     | 0     | 0     | 0         |  |
| 8:20 AM 0        | 0          | 0     | 0     | 0     | (    | 0 0  | 0     | 0       | 0     | C     | 0    | 0     | 0       | 0    | 0     | 0     | 0     | 0     | 0     | 0         |  |
| Total 0          | 0          | 0     | 0     | 0     | (    | 0 0  | 0     | 0       | 0     | C     | 0    | 0     | 0       | 0    | 0     | 0     | 0     | 0     | 0     | 0         |  |

| Heavy 1  | rucks  |      |     |       |    |         |     |      |        |       |         |      |       |      |       |         |      |      |       |       |       |       |           |   |
|----------|--------|------|-----|-------|----|---------|-----|------|--------|-------|---------|------|-------|------|-------|---------|------|------|-------|-------|-------|-------|-----------|---|
|          | Nort   | hbou | ınd |       |    |         |     | Sout | hbound | Ĺ     |         |      | Eastb | ound |       |         |      | West | oound |       |       |       |           |   |
| Start Ti | m Left | Thi  | ru  | Right | U٦ | Turn To | tal | Left | Thru   | Right | UTurn T | otal | Left  | Thru | Right | UTurn T | otal | Left | Thru  | Right | UTurn | Total | Total All | 1 |
| 7:20 AM  | VI (   | C    | 0   | 0     |    | 0       | 0   | (    | 0 0    | 0     | 0       | 0    | 0     | 0    | 0     | 0       | 0    | 0    | 0     | 0     | 0     | 0     | 0         |   |
| 7:35 AN  | VI (   | 0    | 0   | 0     |    | 0       | 0   | (    | 0 0    | 0     | 0       | 0    | 0     | 0    | 0     | 0       | 0    | 0    | 0     | 0     | 0     | 0     | 0         |   |
| 7:50 AN  | VI (   | 0    | 0   | 0     |    | 0       | 0   | (    | 0 0    | 0     | 0       | 0    | 0     | 0    | 0     | 0       | 0    | 0    | 0     | 0     | 0     | 0     | 0         |   |
| 8:05 AM  | v) (   | C    | 0   | 0     |    | 0       | 0   | (    | 0 0    | 0     | 0       | 0    | 0     | 0    | 0     | 0       | 0    | 0    | 0     | 0     | 0     | 0     | 0         |   |
| 8:20 AN  | VI (   | )    | 0   | 0     |    | 0       | 0   | (    | 0 0    | 0     | 0       | 0    | 0     | 0    | 0     | 0       | 0    | 0    | 0     | 0     | 0     | 0     | 0         |   |
| Total    | (      | )    | 0   | 0     |    | 0       | 0   | (    | 0 0    | 0     | 0       | 0    | 0     | 0    | 0     | 0       | 0    | 0    | 0     | 0     | 0     | 0     | 0         |   |

Summary of Turning Movement Counts - from Traffic Count on iOS Study Na Km ranch rd and Bowdish rd Observer Mark leighty

Location Highway 93 & KM Ranch

Weather

Comments 3/1/2022

SB EB WB Streets NB

Cars

| No            | Northbound Southbound Southbound |      |       |       |       |      |      |       |         |       | Eastb | ound |       |         |      | West | bound |       |       |       |           |
|---------------|----------------------------------|------|-------|-------|-------|------|------|-------|---------|-------|-------|------|-------|---------|------|------|-------|-------|-------|-------|-----------|
| Start Tim Lef | t ·                              | Thru | Right | UTurn | Total | Left | Thru | Right | UTurn 1 | Total | Left  | Thru | Right | UTurn 7 | otal | Left | Thru  | Right | UTurn | Total | Total All |
| 4:43 PM       | 8                                | 216  | 2     | 0     | 10    | 0    | 225  | 6     | 0       | 6     | 2     | 0    | 4     | 0       | 6    | 1    | . 0   | 1     | 0     | 2     | 489       |
| 4:58 PM       | 6                                | 217  | 2     | 0     | 8     | 0    | 234  | 8     | 0       | 8     | 2     | 0    | 3     | 0       | 5    | C    | 0     | 1     | 0     | 1     | 495       |
| 5:13 PM       | 7                                | 232  | 2     | 0     | 9     | 2    | 247  | 4     | 0       | 6     | 5     | 0    | 6     | 0       | 11   | C    | 0     | 2     | 0     | 2     | 535       |
| 5:28 PM       | 4                                | 227  | 7     | 0     | 11    | 0    | 245  | 9     | 0       | 9     | 2     | 0    | 3     | 0       | 5    | 1    | . 0   | 0     | 0     | 1     | 524       |
| Total         | 27                               | 0    | 13    | 0     | 40    | 2    | 0    | 27    | 0       | 29    | 12    | 0    | 16    | 0       | 28   | 2    | . 0   | 4     | 0     | 6     | 103       |

Bicycles

| North          | Northbound Southb |       |       |       |      |      |       |         |      | Eastb | ound |       |          | ٧     | Vest | ound |       |       |       |           |
|----------------|-------------------|-------|-------|-------|------|------|-------|---------|------|-------|------|-------|----------|-------|------|------|-------|-------|-------|-----------|
| Start Tim Left | Thru              | Right | UTurn | Total | Left | Thru | Right | UTurn T | otal | Left  | Thru | Right | UTurn To | tal L | eft  | Thru | Right | UTurn | Total | Total All |
| 4:43 PM (      | 0 0               | 0     | 0     | 0     | (    | ) (  | 0     | 0       | 0    | C     | 0    | 0     | 0        | 0     | 0    | 0    | 0     | 0     | 0     | 0         |
| 4:58 PM (      | 0 0               | 0     | 0     | 0     | (    | ) (  | 0     | 0       | 0    | C     | 0    | 0     | 0        | 0     | 0    | 0    | 0     | 0     | 0     | 0         |
| 5:13 PM C      | 0 0               | 0     | 0     | 0     | (    | ) (  | 0     | 0       | 0    | C     | 0    | 0     | 0        | 0     | 0    | 0    | 0     | 0     | 0     | 0         |
| 5:28 PM C      | 0 0               | 0     | 0     | 0     | C    | ) (  | 0     | 0       | 0    | C     | 0    | 0     | 0        | 0     | 0    | 0    | 0     | 0     | 0     | 0         |
| 5:43 PM C      | 0 0               | 0     | 0     | 0     | (    | ) (  | 0     | 0       | 0    | C     | 0    | 0     | 0        | 0     | 0    | 0    | 0     | 0     | 0     | 0         |
| Total 0        | 0 0               | 0     | 0     | 0     | (    | ) 0  | 0     | 0       | 0    | C     | 0    | 0     | 0        | 0     | 0    | 0    | 0     | 0     | 0     | 0         |

Light Trucks

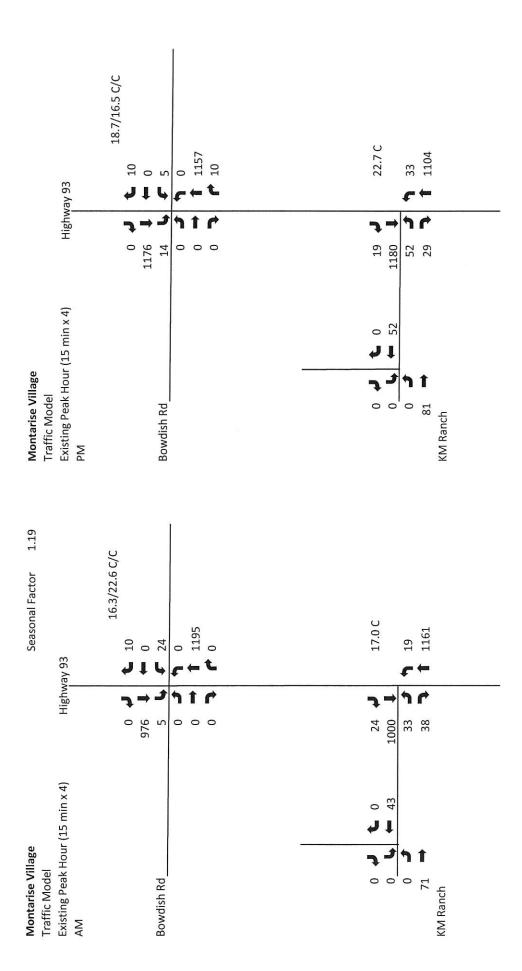
| Nor            | thb | ound |       |         |       | South | bound |       |         |       | Eastb | ound |       |         |      | West | oound |       |       |       |           |  |
|----------------|-----|------|-------|---------|-------|-------|-------|-------|---------|-------|-------|------|-------|---------|------|------|-------|-------|-------|-------|-----------|--|
| Start Tim Left |     | Thru | Right | UTurn ' | Total | Left  | Thru  | Right | UTurn 7 | Γotal | Left  | Thru | Right | UTurn T | otal | Left | Thru  | Right | UTurn | Total | Total All |  |
| 4:43 PM        | 0   | 0    | 0     | 0       | 0     | C     | ) 0   | 0     | 0       | 0     | (     | ) (  | 0     | 0       | 0    | 0    | 0     | 0     | 0     | 0     | 0         |  |
| 4:58 PM        | 0   | 0    | 0     | 0       | 0     | C     | 0     | 0     | 0       | 0     | (     | ) (  | 0     | 0       | 0    | 0    | 0     | 0     | 0     | 0     | 0         |  |
| 5:13 PM        | 0   | 0    | 0     | 0       | 0     | C     | 0     | 0     | 0       | 0     | (     | ) (  | 0     | 0       | 0    | 0    | 0     | 0     | 0     | 0     | 0         |  |
| 5:28 PM        | 0   | 0    | 0     | 0       | 0     | C     | 0     | 0     | 0       | 0     | (     | ) (  | 0     | 0       | 0    | 0    | 0     | 0     | 0     | 0     | 0         |  |
| 5:43 PM        | 0   | 0    | 0     | 0       | 0     | C     | 0     | 0     | 0       | 0     | C     | ) (  | 0     | 0       | 0    | 0    | 0     | 0     | 0     | 0     | 0         |  |
| Total          | 0   | 0    | 0     | 0       | 0     | C     | 0     | 0     | 0       | 0     | (     | ) (  | 0     | 0       | 0    | 0    | 0     | 0     | 0     | 0     | 0         |  |

