### LSC TRANSPORTATION CONSULTANTS, INC.



1889 York Street **Denver, CO 80206** (303) 333-1105 FAX (303) 333-1107

E-mail: lsc@lscdenver.com

December 12, 2018

Mr. Kurtis Jones Starwood Land Ventures 385 Inverness Parkway, Suite 310 Englewood, CO 80112

> Re: Sunstone Village PA 47, 51 & 52 Traffic Impact Analysis Castle Rock, CO LSC #170081

Dear Mr. Jones:

In response to your request, LSC Transportation Consultants, Inc. has prepared this updated traffic impact analysis for the proposed Sunstone Village PA 47, 51 & 52 portion of the overall Terrain master planned development to address Town comments. As shown on Figure 1, the site is located south of State Highway (SH) 86 on the east side of Castle Rock, Colorado.

#### REPORT CONTENTS

The report contains the following: the existing roadway and traffic conditions in the vicinity of the site including the lane geometries, traffic controls, posted speed limits, etc.; the existing weekday peak-hour traffic volumes; the existing daily traffic volumes in the area; the typical weekday site-generated traffic volume projections for the site; the assignment of the projected traffic volumes to the area roadways; the projected site buildout and long-term background and resulting total traffic volumes on the area roadways; the site's projected traffic impacts; and any recommended roadway improvements to mitigate the growth in background traffic and from trips generated by the site.

### LAND USE AND ACCESS

The site is proposed to include 74 duplex or paired dwelling units and 187 single-family detached dwelling units. Access is proposed to Ridge Road and Enderud Boulevard as shown in the conceptual site plan in Figure 2.

### ROADWAY AND TRAFFIC CONDITIONS

### **Area Roadways**

The major roadways in the site's vicinity are shown on Figure 1 and are described below.

- **State Highway (SH) 86** is an east-west, two-lane arterial roadway north of the site. The intersection with Founders Parkway is signalized with auxiliary turn lanes. The posted speed limit is 55 mph in the vicinity of the site. It is classified by CDOT as NR-A (Non-Rural Principal Highway). The section adjacent to the site is planned as a four-lane cross-section by 2040. The Town of Castle Rock plans to replace the traffic signal with a modern two-lane roundabout by 2022.
- **N. Ridge Road** is a north-south, two-lane arterial roadway southwest of the site. The intersection with SH 86/5<sup>th</sup> Street is signalized with auxiliary lanes and the intersection with E. Enderud Boulevard is controlled by a roundabout. The posted speed limit in the vicinity of the site is 45 mph. The Town of Castle Rock has a CIP project under design to widen to a four-lane section south to Plum Creek Parkway by 2022.
- **E. Enderud Boulevard** is a four-lane collector roadway south of the site. The intersection with N. Ridge Road is controlled by a roundabout. The posted speed limit in the vicinity of the site is 35 mph.

### **Existing Traffic Conditions**

Figure 3 shows the existing traffic volumes, lane geometry, posted speed limits, and traffic control in the site's vicinity on a typical weekday. The weekday peak-hour traffic volumes and average daily traffic volumes are from the attached traffic counts conducted by Counter Measures in January and September, 2017 and October, 2018.

### 2023 and 2040 Background Traffic

Figure 4 shows the estimated 2023 background traffic and Figure 5 shows the estimated 2040 background traffic. The 2023 background traffic is based on the projections in the *Castle Rock Transportation Master Plan* (TMP). The projections in Figure 5 are based on the 2040 total traffic volume from Figure 9 of the 2016 *Founders Crossing TIA* by LSC less the trips from the originally assumed land use for the Sunstone Village site which is about a third more dense than what is currently being proposed. This was done at the direction of Town staff and results in a long-term projection above those estimated in the Town's *Transportation Master Plan* (TMP).

### Existing, 2023, and 2040 Background Levels of Service

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection. Level of service is indicated on a scale from "A" to "F." LOS A is indicative of little congestion or delay and LOS F is indicative of a high level of congestion or delay. Attached are specific level of service definitions for signalized and unsignalized intersections.

The intersections in Figures 3, 4 and 5 were analyzed to determine the existing, 2023, and 2040 background levels of service using Synchro, HCS, and/or Rodel. Table 1 shows the level of service analysis results. The level of service reports are attached.

• SH 86/Ridge Road/5<sup>th</sup> Street/Founders Parkway: This signalized intersection currently operates at an overall LOS "C" during both morning and afternoon peak-hours. By 2023,

it is expected to be converted to a two-lane roundabout and as such is expected to operate at LOS "A" during both peak-hours through 2023. In 2040, it is expected to operate at LOS "C" or better during both peak-hours , but the southbound approach is expected to operate at LOS "F" in the afternoon peak-hour.

• **Ridge Road/E. Enderud Boulevard:** This roundabout controlled intersection currently operates at an overall LOS "B" during the morning peak-hour and LOS "A" during the afternoon peak-hour and is expected to operate at LOS "A" during both peak-hours through 2040.

#### TRIP GENERATION

Table 2 shows the estimated average weekday, morning peak-hour, and afternoon peak-hour trip generation for the proposed site based on the rates from *Trip Generation*, 10<sup>th</sup> Edition, 2017 by the Institute of Transportation Engineers (ITE).

The site is projected to generate about 2,307 vehicle-trips on the average weekday, with about half entering and half exiting during a 24-hour period. During the morning peak-hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 43 vehicles would enter and about 130 vehicles would exit the site. During the afternoon peak-hour, which generally occurs for one hour between 4:00 and 6:00 p.m., about 143 vehicles would enter and about 75 vehicles would exit.

### TRIP DISTRIBUTION

Figure 6 shows the estimated directional distribution of site-generated traffic volumes on the area roadways. The estimates were based on the location of the site with respect to the regional population, employment, activity centers, and the site's proposed land use.

### TRIP ASSIGNMENT

Figure 7 shows the estimated site-generated traffic volumes based on the directional distribution percentages (from Figure 6) and the trip generation estimate (from Table 2).

### 2023 AND 2040 TOTAL TRAFFIC

Figure 8a shows the 2023 total traffic which is the sum of the 2023 background traffic volumes (from Figure 4) and the site-generated traffic volumes (from Figure 7). Figure 8b shows the recommended 2023 lane geometry and traffic control.

Figure 9a shows the 2040 total traffic which is the sum of the 2040 background traffic volumes (from Figure 5) and the site-generated traffic volumes (from Figure 7). Figure 9b shows the recommended 2040 lane geometry and traffic control.

#### PROJECTED LEVELS OF SERVICE

The intersections in Figures 8a through 9b were analyzed to determine the 2023 and 2040 total traffic levels of service. Table 1 shows the level of service analysis results.

• **Ridge Road/Site Access:** All movements at this stop-sign controlled three-quarter movement intersection are expected to operate at "B" or better through 2040 with CIP improvements planned by the Town.

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- **Enderud Boulevard/Site Access:** All movements at this full movement stop-controlled intersection are expected to operate at "C" or better through 2040.
- SH 86/Ridge Road/5<sup>th</sup> Street/Founders Parkway: Based on the conservative traffic projections required to be used, this roundabout controlled intersection is expected to operate at an overall LOS "C" or better during the morning peak-hour through 2040 with CIP improvements planned by the Town. The southbound approach is expected to operate at LOS "F" during the afternoon peak-hour by 2040 with or without development of the site. This movement is expected to operate at LOS "D" or better if the 2040 traffic volumes end up being more consistent with the Town's TMP.
- **Ridge Road/E. Enderud Boulevard:** This roundabout controlled intersection is expected to operate at an overall LOS "A" during both morning and afternoon peak-hours through 2040 with CIP improvements planned by the Town.

#### CONCLUSIONS AND RECOMMENDATIONS

### **Trip Generation**

1. The site is projected to generate about 2,307 vehicle-trips on the average weekday, with about half entering and half exiting during a 24-hour period. During the morning peakhour, about 43 vehicles would enter and about 130 vehicles would exit the site. During the afternoon peak-hour, about 143 vehicles would enter and about 75 vehicles would exit.

### **Projected Levels of Service**

2. All signalized intersections and all movements at the unsignalized intersections analyzed are expected to operate at LOS "D" or better during both peak-hours through 2040 with the following exception: The southbound approach at the SH 86/Ridge Road/5<sup>th</sup> Street/Founders Parkway intersection is expected to operate at LOS "F" in the 2040 afternoon peak-hour if the future 2040 traffic volumes shown in Figures 5 and 9a are realized over time. The recent projections in the Town's TMP suggest the projections in Figures 5 and 9a are overly conservative. The southbound approach delay is expected to be LOS "D" or better if the future 2040 traffic volumes end up being consistent with the Town's TMP.

### **Conclusions**

- 3. The impact of the Sunstone Village PA 47, 51 & 52 development can be accommodated by the existing roadway network with implementation of the recommendations below.
- 4. The Town of Castle Rock has a CIP project to convert the SH 86/Ridge Road/5<sup>th</sup> Street/Founders Parkway intersection from a traffic signal to a roundabout by 2022.

### Recommendations

- 5. The Town of Castle Rock has a CIP project to widen N. Ridge Road south to Plum Creek Parkway by 2022 including improvements to the existing intersections along the corridor. The southbound left-turn lane on N. Ridge Road approaching the proposed site access should be 350 feet (275 feet for deceleration from 45 mph and 75 feet for vehicle storage) plus a 160-foot transition taper.
- 6. The existing eastbound left-turn lane on Enderud Boulevard approaching the proposed site access is about 140 feet long with a 175-foot transition taper. This length is appropriate because all vehicles approaching this movement will have just exited the existing roundabout at N. Ridge Road/Enderud Boulevard.
- 7. The proposed site access approach to Enderud Boulevard should have separate left-turn and right-turn lanes. The left-turn lane should be about 100 feet long.
- 8. A southbound right-turn bypass or turn lane may be needed by 2040 at the planned two-lane roundabout at the SH 86/Ridge Road/5<sup>th</sup> Street/Founders Parkway intersection if the 2040 traffic volumes exceed the projections in the Town's TMP and approach the volumes shown in Figures 5 and 9a. The conservative volumes in Figures 5 and 9a were required to be used by Town staff to test the sensitivity of the proposed roundabout to accommodate future growth.

\* \* \* \* \*

We trust our findings will assist you in gaining approval of the Sunstone Village PA 47, 51 & 52 development. Please contact me if you have any questions or need further assistance.

12-12-18

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.

By

Christopher S. McGranahan, PE, PTOE

Principal

CSM/wc

Enclosures:

Tables 1 and 2

Figures 1 - 9b Traffic Counts

Level of Service Definitions Level of Service Reports

 $Z: \ LSC \ Projects \ 2017 \ 170081 - Terrain Sunstone \ Dec-2018 \ Sunstone \ Village PA47, 51, 52-121218. wpd \ Patrick \ Projects \ Projec$ 

## Table 1 Intersection Levels of Service Analysis Sunstone Village PA 47, 51 & 52 Castle Rock, CO

LSC #170081; December, 2018

|                                                  |                    | Existino      | raffic        | 20<br>Backgrou | 23<br>nd Traffic | 202<br>Total 1 |               | 20<br>Backgrou | 40<br>nd Traffic | 20-<br>Total  |               |
|--------------------------------------------------|--------------------|---------------|---------------|----------------|------------------|----------------|---------------|----------------|------------------|---------------|---------------|
|                                                  |                    | Level of      | Level of      | Level of       | Level of         | Level of       | Level of      | Level of       | Level of         | Level of      | Level of      |
| Intersection Location                            | Traffic<br>Control | Service<br>AM | Service<br>PM | Service<br>AM  | Service<br>PM    | Service<br>AM  | Service<br>PM | Service<br>AM  | Service<br>PM    | Service<br>AM | Service<br>PM |
|                                                  | TMOO               |               |               |                |                  |                |               |                |                  |               |               |
| Ridge Road/Site Access WB Right                  | TWSC<br>Three-     |               |               |                |                  | В              | В             |                |                  | В             | В             |
| SB Left                                          | Quarter            |               |               |                |                  | В              | A             |                |                  | В             | Ā             |
| Critical Movement Delay                          | <b>Q</b>           |               |               |                |                  | 12.6           | 10.5          |                |                  | 13.4          | 11.3          |
| Enderud Blvd./Site Access                        | TWSC               |               |               |                |                  |                |               |                |                  |               |               |
| NEB Left                                         | Full               |               |               |                |                  | Α              | Α             |                |                  | Α             | Α             |
| SEB Left                                         | Movement           |               |               |                |                  | C              | C             |                |                  | C             | C             |
| SEB Right                                        |                    |               |               |                |                  | В              | A             |                |                  | В             | A             |
| Critical Movement Delay                          |                    |               |               |                |                  | 16.7           | 16.3          |                |                  | 16.6          | 16.3          |
| SH 86/Ridge Road/5th Street/<br>Founders Parkway | Signalized         |               |               |                |                  |                |               |                |                  |               |               |
| EB Left                                          |                    | С             | С             |                |                  |                |               |                |                  |               |               |
| EB Through                                       |                    | Č             | Č             |                |                  |                |               |                |                  |               |               |
| WB Left                                          |                    | Č             | Č             |                |                  |                |               |                |                  |               |               |
| WB Through                                       |                    | D             | Č             |                |                  |                |               |                |                  |               |               |
| NB Left                                          |                    | С             | В             |                |                  |                |               |                |                  |               |               |
| NB Through                                       |                    | С             | С             |                |                  |                |               |                |                  |               |               |
| SB Left                                          |                    | В             | D             |                |                  |                |               |                |                  |               |               |
| SB Through                                       |                    | В             | С             |                |                  |                |               |                |                  |               |               |
| Entire Intersection Delay (sec /veh)             |                    | 27.8          | 29.6          |                |                  |                |               |                |                  |               |               |
| Entire Intersection LOS                          |                    | С             | С             |                |                  |                |               |                |                  |               |               |
|                                                  | Roundabout         |               |               |                |                  |                |               |                |                  |               |               |
| EB Approach                                      |                    |               |               | Α              | Α                | Α              | Α             | Α              | Α                | Α             | Α             |
| WB Approach                                      |                    |               |               | Α              | Α                | Α              | Α             | Α              | Α                | Α             | Α             |
| NB Approach                                      |                    |               |               | Α              | В                | В              | В             | В              | Α                | В             | Α             |
| SB Approach                                      |                    |               |               | В              | В                | В              | В             | Α              | F                | Α             | F             |
| Entire Intersection Delay (sec /veh)             |                    |               |               | 7.3            | 8.8              | 8.1            | 9.9           | 5.6            | 20.1             | 6.1           | 32.7          |
| Entire Intersection LOS                          |                    |               |               | Α              | Α                | Α              | Α             | Α              | С                | Α             | D             |
| Ridge Road/E. Enderud Blvd.                      | Roundabout         |               |               |                |                  |                |               |                |                  |               |               |
| WB Approach                                      |                    | С             | Α             | Α              | Α                | Α              | Α             | Α              | Α                | Α             | Α             |
| NB Approach                                      |                    | Α             | Α             | Α              | Α                | Α              | Α             | Α              | Α                | Α             | Α             |
| SB Approach                                      |                    | Α             | Α             | Α              | Α                | Α              | Α             | Α              | Α                | Α             | Α             |
| Entire Intersection Delay (sec /veh)             |                    | 10.4          | 6.8           | 5.9            | 6.0              | 6.2            | 6.3           | 6.4            | 7.2              | 6.7           | 7.5           |
| Entire Intersection LOS                          |                    | В             | Α             | Α              | Α                | Α              | Α             | Α              | Α                | Α             | Α             |

<sup>(1)</sup> Highway Capacity Software (HCS) was used to evaluate all roundabouts with the exception of the 2040 scenarios for the SH 86/Ridge Road/5th Street/Founders Parkway intersection which was analyzed using RODEL because it is more effective evaluating roundabouts that are at or near capacity.

# Table 2 ESTIMATED TRAFFIC GENERATION Sunstone Village PA 47, 51 & 52 Castle Rock, CO LSC #170081; December, 2018

|                              |                       | -       | Trip Gene | ration Ra | ites <sup>(1)</sup> |         | ,       | Vehicle-Tri | ps Gen | erated    |      |
|------------------------------|-----------------------|---------|-----------|-----------|---------------------|---------|---------|-------------|--------|-----------|------|
|                              |                       | Average | AM Peal   | k Hour    | PM Peal             | k Hour  | Average | AM Peak     | Hour   | PM Peak - | Hour |
| Trip Generating Category     | Quantity              | Weekday | In        | Out       | In                  | Out     | Weekday | ln          | Out    | In        | Out  |
| Single-Family <sup>(2)</sup> | 187 DU <sup>(3)</sup> | 9.44    | 0.185     | 0.555     | 0.624               | 0.366   | 1,765   | 35          | 104    | 117       | 68   |
| Duplex (4)                   | 74 DU                 | 7.32    | 0.106     | 0.354     | 0.353               | 0.096   | 542     | 8           | 26     | 26        | 7    |
|                              |                       |         |           |           |                     | Total = | 2,307   | 43          | 130    | 143       | 75   |

### Notes:

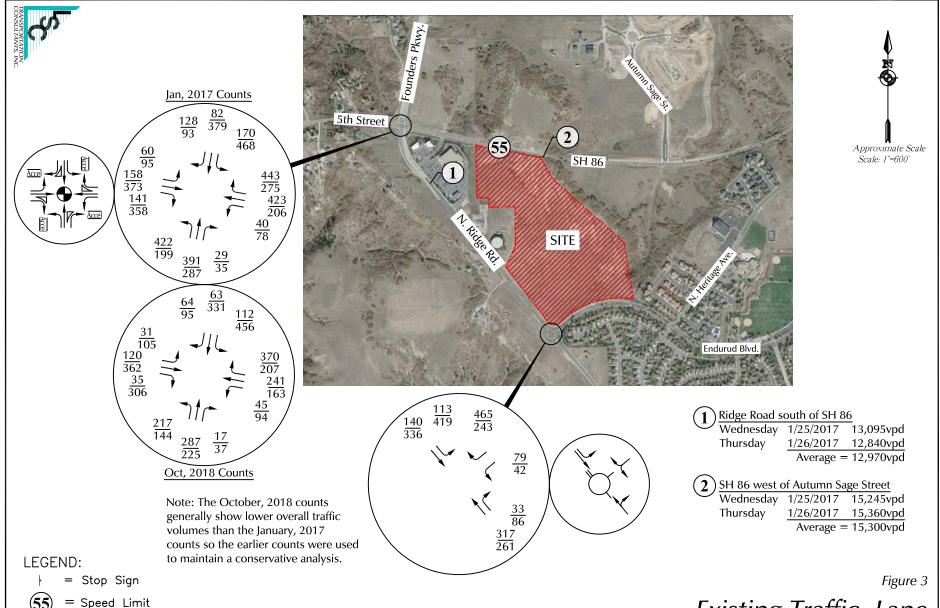
- (1) Source: Trip Generation, Institute of Transportation Engineers, 10th Edition, 2017.
- (2) ITE Land Use No. 210 Single-Family Detached Housing
- (3) DU Dwelling Units
- (4) ITE Land Use No. 220 Multifamily Housing (Low Rise)







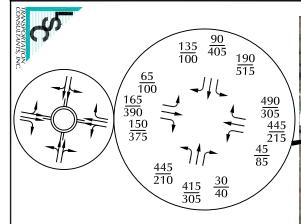
Sunstone Village PA 47, 51 & 52 (LSC #170081)



 $= \frac{\text{AM Peak Hour Traffic}}{\text{PM Peak Hour Traffic}}$ 

2,500 = Average Daily Traffic

## Existing Traffic, Lane Geometry and Traffic Control Sunstone Village PA 47, 51 & 52 (LSC #170081)



Note: An annual growth rate of two percent was assumed on SH 86 and Founders Parkway, one percent on 5th Street, 1.3 percent on Ridge Road and 0.5 percent on Enderud Boulevard based on the projections in the Castle Rock TMP.



= Stop Sign

= Traffic Signal

= Modern Roundabout

AM Peak Hour Traffic
PM Peak Hour Traffic 2,500 = Average Daily Traffic



270 790

815 530

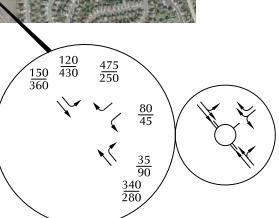
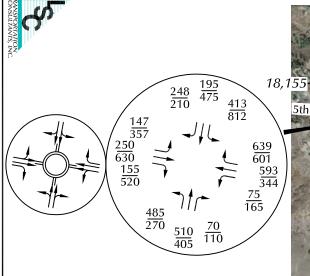


Figure 4

555 295

Approximate Scale Scale: 1"=600"

# Year 2023 Background Traffic, Lane Geometry and Traffic Control Sunstone Village PA 47, 51 & 52 (LSC #170081)



Note: The 2040 background traffic volumes are based on the 2040 total traffic volumes from Figure 9 of the 2016 Founders Crossing TIA by LSC less the trips from the originally assumed land use for the Sunstone Village site which are about a third more dense then what is currently being proposed. This was done at the direction of town staff and results in long-term projections above those estimated in the Towns Transportation Master Plan (TMP).

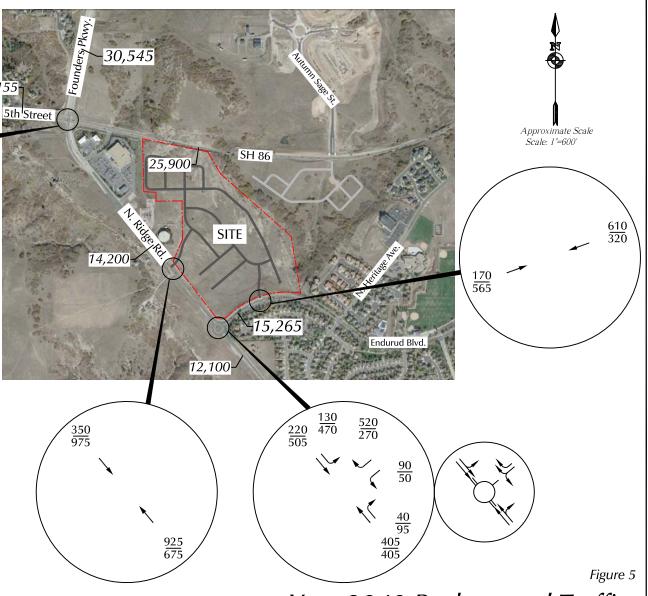
### LEGEND:

= Stop Sign

= Traffic Signal

= Modern Roundabout

AM Peak Hour Traffic
PM Peak Hour Traffic 2,500 = Average Daily Traffic



# Year 2040 Background Traffic, Lane Geometry and Traffic Control Sunstone Village PA 47, 51 & 52 (LSC #170081)







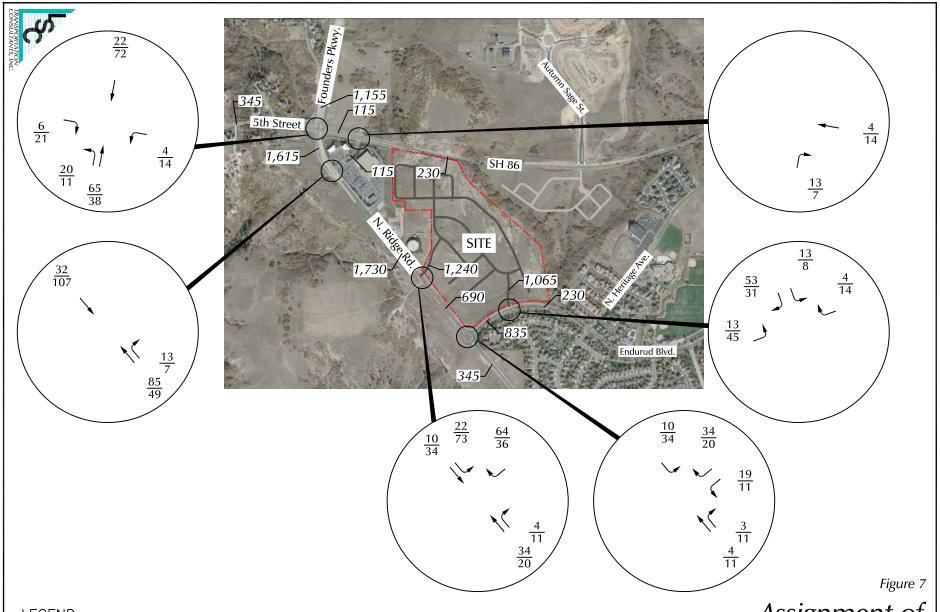
Figure 6

### Directional Distribution of Site-Generated Traffic

Sunstone Village PA 47, 51 & 52 (LSC #170081)

LEGEND:

65% = Percent Directional Distribution



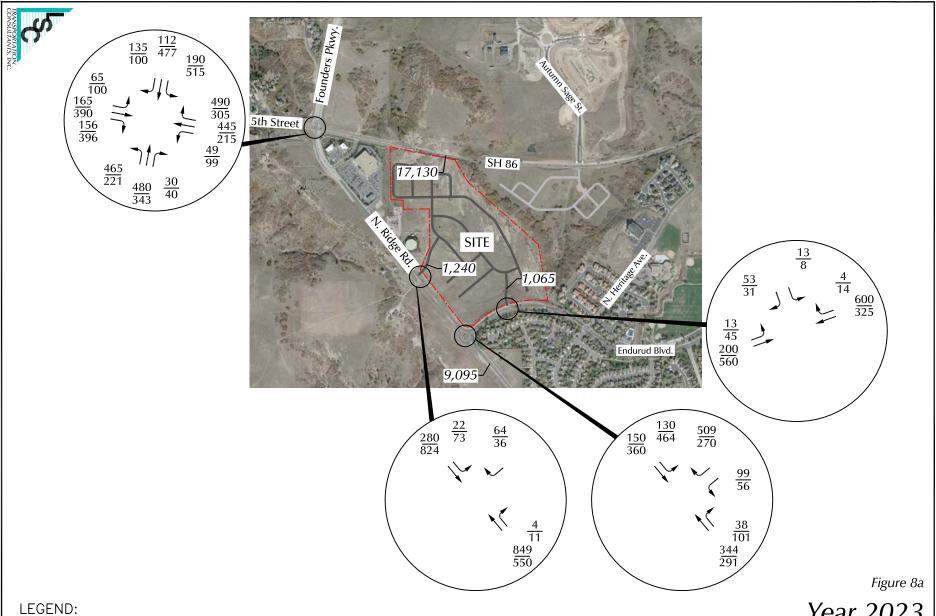
LEGEND:

 $\frac{26}{35}$  =  $\frac{AM \ Peak \ Hour \ Traffic}{PM \ Peak \ Hour \ Traffic}$ 

2,500 = Average Daily Traffic

## Assignment of Site-Generated Traffic

Sunstone Village PA 47, 51 & 52 (LSC #170081)

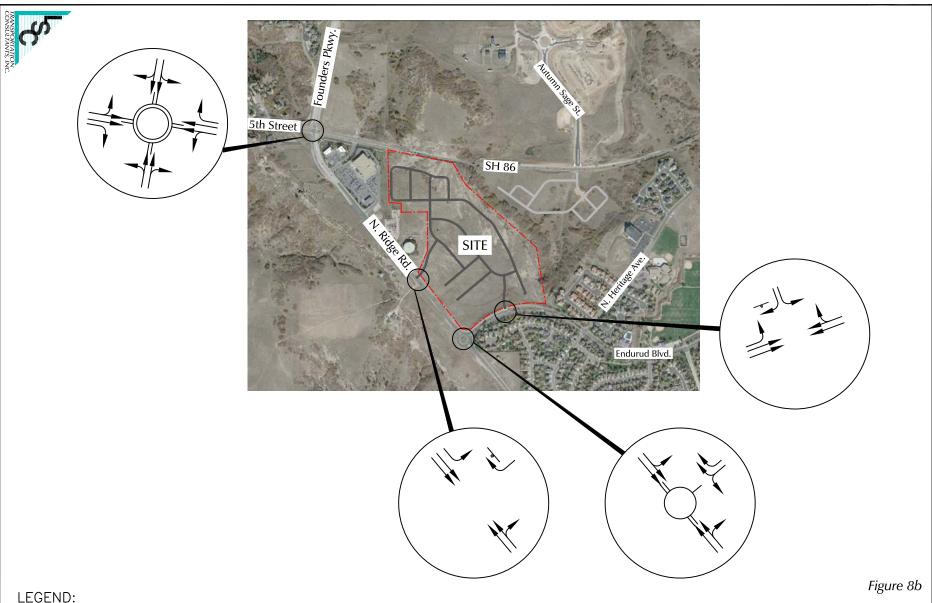


 $\frac{26}{35} = \frac{\text{AM Peak Hour Traffic}}{\text{PM Peak Hour Traffic}}$ 

2,500 = Average Daily Traffic

Year 2023 Total Traffic

Sunstone Village PA 47, 51 & 52 (LSC #170081)



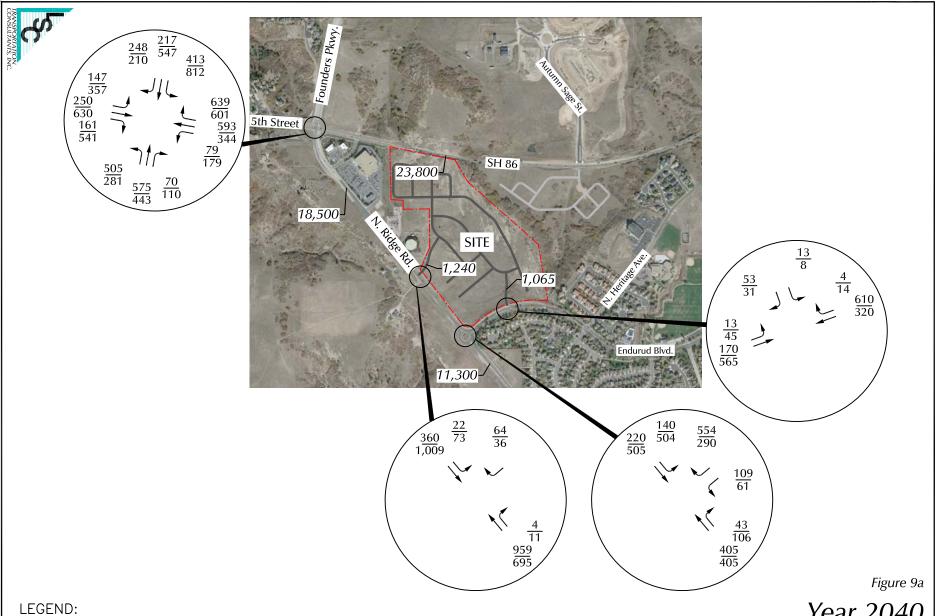
= Stop Sign

= Traffic Signal



= Modern Roundabout

### Year 2023 Total Lane Geometry and Traffic Control Sunstone Village PA 47, 51 & 52 (LSC #170081)

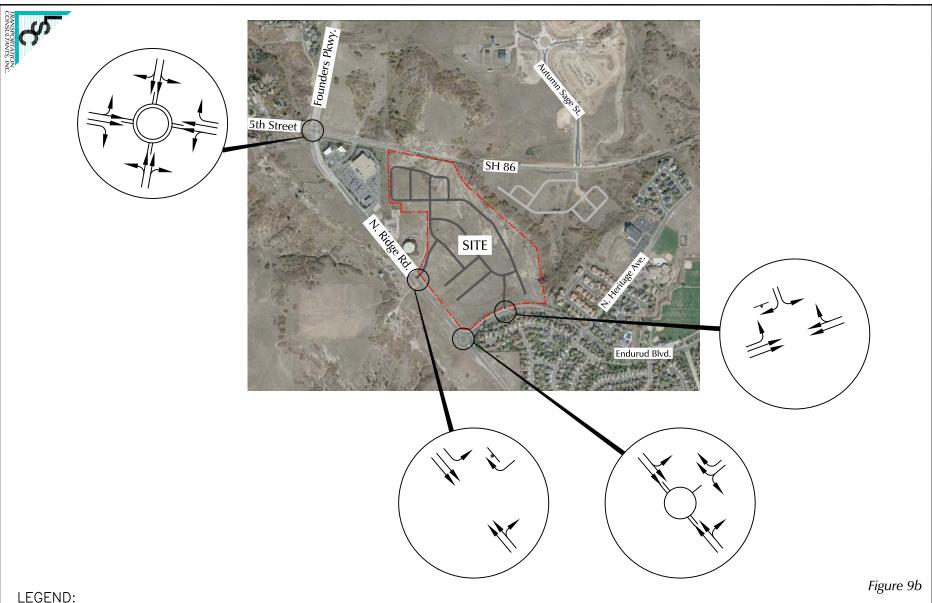


 $\frac{26}{35} = \frac{\text{AM Peak Hour Traffic}}{\text{PM Peak Hour Traffic}}$ 

