
TRAFFIC IMPACT REPORT

8902 QUAIL ROAD LONGMONT, COLORADO

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Prepared for:
Vista Residential Partners
25 NW 23rd St. Suite 6 #414
Portland, OR 97210

Prepared by:



1120 Lincoln Street
Denver, CO 80203
Ph: 303-623-6300

Harris Kocher Smith Project No. 230835

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I. INTRODUCTION

A. Project Overview

Vista Residential Partners is proposing to redevelop approximately 17.3 acres of property situated at 8902 Quail Road in Longmont, Colorado. More specifically, the subject property is bound by Quail Rd. on the north, Wildfire Ct. on the east, Clover Basin Dr. on the south, and private residential property adjacent to Airport Rd. on the west. For the purpose of this study, the proposed development will be referred to as the 8902 Quail Road development. Upon build-out, the proposed development will consist of 310 multi-family (low-rise) residential dwelling units and associated amenities.

Vehicular access for the proposed 8902 Quail Road development will be provided via an internal roadway network providing connectivity to the external transportation system at the following locations:

- SW Site Access – The SW Site Access will be constructed as a full movement access intersecting Clover Basin Dr. at the southwest corner of the project site.
- SE Site Access – The SE Site Access will be constructed as a full movement access intersecting Clover Basin Dr. at Larkspur Dr. in order to provide access to the project site and provide connectivity within public Right-Of-Way from Quail Rd. to Clover Basin Dr.

Figure 1 provides a site location map of the proposed project and surrounding transportation system, and Figure 2 graphically illustrates the conceptual site plan and proposed access points for the proposed 8902 Quail Road development.

B. Purpose of Study

The purpose of this study is to evaluate the impact of the vehicular trips projected to be generated by the proposed 8902 Quail Road development on the study area intersections and roadway system. The study includes 2024 (existing), 2027 (year of anticipated project build-out), and 2050 (long-term) analysis horizons.

C. Study Area

The study area encompasses the existing roadway system in the vicinity of the project site. Specifically, the following intersections are included in the study:

- Airport Rd./Quail Rd. (TWSC)
- Airport Rd./Clover Basin Dr. (Signalized)
- Clover Basin Dr./Larkspur Dr. (TWSC)
- Clover Basin Dr./S Fordham St. (TWSC)
- Airport Rd./Pike Rd. (Signalized)
- Clover Basin Dr./SW Site Access (Proposed)

II. EXISTING CONDITIONS

A. Existing Traffic Volumes

Existing traffic volume and speed counts were collected for this study at the following locations on Tuesday March 12, 2024, and Wednesday March 13, 2024:

- Peak Hour Intersection Turning Movement Counts:
 - Airport Rd./Quail Rd.
 - Airport Rd./Clover Basin Dr.
 - Clover Basin Dr./Larkspur Dr.
 - Clover Basin Dr./S Fordham St.
 - Airport Rd./Pike Rd.
- 48-Hour Directional Counts:
 - Clover Basin Dr. west of Larkspur Dr.
 - Clover Basin Dr. west of S Fordham St.
 - Clover Basin Dr. east of S Fordham St.
 - S Fordham St. north of Clover Basin Dr.
 - S Fordham St. south of Clover Basin Dr.
- 48-Hour Speed Counts:
 - Clover Basin Dr. west of Larkspur Dr.

A summary of the 2024 existing traffic volume counts used in this study are graphically illustrated in Figure 3. Detailed traffic volume and speed count data can both be found in Appendix “A”.

B. Existing Roadway System

The existing transportation network in the vicinity of the proposed 8902 Quail Road development is graphically illustrated in Figure 1. The following narrative provides a description of the study area roadways and associated intersections:

Study Area Roadways:

- **Airport Rd.** – Within the study area, Airport Rd. is classified as an Arterial roadway under the jurisdiction of the City of Longmont. The roadway section consists of two travel lanes and a bike lane in each direction with a striped center median. There is curb and gutter and detached sidewalks along both sides of the roadway. The posted speed limit is 45 mph.
- **Quail Rd.** – Within the study area, between Airport Rd. and Boxelder Dr., Quail Rd. is classified as a Local roadway under the jurisdiction of the City of Longmont. West of Boxelder Dr., Quail Rd. is paved and has one travel lane in each direction with curb and gutter and attached sidewalk along both sides of the roadway. There is no posted speed limit, so it is assumed to be 25 mph. East of Boxelder Dr., Quail Rd. is under the jurisdiction of Boulder County. The roadway is paved and has one travel lane in each direction. There is no posted speed limit, so it is assumed to be 25 mph.
- **Clover Basin Dr.** – Within the study area, Clover Basin Dr. is classified as a Minor Arterial roadway under the jurisdiction of the City of Longmont. The roadway section consists of one travel lane in each direction with a striped center median. There is curb

and gutter and detached sidewalk along the south side of the roadway. There is a paved shoulder along the north side of the roadway. The posted speed limit is 35 mph.

- **S Fordham St.** – Within the study area, S Fordham St. is classified as a Collector roadway under the jurisdiction of the City of Longmont. The roadway section consists of one travel lane in each direction with a striped center median. There is curb and gutter and attached sidewalk along both the east and west sides of the roadway. The posted speed limit is 35 mph.

Study Area Intersections:

- **Airport Rd./Quail Rd.** – The Airport Rd./Quail Rd. intersection is a “T” intersection operating under stop sign control on the westbound approach. The east leg of the intersection has one shared left/right turn lane on the westbound approach, and one eastbound departure lane. The north leg of the intersection has one left turn lane with approximately 225 feet of storage and two through lanes on the southbound approach, and two northbound departure lanes. The south leg of the intersection has one through lane and one shared through/right turn lane on the northbound approach, and two southbound departure lanes.
- **Airport Rd./Clover Basin Dr.** – The Airport Rd./Clover Basin Dr. intersection is a four-legged intersection operating under actuated/coordinated signalized control with protected only left turn phasing on all four approaches. The east leg of the intersection has one left turn lane with approximately 150 feet of storage, one through lane, and one right turn lane with approximately 150 feet of storage on the westbound approach, and one eastbound departure lane along with an eastbound bike lane. The west leg of the intersection has one left turn lane with approximately 100 feet of storage, one through lane, one bike lane, and one right turn lane with approximately 200 feet of storage on the eastbound approach, and one westbound departure lane. The north leg of the intersection has one left turn lane with approximately 400 feet of storage, two through lanes, one bike lane, and one right turn lane with approximately 350 feet of storage on the southbound approach, and two northbound departure lanes. The south leg of the intersection has one left turn lane with approximately 335 feet of storage, two through lanes, one bike lane, and one right turn lane with approximately 350 feet of storage on the northbound approach, and two southbound departure lanes.
- **Clover Basin Dr./Larkspur Dr.** – The Clover Basin Dr./Larkspur Dr. intersection is a “T” intersection operating under stop sign control on the northbound approach. The east leg of the intersection has one shared left turn/through lane on the westbound approach, and one eastbound departure lane. The west leg of the intersection has one through lane, one bike lane, and one right turn lane with approximately 225 feet of storage on the eastbound approach, and one westbound departure lane. The south leg of the intersection has one shared left/right turn lane on the northbound approach, and one southbound departure lane. It is anticipated that a north leg will be added to this intersection with the construction of the proposed 8902 Quail Road development.
- **Clover Basin Dr./S Fordham St.** – The Clover Basin Dr./S Fordham St. intersection is a four-legged intersection operating under stop sign control on the northbound and southbound approaches. The east leg of the intersection has one left turn lane with approximately 200 feet of storage and one shared through/right turn lane on the westbound approach, and one eastbound departure lane. The west leg of the intersection has one left turn lane with approximately 100 feet of storage and one shared through/right turn lane on the eastbound approach, and one westbound departure lane.

The north leg of the intersection has one left turn lane with approximately 200 feet of storage and one shared through/right turn lane on the southbound approach, and one northbound departure lane. The south leg of the intersection has one left turn lane with approximately 100 feet of storage and one shared through/right turn lane on the northbound approach, and one southbound departure lane.

- **Airport Rd./Pike Rd.** – The Airport Rd./Pike Rd. intersection is a four-legged intersection operating under actuated/coordinated signalized control with protected plus permitted left turn phasing on all four approaches. The east leg of the intersection has one left turn lane with approximately 250 feet of storage and one shared through/right turn lane on the westbound approach, and one eastbound departure lane. The west leg of the intersection has one left turn lane with approximately 150 feet of storage and one shared through/right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection has one left turn lane with approximately 150 feet of storage, two through lanes, one bike lane, and one right turn lane with approximately 200 feet of storage on the southbound approach, and two northbound departure lanes. The south leg of the intersection has one left turn lane with approximately 300 feet of storage, two through lanes, one bike lane, and one right turn lane with approximately 150 feet of storage on the northbound approach, and two southbound departure lanes.

C. 2024 Existing Conditions Operational Analysis

In order to establish a base condition in which to evaluate and compare the impacts of the traffic generated by the proposed 8902 Quail Road development on the study area intersections, peak hour capacity analyses were performed for the 2024 existing conditions scenario. These analyses utilized the methodologies contained in the *Highway Capacity Manual 7th Edition* (HCM 7) employing *Synchro 12* software and resulted in a qualitative measure of the operational characteristics of the intersection, described by a letter designation ranging from “A” to “F” known as “Level of Service” (LOS). LOS “A” represents free-flow operating conditions, whereas LOS “F” represents excessive congestion and delay. Unsignalized intersection capacity analysis reports a LOS designation for each impeded intersection movement. Signalized intersection capacity analysis reports the overall LOS designation for the intersection as well as for each lane group and approach. LOS “D” is considered the minimum acceptable standard of operation.

The study area intersections included in the 2024 existing conditions analysis are as follows:

- Airport Rd./Quail Rd. (TWSC)
- Airport Rd./Clover Basin Dr. (Signalized)
- Clover Basin Dr./Larkspur Dr. (TWSC)
- Clover Basin Dr./S Fordham St. (TWSC)
- Airport Rd./Pike Rd. (Signalized)

Traffic signal timing plans were obtained from the City of Longmont and utilized in the operational analyses of the signalized intersections.

The results of the 2024 (existing) conditions operational analysis are summarized in Table 1, below. Figure 4 graphically illustrates the results of the existing conditions analysis and detailed *Synchro 12* software intersection capacity analysis reports are provided in Appendix “B”.

As shown in Table 1, all of the existing study area intersections are projected to operate at acceptable levels of service (LOS “D” or better), overall, under existing conditions.

The following intersections are projected to be operating at acceptable levels of service (LOS “D” or better) overall, however, one or more lane groups are shown to be experiencing poor to failing levels of service (LOS “E” or “F”):

- Airport Rd./Clover Basin Dr.
 - The eastbound left turn lane group is projected to have a poor level of service (LOS “E”) during both the a.m. and p.m. peak hours.
 - The westbound left turn lane group is projected to have a poor level of service (LOS “E”) during both the a.m. and p.m. peak hours.
 - The northbound left turn lane group is projected to have a poor level of service (LOS “E”) during both the a.m. and p.m. peak hours.
 - The southbound left turn lane group is projected to have a poor level of service (LOS “E”) during both the a.m. and p.m. peak hours.
- Clover Basin Dr./S Fordham St.
 - The southbound left turn lane group is projected to have a poor level of service (LOS “E”) during the p.m. peak hour.

D. 2024 Existing Conditions Queuing Analysis

Queue lengths and associated storage requirements for through and auxiliary lanes (turn bays) at the existing study area intersections were computed utilizing the *Synchro 12* 95th percentile reported queues. Queue length calculations are based on a 25-foot vehicle length and reported as the total cumulative computed queue length for all traffic lanes in the lane group.

Existing storage capacity for auxiliary lane groups (left turn and right turn lanes) is reported as the cumulative capacity of all lanes in the group or the distance to the next upstream intersection. Table 2 provides a summary of this analysis and comparison to the actual vehicle storage lengths provided for each of the existing study area intersections.

As shown in Table 2, the following queue related issues are being experienced at the existing study area intersections based on the reported queues in the 2024 (existing) conditions analysis scenario:

- Airport Rd./Clover Basin Dr.
 - The eastbound left turn lane queue is shown to exceed its capacity and spill back into the eastbound through lane during the p.m. peak hour.

E. Existing Traffic Roadway Capacity Analysis

General roadway capacities were evaluated for the following roadway segments based on guidance presented in the *Highway Capacity Manual, 6th Edition (HCM 6), Chapter 16, Exhibit 16-16*, and traffic volume and roadway data collected for this study:

- **Clover Basin Dr.** – In the vicinity of the proposed development site, Clover Basin Dr. is a two-lane minor arterial roadway posted at 35 mph. The existing daily two-way traffic volumes for this roadway segment (Clover Basin Dr. west of Larkspur Dr.) are 9,285 vpd.

Based on HCM 6 Exhibit 16-16 ($K = 0.10$, $D = 0.55$) the daily capacity of this roadway segment is 16,200 vpd. Therefore, Clover Basin Dr. in the vicinity of the proposed 8902 Quail Road development is below its daily traffic volume capacity threshold in the existing scenario.

TABLE 1
2024 EXISTING CONDITIONS
SUMMARY OF OPERATIONAL ANALYSIS

| INTERSECTION | CONTROL | 2024 EXISTING TRAFFIC | | | |
|--|------------------------------|-----------------------|---------------------|-------------------|---------------------|
| | | AM PEAK LOS | AM PEAK DELAY | PM PEAK LOS | PM PEAK DELAY |
| 1. Airport Rd. & Quail Rd. | TWSC | | | | |
| a. WB LR | Stop | C | 16.7 | C | 15.9 |
| b. SB L | | A | 8.0 | A | 9.2 |
| c. INTERSECTION | | A | 0.1 | A | 0.1 |
| 2. Airport Rd. & Clover Basin Dr. | Signal | | | | |
| a. EB L (Prot) | | E | 66.7 | E | 66.8 |
| b. EB T | | D | 50.6 | D | 52.0 |
| c. EB R | | D | 40.1 | D | 38.9 |
| d. WB L (Prot) | | E | 69.2 | E | 69.3 |
| e. WB T | | D | 48.1 | D | 47.6 |
| f. WB R | | D | 42.2 | D | 41.7 |
| g. NB L (Prot) | | E | 68.3 | E | 70.9 |
| h. NB T | | B | 15.8 | C | 20.8 |
| i. NB R | | B | 15.5 | B | 18.7 |
| j. SB L (Prot) | | E | 61.8 | E | 61.1 |
| k. SB T | | B | 15.6 | B | 15.3 |
| l. SB R | | B | 15.0 | B | 14.9 |
| m. INTERSECTION | | C | 33.2 | D | 36.5 |
| 3. Clover Basin Dr. & Larkspur Dr. | TWSC | | | | |
| a. WB LT | Stop | A | 8.4 | A | 8.8 |
| b. NB LR | | B | 14.6 | C | 16.8 |
| c. INTERSECTION | | A | 1.7 | A | 1.6 |
| 4. Clover Basin Dr. & S Fordham St. | TWSC | | | | |
| a. EB L | Stop Stop Stop Stop | A | 7.9 | A | 8.6 |
| b. WB L | | A | 8.6 | A | 8.6 |
| c. NB L | | D | 27.8 | D | 31.4 |
| d. NB TR | | B | 14.9 | C | 23.6 |
| e. SB L | | D | 26.8 | E | 49.0 |
| f. SB TR | | C | 20.1 | C | 16.6 |
| g. INTERSECTION | | A | 3.7 | A | 4.3 |
| 5. Airport Rd. & Pike Rd. | Signal | | | | |
| a. EB L (Prot+Perm) | | D | 42.8 | C | 30.7 |
| b. EB TR | | D | 54.6 | C | 31.9 |
| c. WB L (Prot+Perm) | | D | 43.2 | C | 30.9 |
| d. WB TR | | D | 47.5 | D | 39.4 |
| e. NB L (Prot+Perm) | | A | 6.9 | A | 8.1 |
| f. NB T | | A | 8.1 | B | 10.2 |
| g. NB R | | A | 7.6 | A | 8.4 |
| h. SB L (Prot+Perm) | | A | 6.5 | A | 8.8 |
| i. SB T | | A | 9.6 | B | 10.6 |
| j. SB R | | A | 8.0 | B | 10.1 |
| k. INTERSECTION | | B | 16.4 | B | 14.2 |

TABLE 2
2024 EXISTING CONDITIONS
SUMMARY OF QUEUING ANALYSIS

| INTERSECTION (# OF LANES IN LANE GROUP) | EXISTING STORAGE (FT) | 2024 EXISTING TRAFFIC | |
|---|--------------------------|-----------------------------|------------|
| | | QUEUE LENGTH (FT) 95TH% | |
| | | AM PEAK | PM PEAK |
| 1. Airport Rd. & Quail Rd. | | | |
| a. WB LR (1) | 200 | 3 | 0 |
| b. SB L (1) | 225 | 0 | 0 |
| 2. Airport Rd. & Clover Basin Dr. | | | |
| a. EB L (1) | 100 | 94 | 102 |
| b. EB T (1) | 625 | 284 | 285 |
| c. EB R (1) | 200 | 5 | 35 |
| d. WB L (1) | 150 | 57 | 116 |
| e. WB T (1) | 1300 | 217 | 271 |
| f. WB R (1) | 150 | 80 | 24 |
| g. NB L (1) | 335 | 89 | 79 |
| h. NB T (2) | 1260 | 186 | 464 |
| i. NB R (1) | 350 | 42 | 72 |
| j. SB L (1) | 400 | 144 | 160 |
| k. SB T (2) | 1250 | 481 | 243 |
| l. SB R (1) | 350 | 52 | 20 |
| 3. Clover Basin Dr. & Larkspur Dr. | | | |
| a. WB LT (1) | 225 | 3 | 8 |
| b. NB LR (1) | 100 | 18 | 18 |
| 4. Clover Basin Dr. & S Fordham St. | | | |
| a. EB L (1) | 100 | 3 | 3 |
| b. WB L (1) | 200 | 5 | 3 |
| c. NB L (1) | 100 | 3 | 0 |
| d. NB TR (1) | 250 | 10 | 50 |
| e. SB L (1) | 200 | 13 | 15 |
| f. SB TR (1) | 200 | 25 | 15 |
| 5. Airport Rd. & Pike Rd. | | | |
| a. EB L (1) | 150 | 46 | 43 |
| b. EB TR (1) | 350 | 61 | 45 |
| c. WB L (1) | 250 | 42 | 19 |
| d. WB TR (1) | 250 | 44 | 53 |
| e. NB L (1) | 300 | 23 | 36 |
| f. NB T (2) | 1300 | 116 | 268 |
| g. NB R (1) | 150 | 5 | 10 |
| h. SB L (1) | 150 | 26 | 14 |
| i. SB T (2) | 1800 | 120 | 141 |
| j. SB R (1) | 200 | 22 | 25 |

III. BACKGROUND TRAFFIC

A. Background Traffic Volumes

For the purposes of this study, background traffic volumes were developed incorporating the following methodology. The overall background traffic volumes used in this study are the result of combining two distinct components, “regional” and “local” traffic volumes. The “regional” background traffic volume component accounts for the larger scale traffic growth along the major roadways within the study area. The “regional” background traffic component utilizes regional travel planning models and documents in order to establish an average annual traffic volume growth rate on these roadways. The “local” background traffic volume component accounts for the influence of anticipated future development on properties within in the immediate study area that may not otherwise be captured by the “regional” component.

The development of the background traffic models for the 2027 (build-out) and 2050 (long-term) analysis horizons were developed for this study employing the following strategy:

- 2027 (build-out) background traffic volumes - The 2027 (build-out) background traffic volumes were developed employing a two-step process. The first step of the process was to apply a “regional” background traffic growth factor to the 2024 (existing) traffic volumes to forecast the 2027 (build-out) “regional” background traffic volume component. The second step was to develop a “local” background traffic volume model component. This component took into account surrounding developments within the study area that haven’t been fully built out yet but are anticipated to be in place by the 2027 (build-out) analysis horizon. The only other known development within the study area expected to be in place by the 2027 (build-out) analysis horizon is the Kanemoto Estates mixed-use development. The projected site generated traffic volumes from the Kanemoto Estates mixed-use development were taken directly from *Figure 7a – Assignment of Primary Site-Generated Traffic – No Cross Access to North* in the study entitled, *Kanemoto Estates, Traffic Impact Analysis Update, Longmont, CO, LSC #220131 (May 4, 2023)*, by LSC Transportation Consultants (LSC Study), and then assigned to the study area intersections within the local background traffic model. Combining the “regional” and “local” background traffic volume components results in the 2027 (build-out) total background traffic volume forecast for this study.
- 2050 (long-term) background traffic volumes – The 2050 (long-term) background traffic volumes were developed employing the same two-step process as the 2027 (build-out) background traffic volumes. However, the “local” background traffic volume model component for the 2050 (long-term) analysis horizon also assumes that the 7.5-acre property west of the 8902 Quail Road development will be redeveloped by the 2050 (long-term) analysis horizon. No development is currently planned for this property, but per city direction it was assumed that this property would eventually be redeveloped with a similar land use to the proposed 8902 Quail Road development. In order to be consistent with the land use intensities and density within the 8902 Quail Road development, it was assumed that the 7.5-acre property would consist of 135 multifamily (low-rise) residential dwelling units. The vehicular traffic volumes projected to be generated by this redevelopment were assigned to the study area roadways and intersections utilizing the same overall trip distribution used within this study, but with a north access point connecting to Quail Rd. forming a “T” intersection with Boxelder Drive. Combining the “regional” and “local” background traffic volume components results in the 2050 (long-term) total background traffic volume forecast for this study.

The following describes the methodology utilized in developing the 2027 (build-out) and 2050 (long-term) analysis horizons background traffic models.

- “Regional” Background Traffic Volumes:
 - Based on the current DRCOG 2020 and 2050 travel models for the roadways within the study area, Airport Rd. is forecasting an average annual traffic volume growth rate (AGR) of approximately 0.67%, respectively. Clover Basin Dr. is forecasting an average annual traffic volume growth rate (AGR) of approximately 0.81%, respectively. Based on this data an AGR of 0.67% was employed for through moving traffic volumes on Airport Rd. and an AGR of 0.81% was employed for through moving volumes on Clover Basin Dr. An AGR of 0.67% results in a 3-year (2024 to 2027) growth factor of 1.0202 and a 26-year (2024 to 2050) growth factor of 1.189. An AGR of 0.81% results in a 3-year (2024 to 2027) growth factor of 1.024 and a 26-year (2024 to 2050) growth factor of 1.233.
 - The appropriate AGR factors were applied to the 2024 (existing) traffic volumes in order to develop the forecast 2027 (build-out) and 2050 (long-term) “regional” background traffic volumes. Due to the local background component of this study accounting for future development within the study area and surrounding neighborhoods being fully built out, no growth rate was applied to traffic volumes on Quail Rd., Larkspur Dr., S Fordham St., or Pike Rd. Traffic volume growth on these roadways is captured in the local background traffic component.
 - For the purposes of this study, it was assumed that the distribution of the regional intersection approach traffic (left turn, through, right turn) will remain static through the 2050 (long-term) analysis horizon.
 - Figure 5 graphically illustrates the forecast 2027 (build-out) analysis horizon “regional” background traffic volumes on the study area roadways and intersections.
 - Figure 6 graphically illustrates the forecast 2050 (long-term) analysis horizon “regional” background traffic volumes on the study area roadways and intersections.
- “Local” Background Traffic Volumes:
 - In order to account for the influence of the development of the properties in the immediate area of the study area roadways and intersections a “local” background traffic volume component was developed. A “local” background traffic component was developed for the 2027 (build-out) and 2050 (long-term) analysis horizon background traffic models based on the properties that are assumed to be developed prior to each analysis horizon.
 - For the purposes of this study, two such developments were identified that will have a significant influence on the study area roadways and intersections. They include the Kanemoto Estates mixed-use development, and the eventual redevelopment of the 7.5-acre property west of the 8902 Quail Road development.
 - The forecast site traffic generated from these developments was assigned to the study area roadways and intersections utilizing the *LSC Study* and the methodology described above.
 - Figures 7 and 8 graphically illustrate the forecast 2027 (build-out) and 2050 (long-term) analysis horizon “local” background traffic volumes on the study area roadways and intersections, respectively.

- 2027 (Build-Out) Total Background Traffic Volumes:
 - The 2027 (build-out) total background traffic volumes for this study are the sum of the 2027 (build-out) “regional” background traffic volumes plus the 2027 (build-out) “local” background traffic volumes. Figure 9 graphically illustrates the 2027 (build-out) total background traffic volumes on the study area roadways and intersections.
- 2050 (Long-Term) Total Background Traffic Volumes
 - The 2050 (long-term) total background traffic volumes for this study are the sum of the 2050 (long-term) “regional” background traffic volumes plus the 2050 (long-term) “local” background traffic volumes. Figure 10 graphically illustrates the 2050 (long-term) total background traffic volumes on the study area roadways and intersections.

B. Background Traffic Operational Analysis

The following study area intersections were analyzed for the 2027 (build-out) and 2050 (long-term) analysis horizon total background traffic scenarios in order to provide a basis for comparison of their operational characteristics with and without the proposed 8902 Quail Road development site traffic:

- Airport Rd./Quail Rd. (TWSC)
- Airport Rd./Clover Basin Dr. (Signalized)
- Clover Basin Dr./Larkspur Dr. (TWSC)
- Clover Basin Dr./S Fordham St. (TWSC)
- Airport Rd./Pike Rd. (Signalized)

Per city direction, the Clover Basin Dr./S Fordham St. intersection was also analyzed under all-way stop control (AWSC) in order to provide an alternative analysis and comparison of operational characteristics. A 1-lane roundabout was also included as another alternative for comparative analysis.

The results of the background traffic operational analyses are summarized graphically for the 2027 (build-out) and 2050 (long-term) background traffic analysis horizons in Figures 11 and 12, respectively. A summary of the results of the intersection capacity analyses is provided in Table 3 and detailed *Synchro* 12 software intersection capacity analysis reports in Appendix “B”.

As shown in Table 3, all the existing study area intersections are projected to operate at acceptable levels of service (LOS “D” or better) overall, during the 2027 (build-out) and 2050 (long term) analysis horizon background traffic scenarios with the exception of the following:

- Clover Basin Dr./S Fordham St. (AWSC) – Operating with all-way stop control, the intersection, overall, is projected to experience a failing level of service (LOS “F”) during the p.m. peak hour by the 2027 (build-out) analysis horizon. By the 2050 (long-term) analysis, the intersection, overall, is projected to experience a failing level of service (LOS “F”) during both the a.m. and p.m. peak hours.

The following intersections have at least one lane group that is projected to experience a poor to falling level of service (LOS “E” or “F”) in the 2027 (build-out) or 2050 (long-term) analysis horizon background traffic scenario that wasn’t already present under existing conditions:

- Clover Basin Dr./S Fordham St. (TWSC)

- By the 2027 (build-out) analysis horizon the northbound left turn lane and southbound left turn lane are projected to have a poor or failing level of service (LOS “E” or worse) during the p.m. peak hour.
- By the 2050 (long-term) analysis horizon the northbound shared through/right turn lane is projected to have a poor level of service (LOS “E”) during the p.m. peak hour. The northbound left turn lane and southbound left turn lane are projected to have a poor or failing level of service (LOS “E” or worse) during the a.m. peak hour as well.
- Clover Basin Dr./S Fordham St. (AWSC)
 - By the 2027 (build-out) analysis horizon the eastbound shared through/right turn lane is projected to have a poor or failing level of service (LOS “E” or worse) during both the a.m. and p.m. peak hours. The westbound shared through/right turn lane is projected to have a failing level of service (LOS “F”) during the p.m. peak hour.
 - By the 2050 (long-term) analysis horizon the eastbound shared through/right turn lane is projected to have a failing level of service (LOS “F”) during both the a.m. and p.m. peak hours.

C. Background Traffic Queuing Analysis

Queue lengths and associated storage requirements for through and auxiliary lanes (turn bays) at the study area intersections were computed utilizing the *Synchro 12* 95th percentile reported queues for the 2027 (build-out) and 2050 (long-term) analysis horizons background traffic scenarios. Queue length calculations are based on a 25-foot vehicle length and reported as the total cumulative computed queue length for all traffic lanes in the lane group. Table 4 provides a summary of this analysis and comparison to the existing/proposed vehicle storage lengths provided for each of the study area intersections.

As shown in Table 4, the following queue related issues are projected to be experienced at the study area intersections based on the reported queues in the 2027 (build-out) and 2050 (long-term) analysis horizon background traffic analysis scenarios that weren’t already present under existing conditions:

- Airport Rd. & Clover Basin Dr.
 - The eastbound left turn queue is projected to exceed its capacity during both the a.m. and p.m. peak hour by the 2050 (long-term) analysis horizon background traffic scenario. Modifying the existing raised median and lengthening the turn bay by 25 feet would mitigate this queuing issue.
 - The westbound left turn queue is projected to exceed its capacity during the p.m. peak hour by the 2027 (build-out) analysis horizon background traffic scenario. Lengthening the turn bay by 100 feet would mitigate this queuing issue.
- Clover Basin Dr./S Fordham St. (AWSC)
 - The eastbound shared through/right turn lane queue is projected to exceed its capacity during the p.m. peak hour by the 2027 (build-out) analysis horizon background traffic scenario, and during both the a.m. and p.m. peak hour by the 2050 (long-term) analysis horizon. Implementing all-way stop control would cause this queuing issue on the eastbound approach. Leaving the intersection under two-way stop control or modifying the intersection to be a 1-lane roundabout is not

projected to cause any queuing issues through the 2050 (long-term) analysis horizon background traffic scenario.

D. Background Traffic Roadway Capacity Analysis

General roadway capacities were evaluated for the following roadway segments based on guidance presented in the *Highway Capacity Manual, 6th Edition (HCM 6), Chapter 16, Exhibit 16-16*, and traffic volume and roadway data collected for this study:

- Clover Basin Dr.** – In the vicinity of the proposed development site, Clover Basin Dr. is a two-lane minor arterial roadway posted at 35 mph. The forecast 2027 (buildout) and 2050 (long-range) analysis horizons daily two-way background traffic volumes for this roadway segment (Clover Basin Dr. west of Larkspur Dr.) are 10,500 vpd and 12,650 vpd, respectively. Based on HCM 6 Exhibit 16-16 ($K = 0.10$, $D = 0.55$) the daily capacity of this roadway segment is 16,200 vpd. Therefore, Clover Basin Dr. in the vicinity of the proposed 8902 Quail Road development is projected to be below its daily traffic volume capacity threshold through the 2050 (long-range) analysis horizon background traffic scenarios.

TABLE 3
2027 (BUILD-OUT) & 2050 (LONG-TERM) BACKGROUND TRAFFIC
SUMMARY OF OPERATIONAL ANALYSIS

| INTERSECTION | CONTROL | 2027 BACKGROUND TRAFFIC | | | | 2050 BACKGROUND TRAFFIC | | | |
|---|---------------|-------------------------|---------------------|-------------------|---------------------|-------------------------|---------------------|-------------------|---------------------|
| | | AM PEAK LOS | AM PEAK DELAY | PM PEAK LOS | PM PEAK DELAY | AM PEAK LOS | AM PEAK DELAY | PM PEAK LOS | PM PEAK DELAY |
| 1. Airport Rd. & Quail Rd. | TWSC | | | | | | | | |
| a. WB LR | Stop | C | 17.8 | C | 16.8 | C | 15.9 | C | 15.0 |
| b. SB L | | A | 8.1 | A | 9.4 | A | 8.3 | A | 9.9 |
| c. INTERSECTION | | A | 0.1 | A | 0.1 | A | 0.1 | A | 0.1 |
| 2. Airport Rd. & Clover Basin Dr. | Signal | | | | | | | | |
| a. EB L (Prot) | | E | 66.5 | E | 66.4 | E | 64.7 | E | 64.8 |
| b. EB T | | D | 50.4 | D | 52.3 | D | 50.9 | D | 52.9 |
| c. EB R | | D | 39.7 | D | 38.5 | D | 36.5 | D | 35.0 |
| d. WB L (Prot) | | E | 68.1 | E | 74.6 | E | 66.1 | E | 78.2 |
| e. WB T | | D | 44.9 | D | 41.5 | D | 42.9 | D | 40.1 |
| f. WB R | | D | 40.0 | D | 37.4 | D | 36.8 | D | 44.2 |
| g. NB L (Prot) | | E | 67.9 | E | 70.5 | E | 65.6 | E | 67.4 |
| h. NB T | | B | 17.6 | C | 24.7 | C | 21.9 | C | 32.0 |
| i. NB R | | B | 17.9 | C | 22.8 | C | 22.4 | C | 29.0 |
| j. SB L (Prot) | | E | 62.2 | E | 61.9 | E | 67.2 | E | 66.8 |
| k. SB T | | B | 17.4 | B | 18.4 | C | 22.3 | C | 23.0 |
| l. SB R | | B | 16.7 | B | 17.7 | C | 21.4 | C | 22.0 |
| m. INTERSECTION | | C | 33.3 | D | 37.6 | D | 35.9 | D | 40.8 |
| 3. Clover Basin Dr. & Larkspur Dr. | TWSC | | | | | | | | |
| a. WB LT | Stop | A | 8.6 | A | 9.0 | A | 9.1 | A | 9.5 |
| b. NB LR | | C | 16.1 | C | 18.9 | C | 20.0 | D | 25.4 |
| c. INTERSECTION | | A | 1.7 | A | 1.6 | A | 1.7 | A | 1.6 |

TABLE 3 (CONTINUED)
2027 (BUILD-OUT) & 2050 (LONG-TERM) BACKGROUND TRAFFIC
SUMMARY OF OPERATIONAL ANALYSIS

| INTERSECTION | CONTROL | 2027 BACKGROUND TRAFFIC | | | | 2050 BACKGROUND TRAFFIC | | | |
|--|--|-------------------------|---------------------|-------------------|---------------------|-------------------------|---------------------|-------------------|---------------------|
| | | AM PEAK LOS | AM PEAK DELAY | PM PEAK LOS | PM PEAK DELAY | AM PEAK LOS | AM PEAK DELAY | PM PEAK LOS | PM PEAK DELAY |
| 4. Clover Basin Dr. & S Fordham St. | TWSC | | | | | | | | |
| a. EB L | Stop Stop Stop Stop | A | 8.0 | A | 8.8 | A | 8.2 | A | 9.2 |
| b. WB L | | A | 8.8 | A | 8.8 | A | 9.3 | A | 9.2 |
| c. NB L | | D | 33.2 | E | 38.4 | F | 51.2 | F | 70.8 |
| d. NB TR | | C | 16.2 | D | 28.6 | C | 19.7 | E | 47.2 |
| e. SB L | | D | 31.8 | F | 67.7 | E | 47.1 | F | 155.1 |
| f. SB TR | | C | 23.0 | C | 18.7 | D | 31.3 | C | 23.7 |
| g. INTERSECTION | | A | 3.8 | A | 4.8 | A | 4.3 | A | 7.3 |
| 4.A. Clover Basin Dr. & S Fordham St. | AWSC | | | | | | | | |
| a. EB L | Stop Stop Stop Stop Stop Stop Stop Stop | A | 9.1 | A | 10.0 | A | 9.4 | B | 10.4 |
| b. EB TR | | E | 35.6 | F | 72.9 | F | 93.2 | F | 156.8 |
| c. WB L | | A | 9.7 | A | 10.0 | A | 10.0 | B | 10.3 |
| d. WB TR | | C | 15.5 | F | 72.0 | C | 20.0 | F | 149.6 |
| e. NB L | | B | 10.7 | B | 11.5 | B | 11.3 | B | 12.4 |
| f. NB TR | | B | 10.3 | B | 13.7 | B | 11.0 | B | 14.5 |
| g. SB L | | B | 10.9 | B | 12.2 | B | 11.5 | B | 12.9 |
| h. SB TR | | B | 11.0 | B | 12.0 | B | 11.7 | B | 13.0 |
| i. INTERSECTION | | C | 24.2 | F | 61.0 | F | 55.7 | F | 128.7 |
| 4.B. Clover Basin Dr. & S Fordham St. | Roundabout | | | | | | | | |
| a. EB LTR | Yield Yield Yield Yield | A | 8.7 | A | 8.0 | B | 11.0 | A | 9.8 |
| b. WB LTR | | A | 5.6 | A | 8.2 | A | 6.2 | B | 10.2 |
| c. NB LTR | | A | 5.8 | A | 7.5 | A | 6.8 | A | 9.0 |
| d. SB LTR | | A | 5.2 | A | 6.2 | A | 5.6 | A | 7.4 |
| e. INTERSECTION | | A | 7.1 | A | 7.9 | A | 8.8 | A | 9.7 |
| 5. Airport Rd. & Pike Rd. | Signal | | | | | | | | |
| a. EB L (Prot+Perm) | | D | 41.7 | C | 30.5 | D | 40.6 | C | 30.1 |
| b. EB TR | | D | 54.4 | D | 35.2 | D | 53.9 | C | 34.5 |
| c. WB L (Prot+Perm) | | D | 42.4 | C | 30.0 | D | 41.5 | C | 29.6 |
| d. WB TR | | D | 46.0 | D | 38.9 | D | 45.0 | D | 38.7 |
| e. NB L (Prot+Perm) | | A | 7.5 | A | 8.3 | A | 8.3 | A | 8.8 |
| f. NB T | | A | 8.8 | B | 10.7 | A | 9.5 | B | 11.7 |
| g. NB R | | A | 8.3 | A | 8.7 | A | 8.9 | A | 9.1 |
| h. SB L (Prot+Perm) | | A | 7.0 | A | 9.0 | A | 7.5 | A | 9.5 |
| i. SB T | | B | 10.5 | B | 11.2 | B | 11.7 | B | 11.8 |
| j. SB R | | A | 8.5 | B | 10.3 | A | 9.1 | B | 10.7 |
| k. INTERSECTION | | B | 16.4 | B | 14.6 | B | 17.1 | B | 15.2 |

TABLE 4
2027 (BUILD-OUT) & 2050 (LONG-TERM) BACKGROUND TRAFFIC
SUMMARY OF QUEUING ANALYSIS

| INTERSECTION (# OF LANES IN LANE GROUP) | EXISTING STORAGE (FT) | 2027 BACKGROUND TRAFFIC | | 2050 BACKGROUND TRAFFIC | |
|---|--------------------------|-------------------------------|------------|-------------------------------|------------|
| | | QUEUE LENGTH (FT) 95TH% | | QUEUE LENGTH (FT) 95TH% | |
| | | AM PEAK | PM PEAK | AM PEAK | PM PEAK |
| 1. Airport Rd. & Quail Rd. | | | | | |
| a. WB LR (1) | 200 | 3 | 0 | 3 | 0 |
| b. SB L (1) | 225 | 0 | 0 | 0 | 0 |
| 2. Airport Rd. & Clover Basin Dr. | | | | | |
| a. EB L (1) | 100 | 96 | 102 | 107 | 114 |
| b. EB T (1) | 625 | 290 | 291 | 334 | 341 |
| c. EB R (1) | 200 | 5 | 35 | 14 | 40 |
| d. WB L (1) | 150 | 90 | 205 | 101 | 238 |
| e. WB T (1) | 1300 | 213 | 275 | 252 | 323 |
| f. WB R (1) | 150 | 80 | 26 | 85 | 39 |
| g. NB L (1) | 335 | 89 | 80 | 104 | 96 |
| h. NB T (2) | 1260 | 224 | 523 | 270 | 722 |
| i. NB R (1) | 350 | 80 | 75 | 85 | 78 |
| j. SB L (1) | 400 | 147 | 163 | 174 | 197 |
| k. SB T (2) | 1250 | 528 | 289 | 743 | 338 |
| l. SB R (1) | 350 | 56 | 23 | 77 | 38 |
| 3. Clover Basin Dr. & Larkspur Dr. | | | | | |
| a. WB LT (1) | 225 | 3 | 8 | 3 | 8 |
| b. NB LR (1) | 100 | 20 | 20 | 28 | 28 |
| 4. Clover Basin Dr. & S Fordham St. (TWSC) | | | | | |
| a. EB L (1) | 100 | 3 | 3 | 3 | 3 |
| b. WB L (1) | 200 | 5 | 3 | 5 | 3 |
| c. NB L (1) | 100 | 3 | 0 | 5 | 15 |
| d. NB TR (1) | 250 | 13 | 63 | 15 | 95 |
| e. SB L (1) | 200 | 15 | 23 | 23 | 40 |
| f. SB TR (1) | 200 | 30 | 20 | 43 | 30 |

| INTERSECTION (# OF LANES IN LANE GROUP) | EXISTING STORAGE (FT) | 2027 BACKGROUND TRAFFIC | | 2050 BACKGROUND TRAFFIC | |
|--|--------------------------|-------------------------------|------------|-------------------------------|------------|
| | | QUEUE LENGTH (FT) 95TH% | | QUEUE LENGTH (FT) 95TH% | |
| | | AM PEAK | PM PEAK | AM PEAK | PM PEAK |
| 4.A. Clover Basin Dr. & S Fordham St. (AWSC) | | | | | |
| a. EB L (1) | 100 | 5 | 5 | 5 | 5 |
| b. EB TR (1) | 400 | 263 | 405 | 530 | 688 |
| c. WB L (1) | 200 | 8 | 3 | 8 | 5 |
| d. WB TR (1) | 1500 | 85 | 403 | 125 | 663 |
| e. NB L (1) | 100 | 0 | 0 | 0 | 3 |
| f. NB TR (1) | 250 | 8 | 30 | 8 | 30 |
| g. SB L (1) | 200 | 5 | 3 | 5 | 3 |
| h. SB TR (1) | 200 | 15 | 13 | 15 | 15 |
| 4.B. Clover Basin Dr. & S Fordham St. (Roundabout) | | | | | |
| a. EB LTR (1) | - | 75 | 75 | 125 | 100 |
| b. WB LTR (1) | - | 25 | 75 | 50 | 100 |
| c. NB LTR (1) | - | 0 | 25 | 0 | 25 |
| d. SB LTR (1) | - | 0 | 0 | 0 | 25 |
| 5. Airport Rd. & Pike Rd. | | | | | |
| a. EB L (1) | 150 | 46 | 43 | 50 | 48 |
| b. EB TR (1) | 350 | 62 | 46 | 64 | 47 |
| c. WB L (1) | 250 | 59 | 47 | 64 | 49 |
| d. WB TR (1) | 250 | 44 | 53 | 45 | 55 |
| e. NB L (1) | 300 | 26 | 37 | 26 | 37 |
| f. NB T (2) | 1300 | 162 | 310 | 184 | 367 |
| g. NB R (1) | 150 | 25 | 20 | 10 | 25 |
| h. SB L (1) | 150 | 27 | 14 | 27 | 14 |
| i. SB T (2) | 1800 | 355 | 186 | 428 | 213 |
| j. SB R (1) | 200 | 22 | 25 | 25 | 25 |

IV. PROJECT DEVELOPMENT

A. Trip Generation

The trip generation projections for the proposed 8902 Quail Road development were forecast using the publication *Trip Generation, 11th Edition*, by the Institute of Transportation Engineers (ITE). Estimates of total daily traffic volumes and a.m. and p.m. peak hour traffic volumes were calculated. Trip generation reductions as a result of internal trip capture, transportation demand management or transit use were not considered.

For the purposes of this study, it was assumed that the subject property will be fully developed by 2027 and consist of a residential complex containing 310 multi-family (low-rise) residential dwelling units and associated amenities. Based on these parameters, at buildout, the proposed 8902 Quail Road development is projected to generate 2,062 daily vehicle trips of which 119 are projected to be generated during the a.m. peak hour and 154 are projected to be generated during the p.m. peak hour. A summary of the trip generation projections is provided in Table 5.

TABLE 5
8902 QUAIL ROAD TRIP GENERATION SUMMARY

| Land Use | Intensity | | ITE Code | Daily (vpd) | AM Peak Hour (vph) | | | | | PM Peak Hour (vph) | | | | |
|--|-----------|----|----------|-------------|--------------------|------|-------|----|-----|--------------------|------|-------|----|-----|
| | | | | | Total | % In | % Out | In | Out | Total | % In | % Out | In | Out |
| Multi-family Housing (Low-Rise) (1-3 floors) | 310 | DU | 220 | 2062 | 119 | 24% | 76% | 29 | 90 | 154 | 63% | 37% | 97 | 57 |
| Total | | | | 2,062 | 119 | | | 29 | 90 | 154 | | | 97 | 57 |

B. Trip Distribution

The distribution of the projected vehicle trips generated by the proposed 8902 Quail Road development was established based on the current and projected future traffic patterns on the surrounding transportation system, efficiency of access to the principal transportation corridors serving the area, and potential trip origins/destinations for the proposed land use. Figure 13 graphically illustrates the projected site generated trip distribution patterns for the proposed 8902 Quail Road development.

C. Trip Assignment

The vehicular traffic volumes projected to be generated by the proposed 8902 Quail Road development, shown in Table 5, were assigned to the study area roadways and intersections utilizing the trip distribution methodology described above. Figure 14 graphically illustrate the site generated trip assignment for the proposed 8902 Quail Road development.

V. TOTAL TRAFFIC

Total traffic forecasts for the 2027 (build-out) and 2050 (long-term) analysis horizons were computed by combining the associated 2027 (build-out) and 2050 (long-term) background traffic volumes with the projected site generated traffic volumes. Figures 15 & 16 graphically illustrate the total traffic projections for the study area intersections for the 2027 (build-out) and 2050 (long-term) analysis horizons, respectively.

VI. PROJECT ANALYSIS

A. Operational Analysis

In order to evaluate the impact of the proposed 8902 Quail Road development on the study area roadway system, peak hour intersection capacity analyses for the total traffic conditions were performed for the 2027 (build-out) and 2050 (long-term) analysis horizon total traffic scenarios at each of the study area intersections listed below.

- Airport Rd./Quail Rd. (TWSC)
- Airport Rd./Clover Basin Dr. (Signalized)
- Clover Basin Dr./Larkspur Dr./SE Site Access (TWSC)
- Clover Basin Dr./S Fordham St. (TWSC)
- Airport Rd./Pike Rd. (Signalized)
- Quail Rd./N 89th St./NE Site Access (Proposed)
- Quail Rd./NW Site Access (Proposed)
- Clover Basin Dr./SW Site Access (Proposed)

The results of the total traffic operational analyses are summarized in Table 6, below. Figures 17 and 18 graphically illustrate the 2027 (build-out) and 2050 (long-term) analysis horizon total traffic scenarios operational analyses, respectively. Detailed *Synchro 12* software intersection capacity analysis reports are provided in Appendix “B”.

A comparative analysis of the 2027 (build-out) and 2050 (long-term) analysis horizons background and total traffic operational analyses was performed to evaluate the level of impact, as measured by level of service, the proposed 8902 Quail Road development will have on the study area intersections. Based on the comparative analysis none of the study area intersections are projected to deteriorate from an overall acceptable level of service (LOS “D” or better) to a poor or failing level of service (LOS “E” or “F”) with the addition of the traffic projected to be generated by the proposed 8902 Quail Road development project. In addition, no individual lane groups at any of the study area intersections are projected to deteriorate from an overall acceptable level of service (LOS “D” or better) to a poor or failing level of service (LOS “E” or “F”) with the addition of the traffic projected to be generated by the proposed 8902 Quail Road development project, with the exception of the following:

- Clover Basin Dr. & S Fordham St. (TWSC) – Based on the addition of the traffic generated by the proposed 8902 Quail Road development to the background traffic forecasts it is projected that the level of service of the northbound left turn movement and southbound left turn movement will deteriorate from LOS “D” to “E” during the a.m. peak hour by the 2027 (build-out) analysis horizon. It is also projected that the level of service of the southbound shared through/right turn movement will deteriorate from LOS “D” to “E” during the a.m. peak hour by the 2050 (long-term) analysis horizon.

Table 7 provides a comparative summary of the 2027 (build-out) and 2050 (long-term) analysis horizons background and total traffic operational analyses.

TABLE 6
2027 (BUILD-OUT) & 2050 (LONG-TERM) TOTAL TRAFFIC
SUMMARY OF OPERATIONAL ANALYSIS

| INTERSECTION | CONTROL | 2027 TOTAL TRAFFIC | | | | 2050 TOTAL TRAFFIC | | | |
|--|--|--------------------|---------------------|-------------------|---------------------|--------------------|---------------------|-------------------|---------------------|
| | | AM PEAK LOS | AM PEAK DELAY | PM PEAK LOS | PM PEAK DELAY | AM PEAK LOS | AM PEAK DELAY | PM PEAK LOS | PM PEAK DELAY |
| 1. Airport Rd. & Quail Rd. | TWSC | | | | | | | | |
| a. WB LR | Stop | C | 18.0 | C | 16.9 | C | 16.1 | C | 15.2 |
| b. SB L | | A | 8.1 | A | 9.4 | A | 8.3 | A | 10.0 |
| c. INTERSECTION | | A | 0.1 | A | 0.0 | A | 0.1 | A | 0.1 |
| 2. Airport Rd. & Clover Basin Dr. | Signal | | | | | | | | |
| a. EB L (Prot) | | E | 66.5 | E | 66.4 | E | 64.7 | E | 64.8 |
| b. EB T | | D | 50.2 | D | 52.9 | D | 51.0 | D | 53.4 |
| c. EB R | | D | 39.5 | D | 37.7 | D | 36.3 | D | 34.2 |
| d. WB L (Prot) | | E | 66.3 | E | 75.9 | E | 64.9 | E | 79.6 |
| e. WB T | | D | 44.3 | D | 40.5 | D | 42.8 | D | 39.0 |
| f. WB R | | D | 39.4 | D | 36.4 | D | 36.2 | C | 33.1 |
| g. NB L (Prot) | | E | 67.9 | E | 70.5 | E | 65.6 | E | 67.4 |
| h. NB T | | B | 18.3 | C | 26.3 | C | 22.7 | C | 34.2 |
| i. NB R | | B | 18.7 | C | 24.5 | C | 23.3 | C | 31.2 |
| j. SB L (Prot) | | E | 62.9 | E | 63.6 | E | 67.7 | E | 68.5 |
| k. SB T | | B | 18.0 | B | 19.2 | C | 23.1 | C | 24.0 |
| l. SB R | | B | 17.3 | B | 18.5 | C | 22.1 | C | 23.0 |
| m. INTERSECTION | | C | 33.9 | D | 38.6 | D | 36.5 | D | 41.9 |
| 3. Clover Basin Dr. & Larkspur Dr./SE Site Access | TWSC | | | | | | | | |
| a. EB L | Stop Stop | A | 8.0 | A | 8.8 | A | 8.2 | A | 9.3 |
| b. WB L | | A | 8.7 | A | 9.1 | A | 9.2 | A | 9.6 |
| c. NB LTR | | C | 18.7 | C | 23.2 | C | 24.6 | D | 34.2 |
| d. SB LTR | | C | 23.5 | E | 42.6 | D | 33.0 | F | 72.6 |
| e. INTERSECTION | | A | 2.7 | A | 2.5 | A | 3.1 | A | 3.1 |
| 3.A. Clover Basin Dr. & Larkspur Dr./SE Site Access | Roundabout | | | | | | | | |
| a. EB LTR | Yield Yield Yield Yield | A | 7.5 | A | 8.7 | A | 9.3 | B | 10.7 |
| b. WB LTR | | A | 5.4 | A | 8.7 | A | 5.9 | B | 10.8 |
| c. NB LTR | | A | 6.4 | A | 6.1 | A | 7.4 | A | 7.0 |
| d. SB LTR | | A | 4.5 | A | 5.8 | A | 4.9 | A | 6.8 |
| e. INTERSECTION | | A | 6.6 | A | 8.5 | A | 7.8 | B | 10.6 |
| 4. Clover Basin Dr. & S Fordham St. | TWSC | | | | | | | | |
| a. EB L | Stop Stop Stop Stop Stop Stop | A | 8.1 | A | 9.0 | A | 8.3 | A | 9.4 |
| b. WB L | | A | 9.0 | A | 8.9 | A | 9.5 | A | 9.3 |
| c. NB L | | E | 40.9 | F | 52.4 | F | 67.8 | F | 119.4 |
| d. NB TR | | C | 17.5 | D | 33.6 | C | 21.6 | F | 59.4 |
| e. SB L | | E | 37.5 | F | 88.7 | F | 57.3 | F | 232.5 |
| f. SB TR | | D | 25.9 | C | 20.1 | E | 36.6 | D | 26.3 |
| g. INTERSECTION | | A | 4.2 | A | 5.8 | A | 5.1 | A | 9.9 |
| 4.A. Clover Basin Dr. & S Fordham St. | AWSC | | | | | | | | |
| a. EB L | Stop Stop Stop Stop Stop Stop Stop Stop Stop Stop | A | 9.4 | B | 10.4 | A | 9.6 | B | 10.8 |
| b. EB TR | | F | 51.5 | F | 95.9 | F | 124.9 | F | 191.6 |
| c. WB L | | A | 9.9 | B | 10.2 | B | 10.1 | B | 10.5 |
| d. WB TR | | C | 16.9 | F | 102.7 | C | 22.2 | F | 193.3 |
| e. NB L | | B | 11.0 | B | 12.1 | B | 11.6 | B | 13.0 |
| f. NB TR | | B | 10.6 | B | 14.1 | B | 11.2 | B | 15.0 |
| g. SB L | | B | 11.2 | B | 12.5 | B | 11.7 | B | 13.2 |
| h. SB TR | | B | 11.4 | B | 12.7 | B | 12.0 | B | 13.8 |
| i. INTERSECTION | | D | 32.7 | F | 82.0 | F | 72.9 | F | 159.3 |
| 4.B. Clover Basin Dr. & S Fordham St. | Roundabout | | | | | | | | |
| a. EB LTR | Yield Yield Yield Yield | A | 9.7 | A | 8.5 | B | 12.5 | B | 10.5 |
| b. WB LTR | | A | 5.8 | A | 9.1 | A | 6.5 | B | 11.5 |
| c. NB LTR | | A | 6.3 | A | 8.0 | A | 7.3 | A | 9.7 |
| d. SB LTR | | A | 5.3 | A | 6.8 | A | 5.8 | A | 8.3 |
| e. INTERSECTION | | A | 7.9 | A | 8.6 | A | 9.8 | B | 10.7 |

TABLE 6 (CONTINUED)
2027 (BUILD-OUT) & 2050 (LONG-TERM) TOTAL TRAFFIC
SUMMARY OF OPERATIONAL ANALYSIS

| INTERSECTION | CONTROL | 2027 TOTAL TRAFFIC | | | | 2050 TOTAL TRAFFIC | | | |
|---|---------------|--------------------|---------------------|-------------------|---------------------|--------------------|---------------------|-------------------|---------------------|
| | | AM PEAK LOS | AM PEAK DELAY | PM PEAK LOS | PM PEAK DELAY | AM PEAK LOS | AM PEAK DELAY | PM PEAK LOS | PM PEAK DELAY |
| 5. Airport Rd. & Pike Rd. | Signal | | | | | | | | |
| a. EB L (Prot+Perm) | | D | 41.7 | C | 30.5 | D | 40.6 | C | 30.1 |
| b. EB TR | | D | 54.4 | D | 35.2 | D | 53.9 | C | 34.5 |
| c. WB L (Prot+Perm) | | D | 42.4 | C | 30.0 | D | 41.5 | C | 29.6 |
| d. WB TR | | D | 46.0 | D | 38.9 | D | 45.0 | D | 38.7 |
| e. NB L (Prot+Perm) | | A | 7.5 | A | 8.3 | A | 8.4 | A | 8.8 |
| f. NB T | | A | 8.8 | B | 10.7 | A | 9.6 | B | 11.7 |
| g. NB R | | A | 8.3 | A | 8.7 | A | 8.9 | A | 9.1 |
| h. SB L (Prot+Perm) | | A | 7.0 | A | 9.0 | A | 7.5 | A | 9.5 |
| i. SB T | | B | 10.5 | B | 11.2 | B | 11.7 | B | 11.9 |
| j. SB R | | A | 8.5 | B | 10.3 | A | 9.1 | B | 10.7 |
| k. INTERSECTION | | B | 16.4 | B | 14.6 | B | 17.1 | B | 15.2 |
| 6. Clover Basin Dr. & SW Site Access | TWSC | | | | | | | | |
| a. EB L | | A | 8.1 | A | 8.9 | A | 8.3 | A | 9.4 |
| b. SB LR | Stop | C | 15.7 | C | 20.9 | C | 23.1 | D | 34.2 |
| c. INTERSECTION | | A | 0.9 | A | 0.7 | A | 1.9 | A | 1.5 |

TABLE 7
BACKGROUND & TOTAL TRAFFIC
OPERATIONAL ANALYSIS COMPARISON

| INTERSECTION | CONTROL | 2027 (BUILD-OUT) | | | | 2050 (LONG-TERM) | | | |
|--|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | | BACKGROUND | | TOTAL | | BACKGROUND | | TOTAL | |
| | | AM PEAK LOS | PM PEAK LOS | AM PEAK LOS | PM PEAK LOS | AM PEAK LOS | PM PEAK LOS | AM PEAK LOS | PM PEAK LOS |
| 1. Airport Rd. & Quail Rd. | TWSC | | | | | | | | |
| a. WB LR | Stop | C | C | C | C | C | C | C | C |
| b. SB L | | A | A | A | A | A | A | A | A |
| c. INTERSECTION | | A | A | A | A | A | A | A | A |
| 2. Airport Rd. & Clover Basin Dr. | Signal | | | | | | | | |
| a. EB L (Prot) | | E | E | E | E | E | E | E | E |
| b. EB T | | D | D | D | D | D | D | D | D |
| c. EB R | | D | D | D | D | D | D | D | D |
| d. WB L (Prot) | | E | E | E | E | E | E | E | E |
| e. WB T | | D | D | D | D | D | D | D | D |
| f. WB R | | D | D | D | D | D | D | D | C |
| g. NB L (Prot) | | E | E | E | E | E | E | E | E |
| h. NB T | | B | C | B | C | C | C | C | C |
| i. NB R | | B | C | B | C | C | C | C | C |
| j. SB L (Prot) | | E | E | E | E | E | E | E | E |
| k. SB T | | B | B | B | B | C | C | C | C |
| l. SB R | | B | B | B | B | C | C | C | C |
| m. INTERSECTION | | C | D | C | D | D | D | D | D |

TABLE 7 (CONTINUED)
BACKGROUND & TOTAL TRAFFIC
OPERATIONAL ANALYSIS COMPARISON

| INTERSECTION | CONTROL | 2027 (BUILD-OUT) | | | | 2050 (LONG-TERM) | | | |
|--|--|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | | BACKGROUND | | TOTAL | | BACKGROUND | | TOTAL | |
| | | AM PEAK LOS | PM PEAK LOS | AM PEAK LOS | PM PEAK LOS | AM PEAK LOS | PM PEAK LOS | AM PEAK LOS | PM PEAK LOS |
| 3. Clover Basin Dr. & Larkspur Dr./SE Site Access | TWSC | | | | | | | | |
| a. EB L | Stop Stop Stop | - | - | A | A | - | - | A | A |
| b. WB LT | | A | A | - | - | A | A | - | - |
| c. WB L | | - | - | A | A | - | - | A | A |
| d. NB LR | | C | C | - | - | C | D | - | - |
| e. NB LTR | | - | - | C | C | - | - | C | D |
| f. SB LTR | | - | - | C | E | - | - | D | F |
| g. INTERSECTION | | A | A | A | A | A | A | A | A |
| 3.A. Clover Basin Dr. & Larkspur Dr./SE Site Access | Roundabout | | | | | | | | |
| a. EB LTR | Yield | - | - | A | A | - | - | A | B |
| b. WB LTR | Yield | - | - | A | A | - | - | A | B |
| c. NB LTR | Yield | - | - | A | A | - | - | A | A |
| d. SB LTR | Yield | - | - | A | A | - | - | A | A |
| e. INTERSECTION | | - | - | A | A | - | - | A | B |
| 4. Clover Basin Dr. & S Fordham St. | TWSC | | | | | | | | |
| a. EB L | Stop Stop Stop Stop | A | A | A | A | A | A | A | A |
| b. WB L | | A | A | A | A | A | A | A | A |
| c. NB L | | D | E | E | F | F | F | F | F |
| d. NB TR | | C | D | C | D | C | E | C | F |
| e. SB L | | D | F | E | F | E | F | F | F |
| f. SB TR | | C | C | D | C | D | C | E | D |
| g. INTERSECTION | | A | A | A | A | A | A | A | A |
| 4.A. Clover Basin Dr. & S Fordham St. | AWSC | | | | | | | | |
| a. EB L | Stop Stop Stop Stop Stop Stop Stop Stop | A | A | A | B | A | B | A | B |
| b. EB TR | | E | F | F | F | F | F | F | F |
| c. WB L | | A | A | A | B | A | B | B | B |
| d. WB TR | | C | F | C | F | C | F | C | F |
| e. NB L | | B | B | B | B | B | B | B | B |
| f. NB TR | | B | B | B | B | B | B | B | B |
| g. SB L | | B | B | B | B | B | B | B | B |
| h. SB TR | | B | B | B | B | B | B | B | B |
| i. INTERSECTION | | C | F | D | F | F | F | F | F |
| 4.B. Clover Basin Dr. & S Fordham St. | Roundabout | | | | | | | | |
| a. EB LTR | Yield | A | A | A | A | B | A | B | B |
| b. WB LTR | Yield | A | A | A | A | A | B | A | B |
| c. NB LTR | Yield | A | A | A | A | A | A | A | A |
| d. SB LTR | Yield | A | A | A | A | A | A | A | A |
| e. INTERSECTION | | A | A | A | A | A | A | A | B |
| 5. Airport Rd. & Pike Rd. | Signal | | | | | | | | |
| a. EB L (Prot+Perm) | | D | C | D | C | D | C | D | C |
| b. EB TR | | D | D | D | D | D | C | D | C |
| c. WB L (Prot+Perm) | | D | C | D | C | D | C | D | C |
| d. WB TR | | D | D | D | D | D | D | D | D |
| e. NB L (Prot+Perm) | | A | A | A | A | A | A | A | A |
| f. NB T | | A | B | A | B | A | B | A | B |
| g. NB R | | A | A | A | A | A | A | A | A |
| h. SB L (Prot+Perm) | | A | A | A | A | A | A | A | A |
| i. SB T | | B | B | B | B | B | B | B | B |
| j. SB R | | A | B | A | B | A | B | A | B |
| k. INTERSECTION | | B | B | B | B | B | B | B | B |
| 6. Clover Basin Dr. & SW Site Access | TWSC | | | | | | | | |
| a. EB L | Stop | - | - | A | A | - | - | A | A |
| b. SB LR | | - | - | C | C | - | - | C | D |
| c. INTERSECTION | | - | - | A | A | - | - | A | A |

B. Queuing Analysis

Queue lengths and associated storage requirements for through and auxiliary lanes (turn bays) at the study area intersections were computed utilizing the *Synchro 12* 95th percentile reported queues for the 2027 (build-out) and 2050 (long-term) analysis horizons total traffic scenarios. Queue length calculations are based on a 25-foot vehicle length and reported as the total cumulative computed queue length for all traffic lanes in the lane group. Table 8 provides a summary of this analysis and comparison to the existing/proposed vehicle storage lengths provided for each of the study area intersections.

