

## TRANSPORTATION MEMORANDUM

For

**State Highway 83 & Needles Subdivision  
El Paso County, Colorado**

**P268**

**Added**

June 2026

Prepared for:

The North Ranch, LLC  
944 Cheyenne Boulevard  
Colorado Springs, Colorado 80905

Prepared by:



**SM ROCHA, LLC**

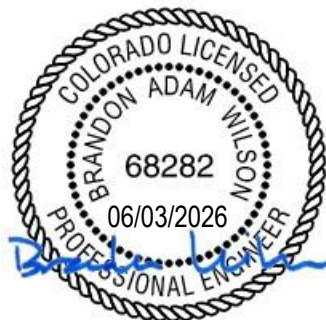
TRAFFIC & TRANSPORTATION ENGINEERING

8700 Turnpike Drive, Suite 240  
Westminster, Colorado 80031  
(303) 458-9798

6 South Tejon Street, Suite 618  
Colorado Springs, Colorado 80903  
(719) 203-6639

Project Engineer:  
Leo Ornelas, EIT

Engineer in Responsible Charge:  
Brandon Wilson, PE



26-042650

**Traffic Engineer's Statement**

The attached traffic report and supporting information were prepared under my responsible charge and they comport with the standard of care. So far as is consistent with the standard of care, said report was prepared in general conformance with the criteria established by the County for traffic reports.



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Brandon Wilson, P.E. #68282

be sure to include  
stamp on final  
submittal

Stamp is already provided  
on the cover page.

06/03/2026

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Date

**Developer's Statement**

I, the Developer, have read and will comply with all commitments made on my behalf within this report.

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Rob Myers  
The North Ranch, LLC  
944 Cheyenne Boulevard  
Colorado Springs, Colorado 80905

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Date

## Table of Contents

|                                                                         |           |
|-------------------------------------------------------------------------|-----------|
| <b>I. Introduction .....</b>                                            | <b>1</b>  |
| Project Overview .....                                                  | 1         |
| Study Area .....                                                        | 1         |
| Site Description .....                                                  | 1         |
| Existing and Committed Surface Transportation Network .....             | 5         |
| <b>II. Existing Traffic Conditions .....</b>                            | <b>6</b>  |
| Peak Hour Intersection Levels of Service – Existing Traffic .....       | 8         |
| Existing Traffic Analysis Results .....                                 | 9         |
| <b>III. Future Traffic Conditions Without Proposed Development.....</b> | <b>10</b> |
| Peak Hour Intersection Levels of Service – Background Traffic .....     | 12        |
| Background Traffic Analysis Results – Year 2028 .....                   | 12        |
| <b>IV. Proposed Project Traffic .....</b>                               | <b>14</b> |
| Trip Generation .....                                                   | 14        |
| Adjustments to Trip Generation Rates .....                              | 15        |
| Trip Distribution .....                                                 | 15        |
| Trip Assignment .....                                                   | 15        |
| <b>V. Future Traffic Conditions With Proposed Development.....</b>      | <b>17</b> |
| Total Traffic Auxiliary Lane Analysis .....                             | 17        |
| Multi-Modal Assessment .....                                            | 17        |
| Peak Hour Intersection Levels of Service – Total Traffic .....          | 19        |
| Total Traffic Analysis Results Upon Development Build-Out .....         | 20        |
| <b>VI. Project Impacts .....</b>                                        | <b>21</b> |
| Queue Length Analysis .....                                             | 21        |
| Development Impacts .....                                               | 22        |
| Recommended Improvements .....                                          | 22        |
| <b>VII. Conclusion .....</b>                                            | <b>23</b> |

### List of Figures

|                                                                                |    |
|--------------------------------------------------------------------------------|----|
| Figure 1 – Location.....                                                       | 3  |
| Figure 2 – Conceptual Site Plan.....                                           | 4  |
| Figure 3 – Existing Traffic Volumes & Intersection Geometry .....              | 7  |
| Figure 4 – Background Traffic Volumes & Intersection Geometry – Year 2028..... | 11 |
| Figure 5 – Distribution and Site-Generated Assignment.....                     | 16 |
| Figure 6 – Total Traffic Volumes & Intersection Geometry – Year 2028.....      | 18 |

### List of Tables

|                                                                                         |    |
|-----------------------------------------------------------------------------------------|----|
| Table 1 – Intersection Capacity Analysis Summary – Existing Traffic .....               | 8  |
| Table 2 – Intersection Capacity Analysis Summary – Background Traffic – Year 2028 ..... | 12 |
| Table 3 – Trip Generation Rates .....                                                   | 14 |
| Table 4 – Trip Generation Summary .....                                                 | 14 |
| Table 5 – Intersection Capacity Analysis Summary – Total Traffic – Year 2028 .....      | 19 |
| Table 6 – Turn Lane Queues and Storage Requirements – Year 2028.....                    | 21 |

### Appendices

|            |                              |
|------------|------------------------------|
| APPENDIX A | TRAFFIC COUNT DATA           |
| APPENDIX B | LEVEL OF SERVICE DEFINITIONS |
| APPENDIX C | CAPACITY WORKSHEETS          |
| APPENDIX D | SIGHT DISTANCE EXHIBIT       |

## I. Introduction

### Project Overview

This transportation memorandum is provided as a planning document and addresses the capacity, geometric, and control requirements associated with the development entitled State Highway 83 & Needles Subdivision. This analysis was prepared in accordance with Appendix B of the County's Engineering Criteria Manual<sup>1</sup>.

This proposed residential development is located near the northeast corner of State Highway 83 and Hodgen Road in El Paso County, Colorado.

### Study Area

The study area to be examined in this analysis encompasses the area bounded by State Highway 83 east to Timber Meadow Drive, and from Hodgen Road north to Walden Way.

Figure 1 illustrates location of the site and study intersections.

### Site Description

Land for the development is currently by a single-family detached home and is surrounded by residential land uses.

The proposed development is understood to entail the subdivision of approximately 40 acres of land into 14 single-family residential lots.

Proposed access to the development is provided via one full-movement access onto Walden Way by way of Needles Drive. The existing access drive that currently serves the single-family detached home will be used as an emergency-only access.

For purposes of this study, it is anticipated that development construction would be completed by end of Year 2028.

General site and access locations are shown on Figure 1.

A conceptual site plan is shown in Figure 2. This plan is provided for illustrative purposes only.

Please include a discussion on the length of the proposed roadway and whether a deviation request would be required with subsequent land use applications.

Discussion included.

<sup>1</sup> El Paso County Engineering Criteria Manual, El Paso County, January 9, 2025.

A conceptual sight distance exhibit, illustrating approximate intersection sight distance triangles, is included for reference in Appendix D. This two-dimensional exhibit does not consider the potential for landscaping, utility, nor vertical curve obstructions, and was prepared in accordance to Section 4.3 of the Colorado Department of Transportation's (CDOT) State Highway Access Code (SHAC)<sup>2</sup> and Section 9.5.3.2 of the American Association of State Highway and Transportation Officials' (AASHTO) A Policy on Geometric Design of Highway and Streets (Green Book)<sup>3</sup> and is provided for illustrative purposes only.

Per ECM B.8

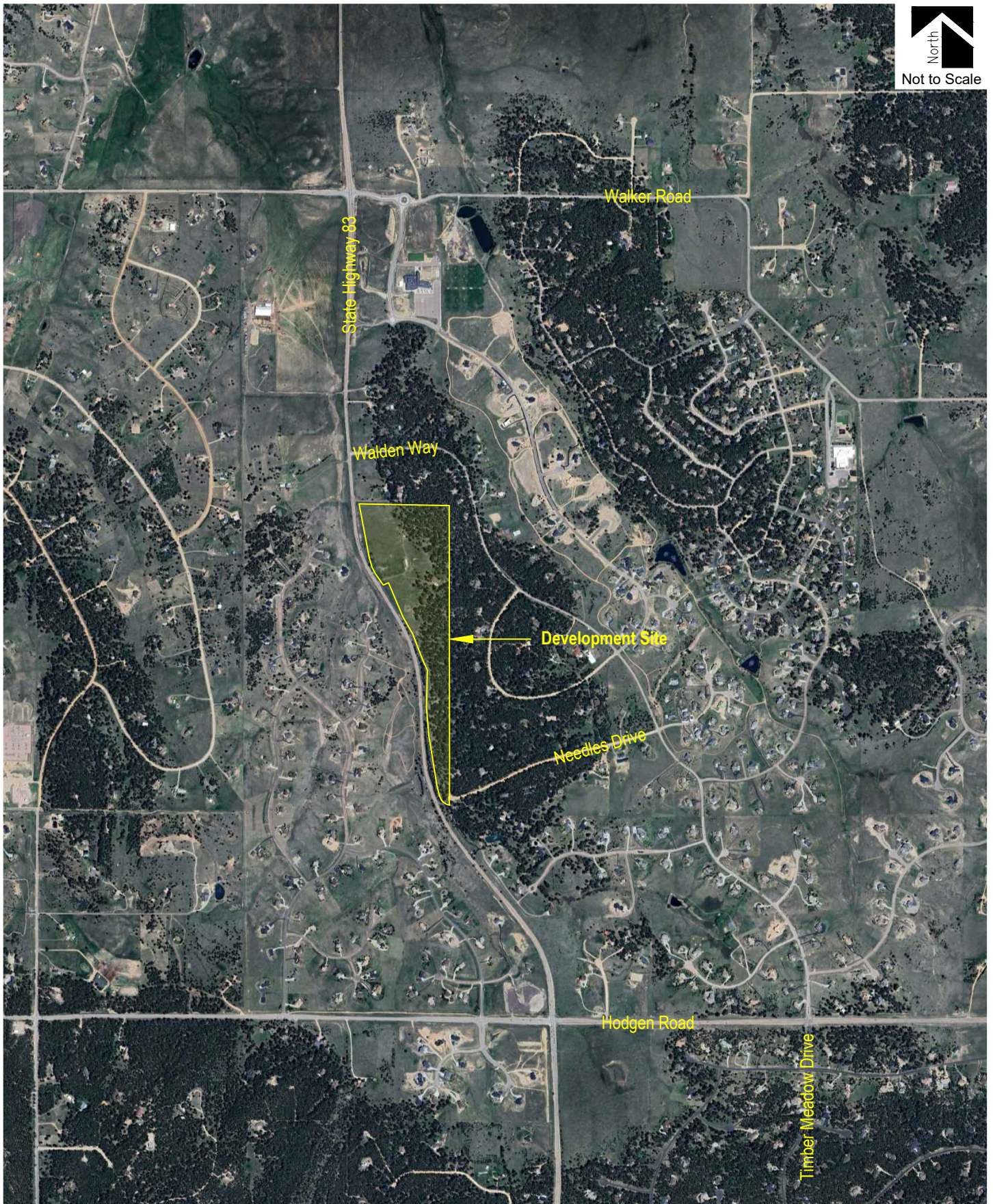
State what the sight distance is for every affected access and whether it can be met. If it cannot be met, state the required modifications so that it can be met.

Discussion added.

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<sup>2</sup> State Highway Access Code, The Transportation Commission of Colorado, March 2002.

<sup>3</sup> A Policy on Geometric Design of Highways and Streets (7<sup>th</sup> Edition), American Association of State Highway and Transportation Officials, 2018.





## Existing and Committed Surface Transportation Network

Within the study area, State Highway 83 and Hodgen Road are the primary roadways that will accommodate traffic to and from the proposed development. The secondary roadways include Timber Meadow Drive, Walden Way, and Needles Drive. A brief description of each roadway, based on the County's Major Transportation Corridors Plan (MTCP)<sup>4</sup> and ECM is provided below.

State Highway 83 is a north-south state roadway having two through lanes (one lane in each direction) with a combination of shared and exclusive turn lanes at the intersection within the study area. The Colorado Department of Transportation (CDOT) categorizes the adjacent segment of State Highway 83 as a Regional Highway (R-A) and provides a posted speed limit of 60 miles per hour (MPH).

Hodgen Road is an east-west, rural **minor arterial** roadway having (one lane in each direction) with a combination of shared and exclusive turn lanes within the study area. Hodgen Road provides a posted speed limit of 55 MPH.

Timber Meadow Drive is generally a north-south, rural local roadway having two through lanes (one in each direction) with shared turn lanes at the intersections within the study area. Timber Meadow Drive has a posted speed limit of 30 MPH. Timber Meadow Drive ends at Needles Drive and continues north as Walden Way.

Needles Drive is an east-west, gravel, rural local roadway having two through lanes (one in each direction) with shared turn lanes at the intersections within the study area. Needles Drive is assumed to provide a posted speed limit of 30 MPH based on its rural local roadway classification.

All study intersections operate under a stop-controlled condition. A stop-controlled intersection is defined as a roadway intersection where vehicle rights-of-way are controlled by one or more "STOP" signs.

Pursuant to discussions provided within the CO 83 Access Control Plan Final Report<sup>5</sup>, State Highway 83 is envisioned to be widened from two to four through lanes from Old North Gate Road to Hodgen Road. However, the CO 83 Access Control Plan Final Report describes how this widening improvement isn't anticipated until Year 2045, and therefore was not considered within this analysis.

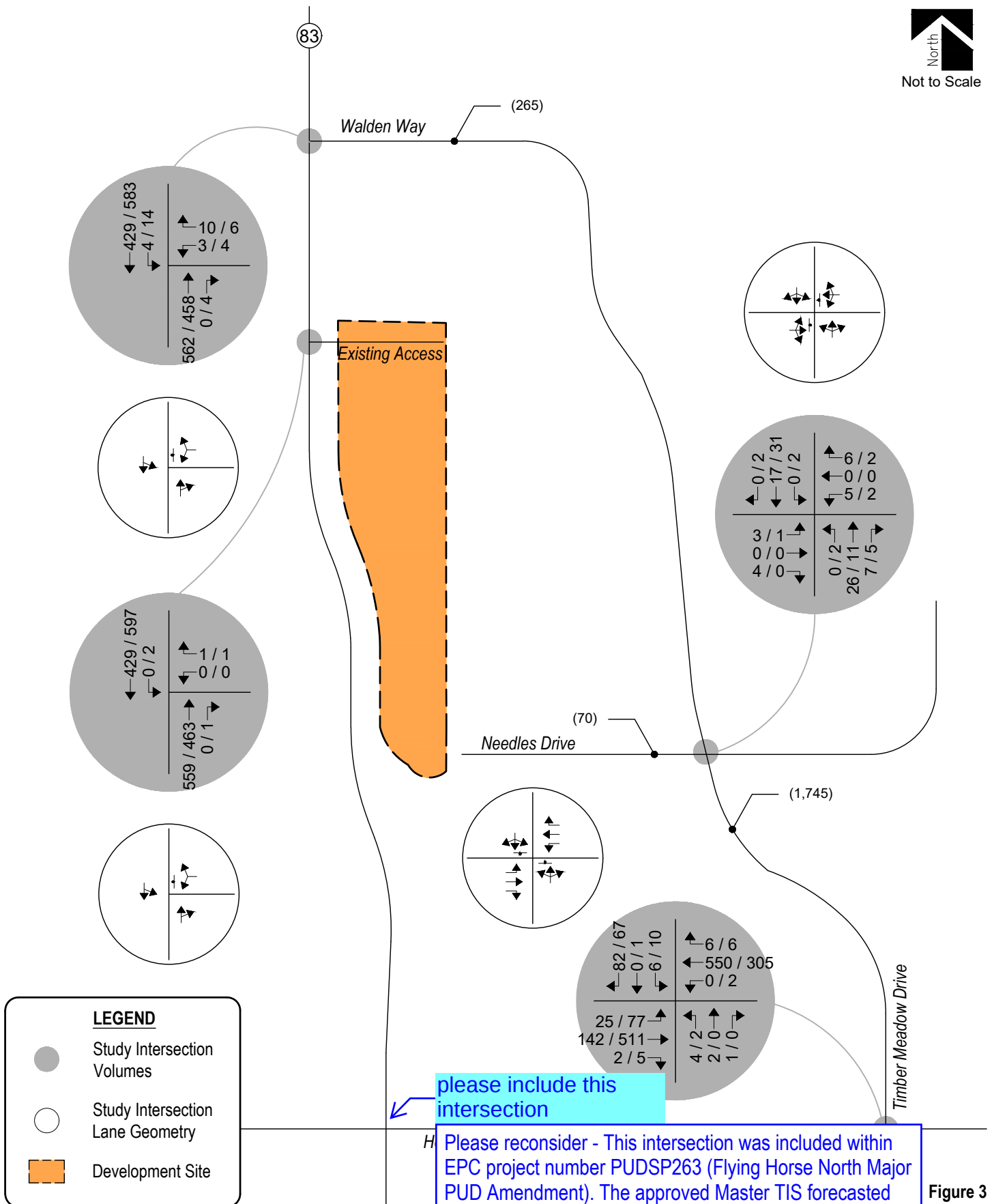
<sup>4</sup> El Paso County Major Transportation Corridors Plan (MTCP), Felsburg Holt & Ullevig, July 2024.

<sup>5</sup> CO 83 Access Control Plan, Atkins, October 2021.

## **II. Existing Traffic Conditions**

Morning (AM) and afternoon (PM) peak hour traffic counts were collected at the intersections of State Highway 83 with Walden Way and Existing Access, as well as the intersections of Timber Meadow Drive with Hodgen Road and Needles Drive. Average daily traffic (ADT) volumes were collected over a 24-hour period on Walden Way, Needles Drive, and Timber Meadow Drive. Counts were collected on Tuesday, April 28, 2026, with AM peak hour counts being collected during the period of 7:00 a.m. to 9:00 a.m. and PM peak hour counts being collected during the period of 4:00 p.m. to 6:00 p.m.

Existing volumes and intersection geometry are shown in Figure 3. Traffic count data is included for reference in Appendix A.



**Figure 3**  
TRAFFIC  
Geometry  
Traffic Hour  
Daily Traffic  
June 2026  
Page 7

### Peak Hour Intersection Levels of Service – Existing Traffic

The Unsignalized Intersection Analysis technique, as published in the Highway Capacity Manual (HCM), 7<sup>th</sup> Edition, by the Transportation Research Board and as incorporated into the SYNCHRO computer program, was used to analyze the study intersections for existing and future traffic conditions. This nationally accepted technique allows for the determination of intersection level of service (LOS) based on the congestion and delay of each traffic movement

Pursuant to Section B.4.1.A of the County's ECM, the design objective for each scenario of this study shall be level of service "D". Level of service is a method of measurement used by transportation professionals to quantify a driver's perception of travel conditions that include travel time, number of stops, and total amount of stopped delay experienced on a roadway network. The HCM categorizes level of service into a range from "A" which indicates little, if any, vehicle delay, to "F" which indicates a level of operation considered unacceptable to most drivers. These levels of service grades with brief descriptions of the operating condition, for unsignalized and signalized intersections, are included for reference in Appendix B and have been used throughout this study.

The level of service analyses results for existing conditions are summarized in Table 1.

Intersection capacity worksheets developed for this study are provided in Appendix C.

**Table 1 – Intersection Capacity Analysis Summary – Existing Traffic**

| INTERSECTION<br>LANE GROUPS         | LEVEL OF SERVICE |              |
|-------------------------------------|------------------|--------------|
|                                     | AM PEAK HOUR     | PM PEAK HOUR |
| Hodgen Road / Timber Meadow Drive   |                  |              |
| Eastbound Left                      | A                | A            |
| Westbound Left                      | A                | A            |
| Northbound Left, Through, and Right | C                | D            |
| Southbound Left, Through, and Right | B                | B            |
| Timber Meadow Drive / Needles Drive |                  |              |
| Eastbound Left, Through and Right   | A                | A            |
| Westbound Left, Through and Right   | A                | A            |
| Northbound Left, Through and Right  | A                | A            |
| Southbound Left, Through, and Right | A                | A            |
| State Highway 83 / Existing Access  |                  |              |
| Westbound Left and Right            | B                | B            |
| Southbound Left and Through         | A                | A            |
| State Highway 83 / Walden Way       |                  |              |
| Westbound Left and Right            | B                | C            |
| Southbound Left and Through         | A                | A            |

Key: Stop-Controlled Intersection: Level of Service

### **Existing Traffic Analysis Results**

Under existing conditions, the unsignalized intersection of Hodgen Road with Timber Meadow Drive has turn movement operations at LOS C or better during the morning peak traffic hour and LOS D or better during the afternoon peak traffic hour.

The unsignalized intersection of Timber Meadow Drive with Needles Drive has turn movement operations at LOS A during the morning and afternoon peak traffic hours.

The stop-controlled intersection of State Highway 83 with Existing Access experiences turn movement operations at LOS B or better during the morning and afternoon peak traffic hours.

The unsignalized intersection of State Highway 83 and Walden Way has turn movement operations at LOS B or better during the morning peak traffic hour and LOS C or better during the afternoon peak traffic hour.

### **III. Future Traffic Conditions Without Proposed Development**

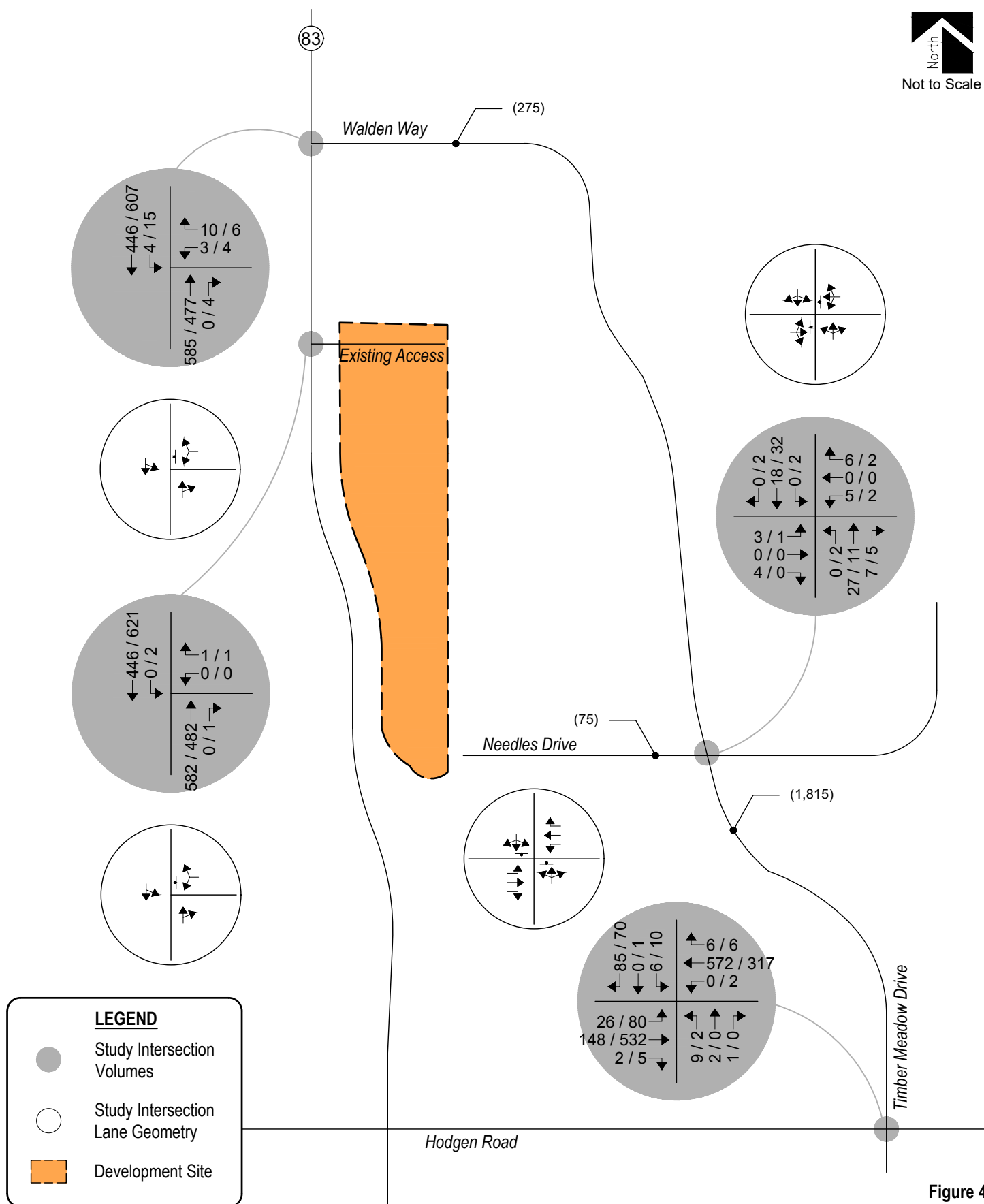
Background traffic is the traffic projected to be on area roadways without consideration of the proposed development. Background traffic includes traffic generated by development of vacant parcels in the area.