2,500 = Average Daily Traffic

Year 2040 Total Traffic

Sunstone Village PA 47, 51 & 52 (LSC #170081)



= Stop Sign

= Traffic Signal



= Modern Roundabout

### Year 2040 Total Lane Geometry and Traffic Control Sunstone Village PA 47, 51 & 52 (LSC #170081)

### **LEVEL OF SERVICE DEFINITIONS**

From *Highway Capacity Manual*, Transportation Research Board, 2010

### SIGNALIZED INTERSECTION LEVEL OF SERVICE (LOS)

| LOS | Average<br>Vehicle Delay<br>sec/vehicle | Operational Characteristics                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A   | <10 seconds                             | Describes operations with low control delay, up to 10 sec/veh. This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.                                                                                                                                                                                              |
| В   | 10 to 20<br>seconds                     | Describes operations with control delay greater than 10 seconds and up to 20 sec/veh. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.                                                                                                                                                                                                                             |
| С   | 20 to 35<br>seconds                     | Describes operations with control delay greater than 20 and up to 35 sec/veh. These higher delays may result from only fair progression, longer cycle length, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve queued vehicles, and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping. |
| D   | 35 to 55<br>seconds                     | Describes operations with control delay greater than 35 and up to 55 sec/veh. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.                                                                                   |
| E   | 55 to 80<br>seconds                     | Describes operations with control delay greater than 55 and up to 80 sec/veh. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.                                                                                                                                                                                                                                            |
| F   | >80<br>seconds                          | Describes operations with control delay in excess of 80 sec/veh. This level, considered unacceptable to most drivers, often occurs with over-saturation, that is, when arrival flow rates exceed the capacity of lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.                                                                |

### **LEVEL OF SERVICE DEFINITIONS**

From *Highway Capacity Manual*, Transportation Research Board, 2010

### UNSIGNALIZED INTERSECTION LEVEL OF SERVICE (LOS) Applicable to Two-Way Stop Control, All-Way Stop Control, and Roundabouts

| LOS | Average<br>Vehicle Control<br>Delay | Operational Characteristics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A   | <10 seconds                         | Normally, vehicles on the stop-controlled approach only have to wait up to 10 seconds before being able to clear the intersection. Left-turning vehicles on the uncontrolled street do not have to wait to make their turn.                                                                                                                                                                                                                                                                                                              |
| В   | 10 to 15<br>seconds                 | Vehicles on the stop-controlled approach will experience delays before being able to clear the intersection. The delay could be up to 15 seconds. Left-turning vehicles on the uncontrolled street may have to wait to make their turn.                                                                                                                                                                                                                                                                                                  |
| С   | 15 to 25<br>seconds                 | Vehicles on the stop-controlled approach can expect delays in the range of 15 to 25 seconds before clearing the intersection.  Motorists may begin to take chances due to the long delays, thereby posing a safety risk to through traffic. Left-turning vehicles on the uncontrolled street will now be required to wait to make their turn causing a queue to be created in the turn lane.                                                                                                                                             |
| D   | 25 to 35<br>seconds                 | This is the point at which a traffic signal may be warranted for this intersection. The delays for the stop-controlled intersection are not considered to be excessive. The length of the queue may begin to block other public and private access points.                                                                                                                                                                                                                                                                               |
| E   | 35 to 50<br>seconds                 | The delays for all critical traffic movements are considered to be unacceptable. The length of the queues for the stop-controlled approaches as well as the left-turn movements are extremely long. There is a high probability that this intersection will meet traffic signal warrants. The ability to install a traffic signal is affected by the location of other existing traffic signals. Consideration may be given to restricting the accesses by eliminating the left-turn movements from and to the stop-controlled approach. |
| F   | >50 seconds                         | The delay for the critical traffic movements are probably in excess of 100 seconds. The length of the queues are extremely long. Motorists are selecting alternative routes due to the long delays. The only remedy for these long delays is installing a traffic signal or restricting the accesses. The potential for accidents at this intersection are extremely high due to motorist taking more risky chances. If the median permits, motorists begin making two-stage left-turns.                                                 |

1889 YORK STREET DENVER.COLORADO 303-333-7409

N/S STREET: FOUNDERS PKWY E/W STREET: SH-86 / 5TH ST CITY: CASTLE ROCK

CITY: CASTLE ROCK COUNTY: DOUGLAS

Groups Printed- VEHICLES

File Name: FOUNSH-86 Site Code: 00000015 Start Date: 10/10/2018

Page No : 1

|             | FC   | OUNDER<br>South | RS PKW<br>bound | ΛΥ   |      | SH-<br>Westl |       |      |      | N. RID<br>North |       |      |      |      | TREET<br>pound |      |               |
|-------------|------|-----------------|-----------------|------|------|--------------|-------|------|------|-----------------|-------|------|------|------|----------------|------|---------------|
| Start Time  | Left | Thru            | Right           | Peds | Left | Thru         | Right | Peds | Left | Thru            | Right | Peds | Left | Thru | Right          | Peds | Int.<br>Total |
| Factor      | 1.0  | 1.0             | 1.0             | 1.0  | 1.0  | 1.0          | 1.0   | 1.0  | 1.0  | 1.0             | 1.0   | 1.0  | 1.0  | 1.0  | 1.0            | 1.0  |               |
| 06:30 AM    | 19   | 6               | 9               | 0    | 3    | 38           | 96    | 0    | 40   | 72              | 6     | 0    | 6    | 22   | 7              | 0    | 324           |
| 06:45 AM    | 27   | 16              | 12              | 0    | 7    | 60           | 99    | 0    | 39   | 72              | 5     | 0    | 12   | 8    | 10             | 0    | 367           |
| Total       | 46   | 22              | 21              | 0    | 10   | 98           | 195   | 0    | 79   | 144             | 11    | 0    | 18   | 30   | 17             | 0    | 691           |
| 07:00 AM    | 28   | 12              | 10              | 0    | 13   | 52           | 85    | 0    | 51   | 81              | 4     | 0    | 11   | 32   | 6              | 0    | 385           |
| 07:15 AM    | 25   | 21              | 16              | 0    | 7    | 57           | 99    | 0    | 39   | 69              | 4     | 0    | 7    | 37   | 10             | 0    | 391           |
| 07:30 AM    | 25   | 7               | 14              | 0    | 15   | 52           | 94    | 0    | 57   | 64              | 4     | 0    | 6    | 27   | 10             | 0    | 375           |
| 07:45 AM    | 34   | 23              | 24              | 0    | 10   | 80           | 92    | 0    | 70   | 73              | 5     | 0    | 7    | 24   | 9              | 0    | 451           |
| Total       | 112  | 63              | 64              | 0    | 45   | 241          | 370   | 0    | 217  | 287             | 17    | 0    | 31   | 120  | 35             | 0    | 1602          |
| 08:00 AM    | 30   | 23              | 19              | 0    | 18   | 65           | 70    | 0    | 24   | 63              | 6     | 0    | 4    | 27   | 13             | 0    | 362           |
| 08:15 AM    | 27   | 16              | 27              | 0    | 13   | 57           | 107   | 0    | 44   | 61              | 7     | 0    | 8    | 24   | 22             | 0    | 413           |
| Total       | 57   | 39              | 46              | 0    | 31   | 122          | 177   | 0    | 68   | 124             | 13    | 0    | 12   | 51   | 35             | 0    | 775           |
| 04:00 PM    | 84   | 52              | 18              | 0    | 15   | 25           | 63    | 0    | 39   | 46              | 6     | 0    | 7    | 58   | 57             | 0    | 470           |
| 04:15 PM    | 107  | 64              | 23              | 0    | 16   | 37           | 61    | ő    | 33   | 51              | 6     | 0    | 20   | 70   | 69             | 0    | 557           |
| 04:30 PM    | 108  | 89              | 15              | 0    | 18   | 44           | 54    | 0    | 35   | 53              | 14    | 0    | 27   | 61   | 72             | 0    | 590           |
| 04:45 PM    | 115  | 78              | 23              | 0    | 25   | 44           | 65    | 0    | 39   | 32              | 14    | 0    | 21   | 84   | 58             | ő    | 598           |
| Total       | 414  | 283             | 79              | 0    | 74   | 150          | 243   | 0    | 146  | 182             | 40    | 0    | 75   | 273  | 256            | 0    | 2215          |
| 05:00 PM    | 95   | 74              | 32              | 0    | 17   | 41           | 44    | 0    | 31   | 58              | 6     | 0    | 26   | 105  | 90             | 0    | 619           |
| 05:15 PM    | 122  | 99              | 24              | 0    | 24   | 48           | 45    | 0    | 41   | 69              | 12    | 0    | 23   | 87   | 78             | ō    | 672           |
| 05:30 PM    | 124  | 80              | 16              | 0    | 28   | 30           | 53    | 0    | 33   | 66              | 5     | 0    | 35   | 86   | 80             | 0    | 636           |
| 05:45 PM    | 84   | 98              | 19              | 0    | 18   | 26           | 58    | 0    | 28   | 46              | 13    | 0    | 19   | 62   | 74             | 0    | 545           |
| Total       | 425  | 351             | 91              | 0    | 87   | 145          | 200   | 0    | 133  | 239             | 36    | 0    | 103  | 340  | 322            | 0    | 2472          |
| Grand Total | 1054 | 758             | 301             | 0    | 247  | 756          | 1185  | 0    | 643  | 976             | 117   | 0    | 239  | 814  | 665            | 0    | 7755          |
| Apprch %    | 49.9 | 35.9            | 14.2            | 0.0  | 11.3 | 34.6         | 54.2  | 0.0  | 37.0 | 56.2            | 6.7   | 0.0  | 13.9 | 47.4 | 38.7           | 0.0  | 50            |
| Total %     | 13.6 | 9.8             | 3.9             | 0.0  | 3.2  | 9.7          | 15.3  | 0.0  | 8.3  | 12.6            | 1.5   | 0.0  | 3.1  | 10.5 | 8.6            | 0.0  |               |

1889 YORK STREET DENVER.COLORADO 303-333-7409

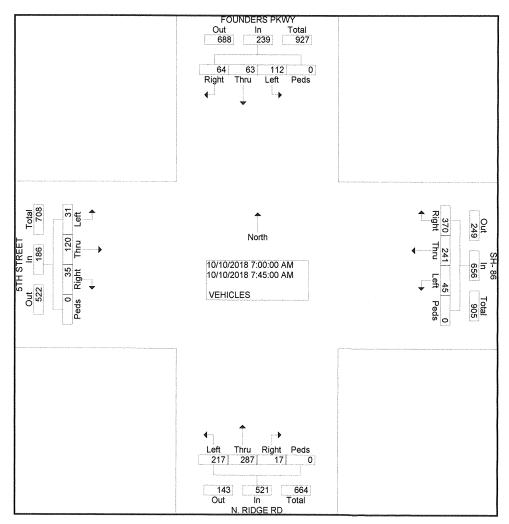
N/S STREET: FOUNDERS PKWY E/W STREET: SH-86 / 5TH ST CITY: CASTLE ROCK

CITY: CASTLE ROCK COUNTY: DOUGLAS

File Name: FOUNSH-86 Site Code: 00000015 Start Date: 10/10/2018

Page No : 2

|                          |          |          | DERS<br>outhbo | PKW<br>und | Y               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | W        | SH- 8<br>estbo | -        |                  |          |          | RIDGE     |          |                  |          |          | l STR     |          |                 |               |
|--------------------------|----------|----------|----------------|------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|----------|------------------|----------|----------|-----------|----------|------------------|----------|----------|-----------|----------|-----------------|---------------|
| Start<br>Time            | Left     | Thr<br>u | Rig<br>ht      | Ped<br>s   | App.<br>Total   | Left                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Thr<br>u | Rig<br>ht      | Ped<br>s | App.<br>Total    | Left     | Thr      | Rig<br>ht | Ped<br>s | App.<br>Total    | Left     | Thr<br>u | Rig<br>ht | Ped<br>s | App.<br>Total   | Int.<br>Total |
| Peak Hour I              | rom C    | 6:30 A   | AM to          | 08:30      | AM - Pe         | eak 1 d                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | of 1     |                |          |                  |          |          |           |          |                  |          |          |           |          |                 |               |
| Intersecti<br>on         | 07:00    | MA (     |                |            |                 | minor a management of the state |          |                |          |                  |          |          |           |          |                  |          |          |           |          |                 |               |
| Volume                   | 112      | 63       | 64             | 0          | 239             | 45                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 241      | 370            | 0        | 656              | 217      | 287      | 17        | 0        | 521              | 31       | 120      | 35        | 0        | 186             | 1602          |
| Percent                  | 46.<br>9 | 26.<br>4 | 26.<br>8       | 0.0        |                 | 6.9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 36.<br>7 | 56.<br>4       | 0.0      |                  | 41.<br>7 | 55.<br>1 | 3.3       | 0.0      |                  | 16.<br>7 | 64.<br>5 | 18.<br>8  | 0.0      |                 |               |
| 07:45<br>Volume<br>Peak  | 34       | 23       | 24             | 0          | 81              | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 80       | 92             | 0        | 182              | 70       | 73       | 5         | 0        | 148              | 7        | 24       | 9         | 0        | 40              | 451<br>0.88   |
| Factor<br>High Int.      | 07:45    | 5 AM     |                |            |                 | 07:45                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5 AM     |                |          |                  | 07:45    | S AM     |           |          |                  | 07:15    | 5 AM     |           |          |                 |               |
| Volume<br>Peak<br>Factor | 34       | 23       | 24             | 0          | 81<br>0.73<br>8 | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 80       | 92             | 0        | 182<br>0.90<br>1 | 70       | 73       | 5         | 0        | 148<br>0.88<br>0 | 7        | 37       | 10        | 0        | 54<br>0.86<br>1 |               |



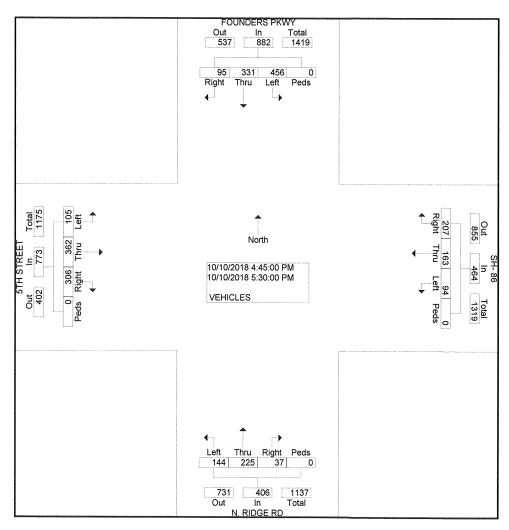
N/S STREET: FOUNDERS PKWY

E/W STREET: SH-86 / 5TH ST CITY: CASTLE ROCK COUNTY: DOUGLAS 1889 YORK STREET DENVER.COLORADO 303-333-7409

File Name: FOUNSH-86 Site Code: 00000015 Start Date: 10/10/2018

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|                  |          | FOUNI<br>So | DERS<br>uthbo |          | Y             | The control of the co |          | SH- 8          | -        |                         |          |          | RIDGE     |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          | ∃ STR<br>astboւ |          |               |               |
|------------------|----------|-------------|---------------|----------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|----------|-------------------------|----------|----------|-----------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|-----------------|----------|---------------|---------------|
| Start<br>Time    | Left     | Thr<br>u    | Rig<br>ht     | Ped<br>s | App.<br>Total | Left                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Thr<br>u | Rig<br>ht      | Ped<br>s | App.<br>Total           | Left     | Thr<br>u | Rig<br>ht | Ped<br>s | App.<br>Total                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Left     | Thr<br>u | Rig<br>ht       | Ped<br>s | App.<br>Total | Int.<br>Total |
| Peak Hour I      | rom 0    | 4:00 P      | M to          | 05:45 F  | PM - Pe       | eak 1 d                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | of 1     | hara en re-en- |          | Province and the second |          |          |           |          | THE STATE OF THE PARTY OF THE P |          |          |                 |          |               | L             |
| Intersecti<br>on | 04:45    | 5 PM        |               |          |               | CONTRACTOR OF THE STATE OF THE  |          |                |          |                         |          |          |           |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          |                 |          |               |               |
| Volume           | 456      | 331         | 95            | 0        | 882           | 94                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 163      | 207            | 0        | 464                     | 144      | 225      | 37        | 0        | 406                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 105      | 362      | 306             | 0        | 773           | 2525          |
| Percent          | 51.<br>7 | 37.<br>5    | 10.<br>8      | 0.0      |               | 20.<br>3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 35.<br>1 | 44.<br>6       | 0.0      |                         | 35.<br>5 | 55.<br>4 | 9.1       | 0.0      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 13.<br>6 | 46.<br>8 | 39.<br>6        | 0.0      |               |               |
| 05:15<br>Volume  | 122      | 99          | 24            | 0        | 245           | 24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 48       | 45             | 0        | 117                     | 41       | 69       | 12        | 0        | 122                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 23       | 87       | 78              | 0        | 188           | 672           |
| Peak             |          |             |               |          |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |                |          |                         |          |          |           |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          |                 |          |               | 0.939         |
| Factor           |          |             |               |          |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |                |          |                         |          |          |           |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |          |                 |          |               | 0.000         |
| High Int.        | 05:15    | 5 PM        |               |          |               | 04:45                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | PM       |                |          |                         | 05:15    | PM       |           |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 05:00    | PM       |                 |          |               |               |
| Volume           | 122      | 99          | 24            | 0        | 245           | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 44       | 65             | 0        | 134                     | 41       | 69       | 12        | 0        | 122                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 26       | 105      | 90              | 0        | 221           |               |
| Peak             |          |             |               |          | 0.90          | 0.000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |          |                |          | 0.86                    |          |          |           |          | 0.83                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |          |          |                 |          | 0.87          |               |
| Factor           |          |             |               |          | 0             | and                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |                |          | 6                       |          |          |           |          | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |          |          |                 |          | 4             |               |



1889 YORK STREET DENVER.COLORADO 303-333-7409

N/S STREET: RIDGE RD E/W STREET: ENDERUD BLVD CITY: CASTLE ROCK COUNTY: DOUGLAS

File Name: RIDGENDE Site Code : 00000015 Start Date : 1/25/2017 Page No : 1

| Groups Pr | inted- Vi | EHICLE | ΞS  |
|-----------|-----------|--------|-----|
| RUD BLVD  |           |        | RID |

| (           | ·    |       |       |      | ·    | (    | Groups I | rinted- | VEHIC |          |          |          |      |        |       |      |               |
|-------------|------|-------|-------|------|------|------|----------|---------|-------|----------|----------|----------|------|--------|-------|------|---------------|
|             |      | RIDG  |       |      | E    |      | JD BLVI  | 0       |       | RIDG     | E RD     |          |      |        |       |      |               |
|             |      | South | bound |      |      | West | oound    |         |       | Northi   | bound    | Minister |      | Eastb  | ound  |      |               |
| Start Time  | Left | Thru  | Right | Peds | Left | Thru | Right    | Peds    | Left  | Thru     | Right    | Peds     | Left | Thru   | Right | Peds | Int.<br>Total |
| Factor      | 1.0  | 1.0   | 1.0   | 1.0  | 1.0  | 1.0  | 1.0      | 1.0     | 1.0   | 1.0      | 1.0      | 1.0      | 1.0  | 1.0    | 1.0   | 1.0  |               |
| 06:30 AM    | 7    | 14    | 0     | 0    | 10   | 0    | 97       | 0       | 0     | 53       | 3        | 0        | 0    | 0      | 0     | 0    | 184           |
| 06:45 AM    | 12   | 8     | 0     | 0    | 11   | 0    | 87       | 0       | 0     | 60       | 4        | 0        | 0    | 0      | Ō     | 0    | 182           |
| Total       | 19   | 22    | Ô     | 0    | 21   | 0    | 184      | 0       | 0     | 113      | 7        | 0        | 0    | 0      | 0     | 0    | 366           |
| 07:00 AM    | 21   | 31    | 0     | 0    | 16   | 0    | 133      | 0       | 0     | 79       | 7        | 0        | 0    | 0      | 0     | 0    | 287           |
| 07:15 AM    | 28   | 30    | 0     | 0    | 25   | 0    | 144      | 0       | Õ     | 106      | 9        | 0        | Õ    | 0      | 0     | 0    | 342           |
| 07:30 AM    | 30   | 38    | 0     | 0    | 20   | 0    | 103      | 0       | Ō     | 85       | 9        | 0        | Ő    | 0      | 0     | 0    | 285           |
| 07:45 AM    | 34   | 41    | 0     | 0    | 18   | 0    | 85       | 0       | Ō     | 47       | 8        | Ō        | Õ    | Õ      | 0     | ő    | 233           |
| Total       | 113  | 140   | 0     | 0    | 79   | 0    | 465      | 0       | 0     | 317      | 33       | 0        | Ö    | 0      | 0     | 0    | 1147          |
| 08:00 AM    | 35   | 33    | 0     | 0    | 10   | 0    | 85       | 0       | 0     | 67       | 20       | 0        | 0    | 0      | ^     | 0    | 250           |
| 08:15 AM    | 28   | 31    | Ö     | Ŏ    | 29   | Ö    | 96       | 0       | Ô     | 55       | 13       | 0        | 0    | 0      | 0     | 0    | 250<br>252    |
|             |      |       |       |      |      |      |          | - 1     |       |          |          | U į      | U    | U      | U     | U    | 252           |
| Total       | 63   | 64    | 0     | 0    | 39   | 0    | 181      | 0       | 0     | 122      | 33       | 0        | 0    | 0      | 0     | 0    | 502           |
| 04:00 PM    | 76   | 69    | 0     | 0    | 12   | 0    | 53       | 0       | 0     | 40       | 477      | 0 1      | •    | •      |       |      |               |
| 04:15 PM    | 93   | 82    | 0     | 0    | 15   | 0    | 73       | 0       | 0     | 40<br>54 | 17       | 0        | 0    | 0      | 0     | 0    | 267           |
| 04:30 PM    | 87   | 95    | ő     | 0    | 9    | 0    | 57       | 0       | 0     | 66       | 18<br>16 | 0        | 0    | 0      | 0     | 0    | 335           |
| 04:45 PM    | 103  | 85    | ŏ     | ő    | 12   | Ö    | 68       | 0       | 0     | 61       | 30       | 0        | 0    | 0<br>0 | 0     | 0    | 330           |
| Total       | 359  | 331   | 0     | 0    | 48   | 0    | 251      | 0       | 0     | 221      | 81       | 0        | 0    | 0      | 0     | 0    | 359<br>1291   |
| 05:00 PM    | 116  | 70    | 0     | 0    | 12   | 0    | 59       | 0       | 0     | 74       | 17       | 0        | 0    | 0      | . 0   | 0    | 348           |
| 05:15 PM    | 113  | 86    | 0     | 0    | 9    | 0    | 59       | 0       | 0     | 60       | 23       | 0        | Ō    | Õ      | ŏ     | ŏ    | 350           |
| 05:30 PM    | 111  | 80    | 0     | 0    | 7    | 0    | 64       | 0       | 0     | 70       | 16       | 0        | Ō    | Õ      | Ö     | ŏ    | 348           |
| 05:45 PM    | 117  | 100   | 0     | 0    | 11   | 0    | 65       | 0       | 0     | 45       | 19       | 0        | Ō    | Ŏ      | ŏ     | Ö    | 357           |
| Total       | 457  | 336   | 0     | 0    | 39   | 0    | 247      | 0       | 0     | 249      | 75       | 0        | 0    | 0      | 0     | 0    | 1403          |
| Grand Total | 1011 | 893   | 0     | 0    | 226  | 0    | 1328     | 0       | 0     | 1022     | 229      | 0        | 0    | 0      | 0     | 0    | 4709          |
| Apprch %    | 53.1 | 46.9  | 0.0   | 0.0  | 14.5 | 0.0  | 85.5     | 0.0     | 0.0   | 81.7     | 18.3     | 0.0      | 0.0  | 0.0    | 0.0   | 0.0  | 4109          |
| Total %     | 21.5 | 19.0  | 0.0   | 0.0  | 4.8  | 0.0  | 28.2     | 0.0     | 0.0   | 21.7     | 4.9      | 0.0      | 0.0  | 0.0    | 0.0   | 0.0  |               |

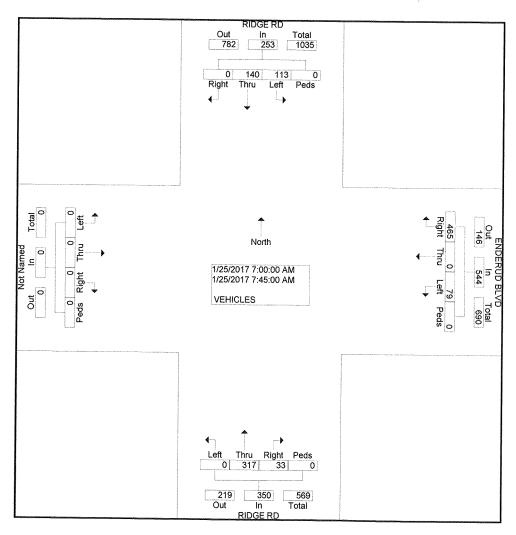
1889 YORK STREET DENVER.COLORADO 303-333-7409

N/S STREET: RIDGE RD E/W STREET: ENDERUD BLVD

CITY: CASTLE ROCK COUNTY: DOUGLAS

File Name: RIDGENDE Site Code : 00000015 Start Date : 1/25/2017 Page No : 2

| Ctt                                   |             | Sc       | IDGE<br>outhbo | und      |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | W    | estbo     | ,   | )                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          | DGE<br>orthbo |     |                  |        | E     | astboi | und |       |       |
|---------------------------------------|-------------|----------|----------------|----------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|-----|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------|-----|------------------|--------|-------|--------|-----|-------|-------|
| Start<br>Time                         | Left        | Thr      | Rig<br>ht      | Ped<br>s | App.<br>Total   | Left                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Thr  | Rig<br>ht | Ped | App.             | Left                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Thr      | Rig           | Ped | App.             | Left   | Thr   | Rig    | Ped | Арр.  | Int.  |
| Peak Hour                             | rom C       | 6:30     |                |          |                 | eak 1 d                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | of 1 | 111       | S   | Total            | L                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | u        | ht            | S   | Total            | 1      | u     | ht     | S   | Total | Total |
| Intersecti<br>on                      | 07:00       | MA (     |                |          |                 | TOTAL STREET, |      |           |     |                  | and the state of t |          |               |     |                  |        |       |        |     |       |       |
| Volume                                | 113         | 140      | 0              | 0        | 253             | 79                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0    | 465       | 0   | 544              | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 317      | 33            | 0   | 350              | 0      | 0     | 0      | 0   | 0     | 1147  |
| Percent                               | 44.<br>7    | 55.<br>3 | 0.0            | 0.0      |                 | 14.<br>5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.0  | 85.<br>5  | 0.0 |                  | 0.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 90.<br>6 | 9.4           | 0.0 |                  | 0.0    | 0.0   | 0.0    | 0.0 | J     | 1171  |
| 07:15<br>Volume<br>Peak               | 28          | 30       | 0              | 0        | 58              | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0    | 144       | 0   | 169              | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 106      | 9             | 0   | 115              | 0      | 0     | 0      | 0   | 0     | 342   |
| Factor                                | <u> </u>    |          |                |          |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |           |     |                  | THE STATE OF THE S |          |               |     |                  |        |       |        |     |       | 0.838 |
| High Int.<br>Volume<br>Peak<br>Factor | 07:45<br>34 | 41       | 0              | 0        | 75<br>0.84<br>3 | 07:15<br>25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0 AM | 144       | 0   | 169<br>0.80<br>5 | 07:15<br>0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 106      | 9             | 0   | 115<br>0.76<br>1 | 6:15:0 | 00 AM |        |     |       |       |



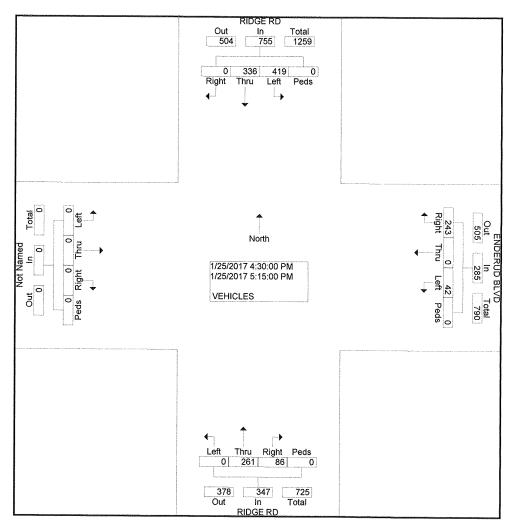
1889 YORK STREET DENVER.COLORADO 303-333-7409

N/S STREET: RIDGE RD E/W STREET: ENDERUD BLVD

CITY: CASTLE ROCK COUNTY: DOUGLAS

File Name: RIDGENDE Site Code : 00000015 Start Date : 1/25/2017 Page No : 2

|                     |          |          | IDGE<br>outhbo |          |               |          |          | ERUD<br>estbo | BLVD<br>und | )             |       |          | DGE<br>orthbo | –        |               |      | E        | astboı    | und      |               |               |
|---------------------|----------|----------|----------------|----------|---------------|----------|----------|---------------|-------------|---------------|-------|----------|---------------|----------|---------------|------|----------|-----------|----------|---------------|---------------|
| Start<br>Time       | Left     | Thr<br>u | Rig<br>ht      | Ped<br>s | App.<br>Total | Left     | Thr<br>u | Rig<br>ht     | Ped<br>s    | App.<br>Total | Left  | Thr<br>u | Rig<br>ht     | Ped<br>s | App.<br>Total | Left | Thr<br>u | Rig<br>ht | Ped<br>s | App.<br>Total | Int.<br>Total |
| Peak Hour I         | rom 0    | 4:30 F   | PM to (        | 05:15    | PM - Pe       | eak 1 c  | of 1     |               |             |               |       |          |               |          |               | I    |          |           | <u> </u> |               |               |
| Intersecti<br>on    | 04:30    | PM       |                |          |               |          |          |               |             |               |       |          |               |          |               |      |          |           |          |               |               |
| Volume              | 419      | 336      | 0              | 0        | 755           | 42       | 0        | 243           | 0           | 285           | 0     | 261      | 86            | 0        | 347           | 0    | 0        | 0         | 0        | 0             | 1387          |
| Percent             | 55.<br>5 | 44.<br>5 | 0.0            | 0.0      |               | 14.<br>7 | 0.0      | 85.<br>3      | 0.0         |               | 0.0   | 75.<br>2 | 24.<br>8      | 0.0      |               | 0.0  | 0.0      | 0.0       | 0.0      |               |               |
| 04:45<br>Volume     | 103      | 85       | 0              | 0        | 188           | 12       | 0        | 68            | 0           | 80            | 0     | 61       | 30            | 0        | 91            | 0    | 0        | 0         | 0        | 0             | 359           |
| Peak                |          |          |                |          |               |          |          |               |             |               |       |          |               |          |               |      |          |           |          |               | 0.966         |
| Factor<br>High Int. | 05:15    | PM       |                |          |               | 04:45    | PM       |               |             |               | 04:45 | PM       |               |          |               |      |          |           |          |               |               |
| Volume<br>Peak      | 113      | 86       | 0              | 0        | 199<br>0.94   | 12       | 0        | 68            | 0           | 80<br>0.89    | 0     | 61       | 30            | 0        | 91<br>0.95    |      |          |           |          |               |               |
| Factor              |          |          |                |          | 8             |          |          |               |             | 1             |       |          |               |          | 3             |      |          |           |          |               |               |



Page 1

Location: RIDGE RD S/O SH-86 City: CASTLE ROCK
County: DOUGLAS
Direction: NORTHBOUND-SOUTHBOUND