As shown in Table 8, the addition of the projected site generated vehicle trips from the proposed 8902 Quail Road development does not create any additional queuing issues beyond those identified in the background traffic analysis scenarios, described above.

TABLE 8
2027 (BUILD-OUT) & 2050 (LONG-TERM) TOTAL TRAFFIC
SUMMARY OF QUEUING ANALYSIS

| INTERSECTION (# OF LANES IN LANE GROUP) | EXISTING STORAGE (FT) | 2027 TOTAL TRAFFIC | | 2050 TOTAL TRAFFIC | |
|--|--------------------------|----------------------------|------------|----------------------------|------------|
| | | QUEUE LENGTH (FT) 95TH% | | QUEUE LENGTH (FT) 95TH% | |
| | | AM PEAK | PM PEAK | AM PEAK | PM PEAK |
| 1. Airport Rd. & Quail Rd. | | | | | |
| a. WB LR (1) | 200 | 3 | 0 | 3 | 0 |
| b. SB L (1) | 225 | 0 | 0 | 0 | 0 |
| 2. Airport Rd. & Clover Basin Dr. | | | | | |
| a. EB L (1) | 100 | 96 | 100 | 107 | 114 |
| b. EB T (1) | 625 | 292 | 303 | 337 | 358 |
| c. EB R (1) | 200 | 5 | 0 | 14 | 0 |
| d. WB L (1) | 150 | 101 | 216 | 113 | 250 |
| e. WB T (1) | 1300 | 226 | 281 | 265 | 331 |
| f. WB R (1) | 150 | 0 | 30 | 0 | 44 |
| g. NB L (1) | 335 | 89 | 81 | 104 | 96 |
| h. NB T (2) | 1260 | 228 | 530 | 270 | 722 |
| i. NB R (1) | 350 | 17 | 44 | 30 | 60 |
| j. SB L (1) | 400 | 150 | 174 | 177 | 211 |
| k. SB T (2) | 1250 | 532 | 289 | 751 | 338 |
| l. SB R (1) | 350 | 56 | 23 | 77 | 38 |
| 3. Clover Basin Dr. & Larkspur Dr./SE Site Access | | | | | |
| a. EB L (1) | 100 | 0 | 0 | 0 | 0 |
| b. WB L (1) | 100 | 3 | 8 | 3 | 8 |
| c. NB LTR (1) | 100 | 25 | 25 | 35 | 38 |
| d. SB LTR (1) | - | 18 | 20 | 25 | 35 |
| 3.A. Clover Basin Dr. & Larkspur Dr./SE Site Access (Roundabout) | | | | | |
| a. EB LTR (1) | - | 50 | 75 | 100 | 125 |
| b. WB LTR (1) | - | 25 | 75 | 50 | 125 |
| c. NB LTR (1) | - | 0 | 0 | 25 | 0 |
| d. SB LTR (1) | - | 0 | 0 | 0 | 0 |
| 4. Clover Basin Dr. & S Fordham St. (TWSC) | | | | | |
| a. EB L (1) | 100 | 3 | 3 | 3 | 5 |
| b. WB L (1) | 200 | 5 | 3 | 5 | 3 |
| c. NB L (1) | 100 | 5 | 13 | 10 | 40 |
| d. NB TR (1) | 250 | 13 | 73 | 18 | 113 |
| e. SB L (1) | 200 | 18 | 28 | 25 | 50 |
| f. SB TR (1) | 200 | 35 | 25 | 53 | 40 |

| INTERSECTION (# OF LANES IN LANE GROUP) | EXISTING STORAGE (FT) | 2027 TOTAL TRAFFIC | | 2050 TOTAL TRAFFIC | |
|--|--------------------------|----------------------------|------------|----------------------------|------------|
| | | QUEUE LENGTH (FT) 95TH% | | QUEUE LENGTH (FT) 95TH% | |
| | | AM PEAK | PM PEAK | AM PEAK | PM PEAK |
| 4.A. Clover Basin Dr. & S Fordham St. (AWSC) | | | | | |
| a. EB L (1) | 100 | 5 | 5 | 8 | 8 |
| b. EB TR (1) | 400 | 350 | 480 | 653 | 785 |
| c. WB L (1) | 200 | 8 | 5 | 8 | 5 |
| d. WB TR (1) | 1500 | 95 | 505 | 140 | 790 |
| e. NB L (1) | 100 | 0 | 3 | 3 | 5 |
| f. NB TR (1) | 250 | 8 | 30 | 8 | 30 |
| g. SB L (1) | 200 | 5 | 3 | 5 | 3 |
| h. SB TR (1) | 200 | 15 | 15 | 15 | 18 |
| 4.B. Clover Basin Dr. & S Fordham St. (Roundabout) | | | | | |
| a. EB LTR (1) | - | 100 | 75 | 150 | 125 |
| b. WB LTR (1) | - | 25 | 75 | 50 | 125 |
| c. NB LTR (1) | - | 0 | 25 | 0 | 25 |
| d. SB LTR (1) | - | 0 | 25 | 0 | 25 |
| 5. Airport Rd. & Pike Rd. | | | | | |
| a. EB L (1) | 150 | 46 | 43 | 50 | 48 |
| b. EB TR (1) | 350 | 62 | 46 | 64 | 47 |
| c. WB L (1) | 250 | 59 | 47 | 64 | 49 |
| d. WB TR (1) | 250 | 44 | 53 | 45 | 55 |
| e. NB L (1) | 300 | 26 | 37 | 26 | 37 |
| f. NB T (2) | 1300 | 163 | 314 | 184 | 372 |
| g. NB R (1) | 150 | 0 | 0 | 0 | 0 |
| h. SB L (1) | 150 | 27 | 14 | 27 | 14 |
| i. SB T (2) | 1800 | 363 | 190 | 433 | 217 |
| j. SB R (1) | 200 | 0 | 0 | 0 | 0 |
| 6. Clover Basin Dr. & SW Site Access | | | | | |
| a. EB L (1) | - | 0 | 3 | 0 | 3 |
| b. SB LR (1) | - | 13 | 10 | 35 | 33 |

C. Total Traffic Roadway Capacity Analysis

General roadway capacities were evaluated for the following roadway segments based on guidance presented in the *Highway Capacity Manual, 6th Edition (HCM 6), Chapter 16, Exhibit 16-16*, and traffic volume and roadway data collected for this study:

- **Clover Basin Dr.** – In the vicinity of the proposed development site, Clover Basin Dr. is a two-lane minor arterial roadway posted at 35 mph. The forecast 2027 (buildout) and 2050 (long-range) analysis horizons daily two-way total traffic volumes for this roadway segment (Clover Basin Dr. west of Larkspur Dr.) are 11,225 vpd and 13,375 vpd, respectively. Based on HCM 6 Exhibit 16-16 ($K = 0.10$, $D = 0.55$) the daily capacity of this roadway segment is 16,200 vpd. Therefore, Clover Basin Dr. in the vicinity of the proposed 8902 Quail Road development is projected to be below its daily traffic volume capacity threshold through the 2050 (long-range) analysis horizon total traffic scenarios.

D. Traffic Signal & All-Way Stop Control Warrant Analysis

Existing and forecast traffic volumes were evaluated for satisfying the criteria for the installation of a traffic signal and All-Way Stop Control based on the methodology presented in the *Manual on Uniform Traffic Control Devices for Streets and Highways, 11th Edition, 2023* at the following intersection:

- Clover Basin Dr. & S Fordham St.

Warrant 1 – Eight Hour Vehicular Volume, Warrant 2 – Four Hour Vehicular Volume, and Warrant 3 – Peak Hour were evaluated based on existing and projected background and total traffic volumes for the installation of a traffic signal. This intersection was also analyzed to determine if the All-Way Stop Control Warrant D: 8-Hour Volume Warrant would be satisfied based on the criteria set forth in the MUTCD for All-Way Stop Control.

The forecast hourly background traffic volumes for the 2027 (build-out) and 2050 (long-term) analysis horizons were forecast using the methodology described in Section III of this study. The distribution of the intersection approach movement (left turn, right turn) volumes were based on the turn movement distribution (left turn, right turn) of the peak hour volumes that were collected for this study. Hourly approach volumes were derived assuming the same hourly distribution of the approach volumes on Clover Basin Dr. from the 48-hour directional counts collected on Tuesday March 12, 2024, and Wednesday March 13, 2024. In order to develop a 24-hour traffic volume profile for the site generated trips projected, the same hourly distribution was used.

Based on these parameters and the analysis performed herein, it was determined that the Clover Basin Dr./S Fordham St. intersection is not projected to meet Traffic Signal Warrants 1, 2 or 3 by the 2050 (long-term) analysis horizon total traffic scenario.

Based on the parameters described above, and the analysis performed herein, it was determined that the Clover Basin Dr./S Fordham St. intersection is not projected to meet the Warrant D: 8-Hour Volume threshold by the 2050 (long-term) analysis horizon. This is due to the minor street approaches (S Fordham St.) not meeting the minimum volume threshold.

A summary of the results of the traffic signal and all-way stop control warrant analyses is presented in Table 9, below. Detailed traffic signal warrant analysis worksheets and the volume data used for this analysis are provided in Appendix “C”.

**TABLE 9
TRAFFIC SIGNAL & AWSC WARRANT ANALYSIS SUMMARY**

| | Analysis Horizon | Eight Hour - Warrant 1 Met? | Four Hour - Warrant 2 Met? | Peak Hour - Warrant 3 Met? | AWSC - Eight Hour Warrant D Met? |
|-------------------------------------|-------------------------|--------------------------------|-------------------------------|-------------------------------|-------------------------------------|
| Clover Basin Dr. & S Fordham St. | 2024 Existing Traffic | NO | NO | NO | NO |
| | 2027 Background Traffic | NO | NO | NO | NO |
| | 2027 Total Traffic | NO | NO | NO | NO |
| | 2050 Background Traffic | NO | NO | NO | NO |
| | 2050 Total Traffic | NO | NO | NO | NO |

E. Traffic Speed Analysis

48-hour traffic speed data was collected at the following locations on Tuesday March 12, 2024, and Wednesday March 13, 2024:

- Clover Basin Dr. west of Larkspur Dr.

A summary of the results of the speed data collection is presented in Table 10, below. Detailed speed count data can be found in Appendix “A”.

**TABLE 10
OVERALL SPEED DATA SUMMARY**

| Speed Parameter | Cover Basin Dr. west of Larkspur Dr. | |
|-----------------------|--------------------------------------|-----------|
| | Eastbound | Westbound |
| Average Speed | 36 MPH | 36 MPH |
| 15th Percentile Speed | 31 MPH | 30 MPH |
| 50th Percentile Speed | 35 MPH | 34 MPH |
| 85th Percentile Speed | 39 MPH | 39 MPH |
| 95th Percentile Speed | 42 MPH | 43 MPH |

These results show that the average speed on Clover Basin Dr. is only slightly above the posted speed limit. The 85th percentile speed found to be 4 mph over the posted speed limit for the roadway. While this is within the recommended guidance from the *Manual for Uniform Traffic Control Devices, 2009 (MUTCD)* to have a posted speed limit within 5 mph from the 85th percentile speed, it is slightly higher than desired. However, it is not recommended to raise the speed limit in this location due to the roadway context, which features on-street bike lanes and adjacent bus stops. Increasing the density of intersections in this stretch of roadway, as well as utilizing existing empty roadway space for auxiliary turn lanes may also function as a way of slightly reducing travel speeds. Based on the observed speeds as well as the volumes associated with this roadway, other more substantial methods of traffic calming are not recommended.

F. Multimodal Assessment

The proposed 8902 Quail Road development has the potential to incorporate various multimodal and travel demand management (TDM) strategies and amenities that encourage and promote multimodal travel options. Incorporating multimodal and TDM strategies and amenities can help offset the impacts of the traffic generated by the development, as well enhance the overall safety, mobility, and environment of the surrounding transportation system. Some of the options may include:

- **Enhanced Wayfinding** – Enhanced route/guide signing to existing/proposed pedestrian, bicycle, transit, commercial/retail and recreational facilities. The existing RTD stop #25612 at the Clover Basin Dr./Larkspur Dr. intersection will remain active with the completion of this project.
- **Resident Communications System** – On-site resident communication system that provide residents with a conduit to share information on a variety of topics including ridesharing, car sharing, and bike sharing. The format of the system may incorporate on-site kiosks, newsletters, web site, etc.
- **Electric Vehicle Charging Stations** – On-site electric vehicle charging stations.
- **Bicycle Amenities** – On-site bicycle amenities such as long-term storage, bike racks, repair/maintenance shop, and wash areas.
- **Bike/Scooter/Car Share Station(s)** – Bike, scooter, and/or car sharing station(s) adjacent to or near the proposed development to encourage multimodal travel among residents.
- **Improving existing and/or adding ADA compliant sidewalks and accessible routes.**
- **Adding crosswalk markings at strategic locations.**
- **Adding pavement markings and signage for on-street bicycle lanes.**

As the development process moves forward, the development team looks forward to working collaboratively with city staff to develop a plan that provides appropriate and beneficial on-site amenities, as well as off-site enhancements to encourage and promote multimodal options in the travel decisions made by the residents of the proposed 8902 Quail Road development. A figure depicting the preliminary multimodal plan for the site can be found in Appendix “D”.

G. Summary of Operational Analysis & Recommended Improvements

The following is a summary of analysis and improvement recommendations to the existing and proposed study area intersections and roadways based on the proposed 8902 Quail Road development:

Study Area Roadways:

- **Airport Rd.** – There are no geometric or operational modifications being recommended for Airport Rd. within the study area as a result of the proposed 8902 Quail Rd. development. No other defined modifications are known, and it is anticipated that the roadway section will remain unchanged through the 2050 (long-term) analysis horizon.
- **Quail Rd.** – There are no geometric or operational modifications being recommended for Airport Rd. within the study area as a result of the proposed 8902 Quail Rd. development. No other defined modifications are known, and it is anticipated that the roadway section will remain unchanged through the 2050 (long-term) analysis horizon.
- **Clover Basin Dr.** – The northern half of Clover Basin Dr. adjacent to the project site will be modified concurrently with construction of the 8902 Quail Road development to include curb and gutter, and a detached sidewalk. The proposed final cross-section will include one travel lane in each direction, one bicycle lane in each direction, and a two-way center left turn lane.
- **S. Fordham St.** – There are no geometric or operational modifications being recommended for S. Fordham St. within the study area as a result of the proposed 8902 Quail Rd. development. No other modifications are known, and it is anticipated that the roadway section will remain unchanged through the 2050 (long-term) analysis horizon.

Study Area Intersections:

- **Airport Rd./Quail Rd.** – The Airport Rd./Quail Rd. intersection is not anticipated to undergo any significant geometric or operational modifications through the 2050 (long-term) analysis horizon. It is anticipated that the intersection will remain a “T” intersection operating under stop sign control on the westbound approach. The east leg of the intersection has one shared left/right turn lane on the westbound approach, and one eastbound departure lane. The north leg of the intersection has one left turn lane with approximately 225 feet of storage and two through lanes on the southbound approach, and two northbound departure lanes. The south leg of the intersection has one through lane and one shared through/right turn lane on the northbound approach, and two southbound departure lanes.

Based on these parameters and the forecast total traffic volumes, it is projected that the intersection, overall, as well as all lane groups will not experience a decline from an acceptable level of service (LOS “D” or better) to a poor or failing level of service (LOS “E” or “F”) with the addition of the site generated traffic by the 2027 (build-out) analysis horizon total traffic scenario. There are no projected queue related issues associated with the addition of the site generated traffic by the 2027 (build-out) analysis horizon total traffic scenario.

By the 2050 (long-term) analysis horizon it is projected that the intersection, overall, as well as all lane groups will not experience a decline from an acceptable level of service (LOS “D” or better) to a poor or failing level of service (LOS “E” or “F”) with the addition of the site generated traffic. There are no additional projected queue related issues associated with the addition of the site generated traffic by the 2050 (long-term) analysis horizon total traffic scenarios. There are no geometric or operational modifications being recommended for the Airport Rd./Quail Rd. intersection as a result of the proposed 8902 Quail Road development.

- **Airport Rd./Clover Basin Dr.** – The Airport Rd./Clover Basin Dr. intersection is not anticipated to undergo any significant geometric or operational modifications through the 2050 (long-term) analysis horizon. It is anticipated that the intersection will remain a four-legged intersection operating under actuated/coordinated signalized control with protected only left turn phasing on all four approaches. The east leg of the intersection has one left turn lane with approximately 150 feet of storage, one through lane, and one right turn lane with approximately 150 feet of storage on the westbound approach, and one eastbound departure lane along with an eastbound bike lane. The west leg of the intersection has one left turn lane with approximately 100 feet of storage, one through lane, one bike lane, and one right turn lane with approximately 200 feet of storage on the eastbound approach, and one westbound departure lane. The north leg of the intersection has one left turn lane with approximately 400 feet of storage, two through lanes, one bike lane, and one right turn lane with approximately 350 feet of storage on the southbound approach, and two northbound departure lanes. The south leg of the intersection has one left turn lane with approximately 335 feet of storage, two through lanes, one bike lane, and one right turn lane with approximately 350 feet of storage on the northbound approach, and two southbound departure lanes.

Based on these parameters and the forecast total traffic volumes, it is projected that the intersection, overall, as well as all lane groups will not experience a decline from an acceptable level of service (LOS “D” or better) to a poor or failing level of service (LOS “E” or “F”) with the addition of the site generated traffic by the 2027 (build-out) analysis horizon total traffic scenarios. However, it is projected that the left turn lane group on

each approach will continue to experience a poor or failing level of service (LOS “E” or worse) during both the a.m. and p.m. peak hour in both the background and total traffic scenarios. A potential mitigation measure that would fully mitigate these poor movements would be modifying the left turn phasing on each approach to allow protected plus permitted phasing for all left turn lane groups. If this measure is not attainable, optimizing the traffic signal timing for actual traffic conditions will be the most effective means to mitigate these issues. Based on the queuing analysis, there are no projected queue related issues associated with the addition of the site generated traffic by the 2027 (build-out) analysis horizon total traffic scenarios.

By the 2050 (long-term) analysis horizon it is projected that the intersection, overall, as well as all lane groups will not experience a decline from an acceptable level of service (LOS “D” or better) to a poor or failing level of service (LOS “E” or “F”) with the addition of the site generated traffic. However, it is projected that the left turn lane group on each approach will continue to experience a poor or failing level of service (LOS “E” or worse) during both the a.m. and p.m. peak hour in both the background and total traffic scenarios. A potential mitigation measure that would fully mitigate these poor movements would be modifying the left turn phasing on each approach to allow protected plus permitted phasing for all left turn lane groups. If this measure is not attainable, optimizing the traffic signal timing for actual traffic conditions will be the most effective means to mitigate these issues. There are no additional projected queue related issues associated with the addition of the site generated traffic by the 2050 (long-term) analysis horizon total traffic scenarios. There are no geometric or operational modifications being recommended for the Airport Rd./Clover Basin Dr. intersection as a result of the proposed 8902 Quail Road development.

- **Clover Basin Dr./Larkspur Dr./SE Site Access** – The Clover Basin Dr./Larkspur Dr./SE Site Access intersection is anticipated to be modified as follows concurrent with construction of the proposed 8902 Quail Road development. A north leg to the intersection will be constructed to serve as the SE Site Access driveway, providing access within public right-of-way through the project site to connect to Quail Rd. The intersection was first analyzed to operate under stop sign control on the northbound and southbound approaches. Based on this condition, it is projected that the southbound shared left/through/ right turn lane will operate with a poor level of service (LOS “E”) during the p.m. peak hour in the total traffic scenario by the 2027 (build-out) analysis horizon and will operate with a failing level of service (LOS “F”) during the p.m. peak hour by the 2050 (long-term) analysis horizon. This poor to failing level of service for the southbound approach is fairly typical for a stop controlled minor street approach due to the high background traffic through volumes on Clover Basin Dr. causing the delay for vehicles on the minor approach attempting to turn left at the intersection. There are no projected queue related issues associated with the addition of the site generated traffic by the 2050 (long-term) analysis horizon total traffic scenarios.

However, based on these issues with the newly created north leg being stop controlled, the intersection was also analyzed to operate as a roundabout with yield control on all four approaches. Based on these parameters, it is projected that the intersection, overall, as well as all impeded lane groups will operate at acceptable levels of service (LOS “D” or better) through the 2050 (long-term) analysis horizon total traffic scenario. Therefore, it is recommended that the Clover Basin Dr./Larkspur Dr./SE Site Access intersection being updated to operate as a single-lane roundabout along with the proposed 8902 Quail Road development.

- Clover Basin Dr./S Fordham St.** – The Clover Basin Dr./S Fordham St. intersection is not anticipated to undergo any significant geometric or operational modifications through the 2050 (long-term) analysis horizon. It is anticipated that the intersection will remain a four-legged intersection operating under stop sign control on the northbound and southbound approaches. The east leg of the intersection has one left turn lane with approximately 200 feet of storage and one shared through/right turn lane on the westbound approach, and one eastbound departure lane. The west leg of the intersection has one left turn lane with approximately 100 feet of storage and one shared through/right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection has one left turn lane with approximately 200 feet of storage and one shared through/right turn lane on the southbound approach, and one northbound departure lane. The south leg of the intersection has one left turn lane with approximately 100 feet of storage and one shared through/right turn lane on the northbound approach, and one southbound departure lane.

Based on these parameters and the forecast total traffic volumes, it is projected that the intersection, overall, will not experience a decline from an acceptable level of service (LOS “D” or better) to a poor or failing level of service (LOS “E” or “F”) with the addition of the site generated traffic by the 2050 (long-term) analysis horizon total traffic scenarios. However, it is projected that the level of service of the northbound left turn movement and southbound left turn movement will deteriorate from LOS “D” to “E” during the a.m. peak hour by the 2027 (build-out) analysis horizon with the addition of site generated traffic. It is also projected that the level of service of the southbound shared through/right turn movement will deteriorate from LOS “D” to “E” during the a.m. peak hour by the 2050 (long-term) analysis horizon. The northbound shared through/right turn lane group will continue to experience a poor or failing level of service (LOS “E” or worse) during the p.m. peak hour in both the background and total traffic scenarios by the 2050 (long-term) analysis horizon. These poor to failing levels of service for the stop-controlled lane groups are fairly typical for a stop controlled minor street approach due to the high background traffic through volumes on Clover Basin Dr. causing the delay for vehicles on the stop-controlled minor approach attempting to turn or cross at the intersection. There are no projected queue related issues associated with the addition of the site generated traffic by the 2050 (long-term) analysis horizon total traffic scenarios. There are no additional geometric or operational modifications being recommended for the Clover Basin Dr./S Fordham St. intersection as a result of the proposed 8902 Quail Road development.

As described in section VI.C. above, the Clover Basin Dr./S Fordham St. intersection was evaluated for satisfying the criteria for the installation of a traffic signal and All-Way Stop Control based on the methodology presented in the *MUTCD*, and it was found that the intersection is not projected to meet any of the warrants analyzed by the 2050 (long-term) analysis horizon. Signalized control was therefore not analyzed for the Clover Basin Dr./S Fordham St. intersection, but all-way stop control (AWSC) and a single lane roundabout were analyzed to provide potential mitigation measures for the unacceptable operational characteristics at the intersection and to provide an alternative analysis and comparison of operational characteristics.

Under all-way stop control, no geometric modifications would be made to the intersection. Based on these parameters, it is projected that the eastbound shared through/right turn lane, westbound shared through/right turn lane, and the intersection, overall, would operate at poor to failing levels of service (LOS “E” or worse) during both the a.m. and p.m. peak hour in both the background and total traffic scenarios. As a

single lane roundabout, operating under yield control, each leg of the intersection would have one shared left/through/right turn lane on the entering approach, and one departure lane. Based on these parameters, it is projected that the intersection, overall, as well as all lane groups would operate at acceptable levels of service (LOS "D" or better) through the 2050 (long-term) analysis horizon total traffic scenario.

- **Airport Rd./Pike Rd.** – The Airport Rd./Pike Rd. intersection is not anticipated to undergo any significant geometric or operational modifications through the 2050 (long-term) analysis horizon. It is anticipated that the intersection will remain a four-legged intersection operating under actuated/coordinated signalized control with protected plus permitted left turn phasing on all four approaches. The east leg of the intersection has one left turn lane with approximately 250 feet of storage and one shared through/right turn lane on the westbound approach, and one eastbound departure lane. The west leg of the intersection has one left turn lane with approximately 150 feet of storage and one shared through/right turn lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection has one left turn lane with approximately 150 feet of storage, two through lanes, one bike lane, and one right turn lane with approximately 200 feet of storage on the southbound approach, and two northbound departure lanes. The south leg of the intersection has one left turn lane with approximately 300 feet of storage, two through lanes, one bike lane, and one right turn lane with approximately 150 feet of storage on the northbound approach, and two southbound departure lanes.

Based on these parameters, it is projected that the intersection, overall, as well as all lane groups will not experience a decline from an acceptable level of service (LOS "D" or better) to a poor or failing level of service (LOS "E" or "F") with the addition of the site generated traffic by the 2027 (build-out) analysis horizon total traffic scenario. There are no projected queue related issues associated with the addition of the site generated traffic by the 2027 (build-out) analysis horizon total traffic scenario.

By the 2050 (long-term) analysis horizon it is projected that the intersection, overall, as well as all lane groups will not experience a decline from an acceptable level of service (LOS "D" or better) to a poor or failing level of service (LOS "E" or "F") with the addition of the site generated traffic. There are no additional projected queue related issues associated with the addition of the site generated traffic by the 2050 (long-term) analysis horizon total traffic scenarios. There are no geometric or operational modifications being recommended for the Airport Rd./Pike Rd. intersection as a result of the proposed 8902 Quail Road development.

- **Clover Basin Dr./SW Site Access (Proposed)** – The Clover Basin Dr./SW Site Access intersection will be constructed concurrently with the proposed 8902 Quail Road development as a full movement "T" intersection. The intersection will operate under stop sign control on the southbound approach. The east leg of the intersection will have one through lane and one right turn lane with a minimum of 100 feet of storage on the westbound approach, and one eastbound departure lane. The west leg of the intersection will have left turns utilizing a center TWLTL with at least 100 feet of storage and one through lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will be constructed to have one shared left/right turn lane on the southbound approach, and one northbound departure lane. Based on these parameters it is projected that the intersection, overall, as well as all impeded lane groups will operate at acceptable levels of service (LOS "D" or better) through the 2050 (long-term) analysis horizon total traffic scenario.

VII. CONCLUSIONS

Vista Residential Partners is proposing to redevelop approximately 17.3 acres of property situated at 8902 Quail Road in Longmont, Colorado. More specifically, the subject property is bound by Quail Rd. on the north, Wildfire Ct. on the east, Clover Basin Dr. on the south, and private residential property adjacent to Airport Rd. on the west. Upon build-out, the proposed development will consist of 310 multi-family (low-rise) residential dwelling units and associated amenities.

Vehicular access for the proposed 8902 Quail Road development will be provided via an internal roadway network providing connectivity to the external transportation system at the following locations:

- **SW Site Access** – The SW Site Access will be constructed as a full movement access intersecting Clover Basin Dr. at the southwest corner of the project site.
- **SE Site Access** – The SE Site Access will be constructed as a full movement access intersecting Clover Basin Dr. at Larkspur Dr. in order to provide access to the project site and provide connectivity within public Right-Of-Way from Quail Rd. to Clover Basin Dr.

Based on these parameters, at buildout, the proposed 8902 Quail Road development is projected to generate 2,062 daily vehicle trips of which 119 are projected to be generated during the a.m. peak hour and 154 are projected to be generated during the p.m. peak hour.

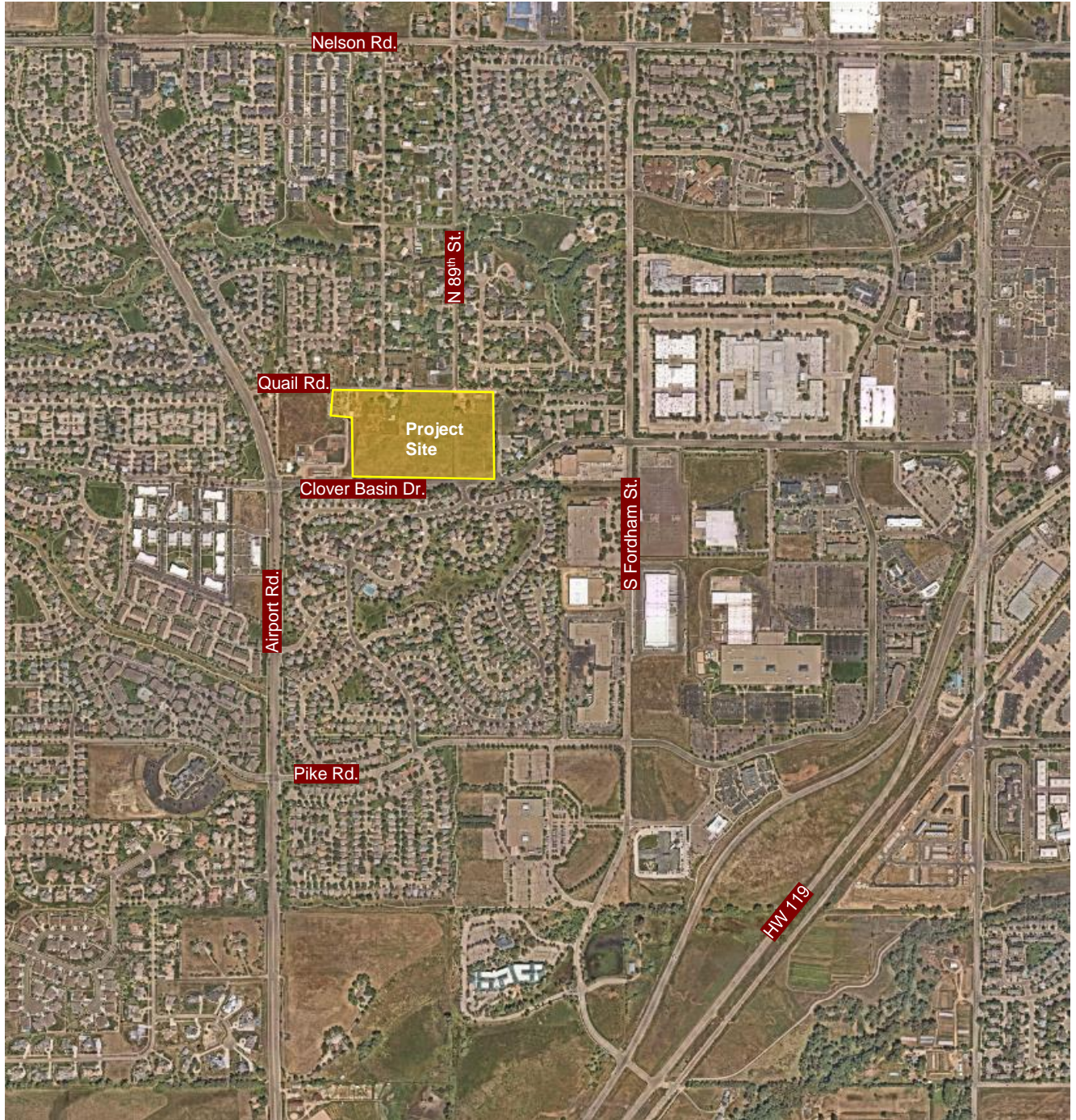
The purpose of this study is to evaluate the impact of the vehicular trips projected to be generated by the proposed 8902 Quail Road development on the study area intersections and roadway system. The study includes 2024 (existing), 2027 (year of anticipated project build-out), and 2050 (long-term) analysis horizons.

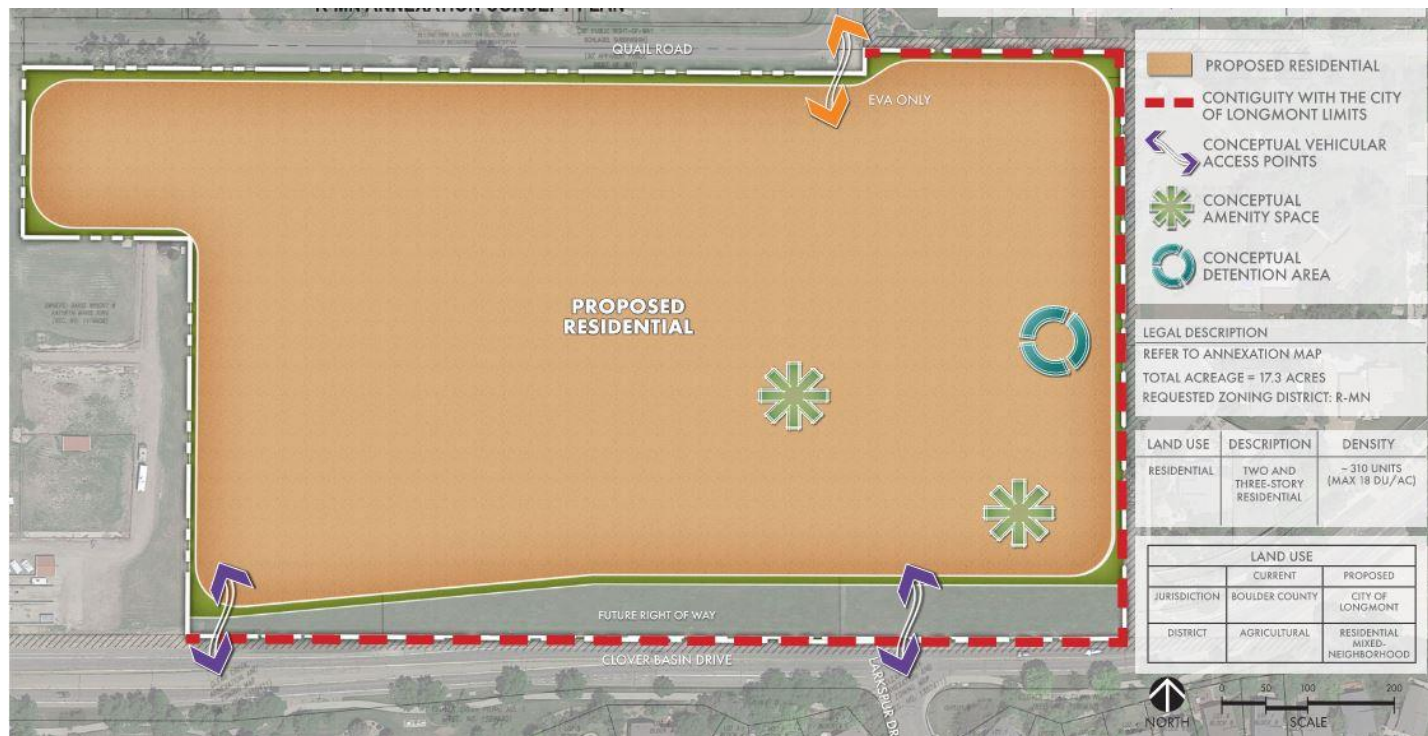
Based on the analyses contained herein, recommendations for intersection and roadway improvements to accommodate the addition of the proposed 8902 Quail Road development traffic were developed. The following is a summary of the recommendations to be the responsibility of the developer in order to mitigate the impact of the traffic projected to be generated by the proposed 8902 Quail Road development:

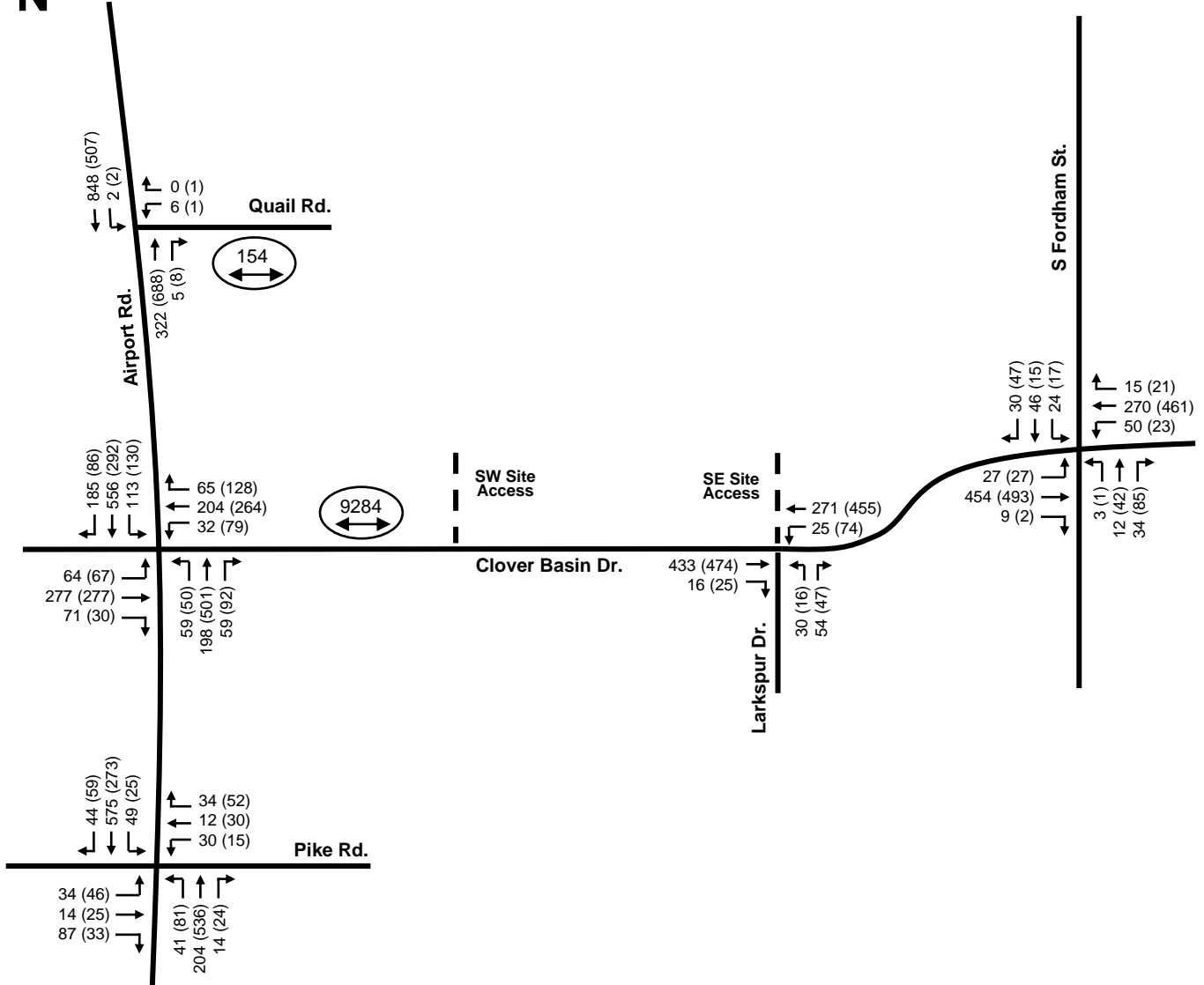
- **Clover Basin Dr.** – The developer shall be responsible for the design and construction of the northern half of Clover Basin Dr. adjacent to the project site to include curb and gutter, and a detached sidewalk. The proposed final cross-section will include one travel lane in each direction, one bicycle lane in each direction, and a two-way center left turn lane.
- **Clover Basin Dr./Larkspur Dr./SE Site Access** – The developer will be responsible for the design and construction of the intersection modifications concurrently with the 8902 Quail Road development to include the following. A north leg to the intersection will be constructed to serve as the SE Site Access driveway, providing access within public right-of-way through the project site to connect to Quail Rd. The intersection will then be updated to operate under roundabout control with a single approach and departure lane on each leg as well as a single circulating lane.
- **Clover Basin Dr./SW Site Access** – The developer will be responsible for the design and construction of the intersection concurrently with the 8902 Quail Road development to include the following. The intersection will be constructed concurrently with the

proposed 8902 Quail Road development as a full movement “T” intersection. The intersection will operate under stop sign control on the southbound approach. The east leg of the intersection will have one through lane and one right turn lane with a minimum of 100 feet of storage on the westbound approach, and one eastbound departure lane. The west leg of the intersection will have one left turn lane with approximately 100 feet of storage and one through lane on the eastbound approach, and one westbound departure lane. The north leg of the intersection will be constructed to have one shared left/right turn lane on the southbound approach, and one northbound departure lane.

In addition to these specific improvements, the developer will also contribute funds through the Transportation Community Investment Fee (TCIF) which can be utilized for other nearby roadway improvements, such as potential improvements for the Clover Basin Dr./S. Fordham St. intersection.







Proposed Roadway

Legend:

Drawing Not To Scale

- ↑ 5 (8) Weekday AM (PM)
- ← 64 (50) Peak Hour
- ↔ 8 (7) Traffic Volumes, vph

3200
↔
Daily Traffic
Volumes, vpd



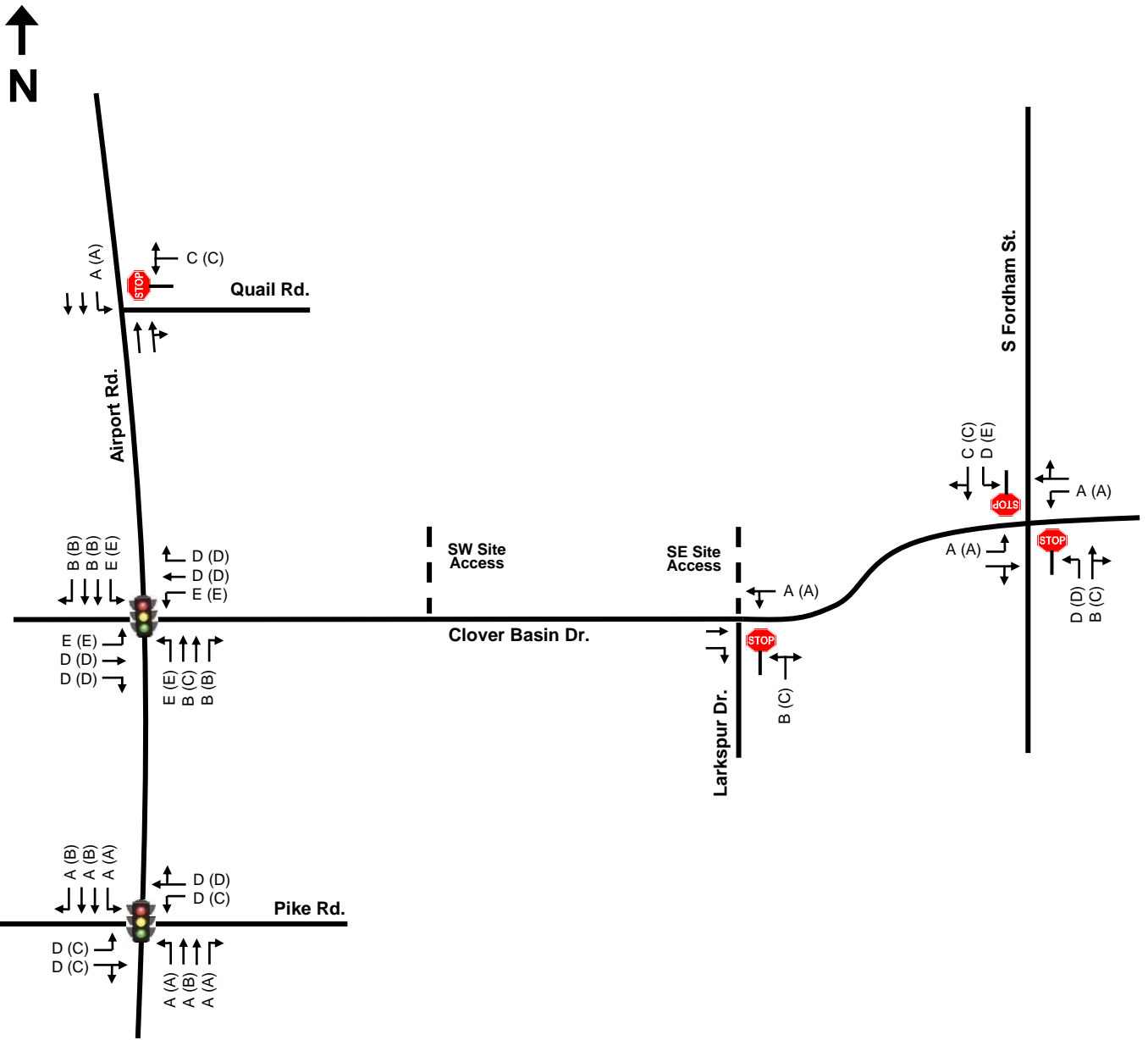
2024 (Existing) Traffic Volumes

8902 Quail Road

Vista Residential Partners

HKS #230835

Figure 3



--- Proposed Roadway

Legend: Drawing Not To Scale

| | | |
|---|-------|------------------|
| ↑ | A (B) | Weekday AM (PM) |
| ← | B (C) | Peak Hour |
| ↔ | D (D) | Level of Service |



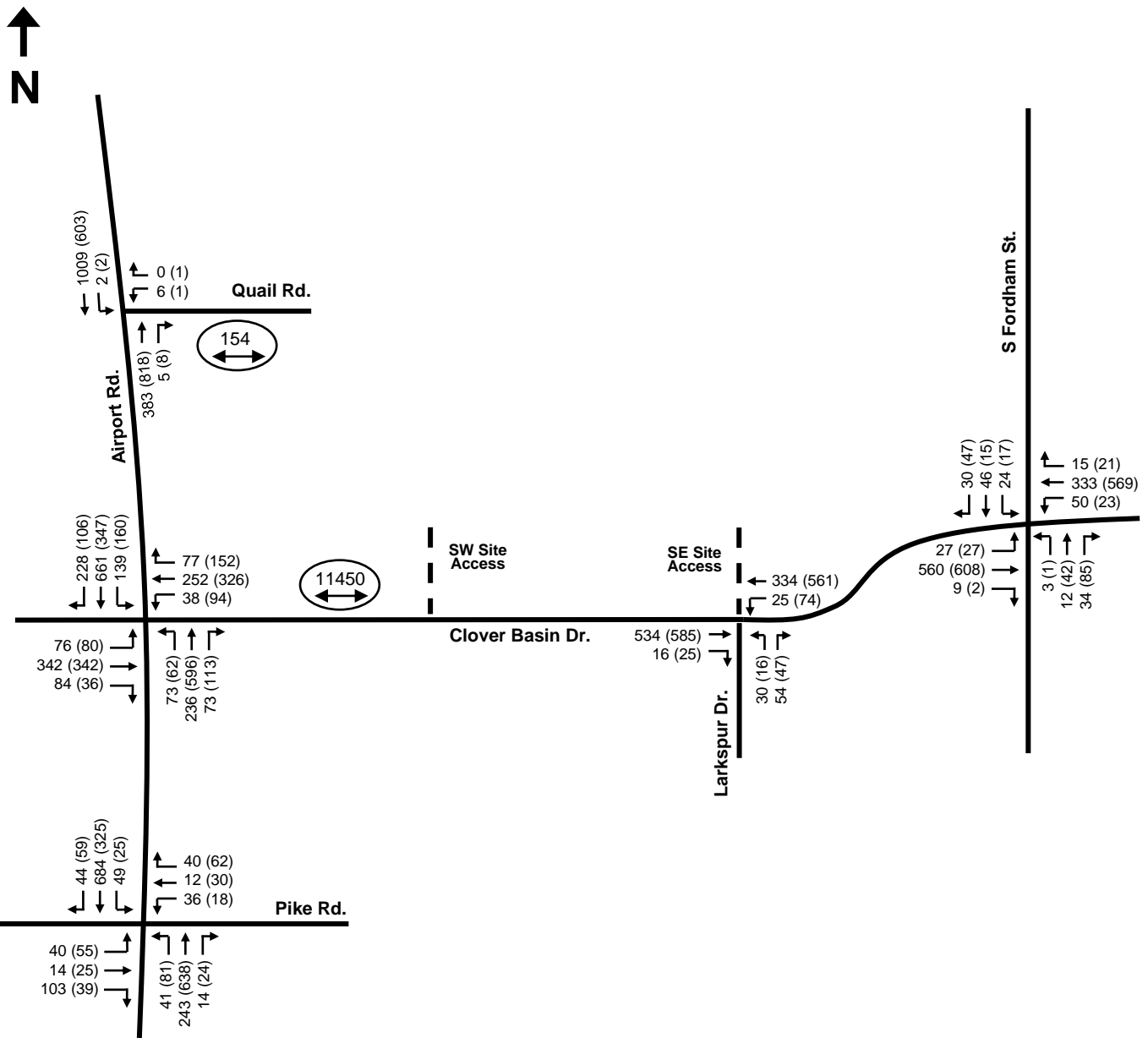
8902 Quail Road
 Vista Residential Partners
 HKS #230835

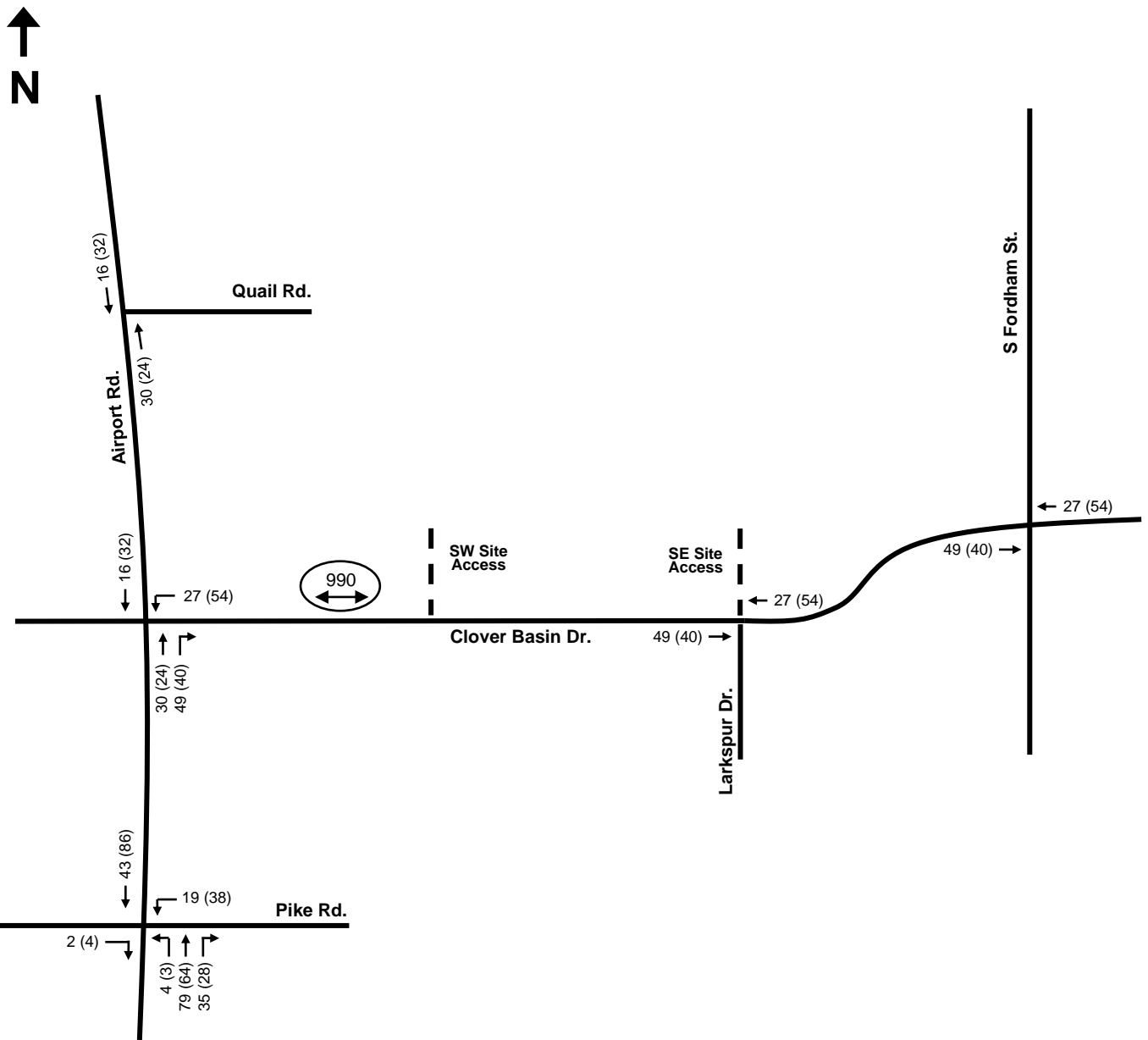
2024 (Existing) Traffic Operational Conditions