To account for projected increases in background traffic for Year 2028, a compounded annual growth rate was determined using historical traffic data for the surrounding area provided by CDOT's Online Transportation Information System (OTIS) along State Highway 83, which shows a 20-year growth rate between one and two percent. Therefore, in order to provide for a conservative analysis, a growth rate of approximately two percent was applied to existing traffic volumes.

It is important to note that ingress and egress traffic volumes along Needles Drive at Timber Meadow Drive are not subject to annual growth patterns since these access drives do not provide connection to other roadways, therefore do not serve regional traffic.

Pursuant to the area roadway improvements discussed in Section I, Year 2028 background traffic conditions assume no roadway improvements to accommodate regional transportation demands.

Projected background traffic volumes and intersection geometry for Year 2028 are shown in Figure 4.



**Figure 4**  
**BACKGROUND TRAFFIC - YEAR 2028**  
Volumes & Intersection Geometry  
AM / PM Peak Traffic Hour  
(ADT) : Average Daily Traffic



### Peak Hour Intersection Levels of Service – Background Traffic

As with existing traffic conditions, the operations of study intersections were analyzed under background conditions, without the proposed development, using the SYNCHRO computer program.

Background traffic level of service analysis results for Year 2028 are listed in Table 2.

Definitions of levels of service are given in Appendix B. Intersection capacity worksheets are provided in Appendix C.

**Table 2 – Intersection Capacity Analysis Summary – Background Traffic – Year 2028**

| INTERSECTION<br>LANE GROUPS         | LEVEL OF SERVICE |              |
|-------------------------------------|------------------|--------------|
|                                     | AM PEAK HOUR     | PM PEAK HOUR |
| Hodgen Road / Timber Meadow Drive   |                  |              |
| Eastbound Left                      | A                | A            |
| Westbound Left                      | A                | A            |
| Northbound Left, Through, and Right | C                | D            |
| Southbound Left, Through, and Right | B                | B            |
| Timber Meadow Drive / Needles Drive |                  |              |
| Eastbound Left, Through and Right   | A                | A            |
| Westbound Left, Through and Right   | A                | A            |
| Northbound Left, Through and Right  | A                | A            |
| Southbound Left, Through, and Right | A                | A            |
| State Highway 83 / Existing Access  |                  |              |
| Westbound Left and Right            | B                | B            |
| Southbound Left and Through         | A                | A            |
| State Highway 83 / Walden Way       |                  |              |
| Westbound Left and Right            | B                | C            |
| Southbound Left and Through         | A                | A            |

Key: Stop-Controlled Intersection: Level of Service

### Background Traffic Analysis Results – Year 2028

Year 2028 background traffic analysis indicates that the unsignalized intersection of Hodgen Road with Timber Meadow Drive operates at or better than LOS C during the morning peak traffic hour and LOS D or better during the afternoon peak traffic hour.

The stop-controlled intersection of Timber Meadow Drive with Needles Drive projects turn movement operations at LOS A during the morning and afternoon peak traffic hours.

The stop-controlled intersection of State Highway 83 and Existing Access anticipates turn movement operations at LOS B or better during the morning and afternoon peak traffic hours.

The stop-controlled intersection of State Highway 83 with Walden Way expects turn movement operations at LOS B or better during the morning peak traffic hour and LOS C or better during the afternoon peak traffic hour.

These intersection operations are similar to existing conditions.

## IV. Proposed Project Traffic

### Trip Generation

Standard traffic generation characteristics compiled by the Institute of Transportation Engineers (ITE) in their report entitled Trip Generation Manual, 12<sup>th</sup> Edition, were applied to the proposed land use in order to estimate average daily traffic (ADT), AM Peak Hour, and PM Peak Hour vehicle trips. A vehicle trip is defined as a one-way vehicle movement from a point of origin to a point of destination.

The ITE land use code 210 (Single-Family Detached Housing) was used for estimating trip generation because of its best fit to the proposed land use description.

Trip generation rates used in this study are presented in Table 3.

**Table 3 – Trip Generation Rates**

| ITE<br>CODELAND USEUNIT |                                |    | TRIP GENERATION RATES |              |      |       |              |      |       |
|-------------------------|--------------------------------|----|-----------------------|--------------|------|-------|--------------|------|-------|
|                         |                                |    | 24<br>HOUR            | AM PEAK HOUR |      |       | PM PEAK HOUR |      |       |
|                         |                                |    |                       | ENTER        | EXIT | TOTAL | ENTER        | EXIT | TOTAL |
| 210                     | Single-Family Detached Housing | DU | 9.09                  | 0.19         | 0.51 | 0.70  | 0.58         | 0.35 | 0.93  |

Key: DU = Dwelling Units.

Note: All data and calculations above are subject to being rounded to nearest value.

Table 5 illustrates projected ADT, AM Peak Hour, and PM Peak Hour traffic volumes likely generated by the proposed development upon build-out.

**Table 4 – Trip Generation Summary**

| ITE<br><br>CODELAND USESIZE |                                |       | TOTAL TRIPS GENERATED |              |      |       |              |      |       |
|-----------------------------|--------------------------------|-------|-----------------------|--------------|------|-------|--------------|------|-------|
|                             |                                |       | 24<br>HOUR            | AM PEAK HOUR |      |       | PM PEAK HOUR |      |       |
|                             |                                |       |                       | ENTER        | EXIT | TOTAL | ENTER        | EXIT | TOTAL |
| 210                         | Single-Family Detached Housing | 14 DU | 127                   | 3            | 7    | 10    | 8            | 5    | 13    |
| Total:                      |                                |       | 127                   | 3            | 7    | 10    | 8            | 5    | 13    |

Key: DU = Dwelling Units.

Note: All data and calculations above are subject to being rounded to nearest value.

Upon build-out, Table 5 illustrates that the proposed development has the potential to generate approximately 127 daily vehicle trips with 10 of those occurring during the morning peak hour and 13 during the afternoon peak hour.

### **Adjustments to Trip Generation Rates**

A development of this type is not likely to attract trips from within area land uses nor pass-by or diverted link trips from the adjacent roadway system, therefore no trip reduction was taken in this analysis.

### **Trip Distribution**

The overall directional distribution of site-generated traffic was determined based on the location of development site within the County, proposed and existing area land uses, allowed turning movements, available roadway network, and in reference to distribution patterns applied within the Flying Horse North Major PUD Amendment Master Traffic Impact Study<sup>6</sup>.

Overall trip distribution patterns for the development are shown on Figure 5.

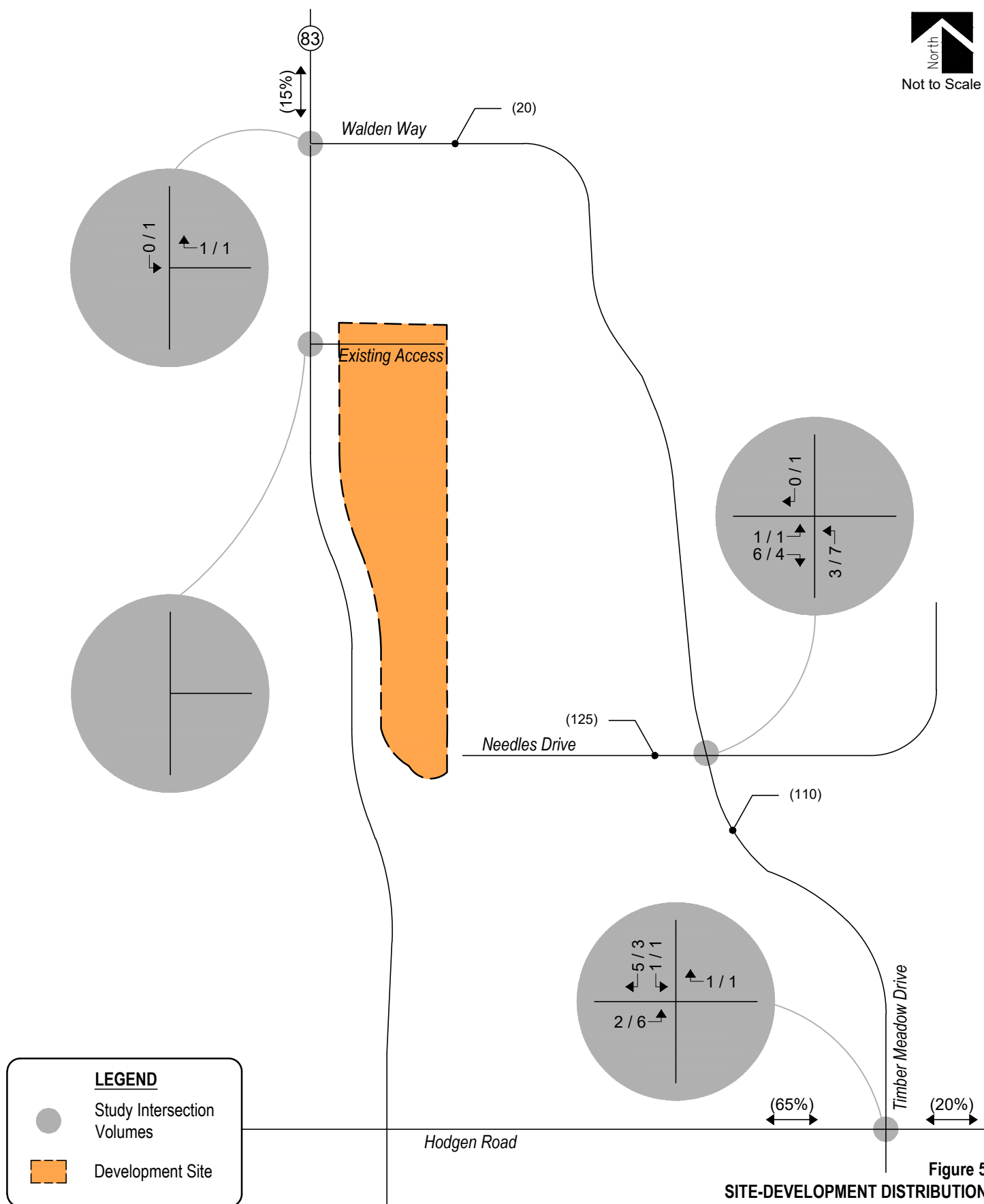
### **Trip Assignment**

Traffic assignment is how generated and distributed vehicle trips are expected to be loaded onto the available roadway network.

Applying trip distribution patterns to site-generated traffic provides the overall site-generated trip assignments shown on Figure 5.

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<sup>6</sup> Flying Horse North Major PUD Amendment: Master Traffic Impact Study, SM ROCHA, LLC, January 2026.



**Figure 5**  
**SITE-DEVELOPMENT DISTRIBUTION**

(%) : Overall  
**SITE-GENERATED TRIPS**  
AM / PM Peak Hour  
(ADT) : Average Daily Traffic



## **V. Future Traffic Conditions With Proposed Development**

Total traffic is the traffic projected to be on area roadways with consideration of the proposed development. Total traffic includes background traffic projections for Years 2028 with consideration of site-generated traffic. For analysis purposes, it was assumed that development construction would be completed by end of Year 2028.

Pursuant to area roadway improvement discussions provided in Section III, Year 2028 total traffic conditions assume no roadway improvements to accommodate regional transportation demands. Roadway improvements associated with site development are expected to be limited to site access and frontage as required by the governing agency.

### **Total Traffic Auxiliary Lane Analysis**

Auxiliary lanes for site development access drives were evaluated and are to be based on County's ECM.

Considering development build-out, an evaluation of auxiliary lane requirements, pursuant to Section 2.3.7.D of the County's ECM, reveals that a northbound left turn deceleration lane at Needles Drive along Timber Meadow Drive is not required since the development's projected peak hour left turn ingress volume does exceed the County's threshold of 25 vehicles per hour.

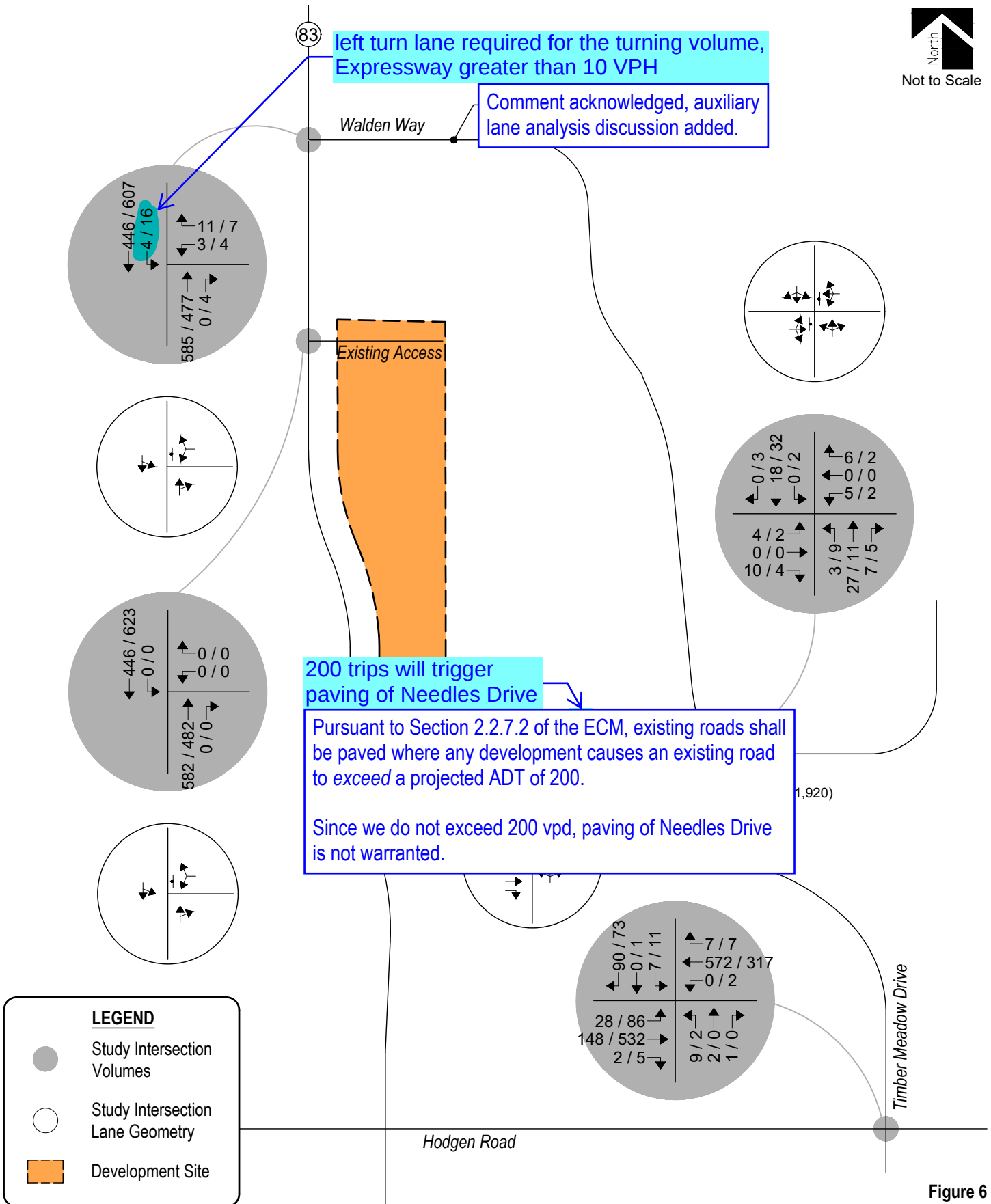
Similarly, a southbound right turn deceleration lane is not required since the development's projected peak hour right turn ingress volume does not exceed the County's threshold of 50 vehicles per hour.

Projected Year 2028 total traffic volumes and intersection geometry are shown in Figure 6.

### **Multi-Modal Assessment**

In accordance with Section B.2.4.D of the County's ECM, an assessment to adequacy of pedestrian and bicycle facilities within the study area was considered.

Due to the rural characteristics of the development site and surrounding area, this area currently does not accommodate pedestrians nor bicyclists with detached sidewalks, trails, nor bike lanes. It is important to note that, pursuant to existing roadway characteristics provided in Section I, typical roadway cross-sections defined within the County's ECM, and per planned Year 2045 roadway functional classifications identified within the County's MTCP, Hodgen Road is not expected to provide sidewalks nor bicycle lanes adjacent the development area due to the County's plans to maintain the rural characteristic of the surrounding area roadways.



**Figure 6**  
**TOTAL TRAFFIC - YEAR 2028**  
Volumes & Intersection Geometry  
AM / PM Peak Traffic Hour  
(ADT) : Average Daily Traffic



### Peak Hour Intersection Levels of Service – Total Traffic

As with background traffic, the operations of the study intersections were analyzed under projected total traffic conditions using the SYNCHRO computer program. The analyses and procedures were performed in accordance with the latest HCM and are based upon the worst-case conditions that occur during a typical weekday upon build-out of site development and analyzed land uses. Therefore, study intersections are likely to operate with traffic conditions better than those described within this study, which represent the peak hours of weekday operations only.

Total traffic level of service analysis results for Years 2028 are summarized in Table 5.

Definitions of levels of service are given in Appendix B. Intersection capacity worksheets are provided in Appendix C.

**Table 5 – Intersection Capacity Analysis Summary – Total Traffic – Year 2028**

| INTERSECTION<br>LANE GROUPS         | LEVEL OF SERVICE |              |
|-------------------------------------|------------------|--------------|
|                                     | AM PEAK HOUR     | PM PEAK HOUR |
| Hodgen Road / Timber Meadow Drive   |                  |              |
| Eastbound Left                      | A                | A            |
| Westbound Left                      | A                | A            |
| Northbound Left, Through, and Right | C                | D            |
| Southbound Left, Through, and Right | C                | B            |
| Timber Meadow Drive / Needles Drive |                  |              |
| Eastbound Left, Through and Right   | A                | A            |
| Westbound Left, Through and Right   | A                | A            |
| Northbound Left, Through and Right  | A                | A            |
| Southbound Left, Through, and Right | A                | A            |
| State Highway 83 / Walden Way       |                  |              |
| Westbound Left and Right            | B                | C            |
| Southbound Left and Through         | A                | A            |

Key: Stop-Controlled Intersection: Level of Service

**Total Traffic Analysis Results Upon Development Build-Out**

Table 7 illustrates how, by Year 2028 and upon development build-out, the stop-controlled intersection of Hodgen Road with Timber Meadow Drive continues to project turn movement operations at LOS C or better during the morning peak traffic hour and LOS D or better during the afternoon peak traffic hour.

The stop-controlled intersection of Timber Meadow Drive with Needles Drive continues to anticipate turn movement operations at LOS A during the morning and afternoon peak traffic hours.

The stop-controlled intersection of State Highway 83 with Existing Access continues to expect turn movement operations at LOS B during the morning and afternoon peak traffic hours.

The stop-controlled intersection of State Highway 83 with Walden Way continues to project turn movement operations at LOS B or better during the morning peak traffic hour and LOS C or better during the afternoon peak traffic hour.

These intersection operations are similar to background conditions.

## VI. Project Impacts

It is emphasized that the analyses and procedures described in this study were performed in accordance with the latest HCM and are based upon the worst-case conditions that occur during a typical weekday upon build-out of site development and analyzed land uses. Therefore, study intersections are likely to operate with traffic conditions better than those described within this study, which represent the peak hours of weekday operations only.

### Queue Length Analysis

Queue lengths for the study intersections were analyzed using Year 2028 background and total traffic conditions. The analysis yields estimate of 95<sup>th</sup> percentile queue lengths, which have only a five percent probability of being exceeded during the analysis time period. An average vehicle length of 25 feet was assumed. Queue lengths were modeled and are included with the Synchro worksheets in Appendix C.

In general, auxiliary lane lengths are recommended to accommodate CDOT's minimum turn lane lengths or accommodate long-term 95<sup>th</sup> percentile vehicle queues, whichever is greater.

Table 6 summarizes the 95<sup>th</sup> percentile queue results in comparison to the projected storage requirements for turn movements within study area for Year 2028.

**Table 6 – Turn Lane Queues and Storage Requirements – Year 2028**

| Intersection                        | Turn Movement |       | Existing Turn Lane Length (feet) | Background 2028     |                     | Total 2028          |                     | Recommended Turn Lane Length (feet) |
|-------------------------------------|---------------|-------|----------------------------------|---------------------|---------------------|---------------------|---------------------|-------------------------------------|
|                                     |               |       |                                  | AM Peak Hour (feet) | PM Peak Hour (feet) | AM Peak Hour (feet) | PM Peak Hour (feet) |                                     |
| Stop-Controlled Intersections       |               |       |                                  |                     |                     |                     |                     |                                     |
| Hodgen Road / Timber Meadow Drive   | EB            | L     | 460'                             | 3'                  | 5'                  | 3'                  | 8'                  | 460'                                |
|                                     |               | T     | -                                | 0'                  | 0'                  | 0'                  | 0'                  | -                                   |
|                                     |               | R     | 420'                             | 0'                  | 0'                  | 0'                  | 0'                  | 420'                                |
|                                     | WB            | L     | 525'                             | 0'                  | 0'                  | 0'                  | 0'                  | 525'                                |
|                                     |               | T     | -                                | 0'                  | 0'                  | 0'                  | 0'                  | -                                   |
|                                     |               | R     | 525'                             | 0'                  | 0'                  | 0'                  | 0'                  | 525'                                |
|                                     | NB            | L,T,R | -                                | 5'                  | 0'                  | 5'                  | 0'                  | -                                   |
|                                     | SB            | L,T,R | -                                | 20'                 | 15'                 | 23'                 | 18'                 | -                                   |
| Timber Meadow Drive / Needles Drive | EB            | L,T,R | -                                | 0'                  | 0'                  | 0'                  | 0'                  | -                                   |
|                                     | WB            | L,T,R | -                                | 0'                  | 0'                  | 0'                  | 0'                  | -                                   |
|                                     | NB            | L,T,R | -                                | 0'                  | 0'                  | 0'                  | 0'                  | -                                   |
|                                     | SB            | L,T,R | -                                | 0'                  | 0'                  | 0'                  | 0'                  | -                                   |
| State Highway 83 / Walden Way       | WB            | L,R   | -                                | 3'                  | 3'                  | 3'                  | 3'                  | -                                   |
|                                     | NB            | T,R   | -                                | 0'                  | 0'                  | 0'                  | 0'                  | -                                   |
|                                     | SB            | L,T   | -                                | 0'                  | 0'                  | 0'                  | 3'                  | -                                   |

Note: Turn Lane Length does not include taper length.

As Table 6 shows, all turn lane lengths at stop-controlled intersections have sufficient storage to accommodate future traffic volumes.

## Development Impacts

Analysis of future traffic conditions indicates that the addition of site-generated traffic is expected to create no negative impact to traffic operations for the existing and surrounding roadway system upon roadway and intersection control improvements assumed within this analysis. With all conservative assumptions defined in this analysis, the study intersections are projected to operate at future levels of service comparable to Year 2028 background traffic conditions.

Pursuant to Section 2.3.2, Table 2-5 of the County's ECM, rural, local, gravel roadways have a design ADT of 200 trips/day. Therefore, in review of long-term total traffic volumes along Needles Drive, no roadway improvements are necessary nor recommended as projected ADT volumes are within the County's 200 trips/day threshold.

## Recommended Improvements

please state the  
number of daily trips,  
Fig 6 shows 200 trips

Discussion added.

Roadway and intersection improvement recommendations were assessed pursuant to roadway descriptions in Section I, projected peak hour traffic volumes, level of service results, projected 95<sup>th</sup> percentile queue lengths, and per requirements defined within the County's ECM.

When considering Year 2028 total traffic conditions, no public improvements to the surrounding roadway network were identified to be needed, therefore none are being recommended with this development.

## **VII. Conclusion**

This traffic impact study addressed the capacity, geometric, and control requirements associated with the development entitled State Highway 83 & Needles Subdivision. This proposed residential development consists of 14 single-family detached homes. This proposed residential development is located near the northeast corner of State Highway 83 and Hodgen Road in El Paso County, Colorado.