### **COUNTER MEASURES INC.**

**1889 YORK STREET DENVER, COLORADO 80206** 303-333-7409

Site Code: 012307 Station ID: 012307

| Start    | 23-Jan-17 |     | Tue                                     | TOTAL POTENCIAL PROPERTY OF THE PROPERTY OF TH | V     | /ed   |       | hu    |                                          | Fri                                                              |    | Sat          |                | un | Week A | /erage |
|----------|-----------|-----|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|-------|-------|------------------------------------------|------------------------------------------------------------------|----|--------------|----------------|----|--------|--------|
| Time     | NB S      | В 1 | NB                                      | SB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | NB    | SB    | NB    | SB    | NB                                       | SB                                                               | NB | SB           | NB             | SB | NB     | SB     |
| 12:00 AM | *         | *   | *                                       | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 4     | 25    | 5     | 27    | *                                        | *                                                                | *  | *            | *              | *  | 4      | 26     |
| 01:00    | *         | *   | *                                       | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 5     | 18    | 6     | 17    | *:                                       | *                                                                | *  | *            | ****           | *  | 6      | 18     |
| 02:00    | *         | *   | *                                       | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 4     | 15    | 3     | 12    | *                                        | *                                                                | *  | *            | *              | *  | 4      | 14     |
| 03:00    | *         | *   | *                                       | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 16    | 9     | 14    | 6     | *                                        |                                                                  | *  |              | *              | *  | 15     | 8      |
| 04:00    | *         | *   | *                                       | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 66    | 15    | 63    | 14    | *                                        | *                                                                | *  | *            | *              | *  | 64     | 14     |
| 05:00    | *         | *   | *                                       | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 222   | 33    | 218   | 30    | *                                        | *                                                                |    | *            | */             | *  | 220    | 32     |
| 06:00    | *         | *   | *                                       | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 501   | 109   | 510   | 106   | *                                        | *                                                                | *  | *            | *              | *  | 506    | 108    |
| 07:00    | *         | *   | *                                       | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 719   | 281   | 714   | 276   | *                                        | *                                                                | *  | *            | *              | *  | 716    | 278    |
| 08:00    | *         | *   | *                                       | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 514   | 299   | 509   | 287   | *                                        | *                                                                | *  | *            | *              | *  | 512    | 293    |
| 09:00    | *         | *   | *                                       | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 386   | 339   | 373   | 298   | *                                        | *                                                                | *  | *            | *              | *  | 380    | 318    |
| 10:00    | *         | *   | *                                       | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 291   | 254   | 288   | 298   | *                                        | *                                                                | *  | *            | *              | *  | 290    | 276    |
| 11:00    | *         | *   | *                                       | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 366   | 336   | 292   | 316   | *                                        | *                                                                | *  | *            | *              |    | 329    | 326    |
| 12:00 PM | *         | *   | *                                       | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 375   | 370   | 333   | 360   | *                                        | *                                                                | *  | *            | *              | *  | 354    | 365    |
| 01:00    | *         | *   | * 1                                     | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 292   | 341   | 298   | 390   | *                                        | *                                                                | *  | 87 S W S & * | \$ 5 5 A C # 1 | *  | 295    | 366    |
| 02:00    | *         | *   | *                                       | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 334   | 339   | 324   | 409   | *                                        | *                                                                | *  | *            | *              | *  | 329    | 374    |
| 03:00    |           | *   | *                                       | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 464   | 679   | 477   | 630   | *                                        | *                                                                | *  | *            | ****           | *  | 470    | 654    |
| 04:00    | *         | *   | *                                       | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 464   | 736   | 482   | 733   | *                                        | *                                                                | *  | *            | *              | *  | 473    | 734    |
| 05:00    | *         | *   | *                                       | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 490   | 782   | 486   | 782   | *                                        | *                                                                | *  |              | *              | *  | 488    | 782    |
| 06:00    | *         | *   | *                                       | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 413   | 624   | 358   | 590   | *                                        | *                                                                | *  | *            | *              | *  | 386    | 607    |
| 07:00    |           | *   | * * * * * * * * * * * * * * * * * * * * | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 216   | 388   | 201   | 356   | *                                        | *                                                                | *  |              |                | *  | 208    | 372    |
| 08:00    | *         | *   | *                                       | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 142   | 348   | 150   | 335   | *                                        | *                                                                | *  | *            | *              | *  | 146    | 342    |
| 09:00    | *         | *   | *                                       | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 73    | 223   | 82    | 194   | *                                        | *                                                                | *  |              | *              | *  | 78     | 208    |
| 10:00    | *         | *   | *                                       | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 28    | 86    | 29    | 96    | *                                        | *                                                                | *  | *            | *              | *  | 28     | 91     |
| 11:00    | *         | *   | *                                       | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 16    | 45    | 23    | 41    | *                                        | *                                                                | *  | *            | *              | *  | 20     | 43     |
| Lane     | 0         | 0   | 0                                       | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 6401  | 6694  | 6238  | 6603  | 0                                        | 0                                                                | 0  | 0            | 0              | 0  | 6321   | 6649   |
| Day      | 0         |     | 0                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 130   |       | 128   |       | 900-00-700-000-000-000-000-000-000-000-0 | 0                                                                |    | 0            | 0              | l  | 1297   |        |
| AM Peak  | ~         | -   | -                                       | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 07:00 | 09:00 | 07:00 | 11:00 | -                                        | -                                                                | -  | -            | -              | -  | 07:00  | 11:00  |
| Vol.     |           | _   | -                                       | _                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 719   | 339   | 714   | 316   | _                                        | -                                                                |    | **           |                | _  | 716    | 326    |
| PM Peak  | ~         | -   | -                                       | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 17:00 | 17:00 | 17:00 | 17:00 | -                                        | -                                                                | -  | -            | -              | -  | 17:00  | 17:00  |
| Vol.     | -         | _   | -                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 490   | 782   | 486   | 782   |                                          | The hit Assessment of PPA has a shift of VA assessment of Andrew |    |              |                | -  | 488    | 782    |
| Comb.    |           |     |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       |       |       |       |                                          |                                                                  |    |              |                |    |        |        |
| Total    | 0         |     | 0                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1     | 3095  | 1     | 2841  |                                          | 0                                                                |    | 0            |                | 0  | 12     | 970    |
| ADT      | ADT 12,9  | 68  | AADT 1                                  | 2,968                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |       |       |       |       |                                          |                                                                  |    |              |                |    |        |        |

Page 1

Location: SH-86 W/O AUTUMN SAGE ST City: CASTLE ROCK County: DOUGLAS Direction: WESTBOUND-EASTBOUND

### **COUNTER MEASURES INC.**

1889 YORK STREET **DENVER, COLORADO 80206** 303-333-7409

Site Code: 012512 Station ID: 012512

| Start          | 23-Jan-17  | Tue         | V     | Ved   | Т     | hu    | Fr                                      | *************************************** | Sat |    | Su                 |                                         | Week A | verage |
|----------------|------------|-------------|-------|-------|-------|-------|-----------------------------------------|-----------------------------------------|-----|----|--------------------|-----------------------------------------|--------|--------|
| Time           | WB EB      | WB EB       | WB    | EB    | WB    | EB    | WB                                      | EB                                      | WB  | EB | WB                 | EB                                      | WB     | EB     |
| 12:00 AM       | * *        | * *         | 10    | 33    | 13    | 34    | *                                       | *                                       | *   | *  | *                  | *                                       | 12     | 34     |
| 01:00          | *          | *           | 9     | 12    | 8     | 11    |                                         | *                                       | *   | *  | *                  | *                                       | 8      | 12     |
| 02:00          | * *        | * *         | 9     | 12    | 8     | 10    | *                                       | *                                       | *   | *  | *                  | *                                       | 8      | 11     |
| 03:00          |            | *           | 33    | 10    | 35    | 8     |                                         | *                                       | *   | *  |                    | * * * * * * * * * * * * * * * * * * * * | 34     | 9      |
| 04:00          | * *        | * *         | 77    | 19    | 70    | 18    | *                                       | *                                       | *   | *  | *                  | *                                       | 74     | 18     |
| 05:00          |            | * *         | 271   | 57    | 278   | 53    |                                         | *                                       | *   | *  | *                  | *                                       | 274    | 55     |
| 06:00          | * *        | * *         | 699   | 188   | 700   | 186   | *                                       | *                                       | *   | *  | *                  | *                                       | 700    | 187    |
| 07:00          |            | * *         | 934   | 399   | 920   | 384   | (1) (1) (1) (1) (1) (1) (1) (1) (1) (1) | *                                       | *   | *  | *                  | *                                       | 927    | 392    |
| 08:00          | * *        | * *         | 651   | 366   | 644   | 358   | *                                       | *                                       | *   | *  | *                  | *                                       | 648    | 362    |
| 09:00          |            | *           | 534   | 332   | 578   | 377   | *                                       | *                                       | *   | *  | *                  | *                                       | 556    | 354    |
| 10:00          | * *        | * *         | 414   | 310   | 482   | 314   | *                                       | *                                       | *   | *  | *                  | *                                       | 448    | 312    |
| 11:00          | * *        | *           | 452   | 322   | 476   | 348   | *                                       | *                                       |     |    | *                  | *                                       | 464    | 335    |
| 12:00 PM       | * *        | * *         | 439   | 384   | 444   | 448   | *                                       | *                                       | *   | *  | *                  | *                                       | 442    | 416    |
| 01:00          | *          | * *         | 362   | 424   | 430   | 440   | *                                       | *                                       | *   | *  | *                  |                                         | 396    | 432    |
| 02:00          | * *        | * *         | 464   | 538   | 450   | 540   | *                                       | *                                       | *   | *  | *                  | *                                       | 457    | 539    |
| 03:00          | *          | * *         | 535   | 718   | 536   | 724   | *                                       | *                                       | *   | *  | * *                | *                                       | 536    | 721    |
| 04:00          | * *        | * *         | 588   | 810   | 531   | 843   | *                                       | *                                       | *   | *  | *                  | *                                       | 560    | 826    |
| 05:00          | *          | *           | 528   | 842   | 476   | 760   | *                                       | *                                       |     | *  | *                  |                                         | 502    | 801    |
| 06:00          | * *        | * *         | 306   | 576   | 276   | 646   | *                                       | *                                       | *   | *  | *                  | *                                       | 291    | 611    |
| 07:00          |            | *           | 164   | 429   | 180   | 404   | *                                       | *                                       | *   | *  | * 7                | ***                                     | 172    | 416    |
| 08:00          | * *        | * *         | 150   | 338   | 130   | 311   | *                                       | *                                       | *   | *  | *                  | *                                       | 140    | 324    |
| 09:00          | *          | *           | 64    | 222   | 83    | 182   | *                                       | *                                       | *   | *  | (8.00 ) ( <b>*</b> |                                         | 74     | 202    |
| 10:00          | * *        | * *         | 38    | 104   | 33    | 96    | *                                       | *                                       | *   | *  | *                  | *                                       | 36     | 100    |
| 11:00          | * *        | *           | 25    | 45    | 24    | 60    | *                                       | *                                       | *   | *  | * :                | *                                       | 24     | 52     |
| Lane           | 0 0        | 0 0         |       | 7490  | 7805  | 7555  | 0                                       | 0                                       | 0 _ | 0  | 0                  | 0                                       | 7783   | 7521   |
| Day            | 0          | 0           |       | 246   | 153   |       | 0                                       |                                         | 0   |    | 0                  |                                         | 1530   |        |
| AM Peak        |            |             | 000   | 07:00 | 07:00 | 07:00 | -                                       | -                                       | -   | -  | -                  | -                                       | 07:00  | 07:00  |
| Vol.           |            | ** ***      | 001   | 399   | 920   | 384   |                                         | -                                       | _   | -  |                    | -                                       | 927    | 392    |
| PM Peak        |            |             | 16:00 | 17:00 | 15:00 | 16:00 | -                                       | -                                       | -   | -  | -                  | -                                       | 16:00  | 16:00  |
| Vol.           | -          |             | 588   | 842   | 536   | 843   |                                         | -                                       | -   |    |                    |                                         | 560    | 826    |
| Comb.<br>Total | 0          | 0           |       | 15246 | 1     | 5360  |                                         | 0                                       | (   | )  |                    | 0                                       | 15     | 5304   |
| ADT            | ADT 15,303 | AADT 15,303 |       |       |       |       |                                         |                                         |     |    |                    |                                         |        |        |

|                              | ۶    | <b>→</b> | •    | •    | <b>←</b> | •    | 1    | <b>†</b> | /    | <b>/</b> | ļ        | 4    |
|------------------------------|------|----------|------|------|----------|------|------|----------|------|----------|----------|------|
| Movement                     | EBL  | EBT      | EBR  | WBL  | WBT      | WBR  | NBL  | NBT      | NBR  | SBL      | SBT      | SBR  |
| Lane Configurations          | 7    | <b>^</b> | 7    | ň    | <b>^</b> | 7    | ř    | <b>†</b> | 7    | 7        | <b>^</b> | 7    |
| Traffic Volume (veh/h)       | 60   | 158      | 141  | 40   | 423      | 443  | 422  | 391      | 29   | 170      | 82       | 128  |
| Future Volume (veh/h)        | 60   | 158      | 141  | 40   | 423      | 443  | 422  | 391      | 29   | 170      | 82       | 128  |
| Initial Q (Qb), veh          | 0    | 0        | 0    | 0    | 0        | 0    | 0    | 0        | 0    | 0        | 0        | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |          | 1.00 | 1.00 |          | 1.00 | 1.00 |          | 1.00 | 1.00     |          | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00     | 1.00 | 1.00 | 1.00     | 1.00 | 1.00 | 1.00     | 1.00 | 1.00     | 1.00     | 1.00 |
| Work Zone On Approach        |      | No       |      |      | No       |      |      | No       |      |          | No       |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870     | 1870 | 1870 | 1870     | 1870 | 1870 | 1870     | 1870 | 1870     | 1870     | 1870 |
| Adj Flow Rate, veh/h         | 67   | 178      | 0    | 45   | 475      | 0    | 474  | 439      | 0    | 191      | 92       | 0    |
| Peak Hour Factor             | 0.89 | 0.89     | 0.89 | 0.89 | 0.89     | 0.89 | 0.89 | 0.89     | 0.89 | 0.89     | 0.89     | 0.89 |
| Percent Heavy Veh, %         | 2    | 2        | 2    | 2    | 2        | 2    | 2    | 2        | 2    | 2        | 2        | 2    |
| Cap, veh/h                   | 204  | 551      |      | 416  | 536      |      | 670  | 677      |      | 398      | 672      |      |
| Arrive On Green              | 0.05 | 0.29     | 0.00 | 0.04 | 0.29     | 0.00 | 0.09 | 0.36     | 0.00 | 0.09     | 0.36     | 0.00 |
| Sat Flow, veh/h              | 1781 | 1870     | 1585 | 1781 | 1870     | 1585 | 1781 | 1870     | 1585 | 1781     | 1870     | 1585 |
| Grp Volume(v), veh/h         | 67   | 178      | 0    | 45   | 475      | 0    | 474  | 439      | 0    | 191      | 92       | 0    |
| Grp Sat Flow(s), veh/h/ln    | 1781 | 1870     | 1585 | 1781 | 1870     | 1585 | 1781 | 1870     | 1585 | 1781     | 1870     | 1585 |
| Q Serve(g_s), s              | 2.3  | 6.5      | 0.0  | 1.5  | 21.3     | 0.0  | 8.0  | 17.1     | 0.0  | 5.8      | 2.9      | 0.0  |
| Cycle Q Clear(g_c), s        | 2.3  | 6.5      | 0.0  | 1.5  | 21.3     | 0.0  | 8.0  | 17.1     | 0.0  | 5.8      | 2.9      | 0.0  |
| Prop In Lane                 | 1.00 |          | 1.00 | 1.00 |          | 1.00 | 1.00 |          | 1.00 | 1.00     |          | 1.00 |
| Lane Grp Cap(c), veh/h       | 204  | 551      |      | 416  | 536      |      | 670  | 677      |      | 398      | 672      |      |
| V/C Ratio(X)                 | 0.33 | 0.32     |      | 0.11 | 0.89     |      | 0.71 | 0.65     |      | 0.48     | 0.14     |      |
| Avail Cap(c_a), veh/h        | 275  | 725      |      | 501  | 725      |      | 670  | 677      |      | 403      | 672      |      |
| HCM Platoon Ratio            | 1.00 | 1.00     | 1.00 | 1.00 | 1.00     | 1.00 | 1.00 | 1.00     | 1.00 | 1.00     | 1.00     | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00     | 0.00 | 1.00 | 1.00     | 0.00 | 1.00 | 1.00     | 0.00 | 1.00     | 1.00     | 0.00 |
| Uniform Delay (d), s/veh     | 23.1 | 24.1     | 0.0  | 20.7 | 29.9     | 0.0  | 20.3 | 23.3     | 0.0  | 17.0     | 18.9     | 0.0  |
| Incr Delay (d2), s/veh       | 0.9  | 0.3      | 0.0  | 0.1  | 10.0     | 0.0  | 3.4  | 4.7      | 0.0  | 0.9      | 0.4      | 0.0  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0      | 0.0  | 0.0  | 0.0      | 0.0  | 0.0  | 0.0      | 0.0  | 0.0      | 0.0      | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 0.9  | 2.7      | 0.0  | 0.6  | 10.0     | 0.0  | 4.0  | 7.8      | 0.0  | 2.2      | 1.2      | 0.0  |
| Unsig. Movement Delay, s/veh |      |          |      |      |          |      |      |          |      |          |          |      |
| LnGrp Delay(d),s/veh         | 24.0 | 24.4     | 0.0  | 20.8 | 39.9     | 0.0  | 23.7 | 28.0     | 0.0  | 17.9     | 19.3     | 0.0  |
| LnGrp LOS                    | С    | С        | 0.0  | C    | D        | 0.0  | C    | С        | 0,0  | В        | В        | 0.0  |
| Approach Vol, veh/h          |      | 245      | А    |      | 520      | А    |      | 913      | А    |          | 283      | А    |
| Approach Delay, s/veh        |      | 24.3     | 7.   |      | 38.2     | 71   |      | 25.8     | /1   |          | 18.4     | 7.   |
| Approach LOS                 |      | C C      |      |      | D        |      |      | C C      |      |          | В        |      |
|                              |      |          |      |      |          |      |      |          |      |          | D        |      |
| Timer - Assigned Phs         | 1    | 2        | 3    | 4    | 5        | 6    | 7    | 8        |      |          |          |      |
| Phs Duration (G+Y+Rc), s     | 11.7 | 38.3     | 7.8  | 29.8 | 12.0     | 38.0 | 8.5  | 29.1     |      |          |          |      |
| Change Period (Y+Rc), s      | 4.0  | 6.5      | 4.5  | 4.0  | 4.0      | 6.5  | 4.5  | 4.0      |      |          |          |      |
| Max Green Setting (Gmax), s  | 8.0  | 31.5     | 7.5  | 34.0 | 8.0      | 31.5 | 7.5  | 34.0     |      |          |          |      |
| Max Q Clear Time (g_c+l1), s | 7.8  | 19.1     | 3.5  | 8.5  | 10.0     | 4.9  | 4.3  | 23.3     |      |          |          |      |
| Green Ext Time (p_c), s      | 0.0  | 1.9      | 0.0  | 0.8  | 0.0      | 0.4  | 0.0  | 1.9      |      |          |          |      |
| Intersection Summary         |      |          |      |      |          |      |      |          |      |          |          |      |
| HCM 6th Ctrl Delay           |      |          | 27.8 |      |          |      |      |          |      |          |          |      |
| HCM 6th LOS                  |      |          | С    |      |          |      |      |          |      |          |          |      |
| Notes                        |      |          |      |      |          |      |      |          |      |          |          |      |

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

|                                                                                                                                                                                 |          |                      |          |        | ROL                                            | JNDABO   | UT REF                                               | PORT                                 |      |               |        |          |        |      |        |                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------|----------|--------|------------------------------------------------|----------|------------------------------------------------------|--------------------------------------|------|---------------|--------|----------|--------|------|--------|--------------------------------------------------|
| General Information                                                                                                                                                             |          |                      |          |        |                                                |          | Site In                                              | form                                 | atio | nn.           |        |          |        |      |        |                                                  |
| Analyst         CSM           Agency or Co.         LSC           Date Performed         4/20/2           Time Period         AM Period           Peak Hour Factor         0.84 |          |                      |          |        |                                                |          | Intersed<br>E/W Str<br>N/S Str<br>Analysi<br>Project | ction<br>reet Na<br>eet Na<br>s Year | ame  | Ridge<br>Ende |        |          | rud Bl | vd   |        |                                                  |
| Project Description:                                                                                                                                                            |          |                      |          |        |                                                |          |                                                      |                                      |      |               |        |          |        |      |        |                                                  |
| Volume Adjustment an                                                                                                                                                            | d Site   | Chara                | cteristi | ics    |                                                |          |                                                      |                                      |      |               |        |          |        |      |        |                                                  |
|                                                                                                                                                                                 |          | E                    | 3        |        |                                                | V        | /B                                                   |                                      |      |               | NB     |          |        |      | SB     |                                                  |
|                                                                                                                                                                                 | L        | Т                    | R        | U      | L                                              | Т        | R                                                    | U                                    | L    | _ T           | R      | U        | L      | Т    | R      | U                                                |
| Number of Lanes (N)                                                                                                                                                             | 0        | 0                    | 0        |        | 0                                              | 0        | 0                                                    |                                      | C    | ) 1           | 0      |          | 1      | 1    | 0      |                                                  |
| Lane Assignment                                                                                                                                                                 |          |                      |          |        |                                                |          | LF                                                   | ?                                    |      |               | Т      | R        | L      | -    |        | T                                                |
| Right-Turn Bypass                                                                                                                                                               |          | Noi                  | пе       |        |                                                | No       | ne                                                   |                                      |      | N             | lone   |          |        | 1    | None   |                                                  |
| Conflicting Lanes                                                                                                                                                               |          | 1                    |          |        |                                                |          | 1                                                    |                                      |      |               | 1      |          |        |      | 1      |                                                  |
| Volume (V), veh/h                                                                                                                                                               |          |                      |          | 0      | 79                                             |          | 465                                                  | 0                                    |      | 317           | 33     | 0        | 113    | 140  | )      | 0                                                |
| Heavy Veh. Adj. (f <sub>HV</sub> ), %                                                                                                                                           | 2        | 2                    | 2        | 2      | 2                                              | 2        | 2                                                    | 2                                    | 2    | 2 2           | 2      | 2        | 2      | 2    | 2      | 2                                                |
| Pedestrians Crossing                                                                                                                                                            |          | 0                    | ı        |        |                                                | (        | )                                                    |                                      |      | <u>"</u>      | 0      |          |        | 1    | 0      |                                                  |
| Critical and Follow-Up                                                                                                                                                          | Headv    | vav Ad               | iustme   | ent    | 1                                              |          |                                                      |                                      | l    |               |        | -        |        |      |        |                                                  |
|                                                                                                                                                                                 |          |                      | EB       |        |                                                |          | WB                                                   |                                      |      |               | NB     |          |        |      | SB     |                                                  |
|                                                                                                                                                                                 |          | Left                 | Righ     | t B    | ypass                                          | Left     | Right                                                | Вура                                 | ass  | Left          | Right  | Bypass   | Le     | ft   | Right  | Bypass                                           |
| Critical Headway (sec)                                                                                                                                                          |          | 5.1929               | +        |        | 1929                                           | 4.2000   | 4.2000                                               | +                                    |      | 4.0000        | 4.0000 | 1        | _      | _    | 1.2000 | 5.1929                                           |
| Follow-Up Headway (sec)                                                                                                                                                         |          | 3.1858               | +        | _      | 1858                                           | 2.8000   | 2.8000                                               | +                                    |      |               | 2.8000 | 3.1858   | +      | -    | 2.8000 | 3.1858                                           |
| Flow Computations                                                                                                                                                               |          | 0.7000   2.0000   0. |          |        |                                                | <u> </u> |                                                      |                                      |      | ]             |        | <u> </u> | 1      |      |        | .1                                               |
| ,                                                                                                                                                                               |          |                      | EB       |        |                                                |          | WB                                                   |                                      |      |               | NB     |          |        |      | SB     |                                                  |
|                                                                                                                                                                                 |          | Left                 | Righ     | t B    | ypass                                          | Left     | Right                                                | Вура                                 | ass  | Left          | Right  | Bypass   | Le     | ft   | Right  | Bypass                                           |
| Circulating Flow (V <sub>c</sub> ), pc/h                                                                                                                                        |          |                      | 403      |        | 71                                             |          | 385                                                  | Бураѕѕ                               |      |               | 137    | ,,,      |        |      | 96     | 1                                                |
| Exiting Flow (V <sub>ex</sub> ), pc/h                                                                                                                                           |          |                      | 177      |        |                                                |          | 0                                                    |                                      |      |               | 950    |          | 1      |      | 266    |                                                  |
| Entry Flow (V <sub>e</sub> ), pc/h                                                                                                                                              |          |                      | 167      |        |                                                |          | 661                                                  |                                      |      |               | 425    |          | 13     | 7    | 170    |                                                  |
| Entry Volume veh/h                                                                                                                                                              |          |                      |          |        |                                                |          | 648                                                  |                                      |      |               | 417    |          | 134    | 4    | 167    | 1                                                |
| Capacity and v/c Ratios                                                                                                                                                         | <u> </u> |                      |          |        |                                                |          |                                                      | -                                    |      |               |        |          | -      |      |        |                                                  |
| , , , , , , , , , , , , , , , , , , , ,                                                                                                                                         |          |                      | EB       |        |                                                |          | WB                                                   |                                      |      |               | NB     |          |        |      | SB     |                                                  |
|                                                                                                                                                                                 |          | Left                 | Righ     | t B    | ypass                                          | Left     | Right                                                | Вура                                 | ass  | Left          | Right  | Bypass   | Le     | ft   | Right  | Bypass                                           |
| Capacity (c <sub>PCE</sub> ), pc/h                                                                                                                                              |          |                      | 0        |        | <u>, ,                                    </u> |          | 953                                                  | 1                                    |      |               | 1164   | 7,       | 119    | -    | 1193   | <del>                                     </del> |
| Capacity (c), veh/h                                                                                                                                                             |          |                      | 0        |        |                                                |          | 934                                                  |                                      |      |               | 1142   |          | 117    | -    | 1170   |                                                  |
| v/c Ratio (X)                                                                                                                                                                   |          |                      |          | $\top$ |                                                |          | 0.69                                                 |                                      |      |               | 0.36   |          | 0.1    | -    | 0.14   |                                                  |
| Delay and Level of Serv                                                                                                                                                         | /ice     | 1                    | 1        |        |                                                |          |                                                      |                                      |      | I             |        | 1        | 1      |      |        |                                                  |
|                                                                                                                                                                                 |          |                      | EB       |        |                                                |          | WB                                                   |                                      |      |               | NB     |          | 1      |      | SB     |                                                  |
|                                                                                                                                                                                 |          | Left                 | Righ     | t B    | ypass                                          | Left     | Right                                                | Вура                                 | ass  | Left          | Right  | Bypass   | Le     | ft   | Right  | Bypass                                           |
| Lane Control Delay (d), s/ve                                                                                                                                                    | eh       |                      | 1        | 1      | , i                                            |          | 15.6                                                 | 1 77                                 |      |               | 6.8    | 7,2.30   | 4.0    | _    | 4.3    | 7,2336                                           |
| Lane LOS                                                                                                                                                                        |          |                      | F        | +      |                                                |          | С                                                    |                                      |      |               | A      |          | A      |      | A      |                                                  |
| Lane 95% Queue                                                                                                                                                                  |          |                      | 1        | $\top$ |                                                |          | 5.8                                                  |                                      |      |               | 1.7    |          | 0.4    | -    | 0.5    |                                                  |
| Approach Delay, s/veh                                                                                                                                                           |          |                      | 1        |        |                                                |          | 15.57                                                |                                      |      |               | 6.78   | 1        | 1      |      | 4.19   |                                                  |
| Approach LOS, s/veh                                                                                                                                                             |          |                      |          |        |                                                |          | С                                                    |                                      |      |               | Α      |          |        |      | Α      |                                                  |
| Intersection Delay, s/veh                                                                                                                                                       |          |                      |          |        |                                                |          |                                                      |                                      | 10.  | .38           |        |          | 1      |      |        |                                                  |
| Intersection LOS                                                                                                                                                                |          |                      |          |        |                                                |          |                                                      |                                      | E    |               |        |          |        |      |        |                                                  |
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|                              | ۶    | <b>→</b>  | •    | •    | <b>←</b> | •    | 4    | <b>†</b> | <b>/</b> | <b>/</b> | ļ         | 4    |
|------------------------------|------|-----------|------|------|----------|------|------|----------|----------|----------|-----------|------|
| Movement                     | EBL  | EBT       | EBR  | WBL  | WBT      | WBR  | NBL  | NBT      | NBR      | SBL      | SBT       | SBR  |
| Lane Configurations          | ሻ    | <b>•</b>  | 7    | ሻ    | <b>•</b> | 7    | ሻ    | <b>↑</b> | 7        | ሻ        | <b>•</b>  | 7    |
| Traffic Volume (veh/h)       | 95   | 373       | 358  | 78   | 206      | 275  | 199  | 287      | 35       | 468      | 379       | 93   |
| Future Volume (veh/h)        | 95   | 373       | 358  | 78   | 206      | 275  | 199  | 287      | 35       | 468      | 379       | 93   |
| Initial Q (Qb), veh          | 0    | 0         | 0    | 0    | 0        | 0    | 0    | 0        | 0        | 0        | 0         | 0    |
| Ped-Bike Adj(A_pbT)          | 1.00 |           | 1.00 | 1.00 |          | 1.00 | 1.00 |          | 1.00     | 1.00     |           | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00      | 1.00 | 1.00 | 1.00     | 1.00 | 1.00 | 1.00     | 1.00     | 1.00     | 1.00      | 1.00 |
| Work Zone On Approach        |      | No        |      |      | No       |      |      | No       |          |          | No        |      |
| Adj Sat Flow, veh/h/ln       | 1870 | 1870      | 1870 | 1870 | 1870     | 1870 | 1870 | 1870     | 1870     | 1870     | 1870      | 1870 |
| Adj Flow Rate, veh/h         | 100  | 393       | 0    | 82   | 217      | 0    | 209  | 302      | 0        | 493      | 399       | 0    |
| Peak Hour Factor             | 0.95 | 0.95      | 0.95 | 0.95 | 0.95     | 0.95 | 0.95 | 0.95     | 0.95     | 0.95     | 0.95      | 0.95 |
| Percent Heavy Veh, %         | 2    | 2         | 2    | 2    | 2        | 2    | 2    | 2        | 2        | 2        | 2         | 2    |
| Cap, veh/h                   | 353  | 461       |      | 223  | 445      |      | 463  | 707      |          | 536      | 712       |      |
| Arrive On Green              | 0.06 | 0.25      | 0.00 | 0.05 | 0.24     | 0.00 | 0.09 | 0.38     | 0.00     | 0.10     | 0.38      | 0.00 |
| Sat Flow, veh/h              | 1781 | 1870      | 1585 | 1781 | 1870     | 1585 | 1781 | 1870     | 1585     | 1781     | 1870      | 1585 |
| Grp Volume(v), veh/h         | 100  | 393       | 0    | 82   | 217      | 0    | 209  | 302      | 0        | 493      | 399       | 0    |
| Grp Sat Flow(s), veh/h/ln    | 1781 | 1870      | 1585 | 1781 | 1870     | 1585 | 1781 | 1870     | 1585     | 1781     | 1870      | 1585 |
| Q Serve(g_s), s              | 3.5  | 16.7      | 0.0  | 2.9  | 8.3      | 0.0  | 5.8  | 10.0     | 0.0      | 8.0      | 14.0      | 0.0  |
| Cycle Q Clear(g_c), s        | 3.5  | 16.7      | 0.0  | 2.9  | 8.3      | 0.0  | 5.8  | 10.0     | 0.0      | 8.0      | 14.0      | 0.0  |
| Prop In Lane                 | 1.00 |           | 1.00 | 1.00 |          | 1.00 | 1.00 | , , , ,  | 1.00     | 1.00     |           | 1.00 |
| Lane Grp Cap(c), veh/h       | 353  | 461       |      | 223  | 445      |      | 463  | 707      |          | 536      | 712       |      |
| V/C Ratio(X)                 | 0.28 | 0.85      |      | 0.37 | 0.49     |      | 0.45 | 0.43     |          | 0.92     | 0.56      |      |
| Avail Cap(c_a), veh/h        | 407  | 763       |      | 293  | 763      |      | 467  | 707      |          | 536      | 712       |      |
| HCM Platoon Ratio            | 1.00 | 1.00      | 1.00 | 1.00 | 1.00     | 1.00 | 1.00 | 1.00     | 1.00     | 1.00     | 1.00      | 1.00 |
| Upstream Filter(I)           | 1.00 | 1.00      | 0.00 | 1.00 | 1.00     | 0.00 | 1.00 | 1.00     | 0.00     | 1.00     | 1.00      | 0.00 |
| Uniform Delay (d), s/veh     | 22.2 | 29.9      | 0.0  | 23.7 | 27.4     | 0.0  | 14.6 | 19.2     | 0.0      | 23.2     | 20.3      | 0.0  |
| Incr Delay (d2), s/veh       | 0.4  | 5.0       | 0.0  | 1.0  | 0.8      | 0.0  | 0.7  | 1.9      | 0.0      | 21.2     | 3.2       | 0.0  |
| Initial Q Delay(d3),s/veh    | 0.0  | 0.0       | 0.0  | 0.0  | 0.0      | 0.0  | 0.0  | 0.0      | 0.0      | 0.0      | 0.0       | 0.0  |
| %ile BackOfQ(50%),veh/ln     | 1.4  | 7.5       | 0.0  | 1.1  | 3.4      | 0.0  | 2.1  | 4.3      | 0.0      | 8.0      | 6.0       | 0.0  |
| Unsig. Movement Delay, s/veh |      | 7.0       | 0.0  | •••  | 0.1      | 0.0  | 2.1  | 1.0      | 0.0      | 0.0      | 0.0       | 0.0  |
| LnGrp Delay(d),s/veh         | 22.7 | 34.9      | 0.0  | 24.7 | 28.2     | 0.0  | 15.3 | 21.1     | 0.0      | 44.5     | 23.5      | 0.0  |
| LnGrp LOS                    | C    | C         | 0.0  | C    | C        | 0.0  | В    | C        | 0.0      | D        | C         | 0.0  |
| Approach Vol, veh/h          |      | 493       | А    |      | 299      | А    |      | 511      | А        |          | 892       | А    |
| Approach Delay, s/veh        |      | 32.4      | А    |      | 27.2     | А    |      | 18.7     | A        |          | 35.1      | А    |
| Approach LOS                 |      | 32.4<br>C |      |      | C C      |      |      | В        |          |          | 33.1<br>D |      |
| Approach LOS                 |      | C         |      |      | C        |      |      | D        |          |          | D         |      |
| Timer - Assigned Phs         | 1    | 2         | 3    | 4    | 5        | 6    | 7    | 8        |          |          |           |      |
| Phs Duration (G+Y+Rc), s     | 12.0 | 38.0      | 8.8  | 24.5 | 11.8     | 38.2 | 9.5  | 23.8     |          |          |           |      |
| Change Period (Y+Rc), s      | 4.0  | 6.5       | 4.5  | 4.0  | 4.0      | 6.5  | 4.5  | 4.0      |          |          |           |      |
| Max Green Setting (Gmax), s  | 8.0  | 31.5      | 7.5  | 34.0 | 8.0      | 31.5 | 7.5  | 34.0     |          |          |           |      |
| Max Q Clear Time (g_c+I1), s | 10.0 | 12.0      | 4.9  | 18.7 | 7.8      | 16.0 | 5.5  | 10.3     |          |          |           |      |
| Green Ext Time (p_c), s      | 0.0  | 1.5       | 0.0  | 1.9  | 0.0      | 1.8  | 0.0  | 1.0      |          |          |           |      |
| Intersection Summary         |      |           |      |      |          |      |      |          |          |          |           |      |
| HCM 6th Ctrl Delay           |      |           | 29.6 |      |          |      |      |          |          |          |           |      |
| HCM 6th LOS                  |      |           | С    |      |          |      |      |          |          |          |           |      |
| Notes                        |      |           |      |      |          |      |      |          |          |          |           |      |