Figure 4



Figure 5





--- Proposed Roadway

Legend: Drawing Not To Scale

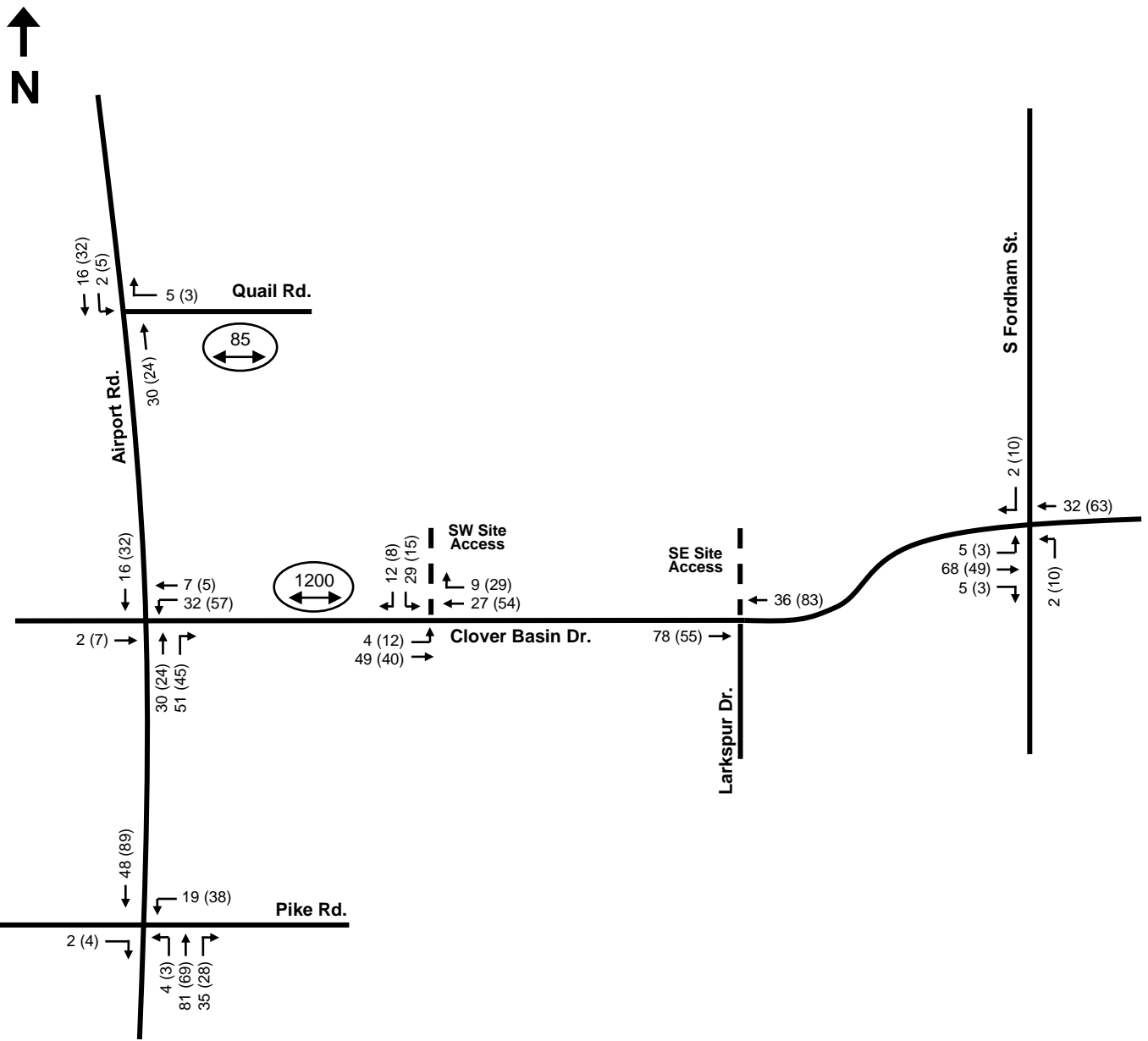
| | | |
|---|---------|----------------------------|
| ↑ | 5 (8) | Weekday AM (PM) |
| ← | 64 (50) | Peak Hour |
| ↔ | 8 (7) | Traffic Volumes, vph |
| | | Daily Traffic Volumes, vpd |



2027 (Build-Out) Analysis Horizon Local Background Traffic Volumes

8902 Quail Road
 Vista Residential Partners
 HKS #230835

Figure 7



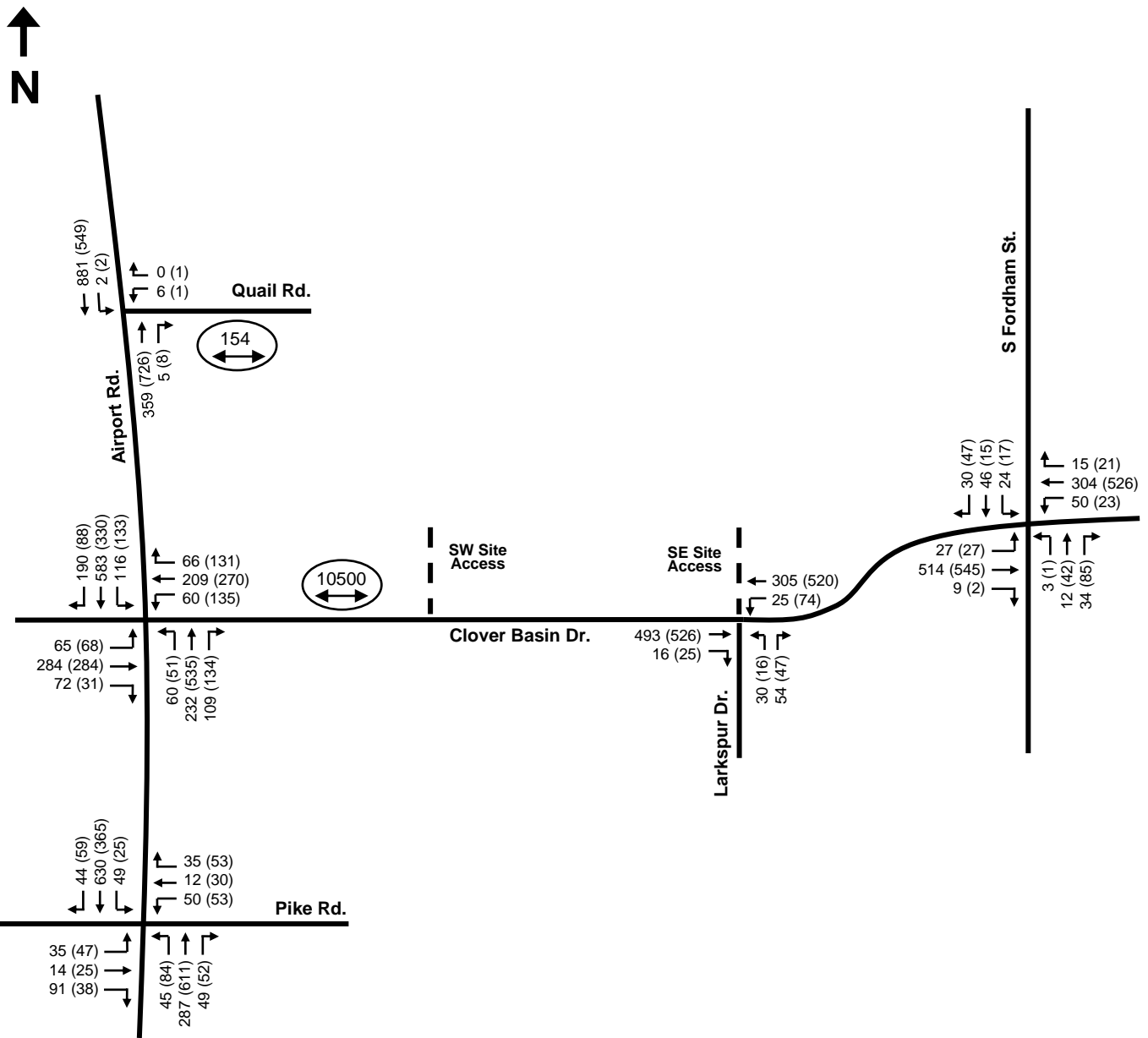
--- Proposed Roadway

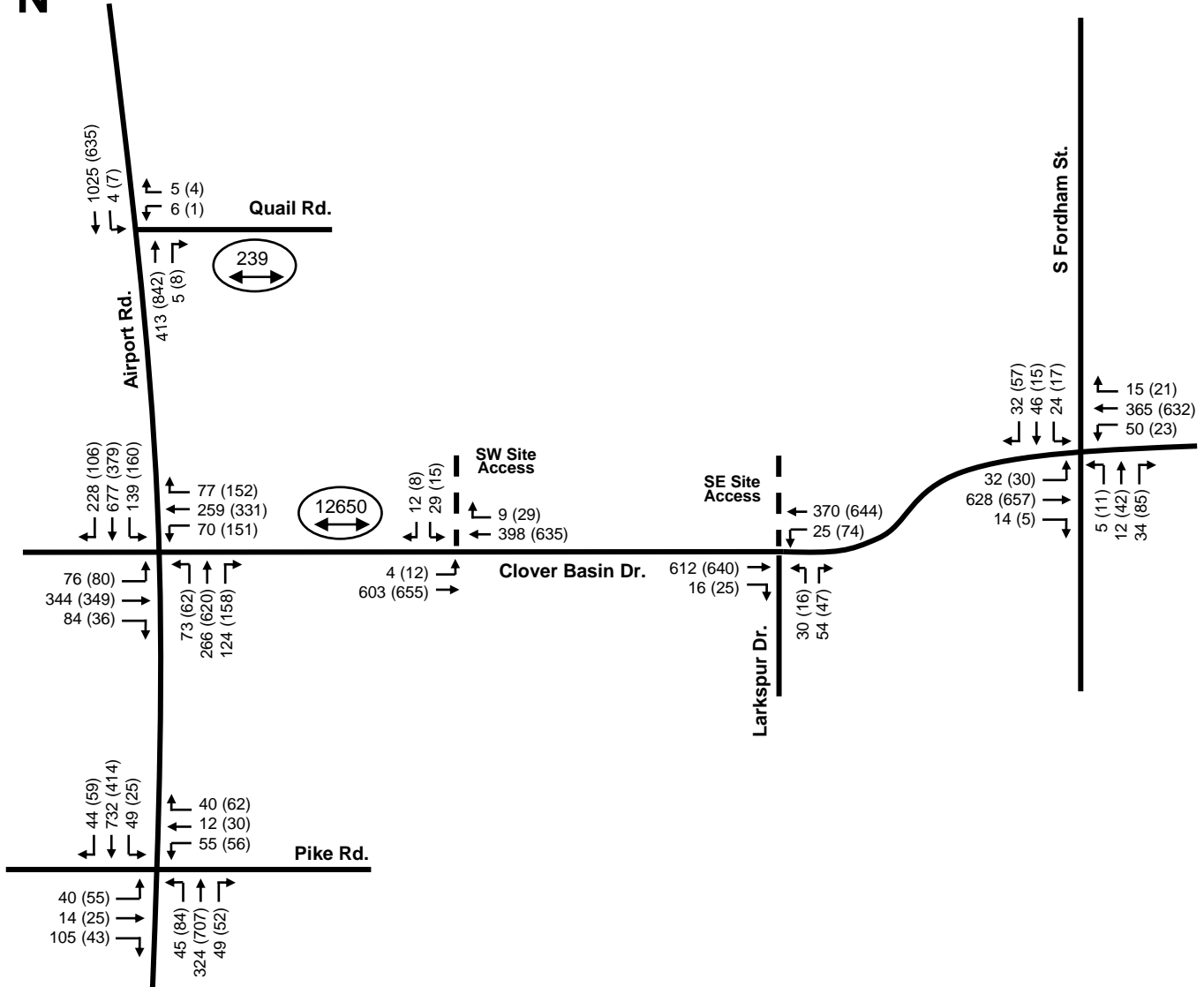
Legend:

Drawing Not To Scale

↑ 5 (8) Weekday AM (PM)
 ← 64 (50) Peak Hour
 ↘ 8 (7) Traffic Volumes, vph

(3200) Daily Traffic
 Volumes, vpd





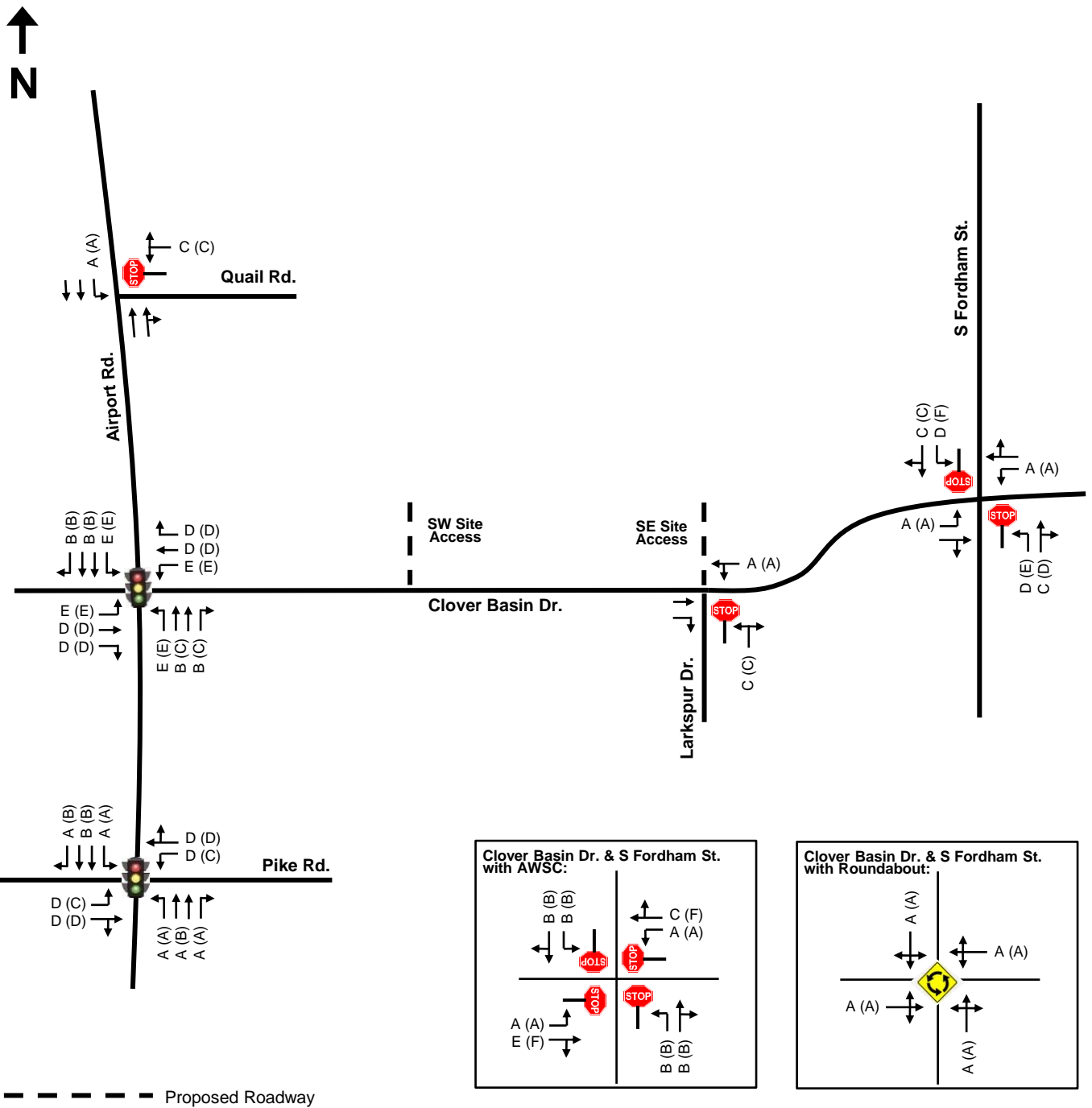
2050 (Long-Term) Analysis Horizon Total Background Traffic Volumes

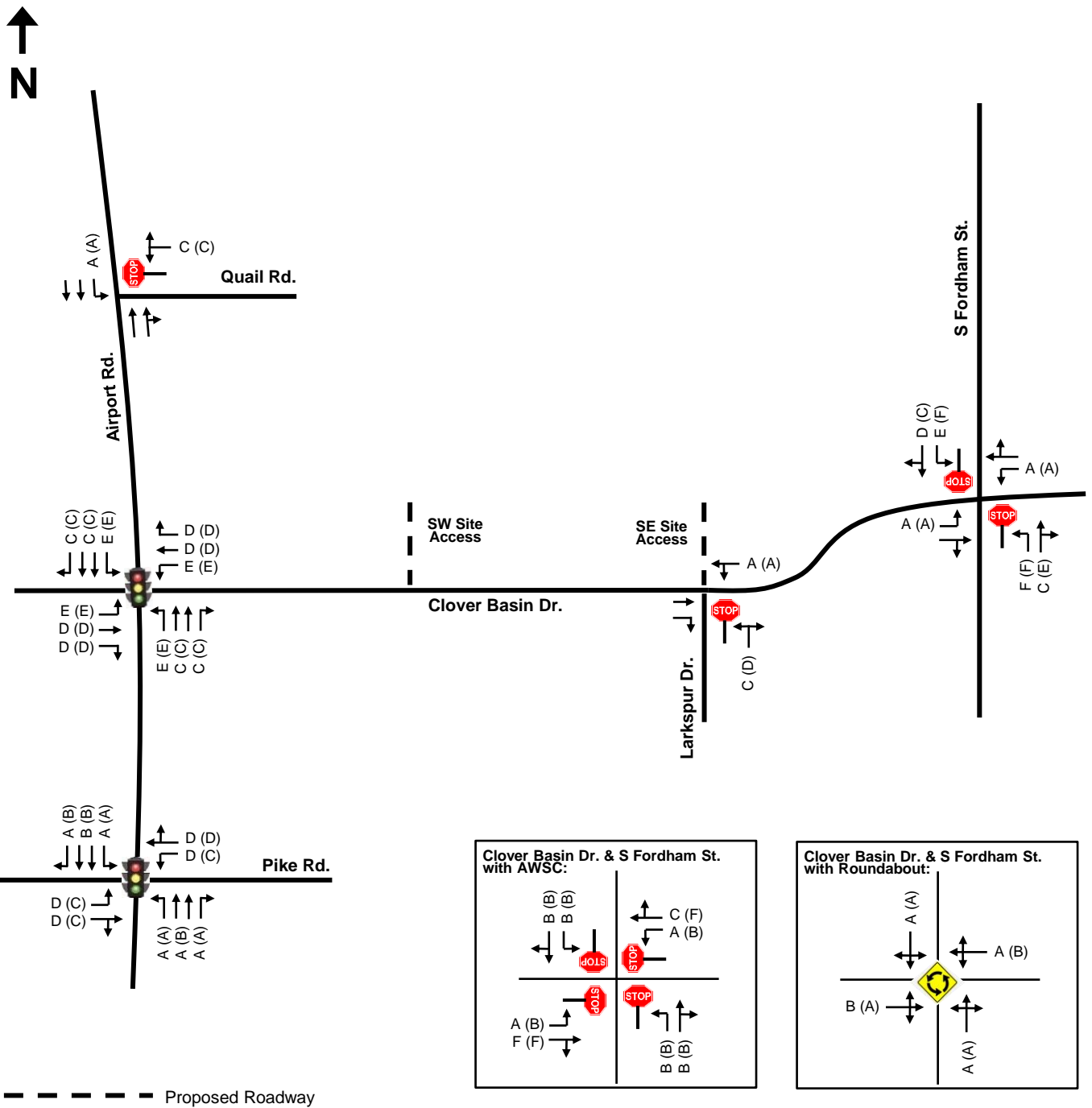
8902 Quail Road

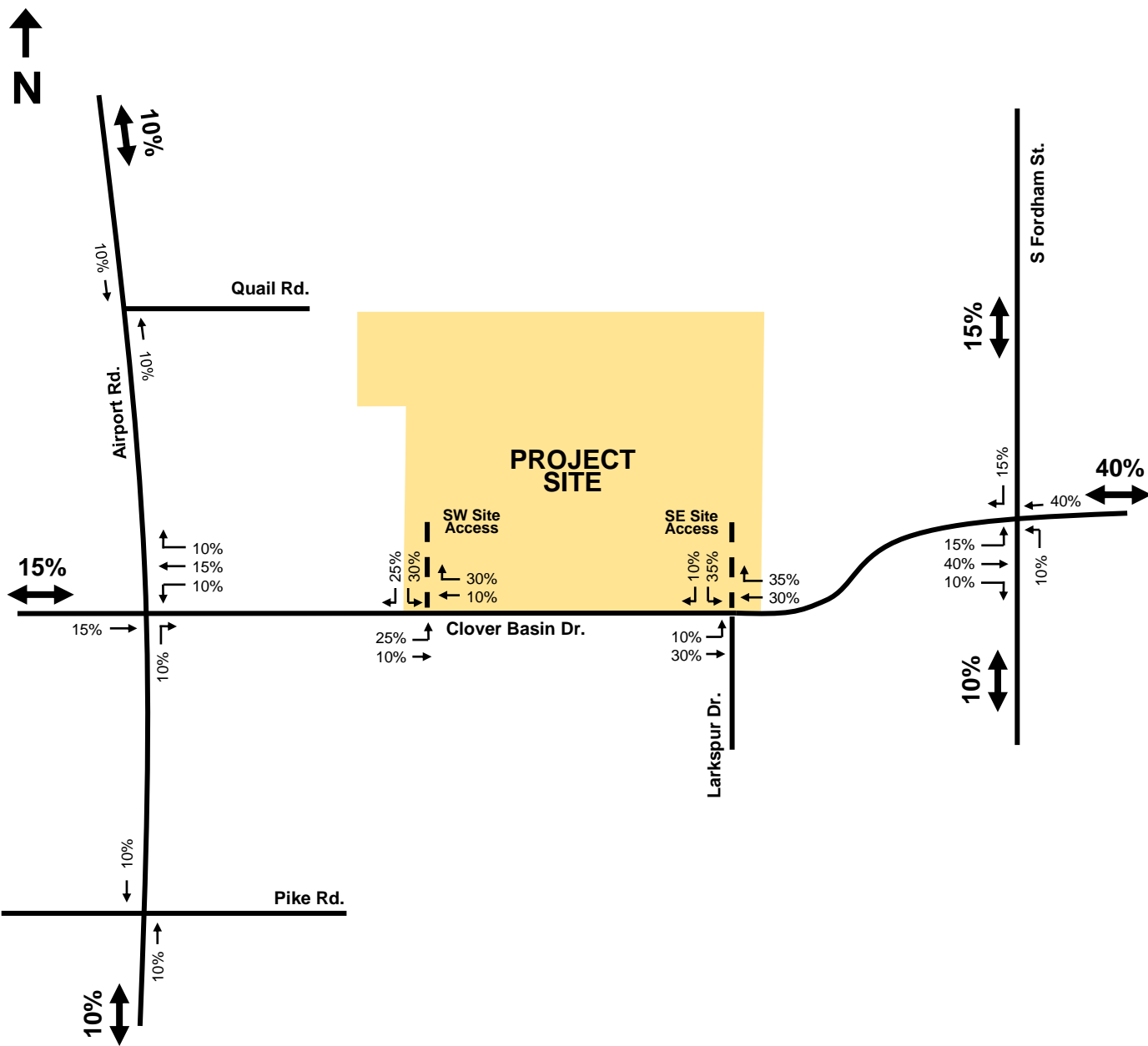
Vista Residential Partners

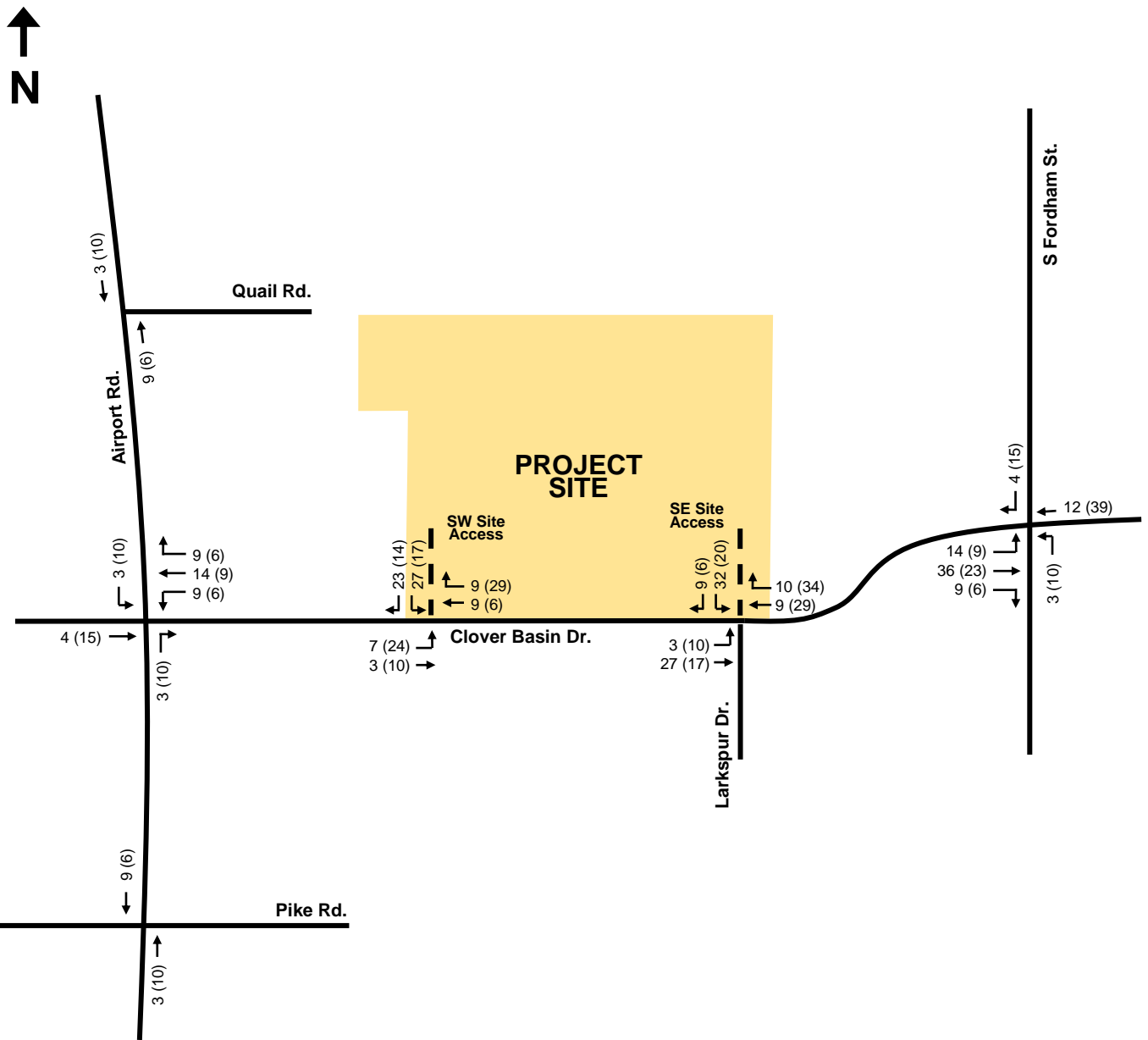
HKS #230835

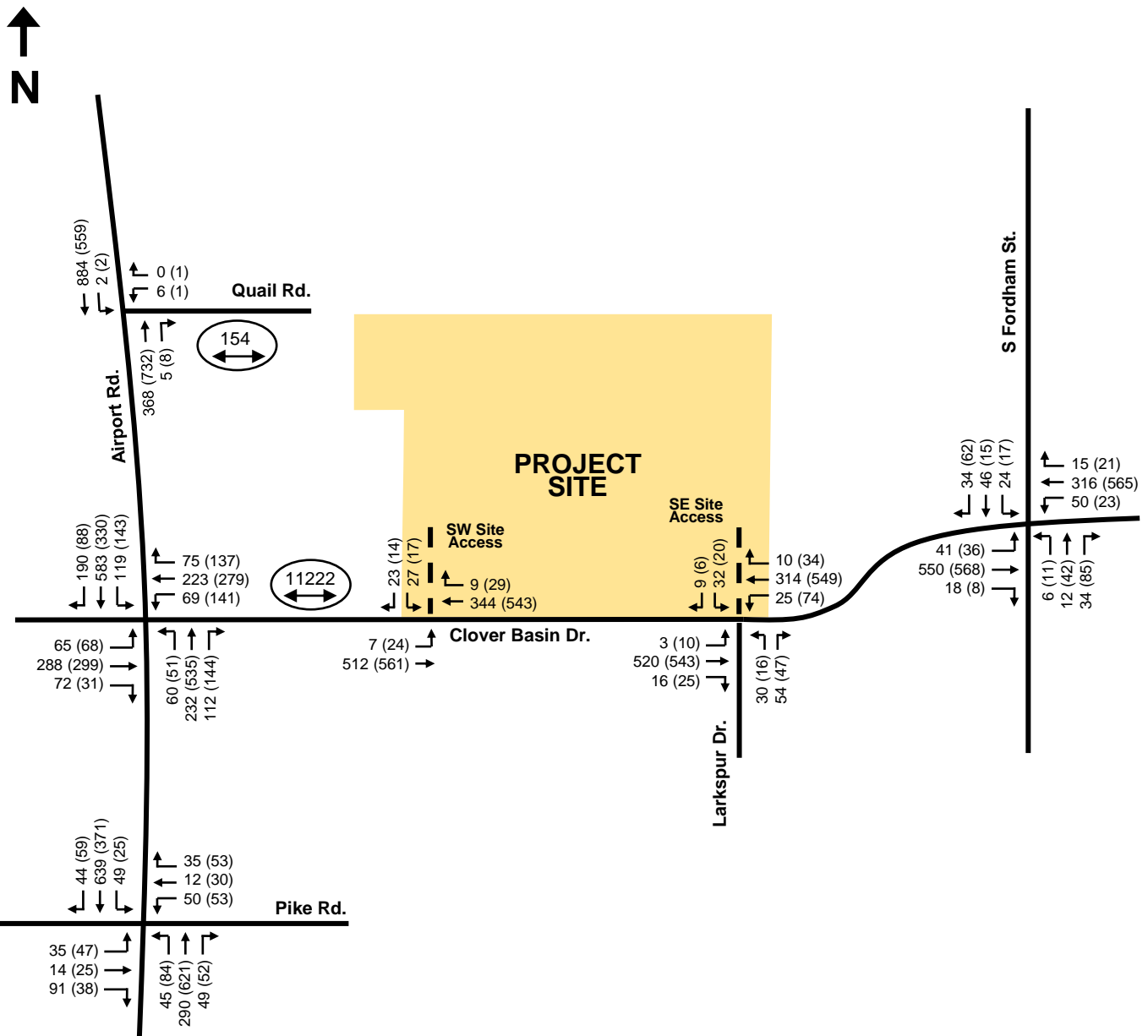
Figure 10











Proposed Roadway

Legend:

Drawing Not To Scale

- Weekday AM (PM)
- Peak Hour
- Traffic Volumes, vph

Daily Traffic Volumes, vpd



DENVER • DALLAS/FORT WORTH

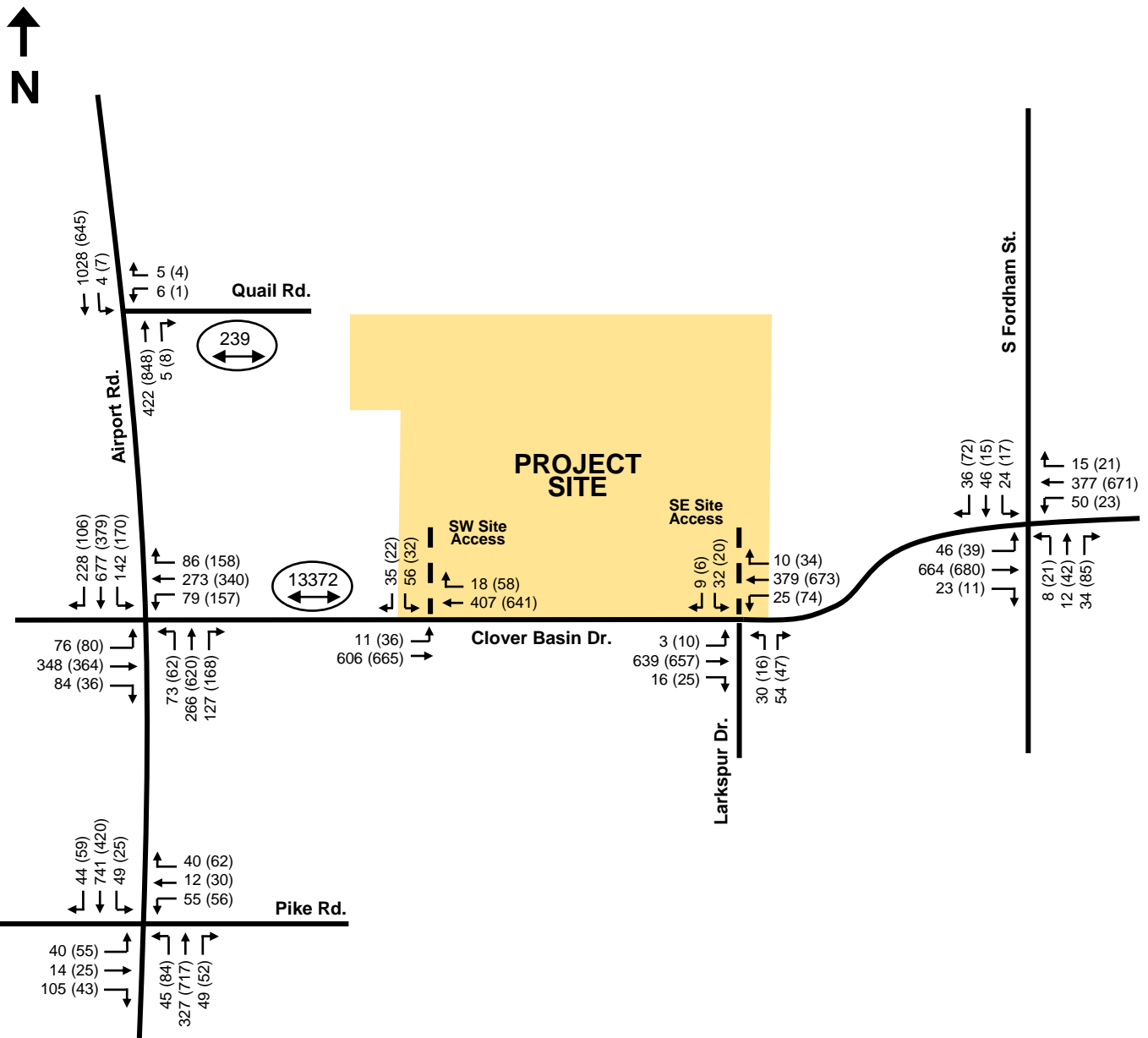
2027 (Build-Out) Analysis Horizon Total Traffic Volumes (Background + Site Generated)

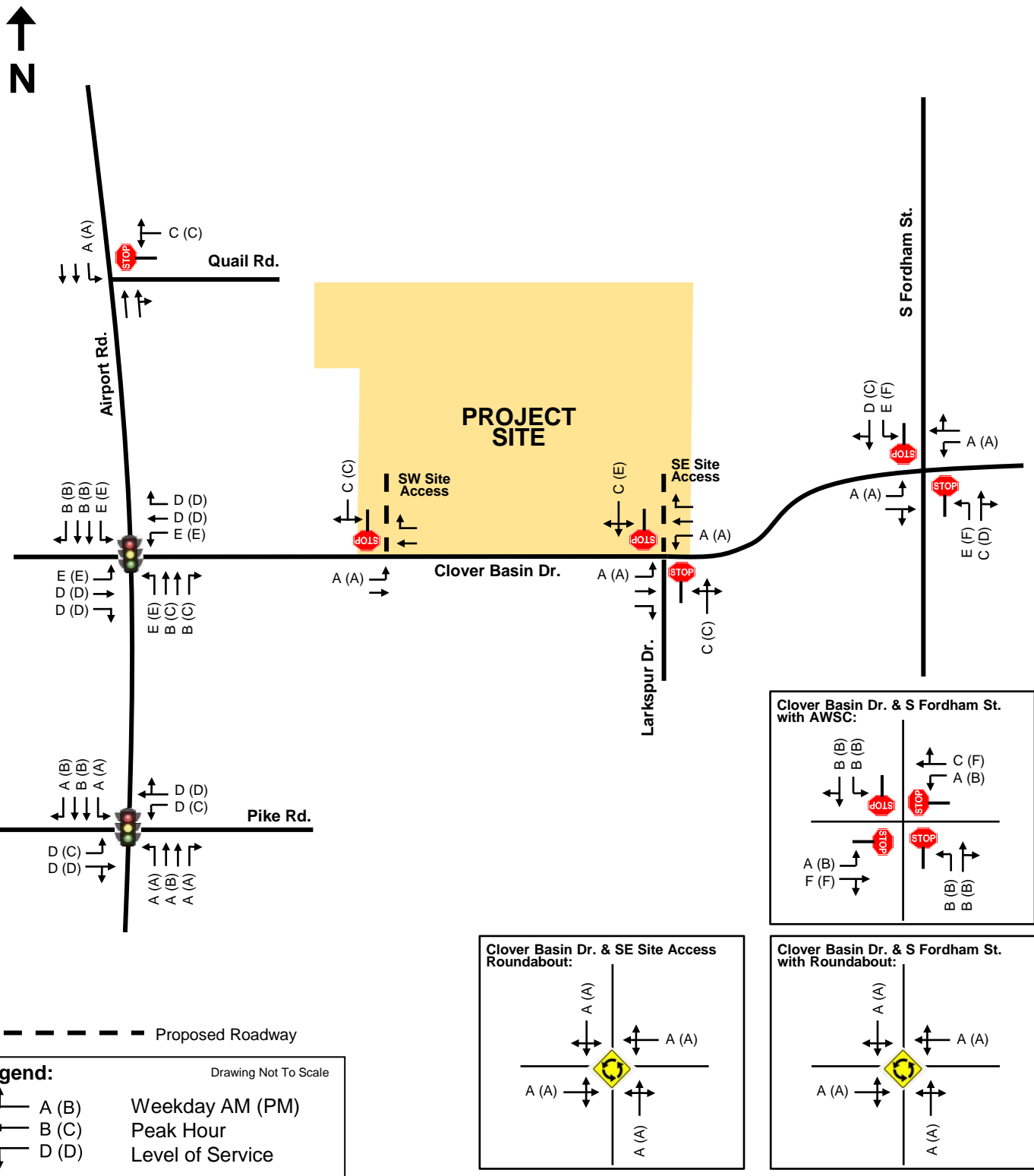
Figure 15

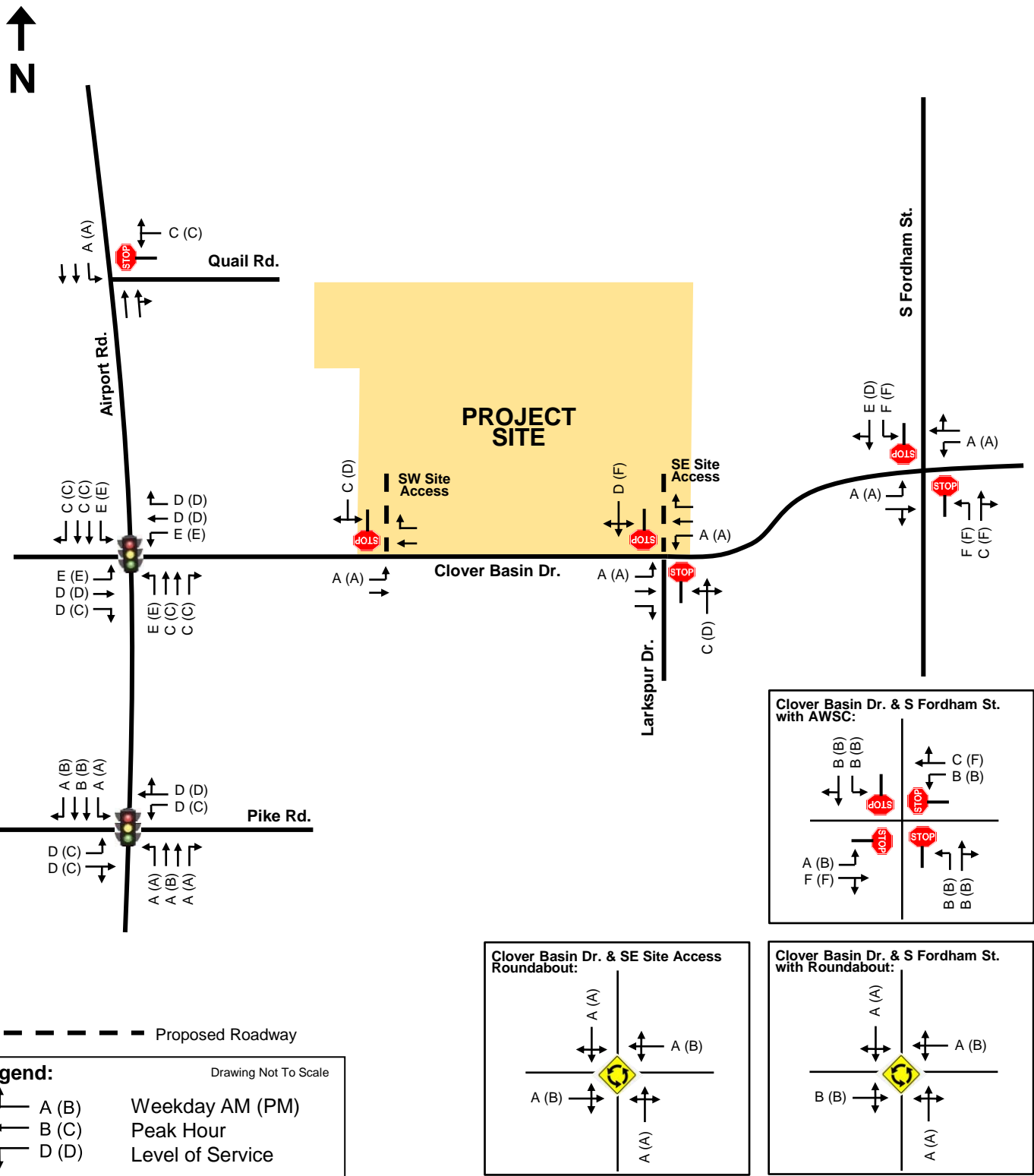
8902 Quail Road

Vista Residential Partners

HKS #230835







APPENDIX “A”

2024 (EXISTING)

TRAFFIC VOLUME & SPEED COUNTS



ALL TRAFFIC DATA SERVICES

(303) 216-2439

www.alltrafficdata.net

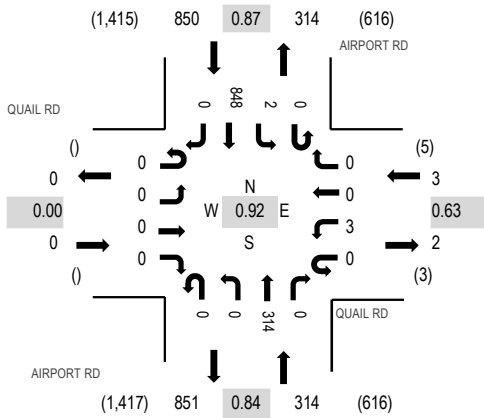
Location: 1 AIRPORT RD & QUAIL RD AM

Date: Tuesday, March 12, 2024

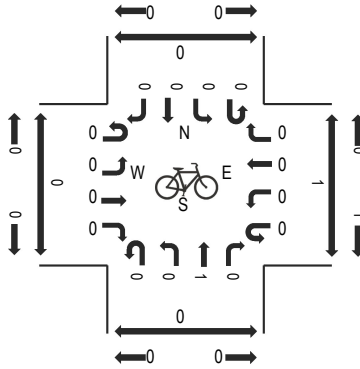
Peak Hour: 07:30 AM - 08:30 AM

Peak 15-Minutes: 08:00 AM - 08:15 AM

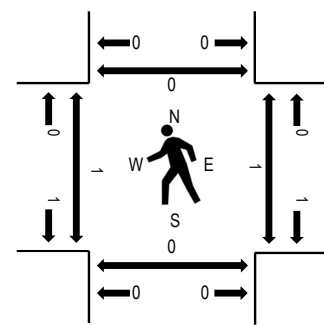
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

| Interval Start Time | QUAIL RD Eastbound | | | | QUAIL RD Westbound | | | | AIRPORT RD Northbound | | | | AIRPORT RD Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|-----------------------|------|------|-------|-----------------------|------|------|-------|--------------------------|------|------|-------|--------------------------|------|-------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 | 0 | 0 | 0 | 116 | 0 | 165 | 951 | 0 | 1 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 65 | 0 | 0 | 0 | 156 | 0 | 221 | 1,102 | 1 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 87 | 0 | 0 | 1 | 182 | 0 | 270 | 1,167 | 0 | 1 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 84 | 0 | 0 | 0 | 209 | 0 | 295 | 1,167 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 72 | 0 | 0 | 0 | 244 | 0 | 316 | 1,085 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 71 | 0 | 0 | 1 | 213 | 0 | 286 | | 1 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 99 | 0 | 0 | 1 | 168 | 0 | 270 | | 0 | 1 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 89 | 0 | 0 | 0 | 124 | 0 | 213 | | 0 | 0 | 0 | 0 |
| Count Total | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 616 | 0 | 0 | 3 | 1,412 | 0 | 2,036 | | 2 | 3 | 0 | 0 |
| Peak Hour | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 314 | 0 | 0 | 2 | 848 | 0 | 1,167 | | 1 | 1 | 0 | 0 |



ALL TRAFFIC DATA SERVICES

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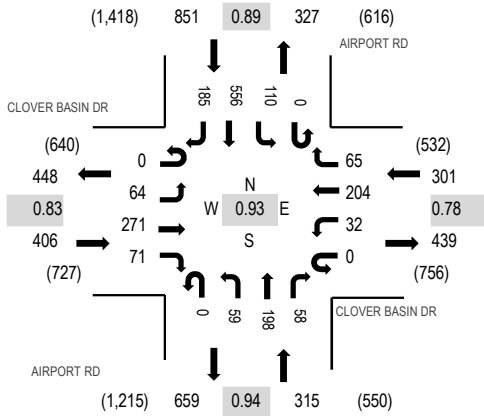
Location: 2 AIRPORT RD & CLOVER BASIN DR AM

Date: Tuesday, March 12, 2024

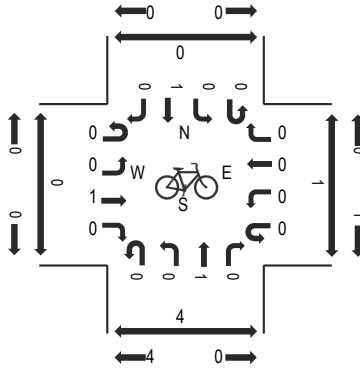
Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:00 AM - 08:15 AM

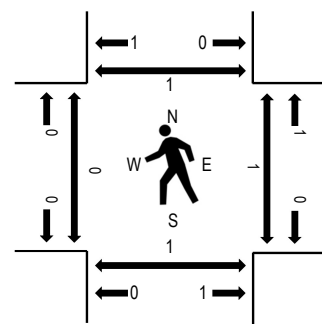
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

| Interval Start Time | CLOVER BASIN DR Eastbound | | | | CLOVER BASIN DR Westbound | | | | AIRPORT RD Northbound | | | | AIRPORT RD Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|------------------------------|------|------|-------|------------------------------|------|------|-------|--------------------------|------|------|-------|--------------------------|------|-------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 7:00 AM | 0 | 7 | 41 | 14 | 0 | 4 | 13 | 10 | 0 | 2 | 32 | 11 | 0 | 20 | 92 | 3 | 249 | 1,493 | 0 | 1 | 1 | 0 |
| 7:15 AM | 0 | 16 | 50 | 16 | 0 | 9 | 32 | 13 | 0 | 8 | 38 | 11 | 0 | 15 | 135 | 7 | 350 | 1,745 | 1 | 0 | 0 | 2 |
| 7:30 AM | 0 | 14 | 69 | 21 | 0 | 11 | 47 | 24 | 0 | 18 | 48 | 7 | 0 | 23 | 138 | 11 | 431 | 1,862 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 17 | 80 | 19 | 0 | 10 | 36 | 10 | 0 | 7 | 56 | 11 | 0 | 29 | 151 | 37 | 463 | 1,873 | 0 | 0 | 0 | 1 |
| 8:00 AM | 0 | 9 | 52 | 16 | 0 | 9 | 72 | 20 | 0 | 29 | 44 | 11 | 0 | 30 | 146 | 63 | 501 | 1,734 | 0 | 0 | 1 | 0 |
| 8:15 AM | 0 | 9 | 67 | 14 | 0 | 6 | 55 | 17 | 0 | 19 | 44 | 17 | 0 | 22 | 136 | 61 | 467 | | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 29 | 72 | 22 | 0 | 7 | 41 | 18 | 0 | 4 | 54 | 19 | 0 | 29 | 123 | 24 | 442 | | 0 | 1 | 0 | 0 |
| 8:45 AM | 0 | 17 | 45 | 11 | 0 | 6 | 35 | 27 | 0 | 6 | 43 | 11 | 0 | 14 | 99 | 10 | 324 | | 0 | 0 | 0 | 0 |
| Count Total | 0 | 118 | 476 | 133 | 0 | 62 | 331 | 139 | 0 | 93 | 359 | 98 | 0 | 182 | 1,020 | 216 | 3,227 | | 1 | 2 | 2 | 3 |
| Peak Hour | 0 | 64 | 271 | 71 | 0 | 32 | 204 | 65 | 0 | 59 | 198 | 58 | 0 | 110 | 556 | 185 | 1,873 | | 0 | 1 | 1 | 1 |



ALL TRAFFIC DATA SERVICES

(303) 216-2439

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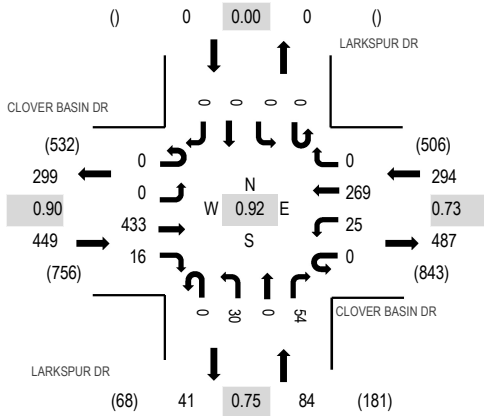
Location: 3 LARKSPUR DR & CLOVER BASIN DR AM

Date: Tuesday, March 12, 2024

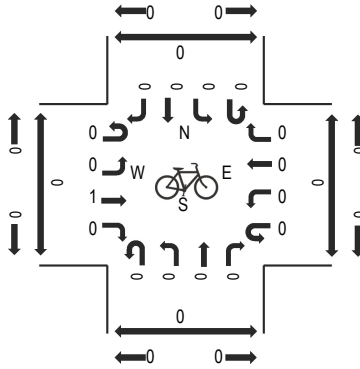
Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:00 AM - 08:15 AM

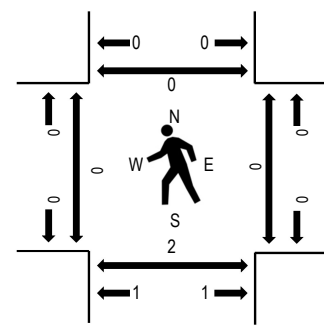
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

| Interval Start Time | CLOVER BASIN DR Eastbound | | | | CLOVER BASIN DR Westbound | | | | LARKSPUR DR Northbound | | | | LARKSPUR DR Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|------------------------------|------|------|-------|------------------------------|------|------|-------|---------------------------|------|------|-------|---------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 7:00 AM | 0 | 0 | 67 | 3 | 0 | 4 | 32 | 0 | 0 | 2 | 0 | 18 | 0 | 0 | 0 | 0 | 126 | 661 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 77 | 1 | 0 | 2 | 34 | 0 | 0 | 15 | 0 | 10 | 0 | 0 | 0 | 0 | 139 | 759 | 1 | 0 | 0 | 1 |
| 7:30 AM | 0 | 0 | 85 | 4 | 0 | 3 | 69 | 0 | 0 | 18 | 0 | 16 | 0 | 0 | 0 | 0 | 195 | 816 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 121 | 4 | 0 | 9 | 46 | 0 | 0 | 5 | 0 | 16 | 0 | 0 | 0 | 0 | 201 | 827 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 91 | 6 | 0 | 8 | 97 | 0 | 0 | 14 | 0 | 8 | 0 | 0 | 0 | 0 | 224 | 782 | 0 | 0 | 1 | 0 |
| 8:15 AM | 0 | 0 | 103 | 4 | 0 | 4 | 65 | 0 | 0 | 7 | 0 | 13 | 0 | 0 | 0 | 0 | 196 | | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 118 | 2 | 0 | 4 | 61 | 0 | 0 | 4 | 0 | 17 | 0 | 0 | 0 | 0 | 206 | | 0 | 0 | 1 | 0 |
| 8:45 AM | 0 | 0 | 67 | 3 | 0 | 7 | 61 | 0 | 0 | 2 | 0 | 16 | 0 | 0 | 0 | 0 | 156 | | 0 | 0 | 0 | 0 |
| Count Total | 0 | 0 | 729 | 27 | 0 | 41 | 465 | 0 | 0 | 67 | 0 | 114 | 0 | 0 | 0 | 0 | 1,443 | | 1 | 0 | 2 | 1 |
| Peak Hour | 0 | 0 | 433 | 16 | 0 | 25 | 269 | 0 | 0 | 30 | 0 | 54 | 0 | 0 | 0 | 0 | 827 | | 0 | 0 | 2 | 0 |



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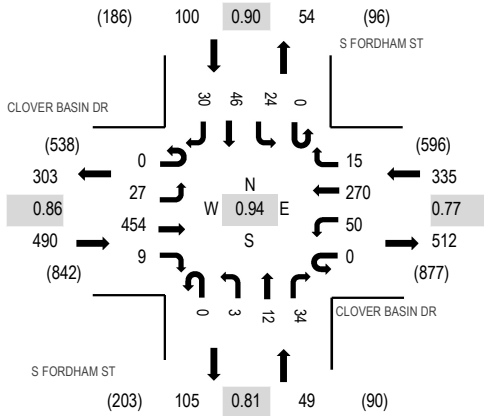
Location: 4 S FORDHAM ST & CLOVER BASIN DR AM

Date: Tuesday, March 12, 2024

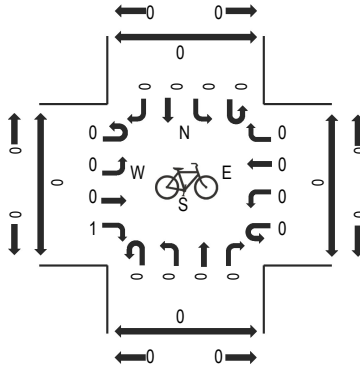
Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:00 AM - 08:15 AM

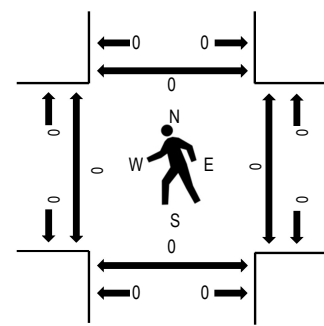
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

| Interval Start Time | CLOVER BASIN DR | | | | CLOVER BASIN DR | | | | S FORDHAM ST | | | | S FORDHAM ST | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|-----------------|------|------|-------|-----------------|------|------|-------|--------------|------|------|-------|--------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | | West | East | South | North |
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | | | | |
| 7:00 AM | 0 | 1 | 82 | 2 | 0 | 9 | 34 | 0 | 0 | 2 | 5 | 3 | 0 | 3 | 9 | 5 | 155 | 797 | 0 | 0 | 0 | 1 |
| 7:15 AM | 0 | 1 | 83 | 0 | 0 | 13 | 40 | 4 | 0 | 1 | 3 | 5 | 0 | 4 | 18 | 4 | 176 | 902 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 8 | 87 | 1 | 0 | 10 | 70 | 2 | 0 | 0 | 8 | 2 | 0 | 8 | 14 | 6 | 216 | 968 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 11 | 128 | 3 | 0 | 20 | 54 | 2 | 0 | 0 | 4 | 7 | 0 | 6 | 11 | 4 | 250 | 974 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 5 | 90 | 3 | 0 | 11 | 98 | 6 | 0 | 0 | 3 | 13 | 0 | 10 | 10 | 11 | 260 | 917 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 3 | 112 | 2 | 0 | 16 | 59 | 4 | 0 | 3 | 3 | 9 | 0 | 4 | 17 | 10 | 242 | | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 8 | 124 | 1 | 0 | 3 | 59 | 3 | 0 | 0 | 2 | 5 | 0 | 4 | 8 | 5 | 222 | | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 6 | 79 | 2 | 0 | 12 | 67 | 0 | 0 | 1 | 4 | 7 | 0 | 2 | 8 | 5 | 193 | | 0 | 0 | 0 | 0 |
| Count Total | 0 | 43 | 785 | 14 | 0 | 94 | 481 | 21 | 0 | 7 | 32 | 51 | 0 | 41 | 95 | 50 | 1,714 | | 0 | 0 | 0 | 1 |
| Peak Hour | 0 | 27 | 454 | 9 | 0 | 50 | 270 | 15 | 0 | 3 | 12 | 34 | 0 | 24 | 46 | 30 | 974 | | 0 | 0 | 0 | 0 |



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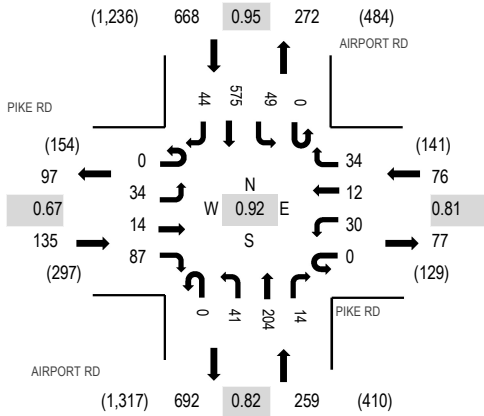
Location: 5 AIRPORT RD & PIKE RD AM

Date: Tuesday, March 12, 2024

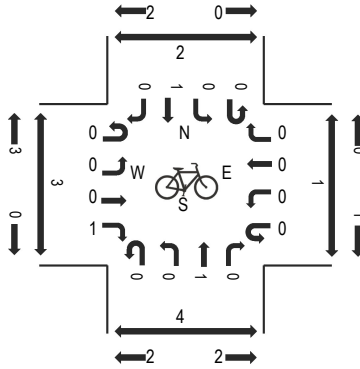
Peak Hour: 07:30 AM - 08:30 AM

Peak 15-Minutes: 07:45 AM - 08:00 AM

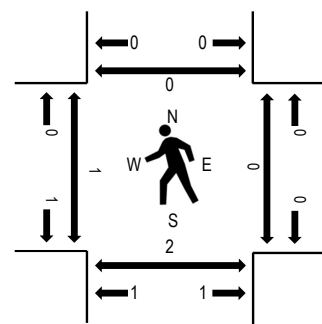
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

| Interval Start Time | PIKE RD Eastbound | | | | PIKE RD Westbound | | | | AIRPORT RD Northbound | | | | AIRPORT RD Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|----------------------|------|------|-------|----------------------|------|------|-------|--------------------------|------|------|-------|--------------------------|------|-------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 7:00 AM | 0 | 7 | 0 | 23 | 0 | 4 | 2 | 3 | 0 | 2 | 28 | 1 | 0 | 6 | 107 | 2 | 185 | 1,039 | 0 | 0 | 0 | 1 |
| 7:15 AM | 0 | 8 | 4 | 21 | 0 | 7 | 1 | 10 | 0 | 2 | 28 | 1 | 0 | 7 | 150 | 10 | 249 | 1,137 | 0 | 0 | 0 | 1 |
| 7:30 AM | 0 | 8 | 2 | 29 | 0 | 3 | 4 | 9 | 0 | 8 | 50 | 7 | 0 | 11 | 155 | 10 | 296 | 1,138 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 8 | 3 | 19 | 0 | 11 | 3 | 6 | 0 | 24 | 53 | 2 | 0 | 10 | 147 | 23 | 309 | 1,129 | 0 | 0 | 2 | 0 |
| 8:00 AM | 0 | 10 | 6 | 21 | 0 | 8 | 2 | 9 | 0 | 4 | 57 | 2 | 0 | 16 | 141 | 7 | 283 | 1,045 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 8 | 3 | 18 | 0 | 8 | 3 | 10 | 0 | 5 | 44 | 3 | 0 | 12 | 132 | 4 | 250 | | 1 | 0 | 0 | 0 |
| 8:30 AM | 0 | 30 | 8 | 24 | 0 | 5 | 3 | 6 | 0 | 6 | 36 | 3 | 0 | 12 | 146 | 8 | 287 | | 0 | 0 | 1 | 0 |
| 8:45 AM | 0 | 14 | 7 | 16 | 0 | 12 | 6 | 6 | 0 | 8 | 36 | 0 | 0 | 3 | 110 | 7 | 225 | | 1 | 1 | 1 | 0 |
| Count Total | 0 | 93 | 33 | 171 | 0 | 58 | 24 | 59 | 0 | 59 | 332 | 19 | 0 | 77 | 1,088 | 71 | 2,084 | | 2 | 1 | 4 | 2 |
| Peak Hour | 0 | 34 | 14 | 87 | 0 | 30 | 12 | 34 | 0 | 41 | 204 | 14 | 0 | 49 | 575 | 44 | 1,138 | | 1 | 0 | 2 | 0 |