The study area examined in this analysis encompassed the area bounded by State Highway 83 east to Timber Meadow Drive, and from Hodgen Road north to Walden Way.

Analysis was conducted for critical AM Peak Hour and PM Peak Hour traffic operations for existing traffic conditions, Year 2028 background traffic conditions, and Year 2028 total traffic conditions.

Analysis of existing traffic conditions indicates that all stop-controlled intersections operate with turn movements at or better than LOS D or better during their respective peak traffic periods.

Under Year 2028 background traffic conditions, operational analysis shows that all stop-controlled intersections anticipate turn movement operations at or better than LOS D during their respective peak traffic periods.

Analysis of future traffic conditions indicates that the addition of site-generated traffic is expected to create no negative impact to traffic operations for the existing and surrounding roadway system. With all conservative assumptions defined in this analysis, the study intersections are projected to operate at future levels of service comparable to Year 2028 background traffic conditions. Existing site accesses have operations at LOS B or better during peak traffic periods and upon build-out.

The submittal of a new CDOT access permit is anticipated with the development of this site and will be coordinated through CDOT staff.

## **APPENDIX A**

### **Traffic Count Data**



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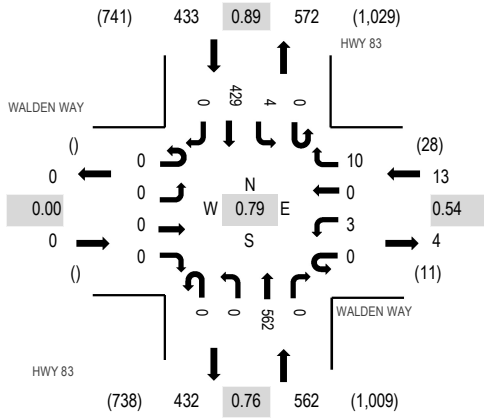
Location: 1 HWY 83 & WALDEN WAY AM

Date: Tuesday, April 28, 2026

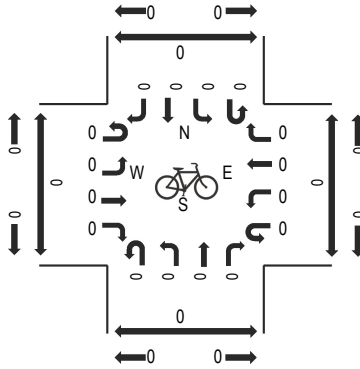
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

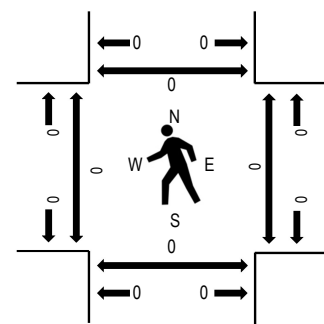
### Peak Hour - Motorized Vehicles



### Peak Hour - Bicycles



### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

| Interval<br>Start Time | WALDEN WAY<br>Eastbound |      |      |       | WALDEN WAY<br>Westbound |      |      |       | HWY 83<br>Northbound |      |       |       | HWY 83<br>Southbound |      |      |       | Total | Rolling<br>Hour | Pedestrian Crossings |      |       |       |
|------------------------|-------------------------|------|------|-------|-------------------------|------|------|-------|----------------------|------|-------|-------|----------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
|                        | U-Turn                  | Left | Thru | Right | U-Turn                  | Left | Thru | Right | U-Turn               | Left | Thru  | Right | U-Turn               | Left | Thru | Right |       |                 | West                 | East | South | North |
| 7:00 AM                | 0                       | 0    | 0    | 0     | 0                       | 2    | 0    | 0     | 0                    | 0    | 113   | 0     | 0                    | 0    | 64   | 0     | 179   | 985             | 0                    | 0    | 0     | 0     |
| 7:15 AM                | 0                       | 0    | 0    | 0     | 0                       | 2    | 0    | 5     | 0                    | 0    | 128   | 0     | 0                    | 0    | 88   | 0     | 223   | 1,008           | 0                    | 0    | 0     | 0     |
| 7:30 AM                | 0                       | 0    | 0    | 0     | 0                       | 0    | 0    | 3     | 0                    | 0    | 192   | 0     | 0                    | 1    | 121  | 0     | 317   | 962             | 0                    | 0    | 0     | 0     |
| 7:45 AM                | 0                       | 0    | 0    | 0     | 0                       | 1    | 0    | 2     | 0                    | 0    | 147   | 0     | 0                    | 2    | 114  | 0     | 266   | 850             | 0                    | 0    | 0     | 0     |
| 8:00 AM                | 0                       | 0    | 0    | 0     | 0                       | 0    | 0    | 0     | 0                    | 0    | 95    | 0     | 0                    | 1    | 106  | 0     | 202   | 793             | 0                    | 0    | 0     | 0     |
| 8:15 AM                | 0                       | 0    | 0    | 0     | 0                       | 1    | 0    | 3     | 0                    | 0    | 102   | 1     | 0                    | 0    | 70   | 0     | 177   |                 | 0                    | 0    | 0     | 0     |
| 8:30 AM                | 0                       | 0    | 0    | 0     | 0                       | 0    | 0    | 5     | 0                    | 0    | 119   | 0     | 0                    | 1    | 80   | 0     | 205   |                 | 0                    | 0    | 0     | 0     |
| 8:45 AM                | 0                       | 0    | 0    | 0     | 0                       | 1    | 0    | 3     | 0                    | 0    | 112   | 0     | 0                    | 5    | 88   | 0     | 209   |                 | 0                    | 0    | 0     | 0     |
| Count Total            | 0                       | 0    | 0    | 0     | 0                       | 7    | 0    | 21    | 0                    | 0    | 1,008 | 1     | 0                    | 10   | 731  | 0     | 1,778 |                 | 0                    | 0    | 0     | 0     |
| Peak Hour              | 0                       | 0    | 0    | 0     | 0                       | 3    | 0    | 10    | 0                    | 0    | 562   | 0     | 0                    | 4    | 429  | 0     | 1,008 |                 | 0                    | 0    | 0     | 0     |



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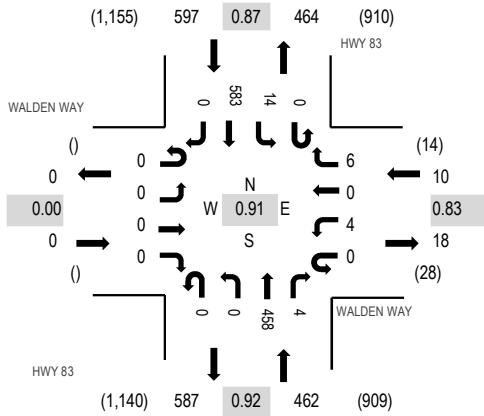
Location: 1 HWY 83 & WALDEN WAY PM

Date: Tuesday, April 28, 2026

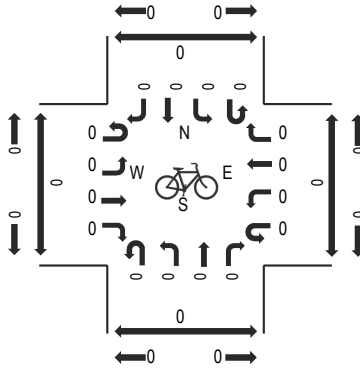
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

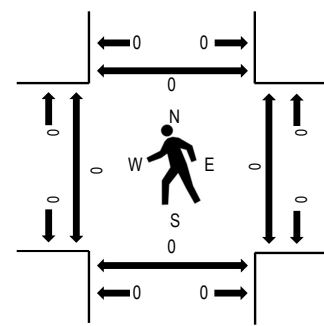
### Peak Hour - Motorized Vehicles



### Peak Hour - Bicycles



### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

| Interval<br>Start Time | WALDEN WAY<br>Eastbound |      |      |       | WALDEN WAY<br>Westbound |      |      |       | HWY 83<br>Northbound |      |      |       | HWY 83<br>Southbound |      |       |       | Total | Rolling<br>Hour | Pedestrian Crossings |      |       |       |
|------------------------|-------------------------|------|------|-------|-------------------------|------|------|-------|----------------------|------|------|-------|----------------------|------|-------|-------|-------|-----------------|----------------------|------|-------|-------|
|                        | U-Turn                  | Left | Thru | Right | U-Turn                  | Left | Thru | Right | U-Turn               | Left | Thru | Right | U-Turn               | Left | Thru  | Right |       |                 | West                 | East | South | North |
| 4:00 PM                | 0                       | 0    | 0    | 0     | 0                       | 1    | 0    | 2     | 0                    | 0    | 117  | 2     | 0                    | 6    | 165   | 0     | 293   | 1,069           | 0                    | 0    | 0     | 0     |
| 4:15 PM                | 0                       | 0    | 0    | 0     | 0                       | 2    | 0    | 1     | 0                    | 0    | 125  | 1     | 0                    | 3    | 145   | 0     | 277   | 1,041           | 0                    | 0    | 0     | 0     |
| 4:30 PM                | 0                       | 0    | 0    | 0     | 0                       | 1    | 0    | 1     | 0                    | 0    | 103  | 1     | 0                    | 3    | 133   | 0     | 242   | 1,031           | 0                    | 0    | 0     | 0     |
| 4:45 PM                | 0                       | 0    | 0    | 0     | 0                       | 0    | 0    | 2     | 0                    | 0    | 113  | 0     | 0                    | 2    | 140   | 0     | 257   | 1,036           | 0                    | 0    | 0     | 0     |
| 5:00 PM                | 0                       | 0    | 0    | 0     | 0                       | 0    | 0    | 0     | 0                    | 0    | 112  | 1     | 0                    | 1    | 151   | 0     | 265   | 1,009           | 0                    | 0    | 0     | 0     |
| 5:15 PM                | 0                       | 0    | 0    | 0     | 0                       | 1    | 0    | 1     | 0                    | 0    | 107  | 1     | 0                    | 0    | 157   | 0     | 267   |                 | 0                    | 0    | 0     | 0     |
| 5:30 PM                | 0                       | 0    | 0    | 0     | 0                       | 0    | 0    | 0     | 0                    | 0    | 110  | 2     | 0                    | 2    | 133   | 0     | 247   |                 | 0                    | 0    | 0     | 0     |
| 5:45 PM                | 0                       | 0    | 0    | 0     | 0                       | 0    | 0    | 2     | 0                    | 0    | 114  | 0     | 0                    | 3    | 111   | 0     | 230   |                 | 0                    | 0    | 0     | 0     |
| Count Total            | 0                       | 0    | 0    | 0     | 0                       | 5    | 0    | 9     | 0                    | 0    | 901  | 8     | 0                    | 20   | 1,135 | 0     | 2,078 |                 | 0                    | 0    | 0     | 0     |
| Peak Hour              | 0                       | 0    | 0    | 0     | 0                       | 4    | 0    | 6     | 0                    | 0    | 458  | 4     | 0                    | 14   | 583   | 0     | 1,069 |                 | 0                    | 0    | 0     | 0     |





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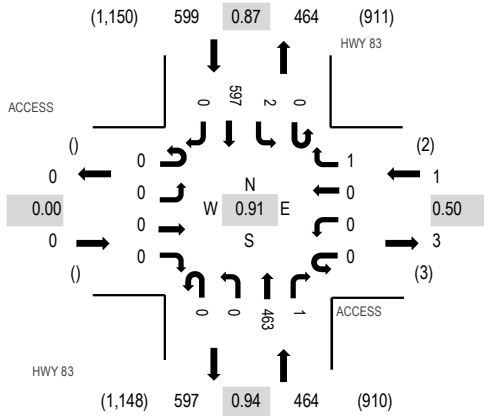
Location: 2 HWY 83 & ACCESS PM

Date: Tuesday, April 28, 2026

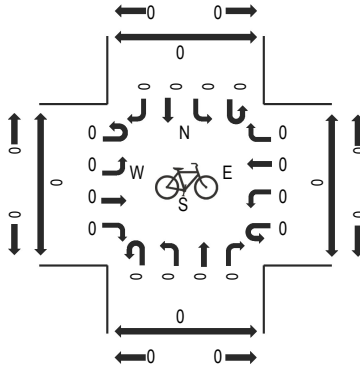
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

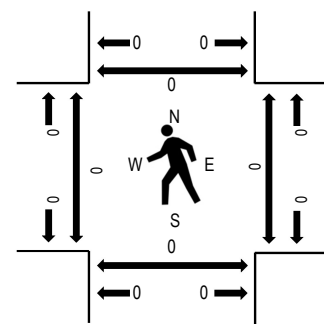
### Peak Hour - Motorized Vehicles



### Peak Hour - Bicycles



### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

| Interval<br>Start Time | ACCESS<br>Eastbound |      |      |       | ACCESS<br>Westbound |      |      |       | HWY 83<br>Northbound |      |      |       | HWY 83<br>Southbound |      |       |       | Total | Rolling<br>Hour | Pedestrian Crossings |      |       |       |
|------------------------|---------------------|------|------|-------|---------------------|------|------|-------|----------------------|------|------|-------|----------------------|------|-------|-------|-------|-----------------|----------------------|------|-------|-------|
|                        | U-Turn              | Left | Thru | Right | U-Turn              | Left | Thru | Right | U-Turn               | Left | Thru | Right | U-Turn               | Left | Thru  | Right |       |                 | West                 | East | South | North |
| 4:00 PM                | 0                   | 0    | 0    | 0     | 0                   | 0    | 0    | 0     | 0                    | 0    | 120  | 1     | 0                    | 0    | 172   | 0     | 293   | 1,064           | 0                    | 0    | 0     | 0     |
| 4:15 PM                | 0                   | 0    | 0    | 0     | 0                   | 0    | 0    | 0     | 0                    | 0    | 124  | 0     | 0                    | 0    | 145   | 0     | 269   | 1,040           | 0                    | 0    | 0     | 0     |
| 4:30 PM                | 0                   | 0    | 0    | 0     | 0                   | 0    | 0    | 0     | 0                    | 0    | 108  | 0     | 0                    | 1    | 136   | 0     | 245   | 1,032           | 0                    | 0    | 0     | 0     |
| 4:45 PM                | 0                   | 0    | 0    | 0     | 0                   | 0    | 0    | 1     | 0                    | 0    | 111  | 0     | 0                    | 1    | 144   | 0     | 257   | 1,036           | 0                    | 0    | 0     | 0     |
| 5:00 PM                | 0                   | 0    | 0    | 0     | 0                   | 0    | 0    | 1     | 0                    | 0    | 120  | 0     | 0                    | 0    | 148   | 0     | 269   | 998             | 0                    | 0    | 0     | 0     |
| 5:15 PM                | 0                   | 0    | 0    | 0     | 0                   | 0    | 0    | 0     | 0                    | 0    | 102  | 0     | 0                    | 0    | 159   | 0     | 261   |                 | 0                    | 0    | 0     | 0     |
| 5:30 PM                | 0                   | 0    | 0    | 0     | 0                   | 0    | 0    | 0     | 0                    | 0    | 113  | 0     | 0                    | 0    | 136   | 0     | 249   |                 | 0                    | 0    | 0     | 0     |
| 5:45 PM                | 0                   | 0    | 0    | 0     | 0                   | 0    | 0    | 0     | 0                    | 0    | 111  | 0     | 0                    | 0    | 108   | 0     | 219   |                 | 0                    | 0    | 0     | 0     |
| Count Total            | 0                   | 0    | 0    | 0     | 0                   | 0    | 0    | 2     | 0                    | 0    | 909  | 1     | 0                    | 2    | 1,148 | 0     | 2,062 |                 | 0                    | 0    | 0     | 0     |
| Peak Hour              | 0                   | 0    | 0    | 0     | 0                   | 0    | 0    | 1     | 0                    | 0    | 463  | 1     | 0                    | 2    | 597   | 0     | 1,064 |                 | 0                    | 0    | 0     | 0     |



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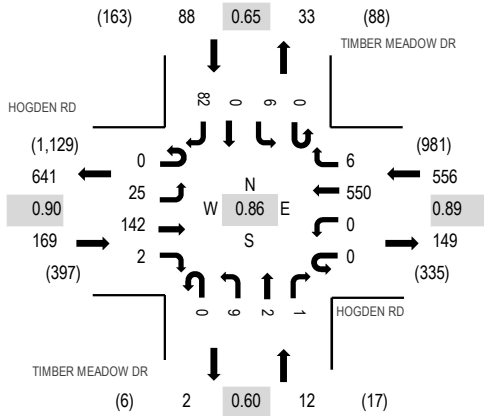
Location: 3 TIMBER MEADOW DR & HOGDEN RD AM

Date: Tuesday, April 28, 2026

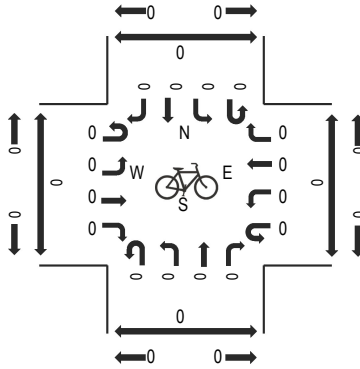
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

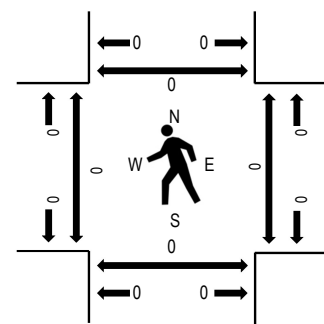
### Peak Hour - Motorized Vehicles



### Peak Hour - Bicycles



### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

| Interval<br>Start Time | HOGDEN RD<br>Eastbound |      |      |       | HOGDEN RD<br>Westbound |      |      |       | TIMBER MEADOW DR<br>Northbound |      |      |       | TIMBER MEADOW DR<br>Southbound |      |      |       | Total | Rolling<br>Hour | Pedestrian Crossings |      |       |       |
|------------------------|------------------------|------|------|-------|------------------------|------|------|-------|--------------------------------|------|------|-------|--------------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
|                        | U-Turn                 | Left | Thru | Right | U-Turn                 | Left | Thru | Right | U-Turn                         | Left | Thru | Right | U-Turn                         | Left | Thru | Right |       |                 | West                 | East | South | North |
| 7:00 AM                | 0                      | 9    | 30   | 1     | 0                      | 0    | 135  | 1     | 0                              | 1    | 0    | 0     | 0                              | 1    | 0    | 18    | 196   | 825             | 0                    | 0    | 0     | 0     |
| 7:15 AM                | 0                      | 3    | 33   | 0     | 0                      | 0    | 129  | 1     | 0                              | 4    | 0    | 1     | 0                              | 2    | 0    | 20    | 193   | 802             | 0                    | 0    | 0     | 0     |
| 7:30 AM                | 0                      | 6    | 38   | 1     | 0                      | 0    | 154  | 3     | 0                              | 3    | 1    | 0     | 0                              | 2    | 0    | 32    | 240   | 794             | 0                    | 0    | 0     | 0     |
| 7:45 AM                | 0                      | 7    | 41   | 0     | 0                      | 0    | 132  | 1     | 0                              | 1    | 1    | 0     | 0                              | 1    | 0    | 12    | 196   | 751             | 0                    | 0    | 0     | 0     |
| 8:00 AM                | 0                      | 17   | 41   | 2     | 0                      | 0    | 96   | 0     | 0                              | 1    | 0    | 0     | 0                              | 2    | 0    | 14    | 173   | 733             | 0                    | 0    | 0     | 0     |
| 8:15 AM                | 0                      | 13   | 51   | 0     | 0                      | 0    | 104  | 2     | 0                              | 0    | 1    | 0     | 0                              | 1    | 0    | 13    | 185   |                 | 0                    | 0    | 0     | 0     |
| 8:30 AM                | 0                      | 8    | 48   | 2     | 0                      | 0    | 112  | 3     | 0                              | 1    | 1    | 0     | 0                              | 3    | 0    | 19    | 197   |                 | 0                    | 0    | 0     | 0     |
| 8:45 AM                | 0                      | 7    | 39   | 0     | 0                      | 0    | 105  | 3     | 0                              | 1    | 0    | 0     | 0                              | 1    | 0    | 22    | 178   |                 | 0                    | 0    | 0     | 0     |
| Count Total            | 0                      | 70   | 321  | 6     | 0                      | 0    | 967  | 14    | 0                              | 12   | 4    | 1     | 0                              | 13   | 0    | 150   | 1,558 |                 | 0                    | 0    | 0     | 0     |
| Peak Hour              | 0                      | 25   | 142  | 2     | 0                      | 0    | 550  | 6     | 0                              | 9    | 2    | 1     | 0                              | 6    | 0    | 82    | 825   |                 | 0                    | 0    | 0     | 0     |



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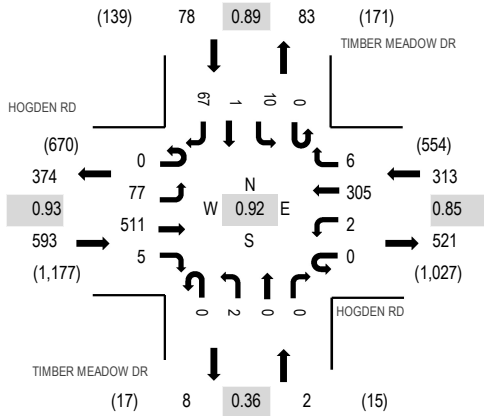
Location: 3 TIMBER MEADOW DR & HOGDEN RD PM

Date: Tuesday, April 28, 2026

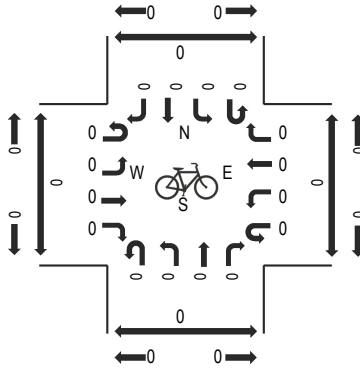
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:15 PM - 04:30 PM

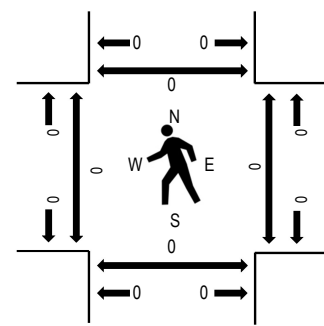
### Peak Hour - Motorized Vehicles



### Peak Hour - Bicycles



### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

| Interval<br>Start Time | HOGDEN RD<br>Eastbound |      |       |       | HOGDEN RD<br>Westbound |      |      |       | TIMBER MEADOW DR<br>Northbound |      |      |       | TIMBER MEADOW DR<br>Southbound |      |      |       | Total | Rolling<br>Hour | Pedestrian Crossings |      |       |       |
|------------------------|------------------------|------|-------|-------|------------------------|------|------|-------|--------------------------------|------|------|-------|--------------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
|                        | U-Turn                 | Left | Thru  | Right | U-Turn                 | Left | Thru | Right | U-Turn                         | Left | Thru | Right | U-Turn                         | Left | Thru | Right |       |                 | West                 | East | South | North |
| 4:00 PM                | 0                      | 25   | 131   | 3     | 0                      | 1    | 72   | 2     | 0                              | 1    | 0    | 0     | 0                              | 5    | 0    | 17    | 257   | 986             | 0                    | 0    | 0     | 0     |
| 4:15 PM                | 0                      | 12   | 142   | 0     | 0                      | 0    | 90   | 2     | 0                              | 0    | 0    | 0     | 0                              | 2    | 1    | 18    | 267   | 963             | 0                    | 0    | 0     | 0     |
| 4:30 PM                | 0                      | 15   | 123   | 1     | 0                      | 0    | 65   | 0     | 0                              | 1    | 0    | 0     | 0                              | 2    | 0    | 13    | 220   | 920             | 0                    | 0    | 0     | 0     |
| 4:45 PM                | 0                      | 25   | 115   | 1     | 0                      | 1    | 78   | 2     | 0                              | 0    | 0    | 0     | 0                              | 1    | 0    | 19    | 242   | 940             | 0                    | 0    | 0     | 0     |
| 5:00 PM                | 0                      | 20   | 119   | 1     | 0                      | 1    | 68   | 2     | 0                              | 7    | 1    | 1     | 0                              | 0    | 0    | 14    | 234   | 899             | 0                    | 0    | 0     | 0     |
| 5:15 PM                | 0                      | 23   | 129   | 2     | 0                      | 0    | 52   | 2     | 0                              | 0    | 0    | 1     | 0                              | 2    | 0    | 13    | 224   |                 | 0                    | 0    | 0     | 0     |
| 5:30 PM                | 0                      | 24   | 131   | 0     | 0                      | 0    | 66   | 1     | 0                              | 1    | 0    | 0     | 0                              | 2    | 0    | 15    | 240   |                 | 0                    | 0    | 0     | 0     |
| 5:45 PM                | 0                      | 13   | 118   | 4     | 0                      | 1    | 47   | 1     | 0                              | 1    | 1    | 0     | 0                              | 3    | 0    | 12    | 201   |                 | 0                    | 0    | 0     | 0     |
| Count Total            | 0                      | 157  | 1,008 | 12    | 0                      | 4    | 538  | 12    | 0                              | 11   | 2    | 2     | 0                              | 17   | 1    | 121   | 1,885 |                 | 0                    | 0    | 0     | 0     |
| Peak Hour              | 0                      | 77   | 511   | 5     | 0                      | 2    | 305  | 6     | 0                              | 2    | 0    | 0     | 0                              | 10   | 1    | 67    | 986   |                 | 0                    | 0    | 0     | 0     |