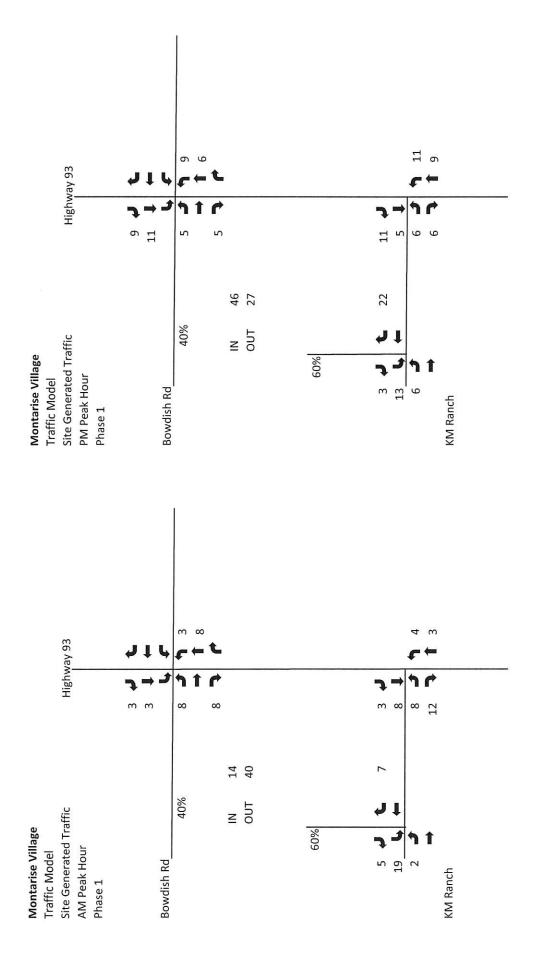
Heavy Trucks

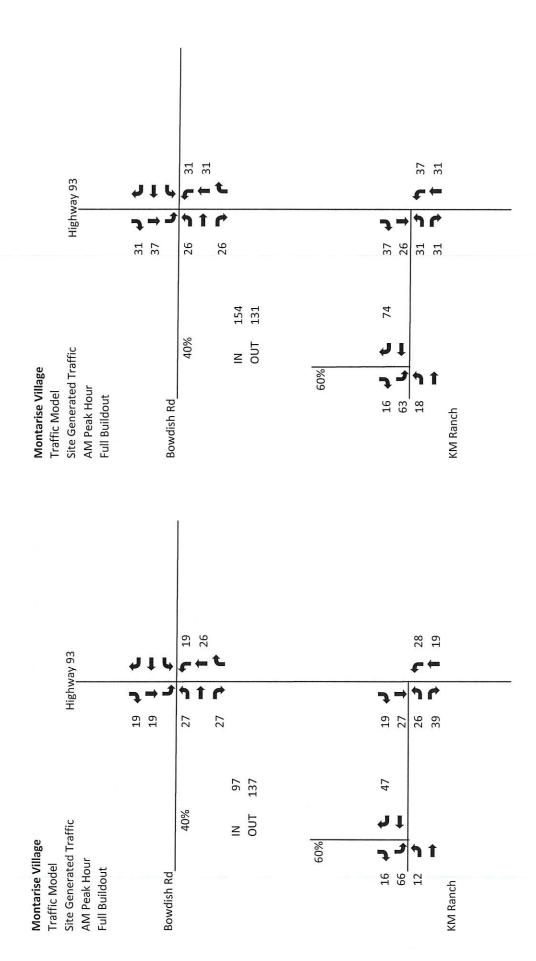
| No            | rthb | oound |       |       |       | Sout | hbound |       |         |      | Eastb | ound |       |         |       | West | bound |       |       |       |           |   |
|---------------|------|-------|-------|-------|-------|------|--------|-------|---------|------|-------|------|-------|---------|-------|------|-------|-------|-------|-------|-----------|---|
| Start Tim Lef | t    | Thru  | Right | UTurn | Total | Left | Thru   | Right | UTurn 7 | otal | Left  | Thru | Right | UTurn ' | Total | Left | Thru  | Right | UTurn | Total | Total All | Ě |
| 4:43 PM       | 0    | 0     | 0     | 0     | C     | ) (  | 0 0    | 0     | 0       | 0    | C     | 0    | 0     | 0       | 0     | 0    | 0     | 0     | 0     | 0     | 0         |   |
| 4:58 PM       | 0    | 0     | 0     | 0     | C     | ) (  | 0 0    | 0     | 0       | 0    | C     | 0    | 0     | 0       | 0     | C    | 0     | 0     | 0     | 0     | 0         |   |
| 5:13 PM       | 0    | 0     | 0     | 0     | C     | ) (  | 0 0    | 0     | 0       | 0    | C     | 0    | 0     | 0       | 0     | C    | 0     | 0     | 0     | 0     | 0         |   |
| 5:28 PM       | 0    | 0     | 0     | 0     | C     | ) (  | 0 0    | 0     | 0       | 0    | C     | 0    | 0     | 0       | 0     | C    | 0     | 0     | 0     | 0     | 0         |   |
| 5:43 PM       | 0    | 0     | 0     | 0     | C     | ) (  | 0 0    | 0     | 0       | 0    | C     | 0    | 0     | 0       | 0     | 0    | 0     | 0     | 0     | 0     | 0         |   |
| Total         | Ω    | 0     | 0     | 0     | (     | 1    | n n    | 0     | 0       | 0    | C     | 0    | 0     | 0       | 0     | 0    | 0     | 0     | 0     | 0     | 0         |   |

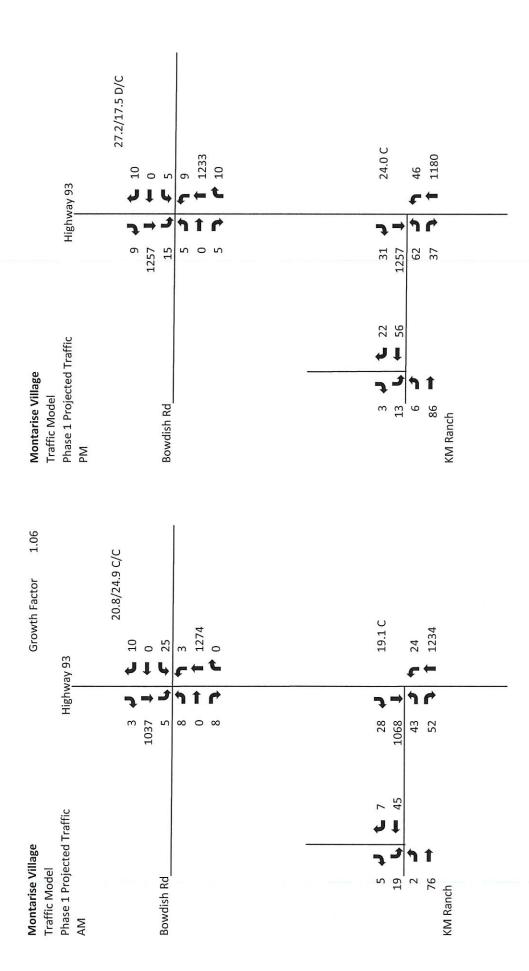
### **APPENDIX B**

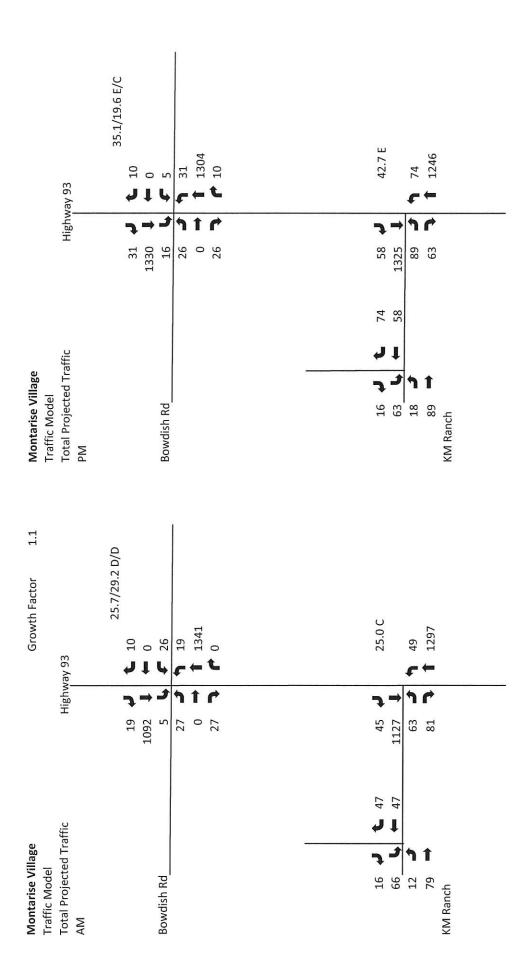
**Traffic Model** 







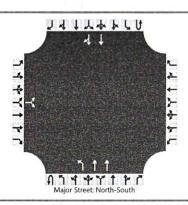




### **APPENDIX C**

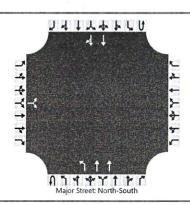
**LOS Calculations** 

|                          | HCS7 Two-Wa           | ay Stop-Control Report     |                       |
|--------------------------|-----------------------|----------------------------|-----------------------|
| General Information      |                       | Site Information           |                       |
| Analyst                  | RLA                   | Intersection               | KM Ranch & Highway 93 |
| Agency/Co.               | ATS                   | Jurisdiction               | MDT                   |
| Date Performed           | 3/1/2022              | East/West Street           | KM Ranch Road         |
| Analysis Year            | 2022                  | North/South Street         | Highway 93            |
| Time Analyzed            | Existing AM Peak Hour | Peak Hour Factor           | 1.00                  |
| Intersection Orientation | North-South           | Analysis Time Period (hrs) | 0.25                  |
| Project Description      | Montarise Village     |                            |                       |