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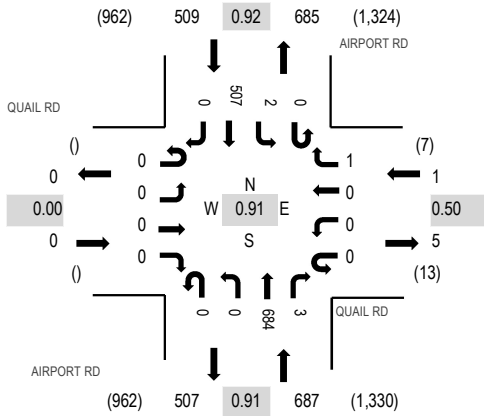
Location: 1 AIRPORT RD & QUAIL RD PM

Date: Tuesday, March 12, 2024

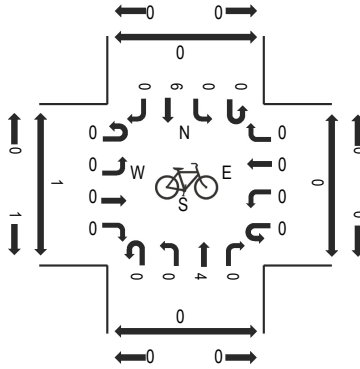
Peak Hour: 04:30 PM - 05:30 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

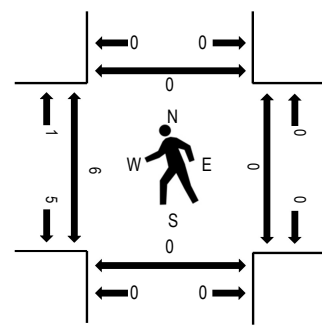
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

| Interval Start Time | QUAIL RD Eastbound | | | | QUAIL RD Westbound | | | | AIRPORT RD Northbound | | | | AIRPORT RD Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|-----------------------|------|------|-------|-----------------------|------|------|-------|--------------------------|------|-------|-------|--------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 177 | 2 | 0 | 1 | 118 | 0 | 300 | 1,163 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 155 | 4 | 0 | 1 | 108 | 0 | 271 | 1,192 | 3 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 173 | 0 | 0 | 1 | 128 | 0 | 302 | 1,197 | 2 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 164 | 2 | 0 | 0 | 123 | 0 | 290 | 1,156 | 3 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 189 | 1 | 0 | 1 | 138 | 0 | 329 | 1,136 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 158 | 0 | 0 | 0 | 118 | 0 | 276 | | 1 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 154 | 0 | 0 | 0 | 106 | 0 | 261 | | 1 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 151 | 0 | 0 | 0 | 119 | 0 | 270 | | 0 | 1 | 0 | 0 |
| Count Total | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 3 | 0 | 0 | 1,321 | 9 | 0 | 4 | 958 | 0 | 2,299 | | 10 | 1 | 0 | 0 |
| Peak Hour | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 684 | 3 | 0 | 2 | 507 | 0 | 1,197 | | 6 | 0 | 0 | 0 |



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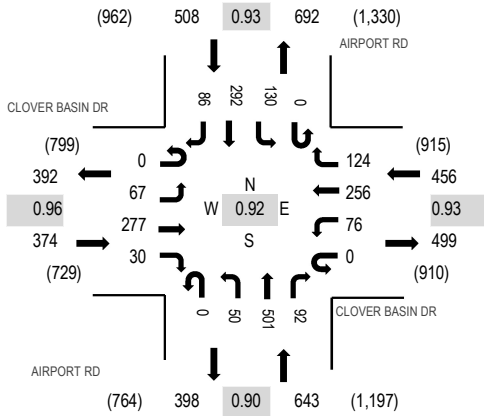
Location: 2 AIRPORT RD & CLOVER BASIN DR PM

Date: Tuesday, March 12, 2024

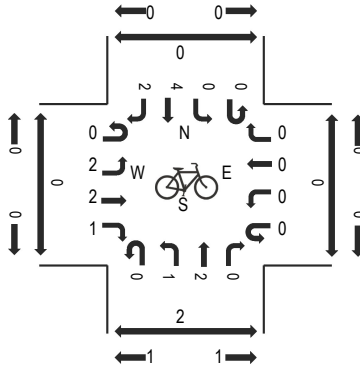
Peak Hour: 04:30 PM - 05:30 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

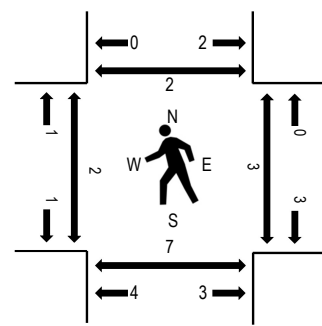
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

| Interval Start Time | CLOVER BASIN DR Eastbound | | | | CLOVER BASIN DR Westbound | | | | AIRPORT RD Northbound | | | | AIRPORT RD Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|------------------------------|------|------|-------|------------------------------|------|------|-------|--------------------------|------|------|-------|--------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 4:00 PM | 0 | 19 | 51 | 12 | 0 | 13 | 77 | 38 | 0 | 7 | 123 | 15 | 0 | 29 | 63 | 28 | 475 | 1,877 | 1 | 3 | 2 | 3 |
| 4:15 PM | 0 | 17 | 59 | 9 | 0 | 20 | 62 | 29 | 0 | 7 | 113 | 21 | 0 | 26 | 61 | 21 | 445 | 1,943 | 1 | 0 | 1 | 0 |
| 4:30 PM | 0 | 20 | 67 | 3 | 0 | 15 | 55 | 27 | 0 | 9 | 126 | 17 | 0 | 31 | 77 | 21 | 468 | 1,981 | 1 | 0 | 3 | 1 |
| 4:45 PM | 0 | 17 | 64 | 6 | 0 | 20 | 58 | 34 | 0 | 14 | 116 | 38 | 0 | 25 | 69 | 28 | 489 | 1,963 | 1 | 3 | 3 | 1 |
| 5:00 PM | 0 | 10 | 81 | 9 | 0 | 19 | 71 | 37 | 0 | 16 | 143 | 19 | 0 | 37 | 80 | 19 | 541 | 1,926 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 20 | 65 | 12 | 0 | 22 | 72 | 26 | 0 | 11 | 116 | 18 | 0 | 37 | 66 | 18 | 483 | | 0 | 0 | 1 | 0 |
| 5:30 PM | 0 | 17 | 70 | 13 | 0 | 13 | 73 | 27 | 0 | 10 | 105 | 18 | 0 | 19 | 65 | 20 | 450 | | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 21 | 60 | 7 | 0 | 16 | 66 | 25 | 0 | 9 | 104 | 22 | 0 | 21 | 74 | 27 | 452 | | 0 | 0 | 0 | 0 |
| Count Total | 0 | 141 | 517 | 71 | 0 | 138 | 534 | 243 | 0 | 83 | 946 | 168 | 0 | 225 | 555 | 182 | 3,803 | | 4 | 6 | 10 | 5 |
| Peak Hour | 0 | 67 | 277 | 30 | 0 | 76 | 256 | 124 | 0 | 50 | 501 | 92 | 0 | 130 | 292 | 86 | 1,981 | | 2 | 3 | 7 | 2 |



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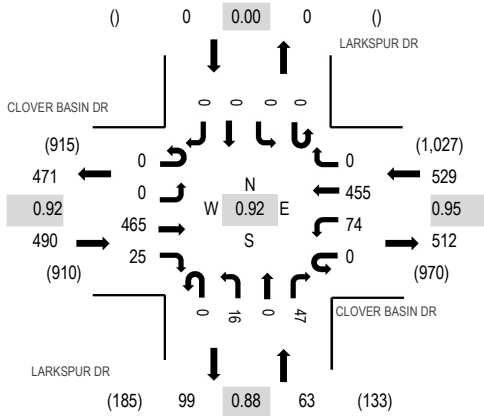
Location: 3 LARKSPUR DR & CLOVER BASIN DR PM

Date: Tuesday, March 12, 2024

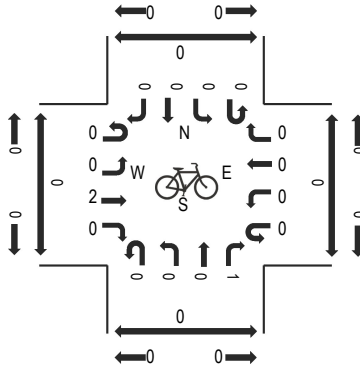
Peak Hour: 04:45 PM - 05:45 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

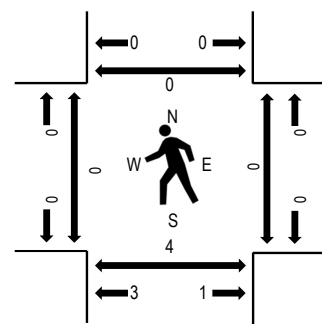
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

| Interval Start Time | CLOVER BASIN DR Eastbound | | | | CLOVER BASIN DR Westbound | | | | LARKSPUR DR Northbound | | | | LARKSPUR DR Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|------------------------------|------|------|-------|------------------------------|------|------|-------|---------------------------|------|------|-------|---------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 4:00 PM | 0 | 0 | 89 | 4 | 0 | 16 | 119 | 0 | 0 | 5 | 0 | 10 | 0 | 0 | 0 | 0 | 243 | 1,011 | 0 | 0 | 2 | 0 |
| 4:15 PM | 0 | 0 | 94 | 9 | 0 | 18 | 114 | 0 | 0 | 3 | 0 | 12 | 0 | 0 | 0 | 0 | 250 | 1,062 | 0 | 0 | 2 | 0 |
| 4:30 PM | 0 | 0 | 116 | 3 | 0 | 15 | 94 | 0 | 0 | 4 | 0 | 16 | 0 | 0 | 0 | 0 | 248 | 1,081 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 121 | 6 | 0 | 19 | 111 | 0 | 0 | 3 | 0 | 10 | 0 | 0 | 0 | 0 | 270 | 1,082 | 0 | 0 | 1 | 0 |
| 5:00 PM | 0 | 0 | 126 | 9 | 0 | 17 | 122 | 0 | 0 | 4 | 0 | 16 | 0 | 0 | 0 | 0 | 294 | 1,059 | 0 | 0 | 1 | 0 |
| 5:15 PM | 0 | 0 | 110 | 8 | 0 | 23 | 112 | 0 | 0 | 5 | 0 | 11 | 0 | 0 | 0 | 0 | 269 | | 0 | 0 | 2 | 0 |
| 5:30 PM | 0 | 0 | 108 | 2 | 0 | 15 | 110 | 0 | 0 | 4 | 0 | 10 | 0 | 0 | 0 | 0 | 249 | | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 103 | 2 | 0 | 19 | 103 | 0 | 0 | 2 | 0 | 18 | 0 | 0 | 0 | 0 | 247 | | 0 | 0 | 0 | 0 |
| Count Total | 0 | 0 | 867 | 43 | 0 | 142 | 885 | 0 | 0 | 30 | 0 | 103 | 0 | 0 | 0 | 0 | 2,070 | | 0 | 0 | 8 | 0 |
| Peak Hour | 0 | 0 | 465 | 25 | 0 | 74 | 455 | 0 | 0 | 16 | 0 | 47 | 0 | 0 | 0 | 0 | 1,082 | | 0 | 0 | 4 | 0 |



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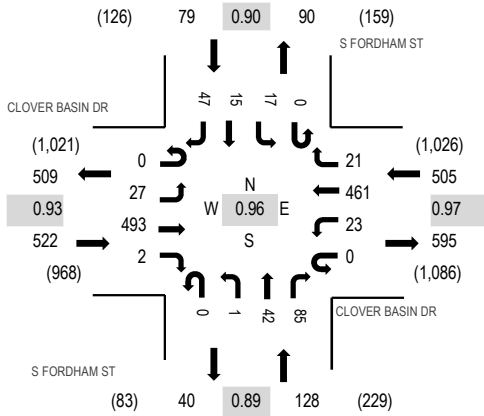
Location: 4 S FORDHAM ST & CLOVER BASIN DR PM

Date: Tuesday, March 12, 2024

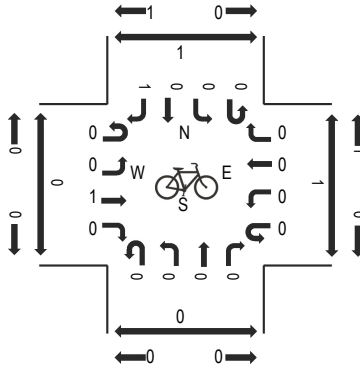
Peak Hour: 04:30 PM - 05:30 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

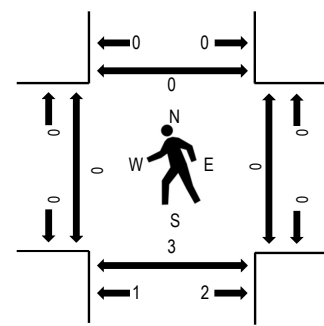
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

| Interval Start Time | CLOVER BASIN DR Eastbound | | | | CLOVER BASIN DR Westbound | | | | S FORDHAM ST Northbound | | | | S FORDHAM ST Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|------------------------------|------|------|-------|------------------------------|------|------|-------|----------------------------|------|------|-------|----------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 4:00 PM | 0 | 4 | 104 | 1 | 0 | 8 | 119 | 3 | 0 | 2 | 11 | 25 | 0 | 3 | 3 | 10 | 293 | 1,171 | 0 | 0 | 2 | 0 |
| 4:15 PM | 0 | 7 | 100 | 0 | 0 | 7 | 119 | 4 | 0 | 2 | 5 | 22 | 0 | 1 | 2 | 7 | 276 | 1,200 | 0 | 0 | 1 | 0 |
| 4:30 PM | 0 | 8 | 124 | 1 | 0 | 7 | 99 | 2 | 0 | 0 | 8 | 24 | 0 | 6 | 6 | 10 | 295 | 1,234 | 0 | 0 | 1 | 0 |
| 4:45 PM | 0 | 6 | 122 | 1 | 0 | 5 | 120 | 7 | 0 | 1 | 9 | 16 | 0 | 6 | 3 | 11 | 307 | 1,204 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 7 | 133 | 0 | 0 | 5 | 119 | 4 | 0 | 0 | 12 | 24 | 0 | 1 | 2 | 15 | 322 | 1,178 | 0 | 0 | 2 | 0 |
| 5:15 PM | 0 | 6 | 114 | 0 | 0 | 6 | 123 | 8 | 0 | 0 | 13 | 21 | 0 | 4 | 4 | 11 | 310 | | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 9 | 98 | 0 | 0 | 8 | 121 | 5 | 0 | 0 | 4 | 12 | 0 | 1 | 2 | 5 | 265 | | 0 | 0 | 0 | 1 |
| 5:45 PM | 0 | 7 | 114 | 2 | 0 | 6 | 117 | 4 | 0 | 1 | 6 | 11 | 0 | 0 | 4 | 9 | 281 | | 0 | 0 | 0 | 0 |
| Count Total | 0 | 54 | 909 | 5 | 0 | 52 | 937 | 37 | 0 | 6 | 68 | 155 | 0 | 22 | 26 | 78 | 2,349 | | 0 | 0 | 6 | 1 |
| Peak Hour | 0 | 27 | 493 | 2 | 0 | 23 | 461 | 21 | 0 | 1 | 42 | 85 | 0 | 17 | 15 | 47 | 1,234 | | 0 | 0 | 3 | 0 |



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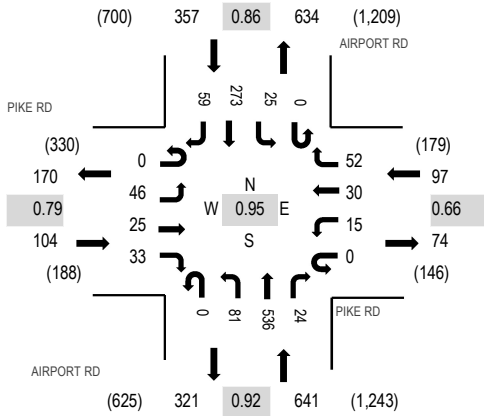
Location: 5 AIRPORT RD & PIKE RD PM

Date: Tuesday, March 12, 2024

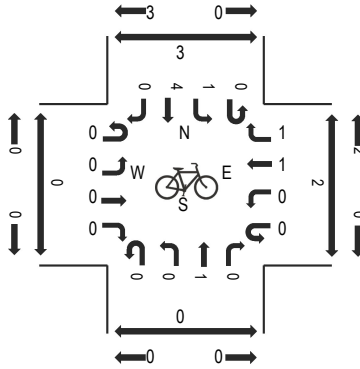
Peak Hour: 04:30 PM - 05:30 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

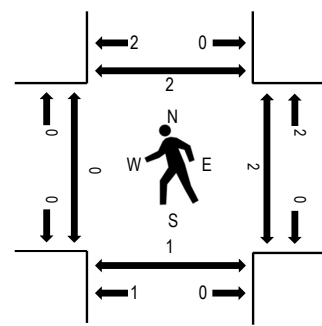
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

| Interval Start Time | PIKE RD Eastbound | | | | PIKE RD Westbound | | | | AIRPORT RD Northbound | | | | AIRPORT RD Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|----------------------|------|------|-------|----------------------|------|------|-------|--------------------------|------|-------|-------|--------------------------|------|------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 4:00 PM | 0 | 17 | 2 | 6 | 0 | 3 | 8 | 8 | 0 | 10 | 114 | 13 | 0 | 5 | 77 | 11 | 274 | 1,136 | 0 | 1 | 0 | 0 |
| 4:15 PM | 0 | 10 | 3 | 5 | 0 | 6 | 5 | 9 | 0 | 16 | 123 | 10 | 0 | 3 | 59 | 20 | 269 | 1,154 | 0 | 0 | 0 | 2 |
| 4:30 PM | 0 | 8 | 2 | 8 | 0 | 2 | 9 | 4 | 0 | 22 | 147 | 6 | 0 | 7 | 73 | 9 | 297 | 1,199 | 0 | 0 | 1 | 0 |
| 4:45 PM | 0 | 15 | 9 | 7 | 0 | 4 | 4 | 9 | 0 | 18 | 142 | 7 | 0 | 4 | 64 | 13 | 296 | 1,192 | 0 | 0 | 0 | 1 |
| 5:00 PM | 0 | 8 | 6 | 7 | 0 | 4 | 10 | 27 | 0 | 15 | 128 | 4 | 0 | 8 | 58 | 17 | 292 | 1,174 | 0 | 2 | 0 | 1 |
| 5:15 PM | 0 | 15 | 8 | 11 | 0 | 5 | 7 | 12 | 0 | 26 | 119 | 7 | 0 | 6 | 78 | 20 | 314 | | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 12 | 1 | 9 | 0 | 5 | 6 | 7 | 0 | 18 | 140 | 7 | 0 | 11 | 63 | 11 | 290 | | 0 | 0 | 0 | 2 |
| 5:45 PM | 0 | 9 | 2 | 8 | 0 | 7 | 11 | 7 | 0 | 22 | 119 | 10 | 0 | 5 | 56 | 22 | 278 | | 0 | 1 | 0 | 0 |
| Count Total | 0 | 94 | 33 | 61 | 0 | 36 | 60 | 83 | 0 | 147 | 1,032 | 64 | 0 | 49 | 528 | 123 | 2,310 | | 0 | 4 | 1 | 6 |
| Peak Hour | 0 | 46 | 25 | 33 | 0 | 15 | 30 | 52 | 0 | 81 | 536 | 24 | 0 | 25 | 273 | 59 | 1,199 | | 0 | 2 | 1 | 2 |

All Traffic Data Services

9660 W 44th Ave
Wheat Ridge, CO 80033

Page 1

Site Code: 8

Station ID: 8

CLOVER BASIN DR W.O. LARKSPUR DR

| Start Time | 12-Mar-24 Tue | EB | WB | | | | | | | Total |
|------------|------------------|-------|-------|---|---|---|---|---|---|-------|
| 12:00 AM | | 6 | 11 | | | | | | | 17 |
| 01:00 | | 6 | 5 | | | | | | | 11 |
| 02:00 | | 2 | 3 | | | | | | | 5 |
| 03:00 | | 5 | 1 | | | | | | | 6 |
| 04:00 | | 26 | 7 | | | | | | | 33 |
| 05:00 | | 76 | 24 | | | | | | | 100 |
| 06:00 | | 110 | 81 | | | | | | | 191 |
| 07:00 | | 364 | 216 | | | | | | | 580 |
| 08:00 | | 387 | 316 | | | | | | | 703 |
| 09:00 | | 267 | 195 | | | | | | | 462 |
| 10:00 | | 228 | 199 | | | | | | | 427 |
| 11:00 | | 314 | 275 | | | | | | | 589 |
| 12:00 PM | | 312 | 323 | | | | | | | 635 |
| 01:00 | | 277 | 300 | | | | | | | 577 |
| 02:00 | | 296 | 320 | | | | | | | 616 |
| 03:00 | | 474 | 451 | | | | | | | 925 |
| 04:00 | | 437 | 444 | | | | | | | 881 |
| 05:00 | | 453 | 464 | | | | | | | 917 |
| 06:00 | | 267 | 393 | | | | | | | 660 |
| 07:00 | | 186 | 270 | | | | | | | 456 |
| 08:00 | | 102 | 219 | | | | | | | 321 |
| 09:00 | | 69 | 100 | | | | | | | 169 |
| 10:00 | | 34 | 66 | | | | | | | 100 |
| 11:00 | | 12 | 26 | | | | | | | 38 |
| Total | | 4710 | 4709 | | | | | | | 9419 |
| Percent | | 50.0% | 50.0% | | | | | | | |
| AM Peak | - | 08:00 | 08:00 | - | - | - | - | - | - | 08:00 |
| Vol. | - | 387 | 316 | - | - | - | - | - | - | 703 |
| PM Peak | - | 15:00 | 17:00 | - | - | - | - | - | - | 15:00 |
| Vol. | - | 474 | 464 | - | - | - | - | - | - | 925 |

All Traffic Data Services

9660 W 44th Ave
Wheat Ridge, CO 80033

Site Code: 8
Station ID: 8
CLOVER BASIN DR W.O. LARKSPUR DR

| Start Time | 13-Mar-24 Wed | EB | WB | | | | | | | Total |
|-------------|------------------|--------|-------|---------|---|---|---|---|---|-------|
| 12:00 AM | | 6 | 16 | | | | | | | 22 |
| 01:00 | | 4 | 4 | | | | | | | 8 |
| 02:00 | | 1 | 3 | | | | | | | 4 |
| 03:00 | | 8 | 3 | | | | | | | 11 |
| 04:00 | | 31 | 9 | | | | | | | 40 |
| 05:00 | | 72 | 20 | | | | | | | 92 |
| 06:00 | | 124 | 84 | | | | | | | 208 |
| 07:00 | | 344 | 209 | | | | | | | 553 |
| 08:00 | | 431 | 295 | | | | | | | 726 |
| 09:00 | | 282 | 244 | | | | | | | 526 |
| 10:00 | | 251 | 234 | | | | | | | 485 |
| 11:00 | | 309 | 264 | | | | | | | 573 |
| 12:00 PM | | 317 | 335 | | | | | | | 652 |
| 01:00 | | 341 | 311 | | | | | | | 652 |
| 02:00 | | 267 | 344 | | | | | | | 611 |
| 03:00 | | 451 | 424 | | | | | | | 875 |
| 04:00 | | 375 | 375 | | | | | | | 750 |
| 05:00 | | 391 | 440 | | | | | | | 831 |
| 06:00 | | 252 | 318 | | | | | | | 570 |
| 07:00 | | 174 | 265 | | | | | | | 439 |
| 08:00 | | 83 | 189 | | | | | | | 272 |
| 09:00 | | 55 | 103 | | | | | | | 158 |
| 10:00 | | 24 | 41 | | | | | | | 65 |
| 11:00 | | 7 | 19 | | | | | | | 26 |
| Total | | 4600 | 4549 | | | | | | | 9149 |
| Percent | | 50.3% | 49.7% | | | | | | | |
| AM Peak | - | 08:00 | 08:00 | - | - | - | - | - | - | 08:00 |
| Vol. | - | 431 | 295 | - | - | - | - | - | - | 726 |
| PM Peak | - | 15:00 | 17:00 | - | - | - | - | - | - | 15:00 |
| Vol. | - | 451 | 440 | - | - | - | - | - | - | 875 |
| Grand Total | | 9310 | 9258 | | | | | | | 18568 |
| Percent | | 50.1% | 49.9% | | | | | | | |
| ADT | | ADT 38 | | AADT 38 | | | | | | |

All Traffic Data Services

9660 W 44th Ave
Wheat Ridge, CO 80033

Page 1

Site Code: 9
Station ID: 9
CLOVER BASIN DR W.O. S FORDHAM ST

| Start Time | 12-Mar-24 Tue | EB | WB | Total |
|------------|------------------|-------|-------|-------|
| 12:00 AM | | 5 | 12 | 17 |
| 01:00 | | 5 | 7 | 12 |
| 02:00 | | 3 | 3 | 6 |
| 03:00 | | 5 | 2 | 7 |
| 04:00 | | 31 | 7 | 38 |
| 05:00 | | 86 | 25 | 111 |
| 06:00 | | 139 | 93 | 232 |
| 07:00 | | 407 | 220 | 627 |
| 08:00 | | 435 | 318 | 753 |
| 09:00 | | 314 | 218 | 532 |
| 10:00 | | 258 | 221 | 479 |
| 11:00 | | 341 | 306 | 647 |
| 12:00 PM | | 351 | 366 | 717 |
| 01:00 | | 307 | 339 | 646 |
| 02:00 | | 304 | 353 | 657 |
| 03:00 | | 501 | 496 | 997 |
| 04:00 | | 478 | 500 | 978 |
| 05:00 | | 490 | 521 | 1011 |
| 06:00 | | 314 | 437 | 751 |
| 07:00 | | 206 | 308 | 514 |
| 08:00 | | 116 | 265 | 381 |
| 09:00 | | 69 | 129 | 198 |
| 10:00 | | 42 | 75 | 117 |
| 11:00 | | 13 | 26 | 39 |
| Total | | 5220 | 5247 | 10467 |
| Percent | | 49.9% | 50.1% | |
| AM Peak | - | 08:00 | 08:00 | 08:00 |
| Vol. | - | 435 | 318 | 753 |
| PM Peak | - | 15:00 | 17:00 | 17:00 |
| Vol. | - | 501 | 521 | 1011 |

All Traffic Data Services

9660 W 44th Ave
Wheat Ridge, CO 80033

Site Code: 9
Station ID: 9
CLOVER BASIN DR W.O. S FORDHAM ST

| Start Time | 13-Mar-24 Wed | EB | WB | Total |
|-------------|------------------|------------|-------------|-------|
| 12:00 AM | | 6 | 16 | 22 |
| 01:00 | | 3 | 7 | 10 |
| 02:00 | | 1 | 3 | 4 |
| 03:00 | | 9 | 3 | 12 |
| 04:00 | | 34 | 10 | 44 |
| 05:00 | | 84 | 21 | 105 |
| 06:00 | | 150 | 107 | 257 |
| 07:00 | | 371 | 219 | 590 |
| 08:00 | | 449 | 313 | 762 |
| 09:00 | | 343 | 273 | 616 |
| 10:00 | | 287 | 273 | 560 |
| 11:00 | | 357 | 314 | 671 |
| 12:00 PM | | 350 | 386 | 736 |
| 01:00 | | 339 | 343 | 682 |
| 02:00 | | 313 | 350 | 663 |
| 03:00 | | 471 | 457 | 928 |
| 04:00 | | 418 | 436 | 854 |
| 05:00 | | 410 | 515 | 925 |
| 06:00 | | 288 | 391 | 679 |
| 07:00 | | 204 | 308 | 512 |
| 08:00 | | 103 | 223 | 326 |
| 09:00 | | 62 | 123 | 185 |
| 10:00 | | 28 | 48 | 76 |
| 11:00 | | 8 | 18 | 26 |
| Total | | 5088 | 5157 | 10245 |
| Percent | | 49.7% | 50.3% | |
| AM Peak | - | 08:00 | 11:00 | - |
| Vol. | - | 449 | 314 | - |
| PM Peak | - | 15:00 | 17:00 | - |
| Vol. | - | 471 | 515 | - |
| Grand Total | | 10308 | 10404 | 20712 |
| Percent | | 49.8% | 50.2% | |
| ADT | | ADT 10,356 | AADT 10,356 | |

All Traffic Data Services

9660 W 44th Ave
Wheat Ridge, CO 80033

Page 1

Site Code: 10
Station ID: 10
S FORDHAM ST N O. CLOVER BASIN DR

| Start Time | 12-Mar-24 Tue | NB | SB | | | | | | | Total |
|------------|------------------|-------|-------|---|---|---|---|---|---|-------|
| 12:00 AM | | 3 | 2 | | | | | | | 5 |
| 01:00 | | 0 | 3 | | | | | | | 3 |
| 02:00 | | 0 | 0 | | | | | | | 0 |
| 03:00 | | 1 | 0 | | | | | | | 1 |
| 04:00 | | 2 | 3 | | | | | | | 5 |
| 05:00 | | 4 | 11 | | | | | | | 15 |
| 06:00 | | 20 | 33 | | | | | | | 53 |
| 07:00 | | 49 | 92 | | | | | | | 141 |
| 08:00 | | 47 | 94 | | | | | | | 141 |
| 09:00 | | 46 | 54 | | | | | | | 100 |
| 10:00 | | 45 | 50 | | | | | | | 95 |
| 11:00 | | 54 | 63 | | | | | | | 117 |
| 12:00 PM | | 63 | 58 | | | | | | | 121 |
| 01:00 | | 54 | 65 | | | | | | | 119 |
| 02:00 | | 50 | 56 | | | | | | | 106 |
| 03:00 | | 69 | 66 | | | | | | | 135 |
| 04:00 | | 74 | 68 | | | | | | | 142 |
| 05:00 | | 85 | 58 | | | | | | | 143 |
| 06:00 | | 61 | 64 | | | | | | | 125 |
| 07:00 | | 44 | 29 | | | | | | | 73 |
| 08:00 | | 28 | 27 | | | | | | | 55 |
| 09:00 | | 19 | 12 | | | | | | | 31 |
| 10:00 | | 11 | 7 | | | | | | | 18 |
| 11:00 | | 1 | 3 | | | | | | | 4 |
| Total | | 830 | 918 | | | | | | | 1748 |
| Percent | | 47.5% | 52.5% | | | | | | | |
| AM Peak | - | 11:00 | 08:00 | - | - | - | - | - | - | 07:00 |
| Vol. | - | 54 | 94 | - | - | - | - | - | - | 141 |
| PM Peak | - | 17:00 | 16:00 | - | - | - | - | - | - | 17:00 |
| Vol. | - | 85 | 68 | - | - | - | - | - | - | 143 |

All Traffic Data Services

9660 W 44th Ave
Wheat Ridge, CO 80033

Site Code: 10
Station ID: 10
S FORDHAM ST N O. CLOVER BASIN DR

| Start Time | 13-Mar-24 Wed | NB | SB | | | | | | | Total |
|-------------|------------------|-----------|------------|---|---|---|---|---|---|-------|
| 12:00 AM | | 0 | 0 | | | | | | | 0 |
| 01:00 | | 0 | 1 | | | | | | | 1 |
| 02:00 | | 0 | 2 | | | | | | | 2 |
| 03:00 | | 0 | 1 | | | | | | | 1 |
| 04:00 | | 4 | 3 | | | | | | | 7 |
| 05:00 | | 7 | 11 | | | | | | | 18 |
| 06:00 | | 19 | 41 | | | | | | | 60 |
| 07:00 | | 39 | 95 | | | | | | | 134 |
| 08:00 | | 50 | 94 | | | | | | | 144 |
| 09:00 | | 45 | 49 | | | | | | | 94 |
| 10:00 | | 54 | 61 | | | | | | | 115 |
| 11:00 | | 53 | 63 | | | | | | | 116 |
| 12:00 PM | | 71 | 69 | | | | | | | 140 |
| 01:00 | | 46 | 69 | | | | | | | 115 |
| 02:00 | | 47 | 66 | | | | | | | 113 |
| 03:00 | | 77 | 58 | | | | | | | 135 |
| 04:00 | | 67 | 56 | | | | | | | 123 |
| 05:00 | | 71 | 76 | | | | | | | 147 |
| 06:00 | | 75 | 56 | | | | | | | 131 |
| 07:00 | | 33 | 39 | | | | | | | 72 |
| 08:00 | | 25 | 19 | | | | | | | 44 |
| 09:00 | | 21 | 10 | | | | | | | 31 |
| 10:00 | | 6 | 7 | | | | | | | 13 |
| 11:00 | | 2 | 2 | | | | | | | 4 |
| Total | | 812 | 948 | | | | | | | 1760 |
| Percent | | 46.1% | 53.9% | | | | | | | |
| AM Peak | - | 10:00 | 07:00 | - | - | - | - | - | - | 08:00 |
| Vol. | - | 54 | 95 | - | - | - | - | - | - | 144 |
| PM Peak | - | 15:00 | 17:00 | - | - | - | - | - | - | 17:00 |
| Vol. | - | 77 | 76 | - | - | - | - | - | - | 147 |
| Grand Total | | 1642 | 1866 | | | | | | | 3508 |
| Percent | | 46.8% | 53.2% | | | | | | | |
| ADT | | ADT 1,754 | AADT 1,754 | | | | | | | |

All Traffic Data Services

9660 W 44th Ave
Wheat Ridge, CO 80033

Page 1

Site Code: 11
Station ID: 11
CLOVER BASIN DR E.O. S FORDHAM ST

| Start Time | 12-Mar-24 | EB | WB | | | | | | | | Total |
|------------|-----------|-------|-------|---|---|---|---|---|---|-------|-------|
| 12:00 AM | | 5 | 13 | | | | | | | | 18 |
| 01:00 | | 6 | 7 | | | | | | | | 13 |
| 02:00 | | 5 | 2 | | | | | | | | 7 |
| 03:00 | | 4 | 2 | | | | | | | | 6 |
| 04:00 | | 33 | 12 | | | | | | | | 45 |
| 05:00 | | 86 | 42 | | | | | | | | 128 |
| 06:00 | | 146 | 136 | | | | | | | | 282 |
| 07:00 | | 418 | 258 | | | | | | | | 676 |
| 08:00 | | 459 | 338 | | | | | | | | 797 |
| 09:00 | | 326 | 231 | | | | | | | | 557 |
| 10:00 | | 279 | 244 | | | | | | | | 523 |
| 11:00 | | 405 | 329 | | | | | | | | 734 |
| 12:00 PM | | 422 | 414 | | | | | | | | 836 |
| 01:00 | | 354 | 370 | | | | | | | | 724 |
| 02:00 | | 372 | 369 | | | | | | | | 741 |
| 03:00 | | 571 | 502 | | | | | | | | 1073 |
| 04:00 | | 553 | 500 | | | | | | | | 1053 |
| 05:00 | | 533 | 526 | | | | | | | | 1059 |
| 06:00 | | 351 | 445 | | | | | | | | 796 |
| 07:00 | | 220 | 318 | | | | | | | | 538 |
| 08:00 | | 119 | 261 | | | | | | | | 380 |
| 09:00 | | 68 | 131 | | | | | | | | 199 |
| 10:00 | | 38 | 75 | | | | | | | | 113 |
| 11:00 | | 16 | 26 | | | | | | | | 42 |
| Total | | 5789 | 5551 | | | | | | | | 11340 |
| Percent | | 51.0% | 49.0% | | | | | | | | |
| AM Peak | - | 08:00 | 08:00 | - | - | - | - | - | - | 08:00 | |
| Vol. | - | 459 | 338 | - | - | - | - | - | - | 797 | |
| PM Peak | - | 15:00 | 17:00 | - | - | - | - | - | - | 15:00 | |
| Vol. | - | 571 | 526 | - | - | - | - | - | - | 1073 | |

All Traffic Data Services

9660 W 44th Ave
Wheat Ridge, CO 80033

Site Code: 11
Station ID: 11
CLOVER BASIN DR E.O. S FORDHAM ST

| Start Time | 13-Mar-24 Wed | EB | WB | | | | | | | Total |
|-------------|------------------|------------|-------------|---|---|---|---|---|---|-------|
| 12:00 AM | | 6 | 16 | | | | | | | 22 |
| 01:00 | | 3 | 6 | | | | | | | 9 |
| 02:00 | | 2 | 2 | | | | | | | 4 |
| 03:00 | | 10 | 3 | | | | | | | 13 |
| 04:00 | | 33 | 17 | | | | | | | 50 |
| 05:00 | | 85 | 43 | | | | | | | 128 |
| 06:00 | | 156 | 135 | | | | | | | 291 |
| 07:00 | | 400 | 254 | | | | | | | 654 |
| 08:00 | | 480 | 342 | | | | | | | 822 |
| 09:00 | | 360 | 293 | | | | | | | 653 |
| 10:00 | | 304 | 296 | | | | | | | 600 |
| 11:00 | | 434 | 351 | | | | | | | 785 |
| 12:00 PM | | 414 | 433 | | | | | | | 847 |
| 01:00 | | 361 | 363 | | | | | | | 724 |
| 02:00 | | 366 | 359 | | | | | | | 725 |
| 03:00 | | 529 | 456 | | | | | | | 985 |
| 04:00 | | 482 | 450 | | | | | | | 932 |
| 05:00 | | 473 | 514 | | | | | | | 987 |
| 06:00 | | 319 | 397 | | | | | | | 716 |
| 07:00 | | 231 | 318 | | | | | | | 549 |
| 08:00 | | 109 | 234 | | | | | | | 343 |
| 09:00 | | 61 | 127 | | | | | | | 188 |
| 10:00 | | 31 | 50 | | | | | | | 81 |
| 11:00 | | 10 | 19 | | | | | | | 29 |
| Total | | 5659 | 5478 | | | | | | | 11137 |
| Percent | | 50.8% | 49.2% | | | | | | | |
| AM Peak | - | 08:00 | 11:00 | - | - | - | - | - | - | 08:00 |
| Vol. | - | 480 | 351 | - | - | - | - | - | - | 822 |
| PM Peak | - | 15:00 | 17:00 | - | - | - | - | - | - | 17:00 |
| Vol. | - | 529 | 514 | - | - | - | - | - | - | 987 |
| Grand Total | | 11448 | 11029 | | | | | | | 22477 |
| Percent | | 50.9% | 49.1% | | | | | | | |
| ADT | | ADT 11,238 | AADT 11,238 | | | | | | | |

All Traffic Data Services

9660 W 44th Ave
Wheat Ridge, CO 80033

Page 1

Site Code: 12
Station ID: 12
S FORDHAM ST S O. CLOVER BASIN DR

| Start Time | 12-Mar-24 | | | | | | | | | | Total |
|------------|-----------|-------|-------|---|---|---|---|---|---|---|-------|
| | Tue | NB | SB | | | | | | | | |
| 12:00 AM | | 2 | 2 | | | | | | | | 4 |
| 01:00 | | 0 | 2 | | | | | | | | 2 |
| 02:00 | | 3 | 0 | | | | | | | | 3 |
| 03:00 | | 0 | 0 | | | | | | | | 0 |
| 04:00 | | 1 | 5 | | | | | | | | 6 |
| 05:00 | | 3 | 27 | | | | | | | | 30 |
| 06:00 | | 19 | 68 | | | | | | | | 87 |
| 07:00 | | 40 | 110 | | | | | | | | 150 |
| 08:00 | | 50 | 93 | | | | | | | | 143 |
| 09:00 | | 47 | 56 | | | | | | | | 103 |
| 10:00 | | 51 | 58 | | | | | | | | 109 |
| 11:00 | | 102 | 70 | | | | | | | | 172 |
| 12:00 PM | | 108 | 80 | | | | | | | | 188 |
| 01:00 | | 77 | 72 | | | | | | | | 149 |
| 02:00 | | 107 | 61 | | | | | | | | 168 |
| 03:00 | | 126 | 59 | | | | | | | | 185 |
| 04:00 | | 125 | 44 | | | | | | | | 169 |
| 05:00 | | 104 | 39 | | | | | | | | 143 |
| 06:00 | | 78 | 52 | | | | | | | | 130 |
| 07:00 | | 45 | 26 | | | | | | | | 71 |
| 08:00 | | 23 | 15 | | | | | | | | 38 |
| 09:00 | | 13 | 9 | | | | | | | | 22 |
| 10:00 | | 6 | 6 | | | | | | | | 12 |
| 11:00 | | 4 | 3 | | | | | | | | 7 |
| Total | | 1134 | 957 | | | | | | | | 2091 |
| Percent | | 54.2% | 45.8% | | | | | | | | |
| AM Peak | - | 11:00 | 07:00 | - | - | - | - | - | - | - | 11:00 |
| Vol. | - | 102 | 110 | - | - | - | - | - | - | - | 172 |
| PM Peak | - | 15:00 | 12:00 | - | - | - | - | - | - | - | 12:00 |
| Vol. | - | 126 | 80 | - | - | - | - | - | - | - | 188 |

All Traffic Data Services

9660 W 44th Ave
Wheat Ridge, CO 80033

Page 2

Site Code: 12
Station ID: 12
S FORDHAM ST S O. CLOVER BASIN DR

| Start Time | 13-Mar-24 | NB | SB | | | | | | | | Total |
|-------------|-----------|-----------|------------|---|---|---|---|---|---|-------|-------|
| 12:00 AM | | 1 | 1 | | | | | | | | 2 |
| 01:00 | | 1 | 1 | | | | | | | | 2 |
| 02:00 | | 1 | 1 | | | | | | | | 2 |
| 03:00 | | 0 | 0 | | | | | | | | 0 |
| 04:00 | | 1 | 8 | | | | | | | | 9 |
| 05:00 | | 5 | 30 | | | | | | | | 35 |
| 06:00 | | 23 | 67 | | | | | | | | 90 |
| 07:00 | | 45 | 107 | | | | | | | | 152 |
| 08:00 | | 65 | 107 | | | | | | | | 172 |
| 09:00 | | 55 | 62 | | | | | | | | 117 |
| 10:00 | | 59 | 72 | | | | | | | | 131 |
| 11:00 | | 102 | 72 | | | | | | | | 174 |
| 12:00 PM | | 107 | 88 | | | | | | | | 195 |
| 01:00 | | 57 | 78 | | | | | | | | 135 |
| 02:00 | | 85 | 60 | | | | | | | | 145 |
| 03:00 | | 128 | 50 | | | | | | | | 178 |
| 04:00 | | 105 | 44 | | | | | | | | 149 |
| 05:00 | | 109 | 50 | | | | | | | | 159 |
| 06:00 | | 75 | 31 | | | | | | | | 106 |
| 07:00 | | 43 | 32 | | | | | | | | 75 |
| 08:00 | | 20 | 19 | | | | | | | | 39 |
| 09:00 | | 17 | 11 | | | | | | | | 28 |
| 10:00 | | 4 | 4 | | | | | | | | 8 |
| 11:00 | | 4 | 3 | | | | | | | | 7 |
| Total | | 1112 | 998 | | | | | | | | 2110 |
| Percent | | 52.7% | 47.3% | | | | | | | | |
| AM Peak | - | 11:00 | 07:00 | - | - | - | - | - | - | 11:00 | |
| Vol. | - | 102 | 107 | - | - | - | - | - | - | 174 | |
| PM Peak | - | 15:00 | 12:00 | - | - | - | - | - | - | 12:00 | |
| Vol. | - | 128 | 88 | - | - | - | - | - | - | 195 | |
| Grand Total | | 2246 | 1955 | | | | | | | | 4201 |
| Percent | | 53.5% | 46.5% | | | | | | | | |
| ADT | | ADT 2,100 | AADT 2,100 | | | | | | | | |

All Traffic Data Services

9660 W 44th Ave
Wheat Ridge, CO 80033

Site Code: 8

Station ID: 8

CLOVER BASIN DR W.O. LARKSPUR DR

EB

| Start Time | 1 15 | 16 20 | 21 25 | 26 30 | 31 35 | 36 40 | 41 45 | 46 50 | 51 55 | 56 60 | 61 65 | 66 70 | 71 75 | 76 999 | Total | Pace Speed | Number in Pace |
|------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-------|---------------|-------------------|
| 03/12/24 | 0 | 0 | 0 | 0 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 31-40 | 5 |
| 01:00 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 30-39 | 4 |
| 02:00 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 24-33 | 1 |
| 03:00 | 0 | 0 | 0 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 26-35 | 4 |
| 04:00 | 0 | 0 | 0 | 0 | 6 | 9 | 9 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 26 | 36-45 | 18 |
| 05:00 | 0 | 0 | 0 | 0 | 17 | 46 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 76 | 31-40 | 63 |
| 06:00 | 0 | 0 | 0 | 4 | 29 | 62 | 14 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 110 | 31-40 | 91 |
| 07:00 | 0 | 0 | 0 | 7 | 140 | 197 | 18 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 364 | 31-40 | 337 |
| 08:00 | 0 | 0 | 0 | 5 | 167 | 188 | 25 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 31-40 | 355 |
| 09:00 | 0 | 0 | 0 | 9 | 100 | 133 | 24 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 267 | 31-40 | 233 |
| 10:00 | 0 | 1 | 0 | 7 | 72 | 129 | 18 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 228 | 31-40 | 201 |
| 11:00 | 0 | 0 | 1 | 19 | 140 | 132 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 314 | 31-40 | 272 |
| 12 PM | 0 | 2 | 0 | 5 | 121 | 154 | 28 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 312 | 31-40 | 275 |
| 13:00 | 0 | 2 | 0 | 12 | 98 | 136 | 28 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 277 | 31-40 | 234 |
| 14:00 | 0 | 1 | 3 | 6 | 71 | 168 | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 296 | 31-40 | 239 |
| 15:00 | 0 | 0 | 1 | 5 | 235 | 208 | 23 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 474 | 31-40 | 443 |
| 16:00 | 0 | 0 | 0 | 23 | 198 | 197 | 18 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 437 | 31-40 | 395 |
| 17:00 | 0 | 0 | 0 | 26 | 200 | 209 | 17 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 453 | 31-40 | 409 |
| 18:00 | 0 | 0 | 0 | 13 | 113 | 127 | 13 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 267 | 31-40 | 240 |
| 19:00 | 0 | 0 | 0 | 1 | 72 | 100 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 186 | 31-40 | 172 |
| 20:00 | 0 | 0 | 1 | 5 | 37 | 47 | 10 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 102 | 31-40 | 84 |
| 21:00 | 0 | 0 | 0 | 0 | 17 | 42 | 9 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 69 | 31-40 | 59 |
| 22:00 | 0 | 0 | 0 | 0 | 13 | 15 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 31-40 | 28 |
| 23:00 | 0 | 0 | 0 | 0 | 2 | 7 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 34-43 | 10 |
| Total | 0 | 6 | 6 | 149 | 1855 | 2311 | 362 | 13 | 7 | 0 | 1 | 0 | 0 | 0 | 4710 | | |
| Percent | 0.0% | 0.1% | 0.1% | 3.2% | 39.4% | 49.1% | 7.7% | 0.3% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | | | |
| AM Peak | | 10:00 | 11:00 | 11:00 | 08:00 | 07:00 | 08:00 | 08:00 | 04:00 | | | | | | 08:00 | | |
| Vol. | | 1 | 1 | 19 | 167 | 197 | 25 | 2 | 1 | | | | | | 387 | | |
| PM Peak | | 12:00 | 14:00 | 17:00 | 15:00 | 17:00 | 14:00 | 15:00 | 20:00 | | 12:00 | | | | 15:00 | | |
| Vol. | | 2 | 3 | 26 | 235 | 209 | 47 | 2 | 2 | | 1 | | | | 474 | | |

All Traffic Data Services

9660 W 44th Ave
Wheat Ridge, CO 80033

Site Code: 8

Station ID: 8

CLOVER BASIN DR W.O. LARKSPUR DR

EB

| Start Time | 1 15 | 16 20 | 21 25 | 26 30 | 31 35 | 36 40 | 41 45 | 46 50 | 51 55 | 56 60 | 61 65 | 66 70 | 71 75 | 76 999 | Total | Pace Speed | Number in Pace |
|------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-------|---------------|-------------------|
| 03/13/24 | 0 | 0 | 0 | 0 | 2 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 35-44 | 4 |
| 01:00 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 34-43 | 4 |
| 02:00 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 29-38 | 1 |
| 03:00 | 0 | 0 | 0 | 0 | 1 | 4 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 33-42 | 5 |
| 04:00 | 0 | 0 | 0 | 1 | 5 | 13 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 34-43 | 19 |
| 05:00 | 0 | 0 | 0 | 1 | 17 | 39 | 14 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 72 | 31-40 | 56 |
| 06:00 | 0 | 0 | 1 | 2 | 45 | 56 | 18 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 124 | 31-40 | 101 |
| 07:00 | 0 | 0 | 0 | 8 | 113 | 193 | 28 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 344 | 31-40 | 306 |
| 08:00 | 0 | 0 | 0 | 8 | 209 | 190 | 23 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 431 | 31-40 | 399 |
| 09:00 | 0 | 0 | 0 | 3 | 85 | 171 | 21 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 282 | 31-40 | 256 |
| 10:00 | 0 | 1 | 0 | 16 | 112 | 108 | 12 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 251 | 31-40 | 220 |
| 11:00 | 0 | 0 | 0 | 9 | 103 | 169 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 309 | 31-40 | 272 |
| 12 PM | 0 | 2 | 0 | 6 | 128 | 152 | 26 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 317 | 31-40 | 280 |
| 13:00 | 0 | 1 | 3 | 11 | 132 | 164 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 341 | 31-40 | 296 |
| 14:00 | 0 | 0 | 0 | 8 | 93 | 140 | 24 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 267 | 31-40 | 233 |
| 15:00 | 0 | 0 | 1 | 26 | 188 | 216 | 17 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 451 | 31-40 | 404 |
| 16:00 | 0 | 0 | 0 | 7 | 139 | 205 | 23 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 375 | 31-40 | 344 |
| 17:00 | 0 | 0 | 0 | 5 | 194 | 173 | 17 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 391 | 31-40 | 367 |
| 18:00 | 0 | 0 | 4 | 10 | 108 | 116 | 12 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 252 | 31-40 | 224 |
| 19:00 | 0 | 0 | 0 | 0 | 62 | 94 | 16 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 174 | 31-40 | 156 |
| 20:00 | 0 | 0 | 0 | 0 | 23 | 45 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 83 | 31-40 | 68 |
| 21:00 | 0 | 0 | 0 | 1 | 18 | 26 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | 31-40 | 44 |
| 22:00 | 0 | 0 | 0 | 1 | 5 | 17 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 31-40 | 22 |
| 23:00 | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 34-43 | 6 |
| Total | 0 | 4 | 9 | 123 | 1782 | 2300 | 348 | 31 | 3 | 0 | 0 | 0 | 0 | 0 | 4600 | | |
| Percent | 0.0% | 0.1% | 0.2% | 2.7% | 38.7% | 50.0% | 7.6% | 0.7% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | | | |
| AM Peak | | 10:00 | 06:00 | 10:00 | 08:00 | 07:00 | 07:00 | 04:00 | | | | | | | 08:00 | | |
| Vol. | | 1 | 1 | 16 | 209 | 193 | 28 | 6 | | | | | | | 431 | | |
| PM Peak | | 12:00 | 18:00 | 15:00 | 17:00 | 15:00 | 13:00 | 12:00 | 14:00 | | | | | | 15:00 | | |
| Vol. | | 2 | 4 | 26 | 194 | 216 | 30 | 3 | 1 | | | | | | 451 | | |
| Total | 0 | 10 | 15 | 272 | 3637 | 4611 | 710 | 44 | 10 | 0 | 1 | 0 | 0 | 0 | 9310 | | |
| Percent | 0.0% | 0.1% | 0.2% | 2.9% | 39.1% | 49.5% | 7.6% | 0.5% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | | | |

15th Percentile : 31 MPH
50th Percentile : 35 MPH
85th Percentile : 39 MPH
95th Percentile : 42 MPH

Stats
10 MPH Pace Speed : 31-40 MPH
Number in Pace : 8248
Percent in Pace : 88.6%
Number of Vehicles > 55 MPH : 1
Percent of Vehicles > 55 MPH : 0.0%
Mean Speed(Average) : 36 MPH

All Traffic Data Services

9660 W 44th Ave
Wheat Ridge, CO 80033

Site Code: 8

Station ID: 8

CLOVER BASIN DR W.O. LARKSPUR DR

| WB | Start Time | 1 15 | 16 20 | 21 25 | 26 30 | 31 35 | 36 40 | 41 45 | 46 50 | 51 55 | 56 60 | 61 65 | 66 70 | 71 75 | 76 999 | Total | Pace Speed | Number in Pace |
|----------|---------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-------|---------------|-------------------|
| 03/12/24 | | 0 | 0 | 0 | 0 | 2 | 6 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 36-45 | 8 |
| 01:00 | | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 31-40 | 3 |
| 02:00 | | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 30-39 | 3 |
| 03:00 | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 29-38 | 1 |
| 04:00 | | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 31-40 | 6 |
| 05:00 | | 0 | 0 | 0 | 0 | 6 | 12 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 31-40 | 18 |
| 06:00 | | 0 | 0 | 0 | 3 | 35 | 28 | 10 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 81 | 31-40 | 63 |
| 07:00 | | 0 | 0 | 1 | 17 | 106 | 66 | 21 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 216 | 31-40 | 172 |
| 08:00 | | 0 | 0 | 2 | 31 | 116 | 128 | 30 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 316 | 31-40 | 244 |
| 09:00 | | 0 | 0 | 1 | 11 | 85 | 71 | 24 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 195 | 31-40 | 156 |
| 10:00 | | 0 | 0 | 0 | 18 | 96 | 57 | 24 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 199 | 31-40 | 153 |
| 11:00 | | 0 | 0 | 1 | 32 | 152 | 65 | 20 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 275 | 31-40 | 217 |
| 12 PM | | 0 | 0 | 1 | 34 | 124 | 130 | 26 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 323 | 31-40 | 254 |
| 13:00 | | 0 | 0 | 0 | 20 | 118 | 112 | 36 | 11 | 3 | 0 | 0 | 0 | 0 | 0 | 300 | 31-40 | 230 |
| 14:00 | | 0 | 0 | 1 | 17 | 109 | 142 | 42 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 320 | 31-40 | 251 |
| 15:00 | | 0 | 0 | 3 | 74 | 170 | 157 | 39 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 451 | 31-40 | 327 |
| 16:00 | | 0 | 0 | 2 | 36 | 187 | 177 | 37 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 444 | 31-40 | 364 |
| 17:00 | | 0 | 0 | 4 | 46 | 217 | 158 | 34 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 464 | 31-40 | 375 |
| 18:00 | | 0 | 0 | 2 | 52 | 166 | 139 | 29 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 393 | 31-40 | 305 |
| 19:00 | | 0 | 0 | 2 | 29 | 127 | 85 | 22 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 270 | 31-40 | 212 |
| 20:00 | | 0 | 0 | 4 | 25 | 98 | 67 | 16 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 219 | 31-40 | 165 |
| 21:00 | | 0 | 0 | 0 | 2 | 38 | 44 | 13 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 100 | 31-40 | 82 |
| 22:00 | | 0 | 0 | 2 | 5 | 24 | 17 | 14 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 31-40 | 41 |
| 23:00 | | 0 | 0 | 0 | 0 | 8 | 5 | 7 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 26 | 31-40 | 13 |
| Total | | 0 | 0 | 26 | 452 | 1989 | 1674 | 451 | 92 | 22 | 2 | 1 | 0 | 0 | 0 | 4709 | | |
| Percent | | 0.0% | 0.0% | 0.6% | 9.6% | 42.2% | 35.5% | 9.6% | 2.0% | 0.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | | | |
| AM Peak | | | | 08:00 | 11:00 | 11:00 | 08:00 | 08:00 | 08:00 | 08:00 | 07:00 | 06:00 | | | | 08:00 | | |
| Vol. | | | | 2 | 32 | 152 | 128 | 30 | 5 | 4 | 1 | 1 | | | | 316 | | |
| PM Peak | | | | 17:00 | 15:00 | 17:00 | 16:00 | 14:00 | 13:00 | 13:00 | 18:00 | | | | | 17:00 | | |
| Vol. | | | | 4 | 74 | 217 | 177 | 42 | 11 | 3 | 1 | | | | | 464 | | |