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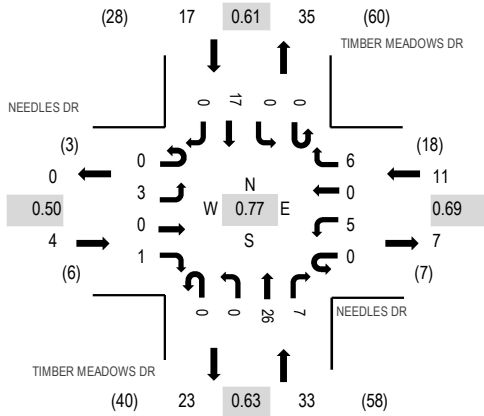
Location: 4 TIMBER MEADOWS DR & NEEDLES DR AM

Date: Tuesday, April 28, 2026

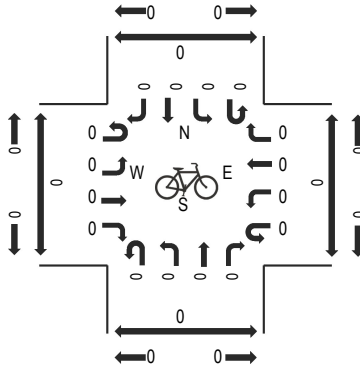
Peak Hour: 08:00 AM - 09:00 AM

Peak 15-Minutes: 08:15 AM - 08:30 AM

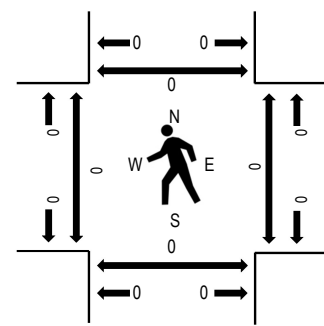
### Peak Hour - Motorized Vehicles



### Peak Hour - Bicycles



### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

| Interval<br>Start Time | NEEDLES DR<br>Eastbound |      |      |       | NEEDLES DR<br>Westbound |      |      |       | TIMBER MEADOWS DR<br>Northbound |      |      |       | TIMBER MEADOWS DR<br>Southbound |      |      |       | Total | Rolling<br>Hour | Pedestrian Crossings |      |       |       |
|------------------------|-------------------------|------|------|-------|-------------------------|------|------|-------|---------------------------------|------|------|-------|---------------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
|                        | U-Turn                  | Left | Thru | Right | U-Turn                  | Left | Thru | Right | U-Turn                          | Left | Thru | Right | U-Turn                          | Left | Thru | Right |       |                 | West                 | East | South | North |
| 7:00 AM                | 0                       | 1    | 0    | 0     | 0                       | 1    | 0    | 0     | 0                               | 1    | 1    | 0     | 0                               | 0    | 1    | 0     | 5     | 45              | 0                    | 0    | 0     | 0     |
| 7:15 AM                | 0                       | 0    | 0    | 0     | 0                       | 2    | 0    | 1     | 0                               | 0    | 5    | 0     | 0                               | 0    | 2    | 0     | 10    | 47              | 0                    | 0    | 0     | 0     |
| 7:30 AM                | 0                       | 0    | 0    | 1     | 0                       | 2    | 0    | 0     | 0                               | 1    | 7    | 0     | 0                               | 0    | 1    | 1     | 13    | 58              | 0                    | 0    | 0     | 0     |
| 7:45 AM                | 0                       | 0    | 0    | 0     | 0                       | 1    | 0    | 0     | 0                               | 0    | 10   | 0     | 0                               | 0    | 6    | 0     | 17    | 64              | 0                    | 0    | 0     | 0     |
| 8:00 AM                | 0                       | 0    | 0    | 0     | 0                       | 0    | 0    | 1     | 0                               | 0    | 4    | 1     | 0                               | 0    | 1    | 0     | 7     | 65              | 0                    | 0    | 0     | 0     |
| 8:15 AM                | 0                       | 0    | 0    | 0     | 0                       | 2    | 0    | 1     | 0                               | 0    | 14   | 1     | 0                               | 0    | 3    | 0     | 21    |                 | 0                    | 0    | 0     | 0     |
| 8:30 AM                | 0                       | 1    | 0    | 1     | 0                       | 0    | 0    | 4     | 0                               | 0    | 5    | 2     | 0                               | 0    | 6    | 0     | 19    |                 | 0                    | 0    | 0     | 0     |
| 8:45 AM                | 0                       | 2    | 0    | 0     | 0                       | 3    | 0    | 0     | 0                               | 0    | 3    | 3     | 0                               | 0    | 7    | 0     | 18    |                 | 0                    | 0    | 0     | 0     |
| Count Total            | 0                       | 4    | 0    | 2     | 0                       | 11   | 0    | 7     | 0                               | 2    | 49   | 7     | 0                               | 0    | 27   | 1     | 110   |                 | 0                    | 0    | 0     | 0     |
| Peak Hour              | 0                       | 3    | 0    | 1     | 0                       | 5    | 0    | 6     | 0                               | 0    | 26   | 7     | 0                               | 0    | 17   | 0     | 65    |                 | 0                    | 0    | 0     | 0     |



ALL TRAFFIC DATA SERVICES

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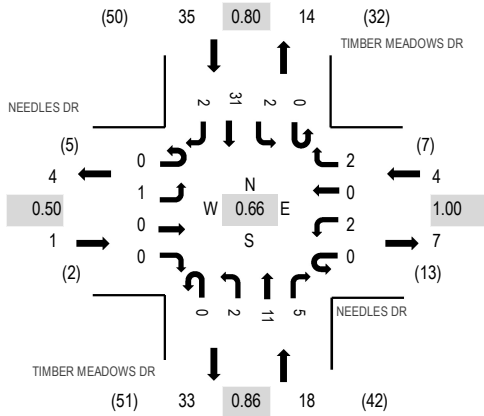
Location: 4 TIMBER MEADOWS DR & NEEDLES DR PM

Date: Tuesday, April 28, 2026

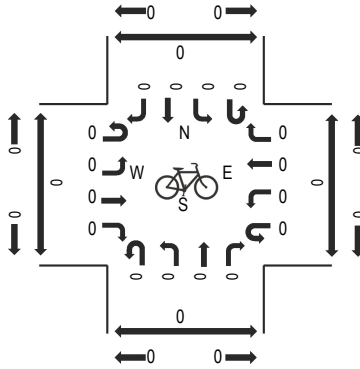
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

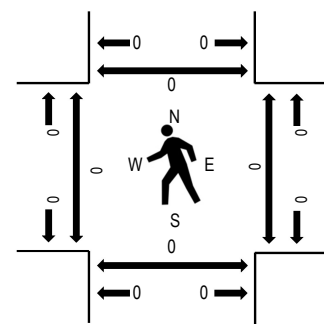
### Peak Hour - Motorized Vehicles



### Peak Hour - Bicycles



### Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

| Interval<br>Start Time | NEEDLES DR<br>Eastbound |      |      |       | NEEDLES DR<br>Westbound |      |      |       | TIMBER MEADOWS DR<br>Northbound |      |      |       | TIMBER MEADOWS DR<br>Southbound |      |      |       | Total | Rolling<br>Hour | Pedestrian Crossings |      |       |       |
|------------------------|-------------------------|------|------|-------|-------------------------|------|------|-------|---------------------------------|------|------|-------|---------------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
|                        | U-Turn                  | Left | Thru | Right | U-Turn                  | Left | Thru | Right | U-Turn                          | Left | Thru | Right | U-Turn                          | Left | Thru | Right |       |                 | West                 | East | South | North |
| 4:00 PM                | 0                       | 0    | 0    | 0     | 0                       | 1    | 0    | 0     | 0                               | 1    | 7    | 2     | 0                               | 1    | 8    | 2     | 22    | 58              | 0                    | 0    | 0     | 0     |
| 4:15 PM                | 0                       | 0    | 0    | 0     | 0                       | 0    | 0    | 1     | 0                               | 1    | 1    | 1     | 0                               | 0    | 9    | 0     | 13    | 45              | 0                    | 0    | 0     | 0     |
| 4:30 PM                | 0                       | 0    | 0    | 0     | 0                       | 1    | 0    | 0     | 0                               | 0    | 1    | 1     | 0                               | 0    | 5    | 0     | 8     | 42              | 0                    | 0    | 0     | 0     |
| 4:45 PM                | 0                       | 1    | 0    | 0     | 0                       | 0    | 0    | 1     | 0                               | 0    | 2    | 1     | 0                               | 1    | 9    | 0     | 15    | 44              | 0                    | 0    | 0     | 0     |
| 5:00 PM                | 0                       | 0    | 0    | 0     | 0                       | 0    | 0    | 0     | 0                               | 0    | 4    | 1     | 0                               | 0    | 4    | 0     | 9     | 43              | 0                    | 0    | 0     | 0     |
| 5:15 PM                | 0                       | 0    | 0    | 0     | 0                       | 0    | 0    | 0     | 0                               | 1    | 4    | 0     | 0                               | 0    | 5    | 0     | 10    |                 | 0                    | 0    | 0     | 0     |
| 5:30 PM                | 0                       | 0    | 1    | 0     | 0                       | 1    | 0    | 0     | 0                               | 0    | 5    | 2     | 0                               | 0    | 1    | 0     | 10    |                 | 0                    | 1    | 0     | 0     |
| 5:45 PM                | 0                       | 0    | 0    | 0     | 0                       | 2    | 0    | 0     | 0                               | 0    | 5    | 2     | 0                               | 0    | 5    | 0     | 14    |                 | 0                    | 0    | 0     | 0     |
| Count Total            | 0                       | 1    | 1    | 0     | 0                       | 5    | 0    | 2     | 0                               | 3    | 29   | 10    | 0                               | 2    | 46   | 2     | 101   |                 | 0                    | 1    | 0     | 0     |
| Peak Hour              | 0                       | 1    | 0    | 0     | 0                       | 2    | 0    | 2     | 0                               | 2    | 11   | 5     | 0                               | 2    | 31   | 2     | 58    |                 | 0                    | 0    | 0     | 0     |



# All Traffic Data Services

5 - WALDEN WAY EAST OF HWY 83

| Time                  | EB      | WB      | Total   |
|-----------------------|---------|---------|---------|
| 4/28/2026             | 0       | 0       | 0       |
| 4/28/2026 12:15:00 AM | 0       | 0       | 0       |
| 4/28/2026 12:30:00 AM | 1       | 0       | 1       |
| 4/28/2026 12:45:00 AM | 0       | 0       | 0       |
| 4/28/2026 1:00:00 AM  | 0       | 0       | 0       |
| 4/28/2026 1:15:00 AM  | 0       | 0       | 0       |
| 4/28/2026 1:30:00 AM  | 0       | 0       | 0       |
| 4/28/2026 1:45:00 AM  | 1       | 0       | 1       |
| 4/28/2026 2:00:00 AM  | 0       | 0       | 0       |
| 4/28/2026 2:15:00 AM  | 0       | 0       | 0       |
| 4/28/2026 2:30:00 AM  | 0       | 0       | 0       |
| 4/28/2026 2:45:00 AM  | 0       | 0       | 0       |
| 4/28/2026 3:00:00 AM  | 0       | 0       | 0       |
| 4/28/2026 3:15:00 AM  | 0       | 0       | 0       |
| 4/28/2026 3:30:00 AM  | 0       | 1       | 1       |
| 4/28/2026 3:45:00 AM  | 0       | 0       | 0       |
| 4/28/2026 4:00:00 AM  | 0       | 0       | 0       |
| 4/28/2026 4:15:00 AM  | 0       | 0       | 0       |
| 4/28/2026 4:30:00 AM  | 0       | 0       | 0       |
| 4/28/2026 4:45:00 AM  | 0       | 1       | 1       |
| 4/28/2026 5:00:00 AM  | 0       | 1       | 1       |
| 4/28/2026 5:15:00 AM  | 0       | 0       | 0       |
| 4/28/2026 5:30:00 AM  | 0       | 3       | 3       |
| 4/28/2026 5:45:00 AM  | 0       | 2       | 2       |
| 4/28/2026 6:00:00 AM  | 1       | 0       | 1       |
| 4/28/2026 6:15:00 AM  | 1       | 2       | 3       |
| 4/28/2026 6:30:00 AM  | 0       | 3       | 3       |
| 4/28/2026 6:45:00 AM  | 0       | 1       | 1       |
| 4/28/2026 7:00:00 AM  | 0       | 2       | 2       |
| 4/28/2026 7:15:00 AM  | 0       | 7       | 7       |
| 4/28/2026 7:30:00 AM  | 1       | 3       | 4       |
| 4/28/2026 7:45:00 AM  | 2       | 3       | 5       |
| 4/28/2026 8:00:00 AM  | 1       | 0       | 1       |
| 4/28/2026 8:15:00 AM  | 1       | 4       | 5       |
| 4/28/2026 8:30:00 AM  | 1       | 5       | 6       |
| 4/28/2026 8:45:00 AM  | 5       | 4       | 9       |
| 4/28/2026 9:00:00 AM  | 0       | 3       | 3       |
| 4/28/2026 9:15:00 AM  | 0       | 3       | 3       |
| 4/28/2026 9:30:00 AM  | 1       | 2       | 3       |
| 4/28/2026 9:45:00 AM  | 3       | 4       | 7       |
| 4/28/2026 10:00:00 AM | 4       | 5       | 9       |
| 4/28/2026 10:15:00 AM | 5       | 4       | 9       |
| 4/28/2026 10:30:00 AM | 0       | 1       | 1       |
| 4/28/2026 10:45:00 AM | 2       | 1       | 3       |
| 4/28/2026 11:00:00 AM | 1       | 2       | 3       |
| 4/28/2026 11:15:00 AM | 0       | 2       | 2       |
| 4/28/2026 11:30:00 AM | 2       | 1       | 3       |
| 4/28/2026 11:45:00 AM | 1       | 2       | 3       |
| Total                 | 34      | 72      | 106     |
| Percentage            | 32.1%   | 67.9%   |         |
| Peak Hour             | 9:30 AM | 8:15 AM | 9:30 AM |
| Volume                | 13      | 16      | 28      |
| PHF                   | 0.650   | 0.800   | 0.778   |



# All Traffic Data Services

5 - WALDEN WAY EAST OF HWY 83

| Time                  | EB      | WB      | Total   |
|-----------------------|---------|---------|---------|
| 4/28/2026 12:00:00 PM | 2       | 3       | 5       |
| 4/28/2026 12:15:00 PM | 3       | 3       | 6       |
| 4/28/2026 12:30:00 PM | 2       | 2       | 4       |
| 4/28/2026 12:45:00 PM | 2       | 2       | 4       |
| 4/28/2026 1:00:00 PM  | 1       | 1       | 2       |
| 4/28/2026 1:15:00 PM  | 3       | 3       | 6       |
| 4/28/2026 1:30:00 PM  | 2       | 1       | 3       |
| 4/28/2026 1:45:00 PM  | 0       | 0       | 0       |
| 4/28/2026 2:00:00 PM  | 0       | 3       | 3       |
| 4/28/2026 2:15:00 PM  | 0       | 5       | 5       |
| 4/28/2026 2:30:00 PM  | 3       | 4       | 7       |
| 4/28/2026 2:45:00 PM  | 2       | 3       | 5       |
| 4/28/2026 3:00:00 PM  | 5       | 1       | 6       |
| 4/28/2026 3:15:00 PM  | 3       | 3       | 6       |
| 4/28/2026 3:30:00 PM  | 2       | 5       | 7       |
| 4/28/2026 3:45:00 PM  | 3       | 5       | 8       |
| 4/28/2026 4:00:00 PM  | 8       | 3       | 11      |
| 4/28/2026 4:15:00 PM  | 4       | 3       | 7       |
| 4/28/2026 4:30:00 PM  | 4       | 2       | 6       |
| 4/28/2026 4:45:00 PM  | 2       | 2       | 4       |
| 4/28/2026 5:00:00 PM  | 2       | 0       | 2       |
| 4/28/2026 5:15:00 PM  | 1       | 2       | 3       |
| 4/28/2026 5:30:00 PM  | 4       | 0       | 4       |
| 4/28/2026 5:45:00 PM  | 3       | 2       | 5       |
| 4/28/2026 6:00:00 PM  | 3       | 1       | 4       |
| 4/28/2026 6:15:00 PM  | 0       | 1       | 1       |
| 4/28/2026 6:30:00 PM  | 2       | 3       | 5       |
| 4/28/2026 6:45:00 PM  | 0       | 0       | 0       |
| 4/28/2026 7:00:00 PM  | 1       | 1       | 2       |
| 4/28/2026 7:15:00 PM  | 0       | 1       | 1       |
| 4/28/2026 7:30:00 PM  | 3       | 1       | 4       |
| 4/28/2026 7:45:00 PM  | 3       | 1       | 4       |
| 4/28/2026 8:00:00 PM  | 2       | 1       | 3       |
| 4/28/2026 8:15:00 PM  | 3       | 0       | 3       |
| 4/28/2026 8:30:00 PM  | 1       | 0       | 1       |
| 4/28/2026 8:45:00 PM  | 0       | 0       | 0       |
| 4/28/2026 9:00:00 PM  | 1       | 0       | 1       |
| 4/28/2026 9:15:00 PM  | 0       | 0       | 0       |
| 4/28/2026 9:30:00 PM  | 3       | 1       | 4       |
| 4/28/2026 9:45:00 PM  | 1       | 0       | 1       |
| 4/28/2026 10:00:00 PM | 1       | 0       | 1       |
| 4/28/2026 10:15:00 PM | 2       | 0       | 2       |
| 4/28/2026 10:30:00 PM | 1       | 1       | 2       |
| 4/28/2026 10:45:00 PM | 0       | 0       | 0       |
| 4/28/2026 11:00:00 PM | 0       | 0       | 0       |
| 4/28/2026 11:15:00 PM | 0       | 0       | 0       |
| 4/28/2026 11:30:00 PM | 0       | 0       | 0       |
| 4/28/2026 11:45:00 PM | 0       | 0       | 0       |
| Total                 | 88      | 70      | 158     |
| Percentage            | 55.7%   | 44.3%   |         |
| Peak Hour             | 3:45 PM | 3:15 PM | 3:30 PM |
| Volume                | 19      | 16      | 33      |
| PHF                   | 0.594   | 0.800   | 0.750   |
| Grand Total           | 122     | 142     | 264     |
| Percentage            | 46.2%   | 53.8%   |         |



# All Traffic Data Services

## 6 - NEEDLES DR WEST OF TIMBER MEADOWS DR

| Time                  | EB      | WB       | Total   |
|-----------------------|---------|----------|---------|
| 4/28/2026             | 0       | 0        | 0       |
| 4/28/2026 12:15:00 AM | 0       | 0        | 0       |
| 4/28/2026 12:30:00 AM | 0       | 1        | 1       |
| 4/28/2026 12:45:00 AM | 0       | 0        | 0       |
| 4/28/2026 1:00:00 AM  | 0       | 0        | 0       |
| 4/28/2026 1:15:00 AM  | 0       | 0        | 0       |
| 4/28/2026 1:30:00 AM  | 0       | 0        | 0       |
| 4/28/2026 1:45:00 AM  | 0       | 0        | 0       |
| 4/28/2026 2:00:00 AM  | 0       | 0        | 0       |
| 4/28/2026 2:15:00 AM  | 0       | 0        | 0       |
| 4/28/2026 2:30:00 AM  | 0       | 0        | 0       |
| 4/28/2026 2:45:00 AM  | 0       | 0        | 0       |
| 4/28/2026 3:00:00 AM  | 0       | 0        | 0       |
| 4/28/2026 3:15:00 AM  | 0       | 0        | 0       |
| 4/28/2026 3:30:00 AM  | 0       | 0        | 0       |
| 4/28/2026 3:45:00 AM  | 0       | 0        | 0       |
| 4/28/2026 4:00:00 AM  | 0       | 0        | 0       |
| 4/28/2026 4:15:00 AM  | 0       | 0        | 0       |
| 4/28/2026 4:30:00 AM  | 0       | 0        | 0       |
| 4/28/2026 4:45:00 AM  | 0       | 0        | 0       |
| 4/28/2026 5:00:00 AM  | 0       | 0        | 0       |
| 4/28/2026 5:15:00 AM  | 0       | 0        | 0       |
| 4/28/2026 5:30:00 AM  | 0       | 0        | 0       |
| 4/28/2026 5:45:00 AM  | 0       | 0        | 0       |
| 4/28/2026 6:00:00 AM  | 0       | 0        | 0       |
| 4/28/2026 6:15:00 AM  | 1       | 0        | 1       |
| 4/28/2026 6:30:00 AM  | 1       | 1        | 2       |
| 4/28/2026 6:45:00 AM  | 0       | 0        | 0       |
| 4/28/2026 7:00:00 AM  | 1       | 1        | 2       |
| 4/28/2026 7:15:00 AM  | 0       | 0        | 0       |
| 4/28/2026 7:30:00 AM  | 1       | 2        | 3       |
| 4/28/2026 7:45:00 AM  | 0       | 0        | 0       |
| 4/28/2026 8:00:00 AM  | 0       | 0        | 0       |
| 4/28/2026 8:15:00 AM  | 0       | 0        | 0       |
| 4/28/2026 8:30:00 AM  | 2       | 0        | 2       |
| 4/28/2026 8:45:00 AM  | 2       | 0        | 2       |
| 4/28/2026 9:00:00 AM  | 0       | 1        | 1       |
| 4/28/2026 9:15:00 AM  | 0       | 0        | 0       |
| 4/28/2026 9:30:00 AM  | 1       | 1        | 2       |
| 4/28/2026 9:45:00 AM  | 2       | 0        | 2       |
| 4/28/2026 10:00:00 AM | 2       | 1        | 3       |
| 4/28/2026 10:15:00 AM | 0       | 0        | 0       |
| 4/28/2026 10:30:00 AM | 0       | 0        | 0       |
| 4/28/2026 10:45:00 AM | 0       | 1        | 1       |
| 4/28/2026 11:00:00 AM | 1       | 1        | 2       |
| 4/28/2026 11:15:00 AM | 0       | 2        | 2       |
| 4/28/2026 11:30:00 AM | 1       | 1        | 2       |
| 4/28/2026 11:45:00 AM | 0       | 0        | 0       |
| Total                 | 15      | 13       | 28      |
| Percentage            | 53.6%   | 46.4%    |         |
| Peak Hour             | 9:15 AM | 10:45 AM | 9:15 AM |
| Volume                | 5       | 5        | 7       |
| PHF                   | 0.625   | 0.625    | 0.583   |