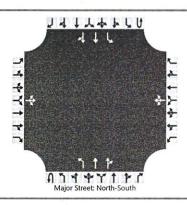
| Vehicle Volumes and Adj                 | ustmei  | nts         |        |      |   |                               |                   |                          |    |  |       |  |    |                |                           |                |
|---|---------|-------------|--------|------|---|-------------------------------|-------------------|--------------------------|----|--|-------|--|----|----------------|---------------------------|----------------|
| Approach                                |         | Eastb       | oound  |      |   | West                          | bound             |                          |    | North  | bound |  |    | South          | bound                     | THE RESERVE    |
| Movement                                | U       | L           | Т      | R    | U                                       | L                             | Т                 | R                        | U  | L  | Т     | R  | U  | L              | Т                         | R              |
| Priority                                |         | 10          | 11     | 12   |   | 7                             | 8                 | 9                        | 1U | 1  | 2     | 3  | 4U | 4              | 5                         | 6              |
| Number of Lanes                         |         | 0           | 1      | 0    |   | 0                             | 0                 | 0                        | 0  | 1  | 2     | 0  | 0  | 0              | 2                         | 0              |
| Configuration                           |         |             | LR     |      |   |                               |                   |                          |    | L  | Т     |  |    |                | Т                         | TR             |
| Volume (veh/h)                          |         | 29          |        | 33   |   |                               |                   |                          | 0  | 16   | 996   |  |    |                | 857                       | 20             |
| Percent Heavy Vehicles (%)              |         | 3           |        | 3    |   |                               |                   |                          | 3  | 3  |       |  |    |                |                           |                |
| Proportion Time Blocked                 |         |             |        |      |   |                               |                   |                          |    |  |       |  |    |                |                           |                |
| Percent Grade (%)                       |         | ALL BURGUES | 0      |      |   | S100                          |                   | Accusion and an accusion |    | Arra salamata a a a a a a a a a a a a a a a a a  |       |  |    | Towns a second | adiocasa museranti reason |                |
| Right Turn Channelized                  |         |             |        |      |   |                               |                   |                          |    |  |       |  |    |                |                           |                |
| Median Type   Storage                   |         |             |        | Left | Only                                    |                               |                   |                          |    |  |       |  | 1  |                |                           |                |
| Critical and Follow-up H                | eadway  | /s          |        |      |   |                               |                   |                          |    | NO. OF THE LOCAL PROPERTY AND ADDRESS OF |       |  |    |                |                           |                |
| Base Critical Headway (sec)             |         | 7.5         |        | 6.9  |   |                               |                   |                          |    | 4.1  |       |  |    |                |                           |                |
| Critical Headway (sec)                  |         | 6.86        |        | 6.96 |   |                               |                   |                          |    | 4.16   |       |  |    |                |                           |                |
| Base Follow-Up Headway (sec)            |         | 3.5         |        | 3.3  |   |                               |                   |                          |    | 2.2  |       |  |    |                |                           |                |
| Follow-Up Headway (sec)                 |         | 3.53        |        | 3.33 |   |                               |                   |                          |    | 2.23   |       |  |    |                |                           |                |
| Delay, Queue Length, and                | d Level | of Se       | ervice | - 5  |   |                               | 1                 | 7                        |    |  |       | 100  |    | 15             |                           |                |
| Flow Rate, v (veh/h)                    | П       |             | 62     |      |   |                               |                   |                          |    | 16   |       |  |    |                |                           |                |
| Capacity, c (veh/h)                     | T       |             | 360    |      |   |                               |                   |                          |    | 759  |       |  |    |                |                           |                |
| v/c Ratio                               |         |             | 0.17   |      |   |                               |                   |                          |    | 0.02   |       |  |    |                |                           |                |
| 95% Queue Length, Q <sub>95</sub> (veh) |         |             | 0.6    |      |   |                               |                   |                          |    | 0.1  |       |  |    |                |                           |                |
| Control Delay (s/veh)                   |         |             | 17.0   |      |   |                               |                   |                          |    | 9.8  |       |  |    |                |                           |                |
| Level of Service (LOS)                  |         |             | С      |      |   |                               |                   |                          |    | А  |       |  |    |                |                           |                |
| Approach Delay (s/veh)                  |         | 17          | 7.0    |      | *************************************** | No. 12 Control of the Control | Same Array of the |                          |    | 0  | .2    | Service and the service and th |    |                | A                         | Particular man |
| Approach LOS                            |         | (           | C      |      |   |                               |                   |                          |    |  |       | The second second  |    |                |                           |                |

|                          | HCS7 Two-Wa           | ay Stop-Control Report     |                       |
|--------------------------|-----------------------|----------------------------|-----------------------|
| General Information      |                       | Site Information           |                       |
| Analyst                  | RLA                   | Intersection               | KM Ranch & Highway 93 |
| Agency/Co.               | ATS                   | Jurisdiction               | MDT                   |
| Date Performed           | 3/1/2022              | East/West Street           | KM Ranch Road         |
| Analysis Year            | 2022                  | North/South Street         | Highway 93            |
| Time Analyzed            | Existing PM Peak Hour | Peak Hour Factor           | 1.00                  |
| Intersection Orientation | North-South           | Analysis Time Period (hrs) | 0.25                  |
| Project Description      | Montarise Village     |                            |                       |



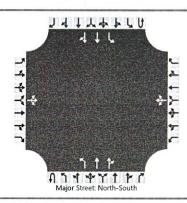
| Vehicle Volumes and Adj                 | ustme   | nts                                    |        |      |      |      |   |            |     |       |       |   |    |   |  |  |
|---|---------|--|--------|------|------|------|---|------------|-----|-------|-------|---|----|---|--|--|
| Approach                                | T       | Easth                                  | oound  |      |      | West | bound                                   |            | T   | North | bound |   |    | South                                     | nbound   | Anna de la constanta de la con |
| Movement                                | U       | L                                      | Т      | R    | U    | L    | Т                                       | R          | U   | L     | Т     | R | U  | L   | T  | R  |
| Priority                                |         | 10                                     | 11     | 12   |      | 7    | 8                                       | 9          | 1U  | 1     | 2     | 3 | 4U | 4   | 5  | 6  |
| Number of Lanes                         |         | 0                                      | 1      | 0    |      | 0    | 0                                       | 0          | 0   | 1     | 2     | 0 | 0  | 0   | 2  | 0  |
| Configuration                           |         |  | LR     |      |      |      |   |            |     | L     | Т     |   |    |   | Т  | TR   |
| Volume (veh/h)                          |         | 45                                     |        | 24   |      |      |   |            | 0   | 29    | 947   |   |    |   | 1012   | 16   |
| Percent Heavy Vehicles (%)              |         | 3                                      |        | 3    |      |      |   |            | 3   | 3     |       |   |    |   |  |  |
| Proportion Time Blocked                 |         |  |        |      |      |      |   |            |     |       |       |   |    |   |  |  |
| Percent Grade (%)                       |         |  | 0      |      |      |      | *************************************** |            |     |       | -     |   |    | 2-10-10-10-10-10-10-10-10-10-10-10-10-10- |  | hannan   |
| Right Turn Channelized                  |         |  |        |      |      |      | *************************************** |            |     |       |       |   |    |   |  | THE REAL PROPERTY.   |
| Median Type   Storage                   | T       | VII SE-1882-1883                       |        | Left | Only |      |   |            |     |       |       |   | 1  |   |  |  |
| Critical and Follow-up H                | eadway  | ys                                     |        |      |      |      |   |            | -1, |       | 1     |   |    |   |  |  |
| Base Critical Headway (sec)             |         | 7.5                                    |        | 6.9  |      |      |   | I          |     | 4.1   |       |   |    |   |  |  |
| Critical Headway (sec)                  |         | 6.86                                   |        | 6.96 |      |      |   |            |     | 4.16  |       |   |    |   |  |  |
| Base Follow-Up Headway (sec)            |         | 3.5                                    |        | 3.3  |      |      |   |            |     | 2.2   |       |   |    |   |  |  |
| Follow-Up Headway (sec)                 |         | 3.53                                   |        | 3.33 |      |      |   |            |     | 2.23  |       |   |    |   |  |  |
| Delay, Queue Length, an                 | d Level | of Se                                  | ervice |      |      |      |   |            |     |       |       |   |    |   |  |  |
| Flow Rate, v (veh/h)                    | T       |  | 69     |      |      |      |   |            |     | 29    |       |   |    |   |  |  |
| Capacity, c (veh/h)                     |         |  | 271    |      |      |      |   |            |     | 665   |       | - |    |   |  |  |
| v/c Ratio                               |         | ************************************** | 0.25   | İ    |      |      |   |            |     | 0.04  |       |   |    | Ì   |  |  |
| 95% Queue Length, Q <sub>95</sub> (veh) |         |  | 1.0    |      |      |      |   |            |     | 0.1   |       |   |    |   |  |  |
| Control Delay (s/veh)                   |         |  | 22.7   |      |      |      |   |            |     | 10.7  |       |   |    |   |  |  |
| Level of Service (LOS)                  |         |  | С      |      |      |      |   |            |     | В     |       |   |    |   |  |  |
| Approach Delay (s/veh)                  |         | 22                                     | 2.7    |      |      | h    | Acres 100 Control                       | former and |     | 0     | .3    |   |    |   | - Contraction of the Contraction | least the same of  |
| Approach LOS                            |         | (                                      | С      |      |      |      | 200000                                  |            |     |       |       |   |    |   |  |  |

| Analyst RLA Intersection KM Ranch & Highway 93  Agency/Co. ATS Jurisdiction MDT  Date Performed 3/1/2022 East/West Street Bowdish Road |                       |                            |                       |  |  |  |  |  |  |  |  |  |
|--|-----------------------|----------------------------|-----------------------|--|--|--|--|--|--|--|--|--|
| General Information  |                       | Site Information           |                       |  |  |  |  |  |  |  |  |  |
| Analyst  | RLA                   | Intersection               | KM Ranch & Highway 93 |  |  |  |  |  |  |  |  |  |
| Agency/Co.   | ATS                   | Jurisdiction               | MDT                   |  |  |  |  |  |  |  |  |  |
| Date Performed   | 3/1/2022              | East/West Street           | Bowdish Road          |  |  |  |  |  |  |  |  |  |
| Analysis Year  | 2022                  | North/South Street         | Highway 93            |  |  |  |  |  |  |  |  |  |
| Time Analyzed  | Existing AM Peak Hour | Peak Hour Factor           | 1.00                  |  |  |  |  |  |  |  |  |  |
| Intersection Orientation   | North-South           | Analysis Time Period (hrs) | 0.25                  |  |  |  |  |  |  |  |  |  |
| Project Description  | Montarise Village     |                            |                       |  |  |  |  |  |  |  |  |  |