Unsignalized Delay for [NBR, EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

|                                                                                             |        |          |          | ROL    | JNDABO | UT REF                                          | PORT                                |     |              |              |          |         |        |                |          |
|---------------------------------------------------------------------------------------------|--------|----------|----------|--------|--------|-------------------------------------------------|-------------------------------------|-----|--------------|--------------|----------|---------|--------|----------------|----------|
| Concret Information                                                                         |        |          |          |        |        | Cito In                                         | form                                |     |              |              |          |         |        |                |          |
| Analyst CSM Agency or Co. LSC Date Performed 9/26/2 Time Period PM Pe Peak Hour Factor 0.95 |        |          |          |        |        | Intersection E/W Str. N/S Str. Analysis Project | ction<br>eet Na<br>eet Na<br>s Year | ame | Ridg<br>Ende |              |          | rud Blv | ⁄d     |                |          |
| Project Description:                                                                        |        |          |          |        |        |                                                 |                                     |     |              |              |          |         |        |                |          |
| Volume Adjustment and                                                                       | d Site |          |          | s      |        |                                                 | 1                                   |     |              |              | 1        |         |        |                |          |
|                                                                                             |        | EB       |          |        | 1      | /B                                              |                                     |     |              | NB           |          | 1       |        | SB<br>T        |          |
|                                                                                             | L      | Т        | R        | U L    | Т      | R                                               | U                                   | L   |              | R            | U        | L       | Т      | R              | U        |
| Number of Lanes (N)                                                                         | 0      | 0        | 0        | 0      | 0      | 0                                               |                                     | 0   | ) 1          | 0            |          | 1       | 1      | 0              |          |
| Lane Assignment                                                                             |        |          |          |        |        | LF                                              | ?                                   |     |              | T            | R        | L       |        |                | T        |
| Right-Turn Bypass                                                                           |        | Non      | е        |        | No     | one                                             |                                     |     | ١            | lone         |          |         | N      | one            |          |
| Conflicting Lanes                                                                           |        | 1        |          |        |        | 1                                               |                                     |     |              | 1            |          |         |        | 1              |          |
| Volume (V), veh/h                                                                           |        |          |          | 0 42   |        | 243                                             | 0                                   |     | 261          | 86           | 0        | 419     | 336    |                | 0        |
| Heavy Veh. Adj. (f <sub>HV</sub> ), %                                                       | 2      | 2        | 2        | 2 2    | 2      | 2                                               | 2                                   | 2   | 2            | 2            | 2        | 2       | 2      | 2              | 2        |
| Pedestrians Crossing                                                                        |        | 0        |          |        | (      | 0                                               |                                     |     |              | 0            |          |         |        | 0              |          |
| Critical and Follow-Up                                                                      | Headv  | vay Adj  | ustmer   | nt     |        |                                                 |                                     |     |              |              |          |         |        |                |          |
|                                                                                             |        |          | EB       |        |        | WB                                              |                                     |     |              | NB           |          |         |        | SB             |          |
|                                                                                             |        | Left     | Right    | Bypass | Left   | Right                                           | Вура                                | ass | Left         | Right        | Bypass   | Lef     | t F    | Right          | Bypass   |
| Critical Headway (sec)                                                                      |        | 5.1929   | 4.0000   | 5.1929 | 4.2000 | 4.2000                                          | 5.19                                | 29  | 4.0000       | 4.0000 5.192 |          | 4.200   | 00 4.  | 2000           | 5.1929   |
| Follow-Up Headway (sec)                                                                     |        | 3.1858   | 2.8000   | 3.1858 | 2.8000 | 2.8000                                          | 3.18                                | 58  | 2.8000       | 2.8000       | 3.1858   | 2.800   | 00 2.  | 8000           | 3.1858   |
| Flow Computations                                                                           |        |          |          |        |        |                                                 | •                                   |     | ı            |              |          | 1       | •      |                |          |
| -                                                                                           |        |          | EB       |        |        | WB                                              |                                     |     |              | NB           |          |         |        | SB             |          |
|                                                                                             |        | Left     | Right    | Bypass | Left   | Right                                           | Вура                                | ass | Left         | Right        | Bypass   | Lef     | t F    | Right          | Bypass   |
| Circulating Flow (V <sub>c</sub> ), pc/h                                                    |        |          | 856      |        |        | 280                                             | 1                                   |     |              | 450          |          |         |        | <del>4</del> 5 |          |
| Exiting Flow (V <sub>ex</sub> ), pc/h                                                       |        |          | 542      |        |        | 0                                               |                                     |     |              | 541          |          |         |        | 406            |          |
| Entry Flow (V <sub>e</sub> ), pc/h                                                          |        |          | 354      |        |        | 306                                             |                                     |     |              | 373          |          | 450     | ) ;    | 361            |          |
| Entry Volume veh/h                                                                          |        |          |          |        |        | 300                                             |                                     |     |              | 366          |          | 441     | , ;    | 354            |          |
| Capacity and v/c Ratios                                                                     | •      |          |          | -      |        |                                                 | -                                   |     |              |              |          | ļ       |        |                |          |
|                                                                                             | -      |          | EB       |        |        | WB                                              |                                     |     |              | NB           |          |         |        | SB             |          |
|                                                                                             |        | Left     | Right    | Bypass | Left   | Right                                           | Вура                                | ass | Left         | Right        | Bypass   | Lef     |        | Right          | Bypass   |
| Capacity (c <sub>PCE</sub> ), pc/h                                                          |        |          | 0        | 1      |        | 1034                                            | 1 7                                 |     |              | 929          | ,,       | 124     |        | 241            | ''       |
| Capacity (c), veh/h                                                                         |        |          | 0        |        |        | 1014                                            | T                                   |     |              | 911          |          | 121     | _      | 217            |          |
| v/c Ratio (X)                                                                               |        |          |          |        |        | 0.30                                            |                                     |     |              | 0.40         |          | 0.36    | _      | 0.29           |          |
| Delay and Level of Serv                                                                     | /ice   | <u>I</u> | 1        | 1      | I      | 1                                               |                                     |     | I            | <u> </u>     | <u>I</u> | 1       |        | -              | I        |
|                                                                                             |        |          | EB       |        |        | WB                                              |                                     |     |              | NB           |          |         |        | SB             |          |
|                                                                                             |        | Left     | Right    | Bypass | Left   | Right                                           | Вура                                | ass | Left         | Right        | Bypass   | Lef     |        | Right          | Bypass   |
| Lane Control Delay (d), s/ve                                                                | eh     |          | 1        | 1      |        | 6.5                                             | †                                   |     |              | 8.6          |          | 6.4     |        | 5.6            | <u> </u> |
| Lane LOS                                                                                    |        |          | F        |        |        | Α                                               |                                     |     |              | Α            |          | A       |        | Α              |          |
| Lane 95% Queue                                                                              |        |          |          |        |        | 1.2                                             | 1                                   |     |              | 2.0          |          | 1.7     | -      | 1.2            |          |
| Approach Delay, s/veh                                                                       |        |          | 1        | 1      |        | 6.51                                            |                                     |     |              | 8.58         | l        |         |        | 5.08           | 1        |
| Approach LOS, s/veh                                                                         |        |          |          |        |        | Α                                               |                                     |     |              | Α            |          | 1       |        | Α              |          |
| Intersection Delay, s/veh                                                                   |        |          |          |        | 1      |                                                 |                                     | 6.7 | <br>79       |              |          | 1       |        |                |          |
| Intersection LOS                                                                            |        |          |          |        |        |                                                 |                                     | -/- |              |              |          |         |        |                |          |
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| General Information                                                                                                  |          |         |          |        |       | Site In           | forma                                 | tion |                 |                                  |         |        |      |               |        |
|----------------------------------------------------------------------------------------------------------------------|----------|---------|----------|--------|-------|-------------------|---------------------------------------|------|-----------------|----------------------------------|---------|--------|------|---------------|--------|
| Analyst KMK Agency or Co. LSC Date Performed 10/16/ Time Period AM Period Peak Hour Factor 0.92 Project Description: |          |         |          |        |       | Interse<br>E/W St | ction<br>reet Na<br>eet Nar<br>s Year | me a | 5th Si<br>Ridge | treet/ SI<br>e Road/I<br>Backgro | ounders |        |      |               |        |
| Volume Adjustment an                                                                                                 | d Site   | Charac  | teristic | s      |       |                   |                                       |      |                 |                                  |         |        |      |               |        |
|                                                                                                                      |          | EB      |          |        | V     | /B                |                                       |      | 1               | NB                               |         |        | SB   |               |        |
|                                                                                                                      | L        | Т       | R        | U L    | Т     | R                 | U                                     | L    | Т               | R                                | U       | L      | Т    | R             | U      |
| Number of Lanes (N)                                                                                                  | 0        | 2       | 0        | 0      | 2     | 0                 |                                       | 0    | 2               | 0                                |         | 0      | 2    | 0             |        |
| Lane Assignment                                                                                                      | L        | T       | T        |        | LT    | 7                 |                                       | L7   | _               | Т                                | R       | LT     |      |               | TR     |
| Right-Turn Bypass                                                                                                    |          | Non-Yie | lding    |        | Non-Y | ielding           |                                       |      | N               | one                              |         |        | Non  | е             |        |
| Conflicting Lanes                                                                                                    |          | 1       | 1        |        |       | 1                 |                                       |      |                 | 1                                |         | 1      | 1    |               | 1      |
| Volume (V), veh/h                                                                                                    | 65       | 165     |          | 0 45   | 445   |                   | 0                                     | 445  | 415             | 30                               | 0       |        |      | 135           | 0      |
| Heavy Veh. Adj. (f <sub>HV</sub> ), %                                                                                | 2        | 2 0     | 2        | 2 2    | 2     | 2                 | 2                                     | 2    | 2               | 0                                | 2       | 2      | 2 0  | 2             | 2      |
| Pedestrians Crossing  Critical and Follow-Up                                                                         | Hoody    |         | tman     | .4     |       | U                 |                                       |      |                 | U                                |         |        | 0    |               |        |
| Critical and Follow-Op                                                                                               | пеаи     | vay Auj | EB       | ıt     | 1     | WB                |                                       |      |                 | NB                               |         | 1      | SI   | 2             |        |
|                                                                                                                      |          | Left    | Right    | Bypass | Left  | Right             | Вура                                  | ss L | eft             | Right                            | Bypass  | Left   | Rig  |               | Bypass |
| Critical Headway (sec)                                                                                               |          | 4.0000  | 4.0000   |        |       | 4.0000            | +                                     |      |                 | 4.0000                           | 5.1929  | 4.0000 |      | $\rightarrow$ | 5.1929 |
| Follow-Up Headway (sec)                                                                                              |          | 2.5000  | 2.5000   | 2.5000 |       | 2.5000            |                                       | _    | _               | 2.5000                           | 3.1858  | 2.5000 | _    | $\rightarrow$ | 3.1858 |
| Flow Computations                                                                                                    |          |         | ı        |        |       | 1                 | 1                                     |      | - '             |                                  | 1       | 1      | ı    |               |        |
|                                                                                                                      |          |         | EB       |        |       | WB                |                                       |      |                 | NB                               |         |        | SI   | 3             |        |
|                                                                                                                      |          | Left    | Right    | Bypass | Left  | Right             | Вура                                  | ss L | eft             | Right                            | Bypass  | Left   | Rig  | ht            | Bypass |
| Circulating Flow (V <sub>c</sub> ), pc/h                                                                             |          |         | 361      |        |       | 1025              |                                       |      |                 | 466                              |         |        | 103  | 36            |        |
| Exiting Flow (V <sub>ex</sub> ), pc/h                                                                                |          |         | 427      | 1      |       | 1136              | 1                                     |      |                 | 532                              | 1       |        | 15   |               |        |
| Entry Flow (V <sub>e</sub> ), pc/h                                                                                   |          | 120     | 135      | 166    | 255   | 288               | 543                                   | _    | 93              | 493                              |         | 216    | 24   | $\rightarrow$ |        |
| Entry Volume veh/h                                                                                                   |          | 118     | 132      | 163    | 250   | 282               | 532                                   | 48   | 33              | 483                              |         | 212    | 23   | 9             |        |
| Capacity and v/c Ratios                                                                                              | <u> </u> |         | EB       |        |       | WB                |                                       |      |                 | ND                               |         |        | SI   |               |        |
|                                                                                                                      |          | Left    | Right    | Bypass | Left  | Right             | Вура                                  | ec L | eft             | NB<br>Right                      | Bypass  | Left   | Rig  |               | Bypass |
| Capacity (c <sub>PCE</sub> ), pc/h                                                                                   |          | 1094    | 1094     | руразз | 658   | 658               | Бура                                  |      | 009             | 1009                             | Бураза  | 652    | 65.  | -             | рураб  |
| Capacity (c), veh/h                                                                                                  |          | 1072    | 1072     |        | 645   | 645               | +                                     |      | 39              | 989                              |         | 640    | 64   | $\rightarrow$ |        |
| v/c Ratio (X)                                                                                                        |          | 0.11    | 0.12     |        | 0.39  | 0.44              |                                       |      | 49              | 0.49                             |         | 0.33   | 0.3  | $\rightarrow$ |        |
| Delay and Level of Serv                                                                                              | vice     | 1       | 1        | 1      |       | 1                 |                                       |      |                 |                                  |         |        |      |               |        |
| -                                                                                                                    |          |         | EB       |        |       | WB                |                                       |      |                 | NB                               |         |        | SI   | 3             |        |
|                                                                                                                      |          | Left    | Right    | Bypass | Left  | Right             | Вура                                  | ss L | eft             | Right                            | Bypass  | Left   | Rig  | ht            | Bypass |
| Lane Control Delay (d), s/ve                                                                                         | eh       | 4.3     | 4.4      | 0.0    | 11.0  | 12.0              | 0.0                                   | 9    | .5              | 9.5                              |         | 10.0   | 10.  | 8             |        |
| Lane LOS                                                                                                             |          | Α       | Α        |        | В     | В                 |                                       | _    | 4               | Α                                |         | В      | В    | $\rightarrow$ |        |
| Lane 95% Queue                                                                                                       |          | 0.4     | 0.4      |        | 1.8   | 2.2               |                                       | 2    | .7              | 2.7                              |         | 1.4    | 1.   |               |        |
| Approach Delay, s/veh                                                                                                |          |         | 2.66     |        |       | 5.78              |                                       |      |                 | 9.51                             |         |        | 10.4 |               |        |
| Approach LOS, s/veh Intersection Delay, s/veh                                                                        |          |         | Α        |        |       | A                 |                                       | 701  |                 | Α                                |         |        | В    |               |        |
| untorcootion Dolovi c/voh                                                                                            |          | 1       |          |        |       |                   |                                       | 7.31 |                 |                                  |         |        |      |               |        |

| General Information                                                                                               |            |                      |              |         |          | Site In                                                 | forms                            | tio        | n                    |                                             |        |          |             |          |
|-------------------------------------------------------------------------------------------------------------------|------------|----------------------|--------------|---------|----------|---------------------------------------------------------|----------------------------------|------------|----------------------|---------------------------------------------|--------|----------|-------------|----------|
| Analyst KMK Agency or Co. LSC Date Performed 10/16/ Time Period AM Pe Peak Hour Factor 0.92  Project Description: |            |                      |              |         |          | Intersect<br>E/W Str<br>N/S Stre<br>Analysis<br>Project | tion<br>eet Na<br>eet Na<br>Year | ame<br>me  | Ridg<br>Ende<br>Ridg | e Road/<br>erud Blvd<br>e Road<br>B Backgrd | 1      | rud Blvd |             |          |
| Volume Adjustment an                                                                                              | d Sita     | Charac               | toristic     | •e      |          |                                                         |                                  |            |                      |                                             |        |          |             |          |
| Volume Aujustinent an                                                                                             |            | EB                   |              | .3      | V        | /B                                                      |                                  |            |                      | NB                                          |        |          | SB          |          |
|                                                                                                                   | L          | Т                    |              | UL      | Тт       | R                                                       | U                                | L          |                      | R                                           | U      | L        | T R         | U        |
| Number of Lanes (N)                                                                                               | 0          | 0                    | 0            | 0       | 1        | 1                                                       |                                  | 0          |                      | 0                                           |        |          | 2 0         |          |
| Lane Assignment                                                                                                   |            |                      |              |         | LTR      | R                                                       |                                  |            | T                    | T                                           | R      | LT       |             | T        |
| Right-Turn Bypass                                                                                                 |            | Non                  | e            |         |          | ne                                                      |                                  |            |                      | None                                        |        |          | None        |          |
| Conflicting Lanes                                                                                                 |            | 1                    |              |         |          |                                                         |                                  |            | <u> </u>             | 1                                           |        |          | 1           |          |
| Volume (V), veh/h                                                                                                 |            |                      |              | 0 80    | 0        | 475                                                     | 0                                |            | 340                  | _                                           | 0      | 120      | i           | 0        |
| Heavy Veh. Adj. (f <sub>HV</sub> ), %                                                                             | 2          | 2                    |              | 2 2     | 2        | 2                                                       | 2                                | 2          |                      | 2                                           | 2      |          | 2 2         | 2        |
| Pedestrians Crossing                                                                                              | _          | 0                    | -            |         |          | <u> </u>                                                | _                                |            |                      | 0                                           |        | -        | 0           |          |
| Critical and Follow-Up                                                                                            | Hoody      |                      | otmo.        | .4      |          |                                                         |                                  |            |                      |                                             |        |          |             |          |
| Chucai and Follow-op                                                                                              | пеаич      | ay Auj               | EB           | n.      |          | WB                                                      |                                  |            |                      | NB                                          |        |          | SB          |          |
|                                                                                                                   |            | Left                 | Right        | Bypass  | Left     | Right                                                   | Вура                             | 200        | Left                 | Right                                       | Bypass | Left     | Right       | Bypass   |
| Critical Headway (sec)                                                                                            |            | 5.1929               | <del>-</del> | _       | 4.2000   |                                                         | _                                | _          | 4.2000               | 4.2000                                      |        | 4.2000   |             | +        |
| Follow-Up Headway (sec)                                                                                           |            | 3.1858               | 1            | +       |          | 2.8000                                                  | +                                | _          |                      | 2.8000                                      | 3.1858 | 2.8000   |             | +        |
| Flow Computations                                                                                                 |            | 3.7606   2.6000   3. |              | 3.1000  | 2.0000   | 2.0000                                                  | 3.70                             | <i>J</i> 0 | 2.0000               | 2.0000                                      | 3.1000 | 2.0000   | 2.0000      | 3.7000   |
| riow Computations                                                                                                 |            |                      | EB           |         | Ι        | WB                                                      |                                  |            |                      | NB                                          |        |          | SB          |          |
|                                                                                                                   |            | l off                | 1            | D. mana | l oft    | ı                                                       | Dyne                             |            | l oft                |                                             | Dunaga | Loft     | 1           | Dungag   |
| Circulating Flow (V <sub>c</sub> ), pc/h                                                                          |            | Left                 | Right 638    | Bypass  | Left     | Right<br>377                                            | Вура                             | 155        | Left                 | Right<br>133                                | Bypass | Left     | Right<br>89 | Bypass   |
| Exiting Flow (V <sub>ex</sub> ), pc/h                                                                             |            |                      |              |         |          |                                                         |                                  |            |                      |                                             |        |          |             |          |
| Entry Flow (V <sub>e</sub> ), pc/h                                                                                |            |                      | 172<br>286   |         | 289      | 0                                                       | 1                                |            | 195                  | 904                                         |        | 258      | 504<br>291  | 1        |
|                                                                                                                   |            |                      | 200          |         | 1        | 326                                                     |                                  |            |                      | -                                           |        | <b>.</b> | +           | -        |
| Entry Volume veh/h                                                                                                |            |                      |              |         | 283      | 320                                                     |                                  |            | 191                  | 216                                         |        | 253      | 285         | <u> </u> |
| Capacity and v/c Ratios                                                                                           | <u> </u>   |                      | EB           |         |          | WB                                                      |                                  | 1          |                      | NB                                          |        |          | SB          |          |
|                                                                                                                   |            | Left                 | 1            | Bypass  | Left     | Right                                                   | Вура                             | 200        | Left                 | Right                                       | Bypass | Left     | Right       | Bypaga   |
| Capacity (c <sub>PCE</sub> ), pc/h                                                                                |            | Leit                 | Right 0      | Бураѕѕ  | 959      | 959                                                     | Бура                             | 155        | 1159                 | 1159                                        | Бураза | 1200     | 1200        | Bypass   |
| Capacity (c), veh/h                                                                                               |            |                      | 0            |         | 940      | 940                                                     |                                  |            | 1137                 | 1137                                        |        | 1176     | 1176        |          |
| v/c Ratio (X)                                                                                                     |            |                      | "            |         | 0.30     | 0.34                                                    |                                  |            | 0.17                 | 0.19                                        |        | 0.22     | 0.24        |          |
| Delay and Level of Serv                                                                                           | vice       |                      | <u> </u>     |         | 0.30     | 0.34                                                    |                                  |            | 0.17                 | 0.19                                        |        | 0.22     | 0.24        |          |
| Delay and Level of Ser                                                                                            | vice       |                      | EB           |         |          | \\/D                                                    |                                  |            |                      | NB                                          |        |          | CD.         |          |
|                                                                                                                   |            | Left                 | Right        | Bypass  | Left     | WB<br>Right                                             | Вура                             | 100        | Left                 | Right                                       | Bypass | Left     | SB<br>Right | Bypass   |
| Lane Control Delay (d), s/ve                                                                                      | ah         | FEIL                 | TXIGHT       | Бураза  | 7.0      | 7.5                                                     | Грура                            | 100        | 4.6                  | 4.9                                         | рураза | 5.0      | 5.3         | рураза   |
| Lane LOS                                                                                                          | <b>-11</b> |                      | F            |         | 7.0<br>A | 7.5<br>A                                                |                                  |            | 4.0<br>A             | 4.9<br>A                                    |        | 3.0<br>A | 3.3<br>A    | +        |
| Lane 95% Queue                                                                                                    |            |                      | + '-         | +       | 1.3      | 1.5                                                     |                                  |            | 0.6                  | 0.7                                         |        | 0.8      | 1.0         |          |
| Approach Delay, s/veh                                                                                             |            |                      | 1            |         | 1.5      | 7.25                                                    |                                  |            | 0.0                  | 4.76                                        |        | 0.0      | 5.12        |          |
|                                                                                                                   |            |                      |              |         | -        | 7.25<br>A                                               |                                  |            |                      | 4.70<br>A                                   |        |          | 3.12<br>A   |          |
| Approach LOS, s/veh                                                                                               |            | A                    |              | F (     | 25       | А                                                       |                                  |            | A                    |                                             |        |          |             |          |
| Intersection Delay, s/veh Intersection LOS                                                                        |            |                      |              |         |          |                                                         |                                  | 5.8<br>A   |                      |                                             |        |          |             |          |
|                                                                                                                   |            |                      |              |         |          |                                                         |                                  |            | •                    |                                             |        |          |             |          |

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|                                                                                             |          |                |              |          | JNDABC   |                                                      |                             |       |                |                                   |                                                  |         |       |            |                  |
|---------------------------------------------------------------------------------------------|----------|----------------|--------------|----------|----------|------------------------------------------------------|-----------------------------|-------|----------------|-----------------------------------|--------------------------------------------------|---------|-------|------------|------------------|
| General Information                                                                         |          |                |              |          |          | Site In                                              | forma                       | atior | า              |                                   |                                                  |         |       |            |                  |
| Analyst KMK Agency or Co. LSC Date Performed 10/16/ Time Period PM Pe Peak Hour Factor 0.96 |          |                |              |          |          | Intersec<br>E/W Str<br>N/S Str<br>Analysi<br>Project | reet Na<br>eet Na<br>s Year | me    | 5th S<br>Ridg  | Street/ SI<br>e Road/I<br>Backgro | Founders                                         |         |       |            |                  |
| Project Description:                                                                        | d Sita   | Chara          | torictio     |          |          |                                                      |                             |       |                |                                   |                                                  |         |       |            |                  |
| Volume Adjustment an                                                                        | u site   | EB             |              | <u>s</u> | ١٨       | VB                                                   |                             |       |                | NB                                |                                                  |         | SE    | ₹          |                  |
|                                                                                             | L        | Т              |              | U L      | Т        | R                                                    | U                           | L     | Т              | R                                 | U                                                | L       | Т     | R          | U                |
| Number of Lanes (N)                                                                         | 0        | 2              | 0            | 0        | 2        | 0                                                    |                             | 0     | 2              | 0                                 |                                                  | 0       | 2     | 0          |                  |
| Lane Assignment                                                                             | L        | Т              | T            |          | LT       | T                                                    |                             |       | LT             | 7                                 | R                                                | LT      |       |            | TR               |
| Right-Turn Bypass                                                                           |          | Non-Yie        | elding       |          | Non-Y    | ielding/                                             |                             |       | ١              | lone                              |                                                  |         | Non   | ne         |                  |
| Conflicting Lanes                                                                           |          | 1              |              |          |          | 1                                                    |                             |       |                | 1                                 |                                                  |         | 1     |            |                  |
| Volume (V), veh/h                                                                           | 100      | 390            |              | 0 85     | 215      |                                                      | 0                           | 210   | _              | _                                 | <del>                                     </del> |         | 405   | 100        | _                |
| Heavy Veh. Adj. (f <sub>HV</sub> ), %                                                       | 2        | 2              | 2            | 2 2      | 2        | 2                                                    | 2                           | 2     | 2              | 2                                 | 2                                                | 2       | 2     | 2          | 2                |
| Pedestrians Crossing                                                                        |          | 0              |              |          |          | 0                                                    |                             |       |                | 0                                 |                                                  |         | 0     |            |                  |
| Critical and Follow-Up                                                                      | Headv    | vay Adj<br>⊤   |              | )t       |          |                                                      |                             |       |                |                                   |                                                  | 1       |       |            |                  |
|                                                                                             |          | 1 - 61         | EB           | D        | 1 - 41   | WB                                                   | Īp                          |       | 1 -61          | NB                                | D                                                | 1 - 61  | S     |            | D                |
| Critical Headway (sec)                                                                      |          | Left<br>4.0000 | Right 4.0000 | 4.0000   |          | Right 4.0000                                         | Bypa 4.00                   | -     | Left<br>4.0000 | Right 4.0000                      | Bypass 5.1929                                    |         | _     | ght<br>200 | Bypass<br>5.1929 |
| Follow-Up Headway (sec)                                                                     |          |                |              | 2.5000   |          |                                                      |                             | _     | 2.5000         | 2.5000                            | 3.1858                                           |         | _     |            | 3.1858           |
| Flow Computations                                                                           |          |                | 12.0000      | 2.0000   |          | 12.0000                                              | 12.00                       |       |                | 12.0000                           | 0.7000                                           | 1=.0000 | 12.00 |            | 0.7000           |
|                                                                                             |          |                | EB           |          |          | WB                                                   |                             |       |                | NB                                |                                                  |         | S     | В          |                  |
|                                                                                             |          | Left           | Right        | Bypass   | Left     | Right                                                | Вура                        | ass   | Left           | Right                             | Bypass                                           | Left    | Rig   | ght        | Bypass           |
| Circulating Flow (V <sub>c</sub> ), pc/h                                                    |          |                | 1067         |          |          | 653                                                  |                             |       |                | 1067                              |                                                  |         | 54    | <b>1</b> 1 |                  |
| Exiting Flow (V <sub>ex</sub> ), pc/h                                                       |          |                | 1004         | 1        |          | 558                                                  |                             |       |                | 430                               |                                                  |         | 52    | 21         | 1                |
| Entry Flow (V <sub>e</sub> ), pc/h                                                          |          | 245            | 276          | 398      | 150      | 169                                                  | 324                         | -     | 277            | 313                               |                                                  | 547     | 53    |            |                  |
| Entry Volume veh/h                                                                          |          | 240            | 271          | 390      | 147      | 166                                                  | 318                         | 8     | 272            | 307                               |                                                  | 536     | 52    | 26         |                  |
| Capacity and v/c Ratios                                                                     | <u> </u> | 1              |              |          |          | WD                                                   |                             |       |                | ND                                |                                                  | 1       |       | n          |                  |
|                                                                                             |          | Loft           | EB<br>Bight  | Pyposs   | Loft     | WB                                                   | Pyroc                       | 200   | l oft          | NB<br>Bight                       | Pypaga                                           | Loft    | S     | ght        | Bypage           |
| Capacity (c <sub>PCE</sub> ), pc/h                                                          |          | Left<br>637    | Right 637    | Bypass   | Left 874 | Right 874                                            | Вура                        | 355   | Left<br>637    | Right 637                         | Bypass                                           | 952     | 95    |            | Bypass           |
| Capacity (c), veh/h                                                                         |          | 624            | 624          |          | 857      | 857                                                  |                             |       | 624            | 624                               |                                                  | 933     | 93    |            |                  |
| v/c Ratio (X)                                                                               |          | 0.38           | 0.43         |          | 0.17     | 0.19                                                 |                             |       | 0.44           | 0.49                              |                                                  | 0.57    | 0.5   |            |                  |
| Delay and Level of Serv                                                                     | vice .   | 1              | 1            | 1        |          | 1                                                    | 1                           |       |                | <u> </u>                          |                                                  | 1       |       |            |                  |
|                                                                                             |          |                | EB           |          |          | WB                                                   |                             |       |                | NB                                |                                                  |         | S     | В          |                  |
|                                                                                             |          | Left           | Right        | Bypass   | Left     | Right                                                | Вура                        | ass   | Left           | Right                             | Bypass                                           | Left    | Rig   | ght        | Bypass           |
| Lane Control Delay (d), s/ve                                                                | eh       | 11.3           | 12.3         | 0.0      | 5.9      | 6.2                                                  | 0.0                         | )     | 12.3           | 13.7                              |                                                  | 11.8    | 11    | .6         |                  |
| Lane LOS                                                                                    |          | В              | В            |          | Α        | Α                                                    |                             |       | В              | В                                 |                                                  | В       | E     | 3          |                  |
| Lane 95% Queue                                                                              |          | 1.8            | 2.2          |          | 0.6      | 0.7                                                  |                             |       | 2.2            | 2.7                               |                                                  | 3.8     | 3.    |            |                  |
| Approach Delay, s/veh                                                                       |          |                | 6.69         |          |          | 3.00                                                 |                             |       |                | 13.04                             |                                                  |         | 11.   |            |                  |
| Approach LOS, s/veh                                                                         |          |                | Α            |          |          | A                                                    |                             |       | ·0             | В                                 |                                                  |         | Е     | 3          |                  |
| Intersection Delay, s/veh                                                                   |          |                |              |          |          |                                                      |                             | 8.7   |                |                                   |                                                  |         |       |            |                  |
| Intersection LOS                                                                            |          |                | Rights Re    |          |          | HCS 201                                              |                             | Α     |                |                                   |                                                  |         |       |            |                  |