# All Traffic Data Services

## 6 - NEEDLES DR WEST OF TIMBER MEADOWS DR

| Time                  | EB      | WB      | Total   |
|-----------------------|---------|---------|---------|
| 4/28/2026 12:00:00 PM | 0       | 1       | 1       |
| 4/28/2026 12:15:00 PM | 2       | 1       | 3       |
| 4/28/2026 12:30:00 PM | 0       | 1       | 1       |
| 4/28/2026 12:45:00 PM | 0       | 0       | 0       |
| 4/28/2026 1:00:00 PM  | 1       | 0       | 1       |
| 4/28/2026 1:15:00 PM  | 2       | 1       | 3       |
| 4/28/2026 1:30:00 PM  | 0       | 0       | 0       |
| 4/28/2026 1:45:00 PM  | 0       | 0       | 0       |
| 4/28/2026 2:00:00 PM  | 0       | 0       | 0       |
| 4/28/2026 2:15:00 PM  | 0       | 1       | 1       |
| 4/28/2026 2:30:00 PM  | 2       | 1       | 3       |
| 4/28/2026 2:45:00 PM  | 1       | 0       | 1       |
| 4/28/2026 3:00:00 PM  | 0       | 0       | 0       |
| 4/28/2026 3:15:00 PM  | 1       | 0       | 1       |
| 4/28/2026 3:30:00 PM  | 0       | 1       | 1       |
| 4/28/2026 3:45:00 PM  | 2       | 1       | 3       |
| 4/28/2026 4:00:00 PM  | 0       | 3       | 3       |
| 4/28/2026 4:15:00 PM  | 0       | 1       | 1       |
| 4/28/2026 4:30:00 PM  | 0       | 0       | 0       |
| 4/28/2026 4:45:00 PM  | 1       | 0       | 1       |
| 4/28/2026 5:00:00 PM  | 0       | 0       | 0       |
| 4/28/2026 5:15:00 PM  | 0       | 1       | 1       |
| 4/28/2026 5:30:00 PM  | 1       | 0       | 1       |
| 4/28/2026 5:45:00 PM  | 0       | 0       | 0       |
| 4/28/2026 6:00:00 PM  | 0       | 0       | 0       |
| 4/28/2026 6:15:00 PM  | 2       | 2       | 4       |
| 4/28/2026 6:30:00 PM  | 0       | 1       | 1       |
| 4/28/2026 6:45:00 PM  | 1       | 1       | 2       |
| 4/28/2026 7:00:00 PM  | 0       | 0       | 0       |
| 4/28/2026 7:15:00 PM  | 0       | 0       | 0       |
| 4/28/2026 7:30:00 PM  | 0       | 1       | 1       |
| 4/28/2026 7:45:00 PM  | 1       | 0       | 1       |
| 4/28/2026 8:00:00 PM  | 0       | 1       | 1       |
| 4/28/2026 8:15:00 PM  | 0       | 2       | 2       |
| 4/28/2026 8:30:00 PM  | 1       | 0       | 1       |
| 4/28/2026 8:45:00 PM  | 1       | 0       | 1       |
| 4/28/2026 9:00:00 PM  | 0       | 1       | 1       |
| 4/28/2026 9:15:00 PM  | 0       | 0       | 0       |
| 4/28/2026 9:30:00 PM  | 0       | 0       | 0       |
| 4/28/2026 9:45:00 PM  | 0       | 1       | 1       |
| 4/28/2026 10:00:00 PM | 0       | 0       | 0       |
| 4/28/2026 10:15:00 PM | 0       | 0       | 0       |
| 4/28/2026 10:30:00 PM | 0       | 0       | 0       |
| 4/28/2026 10:45:00 PM | 0       | 0       | 0       |
| 4/28/2026 11:00:00 PM | 0       | 0       | 0       |
| 4/28/2026 11:15:00 PM | 0       | 0       | 0       |
| 4/28/2026 11:30:00 PM | 0       | 0       | 0       |
| 4/28/2026 11:45:00 PM | 0       | 0       | 0       |
| Total                 | 19      | 23      | 42      |
| Percentage            | 45.2%   | 54.8%   |         |
| Peak Hour             | 2:30 PM | 3:30 PM | 3:15 PM |
| Volume                | 4       | 7       | 9       |
| PHF                   | 0.500   | 0.583   | 0.750   |
| Grand Total           | 34      | 36      | 70      |
| Percentage            | 48.6%   | 51.4%   |         |



# All Traffic Data Services

## 7 - TIMBER MEADOW DR NORTH OF HOGDEN RD

| Time                  | NB       | SB      | Total   |
|-----------------------|----------|---------|---------|
| 4/28/2026             | 0        | 0       | 0       |
| 4/28/2026 12:15:00 AM | 0        | 0       | 0       |
| 4/28/2026 12:30:00 AM | 0        | 0       | 0       |
| 4/28/2026 12:45:00 AM | 0        | 0       | 0       |
| 4/28/2026 1:00:00 AM  | 0        | 0       | 0       |
| 4/28/2026 1:15:00 AM  | 0        | 0       | 0       |
| 4/28/2026 1:30:00 AM  | 0        | 0       | 0       |
| 4/28/2026 1:45:00 AM  | 1        | 1       | 2       |
| 4/28/2026 2:00:00 AM  | 0        | 0       | 0       |
| 4/28/2026 2:15:00 AM  | 0        | 0       | 0       |
| 4/28/2026 2:30:00 AM  | 0        | 0       | 0       |
| 4/28/2026 2:45:00 AM  | 0        | 0       | 0       |
| 4/28/2026 3:00:00 AM  | 0        | 0       | 0       |
| 4/28/2026 3:15:00 AM  | 0        | 0       | 0       |
| 4/28/2026 3:30:00 AM  | 0        | 0       | 0       |
| 4/28/2026 3:45:00 AM  | 0        | 0       | 0       |
| 4/28/2026 4:00:00 AM  | 0        | 2       | 2       |
| 4/28/2026 4:15:00 AM  | 2        | 2       | 4       |
| 4/28/2026 4:30:00 AM  | 1        | 2       | 3       |
| 4/28/2026 4:45:00 AM  | 0        | 1       | 1       |
| 4/28/2026 5:00:00 AM  | 1        | 1       | 2       |
| 4/28/2026 5:15:00 AM  | 2        | 5       | 7       |
| 4/28/2026 5:30:00 AM  | 0        | 5       | 5       |
| 4/28/2026 5:45:00 AM  | 4        | 1       | 5       |
| 4/28/2026 6:00:00 AM  | 1        | 4       | 5       |
| 4/28/2026 6:15:00 AM  | 1        | 13      | 14      |
| 4/28/2026 6:30:00 AM  | 4        | 9       | 13      |
| 4/28/2026 6:45:00 AM  | 8        | 14      | 22      |
| 4/28/2026 7:00:00 AM  | 10       | 19      | 29      |
| 4/28/2026 7:15:00 AM  | 4        | 22      | 26      |
| 4/28/2026 7:30:00 AM  | 10       | 34      | 44      |
| 4/28/2026 7:45:00 AM  | 9        | 13      | 22      |
| 4/28/2026 8:00:00 AM  | 17       | 16      | 33      |
| 4/28/2026 8:15:00 AM  | 16       | 14      | 30      |
| 4/28/2026 8:30:00 AM  | 12       | 22      | 34      |
| 4/28/2026 8:45:00 AM  | 10       | 23      | 33      |
| 4/28/2026 9:00:00 AM  | 14       | 16      | 30      |
| 4/28/2026 9:15:00 AM  | 9        | 14      | 23      |
| 4/28/2026 9:30:00 AM  | 6        | 17      | 23      |
| 4/28/2026 9:45:00 AM  | 13       | 16      | 29      |
| 4/28/2026 10:00:00 AM | 13       | 22      | 35      |
| 4/28/2026 10:15:00 AM | 13       | 8       | 21      |
| 4/28/2026 10:30:00 AM | 12       | 16      | 28      |
| 4/28/2026 10:45:00 AM | 14       | 9       | 23      |
| 4/28/2026 11:00:00 AM | 19       | 17      | 36      |
| 4/28/2026 11:15:00 AM | 14       | 20      | 34      |
| 4/28/2026 11:30:00 AM | 9        | 13      | 22      |
| 4/28/2026 11:45:00 AM | 20       | 17      | 37      |
| Total                 | 269      | 408     | 677     |
| Percentage            | 39.7%    | 60.3%   |         |
| Peak Hour             | 11:00 AM | 6:45 AM | 8:00 AM |
| Volume                | 62       | 89      | 130     |
| PHF                   | 0.775    | 0.654   | 0.956   |



# All Traffic Data Services

## 7 - TIMBER MEADOW DR NORTH OF HOGDEN RD

| Time                  | NB      | SB      | Total   |
|-----------------------|---------|---------|---------|
| 4/28/2026 12:00:00 PM | 11      | 23      | 34      |
| 4/28/2026 12:15:00 PM | 16      | 17      | 33      |
| 4/28/2026 12:30:00 PM | 19      | 16      | 35      |
| 4/28/2026 12:45:00 PM | 14      | 14      | 28      |
| 4/28/2026 1:00:00 PM  | 15      | 11      | 26      |
| 4/28/2026 1:15:00 PM  | 13      | 10      | 23      |
| 4/28/2026 1:30:00 PM  | 10      | 10      | 20      |
| 4/28/2026 1:45:00 PM  | 12      | 11      | 23      |
| 4/28/2026 2:00:00 PM  | 15      | 7       | 22      |
| 4/28/2026 2:15:00 PM  | 12      | 15      | 27      |
| 4/28/2026 2:30:00 PM  | 15      | 18      | 33      |
| 4/28/2026 2:45:00 PM  | 18      | 12      | 30      |
| 4/28/2026 3:00:00 PM  | 17      | 17      | 34      |
| 4/28/2026 3:15:00 PM  | 18      | 9       | 27      |
| 4/28/2026 3:30:00 PM  | 25      | 10      | 35      |
| 4/28/2026 3:45:00 PM  | 26      | 23      | 49      |
| 4/28/2026 4:00:00 PM  | 27      | 22      | 49      |
| 4/28/2026 4:15:00 PM  | 14      | 21      | 35      |
| 4/28/2026 4:30:00 PM  | 15      | 15      | 30      |
| 4/28/2026 4:45:00 PM  | 27      | 20      | 47      |
| 4/28/2026 5:00:00 PM  | 23      | 14      | 37      |
| 4/28/2026 5:15:00 PM  | 25      | 15      | 40      |
| 4/28/2026 5:30:00 PM  | 25      | 17      | 42      |
| 4/28/2026 5:45:00 PM  | 15      | 15      | 30      |
| 4/28/2026 6:00:00 PM  | 16      | 14      | 30      |
| 4/28/2026 6:15:00 PM  | 17      | 7       | 24      |
| 4/28/2026 6:30:00 PM  | 18      | 11      | 29      |
| 4/28/2026 6:45:00 PM  | 12      | 3       | 15      |
| 4/28/2026 7:00:00 PM  | 10      | 4       | 14      |
| 4/28/2026 7:15:00 PM  | 11      | 7       | 18      |
| 4/28/2026 7:30:00 PM  | 13      | 9       | 22      |
| 4/28/2026 7:45:00 PM  | 10      | 11      | 21      |
| 4/28/2026 8:00:00 PM  | 9       | 3       | 12      |
| 4/28/2026 8:15:00 PM  | 10      | 3       | 13      |
| 4/28/2026 8:30:00 PM  | 3       | 3       | 6       |
| 4/28/2026 8:45:00 PM  | 4       | 8       | 12      |
| 4/28/2026 9:00:00 PM  | 10      | 1       | 11      |
| 4/28/2026 9:15:00 PM  | 11      | 7       | 18      |
| 4/28/2026 9:30:00 PM  | 5       | 0       | 5       |
| 4/28/2026 9:45:00 PM  | 3       | 1       | 4       |
| 4/28/2026 10:00:00 PM | 6       | 0       | 6       |
| 4/28/2026 10:15:00 PM | 4       | 0       | 4       |
| 4/28/2026 10:30:00 PM | 2       | 0       | 2       |
| 4/28/2026 10:45:00 PM | 5       | 0       | 5       |
| 4/28/2026 11:00:00 PM | 2       | 0       | 2       |
| 4/28/2026 11:15:00 PM | 4       | 0       | 4       |
| 4/28/2026 11:30:00 PM | 0       | 0       | 0       |
| 4/28/2026 11:45:00 PM | 0       | 0       | 0       |
| Total                 | 612     | 454     | 1,066   |
| Percentage            | 57.4%   | 42.6%   |         |
| Peak Hour             | 4:45 PM | 3:45 PM | 3:30 PM |
| Volume                | 100     | 81      | 168     |
| PHF                   | 0.926   | 0.880   | 0.857   |
| Grand Total           | 881     | 862     | 1,743   |
| Percentage            | 50.5%   | 49.5%   |         |

## **APPENDIX B**

### **Level of Service Definitions**

The following information is referenced from the Highway Capacity Manual: A Guide for Multimodal Mobility Analysis, 7<sup>th</sup> Edition, Transportation Research Board, 2022: Chapter 19 – Signalized Intersections.

### **Motorized Vehicle Level of Service (LOS) for Signalized Intersections**

Levels of service are defined to represent reasonable ranges in control delay.

**LOS A** Describes operations with a control delay of 10 s/veh or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

**LOS B** Describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.

**LOS C** Describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual *cycle failures* (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

**LOS D** Describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

**LOS E** Describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

**LOS F** Describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

| Control Delay<br>(s/veh) | LOS by Volume-to-Capacity Ratio <sup>a</sup> |             |
|--------------------------|----------------------------------------------|-------------|
|                          | $v/c \leq 1.0$                               | $v/c > 1.0$ |
| $\leq 10$                | A                                            | F           |
| $> 10 - 20$              | B                                            | F           |
| $> 20 - 35$              | C                                            | F           |
| $> 35 - 55$              | D                                            | F           |
| $> 55 - 80$              | E                                            | F           |
| $> 80$                   | F                                            | F           |

Note: <sup>a</sup> For approach-based and intersectionwide assessments, LOS is defined solely by control delay.

The following information is referenced from the Highway Capacity Manual: A Guide for Multimodal Mobility Analysis, 7<sup>th</sup> Edition, Transportation Research Board, 2022: Chapter 20 – Two-Way Stop-Controlled Intersections, Chapter 21 – All-Way Stop-Controlled Intersections, and Chapter 22 - Roundabouts.

### **Motorized Vehicle Level of Service (LOS) for Unsignalized & Roundabout Intersections**

LOS is a quantitative stratification of performance measure(s) representing quality of service. Quality of service describes how well a transportation facility or service operates from a traveler's perspective. LOS is measured on an A – F scale, with LOS A representing the best operating conditions from a traveler's perspective.

| Control Delay<br>(s/veh) | <u>LOS by Volume-to-Capacity Ratio<sup>a</sup></u> |             |
|--------------------------|----------------------------------------------------|-------------|
|                          | $v/c \leq 1.0$                                     | $v/c > 1.0$ |
| 0 – 10                   | A                                                  | F           |
| > 10 – 15                | B                                                  | F           |
| > 15 – 25                | C                                                  | F           |
| > 25 – 35                | D                                                  | F           |
| > 35 – 50                | E                                                  | F           |
| > 50                     | F                                                  | F           |

Note: The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection as a whole.

<sup>a</sup> For approaches and intersectionwide assessment, LOS is defined solely by control delay.

## **APPENDIX C**

### **Capacity Worksheets**

| Intersection             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                   |      |      |                                                                                     |      |
|--------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 2                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                   |      |      |                                                                                     |      |
| Movement                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL  | NBT                                                                               | NBR  | SBL  | SBT                                                                                 | SBR  |
| Lane Configurations      |  |  |  |  |  |  |      |  |      |      |  |      |
| Traffic Vol, veh/h       | 25                                                                                | 142                                                                               | 2                                                                                 | 0                                                                                 | 550                                                                               | 6                                                                                 | 4    | 2                                                                                 | 1    | 6    | 0                                                                                   | 82   |
| Future Vol, veh/h        | 25                                                                                | 142                                                                               | 2                                                                                 | 0                                                                                 | 550                                                                               | 6                                                                                 | 4    | 2                                                                                 | 1    | 6    | 0                                                                                   | 82   |
| Conflicting Peds, #/hr   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0    | 0                                                                                   | 0    |
| Sign Control             | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              | Stop | Stop                                                                              | Stop | Stop | Stop                                                                                | Stop |
| RT Channelized           | -                                                                                 | -                                                                                 | None                                                                              | -                                                                                 | -                                                                                 | None                                                                              | -    | -                                                                                 | None | -    | -                                                                                   | None |
| Storage Length           | 460                                                                               | -                                                                                 | 420                                                                               | 525                                                                               | -                                                                                 | 525                                                                               | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Veh in Median Storage, # | -                                                                                 | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Grade, %                 | -                                                                                 | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Peak Hour Factor         | 92                                                                                | 92                                                                                | 92                                                                                | 92                                                                                | 92                                                                                | 92                                                                                | 92   | 92                                                                                | 92   | 92   | 92                                                                                  | 92   |
| Heavy Vehicles, %        | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2    | 2                                                                                 | 2    | 2    | 2                                                                                   | 2    |
| Mvmt Flow                | 27                                                                                | 154                                                                               | 2                                                                                 | 0                                                                                 | 598                                                                               | 7                                                                                 | 4    | 2                                                                                 | 1    | 7    | 0                                                                                   | 89   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 604    | 0 | 0 | 157    | 0 | 0 | 807    | 813   | 154   | 808    | 809   | 598   |
| Stage 1              | -      | - | - | -      | - | - | 209    | 209   | -     | 598    | 598   | -     |
| Stage 2              | -      | - | - | -      | - | - | 598    | 604   | -     | 210    | 211   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 7.12   | 6.52  | 6.22  | 7.12   | 6.52  | 6.22  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 973    | - | - | 1423   | - | - | 300    | 313   | 892   | 300    | 314   | 502   |
| Stage 1              | -      | - | - | -      | - | - | 793    | 729   | -     | 489    | 491   | -     |
| Stage 2              | -      | - | - | -      | - | - | 489    | 488   | -     | 792    | 728   | -     |
| Platoon blocked, %   |        | - | - |        | - | - |        |       |       |        |       |       |
| Mov Cap-1 Maneuver   | 973    | - | - | 1423   | - | - | 240    | 304   | 892   | 289    | 306   | 502   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 240    | 304   | -     | 289    | 306   | -     |
| Stage 1              | -      | - | - | -      | - | - | 771    | 709   | -     | 489    | 491   | -     |
| Stage 2              | -      | - | - | -      | - | - | 402    | 488   | -     | 767    | 707   | -     |

| Approach          | EB  | WB | NB    | SB   |
|-------------------|-----|----|-------|------|
| HCM Ctrl Dly, s/v | 1.3 | 0  | 17.88 | 14.4 |
| HCM LOS           |     |    | C     | B    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL  | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h)      | 287   | 973   | -   | -   | 1423 | -   | -   | 478   |
| HCM Lane V/C Ratio    | 0.026 | 0.028 | -   | -   | -    | -   | -   | 0.2   |
| HCM Ctrl Dly (s/v)    | 17.9  | 8.8   | -   | -   | 0    | -   | -   | 14.4  |
| HCM Lane LOS          | C     | A     | -   | -   | A    | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.1   | 0.1   | -   | -   | 0    | -   | -   | 0.7   |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.3  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 3    | 0    | 4    | 5    | 0    | 6    | 0    | 26   | 7    | 0    | 17   | 0    |
| Future Vol, veh/h        | 3    | 0    | 4    | 5    | 0    | 6    | 0    | 26   | 7    | 0    | 17   | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 3    | 0    | 4    | 5    | 0    | 7    | 0    | 28   | 8    | 0    | 18   | 0    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 47     | 54    | 18     | 51    | 51     | 32    | 18     | 0 | 0 | 36    | 0 | 0 |
| Stage 1              | 18     | 18    | -      | 32    | 32     | -     | -      | - | - | -     | - | - |
| Stage 2              | 28     | 36    | -      | 18    | 18     | -     | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.12   | 6.52  | 6.22   | 7.12  | 6.52   | 6.22  | 4.12   | - | - | 4.12  | - | - |
| Critical Hdwy Stg 1  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.518  | 4.018 | 3.318  | 3.518 | 4.018  | 3.318 | 2.218  | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver   | 954    | 837   | 1060   | 949   | 841    | 1042  | 1598   | - | - | 1575  | - | - |
| Stage 1              | 1001   | 880   | -      | 984   | 868    | -     | -      | - | - | -     | - | - |
| Stage 2              | 989    | 865   | -      | 1001  | 880    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - |       | - | - |
| Mov Cap-1 Maneuver   | 948    | 837   | 1060   | 945   | 841    | 1042  | 1598   | - | - | 1575  | - | - |
| Mov Cap-2 Maneuver   | 948    | 837   | -      | 945   | 841    | -     | -      | - | - | -     | - | - |
| Stage 1              | 1001   | 880   | -      | 984   | 868    | -     | -      | - | - | -     | - | - |
| Stage 2              | 983    | 865   | -      | 997   | 880    | -     | -      | - | - | -     | - | - |

| Approach          | EB   |  | WB   |  | NB |  | SB |  |
|-------------------|------|--|------|--|----|--|----|--|
| HCM Ctrl Dly, s/v | 8.59 |  | 8.66 |  | 0  |  | 0  |  |
| HCM LOS           | A    |  | A    |  |    |  |    |  |

| Minor Lane/Major Mvmt | NBL  | NBT | NBR | EBLn1WBLn1 | SBL   | SBT  | SBR |
|-----------------------|------|-----|-----|------------|-------|------|-----|
| Capacity (veh/h)      | 1598 | -   | -   | 1009       | 995   | 1575 | -   |
| HCM Lane V/C Ratio    | -    | -   | -   | 0.008      | 0.012 | -    | -   |
| HCM Ctrl Dly (s/v)    | 0    | -   | -   | 8.6        | 8.7   | 0    | -   |
| HCM Lane LOS          | A    | -   | -   | A          | A     | A    | -   |
| HCM 95th %tile Q(veh) | 0    | -   | -   | 0          | 0     | 0    | -   |