| Approach                                |         | Eastb | ound   |      |               | West | bound |      |    | North | bound |    |    | South | bound |                   |
|---|---------|-------|--------|------|---------------|------|-------|------|----|-------|-------|----|----|-------|-------|-------------------|
| Movement                                | U       | L     | Т      | R    | U             | L    | Т     | R    | U  | L     | Т     | R  | U  | L     | Т     | R                 |
| Priority                                |         | 10    | 11     | 12   |               | 7    | 8     | 9    | 1U | 1     | 2     | 3  | 4U | 4     | 5     | 6                 |
| Number of Lanes                         |         | 0     | 1      | 0    |               | 0    | 1     | 0    | 0  | 1     | 2     | 0  | 0  | 1     | 2     | 0                 |
| Configuration                           |         |       | LTR    |      |               |      | LTR   |      |    | L     | Т     | TR |    | L     | Т     | TR                |
| Volume (veh/h)                          |         | 1     | 0      | 1    |               | 20   | 0     | 8    | 0  | 1     | 1024  | 1  | 0  | 4     | 836   | 1                 |
| Percent Heavy Vehicles (%)              |         | 3     | 3      | 3    |               | 3    | 3     | 3    | 3  | 3     |       |    | 3  | 3     |       |                   |
| Proportion Time Blocked                 |         |       |        |      |               |      |       |      |    |       |       |    |    |       |       |                   |
| Percent Grade (%)                       |         | (     | )      |      |               |      | 0     |      |    |       |       |    |    | 11    |       | http://www.esc.es |
| Right Turn Channelized                  |         |       |        |      |               |      |       |      |    |       |       |    |    |       |       |                   |
| Median Type   Storage                   |         |       |        | Left | Only          |      |       |      |    |       |       |    | 1  |       |       |                   |
| Critical and Follow-up Ho               | eadway  | /S    |        |      |               |      |       |      |    |       |       |    |    |       |       | 12                |
| Base Critical Headway (sec)             |         | 7.5   | 6.5    | 6.9  |               | 7.5  | 6.5   | 6.9  |    | 4.1   |       |    |    | 4.1   |       |                   |
| Critical Headway (sec)                  |         | 7.56  | 6.56   | 6.96 |               | 7.56 | 6.56  | 6.96 |    | 4.16  |       |    |    | 4.16  |       |                   |
| Base Follow-Up Headway (sec)            |         | 3.5   | 4.0    | 3.3  |               | 3.5  | 4.0   | 3.3  |    | 2.2   |       |    |    | 2.2   |       |                   |
| Follow-Up Headway (sec)                 |         | 3.53  | 4.03   | 3.33 |               | 3.53 | 4.03  | 3.33 |    | 2.23  |       |    |    | 2.23  |       |                   |
| Delay, Queue Length, and                | d Level | of Se | ervice |      |               | is a | _     |      |    | - di  |       |    |    |       |       |                   |
| Flow Rate, v (veh/h)                    |         |       | 2      |      |               |      | 28    |      |    | 1     |       |    |    | 4     |       |                   |
| Capacity, c (veh/h)                     |         |       | 321    |      |               |      | 232   |      |    | 786   |       |    |    | 667   |       |                   |
| v/c Ratio                               |         |       | 0.01   |      |               |      | 0.12  |      |    | 0.00  |       |    |    | 0.01  |       |                   |
| 95% Queue Length, Q <sub>95</sub> (veh) | I       |       | 0.0    |      |               |      | 0.4   |      |    | 0.0   |       |    |    | 0.0   |       |                   |
| Control Delay (s/veh)                   |         |       | 16.3   |      |               |      | 22.6  |      |    | 9.6   |       |    |    | 10.4  |       |                   |
| Level of Service (LOS)                  |         |       | С      |      |               |      | С     |      |    | Α     |       |    |    | В     |       |                   |
| Approach Delay (s/veh)                  |         | 16    | 5.3    |      | 10000 E 10000 | 22   | 2.6   |      |    | 0     | .0    |    |    | 0     | .0    |                   |
| Approach LOS                            |         | (     |        |      |               | (    | 2     |      |    |       |       | -  |    | -     | 100   |                   |

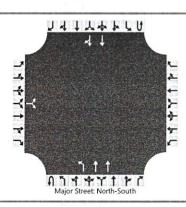
|                          | HCS7 Two-W            | ay Stop-Control Report     |                       |
|--------------------------|-----------------------|----------------------------|-----------------------|
| General Information      |                       | Site Information           |                       |
| Analyst                  | RLA                   | Intersection               | KM Ranch & Highway 93 |
| Agency/Co.               | ATS                   | Jurisdiction               | MDT                   |
| Date Performed           | 3/1/2022              | East/West Street           | Bowdish Road          |
| Analysis Year            | 2022                  | North/South Street         | Highway 93            |
| Time Analyzed            | Existing AM Peak Hour | Peak Hour Factor           | 1.00                  |
| Intersection Orientation | North-South           | Analysis Time Period (hrs) | 0.25                  |
| Project Description      | Montarise Village     | 8                          |                       |



| Vehicle Volumes and Ad                  | justme  | nts                                     |        |           |                        |         |                |               |    |   |       |             |                          |  |                   |    |
|---|---------|---|--------|-----------|------------------------|---------|----------------|---------------|----|---|-------|-------------|--------------------------|--|-------------------|----|
| Approach                                | T       | Eastl                                   | oound  |           |                        | West    | bound          |               |    | North   | bound |             |                          | South  | bound             |    |
| Movement                                | U       | L                                       | Т      | R         | U                      | L       | T              | R             | U  | L   | Т     | R           | U                        | L  | Т                 | R  |
| Priority                                |         | 10                                      | 11     | 12        |                        | 7       | 8              | 9             | 1U | 1   | 2     | 3           | 4U                       | 4  | 5                 | 6  |
| Number of Lanes                         |         | 0                                       | 1      | 0         |                        | 0       | 1              | 0             | 0  | 1   | 2     | 0           | 0                        | 1  | 2                 | 0  |
| Configuration                           |         |   | LTR    |           |                        |         | LTR            |               |    | L   | Т     | TR          |                          | L  | Т                 | TR |
| Volume (veh/h)                          |         | 1                                       | 0      | 1         |                        | 4       | 0              | 8             | 0  | 1   | 991   | 8           | 0                        | 12   | 1008              | 1  |
| Percent Heavy Vehicles (%)              |         | 3                                       | 3      | 3         |                        | 3       | 3              | 3             | 3  | 3   |       |             | 3                        | 3  |                   |    |
| Proportion Time Blocked                 |         | -                                       |        |           |                        |         |                |               |    |   |       |             |                          |  |                   |    |
| Percent Grade (%)                       |         | Lacous annual marian                    | 0      | Attention |                        |         | 0              |               |    | Ann.  |       | Anne summan |                          | A  | A                 |    |
| Right Turn Channelized                  |         |   | -      |           |                        |         |                |               |    | E Berrin  |       |             |                          |  |                   |    |
| Median Type   Storage                   | T       |   |        | Left      | Only                   |         | COMMENT AND DE | D-11 - 1 - 12 |    | 100 No. |       | )           | 1                        | Ma-Marine III e e e  |                   |    |
| Critical and Follow-up H                | eadway  | ys                                      |        |           | Merican Later resident |         |                | 72            |    |   |       | <u> </u>    | SOURCE PARTIES IN SECULO | Meteorica de Caración de Carac |                   | 91 |
| Base Critical Headway (sec)             | T       | 7.5                                     | 6.5    | 6.9       |                        | 7.5     | 6.5            | 6.9           |    | 4.1   |       |             | I                        | 4.1  |                   |    |
| Critical Headway (sec)                  |         | 7.56                                    | 6.56   | 6.96      |                        | 7.56    | 6.56           | 6.96          |    | 4.16  |       |             |                          | 4.16   |                   |    |
| Base Follow-Up Headway (sec)            |         | 3.5                                     | 4.0    | 3.3       |                        | 3.5     | 4.0            | 3.3           |    | 2.2   |       |             |                          | 2.2  |                   |    |
| Follow-Up Headway (sec)                 |         | 3.53                                    | 4.03   | 3.33      |                        | 3.53    | 4.03           | 3.33          |    | 2.23  |       |             |                          | 2.23   |                   |    |
| Delay, Queue Length, an                 | d Level | of Se                                   | ervice |           |                        | one fax | -              |               |    | 2   |       | American    | - 5 8                    |  |                   |    |
| Flow Rate, v (veh/h)                    | T       |   | 2      |           |                        |         | 12             |               |    | 1   |       |             |                          | 12   |                   |    |
| Capacity, c (veh/h)                     |         | *************************************** | 265    |           |                        |         | 324            |               |    | 677   |       |             |                          | 683  |                   |    |
| v/c Ratio                               |         |   | 0.01   |           |                        |         | 0.04           |               |    | 0.00  |       |             |                          | 0.02   |                   |    |
| 95% Queue Length, Q <sub>95</sub> (veh) |         |   | 0.0    |           |                        |         | 0.1            |               |    | 0.0   |       |             |                          | 0.1  |                   |    |
| Control Delay (s/veh)                   |         |   | 18.7   |           |                        |         | 16.5           |               |    | 10.3  |       |             |                          | 10.4   |                   | -  |
| Level of Service (LOS)                  |         |   | С      |           |                        |         | С              |               |    | В   |       |             |                          | В  |                   |    |
| Approach Delay (s/veh)                  |         | 18                                      | 3.7    |           |                        | 16      | 5.5            |               |    | 0   | .0    |             |                          | 0  | .1                | -  |
| Approach LOS                            | 1       | (                                       | 5      |           |                        | (       |                |               |    |   |       |             |                          | 0.7  | Christian Company |    |

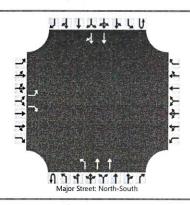


|                          | HCS7 Two-Wa          | ay Stop-Control Report     |                       |
|--------------------------|----------------------|----------------------------|-----------------------|
| General Information      |                      | Site Information           |                       |
| Analyst                  | RLA                  | Intersection               | KM Ranch & Highway 93 |
| Agency/Co.               | ATS                  | Jurisdiction               | MDT                   |
| Date Performed           | 3/1/2022             | East/West Street           | KM Ranch Road         |
| Analysis Year            | 2023                 | North/South Street         | Highway 93            |
| Time Analyzed            | Phase 1 AM Peak Hour | Peak Hour Factor           | 1.00                  |
| Intersection Orientation | North-South          | Analysis Time Period (hrs) | 0.25                  |
| Project Description      | Montarise Village    |                            |                       |