|                                                                                              |           |                      |              | ROL      | JNDABO | UT REP                                                  | ORT                                |           |                      |                                                  |        |         |               |                   |        |
|----------------------------------------------------------------------------------------------|-----------|----------------------|--------------|----------|--------|---------------------------------------------------------|------------------------------------|-----------|----------------------|--------------------------------------------------|--------|---------|---------------|-------------------|--------|
| General Information                                                                          |           |                      |              |          |        | Site In                                                 | forms                              | ntio.     | .n                   |                                                  |        |         |               |                   |        |
| Analyst KMK Agency or Co. LSC Date Performed 10/16/2 Time Period PM Pe Peak Hour Factor 0.95 |           |                      |              |          |        | Intersect<br>E/W Str<br>N/S Stre<br>Analysis<br>Project | tion<br>eet Na<br>eet Na<br>s Year | ame<br>me | Ridg<br>Ende<br>Ridg | e Road/<br>erud Blvd<br>e Road<br>Backgrd<br>081 | I      | rud Blv | rd            |                   |        |
| Project Description:                                                                         |           |                      |              |          |        |                                                         |                                    |           |                      |                                                  |        |         |               |                   |        |
| Volume Adjustment and                                                                        | d Site    | Charac               | teristic     | s        |        |                                                         |                                    |           |                      |                                                  |        |         |               |                   |        |
|                                                                                              |           | EB                   | 3            |          | V      | /B                                                      |                                    |           |                      | NB                                               |        |         | S             | В                 |        |
|                                                                                              | L         | Т                    | R l          | J L      | Т      | R                                                       | U                                  | L         | . T                  | R                                                | U      | L       | Т             | R                 | U      |
| Number of Lanes (N)                                                                          | 0         | 0                    | 0            | 0        | 1      | 1                                                       |                                    | 0         | 2                    | 0                                                |        | 0       | 2             | 0                 |        |
| Lane Assignment                                                                              |           |                      |              | I        | LTR    | R                                                       |                                    |           | Τ                    | T                                                | R      | LT      |               |                   | Τ      |
| Right-Turn Bypass                                                                            |           | Non                  | е            |          | No     | ne                                                      |                                    |           | N                    | lone                                             |        |         | No            | ne                |        |
| Conflicting Lanes                                                                            |           | 1                    |              |          |        | 1                                                       |                                    |           |                      | 1                                                |        |         |               | 1                 |        |
| Volume (V), veh/h                                                                            |           |                      | (            | ) 45     | 0      | 250                                                     | 0                                  |           | 280 90               |                                                  | 0      | 430     | 360           |                   | 0      |
| Heavy Veh. Adj. (f <sub>HV</sub> ), %                                                        | 2         | 2                    | 2 2          | 2 2      | 2      | 2                                                       | 2                                  | 2         | 2                    | 2                                                | 2      | 2       | 2             | 2                 | 2      |
| Pedestrians Crossing                                                                         | rossing 0 |                      |              |          |        | )                                                       |                                    |           | •                    | 0                                                |        | •       | (             | 0                 |        |
| Critical and Follow-Up                                                                       | Headv     | vay Adj              | ustmen       | t        |        |                                                         |                                    |           |                      |                                                  |        |         |               |                   |        |
| -                                                                                            |           |                      | EB           |          |        | WB                                                      |                                    |           |                      | NB                                               |        |         | ;             | SB                |        |
|                                                                                              |           | Left                 | Right        | Bypass   | Left   | Right                                                   | Вура                               | ass       | Left                 | Right                                            | Bypass | Left    | t R           | ight              | Bypass |
| Critical Headway (sec)                                                                       |           | 5.1929               | <del>-</del> | 5.1929   | 4.2000 |                                                         | 4.2000 5.192                       |           | 4.2000               | 4.2000                                           |        |         | _             | 2000              | 5.1929 |
| Follow-Up Headway (sec)                                                                      |           | 3.1858 2.8000        |              | 3.1858   | 2.8000 | 2.8000                                                  | 3.18                               | 58        | 2.8000               | 2.8000                                           | 3.1858 | 2.800   | 00 2.8        | 3000              | 3.1858 |
| Flow Computations                                                                            |           | 3.1636 2.6000 3.1636 |              |          |        |                                                         |                                    |           |                      |                                                  | ı      | 1       | I             |                   |        |
| -                                                                                            |           |                      | EB           |          |        | WB                                                      |                                    |           |                      | NB                                               |        |         | ;             | SB                |        |
|                                                                                              |           | Left                 | Right        | Bypass   | Left   | Right                                                   | Вура                               | iss       | Left                 | Right                                            | Bypass | Left    | t R           | ight              | Bypass |
| Circulating Flow (V <sub>c</sub> ), pc/h                                                     |           |                      | 897          |          |        | 301                                                     |                                    |           |                      | 462                                              |        |         | _             | <del></del><br>48 |        |
| Exiting Flow (V <sub>ex</sub> ), pc/h                                                        |           |                      | 558          |          |        | 0                                                       |                                    |           | 569                  |                                                  |        |         | 435           |                   |        |
| Entry Flow (V <sub>e</sub> ), pc/h                                                           |           |                      | 503          |          | 149    | 168                                                     |                                    |           | 187                  | 211                                              |        | 462     | 3             | 387               |        |
| Entry Volume veh/h                                                                           |           |                      | 1            |          | 146    | 165                                                     |                                    |           | 183                  | 207                                              |        | 453     | 3             | 379               |        |
| Capacity and v/c Ratios                                                                      | •         |                      |              | <u> </u> |        |                                                         |                                    | !         |                      |                                                  |        |         |               |                   |        |
| , , , , , , , , , , , , , , , , , , , ,                                                      | •         |                      | EB           |          |        | WB                                                      |                                    |           |                      | NB                                               |        |         |               | SB                |        |
|                                                                                              |           | Left                 | Right        | Bypass   | Left   | Right                                                   | Вура                               | ass       | Left                 | Right                                            | Bypass | Left    | t R           | ight              | Bypass |
| Capacity (c <sub>PCE</sub> ), pc/h                                                           |           |                      | 0            | 71       | 1018   | 1018                                                    | ''                                 |           | 898                  | 898                                              | 71     | 1238    |               | 238               | 71     |
| Capacity (c), veh/h                                                                          |           |                      | 0            |          | 998    | 998                                                     |                                    |           | 880                  | 880                                              |        | 1214    | _             | 214               |        |
| v/c Ratio (X)                                                                                |           |                      |              |          | 0.15   | 0.17                                                    |                                    |           | 0.21                 | 0.24                                             |        | 0.37    | _             | .31               |        |
| Delay and Level of Serv                                                                      | /ice      | I                    | 1            | <u> </u> |        |                                                         |                                    |           |                      | 1                                                | 1      | 1       |               |                   | I      |
| ,                                                                                            |           |                      | EB           |          |        | WB                                                      |                                    |           |                      | NB                                               |        |         |               | SB                |        |
|                                                                                              |           | Left                 | Right        | Bypass   | Left   | Right                                                   | Вура                               | ass       | Left                 | Right                                            | Bypass | Left    |               | ight              | Bypass |
| Lane Control Delay (d), s/ve                                                                 | eh        |                      | Ť            | <u> </u> | 5.0    | 5.1                                                     | <u> </u>                           |           | 6.2                  | 6.5                                              |        | 6.6     |               | 5.9               |        |
| Lane LOS                                                                                     |           |                      | F            |          | Α      | Α                                                       |                                    |           | Α                    | Α                                                |        | A       |               | A                 |        |
| Lane 95% Queue                                                                               |           |                      |              |          | 0.5    | 0.6                                                     |                                    |           | 0.8                  | 0.9                                              |        | 1.8     | <u> </u>      | 1.3               |        |
| Approach Delay, s/veh                                                                        |           |                      | 1            | 1        |        | 5.06                                                    |                                    |           |                      | 6.37                                             | 1      |         |               | .26               |        |
| Approach LOS, s/veh                                                                          |           |                      |              |          |        | Α                                                       |                                    |           |                      | Α                                                |        |         |               | Α                 |        |
| Intersection Delay, s/veh                                                                    |           |                      |              |          |        |                                                         |                                    | 6.0       | )4                   |                                                  |        | 1       |               |                   |        |
| Intersection LOS                                                                             |           |                      |              |          |        |                                                         |                                    |           |                      |                                                  |        |         |               |                   |        |
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HCS 2010<sup>TM</sup> 6.50 Roundabouts Generated: 10/16/2018 8:55 AM

| Intersection Int Delay, s/veh 0.8                                                                                                                                                                                                                                                                                                                                        |                      |                                          |             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------------------------------------|-------------|
|                                                                                                                                                                                                                                                                                                                                                                          |                      |                                          |             |
|                                                                                                                                                                                                                                                                                                                                                                          | NDD                  | CDI                                      | CDT         |
| Movement WBL WBR NBT                                                                                                                                                                                                                                                                                                                                                     | NBR                  | SBL                                      | SBT         |
| Lane Configurations 7 1                                                                                                                                                                                                                                                                                                                                                  |                      | <u>ነ</u>                                 | <b>^</b>    |
| Traffic Vol, veh/h 0 64 849                                                                                                                                                                                                                                                                                                                                              |                      | 22                                       | 280         |
| Future Vol, veh/h 0 64 849                                                                                                                                                                                                                                                                                                                                               | 4                    | 22                                       | 280         |
| Conflicting Peds, #/hr 0 0 0                                                                                                                                                                                                                                                                                                                                             | 0                    | _ 0                                      | _ 0         |
| Sign Control Stop Stop Free                                                                                                                                                                                                                                                                                                                                              | Free                 | Free                                     | Free        |
| RT Channelized - None -                                                                                                                                                                                                                                                                                                                                                  |                      | -                                        | None        |
| Storage Length - 0 -                                                                                                                                                                                                                                                                                                                                                     |                      | 200                                      | -           |
| 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           |
| Mvmt Flow 0 70 923                                                                                                                                                                                                                                                                                                                                                       | 4                    | 24                                       | 304         |
|                                                                                                                                                                                                                                                                                                                                                                          |                      |                                          |             |
| Major/Minor Minor1 Major1                                                                                                                                                                                                                                                                                                                                                |                      | Major2                                   |             |
| Conflicting Flow All - 464 0                                                                                                                                                                                                                                                                                                                                             |                      | 927                                      | 0           |
| Stage 1                                                                                                                                                                                                                                                                                                                                                                  | -                    | ,21                                      | -           |
| Stage 2                                                                                                                                                                                                                                                                                                                                                                  | _                    | _                                        | _           |
| Critical Hdwy - 6.94 -                                                                                                                                                                                                                                                                                                                                                   | -                    | 4.14                                     | -           |
| Critical Hdwy Stg 1                                                                                                                                                                                                                                                                                                                                                      | _                    |                                          | _           |
| Critical Hdwy Stg 2                                                                                                                                                                                                                                                                                                                                                      | _                    | _                                        | _           |
| Follow-up Hdwy - 3.32 -                                                                                                                                                                                                                                                                                                                                                  | _                    | 2.22                                     | _           |
| Pot Cap-1 Maneuver 0 545 -                                                                                                                                                                                                                                                                                                                                               | _                    | 733                                      | -           |
| Stage 1 0                                                                                                                                                                                                                                                                                                                                                                | _                    | -                                        | _           |
| Stage 2 0                                                                                                                                                                                                                                                                                                                                                                | _                    | _                                        | -           |
| Platoon blocked, %                                                                                                                                                                                                                                                                                                                                                       | _                    |                                          | _           |
| Mov Cap-1 Maneuver - 545 -                                                                                                                                                                                                                                                                                                                                               | _                    | 733                                      | _           |
| Mov Cap-1 Maneuver                                                                                                                                                                                                                                                                                                                                                       | -                    | 733                                      |             |
| 1VIUV CAU-2 IVIAIIEUVEI                                                                                                                                                                                                                                                                                                                                                  | _                    |                                          | -           |
|                                                                                                                                                                                                                                                                                                                                                                          | -                    | -                                        | -           |
| Stage 1                                                                                                                                                                                                                                                                                                                                                                  | -                    |                                          |             |
|                                                                                                                                                                                                                                                                                                                                                                          |                      |                                          | -           |
| Stage 1                                                                                                                                                                                                                                                                                                                                                                  |                      |                                          | -           |
| Stage 1                                                                                                                                                                                                                                                                                                                                                                  |                      | SB                                       | -           |
| Stage 1 Stage 2                                                                                                                                                                                                                                                                                                                                                          |                      |                                          | _           |
| Stage 1         -         -         -           Stage 2         -         -         -           Approach         WB         NB                                                                                                                                                                                                                                           |                      | SB                                       |             |
| Stage 1         -         -         -           Stage 2         -         -         -           Approach         WB         NB           HCM Control Delay, s         12.6         0                                                                                                                                                                                     |                      | SB                                       |             |
| Stage 1 Stage 2                                                                                                                                                                                                                                                                                                                                                          | MDI n1               | SB<br>0.7                                | CDT         |
| Stage 1                                                                                                                                                                                                                                                                                                                                                                  | WBLn1                | SB<br>0.7<br>SBL                         | SBT         |
| Stage 1                                                                                                                                                                                                                                                                                                                                                                  | 545                  | SB 0.7  SBL 733                          | -           |
| Stage 1         -         -         -           Stage 2         -         -         -           Approach         WB         NB           HCM Control Delay, s         12.6         0           HCM LOS         B           Minor Lane/Major Mvmt         NBT         NBR           Capacity (veh/h)         -         -           HCM Lane V/C Ratio         -         - | 545<br>0.128         | SB 0.7<br>SBL 733<br>0.033               | -           |
| Stage 1                                                                                                                                                                                                                                                                                                                                                                  | 545<br>0.128<br>12.6 | SB<br>0.7<br>SBL<br>733<br>0.033<br>10.1 | -<br>-<br>- |
| Stage 1         -         -         -           Stage 2         -         -         -           Approach         WB         NB           HCM Control Delay, s         12.6         0           HCM LOS         B           Minor Lane/Major Mvmt         NBT         NBR           Capacity (veh/h)         -         -           HCM Lane V/C Ratio         -         - | 545<br>0.128         | SB 0.7<br>SBL 733<br>0.033               | -           |

| Intersection                                                                    |        |                     |                      |                      |                      |             |
|---------------------------------------------------------------------------------|--------|---------------------|----------------------|----------------------|----------------------|-------------|
| Int Delay, s/veh                                                                | 1      |                     |                      |                      |                      |             |
| Movement                                                                        | SEL    | SER                 | NEL                  | NET                  | SWT                  | SWR         |
| Lane Configurations                                                             | JLL    | JLK<br>7            | ivee<br><sup>*</sup> | <b>↑</b> ↑           | <b>↑</b>             | JVVIX       |
| Traffic Vol, veh/h                                                              | 13     | 53                  | 13                   | 200                  | 600                  | 4           |
| Future Vol, veh/h                                                               | 13     | 53                  | 13                   | 200                  | 600                  | 4           |
| Conflicting Peds, #/hr                                                          | 0      | 0                   | 0                    | 0                    | 000                  | 0           |
| Sign Control                                                                    | Stop   | Stop                | Free                 | Free                 | Free                 | Free        |
| RT Channelized                                                                  | -<br>- | None                | -                    | None                 | -                    | None        |
| Storage Length                                                                  | 1000   | 0                   | 200                  | -                    | _                    | -           |
| Veh in Median Storage,                                                          |        | -                   | -                    | 0                    | 0                    | _           |
| Grade, %                                                                        | 0      | _                   | _                    | 0                    | 0                    | _           |
| Peak Hour Factor                                                                | 92     | 92                  | 92                   | 92                   | 92                   | 92          |
| Heavy Vehicles, %                                                               | 2      | 2                   | 2                    | 2                    | 2                    | 2           |
| Mymt Flow                                                                       | 14     | 58                  | 14                   | 217                  | 652                  | 4           |
| IVIVIIIL FIOW                                                                   | 14     | 26                  | 14                   | 217                  | 002                  | 4           |
|                                                                                 |        |                     |                      |                      |                      |             |
| Major/Minor N                                                                   | 1inor2 | Λ                   | /lajor1              | N                    | Major2               |             |
| Conflicting Flow All                                                            | 791    | 328                 | 656                  | 0                    | -                    | 0           |
| Stage 1                                                                         | 654    | -                   | -                    | -                    | -                    | -           |
| Stage 2                                                                         | 137    | -                   | -                    | -                    | -                    | -           |
| Critical Hdwy                                                                   | 6.84   | 6.94                | 4.14                 | -                    | -                    | -           |
| Critical Hdwy Stg 1                                                             | 5.84   | -                   | -                    | -                    | -                    | -           |
| Critical Hdwy Stg 2                                                             | 5.84   | -                   | -                    | -                    | -                    | -           |
| Follow-up Hdwy                                                                  | 3.52   | 3.32                | 2.22                 | -                    | -                    | _           |
| Pot Cap-1 Maneuver                                                              | 327    | 668                 | 927                  | -                    | -                    | -           |
| Stage 1                                                                         | 479    | -                   |                      | -                    | -                    | _           |
| Stage 2                                                                         | 875    | -                   | -                    | -                    | -                    | -           |
| Platoon blocked, %                                                              | 0,0    |                     |                      | -                    | -                    | _           |
| Mov Cap-1 Maneuver                                                              | 322    | 668                 | 927                  | _                    | _                    | _           |
| Mov Cap-1 Maneuver                                                              | 322    | -                   | 721                  | _                    | _                    | _           |
| Stage 1                                                                         | 472    | _                   |                      |                      |                      |             |
| Stage 2                                                                         | 875    | -                   | -                    | -                    | -                    | -           |
| Staye 2                                                                         | 075    | -                   | -                    | -                    | -                    | -           |
|                                                                                 |        |                     |                      |                      |                      |             |
| Approach                                                                        | SE     |                     | NE                   |                      | SW                   |             |
| HCM Control Delay, s                                                            | 12     |                     | 0.5                  |                      | 0                    |             |
| TION CONTROL DOING                                                              | В      |                     |                      |                      |                      |             |
| HCM LOS                                                                         | D      |                     |                      |                      |                      |             |
| •                                                                               | U      |                     |                      |                      |                      |             |
| HCM LOS                                                                         |        | NEI                 | NET                  | CEI n1 (             | SEL n2               | CM/T        |
| HCM LOS  Minor Lane/Major Mvmt                                                  |        | NEL                 | NET:                 | SELn1 S              |                      | SWT         |
| HCM LOS  Minor Lane/Major Mvmt Capacity (veh/h)                                 |        | 927                 | -                    | 322                  | 668                  | -           |
| HCM LOS  Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio              |        | 927<br>0.015        | -                    | 322<br>0.044         | 668<br>0.086         | -           |
| Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s) |        | 927<br>0.015<br>8.9 | -<br>-<br>-          | 322<br>0.044<br>16.7 | 668<br>0.086<br>10.9 | -<br>-<br>- |
| HCM LOS  Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio              | 1      | 927<br>0.015        | -                    | 322<br>0.044         | 668<br>0.086         | -           |

|                                                                                                                      |          |         |             |          | JNDABC   |                                                     |                             |      |               |                                  |                              |        |             |               |        |
|----------------------------------------------------------------------------------------------------------------------|----------|---------|-------------|----------|----------|-----------------------------------------------------|-----------------------------|------|---------------|----------------------------------|------------------------------|--------|-------------|---------------|--------|
| General Information                                                                                                  |          |         |             |          |          | Site In                                             | forma                       | atio | n             |                                  |                              |        |             |               |        |
| Analyst KMK Agency or Co. LSC Date Performed 10/16/ Time Period AM Period Peak Hour Factor 0.92 Project Description: |          |         |             |          |          | Intersed<br>E/W St<br>N/S Str<br>Analysi<br>Project | reet Na<br>eet Na<br>s Year | ame  | 5th S<br>Ridg | Street/ SI<br>e Road/<br>3 Total | 5th Stree<br>H 86<br>Founder |        |             |               |        |
| Volume Adjustment an                                                                                                 | d Sita   | Charac  | toristic    | •        |          |                                                     |                             |      |               |                                  |                              |        |             |               |        |
| Volume Aujustment an                                                                                                 | u sne    | EB      |             | <u> </u> | V        | VB                                                  |                             |      |               | NB                               |                              |        | SB          |               |        |
|                                                                                                                      | L        | Т       |             | J L      | Т        | R                                                   | U                           | L    | Т             | R                                | U                            | L      |             | R             | U      |
| Number of Lanes (N)                                                                                                  | 0        | 2       | 0           | 0        | 2        | 0                                                   |                             | 0    | 2             | 0                                |                              | 0      | 2           | 0             |        |
| Lane Assignment                                                                                                      | L        | Т       | Т           |          | LT       | Т                                                   |                             |      | LT            | 7                                | R                            | LT     |             |               | TR     |
| Right-Turn Bypass                                                                                                    |          | Non-Yie | elding      |          | Non-Y    | 'ielding                                            |                             |      | ١             | None                             |                              |        | None        | )             |        |
| Conflicting Lanes                                                                                                    |          | 1       |             |          |          | 1                                                   |                             |      |               | 1                                |                              |        | 1           |               |        |
| Volume (V), veh/h                                                                                                    | 65       | 165     |             | 0 49     | 445      |                                                     | 0                           | 46   |               | _                                | 0                            |        |             | 35            | 0      |
| Heavy Veh. Adj. (f <sub>HV</sub> ), %                                                                                | 2        | 2       | 2           | 2 2      | 2        | 2                                                   | 2                           | 2    | 2             | 2                                | 2                            | 2      | 2           | 2             | 2      |
| Pedestrians Crossing                                                                                                 | <u> </u> | 0       |             |          |          | 0                                                   |                             |      |               | 0                                |                              |        | 0           |               |        |
| Critical and Follow-Up                                                                                               | Heady    | vay Adj |             | t        | 1        | 14/5                                                |                             |      |               | ND                               |                              | 1      |             |               |        |
|                                                                                                                      |          | Left    | EB<br>Right | Pyposs   | Left     | WB                                                  | Вура                        | 200  | Left          | NB<br>Dight                      | Bypass                       | Left   | SB          | _             | Bypass |
| Critical Headway (sec)                                                                                               |          | 4.0000  | 4.0000      | 4.0000   |          | Right 4.0000                                        | +                           |      | 4.0000        | Right 4.0000                     | 5.1929                       |        | Right 4.000 | -             | 5.1929 |
| Follow-Up Headway (sec)                                                                                              |          |         |             | 2.5000   |          |                                                     |                             | -    | 2.5000        | 2.5000                           | 3.1858                       | 2.5000 | _           | $\rightarrow$ | 3.1858 |
| Flow Computations                                                                                                    |          |         |             |          |          |                                                     | 1                           |      |               |                                  |                              |        |             | - 1           |        |
| -                                                                                                                    |          |         | EB          |          |          | WB                                                  |                             |      |               | NB                               |                              |        | SB          |               |        |
|                                                                                                                      |          | Left    | Right       | Bypass   | Left     | Right                                               | Вура                        | ass  | Left          | Right                            | Bypass                       | Left   | Righ        | nt            | Bypass |
| Circulating Flow (V <sub>c</sub> ), pc/h                                                                             |          |         | 389         |          |          | 1120                                                |                             |      |               | 466                              |                              |        | 106         | 3             |        |
| Exiting Flow (V <sub>ex</sub> ), pc/h                                                                                |          |         | 427         | Т        |          | 1159                                                |                             |      |               | 604                              |                              |        | 179         | )             |        |
| Entry Flow (V <sub>e</sub> ), pc/h                                                                                   |          | 120     | 135         | 173      | 257      | 290                                                 | 54.                         | -    | 508           | 573                              |                              | 228    | 257         | $\dashv$      |        |
| Entry Volume veh/h                                                                                                   |          | 118     | 132         | 170      | 252      | 284                                                 | 53                          | 2    | 498           | 562                              |                              | 224    | 252         | ?             |        |
| Capacity and v/c Ratios                                                                                              | <u> </u> |         | EB          |          | <u> </u> | WB                                                  |                             |      |               | ND                               |                              |        | SB          |               |        |
|                                                                                                                      |          | Left    | Right       | Bypass   | Left     | Right                                               | Вура                        | 200  | Left          | NB<br>Right                      | Bypass                       | Left   | Righ        |               | Bypass |
| Capacity (c <sub>PCF</sub> ), pc/h                                                                                   |          | 1070    | 1070        | Бураза   | 612      | 612                                                 | Joypa                       | ددد  | 1009          | 1009                             | Бураза                       | 639    | 639         | _             | Бураза |
| Capacity (c), veh/h                                                                                                  |          | 1049    | 1049        |          | 600      | 600                                                 | +                           | +    | 989           | 989                              |                              | 627    | 627         | $\rightarrow$ |        |
| v/c Ratio (X)                                                                                                        |          | 0.11    | 0.13        |          | 0.42     | 0.47                                                | $\dagger$                   |      | 0.50          | 0.57                             |                              | 0.36   | 0.40        | $\rightarrow$ |        |
| Delay and Level of Serv                                                                                              | vice     | ı       |             | I        |          | 1                                                   |                             |      |               |                                  | ı                            | 1      | 1           |               |        |
| -                                                                                                                    |          |         | EB          |          |          | WB                                                  |                             |      |               | NB                               |                              |        | SB          |               |        |
|                                                                                                                      |          | Left    | Right       | Bypass   | Left     | Right                                               | Вура                        | ass  | Left          | Right                            | Bypass                       | Left   | Righ        | nt            | Bypass |
| Lane Control Delay (d), s/ve                                                                                         | eh       | 4.4     | 4.6         | 0.0      | 12.4     | 13.7                                                | 0.0                         | 0    | 9.8           | 11.2                             |                              | 10.7   | 11.6        | 3             |        |
| Lane LOS                                                                                                             |          | Α       | Α           |          | В        | В                                                   |                             |      | Α             | В                                |                              | В      | В           | $\prod$       |        |
| Lane 95% Queue                                                                                                       |          | 0.4     | 0.4         |          | 2.1      | 2.5                                                 |                             |      | 2.9           | 3.7                              |                              | 1.6    | 1.9         | _             |        |
| Approach Delay, s/veh                                                                                                |          |         | 2.68        |          |          | 6.55                                                |                             | _    |               | 10.51                            |                              |        | 11.1        | 4             |        |
| Approach LOS, s/veh                                                                                                  |          |         | Α           |          |          | A                                                   |                             |      |               | В                                |                              |        | В           |               |        |
| Intersection Delay, s/veh                                                                                            |          |         |             |          |          |                                                     |                             | 8.1  |               |                                  |                              |        |             |               |        |
| Intersection LOS                                                                                                     |          |         |             |          |          | HCS 201                                             |                             | Α    |               |                                  |                              |        |             |               |        |

|                                                                                              |        |        |             | ROL    | JNDABO | UT REP                                                  | ORT                                  |           |                      |                                                 |        |          |          |     |           |
|----------------------------------------------------------------------------------------------|--------|--------|-------------|--------|--------|---------------------------------------------------------|--------------------------------------|-----------|----------------------|-------------------------------------------------|--------|----------|----------|-----|-----------|
| General Information                                                                          |        |        |             |        |        | Site In                                                 | forms                                | ntio.     | n                    |                                                 |        |          |          |     |           |
| Analyst KMK Agency or Co. LSC Date Performed 10/16/2 Time Period AM Pe Peak Hour Factor 0.92 |        |        |             |        |        | Intersect<br>E/W Str<br>N/S Stre<br>Analysis<br>Project | eet Na<br>eet Na<br>eet Na<br>S Year | ame<br>me | Ridg<br>Ende<br>Ridg | e Road/<br>erud Blvd<br>e Road<br>Total<br>1081 |        | rud Blvd | d        |     |           |
| Project Description:                                                                         |        |        |             |        |        |                                                         |                                      |           |                      |                                                 |        |          |          |     |           |
| Volume Adjustment and                                                                        | d Site | Charac | teristic    | s      |        |                                                         |                                      |           |                      |                                                 |        |          |          |     |           |
|                                                                                              |        | EB     | <b>3</b>    |        | V      | /B                                                      |                                      |           |                      | NB                                              |        |          | SE       | 3   |           |
|                                                                                              | L      | Т      | R l         | J L    | Т      | R                                                       | U                                    | L         | . T                  | R                                               | U      | L        | Т        | R   | U         |
| Number of Lanes (N)                                                                          | 0      | 0      | 0           | 0      | 1      | 1                                                       |                                      | 0         | 2                    | 0                                               |        | 0        | 2        | 0   |           |
| Lane Assignment                                                                              |        |        |             | I      | LTR    | R                                                       |                                      |           | Τ                    | T                                               | R      | LT       |          |     | Τ         |
| Right-Turn Bypass                                                                            |        | Non    | е           |        | No     | ne                                                      |                                      |           | N                    | lone                                            |        |          | Nor      | ne  |           |
| Conflicting Lanes                                                                            |        | 1      |             |        |        | 1                                                       |                                      |           |                      | 1                                               |        |          | 1        |     |           |
| Volume (V), veh/h                                                                            |        |        | (           | 99     | 0      | 509                                                     | 0                                    |           | 344                  | 38                                              | 0      | 130      |          |     | 0         |
| Heavy Veh. Adj. (f <sub>HV</sub> ), %                                                        | 2      | 2      | 2 2         | 2 2    | 2      | 2                                                       | 2                                    | 2         | 2                    | 2                                               | 2      | 2        | 2        | 2   | 2         |
| Pedestrians Crossing                                                                         |        | 0      |             |        | (      | 0                                                       |                                      |           |                      | 0                                               |        |          | 0        |     |           |
| Critical and Follow-Up                                                                       | Headv  | vay Ad | ustmen      | t      |        |                                                         |                                      |           |                      |                                                 |        |          |          |     |           |
|                                                                                              |        |        | EB          |        |        | WB                                                      |                                      |           |                      | NB                                              |        |          | S        | В   |           |
|                                                                                              |        | Left   | Right       | Bypass | Left   | Right                                                   | Вура                                 | iss       | Left                 | Right                                           | Bypass | Left     | Rig      | ght | Bypass    |
| Critical Headway (sec)                                                                       |        | 5.1929 | 4.2000      | 5.1929 | 4.2000 | 4.2000                                                  | 5.192                                | 29        | 4.2000               | 4.2000                                          | 5.1929 | 4.200    | 0 4.20   | 000 | 5.1929    |
| Follow-Up Headway (sec)                                                                      |        | 3.1858 | 2.8000      | 3.1858 | 2.8000 | 2.8000                                                  | 3.18                                 | 58        | 2.8000               | 2.8000                                          | 3.1858 | 2.800    | 0 2.80   | 000 | 3.1858    |
| Flow Computations                                                                            |        |        |             |        |        |                                                         |                                      |           |                      |                                                 |        |          |          |     |           |
|                                                                                              |        |        | EB          |        |        | WB                                                      |                                      |           |                      | NB                                              |        |          | S        | В   |           |
|                                                                                              |        | Left   | Right       | Bypass | Left   | Right                                                   | Вура                                 | iss       | Left                 | Right                                           | Bypass | Left     | Rig      | ght | Bypass    |
| Circulating Flow (V <sub>c</sub> ), pc/h                                                     |        |        | 692         |        |        | 381                                                     |                                      |           |                      | 144                                             |        |          | 11       | 10  |           |
| Exiting Flow (V <sub>ex</sub> ), pc/h                                                        |        |        | 186         |        |        | 0                                                       |                                      |           |                      | 946                                             |        |          | 54       | 18  |           |
| Entry Flow (V <sub>e</sub> ), pc/h                                                           |        |        | 302         |        | 317    | 357                                                     |                                      |           | 199                  | 224                                             |        | 274      | 30       | 08  |           |
| Entry Volume veh/h                                                                           |        |        |             |        | 311    | 350                                                     |                                      |           | 195                  | 220                                             |        | 269      | 30       | )2  |           |
| Capacity and v/c Ratios                                                                      | •      | •      |             | •      | •      | •                                                       | •                                    | •         |                      |                                                 | •      | •        | •        |     |           |
|                                                                                              |        |        | EB          |        |        | WB                                                      |                                      |           |                      | NB                                              |        |          | S        | В   |           |
|                                                                                              |        | Left   | Right       | Bypass | Left   | Right                                                   | Вура                                 | iss       | Left                 | Right                                           | Bypass | Left     | Rig      | ght | Bypass    |
| Capacity (c <sub>PCE</sub> ), pc/h                                                           |        |        | 0           |        | 956    | 956                                                     |                                      |           | 1149                 | 1149                                            |        | 1181     | 118      | 81  |           |
| Capacity (c), veh/h                                                                          |        |        | 0           |        | 937    | 937                                                     |                                      |           | 1127                 | 1127                                            |        | 1157     | 11:      | 57  |           |
| v/c Ratio (X)                                                                                |        |        |             |        | 0.33   | 0.37                                                    |                                      |           | 0.17                 | 0.19                                            |        | 0.23     | 0.2      | 26  |           |
| Delay and Level of Serv                                                                      | /ice   | •      | •           |        | •      | •                                                       | •                                    |           |                      |                                                 | •      | •        | •        |     |           |
|                                                                                              |        |        | EB          |        |        | WB                                                      |                                      |           |                      | NB                                              |        |          | S        | В   |           |
|                                                                                              |        | Left   | Right       | Bypass | Left   | Right                                                   | Вура                                 | iss       | Left                 | Right                                           | Bypass | Left     | Rig      | ght | Bypass    |
| Lane Control Delay (d), s/ve                                                                 | eh     |        |             |        | 7.4    | 8.0                                                     |                                      |           | 4.7                  | 4.9                                             |        | 5.2      | 5.       |     |           |
| Lane LOS                                                                                     |        |        | F           |        | Α      | Α                                                       |                                      |           | Α                    | Α                                               |        | Α        | <i>A</i> | 1   |           |
| Lane 95% Queue                                                                               |        |        |             |        | 1.5    | 1.7                                                     |                                      |           | 0.6                  | 0.7                                             |        | 0.9      | 1.       | 0   |           |
| Approach Delay, s/veh                                                                        |        |        | •           | •      |        | 7.71                                                    | •                                    |           |                      | 4.84                                            | •      |          | 5.3      | 37  |           |
| Approach LOS, s/veh                                                                          |        |        |             |        |        | Α                                                       |                                      |           |                      | Α                                               |        |          | A        | A   |           |
| Intersection Delay, s/veh                                                                    |        |        |             |        | •      |                                                         |                                      | 6.1       | 17                   |                                                 |        | •        |          |     |           |
| Intersection LOS                                                                             |        |        |             |        |        |                                                         |                                      | A         | 1                    |                                                 |        |          |          |     |           |
| Convright © 2013 University                                                                  | ( 🗆    |        | D:l- (- D - |        |        | JCS 201                                                 | -TM -                                |           |                      |                                                 | 0      | l: 40    | /4.0/00  | 40  | 0 4 4 4 4 |