HCM 7th TWSC  
3: State Highway 83 & Existing Access

Existing Traffic Conditions  
AM Peak Traffic Hour

Intersection

Int Delay, s/veh 0

| Movement                 | WBL                                                                               | WBR  | NBT                                                                               | NBR  | SBL  | SBT                                                                               |
|--------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|
| Lane Configurations      |  |      |  |      |      |  |
| Traffic Vol, veh/h       | 0                                                                                 | 1    | 559                                                                               | 0    | 0    | 429                                                                               |
| Future Vol, veh/h        | 0                                                                                 | 1    | 559                                                                               | 0    | 0    | 429                                                                               |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0                                                                                 | 0    | 0    | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop | Free                                                                              | Free | Free | Free                                                                              |
| RT Channelized           | -                                                                                 | None | -                                                                                 | None | -    | None                                                                              |
| Storage Length           | 0                                                                                 | -    | -                                                                                 | -    | -    | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92   | 92                                                                                | 92   | 92   | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2    | 2                                                                                 | 2    | 2    | 2                                                                                 |
| Mvmt Flow                | 0                                                                                 | 1    | 608                                                                               | 0    | 0    | 466                                                                               |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1074   | 608    | 0      |
| Stage 1              | 608    | -      | -      |
| Stage 2              | 466    | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | -      |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | -      |
| Pot Cap-1 Maneuver   | 243    | 496    | -      |
| Stage 1              | 544    | -      | -      |
| Stage 2              | 631    | -      | -      |
| Platoon blocked, %   |        | -      | -      |
| Mov Cap-1 Maneuver   | 243    | 496    | -      |
| Mov Cap-2 Maneuver   | 243    | -      | -      |
| Stage 1              | 544    | -      | -      |
| Stage 2              | 631    | -      | -      |

| Approach          | WB    | NB | SB |
|-------------------|-------|----|----|
| HCM Ctrl Dly, s/v | 12.27 | 0  | 0  |
| HCM LOS           | B     |    |    |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT |
|-----------------------|-----|----------|-------|-----|
| Capacity (veh/h)      | -   | -        | 496   | 971 |
| HCM Lane V/C Ratio    | -   | -        | 0.002 | -   |
| HCM Ctrl Dly (s/v)    | -   | -        | 12.3  | 0   |
| HCM Lane LOS          | -   | -        | B     | A   |
| HCM 95th %tile Q(veh) | -   | -        | 0     | 0   |

| Intersection             |                                                                                   |          |                                                                                   |       |       |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------|-------|-------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 0.2                                                                               |          |                                                                                   |       |       |                                                                                   |
| Movement                 | WBL                                                                               | WBR      | NBT                                                                               | NBR   | SBL   | SBT                                                                               |
| Lane Configurations      |  |          |  |       |       |  |
| Traffic Vol, veh/h       | 3                                                                                 | 10       | 562                                                                               | 0     | 4     | 429                                                                               |
| Future Vol, veh/h        | 3                                                                                 | 10       | 562                                                                               | 0     | 4     | 429                                                                               |
| Conflicting Peds, #/hr   | 0                                                                                 | 0        | 0                                                                                 | 0     | 0     | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop     | Free                                                                              | Free  | Free  | Free                                                                              |
| RT Channelized           | -                                                                                 | None     | -                                                                                 | None  | -     | None                                                                              |
| Storage Length           | 0                                                                                 | -        | -                                                                                 | -     | -     | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -        | 0                                                                                 | -     | -     | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -        | 0                                                                                 | -     | -     | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92       | 92                                                                                | 92    | 92    | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2        | 2                                                                                 | 2     | 2     | 2                                                                                 |
| Mvmt Flow                | 3                                                                                 | 11       | 611                                                                               | 0     | 4     | 466                                                                               |
| Major/Minor              | Minor1                                                                            | Major1   | Major2                                                                            |       |       |                                                                                   |
| Conflicting Flow All     | 1086                                                                              | 611      | 0                                                                                 | 0     | 611   | 0                                                                                 |
| Stage 1                  | 611                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Stage 2                  | 475                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Critical Hdwy            | 6.42                                                                              | 6.22     | -                                                                                 | -     | 4.12  | -                                                                                 |
| Critical Hdwy Stg 1      | 5.42                                                                              | -        | -                                                                                 | -     | -     | -                                                                                 |
| Critical Hdwy Stg 2      | 5.42                                                                              | -        | -                                                                                 | -     | -     | -                                                                                 |
| Follow-up Hdwy           | 3.518                                                                             | 3.318    | -                                                                                 | -     | 2.218 | -                                                                                 |
| Pot Cap-1 Maneuver       | 239                                                                               | 494      | -                                                                                 | -     | 968   | -                                                                                 |
| Stage 1                  | 542                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Stage 2                  | 626                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Platoon blocked, %       |                                                                                   |          | -                                                                                 | -     |       | -                                                                                 |
| Mov Cap-1 Maneuver       | 238                                                                               | 494      | -                                                                                 | -     | 968   | -                                                                                 |
| Mov Cap-2 Maneuver       | 238                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Stage 1                  | 542                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Stage 2                  | 622                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Approach                 | WB                                                                                | NB       | SB                                                                                |       |       |                                                                                   |
| HCM Ctrl Dly, s/v        | 14.43                                                                             | 0        | 0.08                                                                              |       |       |                                                                                   |
| HCM LOS                  | B                                                                                 |          |                                                                                   |       |       |                                                                                   |
| Minor Lane/Major Mvmt    | NBT                                                                               | NBRWBLn1 | SBL                                                                               | SBT   |       |                                                                                   |
| Capacity (veh/h)         | -                                                                                 | -        | 396                                                                               | 17    | -     |                                                                                   |
| HCM Lane V/C Ratio       | -                                                                                 | -        | 0.036                                                                             | 0.004 | -     |                                                                                   |
| HCM Ctrl Dly (s/v)       | -                                                                                 | -        | 14.4                                                                              | 8.7   | 0     |                                                                                   |
| HCM Lane LOS             | -                                                                                 | -        | B                                                                                 | A     | A     |                                                                                   |
| HCM 95th %tile Q(veh)    | -                                                                                 | -        | 0.1                                                                               | 0     | -     |                                                                                   |

| Intersection             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                   |      |      |                                                                                     |      |
|--------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 1.8                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                   |      |      |                                                                                     |      |
| Movement                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL  | NBT                                                                               | NBR  | SBL  | SBT                                                                                 | SBR  |
| Lane Configurations      |  |  |  |  |  |  |      |  |      |      |  |      |
| Traffic Vol, veh/h       | 77                                                                                | 511                                                                               | 5                                                                                 | 2                                                                                 | 305                                                                               | 6                                                                                 | 2    | 0                                                                                 | 0    | 10   | 1                                                                                   | 67   |
| Future Vol, veh/h        | 77                                                                                | 511                                                                               | 5                                                                                 | 2                                                                                 | 305                                                                               | 6                                                                                 | 2    | 0                                                                                 | 0    | 10   | 1                                                                                   | 67   |
| Conflicting Peds, #/hr   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0    | 0                                                                                   | 0    |
| Sign Control             | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              | Stop | Stop                                                                              | Stop | Stop | Stop                                                                                | Stop |
| RT Channelized           | -                                                                                 | -                                                                                 | None                                                                              | -                                                                                 | -                                                                                 | None                                                                              | -    | -                                                                                 | None | -    | -                                                                                   | None |
| Storage Length           | 460                                                                               | -                                                                                 | 420                                                                               | 525                                                                               | -                                                                                 | 525                                                                               | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Veh in Median Storage, # | -                                                                                 | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Grade, %                 | -                                                                                 | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Peak Hour Factor         | 92                                                                                | 92                                                                                | 92                                                                                | 92                                                                                | 92                                                                                | 92                                                                                | 92   | 92                                                                                | 92   | 92   | 92                                                                                  | 92   |
| Heavy Vehicles, %        | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2    | 2                                                                                 | 2    | 2    | 2                                                                                   | 2    |
| Mvmt Flow                | 84                                                                                | 555                                                                               | 5                                                                                 | 2                                                                                 | 332                                                                               | 7                                                                                 | 2    | 0                                                                                 | 0    | 11   | 1                                                                                   | 73   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 338    | 0 | 0 | 561    | 0 | 0 | 1059   | 1065  | 555   | 1059   | 1064  | 332   |
| Stage 1              | -      | - | - | -      | - | - | 723    | 723   | -     | 336    | 336   | -     |
| Stage 2              | -      | - | - | -      | - | - | 336    | 342   | -     | 723    | 728   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 7.12   | 6.52  | 6.22  | 7.12   | 6.52  | 6.22  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1221   | - | - | 1010   | - | - | 202    | 222   | 531   | 202    | 223   | 710   |
| Stage 1              | -      | - | - | -      | - | - | 418    | 431   | -     | 678    | 642   | -     |
| Stage 2              | -      | - | - | -      | - | - | 678    | 638   | -     | 418    | 428   | -     |
| Platoon blocked, %   |        | - | - |        | - | - |        |       |       |        |       |       |
| Mov Cap-1 Maneuver   | 1221   | - | - | 1010   | - | - | 168    | 207   | 531   | 188    | 207   | 710   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 168    | 207   | -     | 188    | 207   | -     |
| Stage 1              | -      | - | - | -      | - | - | 389    | 401   | -     | 677    | 641   | -     |
| Stage 2              | -      | - | - | -      | - | - | 606    | 636   | -     | 389    | 399   | -     |

| Approach          | EB   |  |  | WB   |  |  | NB    |  |  | SB    |  |  |
|-------------------|------|--|--|------|--|--|-------|--|--|-------|--|--|
| HCM Ctrl Dly, s/v | 1.06 |  |  | 0.05 |  |  | 26.73 |  |  | 13.42 |  |  |
| HCM LOS           |      |  |  |      |  |  | D     |  |  | B     |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 168   | 1221  | -   | -   | 1010  | -   | -   | 512   |
| HCM Lane V/C Ratio    | 0.013 | 0.069 | -   | -   | 0.002 | -   | -   | 0.166 |
| HCM Ctrl Dly (s/v)    | 26.7  | 8.2   | -   | -   | 8.6   | -   | -   | 13.4  |
| HCM Lane LOS          | D     | A     | -   | -   | A     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | 0.2   | -   | -   | 0     | -   | -   | 0.6   |

HCM 7th TWSC  
2: Timber Meadow Drive/Walden Way & Needles Drive

Existing Traffic Conditions  
PM Peak Traffic Hour

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.2  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 1    | 0    | 0    | 2    | 0    | 2    | 2    | 11   | 5    | 2    | 31   | 2    |
| Future Vol, veh/h        | 1    | 0    | 0    | 2    | 0    | 2    | 2    | 11   | 5    | 2    | 31   | 2    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1    | 0    | 0    | 2    | 0    | 2    | 2    | 12   | 5    | 2    | 34   | 2    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 55     | 61    | 35     | 57    | 59     | 15    | 36     | 0 | 0 | 17    | 0 | 0 |
| Stage 1              | 39     | 39    | -      | 19    | 19     | -     | -      | - | - | -     | - | - |
| Stage 2              | 16     | 22    | -      | 38    | 40     | -     | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.12   | 6.52  | 6.22   | 7.12  | 6.52   | 6.22  | 4.12   | - | - | 4.12  | - | - |
| Critical Hdwy Stg 1  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.518  | 4.018 | 3.318  | 3.518 | 4.018  | 3.318 | 2.218  | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver   | 942    | 830   | 1038   | 940   | 832    | 1065  | 1575   | - | - | 1600  | - | - |
| Stage 1              | 976    | 862   | -      | 1000  | 879    | -     | -      | - | - | -     | - | - |
| Stage 2              | 1003   | 877   | -      | 977   | 861    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - |       | - | - |
| Mov Cap-1 Maneuver   | 938    | 828   | 1038   | 937   | 829    | 1065  | 1575   | - | - | 1600  | - | - |
| Mov Cap-2 Maneuver   | 938    | 828   | -      | 937   | 829    | -     | -      | - | - | -     | - | - |
| Stage 1              | 975    | 861   | -      | 999   | 878    | -     | -      | - | - | -     | - | - |
| Stage 2              | 1000   | 876   | -      | 976   | 860    | -     | -      | - | - | -     | - | - |

| Approach          | EB   |  | WB   |  | NB   |  | SB   |  |
|-------------------|------|--|------|--|------|--|------|--|
| HCM Ctrl Dly, s/v | 8.84 |  | 8.63 |  | 0.81 |  | 0.41 |  |
| HCM LOS           | A    |  | A    |  |      |  |      |  |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL   | SBT   | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h)      | 188   | -   | -   | 938        | 997   | 102   | -   |
| HCM Lane V/C Ratio    | 0.001 | -   | -   | 0.001      | 0.004 | 0.001 | -   |
| HCM Ctrl Dly (s/v)    | 7.3   | 0   | -   | 8.8        | 8.6   | 7.3   | 0   |
| HCM Lane LOS          | A     | A   | -   | A          | A     | A     | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0          | 0     | 0     | -   |

HCM 7th TWSC  
3: State Highway 83 & Existing Access

Existing Traffic Conditions  
PM Peak Traffic Hour

Intersection

Int Delay, s/veh 0

| Movement                 | WBL                                                                               | WBR  | NBT                                                                               | NBR  | SBL  | SBT                                                                               |
|--------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|
| Lane Configurations      |  |      |  |      |      |  |
| Traffic Vol, veh/h       | 0                                                                                 | 1    | 463                                                                               | 1    | 2    | 597                                                                               |
| Future Vol, veh/h        | 0                                                                                 | 1    | 463                                                                               | 1    | 2    | 597                                                                               |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0                                                                                 | 0    | 0    | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop | Free                                                                              | Free | Free | Free                                                                              |
| RT Channelized           | -                                                                                 | None | -                                                                                 | None | -    | None                                                                              |
| Storage Length           | 0                                                                                 | -    | -                                                                                 | -    | -    | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92   | 92                                                                                | 92   | 92   | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2    | 2                                                                                 | 2    | 2    | 2                                                                                 |
| Mvmt Flow                | 0                                                                                 | 1    | 503                                                                               | 1    | 2    | 649                                                                               |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1157   | 504    | 0      |
| Stage 1              | 504    | -      | -      |
| Stage 2              | 653    | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | -      |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | -      |
| Pot Cap-1 Maneuver   | 217    | 568    | -      |
| Stage 1              | 607    | -      | -      |
| Stage 2              | 518    | -      | -      |
| Platoon blocked, %   |        | -      | -      |
| Mov Cap-1 Maneuver   | 216    | 568    | -      |
| Mov Cap-2 Maneuver   | 216    | -      | -      |
| Stage 1              | 607    | -      | -      |
| Stage 2              | 516    | -      | -      |

| Approach          | WB    | NB | SB   |
|-------------------|-------|----|------|
| HCM Ctrl Dly, s/v | 11.35 | 0  | 0.03 |
| HCM LOS           | B     |    |      |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 568   | 6     |
| HCM Lane V/C Ratio    | -   | -        | 0.002 | 0.002 |
| HCM Ctrl Dly (s/v)    | -   | -        | 11.4  | 8.4   |
| HCM Lane LOS          | -   | -        | B     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0     | 0     |

| Intersection             |                                                                                   |      |                                                                                   |      |      |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 0.3                                                                               |      |                                                                                   |      |      |                                                                                   |
| Movement                 | WBL                                                                               | WBR  | NBT                                                                               | NBR  | SBL  | SBT                                                                               |
| Lane Configurations      |  |      |  |      |      |  |
| Traffic Vol, veh/h       | 4                                                                                 | 6    | 458                                                                               | 4    | 14   | 583                                                                               |
| Future Vol, veh/h        | 4                                                                                 | 6    | 458                                                                               | 4    | 14   | 583                                                                               |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0                                                                                 | 0    | 0    | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop | Free                                                                              | Free | Free | Free                                                                              |
| RT Channelized           | -                                                                                 | None | -                                                                                 | None | -    | None                                                                              |
| Storage Length           | 0                                                                                 | -    | -                                                                                 | -    | -    | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92   | 92                                                                                | 92   | 92   | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2    | 2                                                                                 | 2    | 2    | 2                                                                                 |
| Mvmt Flow                | 4                                                                                 | 7    | 498                                                                               | 4    | 15   | 634                                                                               |

| Major/Minor          | Minor1 | Major1 | Major2 |   |       |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 1164   | 500    | 0      | 0 | 502   |
| Stage 1              | 500    | -      | -      | - | -     |
| Stage 2              | 664    | -      | -      | - | -     |
| Critical Hdwy        | 6.42   | 6.22   | -      | - | 4.12  |
| Critical Hdwy Stg 1  | 5.42   | -      | -      | - | -     |
| Critical Hdwy Stg 2  | 5.42   | -      | -      | - | -     |
| Follow-up Hdwy       | 3.518  | 3.318  | -      | - | 2.218 |
| Pot Cap-1 Maneuver   | 215    | 571    | -      | - | 1062  |
| Stage 1              | 609    | -      | -      | - | -     |
| Stage 2              | 512    | -      | -      | - | -     |
| Platoon blocked, %   |        |        | -      | - | -     |
| Mov Cap-1 Maneuver   | 210    | 571    | -      | - | 1062  |
| Mov Cap-2 Maneuver   | 210    | -      | -      | - | -     |
| Stage 1              | 609    | -      | -      | - | -     |
| Stage 2              | 500    | -      | -      | - | -     |

| Approach          | WB    | NB | SB  |
|-------------------|-------|----|-----|
| HCM Ctrl Dly, s/v | 15.99 | 0  | 0.2 |
| HCM LOS           | C     |    |     |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 338   | 42    |
| HCM Lane V/C Ratio    | -   | -        | 0.032 | 0.014 |
| HCM Ctrl Dly (s/v)    | -   | -        | 16    | 8.4   |
| HCM Lane LOS          | -   | -        | C     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0.1   | 0     |

| Intersection             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                   |      |      |                                                                                     |      |
|--------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 2.1                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                   |      |      |                                                                                     |      |
| Movement                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL  | NBT                                                                               | NBR  | SBL  | SBT                                                                                 | SBR  |
| Lane Configurations      |  |  |  |  |  |  |      |  |      |      |  |      |
| Traffic Vol, veh/h       | 26                                                                                | 148                                                                               | 2                                                                                 | 0                                                                                 | 572                                                                               | 6                                                                                 | 9    | 2                                                                                 | 1    | 6    | 0                                                                                   | 85   |
| Future Vol, veh/h        | 26                                                                                | 148                                                                               | 2                                                                                 | 0                                                                                 | 572                                                                               | 6                                                                                 | 9    | 2                                                                                 | 1    | 6    | 0                                                                                   | 85   |
| Conflicting Peds, #/hr   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0    | 0                                                                                   | 0    |
| Sign Control             | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              | Stop | Stop                                                                              | Stop | Stop | Stop                                                                                | Stop |
| RT Channelized           | -                                                                                 | -                                                                                 | None                                                                              | -                                                                                 | -                                                                                 | None                                                                              | -    | -                                                                                 | None | -    | -                                                                                   | None |
| Storage Length           | 460                                                                               | -                                                                                 | 420                                                                               | 525                                                                               | -                                                                                 | 525                                                                               | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Veh in Median Storage, # | -                                                                                 | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Grade, %                 | -                                                                                 | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Peak Hour Factor         | 92                                                                                | 92                                                                                | 92                                                                                | 92                                                                                | 92                                                                                | 92                                                                                | 92   | 92                                                                                | 92   | 92   | 92                                                                                  | 92   |
| Heavy Vehicles, %        | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2    | 2                                                                                 | 2    | 2    | 2                                                                                   | 2    |
| Mvmt Flow                | 28                                                                                | 161                                                                               | 2                                                                                 | 0                                                                                 | 622                                                                               | 7                                                                                 | 10   | 2                                                                                 | 1    | 7    | 0                                                                                   | 92   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 628    | 0 | 0 | 163    | 0 | 0 | 839    | 846   | 161   | 840    | 841   | 622   |
| Stage 1              | -      | - | - | -      | - | - | 217    | 217   | -     | 622    | 622   | -     |
| Stage 2              | -      | - | - | -      | - | - | 622    | 628   | -     | 218    | 220   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 7.12   | 6.52  | 6.22  | 7.12   | 6.52  | 6.22  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 954    | - | - | 1416   | - | - | 285    | 299   | 884   | 285    | 301   | 487   |
| Stage 1              | -      | - | - | -      | - | - | 785    | 723   | -     | 475    | 479   | -     |
| Stage 2              | -      | - | - | -      | - | - | 475    | 476   | -     | 784    | 721   | -     |
| Platoon blocked, %   |        | - | - |        | - | - |        |       |       |        |       |       |
| Mov Cap-1 Maneuver   | 954    | - | - | 1416   | - | - | 224    | 290   | 884   | 274    | 292   | 487   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 224    | 290   | -     | 274    | 292   | -     |
| Stage 1              | -      | - | - | -      | - | - | 762    | 702   | -     | 475    | 479   | -     |
| Stage 2              | -      | - | - | -      | - | - | 384    | 476   | -     | 757    | 700   | -     |

| Approach          | EB   | WB | NB    | SB    |
|-------------------|------|----|-------|-------|
| HCM Ctrl Dly, s/v | 1.31 | 0  | 20.24 | 14.87 |
| HCM LOS           |      |    | C     | B     |

| Minor Lane/Major Mvmt | NBLn1 | EBL  | EBT | EBR | WBL  | WBT | WBR | SBLn1 |
|-----------------------|-------|------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h)      | 249   | 954  | -   | -   | 1416 | -   | -   | 463   |
| HCM Lane V/C Ratio    | 0.052 | 0.03 | -   | -   | -    | -   | -   | 0.214 |
| HCM Ctrl Dly (s/v)    | 20.2  | 8.9  | -   | -   | 0    | -   | -   | 14.9  |
| HCM Lane LOS          | C     | A    | -   | -   | A    | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0.2   | 0.1  | -   | -   | 0    | -   | -   | 0.8   |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.2  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 3    | 0    | 4    | 5    | 0    | 6    | 0    | 27   | 7    | 0    | 18   | 0    |
| Future Vol, veh/h        | 3    | 0    | 4    | 5    | 0    | 6    | 0    | 27   | 7    | 0    | 18   | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 3    | 0    | 4    | 5    | 0    | 7    | 0    | 29   | 8    | 0    | 20   | 0    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 49     | 57    | 20     | 53    | 53     | 33    | 20     | 0 | 0 | 37    | 0 | 0 |
| Stage 1              | 20     | 20    | -      | 33    | 33     | -     | -      | - | - | -     | - | - |
| Stage 2              | 29     | 37    | -      | 20    | 20     | -     | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.12   | 6.52  | 6.22   | 7.12  | 6.52   | 6.22  | 4.12   | - | - | 4.12  | - | - |
| Critical Hdwy Stg 1  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.518  | 4.018 | 3.318  | 3.518 | 4.018  | 3.318 | 2.218  | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver   | 951    | 835   | 1058   | 946   | 839    | 1040  | 1597   | - | - | 1574  | - | - |
| Stage 1              | 999    | 879   | -      | 983   | 867    | -     | -      | - | - | -     | - | - |
| Stage 2              | 988    | 864   | -      | 999   | 879    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - |       | - | - |
| Mov Cap-1 Maneuver   | 945    | 835   | 1058   | 942   | 839    | 1040  | 1597   | - | - | 1574  | - | - |
| Mov Cap-2 Maneuver   | 945    | 835   | -      | 942   | 839    | -     | -      | - | - | -     | - | - |
| Stage 1              | 999    | 879   | -      | 983   | 867    | -     | -      | - | - | -     | - | - |
| Stage 2              | 981    | 864   | -      | 995   | 879    | -     | -      | - | - | -     | - | - |

| Approach          | EB  |  | WB   |  | NB |  | SB |  |
|-------------------|-----|--|------|--|----|--|----|--|
| HCM Ctrl Dly, s/v | 8.6 |  | 8.67 |  | 0  |  | 0  |  |
| HCM LOS           | A   |  | A    |  |    |  |    |  |

| Minor Lane/Major Mvmt | NBL  | NBT | NBR | EBLn1WBLn1 | SBL   | SBT  | SBR |
|-----------------------|------|-----|-----|------------|-------|------|-----|
| Capacity (veh/h)      | 1597 | -   | -   | 1007       | 993   | 1574 | -   |
| HCM Lane V/C Ratio    | -    | -   | -   | 0.008      | 0.012 | -    | -   |
| HCM Ctrl Dly (s/v)    | 0    | -   | -   | 8.6        | 8.7   | 0    | -   |
| HCM Lane LOS          | A    | -   | -   | A          | A     | A    | -   |
| HCM 95th %tile Q(veh) | 0    | -   | -   | 0          | 0     | 0    | -   |

| Intersection             |                                                                                   |          |                                                                                   |      |       |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------|------|-------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 0                                                                                 |          |                                                                                   |      |       |                                                                                   |
| Movement                 | WBL                                                                               | WBR      | NBT                                                                               | NBR  | SBL   | SBT                                                                               |
| Lane Configurations      |  |          |  |      |       |  |
| Traffic Vol, veh/h       | 0                                                                                 | 1        | 582                                                                               | 0    | 0     | 446                                                                               |
| Future Vol, veh/h        | 0                                                                                 | 1        | 582                                                                               | 0    | 0     | 446                                                                               |
| Conflicting Peds, #/hr   | 0                                                                                 | 0        | 0                                                                                 | 0    | 0     | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop     | Free                                                                              | Free | Free  | Free                                                                              |
| RT Channelized           | -                                                                                 | None     | -                                                                                 | None | -     | None                                                                              |
| Storage Length           | 0                                                                                 | -        | -                                                                                 | -    | -     | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -        | 0                                                                                 | -    | -     | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -        | 0                                                                                 | -    | -     | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92       | 92                                                                                | 92   | 92    | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2        | 2                                                                                 | 2    | 2     | 2                                                                                 |
| Mvmt Flow                | 0                                                                                 | 1        | 633                                                                               | 0    | 0     | 485                                                                               |
| Major/Minor              | Minor1                                                                            | Major1   | Major2                                                                            |      |       |                                                                                   |
| Conflicting Flow All     | 1117                                                                              | 633      | 0                                                                                 | 0    | 633   | 0                                                                                 |
| Stage 1                  | 633                                                                               | -        | -                                                                                 | -    | -     | -                                                                                 |
| Stage 2                  | 485                                                                               | -        | -                                                                                 | -    | -     | -                                                                                 |
| Critical Hdwy            | 6.42                                                                              | 6.22     | -                                                                                 | -    | 4.12  | -                                                                                 |
| Critical Hdwy Stg 1      | 5.42                                                                              | -        | -                                                                                 | -    | -     | -                                                                                 |
| Critical Hdwy Stg 2      | 5.42                                                                              | -        | -                                                                                 | -    | -     | -                                                                                 |
| Follow-up Hdwy           | 3.518                                                                             | 3.318    | -                                                                                 | -    | 2.218 | -                                                                                 |
| Pot Cap-1 Maneuver       | 229                                                                               | 480      | -                                                                                 | -    | 950   | -                                                                                 |
| Stage 1                  | 529                                                                               | -        | -                                                                                 | -    | -     | -                                                                                 |
| Stage 2                  | 619                                                                               | -        | -                                                                                 | -    | -     | -                                                                                 |
| Platoon blocked, %       |                                                                                   |          | -                                                                                 | -    |       | -                                                                                 |
| Mov Cap-1 Maneuver       | 229                                                                               | 480      | -                                                                                 | -    | 950   | -                                                                                 |
| Mov Cap-2 Maneuver       | 229                                                                               | -        | -                                                                                 | -    | -     | -                                                                                 |
| Stage 1                  | 529                                                                               | -        | -                                                                                 | -    | -     | -                                                                                 |
| Stage 2                  | 619                                                                               | -        | -                                                                                 | -    | -     | -                                                                                 |
| Approach                 | WB                                                                                | NB       | SB                                                                                |      |       |                                                                                   |
| HCM Ctrl Dly, s/v        | 12.52                                                                             | 0        | 0                                                                                 |      |       |                                                                                   |
| HCM LOS                  | B                                                                                 |          |                                                                                   |      |       |                                                                                   |
| Minor Lane/Major Mvmt    | NBT                                                                               | NBRWBLn1 | SBL                                                                               | SBT  |       |                                                                                   |
| Capacity (veh/h)         | -                                                                                 | -        | 480                                                                               | 950  | -     |                                                                                   |
| HCM Lane V/C Ratio       | -                                                                                 | -        | 0.002                                                                             | -    | -     |                                                                                   |
| HCM Ctrl Dly (s/v)       | -                                                                                 | -        | 12.5                                                                              | 0    | -     |                                                                                   |
| HCM Lane LOS             | -                                                                                 | -        | B                                                                                 | A    | -     |                                                                                   |
| HCM 95th %tile Q(veh)    | -                                                                                 | -        | 0                                                                                 | 0    | -     |                                                                                   |