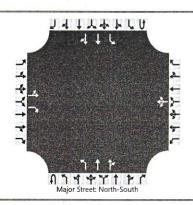
| Vehicle Volumes and Ad                  | justme  | nts            |          |      |  |   |        |                 | 100 | #1<br>10 |                       |             |    |                      |       |        |
|---|---------|----------------|----------|------|--|---|--------|-----------------|-----|----------|-----------------------|-------------|----|----------------------|-------|--------|
| Approach                                | T       | Easth          | oound    |      |  | West  | bound  |                 |     | North    | bound                 |             |    | South                | bound | even a |
| Movement                                | U       | L              | Т        | R    | U                                      | L   | Т      | R               | U   | L        | Т                     | R           | U  | L                    | Т     | R      |
| Priority                                |         | 10             | 11       | 12   |  | 7   | 8      | 9               | 1U  | 1        | 2                     | 3           | 4U | 4                    | 5     | 6      |
| Number of Lanes                         |         | 0              | 1        | 0    |  | 0   | 0      | 0               | 0   | 1        | 2                     | 0           | 0  | 0                    | 2     | 0      |
| Configuration                           |         |                | LR       |      |  |   |        |                 |     | L        | Т                     |             |    |                      | Т     | TR     |
| Volume (veh/h)                          |         | 38             |          | 46   |  |   |        |                 | 0   | 21       | 1058                  |             |    |                      | 916   | 24     |
| Percent Heavy Vehicles (%)              |         | 3              |          | 3    |  |   |        |                 | 3   | 3        |                       |             |    |                      |       |        |
| Proportion Time Blocked                 |         |                |          |      |  |   |        |                 |     |          |                       |             |    |                      |       |        |
| Percent Grade (%)                       |         | Annual Control | 0        |      |  | dame-manuscus Accord  | Access | A-monus-ress    |     | A        | afternoon on the same | Automatema  |    |                      |       |        |
| Right Turn Channelized                  |         |                |          |      |  |   |        |                 |     |          |                       |             |    |                      |       |        |
| Median Type   Storage                   |         |                |          | Left | Only                                   |   |        |                 |     |          |                       |             | 1  |                      |       |        |
| Critical and Follow-up H                | eadway  | ys             | ***      |      |  |   |        |                 |     |          |                       | 4           |    |                      |       |        |
| Base Critical Headway (sec)             |         | 7.5            |          | 6.9  |  |   |        |                 |     | 4.1      |                       |             |    |                      |       |        |
| Critical Headway (sec)                  |         | 6.86           |          | 6.96 |  |   |        |                 |     | 4.16     |                       |             |    |                      |       |        |
| Base Follow-Up Headway (sec)            |         | 3.5            |          | 3.3  |  |   |        |                 |     | 2.2      |                       |             |    |                      |       |        |
| Follow-Up Headway (sec)                 |         | 3.53           |          | 3.33 |  |   |        |                 |     | 2.23     |                       |             |    |                      |       |        |
| Delay, Queue Length, an                 | d Level | of Se          | ervice   |      |  |   |        |                 |     |          |                       |             |    |                      |       |        |
| Flow Rate, v (veh/h)                    | T       |                | 84       |      |  |   |        |                 |     | 21       |                       |             |    |                      |       |        |
| Capacity, c (veh/h)                     | 1       |                | 339      |      |  |   |        |                 |     | 719      |                       |             |    |                      |       |        |
| v/c Ratio                               |         | -              | 0.25     |      |  |   |        |                 |     | 0.03     |                       |             |    |                      |       |        |
| 95% Queue Length, Q <sub>95</sub> (veh) |         |                | 1.0      |      |  |   |        |                 |     | 0.1      |                       |             |    |                      |       |        |
| Control Delay (s/veh)                   |         |                | 19.1     |      |  |   |        |                 |     | 10.2     |                       |             |    |                      |       |        |
| Level of Service (LOS)                  |         | *              | С        |      |  |   |        |                 |     | В        |                       |             |    |                      |       |        |
| Approach Delay (s/veh)                  | T       | 19             | 9.1      |      | ************************************** | CONTRACTOR OF THE PARTY OF THE |        | li amitur-annua |     | 0        | .2                    | lean market |    | Access of the second |       |        |
| Approach LOS                            | 1       | (              | <u> </u> |      |  |   |        |                 |     | 20 WAR   |                       |             |    |                      |       |        |

| HCS7 Two-Way Stop-Control Report |                      |                            |                       |  |  |  |  |  |  |  |
|----------------------------------|----------------------|----------------------------|-----------------------|--|--|--|--|--|--|--|
| General Information              | Site Information     |                            |                       |  |  |  |  |  |  |  |
| Analyst                          | RLA                  | Intersection               | KM Ranch & Highway 93 |  |  |  |  |  |  |  |
| Agency/Co.                       | ATS                  | Jurisdiction               | MDT                   |  |  |  |  |  |  |  |
| Date Performed                   | 3/1/2022             | East/West Street           | KM Ranch Road         |  |  |  |  |  |  |  |
| Analysis Year                    | 2023                 | North/South Street         | Highway 93            |  |  |  |  |  |  |  |
| Time Analyzed                    | Phase 1 PM Peak Hour | Peak Hour Factor           | 1.00                  |  |  |  |  |  |  |  |
| Intersection Orientation         | North-South          | Analysis Time Period (hrs) | 0.25                  |  |  |  |  |  |  |  |
| Project Description              | Montarise Village    |                            |                       |  |  |  |  |  |  |  |



| Vehicle Volumes and Adj                 | justmei | nts   |       |      |      |      |       |  |    |                 |       |                     |    |       |  |     |
|---|---------|-------|-------|------|------|------|-------|--|----|-----------------|-------|---------------------|----|-------|--|-----|
| Approach                                | T       | Eastb | ound  |      |      | West | bound |  |    | North           | bound |                     |    | South | bound  |     |
| Movement                                | U       | L     | Т     | R    | U    | L    | Т     | R  | U  | L               | Т     | R                   | U  | L     | Т  | R   |
| Priority                                |         | 10    | 11    | 12   |      | 7    | 8     | 9  | 1U | 1               | 2     | 3                   | 4U | 4     | 5  | 6   |
| Number of Lanes                         |         | 1     | 0     | 1    |      | 0    | 0     | 0  | 0  | 1               | 2     | 0                   | 0  | 0     | 2  | 0   |
| Configuration                           |         | L     |       | R    |      |      |       |  |    | L               | Т     |                     |    |       | Т  | TR  |
| Volume (veh/h)                          |         | 54    |       | 32   |      |      |       |  | 0  | 41              | 1013  |                     |    |       | 1078   | 28  |
| Percent Heavy Vehicles (%)              |         | 3     |       | 3    |      |      |       |  | 3  | 3               |       | AND PERSON NAMED IN |    |       |  |     |
| Proportion Time Blocked                 |         |       |       |      |      |      |       |  |    |                 |       |                     |    |       |  |     |
| Percent Grade (%)                       |         | (     | )     |      |      |      |       | C  |    | 41000-01100-010 | -0    |                     |    |       | -  |     |
| Right Turn Channelized                  | T       | N     | lo    |      |      |      |       | A  |    |                 |       |                     |    |       |  |     |
| Median Type   Storage                   |         |       |       | Left | Only |      |       |  |    |                 |       |                     | 1  |       |  |     |
| Critical and Follow-up H                | eadway  | /S    |       |      |      |      |       |  |    |                 |       |                     |    |       | Tyrus,   | e e |
| Base Critical Headway (sec)             |         | 7.5   |       | 6.9  |      |      |       |  |    | 4.1             |       |                     |    |       |  |     |
| Critical Headway (sec)                  |         | 6.86  |       | 6.96 |      |      |       |  |    | 4.16            |       |                     |    |       |  |     |
| Base Follow-Up Headway (sec)            |         | 3.5   |       | 3.3  |      |      |       |  |    | 2.2             |       |                     |    |       |  |     |
| Follow-Up Headway (sec)                 |         | 3.53  |       | 3.33 |      |      |       |  |    | 2.23            |       |                     |    |       |  |     |
| Delay, Queue Length, an                 | d Level | of Se | rvice |      |      |      |       |  | =1 |                 | 4     |                     |    |       |  |     |
| Flow Rate, v (veh/h)                    |         | 54    |       | 32   |      |      |       |  |    | 41              |       |                     |    |       |  |     |
| Capacity, c (veh/h)                     |         | 195   |       | 474  |      |      |       | STATE OF THE PARTY |    | 621             |       |                     |    |       |  |     |
| v/c Ratio                               |         | 0.28  |       | 0.07 |      |      |       |  |    | 0.07            |       |                     |    |       |  |     |
| 95% Queue Length, Q <sub>95</sub> (veh) |         | 1.1   |       | 0.2  |      |      |       |  | -  | 0.2             |       |                     |    |       |  |     |
| Control Delay (s/veh)                   |         | 30.4  |       | 13.1 |      |      |       |  |    | 11.2            |       |                     |    |       |  |     |
| Level of Service (LOS)                  |         | D     |       | В    |      |      |       |  |    | В               |       |                     |    |       |  |     |
| Approach Delay (s/veh)                  |         | 24    | .0    |      |      |      |       |  |    | 0               | .4    | - Downson           |    |       | de la constantina della consta |     |
| Approach LOS                            | T       | C     |       |      |      |      |       |  |    | -               |       |                     |    |       | ***************************************  | -   |

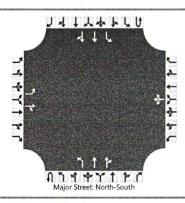
| HCS7 Two-Way Stop-Control Report     |                      |                            |                       |  |  |  |  |  |  |  |
|--------------------------------------|----------------------|----------------------------|-----------------------|--|--|--|--|--|--|--|
| General Information Site Information |                      |                            |                       |  |  |  |  |  |  |  |
| Analyst                              | RLA                  | Intersection               | KM Ranch & Highway 93 |  |  |  |  |  |  |  |
| Agency/Co.                           | ATS                  | Jurisdiction               | MDT                   |  |  |  |  |  |  |  |
| Date Performed                       | 3/1/2022             | East/West Street           | Bowdish Road          |  |  |  |  |  |  |  |
| Analysis Year                        | 2023                 | North/South Street         | Highway 93            |  |  |  |  |  |  |  |
| Time Analyzed                        | Phase 1 AM Peak Hour | Peak Hour Factor           | 1.00                  |  |  |  |  |  |  |  |
| Intersection Orientation             | North-South          | Analysis Time Period (hrs) | 0.25                  |  |  |  |  |  |  |  |
| Project Description                  | Montarise Village    |                            |                       |  |  |  |  |  |  |  |



| 1 | Ve | hic | le | Vo | lumes | and | Adj | just | ments |
|---|----|-----|----|----|-------|-----|-----|------|-------|
| ١ |    |     |    |    |       |     |     |      |       |