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HCS 2010<sup>TM</sup> 6.50 Roundabouts Generated: 10/16/2018 9:14 AM

| Intersection           |         |          |            |       |          |          |
|------------------------|---------|----------|------------|-------|----------|----------|
| Int Delay, s/veh       | 0.7     |          |            |       |          |          |
| Movement               | WBL     | WBR      | NBT        | NBR   | SBL      | SBT      |
|                        | WDL     |          |            | NDK   |          |          |
| Lane Configurations    | _       | <b>7</b> | <b>↑</b> ↑ | 44    | <b>ች</b> | <b>^</b> |
| Traffic Vol, veh/h     | 0       | 36       | 550        | 11    | 73       | 824      |
| Future Vol, veh/h      | 0       | 36       | 550        | 11    | 73       | 824      |
| 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        | -          | -     | 200      | -        |
| 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        |
| Mymt Flow              | 0       | 39       | 598        | 12    | 79       | 896      |
| IVIVIIIL I IOW         | U       | 37       | 370        | 12    | 17       | 070      |
|                        |         |          |            |       |          |          |
| Major/Minor N          | /linor1 | N        | Major1     | N     | Major2   |          |
| Conflicting Flow All   | -       | 305      | 0          | 0     | 610      | 0        |
| Stage 1                | -       | -        | -          | -     | -        | -        |
| Stage 2                | _       | -        | _          | _     | _        | _        |
| Critical Hdwy          | _       | 6.94     | -          | _     | 4.14     | _        |
| Critical Hdwy Stg 1    |         | 0.74     |            | _     | 4.14     | _        |
|                        | -       | -        | -          | -     | -        |          |
| Critical Hdwy Stg 2    | -       | -        | -          | -     | -        | -        |
| Follow-up Hdwy         | -       | 3.32     | -          | -     | 2.22     | -        |
| Pot Cap-1 Maneuver     | 0       | 691      | -          | -     | 965      | -        |
| Stage 1                | 0       | -        | -          | -     | -        | -        |
| Stage 2                | 0       | -        | -          | -     | -        | -        |
| Platoon blocked, %     |         |          | -          | -     |          | -        |
| Mov Cap-1 Maneuver     | -       | 691      | -          | -     | 965      | -        |
| Mov Cap-2 Maneuver     | -       | -        | -          | -     | -        | -        |
| Stage 1                | _       | _        | -          | _     | -        | _        |
| Stage 2                | _       | _        | _          | _     | _        | _        |
| Jiaye Z                | _       | -        | -          | -     | _        | _        |
|                        |         |          |            |       |          |          |
| Approach               | WB      |          | NB         |       | SB       |          |
| HCM Control Delay, s   | 10.5    |          | 0          |       | 0.7      |          |
| HCM LOS                | В       |          |            |       |          |          |
| TIOW EOO               |         |          |            |       |          |          |
|                        |         |          |            |       |          |          |
| Minor Lane/Major Mvmt  | t       | NBT      | NBRV       | VBLn1 | SBL      | SBT      |
| Capacity (veh/h)       |         | -        | -          | 691   | 965      | -        |
| HCM Lane V/C Ratio     |         | -        | _          | 0.057 |          | -        |
| HCM Control Delay (s)  |         | -        | _          | 10.5  | 9.1      | -        |
| HCM Lane LOS           |         | _        | _          | В     | Α        | _        |
| HCM 95th %tile Q(veh)  |         | -        | -          | 0.2   | 0.3      | -        |
| HOW FOUT WITH Q(VEH)   |         | •        | -          | 0.2   | 0.5      | •        |
|                        |         |          |            |       |          |          |

| Intersection           |        |       |        |          |            |      |
|------------------------|--------|-------|--------|----------|------------|------|
| Int Delay, s/veh       | 0.8    |       |        |          |            |      |
| Movement               | SEL    | SER   | NEL    | NET      | SWT        | SWR  |
| Lane Configurations    | *      | 7     | *      | <b>^</b> | <b>∱</b> ⊅ |      |
| Traffic Vol, veh/h     | 8      | 31    | 45     | 560      | 325        | 14   |
| Future Vol, veh/h      | 8      | 31    | 45     | 560      | 325        | 14   |
| Conflicting Peds, #/hr | 0      | 0     | 0      | 0        | 0          | 0    |
| Sign Control           | Stop   | Stop  | Free   | Free     | Free       | Free |
| RT Channelized         | -      | None  | -      | None     | -          | None |
| Storage Length         | 1000   | 0     | 200    | -        |            | -    |
| Veh in Median Storage  |        | -     | -      | 0        | 0          | _    |
| Grade, %               | 0      | -     | _      | 0        | 0          | _    |
| Peak Hour Factor       | 92     | 92    | 92     | 92       | 92         | 92   |
|                        |        |       | 2      |          |            |      |
| Heavy Vehicles, %      | 2      | 2     |        | 2        | 2          | 2    |
| Mvmt Flow              | 9      | 34    | 49     | 609      | 353        | 15   |
|                        |        |       |        |          |            |      |
| Major/Minor 1          | Minor2 | N     | Major1 | 1        | Major2     |      |
| Conflicting Flow All   | 764    | 184   | 368    | 0        | -          | 0    |
| Stage 1                | 361    | -     | -      | -        | -          | -    |
| Stage 2                | 403    | _     | _      | _        | -          | _    |
| Critical Hdwy          | 6.84   | 6.94  | 4.14   | _        | -          | _    |
| Critical Hdwy Stg 1    | 5.84   | -     | -      | -        | -          | -    |
| Critical Hdwy Stg 2    | 5.84   | -     | _      | _        | _          | _    |
| Follow-up Hdwy         | 3.52   | 3.32  | 2.22   | _        | _          | _    |
| Pot Cap-1 Maneuver     | 340    | 827   | 1187   | _        | _          | _    |
| Stage 1                | 676    | 027   | -      | _        | _          | _    |
| Stage 2                | 644    |       | _      |          |            | _    |
| Platoon blocked, %     | 044    | -     | -      | -        | -          |      |
|                        | 326    | 827   | 1187   | -        | -          | -    |
| Mov Cap-1 Maneuver     |        | 827   | 1107   | -        |            |      |
| Mov Cap-2 Maneuver     | 326    | -     | -      | -        | -          | -    |
| Stage 1                | 648    | -     | -      | -        | -          | -    |
| Stage 2                | 644    | -     | -      | -        | -          | -    |
|                        |        |       |        |          |            |      |
| Approach               | SE     |       | NE     |          | SW         |      |
| HCM Control Delay, s   | 10.9   |       | 0.6    |          | 0          |      |
| HCM LOS                | В      |       | 0.0    |          | U          |      |
| TIOW EOS               | J      |       |        |          |            |      |
|                        |        |       |        |          |            |      |
| Minor Lane/Major Mvm   | nt     | NEL   | NET:   | SELn1    | SELn2      | SWT  |
| Capacity (veh/h)       |        | 1187  | -      | 326      | 827        | -    |
| HCM Lane V/C Ratio     |        | 0.041 | -      | 0.027    | 0.041      | -    |
| HCM Control Delay (s)  |        | 8.2   | -      | 16.3     | 9.5        | -    |
| HCM Lane LOS           |        | Α     | -      | С        | Α          | -    |
| HCM 95th %tile Q(veh)  | )      | 0.1   | -      | 0.1      | 0.1        | -    |
|                        |        |       |        |          |            |      |

|                                                                                                                  |          |                |              |          | JNDABC   | OT ILL                                              |                                      |          |                       |                                  |                                                  |             |      |     |               |
|------------------------------------------------------------------------------------------------------------------|----------|----------------|--------------|----------|----------|-----------------------------------------------------|--------------------------------------|----------|-----------------------|----------------------------------|--------------------------------------------------|-------------|------|-----|---------------|
| General Information                                                                                              |          |                |              |          |          | Site In                                             | forma                                | atior    | າ                     |                                  |                                                  |             |      |     |               |
| Analyst KMK Agency or Co. LSC Date Performed 10/16/ Time Period PM Pe Peak Hour Factor 0.96 Project Description: |          |                |              |          |          | Intersed<br>E/W St<br>N/S Str<br>Analysi<br>Project | ction<br>reet Na<br>eet Na<br>s Year | ame      | Ridg<br>5th S<br>Ridg | Street/ SI<br>e Road/<br>! Total | 5th Stree<br>H 86<br>Founder                     |             |      |     |               |
| Volume Adjustment an                                                                                             | d Sita   | Charac         | torictio     | •        |          |                                                     |                                      |          |                       |                                  |                                                  |             |      |     |               |
| Volume Aujustment an                                                                                             | u sne    | EB             |              | <u> </u> | V        | /B                                                  |                                      |          |                       | NB                               |                                                  |             | SB   |     |               |
|                                                                                                                  | L        | Т              |              | J L      | Т        | R                                                   | U                                    | L        | Т                     | R                                | U                                                | L           | т    | R   | U             |
| Number of Lanes (N)                                                                                              | 0        | 2              | 0            | 0        | 2        | 0                                                   |                                      | 0        | 2                     | 0                                |                                                  | 0           | 2    | 0   |               |
| Lane Assignment                                                                                                  | L        | Т              | T            |          | LT       | Т                                                   |                                      |          | LT                    | 7                                | R                                                | LT          |      |     | TR            |
| Right-Turn Bypass                                                                                                |          | Non-Yie        | elding       |          | Non-Y    | 'ielding                                            |                                      |          | ١                     | lone                             |                                                  |             | None | е   |               |
| Conflicting Lanes                                                                                                |          | 1              |              |          |          | 1                                                   |                                      |          |                       | 1                                |                                                  |             | 1    |     |               |
| Volume (V), veh/h                                                                                                | 100      | 390            |              | 0 99     | 215      |                                                     | 0                                    | 221      | _                     | _                                | <del>                                     </del> |             |      | 100 |               |
| Heavy Veh. Adj. (f <sub>HV</sub> ), %                                                                            | 2        | 2              | 2 2          | 2 2      | 2        | 2                                                   | 2                                    | 2        | 2                     | 2                                | 2                                                | 2           | 2    | 2   | 2             |
| Pedestrians Crossing                                                                                             |          | 0              |              |          | -        | 0                                                   |                                      |          |                       | 0                                |                                                  |             | 0    |     |               |
| Critical and Follow-Up                                                                                           | Heady    | vay Adj        |              | nt       | Ι        | 14/5                                                |                                      |          |                       | ND                               |                                                  | ı           |      |     |               |
|                                                                                                                  |          | l oft          | EB           | Dunaga   | l oft    | WB                                                  | Dune                                 | 200      | Left                  | NB                               | Dunasa                                           | Loft        | SE   | _   | Dunasa        |
| Critical Headway (sec)                                                                                           |          | Left<br>4.0000 | Right 4.0000 | 4.0000   |          | 4.0000                                              | Bypa 4.00                            | _        | 4.0000                | Right 4.0000                     | Bypass 5.1929                                    |             | Rig  | _   | Bypass 5.1929 |
| Follow-Up Headway (sec)                                                                                          |          |                |              | 2.5000   |          |                                                     | +                                    |          |                       | 2.5000                           | 3.1858                                           |             |      | -   | 3.1858        |
| Flow Computations                                                                                                |          |                | 1            |          | 1        | 1-1-1-1                                             | 1                                    | -        |                       |                                  |                                                  | 1           | 1    |     |               |
|                                                                                                                  |          |                | EB           |          |          | WB                                                  |                                      |          |                       | NB                               |                                                  |             | SE   | 3   |               |
|                                                                                                                  |          | Left           | Right        | Bypass   | Left     | Right                                               | Вура                                 | ass      | Left                  | Right                            | Bypass                                           | Left        | Rig  | ht  | Bypass        |
| Circulating Flow (V <sub>c</sub> ), pc/h                                                                         |          |                | 1159         |          |          | 705                                                 |                                      |          |                       | 1067                             |                                                  |             | 568  | 8   |               |
| Exiting Flow (V <sub>ex</sub> ), pc/h                                                                            |          |                | 1004         | T        |          | 570                                                 |                                      |          |                       | 471                              |                                                  |             | 612  | 2   |               |
| Entry Flow (V <sub>e</sub> ), pc/h                                                                               |          | 245            | 276          | 421      | 157      | 177                                                 | 32                                   | 4        | 302                   | 340                              |                                                  | 545         | 618  | 5   |               |
| Entry Volume veh/h                                                                                               |          | 240            | 271          | 413      | 154      | 174                                                 | 31                                   | 8        | 296                   | 333                              |                                                  | 534         | 603  | 3   |               |
| Capacity and v/c Ratios                                                                                          | <u> </u> |                |              |          |          | WD                                                  |                                      | 1        |                       | ND                               |                                                  | 1           |      |     |               |
|                                                                                                                  |          | Loft           | EB           | Pyposs   | Loft     | WB                                                  | Byrn                                 | 200      | Loft                  | NB<br>Bight                      | Pypaga                                           | Loft        | SE   | _   | Dynago        |
| Capacity (c <sub>PCE</sub> ), pc/h                                                                               |          | Left<br>594    | Right 594    | Bypass   | Left 840 | Right 840                                           | Вура                                 | 355      | Left<br>637           | Right 637                        | Bypass                                           | Left<br>933 | Rigi | -   | Bypass        |
| Capacity (c), veh/h                                                                                              |          | 582            | 582          |          | 824      | 824                                                 |                                      |          | 624                   | 624                              |                                                  | 914         | 914  | -   |               |
| v/c Ratio (X)                                                                                                    |          | 0.41           | 0.46         |          | 0.19     | 0.21                                                |                                      |          | 0.47                  | 0.53                             |                                                  | 0.58        | 0.6  | -   |               |
| Delay and Level of Serv                                                                                          | vice .   |                | 1            | 1        |          | 1                                                   |                                      | <u> </u> |                       |                                  |                                                  | 1           | 1    |     |               |
|                                                                                                                  |          |                | EB           |          |          | WB                                                  |                                      |          |                       | NB                               |                                                  |             | SE   | 3   |               |
|                                                                                                                  |          | Left           | Right        | Bypass   | Left     | Right                                               | Вура                                 | ass      | Left                  | Right                            | Bypass                                           | Left        | Rig  | ht  | Bypass        |
| Lane Control Delay (d), s/ve                                                                                     | eh       | 12.5           | 13.8         | 0.0      | 6.3      | 6.6                                                 | 0.0                                  | )        | 13.2                  | 14.9                             |                                                  | 12.2        | 14.  | 5   |               |
| Lane LOS                                                                                                         |          | В              | В            |          | Α        | Α                                                   |                                      |          | В                     | В                                |                                                  | В           | В    |     |               |
| Lane 95% Queue                                                                                                   |          | 2.0            | 2.5          |          | 0.7      | 0.8                                                 |                                      |          | 2.6                   | 3.2                              |                                                  | 3.9         | 5.1  |     |               |
| Approach Delay, s/veh                                                                                            |          | -              | 7.29         |          |          | 3.28                                                |                                      |          |                       | 14.10                            |                                                  |             | 13.4 |     |               |
| Approach LOS, s/veh                                                                                              |          |                | Α            |          |          | A                                                   |                                      |          |                       | В                                |                                                  |             | В    |     |               |
| Intersection Delay, s/veh                                                                                        |          |                |              |          |          |                                                     |                                      | 9.90     | υ                     |                                  |                                                  |             |      |     |               |
| Intersection LOS                                                                                                 |          |                |              | eserved  |          | HCS 201                                             |                                      | A        |                       |                                  | Generat                                          |             |      |     |               |

| General Information                                                                         |        |              |                |        |       | Site In                                                 | forma                       | tion |              |                                                   |          |          |     |          |        |
|---------------------------------------------------------------------------------------------|--------|--------------|----------------|--------|-------|---------------------------------------------------------|-----------------------------|------|--------------|---------------------------------------------------|----------|----------|-----|----------|--------|
| Analyst KMK Agency or Co. LSC Date Performed 10/16/ Time Period PM Pe Peak Hour Factor 0.95 |        |              |                |        |       | Intersect<br>E/W Str<br>N/S Stro<br>Analysis<br>Project | eet Na<br>eet Nar<br>s Year |      | Ende<br>Ridg | e Road/<br>erud Blvd<br>e Road<br>3 Total<br>0081 |          | rud Blva |     |          |        |
| Project Description:                                                                        | d Sita | Chara        | torictio       |        |       |                                                         |                             |      |              |                                                   |          |          |     |          |        |
| Volume Adjustment an                                                                        | a site | EB           |                | - S    | ١٨    | /B                                                      |                             |      |              | NB                                                |          |          | SE  | 3        |        |
|                                                                                             | L      | Т            |                | U L    | Тт    | R                                                       | U                           | L    | Т            | R                                                 | U        | L        | T   | R        | U      |
| Number of Lanes (N)                                                                         | 0      | 0            | 0              | 0      | 1     | 1                                                       |                             | 0    | 2            | 0                                                 |          | 0        | 2   | 0        |        |
| Lane Assignment                                                                             |        |              |                | I      | LTR   | R                                                       |                             |      | T            | 7                                                 | R        | LT       |     |          | T      |
| Right-Turn Bypass                                                                           |        | Non          | е              |        | No    | ne                                                      |                             |      | ١            | None                                              |          |          | Nor | ne       |        |
| Conflicting Lanes                                                                           |        | 1            |                |        |       | 1                                                       |                             |      |              | 1                                                 |          |          | 1   |          |        |
| Volume (V), veh/h                                                                           |        |              |                | 0 56   | 0     | 270                                                     | 0                           |      | 291          |                                                   | 0        |          | 360 |          | 0      |
| Heavy Veh. Adj. (f <sub>HV</sub> ), %                                                       | 2      | 2            | 2              | 2 2    | 2     | 2                                                       | 2                           | 2    | 2            | 2                                                 | 2        | 2        | 2   | 2        | 2      |
| Pedestrians Crossing                                                                        | <br>   | 0            |                |        | (     | 0                                                       |                             |      |              | 0                                                 |          |          | 0   |          |        |
| Critical and Follow-Up                                                                      | Headv  | vay Adj<br>⊺ | EB             | it     | 1     | WB                                                      |                             | 1    |              | NB                                                |          | 1        |     | В        |        |
|                                                                                             |        | Left         | Right          | Bypass | Left  | Right                                                   | Вура                        | 98   | Left         | Right                                             | Bypass   | Left     |     | ght      | Bypass |
| Critical Headway (sec)                                                                      |        | 5.1929       | <del></del>    | 5.1929 |       | 4.2000                                                  | +                           | _    | 2000         | 4.2000                                            | 5.1929   |          | _   | _        | 5.1929 |
| Follow-Up Headway (sec)                                                                     |        |              |                | 3.1858 |       | 2.8000                                                  |                             | _    | 8000         | 2.8000                                            | 3.1858   |          | _   |          | 3.1858 |
| Flow Computations                                                                           |        | ı            | 1              | 1      |       |                                                         |                             | I    |              |                                                   |          | 1        | l . |          |        |
|                                                                                             |        |              | EB             |        |       | WB                                                      |                             |      |              | NB                                                |          |          | S   | В        |        |
|                                                                                             |        | Left         | Right          | Bypass | Left  | Right                                                   | Вура                        | ss   | Left         | Right                                             | Bypass   | Left     | Ri  | ght      | Bypass |
| Circulating Flow (V <sub>c</sub> ), pc/h                                                    |        |              | 945            |        |       | 312                                                     |                             |      |              | 498                                               |          |          | 6   | 0        |        |
| Exiting Flow (V <sub>ex</sub> ), pc/h                                                       |        |              | 607            | 1      |       | 0                                                       | _                           |      |              | 602                                               |          |          |     | 47       |        |
| Entry Flow (V <sub>e</sub> ), pc/h                                                          |        |              | 495            |        | 165   | 186                                                     | -                           |      | 198          | 223                                               |          | 498      | 38  |          |        |
| Entry Volume veh/h  Capacity and v/c Ration                                                 | •      |              |                |        | 162   | 182                                                     |                             |      | 194          | 219                                               |          | 488      | 37  | /9       |        |
| Capacity and v/c Natio                                                                      |        |              | EB             |        |       | WB                                                      |                             |      |              | NB                                                |          |          | S   | В        |        |
|                                                                                             |        | Left         | Right          | Bypass | Left  | Right                                                   | Вура                        | ss   | Left         | Right                                             | Bypass   | Left     |     | ght      | Bypass |
| Capacity (c <sub>PCE</sub> ), pc/h                                                          |        |              | 0              | 1      | 1008  | 1008                                                    | 1                           |      | 873          | 873                                               | 7,       | 1227     |     | 27       | ,,     |
| Capacity (c), veh/h                                                                         |        |              | 0              |        | 989   | 989                                                     |                             |      | 856          | 856                                               |          | 1203     | 12  | 03       |        |
| v/c Ratio (X)                                                                               |        |              |                |        | 0.16  | 0.18                                                    |                             |      | 0.23         | 0.26                                              |          | 0.41     | 0   | 32       |        |
| Delay and Level of Ser                                                                      | vice   |              |                |        |       |                                                         |                             |      |              |                                                   |          |          |     |          |        |
|                                                                                             |        |              | EB             |        |       | WB                                                      |                             |      |              | NB                                                |          |          | _   | В        |        |
|                                                                                             |        | Left         | Right          | Bypass |       | Right                                                   | Вура                        |      | Left         | Right                                             | Bypass   |          |     | ght      | Bypass |
| Lane Control Delay (d), s/ve                                                                | eh     |              | <del>  _</del> |        | 5.2   | 5.4                                                     | -                           |      | 6.6          | 6.9                                               |          | 7.1      | +   | .9       |        |
| Lane LOS                                                                                    |        |              | F              |        | A 0.6 | A 0.7                                                   | 1                           |      | <u>A</u>     | A 1.0                                             |          | A 2.0    | -   | 4        |        |
| Lane 95% Queue<br>Approach Delay, s/veh                                                     |        |              |                |        | 0.6   | <i>0.7 5.28</i>                                         | 1                           | -    | 0.9          | 1.0<br>6.75                                       | <u> </u> | 2.0      |     | .4<br>57 |        |
| Approach LOS, s/veh                                                                         |        |              |                |        |       | A                                                       |                             | -    |              | A                                                 |          |          | 0   |          |        |
| Intersection Delay, s/veh                                                                   |        |              |                |        | I     |                                                         |                             | 6.34 |              |                                                   |          | I        |     | •        |        |
|                                                                                             |        | +            |                |        |       |                                                         |                             |      |              |                                                   |          |          |     |          |        |

# **Operational Data**

## **Main Geometry (ft)**

## **Approach and Entry Geometry**

| Leg | Leg Names           | Approach<br>Bearing<br>(deg) | Grade<br>Separation<br>G | Half Width<br>V | Approach<br>Lanes<br>n | Entry<br>Width<br>E | Entry<br>Lanes<br>n | Flare<br>Length<br>L' | Entry<br>Radius<br>R | Entry<br>Angle<br>? |
|-----|---------------------|------------------------------|--------------------------|-----------------|------------------------|---------------------|---------------------|-----------------------|----------------------|---------------------|
| 1   | Founders<br>Parkway | 10                           | 0                        | 24.00           | 2                      | 28.00               | 2                   | 150.00                | 75.00                | 20.00               |
| 2   | SH 86               | 100                          | 0                        | 24.00           | 2                      | 28.00               | 2                   | 150.00                | 75.00                | 20.00               |
| 3   | Ridge Road          | 170                          | 0                        | 24.00           | 2                      | 28.00               | 2                   | 150.00                | 75.00                | 20.00               |
| 4   | Fifth Street        | 280                          | 0                        | 24.00           | 2                      | 28.00               | 2                   | 150.00                | 75.00                | 20.00               |

## **Circulating and Exit Geometry**

| Leg | Leg Names           | Inscribed<br>Diameter<br>D | Circulating<br>Width<br>C | Circulating<br>Lanes<br>nc | Exit<br>Width<br>Ex | Exit<br>Lanes<br>nex | Exit<br>Half Width<br>Vx | Exit Half<br>Width Lanes<br>nvx |
|-----|---------------------|----------------------------|---------------------------|----------------------------|---------------------|----------------------|--------------------------|---------------------------------|
| 1   | Founders<br>Parkway | 193.00                     | 29.00                     | 2                          | 28.00               | 2                    | 24.00                    | 2                               |
| 2   | SH 86               | 193.00                     | 29.00                     | 2                          | 28.00               | 2                    | 24.00                    | 2                               |
| 3   | Ridge Road          | 193.00                     | 29.00                     | 2                          | 28.00               | 2                    | 24.00                    | 2                               |
| 4   | Fifth Street        | 193.00                     | 29.00                     | 2                          | 28.00               | 2                    | 24.00                    | 2                               |

# **Bypass Geometry**

## **Bypass Approach Geometry (ft)**

| Le | g Leg Names  | Bypass<br>Type | Bypass<br>Flows | V  | nv | Vb | nvb | Vt | nvt |
|----|--------------|----------------|-----------------|----|----|----|-----|----|-----|
| 2  | SH 86        | Free           | 639             | 24 | 2  | 12 | 1   | 24 | 2   |
| 4  | Fifth Street | Merge          | 155             | 24 | 2  | 12 | 1   | 24 | 2   |

## **Bypass Entry and Exit Geometry (ft)**

| Log | L og Names   |    |     | Entry G | eometry |               |      | Lag | Log Names        | Exit I | anes |
|-----|--------------|----|-----|---------|---------|---------------|------|-----|------------------|--------|------|
| Leg | Leg Names    | Eb | neb | Lb      | Lt      | Rb            | Phib | Leg | Leg Names        | nex    | Nmx  |
| 2   | SH 86        | 13 | 1   | 0       | 130     | 75.00009<br>6 | 30   | 3   | Ridge Road       | 2      | 2    |
| 4   | Fifth Street | 13 | 1   | 0       | 130     | 75.00009<br>6 | 30   | 1   | Founders Parkway | 2      | 2    |

# **Operational Results**

#### 2040 AM Peak - 60 minutes

## **Flows and Capacity**

|     |                  |                |        | Flo     | ows (veh/l | hr)      |      | Capacity (veh/hr) |        |        |        |  |
|-----|------------------|----------------|--------|---------|------------|----------|------|-------------------|--------|--------|--------|--|
| Leg | Leg Names        | Bypass<br>Type | Arriva | al Flow | Opposi     | ing Flow | Exit | Сар               | acity  | Averaç | ge VCR |  |
|     |                  | .,,,,          | Entry  | Bypass  | Entry      | Bypass   | Flow | Entry             | Bypass | Entry  | Bypass |  |
| 1   | Founders Parkway | None           | 856    |         | 881        |          | 739  | 1838              |        | 0.4749 |        |  |
| 2   | SH 86            | Free           | 668    | 639     | 755        | 0        | 982  | 1928              | 1325   | 0.3503 | 0.4835 |  |
| 3   | Ridge Road       | None           | 1065   |         | 1081       |          | 981  | 1697              |        | 0.6451 |        |  |
| 4   | Fifth Street     | Merge          | 397    | 155     | 1069       | 584      | 1076 | 1705              | 1146   | 0.2363 | 0.1368 |  |

#### **Delays, Queues and Level of Service**

| Lan | Low Names        | Bypass | Ave   | rage Delay (s | sec)  | 95% Qu | eue (veh) | Level of Service |        |     |  |
|-----|------------------|--------|-------|---------------|-------|--------|-----------|------------------|--------|-----|--|
| Leg | Leg Names        | Туре   | Entry | Bypass        | Leg   | Entry  | Bypass    | Entry            | Bypass | Leg |  |
| 1   | Founders Parkway | None   | 6.87  |               | 6.87  | 5.05   |           | Α                |        | Α   |  |
| 2   | SH 86            | Free   | 3.14  | 0.00          | 1.61  | 1.79   | 0.00      | Α                | Α      | Α   |  |
| 3   | Ridge Road       | None   | 10.13 |               | 10.13 | 9.84   |           | В                |        | В   |  |
| 4   | Fifth Street     | Merge  | 4.28  | 3.60          | 4.09  | 1.45   | 0.46      | Α                | Α      | Α   |  |