| Intersection             |                                                                                   |          |                                                                                   |       |       |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------|-------|-------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 0.2                                                                               |          |                                                                                   |       |       |                                                                                   |
| Movement                 | WBL                                                                               | WBR      | NBT                                                                               | NBR   | SBL   | SBT                                                                               |
| Lane Configurations      |  |          |  |       |       |  |
| Traffic Vol, veh/h       | 3                                                                                 | 10       | 585                                                                               | 0     | 4     | 446                                                                               |
| Future Vol, veh/h        | 3                                                                                 | 10       | 585                                                                               | 0     | 4     | 446                                                                               |
| Conflicting Peds, #/hr   | 0                                                                                 | 0        | 0                                                                                 | 0     | 0     | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop     | Free                                                                              | Free  | Free  | Free                                                                              |
| RT Channelized           | -                                                                                 | None     | -                                                                                 | None  | -     | None                                                                              |
| Storage Length           | 0                                                                                 | -        | -                                                                                 | -     | -     | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -        | 0                                                                                 | -     | -     | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -        | 0                                                                                 | -     | -     | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92       | 92                                                                                | 92    | 92    | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2        | 2                                                                                 | 2     | 2     | 2                                                                                 |
| Mvmt Flow                | 3                                                                                 | 11       | 636                                                                               | 0     | 4     | 485                                                                               |
| Major/Minor              | Minor1                                                                            | Major1   | Major2                                                                            |       |       |                                                                                   |
| Conflicting Flow All     | 1129                                                                              | 636      | 0                                                                                 | 0     | 636   | 0                                                                                 |
| Stage 1                  | 636                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Stage 2                  | 493                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Critical Hdwy            | 6.42                                                                              | 6.22     | -                                                                                 | -     | 4.12  | -                                                                                 |
| Critical Hdwy Stg 1      | 5.42                                                                              | -        | -                                                                                 | -     | -     | -                                                                                 |
| Critical Hdwy Stg 2      | 5.42                                                                              | -        | -                                                                                 | -     | -     | -                                                                                 |
| Follow-up Hdwy           | 3.518                                                                             | 3.318    | -                                                                                 | -     | 2.218 | -                                                                                 |
| Pot Cap-1 Maneuver       | 226                                                                               | 478      | -                                                                                 | -     | 948   | -                                                                                 |
| Stage 1                  | 527                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Stage 2                  | 614                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Platoon blocked, %       |                                                                                   |          | -                                                                                 | -     |       | -                                                                                 |
| Mov Cap-1 Maneuver       | 224                                                                               | 478      | -                                                                                 | -     | 948   | -                                                                                 |
| Mov Cap-2 Maneuver       | 224                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Stage 1                  | 527                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Stage 2                  | 610                                                                               | -        | -                                                                                 | -     | -     | -                                                                                 |
| Approach                 | WB                                                                                | NB       | SB                                                                                |       |       |                                                                                   |
| HCM Ctrl Dly, s/v        | 14.87                                                                             | 0        | 0.08                                                                              |       |       |                                                                                   |
| HCM LOS                  | B                                                                                 |          |                                                                                   |       |       |                                                                                   |
| Minor Lane/Major Mvmt    | NBT                                                                               | NBRWBLn1 | SBL                                                                               | SBT   |       |                                                                                   |
| Capacity (veh/h)         | -                                                                                 | -        | 379                                                                               | 16    | -     |                                                                                   |
| HCM Lane V/C Ratio       | -                                                                                 | -        | 0.037                                                                             | 0.005 | -     |                                                                                   |
| HCM Ctrl Dly (s/v)       | -                                                                                 | -        | 14.9                                                                              | 8.8   | 0     |                                                                                   |
| HCM Lane LOS             | -                                                                                 | -        | B                                                                                 | A     | A     |                                                                                   |
| HCM 95th %tile Q(veh)    | -                                                                                 | -        | 0.1                                                                               | 0     | -     |                                                                                   |

| Intersection             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                   |      |      |                                                                                     |      |
|--------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 1.8                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                   |      |      |                                                                                     |      |
| Movement                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL  | NBT                                                                               | NBR  | SBL  | SBT                                                                                 | SBR  |
| Lane Configurations      |  |  |  |  |  |  |      |  |      |      |  |      |
| Traffic Vol, veh/h       | 80                                                                                | 532                                                                               | 5                                                                                 | 2                                                                                 | 317                                                                               | 6                                                                                 | 2    | 0                                                                                 | 0    | 10   | 1                                                                                   | 70   |
| Future Vol, veh/h        | 80                                                                                | 532                                                                               | 5                                                                                 | 2                                                                                 | 317                                                                               | 6                                                                                 | 2    | 0                                                                                 | 0    | 10   | 1                                                                                   | 70   |
| Conflicting Peds, #/hr   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0    | 0                                                                                   | 0    |
| Sign Control             | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              | Stop | Stop                                                                              | Stop | Stop | Stop                                                                                | Stop |
| RT Channelized           | -                                                                                 | -                                                                                 | None                                                                              | -                                                                                 | -                                                                                 | None                                                                              | -    | -                                                                                 | None | -    | -                                                                                   | None |
| Storage Length           | 460                                                                               | -                                                                                 | 420                                                                               | 525                                                                               | -                                                                                 | 525                                                                               | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Veh in Median Storage, # | -                                                                                 | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Grade, %                 | -                                                                                 | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Peak Hour Factor         | 92                                                                                | 92                                                                                | 92                                                                                | 92                                                                                | 92                                                                                | 92                                                                                | 92   | 92                                                                                | 92   | 92   | 92                                                                                  | 92   |
| Heavy Vehicles, %        | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2    | 2                                                                                 | 2    | 2    | 2                                                                                   | 2    |
| Mvmt Flow                | 87                                                                                | 578                                                                               | 5                                                                                 | 2                                                                                 | 345                                                                               | 7                                                                                 | 2    | 0                                                                                 | 0    | 11   | 1                                                                                   | 76   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 351    | 0 | 0 | 584    | 0 | 0 | 1102   | 1108  | 578   | 1101   | 1107  | 345   |
| Stage 1              | -      | - | - | -      | - | - | 752    | 752   | -     | 349    | 349   | -     |
| Stage 2              | -      | - | - | -      | - | - | 349    | 355   | -     | 752    | 758   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 7.12   | 6.52  | 6.22  | 7.12   | 6.52  | 6.22  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1208   | - | - | 991    | - | - | 189    | 210   | 515   | 189    | 210   | 698   |
| Stage 1              | -      | - | - | -      | - | - | 402    | 418   | -     | 667    | 634   | -     |
| Stage 2              | -      | - | - | -      | - | - | 667    | 629   | -     | 402    | 415   | -     |
| Platoon blocked, %   |        | - | - |        | - | - |        |       |       |        |       |       |
| Mov Cap-1 Maneuver   | 1208   | - | - | 991    | - | - | 155    | 194   | 515   | 175    | 195   | 698   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 155    | 194   | -     | 175    | 195   | -     |
| Stage 1              | -      | - | - | -      | - | - | 373    | 388   | -     | 666    | 632   | -     |
| Stage 2              | -      | - | - | -      | - | - | 592    | 628   | -     | 373    | 386   | -     |

| Approach          | EB   |  |  | WB   |  |  | NB    |  |  | SB    |  |  |
|-------------------|------|--|--|------|--|--|-------|--|--|-------|--|--|
| HCM Ctrl Dly, s/v | 1.06 |  |  | 0.05 |  |  | 28.52 |  |  | 13.76 |  |  |
| HCM LOS           |      |  |  |      |  |  | D     |  |  | B     |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 155   | 1208  | -   | -   | 991   | -   | -   | 499   |
| HCM Lane V/C Ratio    | 0.014 | 0.072 | -   | -   | 0.002 | -   | -   | 0.177 |
| HCM Ctrl Dly (s/v)    | 28.5  | 8.2   | -   | -   | 8.6   | -   | -   | 13.8  |
| HCM Lane LOS          | D     | A     | -   | -   | A     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | 0.2   | -   | -   | 0     | -   | -   | 0.6   |

| Intersection             |        |                                                                                   |        |       |                                                                                   |       |        |                                                                                   |      |       |                                                                                     |      |
|--------------------------|--------|-----------------------------------------------------------------------------------|--------|-------|-----------------------------------------------------------------------------------|-------|--------|-----------------------------------------------------------------------------------|------|-------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 1.2    |                                                                                   |        |       |                                                                                   |       |        |                                                                                   |      |       |                                                                                     |      |
| Movement                 | EBL    | EBT                                                                               | EBR    | WBL   | WBT                                                                               | WBR   | NBL    | NBT                                                                               | NBR  | SBL   | SBT                                                                                 | SBR  |
| Lane Configurations      |        |  |        |       |  |       |        |  |      |       |  |      |
| Traffic Vol, veh/h       | 1      | 0                                                                                 | 0      | 2     | 0                                                                                 | 2     | 2      | 11                                                                                | 5    | 2     | 32                                                                                  | 2    |
| Future Vol, veh/h        | 1      | 0                                                                                 | 0      | 2     | 0                                                                                 | 2     | 2      | 11                                                                                | 5    | 2     | 32                                                                                  | 2    |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0      | 0     | 0                                                                                 | 0     | 0      | 0                                                                                 | 0    | 0     | 0                                                                                   | 0    |
| Sign Control             | Stop   | Stop                                                                              | Stop   | Stop  | Stop                                                                              | Stop  | Free   | Free                                                                              | Free | Free  | Free                                                                                | Free |
| RT Channelized           | -      | -                                                                                 | None   | -     | -                                                                                 | None  | -      | -                                                                                 | None | -     | -                                                                                   | None |
| Storage Length           | -      | -                                                                                 | -      | -     | -                                                                                 | -     | -      | -                                                                                 | -    | -     | -                                                                                   | -    |
| Veh in Median Storage, # | -      | 0                                                                                 | -      | -     | 0                                                                                 | -     | -      | 0                                                                                 | -    | -     | 0                                                                                   | -    |
| Grade, %                 | -      | 0                                                                                 | -      | -     | 0                                                                                 | -     | -      | 0                                                                                 | -    | -     | 0                                                                                   | -    |
| Peak Hour Factor         | 92     | 92                                                                                | 92     | 92    | 92                                                                                | 92    | 92     | 92                                                                                | 92   | 92    | 92                                                                                  | 92   |
| Heavy Vehicles, %        | 2      | 2                                                                                 | 2      | 2     | 2                                                                                 | 2     | 2      | 2                                                                                 | 2    | 2     | 2                                                                                   | 2    |
| Mvmt Flow                | 1      | 0                                                                                 | 0      | 2     | 0                                                                                 | 2     | 2      | 12                                                                                | 5    | 2     | 35                                                                                  | 2    |
|                          |        |                                                                                   |        |       |                                                                                   |       |        |                                                                                   |      |       |                                                                                     |      |
| Major/Minor              | Minor2 |                                                                                   | Minor1 |       | Major1                                                                            |       | Major2 |                                                                                   |      |       |                                                                                     |      |
| Conflicting Flow All     | 57     | 62                                                                                | 36     | 58    | 60                                                                                | 15    | 37     | 0                                                                                 | 0    | 17    | 0                                                                                   | 0    |
| Stage 1                  | 40     | 40                                                                                | -      | 19    | 19                                                                                | -     | -      | -                                                                                 | -    | -     | -                                                                                   | -    |
| Stage 2                  | 16     | 22                                                                                | -      | 39    | 41                                                                                | -     | -      | -                                                                                 | -    | -     | -                                                                                   | -    |
| Critical Hdwy            | 7.12   | 6.52                                                                              | 6.22   | 7.12  | 6.52                                                                              | 6.22  | 4.12   | -                                                                                 | -    | 4.12  | -                                                                                   | -    |
| Critical Hdwy Stg 1      | 6.12   | 5.52                                                                              | -      | 6.12  | 5.52                                                                              | -     | -      | -                                                                                 | -    | -     | -                                                                                   | -    |
| Critical Hdwy Stg 2      | 6.12   | 5.52                                                                              | -      | 6.12  | 5.52                                                                              | -     | -      | -                                                                                 | -    | -     | -                                                                                   | -    |
| Follow-up Hdwy           | 3.518  | 4.018                                                                             | 3.318  | 3.518 | 4.018                                                                             | 3.318 | 2.218  | -                                                                                 | -    | 2.218 | -                                                                                   | -    |
| Pot Cap-1 Maneuver       | 941    | 829                                                                               | 1037   | 938   | 831                                                                               | 1065  | 1574   | -                                                                                 | -    | 1600  | -                                                                                   | -    |
| Stage 1                  | 975    | 861                                                                               | -      | 1000  | 879                                                                               | -     | -      | -                                                                                 | -    | -     | -                                                                                   | -    |
| Stage 2                  | 1003   | 877                                                                               | -      | 976   | 861                                                                               | -     | -      | -                                                                                 | -    | -     | -                                                                                   | -    |
| Platoon blocked, %       |        |                                                                                   |        |       |                                                                                   |       |        | -                                                                                 | -    |       | -                                                                                   | -    |
| Mov Cap-1 Maneuver       | 936    | 827                                                                               | 1037   | 936   | 828                                                                               | 1065  | 1574   | -                                                                                 | -    | 1600  | -                                                                                   | -    |
| Mov Cap-2 Maneuver       | 936    | 827                                                                               | -      | 936   | 828                                                                               | -     | -      | -                                                                                 | -    | -     | -                                                                                   | -    |
| Stage 1                  | 973    | 860                                                                               | -      | 999   | 878                                                                               | -     | -      | -                                                                                 | -    | -     | -                                                                                   | -    |
| Stage 2                  | 1000   | 876                                                                               | -      | 975   | 859                                                                               | -     | -      | -                                                                                 | -    | -     | -                                                                                   | -    |
|                          |        |                                                                                   |        |       |                                                                                   |       |        |                                                                                   |      |       |                                                                                     |      |
|                          |        |                                                                                   |        |       |                                                                                   |       |        |                                                                                   |      |       |                                                                                     |      |
| Approach                 | EB     |                                                                                   | WB     |       | NB                                                                                |       | SB     |                                                                                   |      |       |                                                                                     |      |
| HCM Ctrl Dly, s/v        | 8.85   |                                                                                   | 8.63   |       | 0.81                                                                              |       | 0.4    |                                                                                   |      |       |                                                                                     |      |
| HCM LOS                  | A      |                                                                                   | A      |       |                                                                                   |       |        |                                                                                   |      |       |                                                                                     |      |
|                          |        |                                                                                   |        |       |                                                                                   |       |        |                                                                                   |      |       |                                                                                     |      |
| Minor Lane/Major Mvmt    | NBL    | NBT                                                                               | NBR    | EBLn1 | WBLn1                                                                             | SBL   | SBT    | SBR                                                                               |      |       |                                                                                     |      |
| Capacity (veh/h)         | 188    | -                                                                                 | -      | 936   | 996                                                                               | 99    | -      | -                                                                                 |      |       |                                                                                     |      |
| HCM Lane V/C Ratio       | 0.001  | -                                                                                 | -      | 0.001 | 0.004                                                                             | 0.001 | -      | -                                                                                 |      |       |                                                                                     |      |
| HCM Ctrl Dly (s/v)       | 7.3    | 0                                                                                 | -      | 8.9   | 8.6                                                                               | 7.3   | 0      | -                                                                                 |      |       |                                                                                     |      |
| HCM Lane LOS             | A      | A                                                                                 | -      | A     | A                                                                                 | A     | A      | -                                                                                 |      |       |                                                                                     |      |
| HCM 95th %tile Q(veh)    | 0      | -                                                                                 | -      | 0     | 0                                                                                 | 0     | -      | -                                                                                 |      |       |                                                                                     |      |

Intersection

Int Delay, s/veh 0

| Movement                 | WBL                                                                               | WBR  | NBT                                                                               | NBR  | SBL  | SBT                                                                               |
|--------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|
| Lane Configurations      |  |      |  |      |      |  |
| Traffic Vol, veh/h       | 0                                                                                 | 1    | 482                                                                               | 1    | 2    | 621                                                                               |
| Future Vol, veh/h        | 0                                                                                 | 1    | 482                                                                               | 1    | 2    | 621                                                                               |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0                                                                                 | 0    | 0    | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop | Free                                                                              | Free | Free | Free                                                                              |
| RT Channelized           | -                                                                                 | None | -                                                                                 | None | -    | None                                                                              |
| Storage Length           | 0                                                                                 | -    | -                                                                                 | -    | -    | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92   | 92                                                                                | 92   | 92   | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2    | 2                                                                                 | 2    | 2    | 2                                                                                 |
| Mvmt Flow                | 0                                                                                 | 1    | 524                                                                               | 1    | 2    | 675                                                                               |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1204   | 524    | 0      |
| Stage 1              | 524    | -      | -      |
| Stage 2              | 679    | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | -      |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | -      |
| Pot Cap-1 Maneuver   | 203    | 553    | -      |
| Stage 1              | 594    | -      | -      |
| Stage 2              | 504    | -      | -      |
| Platoon blocked, %   |        | -      | -      |
| Mov Cap-1 Maneuver   | 203    | 553    | -      |
| Mov Cap-2 Maneuver   | 203    | -      | -      |
| Stage 1              | 594    | -      | -      |
| Stage 2              | 502    | -      | -      |

| Approach          | WB    | NB | SB   |
|-------------------|-------|----|------|
| HCM Ctrl Dly, s/v | 11.52 | 0  | 0.03 |
| HCM LOS           | B     |    |      |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 553   | 6     |
| HCM Lane V/C Ratio    | -   | -        | 0.002 | 0.002 |
| HCM Ctrl Dly (s/v)    | -   | -        | 11.5  | 8.5   |
| HCM Lane LOS          | -   | -        | B     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0     | 0     |

| Intersection             |                                                                                   |          |                                                                                   |        |       |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------|--------|-------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 0.3                                                                               |          |                                                                                   |        |       |                                                                                   |
| Movement                 | WBL                                                                               | WBR      | NBT                                                                               | NBR    | SBL   | SBT                                                                               |
| Lane Configurations      |  |          |  |        |       |  |
| Traffic Vol, veh/h       | 4                                                                                 | 6        | 477                                                                               | 4      | 15    | 607                                                                               |
| Future Vol, veh/h        | 4                                                                                 | 6        | 477                                                                               | 4      | 15    | 607                                                                               |
| Conflicting Peds, #/hr   | 0                                                                                 | 0        | 0                                                                                 | 0      | 0     | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop     | Free                                                                              | Free   | Free  | Free                                                                              |
| RT Channelized           | -                                                                                 | None     | -                                                                                 | None   | -     | None                                                                              |
| Storage Length           | 0                                                                                 | -        | -                                                                                 | -      | -     | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -        | 0                                                                                 | -      | -     | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -        | 0                                                                                 | -      | -     | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92       | 92                                                                                | 92     | 92    | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2        | 2                                                                                 | 2      | 2     | 2                                                                                 |
| Mvmt Flow                | 4                                                                                 | 7        | 518                                                                               | 4      | 16    | 660                                                                               |
|                          |                                                                                   |          |                                                                                   |        |       |                                                                                   |
| Major/Minor              | Minor1                                                                            | Major1   |                                                                                   | Major2 |       |                                                                                   |
| Conflicting Flow All     | 1213                                                                              | 521      | 0                                                                                 | 0      | 523   | 0                                                                                 |
| Stage 1                  | 521                                                                               | -        | -                                                                                 | -      | -     | -                                                                                 |
| Stage 2                  | 692                                                                               | -        | -                                                                                 | -      | -     | -                                                                                 |
| Critical Hdwy            | 6.42                                                                              | 6.22     | -                                                                                 | -      | 4.12  | -                                                                                 |
| Critical Hdwy Stg 1      | 5.42                                                                              | -        | -                                                                                 | -      | -     | -                                                                                 |
| Critical Hdwy Stg 2      | 5.42                                                                              | -        | -                                                                                 | -      | -     | -                                                                                 |
| Follow-up Hdwy           | 3.518                                                                             | 3.318    | -                                                                                 | -      | 2.218 | -                                                                                 |
| Pot Cap-1 Maneuver       | 201                                                                               | 556      | -                                                                                 | -      | 1044  | -                                                                                 |
| Stage 1                  | 596                                                                               | -        | -                                                                                 | -      | -     | -                                                                                 |
| Stage 2                  | 497                                                                               | -        | -                                                                                 | -      | -     | -                                                                                 |
| Platoon blocked, %       |                                                                                   |          | -                                                                                 | -      |       | -                                                                                 |
| Mov Cap-1 Maneuver       | 196                                                                               | 556      | -                                                                                 | -      | 1044  | -                                                                                 |
| Mov Cap-2 Maneuver       | 196                                                                               | -        | -                                                                                 | -      | -     | -                                                                                 |
| Stage 1                  | 596                                                                               | -        | -                                                                                 | -      | -     | -                                                                                 |
| Stage 2                  | 484                                                                               | -        | -                                                                                 | -      | -     | -                                                                                 |
|                          |                                                                                   |          |                                                                                   |        |       |                                                                                   |
|                          |                                                                                   |          |                                                                                   |        |       |                                                                                   |
| Approach                 | WB                                                                                | NB       |                                                                                   | SB     |       |                                                                                   |
| HCM Ctrl Dly, s/v        | 16.63                                                                             | 0        |                                                                                   | 0.21   |       |                                                                                   |
| HCM LOS                  | C                                                                                 |          |                                                                                   |        |       |                                                                                   |
|                          |                                                                                   |          |                                                                                   |        |       |                                                                                   |
| Minor Lane/Major Mvmt    | NBT                                                                               | NBRWBLn1 |                                                                                   | SBL    | SBT   |                                                                                   |
| Capacity (veh/h)         | -                                                                                 | -        | 320                                                                               | 43     | -     |                                                                                   |
| HCM Lane V/C Ratio       | -                                                                                 | -        | 0.034                                                                             | 0.016  | -     |                                                                                   |
| HCM Ctrl Dly (s/v)       | -                                                                                 | -        | 16.6                                                                              | 8.5    | 0     |                                                                                   |
| HCM Lane LOS             | -                                                                                 | -        | C                                                                                 | A      | A     |                                                                                   |
| HCM 95th %tile Q(veh)    | -                                                                                 | -        | 0.1                                                                               | 0      | -     |                                                                                   |