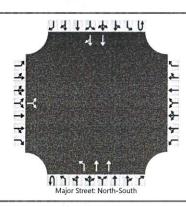
| Approach                                |        | Eastb   | ound   |   |      | West | bound |  |    | North             | bound  |                           |    | South       | bound                           | - W- 100  |
|---|--------|---------|--------|---|------|------|-------|--|----|-------------------|--|---------------------------|----|-------------|---------------------------------|-----------|
| Movement                                | U      | L       | Т      | R                                       | U    | L    | Т     | R  | U  | L                 | Т  | R                         | U  | L           | T                               | R         |
| Priority                                |        | 10      | 11     | 12                                      |      | 7    | 8     | 9  | 1U | 1                 | 2  | 3                         | 4U | 4           | 5                               | 6         |
| Number of Lanes                         |        | 0       | 1      | 1                                       |      | 0    | 1     | 0  | 0  | 1                 | 2  | 0                         | 0  | 1           | 2                               | 0         |
| Configuration                           | T      | LT      |        | R                                       |      |      | LTR   |  |    | L                 | Т  | TR                        |    | L           | Т                               | TR        |
| Volume (veh/h)                          |        | 8       | 1      | 8                                       |      | 21   | 0     | 9  | 0  | 3                 | 1093   | 1                         | 0  | 4           | 889                             | 3         |
| Percent Heavy Vehicles (%)              |        | 3       | 3      | 3                                       |      | 3    | 3     | 3  | 3  | 3                 |  |                           | 3  | 3           |                                 |           |
| Proportion Time Blocked                 |        |         |        |   |      |      |       |  |    |                   |  |                           |    |             |                                 |           |
| Percent Grade (%)                       | T      | (       | 0      |   |      |      | 0     |  |    |                   | facilities and the same of   |                           |    |             |                                 |           |
| Right Turn Channelized                  |        | Ν       | lo     | *************************************** |      |      |       |  |    |                   |  |                           |    |             | Marie de 120 marie de 120 marie |           |
| Median Type   Storage                   |        |         |        | Left                                    | Only |      |       |  |    |                   | 10 70 110 15   | 0)                        | 1  |             | 1100-010                        |           |
| Critical and Follow-up H                | eadwa  | ys      |        |   |      |      |       | 19   |    |                   | 20   | à.<br>2                   |    |             |                                 | 1         |
| Base Critical Headway (sec)             |        | 7.5     | 6.5    | 6.9                                     |      | 7.5  | 6.5   | 6.9  |    | 4.1               |  |                           |    | 4.1         |                                 |           |
| Critical Headway (sec)                  |        | 7.56    | 6.56   | 6.96                                    |      | 7.56 | 6.56  | 6.96   |    | 4.16              |  |                           |    | 4.16        |                                 |           |
| Base Follow-Up Headway (sec)            |        | 3.5     | 4.0    | 3.3                                     |      | 3.5  | 4.0   | 3.3  |    | 2.2               |  |                           |    | 2.2         |                                 |           |
| Follow-Up Headway (sec)                 |        | 3.53    | 4.03   | 3.33                                    |      | 3.53 | 4.03  | 3.33   |    | 2.23              |  |                           |    | 2.23        |                                 |           |
| Delay, Queue Length, an                 | d Leve | l of Se | ervice |   |      |      |       |  |    |                   | Annual Commence of the Commenc |                           | 5  |             |                                 |           |
| Flow Rate, v (veh/h)                    |        | 9       |        | 8                                       |      |      | 30    |  |    | 3                 |  |                           |    | 4           |                                 |           |
| Capacity, c (veh/h)                     |        | 159     |        | 557                                     |      |      | 211   |  |    | 750               |  |                           |    | 628         |                                 |           |
| v/c Ratio                               |        | 0.06    |        | 0.01                                    |      |      | 0.14  |  |    | 0.00              |  |                           |    | 0.01        |                                 |           |
| 95% Queue Length, Q <sub>95</sub> (veh) |        | 0.2     |        | 0.0                                     |      |      | 0.5   |  |    | 0.0               |  |                           |    | 0.0         |                                 |           |
| Control Delay (s/veh)                   |        | 29.0    |        | 11.6                                    |      |      | 24.9  |  |    | 9.8               |  |                           |    | 10.8        |                                 |           |
| Level of Service (LOS)                  |        | D       |        | В                                       |      |      | С     |  |    | А                 |  |                           |    | В           |                                 |           |
| Approach Delay (s/veh)                  |        | 20      | ).8    |   |      | 24   | 1.9   | Annual of the latest t |    | 0                 | .0   |                           |    | 0           | .0                              | here were |
| Approach LOS                            | T      | (       | -      |   |      | (    |       |  |    | CONTRACT CONTRACT | AMERICAN CONTRACTOR  | A Annual of the Section 1 |    | THE RESERVE | W-1                             |           |

| HCS7 Two-Way Stop-Control Report |                      |                            |                       |  |  |  |  |  |  |  |
|----------------------------------|----------------------|----------------------------|-----------------------|--|--|--|--|--|--|--|
| General Information              |                      | Site Information           |                       |  |  |  |  |  |  |  |
| Analyst                          | RLA                  | Intersection               | KM Ranch & Highway 93 |  |  |  |  |  |  |  |
| Agency/Co.                       | ATS                  | Jurisdiction               | MDT                   |  |  |  |  |  |  |  |
| Date Performed                   | 3/1/2022             | East/West Street           | Bowdish Road          |  |  |  |  |  |  |  |
| Analysis Year                    | 2023                 | North/South Street         | Highway 93            |  |  |  |  |  |  |  |
| Time Analyzed                    | Phase 1 PM Peak Hour | Peak Hour Factor           | 1.00                  |  |  |  |  |  |  |  |
| Intersection Orientation         | North-South          | Analysis Time Period (hrs) | 0.25                  |  |  |  |  |  |  |  |
| Project Description              | Montarise Village    |                            |                       |  |  |  |  |  |  |  |



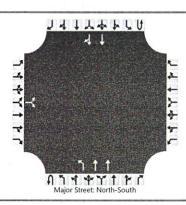
| Vehicle Volumes and Ad                  | justme | nts   |        |                              | 15      |      |       |                    |    |                     |                          |    | 5a |       |       |            |
|---|--------|-------|--------|------------------------------|---------|------|-------|--------------------|----|---------------------|--------------------------|----|----|-------|-------|------------|
| Approach                                | T      | Eastl | oound  | Canal Canal                  |         | West | bound |                    |    | North               | bound                    |    |    | South | bound |            |
| Movement                                | U      | L     | Т      | R                            | U       | L    | Т     | R                  | U  | L                   | Т                        | R  | U  | L     | Т     | R          |
| Priority                                |        | 10    | 11     | 12                           |         | 7    | 8     | 9                  | 1U | 1                   | 2                        | 3  | 4U | 4     | 5     | 6          |
| Number of Lanes                         |        | 1     | 1      | 0                            |         | 0    | 1     | 0                  | 0  | 1                   | 2                        | 0  | 0  | 1     | 2     | 0          |
| Configuration                           |        | L     |        | TR                           |         |      | LTR   |                    |    | L                   | Т                        | TR |    | L     | Т     | TR         |
| Volume (veh/h)                          |        | 5     | 1      | 5                            |         | 4    | 0     | 9                  | 0  | 9                   | 1057                     | 9  | 0  | 13    | 1079  | 9          |
| Percent Heavy Vehicles (%)              |        | 3     | 3      | 3                            |         | 3    | 3     | 3                  | 3  | 3                   |                          |    | 3  | 3     |       |            |
| Proportion Time Blocked                 |        |       |        |                              |         |      |       |                    |    |                     |                          |    |    |       |       |            |
| Percent Grade (%)                       |        |       | 0      | Approximation and the second |         |      | 0     | Character security |    | format and a second | Green reconstruction and |    |    |       | A     |            |
| Right Turn Channelized                  |        |       |        |                              |         |      |       |                    |    |                     |                          |    |    |       |       |            |
| Median Type   Storage                   |        |       |        | Left                         | Only    |      |       |                    |    |                     |                          |    | 1  |       |       |            |
| Critical and Follow-up H                | eadwa  | ys    |        | 1                            |         |      |       |                    |    | 0.000,000           |                          | 1  |    |       |       | li li      |
| Base Critical Headway (sec)             |        | 7.5   | 6.5    | 6.9                          |         | 7.5  | 6.5   | 6.9                |    | 4.1                 |                          |    |    | 4.1   |       |            |
| Critical Headway (sec)                  |        | 7.56  | 6.56   | 6.96                         |         | 7.56 | 6.56  | 6.96               |    | 4.16                |                          |    |    | 4.16  |       |            |
| Base Follow-Up Headway (sec)            |        | 3.5   | 4.0    | 3.3                          |         | 3.5  | 4.0   | 3.3                |    | 2.2                 |                          |    |    | 2.2   |       |            |
| Follow-Up Headway (sec)                 |        | 3.53  | 4.03   | 3.33                         |         | 3.53 | 4.03  | 3.33               |    | 2.23                |                          |    |    | 2.23  |       |            |
| Delay, Queue Length, an                 | d Leve | of S  | ervice |                              | 1 1 1 7 |      | 1 =   | 1 2                |    | 2                   |                          |    |    | 18 7  |       |            |
| Flow Rate, v (veh/h)                    |        | 5     |        | 6                            |         |      | 13    |                    |    | 9                   |                          |    |    | 13    |       |            |
| Capacity, c (veh/h)                     | 1      | 158   |        | 177                          |         |      | 301   |                    |    | 631                 |                          |    |    | 644   |       |            |
| v/c Ratio                               |        | 0.03  |        | 0.03                         |         |      | 0.04  |                    |    | 0.01                |                          |    |    | 0.02  |       |            |
| 95% Queue Length, Q <sub>95</sub> (veh) |        | 0.1   |        | 0.1                          |         |      | 0.1   |                    |    | 0.0                 |                          |    |    | 0.1   |       |            |
| Control Delay (s/veh)                   |        | 28.5  |        | 26.0                         |         |      | 17.5  |                    |    | 10.8                |                          |    |    | 10.7  |       |            |
| Level of Service (LOS)                  |        | D     |        | D                            |         |      | С     |                    |    | В                   |                          |    |    | В     |       |            |
| Approach Delay (s/veh)                  | T      | 2     | 7.2    | Terror and the second        |         | 1    | 7.5   |                    |    | 0                   | .1                       |    |    | 0     | .1    |            |
| Approach LOS                            |        | 1     | D      |                              |         |      | C     |                    |    |                     |                          |    |    |       |       | 110 200 20 |

| HCS7 Two-Way Stop-Control Report |                        |                            |                       |  |  |  |  |  |  |  |
|----------------------------------|------------------------|----------------------------|-----------------------|--|--|--|--|--|--|--|
| General Information              |                        | Site Information           |                       |  |  |  |  |  |  |  |
| Analyst                          | RLA                    | Intersection               | KM Ranch & Highway 93 |  |  |  |  |  |  |  |
| Agency/Co.                       | ATS                    | Jurisdiction               | MDT                   |  |  |  |  |  |  |  |
| Date Performed                   | 3/1/2022               | East/West Street           | KM Ranch Road         |  |  |  |  |  |  |  |
| Analysis Year                    | 2025                   | North/South Street         | Highway 93            |  |  |  |  |  |  |  |
| Time Analyzed                    | Projected AM Peak Hour | Peak Hour Factor           | 1.00                  |  |  |  |  |  |  |  |
| Intersection Orientation         | North-South            | Analysis Time Period (hrs) | 0.25                  |  |  |  |  |  |  |  |
| Project Description              | Montarise Village      |                            |                       |  |  |  |  |  |  |  |