All Traffic Data Services

9660 W 44th Ave
Wheat Ridge, CO 80033

Site Code: 8

Station ID: 8

CLOVER BASIN DR W.O. LARKSPUR DR

WB











| Start Time | 1 15 | 16 20 | 21 25 | 26 30 | 31 35 | 36 40 | 41 45 | 46 50 | 51 55 | 56 60 | 61 65 | 66 70 | 71 75 | 76 999 | Total | Pace Speed | Number in Pace |
|------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-------|---------------|-------------------|
| 03/13/24 | 0 | 0 | 0 | 1 | 6 | 6 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 31-40 | 12 |
| 01:00 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 29-38 | 3 |
| 02:00 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 31-40 | 3 |
| 03:00 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 29-38 | 3 |
| 04:00 | 0 | 0 | 0 | 1 | 3 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 9 | 31-40 | 6 |
| 05:00 | 0 | 0 | 0 | 1 | 3 | 9 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 20 | 31-40 | 12 |
| 06:00 | 0 | 0 | 1 | 8 | 24 | 38 | 10 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 84 | 31-40 | 62 |
| 07:00 | 0 | 0 | 1 | 18 | 97 | 78 | 11 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 209 | 31-40 | 175 |
| 08:00 | 0 | 0 | 7 | 24 | 126 | 99 | 34 | 2 | 2 | 0 | 0 | 1 | 0 | 0 | 295 | 31-40 | 225 |
| 09:00 | 0 | 0 | 2 | 18 | 83 | 110 | 23 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 244 | 31-40 | 193 |
| 10:00 | 0 | 0 | 4 | 15 | 103 | 84 | 26 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 234 | 31-40 | 187 |
| 11:00 | 0 | 0 | 1 | 20 | 122 | 92 | 23 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 264 | 31-40 | 214 |
| 12 PM | 0 | 0 | 4 | 18 | 132 | 134 | 34 | 11 | 2 | 0 | 0 | 0 | 0 | 0 | 335 | 31-40 | 266 |
| 13:00 | 0 | 0 | 1 | 25 | 142 | 110 | 30 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 311 | 31-40 | 252 |
| 14:00 | 0 | 0 | 4 | 28 | 167 | 118 | 23 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 344 | 31-40 | 285 |
| 15:00 | 0 | 0 | 0 | 41 | 165 | 169 | 42 | 4 | 2 | 1 | 0 | 0 | 0 | 0 | 424 | 31-40 | 334 |
| 16:00 | 0 | 0 | 0 | 11 | 127 | 168 | 60 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 375 | 31-40 | 295 |
| 17:00 | 0 | 0 | 3 | 44 | 199 | 152 | 37 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 440 | 31-40 | 351 |
| 18:00 | 0 | 0 | 0 | 23 | 145 | 115 | 30 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 318 | 31-40 | 260 |
| 19:00 | 0 | 0 | 2 | 21 | 120 | 90 | 26 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 265 | 31-40 | 210 |
| 20:00 | 0 | 0 | 0 | 19 | 57 | 77 | 30 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 189 | 31-40 | 134 |
| 21:00 | 0 | 0 | 0 | 7 | 34 | 38 | 18 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 103 | 31-40 | 72 |
| 22:00 | 0 | 0 | 0 | 4 | 16 | 9 | 10 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 41 | 31-40 | 25 |
| 23:00 | 0 | 0 | 0 | 2 | 7 | 3 | 3 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 19 | 29-38 | 10 |
| Total | 0 | 0 | 30 | 350 | 1881 | 1708 | 475 | 82 | 18 | 3 | 1 | 1 | 0 | 0 | 4549 | | |
| Percent | 0.0% | 0.0% | 0.7% | 7.7% | 41.3% | 37.5% | 10.4% | 1.8% | 0.4% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | | | |
| AM Peak | | | 08:00 | 08:00 | 08:00 | 09:00 | 08:00 | 09:00 | 08:00 | | | 08:00 | | | 08:00 | | |
| Vol. | | | 7 | 24 | 126 | 110 | 34 | 8 | 2 | | | 1 | | | 295 | | |
| PM Peak | | | 12:00 | 17:00 | 17:00 | 15:00 | 16:00 | 12:00 | 12:00 | 15:00 | 23:00 | | | | 17:00 | | |
| Vol. | | | 4 | 44 | 199 | 169 | 60 | 11 | 2 | 1 | 1 | | | | 440 | | |
| Total | 0 | 0 | 56 | 802 | 3870 | 3382 | 926 | 174 | 40 | 5 | 2 | 1 | 0 | 0 | 9258 | | |
| Percent | 0.0% | 0.0% | 0.6% | 8.7% | 41.8% | 36.5% | 10.0% | 1.9% | 0.4% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | | | |





15th Percentile : 30 MPH
50th Percentile : 34 MPH
85th Percentile : 39 MPH
95th Percentile : 43 MPH

Stats
10 MPH Pace Speed : 31-40 MPH
Number in Pace : 7252
Percent in Pace : 78.3%
Number of Vehicles > 55 MPH : 8
Percent of Vehicles > 55 MPH : 0.1%
Mean Speed(Average) : 36 MPH

APPENDIX “B”

INTERSECTION CAPACITY ANALYSIS WORKSHEETS

| | | | | | | |
|----------------------|---|---|---|---|---|---|
| |  |  |  |  |  |  |
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | 0% | | | 0% |
| Storage Length (ft) | 0 | 0 | | 0 | 200 | |
| Storage Lanes | 1 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Ped Bike Factor | | | | | | |
| Frt | | | 0.998 | | | |
| Flt Protected | 0.950 | | | | 0.950 | |
| Satd. Flow (prot) | 1770 | 0 | 3532 | 0 | 1770 | 3539 |
| Flt Permitted | 0.950 | | | | 0.950 | |
| Satd. Flow (perm) | 1770 | 0 | 3532 | 0 | 1770 | 3539 |
| Link Speed (mph) | 30 | | 30 | | | 30 |
| Link Distance (ft) | 244 | | 284 | | | 406 |
| Travel Time (s) | 5.5 | | 6.5 | | | 9.2 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |

| Intersection | | | | | | |
|--------------------------|---|------|---|------|---|---|
| Int Delay, s/veh | 0.1 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Traffic Vol, veh/h | 6 | 0 | 322 | 5 | 2 | 848 |
| Future Vol, veh/h | 6 | 0 | 322 | 5 | 2 | 848 |
| 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 |
| Mvmt Flow | 7 | 0 | 350 | 5 | 2 | 922 |

























| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 818 | 178 | 0 |
| Stage 1 | 353 | - | - |
| Stage 2 | 465 | - | - |
| Critical Hdwy | 6.84 | 6.94 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - |
| Pot Cap-1 Maneuver | 314 | 835 | - |
| Stage 1 | 682 | - | - |
| Stage 2 | 598 | - | - |
| Platoon blocked, % | | - | - |
| Mov Cap-1 Maneuver | 313 | 835 | - |
| Mov Cap-2 Maneuver | 313 | - | - |
| Stage 1 | 682 | - | - |
| Stage 2 | 597 | - | - |

| Approach | WB | NB | SB |
|-----------------------------|----|----|------|
| HCM Control Delay, s/v16.73 | | 0 | 0.02 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|---------------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 313 | 1200 |
| HCM Lane V/C Ratio | - | - | 0.021 | 0.002 |
| HCM Control Delay (s/veh) | - | - | 16.7 | 8 |
| HCM Lane LOS | - | - | C | A |
| HCM 95th %tile Q(veh) | - | - | 0.1 | 0 |

Lanes and Geometrics
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/05/2024

























| |  |  |  |  |  |  |  |  |  |  |  |  | |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | |
| Grade (%) | 0% | | 0% | | 0% | | 0% | | 0% | | 0% | | |
| Storage Length (ft) | 75 | | 150 | 150 | | 100 | 300 | | 250 | 250 | | 200 | |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 1 | | 1 | 1 | | 1 | |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Ped Bike Factor | | | | | | | | | | | | | |
| Frt | | | 0.850 | | | | 0.850 | | 0.850 | | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | | |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | | |
| Satd. Flow (perm) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | |
| Right Turn on Red | | | Yes | | | | Yes | | Yes | | | | Yes |
| Satd. Flow (RTOR) | | | 133 | | | | 180 | | 173 | | | | 201 |
| Link Speed (mph) | 30 | | | | 30 | | | | 30 | | | | 30 |
| Link Distance (ft) | 794 | | | | 1437 | | | | 2219 | | 401 | | |
| Travel Time (s) | 18.0 | | | | 32.7 | | | | 50.4 | | 9.1 | | |

Intersection Summary

Area Type: Other

Timings
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/05/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 64 | 277 | 71 | 32 | 204 | 65 | 59 | 198 | 59 | 113 | 556 | 185 |
| Future Volume (vph) | 64 | 277 | 71 | 32 | 204 | 65 | 59 | 198 | 59 | 113 | 556 | 185 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 34.2 | 34.2 | 10.0 | 34.2 | 34.2 | 10.0 | 26.0 | 26.0 | 10.0 | 26.0 | 26.0 |
| Total Split (s) | 25.0 | 46.0 | 46.0 | 18.0 | 39.0 | 39.0 | 18.0 | 30.0 | 30.0 | 21.0 | 33.0 | 33.0 |
| Total Split (%) | 21.7% | 40.0% | 40.0% | 15.7% | 33.9% | 33.9% | 15.7% | 26.1% | 26.1% | 18.3% | 28.7% | 28.7% |
| Yellow Time (s) | 3.0 | 4.2 | 4.2 | 3.0 | 4.2 | 4.2 | 3.0 | 5.0 | 5.0 | 3.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 6.2 | 6.2 | 5.0 | 6.2 | 6.2 | 5.0 | 7.0 | 7.0 | 5.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 9.9 | 26.0 | 26.0 | 7.8 | 21.7 | 21.7 | 9.5 | 49.2 | 49.2 | 13.3 | 55.1 | 55.1 |
| Actuated g/C Ratio | 0.09 | 0.23 | 0.23 | 0.07 | 0.19 | 0.19 | 0.08 | 0.43 | 0.43 | 0.12 | 0.48 | 0.48 |
| v/c Ratio | 0.46 | 0.71 | 0.17 | 0.29 | 0.63 | 0.16 | 0.44 | 0.14 | 0.08 | 0.60 | 0.36 | 0.23 |
| Control Delay (s/veh) | 59.0 | 50.5 | 1.3 | 56.7 | 50.6 | 0.8 | 58.8 | 24.3 | 0.2 | 60.2 | 23.3 | 4.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 59.0 | 50.5 | 1.3 | 56.7 | 50.6 | 0.8 | 58.8 | 24.3 | 0.2 | 60.2 | 23.3 | 4.5 |
| LOS | E | D | A | E | D | A | E | C | A | E | C | A |
| Approach Delay (s/veh) | | 43.4 | | | 40.5 | | | 26.2 | | | 24.1 | |
| Approach LOS | | D | | | D | | | C | | | C | |

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 9 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay (s/veh): 31.3

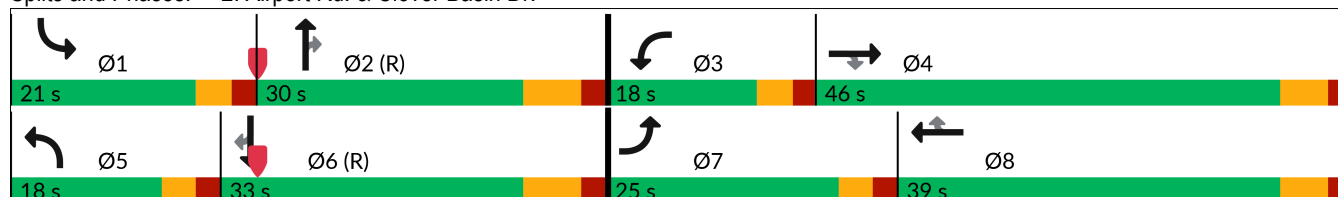
Intersection LOS: C

Intersection Capacity Utilization 57.6%

ICU Level of Service B













Analysis Period (min) 15

Splits and Phases: 2: Airport Rd. & Clover Basin Dr.



Queues
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/05/2024

























| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Group Flow (vph) | 70 | 301 | 77 | 35 | 222 | 71 | 64 | 215 | 64 | 123 | 604 | 201 |
| v/c Ratio | 0.46 | 0.71 | 0.17 | 0.29 | 0.63 | 0.16 | 0.44 | 0.14 | 0.08 | 0.60 | 0.36 | 0.23 |
| Control Delay (s/veh) | 59.0 | 50.5 | 1.3 | 56.7 | 50.6 | 0.8 | 58.8 | 24.3 | 0.2 | 60.2 | 23.3 | 4.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 59.0 | 50.5 | 1.3 | 56.7 | 50.6 | 0.8 | 58.8 | 24.3 | 0.2 | 60.2 | 23.3 | 4.5 |
| Queue Length 50th (ft) | 50 | 211 | 0 | 25 | 152 | 0 | 46 | 52 | 0 | 88 | 155 | 0 |
| Queue Length 95th (ft) | 94 | 284 | 5 | 57 | 217 | 0 | 89 | 98 | 0 | 144 | 253 | 52 |
| Internal Link Dist (ft) | 714 | | 1357 | | | | 2139 | | | | 321 | |
| Turn Bay Length (ft) | 75 | 150 | | 150 | 100 | | 300 | 250 | | 250 | 200 | |
| Base Capacity (vph) | 307 | 644 | 634 | 200 | 531 | 580 | 200 | 1514 | 776 | 253 | 1696 | 863 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.23 | 0.47 | 0.12 | 0.18 | 0.42 | 0.12 | 0.32 | 0.14 | 0.08 | 0.49 | 0.36 | 0.23 |
| Intersection Summary | | | | | | | | | | | | |

HCM 7th Signalized Intersection Summary

2: Airport Rd. & Clover Basin Dr.











8902 Quail Road

04/05/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h) | 64 | 277 | 71 | 32 | 204 | 65 | 59 | 198 | 59 | 113 | 556 | 185 |
| Future Volume (veh/h) | 64 | 277 | 71 | 32 | 204 | 65 | 59 | 198 | 59 | 113 | 556 | 185 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width 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 |
| 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 | 70 | 301 | 77 | 35 | 222 | 71 | 64 | 215 | 64 | 123 | 604 | 201 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 91 | 355 | 301 | 52 | 314 | 266 | 83 | 1757 | 784 | 151 | 1893 | 844 |
| Arrive On Green | 0.05 | 0.19 | 0.19 | 0.03 | 0.17 | 0.17 | 0.05 | 0.49 | 0.49 | 0.08 | 0.53 | 0.53 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 70 | 301 | 77 | 35 | 222 | 71 | 64 | 215 | 64 | 123 | 604 | 201 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 4.5 | 17.9 | 4.8 | 2.2 | 12.9 | 4.5 | 4.1 | 3.7 | 2.4 | 7.8 | 11.0 | 7.8 |
| Cycle Q Clear(g_c), s | 4.5 | 17.9 | 4.8 | 2.2 | 12.9 | 4.5 | 4.1 | 3.7 | 2.4 | 7.8 | 11.0 | 7.8 |
| 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 | 91 | 355 | 301 | 52 | 314 | 266 | 83 | 1757 | 784 | 151 | 1893 | 844 |
| V/C Ratio(X) | 0.77 | 0.85 | 0.26 | 0.67 | 0.71 | 0.27 | 0.77 | 0.12 | 0.08 | 0.81 | 0.32 | 0.24 |
| Avail Cap(c_a), veh/h | 310 | 647 | 549 | 201 | 533 | 452 | 201 | 1757 | 784 | 248 | 1893 | 844 |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 53.9 | 45.0 | 39.7 | 55.3 | 45.2 | 41.7 | 54.2 | 15.6 | 15.3 | 51.7 | 15.1 | 14.4 |
| Incr Delay (d2), s/veh | 12.8 | 5.7 | 0.4 | 13.9 | 2.9 | 0.5 | 14.0 | 0.1 | 0.2 | 10.1 | 0.4 | 0.7 |
| 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(95%),veh/ln | 4.2 | 13.7 | 3.4 | 2.2 | 10.3 | 3.2 | 3.9 | 2.8 | 1.7 | 7.0 | 8.0 | 5.3 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d), s/veh | 66.7 | 50.6 | 40.1 | 69.2 | 48.1 | 42.2 | 68.3 | 15.8 | 15.5 | 61.8 | 15.6 | 15.0 |
| LnGrp LOS | E | D | D | E | D | D | E | B | B | E | B | B |
| Approach Vol, veh/h | 448 | | | 328 | | | 343 | | | 928 | | |
| Approach Delay, s/veh | 51.3 | | | 49.1 | | | 25.5 | | | 21.6 | | |
| Approach LOS | D | | | D | | | C | | | C | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 14.7 | 63.9 | 8.4 | 28.0 | 10.3 | 68.3 | 10.9 | 25.5 | | | | |
| Change Period (Y+Rc), s | 5.0 | 7.0 | 5.0 | 6.2 | 5.0 | 7.0 | 5.0 | 6.2 | | | | |
| Max Green Setting (Gmax), s | 16.0 | 23.0 | 13.0 | 39.8 | 13.0 | 26.0 | 20.0 | 32.8 | | | | |
| Max Q Clear Time (g_c+I1), s | 9.8 | 5.7 | 4.2 | 19.9 | 6.1 | 13.0 | 6.5 | 14.9 | | | | |
| Green Ext Time (p_c), s | 0.1 | 1.4 | 0.0 | 2.0 | 0.1 | 4.0 | 0.1 | 1.4 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 7th Control Delay, s/veh | 33.2 | | | | | | | | | | | |
| HCM 7th LOS | C | | | | | | | | | | | |

Lanes and Geometrics
3: Larkspur Dr. & Clover Basin Dr.





















8902 Quail Road
04/05/2024

| |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|
| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | 0% | |
| Storage Length (ft) | | 200 | 0 | | 0 | 0 |
| Storage Lanes | | 1 | 0 | | 1 | 0 |
| Taper Length (ft) | | | 25 | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | |
| Frt | | 0.850 | | | 0.913 | |
| Flt Protected | | | | 0.996 | 0.982 | |
| Satd. Flow (prot) | 1863 | 1583 | 0 | 1855 | 1670 | 0 |
| Flt Permitted | | | | 0.996 | 0.982 | |
| Satd. Flow (perm) | 1863 | 1583 | 0 | 1855 | 1670 | 0 |
| Link Speed (mph) | 30 | | | 30 | 30 | |
| Link Distance (ft) | 1437 | | | 260 | 268 | |
| Travel Time (s) | 32.7 | | | 5.9 | 6.5 | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |

| Intersection | | | | | | |
|---------------------------|--------|------|--------|-------|--------|-------|
| Int Delay, s/veh | 1.7 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↗ | | ↖ | ↘ | |
| Traffic Vol, veh/h | 433 | 16 | 25 | 271 | 30 | 54 |
| Future Vol, veh/h | 433 | 16 | 25 | 271 | 30 | 54 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 200 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 471 | 17 | 27 | 295 | 33 | 59 |
| | | | | | | |
| Major/Minor | Major1 | | Major2 | | Minor1 | |
| Conflicting Flow All | 0 | 0 | 488 | 0 | 820 | 471 |
| Stage 1 | - | - | - | - | 471 | - |
| Stage 2 | - | - | - | - | 349 | - |
| Critical Hdwy | - | - | 4.12 | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | - | - | 1075 | - | 345 | 593 |
| Stage 1 | - | - | - | - | 629 | - |
| Stage 2 | - | - | - | - | 714 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1075 | - | 334 | 593 |
| Mov Cap-2 Maneuver | - | - | - | - | 334 | - |
| Stage 1 | - | - | - | - | 629 | - |
| Stage 2 | - | - | - | - | 693 | - |
| | | | | | | |
| | | | | | | |
| Approach | EB | | WB | | NB | |
| HCM Control Delay, s/v | 0 | | 0.71 | | 14.63 | |
| HCM LOS | B | | | | | |
| | | | | | | |
| | | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 465 | - | - | 152 | - | |
| HCM Lane V/C Ratio | 0.196 | - | - | 0.025 | - | |
| HCM Control Delay (s/veh) | 14.6 | - | - | 8.4 | 0 | |
| HCM Lane LOS | B | - | - | A | A | |
| HCM 95th %tile Q(veh) | 0.7 | - | - | 0.1 | - | |









Lanes and Geometrics
4: S Fordham St. & Clover Basin Dr.

8902 Quail Road
04/05/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 100 | | 0 | 150 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.997 | | | 0.992 | | | 0.889 | | | 0.940 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1857 | 0 | 1770 | 1848 | 0 | 1770 | 1656 | 0 | 1770 | 1751 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1857 | 0 | 1770 | 1848 | 0 | 1770 | 1656 | 0 | 1770 | 1751 | 0 |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 483 | | | 921 | | | 648 | | | 640 | | |
| Travel Time (s) | 11.0 | | | 20.9 | | | 14.7 | | | 14.5 | | |

Intersection Summary

Area Type: Other

| Intersection | | | | | | | | | | | | |
|--------------------------|---|---|------|---|---|------|---|---|------|---|---|------|
| Int Delay, s/veh | 3.7 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Vol, veh/h | 27 | 454 | 9 | 50 | 270 | 15 | 3 | 12 | 34 | 24 | 46 | 30 |
| Future Vol, veh/h | 27 | 454 | 9 | 50 | 270 | 15 | 3 | 12 | 34 | 24 | 46 | 30 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 100 | - | - | 150 | - | - | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 29 | 493 | 10 | 54 | 293 | 16 | 3 | 13 | 37 | 26 | 50 | 33 |























| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 310 | 0 | 0 | 503 | 0 | 0 | 984 | 976 | 498 | 969 | 972 | 302 |
| Stage 1 | - | - | - | - | - | - | 557 | 557 | - | 410 | 410 | - |
| Stage 2 | - | - | - | - | - | - | 427 | 418 | - | 559 | 562 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1251 | - | - | 1061 | - | - | 227 | 251 | 572 | 233 | 252 | 738 |
| Stage 1 | - | - | - | - | - | - | 515 | 512 | - | 618 | 595 | - |
| Stage 2 | - | - | - | - | - | - | 606 | 590 | - | 514 | 510 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1251 | - | - | 1061 | - | - | 161 | 233 | 572 | 191 | 234 | 738 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 161 | 233 | - | 191 | 234 | - |
| Stage 1 | - | - | - | - | - | - | 503 | 500 | - | 587 | 565 | - |
| Stage 2 | - | - | - | - | - | - | 501 | 560 | - | 457 | 498 | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|------|-------|-------|
| HCM Control Delay, s/v | 0.44 | 1.28 | 15.67 | 21.71 |
| HCM LOS | | | C | C |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|---------------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h) | 161 | 414 | 1251 | - | - | 1061 | - | - | 191 | 320 |
| HCM Lane V/C Ratio | 0.02 | 0.121 | 0.023 | - | - | 0.051 | - | - | 0.136 | 0.258 |
| HCM Control Delay (s/veh) | 27.8 | 14.9 | 7.9 | - | - | 8.6 | - | - | 26.8 | 20.1 |
| HCM Lane LOS | D | B | A | - | - | A | - | - | D | C |
| HCM 95th %tile Q(veh) | 0.1 | 0.4 | 0.1 | - | - | 0.2 | - | - | 0.5 | 1 |

Lanes and Geometrics
5: Pike Rd. & Airport Rd.

8902 Quail Road
04/05/2024





















| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 150 | | 0 | 100 | | 0 | 300 | | 150 | 150 | | 200 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.870 | | | | 0.889 | | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1621 | 0 | 1770 | 1656 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.642 | | | 0.686 | | | 0.394 | | | 0.608 | | |
| Satd. Flow (perm) | 1196 | 1621 | 0 | 1278 | 1656 | 0 | 734 | 3539 | 1583 | 1133 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 95 | | | 37 | | | | 156 | | | 156 |
| Link Speed (mph) | | 30 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 478 | | | 955 | | | 764 | | | 2219 | |
| Travel Time (s) | | 10.9 | | | 21.7 | | | 17.4 | | | 50.4 | |

Intersection Summary

Area Type: Other

Timings
5: Pike Rd. & Airport Rd.

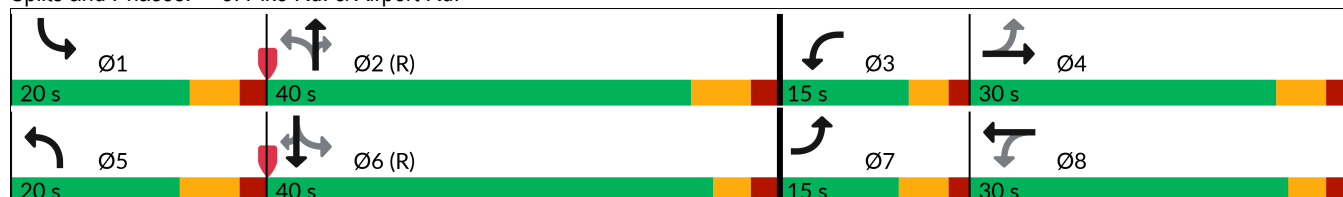
8902 Quail Road
04/05/2024

| |  |  |  |  |  |  |  |  |  |  |
|------------------------|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 34 | 14 | 30 | 12 | 41 | 204 | 14 | 49 | 575 | 44 |
| Future Volume (vph) | 34 | 14 | 30 | 12 | 41 | 204 | 14 | 49 | 575 | 44 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.4 | 29.9 | 9.7 | 30.0 | 11.7 | 22.5 | 22.5 | 10.9 | 22.5 | 22.5 |
| Total Split (s) | 15.0 | 30.0 | 15.0 | 30.0 | 20.0 | 40.0 | 40.0 | 20.0 | 40.0 | 40.0 |
| Total Split (%) | 14.3% | 28.6% | 14.3% | 28.6% | 19.0% | 38.1% | 38.1% | 19.0% | 38.1% | 38.1% |
| Yellow Time (s) | 3.9 | 3.9 | 3.2 | 3.0 | 4.7 | 4.7 | 4.7 | 3.9 | 3.0 | 3.0 |
| All-Red Time (s) | 1.5 | 2.0 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.4 | 5.9 | 4.7 | 5.0 | 6.7 | 6.7 | 6.7 | 5.9 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 13.1 | 7.6 | 13.0 | 7.9 | 72.4 | 67.1 | 67.1 | 74.1 | 70.7 | 70.7 |
| Actuated g/C Ratio | 0.12 | 0.07 | 0.12 | 0.08 | 0.69 | 0.64 | 0.64 | 0.71 | 0.67 | 0.67 |
| v/c Ratio | 0.20 | 0.54 | 0.17 | 0.32 | 0.08 | 0.10 | 0.01 | 0.06 | 0.26 | 0.04 |
| Control Delay (s/veh) | 36.8 | 22.5 | 35.7 | 25.1 | 6.2 | 9.8 | 0.0 | 5.8 | 9.7 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 36.8 | 22.5 | 35.7 | 25.1 | 6.2 | 9.8 | 0.0 | 5.8 | 9.7 | 0.1 |
| LOS | D | C | D | C | A | A | A | A | A | A |
| Approach Delay (s/veh) | | 26.1 | | 29.3 | | 8.7 | | | 8.8 | |
| Approach LOS | | C | | C | | A | | | A | |

Intersection Summary

| |
|---|
| Cycle Length: 105 |
| Actuated Cycle Length: 105 |
| Offset: 59 (56%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green |
| Natural Cycle: 75 |
| Control Type: Actuated-Coordinated |
| Maximum v/c Ratio: 0.54 |
| Intersection Signal Delay (s/veh): 12.2 |
| Intersection Capacity Utilization 43.3% |
| Analysis Period (min) 15 |
| Intersection LOS: B |
| ICU Level of Service A |

Splits and Phases: 5: Pike Rd. & Airport Rd.



























| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 37 | 110 | 33 | 50 | 45 | 222 | 15 | 53 | 625 | 48 |
| v/c Ratio | 0.20 | 0.54 | 0.17 | 0.32 | 0.08 | 0.10 | 0.01 | 0.06 | 0.26 | 0.04 |
| Control Delay (s/veh) | 36.8 | 22.5 | 35.7 | 25.1 | 6.2 | 9.8 | 0.0 | 5.8 | 9.7 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 36.8 | 22.5 | 35.7 | 25.1 | 6.2 | 9.8 | 0.0 | 5.8 | 9.7 | 0.1 |
| Queue Length 50th (ft) | 21 | 10 | 19 | 8 | 8 | 32 | 0 | 9 | 100 | 0 |
| Queue Length 95th (ft) | 46 | 61 | 42 | 44 | 23 | 61 | 0 | 26 | 163 | 0 |
| Internal Link Dist (ft) | | 398 | | 875 | | 684 | | | 2139 | |
| Turn Bay Length (ft) | 150 | | 100 | | 300 | | 150 | 150 | | 200 |
| Base Capacity (vph) | 226 | 445 | 240 | 422 | 670 | 2260 | 1067 | 926 | 2384 | 1117 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.16 | 0.25 | 0.14 | 0.12 | 0.07 | 0.10 | 0.01 | 0.06 | 0.26 | 0.04 |
| Intersection Summary | | | | | | | | | | |

HCM 7th Signalized Intersection Summary

5: Pike Rd. & Airport Rd.

8902 Quail Road

04/05/2024






| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Traffic Volume (veh/h) | 34 | 14 | 87 | 30 | 12 | 34 | 41 | 204 | 14 | 49 | 575 | 44 |
| Future Volume (veh/h) | 34 | 14 | 87 | 30 | 12 | 34 | 41 | 204 | 14 | 49 | 575 | 44 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width 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 |
| 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 | 37 | 15 | 95 | 33 | 13 | 37 | 45 | 222 | 15 | 53 | 625 | 48 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 195 | 20 | 125 | 151 | 35 | 99 | 541 | 2213 | 987 | 818 | 2195 | 979 |
| Arrive On Green | 0.03 | 0.09 | 0.09 | 0.03 | 0.08 | 0.08 | 0.03 | 0.62 | 0.62 | 0.04 | 0.62 | 0.62 |
| Sat Flow, veh/h | 1781 | 221 | 1398 | 1781 | 429 | 1221 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 37 | 0 | 110 | 33 | 0 | 50 | 45 | 222 | 15 | 53 | 625 | 48 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1619 | 1781 | 0 | 1651 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 2.0 | 0.0 | 7.0 | 1.8 | 0.0 | 3.0 | 0.9 | 2.6 | 0.4 | 1.1 | 8.6 | 1.3 |
| Cycle Q Clear(g_c), s | 2.0 | 0.0 | 7.0 | 1.8 | 0.0 | 3.0 | 0.9 | 2.6 | 0.4 | 1.1 | 8.6 | 1.3 |
| Prop In Lane | 1.00 | | 0.86 | 1.00 | | 0.74 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 195 | 0 | 145 | 151 | 0 | 133 | 541 | 2213 | 987 | 818 | 2195 | 979 |
| V/C Ratio(X) | 0.19 | 0.00 | 0.76 | 0.22 | 0.00 | 0.37 | 0.08 | 0.10 | 0.02 | 0.06 | 0.28 | 0.05 |
| Avail Cap(c_a), veh/h | 302 | 0 | 372 | 273 | 0 | 393 | 704 | 2213 | 987 | 991 | 2195 | 979 |
| 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 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 |
| Uniform Delay (d), s/veh | 42.3 | 0.0 | 46.7 | 42.5 | 0.0 | 45.7 | 6.9 | 8.0 | 7.5 | 6.5 | 9.3 | 7.9 |
| Incr Delay (d2), s/veh | 0.5 | 0.0 | 7.9 | 0.7 | 0.0 | 1.7 | 0.1 | 0.1 | 0.0 | 0.0 | 0.3 | 0.1 |
| 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(95%),veh/ln | 1.6 | 0.0 | 5.6 | 1.4 | 0.0 | 2.3 | 0.6 | 1.8 | 0.2 | 0.7 | 5.8 | 0.8 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d), s/veh | 42.8 | 0.0 | 54.6 | 43.2 | 0.0 | 47.5 | 6.9 | 8.1 | 7.6 | 6.5 | 9.6 | 8.0 |
| LnGrp LOS | D | | D | D | | D | A | A | A | A | A | A |
| Approach Vol, veh/h | 147 | | | 83 | | | 282 | | | 726 | | |
| Approach Delay, s/veh | 51.6 | | | 45.8 | | | 7.9 | | | 9.3 | | |
| Approach LOS | D | | | D | | | A | | | A | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.8 | 72.1 | 7.8 | 15.3 | 10.4 | 71.6 | 8.7 | 14.4 | | | | |
| Change Period (Y+Rc), s | 5.9 | 6.7 | 4.7 | 5.9 | 6.7 | * 6.7 | 5.4 | * 5.9 | | | | |
| Max Green Setting (Gmax), s | 14.1 | 33.3 | 10.3 | 24.1 | 13.3 | * 35 | 9.6 | * 25 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.1 | 4.6 | 3.8 | 9.0 | 2.9 | 10.6 | 4.0 | 5.0 | | | | |
| Green Ext Time (p_c), s | 0.1 | 1.5 | 0.0 | 0.5 | 0.0 | 4.7 | 0.0 | 0.2 | | | | |





Intersection Summary

| | |
|------------------------------|------|
| HCM 7th Control Delay, s/veh | 16.4 |
| HCM 7th LOS | B |

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

| |  | | | | | |
|-----------------------------|---|------|---|------|---|---|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | 0% | | | 0% |
| Storage Length (ft) | 0 | 0 | | 0 | 200 | |
| Storage Lanes | 1 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Ped Bike Factor | | | | | | |
| Frt | 0.932 | | 0.998 | | | |
| Flt Protected | 0.976 | | | | 0.950 | |
| Satd. Flow (prot) | 1694 | 0 | 3532 | 0 | 1770 | 3539 |
| Flt Permitted | 0.976 | | | | 0.950 | |
| Satd. Flow (perm) | 1694 | 0 | 3532 | 0 | 1770 | 3539 |
| Link Speed (mph) | 30 | | 30 | | | 30 |
| Link Distance (ft) | 244 | | 284 | | | 406 |
| Travel Time (s) | 5.5 | | 6.5 | | | 9.2 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |

| Intersection | | | | | | |
|--------------------------|---|------|---|------|---|---|
| Int Delay, s/veh | 0 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Traffic Vol, veh/h | 1 | 1 | 688 | 8 | 2 | 507 |
| Future Vol, veh/h | 1 | 1 | 688 | 8 | 2 | 507 |
| 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 |
| Mvmt Flow | 1 | 1 | 748 | 9 | 2 | 551 |

























| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1032 | 378 | 0 |
| Stage 1 | 752 | - | - |
| Stage 2 | 280 | - | - |
| Critical Hdwy | 6.84 | 6.94 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - |
| Pot Cap-1 Maneuver | 229 | 619 | - |
| Stage 1 | 426 | - | - |
| Stage 2 | 742 | - | - |
| Platoon blocked, % | | - | - |
| Mov Cap-1 Maneuver | 228 | 619 | - |
| Mov Cap-2 Maneuver | 228 | - | - |
| Stage 1 | 426 | - | - |
| Stage 2 | 741 | - | - |

| Approach | WB | NB | SB |
|-----------------------------|----|----|------|
| HCM Control Delay, s/v15.87 | | 0 | 0.04 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|---------------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 333 | 850 |
| HCM Lane V/C Ratio | - | - | 0.007 | 0.003 |
| HCM Control Delay (s/veh) | - | - | 15.9 | 9.2 |
| HCM Lane LOS | - | - | C | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 |

Lanes and Geometrics
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/05/2024

























| |  |  |  |  |  |  |  |  |  |  |  |  | |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | |
| Grade (%) | 0% | | 0% | | 0% | | 0% | | 0% | | 0% | | |
| Storage Length (ft) | 75 | | 150 | 150 | | 100 | 300 | | 250 | 250 | | 200 | |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 1 | | 1 | 1 | | 1 | |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Ped Bike Factor | | | | | | | | | | | | | |
| Frt | | | 0.850 | | | | 0.850 | | 0.850 | | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | | |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | | |
| Satd. Flow (perm) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | |
| Right Turn on Red | | | Yes | | | | Yes | | Yes | | | | Yes |
| Satd. Flow (RTOR) | | | 180 | | | | 180 | | 173 | | | | 125 |
| Link Speed (mph) | 30 | | | | 30 | | | | 30 | | | | 30 |
| Link Distance (ft) | 794 | | | | 1437 | | | | 2219 | | 401 | | |
| Travel Time (s) | 18.0 | | | | 32.7 | | | | 50.4 | | 9.1 | | |

Intersection Summary

Area Type: Other

Timings
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/05/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 67 | 277 | 30 | 79 | 264 | 128 | 50 | 501 | 92 | 130 | 292 | 86 |
| Future Volume (vph) | 67 | 277 | 30 | 79 | 264 | 128 | 50 | 501 | 92 | 130 | 292 | 86 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 34.2 | 34.2 | 10.0 | 34.2 | 34.2 | 10.0 | 26.0 | 26.0 | 10.0 | 26.0 | 26.0 |
| Total Split (s) | 15.0 | 42.0 | 42.0 | 15.0 | 42.0 | 42.0 | 14.0 | 35.0 | 35.0 | 23.0 | 44.0 | 44.0 |
| Total Split (%) | 13.0% | 36.5% | 36.5% | 13.0% | 36.5% | 36.5% | 12.2% | 30.4% | 30.4% | 20.0% | 38.3% | 38.3% |
| Yellow Time (s) | 3.0 | 4.2 | 4.2 | 3.0 | 4.2 | 4.2 | 3.0 | 5.0 | 5.0 | 3.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 6.2 | 6.2 | 5.0 | 6.2 | 6.2 | 5.0 | 7.0 | 7.0 | 5.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 8.9 | 24.1 | 24.1 | 9.2 | 24.2 | 24.2 | 8.9 | 46.5 | 46.5 | 14.4 | 54.1 | 54.1 |
| Actuated g/C Ratio | 0.08 | 0.21 | 0.21 | 0.08 | 0.21 | 0.21 | 0.08 | 0.40 | 0.40 | 0.13 | 0.47 | 0.47 |
| v/c Ratio | 0.53 | 0.77 | 0.07 | 0.61 | 0.73 | 0.29 | 0.40 | 0.38 | 0.13 | 0.64 | 0.19 | 0.11 |
| Control Delay (s/veh) | 65.1 | 55.9 | 0.3 | 69.6 | 53.0 | 3.5 | 58.2 | 28.4 | 0.4 | 60.4 | 21.8 | 2.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 65.1 | 55.9 | 0.3 | 69.6 | 53.0 | 3.5 | 58.2 | 28.4 | 0.4 | 60.4 | 21.8 | 2.4 |
| LOS | E | E | A | E | D | A | E | C | A | E | C | A |
| Approach Delay (s/veh) | | 53.0 | | | 42.4 | | | 26.7 | | | 28.4 | |
| Approach LOS | | D | | | D | | | C | | | C | |

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 9 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay (s/veh): 35.8

Intersection LOS: D

Intersection Capacity Utilization 59.3%

ICU Level of Service B













Analysis Period (min) 15

Splits and Phases: 2: Airport Rd. & Clover Basin Dr.



Queues
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/05/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Group Flow (vph) | 73 | 301 | 33 | 86 | 287 | 139 | 54 | 545 | 100 | 141 | 317 | 93 |
| v/c Ratio | 0.53 | 0.77 | 0.07 | 0.61 | 0.73 | 0.29 | 0.40 | 0.38 | 0.13 | 0.64 | 0.19 | 0.11 |
| Control Delay (s/veh) | 65.1 | 55.9 | 0.3 | 69.6 | 53.0 | 3.5 | 58.2 | 28.4 | 0.4 | 60.4 | 21.8 | 2.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 65.1 | 55.9 | 0.3 | 69.6 | 53.0 | 3.5 | 58.2 | 28.4 | 0.4 | 60.4 | 21.8 | 2.4 |
| Queue Length 50th (ft) | 52 | 212 | 0 | 62 | 200 | 0 | 39 | 154 | 0 | 101 | 76 | 0 |
| Queue Length 95th (ft) | 102 | 285 | 0 | #116 | 271 | 24 | 79 | 244 | 0 | 160 | 128 | 20 |
| Internal Link Dist (ft) | 714 | | | 1357 | | | 2139 | | | 321 | | |
| Turn Bay Length (ft) | 75 | | 150 | 150 | | 100 | 300 | | 250 | 250 | | 200 |
| Base Capacity (vph) | 153 | 579 | 616 | 153 | 579 | 616 | 152 | 1431 | 743 | 282 | 1664 | 810 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.48 | 0.52 | 0.05 | 0.56 | 0.50 | 0.23 | 0.36 | 0.38 | 0.13 | 0.50 | 0.19 | 0.11 |

Intersection Summary

























95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 7th Signalized Intersection Summary

2: Airport Rd. & Clover Basin Dr.











8902 Quail Road

04/05/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h) | 67 | 277 | 30 | 79 | 264 | 128 | 50 | 501 | 92 | 130 | 292 | 86 |
| Future Volume (veh/h) | 67 | 277 | 30 | 79 | 264 | 128 | 50 | 501 | 92 | 130 | 292 | 86 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width 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 |
| 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 | 73 | 301 | 33 | 86 | 287 | 139 | 54 | 545 | 100 | 141 | 317 | 93 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 94 | 351 | 297 | 109 | 367 | 311 | 70 | 1613 | 719 | 170 | 1814 | 809 |
| Arrive On Green | 0.05 | 0.19 | 0.19 | 0.06 | 0.20 | 0.20 | 0.04 | 0.45 | 0.45 | 0.10 | 0.51 | 0.51 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 73 | 301 | 33 | 86 | 287 | 139 | 54 | 545 | 100 | 141 | 317 | 93 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 4.7 | 17.9 | 2.0 | 5.5 | 16.8 | 8.9 | 3.5 | 11.4 | 4.2 | 8.9 | 5.5 | 3.5 |
| Cycle Q Clear(g_c), s | 4.7 | 17.9 | 2.0 | 5.5 | 16.8 | 8.9 | 3.5 | 11.4 | 4.2 | 8.9 | 5.5 | 3.5 |
| 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 | 94 | 351 | 297 | 109 | 367 | 311 | 70 | 1613 | 719 | 170 | 1814 | 809 |
| V/C Ratio(X) | 0.78 | 0.86 | 0.11 | 0.79 | 0.78 | 0.45 | 0.77 | 0.34 | 0.14 | 0.83 | 0.17 | 0.11 |
| Avail Cap(c_a), veh/h | 155 | 582 | 493 | 155 | 582 | 493 | 139 | 1613 | 719 | 279 | 1814 | 809 |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 | 0.98 | 0.98 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 53.8 | 45.2 | 38.8 | 53.3 | 43.9 | 40.7 | 54.7 | 20.3 | 18.3 | 51.1 | 15.1 | 14.6 |
| Incr Delay (d2), s/veh | 13.0 | 6.8 | 0.2 | 16.0 | 3.7 | 1.0 | 16.2 | 0.6 | 0.4 | 10.1 | 0.2 | 0.3 |
| 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(95%),veh/ln | 4.4 | 13.8 | 1.4 | 5.3 | 12.8 | 6.4 | 3.4 | 8.4 | 2.9 | 7.9 | 4.1 | 2.4 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d), s/veh | 66.8 | 52.0 | 38.9 | 69.3 | 47.6 | 41.7 | 70.9 | 20.8 | 18.7 | 61.1 | 15.3 | 14.9 |
| LnGrp LOS | E | D | D | E | D | D | E | C | B | E | B | B |
| Approach Vol, veh/h | 407 | | | 512 | | | 699 | | | 551 | | |
| Approach Delay, s/veh | 53.6 | | | 49.6 | | | 24.4 | | | 27.0 | | |
| Approach LOS | D | | | D | | | C | | | C | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 16.0 | 59.2 | 12.0 | 27.8 | 9.5 | 65.7 | 11.0 | 28.8 | | | | |
| Change Period (Y+Rc), s | 5.0 | 7.0 | 5.0 | 6.2 | 5.0 | 7.0 | 5.0 | 6.2 | | | | |
| Max Green Setting (Gmax), s | 18.0 | 28.0 | 10.0 | 35.8 | 9.0 | 37.0 | 10.0 | 35.8 | | | | |
| Max Q Clear Time (g_c+I1), s | 10.9 | 13.4 | 7.5 | 19.9 | 5.5 | 7.5 | 6.7 | 18.8 | | | | |
| Green Ext Time (p_c), s | 0.2 | 3.5 | 0.0 | 1.6 | 0.0 | 2.5 | 0.0 | 2.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 7th Control Delay, s/veh | 36.5 | | | | | | | | | | | |
| HCM 7th LOS | D | | | | | | | | | | | |

Lanes and Geometrics
3: Larkspur Dr. & Clover Basin Dr.

8902 Quail Road
04/05/2024

| |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|
| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | 0% | |
| Storage Length (ft) | | 200 | 0 | | 0 | 0 |
| Storage Lanes | | 1 | 0 | | 1 | 0 |
| Taper Length (ft) | | | 25 | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | |
| Frt | | 0.850 | | | 0.899 | |
| Flt Protected | | | | 0.993 | 0.988 | |
| Satd. Flow (prot) | 1863 | 1583 | 0 | 1850 | 1655 | 0 |
| Flt Permitted | | | | 0.993 | 0.988 | |
| Satd. Flow (perm) | 1863 | 1583 | 0 | 1850 | 1655 | 0 |
| Link Speed (mph) | 30 | | | 30 | 30 | |
| Link Distance (ft) | 1437 | | | 260 | 268 | |
| Travel Time (s) | 32.7 | | | 5.9 | 6.5 | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |

Intersection

Int Delay, s/veh 1.6

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | ↑ | ↑ | | ↑ | ↑ | |
| Traffic Vol, veh/h | 474 | 25 | 74 | 455 | 16 | 47 |
| Future Vol, veh/h | 474 | 25 | 74 | 455 | 16 | 47 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 200 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 515 | 27 | 80 | 495 | 17 | 51 |





















| Major/Minor | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 542 |
| Stage 1 | - | - | 515 |
| Stage 2 | - | - | 655 |
| Critical Hdwy | - | 4.12 | 6.42 |
| Critical Hdwy Stg 1 | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | 5.42 |
| Follow-up Hdwy | - | 2.218 | 3.518 |
| Pot Cap-1 Maneuver | - | 1026 | 213 |
| Stage 1 | - | - | 600 |
| Stage 2 | - | - | 517 |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | - | 1026 | 190 |
| Mov Cap-2 Maneuver | - | - | 190 |
| Stage 1 | - | - | 600 |
| Stage 2 | - | - | 461 |

| Approach | EB | WB | NB |
|------------------------|----|------|-------|
| HCM Control Delay, s/v | 0 | 1.23 | 16.75 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---------------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 375 | - | - | 252 | - |
| HCM Lane V/C Ratio | 0.183 | - | - | 0.078 | - |
| HCM Control Delay (s/veh) | 16.8 | - | - | 8.8 | 0 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.7 | - | - | 0.3 | - |









Lanes and Geometrics
4: S Fordham St. & Clover Basin Dr.

8902 Quail Road
04/05/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 100 | | 0 | 150 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.999 | | | 0.993 | | | 0.900 | | | 0.886 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1861 | 0 | 1770 | 1850 | 0 | 1770 | 1676 | 0 | 1770 | 1650 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1861 | 0 | 1770 | 1850 | 0 | 1770 | 1676 | 0 | 1770 | 1650 | 0 |
| Link Speed (mph) | 30 | | | | 30 | | | | 30 | | | |
| Link Distance (ft) | 483 | | | | 921 | | | | 648 | | | |
| Travel Time (s) | 11.0 | | | | 20.9 | | | | 14.7 | | | |

Intersection Summary

Area Type: Other

| Intersection | | | | | | | | | | | | |
|--------------------------|---|---|------|---|---|------|---|---|------|---|---|------|
| Int Delay, s/veh | 4.3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Vol, veh/h | 27 | 493 | 2 | 23 | 461 | 21 | 1 | 42 | 85 | 17 | 15 | 47 |
| Future Vol, veh/h | 27 | 493 | 2 | 23 | 461 | 21 | 1 | 42 | 85 | 17 | 15 | 47 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 100 | - | - | 150 | - | - | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 29 | 536 | 2 | 25 | 501 | 23 | 1 | 46 | 92 | 18 | 16 | 51 |























| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 524 | 0 | 0 | 538 | 0 | 0 | 1155 | 1170 | 537 | 1180 | 1159 | 513 |
| Stage 1 | - | - | - | - | - | - | 596 | 596 | - | 563 | 563 | - |
| Stage 2 | - | - | - | - | - | - | 559 | 574 | - | 617 | 597 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1043 | - | - | 1030 | - | - | 174 | 193 | 544 | 167 | 196 | 562 |
| Stage 1 | - | - | - | - | - | - | 490 | 492 | - | 511 | 509 | - |
| Stage 2 | - | - | - | - | - | - | 513 | 503 | - | 477 | 492 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1043 | - | - | 1030 | - | - | 137 | 183 | 544 | 100 | 186 | 562 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 137 | 183 | - | 100 | 186 | - |
| Stage 1 | - | - | - | - | - | - | 477 | 478 | - | 499 | 497 | - |
| Stage 2 | - | - | - | - | - | - | 440 | 491 | - | 348 | 478 | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|------|-------|-------|
| HCM Control Delay, s/v | 0.44 | 0.39 | 23.67 | 23.58 |
| HCM LOS | | | C | C |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|---------------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h) | 137 | 329 | 1043 | - | - | 1030 | - | - | 100 | 377 |
| HCM Lane V/C Ratio | 0.008 | 0.419 | 0.028 | - | - | 0.024 | - | - | 0.185 | 0.179 |
| HCM Control Delay (s/veh) | 31.4 | 23.6 | 8.6 | - | - | 8.6 | - | - | 49 | 16.6 |
| HCM Lane LOS | D | C | A | - | - | A | - | - | E | C |
| HCM 95th %tile Q(veh) | 0 | 2 | 0.1 | - | - | 0.1 | - | - | 0.6 | 0.6 |

Lanes and Geometrics
5: Pike Rd. & Airport Rd.

8902 Quail Road
04/05/2024





















| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 150 | | 0 | 100 | | 0 | 300 | | 150 | 150 | | 200 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.914 | | | 0.905 | | | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1703 | 0 | 1770 | 1686 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.528 | | | 0.716 | | | 0.509 | | | 0.432 | | |
| Satd. Flow (perm) | 984 | 1703 | 0 | 1334 | 1686 | 0 | 948 | 3539 | 1583 | 805 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | 36 | | | 57 | | | | | 218 | | | 218 |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 478 | | | 955 | | | 764 | | | 2219 | | |
| Travel Time (s) | 10.9 | | | 21.7 | | | 17.4 | | | 50.4 | | |

Intersection Summary

Area Type: Other

Timings
5: Pike Rd. & Airport Rd.

8902 Quail Road
04/05/2024

| |  |  |  |  |  |  |  |  |  |  |
|------------------------|---|---|---|---|---|---|--|---|---|---|
| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 46 | 25 | 15 | 30 | 81 | 536 | 24 | 25 | 273 | 59 |
| Future Volume (vph) | 46 | 25 | 15 | 30 | 81 | 536 | 24 | 25 | 273 | 59 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 4.6 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 20.0 | 9.7 | 20.0 | 11.7 | 22.5 | 22.5 | 10.9 | 22.5 | 22.5 |
| Total Split (s) | 10.0 | 20.0 | 10.0 | 20.0 | 15.0 | 30.0 | 30.0 | 15.0 | 30.0 | 30.0 |
| Total Split (%) | 13.3% | 26.7% | 13.3% | 26.7% | 20.0% | 40.0% | 40.0% | 20.0% | 40.0% | 40.0% |
| Yellow Time (s) | 3.9 | 3.9 | 3.2 | 3.0 | 4.7 | 4.7 | 4.7 | 3.9 | 3.0 | 3.0 |
| All-Red Time (s) | 1.5 | 2.0 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.4 | 5.9 | 4.7 | 5.0 | 6.7 | 6.7 | 6.7 | 5.9 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 12.0 | 10.9 | 11.0 | 7.6 | 50.2 | 48.2 | 48.2 | 46.2 | 43.2 | 43.2 |
| Actuated g/C Ratio | 0.16 | 0.15 | 0.15 | 0.10 | 0.67 | 0.64 | 0.64 | 0.62 | 0.58 | 0.58 |
| v/c Ratio | 0.24 | 0.23 | 0.07 | 0.41 | 0.12 | 0.26 | 0.02 | 0.05 | 0.15 | 0.06 |
| Control Delay (s/veh) | 26.0 | 16.9 | 21.7 | 20.1 | 6.7 | 10.2 | 0.0 | 6.7 | 11.8 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 26.0 | 16.9 | 21.7 | 20.1 | 6.7 | 10.2 | 0.0 | 6.7 | 11.8 | 0.1 |
| LOS | C | B | C | C | A | B | A | A | B | A |
| Approach Delay (s/veh) | | 20.9 | | 20.4 | | 9.4 | | | 9.5 | |
| Approach LOS | | C | | C | | A | | | A | |

Intersection Summary

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 59 (79%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.41

Intersection Signal Delay (s/veh): 11.3

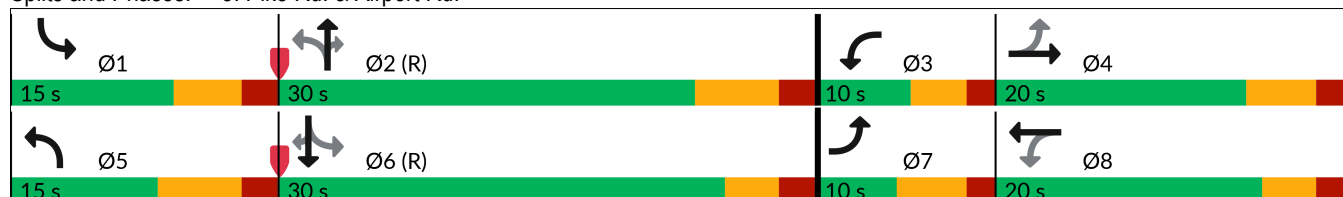
Intersection LOS: B

Intersection Capacity Utilization 43.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: Pike Rd. & Airport Rd.



























| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 50 | 63 | 16 | 90 | 88 | 583 | 26 | 27 | 297 | 64 |
| v/c Ratio | 0.24 | 0.23 | 0.07 | 0.41 | 0.12 | 0.26 | 0.02 | 0.05 | 0.15 | 0.06 |
| Control Delay (s/veh) | 26.0 | 16.9 | 21.7 | 20.1 | 6.7 | 10.2 | 0.0 | 6.7 | 11.8 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 26.0 | 16.9 | 21.7 | 20.1 | 6.7 | 10.2 | 0.0 | 6.7 | 11.8 | 0.1 |
| Queue Length 50th (ft) | 19 | 10 | 6 | 15 | 15 | 57 | 0 | 4 | 41 | 0 |
| Queue Length 95th (ft) | 43 | 45 | 19 | 53 | 36 | 141 | 0 | 14 | 74 | 0 |
| Internal Link Dist (ft) | | 398 | | 875 | | 684 | | | 2139 | |
| Turn Bay Length (ft) | 150 | | 100 | | 300 | | 150 | 150 | | 200 |
| Base Capacity (vph) | 205 | 373 | 226 | 382 | 727 | 2273 | 1095 | 638 | 2040 | 1005 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.24 | 0.17 | 0.07 | 0.24 | 0.12 | 0.26 | 0.02 | 0.04 | 0.15 | 0.06 |

Intersection Summary

HCM 7th Signalized Intersection Summary

5: Pike Rd. & Airport Rd.