Intersection

Int Delay, s/veh 2.3

| Movement                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL  | NBT                                                                               | NBR  | SBL  | SBT                                                                                 | SBR  |
|--------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------------------|------|
| Lane Configurations      |  |  |  |  |  |  |      |  |      |      |  |      |
| Traffic Vol, veh/h       | 28                                                                                | 148                                                                               | 2                                                                                 | 0                                                                                 | 572                                                                               | 7                                                                                 | 9    | 2                                                                                 | 1    | 7    | 0                                                                                   | 90   |
| Future Vol, veh/h        | 28                                                                                | 148                                                                               | 2                                                                                 | 0                                                                                 | 572                                                                               | 7                                                                                 | 9    | 2                                                                                 | 1    | 7    | 0                                                                                   | 90   |
| Conflicting Peds, #/hr   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0    | 0                                                                                   | 0    |
| Sign Control             | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              | Stop | Stop                                                                              | Stop | Stop | Stop                                                                                | Stop |
| RT Channelized           | -                                                                                 | -                                                                                 | None                                                                              | -                                                                                 | -                                                                                 | None                                                                              | -    | -                                                                                 | None | -    | -                                                                                   | None |
| Storage Length           | 460                                                                               | -                                                                                 | 420                                                                               | 525                                                                               | -                                                                                 | 525                                                                               | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Veh in Median Storage, # | -                                                                                 | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Grade, %                 | -                                                                                 | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Peak Hour Factor         | 92                                                                                | 92                                                                                | 92                                                                                | 92                                                                                | 92                                                                                | 92                                                                                | 92   | 92                                                                                | 92   | 92   | 92                                                                                  | 92   |
| Heavy Vehicles, %        | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2    | 2                                                                                 | 2    | 2    | 2                                                                                   | 2    |
| Mvmt Flow                | 30                                                                                | 161                                                                               | 2                                                                                 | 0                                                                                 | 622                                                                               | 8                                                                                 | 10   | 2                                                                                 | 1    | 8    | 0                                                                                   | 98   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 629    | 0 | 0 | 163    | 0 | 0 | 843    | 851   | 161   | 845    | 846   | 622   |
| Stage 1              | -      | - | - | -      | - | - | 222    | 222   | -     | 622    | 622   | -     |
| Stage 2              | -      | - | - | -      | - | - | 622    | 629   | -     | 223    | 224   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 7.12   | 6.52  | 6.22  | 7.12   | 6.52  | 6.22  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 953    | - | - | 1416   | - | - | 283    | 297   | 884   | 283    | 299   | 487   |
| Stage 1              | -      | - | - | -      | - | - | 781    | 720   | -     | 475    | 479   | -     |
| Stage 2              | -      | - | - | -      | - | - | 475    | 475   | -     | 780    | 718   | -     |
| Platoon blocked, %   |        | - | - |        | - | - |        |       |       |        |       |       |
| Mov Cap-1 Maneuver   | 953    | - | - | 1416   | - | - | 219    | 288   | 884   | 271    | 290   | 487   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 219    | 288   | -     | 271    | 290   | -     |
| Stage 1              | -      | - | - | -      | - | - | 756    | 697   | -     | 475    | 479   | -     |
| Stage 2              | -      | - | - | -      | - | - | 379    | 475   | -     | 752    | 695   | -     |

| Approach          | EB  | WB | NB    | SB    |
|-------------------|-----|----|-------|-------|
| HCM Ctrl Dly, s/v | 1.4 | 0  | 20.58 | 15.12 |
| HCM LOS           |     |    | C     | C     |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL  | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h)      | 244   | 953   | -   | -   | 1416 | -   | -   | 460   |
| HCM Lane V/C Ratio    | 0.053 | 0.032 | -   | -   | -    | -   | -   | 0.229 |
| HCM Ctrl Dly (s/v)    | 20.6  | 8.9   | -   | -   | 0    | -   | -   | 15.1  |
| HCM Lane LOS          | C     | A     | -   | -   | A    | -   | -   | C     |
| HCM 95th %tile Q(veh) | 0.2   | 0.1   | -   | -   | 0    | -   | -   | 0.9   |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 4    | 0    | 10   | 5    | 0    | 6    | 3    | 27   | 7    | 0    | 18   | 0    |
| Future Vol, veh/h        | 4    | 0    | 10   | 5    | 0    | 6    | 3    | 27   | 7    | 0    | 18   | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 4    | 0    | 11   | 5    | 0    | 7    | 3    | 29   | 8    | 0    | 20   | 0    |

| Major/Minor          | Minor2 |       | Minor1 |       | Major1 |       | Major2 |   |   |       |   |   |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 55     | 63    | 20     | 59    | 59     | 33    | 20     | 0 | 0 | 37    | 0 | 0 |
| Stage 1              | 20     | 20    | -      | 40    | 40     | -     | -      | - | - | -     | - | - |
| Stage 2              | 36     | 43    | -      | 20    | 20     | -     | -      | - | - | -     | - | - |
| Critical Hdwy        | 7.12   | 6.52  | 6.22   | 7.12  | 6.52   | 6.22  | 4.12   | - | - | 4.12  | - | - |
| Critical Hdwy Stg 1  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Critical Hdwy Stg 2  | 6.12   | 5.52  | -      | 6.12  | 5.52   | -     | -      | - | - | -     | - | - |
| Follow-up Hdwy       | 3.518  | 4.018 | 3.318  | 3.518 | 4.018  | 3.318 | 2.218  | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver   | 942    | 828   | 1058   | 937   | 832    | 1040  | 1597   | - | - | 1574  | - | - |
| Stage 1              | 999    | 879   | -      | 975   | 862    | -     | -      | - | - | -     | - | - |
| Stage 2              | 980    | 859   | -      | 999   | 879    | -     | -      | - | - | -     | - | - |
| Platoon blocked, %   |        |       |        |       |        |       |        | - | - |       | - | - |
| Mov Cap-1 Maneuver   | 934    | 826   | 1058   | 925   | 830    | 1040  | 1597   | - | - | 1574  | - | - |
| Mov Cap-2 Maneuver   | 934    | 826   | -      | 925   | 830    | -     | -      | - | - | -     | - | - |
| Stage 1              | 999    | 879   | -      | 973   | 860    | -     | -      | - | - | -     | - | - |
| Stage 2              | 972    | 857   | -      | 989   | 879    | -     | -      | - | - | -     | - | - |

| Approach          | EB   |  | WB  |  | NB   |  | SB |  |
|-------------------|------|--|-----|--|------|--|----|--|
| HCM Ctrl Dly, s/v | 8.58 |  | 8.7 |  | 0.59 |  | 0  |  |
| HCM LOS           | A    |  | A   |  |      |  |    |  |

| Minor Lane/Major Mvmt | NBL   | NBT | NBR | EBLn1WBLn1 | SBL   | SBT  | SBR |
|-----------------------|-------|-----|-----|------------|-------|------|-----|
| Capacity (veh/h)      | 140   | -   | -   | 1020       | 985   | 1574 | -   |
| HCM Lane V/C Ratio    | 0.002 | -   | -   | 0.015      | 0.012 | -    | -   |
| HCM Ctrl Dly (s/v)    | 7.3   | 0   | -   | 8.6        | 8.7   | 0    | -   |
| HCM Lane LOS          | A     | A   | -   | A          | A     | A    | -   |
| HCM 95th %tile Q(veh) | 0     | -   | -   | 0          | 0     | 0    | -   |

Intersection

Int Delay, s/veh 0.2

| Movement                 | WBL                                                                               | WBR  | NBT                                                                               | NBR  | SBL  | SBT                                                                               |
|--------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|
| Lane Configurations      |  |      |  |      |      |  |
| Traffic Vol, veh/h       | 3                                                                                 | 11   | 585                                                                               | 0    | 4    | 446                                                                               |
| Future Vol, veh/h        | 3                                                                                 | 11   | 585                                                                               | 0    | 4    | 446                                                                               |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0                                                                                 | 0    | 0    | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop | Free                                                                              | Free | Free | Free                                                                              |
| RT Channelized           | -                                                                                 | None | -                                                                                 | None | -    | None                                                                              |
| Storage Length           | 0                                                                                 | -    | -                                                                                 | -    | -    | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92   | 92                                                                                | 92   | 92   | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2    | 2                                                                                 | 2    | 2    | 2                                                                                 |
| Mvmt Flow                | 3                                                                                 | 12   | 636                                                                               | 0    | 4    | 485                                                                               |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1129   | 636    | 0      |
| Stage 1              | 636    | -      | -      |
| Stage 2              | 493    | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | -      |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | -      |
| Pot Cap-1 Maneuver   | 226    | 478    | -      |
| Stage 1              | 527    | -      | -      |
| Stage 2              | 614    | -      | -      |
| Platoon blocked, %   |        | -      | -      |
| Mov Cap-1 Maneuver   | 224    | 478    | -      |
| Mov Cap-2 Maneuver   | 224    | -      | -      |
| Stage 1              | 527    | -      | -      |
| Stage 2              | 610    | -      | -      |

| Approach          | WB    | NB | SB   |
|-------------------|-------|----|------|
| HCM Ctrl Dly, s/v | 14.75 | 0  | 0.08 |
| HCM LOS           | B     |    |      |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL  | SBT   |
|-----------------------|-----|----------|------|-------|
| Capacity (veh/h)      | -   | -        | 385  | 16    |
| HCM Lane V/C Ratio    | -   | -        | 0.04 | 0.005 |
| HCM Ctrl Dly (s/v)    | -   | -        | 14.7 | 8.8   |
| HCM Lane LOS          | -   | -        | B    | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0.1  | 0     |

| Intersection             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                   |      |      |                                                                                     |      |
|--------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 1.9                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |      |                                                                                   |      |      |                                                                                     |      |
| Movement                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL  | NBT                                                                               | NBR  | SBL  | SBT                                                                                 | SBR  |
| Lane Configurations      |  |  |  |  |  |  |      |  |      |      |  |      |
| Traffic Vol, veh/h       | 86                                                                                | 532                                                                               | 5                                                                                 | 2                                                                                 | 317                                                                               | 7                                                                                 | 2    | 0                                                                                 | 0    | 11   | 1                                                                                   | 73   |
| Future Vol, veh/h        | 86                                                                                | 532                                                                               | 5                                                                                 | 2                                                                                 | 317                                                                               | 7                                                                                 | 2    | 0                                                                                 | 0    | 11   | 1                                                                                   | 73   |
| Conflicting Peds, #/hr   | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0    | 0                                                                                   | 0    |
| Sign Control             | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              | Free                                                                              | Stop | Stop                                                                              | Stop | Stop | Stop                                                                                | Stop |
| RT Channelized           | -                                                                                 | -                                                                                 | None                                                                              | -                                                                                 | -                                                                                 | None                                                                              | -    | -                                                                                 | None | -    | -                                                                                   | None |
| Storage Length           | 460                                                                               | -                                                                                 | 420                                                                               | 525                                                                               | -                                                                                 | 525                                                                               | -    | -                                                                                 | -    | -    | -                                                                                   | -    |
| Veh in Median Storage, # | -                                                                                 | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Grade, %                 | -                                                                                 | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                   | -    |
| Peak Hour Factor         | 92                                                                                | 92                                                                                | 92                                                                                | 92                                                                                | 92                                                                                | 92                                                                                | 92   | 92                                                                                | 92   | 92   | 92                                                                                  | 92   |
| Heavy Vehicles, %        | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2    | 2                                                                                 | 2    | 2    | 2                                                                                   | 2    |
| Mvmt Flow                | 93                                                                                | 578                                                                               | 5                                                                                 | 2                                                                                 | 345                                                                               | 8                                                                                 | 2    | 0                                                                                 | 0    | 12   | 1                                                                                   | 79   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |       |       | Minor2 |       |       |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 352    | 0 | 0 | 584    | 0 | 0 | 1115   | 1122  | 578   | 1114   | 1120  | 345   |
| Stage 1              | -      | - | - | -      | - | - | 765    | 765   | -     | 349    | 349   | -     |
| Stage 2              | -      | - | - | -      | - | - | 349    | 357   | -     | 765    | 771   | -     |
| Critical Hdwy        | 4.12   | - | - | 4.12   | - | - | 7.12   | 6.52  | 6.22  | 7.12   | 6.52  | 6.22  |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.12   | 5.52  | -     | 6.12   | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | - | - | 2.218  | - | - | 3.518  | 4.018 | 3.318 | 3.518  | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1207   | - | - | 991    | - | - | 185    | 206   | 515   | 185    | 207   | 698   |
| Stage 1              | -      | - | - | -      | - | - | 396    | 412   | -     | 667    | 634   | -     |
| Stage 2              | -      | - | - | -      | - | - | 667    | 629   | -     | 396    | 410   | -     |
| Platoon blocked, %   |        | - | - |        | - | - |        |       |       |        |       |       |
| Mov Cap-1 Maneuver   | 1207   | - | - | 991    | - | - | 150    | 190   | 515   | 171    | 190   | 698   |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 150    | 190   | -     | 171    | 190   | -     |
| Stage 1              | -      | - | - | -      | - | - | 365    | 380   | -     | 666    | 632   | -     |
| Stage 2              | -      | - | - | -      | - | - | 589    | 627   | -     | 365    | 378   | -     |

| Approach          | EB   |  |  | WB   |  |  | NB    |  |  | SB   |  |  |
|-------------------|------|--|--|------|--|--|-------|--|--|------|--|--|
| HCM Ctrl Dly, s/v | 1.14 |  |  | 0.05 |  |  | 29.29 |  |  | 14.1 |  |  |
| HCM LOS           |      |  |  |      |  |  | D     |  |  | B    |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 150   | 1207  | -   | -   | 991   | -   | -   | 488   |
| HCM Lane V/C Ratio    | 0.014 | 0.077 | -   | -   | 0.002 | -   | -   | 0.189 |
| HCM Ctrl Dly (s/v)    | 29.3  | 8.2   | -   | -   | 8.6   | -   | -   | 14.1  |
| HCM Lane LOS          | D     | A     | -   | -   | A     | -   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | 0.3   | -   | -   | 0     | -   | -   | 0.7   |

| Intersection             |        |                                                                                   |        |       |                                                                                   |       |        |                                                                                   |      |       |                                                                                     |      |
|--------------------------|--------|-----------------------------------------------------------------------------------|--------|-------|-----------------------------------------------------------------------------------|-------|--------|-----------------------------------------------------------------------------------|------|-------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 2.3    |                                                                                   |        |       |                                                                                   |       |        |                                                                                   |      |       |                                                                                     |      |
| Movement                 | EBL    | EBT                                                                               | EBR    | WBL   | WBT                                                                               | WBR   | NBL    | NBT                                                                               | NBR  | SBL   | SBT                                                                                 | SBR  |
| Lane Configurations      |        |  |        |       |  |       |        |  |      |       |  |      |
| Traffic Vol, veh/h       | 2      | 0                                                                                 | 4      | 2     | 0                                                                                 | 2     | 9      | 11                                                                                | 5    | 2     | 32                                                                                  | 3    |
| Future Vol, veh/h        | 2      | 0                                                                                 | 4      | 2     | 0                                                                                 | 2     | 9      | 11                                                                                | 5    | 2     | 32                                                                                  | 3    |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0      | 0     | 0                                                                                 | 0     | 0      | 0                                                                                 | 0    | 0     | 0                                                                                   | 0    |
| Sign Control             | Stop   | Stop                                                                              | Stop   | Stop  | Stop                                                                              | Stop  | Free   | Free                                                                              | Free | Free  | Free                                                                                | Free |
| RT Channelized           | -      | -                                                                                 | None   | -     | -                                                                                 | None  | -      | -                                                                                 | None | -     | -                                                                                   | None |
| Storage Length           | -      | -                                                                                 | -      | -     | -                                                                                 | -     | -      | -                                                                                 | -    | -     | -                                                                                   | -    |
| Veh in Median Storage, # | -      | 0                                                                                 | -      | -     | 0                                                                                 | -     | -      | 0                                                                                 | -    | -     | 0                                                                                   | -    |
| Grade, %                 | -      | 0                                                                                 | -      | -     | 0                                                                                 | -     | -      | 0                                                                                 | -    | -     | 0                                                                                   | -    |
| Peak Hour Factor         | 92     | 92                                                                                | 92     | 92    | 92                                                                                | 92    | 92     | 92                                                                                | 92   | 92    | 92                                                                                  | 92   |
| Heavy Vehicles, %        | 2      | 2                                                                                 | 2      | 2     | 2                                                                                 | 2     | 2      | 2                                                                                 | 2    | 2     | 2                                                                                   | 2    |
| Mvmt Flow                | 2      | 0                                                                                 | 4      | 2     | 0                                                                                 | 2     | 10     | 12                                                                                | 5    | 2     | 35                                                                                  | 3    |
|                          |        |                                                                                   |        |       |                                                                                   |       |        |                                                                                   |      |       |                                                                                     |      |
| Major/Minor              | Minor2 |                                                                                   | Minor1 |       | Major1                                                                            |       | Major2 |                                                                                   |      |       |                                                                                     |      |
| Conflicting Flow All     | 72     | 78                                                                                | 36     | 73    | 77                                                                                | 15    | 38     | 0                                                                                 | 0    | 17    | 0                                                                                   | 0    |
| Stage 1                  | 41     | 41                                                                                | -      | 34    | 34                                                                                | -     | -      | -                                                                                 | -    | -     | -                                                                                   | -    |
| Stage 2                  | 32     | 37                                                                                | -      | 39    | 42                                                                                | -     | -      | -                                                                                 | -    | -     | -                                                                                   | -    |
| Critical Hdwy            | 7.12   | 6.52                                                                              | 6.22   | 7.12  | 6.52                                                                              | 6.22  | 4.12   | -                                                                                 | -    | 4.12  | -                                                                                   | -    |
| Critical Hdwy Stg 1      | 6.12   | 5.52                                                                              | -      | 6.12  | 5.52                                                                              | -     | -      | -                                                                                 | -    | -     | -                                                                                   | -    |
| Critical Hdwy Stg 2      | 6.12   | 5.52                                                                              | -      | 6.12  | 5.52                                                                              | -     | -      | -                                                                                 | -    | -     | -                                                                                   | -    |
| Follow-up Hdwy           | 3.518  | 4.018                                                                             | 3.318  | 3.518 | 4.018                                                                             | 3.318 | 2.218  | -                                                                                 | -    | 2.218 | -                                                                                   | -    |
| Pot Cap-1 Maneuver       | 919    | 813                                                                               | 1036   | 917   | 814                                                                               | 1065  | 1572   | -                                                                                 | -    | 1600  | -                                                                                   | -    |
| Stage 1                  | 974    | 861                                                                               | -      | 982   | 866                                                                               | -     | -      | -                                                                                 | -    | -     | -                                                                                   | -    |
| Stage 2                  | 985    | 864                                                                               | -      | 976   | 860                                                                               | -     | -      | -                                                                                 | -    | -     | -                                                                                   | -    |
| Platoon blocked, %       |        |                                                                                   |        |       |                                                                                   |       |        | -                                                                                 | -    |       | -                                                                                   | -    |
| Mov Cap-1 Maneuver       | 910    | 806                                                                               | 1036   | 906   | 807                                                                               | 1065  | 1572   | -                                                                                 | -    | 1600  | -                                                                                   | -    |
| Mov Cap-2 Maneuver       | 910    | 806                                                                               | -      | 906   | 807                                                                               | -     | -      | -                                                                                 | -    | -     | -                                                                                   | -    |
| Stage 1                  | 973    | 860                                                                               | -      | 976   | 861                                                                               | -     | -      | -                                                                                 | -    | -     | -                                                                                   | -    |
| Stage 2                  | 977    | 859                                                                               | -      | 970   | 858                                                                               | -     | -      | -                                                                                 | -    | -     | -                                                                                   | -    |
|                          |        |                                                                                   |        |       |                                                                                   |       |        |                                                                                   |      |       |                                                                                     |      |
|                          |        |                                                                                   |        |       |                                                                                   |       |        |                                                                                   |      |       |                                                                                     |      |
| Approach                 | EB     |                                                                                   | WB     |       | NB                                                                                |       | SB     |                                                                                   |      |       |                                                                                     |      |
| HCM Ctrl Dly, s/v        | 8.66   |                                                                                   | 8.69   |       | 2.63                                                                              |       | 0.39   |                                                                                   |      |       |                                                                                     |      |
| HCM LOS                  | A      |                                                                                   | A      |       |                                                                                   |       |        |                                                                                   |      |       |                                                                                     |      |
|                          |        |                                                                                   |        |       |                                                                                   |       |        |                                                                                   |      |       |                                                                                     |      |
| Minor Lane/Major Mvmt    | NBL    | NBT                                                                               | NBR    | EBLn1 | WBLn1                                                                             | SBL   | SBT    | SBR                                                                               |      |       |                                                                                     |      |
| Capacity (veh/h)         | 610    | -                                                                                 | -      | 990   | 979                                                                               | 96    | -      | -                                                                                 |      |       |                                                                                     |      |
| HCM Lane V/C Ratio       | 0.006  | -                                                                                 | -      | 0.007 | 0.004                                                                             | 0.001 | -      | -                                                                                 |      |       |                                                                                     |      |
| HCM Ctrl Dly (s/v)       | 7.3    | 0                                                                                 | -      | 8.7   | 8.7                                                                               | 7.3   | 0      | -                                                                                 |      |       |                                                                                     |      |
| HCM Lane LOS             | A      | A                                                                                 | -      | A     | A                                                                                 | A     | A      | -                                                                                 |      |       |                                                                                     |      |
| HCM 95th %tile Q(veh)    | 0      | -                                                                                 | -      | 0     | 0                                                                                 | 0     | -      | -                                                                                 |      |       |                                                                                     |      |

Intersection

Int Delay, s/veh 0.3

| Movement                 | WBL                                                                               | WBR  | NBT                                                                               | NBR  | SBL  | SBT                                                                               |
|--------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|------|------|-----------------------------------------------------------------------------------|
| Lane Configurations      |  |      |  |      |      |  |
| Traffic Vol, veh/h       | 4                                                                                 | 7    | 477                                                                               | 4    | 16   | 607                                                                               |
| Future Vol, veh/h        | 4                                                                                 | 7    | 477                                                                               | 4    | 16   | 607                                                                               |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0                                                                                 | 0    | 0    | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop | Free                                                                              | Free | Free | Free                                                                              |
| RT Channelized           | -                                                                                 | None | -                                                                                 | None | -    | None                                                                              |
| Storage Length           | 0                                                                                 | -    | -                                                                                 | -    | -    | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -    | 0                                                                                 | -    | -    | 0                                                                                 |
| Peak Hour Factor         | 92                                                                                | 92   | 92                                                                                | 92   | 92   | 92                                                                                |
| Heavy Vehicles, %        | 2                                                                                 | 2    | 2                                                                                 | 2    | 2    | 2                                                                                 |
| Mvmt Flow                | 4                                                                                 | 8    | 518                                                                               | 4    | 17   | 660                                                                               |

| Major/Minor          | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1215   | 521    | 0      |
| Stage 1              | 521    | -      | -      |
| Stage 2              | 695    | -      | -      |
| Critical Hdwy        | 6.42   | 6.22   | -      |
| Critical Hdwy Stg 1  | 5.42   | -      | -      |
| Critical Hdwy Stg 2  | 5.42   | -      | -      |
| Follow-up Hdwy       | 3.518  | 3.318  | -      |
| Pot Cap-1 Maneuver   | 200    | 556    | -      |
| Stage 1              | 596    | -      | -      |
| Stage 2              | 495    | -      | -      |
| Platoon blocked, %   |        | -      | -      |
| Mov Cap-1 Maneuver   | 195    | 556    | -      |
| Mov Cap-2 Maneuver   | 195    | -      | -      |
| Stage 1              | 596    | -      | -      |
| Stage 2              | 482    | -      | -      |

| Approach          | WB    | NB | SB   |
|-------------------|-------|----|------|
| HCM Ctrl Dly, s/v | 16.24 | 0  | 0.22 |
| HCM LOS           | C     |    |      |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL   | SBT   |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h)      | -   | -        | 332   | 46    |
| HCM Lane V/C Ratio    | -   | -        | 0.036 | 0.017 |
| HCM Ctrl Dly (s/v)    | -   | -        | 16.2  | 8.5   |
| HCM Lane LOS          | -   | -        | C     | A     |
| HCM 95th %tile Q(veh) | -   | -        | 0.1   | 0.1   |

## **APPENDIX D**

### **Sight Distance Exhibit**



Provide sight distance  
both directions

Updated.

STATE HIGHWAY 83 & NEEDLES SUBDIVISION  
Sight Distance Exhibit



SM ROCHA, LLC  
Traffic and Transportation Engineering

June 2026