| Vehicle Volumes and Ad                  | justmei | nts   |        |      |      |  |       |   |    |                     |                            |   |    |  |   |            |
|---|---------|-------|--------|------|------|--|-------|---|----|---------------------|----------------------------|---|----|--|---|------------|
| Approach                                | 7       | Eastb | ound   |      |      | West   | bound |   |    | North               | bound                      |   |    | South  | bound                                   |            |
| Movement                                | U       | L     | Т      | R    | U    | L  | Т     | R   | U  | L                   | Т                          | R | U  | L  | Т                                       | R          |
| Priority                                |         | 10    | 11     | 12   |      | 7  | 8     | 9   | 1U | 1                   | 2                          | 3 | 4U | 4  | 5                                       | 6          |
| Number of Lanes                         |         | 0     | 1      | 0    |      | 0  | 0     | 0   | 0  | 1                   | 2                          | 0 | 0  | 0  | 2                                       | 0          |
| Configuration                           |         |       | LR     |      |      |  |       |   |    | L                   | Т                          |   |    |  | Т                                       | TR         |
| Volume (veh/h)                          |         | 58    |        | 75   |      |  |       |   | 0  | 46                  | 1114                       |   |    |  | 970                                     | 41         |
| Percent Heavy Vehicles (%)              |         | 3     |        | 3    |      |  |       |   | 3  | 3                   |                            |   |    |  |   |            |
| Proportion Time Blocked                 |         |       |        |      |      |  |       |   |    |                     |                            |   |    |  |   |            |
| Percent Grade (%)                       |         |       | 0      |      |      | A compression of the compression |       | Accessor  |    | dio Carrier Control | - Angelong and the Company |   |    | Aceesson   | A. IIII III III III III III III III III | Билининици |
| Right Turn Channelized                  |         |       |        |      |      |  |       |   |    |                     | 4 - 45 - 31 - 41 - 42 - 4  |   |    | AND THE PROPERTY OF THE PARTY O |   |            |
| Median Type   Storage                   |         |       |        | Left | Only |  |       |   |    |                     |                            |   | 1  |  |   |            |
| Critical and Follow-up H                | eadway  | /S    |        |      |      |  | = = = |   |    | 2000                |                            | - |    |  |   |            |
| Base Critical Headway (sec)             | T       | 7.5   |        | 6.9  |      |  |       |   |    | 4.1                 |                            |   |    |  |   |            |
| Critical Headway (sec)                  |         | 6.86  |        | 6.96 |      |  |       |   |    | 4.16                |                            |   |    |  |   |            |
| Base Follow-Up Headway (sec)            |         | 3.5   |        | 3.3  |      |  |       |   |    | 2.2                 |                            |   |    |  |   |            |
| Follow-Up Headway (sec)                 |         | 3.53  |        | 3.33 |      |  |       |   |    | 2.23                |                            |   |    |  |   |            |
| Delay, Queue Length, an                 | d Level | of Se | ervice |      |      |  |       |   | 1  | 2.                  |                            |   |    |  |   |            |
| Flow Rate, v (veh/h)                    | ТП      |       | 133    |      |      |  |       |   |    | 46                  |                            |   |    |  |   |            |
| Capacity, c (veh/h)                     | 1       |       | 311    |      |      |  |       |   |    | 675                 |                            |   |    |  |   |            |
| v/c Ratio                               |         |       | 0.43   |      |      |  |       |   |    | 0.07                |                            |   |    |  |   |            |
| 95% Queue Length, Q <sub>95</sub> (veh) |         |       | 2.1    |      |      |  |       |   |    | 0.2                 |                            |   |    |  |   |            |
| Control Delay (s/veh)                   |         |       | 25.0   |      |      |  |       |   |    | 10.7                |                            |   |    |  |   |            |
| Level of Service (LOS)                  |         |       | С      |      |      |  |       |   |    | В                   |                            |   |    |  |   |            |
| Approach Delay (s/veh)                  | i '     | 25    | 5.0    | -    |      | Access of the latest of the la | ā     |   |    | 0                   | .4                         |   |    |  | Accessor                                |            |
| Approach LOS                            | 1       | (     |        |      |      |  | ***   | Al a state of the |    |                     |                            |   |    | -  |   |            |

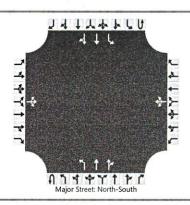
| HCS7 Two-Way Stop-Control Report |                        |                            |                       |  |  |  |  |  |  |  |
|----------------------------------|------------------------|----------------------------|-----------------------|--|--|--|--|--|--|--|
| General Information              |                        |                            |                       |  |  |  |  |  |  |  |
| Analyst                          | RLA                    | Intersection               | KM Ranch & Highway 93 |  |  |  |  |  |  |  |
| Agency/Co.                       | ATS                    | Jurisdiction               | MDT                   |  |  |  |  |  |  |  |
| Date Performed                   | 3/1/2022               | East/West Street           | KM Ranch Road         |  |  |  |  |  |  |  |
| Analysis Year                    | 2025                   | North/South Street         | Highway 93            |  |  |  |  |  |  |  |
| Time Analyzed                    | Projected PM Peak Hour | Peak Hour Factor           | 1.00                  |  |  |  |  |  |  |  |
| Intersection Orientation         | North-South            | Analysis Time Period (hrs) | 0.25                  |  |  |  |  |  |  |  |
| Project Description              | Montarise Village      |                            |                       |  |  |  |  |  |  |  |



| <b>Vehicle Volumes and Adj</b>          | ustmer  | nts   |        |                     |      |           |  |      |    |   |  |  |    |                   |  |   |
|---|---------|-------|--------|---------------------|------|-----------|--|------|----|---|--|--|----|-------------------|--|---|
| Approach                                |         | Eastb | oound  |                     |      | West      | bound  |      |    | North   | bound  |  |    | South             | nbound   | CONTRACTOR OF THE PARTY OF THE |
| Movement                                | U       | L     | Т      | R                   | U    | L         | Т  | R    | U  | L   | Т  | R  | U  | L                 | Т  | R   |
| Priority                                |         | 10    | 11     | 12                  |      | 7         | 8  | 9    | 1U | 1   | 2  | 3  | 4U | 4                 | 5  | 6   |
| Number of Lanes                         |         | 0     | 1      | 0                   |      | 0         | 0  | 0    | 0  | 1   | 2  | 0  | 0  | 0                 | 2  | 0   |
| Configuration                           |         |       | LR     |                     |      |           |  |      |    | L   | Т  |  |    |                   | Т  | TR  |
| Volume (veh/h)                          |         | 81    |        | 58                  |      |           |  |      | 0  | 68  | 1072   |  |    |                   | 1139   | 55  |
| Percent Heavy Vehicles (%)              |         | 3     |        | 3                   |      |           |  |      | 3  | 3   |  |  |    |                   |  |   |
| Proportion Time Blocked                 |         |       |        |                     |      |           |  |      |    |   |  |  |    |                   |  |   |
| Percent Grade (%)                       |         | (     | 0      | Account to the same |      | Антиненти | Access to the second   | A.c. |    | A construction to the same of | de consecuence de la |  |    | Access Memory and | A STATE OF THE PARTY OF THE PAR |   |
| Right Turn Channelized                  |         |       |        |                     |      |           |  |      |    |   |  | - In the contract of   |    | - ACCIONISTA      |  |   |
| Median Type   Storage                   |         |       |        | Left                | Only |           |  |      |    | .,,   |  |  | 1  |                   |  | - Company   |
| Critical and Follow-up He               | eadway  | /S    |        |                     |      |           |  |      |    |   |  |  |    |                   |  |   |
| Base Critical Headway (sec)             |         | 7.5   |        | 6.9                 |      |           |  |      |    | 4.1   |  |  |    |                   |  |   |
| Critical Headway (sec)                  |         | 6.86  |        | 6.96                |      |           |  |      |    | 4.16  |  |  |    |                   |  |   |
| Base Follow-Up Headway (sec)            |         | 3.5   |        | 3.3                 |      |           |  |      |    | 2.2   |  |  |    |                   |  |   |
| Follow-Up Headway (sec)                 |         | 3.53  |        | 3.33                |      |           |  |      |    | 2.23  |  | AND DESCRIPTION OF THE PARTY OF |    |                   |  |   |
| Delay, Queue Length, and                | d Level | of Se | ervice |                     |      |           |  |      |    | 22  |  |  |    | 729               |  |   |
| Flow Rate, v (veh/h)                    | П       |       | 139    |                     |      |           |  |      |    | 68  |  |  |    |                   |  |   |
| Capacity, c (veh/h)                     |         |       | 228    |                     |      |           |  |      |    | 575   |  |  |    |                   |  |   |
| v/c Ratio                               |         |       | 0.61   |                     |      |           |  |      |    | 0.12  |  |  |    |                   |  |   |
| 95% Queue Length, Q <sub>95</sub> (veh) |         |       | 3.6    |                     |      |           |  |      |    | 0.4   |  |  |    |                   |  |   |
| Control Delay (s/veh)                   |         |       | 42.7   |                     |      |           |  |      |    | 12.1  |  |  |    |                   |  |   |
| Level of Service (LOS)                  |         |       | Е      |                     |      |           |  |      |    | В   |  |  |    |                   |  |   |
| Approach Delay (s/veh)                  | İ       | 42    | 2.7    |                     |      |           | America and annual section of the se |      |    | 0   | .7   | etter retain comme   |    |                   |  |   |
| Approach LOS                            | İ       | [     | E      |                     |      |           |  |      |    | -   |  | -  |    |                   |  | -   |

| HCS7 Two-Way Stop-Control Report |                        |                            |                       |  |  |  |  |  |  |  |
|----------------------------------|------------------------|----------------------------|-----------------------|--|--|--|--|--|--|--|
| General Information              |                        | Site Information           |                       |  |  |  |  |  |  |  |
| Analyst                          | RLA                    | Intersection               | KM Ranch & Highway 93 |  |  |  |  |  |  |  |
| Agency/Co.                       | ATS                    | Jurisdiction               | MDT                   |  |  |  |  |  |  |  |
| Date Performed                   | 3/1/2022               | East/West Street           | Bowdish Road          |  |  |  |  |  |  |  |
| Analysis Year                    | 2025                   | North/South Street         | Highway 93            |  |  |  |  |  |  |  |
| Time Analyzed                    | Projected AM Peak Hour | Peak Hour Factor           | 1.00                  |  |  |  |  |  |  |  |
| Intersection Orientation         | North-South            | Analysis Time Period (hrs) | 0.25                  |  |  |  |  |  |  |  |
| Project Description              | Montarise Village      |                            |                       |  |  |  |  |  |  |  |