8902 Quail Road
04/05/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Traffic Volume (veh/h) | 46 | 25 | 33 | 15 | 30 | 52 | 81 | 536 | 24 | 25 | 273 | 59 |
| Future Volume (veh/h) | 46 | 25 | 33 | 15 | 30 | 52 | 81 | 536 | 24 | 25 | 273 | 59 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width 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 |
| 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 | 50 | 27 | 36 | 16 | 33 | 57 | 88 | 583 | 26 | 27 | 297 | 64 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 202 | 80 | 106 | 230 | 49 | 85 | 654 | 1896 | 846 | 506 | 1761 | 785 |
| Arrive On Green | 0.04 | 0.11 | 0.11 | 0.02 | 0.08 | 0.08 | 0.06 | 0.53 | 0.53 | 0.03 | 0.50 | 0.50 |
| Sat Flow, veh/h | 1781 | 727 | 969 | 1781 | 616 | 1063 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 50 | 0 | 63 | 16 | 0 | 90 | 88 | 583 | 26 | 27 | 297 | 64 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1696 | 1781 | 0 | 1679 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 1.9 | 0.0 | 2.6 | 0.6 | 0.0 | 3.9 | 1.7 | 6.9 | 0.6 | 0.5 | 3.5 | 1.6 |
| Cycle Q Clear(g_c), s | 1.9 | 0.0 | 2.6 | 0.6 | 0.0 | 3.9 | 1.7 | 6.9 | 0.6 | 0.5 | 3.5 | 1.6 |
| Prop In Lane | 1.00 | | 0.57 | 1.00 | | 0.63 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 202 | 0 | 186 | 230 | 0 | 133 | 654 | 1896 | 846 | 506 | 1761 | 785 |
| V/C Ratio(X) | 0.25 | 0.00 | 0.34 | 0.07 | 0.00 | 0.67 | 0.13 | 0.31 | 0.03 | 0.05 | 0.17 | 0.08 |
| Avail Cap(c_a), veh/h | 241 | 0 | 319 | 323 | 0 | 336 | 752 | 1896 | 846 | 671 | 1761 | 785 |
| 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 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.97 | 0.97 |
| Uniform Delay (d), s/veh | 30.0 | 0.0 | 30.9 | 30.8 | 0.0 | 33.6 | 8.0 | 9.8 | 8.3 | 8.7 | 10.4 | 9.9 |
| Incr Delay (d2), s/veh | 0.6 | 0.0 | 1.1 | 0.1 | 0.0 | 5.8 | 0.1 | 0.4 | 0.1 | 0.0 | 0.2 | 0.2 |
| 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(95%),veh/ln | 1.5 | 0.0 | 1.9 | 0.5 | 0.0 | 3.2 | 1.1 | 4.5 | 0.4 | 0.4 | 2.3 | 1.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d), s/veh | 30.7 | 0.0 | 31.9 | 30.9 | 0.0 | 39.4 | 8.1 | 10.2 | 8.4 | 8.8 | 10.6 | 10.1 |
| LnGrp LOS | C | | C | C | | D | A | B | A | A | B | B |
| Approach Vol, veh/h | 113 | | | 106 | | | 697 | | | 388 | | |
| Approach Delay, s/veh | 31.4 | | | 38.1 | | | 9.9 | | | 10.4 | | |
| Approach LOS | C | | | D | | | A | | | B | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.1 | 46.7 | 6.1 | 14.1 | 10.9 | 43.9 | 8.4 | 11.9 | | | | |
| Change Period (Y+Rc), s | 5.9 | 6.7 | 4.7 | 5.9 | 6.7 | * 6.7 | 5.4 | * 5.9 | | | | |
| Max Green Setting (Gmax), s | 9.1 | 23.3 | 5.3 | 14.1 | 8.3 | * 25 | 4.6 | * 15 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.5 | 8.9 | 2.6 | 4.6 | 3.7 | 5.5 | 3.9 | 5.9 | | | | |
| Green Ext Time (p_c), s | 0.0 | 3.5 | 0.0 | 0.1 | 0.1 | 2.0 | 0.0 | 0.2 | | | | |

Intersection Summary





HCM 7th Control Delay, s/veh 14.2
HCM 7th LOS B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|-----------------------------|-------|------|------|------|-------|------|
| Lane Configurations | W | | ↑↑ | | W | ↑↑ |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | 0% | | | 0% |
| Storage Length (ft) | 0 | 0 | | 0 | 200 | |
| Storage Lanes | 1 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Ped Bike Factor | | | | | | |
| Frt | 0.997 | | | | | |
| Flt Protected | 0.950 | | | | 0.950 | |
| Satd. Flow (prot) | 1770 | 0 | 3529 | 0 | 1770 | 3539 |
| Flt Permitted | 0.950 | | | | 0.950 | |
| Satd. Flow (perm) | 1770 | 0 | 3529 | 0 | 1770 | 3539 |
| Link Speed (mph) | 30 | | 30 | | | 30 |
| Link Distance (ft) | 244 | | 284 | | | 406 |
| Travel Time (s) | 5.5 | | 6.5 | | | 9.2 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |

| Intersection | | | | | | |
|--------------------------|---|------|---|------|---|---|
| Int Delay, s/veh | 0.1 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Traffic Vol, veh/h | 6 | 0 | 359 | 6 | 2 | 881 |
| Future Vol, veh/h | 6 | 0 | 359 | 6 | 2 | 881 |
| 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 |
| Mvmt Flow | 7 | 0 | 390 | 7 | 2 | 958 |

| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 877 | 198 | 0 |
| Stage 1 | 393 | - | - |
| Stage 2 | 483 | - | - |
| Critical Hdwy | 6.84 | 6.94 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - |
| Pot Cap-1 Maneuver | 288 | 809 | - |
| Stage 1 | 651 | - | - |
| Stage 2 | 586 | - | - |
| Platoon blocked, % | | - | - |
| Mov Cap-1 Maneuver | 287 | 809 | - |
| Mov Cap-2 Maneuver | 287 | - | - |
| Stage 1 | 651 | - | - |
| Stage 2 | 585 | - | - |

























| Approach | WB | NB | SB |
|------------------------|-------|----|------|
| HCM Control Delay, s/v | 17.82 | 0 | 0.02 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|---------------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 287 | 1158 |
| HCM Lane V/C Ratio | - | - | 0.023 | 0.002 |
| HCM Control Delay (s/veh) | - | - | 17.8 | 8.1 |
| HCM Lane LOS | - | - | C | A |
| HCM 95th %tile Q(veh) | - | - | 0.1 | 0 |

Lanes and Geometrics
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road

04/08/2024

























| |  |  |  |  |  |  |  |  |  |  |  |  | | |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|-------|-----|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | | |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | | |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | | |
| Grade (%) | 0% | | | | 0% | | | | 0% | | | | | |
| Storage Length (ft) | 75 | | | 150 | 150 | | | 100 | 300 | | | 250 | 250 | 200 |
| Storage Lanes | 1 | | | 1 | 1 | | | 1 | 1 | | | 1 | 1 | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | |
| Ped Bike Factor | | | | | | | | | | | | | | |
| Frt | | | 0.850 | | | | 0.850 | | | | 0.850 | | 0.850 | |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.950 | | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | | |
| Flt Permitted | 0.950 | | | 0.950 | | | | 0.950 | | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | | |
| Right Turn on Red | | | Yes | | | | Yes | | | | Yes | | Yes | |
| Satd. Flow (RTOR) | | | 133 | | | | 180 | | | | 173 | | 207 | |
| Link Speed (mph) | 30 | | | | 30 | | | | 30 | | | | 30 | |
| Link Distance (ft) | 794 | | | | 1437 | | | | 2219 | | | | 401 | |
| Travel Time (s) | 18.0 | | | | 32.7 | | | | 50.4 | | | | 9.1 | |

Intersection Summary

Area Type: Other

Timings
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/08/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 65 | 284 | 72 | 60 | 209 | 66 | 60 | 232 | 109 | 116 | 583 | 190 |
| Future Volume (vph) | 65 | 284 | 72 | 60 | 209 | 66 | 60 | 232 | 109 | 116 | 583 | 190 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 34.2 | 34.2 | 10.0 | 34.2 | 34.2 | 10.0 | 26.0 | 26.0 | 10.0 | 26.0 | 26.0 |
| Total Split (s) | 25.0 | 46.0 | 46.0 | 18.0 | 39.0 | 39.0 | 18.0 | 30.0 | 30.0 | 21.0 | 33.0 | 33.0 |
| Total Split (%) | 21.7% | 40.0% | 40.0% | 15.7% | 33.9% | 33.9% | 15.7% | 26.1% | 26.1% | 18.3% | 28.7% | 28.7% |
| Yellow Time (s) | 3.0 | 4.2 | 4.2 | 3.0 | 4.2 | 4.2 | 3.0 | 5.0 | 5.0 | 3.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 6.2 | 6.2 | 5.0 | 6.2 | 6.2 | 5.0 | 7.0 | 7.0 | 5.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 10.0 | 24.8 | 24.8 | 9.5 | 24.3 | 24.3 | 9.6 | 46.3 | 46.3 | 13.4 | 52.3 | 52.3 |
| Actuated g/C Ratio | 0.09 | 0.22 | 0.22 | 0.08 | 0.21 | 0.21 | 0.08 | 0.40 | 0.40 | 0.12 | 0.45 | 0.45 |
| v/c Ratio | 0.46 | 0.77 | 0.18 | 0.45 | 0.58 | 0.15 | 0.44 | 0.18 | 0.16 | 0.61 | 0.39 | 0.25 |
| Control Delay (s/veh) | 59.0 | 55.0 | 1.5 | 59.0 | 45.8 | 0.7 | 58.9 | 26.6 | 1.8 | 60.4 | 25.9 | 4.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 59.0 | 55.0 | 1.5 | 59.0 | 45.8 | 0.7 | 58.9 | 26.6 | 1.8 | 60.4 | 25.9 | 4.9 |
| LOS | E | E | A | E | D | A | E | C | A | E | C | A |
| Approach Delay (s/veh) | | 46.5 | | | 39.2 | | | 24.7 | | | 25.9 | |
| Approach LOS | | D | | | D | | | C | | | C | |

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 9 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay (s/veh): 32.1

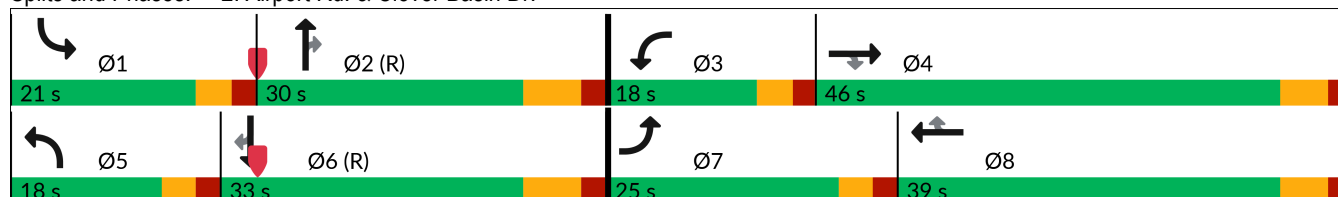
Intersection LOS: C

Intersection Capacity Utilization 58.7%

ICU Level of Service B













Analysis Period (min) 15

Splits and Phases: 2: Airport Rd. & Clover Basin Dr.



Queues
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/08/2024
























| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Group Flow (vph) | 71 | 309 | 78 | 65 | 227 | 72 | 65 | 252 | 118 | 126 | 634 | 207 |
| v/c Ratio | 0.46 | 0.77 | 0.18 | 0.45 | 0.58 | 0.15 | 0.44 | 0.18 | 0.16 | 0.61 | 0.39 | 0.25 |
| Control Delay (s/veh) | 59.0 | 55.0 | 1.5 | 59.0 | 45.8 | 0.7 | 58.9 | 26.6 | 1.8 | 60.4 | 25.9 | 4.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 59.0 | 55.0 | 1.5 | 59.0 | 45.8 | 0.7 | 58.9 | 26.6 | 1.8 | 60.4 | 25.9 | 4.9 |
| Queue Length 50th (ft) | 51 | 217 | 0 | 47 | 152 | 0 | 47 | 64 | 0 | 90 | 172 | 0 |
| Queue Length 95th (ft) | 96 | 290 | 5 | 90 | 213 | 0 | 89 | 118 | 13 | 147 | 278 | 56 |
| Internal Link Dist (ft) | 714 | | 1357 | | | | 2139 | | | | 321 | |
| Turn Bay Length (ft) | 75 | 150 | | 150 | 100 | | 300 | 250 | | 250 | 200 | |
| Base Capacity (vph) | 307 | 644 | 634 | 200 | 531 | 580 | 201 | 1424 | 740 | 254 | 1610 | 832 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.23 | 0.48 | 0.12 | 0.33 | 0.43 | 0.12 | 0.32 | 0.18 | 0.16 | 0.50 | 0.39 | 0.25 |
| Intersection Summary | | | | | | | | | | | | |

HCM 7th Signalized Intersection Summary

2: Airport Rd. & Clover Basin Dr.











8902 Quail Road

04/08/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  | |
| Traffic Volume (veh/h) | 65 | 284 | 72 | 60 | 209 | 66 | 60 | 232 | 109 | 116 | 583 | 190 |
| Future Volume (veh/h) | 65 | 284 | 72 | 60 | 209 | 66 | 60 | 232 | 109 | 116 | 583 | 190 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width 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 |
| 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 | 71 | 309 | 78 | 65 | 227 | 72 | 65 | 252 | 118 | 126 | 634 | 207 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 92 | 363 | 308 | 84 | 355 | 301 | 84 | 1671 | 745 | 154 | 1811 | 808 |
| Arrive On Green | 0.05 | 0.19 | 0.19 | 0.05 | 0.19 | 0.19 | 0.05 | 0.47 | 0.47 | 0.09 | 0.51 | 0.51 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 71 | 309 | 78 | 65 | 227 | 72 | 65 | 252 | 118 | 126 | 634 | 207 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 4.5 | 18.3 | 4.8 | 4.1 | 12.9 | 4.4 | 4.1 | 4.6 | 4.9 | 8.0 | 12.2 | 8.5 |
| Cycle Q Clear(g_c), s | 4.5 | 18.3 | 4.8 | 4.1 | 12.9 | 4.4 | 4.1 | 4.6 | 4.9 | 8.0 | 12.2 | 8.5 |
| 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 | 92 | 363 | 308 | 84 | 355 | 301 | 84 | 1671 | 745 | 154 | 1811 | 808 |
| V/C Ratio(X) | 0.77 | 0.85 | 0.25 | 0.77 | 0.64 | 0.24 | 0.77 | 0.15 | 0.16 | 0.82 | 0.35 | 0.26 |
| Avail Cap(c_a), veh/h | 310 | 647 | 549 | 201 | 533 | 452 | 201 | 1671 | 745 | 248 | 1811 | 808 |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 0.99 | 0.99 | 0.99 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 53.9 | 44.7 | 39.3 | 54.2 | 43.0 | 39.6 | 54.2 | 17.4 | 17.4 | 51.6 | 16.8 | 15.9 |
| Incr Delay (d2), s/veh | 12.6 | 5.6 | 0.4 | 13.9 | 1.9 | 0.4 | 13.8 | 0.2 | 0.4 | 10.6 | 0.5 | 0.8 |
| 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(95%),veh/ln | 4.2 | 13.9 | 3.4 | 3.9 | 10.2 | 3.2 | 3.9 | 3.5 | 3.4 | 7.2 | 8.7 | 5.8 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d), s/veh | 66.5 | 50.4 | 39.7 | 68.1 | 44.9 | 40.0 | 67.9 | 17.6 | 17.9 | 62.2 | 17.4 | 16.7 |
| LnGrp LOS | E | D | D | E | D | D | E | B | B | E | B | B |
| Approach Vol, veh/h | 458 | | | 364 | | | 435 | | | 967 | | |
| Approach Delay, s/veh | 51.0 | | | 48.1 | | | 25.2 | | | 23.1 | | |
| Approach LOS | D | | | D | | | C | | | C | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 15.0 | 61.1 | 10.4 | 28.5 | 10.4 | 65.6 | 10.9 | 28.0 | | | | |
| Change Period (Y+Rc), s | 5.0 | 7.0 | 5.0 | 6.2 | 5.0 | 7.0 | 5.0 | 6.2 | | | | |
| Max Green Setting (Gmax), s | 16.0 | 23.0 | 13.0 | 39.8 | 13.0 | 26.0 | 20.0 | 32.8 | | | | |
| Max Q Clear Time (g_c+I1), s | 10.0 | 6.9 | 6.1 | 20.3 | 6.1 | 14.2 | 6.5 | 14.9 | | | | |
| Green Ext Time (p_c), s | 0.1 | 1.8 | 0.1 | 2.0 | 0.1 | 4.0 | 0.1 | 1.4 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 7th Control Delay, s/veh | 33.3 | | | | | | | | | | | |
| HCM 7th LOS | C | | | | | | | | | | | |

Lanes and Geometrics
3: Larkspur Dr. & Clover Basin Dr.





















8902 Quail Road
04/08/2024

| |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|
| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | 0% | |
| Storage Length (ft) | | 200 | 0 | | 0 | 0 |
| Storage Lanes | | 1 | 0 | | 1 | 0 |
| Taper Length (ft) | | | 25 | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | |
| Frt | | 0.850 | | | 0.913 | |
| Flt Protected | | | | 0.996 | 0.982 | |
| Satd. Flow (prot) | 1863 | 1583 | 0 | 1855 | 1670 | 0 |
| Flt Permitted | | | | 0.996 | 0.982 | |
| Satd. Flow (perm) | 1863 | 1583 | 0 | 1855 | 1670 | 0 |
| Link Speed (mph) | 30 | | | 30 | 30 | |
| Link Distance (ft) | 1437 | | | 260 | 268 | |
| Travel Time (s) | 32.7 | | | 5.9 | 6.5 | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |

| Intersection | | | | | | |
|---------------------------|--------|------|--------|-------|--------|-------|
| Int Delay, s/veh | 1.7 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↗ | | ↖ | ↘ | |
| Traffic Vol, veh/h | 493 | 16 | 25 | 305 | 30 | 54 |
| Future Vol, veh/h | 493 | 16 | 25 | 305 | 30 | 54 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 200 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 536 | 17 | 27 | 332 | 33 | 59 |
| | | | | | | |
| Major/Minor | Major1 | | Major2 | | Minor1 | |
| Conflicting Flow All | 0 | 0 | 553 | 0 | 922 | 536 |
| Stage 1 | - | - | - | - | 536 | - |
| Stage 2 | - | - | - | - | 386 | - |
| Critical Hdwy | - | - | 4.12 | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | - | - | 1017 | - | 300 | 545 |
| Stage 1 | - | - | - | - | 587 | - |
| Stage 2 | - | - | - | - | 687 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1017 | - | 290 | 545 |
| Mov Cap-2 Maneuver | - | - | - | - | 290 | - |
| Stage 1 | - | - | - | - | 587 | - |
| Stage 2 | - | - | - | - | 665 | - |
| | | | | | | |
| | | | | | | |
| Approach | EB | | WB | | NB | |
| HCM Control Delay, s/v | 0 | | 0.65 | | 16.11 | |
| HCM LOS | C | | | | | |
| | | | | | | |
| | | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 415 | - | - | 136 | - | |
| HCM Lane V/C Ratio | 0.22 | - | - | 0.027 | - | |
| HCM Control Delay (s/veh) | 16.1 | - | - | 8.6 | 0 | |
| HCM Lane LOS | C | - | - | A | A | |
| HCM 95th %tile Q(veh) | 0.8 | - | - | 0.1 | - | |









Lanes and Geometrics
4: S Fordham St. & Clover Basin Dr.

8902 Quail Road
04/08/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 100 | | 0 | 150 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.997 | | | 0.993 | | | 0.889 | | | 0.940 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1857 | 0 | 1770 | 1850 | 0 | 1770 | 1656 | 0 | 1770 | 1751 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1857 | 0 | 1770 | 1850 | 0 | 1770 | 1656 | 0 | 1770 | 1751 | 0 |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 483 | | | 921 | | | 648 | | | 640 | | |
| Travel Time (s) | 11.0 | | | 20.9 | | | 14.7 | | | 14.5 | | |

Intersection Summary

Area Type: Other

| Intersection | | | | | | | | | | | | |
|--------------------------|---|---|------|---|---|------|---|---|------|---|---|------|
| Int Delay, s/veh | 3.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Vol, veh/h | 27 | 514 | 9 | 50 | 304 | 15 | 3 | 12 | 34 | 24 | 46 | 30 |
| Future Vol, veh/h | 27 | 514 | 9 | 50 | 304 | 15 | 3 | 12 | 34 | 24 | 46 | 30 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 100 | - | - | 150 | - | - | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 29 | 559 | 10 | 54 | 330 | 16 | 3 | 13 | 37 | 26 | 50 | 33 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 347 | 0 | 0 | 568 | 0 | 0 | 1086 | 1078 | 564 | 1071 | 1074 | 339 |
| Stage 1 | - | - | - | - | - | - | 622 | 622 | - | 447 | 447 | - |
| Stage 2 | - | - | - | - | - | - | 464 | 455 | - | 624 | 627 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1212 | - | - | 1004 | - | - | 194 | 219 | 525 | 198 | 220 | 704 |
| Stage 1 | - | - | - | - | - | - | 474 | 479 | - | 591 | 573 | - |
| Stage 2 | - | - | - | - | - | - | 578 | 568 | - | 473 | 476 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1212 | - | - | 1004 | - | - | 131 | 202 | 525 | 160 | 203 | 704 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 131 | 202 | - | 160 | 203 | - |
| Stage 1 | - | - | - | - | - | - | 463 | 467 | - | 559 | 542 | - |
| Stage 2 | - | - | - | - | - | - | 473 | 538 | - | 417 | 465 | - |























| Approach | EB | WB | NB | SB |
|------------------------|------|------|-------|-------|
| HCM Control Delay, s/v | 0.39 | 1.19 | 17.27 | 25.09 |
| HCM LOS | | | C | D |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|---------------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h) | 131 | 370 | 1212 | - | - | 1004 | - | - | 160 | 282 |
| HCM Lane V/C Ratio | 0.025 | 0.135 | 0.024 | - | - | 0.054 | - | - | 0.163 | 0.293 |
| HCM Control Delay (s/veh) | 33.2 | 16.2 | 8 | - | - | 8.8 | - | - | 31.8 | 23 |
| HCM Lane LOS | D | C | A | - | - | A | - | - | D | C |
| HCM 95th %tile Q(veh) | 0.1 | 0.5 | 0.1 | - | - | 0.2 | - | - | 0.6 | 1.2 |

Lanes and Geometrics
5: Pike Rd. & Airport Rd.

8902 Quail Road

04/08/2024





















| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 150 | | 0 | 100 | | 0 | 300 | | 150 | 150 | | 200 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.870 | | | 0.888 | | | 0.850 | | | 0.850 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1621 | 0 | 1770 | 1654 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.724 | | | 0.572 | | | 0.349 | | | 0.562 | | |
| Satd. Flow (perm) | 1349 | 1621 | 0 | 1065 | 1654 | 0 | 650 | 3539 | 1583 | 1047 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | 99 | | | 38 | | | 156 | | | 156 | | |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 478 | | | 955 | | | 764 | | | 2219 | | |
| Travel Time (s) | 10.9 | | | 21.7 | | | 17.4 | | | 50.4 | | |

Intersection Summary

Area Type: Other

Timings
5: Pike Rd. & Airport Rd.

8902 Quail Road
04/08/2024

| |  |  |  |  |  |  |  |  |  |  |
|------------------------|---|---|---|---|---|---|--|---|---|---|
| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 35 | 14 | 50 | 12 | 45 | 287 | 49 | 49 | 630 | 44 |
| Future Volume (vph) | 35 | 14 | 50 | 12 | 45 | 287 | 49 | 49 | 630 | 44 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.4 | 29.9 | 9.7 | 30.0 | 11.7 | 22.5 | 22.5 | 10.9 | 22.5 | 22.5 |
| Total Split (s) | 15.0 | 30.0 | 15.0 | 30.0 | 20.0 | 40.0 | 40.0 | 20.0 | 40.0 | 40.0 |
| Total Split (%) | 14.3% | 28.6% | 14.3% | 28.6% | 19.0% | 38.1% | 38.1% | 19.0% | 38.1% | 38.1% |
| Yellow Time (s) | 3.9 | 3.9 | 3.2 | 3.0 | 4.7 | 4.7 | 4.7 | 3.9 | 3.0 | 3.0 |
| All-Red Time (s) | 1.5 | 2.0 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.4 | 5.9 | 4.7 | 5.0 | 6.7 | 6.7 | 6.7 | 5.9 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 14.4 | 7.6 | 16.8 | 11.0 | 69.3 | 63.9 | 63.9 | 69.6 | 65.0 | 65.0 |
| Actuated g/C Ratio | 0.14 | 0.07 | 0.16 | 0.10 | 0.66 | 0.61 | 0.61 | 0.66 | 0.62 | 0.62 |
| v/c Ratio | 0.18 | 0.55 | 0.24 | 0.25 | 0.10 | 0.14 | 0.05 | 0.07 | 0.31 | 0.05 |
| Control Delay (s/veh) | 34.5 | 22.3 | 35.1 | 22.0 | 7.0 | 11.1 | 0.1 | 6.6 | 12.0 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 34.5 | 22.3 | 35.1 | 22.0 | 7.0 | 11.1 | 0.1 | 6.6 | 12.0 | 0.1 |
| LOS | C | C | D | C | A | B | A | A | B | A |
| Approach Delay (s/veh) | | 25.3 | | 28.7 | | 9.2 | | | 10.9 | |
| Approach LOS | | C | | C | | A | | | B | |

Intersection Summary

Cycle Length: 105

Actuated Cycle Length: 105

Offset: 59 (56%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay (s/veh): 13.2

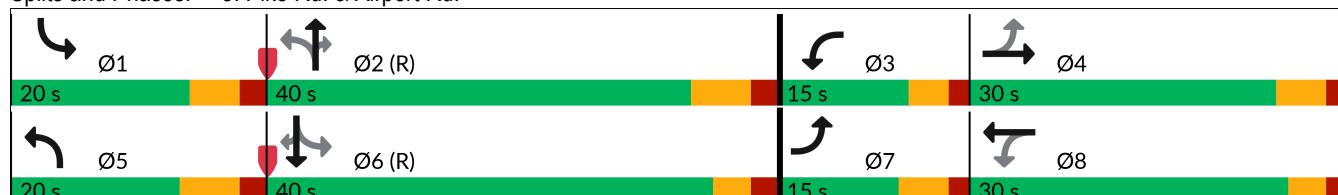
Intersection LOS: B

Intersection Capacity Utilization 44.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: Pike Rd. & Airport Rd.





| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 38 | 114 | 54 | 51 | 49 | 312 | 53 | 53 | 685 | 48 |
| v/c Ratio | 0.18 | 0.55 | 0.24 | 0.25 | 0.10 | 0.14 | 0.05 | 0.07 | 0.31 | 0.05 |
| Control Delay (s/veh) | 34.5 | 22.3 | 35.1 | 22.0 | 7.0 | 11.1 | 0.1 | 6.6 | 12.0 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 34.5 | 22.3 | 35.1 | 22.0 | 7.0 | 11.1 | 0.1 | 6.6 | 12.0 | 0.1 |
| Queue Length 50th (ft) | 21 | 10 | 30 | 8 | 9 | 47 | 0 | 10 | 115 | 0 |
| Queue Length 95th (ft) | 46 | 62 | 59 | 44 | 26 | 85 | 0 | 27 | 187 | 0 |
| Internal Link Dist (ft) | | 398 | | 875 | | 684 | | | 2139 | |
| Turn Bay Length (ft) | 150 | | 100 | | 300 | | 150 | 150 | | 200 |
| Base Capacity (vph) | 250 | 448 | 253 | 422 | 599 | 2153 | 1024 | 842 | 2191 | 1039 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.15 | 0.25 | 0.21 | 0.12 | 0.08 | 0.14 | 0.05 | 0.06 | 0.31 | 0.05 |






















Intersection Summary

HCM 7th Signalized Intersection Summary

5: Pike Rd. & Airport Rd.

8902 Quail Road

04/08/2024





















| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  | |
| Traffic Volume (veh/h) | 35 | 14 | 91 | 50 | 12 | 35 | 45 | 287 | 49 | 49 | 630 | 44 |
| Future Volume (veh/h) | 35 | 14 | 91 | 50 | 12 | 35 | 45 | 287 | 49 | 49 | 630 | 44 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width 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 |
| 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 | 38 | 15 | 99 | 54 | 13 | 38 | 49 | 312 | 53 | 53 | 685 | 48 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 210 | 20 | 129 | 166 | 38 | 112 | 503 | 2174 | 970 | 719 | 2151 | 959 |
| Arrive On Green | 0.03 | 0.09 | 0.09 | 0.04 | 0.09 | 0.09 | 0.04 | 0.61 | 0.61 | 0.04 | 0.61 | 0.61 |
| Sat Flow, veh/h | 1781 | 213 | 1405 | 1781 | 420 | 1229 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 38 | 0 | 114 | 54 | 0 | 51 | 49 | 312 | 53 | 53 | 685 | 48 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1618 | 1781 | 0 | 1649 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 2.0 | 0.0 | 7.2 | 2.9 | 0.0 | 3.0 | 1.1 | 3.9 | 1.4 | 1.2 | 9.9 | 1.3 |
| Cycle Q Clear(g_c), s | 2.0 | 0.0 | 7.2 | 2.9 | 0.0 | 3.0 | 1.1 | 3.9 | 1.4 | 1.2 | 9.9 | 1.3 |
| Prop In Lane | 1.00 | | 0.87 | 1.00 | | 0.75 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 210 | 0 | 149 | 166 | 0 | 151 | 503 | 2174 | 970 | 719 | 2151 | 959 |
| V/C Ratio(X) | 0.18 | 0.00 | 0.76 | 0.33 | 0.00 | 0.34 | 0.10 | 0.14 | 0.05 | 0.07 | 0.32 | 0.05 |
| Avail Cap(c_a), veh/h | 316 | 0 | 371 | 273 | 0 | 393 | 664 | 2174 | 970 | 892 | 2151 | 959 |
| 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 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.93 |
| Uniform Delay (d), s/veh | 41.3 | 0.0 | 46.5 | 41.3 | 0.0 | 44.7 | 7.4 | 8.7 | 8.2 | 7.0 | 10.1 | 8.4 |
| Incr Delay (d2), s/veh | 0.4 | 0.0 | 7.9 | 1.1 | 0.0 | 1.3 | 0.1 | 0.1 | 0.1 | 0.0 | 0.4 | 0.1 |
| 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(95%),veh/ln | 1.6 | 0.0 | 5.8 | 2.3 | 0.0 | 2.3 | 0.7 | 2.7 | 0.9 | 0.8 | 6.8 | 0.8 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d), s/veh | 41.7 | 0.0 | 54.4 | 42.4 | 0.0 | 46.0 | 7.5 | 8.8 | 8.3 | 7.0 | 10.5 | 8.5 |
| LnGrp LOS | D | | D | D | | D | A | A | A | A | B | A |
| Approach Vol, veh/h | 152 | | | 105 | | | 414 | | | 786 | | |
| Approach Delay, s/veh | 51.3 | | | 44.2 | | | 8.6 | | | 10.1 | | |
| Approach LOS | D | | | D | | | A | | | B | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.8 | 70.9 | 8.7 | 15.6 | 10.5 | 70.3 | 8.7 | 15.5 | | | | |
| Change Period (Y+Rc), s | 5.9 | 6.7 | 4.7 | 5.9 | 6.7 | * 6.7 | 5.4 | * 5.9 | | | | |
| Max Green Setting (Gmax), s | 14.1 | 33.3 | 10.3 | 24.1 | 13.3 | * 35 | 9.6 | * 25 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.2 | 5.9 | 4.9 | 9.2 | 3.1 | 11.9 | 4.0 | 5.0 | | | | |
| Green Ext Time (p_c), s | 0.1 | 2.3 | 0.0 | 0.5 | 0.1 | 5.1 | 0.0 | 0.2 | | | | |

Intersection Summary

| | |
|------------------------------|------|
| HCM 7th Control Delay, s/veh | 16.4 |
| HCM 7th LOS | B |

Notes









* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 100 | | 0 | 100 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.997 | | | 0.993 | | | 0.889 | | | 0.940 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1857 | 0 | 1770 | 1850 | 0 | 1770 | 1656 | 0 | 1770 | 1751 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1857 | 0 | 1770 | 1850 | 0 | 1770 | 1656 | 0 | 1770 | 1751 | 0 |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 297 | | | 624 | | | 503 | | | 339 | | |
| Travel Time (s) | 6.8 | | | 7.4 | | | 7.1 | | | 7.7 | | |

Intersection Summary

















Area Type: Other

| Intersection | |
|---------------------------|------|
| Intersection Delay, s/veh | 24.2 |
| Intersection LOS | C |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---------------------|---|---|------|---|---|------|---|---|------|---|---|------|
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Vol, veh/h | 27 | 514 | 9 | 50 | 304 | 15 | 3 | 12 | 34 | 24 | 46 | 30 |
| Future Vol, veh/h | 27 | 514 | 9 | 50 | 304 | 15 | 3 | 12 | 34 | 24 | 46 | 30 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 29 | 559 | 10 | 54 | 330 | 16 | 3 | 13 | 37 | 26 | 50 | 33 |
| Number of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|----------------------------|------|------|------|----|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 2 | 2 | 2 | 2 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 2 | 2 | 2 | 2 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 2 | 2 | 2 | 2 |
| HCM Control Delay, s/veh | 34.3 | 14.7 | 10.3 | 11 |
| HCM LOS | D | B | B | B |











| Lane | NBLn1 | NBLn2 | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 | SBLn2 |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Vol Left, % | 100% | 0% | 100% | 0% | 100% | 0% | 100% | 0% |
| Vol Thru, % | 0% | 26% | 0% | 98% | 0% | 95% | 0% | 61% |
| Vol Right, % | 0% | 74% | 0% | 2% | 0% | 5% | 0% | 39% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 3 | 46 | 27 | 523 | 50 | 319 | 24 | 76 |
| LT Vol | 3 | 0 | 27 | 0 | 50 | 0 | 24 | 0 |
| Through Vol | 0 | 12 | 0 | 514 | 0 | 304 | 0 | 46 |
| RT Vol | 0 | 34 | 0 | 9 | 0 | 15 | 0 | 30 |
| Lane Flow Rate | 3 | 50 | 29 | 568 | 54 | 347 | 26 | 83 |
| Geometry Grp | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Degree of Util (X) | 0.007 | 0.095 | 0.05 | 0.88 | 0.095 | 0.555 | 0.056 | 0.159 |
| Departure Headway (Hd) | 7.898 | 6.855 | 6.092 | 5.575 | 6.299 | 5.759 | 7.724 | 6.93 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 452 | 521 | 588 | 648 | 568 | 628 | 463 | 516 |
| Service Time | 5.665 | 4.621 | 3.826 | 3.31 | 4.039 | 3.499 | 5.482 | 4.687 |
| HCM Lane V/C Ratio | 0.007 | 0.096 | 0.049 | 0.877 | 0.095 | 0.553 | 0.056 | 0.161 |
| HCM Control Delay, s/veh | 10.7 | 10.3 | 9.1 | 35.6 | 9.7 | 15.5 | 10.9 | 11 |
| HCM Lane LOS | B | B | A | E | A | C | B | B |
| HCM 95th-tile Q | 0 | 0.3 | 0.2 | 10.5 | 0.3 | 3.4 | 0.2 | 0.6 |





| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | | |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.998 | | | 0.995 | | | 0.906 | | | 0.959 | |
| Flt Protected | | 0.998 | | | 0.993 | | | 0.997 | | | 0.988 | |
| Satd. Flow (prot) | 0 | 1855 | 0 | 0 | 1840 | 0 | 0 | 1683 | 0 | 0 | 1765 | 0 |
| Flt Permitted | | 0.998 | | | 0.993 | | | 0.997 | | | 0.988 | |
| Satd. Flow (perm) | 0 | 1855 | 0 | 0 | 1840 | 0 | 0 | 1683 | 0 | 0 | 1765 | 0 |
| Link Speed (mph) | | 30 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 366 | | | 418 | | | 541 | | | 378 | |
| Travel Time (s) | | 8.3 | | | 9.5 | | | 8.8 | | | 8.6 | |

Intersection Summary

Area Type: Other

| | | | | |
|-----------------------------|---------|---------|---------|---------|
| Intersection | | | | |
| Intersection Delay, s/veh | 7.1 | | | |
| Intersection LOS | A | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 598 | 400 | 53 | 109 |
| Demand Flow Rate, veh/h | 610 | 408 | 54 | 112 |
| Vehicles Circulating, veh/h | 133 | 46 | 627 | 395 |
| Vehicles Exiting, veh/h | 374 | 635 | 116 | 59 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 8.7 | 5.6 | 5.8 | 5.2 |
| Approach LOS | A | A | A | A |
| Lane | Left | Left | Left | Left |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| RT Channelized | | | | |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 4.976 |
| A (Intercept) | 1380 | 1380 | 1380 | 1380 |
| B (Slope) | 1.02e-3 | 1.02e-3 | 1.02e-3 | 1.02e-3 |
| Entry Flow, veh/h | 610 | 408 | 54 | 112 |
| Cap Entry Lane, veh/h | 1205 | 1317 | 728 | 922 |
| Entry HV Adj Factor | 0.980 | 0.981 | 0.977 | 0.973 |
| Flow Entry, veh/h | 598 | 400 | 53 | 109 |
| Cap Entry, veh/h | 1181 | 1292 | 711 | 898 |
| V/C Ratio | 0.506 | 0.310 | 0.074 | 0.121 |
| Control Delay, s/veh | 8.7 | 5.6 | 5.8 | 5.2 |
| LOS | A | A | A | A |
| 95th %tile Queue, veh | 3 | 1 | 0 | 0 |

| |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | 0% | | | 0% |
| Storage Length (ft) | 0 | 0 | | 0 | 200 | |
| Storage Lanes | 1 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Ped Bike Factor | | | | | | |
| Frt | 0.932 | | 0.998 | | | |
| Flt Protected | 0.976 | | | | 0.950 | |
| Satd. Flow (prot) | 1694 | 0 | 3532 | 0 | 1770 | 3539 |
| Flt Permitted | 0.976 | | | | 0.950 | |
| Satd. Flow (perm) | 1694 | 0 | 3532 | 0 | 1770 | 3539 |
| Link Speed (mph) | 30 | | 30 | | | 30 |
| Link Distance (ft) | 244 | | 284 | | | 406 |
| Travel Time (s) | 5.5 | | 6.5 | | | 9.2 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |

| Intersection | | | | | | |
|--------------------------|---|------|---|------|---|---|
| Int Delay, s/veh | 0 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Traffic Vol, veh/h | 1 | 1 | 726 | 8 | 2 | 549 |
| Future Vol, veh/h | 1 | 1 | 726 | 8 | 2 | 549 |
| 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 |
| Mvmt Flow | 1 | 1 | 789 | 9 | 2 | 597 |

























| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1096 | 399 | 0 |
| Stage 1 | 793 | - | - |
| Stage 2 | 303 | - | - |
| Critical Hdwy | 6.84 | 6.94 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - |
| Pot Cap-1 Maneuver | 208 | 601 | - |
| Stage 1 | 406 | - | - |
| Stage 2 | 723 | - | - |
| Platoon blocked, % | | - | - |
| Mov Cap-1 Maneuver | 207 | 601 | - |
| Mov Cap-2 Maneuver | 207 | - | - |
| Stage 1 | 406 | - | - |
| Stage 2 | 721 | - | - |

| Approach | WB | NB | SB |
|-----------------------------|----|----|------|
| HCM Control Delay, s/v16.77 | | 0 | 0.03 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|---------------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 308 | 820 |
| HCM Lane V/C Ratio | - | - | 0.007 | 0.003 |
| HCM Control Delay (s/veh) | - | - | 16.8 | 9.4 |
| HCM Lane LOS | - | - | C | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 |

Lanes and Geometrics
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/08/2024

























| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 75 | | 150 | 150 | | 100 | 300 | | 250 | 250 | | 200 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.850 | | | 0.850 | | | 0.850 | | | 0.850 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Right Turn on Red | Yes | | | Yes | | | Yes | | | Yes | | |
| Satd. Flow (RTOR) | 180 | | | 180 | | | 173 | | | 125 | | |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 794 | | | 1437 | | | 2219 | | | 401 | | |
| Travel Time (s) | 18.0 | | | 32.7 | | | 50.4 | | | 9.1 | | |

Intersection Summary

Area Type: Other

Timings
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/08/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 68 | 284 | 31 | 135 | 270 | 131 | 51 | 535 | 134 | 133 | 330 | 88 |
| Future Volume (vph) | 68 | 284 | 31 | 135 | 270 | 131 | 51 | 535 | 134 | 133 | 330 | 88 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 34.2 | 34.2 | 10.0 | 34.2 | 34.2 | 10.0 | 26.0 | 26.0 | 10.0 | 26.0 | 26.0 |
| Total Split (s) | 18.0 | 42.0 | 42.0 | 18.0 | 42.0 | 42.0 | 14.0 | 32.0 | 32.0 | 23.0 | 41.0 | 41.0 |
| Total Split (%) | 15.7% | 36.5% | 36.5% | 15.7% | 36.5% | 36.5% | 12.2% | 27.8% | 27.8% | 20.0% | 35.7% | 35.7% |
| Yellow Time (s) | 3.0 | 4.2 | 4.2 | 3.0 | 4.2 | 4.2 | 3.0 | 5.0 | 5.0 | 3.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 6.2 | 6.2 | 5.0 | 6.2 | 6.2 | 5.0 | 7.0 | 7.0 | 5.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effct Green (s) | 9.9 | 24.6 | 24.6 | 12.4 | 29.3 | 29.3 | 8.9 | 40.2 | 40.2 | 14.6 | 48.1 | 48.1 |
| Actuated g/C Ratio | 0.09 | 0.21 | 0.21 | 0.11 | 0.25 | 0.25 | 0.08 | 0.35 | 0.35 | 0.13 | 0.42 | 0.42 |
| v/c Ratio | 0.49 | 0.78 | 0.07 | 0.77 | 0.62 | 0.26 | 0.40 | 0.47 | 0.22 | 0.64 | 0.24 | 0.13 |
| Control Delay (s/veh) | 60.2 | 55.7 | 0.3 | 76.2 | 44.3 | 3.2 | 58.5 | 33.1 | 4.0 | 60.4 | 25.0 | 2.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 60.2 | 55.7 | 0.3 | 76.2 | 44.3 | 3.2 | 58.5 | 33.1 | 4.0 | 60.4 | 25.0 | 2.9 |
| LOS | E | E | A | E | D | A | E | C | A | E | C | A |
| Approach Delay (s/veh) | | 52.0 | | | 42.4 | | | 29.4 | | | 30.0 | |
| Approach LOS | | D | | | D | | | C | | | C | |

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 9 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay (s/veh): 36.7

Intersection LOS: D

Intersection Capacity Utilization 63.9%

ICU Level of Service B













Analysis Period (min) 15

Splits and Phases: 2: Airport Rd. & Clover Basin Dr.



Queues
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/08/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Group Flow (vph) | 74 | 309 | 34 | 147 | 293 | 142 | 55 | 582 | 146 | 145 | 359 | 96 |
| v/c Ratio | 0.49 | 0.78 | 0.07 | 0.77 | 0.62 | 0.26 | 0.40 | 0.47 | 0.22 | 0.64 | 0.24 | 0.13 |
| Control Delay (s/veh) | 60.2 | 55.7 | 0.3 | 76.2 | 44.3 | 3.2 | 58.5 | 33.1 | 4.0 | 60.4 | 25.0 | 2.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 60.2 | 55.7 | 0.3 | 76.2 | 44.3 | 3.2 | 58.5 | 33.1 | 4.0 | 60.4 | 25.0 | 2.9 |
| Queue Length 50th (ft) | 53 | 217 | 0 | 107 | 197 | 0 | 40 | 176 | 0 | 103 | 92 | 0 |
| Queue Length 95th (ft) | 100 | 291 | 0 | #205 | 275 | 26 | 80 | 275 | 35 | 163 | 152 | 23 |
| Internal Link Dist (ft) | | 714 | | | 1357 | | | 2139 | | | 321 | |
| Turn Bay Length (ft) | 75 | | 150 | 150 | | 100 | 300 | | 250 | 250 | | 200 |
| Base Capacity (vph) | 200 | 579 | 616 | 200 | 579 | 616 | 152 | 1237 | 666 | 283 | 1480 | 734 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.37 | 0.53 | 0.06 | 0.74 | 0.51 | 0.23 | 0.36 | 0.47 | 0.22 | 0.51 | 0.24 | 0.13 |

Intersection Summary

























95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 7th Signalized Intersection Summary

2: Airport Rd. & Clover Basin Dr.











8902 Quail Road

04/08/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h) | 68 | 284 | 31 | 135 | 270 | 131 | 51 | 535 | 134 | 133 | 330 | 88 |
| Future Volume (veh/h) | 68 | 284 | 31 | 135 | 270 | 131 | 51 | 535 | 134 | 133 | 330 | 88 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width 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 |
| 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 | 74 | 309 | 34 | 147 | 293 | 142 | 55 | 582 | 146 | 145 | 359 | 96 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 95 | 359 | 304 | 175 | 443 | 375 | 71 | 1458 | 650 | 175 | 1664 | 742 |
| Arrive On Green | 0.05 | 0.19 | 0.19 | 0.10 | 0.24 | 0.24 | 0.04 | 0.41 | 0.41 | 0.10 | 0.47 | 0.47 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 74 | 309 | 34 | 147 | 293 | 142 | 55 | 582 | 146 | 145 | 359 | 96 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 4.7 | 18.4 | 2.0 | 9.3 | 16.3 | 8.6 | 3.5 | 13.3 | 6.9 | 9.2 | 6.9 | 3.9 |
| Cycle Q Clear(g_c), s | 4.7 | 18.4 | 2.0 | 9.3 | 16.3 | 8.6 | 3.5 | 13.3 | 6.9 | 9.2 | 6.9 | 3.9 |
| 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 | 95 | 359 | 304 | 175 | 443 | 375 | 71 | 1458 | 650 | 175 | 1664 | 742 |
| V/C Ratio(X) | 0.78 | 0.86 | 0.11 | 0.84 | 0.66 | 0.38 | 0.77 | 0.40 | 0.22 | 0.83 | 0.22 | 0.13 |
| Avail Cap(c_a), veh/h | 201 | 582 | 493 | 201 | 582 | 493 | 139 | 1458 | 650 | 279 | 1664 | 742 |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.97 | 0.97 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 53.8 | 45.0 | 38.4 | 51.0 | 39.7 | 36.8 | 54.7 | 23.9 | 22.0 | 50.9 | 18.1 | 17.3 |
| Incr Delay (d2), s/veh | 12.7 | 7.3 | 0.2 | 23.6 | 1.7 | 0.6 | 15.8 | 0.8 | 0.8 | 10.9 | 0.3 | 0.4 |
| 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(95%),veh/ln | 4.4 | 14.2 | 1.5 | 9.1 | 12.2 | 6.2 | 3.4 | 9.6 | 4.9 | 8.1 | 5.2 | 2.7 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d), s/veh | 66.4 | 52.3 | 38.5 | 74.6 | 41.5 | 37.4 | 70.5 | 24.7 | 22.8 | 61.9 | 18.4 | 17.7 |
| LnGrp LOS | E | D | D | E | D | D | E | C | C | E | B | B |
| Approach Vol, veh/h | 417 | | | 582 | | | 783 | | | 600 | | |
| Approach Delay, s/veh | 53.7 | | | 48.9 | | | 27.6 | | | 28.8 | | |
| Approach LOS | D | | | D | | | C | | | C | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 16.3 | 54.2 | 16.3 | 28.3 | 9.6 | 60.9 | 11.1 | 33.4 | | | | |
| Change Period (Y+Rc), s | 5.0 | 7.0 | 5.0 | 6.2 | 5.0 | 7.0 | 5.0 | 6.2 | | | | |
| Max Green Setting (Gmax), s | 18.0 | 25.0 | 13.0 | 35.8 | 9.0 | 34.0 | 13.0 | 35.8 | | | | |
| Max Q Clear Time (g_c+I1), s | 11.2 | 15.3 | 11.3 | 20.4 | 5.5 | 8.9 | 6.7 | 18.3 | | | | |
| Green Ext Time (p_c), s | 0.2 | 3.1 | 0.1 | 1.7 | 0.0 | 2.7 | 0.1 | 2.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 7th Control Delay, s/veh | 37.6 | | | | | | | | | | | |
| HCM 7th LOS | D | | | | | | | | | | | |

Lanes and Geometrics
3: Larkspur Dr. & Clover Basin Dr.





















8902 Quail Road
04/08/2024

| |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|
| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | 0% | |
| Storage Length (ft) | | 200 | 0 | | 0 | 0 |
| Storage Lanes | | 1 | 0 | | 1 | 0 |
| Taper Length (ft) | | | 25 | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | |
| Frt | | 0.850 | | | 0.899 | |
| Flt Protected | | | | 0.994 | 0.988 | |
| Satd. Flow (prot) | 1863 | 1583 | 0 | 1852 | 1655 | 0 |
| Flt Permitted | | | | 0.994 | 0.988 | |
| Satd. Flow (perm) | 1863 | 1583 | 0 | 1852 | 1655 | 0 |
| Link Speed (mph) | 30 | | | 30 | 30 | |
| Link Distance (ft) | 1437 | | | 260 | 268 | |
| Travel Time (s) | 32.7 | | | 5.9 | 6.5 | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |

| Intersection | | | | | | |
|---------------------------|--------|------|--------|-------|--------|-------|
| Int Delay, s/veh | 1.5 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↗ | | ↖ | ↘ | |
| Traffic Vol, veh/h | 526 | 25 | 74 | 520 | 16 | 47 |
| Future Vol, veh/h | 526 | 25 | 74 | 520 | 16 | 47 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 200 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 572 | 27 | 80 | 565 | 17 | 51 |
| | | | | | | |
| Major/Minor | Major1 | | Major2 | | Minor1 | |
| Conflicting Flow All | 0 | 0 | 599 | 0 | 1298 | 572 |
| Stage 1 | - | - | - | - | 572 | - |
| Stage 2 | - | - | - | - | 726 | - |
| Critical Hdwy | - | - | 4.12 | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | - | - | 978 | - | 178 | 520 |
| Stage 1 | - | - | - | - | 565 | - |
| Stage 2 | - | - | - | - | 479 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 978 | - | 157 | 520 |
| Mov Cap-2 Maneuver | - | - | - | - | 157 | - |
| Stage 1 | - | - | - | - | 565 | - |
| Stage 2 | - | - | - | - | 421 | - |
| | | | | | | |
| | | | | | | |
| Approach | EB | | WB | | NB | |
| HCM Control Delay, s/v | 0 | | 1.12 | | 18.87 | |
| HCM LOS | C | | | | | |
| | | | | | | |
| | | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 328 | - | - | 224 | - | |
| HCM Lane V/C Ratio | 0.209 | - | - | 0.082 | - | |
| HCM Control Delay (s/veh) | 18.9 | - | - | 9 | 0 | |
| HCM Lane LOS | C | - | - | A | A | |
| HCM 95th %tile Q(veh) | 0.8 | - | - | 0.3 | - | |









Lanes and Geometrics
4: S Fordham St. & Clover Basin Dr.

8902 Quail Road
04/08/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 100 | | 0 | 150 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.999 | | | 0.994 | | | 0.900 | | | 0.886 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1861 | 0 | 1770 | 1852 | 0 | 1770 | 1676 | 0 | 1770 | 1650 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1861 | 0 | 1770 | 1852 | 0 | 1770 | 1676 | 0 | 1770 | 1650 | 0 |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 483 | | | 921 | | | 648 | | | 640 | | |
| Travel Time (s) | 11.0 | | | 20.9 | | | 14.7 | | | 14.5 | | |

Intersection Summary

Area Type: Other

| Intersection | | | | | | | | | | | | |
|--------------------------|---|---|------|---|---|------|---|---|------|---|---|------|
| Int Delay, s/veh | 4.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Vol, veh/h | 27 | 545 | 2 | 23 | 526 | 21 | 1 | 42 | 85 | 17 | 15 | 47 |
| Future Vol, veh/h | 27 | 545 | 2 | 23 | 526 | 21 | 1 | 42 | 85 | 17 | 15 | 47 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 100 | - | - | 150 | - | - | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 29 | 592 | 2 | 25 | 572 | 23 | 1 | 46 | 92 | 18 | 16 | 51 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 595 | 0 | 0 | 595 | 0 | 0 | 1282 | 1297 | 593 | 1307 | 1286 | 583 |
| Stage 1 | - | - | - | - | - | - | 652 | 652 | - | 633 | 633 | - |
| Stage 2 | - | - | - | - | - | - | 630 | 645 | - | 674 | 653 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 982 | - | - | 982 | - | - | 142 | 162 | 505 | 137 | 164 | 512 |
| Stage 1 | - | - | - | - | - | - | 457 | 464 | - | 468 | 473 | - |
| Stage 2 | - | - | - | - | - | - | 470 | 468 | - | 444 | 463 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 982 | - | - | 982 | - | - | 109 | 153 | 505 | 75 | 155 | 512 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 109 | 153 | - | 75 | 155 | - |
| Stage 1 | - | - | - | - | - | - | 443 | 450 | - | 456 | 461 | - |
| Stage 2 | - | - | - | - | - | - | 397 | 456 | - | 316 | 450 | - |























| Approach | EB | | | WB | | | NB | | | SB | | |
|------------------------|------|--|--|------|--|--|-------|--|--|-------|--|--|
| HCM Control Delay, s/v | 0.41 | | | 0.35 | | | 28.72 | | | 29.27 | | |
| HCM LOS | | | | | | | D | | | D | | |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|---------------------------|-------|-------|------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h) | 109 | 287 | 982 | - | - | 982 | - | - | 75 | 329 |
| HCM Lane V/C Ratio | 0.01 | 0.481 | 0.03 | - | - | 0.025 | - | - | 0.245 | 0.205 |
| HCM Control Delay (s/veh) | 38.4 | 28.6 | 8.8 | - | - | 8.8 | - | - | 67.7 | 18.7 |
| HCM Lane LOS | E | D | A | - | - | A | - | - | F | C |
| HCM 95th %tile Q(veh) | 0 | 2.5 | 0.1 | - | - | 0.1 | - | - | 0.9 | 0.8 |

Lanes and Geometrics
5: Pike Rd. & Airport Rd.

8902 Quail Road

04/08/2024





















| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 150 | | 0 | 100 | | 0 | 300 | | 150 | 150 | | 200 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.910 | | | 0.904 | | | 0.850 | | | 0.850 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1695 | 0 | 1770 | 1684 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.664 | | | 0.713 | | | 0.463 | | | 0.399 | | |
| Satd. Flow (perm) | 1237 | 1695 | 0 | 1328 | 1684 | 0 | 862 | 3539 | 1583 | 743 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | 41 | | | 58 | | | 218 | | | 218 | | |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 478 | | | 955 | | | 764 | | | 2219 | | |
| Travel Time (s) | 10.9 | | | 21.7 | | | 17.4 | | | 50.4 | | |

Intersection Summary

Area Type: Other

Timings
5: Pike Rd. & Airport Rd.

8902 Quail Road
04/08/2024

| |  |  |  |  |  |  |  |  |  |  |
|------------------------|---|---|---|---|---|---|--|---|---|---|
| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 47 | 25 | 53 | 30 | 84 | 611 | 52 | 25 | 365 | 59 |
| Future Volume (vph) | 47 | 25 | 53 | 30 | 84 | 611 | 52 | 25 | 365 | 59 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 4.6 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 20.0 | 9.7 | 20.0 | 11.7 | 22.5 | 22.5 | 10.9 | 22.5 | 22.5 |
| Total Split (s) | 10.0 | 20.0 | 10.0 | 20.0 | 15.0 | 30.0 | 30.0 | 15.0 | 30.0 | 30.0 |
| Total Split (%) | 13.3% | 26.7% | 13.3% | 26.7% | 20.0% | 40.0% | 40.0% | 20.0% | 40.0% | 40.0% |
| Yellow Time (s) | 3.9 | 3.9 | 3.2 | 3.0 | 4.7 | 4.7 | 4.7 | 3.9 | 3.0 | 3.0 |
| All-Red Time (s) | 1.5 | 2.0 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.4 | 5.9 | 4.7 | 5.0 | 6.7 | 6.7 | 6.7 | 5.9 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 10.0 | 7.1 | 11.2 | 7.8 | 50.0 | 48.0 | 48.0 | 46.0 | 43.0 | 43.0 |
| Actuated g/C Ratio | 0.13 | 0.09 | 0.15 | 0.10 | 0.67 | 0.64 | 0.64 | 0.61 | 0.57 | 0.57 |
| v/c Ratio | 0.26 | 0.35 | 0.25 | 0.40 | 0.14 | 0.29 | 0.05 | 0.05 | 0.20 | 0.06 |
| Control Delay (s/veh) | 26.3 | 21.1 | 25.4 | 19.8 | 6.8 | 10.6 | 0.1 | 6.8 | 12.1 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 26.3 | 21.1 | 25.4 | 19.8 | 6.8 | 10.6 | 0.1 | 6.8 | 12.1 | 0.1 |
| LOS | C | C | C | B | A | B | A | A | B | A |
| Approach Delay (s/veh) | | 23.3 | | 21.9 | | 9.4 | | | 10.3 | |
| Approach LOS | | C | | C | | A | | | B | |

Intersection Summary

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 59 (79%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.40

Intersection Signal Delay (s/veh): 11.9

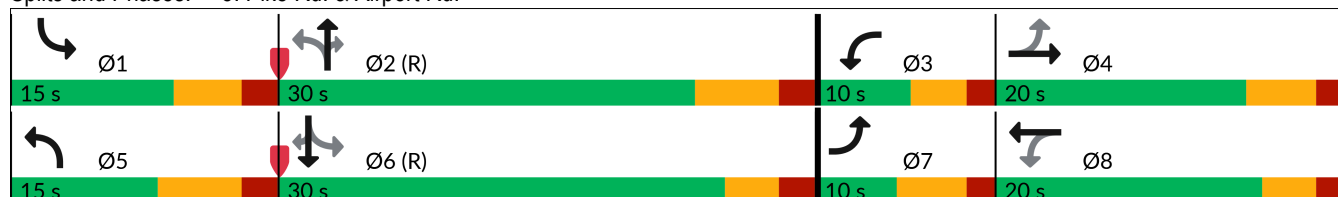
Intersection LOS: B

Intersection Capacity Utilization 45.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: Pike Rd. & Airport Rd.



























| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 51 | 68 | 58 | 91 | 91 | 664 | 57 | 27 | 397 | 64 |
| v/c Ratio | 0.26 | 0.35 | 0.25 | 0.40 | 0.14 | 0.29 | 0.05 | 0.05 | 0.20 | 0.06 |
| Control Delay (s/veh) | 26.3 | 21.1 | 25.4 | 19.8 | 6.8 | 10.6 | 0.1 | 6.8 | 12.1 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 26.3 | 21.1 | 25.4 | 19.8 | 6.8 | 10.6 | 0.1 | 6.8 | 12.1 | 0.1 |
| Queue Length 50th (ft) | 19 | 12 | 21 | 14 | 16 | 69 | 0 | 4 | 57 | 0 |
| Queue Length 95th (ft) | 43 | 46 | 47 | 53 | 37 | 163 | 0 | 14 | 98 | 0 |
| Internal Link Dist (ft) | | 398 | | 875 | | 684 | | | 2139 | |
| Turn Bay Length (ft) | 150 | | 100 | | 300 | | 150 | 150 | | 200 |
| Base Capacity (vph) | 198 | 351 | 228 | 383 | 678 | 2264 | 1091 | 603 | 2028 | 1000 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.26 | 0.19 | 0.25 | 0.24 | 0.13 | 0.29 | 0.05 | 0.04 | 0.20 | 0.06 |
| Intersection Summary | | | | | | | | | | |

HCM 7th Signalized Intersection Summary

5: Pike Rd. & Airport Rd.