## **Global Results**

#### **Performance and Accidents**

#### 2040 AM Peak Global Performance

| Parameter       | Units   | Entries | Bypasses | Total |
|-----------------|---------|---------|----------|-------|
| Arrive Flows    | veh/hr  | 2986    | 794      | 3780  |
| Capacity        | veh/hr  | 7167    | 2471     | 9638  |
| Average Delay   | sec/veh | 6.86    | 0.70     | 5.56  |
| L.O.S. (Signal) | A – F   | A       | Α        | Α     |
| L.O.S. (Unsig)  | A – F   | A       | Α        | Α     |
| Total Delay     | veh.hrs | 5.69    | 0.16     | 5.84  |

| General Information                                                                                              |          |             |             |               |       | Site In                                              | forma                      | tior | 1            |                                  |                                                  |          |              |       |
|------------------------------------------------------------------------------------------------------------------|----------|-------------|-------------|---------------|-------|------------------------------------------------------|----------------------------|------|--------------|----------------------------------|--------------------------------------------------|----------|--------------|-------|
| Analyst KMK Agency or Co. LSC Date Performed 12/03/ Time Period AM Pe Peak Hour Factor 0.92 Project Description: |          |             |             |               |       | Intersed<br>E/W Str<br>N/S Str<br>Analysi<br>Project | eet Na<br>eet Na<br>s Year | me   | Ende<br>Ridg | erud Blvo<br>e Road<br>) Backgro |                                                  | rud Blvd |              |       |
| Volume Adjustment an                                                                                             | d Sita   | Chara       | ctoristic   | •             |       |                                                      |                            |      |              |                                  |                                                  |          |              |       |
| Volume Aujustment an                                                                                             | u site   | EE          |             | ,3            | V     | /B                                                   | I                          |      |              | NB                               |                                                  |          | SB           |       |
|                                                                                                                  | L        | Т           |             | UL            | Т     | R                                                    | U                          | L    | Т            | R                                | U                                                | L        | T F          | l U   |
| Number of Lanes (N)                                                                                              | 0        | 0           | 0           | 0             | 1     | 1                                                    |                            | 0    | 2            | 0                                |                                                  | 0        | 2 0          | )     |
| Lane Assignment                                                                                                  |          |             |             | 1             | LTR   | R                                                    |                            |      | T            | 7                                | R                                                | LT       |              | T     |
| Right-Turn Bypass                                                                                                |          | Nor         | ne          |               | No    | one                                                  |                            |      | 1            | None                             |                                                  |          | None         |       |
| Conflicting Lanes                                                                                                |          | 1           |             |               |       | 1                                                    |                            |      |              | 1                                |                                                  |          | 1            |       |
| Volume (V), veh/h                                                                                                |          |             |             | 0 90          | 0     | 520                                                  | 0                          |      | 405          |                                  | <del>                                     </del> | 130      |              | 0     |
| Heavy Veh. Adj. (f <sub>HV</sub> ), %                                                                            | 2        | 2           | 2           | 2 2           | 2     | 2                                                    | 2                          | 2    | 2            | 2                                | 2                                                | 2        | 2 2          | 2     |
| Pedestrians Crossing                                                                                             | <u> </u> | 0           |             |               | -     | 0                                                    |                            |      |              | 0                                |                                                  |          | 0            |       |
| Critical and Follow-Up                                                                                           | Heady    | vay Ad      |             | nt            | Ι     | \\/\D                                                |                            |      |              | ND                               |                                                  | 1        | 0.0          |       |
|                                                                                                                  |          | l oft       | EB          | D. mana       | l oft | WB                                                   | Dyna                       |      | Left         | NB<br>Dight                      | D. mana                                          | l oft    | SB           | Dunga |
| Critical Headway (sec)                                                                                           |          | Left 5.1929 | Right       | Bypass 5.1929 |       | Right 4.2000                                         | Bypa 5.192                 | -    | 4.2000       | Right 4.2000                     | Bypass 5.1929                                    |          | Right 4.2000 | +     |
| Follow-Up Headway (sec)                                                                                          |          | 1           |             | 3.1858        |       |                                                      |                            |      | 2.8000       | 2.8000                           | 3.1858                                           |          | _            |       |
| Flow Computations                                                                                                |          |             | 1=:         | 1             | 1     | 1-1-1-1                                              | 1                          |      |              |                                  | 1                                                | 1        |              | 1     |
|                                                                                                                  |          |             | EB          |               |       | WB                                                   |                            |      |              | NB                               |                                                  |          | SB           |       |
|                                                                                                                  |          | Left        | Right       | Bypass        | Left  | Right                                                | Вура                       | ıss  | Left         | Right                            | Bypass                                           | Left     | Right        | Bypas |
| Circulating Flow (V <sub>c</sub> ), pc/h                                                                         |          |             | 455         |               |       | 449                                                  |                            |      |              | 144                              |                                                  |          | 100          |       |
| Exiting Flow (V <sub>ex</sub> ), pc/h                                                                            |          |             | 188         | 1             |       | 0                                                    |                            |      |              | 1026                             |                                                  |          | 310          |       |
| Entry Flow (V <sub>e</sub> ), pc/h                                                                               |          |             | 184         |               | 318   | 358                                                  | <u> </u>                   |      | 232          | 261                              |                                                  | 167      | 188          |       |
| Entry Volume veh/h                                                                                               |          |             |             |               | 312   | 351                                                  |                            |      | 227          | 256                              |                                                  | 164      | 184          |       |
| Capacity and v/c Ration                                                                                          | <u> </u> | 1           |             |               |       | MD                                                   |                            | -    |              | ND                               |                                                  | 1        | 0.0          |       |
|                                                                                                                  |          | Left        | EB<br>Right | Bypass        | Left  | WB<br>Right                                          | Вура                       |      | Left         | NB<br>Right                      | Bypass                                           | Left     | SB<br>Right  | Bypas |
| Capacity (c <sub>PCE</sub> ), pc/h                                                                               |          | Leit        | 0 Kigiit    | Бураѕѕ        | 907   | 907                                                  | Бура                       | 155  | 1149         | 1149                             | Буразз                                           | 1190     | 1190         | Бураѕ |
| Capacity (c), veh/h                                                                                              |          |             | 0           |               | 889   | 889                                                  | 1                          | +    | 1127         | 1127                             |                                                  | 1166     | 1166         |       |
| v/c Ratio (X)                                                                                                    |          |             |             |               | 0.35  | 0.39                                                 |                            |      | 0.20         | 0.23                             |                                                  | 0.14     | 0.16         |       |
| Delay and Level of Ser                                                                                           | vice     | I           | 1           | 1             |       | 1                                                    |                            |      |              | <u> </u>                         | 1                                                | 1        | 1            | 1     |
| -                                                                                                                |          |             | EB          |               |       | WB                                                   |                            |      |              | NB                               |                                                  |          | SB           |       |
|                                                                                                                  |          | Left        | Right       | Bypass        | Left  | Right                                                | Вура                       | ISS  | Left         | Right                            | Bypass                                           | Left     | Right        | Bypas |
| Lane Control Delay (d), s/ve                                                                                     | eh       |             |             |               | 8.0   | 8.6                                                  |                            |      | 5.0          | 5.3                              |                                                  | 4.3      | 4.5          |       |
| Lane LOS                                                                                                         |          |             | F           |               | Α     | Α                                                    |                            |      | Α            | Α                                |                                                  | Α        | Α            |       |
| Lane 95% Queue                                                                                                   |          |             |             |               | 1.6   | 1.9                                                  |                            |      | 0.8          | 0.9                              |                                                  | 0.5      | 0.6          |       |
| Approach Delay, s/veh                                                                                            |          |             |             |               |       | 8.33                                                 |                            |      |              | 5.15                             |                                                  |          | 4.38         |       |
| Approach LOS, s/veh                                                                                              |          |             |             |               |       | Α                                                    |                            |      |              | Α                                |                                                  |          | Α            |       |
| Intersection Delay, s/veh                                                                                        |          |             |             |               |       |                                                      |                            | 6.38 | 8            |                                  |                                                  |          |              |       |
| Intersection LOS                                                                                                 |          |             |             |               |       |                                                      |                            | Α    |              |                                  |                                                  |          |              |       |

# **Operational Data**

## **Main Geometry (ft)**

#### **Approach and Entry Geometry**

|     |                     | •                            | •                        |                 |                        |                     |                     |                       |                      |                     |
|-----|---------------------|------------------------------|--------------------------|-----------------|------------------------|---------------------|---------------------|-----------------------|----------------------|---------------------|
| Leg | Leg Names           | Approach<br>Bearing<br>(deg) | Grade<br>Separation<br>G | Half Width<br>V | Approach<br>Lanes<br>n | Entry<br>Width<br>E | Entry<br>Lanes<br>n | Flare<br>Length<br>L' | Entry<br>Radius<br>R | Entry<br>Angle<br>? |
| 1   | Founders<br>Parkway | 10                           | 0                        | 24.00           | 2                      | 28.00               | 2                   | 150.00                | 75.00                | 20.00               |
| 2   | SH 86               | 100                          | 0                        | 24.00           | 2                      | 28.00               | 2                   | 150.00                | 75.00                | 20.00               |
| 3   | Ridge Road          | 170                          | 0                        | 24.00           | 2                      | 28.00               | 2                   | 150.00                | 75.00                | 20.00               |
| 4   | Fifth Street        | 280                          | 0                        | 24.00           | 2                      | 28.00               | 2                   | 150.00                | 75.00                | 20.00               |

## **Circulating and Exit Geometry**

| Leg | Leg Names           | Inscribed<br>Diameter<br>D | Circulating<br>Width<br>C | Circulating<br>Lanes<br>nc | Exit<br>Width<br>Ex | Exit<br>Lanes<br>nex | Exit<br>Half Width<br>Vx | Exit Half<br>Width Lanes<br>nvx |
|-----|---------------------|----------------------------|---------------------------|----------------------------|---------------------|----------------------|--------------------------|---------------------------------|
| 1   | Founders<br>Parkway | 193.00                     | 29.00                     | 2                          | 28.00               | 2                    | 24.00                    | 2                               |
| 2   | SH 86               | 193.00                     | 29.00                     | 2                          | 28.00               | 2                    | 24.00                    | 2                               |
| 3   | Ridge Road          | 193.00                     | 29.00                     | 2                          | 28.00               | 2                    | 24.00                    | 2                               |
| 4   | Fifth Street        | 193.00                     | 29.00                     | 2                          | 28.00               | 2                    | 24.00                    | 2                               |

# **Bypass Geometry**

## **Bypass Approach Geometry (ft)**

| L | _eg | Leg Names    | Bypass<br>Type | Bypass<br>Flows | V  | nv | Vb | nvb | Vt | nvt |
|---|-----|--------------|----------------|-----------------|----|----|----|-----|----|-----|
|   | 2   | SH 86        | Free           | 601             | 24 | 2  | 12 | 1   | 24 | 2   |
|   | 4   | Fifth Street | Merge          | 520             | 24 | 2  | 12 | 1   | 24 | 2   |

## **Bypass Entry and Exit Geometry (ft)**

| Log | L og Names   |    |     | Entry G | eometry |                |      | Lon | Log Names        | Exit Lanes |     |
|-----|--------------|----|-----|---------|---------|----------------|------|-----|------------------|------------|-----|
| Leg | Leg Names    | Eb | neb | Lb      | Lt      | Rb             | Phib | Leg | Leg Names        | nex        | Nmx |
| 2   | SH 86        | 13 | 1   | 0       | 130     | 75.0001<br>032 | 30   | 3   | Ridge Road       | 2          | 2   |
| 4   | Fifth Street | 13 | 1   | 0       | 130     | 75.0001<br>032 | 30   | 1   | Founders Parkway | 2          | 2   |

# **Operational Results**

#### 2040 PM Peak - 60 minutes

## **Flows and Capacity**

|     |                  |                |        | Flo     | ows (veh/ | hr)      |      | Capacity (veh/hr) |        |        |        |  |
|-----|------------------|----------------|--------|---------|-----------|----------|------|-------------------|--------|--------|--------|--|
| Leg | Leg Names        | Bypass<br>Type | Arriva | al Flow | Opposi    | ing Flow | Exit | Сар               | acity  | Avera  | ge VCR |  |
|     |                  | .,,,,          | Entry  | Bypass  | Entry     | Bypass   | Flow | Entry             | Bypass | Entry  | Bypass |  |
| 1   | Founders Parkway | None           | 1497   |         | 1257      |          | 1090 | 1572              |        | 1.0628 |        |  |
| 2   | SH 86            | Free           | 509    | 601     | 1629      | 0        | 1107 | 1307              | 1325   | 0.3956 | 0.4540 |  |
| 3   | Ridge Road       | None           | 785    |         | 1311      |          | 1427 | 1533              |        | 0.5210 |        |  |
| 4   | Fifth Street     | Merge          | 987    | 520     | 840       | 570      | 1256 | 1868              | 1150   | 0.5365 | 0.4583 |  |

#### **Delays, Queues and Level of Service**

| Lon | Log Names        | Bypass | Ave   | rage Delay (s | sec)  | 95% Qu | eue (veh) | Level of Service |        |     |  |
|-----|------------------|--------|-------|---------------|-------|--------|-----------|------------------|--------|-----|--|
| Leg | Leg Names        | Туре   | Entry | Bypass        | Leg   | Entry  | Bypass    | Entry            | Bypass | Leg |  |
| 1   | Founders Parkway | None   | 53.77 |               | 53.77 | 70.64  |           | F                |        | F   |  |
| 2   | SH 86            | Free   | 6.48  | 0.00          | 2.97  | 2.65   | 0.00      | Α                | Α      | Α   |  |
| 3   | Ridge Road       | None   | 7.09  |               | 7.09  | 4.47   |           | Α                |        | Α   |  |
| 4   | Fifth Street     | Merge  | 6.20  | 5.65          | 6.01  | 4.91   | 2.35      | Α                | Α      | Α   |  |

## **Global Results**

#### **Performance and Accidents**

#### 2040 PM Peak Global Performance

| Parameter       | Units   | Entries | Bypasses | Total |
|-----------------|---------|---------|----------|-------|
| Arrive Flows    | veh/hr  | 3778    | 1121     | 4899  |
| Capacity        | veh/hr  | 6279    | 2475     | 8754  |
| Average Delay   | sec/veh | 25.27   | 2.62     | 20.09 |
| L.O.S. (Signal) | A - F   | С       | Α        | С     |
| L.O.S. (Unsig)  | A – F   | D       | Α        | С     |
| Total Delay     | veh.hrs | 26.52   | 0.82     | 27.34 |

| General Information                                                                                              |          |             |             |               |      | Site In                                              | forma                      | itioi | n            |                                  |               |          |              |       |
|------------------------------------------------------------------------------------------------------------------|----------|-------------|-------------|---------------|------|------------------------------------------------------|----------------------------|-------|--------------|----------------------------------|---------------|----------|--------------|-------|
| Analyst KMK Agency or Co. LSC Date Performed 12/03/ Time Period PM Pe Peak Hour Factor 0.95 Project Description: |          |             |             |               |      | Intersed<br>E/W Str<br>N/S Str<br>Analysi<br>Project | eet Na<br>eet Na<br>s Year | me    | Ende<br>Ridg | erud Blvo<br>e Road<br>) Backgro |               | rud Blvd |              |       |
| Volume Adjustment an                                                                                             | d Sita   | Chara       | ctoricti    |               |      |                                                      |                            |       |              |                                  |               |          |              |       |
| Volume Aujustment an                                                                                             | u site   | EE          |             | ,3            | V    | /B                                                   |                            |       |              | NB                               |               |          | SB           |       |
|                                                                                                                  | L        | Т           |             | U L           | Т    | R                                                    | U                          | L     | Т            | R                                | U             | L        | T F          | ₹ U   |
| Number of Lanes (N)                                                                                              | 0        | 0           | 0           | 0             | 1    | 1                                                    |                            | 0     | 2            | 0                                |               | 0        | 2 (          | )     |
| Lane Assignment                                                                                                  |          |             |             | -             | LTR  | R                                                    |                            |       | T            | 7                                | R             | LT       |              | T     |
| Right-Turn Bypass                                                                                                |          | Nor         | ne          |               | No   | one                                                  |                            |       | ١            | None                             |               |          | None         |       |
| Conflicting Lanes                                                                                                |          | 1           |             |               |      | 1                                                    |                            |       |              | 1                                |               |          | 1            |       |
| Volume (V), veh/h                                                                                                |          |             |             | 0 50          | 0    | 270                                                  | 0                          |       | 405          |                                  | 0             |          | 505          | 0     |
| Heavy Veh. Adj. (f <sub>HV</sub> ), %                                                                            | 2        | 2           | 2           | 2 2           | 2    | 2                                                    | 2                          | 2     | 2            | 2                                | 2             | 2        | 2 2          | 2     |
| Pedestrians Crossing                                                                                             | <u> </u> | 0           |             |               |      | 0                                                    |                            |       |              | 0                                |               |          | 0            |       |
| Critical and Follow-Up                                                                                           | Heady    | vay Ad      |             | nt            | 1    | \\/\D                                                |                            |       |              | ND                               |               | 1        |              |       |
|                                                                                                                  |          | l oft       | EB          | Dunaga        | Loft | WB                                                   | Dyne                       |       | Left         | NB<br>Dight                      | Dunaga        | l oft    | SB           | Dunas |
| Critical Headway (sec)                                                                                           |          | Left 5.1929 | Right       | Bypass 5.1929 | -    | Right 4.2000                                         | Bypa<br>5.19               | _     | 4.2000       | Right 4.2000                     | Bypass 5.1929 |          | Right 4.2000 |       |
| Follow-Up Headway (sec)                                                                                          |          | 1           |             | 3.1858        | 1    |                                                      | +                          |       | 2.8000       | 2.8000                           | 3.1858        |          |              |       |
| Flow Computations                                                                                                |          |             | 1           |               |      |                                                      | 1                          |       |              |                                  |               |          |              | 1     |
|                                                                                                                  |          |             | EB          |               |      | WB                                                   |                            |       |              | NB                               |               |          | SB           |       |
|                                                                                                                  |          | Left        | Right       | Bypass        | Left | Right                                                | Вура                       | ass   | Left         | Right                            | Bypass        | Left     | Right        | Bypas |
| Circulating Flow (V <sub>c</sub> ), pc/h                                                                         |          |             | 1101        |               |      | 435                                                  |                            |       |              | 505                              |               |          | 54           |       |
| Exiting Flow (V <sub>ex</sub> ), pc/h                                                                            |          |             | 607         | 1             |      | 0                                                    |                            |       |              | 725                              |               |          | 596          | 1     |
| Entry Flow (V <sub>e</sub> ), pc/h                                                                               |          |             | 469         |               | 161  | 182                                                  |                            |       | 252          | 285                              |               | 492      | 555          |       |
| Entry Volume veh/h                                                                                               |          |             |             |               | 158  | 178                                                  |                            |       | 247          | 279                              |               | 482      | 544          |       |
| Capacity and v/c Ration                                                                                          | <u> </u> | 1           |             |               |      | WD                                                   |                            |       |              | ND                               |               |          | CD           |       |
|                                                                                                                  |          | Left        | EB<br>Right | Bypass        | Left | WB<br>Right                                          | Вура                       | 200   | Left         | NB<br>Right                      | Bypass        | Left     | SB<br>Right  | Bypas |
| Capacity (c <sub>PCE</sub> ), pc/h                                                                               |          | Leit        | 0 Kigiit    | Бураѕѕ        | 917  | 917                                                  | Бура                       | 155   | 868          | 868                              | Буразз        | 1233     | 1233         |       |
| Capacity (c), veh/h                                                                                              |          |             | 0           |               | 899  | 899                                                  | 1                          |       | 851          | 851                              |               | 1209     | 1209         | +     |
| v/c Ratio (X)                                                                                                    |          |             |             |               | 0.18 | 0.20                                                 |                            |       | 0.29         | 0.33                             |               | 0.40     | 0.45         |       |
| Delay and Level of Ser                                                                                           | vice     | 1           |             | 1             |      | 1                                                    | 1                          |       |              | <u> </u>                         | 1             | 1        |              |       |
|                                                                                                                  |          |             | EB          |               |      | WB                                                   |                            |       |              | NB                               |               |          | SB           |       |
|                                                                                                                  |          | Left        | Right       | Bypass        | Left | Right                                                | Вура                       | ass   | Left         | Right                            | Bypass        | Left     | Right        | Bypas |
| Lane Control Delay (d), s/ve                                                                                     | eh       |             |             |               | 5.7  | 6.0                                                  |                            |       | 7.4          | 7.9                              |               | 6.9      | 7.6          |       |
| Lane LOS                                                                                                         |          |             | F           |               | Α    | Α                                                    |                            |       | Α            | Α                                |               | Α        | Α            |       |
| Lane 95% Queue                                                                                                   |          |             |             |               | 0.6  | 0.7                                                  |                            |       | 1.2          | 1.4                              |               | 1.9      | 2.4          |       |
| Approach Delay, s/veh                                                                                            |          |             |             |               |      | 5.87                                                 |                            |       |              | 7.68                             |               |          | 7.31         |       |
| Approach LOS, s/veh                                                                                              |          |             |             |               |      | Α                                                    |                            |       |              | Α                                |               |          | Α            |       |
| Intersection Delay, s/veh                                                                                        |          |             |             |               |      |                                                      |                            | 7.1   |              |                                  |               |          |              |       |
| Intersection LOS                                                                                                 |          |             |             |               |      |                                                      |                            | Α     |              |                                  |               |          |              |       |

| Intersection           |        |      |          |       |        |            |
|------------------------|--------|------|----------|-------|--------|------------|
| Int Delay, s/veh       | 0.8    |      |          |       |        |            |
| Movement               | WBL    | WBR  | NBT      | NBR   | SBL    | SBT        |
| Lane Configurations    | WDL    | ₩ M  | <b>†</b> | אטוי  | )<br>j | <b>↑</b> ↑ |
| Traffic Vol, veh/h     | 0      | 64   | 959      | 4     | 22     | 360        |
| Future Vol, veh/h      | 0      | 64   | 959      | 4     | 22     | 360        |
| Conflicting Peds, #/hr | 0      | 0    | 0        | 0     | 0      | 0          |
|                        |        |      | Free     | Free  | Free   | Free       |
| Sign Control           | Stop   | Stop |          |       |        |            |
| RT Channelized         | -      | None | -        | None  | -      | None       |
| Storage Length         | -      | 0    | -        | -     | 200    | -          |
| Veh in Median Storage  |        | -    | 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      | 70   | 1042     | 4     | 24     | 391        |
|                        |        |      |          |       |        |            |
| Major/Minor N          | Minor1 | N    | Major1   | N     | Major2 |            |
|                        | -      | 523  |          |       | 1046   | 0          |
| Conflicting Flow All   |        |      | 0        | U     |        |            |
| Stage 1                | -      | -    | -        | -     | -      | -          |
| Stage 2                | -      | -    | -        | -     | -      | -          |
| Critical Hdwy          | -      | 6.94 | -        | -     | 4.14   | -          |
| Critical Hdwy Stg 1    | -      | -    | -        | -     | -      | -          |
| Critical Hdwy Stg 2    | -      | -    | -        | -     | -      | -          |
| Follow-up Hdwy         | -      | 3.32 | -        | -     | 2.22   | -          |
| Pot Cap-1 Maneuver     | 0      | 499  | -        | -     | 661    | -          |
| Stage 1                | 0      | -    | -        | -     | -      | -          |
| Stage 2                | 0      | -    | -        | -     | -      | -          |
| Platoon blocked, %     |        |      | -        | -     |        | -          |
| Mov Cap-1 Maneuver     | -      | 499  | -        | -     | 661    | -          |
| Mov Cap-2 Maneuver     | -      | -    | -        | -     | -      | -          |
| Stage 1                | -      | _    | -        | -     | -      | _          |
| Stage 2                | _      | _    | _        | _     | _      | _          |
| olago 2                |        |      |          |       |        |            |
|                        |        |      |          |       |        |            |
| Approach               | WB     |      | NB       |       | SB     |            |
| HCM Control Delay, s   | 13.4   |      | 0        |       | 0.6    |            |
| HCM LOS                | В      |      |          |       |        |            |
|                        |        |      |          |       |        |            |
| Minor Lane/Major Mvm   | nt     | NBT  | NRDV     | VBLn1 | SBL    | SBT        |
|                        | It     | INDI | NDKV     |       |        | SDI        |
| Capacity (veh/h)       |        | -    | -        | 499   | 661    | -          |
| HCM Lane V/C Ratio     |        | -    | -        | 0.139 |        | -          |
| HCM Control Delay (s)  |        | -    | -        | 13.4  | 10.7   | -          |
| HCM Lane LOS           |        | -    | -        | В     | В      | -          |
| HCM 95th %tile Q(veh)  | )      | -    | -        | 0.5   | 0.1    | -          |
| HCM 95th %tile Q(veh)  | )      | -    | -        | 0.5   | 0.1    |            |

| Intersection           |                |          |        |          |           |           |
|------------------------|----------------|----------|--------|----------|-----------|-----------|
| Int Delay, s/veh       | 1.1            |          |        |          |           |           |
| Movement               | SEL            | SER      | NEL    | NET      | SWT       | SWR       |
| Lane Configurations    | <del>الا</del> | JLK<br>7 | ሻ      | <b>^</b> | <b>†</b>  | OVVIC     |
| Traffic Vol, veh/h     | 13             | 53       | 13     | 170      | 610       | 4         |
| Future Vol, veh/h      | 13             | 53       | 13     | 170      | 610       | 4         |
|                        | 0              | 0        | 0      | 0        |           |           |
| Conflicting Peds, #/hr |                |          |        |          | 0<br>Fron | 0<br>Fron |
| Sign Control           | Stop           | Stop     | Free   | Free     | Free      | Free      |
| RT Channelized         | -              | None     | -      | None     | -         | None      |
| Storage Length         | 1000           | 0        | 200    | -        | -         | -         |
| Veh in Median Storage  |                | -        | -      | 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              | 14             | 58       | 14     | 185      | 663       | 4         |
|                        |                |          |        |          |           |           |
| N 4 - 1 /N 41          | A' O           |          | 1-11   |          | 4-!       |           |
|                        | Minor2         |          | Major1 |          | Major2    |           |
| Conflicting Flow All   | 786            | 334      | 667    | 0        | -         | 0         |
| Stage 1                | 665            | -        | -      | -        | -         | -         |
| Stage 2                | 121            | -        | -      | -        | -         | -         |
| Critical Hdwy          | 6.84           | 6.94     | 4.14   | -        | -         | -         |
| Critical Hdwy Stg 1    | 5.84           | -        | -      | -        | -         | -         |
| Critical Hdwy Stg 2    | 5.84           | -        | -      | -        | -         | -         |
| Follow-up Hdwy         | 3.52           | 3.32     | 2.22   | -        | -         | -         |
| Pot Cap-1 Maneuver     | 329            | 662      | 919    | -        | -         | -         |
| Stage 1                | 473            | _        | _      | _        | -         | _         |
| Stage 2                | 891            | _        | -      | _        | _         | _         |
| Platoon blocked, %     | 071            |          |        | _        | _         | _         |
| Mov Cap-1 Maneuver     | 324            | 662      | 919    | _        | _         | _         |
| Mov Cap-1 Maneuver     | 324            | 002      | 717    |          |           | _         |
| Stage 1                | 466            |          | -      | -        | _         | _         |
|                        |                |          | -      | -        | -         | -         |
| Stage 2                | 891            | -        | -      | -        | -         | -         |
|                        |                |          |        |          |           |           |
| Approach               | SE             |          | NE     |          | SW        |           |
| HCM Control Delay, s   | 12.1           |          | 0.6    |          | 0         |           |
| HCM LOS                | В              |          | 0.0    |          | U         |           |
| HOW LOS                | D              |          |        |          |           |           |
|                        |                |          |        |          |           |           |
| Minor Lane/Major Mvm   | ıt             | NEL      | NET:   | SELn1    | SELn2     | SWT       |
| Capacity (veh/h)       |                | 919      | _      | 324      | 662       | -         |
| HCM Lane V/C Ratio     |                | 0.015    | _      | 0.044    |           | _         |
| HCM Control Delay (s)  |                | 9        | _      | 16.6     | 11        | _         |
| HCM Lane LOS           |                | Á        | _      | C        | В         | _         |
| HCM 95th %tile Q(veh)  |                | 0        | -      | 0.1      | 0.3       | -         |
| 115W 75W 76W Q(VCH)    |                | U        |        | 0.1      | 0.0       |           |

# **Operational Data**

## **Main Geometry (ft)**

## **Approach and Entry Geometry**

| Leg | Leg Names           | Approach<br>Bearing<br>(deg) | Grade<br>Separation<br>G | Half Width<br>V | Approach<br>Lanes<br>n | Entry<br>Width<br>E | Entry<br>Lanes<br>n | Flare<br>Length<br>L' | Entry<br>Radius<br>R | Entry<br>Angle<br>? |
|-----|---------------------|------------------------------|--------------------------|-----------------|------------------------|---------------------|---------------------|-----------------------|----------------------|---------------------|
| 1   | Founders<br>Parkway | 10                           | 0                        | 24.00           | 2                      | 28.00               | 2                   | 150.00                | 75.00                | 20.00               |
| 2   | SH 86               | 100                          | 0                        | 24.00           | 2                      | 28.00               | 2                   | 150.00                | 75.00                | 20.00               |
| 3   | Ridge Road          | 170                          | 0                        | 24.00           | 2                      | 28.00               | 2                   | 150.00                | 75.00                | 20.00               |
| 4   | Fifth Street        | 280                          | 0                        | 24.00           | 2                      | 28.00               | 2                   | 150.00                | 75.00                | 20.00               |

## **Circulating and Exit Geometry**

| Leg | Leg Names           | Inscribed<br>Diameter<br>D | Circulating<br>Width<br>C | Circulating<br>Lanes<br>nc | Exit<br>Width<br>Ex | Exit<br>Lanes<br>nex | Exit<br>Half Width<br>Vx | Exit Half<br>Width Lanes<br>nvx |
|-----|---------------------|----------------------------|---------------------------|----------------------------|---------------------|----------------------|--------------------------|---------------------------------|
| 1   | Founders<br>Parkway | 193.00                     | 29.00                     | 2                          | 28.00               | 2                    | 24.00                    | 2                               |
| 2   | SH 86               | 193.00                     | 29.00                     | 2                          | 28.00               | 2                    | 24.00                    | 2                               |
| 3   | Ridge Road          | 193.00                     | 29.00                     | 2                          | 28.00               | 2                    | 24.00                    | 2                               |
| 4   | Fifth Street        | 193.00                     | 29.00                     | 2                          | 28.00               | 2                    | 24.00                    | 2                               |

# **Bypass Geometry**

## **Bypass Approach Geometry (ft)**

| L | eg | Leg Names    | Bypass<br>Type | Bypass<br>Flows | V  | nv | Vb | nvb | Vt | nvt |
|---|----|--------------|----------------|-----------------|----|----|----|-----|----|-----|
|   | 2  | SH 86        | Free           | 639             | 24 | 2  | 12 | 1   | 24 | 2   |
|   | 4  | Fifth Street | Merge          | 161             | 24 | 2  | 12 | 1   | 24 | 2   |

## **Bypass Entry and Exit Geometry (ft)**

| Log | L og Names   |    |     | Entry G | eometry |                |      | Lag | Log Names        | Exit l | Lanes |
|-----|--------------|----|-----|---------|---------|----------------|------|-----|------------------|--------|-------|
| Leg | Leg Names    | Eb | neb | Lb      | Lt      | Rb             | Phib | Leg | Leg Names        | nex    | Nmx   |
| 2   | SH 86        | 13 | 1   | 0       | 130     | 75.0000<br>792 | 30   | 3   | Ridge Road       | 2      | 2     |
| 4   | Fifth Street | 13 | 1   | 0       | 130     | 75.0000<br>792 | 30   | 1   | Founders Parkway | 2      | 2     |

# **Operational Results**

## 2040 AM Peak - 60 minutes

## **Flows and Capacity**

|     |                  |                |        | Flo     | ows (veh/l | hr)     |      |       | Capacity | (veh/hr) |        |
|-----|------------------|----------------|--------|---------|------------|---------|------|-------|----------|----------|--------|
| Leg | Leg Names        | Bypass<br>Type | Arriva | al Flow | Opposi     | ng Flow | Exit | Сар   | acity    | Avera    | ge VCR |
|     |                  | .,,,,          | Entry  | Bypass  | Entry      | Bypass  | Flow | Entry | Bypass   | Entry    | Bypass |
| 1   | Founders Parkway | None           | 878    |         | 902        |         | 815  | 1824  |          | 0.4911   |        |
| 2   | SH 86            | Free           | 672    | 639     | 777        | 0       | 1003 | 1912  | 1325     | 0.3554   | 0.4835 |
| 3   | Ridge Road       | None           | 1150   |         | 1085       |         | 1003 | 1694  |          | 0.6997   |        |
| 4   | Fifth Street     | Merge          | 397    | 161     | 1158       | 654     | 1076 | 1641  | 1124     | 0.2456   | 0.1448 |