Approach



Westbound

Northbound

0.2

| Vehicle Volumes and Ac | ljustments |
|------------------------|------------|
|------------------------|------------|

Eastbound

25.7

D

| . IL L                                  |        |           |        |      |   |      |      |      | 110101000110 |      |      |            | Doddinodina |      |     |  |  |
|---|--------|-----------|--------|------|---|------|------|------|--------------|------|------|------------|-------------|------|-----|--|--|
| Movement                                | U      | L         | Т      | R    | U | L    | Т    | R    | U            | L    | Т    | R          | U           | L    | Т   | R  |  |
| Priority                                |        | 10        | 11     | 12   |   | 7    | 8    | 9    | 1U           | 1    | 2    | 3          | 4U          | 4    | 5   | 6  |  |
| Number of Lanes                         |        | 0         | 1      | 0    |   | 0    | 1    | 0    | 0            | 1    | 2    | 0          | 0           | 1    | 2   | 0  |  |
| Configuration                           |        |           | LTR    |      |   |      | LTR  |      |              | L    | Т    | TR         |             | L    | Т   | TR   |  |
| Volume (veh/h)                          |        | 27        | 2      | 27   |   | 22   | 0    | 9    | 0            | 19   | 1153 | 1          | 0           | 4    | 939 | 19   |  |
| Percent Heavy Vehicles (%)              |        | 3         | 3      | 3    |   | 3    | 3    | 3    | 3            | 3    |      |            | 3           | 3    |     |  |  |
| Proportion Time Blocked                 |        |           |        |      |   |      |      |      |              |      |      |            |             |      |     |  |  |
| Percent Grade (%)                       | 0      |           |        |      |   |      | )    |      |              |      |      |            |             |      |     | dia managamenta de la constanti de la constant |  |
| Right Turn Channelized                  |        |           |        |      |   |      |      |      |              |      |      |            |             |      |     |  |  |
| Median Type   Storage                   | T      | Left Only |        |      |   |      |      |      |              |      |      |            | l           |      |     |  |  |
| Critical and Follow-up H                | eadwa  | ys        |        | *    |   |      |      | IF   |              |      |      | \$0<br>2.0 |             |      |     | 27E  |  |
| Base Critical Headway (sec)             | T      | 7.5       | 6.5    | 6.9  |   | 7.5  | 6.5  | 6.9  |              | 4.1  |      |            |             | 4.1  |     |  |  |
| Critical Headway (sec)                  |        | 7.56      | 6.56   | 6.96 |   | 7.56 | 6.56 | 6.96 |              | 4.16 |      |            |             | 4.16 |     |  |  |
| Base Follow-Up Headway (sec)            |        | 3.5       | 4.0    | 3.3  |   | 3.5  | 4.0  | 3.3  |              | 2.2  |      |            |             | 2.2  |     |  |  |
| Follow-Up Headway (sec)                 |        | 3.53      | 4.03   | 3.33 |   | 3.53 | 4.03 | 3.33 |              | 2.23 |      |            |             | 2.23 |     |  |  |
| Delay, Queue Length, an                 | d Leve | l of Se   | ervice |      |   |      |      |      |              |      |      | 1          |             |      |     |  |  |
| Flow Rate, v (veh/h)                    | T      |           | 56     |      |   |      | 31   |      |              | 19   |      |            |             | 4    |     |  |  |
| Capacity, c (veh/h)                     | Ī      |           | 230    |      |   |      | 180  |      |              | 708  |      |            |             | 595  |     |  |  |
| v/c Ratio                               |        |           | 0.24   |      |   |      | 0.17 |      |              | 0.03 |      |            |             | 0.01 |     |  |  |
| 95% Queue Length, Q <sub>95</sub> (veh) |        |           | 0.9    |      |   |      | 0.6  |      |              | 0.1  |      |            |             | 0.0  |     |  |  |
| Control Delay (s/veh)                   |        |           | 25.7   |      |   |      | 29.2 |      |              | 10.2 |      |            |             | 11.1 |     |  |  |
| Level of Service (LOS)                  | T      |           | D      |      |   |      | D    |      |              | В    |      |            | -           | В    |     |  |  |

Approach Delay (s/veh)

Approach LOS

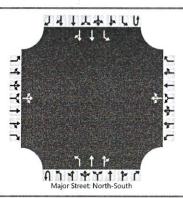
29.2

D

0.0

Southbound

| HCS7 Two-Way Stop-Control Report |                        |                            |                       |  |  |  |  |  |  |  |  |
|----------------------------------|------------------------|----------------------------|-----------------------|--|--|--|--|--|--|--|--|
| General Information              |                        | Site Information           |                       |  |  |  |  |  |  |  |  |
| Analyst                          | RLA                    | Intersection               | KM Ranch & Highway 93 |  |  |  |  |  |  |  |  |
| Agency/Co.                       | ATS                    | Jurisdiction               | MDT                   |  |  |  |  |  |  |  |  |
| Date Performed                   | 3/1/2022               | East/West Street           | Bowdish Road          |  |  |  |  |  |  |  |  |
| Analysis Year                    | 2025                   | North/South Street         | Highway 93            |  |  |  |  |  |  |  |  |
| Time Analyzed                    | Projected PM Peak Hour | Peak Hour Factor           | 1.00                  |  |  |  |  |  |  |  |  |
| Intersection Orientation         | North-South            | Analysis Time Period (hrs) | 0.25                  |  |  |  |  |  |  |  |  |
| Project Description              | Montarise Village      | 5                          |                       |  |  |  |  |  |  |  |  |



| Vehicle Volumes and Adj                 | ustmen    | ıts   |        |          |   |           |      |               |  |             |                           |    |      |            |      |    |  |  |
|---|-----------|-------|--------|----------|---|-----------|------|---------------|--|-------------|---------------------------|----|------|------------|------|----|--|--|
| Approach                                | Eastbound |       |        |          |   | Westbound |      |               |  | Northbound  |                           |    |      | Southbound |      |    |  |  |
| Movement                                | ULTR      |       |        |          | U                                       | L         | Т    | R             | U  | L           | T                         | R  | U    | L          | Т    | R  |  |  |
| Priority                                |           | 10    | 11     | 12       |   | 7         | 8    | 9             | 1U   | 1           | 2                         | 3  | 4U   | 4          | 5    | 6  |  |  |
| Number of Lanes                         |           | 0     | 1      | 0        |   | 0         | 1    | 0             | 0  | 1           | 2                         | 0  | 0    | 1          | 2    | 0  |  |  |
| Configuration                           |           |       | LTR    |          |   |           | LTR  |               |  | L           | T                         | TR |      | L          | Т    | TR |  |  |
| Volume (veh/h)                          | I         | 26    | 2      | 26       |   | 4         | 0    | 9             | 0  | 31          | 1122                      | 9  | 0    | 13         | 1145 | 31 |  |  |
| Percent Heavy Vehicles (%)              | ПП        | 3     | 3      | 3        |   | 3         | 3    | 3             | 3  | 3           |                           |    | 3    | 3          |      |    |  |  |
| Proportion Time Blocked                 |           |       |        |          |   |           |      |               |  |             |                           |    |      | _          |      |    |  |  |
| Percent Grade (%)                       |           |       | 0      | 4        |   |           | 0    | An months and |  | ås - commun |                           |    |      |            |      |    |  |  |
| Right Turn Channelized                  |           |       |        |          |   |           |      |               |  |             |                           |    |      |            |      |    |  |  |
| Median Type   Storage                   |           |       |        | Left     | Only                                    |           |      |               |  |             | the state of the state of |    | 1    |            |      |    |  |  |
| Critical and Follow-up He               | adway     | s     |        |          |   |           |      |               | THE STATE OF THE S |             |                           | 1  |      |            |      |    |  |  |
| Base Critical Headway (sec)             |           | 7.5   | 6.5    | 6.9      |   | 7.5       | 6.5  | 6.9           |  | 4.1         |                           |    |      | 4.1        |      |    |  |  |
| Critical Headway (sec)                  |           | 7.56  | 6.56   | 6.96     |   | 7.56      | 6.56 | 6.96          |  | 4.16        |                           |    |      | 4.16       |      |    |  |  |
| Base Follow-Up Headway (sec)            |           | 3.5   | 4.0    | 3.3      |   | 3.5       | 4.0  | 3.3           |  | 2.2         |                           |    |      | 2.2        |      |    |  |  |
| Follow-Up Headway (sec)                 |           | 3.53  | 4.03   | 3.33     |   | 3.53      | 4.03 | 3.33          |  | 2.23        |                           |    |      | 2.23       |      |    |  |  |
| Delay, Queue Length, and                | Level     | of Se | ervice | es i mac |   | 91        |      |               | ni edh   |             |                           |    | 1 14 |            |      |    |  |  |
| Flow Rate, v (veh/h)                    |           |       | 54     |          |   |           | 13   |               |  | 31          |                           |    |      | 13         |      |    |  |  |
| Capacity, c (veh/h)                     |           |       | 173    |          |   |           | 259  |               |  | 584         |                           |    |      | 608        |      |    |  |  |
| v/c Ratio                               |           |       | 0.31   |          |   |           | 0.05 |               |  | 0.05        |                           |    |      | 0.02       |      |    |  |  |
| 95% Queue Length, Q <sub>95</sub> (veh) |           |       | 1.3    |          |   |           | 0.2  |               |  | 0.2         |                           |    |      | 0.1        |      |    |  |  |
| Control Delay (s/veh)                   |           |       | 35.1   |          | *************************************** |           | 19.6 |               |  | 11.5        |                           |    |      | 11.1       |      |    |  |  |
| Level of Service (LOS)                  |           |       | Е      |          |   |           | С    |               |  | В           |                           |    |      | В          |      |    |  |  |
| Approach Delay (s/veh)                  | 35.1      |       |        |          |   | 19        | 9.6  |               |  | 0           | .3                        |    | 0.1  |            |      |    |  |  |
| Approach LOS                            | E         |       |        |          |   | (         |      |               |  |             |                           | -  |      |            |      |    |  |  |