8902 Quail Road

04/08/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Traffic Volume (veh/h) | 47 | 25 | 38 | 53 | 30 | 53 | 84 | 611 | 52 | 25 | 365 | 59 |
| Future Volume (veh/h) | 47 | 25 | 38 | 53 | 30 | 53 | 84 | 611 | 52 | 25 | 365 | 59 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width 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 |
| 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 | 51 | 27 | 41 | 58 | 33 | 58 | 91 | 664 | 57 | 27 | 397 | 64 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 205 | 56 | 86 | 240 | 50 | 87 | 596 | 1887 | 842 | 457 | 1749 | 780 |
| Arrive On Green | 0.04 | 0.08 | 0.08 | 0.05 | 0.08 | 0.08 | 0.06 | 0.53 | 0.53 | 0.03 | 0.49 | 0.49 |
| Sat Flow, veh/h | 1781 | 670 | 1017 | 1781 | 608 | 1069 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 51 | 0 | 68 | 58 | 0 | 91 | 91 | 664 | 57 | 27 | 397 | 64 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1687 | 1781 | 0 | 1678 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 1.9 | 0.0 | 2.9 | 2.2 | 0.0 | 3.9 | 1.8 | 8.1 | 1.3 | 0.6 | 4.8 | 1.6 |
| Cycle Q Clear(g_c), s | 1.9 | 0.0 | 2.9 | 2.2 | 0.0 | 3.9 | 1.8 | 8.1 | 1.3 | 0.6 | 4.8 | 1.6 |
| Prop In Lane | 1.00 | | 0.60 | 1.00 | | 0.64 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 205 | 0 | 142 | 240 | 0 | 137 | 596 | 1887 | 842 | 457 | 1749 | 780 |
| V/C Ratio(X) | 0.25 | 0.00 | 0.48 | 0.24 | 0.00 | 0.66 | 0.15 | 0.35 | 0.07 | 0.06 | 0.23 | 0.08 |
| Avail Cap(c_a), veh/h | 243 | 0 | 317 | 283 | 0 | 336 | 692 | 1887 | 842 | 622 | 1749 | 780 |
| 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 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.93 |
| Uniform Delay (d), s/veh | 29.9 | 0.0 | 32.8 | 29.5 | 0.0 | 33.4 | 8.2 | 10.1 | 8.6 | 8.9 | 10.9 | 10.1 |
| Incr Delay (d2), s/veh | 0.6 | 0.0 | 2.5 | 0.5 | 0.0 | 5.4 | 0.1 | 0.5 | 0.2 | 0.0 | 0.3 | 0.2 |
| 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(95%),veh/ln | 1.5 | 0.0 | 2.2 | 1.7 | 0.0 | 3.2 | 1.1 | 5.3 | 0.8 | 0.4 | 3.2 | 1.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d), s/veh | 30.5 | 0.0 | 35.2 | 30.0 | 0.0 | 38.9 | 8.3 | 10.7 | 8.7 | 9.0 | 11.2 | 10.3 |
| LnGrp LOS | C | | D | C | | D | A | B | A | A | B | B |
| Approach Vol, veh/h | 119 | | | 149 | | | 812 | | | 488 | | |
| Approach Delay, s/veh | 33.2 | | | 35.4 | | | 10.3 | | | 10.9 | | |
| Approach LOS | C | | | D | | | B | | | B | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.1 | 46.5 | 8.2 | 12.2 | 10.9 | 43.6 | 8.4 | 12.0 | | | | |
| Change Period (Y+Rc), s | 5.9 | 6.7 | 4.7 | 5.9 | 6.7 | * 6.7 | 5.4 | * 5.9 | | | | |
| Max Green Setting (Gmax), s | 9.1 | 23.3 | 5.3 | 14.1 | 8.3 | * 25 | 4.6 | * 15 | | | | |
| Max Q Clear Time (g_c+l1), s | 2.6 | 10.1 | 4.2 | 4.9 | 3.8 | 6.8 | 3.9 | 5.9 | | | | |
| Green Ext Time (p_c), s | 0.0 | 3.9 | 0.0 | 0.2 | 0.1 | 2.6 | 0.0 | 0.2 | | | | |





















Intersection Summary

| | |
|------------------------------|------|
| HCM 7th Control Delay, s/veh | 14.6 |
| HCM 7th LOS | B |









Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

















| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 100 | | 0 | 100 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.999 | | | 0.994 | | | 0.900 | | | 0.886 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1861 | 0 | 1770 | 1852 | 0 | 1770 | 1676 | 0 | 1770 | 1650 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1861 | 0 | 1770 | 1852 | 0 | 1770 | 1676 | 0 | 1770 | 1650 | 0 |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 345 | | | 627 | | | 442 | | | 339 | | |
| Travel Time (s) | 7.8 | | | 10.2 | | | 7.8 | | | 7.7 | | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |

| Intersection | |
|---------------------------|----|
| Intersection Delay, s/veh | 61 |
| Intersection LOS | F |











| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---------------------|---|---|------|---|---|------|---|---|------|---|---|------|
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Vol, veh/h | 27 | 545 | 2 | 23 | 526 | 21 | 1 | 42 | 85 | 17 | 15 | 47 |
| Future Vol, veh/h | 27 | 545 | 2 | 23 | 526 | 21 | 1 | 42 | 85 | 17 | 15 | 47 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 29 | 592 | 2 | 25 | 572 | 23 | 1 | 46 | 92 | 18 | 16 | 51 |
| Number of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |





| Approach | EB | WB | NB | SB |
|----------------------------|------|------|------|----|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 2 | 2 | 2 | 2 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 2 | 2 | 2 | 2 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 2 | 2 | 2 | 2 |
| HCM Control Delay, s/veh | 69.9 | 69.5 | 13.7 | 12 |
| HCM LOS | F | F | B | B |

| Lane | NBLn1 | NBLn2 | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 | SBLn2 |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Vol Left, % | 100% | 0% | 100% | 0% | 100% | 0% | 100% | 0% |
| Vol Thru, % | 0% | 33% | 0% | 100% | 0% | 96% | 0% | 24% |
| Vol Right, % | 0% | 67% | 0% | 0% | 0% | 4% | 0% | 76% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 1 | 127 | 27 | 547 | 23 | 547 | 17 | 62 |
| LT Vol | 1 | 0 | 27 | 0 | 23 | 0 | 17 | 0 |
| Through Vol | 0 | 42 | 0 | 545 | 0 | 526 | 0 | 15 |
| RT Vol | 0 | 85 | 0 | 2 | 0 | 21 | 0 | 47 |
| Lane Flow Rate | 1 | 138 | 29 | 595 | 25 | 595 | 18 | 67 |
| Geometry Grp | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Degree of Util (X) | 0.003 | 0.293 | 0.055 | 1.038 | 0.047 | 1.035 | 0.045 | 0.146 |
| Departure Headway (Hd) | 8.806 | 7.801 | 6.904 | 6.392 | 6.912 | 6.376 | 9.057 | 7.985 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 409 | 464 | 522 | 571 | 521 | 571 | 398 | 452 |
| Service Time | 6.506 | 5.501 | 4.604 | 4.092 | 4.612 | 4.076 | 6.757 | 5.685 |
| HCM Lane V/C Ratio | 0.002 | 0.297 | 0.056 | 1.042 | 0.048 | 1.042 | 0.045 | 0.148 |
| HCM Control Delay, s/veh | 11.5 | 13.7 | 10 | 72.9 | 10 | 72 | 12.2 | 12 |
| HCM Lane LOS | B | B | A | F | A | F | B | B |
| HCM 95th-tile Q | 0 | 1.2 | 0.2 | 16.2 | 0.1 | 16.1 | 0.1 | 0.5 |

| |  |  |  |  |  |  |  |  |  |  |  |  | |
|----------------------|---|---|---|---|---|---|--|---|---|---|---|---|-------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations | |  | | |  | | |  | | |  | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Ped Bike Factor | | | | | | | | | | | | | |
| Frt | | | | | 0.995 | | | | | 0.911 | | | 0.919 |
| Flt Protected | | | | | 0.998 | | | | | | | | 0.990 |
| Satd. Flow (prot) | 0 | 1859 | 0 | 0 | 1850 | 0 | 0 | 1697 | 0 | 0 | 1695 | 0 | |
| Flt Permitted | | | | | 0.998 | | | | | | | | 0.990 |
| Satd. Flow (perm) | 0 | 1859 | 0 | 0 | 1850 | 0 | 0 | 1697 | 0 | 0 | 1695 | 0 | |
| Link Speed (mph) | | | | | 30 | | | | | 30 | | | 30 |
| Link Distance (ft) | | | | | 352 | | | | | 471 | | | 295 |
| Travel Time (s) | 8.0 | | | | 12.4 | | | | 10.7 | | | | 6.7 |
| Intersection Summary | | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | | |

| | | | | |
|-----------------------------|---------|---------|---------|---------|
| Intersection | | | | |
| Intersection Delay, s/veh | 7.9 | | | |
| Intersection LOS | A | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 623 | 620 | 139 | 85 |
| Demand Flow Rate, veh/h | 636 | 632 | 142 | 86 |
| Vehicles Circulating, veh/h | 60 | 78 | 652 | 610 |
| Vehicles Exiting, veh/h | 636 | 716 | 44 | 100 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 8.0 | 8.2 | 7.5 | 6.2 |
| Approach LOS | A | A | A | A |
| Lane | Left | Left | Left | Left |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| RT Channelized | | | | |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 4.976 |
| A (Intercept) | 1380 | 1380 | 1380 | 1380 |
| B (Slope) | 1.02e-3 | 1.02e-3 | 1.02e-3 | 1.02e-3 |
| Entry Flow, veh/h | 636 | 632 | 142 | 86 |
| Cap Entry Lane, veh/h | 1298 | 1274 | 710 | 741 |
| Entry HV Adj Factor | 0.980 | 0.980 | 0.979 | 0.985 |
| Flow Entry, veh/h | 623 | 620 | 139 | 85 |
| Cap Entry, veh/h | 1272 | 1249 | 695 | 729 |
| V/C Ratio | 0.490 | 0.496 | 0.200 | 0.116 |
| Control Delay, s/veh | 8.0 | 8.2 | 7.5 | 6.2 |
| LOS | A | A | A | A |
| 95th %tile Queue, veh | 3 | 3 | 1 | 0 |

| |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | 0% | | | 0% |
| Storage Length (ft) | 0 | 0 | | 0 | 200 | |
| Storage Lanes | 1 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Ped Bike Factor | | | | | | |
| Frt | 0.944 | | 0.998 | | | |
| Flt Protected | 0.972 | | | | 0.950 | |
| Satd. Flow (prot) | 1709 | 0 | 3532 | 0 | 1770 | 3539 |
| Flt Permitted | 0.972 | | | | 0.950 | |
| Satd. Flow (perm) | 1709 | 0 | 3532 | 0 | 1770 | 3539 |
| Link Speed (mph) | 30 | | 30 | | | 30 |
| Link Distance (ft) | 244 | | 284 | | | 406 |
| Travel Time (s) | 5.5 | | 6.5 | | | 9.2 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |

| Intersection | | | | | | |
|--------------------------|---|------|---|------|---|---|
| Int Delay, s/veh | 0.1 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Traffic Vol, veh/h | 6 | 5 | 413 | 6 | 4 | 1025 |
| Future Vol, veh/h | 6 | 5 | 413 | 6 | 4 | 1025 |
| 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 |
| Mvmt Flow | 7 | 5 | 449 | 7 | 4 | 1114 |

























| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1018 | 228 | 0 |
| Stage 1 | 452 | - | - |
| Stage 2 | 566 | - | - |
| Critical Hdwy | 6.84 | 6.94 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - |
| Pot Cap-1 Maneuver | 233 | 775 | - |
| Stage 1 | 608 | - | - |
| Stage 2 | 532 | - | - |
| Platoon blocked, % | | - | - |
| Mov Cap-1 Maneuver | 233 | 775 | - |
| Mov Cap-2 Maneuver | 233 | - | - |
| Stage 1 | 608 | - | - |
| Stage 2 | 530 | - | - |

| Approach | WB | NB | SB |
|-----------------------------|----|----|------|
| HCM Control Delay, s/v15.94 | | 0 | 0.03 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|---------------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 341 | 1102 |
| HCM Lane V/C Ratio | - | - | 0.035 | 0.004 |
| HCM Control Delay (s/veh) | - | - | 15.9 | 8.3 |
| HCM Lane LOS | - | - | C | A |
| HCM 95th %tile Q(veh) | - | - | 0.1 | 0 |

Lanes and Geometrics
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/08/2024

























| |  |  |  |  |  |  |  |  |  |  |  |  | |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | |
| Grade (%) | 0% | | 0% | | 0% | | 0% | | 0% | | 0% | | |
| Storage Length (ft) | 75 | | 150 | 150 | | 100 | 300 | | 250 | 250 | | 200 | |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 1 | | 1 | 1 | | 1 | |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Ped Bike Factor | | | | | | | | | | | | | |
| Frt | | | 0.850 | | | | 0.850 | | 0.850 | | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | | |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | | |
| Satd. Flow (perm) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | |
| Right Turn on Red | | | Yes | | | | Yes | | Yes | | | | Yes |
| Satd. Flow (RTOR) | | | 133 | | | | 180 | | 173 | | | | 233 |
| Link Speed (mph) | 30 | | | | 30 | | | | 30 | | | | 30 |
| Link Distance (ft) | 794 | | | | 1437 | | | | 2219 | | | | 401 |
| Travel Time (s) | 18.0 | | | | 32.7 | | | | 50.4 | | | | 9.1 |

Intersection Summary

Area Type: Other

Timings
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/08/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 76 | 344 | 84 | 70 | 259 | 77 | 73 | 266 | 124 | 139 | 677 | 228 |
| Future Volume (vph) | 76 | 344 | 84 | 70 | 259 | 77 | 73 | 266 | 124 | 139 | 677 | 228 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 34.2 | 34.2 | 10.0 | 34.2 | 34.2 | 10.0 | 26.0 | 26.0 | 10.0 | 26.0 | 26.0 |
| Total Split (s) | 25.0 | 46.0 | 46.0 | 18.0 | 39.0 | 39.0 | 18.0 | 30.0 | 30.0 | 21.0 | 33.0 | 33.0 |
| Total Split (%) | 21.7% | 40.0% | 40.0% | 15.7% | 33.9% | 33.9% | 15.7% | 26.1% | 26.1% | 18.3% | 28.7% | 28.7% |
| Yellow Time (s) | 3.0 | 4.2 | 4.2 | 3.0 | 4.2 | 4.2 | 3.0 | 5.0 | 5.0 | 3.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 6.2 | 6.2 | 5.0 | 6.2 | 6.2 | 5.0 | 7.0 | 7.0 | 5.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 10.7 | 28.9 | 28.9 | 10.0 | 28.3 | 28.3 | 10.5 | 40.7 | 40.7 | 14.4 | 46.9 | 46.9 |
| Actuated g/C Ratio | 0.09 | 0.25 | 0.25 | 0.09 | 0.25 | 0.25 | 0.09 | 0.35 | 0.35 | 0.13 | 0.41 | 0.41 |
| v/c Ratio | 0.51 | 0.80 | 0.18 | 0.49 | 0.62 | 0.16 | 0.49 | 0.23 | 0.20 | 0.68 | 0.51 | 0.32 |
| Control Delay (s/veh) | 59.5 | 52.7 | 2.3 | 60.4 | 43.7 | 0.6 | 59.3 | 31.0 | 3.2 | 63.3 | 31.8 | 6.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 59.5 | 52.7 | 2.3 | 60.4 | 43.7 | 0.6 | 59.3 | 31.0 | 3.2 | 63.3 | 31.8 | 6.7 |
| LOS | E | D | A | E | D | A | E | C | A | E | C | A |
| Approach Delay (s/veh) | | 45.4 | | | 38.4 | | | 28.0 | | | 30.5 | |
| Approach LOS | | D | | | D | | | C | | | C | |

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 9 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay (s/veh): 34.4

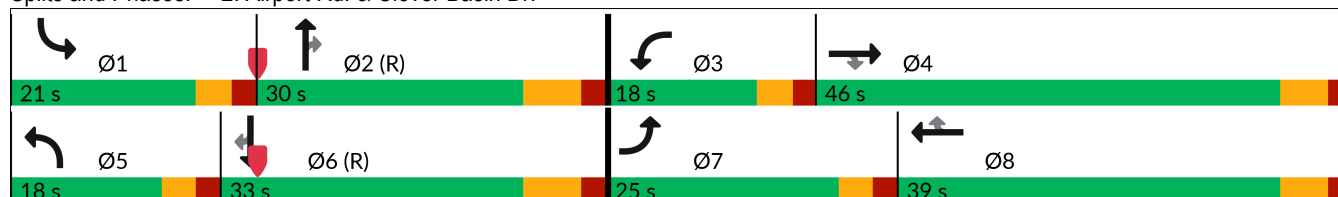
Intersection LOS: C

Intersection Capacity Utilization 64.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Airport Rd. & Clover Basin Dr.





| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 83 | 374 | 91 | 76 | 282 | 84 | 79 | 289 | 135 | 151 | 736 | 248 |
| v/c Ratio | 0.51 | 0.80 | 0.18 | 0.49 | 0.62 | 0.16 | 0.49 | 0.23 | 0.20 | 0.68 | 0.51 | 0.32 |
| Control Delay (s/veh) | 59.5 | 52.7 | 2.3 | 60.4 | 43.7 | 0.6 | 59.3 | 31.0 | 3.2 | 63.3 | 31.8 | 6.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 59.5 | 52.7 | 2.3 | 60.4 | 43.7 | 0.6 | 59.3 | 31.0 | 3.2 | 63.3 | 31.8 | 6.7 |
| Queue Length 50th (ft) | 60 | 261 | 0 | 54 | 186 | 0 | 57 | 82 | 0 | 108 | 226 | 7 |
| Queue Length 95th (ft) | 107 | 334 | 14 | 101 | 252 | 0 | 104 | 142 | 28 | 174 | #391 | 77 |
| Internal Link Dist (ft) | | 714 | | | 1357 | | | 2139 | | | 321 | |
| Turn Bay Length (ft) | 75 | | 150 | 150 | | 100 | 300 | | 250 | 250 | | 200 |
| Base Capacity (vph) | 307 | 644 | 634 | 200 | 542 | 588 | 205 | 1251 | 671 | 255 | 1444 | 783 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.27 | 0.58 | 0.14 | 0.38 | 0.52 | 0.14 | 0.39 | 0.23 | 0.20 | 0.59 | 0.51 | 0.32 |

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

























Queue shown is maximum after two cycles.

HCM 7th Signalized Intersection Summary

2: Airport Rd. & Clover Basin Dr.











8902 Quail Road

04/08/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h) | 76 | 344 | 84 | 70 | 259 | 77 | 73 | 266 | 124 | 139 | 677 | 228 |
| Future Volume (veh/h) | 76 | 344 | 84 | 70 | 259 | 77 | 73 | 266 | 124 | 139 | 677 | 228 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width 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 |
| 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 | 83 | 374 | 91 | 76 | 282 | 84 | 79 | 289 | 135 | 151 | 736 | 248 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 107 | 430 | 364 | 98 | 420 | 356 | 101 | 1466 | 654 | 180 | 1623 | 724 |
| Arrive On Green | 0.06 | 0.23 | 0.23 | 0.05 | 0.22 | 0.22 | 0.06 | 0.41 | 0.41 | 0.10 | 0.46 | 0.46 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 83 | 374 | 91 | 76 | 282 | 84 | 79 | 289 | 135 | 151 | 736 | 248 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 5.3 | 22.1 | 5.4 | 4.8 | 15.8 | 5.0 | 5.0 | 6.0 | 6.3 | 9.6 | 16.3 | 11.6 |
| Cycle Q Clear(g_c), s | 5.3 | 22.1 | 5.4 | 4.8 | 15.8 | 5.0 | 5.0 | 6.0 | 6.3 | 9.6 | 16.3 | 11.6 |
| 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 | 107 | 430 | 364 | 98 | 420 | 356 | 101 | 1466 | 654 | 180 | 1623 | 724 |
| V/C Ratio(X) | 0.78 | 0.87 | 0.25 | 0.78 | 0.67 | 0.24 | 0.78 | 0.20 | 0.21 | 0.84 | 0.45 | 0.34 |
| Avail Cap(c_a), veh/h | 310 | 647 | 549 | 201 | 533 | 452 | 201 | 1466 | 654 | 248 | 1623 | 724 |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 0.99 | 0.99 | 0.99 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 53.3 | 42.6 | 36.2 | 53.7 | 40.7 | 36.5 | 53.5 | 21.6 | 21.7 | 50.8 | 21.4 | 20.1 |
| Incr Delay (d2), s/veh | 11.4 | 8.3 | 0.4 | 12.5 | 2.2 | 0.3 | 12.1 | 0.3 | 0.7 | 16.4 | 0.9 | 1.3 |
| 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(95%),veh/ln | 4.9 | 16.6 | 3.8 | 4.5 | 12.0 | 3.6 | 4.7 | 4.6 | 4.4 | 8.8 | 11.2 | 8.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d), s/veh | 64.7 | 50.9 | 36.5 | 66.1 | 42.9 | 36.8 | 65.6 | 21.9 | 22.4 | 67.2 | 22.3 | 21.4 |
| LnGrp LOS | E | D | D | E | D | D | E | C | C | E | C | C |
| Approach Vol, veh/h | 548 | | | | 442 | | | | 503 | | 1135 | |
| Approach Delay, s/veh | 50.6 | | | | 45.8 | | | | 28.9 | | 28.1 | |
| Approach LOS | D | | | | D | | | | C | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 16.6 | 54.4 | 11.3 | 32.6 | 11.5 | 59.5 | 11.9 | 32.0 | | | | |
| Change Period (Y+Rc), s | 5.0 | 7.0 | 5.0 | 6.2 | 5.0 | 7.0 | 5.0 | 6.2 | | | | |
| Max Green Setting (Gmax), s | 16.0 | 23.0 | 13.0 | 39.8 | 13.0 | 26.0 | 20.0 | 32.8 | | | | |
| Max Q Clear Time (g_c+I1), s | 11.6 | 8.3 | 6.8 | 24.1 | 7.0 | 18.3 | 7.3 | 17.8 | | | | |
| Green Ext Time (p_c), s | 0.1 | 2.0 | 0.1 | 2.3 | 0.1 | 3.5 | 0.1 | 1.7 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 7th Control Delay, s/veh | 35.9 | | | | | | | | | | | |
| HCM 7th LOS | D | | | | | | | | | | | |





Lanes and Geometrics
3: Larkspur Dr. & Clover Basin Dr.

8902 Quail Road
04/08/2024

| |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|
| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | 0% | |
| Storage Length (ft) | | 200 | 0 | | 0 | 0 |
| Storage Lanes | | 1 | 0 | | 1 | 0 |
| Taper Length (ft) | | | 25 | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | |
| Frt | | 0.850 | | | 0.913 | |
| Flt Protected | | | | 0.997 | 0.982 | |
| Satd. Flow (prot) | 1863 | 1583 | 0 | 1857 | 1670 | 0 |
| Flt Permitted | | | | 0.997 | 0.982 | |
| Satd. Flow (perm) | 1863 | 1583 | 0 | 1857 | 1670 | 0 |
| Link Speed (mph) | 30 | | | 30 | 30 | |
| Link Distance (ft) | 1437 | | | 260 | 268 | |
| Travel Time (s) | 32.7 | | | 5.9 | 6.5 | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |

Intersection

Int Delay, s/veh 1.7

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|--------------------------|---|---|------|---|---|------|
| Lane Configurations |  |  | |  |  | |
| Traffic Vol, veh/h | 612 | 16 | 25 | 370 | 30 | 54 |
| Future Vol, veh/h | 612 | 16 | 25 | 370 | 30 | 54 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 200 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 665 | 17 | 27 | 402 | 33 | 59 |





















| Major/Minor | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 683 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Critical Hdwy | - | - | 4.12 |
| Critical Hdwy Stg 1 | - | - | - |
| Critical Hdwy Stg 2 | - | - | - |
| Follow-up Hdwy | - | - | 2.218 |
| Pot Cap-1 Maneuver | - | - | 910 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | - | - | 910 |
| Mov Cap-2 Maneuver | - | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |

| Approach | EB | WB | NB |
|------------------------|----|------|-------|
| HCM Control Delay, s/v | 0 | 0.57 | 20.01 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---------------------------|-------|-----|-----|------|-----|
| Capacity (veh/h) | 330 | - | - | 114 | - |
| HCM Lane V/C Ratio | 0.276 | - | - | 0.03 | - |
| HCM Control Delay (s/veh) | 20 | - | - | 9.1 | 0 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 1.1 | - | - | 0.1 | - |









Lanes and Geometrics
4: S Fordham St. & Clover Basin Dr.

8902 Quail Road
04/08/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 100 | | 0 | 150 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.997 | | | 0.994 | | | 0.889 | | | 0.938 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1857 | 0 | 1770 | 1852 | 0 | 1770 | 1656 | 0 | 1770 | 1747 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1857 | 0 | 1770 | 1852 | 0 | 1770 | 1656 | 0 | 1770 | 1747 | 0 |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 483 | | | 921 | | | 648 | | | 640 | | |
| Travel Time (s) | 11.0 | | | 20.9 | | | 14.7 | | | 14.5 | | |

Intersection Summary

Area Type: Other

| Intersection | | | | | | | | | | | | |
|--------------------------|---|---|------|---|---|------|---|---|------|---|---|------|
| Int Delay, s/veh | 4.3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Vol, veh/h | 32 | 628 | 14 | 50 | 365 | 15 | 5 | 12 | 34 | 24 | 46 | 32 |
| Future Vol, veh/h | 32 | 628 | 14 | 50 | 365 | 15 | 5 | 12 | 34 | 24 | 46 | 32 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 100 | - | - | 150 | - | - | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 35 | 683 | 15 | 54 | 397 | 16 | 5 | 13 | 37 | 26 | 50 | 35 |























| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 413 | 0 | 0 | 698 | 0 | 0 | 1290 | 1282 | 690 | 1272 | 1281 | 405 |
| Stage 1 | - | - | - | - | - | - | 760 | 760 | - | 514 | 514 | - |
| Stage 2 | - | - | - | - | - | - | 530 | 522 | - | 759 | 767 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1146 | - | - | 899 | - | - | 140 | 165 | 445 | 144 | 166 | 646 |
| Stage 1 | - | - | - | - | - | - | 398 | 415 | - | 544 | 536 | - |
| Stage 2 | - | - | - | - | - | - | 532 | 531 | - | 399 | 411 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1146 | - | - | 899 | - | - | 83 | 151 | 445 | 111 | 151 | 646 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 83 | 151 | - | 111 | 151 | - |
| Stage 1 | - | - | - | - | - | - | 386 | 402 | - | 511 | 503 | - |
| Stage 2 | - | - | - | - | - | - | 426 | 499 | - | 343 | 399 | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|------|-------|----|
| HCM Control Delay, s/v | 0.39 | 1.08 | 22.78 | 35 |
| HCM LOS | | | C | E |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|---------------------------|-------|-------|------|-----|-----|------|-----|-----|-------|-------|
| Capacity (veh/h) | 83 | 295 | 1146 | - | - | 899 | - | - | 111 | 220 |
| HCM Lane V/C Ratio | 0.065 | 0.17 | 0.03 | - | - | 0.06 | - | - | 0.235 | 0.385 |
| HCM Control Delay (s/veh) | 51.2 | 19.7 | 8.2 | - | - | 9.3 | - | - | 47.1 | 31.3 |
| HCM Lane LOS | F | C | A | - | - | A | - | - | E | D |
| HCM 95th %tile Q(veh) | 0.2 | 0.6 | 0.1 | - | - | 0.2 | - | - | 0.9 | 1.7 |

Lanes and Geometrics
5: Pike Rd. & Airport Rd.

8902 Quail Road
04/08/2024





















| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 150 | | 0 | 100 | | 0 | 300 | | 150 | 150 | | 200 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.867 | | | | 0.885 | | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1615 | 0 | 1770 | 1649 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.720 | | | 0.503 | | | 0.299 | | | 0.541 | | |
| Satd. Flow (perm) | 1341 | 1615 | 0 | 937 | 1649 | 0 | 557 | 3539 | 1583 | 1008 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 114 | | | 43 | | | | 156 | | | 156 |
| Link Speed (mph) | | 30 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 478 | | | 955 | | | 764 | | | 2219 | |
| Travel Time (s) | | 10.9 | | | 21.7 | | | 17.4 | | | 50.4 | |

Intersection Summary

Area Type: Other

Timings
5: Pike Rd. & Airport Rd.

8902 Quail Road
04/08/2024

| |  |  |  |  |  |  |  |  |  |  |
|------------------------|---|---|---|---|---|---|--|---|---|---|
| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 40 | 14 | 55 | 12 | 45 | 324 | 49 | 49 | 732 | 44 |
| Future Volume (vph) | 40 | 14 | 55 | 12 | 45 | 324 | 49 | 49 | 732 | 44 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.4 | 29.9 | 9.7 | 30.0 | 11.7 | 22.5 | 22.5 | 10.9 | 22.5 | 22.5 |
| Total Split (s) | 15.0 | 30.0 | 15.0 | 30.0 | 20.0 | 40.0 | 40.0 | 20.0 | 40.0 | 40.0 |
| Total Split (%) | 14.3% | 28.6% | 14.3% | 28.6% | 19.0% | 38.1% | 38.1% | 19.0% | 38.1% | 38.1% |
| Yellow Time (s) | 3.9 | 3.9 | 3.2 | 3.0 | 4.7 | 4.7 | 4.7 | 3.9 | 3.0 | 3.0 |
| All-Red Time (s) | 1.5 | 2.0 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.4 | 5.9 | 4.7 | 5.0 | 6.7 | 6.7 | 6.7 | 5.9 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 14.7 | 7.7 | 17.1 | 11.1 | 69.0 | 63.6 | 63.6 | 69.3 | 64.7 | 64.7 |
| Actuated g/C Ratio | 0.14 | 0.07 | 0.16 | 0.11 | 0.66 | 0.61 | 0.61 | 0.66 | 0.62 | 0.62 |
| v/c Ratio | 0.20 | 0.58 | 0.28 | 0.26 | 0.11 | 0.16 | 0.05 | 0.07 | 0.36 | 0.05 |
| Control Delay (s/veh) | 34.6 | 21.8 | 35.7 | 21.1 | 7.3 | 11.4 | 0.1 | 6.7 | 12.7 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 34.6 | 21.8 | 35.7 | 21.1 | 7.3 | 11.4 | 0.1 | 6.7 | 12.7 | 0.1 |
| LOS | C | C | D | C | A | B | A | A | B | A |
| Approach Delay (s/veh) | | 25.0 | | 28.7 | | 9.7 | | | 11.7 | |
| Approach LOS | | C | | C | | A | | | B | |

Intersection Summary

Cycle Length: 105

Actuated Cycle Length: 105

Offset: 59 (56%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay (s/veh): 13.7

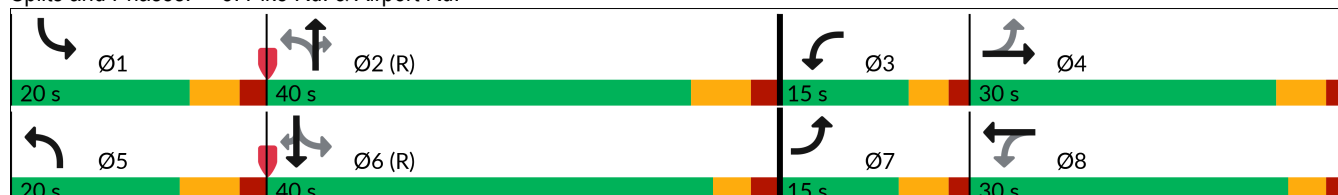
Intersection LOS: B

Intersection Capacity Utilization 48.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: Pike Rd. & Airport Rd.



Queues
5: Pike Rd. & Airport Rd.

8902 Quail Road
04/08/2024

























| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 43 | 129 | 60 | 56 | 49 | 352 | 53 | 53 | 796 | 48 |
| v/c Ratio | 0.20 | 0.58 | 0.28 | 0.26 | 0.11 | 0.16 | 0.05 | 0.07 | 0.36 | 0.05 |
| Control Delay (s/veh) | 34.6 | 21.8 | 35.7 | 21.1 | 7.3 | 11.4 | 0.1 | 6.7 | 12.7 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 34.6 | 21.8 | 35.7 | 21.1 | 7.3 | 11.4 | 0.1 | 6.7 | 12.7 | 0.1 |
| Queue Length 50th (ft) | 24 | 10 | 34 | 8 | 9 | 54 | 0 | 10 | 141 | 0 |
| Queue Length 95th (ft) | 50 | 64 | 64 | 45 | 26 | 97 | 0 | 27 | 225 | 0 |
| Internal Link Dist (ft) | | 398 | | 875 | | 684 | | | 2139 | |
| Turn Bay Length (ft) | 150 | | 100 | | 300 | | 150 | 150 | | 200 |
| Base Capacity (vph) | 251 | 458 | 245 | 425 | 544 | 2143 | 1020 | 817 | 2181 | 1035 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.17 | 0.28 | 0.24 | 0.13 | 0.09 | 0.16 | 0.05 | 0.06 | 0.36 | 0.05 |
| Intersection Summary | | | | | | | | | | |

HCM 7th Signalized Intersection Summary

5: Pike Rd. & Airport Rd.

8902 Quail Road

04/08/2024





















| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Traffic Volume (veh/h) | 40 | 14 | 105 | 55 | 12 | 40 | 45 | 324 | 49 | 49 | 732 | 44 |
| Future Volume (veh/h) | 40 | 14 | 105 | 55 | 12 | 40 | 45 | 324 | 49 | 49 | 732 | 44 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width 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 |
| 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 | 43 | 15 | 114 | 60 | 13 | 43 | 49 | 352 | 53 | 53 | 796 | 48 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 224 | 19 | 146 | 171 | 39 | 129 | 443 | 2128 | 949 | 679 | 2105 | 939 |
| Arrive On Green | 0.03 | 0.10 | 0.10 | 0.04 | 0.10 | 0.10 | 0.04 | 0.60 | 0.60 | 0.04 | 0.59 | 0.59 |
| Sat Flow, veh/h | 1781 | 188 | 1426 | 1781 | 381 | 1262 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 43 | 0 | 129 | 60 | 0 | 56 | 49 | 352 | 53 | 53 | 796 | 48 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1614 | 1781 | 0 | 1643 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 2.2 | 0.0 | 8.2 | 3.1 | 0.0 | 3.3 | 1.1 | 4.6 | 1.5 | 1.2 | 12.4 | 1.3 |
| Cycle Q Clear(g_c), s | 2.2 | 0.0 | 8.2 | 3.1 | 0.0 | 3.3 | 1.1 | 4.6 | 1.5 | 1.2 | 12.4 | 1.3 |
| Prop In Lane | 1.00 | | 0.88 | 1.00 | | 0.77 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 224 | 0 | 165 | 171 | 0 | 168 | 443 | 2128 | 949 | 679 | 2105 | 939 |
| V/C Ratio(X) | 0.19 | 0.00 | 0.78 | 0.35 | 0.00 | 0.33 | 0.11 | 0.17 | 0.06 | 0.08 | 0.38 | 0.05 |
| Avail Cap(c_a), veh/h | 326 | 0 | 370 | 274 | 0 | 391 | 604 | 2128 | 949 | 851 | 2105 | 939 |
| 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 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.88 | 0.88 | 0.88 |
| Uniform Delay (d), s/veh | 40.2 | 0.0 | 46.0 | 40.3 | 0.0 | 43.8 | 8.2 | 9.4 | 8.7 | 7.5 | 11.2 | 9.0 |
| Incr Delay (d2), s/veh | 0.4 | 0.0 | 7.9 | 1.2 | 0.0 | 1.2 | 0.1 | 0.2 | 0.1 | 0.0 | 0.5 | 0.1 |
| 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(95%),veh/ln | 1.8 | 0.0 | 6.5 | 2.6 | 0.0 | 2.5 | 0.7 | 3.2 | 0.9 | 0.8 | 8.1 | 0.8 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d), s/veh | 40.6 | 0.0 | 53.9 | 41.5 | 0.0 | 45.0 | 8.3 | 9.5 | 8.9 | 7.5 | 11.7 | 9.1 |
| LnGrp LOS | D | | D | D | | D | A | A | A | A | B | A |
| Approach Vol, veh/h | 172 | | | 116 | | | 454 | | | 897 | | |
| Approach Delay, s/veh | 50.6 | | | 43.2 | | | 9.3 | | | 11.3 | | |
| Approach LOS | D | | | D | | | A | | | B | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.8 | 69.6 | 9.0 | 16.6 | 10.5 | 68.9 | 9.0 | 16.6 | | | | |
| Change Period (Y+Rc), s | 5.9 | 6.7 | 4.7 | 5.9 | 6.7 | * 6.7 | 5.4 | * 5.9 | | | | |
| Max Green Setting (Gmax), s | 14.1 | 33.3 | 10.3 | 24.1 | 13.3 | * 35 | 9.6 | * 25 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.2 | 6.6 | 5.1 | 10.2 | 3.1 | 14.4 | 4.2 | 5.3 | | | | |
| Green Ext Time (p_c), s | 0.1 | 2.6 | 0.0 | 0.5 | 0.1 | 5.8 | 0.0 | 0.2 | | | | |

Intersection Summary









| | |
|------------------------------|------|
| HCM 7th Control Delay, s/veh | 17.1 |
| HCM 7th LOS | B |

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

















| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 100 | | 0 | 100 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.997 | | | 0.994 | | | 0.889 | | | 0.938 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1857 | 0 | 1770 | 1852 | 0 | 1770 | 1656 | 0 | 1770 | 1747 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1857 | 0 | 1770 | 1852 | 0 | 1770 | 1656 | 0 | 1770 | 1747 | 0 |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 297 | | | 624 | | | 503 | | | 339 | | |
| Travel Time (s) | 6.8 | | | 7.4 | | | 7.1 | | | 7.7 | | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |

| Intersection | |
|---------------------------|------|
| Intersection Delay, s/veh | 55.7 |
| Intersection LOS | F |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---------------------|---|---|------|---|---|------|---|---|------|---|---|------|
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Vol, veh/h | 32 | 628 | 14 | 50 | 365 | 15 | 5 | 12 | 34 | 24 | 46 | 32 |
| Future Vol, veh/h | 32 | 628 | 14 | 50 | 365 | 15 | 5 | 12 | 34 | 24 | 46 | 32 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 35 | 683 | 15 | 54 | 397 | 16 | 5 | 13 | 37 | 26 | 50 | 35 |
| Number of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|----------------------------|------|------|----|------|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 2 | 2 | 2 | 2 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 2 | 2 | 2 | 2 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 2 | 2 | 2 | 2 |
| HCM Control Delay, s/veh | 89.2 | 18.8 | 11 | 11.7 |
| HCM LOS | F | C | B | B |











| Lane | NBLn1 | NBLn2 | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 | SBLn2 |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Vol Left, % | 100% | 0% | 100% | 0% | 100% | 0% | 100% | 0% |
| Vol Thru, % | 0% | 26% | 0% | 98% | 0% | 96% | 0% | 59% |
| Vol Right, % | 0% | 74% | 0% | 2% | 0% | 4% | 0% | 41% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 5 | 46 | 32 | 642 | 50 | 380 | 24 | 78 |
| LT Vol | 5 | 0 | 32 | 0 | 50 | 0 | 24 | 0 |
| Through Vol | 0 | 12 | 0 | 628 | 0 | 365 | 0 | 46 |
| RT Vol | 0 | 34 | 0 | 14 | 0 | 15 | 0 | 32 |
| Lane Flow Rate | 5 | 50 | 35 | 698 | 54 | 413 | 26 | 85 |
| Geometry Grp | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Degree of Util (X) | 0.012 | 0.099 | 0.06 | 1.113 | 0.096 | 0.667 | 0.058 | 0.169 |
| Departure Headway (Hd) | 8.516 | 7.466 | 6.261 | 5.74 | 6.58 | 6.045 | 8.299 | 7.489 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 423 | 483 | 576 | 635 | 548 | 603 | 434 | 482 |
| Service Time | 6.216 | 5.166 | 3.961 | 3.44 | 4.28 | 3.745 | 5.999 | 5.189 |
| HCM Lane V/C Ratio | 0.012 | 0.104 | 0.061 | 1.099 | 0.099 | 0.685 | 0.06 | 0.176 |
| HCM Control Delay, s/veh | 11.3 | 11 | 9.4 | 93.2 | 10 | 20 | 11.5 | 11.7 |
| HCM Lane LOS | B | B | A | F | A | C | B | B |
| HCM 95th-tile Q | 0 | 0.3 | 0.2 | 21.2 | 0.3 | 5 | 0.2 | 0.6 |

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | | |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.997 | | | 0.995 | | | 0.909 | | | 0.957 | |
| Flt Protected | | 0.998 | | | 0.994 | | | 0.995 | | | 0.988 | |
| Satd. Flow (prot) | 0 | 1853 | 0 | 0 | 1842 | 0 | 0 | 1685 | 0 | 0 | 1761 | 0 |
| Flt Permitted | | 0.998 | | | 0.994 | | | 0.995 | | | 0.988 | |
| Satd. Flow (perm) | 0 | 1853 | 0 | 0 | 1842 | 0 | 0 | 1685 | 0 | 0 | 1761 | 0 |
| Link Speed (mph) | | 30 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 366 | | | 418 | | | 541 | | | 378 | |
| Travel Time (s) | | 8.3 | | | 9.5 | | | 8.8 | | | 8.6 | |

Intersection Summary





Area Type: Other

| | | | | |
|-----------------------------|-------------|-------------|-------------|-------------|
| Intersection | | | | |
| Intersection Delay, s/veh | 8.8 | | | |
| Intersection LOS | A | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 733 | 467 | 55 | 111 |
| Demand Flow Rate, veh/h | 748 | 476 | 56 | 114 |
| Vehicles Circulating, veh/h | 133 | 54 | 760 | 465 |
| Vehicles Exiting, veh/h | 446 | 762 | 121 | 65 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 11.0 | 6.2 | 6.8 | 5.6 |
| Approach LOS | B | A | A | A |
| Lane | Left | Left | Left | Left |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| RT Channelized | | | | |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 4.976 |
| A (Intercept) | 1380 | 1380 | 1380 | 1380 |
| B (Slope) | 1.02e-3 | 1.02e-3 | 1.02e-3 | 1.02e-3 |
| Entry Flow, veh/h | 748 | 476 | 56 | 114 |
| Cap Entry Lane, veh/h | 1205 | 1306 | 636 | 859 |
| Entry HV Adj Factor | 0.980 | 0.981 | 0.978 | 0.974 |
| Flow Entry, veh/h | 733 | 467 | 55 | 111 |
| Cap Entry, veh/h | 1181 | 1281 | 621 | 836 |
| V/C Ratio | 0.621 | 0.364 | 0.088 | 0.133 |
| Control Delay, s/veh | 11.0 | 6.2 | 6.8 | 5.6 |
| LOS | B | A | A | A |
| 95th %tile Queue, veh | 5 | 2 | 0 | 0 |

| |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | 0% | | | 0% |
| Storage Length (ft) | 0 | 0 | | 0 | 200 | |
| Storage Lanes | 1 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Ped Bike Factor | | | | | | |
| Frt | 0.892 | | 0.999 | | | |
| Flt Protected | 0.990 | | | | 0.950 | |
| Satd. Flow (prot) | 1645 | 0 | 3536 | 0 | 1770 | 3539 |
| Flt Permitted | 0.990 | | | | 0.950 | |
| Satd. Flow (perm) | 1645 | 0 | 3536 | 0 | 1770 | 3539 |
| Link Speed (mph) | 30 | | 30 | | | 30 |
| Link Distance (ft) | 244 | | 284 | | | 406 |
| Travel Time (s) | 5.5 | | 6.5 | | | 9.2 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |

Intersection

Int Delay, s/veh 0.1

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------|---|------|---|------|---|---|
| Lane Configurations |  | |  | |  |  |
| Traffic Vol, veh/h | 1 | 4 | 842 | 8 | 7 | 635 |
| Future Vol, veh/h | 1 | 4 | 842 | 8 | 7 | 635 |
| 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 |
| Mvmt Flow | 1 | 4 | 915 | 9 | 8 | 690 |

























| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1280 | 462 | 0 |
| Stage 1 | 920 | - | - |
| Stage 2 | 360 | - | - |
| Critical Hdwy | 6.84 | 6.94 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - |
| Pot Cap-1 Maneuver | 158 | 547 | - |
| Stage 1 | 349 | - | - |
| Stage 2 | 676 | - | - |
| Platoon blocked, % | | - | - |
| Mov Cap-1 Maneuver | 156 | 547 | - |
| Mov Cap-2 Maneuver | 156 | - | - |
| Stage 1 | 349 | - | - |
| Stage 2 | 669 | - | - |

| Approach | WB | NB | SB |
|-----------------------------|----|----|------|
| HCM Control Delay, s/v15.04 | | 0 | 0.11 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|---------------------------|-----|----------|-------|------|
| Capacity (veh/h) | - | - | 364 | 735 |
| HCM Lane V/C Ratio | - | - | 0.015 | 0.01 |
| HCM Control Delay (s/veh) | - | - | 15 | 9.9 |
| HCM Lane LOS | - | - | C | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 |

Lanes and Geometrics
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/10/2024

























| |  |  |  |  |  |  |  |  |  |  |  |  | | |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|-------|-----|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | | |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | | |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | | |
| Grade (%) | 0% | | | | 0% | | | | 0% | | | | | |
| Storage Length (ft) | 75 | | | 150 | 150 | | | 100 | 300 | | | 250 | 250 | 200 |
| Storage Lanes | 1 | | | 1 | 1 | | | 1 | 1 | | | 1 | 1 | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | |
| Ped Bike Factor | | | | | | | | | | | | | | |
| Frt | | | 0.850 | | | | 0.850 | | | | 0.850 | | 0.850 | |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.950 | | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | | |
| Flt Permitted | 0.950 | | | 0.950 | | | | 0.950 | | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | | |
| Right Turn on Red | | | Yes | | | | Yes | | | | Yes | | Yes | |
| Satd. Flow (RTOR) | | | 180 | | | | 180 | | | | 173 | | 125 | |
| Link Speed (mph) | 30 | | | | 30 | | | | 30 | | | | 30 | |
| Link Distance (ft) | 794 | | | | 1437 | | | | 2219 | | | | 401 | |
| Travel Time (s) | 18.0 | | | | 32.7 | | | | 50.4 | | | | 9.1 | |

Intersection Summary

Area Type: Other

Timings
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/10/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 80 | 349 | 36 | 151 | 331 | 152 | 62 | 620 | 158 | 160 | 379 | 106 |
| Future Volume (vph) | 80 | 349 | 36 | 151 | 331 | 152 | 62 | 620 | 158 | 160 | 379 | 106 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 34.2 | 34.2 | 10.0 | 34.2 | 34.2 | 10.0 | 26.0 | 26.0 | 10.0 | 26.0 | 26.0 |
| Total Split (s) | 18.0 | 44.0 | 44.0 | 18.0 | 44.0 | 44.0 | 14.0 | 30.0 | 30.0 | 23.0 | 39.0 | 39.0 |
| Total Split (%) | 15.7% | 38.3% | 38.3% | 15.7% | 38.3% | 38.3% | 12.2% | 26.1% | 26.1% | 20.0% | 33.9% | 33.9% |
| Yellow Time (s) | 3.0 | 4.2 | 4.2 | 3.0 | 4.2 | 4.2 | 3.0 | 5.0 | 5.0 | 3.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 6.2 | 6.2 | 5.0 | 6.2 | 6.2 | 5.0 | 7.0 | 7.0 | 5.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 10.5 | 29.0 | 29.0 | 12.7 | 33.4 | 33.4 | 8.9 | 34.5 | 34.5 | 15.6 | 43.5 | 43.5 |
| Actuated g/C Ratio | 0.09 | 0.25 | 0.25 | 0.11 | 0.29 | 0.29 | 0.08 | 0.30 | 0.30 | 0.14 | 0.38 | 0.38 |
| v/c Ratio | 0.54 | 0.81 | 0.07 | 0.84 | 0.67 | 0.28 | 0.49 | 0.63 | 0.29 | 0.73 | 0.31 | 0.17 |
| Control Delay (s/veh) | 61.7 | 53.5 | 0.3 | 84.4 | 42.7 | 4.6 | 63.0 | 40.3 | 7.0 | 64.6 | 28.7 | 5.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 61.7 | 53.5 | 0.3 | 84.4 | 42.7 | 4.6 | 63.0 | 40.3 | 7.0 | 64.6 | 28.7 | 5.2 |
| LOS | E | D | A | F | D | A | E | D | A | E | C | A |
| Approach Delay (s/veh) | | 50.8 | | | 43.5 | | | 35.7 | | | 33.7 | |
| Approach LOS | | D | | | D | | | D | | | C | |

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 9 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay (s/veh): 39.8

Intersection LOS: D

Intersection Capacity Utilization 72.1%

ICU Level of Service C













Analysis Period (min) 15

Splits and Phases: 2: Airport Rd. & Clover Basin Dr.



Queues
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/10/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Group Flow (vph) | 87 | 379 | 39 | 164 | 360 | 165 | 67 | 674 | 172 | 174 | 412 | 115 |
| v/c Ratio | 0.54 | 0.81 | 0.07 | 0.84 | 0.67 | 0.28 | 0.49 | 0.63 | 0.29 | 0.73 | 0.31 | 0.17 |
| Control Delay (s/veh) | 61.7 | 53.5 | 0.3 | 84.4 | 42.7 | 4.6 | 63.0 | 40.3 | 7.0 | 64.6 | 28.7 | 5.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 61.7 | 53.5 | 0.3 | 84.4 | 42.7 | 4.6 | 63.0 | 40.3 | 7.0 | 64.6 | 28.7 | 5.2 |
| Queue Length 50th (ft) | 62 | 265 | 0 | 121 | 242 | 0 | 48 | 230 | 0 | 124 | 117 | 0 |
| Queue Length 95th (ft) | 114 | 341 | 0 | #238 | 323 | 39 | 96 | #380 | 58 | 197 | 178 | 38 |
| Internal Link Dist (ft) | | 714 | | | 1357 | | | 2139 | | | 321 | |
| Turn Bay Length (ft) | 75 | | 150 | 150 | | 100 | 300 | | 250 | 250 | | 200 |
| Base Capacity (vph) | 200 | 612 | 641 | 200 | 612 | 641 | 148 | 1062 | 596 | 280 | 1337 | 676 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.44 | 0.62 | 0.06 | 0.82 | 0.59 | 0.26 | 0.45 | 0.63 | 0.29 | 0.62 | 0.31 | 0.17 |

Intersection Summary

























95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 7th Signalized Intersection Summary

2: Airport Rd. & Clover Basin Dr.











8902 Quail Road

04/10/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h) | 80 | 349 | 36 | 151 | 331 | 152 | 62 | 620 | 158 | 160 | 379 | 106 |
| Future Volume (veh/h) | 80 | 349 | 36 | 151 | 331 | 152 | 62 | 620 | 158 | 160 | 379 | 106 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width 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 |
| 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 | 87 | 379 | 39 | 164 | 360 | 165 | 67 | 674 | 172 | 174 | 412 | 115 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 111 | 431 | 365 | 192 | 516 | 437 | 86 | 1229 | 548 | 204 | 1464 | 653 |
| Arrive On Green | 0.06 | 0.23 | 0.23 | 0.11 | 0.28 | 0.28 | 0.05 | 0.35 | 0.35 | 0.11 | 0.41 | 0.41 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 87 | 379 | 39 | 164 | 360 | 165 | 67 | 674 | 172 | 174 | 412 | 115 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 5.5 | 22.5 | 2.2 | 10.4 | 19.8 | 9.7 | 4.3 | 17.6 | 9.2 | 11.0 | 8.9 | 5.3 |
| Cycle Q Clear(g_c), s | 5.5 | 22.5 | 2.2 | 10.4 | 19.8 | 9.7 | 4.3 | 17.6 | 9.2 | 11.0 | 8.9 | 5.3 |
| 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 | 111 | 431 | 365 | 192 | 516 | 437 | 86 | 1229 | 548 | 204 | 1464 | 653 |
| V/C Ratio(X) | 0.79 | 0.88 | 0.11 | 0.86 | 0.70 | 0.38 | 0.78 | 0.55 | 0.31 | 0.85 | 0.28 | 0.18 |
| Avail Cap(c_a), veh/h | 201 | 615 | 521 | 201 | 615 | 521 | 139 | 1229 | 548 | 279 | 1464 | 653 |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 53.2 | 42.7 | 34.9 | 50.4 | 37.3 | 33.7 | 54.1 | 30.4 | 27.6 | 50.0 | 22.5 | 21.4 |
| Incr Delay (d2), s/veh | 11.6 | 10.2 | 0.1 | 27.8 | 2.8 | 0.5 | 13.2 | 1.7 | 1.4 | 16.8 | 0.5 | 0.6 |
| 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(95%),veh/ln | 5.1 | 17.1 | 1.6 | 10.2 | 14.4 | 6.8 | 4.0 | 12.2 | 6.6 | 9.8 | 6.9 | 3.7 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d), s/veh | 64.8 | 52.9 | 35.0 | 78.2 | 40.1 | 34.2 | 67.4 | 32.0 | 29.0 | 66.8 | 23.0 | 22.0 |
| LnGrp LOS | E | D | D | E | D | C | E | C | C | E | C | C |
| Approach Vol, veh/h | 505 | | | 689 | | | 913 | | | 701 | | |
| Approach Delay, s/veh | 53.6 | | | 47.8 | | | 34.1 | | | 33.7 | | |
| Approach LOS | D | | | D | | | C | | | C | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 18.2 | 46.8 | 17.4 | 32.7 | 10.6 | 54.4 | 12.1 | 37.9 | | | | |
| Change Period (Y+Rc), s | 5.0 | 7.0 | 5.0 | 6.2 | 5.0 | 7.0 | 5.0 | 6.2 | | | | |
| Max Green Setting (Gmax), s | 18.0 | 23.0 | 13.0 | 37.8 | 9.0 | 32.0 | 13.0 | 37.8 | | | | |
| Max Q Clear Time (g_c+I1), s | 13.0 | 19.6 | 12.4 | 24.5 | 6.3 | 10.9 | 7.5 | 21.8 | | | | |
| Green Ext Time (p_c), s | 0.2 | 1.6 | 0.0 | 2.0 | 0.0 | 3.1 | 0.1 | 2.5 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 7th Control Delay, s/veh | 40.8 | | | | | | | | | | | |
| HCM 7th LOS | D | | | | | | | | | | | |

Lanes and Geometrics
3: Larkspur Dr. & Clover Basin Dr.





















8902 Quail Road
04/10/2024

| |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|
| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | 0% | |
| Storage Length (ft) | | 200 | 0 | | 0 | 0 |
| Storage Lanes | | 1 | 0 | | 1 | 0 |
| Taper Length (ft) | | | 25 | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | |
| Frt | | 0.850 | | | 0.899 | |
| Flt Protected | | | | 0.995 | 0.988 | |
| Satd. Flow (prot) | 1863 | 1583 | 0 | 1853 | 1655 | 0 |
| Flt Permitted | | | | 0.995 | 0.988 | |
| Satd. Flow (perm) | 1863 | 1583 | 0 | 1853 | 1655 | 0 |
| Link Speed (mph) | 30 | | | 30 | 30 | |
| Link Distance (ft) | 1437 | | | 260 | 268 | |
| Travel Time (s) | 32.7 | | | 5.9 | 6.5 | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |

| Intersection | | | | | | |
|---------------------------|--------|------|--------|-------|--------|-------|
| Int Delay, s/veh | 1.6 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↗ | | ↖ | ↘ | |
| Traffic Vol, veh/h | 640 | 25 | 74 | 644 | 16 | 47 |
| Future Vol, veh/h | 640 | 25 | 74 | 644 | 16 | 47 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 200 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 696 | 27 | 80 | 700 | 17 | 51 |
| | | | | | | |
| Major/Minor | Major1 | | Major2 | | Minor1 | |
| Conflicting Flow All | 0 | 0 | 723 | 0 | 1557 | 696 |
| Stage 1 | - | - | - | - | 696 | - |
| Stage 2 | - | - | - | - | 861 | - |
| Critical Hdwy | - | - | 4.12 | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | - | - | 879 | - | 124 | 442 |
| Stage 1 | - | - | - | - | 495 | - |
| Stage 2 | - | - | - | - | 414 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 879 | - | 106 | 442 |
| Mov Cap-2 Maneuver | - | - | - | - | 106 | - |
| Stage 1 | - | - | - | - | 495 | - |
| Stage 2 | - | - | - | - | 352 | - |
| | | | | | | |
| | | | | | | |
| Approach | EB | | WB | | NB | |
| HCM Control Delay, s/v | 0 | | 0.98 | | 25.39 | |
| HCM LOS | D | | | | | |
| | | | | | | |
| | | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 244 | - | - | 186 | - | |
| HCM Lane V/C Ratio | 0.28 | - | - | 0.091 | - | |
| HCM Control Delay (s/veh) | 25.4 | - | - | 9.5 | 0 | |
| HCM Lane LOS | D | - | - | A | A | |
| HCM 95th %tile Q(veh) | 1.1 | - | - | 0.3 | - | |









Lanes and Geometrics
4: S Fordham St. & Clover Basin Dr.

8902 Quail Road
04/10/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 100 | | 0 | 150 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.999 | | | 0.995 | | | 0.900 | | | 0.881 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1861 | 0 | 1770 | 1853 | 0 | 1770 | 1676 | 0 | 1770 | 1641 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1861 | 0 | 1770 | 1853 | 0 | 1770 | 1676 | 0 | 1770 | 1641 | 0 |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 483 | | | 921 | | | 648 | | | 640 | | |
| Travel Time (s) | 11.0 | | | 20.9 | | | 14.7 | | | 14.5 | | |

Intersection Summary

Area Type: Other

| Intersection | | | | | | | | | | | | |
|--------------------------|---|---|------|---|---|------|---|---|------|---|---|------|
| Int Delay, s/veh | 7.3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Vol, veh/h | 30 | 657 | 5 | 23 | 632 | 21 | 11 | 42 | 85 | 17 | 15 | 57 |
| Future Vol, veh/h | 30 | 657 | 5 | 23 | 632 | 21 | 11 | 42 | 85 | 17 | 15 | 57 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 100 | - | - | 150 | - | - | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 33 | 714 | 5 | 25 | 687 | 23 | 12 | 46 | 92 | 18 | 16 | 62 |























| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 710 | 0 | 0 | 720 | 0 | 0 | 1527 | 1542 | 717 | 1551 | 1533 | 698 |
| Stage 1 | - | - | - | - | - | - | 782 | 782 | - | 748 | 748 | - |
| Stage 2 | - | - | - | - | - | - | 745 | 760 | - | 802 | 785 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 889 | - | - | 882 | - | - | 96 | 115 | 430 | 93 | 116 | 440 |
| Stage 1 | - | - | - | - | - | - | 387 | 405 | - | 404 | 420 | - |
| Stage 2 | - | - | - | - | - | - | 406 | 415 | - | 378 | 404 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 889 | - | - | 882 | - | - | 66 | 108 | 430 | 40 | 109 | 440 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 66 | 108 | - | 40 | 109 | - |
| Stage 1 | - | - | - | - | - | - | 373 | 390 | - | 393 | 408 | - |
| Stage 2 | - | - | - | - | - | - | 325 | 403 | - | 252 | 389 | - |

| Approach | EB | | | WB | | | NB | | | SB | | |
|------------------------|-----|--|--|------|--|--|-------|--|--|-------|--|--|
| HCM Control Delay, s/v | 0.4 | | | 0.31 | | | 49.04 | | | 48.81 | | |
| HCM LOS | | | | | | | E | | | E | | |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|---------------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h) | 66 | 216 | 889 | - | - | 882 | - | - | 40 | 270 |
| HCM Lane V/C Ratio | 0.18 | 0.639 | 0.037 | - | - | 0.028 | - | - | 0.459 | 0.29 |
| HCM Control Delay (s/veh) | 70.8 | 47.2 | 9.2 | - | - | 9.2 | - | - | 155.1 | 23.7 |
| HCM Lane LOS | F | E | A | - | - | A | - | - | F | C |
| HCM 95th %tile Q(veh) | 0.6 | 3.8 | 0.1 | - | - | 0.1 | - | - | 1.6 | 1.2 |

Lanes and Geometrics
5: Pike Rd. & Airport Rd.