#### **Delays, Queues and Level of Service**

| Lan | Low Names        | Bypass | Ave   | rage Delay (s | sec)  | 95% Qu | eue (veh) | Lo    | evel of Service | e   |
|-----|------------------|--------|-------|---------------|-------|--------|-----------|-------|-----------------|-----|
| Leg | Leg Names        | Type   | Entry | Bypass        | Leg   | Entry  | Bypass    | Entry | Bypass          | Leg |
| 1   | Founders Parkway | None   | 6.97  |               | 6.97  | 5.28   |           | Α     |                 | Α   |
| 2   | SH 86            | Free   | 3.21  | 0.00          | 1.65  | 1.85   | 0.00      | Α     | Α               | Α   |
| 3   | Ridge Road       | None   | 11.41 |               | 11.41 | 12.26  |           | В     |                 | В   |
| 4   | Fifth Street     | Merge  | 4.50  | 3.70          | 4.27  | 1.53   | 0.49      | Α     | Α               | Α   |

## **Global Results**

#### **Performance and Accidents**

#### 2040 AM Peak Global Performance

| Parameter       | Units   | Entries | Bypasses | Total |
|-----------------|---------|---------|----------|-------|
| Arrive Flows    | veh/hr  | 3097    | 800      | 3897  |
| Capacity        | veh/hr  | 7071    | 2449     | 9520  |
| Average Delay   | sec/veh | 7.49    | 0.74     | 6.10  |
| L.O.S. (Signal) | A – F   | A       | Α        | Α     |
| L.O.S. (Unsig)  | A – F   | A       | Α        | Α     |
| Total Delay     | veh.hrs | 6.44    | 0.17     | 6.61  |

|                                                                                |            |          |        |          | ROL   | INDABO   | UT REF                                                | ORT                                 |            |                      |                                                   |        |          |     |             |          |
|--------------------------------------------------------------------------------|------------|----------|--------|----------|-------|----------|-------------------------------------------------------|-------------------------------------|------------|----------------------|---------------------------------------------------|--------|----------|-----|-------------|----------|
| General Information                                                            |            |          |        |          |       |          | Site In                                               | form                                | atio       | \n                   |                                                   |        |          |     |             |          |
| Analyst KMK Agency or Co. LSC Date Performed 12/03/ Time Period AM Period 0.92 |            |          |        |          |       |          | Intersed<br>E/W Str<br>N/S Str<br>Analysis<br>Project | etion<br>eet Na<br>eet Na<br>s Year | ame        | Ridg<br>Ende<br>Ridg | e Road/<br>erud Blvo<br>e Road<br>) Total<br>)081 |        | rud Blv  | d   |             |          |
| Project Description:                                                           |            |          |        |          |       |          |                                                       |                                     |            |                      |                                                   |        |          |     |             |          |
| Volume Adjustment an                                                           | d Site     | Chara    | cteris | tics     |       |          |                                                       |                                     |            |                      |                                                   |        |          |     |             |          |
|                                                                                |            | E        | В      |          |       | V        | /B                                                    |                                     |            |                      | NB                                                |        |          | ,   | SB          |          |
|                                                                                | L          | Т        | R      | U        | L     | Т        | R                                                     | U                                   | L          | _ T                  | R                                                 | U      | L        | Т   | R           | U        |
| Number of Lanes (N)                                                            | 0          | 0        | 0      |          | 0     | 1        | 1                                                     |                                     | C          | 2                    | 0                                                 |        | 0        | 2   | 0           |          |
| Lane Assignment                                                                |            |          |        |          | I     | _TR      | R                                                     |                                     |            | Τ                    | T                                                 | R      | LT       | •   |             | Τ        |
| Right-Turn Bypass                                                              |            | No       | ne     |          |       | No       | ne                                                    |                                     |            | 1                    | lone                                              |        |          | Ν   | one         |          |
| Conflicting Lanes                                                              |            | 1        |        |          |       | •        | 1                                                     |                                     |            |                      | 1                                                 |        |          |     | 1           |          |
| Volume (V), veh/h                                                              |            |          |        | 0        | 109   | 0        | 554                                                   | 0                                   |            | 405                  | 43                                                | 0      | 140      | 220 |             | 0        |
| Heavy Veh. Adj. (f <sub>HV</sub> ), %                                          | 2          | 2        | 2      | 2        | 2     | 2        | 2                                                     | 2                                   | 2          | 2                    | 2                                                 | 2      | 2        | 2   | 2           | 2        |
| Pedestrians Crossing                                                           |            | C        | )      |          |       | (        | )                                                     |                                     |            | •                    | 0                                                 |        | •        |     | 0           | •        |
| Critical and Follow-Up                                                         | Headv      | vay Ad   | justm  | ent      | •     |          |                                                       |                                     |            |                      |                                                   |        |          |     |             |          |
| -                                                                              |            |          | EB     | 3        |       |          | WB                                                    |                                     |            |                      | NB                                                |        |          |     | SB          |          |
|                                                                                |            | Left     | Rigl   | nt B     | ypass | Left     | Right                                                 | Вура                                | ass        | Left                 | Right                                             | Bypass | Left     | F   | Right       | Bypass   |
| Critical Headway (sec)                                                         |            | 5.1929   |        |          | .1929 | 4.2000   | 4.2000                                                | + **                                |            | 4.2000               | 4.2000                                            |        | +        | _   | 2000        | 5.1929   |
| Follow-Up Headway (sec)                                                        |            |          | 3 2.80 |          |       | 2.8000   | 2.8000                                                | +                                   |            | 2.8000               | 2.8000                                            |        | +        | _   | 8000        | 3.1858   |
| Flow Computations                                                              |            | 1        |        |          |       | I        | 1                                                     | 1                                   |            | l                    | l                                                 |        |          |     |             | <u> </u> |
| ,                                                                              |            |          | EB     | 3        |       |          | WB                                                    |                                     |            |                      | NB                                                |        |          |     | SB          |          |
|                                                                                |            | Left     | Rigl   | nt B     | ypass | Left     | Right                                                 | Вура                                | ass        | Left                 | Right                                             | Bypass | Left     | F   | Right       | Bypass   |
| Circulating Flow (V <sub>c</sub> ), pc/h                                       |            |          | 520    |          | 71    |          | 449                                                   | 1 71                                |            |                      | 155                                               | 71     |          |     | 121         | 71       |
| Exiting Flow (V <sub>ex</sub> ), pc/h                                          |            |          | 203    | 3        |       |          | 0                                                     |                                     |            |                      | 1063                                              |        |          |     | 365         |          |
| Entry Flow (V <sub>e</sub> ), pc/h                                             |            |          | 190    |          |       | 345      | 390                                                   |                                     |            | 233                  | 263                                               |        | 188      |     | 212         |          |
| Entry Volume veh/h                                                             |            |          | +      |          |       | 338      | 382                                                   | 1                                   |            | 228                  | 258                                               |        | 184      |     | 208         |          |
| Capacity and v/c Ratios                                                        | •          | L        |        | !_       |       | 000      | 002                                                   |                                     |            |                      |                                                   |        | 1        |     |             |          |
| oupuony una 170 nuno                                                           |            |          | EB     | 1        |       |          | WB                                                    |                                     |            |                      | NB                                                |        |          |     | SB          |          |
|                                                                                |            | Left     | Rigi   |          | ypass | Left     | Right                                                 | Вура                                | 225        | Left                 | Right                                             | Bypass | Left     |     | Right       | Bypass   |
| Capacity (c <sub>PCE</sub> ), pc/h                                             |            | 2010     | 0      |          | урасс | 907      | 907                                                   | 15,60                               | 400        | 1140                 | 1140                                              | Бурасс | 1170     |     | 170         | Бурасс   |
| Capacity (c), veh/h                                                            |            |          | 0      |          |       | 889      | 889                                                   |                                     |            | 1117                 | 1117                                              |        | 1147     |     | 1147        |          |
| v/c Ratio (X)                                                                  |            |          | + -    |          |       | 0.38     | 0.43                                                  | 1                                   |            | 0.20                 | 0.23                                              |        | 0.16     |     | 0.18        |          |
| Delay and Level of Serv                                                        | /ice       | <u> </u> |        |          |       | 1 0.00   | 1 0.40                                                |                                     |            | 0.20                 | 1 0.20                                            |        | 1 3.70   |     |             |          |
| Delay and Level Of Serv                                                        | 7100       |          | EB     | <u> </u> |       |          | WB                                                    |                                     |            |                      | NB                                                |        |          |     | SB          |          |
|                                                                                |            | Left     | Rigi   |          | ypass | Left     | Right                                                 | Вура                                | 200        | Left                 | Right                                             | Bypass | Left     |     | Right       | Bypass   |
| Lane Control Delay (d), s/ve                                                   | ah         | FEIL     | Kigi   | יו ו     | ypass | 8.4      | 9.2                                                   | Бура                                | <b>400</b> | 5.1                  | 5.3                                               | Бураза | 4.5      |     | 4.7         | руразз   |
| Lane LOS                                                                       | <b>211</b> |          | F      |          |       | 0.4<br>A | 9.2<br>A                                              | +                                   |            | 3. 1<br>A            | 0.3<br>A                                          |        | 4.5<br>A | +   | 4.7<br>A    |          |
| Lane 95% Queue                                                                 |            |          | + '    | +        |       | 1.8      | 2.2                                                   | 1                                   |            | 0.8                  | 0.9                                               |        | 0.6      | +   | 0.7         |          |
| Approach Delay, s/veh                                                          |            |          |        |          |       | 1.0      | 8.84                                                  |                                     |            | 0.0                  | 5.22                                              |        | 0.0      |     | 0.7<br>4.65 | <u> </u> |
| Approach LOS, s/veh                                                            |            |          |        |          |       |          | A                                                     |                                     |            |                      | A                                                 |        |          |     | 4.05<br>A   |          |
|                                                                                |            | -        |        |          |       |          | A                                                     |                                     | 6.7        | 71                   | А                                                 |        |          |     | А           |          |
| Intersection Delay, s/veh                                                      |            |          |        |          |       |          |                                                       |                                     | - O. I     |                      |                                                   |        |          |     |             |          |
| Intersection LOS                                                               |            |          |        |          |       |          |                                                       | T. 4                                |            | Pounda               |                                                   |        |          |     |             |          |

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HCS 2010<sup>TM</sup> 6.50 Roundabouts Generated: 12/3/2018 1:06 PM

| Intersection           |           |      |          |        |        |          |
|------------------------|-----------|------|----------|--------|--------|----------|
| Int Delay, s/veh       | 0.6       |      |          |        |        |          |
| Movement               | WBL       | WBR  | NBT      | NBR    | SBL    | SBT      |
| Lane Configurations    | WDL       | 7    | <b>†</b> | NDI    | ሻ      | <b>^</b> |
| Traffic Vol, veh/h     | 0         | 36   | 695      | 11     | 73     | 1009     |
| Future Vol, veh/h      | 0         | 36   | 695      | 11     | 73     | 1007     |
| Conflicting Peds, #/hr | 0         | 0    | 0        | 0      | 0      | 0        |
| Sign Control           | Stop      | Stop | Free     | Free   | Free   | Free     |
| RT Channelized         | Jiop<br>- | None | -        |        | -      | None     |
| Storage Length         | _         | 0    | _        | -      | 200    | -        |
| Veh in Median Storage  | e, # 0    | -    | 0        | _      | 200    | 0        |
| Grade, %               | ο, π Ο    | -    | 0        | _      | _      | 0        |
| Peak Hour Factor       | 92        | 92   | 92       | 92     | 92     | 92       |
|                        | 2         | 2    | 2        | 2      | 2      | 2        |
| Heavy Vehicles, %      |           |      |          |        |        |          |
| Mvmt Flow              | 0         | 39   | 755      | 12     | 79     | 1097     |
|                        |           |      |          |        |        |          |
| Major/Minor I          | Minor1    | N    | /lajor1  |        | Major2 |          |
| Conflicting Flow All   | -         | 384  | 0        | 0      | 767    | 0        |
| Stage 1                | -         | -    | -        | -      | -      | -        |
| Stage 2                | -         | -    | -        | -      | -      | -        |
| Critical Hdwy          | -         | 6.94 | -        | -      | 4.14   | -        |
| Critical Hdwy Stg 1    | _         | _    | -        | _      | _      | _        |
| Critical Hdwy Stg 2    | _         | _    | _        | _      | -      | _        |
| Follow-up Hdwy         | _         | 3.32 | _        | _      | 2.22   | _        |
| Pot Cap-1 Maneuver     | 0         | 614  | _        | _      | 842    | _        |
| Stage 1                | 0         | -    | _        | _      | - 012  | _        |
| Stage 2                | 0         | _    | _        | _      | _      | _        |
| Platoon blocked, %     | U         |      | _        | _      |        | _        |
| Mov Cap-1 Maneuver     | -         | 614  | -        |        | 842    |          |
| Mov Cap-1 Maneuver     | -         | 014  | -        | -      | 042    | -        |
|                        | -         | -    | -        | -      |        | -        |
| Stage 1                | -         | -    | -        | -      | -      | -        |
| Stage 2                | -         | -    | -        | -      | -      | -        |
|                        |           |      |          |        |        |          |
| Approach               | WB        |      | NB       |        | SB     |          |
| HCM Control Delay, s   | 11.3      |      | 0        |        | 0.7    |          |
| HCM LOS                | В         |      | -        |        |        |          |
|                        |           |      |          |        |        |          |
| N 01 1 10 0 1 0 1      |           | NET  | NIDD     | N/DL 4 | 051    | 007      |
| Minor Lane/Major Mvm   | IT .      | NBT  |          | VBLn1  | SBL    | SBT      |
| Capacity (veh/h)       |           | -    | -        | 614    | 842    | -        |
| HCM Lane V/C Ratio     |           | -    | -        | 0.064  |        | -        |
| HCM Control Delay (s)  |           | -    | -        |        | 9.7    | -        |
| HCM Lane LOS           |           | -    | -        | В      | Α      | -        |
| HCM 95th %tile Q(veh)  |           | -    | -        | 0.2    | 0.3    | -        |
|                        |           |      |          |        |        |          |

| Int Delay, s/veh  Movement  Lane Configurations  Traffic Vol, veh/h | 0.8<br>SEL   | SER      |        |          |          |       |
|---------------------------------------------------------------------|--------------|----------|--------|----------|----------|-------|
| Lane Configurations<br>Traffic Vol, veh/h                           | SEL          | CED      |        |          |          |       |
| Lane Configurations<br>Traffic Vol, veh/h                           | ULL          | OLK.     | NEL    | NET      | SWT      | SWR   |
| Traffic Vol, veh/h                                                  | ሻ            | JLK<br>* | ሻ      | <b>^</b> | <b>†</b> | OVVIC |
|                                                                     | 8            | 31       | 45     | 565      | 320      | 14    |
|                                                                     | 8            | 31       | 45     | 565      | 320      | 14    |
| Future Vol, veh/h                                                   |              |          |        |          |          |       |
| Conflicting Peds, #/h                                               |              | O Cton   | 0      | 0        | 0        | 0     |
| Sign Control                                                        | Stop         | Stop     | Free   | Free     | Free     | Free  |
| RT Channelized                                                      | -            | None     | -      | None     | -        | None  |
| Storage Length                                                      | 1000         | 0        | 200    | -        | -        | -     |
| Veh in Median Stora                                                 | 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                                                           | 9            | 34       | 49     | 614      | 348      | 15    |
|                                                                     |              |          |        |          |          |       |
|                                                                     | <b>.</b>     |          |        | -        |          |       |
| Major/Minor                                                         | Minor2       |          | Major1 |          | Major2   |       |
| Conflicting Flow All                                                | 761          | 182      | 363    | 0        | -        | 0     |
| Stage 1                                                             | 356          | -        | -      | -        | -        | -     |
| Stage 2                                                             | 405          | -        | -      | -        | -        | -     |
| Critical Hdwy                                                       | 6.84         | 6.94     | 4.14   | -        | -        | -     |
| Critical Hdwy Stg 1                                                 | 5.84         | -        | -      | -        | -        | -     |
| Critical Hdwy Stg 2                                                 | 5.84         | -        | -      | -        | -        | -     |
| Follow-up Hdwy                                                      | 3.52         | 3.32     | 2.22   | -        | -        | -     |
| Pot Cap-1 Maneuver                                                  |              | 829      | 1192   | -        | -        | -     |
| Stage 1                                                             | 680          | _        | _      | _        | -        | _     |
| Stage 2                                                             | 642          | _        | _      | _        | _        | _     |
| Platoon blocked, %                                                  | 012          |          |        | _        | _        | _     |
| Mov Cap-1 Maneuve                                                   | er 328       | 829      | 1192   |          |          |       |
| Mov Cap-1 Maneuve                                                   |              | 027      | 1172   | _        | _        |       |
|                                                                     |              | -        | -      | -        | -        | -     |
| Stage 1                                                             | 652          | -        | -      | -        | -        | -     |
| Stage 2                                                             | 642          | -        | -      | -        | -        | -     |
|                                                                     |              |          |        |          |          |       |
| Approach                                                            | SE           |          | NE     |          | SW       |       |
| HCM Control Delay,                                                  |              |          | 0.6    |          | 0        |       |
| HCM LOS                                                             | B            |          | 0.0    |          | U        |       |
| TIOWI LOJ                                                           | U            |          |        |          |          |       |
|                                                                     |              |          |        |          |          |       |
| Minor Lane/Major My                                                 | vmt          | NEL      | NET:   | SELn1    | SELn2    | SWT   |
| Capacity (veh/h)                                                    |              | 1192     | -      | 328      | 829      | -     |
| HCM Lane V/C Ratio                                                  | 0            | 0.041    | _      | 0.027    |          | -     |
|                                                                     |              | 8.1      | _      | 16.3     | 9.5      | -     |
| HCM Control Delay                                                   | (~)          |          |        | C        | Α.       | _     |
| HCM Lane LOS                                                        |              |          | -      |          |          |       |
| HCM Control Delay (<br>HCM Lane LOS<br>HCM 95th %tile Q(ve          | 2 <b>h</b> ) | A<br>0.1 | -      | 0.1      | 0.1      | _     |

# **Operational Data**

## **Main Geometry (ft)**

## **Approach and Entry Geometry**

| Leg | Leg Names           | Approach<br>Bearing<br>(deg) | Grade<br>Separation<br>G | Half Width<br>V | Approach<br>Lanes<br>n | Entry<br>Width<br>E | Entry<br>Lanes<br>n | Flare<br>Length<br>L' | Entry<br>Radius<br>R | Entry<br>Angle<br>? |
|-----|---------------------|------------------------------|--------------------------|-----------------|------------------------|---------------------|---------------------|-----------------------|----------------------|---------------------|
| 1   | Founders<br>Parkway | 10                           | 0                        | 24.00           | 2                      | 28.00               | 2                   | 150.00                | 75.00                | 20.00               |
| 2   | SH 86               | 100                          | 0                        | 24.00           | 2                      | 28.00               | 2                   | 150.00                | 75.00                | 20.00               |
| 3   | Ridge Road          | 170                          | 0                        | 24.00           | 2                      | 28.00               | 2                   | 150.00                | 75.00                | 20.00               |
| 4   | Fifth Street        | 280                          | 0                        | 24.00           | 2                      | 28.00               | 2                   | 150.00                | 75.00                | 20.00               |

## **Circulating and Exit Geometry**

| Leg | Leg Names           | Inscribed<br>Diameter<br>D | Circulating<br>Width<br>C | Circulating<br>Lanes<br>nc | Exit<br>Width<br>Ex | Exit<br>Lanes<br>nex | Exit<br>Half Width<br>Vx | Exit Half<br>Width Lanes<br>nvx |
|-----|---------------------|----------------------------|---------------------------|----------------------------|---------------------|----------------------|--------------------------|---------------------------------|
| 1   | Founders<br>Parkway | 193.00                     | 29.00                     | 2                          | 28.00               | 2                    | 24.00                    | 2                               |
| 2   | SH 86               | 193.00                     | 29.00                     | 2                          | 28.00               | 2                    | 24.00                    | 2                               |
| 3   | Ridge Road          | 193.00                     | 29.00                     | 2                          | 28.00               | 2                    | 24.00                    | 2                               |
| 4   | Fifth Street        | 193.00                     | 29.00                     | 2                          | 28.00               | 2                    | 24.00                    | 2                               |

# **Bypass Geometry**

## **Bypass Approach Geometry (ft)**

| Leg | Leg Names    | Bypass<br>Type | Bypass<br>Flows | V  | nv | Vb | nvb | Vt | nvt |
|-----|--------------|----------------|-----------------|----|----|----|-----|----|-----|
| 2   | SH 86        | Free           | 601             | 24 | 2  | 12 | 1   | 24 | 2   |
| 4   | Fifth Street | Merge          | 541             | 24 | 2  | 12 | 1   | 24 | 2   |

## **Bypass Entry and Exit Geometry (ft)**

| Log | Leg Names    |    |     | Entry G | eometry |                | Lag  | Log Names | Exit Lanes       |     |     |
|-----|--------------|----|-----|---------|---------|----------------|------|-----------|------------------|-----|-----|
| Leg | Leg Names    | Eb | neb | Lb      | Lt      | Rb             | Phib | Leg       | Leg Names        | nex | Nmx |
| 2   | SH 86        | 13 | 1   | 0       | 130     | 75.0000<br>864 | 30   | 3         | Ridge Road       | 2   | 2   |
| 4   | Fifth Street | 13 | 1   | 0       | 130     | 75.0000<br>864 | 30   | 1         | Founders Parkway | 2   | 2   |

# **Operational Results**

## 2040 PM Peak - 60 minutes

## **Flows and Capacity**

|     |                  |                |              | Flo    | ows (veh/     | hr)    | Capacity (veh/hr) |          |        |             |        |
|-----|------------------|----------------|--------------|--------|---------------|--------|-------------------|----------|--------|-------------|--------|
| Leg | Leg Names        | Bypass<br>Type | Arrival Flow |        | Opposing Flow |        | Exit              | Capacity |        | Average VCR |        |
|     |                  | .,,,,,         | Entry        | Bypass | Entry         | Bypass | Flow              | Entry    | Bypass | Entry       | Bypass |
| 1   | Founders Parkway | None           | 1569         |        | 1268          |        | 1163              | 1564     |        | 1.1967      |        |
| 2   | SH 86            | Free           | 523          | 601    | 1673          | 0      | 1114              | 1276     | 1325   | 0.4166      | 0.4540 |
| 3   | Ridge Road       | None           | 834          |        | 1309          |        | 1488              | 1534     |        | 0.5531      |        |
| 4   | Fifth Street     | Merge          | 987          | 541    | 903           | 622    | 1240              | 1823     | 1134   | 0.5501      | 0.4839 |

#### **Delays, Queues and Level of Service**

| Lon | Log Nomes        | Bypass | Average Delay (sec) |        |       | 95% Qu | eue (veh) | Level of Service |        |     |  |
|-----|------------------|--------|---------------------|--------|-------|--------|-----------|------------------|--------|-----|--|
| Leg | Leg Names        | Type   | Entry               | Bypass | Leg   | Entry  | Bypass    | Entry            | Bypass | Leg |  |
| 1   | Founders Parkway | None   | 92.96               |        | 92.96 | 117.27 |           | F                |        | F   |  |
| 2   | SH 86            | Free   | 7.03                | 0.00   | 3.27  | 2.90   | 0.00      | Α                | Α      | Α   |  |
| 3   | Ridge Road       | None   | 7.45                |        | 7.45  | 4.95   |           | Α                |        | Α   |  |
| 4   | Fifth Street     | Merge  | 6.52                | 6.00   | 6.34  | 5.18   | 2.60      | Α                | Α      | Α   |  |

## **Global Results**

#### **Performance and Accidents**

#### 2040 PM Peak Global Performance

| Parameter       | Units   | Entries | Bypasses | Total |
|-----------------|---------|---------|----------|-------|
| Arrive Flows    | veh/hr  | 3913    | 1142     | 5055  |
| Capacity        | veh/hr  | 6198    | 2459     | 8657  |
| Average Delay   | sec/veh | 41.45   | 2.84     | 32.73 |
| L.O.S. (Signal) | A – F   | D       | Α        | С     |
| L.O.S. (Unsig)  | A – F   | Е       | Α        | D     |
| Total Delay     | veh.hrs | 45.05   | 0.90     | 45.95 |

|                                                                                                                  |          |        |                          |             | JNDABC   |                                                                                                                                              |       |      |        |              |        |      |             |          |        |  |
|------------------------------------------------------------------------------------------------------------------|----------|--------|--------------------------|-------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------|-------|------|--------|--------------|--------|------|-------------|----------|--------|--|
| General Information                                                                                              |          |        |                          |             |          | Site In                                                                                                                                      | forma | tior | 7      |              |        |      |             |          |        |  |
| Analyst KMK Agency or Co. LSC Date Performed 12/03/ Time Period PM Pe Peak Hour Factor 0.95 Project Description: |          |        |                          |             |          | Intersection Ridge Road/ E. Enderud Blvd E/W Street Name Enderud Blvd N/S Street Name Ridge Road Analysis Year 2040 Total Project ID #170081 |       |      |        |              |        |      |             |          |        |  |
| Volume Adjustment an                                                                                             | d Sita   | Chara  | otoristic                |             |          |                                                                                                                                              |       |      |        |              |        |      |             |          |        |  |
| Volume Aujustment an                                                                                             | u site   | EE     |                          | ,3          | V        | VB                                                                                                                                           | I     |      | NB     |              |        |      | SB          |          |        |  |
|                                                                                                                  | L        | Т      |                          | UL          | Т        | R                                                                                                                                            | U     | L    | Т      | R            | U      | L    |             | R        | U      |  |
| Number of Lanes (N)                                                                                              | 0        | 0      | 0                        | 0           | 1        | 1                                                                                                                                            |       | 0    | 2      | 0            |        | 0    | 2           | 0        |        |  |
| Lane Assignment                                                                                                  |          |        |                          | 1           | LTR      | R                                                                                                                                            |       |      | Т      | 7            | R      | LT   |             |          | T      |  |
| Right-Turn Bypass                                                                                                |          | None   |                          |             | No       | one                                                                                                                                          |       |      | ١      | None         |        |      | None        | )        |        |  |
| Conflicting Lanes                                                                                                |          | 1      |                          |             |          | 1 1                                                                                                                                          |       |      |        |              | 1      |      |             |          |        |  |
| Volume (V), veh/h                                                                                                |          |        |                          | 0 61        | 0        | 290                                                                                                                                          | 0     |      | 405    | _            | 0      |      | 505         |          | 0      |  |
| Heavy Veh. Adj. (f <sub>HV</sub> ), %                                                                            | 2        | 2      | 2                        | 2 2         | 2        | 2                                                                                                                                            | 2     | 2    | 2      | 2            | 2      | 2    |             | 2        | 2      |  |
| Pedestrians Crossing                                                                                             |          | 0      |                          |             |          | 0                                                                                                                                            |       |      |        | 0            |        |      | 0           |          |        |  |
| Critical and Follow-Up                                                                                           | Heady    | vay Ad |                          | nt          | 1        | \\/\D                                                                                                                                        |       |      |        | ND           |        | 1    |             |          |        |  |
|                                                                                                                  |          | Left   | EB<br>T <sub>Bight</sub> | Bypass      | Left     | WB                                                                                                                                           | Вура  |      | Left   | NB<br>Dight  | Bypass | Left | SB          | _        | Bypass |  |
| Critical Headway (sec)                                                                                           |          | 5.1929 | Right                    | 5.1929      |          | Right 4.2000                                                                                                                                 | +     | _    | 4.2000 | Right 4.2000 | 5.1929 | +    | Right 4.200 | $\dashv$ | 5.1929 |  |
| Follow-Up Headway (sec)                                                                                          |          |        |                          | 3.1858      |          | +                                                                                                                                            | +     |      | 2.8000 | 2.8000       | 3.1858 |      |             | $\dashv$ | 3.1858 |  |
| Flow Computations                                                                                                |          |        | 1                        |             |          |                                                                                                                                              | 1     |      |        |              |        |      |             |          |        |  |
| -                                                                                                                |          |        | EB                       |             |          | WB                                                                                                                                           |       |      |        | NB           |        |      | SB          | ,        |        |  |
|                                                                                                                  |          | Left   | Right                    | Bypass      | Left     | Right                                                                                                                                        | Вура  | ıss  | Left   | Right        | Bypass | Left | Righ        | nt       | Bypass |  |
| Circulating Flow (V <sub>c</sub> ), pc/h                                                                         |          |        | 1148                     | 148 435 541 |          | 541                                                                                                                                          |       |      | 65     |              |        |      |             |          |        |  |
| Exiting Flow (V <sub>ex</sub> ), pc/h                                                                            |          |        | 655                      |             |          | 0                                                                                                                                            |       |      |        | 746          | 1      |      | 608         | 3        |        |  |
| Entry Flow (V <sub>e</sub> ), pc/h                                                                               |          |        | 469                      |             | 177      | 200                                                                                                                                          |       |      | 258    | 291          |        | 509  | 574         | $\dashv$ |        |  |
| Entry Volume veh/h                                                                                               |          |        |                          |             | 174      | 196                                                                                                                                          |       |      | 253    | 285          |        | 499  | 563         | 3        |        |  |
| Capacity and v/c Ration                                                                                          | <u> </u> |        | EB                       |             | <u> </u> | WB                                                                                                                                           |       |      |        | NB           |        | 1    | SB          |          |        |  |
|                                                                                                                  |          | Left   | Right                    | Bypass      | Left     | Right                                                                                                                                        | Вура  |      | Left   | Right        | Bypass | Left | Righ        | _        | Bypass |  |
| Capacity (c <sub>PCE</sub> ), pc/h                                                                               |          | Leit   | 0 Kigiit                 | Бураза      | 917      | 917                                                                                                                                          | Тоура | .00  | 844    | 844          | Бураза | 1222 | 122         | $\dashv$ | Бураза |  |
| Capacity (c), veh/h                                                                                              |          |        | 0                        |             | 899      | 899                                                                                                                                          | 1     |      | 827    | 827          |        | 1198 | 119         | $\dashv$ |        |  |
| v/c Ratio (X)                                                                                                    |          |        | 1                        |             | 0.19     | 0.22                                                                                                                                         |       |      | 0.31   | 0.34         |        | 0.42 | 0.47        | $\dashv$ |        |  |
| Delay and Level of Ser                                                                                           | vice     | ı      |                          | I           |          | 1                                                                                                                                            | 1     |      |        |              | 1      | 1    |             |          |        |  |
| -                                                                                                                |          |        | EB                       |             |          | WB                                                                                                                                           |       |      |        | NB           |        |      | SB          | ,        |        |  |
|                                                                                                                  |          | Left   | Right                    | Bypass      | Left     | Right                                                                                                                                        | Вура  | ISS  | Left   | Right        | Bypass | Left | Righ        | nt       | Bypass |  |
| Lane Control Delay (d), s/ve                                                                                     | eh       |        |                          |             | 5.9      | 6.2                                                                                                                                          |       |      | 7.8    | 8.4          |        | 7.2  | 8.0         |          |        |  |
| Lane LOS                                                                                                         |          |        | F                        |             | Α        | Α                                                                                                                                            |       |      | Α      | Α            |        | Α    | Α           |          |        |  |
| Lane 95% Queue                                                                                                   |          |        |                          |             | 0.7      | 0.8                                                                                                                                          |       |      | 1.3    | 1.5          |        | 2.1  | 2.6         |          |        |  |
| Approach Delay, s/veh                                                                                            |          |        |                          |             |          | 6.08                                                                                                                                         |       |      |        | 8.09         |        |      | 7.62        | 2        |        |  |
| Approach LOS, s/veh                                                                                              |          |        |                          |             |          | Α                                                                                                                                            |       |      |        | Α            |        |      | Α           |          |        |  |
| Intersection Delay, s/veh                                                                                        |          |        |                          |             |          |                                                                                                                                              |       | 7.4  | bí     |              |        |      |             |          |        |  |
| Intersection LOS                                                                                                 |          | 1      |                          |             |          |                                                                                                                                              |       | Α    |        |              |        |      |             |          |        |  |