8902 Quail Road
04/10/2024





















| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 150 | | 0 | 100 | | 0 | 300 | | 150 | 150 | | 200 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.905 | | | 0.899 | | | 0.850 | | | 0.850 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1686 | 0 | 1770 | 1675 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.658 | | | 0.709 | | | 0.432 | | | 0.361 | | |
| Satd. Flow (perm) | 1226 | 1686 | 0 | 1321 | 1675 | 0 | 805 | 3539 | 1583 | 672 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | 47 | | | 67 | | | 218 | | | 218 | | |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 478 | | | 955 | | | 764 | | | 2219 | | |
| Travel Time (s) | 10.9 | | | 21.7 | | | 17.4 | | | 50.4 | | |

Intersection Summary

Area Type: Other

Timings
5: Pike Rd. & Airport Rd.

8902 Quail Road
04/10/2024

| |  |  |  |  |  |  |  |  |  |  |
|------------------------|---|---|---|---|---|---|--|---|---|---|
| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 55 | 25 | 56 | 30 | 84 | 707 | 52 | 25 | 414 | 59 |
| Future Volume (vph) | 55 | 25 | 56 | 30 | 84 | 707 | 52 | 25 | 414 | 59 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 4.6 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 20.0 | 9.7 | 20.0 | 11.7 | 22.5 | 22.5 | 10.9 | 22.5 | 22.5 |
| Total Split (s) | 10.0 | 20.0 | 10.0 | 20.0 | 15.0 | 30.0 | 30.0 | 15.0 | 30.0 | 30.0 |
| Total Split (%) | 13.3% | 26.7% | 13.3% | 26.7% | 20.0% | 40.0% | 40.0% | 20.0% | 40.0% | 40.0% |
| Yellow Time (s) | 3.9 | 3.9 | 3.2 | 3.0 | 4.7 | 4.7 | 4.7 | 3.9 | 3.0 | 3.0 |
| All-Red Time (s) | 1.5 | 2.0 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.4 | 5.9 | 4.7 | 5.0 | 6.7 | 6.7 | 6.7 | 5.9 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 10.1 | 7.1 | 11.2 | 7.8 | 50.0 | 47.9 | 47.9 | 45.9 | 42.9 | 42.9 |
| Actuated g/C Ratio | 0.13 | 0.09 | 0.15 | 0.10 | 0.67 | 0.64 | 0.64 | 0.61 | 0.57 | 0.57 |
| v/c Ratio | 0.30 | 0.37 | 0.27 | 0.43 | 0.15 | 0.34 | 0.05 | 0.05 | 0.22 | 0.06 |
| Control Delay (s/veh) | 27.2 | 20.5 | 25.6 | 19.1 | 6.9 | 11.0 | 0.1 | 6.9 | 12.3 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 27.2 | 20.5 | 25.6 | 19.1 | 6.9 | 11.0 | 0.1 | 6.9 | 12.3 | 0.1 |
| LOS | C | C | C | B | A | B | A | A | B | A |
| Approach Delay (s/veh) | | 23.5 | | 21.5 | | 9.9 | | | 10.6 | |
| Approach LOS | | C | | C | | A | | | B | |

Intersection Summary

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 59 (79%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.43

Intersection Signal Delay (s/veh): 12.3

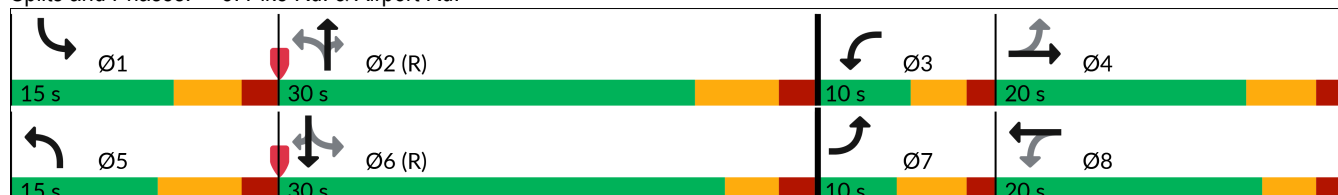
Intersection LOS: B

Intersection Capacity Utilization 48.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: Pike Rd. & Airport Rd.



























| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 60 | 74 | 61 | 100 | 91 | 768 | 57 | 27 | 450 | 64 |
| v/c Ratio | 0.30 | 0.37 | 0.27 | 0.43 | 0.15 | 0.34 | 0.05 | 0.05 | 0.22 | 0.06 |
| Control Delay (s/veh) | 27.2 | 20.5 | 25.6 | 19.1 | 6.9 | 11.0 | 0.1 | 6.9 | 12.3 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 27.2 | 20.5 | 25.6 | 19.1 | 6.9 | 11.0 | 0.1 | 6.9 | 12.3 | 0.1 |
| Queue Length 50th (ft) | 22 | 12 | 23 | 14 | 16 | 83 | 0 | 4 | 66 | 0 |
| Queue Length 95th (ft) | 48 | 47 | 49 | 55 | 37 | 193 | 0 | 14 | 112 | 0 |
| Internal Link Dist (ft) | | 398 | | 875 | | 684 | | | 2139 | |
| Turn Bay Length (ft) | 150 | | 100 | | 300 | | 150 | 150 | | 200 |
| Base Capacity (vph) | 198 | 355 | 229 | 388 | 645 | 2262 | 1090 | 566 | 2026 | 999 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.30 | 0.21 | 0.27 | 0.26 | 0.14 | 0.34 | 0.05 | 0.05 | 0.22 | 0.06 |
| Intersection Summary | | | | | | | | | | |

HCM 7th Signalized Intersection Summary

5: Pike Rd. & Airport Rd.

8902 Quail Road

04/10/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Traffic Volume (veh/h) | 55 | 25 | 43 | 56 | 30 | 62 | 84 | 707 | 52 | 25 | 414 | 59 |
| Future Volume (veh/h) | 55 | 25 | 43 | 56 | 30 | 62 | 84 | 707 | 52 | 25 | 414 | 59 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width 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 |
| 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 | 60 | 27 | 47 | 61 | 33 | 67 | 91 | 768 | 57 | 27 | 450 | 64 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 212 | 57 | 99 | 249 | 48 | 98 | 558 | 1852 | 826 | 406 | 1715 | 765 |
| Arrive On Green | 0.04 | 0.09 | 0.09 | 0.05 | 0.09 | 0.09 | 0.06 | 0.52 | 0.52 | 0.03 | 0.48 | 0.48 |
| Sat Flow, veh/h | 1781 | 612 | 1066 | 1781 | 551 | 1118 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 60 | 0 | 74 | 61 | 0 | 100 | 91 | 768 | 57 | 27 | 450 | 64 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1678 | 1781 | 0 | 1669 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 2.3 | 0.0 | 3.1 | 2.3 | 0.0 | 4.4 | 1.9 | 9.9 | 1.3 | 0.6 | 5.6 | 1.6 |
| Cycle Q Clear(g_c), s | 2.3 | 0.0 | 3.1 | 2.3 | 0.0 | 4.4 | 1.9 | 9.9 | 1.3 | 0.6 | 5.6 | 1.6 |
| Prop In Lane | 1.00 | | 0.64 | 1.00 | | 0.67 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 212 | 0 | 156 | 249 | 0 | 146 | 558 | 1852 | 826 | 406 | 1715 | 765 |
| V/C Ratio(X) | 0.28 | 0.00 | 0.48 | 0.24 | 0.00 | 0.68 | 0.16 | 0.41 | 0.07 | 0.07 | 0.26 | 0.08 |
| Avail Cap(c_a), veh/h | 243 | 0 | 316 | 289 | 0 | 334 | 654 | 1852 | 826 | 571 | 1715 | 765 |
| 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 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.90 | 0.90 | 0.90 |
| Uniform Delay (d), s/veh | 29.4 | 0.0 | 32.3 | 29.1 | 0.0 | 33.2 | 8.6 | 11.0 | 8.9 | 9.4 | 11.5 | 10.5 |
| Incr Delay (d2), s/veh | 0.7 | 0.0 | 2.2 | 0.5 | 0.0 | 5.5 | 0.1 | 0.7 | 0.2 | 0.1 | 0.3 | 0.2 |
| 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(95%),veh/ln | 1.8 | 0.0 | 2.4 | 1.8 | 0.0 | 3.5 | 1.2 | 6.6 | 0.8 | 0.4 | 3.8 | 1.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d), s/veh | 30.1 | 0.0 | 34.5 | 29.6 | 0.0 | 38.7 | 8.8 | 11.7 | 9.1 | 9.5 | 11.8 | 10.7 |
| LnGrp LOS | C | | C | C | | D | A | B | A | A | B | B |
| Approach Vol, veh/h | 134 | | | 161 | | | 916 | | | 541 | | |
| Approach Delay, s/veh | 32.6 | | | 35.3 | | | 11.2 | | | 11.6 | | |
| Approach LOS | C | | | D | | | B | | | B | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.1 | 45.8 | 8.3 | 12.9 | 10.9 | 42.9 | 8.7 | 12.5 | | | | |
| Change Period (Y+Rc), s | 5.9 | 6.7 | 4.7 | 5.9 | 6.7 | * 6.7 | 5.4 | * 5.9 | | | | |
| Max Green Setting (Gmax), s | 9.1 | 23.3 | 5.3 | 14.1 | 8.3 | * 25 | 4.6 | * 15 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.6 | 11.9 | 4.3 | 5.1 | 3.9 | 7.6 | 4.3 | 6.4 | | | | |
| Green Ext Time (p_c), s | 0.0 | 4.2 | 0.0 | 0.2 | 0.1 | 3.0 | 0.0 | 0.3 | | | | |





















Intersection Summary

| | |
|------------------------------|------|
| HCM 7th Control Delay, s/veh | 15.2 |
| HCM 7th LOS | B |

Notes

User approved pedestrian interval to be less than phase max green.









* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 100 | | 0 | 100 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.999 | | | 0.995 | | | 0.900 | | | 0.881 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1861 | 0 | 1770 | 1853 | 0 | 1770 | 1676 | 0 | 1770 | 1641 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1861 | 0 | 1770 | 1853 | 0 | 1770 | 1676 | 0 | 1770 | 1641 | 0 |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 345 | | | 627 | | | 442 | | | 339 | | |
| Travel Time (s) | 7.8 | | | 10.2 | | | 7.8 | | | 7.7 | | |

Intersection Summary

















Area Type: Other

| Intersection | |
|---------------------------|-------|
| Intersection Delay, s/veh | 128.7 |
| Intersection LOS | F |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---------------------|---|---|------|---|---|------|---|---|------|---|---|------|
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Vol, veh/h | 30 | 657 | 5 | 23 | 632 | 21 | 11 | 42 | 85 | 17 | 15 | 57 |
| Future Vol, veh/h | 30 | 657 | 5 | 23 | 632 | 21 | 11 | 42 | 85 | 17 | 15 | 57 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 33 | 714 | 5 | 25 | 687 | 23 | 12 | 46 | 92 | 18 | 16 | 62 |
| Number of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|----------------------------|-------|-------|------|----|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 2 | 2 | 2 | 2 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 2 | 2 | 2 | 2 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 2 | 2 | 2 | 2 |
| HCM Control Delay, s/veh | 150.5 | 144.9 | 14.3 | 13 |
| HCM LOS | F | F | B | B |











| Lane | NBLn1 | NBLn2 | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 | SBLn2 |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Vol Left, % | 100% | 0% | 100% | 0% | 100% | 0% | 100% | 0% |
| Vol Thru, % | 0% | 33% | 0% | 99% | 0% | 97% | 0% | 21% |
| Vol Right, % | 0% | 67% | 0% | 1% | 0% | 3% | 0% | 79% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 11 | 127 | 30 | 662 | 23 | 653 | 17 | 72 |
| LT Vol | 11 | 0 | 30 | 0 | 23 | 0 | 17 | 0 |
| Through Vol | 0 | 42 | 0 | 657 | 0 | 632 | 0 | 15 |
| RT Vol | 0 | 85 | 0 | 5 | 0 | 21 | 0 | 57 |
| Lane Flow Rate | 12 | 138 | 33 | 720 | 25 | 710 | 18 | 78 |
| Geometry Grp | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Degree of Util (X) | 0.028 | 0.289 | 0.062 | 1.27 | 0.048 | 1.252 | 0.045 | 0.166 |
| Departure Headway (Hd) | 9.438 | 8.424 | 7.19 | 6.674 | 7.216 | 6.682 | 9.721 | 8.614 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 382 | 429 | 501 | 547 | 499 | 547 | 371 | 419 |
| Service Time | 7.138 | 6.124 | 4.89 | 4.374 | 4.916 | 4.382 | 7.421 | 6.314 |
| HCM Lane V/C Ratio | 0.031 | 0.322 | 0.066 | 1.316 | 0.05 | 1.298 | 0.049 | 0.186 |
| HCM Control Delay, s/veh | 12.4 | 14.5 | 10.4 | 156.8 | 10.3 | 149.6 | 12.9 | 13 |
| HCM Lane LOS | B | B | B | F | B | F | B | B |
| HCM 95th-tile Q | 0.1 | 1.2 | 0.2 | 27.5 | 0.2 | 26.5 | 0.1 | 0.6 |





| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | | |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.999 | | | 0.996 | | | 0.917 | | | 0.913 | |
| Flt Protected | | 0.998 | | | 0.998 | | | 0.996 | | | 0.991 | |
| Satd. Flow (prot) | 0 | 1857 | 0 | 0 | 1852 | 0 | 0 | 1701 | 0 | 0 | 1685 | 0 |
| Flt Permitted | | 0.998 | | | 0.998 | | | 0.996 | | | 0.991 | |
| Satd. Flow (perm) | 0 | 1857 | 0 | 0 | 1852 | 0 | 0 | 1701 | 0 | 0 | 1685 | 0 |
| Link Speed (mph) | | 30 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 352 | | | 547 | | | 471 | | | 295 | |
| Travel Time (s) | | 8.0 | | | 12.4 | | | 10.7 | | | 6.7 | |

Intersection Summary

Area Type: Other

| Intersection | | | | |
|-----------------------------|---------|---------|---------|---------|
| Intersection Delay, s/veh | 9.7 | | | |
| Intersection LOS | A | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 752 | 735 | 150 | 96 |
| Demand Flow Rate, veh/h | 767 | 750 | 153 | 97 |
| Vehicles Circulating, veh/h | 60 | 93 | 780 | 739 |
| Vehicles Exiting, veh/h | 776 | 840 | 47 | 104 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 9.8 | 10.2 | 9.0 | 7.4 |
| Approach LOS | A | B | A | A |
| Lane | Left | Left | Left | Left |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| RT Channelized | | | | |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 4.976 |
| A (Intercept) | 1380 | 1380 | 1380 | 1380 |
| B (Slope) | 1.02e-3 | 1.02e-3 | 1.02e-3 | 1.02e-3 |
| Entry Flow, veh/h | 767 | 750 | 153 | 97 |
| Cap Entry Lane, veh/h | 1298 | 1255 | 623 | 649 |
| Entry HV Adj Factor | 0.980 | 0.980 | 0.981 | 0.986 |
| Flow Entry, veh/h | 752 | 735 | 150 | 96 |
| Cap Entry, veh/h | 1272 | 1230 | 611 | 641 |
| V/C Ratio | 0.591 | 0.598 | 0.246 | 0.149 |
| Control Delay, s/veh | 9.8 | 10.2 | 9.0 | 7.4 |
| LOS | A | B | A | A |
| 95th %tile Queue, veh | 4 | 4 | 1 | 1 |

| |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | 0% | | | 0% |
| Storage Length (ft) | 0 | 0 | | 0 | 200 | |
| Storage Lanes | 1 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Ped Bike Factor | | | | | | |
| Frt | | | 0.998 | | | |
| Flt Protected | 0.950 | | | | 0.950 | |
| Satd. Flow (prot) | 1770 | 0 | 3532 | 0 | 1770 | 3539 |
| Flt Permitted | 0.950 | | | | 0.950 | |
| Satd. Flow (perm) | 1770 | 0 | 3532 | 0 | 1770 | 3539 |
| Link Speed (mph) | 30 | | 30 | | | 30 |
| Link Distance (ft) | 244 | | 284 | | | 406 |
| Travel Time (s) | 5.5 | | 6.5 | | | 9.2 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |

| Intersection | | | | | | |
|--------------------------|---|------|---|------|---|---|
| Int Delay, s/veh | 0.1 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Traffic Vol, veh/h | 6 | 0 | 368 | 5 | 2 | 884 |
| Future Vol, veh/h | 6 | 0 | 368 | 5 | 2 | 884 |
| 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 |
| Mvmt Flow | 7 | 0 | 400 | 5 | 2 | 961 |

| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 888 | 203 | 0 |
| Stage 1 | 403 | - | - |
| Stage 2 | 485 | - | - |
| Critical Hdwy | 6.84 | 6.94 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - |
| Pot Cap-1 Maneuver | 283 | 804 | - |
| Stage 1 | 644 | - | - |
| Stage 2 | 585 | - | - |
| Platoon blocked, % | | - | - |
| Mov Cap-1 Maneuver | 283 | 804 | - |
| Mov Cap-2 Maneuver | 283 | - | - |
| Stage 1 | 644 | - | - |
| Stage 2 | 584 | - | - |

























| Approach | WB | NB | SB |
|-----------------------------|----|----|------|
| HCM Control Delay, s/v18.03 | | 0 | 0.02 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|---------------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 283 | 1150 |
| HCM Lane V/C Ratio | - | - | 0.023 | 0.002 |
| HCM Control Delay (s/veh) | - | - | 18 | 8.1 |
| HCM Lane LOS | - | - | C | A |
| HCM 95th %tile Q(veh) | - | - | 0.1 | 0 |

Lanes and Geometrics
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road

04/29/2024

























| |  |  |  |  |  |  |  |  |  |  |  |  | | |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|-------|-----|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | | |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | | |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | | |
| Grade (%) | 0% | | | | 0% | | | | 0% | | | | | |
| Storage Length (ft) | 75 | | | 150 | 150 | | | 100 | 300 | | | 250 | 250 | 200 |
| Storage Lanes | 1 | | | 1 | 1 | | | 1 | 1 | | | 1 | 1 | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | |
| Ped Bike Factor | | | | | | | | | | | | | | |
| Frt | | | 0.850 | | | | 0.850 | | | | 0.850 | | 0.850 | |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.950 | | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | | |
| Flt Permitted | 0.950 | | | 0.950 | | | | 0.950 | | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | | |
| Right Turn on Red | | | Yes | | | | Yes | | | | Yes | | Yes | |
| Satd. Flow (RTOR) | | | 133 | | | | 180 | | | | 173 | | 207 | |
| Link Speed (mph) | 30 | | | | 30 | | | | 30 | | | | 30 | |
| Link Distance (ft) | 794 | | | | 727 | | | | 2219 | | | | 401 | |
| Travel Time (s) | 18.0 | | | | 16.5 | | | | 50.4 | | | | 9.1 | |

Intersection Summary

Area Type: Other

Timings
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/29/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 65 | 288 | 72 | 69 | 223 | 75 | 60 | 232 | 112 | 119 | 583 | 190 |
| Future Volume (vph) | 65 | 288 | 72 | 69 | 223 | 75 | 60 | 232 | 112 | 119 | 583 | 190 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 34.2 | 34.2 | 10.0 | 34.2 | 34.2 | 10.0 | 26.0 | 26.0 | 10.0 | 26.0 | 26.0 |
| Total Split (s) | 25.0 | 46.0 | 46.0 | 18.0 | 39.0 | 39.0 | 18.0 | 30.0 | 30.0 | 21.0 | 33.0 | 33.0 |
| Total Split (%) | 21.7% | 40.0% | 40.0% | 15.7% | 33.9% | 33.9% | 15.7% | 26.1% | 26.1% | 18.3% | 28.7% | 28.7% |
| Yellow Time (s) | 3.0 | 4.2 | 4.2 | 3.0 | 4.2 | 4.2 | 3.0 | 5.0 | 5.0 | 3.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 6.2 | 6.2 | 5.0 | 6.2 | 6.2 | 5.0 | 7.0 | 7.0 | 5.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 10.0 | 25.1 | 25.1 | 10.0 | 25.1 | 25.1 | 9.6 | 45.3 | 45.3 | 13.6 | 51.6 | 51.6 |
| Actuated g/C Ratio | 0.09 | 0.22 | 0.22 | 0.09 | 0.22 | 0.22 | 0.08 | 0.39 | 0.39 | 0.12 | 0.45 | 0.45 |
| v/c Ratio | 0.46 | 0.76 | 0.17 | 0.49 | 0.59 | 0.16 | 0.44 | 0.18 | 0.16 | 0.61 | 0.39 | 0.25 |
| Control Delay (s/veh) | 58.9 | 54.4 | 1.4 | 60.2 | 45.7 | 0.7 | 58.8 | 27.3 | 2.0 | 60.4 | 26.4 | 4.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 58.9 | 54.4 | 1.4 | 60.2 | 45.7 | 0.7 | 58.8 | 27.3 | 2.0 | 60.4 | 26.4 | 4.9 |
| LOS | E | D | A | E | D | A | E | C | A | E | C | A |
| Approach Delay (s/veh) | | 46.2 | | | 39.2 | | | 25.0 | | | 26.4 | |
| Approach LOS | | D | | | D | | | C | | | C | |

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 9 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay (s/veh): 32.4

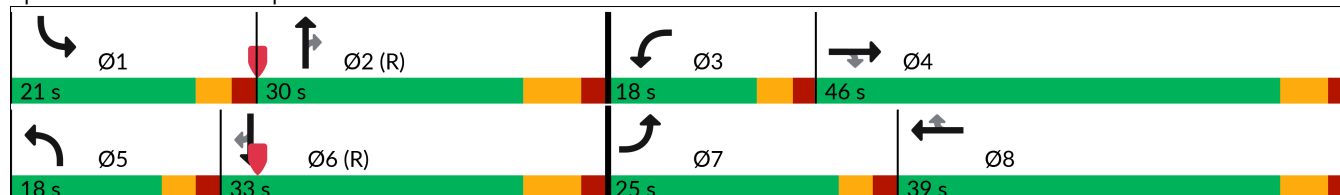
Intersection LOS: C

Intersection Capacity Utilization 58.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 2: Airport Rd. & Clover Basin Dr.















Queues

8902 Quail Road

2: Airport Rd. & Clover Basin Dr.

04/29/2024
























| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Group Flow (vph) | 71 | 313 | 78 | 75 | 242 | 82 | 65 | 252 | 122 | 129 | 634 | 207 |
| v/c Ratio | 0.46 | 0.76 | 0.17 | 0.49 | 0.59 | 0.16 | 0.44 | 0.18 | 0.16 | 0.61 | 0.39 | 0.25 |
| Control Delay (s/veh) | 58.9 | 54.4 | 1.4 | 60.2 | 45.7 | 0.7 | 58.8 | 27.3 | 2.0 | 60.4 | 26.4 | 4.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 58.9 | 54.4 | 1.4 | 60.2 | 45.7 | 0.7 | 58.8 | 27.3 | 2.0 | 60.4 | 26.4 | 4.9 |
| Queue Length 50th (ft) | 51 | 220 | 0 | 54 | 162 | 0 | 47 | 65 | 0 | 92 | 174 | 0 |
| Queue Length 95th (ft) | 96 | 292 | 5 | 101 | 226 | 0 | 89 | 120 | 17 | 150 | 280 | 56 |
| Internal Link Dist (ft) | | 714 | | | 647 | | | 2139 | | | 321 | |
| Turn Bay Length (ft) | 75 | | 150 | 150 | | 100 | 300 | | 250 | 250 | | 200 |
| Base Capacity (vph) | 307 | 644 | 634 | 200 | 531 | 580 | 201 | 1395 | 729 | 254 | 1586 | 823 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.23 | 0.49 | 0.12 | 0.38 | 0.46 | 0.14 | 0.32 | 0.18 | 0.17 | 0.51 | 0.40 | 0.25 |
| Intersection Summary | | | | | | | | | | | | |






















HCM 7th Signalized Intersection Summary

2: Airport Rd. & Clover Basin Dr.

8902 Quail Road









04/29/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  | |
| Traffic Volume (veh/h) | 65 | 288 | 72 | 69 | 223 | 75 | 60 | 232 | 112 | 119 | 583 | 190 |
| Future Volume (veh/h) | 65 | 288 | 72 | 69 | 223 | 75 | 60 | 232 | 112 | 119 | 583 | 190 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width 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 |
| 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 | 71 | 313 | 78 | 75 | 242 | 82 | 65 | 252 | 122 | 129 | 634 | 207 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 92 | 367 | 311 | 96 | 372 | 315 | 84 | 1633 | 728 | 157 | 1779 | 793 |
| Arrive On Green | 0.05 | 0.20 | 0.20 | 0.05 | 0.20 | 0.20 | 0.05 | 0.46 | 0.46 | 0.09 | 0.50 | 0.50 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 71 | 313 | 78 | 75 | 242 | 82 | 65 | 252 | 122 | 129 | 634 | 207 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 4.5 | 18.6 | 4.8 | 4.8 | 13.7 | 5.0 | 4.1 | 4.7 | 5.2 | 8.2 | 12.5 | 8.6 |
| Cycle Q Clear(g_c), s | 4.5 | 18.6 | 4.8 | 4.8 | 13.7 | 5.0 | 4.1 | 4.7 | 5.2 | 8.2 | 12.5 | 8.6 |
| 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 | 92 | 367 | 311 | 96 | 372 | 315 | 84 | 1633 | 728 | 157 | 1779 | 793 |
| V/C Ratio(X) | 0.77 | 0.85 | 0.25 | 0.78 | 0.65 | 0.26 | 0.77 | 0.15 | 0.17 | 0.82 | 0.36 | 0.26 |
| Avail Cap(c_a), veh/h | 310 | 647 | 549 | 201 | 533 | 452 | 201 | 1633 | 728 | 248 | 1779 | 793 |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 0.99 | 0.99 | 0.99 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 53.9 | 44.6 | 39.1 | 53.7 | 42.4 | 38.9 | 54.2 | 18.1 | 18.2 | 51.5 | 17.5 | 16.5 |
| Incr Delay (d2), s/veh | 12.6 | 5.6 | 0.4 | 12.6 | 1.9 | 0.4 | 13.8 | 0.2 | 0.5 | 11.3 | 0.6 | 0.8 |
| 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(95%),veh/ln | 4.2 | 14.1 | 3.4 | 4.5 | 10.7 | 3.6 | 3.9 | 3.6 | 3.6 | 7.5 | 8.9 | 5.9 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d), s/veh | 66.5 | 50.2 | 39.5 | 66.3 | 44.3 | 39.4 | 67.9 | 18.3 | 18.7 | 62.9 | 18.0 | 17.3 |
| LnGrp LOS | E | D | D | E | D | D | E | B | B | E | B | B |
| Approach Vol, veh/h | 462 | | | 399 | | | 439 | | | 970 | | |
| Approach Delay, s/veh | 50.9 | | | 47.4 | | | 25.7 | | | 23.8 | | |
| Approach LOS | D | | | D | | | C | | | C | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 15.2 | 59.8 | 11.2 | 28.8 | 10.4 | 64.6 | 10.9 | 29.1 | | | | |
| Change Period (Y+Rc), s | 5.0 | 7.0 | 5.0 | 6.2 | 5.0 | 7.0 | 5.0 | 6.2 | | | | |
| Max Green Setting (Gmax), s | 16.0 | 23.0 | 13.0 | 39.8 | 13.0 | 26.0 | 20.0 | 32.8 | | | | |
| Max Q Clear Time (g_c+I1), s | 10.2 | 7.2 | 6.8 | 20.6 | 6.1 | 14.5 | 6.5 | 15.7 | | | | |
| Green Ext Time (p_c), s | 0.1 | 1.8 | 0.1 | 2.0 | 0.1 | 3.9 | 0.1 | 1.5 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 7th Control Delay, s/veh | 33.9 | | | | | | | | | | | |
| HCM 7th LOS | C | | | | | | | | | | | |

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  | |  | | |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 100 | | 200 | 100 | | 100 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 1 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | | 0.850 | | | 0.850 | | 0.913 | | | 0.970 | |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.982 | | | 0.963 | |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 0 | 1670 | 0 | 0 | 1740 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | | 0.982 | | | 0.963 | |
| Satd. Flow (perm) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 0 | 1670 | 0 | 0 | 1740 | 0 |
| Link Speed (mph) | | 30 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 710 | | | 392 | | | 268 | | | 265 | |
| Travel Time (s) | | 32.7 | | | 5.9 | | | 6.5 | | | 0.0 | |

Intersection Summary

Area Type: Other

| Intersection | | | | | | | | | | | | |
|--------------------------|---|---|---|---|---|---|------|---|------|------|---|------|
| Int Delay, s/veh | 2.7 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  | |  | | |  | |
| Traffic Vol, veh/h | 3 | 520 | 16 | 25 | 314 | 10 | 30 | 0 | 54 | 32 | 0 | 9 |
| Future Vol, veh/h | 3 | 520 | 16 | 25 | 314 | 10 | 30 | 0 | 54 | 32 | 0 | 9 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 100 | - | 200 | 100 | - | 100 | 0 | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 3 | 565 | 17 | 27 | 341 | 11 | 33 | 0 | 59 | 35 | 0 | 10 |





















| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 352 | 0 | 0 | 583 | 0 | 0 | 967 | 978 | 565 | 967 | 985 | 341 |
| Stage 1 | - | - | - | - | - | - | 572 | 572 | - | 396 | 396 | - |
| Stage 2 | - | - | - | - | - | - | 396 | 407 | - | 572 | 589 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1207 | - | - | 992 | - | - | 234 | 250 | 524 | 234 | 248 | 701 |
| Stage 1 | - | - | - | - | - | - | 505 | 504 | - | 630 | 604 | - |
| Stage 2 | - | - | - | - | - | - | 630 | 598 | - | 505 | 495 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1207 | - | - | 992 | - | - | 223 | 243 | 524 | 201 | 241 | 701 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 223 | 243 | - | 201 | 241 | - |
| Stage 1 | - | - | - | - | - | - | 504 | 503 | - | 612 | 588 | - |
| Stage 2 | - | - | - | - | - | - | 604 | 581 | - | 448 | 494 | - |









| Approach | EB | WB | NB | SB |
|------------------------|------|------|-------|-------|
| HCM Control Delay, s/v | 0.04 | 0.63 | 18.67 | 23.53 |
| HCM LOS | | | C | C |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---------------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 354 | 1207 | - | - | 992 | - | - | 238 |
| HCM Lane V/C Ratio | 0.258 | 0.003 | - | - | 0.027 | - | - | 0.187 |
| HCM Control Delay (s/veh) | 18.7 | 8 | - | - | 8.7 | - | - | 23.5 |
| HCM Lane LOS | C | A | - | - | A | - | - | C |
| HCM 95th %tile Q(veh) | 1 | 0 | - | - | 0.1 | - | - | 0.7 |

Lanes and Geometrics
4: S Fordham St. & Clover Basin Dr.

8902 Quail Road
04/29/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 100 | | 0 | 150 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.995 | | | 0.993 | | | 0.889 | | | 0.936 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1853 | 0 | 1770 | 1850 | 0 | 1770 | 1656 | 0 | 1770 | 1744 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1853 | 0 | 1770 | 1850 | 0 | 1770 | 1656 | 0 | 1770 | 1744 | 0 |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 483 | | | 921 | | | 648 | | | 640 | | |
| Travel Time (s) | 11.0 | | | 20.9 | | | 14.7 | | | 14.5 | | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |

| Intersection | | | | | | | | | | | | |
|--------------------------|---|---|------|---|---|------|---|---|------|---|---|------|
| Int Delay, s/veh | 4.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Vol, veh/h | 41 | 550 | 18 | 50 | 316 | 15 | 6 | 12 | 34 | 24 | 46 | 34 |
| Future Vol, veh/h | 41 | 550 | 18 | 50 | 316 | 15 | 6 | 12 | 34 | 24 | 46 | 34 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 100 | - | - | 150 | - | - | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 45 | 598 | 20 | 54 | 343 | 16 | 7 | 13 | 37 | 26 | 50 | 37 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 360 | 0 | 0 | 617 | 0 | 0 | 1174 | 1165 | 608 | 1154 | 1167 | 352 |
| Stage 1 | - | - | - | - | - | - | 697 | 697 | - | 460 | 460 | - |
| Stage 2 | - | - | - | - | - | - | 477 | 468 | - | 693 | 707 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1199 | - | - | 963 | - | - | 169 | 194 | 496 | 174 | 194 | 692 |
| Stage 1 | - | - | - | - | - | - | 432 | 443 | - | 581 | 566 | - |
| Stage 2 | - | - | - | - | - | - | 569 | 561 | - | 433 | 438 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1199 | - | - | 963 | - | - | 107 | 176 | 496 | 137 | 176 | 692 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 107 | 176 | - | 137 | 176 | - |
| Stage 1 | - | - | - | - | - | - | 416 | 426 | - | 548 | 534 | - |
| Stage 2 | - | - | - | - | - | - | 461 | 529 | - | 374 | 422 | - |























| Approach | EB | WB | NB | SB |
|------------------------|------|------|-------|------|
| HCM Control Delay, s/v | 0.55 | 1.18 | 20.25 | 28.6 |
| HCM LOS | | | C | D |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|---------------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h) | 107 | 337 | 1199 | - | - | 963 | - | - | 137 | 258 |
| HCM Lane V/C Ratio | 0.061 | 0.148 | 0.037 | - | - | 0.056 | - | - | 0.191 | 0.338 |
| HCM Control Delay (s/veh) | 40.9 | 17.5 | 8.1 | - | - | 9 | - | - | 37.5 | 25.9 |
| HCM Lane LOS | E | C | A | - | - | A | - | - | E | D |
| HCM 95th %tile Q(veh) | 0.2 | 0.5 | 0.1 | - | - | 0.2 | - | - | 0.7 | 1.4 |

Lanes and Geometrics
5: Pike Rd. & Airport Rd.

8902 Quail Road

04/29/2024





















| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 150 | | 0 | 100 | | 0 | 300 | | 150 | 150 | | 200 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.870 | | | 0.888 | | | 0.850 | | | 0.850 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1621 | 0 | 1770 | 1654 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.724 | | | 0.572 | | | 0.344 | | | 0.561 | | |
| Satd. Flow (perm) | 1349 | 1621 | 0 | 1065 | 1654 | 0 | 641 | 3539 | 1583 | 1045 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | 99 | | | 38 | | | 156 | | | 156 | | |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 478 | | | 955 | | | 764 | | | 2219 | | |
| Travel Time (s) | 10.9 | | | 21.7 | | | 17.4 | | | 50.4 | | |

Intersection Summary

Area Type: Other

Timings
5: Pike Rd. & Airport Rd.

8902 Quail Road
04/29/2024

| |  |  |  |  |  |  |  |  |  |  |
|------------------------|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 35 | 14 | 50 | 12 | 45 | 290 | 49 | 49 | 639 | 44 |
| Future Volume (vph) | 35 | 14 | 50 | 12 | 45 | 290 | 49 | 49 | 639 | 44 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.4 | 29.9 | 9.7 | 30.0 | 11.7 | 22.5 | 22.5 | 10.9 | 22.5 | 22.5 |
| Total Split (s) | 15.0 | 30.0 | 15.0 | 30.0 | 20.0 | 40.0 | 40.0 | 20.0 | 40.0 | 40.0 |
| Total Split (%) | 14.3% | 28.6% | 14.3% | 28.6% | 19.0% | 38.1% | 38.1% | 19.0% | 38.1% | 38.1% |
| Yellow Time (s) | 3.9 | 3.9 | 3.2 | 3.0 | 4.7 | 4.7 | 4.7 | 3.9 | 3.0 | 3.0 |
| All-Red Time (s) | 1.5 | 2.0 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.4 | 5.9 | 4.7 | 5.0 | 6.7 | 6.7 | 6.7 | 5.9 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 14.4 | 7.6 | 16.8 | 11.0 | 69.3 | 63.9 | 63.9 | 69.6 | 65.0 | 65.0 |
| Actuated g/C Ratio | 0.14 | 0.07 | 0.16 | 0.10 | 0.66 | 0.61 | 0.61 | 0.66 | 0.62 | 0.62 |
| v/c Ratio | 0.17 | 0.54 | 0.24 | 0.24 | 0.09 | 0.14 | 0.05 | 0.07 | 0.31 | 0.04 |
| Control Delay (s/veh) | 34.5 | 22.2 | 35.1 | 21.9 | 7.0 | 11.1 | 0.1 | 6.5 | 12.0 | 0.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 34.5 | 22.2 | 35.1 | 21.9 | 7.0 | 11.1 | 0.1 | 6.5 | 12.0 | 0.0 |
| LOS | C | C | D | C | A | B | A | A | B | A |
| Approach Delay (s/veh) | | 25.3 | | 28.7 | | 9.3 | | | 10.9 | |
| Approach LOS | | C | | C | | A | | | B | |

Intersection Summary

Cycle Length: 105

Actuated Cycle Length: 105

Offset: 59 (56%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay (s/veh): 13.2

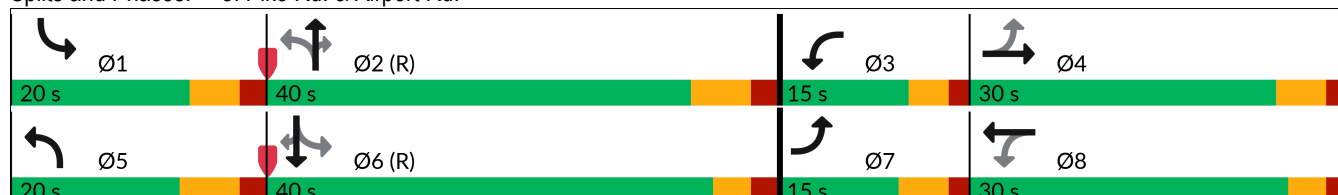
Intersection LOS: B

Intersection Capacity Utilization 45.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: Pike Rd. & Airport Rd.



Queues
5: Pike Rd. & Airport Rd.

8902 Quail Road
04/29/2024

























| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 38 | 114 | 54 | 51 | 49 | 315 | 53 | 53 | 695 | 48 |
| v/c Ratio | 0.17 | 0.54 | 0.24 | 0.24 | 0.09 | 0.14 | 0.05 | 0.07 | 0.31 | 0.04 |
| Control Delay (s/veh) | 34.5 | 22.2 | 35.1 | 21.9 | 7.0 | 11.1 | 0.1 | 6.5 | 12.0 | 0.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 34.5 | 22.2 | 35.1 | 21.9 | 7.0 | 11.1 | 0.1 | 6.5 | 12.0 | 0.0 |
| Queue Length 50th (ft) | 21 | 10 | 30 | 8 | 9 | 48 | 0 | 10 | 117 | 0 |
| Queue Length 95th (ft) | 46 | 62 | 59 | 44 | 26 | 86 | 0 | 27 | 191 | 0 |
| Internal Link Dist (ft) | | 398 | | 875 | | 684 | | | 2139 | |
| Turn Bay Length (ft) | 150 | | 100 | | 300 | | 150 | 150 | | 200 |
| Base Capacity (vph) | 250 | 448 | 253 | 422 | 594 | 2153 | 1024 | 841 | 2191 | 1039 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.15 | 0.25 | 0.21 | 0.12 | 0.08 | 0.15 | 0.05 | 0.06 | 0.32 | 0.05 |
| Intersection Summary | | | | | | | | | | |

HCM 7th Signalized Intersection Summary

5: Pike Rd. & Airport Rd.

8902 Quail Road
04/29/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Traffic Volume (veh/h) | 35 | 14 | 91 | 50 | 12 | 35 | 45 | 290 | 49 | 49 | 639 | 44 |
| Future Volume (veh/h) | 35 | 14 | 91 | 50 | 12 | 35 | 45 | 290 | 49 | 49 | 639 | 44 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width 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 |
| 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 | 38 | 15 | 99 | 54 | 13 | 38 | 49 | 315 | 53 | 53 | 695 | 48 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 210 | 20 | 129 | 166 | 38 | 112 | 498 | 2174 | 970 | 717 | 2151 | 959 |
| Arrive On Green | 0.03 | 0.09 | 0.09 | 0.04 | 0.09 | 0.09 | 0.04 | 0.61 | 0.61 | 0.04 | 0.61 | 0.61 |
| Sat Flow, veh/h | 1781 | 213 | 1405 | 1781 | 420 | 1229 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 38 | 0 | 114 | 54 | 0 | 51 | 49 | 315 | 53 | 53 | 695 | 48 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1618 | 1781 | 0 | 1649 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 2.0 | 0.0 | 7.2 | 2.9 | 0.0 | 3.0 | 1.1 | 4.0 | 1.4 | 1.2 | 10.1 | 1.3 |
| Cycle Q Clear(g_c), s | 2.0 | 0.0 | 7.2 | 2.9 | 0.0 | 3.0 | 1.1 | 4.0 | 1.4 | 1.2 | 10.1 | 1.3 |
| Prop In Lane | 1.00 | | 0.87 | 1.00 | | 0.75 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 210 | 0 | 149 | 166 | 0 | 151 | 498 | 2174 | 970 | 717 | 2151 | 959 |
| V/C Ratio(X) | 0.18 | 0.00 | 0.76 | 0.33 | 0.00 | 0.34 | 0.10 | 0.14 | 0.05 | 0.07 | 0.32 | 0.05 |
| Avail Cap(c_a), veh/h | 316 | 0 | 371 | 273 | 0 | 393 | 659 | 2174 | 970 | 890 | 2151 | 959 |
| 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 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.93 |
| Uniform Delay (d), s/veh | 41.3 | 0.0 | 46.5 | 41.3 | 0.0 | 44.7 | 7.5 | 8.7 | 8.2 | 7.0 | 10.2 | 8.4 |
| Incr Delay (d2), s/veh | 0.4 | 0.0 | 7.9 | 1.1 | 0.0 | 1.3 | 0.1 | 0.1 | 0.1 | 0.0 | 0.4 | 0.1 |
| 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(95%),veh/ln | 1.6 | 0.0 | 5.8 | 2.3 | 0.0 | 2.3 | 0.7 | 2.7 | 0.9 | 0.8 | 6.9 | 0.8 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d), s/veh | 41.7 | 0.0 | 54.4 | 42.4 | 0.0 | 46.0 | 7.5 | 8.8 | 8.3 | 7.0 | 10.5 | 8.5 |
| LnGrp LOS | D | | D | D | | D | A | A | A | A | B | A |
| Approach Vol, veh/h | 152 | | | 105 | | | 417 | | | 796 | | |
| Approach Delay, s/veh | 51.3 | | | 44.2 | | | 8.6 | | | 10.2 | | |
| Approach LOS | D | | | D | | | A | | | B | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.8 | 70.9 | 8.7 | 15.6 | 10.5 | 70.3 | 8.7 | 15.5 | | | | |
| Change Period (Y+Rc), s | 5.9 | 6.7 | 4.7 | 5.9 | 6.7 | * 6.7 | 5.4 | * 5.9 | | | | |
| Max Green Setting (Gmax), s | 14.1 | 33.3 | 10.3 | 24.1 | 13.3 | * 35 | 9.6 | * 25 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.2 | 6.0 | 4.9 | 9.2 | 3.1 | 12.1 | 4.0 | 5.0 | | | | |
| Green Ext Time (p_c), s | 0.1 | 2.3 | 0.0 | 0.5 | 0.1 | 5.2 | 0.0 | 0.2 | | | | |

Intersection Summary

HCM 7th Control Delay, s/veh 16.4
HCM 7th LOS B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes and Geometrics
6: Clover Basin Dr. & SW Site Access







8902 Quail Road
04/29/2024



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|---------------------|-------|------|------|-------|-------|------|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | 0% | | 0% | |
| Storage Length (ft) | 100 | | | 150 | 0 | 0 |
| Storage Lanes | 1 | | | 1 | 1 | 0 |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | |
| Frt | | | | 0.850 | 0.937 | |
| Flt Protected | 0.950 | | | | 0.974 | |
| Satd. Flow (prot) | 1770 | 1863 | 1863 | 1583 | 1700 | 0 |
| Flt Permitted | 0.950 | | | | 0.974 | |
| Satd. Flow (perm) | 1770 | 1863 | 1863 | 1583 | 1700 | 0 |
| Link Speed (mph) | | 30 | 30 | | 30 | |
| Link Distance (ft) | | 727 | 710 | | 280 | |
| Travel Time (s) | | 16.5 | 16.1 | | 4.8 | |

Intersection Summary





















Area Type: Other

| Intersection | | | | | | |
|--------------------------|---|---|---|---|---|---|
| Int Delay, s/veh | 0.9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations |  |  |  |  |  |  |
| Traffic Vol, veh/h | 7 | 512 | 344 | 9 | 27 | 23 |
| Future Vol, veh/h | 7 | 512 | 344 | 9 | 27 | 23 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 100 | - | - | 150 | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 8 | 557 | 374 | 10 | 29 | 25 |









| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 384 | 0 | 0 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Critical Hdwy | 4.12 | - | - |
| Critical Hdwy Stg 1 | - | - | - |
| Critical Hdwy Stg 2 | - | - | - |
| Follow-up Hdwy | 2.218 | - | - |
| Pot Cap-1 Maneuver | 1175 | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 1175 | - | - |
| Mov Cap-2 Maneuver | - | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |

| Approach | EB | WB | SB |
|------------------------|------|----|-------|
| HCM Control Delay, s/v | 0.11 | 0 | 15.68 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---------------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1175 | - | - | - | 391 |
| HCM Lane V/C Ratio | 0.006 | - | - | - | 0.139 |
| HCM Control Delay (s/veh) | 8.1 | - | - | - | 15.7 |
| HCM Lane LOS | A | - | - | - | C |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.5 |

















| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 100 | | 0 | 100 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.995 | | | 0.993 | | | 0.889 | | | 0.936 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1853 | 0 | 1770 | 1850 | 0 | 1770 | 1656 | 0 | 1770 | 1744 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1853 | 0 | 1770 | 1850 | 0 | 1770 | 1656 | 0 | 1770 | 1744 | 0 |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 297 | | | 624 | | | 503 | | | 339 | | |
| Travel Time (s) | 6.8 | | | 7.4 | | | 7.1 | | | 7.7 | | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |

| Intersection | |
|---------------------------|------|
| Intersection Delay, s/veh | 32.7 |
| Intersection LOS | D |

















| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---------------------|---|---|------|---|---|------|---|---|------|---|---|------|
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Vol, veh/h | 41 | 550 | 18 | 50 | 316 | 15 | 6 | 12 | 34 | 24 | 46 | 34 |
| Future Vol, veh/h | 41 | 550 | 18 | 50 | 316 | 15 | 6 | 12 | 34 | 24 | 46 | 34 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 45 | 598 | 20 | 54 | 343 | 16 | 7 | 13 | 37 | 26 | 50 | 37 |
| Number of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|----------------------------|------|----|------|------|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 2 | 2 | 2 | 2 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 2 | 2 | 2 | 2 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 2 | 2 | 2 | 2 |
| HCM Control Delay, s/veh | 48.7 | 16 | 10.6 | 11.4 |
| HCM LOS | E | C | B | B |











| Lane | NBLn1 | NBLn2 | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 | SBLn2 |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Vol Left, % | 100% | 0% | 100% | 0% | 100% | 0% | 100% | 0% |
| Vol Thru, % | 0% | 26% | 0% | 97% | 0% | 95% | 0% | 57% |
| Vol Right, % | 0% | 74% | 0% | 3% | 0% | 5% | 0% | 43% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 6 | 46 | 41 | 568 | 50 | 331 | 24 | 80 |
| LT Vol | 6 | 0 | 41 | 0 | 50 | 0 | 24 | 0 |
| Through Vol | 0 | 12 | 0 | 550 | 0 | 316 | 0 | 46 |
| RT Vol | 0 | 34 | 0 | 18 | 0 | 15 | 0 | 34 |
| Lane Flow Rate | 7 | 50 | 45 | 617 | 54 | 360 | 26 | 87 |
| Geometry Grp | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Degree of Util (X) | 0.015 | 0.098 | 0.076 | 0.968 | 0.097 | 0.59 | 0.057 | 0.172 |
| Departure Headway (Hd) | 8.115 | 7.07 | 6.17 | 5.643 | 6.442 | 5.903 | 7.926 | 7.108 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 439 | 504 | 580 | 642 | 555 | 612 | 451 | 503 |
| Service Time | 5.894 | 4.847 | 3.91 | 3.382 | 4.19 | 3.651 | 5.696 | 4.878 |
| HCM Lane V/C Ratio | 0.016 | 0.099 | 0.078 | 0.961 | 0.097 | 0.588 | 0.058 | 0.173 |
| HCM Control Delay, s/veh | 11 | 10.6 | 9.4 | 51.5 | 9.9 | 16.9 | 11.2 | 11.4 |
| HCM Lane LOS | B | B | A | F | A | C | B | B |
| HCM 95th-tile Q | 0 | 0.3 | 0.2 | 14 | 0.3 | 3.8 | 0.2 | 0.6 |





| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | | |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.996 | | | 0.995 | | | 0.912 | | | 0.956 | |
| Flt Protected | | 0.997 | | | 0.994 | | | 0.994 | | | 0.989 | |
| Satd. Flow (prot) | 0 | 1850 | 0 | 0 | 1842 | 0 | 0 | 1689 | 0 | 0 | 1761 | 0 |
| Flt Permitted | | 0.997 | | | 0.994 | | | 0.994 | | | 0.989 | |
| Satd. Flow (perm) | 0 | 1850 | 0 | 0 | 1842 | 0 | 0 | 1689 | 0 | 0 | 1761 | 0 |
| Link Speed (mph) | | 30 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 366 | | | 418 | | | 541 | | | 378 | |
| Travel Time (s) | | 8.3 | | | 9.5 | | | 8.8 | | | 8.6 | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |

| Intersection | | | | |
|-----------------------------|---------|---------|---------|---------|
| Intersection Delay, s/veh | 7.9 | | | |
| Intersection LOS | A | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 663 | 413 | 57 | 113 |
| Demand Flow Rate, veh/h | 676 | 421 | 58 | 116 |
| Vehicles Circulating, veh/h | 133 | 66 | 683 | 412 |
| Vehicles Exiting, veh/h | 395 | 675 | 126 | 75 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 9.7 | 5.8 | 6.3 | 5.3 |
| Approach LOS | A | A | A | A |
| Lane | Left | Left | Left | Left |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| RT Channelized | | | | |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 4.976 |
| A (Intercept) | 1380 | 1380 | 1380 | 1380 |
| B (Slope) | 1.02e-3 | 1.02e-3 | 1.02e-3 | 1.02e-3 |
| Entry Flow, veh/h | 676 | 421 | 58 | 116 |
| Cap Entry Lane, veh/h | 1205 | 1290 | 688 | 906 |
| Entry HV Adj Factor | 0.981 | 0.981 | 0.978 | 0.974 |
| Flow Entry, veh/h | 663 | 413 | 57 | 113 |
| Cap Entry, veh/h | 1182 | 1266 | 673 | 883 |
| V/C Ratio | 0.561 | 0.326 | 0.084 | 0.128 |
| Control Delay, s/veh | 9.7 | 5.8 | 6.3 | 5.3 |
| LOS | A | A | A | A |
| 95th %tile Queue, veh | 4 | 1 | 0 | 0 |

| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | | |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.996 | | | 0.996 | | | 0.913 | | | 0.970 | |
| Flt Protected | | | | | 0.996 | | | 0.982 | | | 0.963 | |
| Satd. Flow (prot) | 0 | 1855 | 0 | 0 | 1848 | 0 | 0 | 1670 | 0 | 0 | 1740 | 0 |
| Flt Permitted | | | | | 0.996 | | | 0.982 | | | 0.963 | |
| Satd. Flow (perm) | 0 | 1855 | 0 | 0 | 1848 | 0 | 0 | 1670 | 0 | 0 | 1740 | 0 |
| Link Speed (mph) | | 30 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 657 | | | 532 | | | 461 | | | 323 | |
| Travel Time (s) | | 10.4 | | | 12.1 | | | 8.0 | | | 7.3 | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |

| Intersection | | | | |
|-----------------------------|---------|---------|---------|---------|
| Intersection Delay, s/veh | 6.6 | | | |
| Intersection LOS | A | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 585 | 379 | 92 | 45 |
| Demand Flow Rate, veh/h | 596 | 387 | 94 | 46 |
| Vehicles Circulating, veh/h | 64 | 37 | 615 | 410 |
| Vehicles Exiting, veh/h | 392 | 672 | 45 | 14 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 7.5 | 5.4 | 6.4 | 4.5 |
| Approach LOS | A | A | A | A |
| Lane | Left | Left | Left | Left |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| RT Channelized | | | | |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 4.976 |
| A (Intercept) | 1380 | 1380 | 1380 | 1380 |
| B (Slope) | 1.02e-3 | 1.02e-3 | 1.02e-3 | 1.02e-3 |
| Entry Flow, veh/h | 596 | 387 | 94 | 46 |
| Cap Entry Lane, veh/h | 1293 | 1329 | 737 | 908 |
| Entry HV Adj Factor | 0.981 | 0.980 | 0.979 | 0.978 |
| Flow Entry, veh/h | 585 | 379 | 92 | 45 |
| Cap Entry, veh/h | 1268 | 1302 | 721 | 889 |
| V/C Ratio | 0.461 | 0.291 | 0.128 | 0.051 |
| Control Delay, s/veh | 7.5 | 5.4 | 6.4 | 4.5 |
| LOS | A | A | A | A |
| 95th %tile Queue, veh | 2 | 1 | 0 | 0 |

| |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | 0% | | | 0% |
| Storage Length (ft) | 0 | 0 | | 0 | 200 | |
| Storage Lanes | 1 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Ped Bike Factor | | | | | | |
| Frt | 0.932 | | 0.998 | | | |
| Flt Protected | 0.976 | | | | 0.950 | |
| Satd. Flow (prot) | 1694 | 0 | 3532 | 0 | 1770 | 3539 |
| Flt Permitted | 0.976 | | | | 0.950 | |
| Satd. Flow (perm) | 1694 | 0 | 3532 | 0 | 1770 | 3539 |
| Link Speed (mph) | 30 | | 30 | | | 30 |
| Link Distance (ft) | 244 | | 284 | | | 406 |
| Travel Time (s) | 5.5 | | 6.5 | | | 9.2 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |

| Intersection | | | | | | |
|--------------------------|---|------|---|------|---|---|
| Int Delay, s/veh | 0 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Traffic Vol, veh/h | 1 | 1 | 732 | 8 | 2 | 559 |
| Future Vol, veh/h | 1 | 1 | 732 | 8 | 2 | 559 |
| 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 |
| Mvmt Flow | 1 | 1 | 796 | 9 | 2 | 608 |

























| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1108 | 402 | 0 |
| Stage 1 | 800 | - | - |
| Stage 2 | 308 | - | - |
| Critical Hdwy | 6.84 | 6.94 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - |
| Pot Cap-1 Maneuver | 204 | 598 | - |
| Stage 1 | 403 | - | - |
| Stage 2 | 719 | - | - |
| Platoon blocked, % | | - | - |
| Mov Cap-1 Maneuver | 203 | 598 | - |
| Mov Cap-2 Maneuver | 203 | - | - |
| Stage 1 | 403 | - | - |
| Stage 2 | 717 | - | - |

| Approach | WB | NB | SB |
|-----------------------------|----|----|------|
| HCM Control Delay, s/v16.94 | | 0 | 0.03 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|---------------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 304 | 816 |
| HCM Lane V/C Ratio | - | - | 0.007 | 0.003 |
| HCM Control Delay (s/veh) | - | - | 16.9 | 9.4 |
| HCM Lane LOS | - | - | C | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 |

Lanes and Geometrics
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/29/2024

























| |  |  |  |  |  |  |  |  |  |  |  |  | |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | |
| Grade (%) | 0% | | 0% | | 0% | | 0% | | 0% | | 0% | | |
| Storage Length (ft) | 75 | | 150 | 150 | | 100 | 300 | | 250 | 250 | | 200 | |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 1 | | 1 | 1 | | 1 | |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Ped Bike Factor | | | | | | | | | | | | | |
| Frt | | | 0.850 | | | | 0.850 | | 0.850 | | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | | |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | | |
| Satd. Flow (perm) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | |
| Right Turn on Red | | | Yes | | | | Yes | | Yes | | | | Yes |
| Satd. Flow (RTOR) | | | 180 | | | | 180 | | 173 | | | | 125 |
| Link Speed (mph) | 30 | | | | 30 | | | | 30 | | | | 30 |
| Link Distance (ft) | 794 | | | | 667 | | | | 2219 | | 401 | | |
| Travel Time (s) | 18.0 | | | | 15.2 | | | | 50.4 | | 9.1 | | |

Intersection Summary

Area Type: Other

Timings
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/29/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 68 | 299 | 31 | 141 | 279 | 137 | 51 | 535 | 144 | 143 | 330 | 88 |
| Future Volume (vph) | 68 | 299 | 31 | 141 | 279 | 137 | 51 | 535 | 144 | 143 | 330 | 88 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 34.2 | 34.2 | 10.0 | 34.2 | 34.2 | 10.0 | 26.0 | 26.0 | 10.0 | 26.0 | 26.0 |
| Total Split (s) | 18.0 | 42.0 | 42.0 | 18.0 | 42.0 | 42.0 | 14.0 | 32.0 | 32.0 | 23.0 | 41.0 | 41.0 |
| Total Split (%) | 15.7% | 36.5% | 36.5% | 15.7% | 36.5% | 36.5% | 12.2% | 27.8% | 27.8% | 20.0% | 35.7% | 35.7% |
| Yellow Time (s) | 3.0 | 4.2 | 4.2 | 3.0 | 4.2 | 4.2 | 3.0 | 5.0 | 5.0 | 3.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 6.2 | 6.2 | 5.0 | 6.2 | 6.2 | 5.0 | 7.0 | 7.0 | 5.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 9.9 | 25.5 | 25.5 | 12.4 | 30.3 | 30.3 | 8.7 | 38.7 | 38.7 | 15.1 | 47.3 | 47.3 |
| Actuated g/C Ratio | 0.09 | 0.22 | 0.22 | 0.11 | 0.26 | 0.26 | 0.08 | 0.34 | 0.34 | 0.13 | 0.41 | 0.41 |
| v/c Ratio | 0.48 | 0.78 | 0.06 | 0.80 | 0.61 | 0.27 | 0.41 | 0.48 | 0.24 | 0.66 | 0.24 | 0.13 |
| Control Delay (s/veh) | 60.1 | 55.4 | 0.2 | 79.1 | 43.4 | 3.7 | 59.4 | 34.4 | 5.1 | 61.1 | 25.4 | 2.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 60.1 | 55.4 | 0.2 | 79.1 | 43.4 | 3.7 | 59.4 | 34.4 | 5.1 | 61.1 | 25.4 | 2.8 |
| LOS | E | E | A | E | D | A | E | C | A | E | C | A |
| Approach Delay (s/veh) | | 51.9 | | | 42.7 | | | 30.4 | | | 31.0 | |
| Approach LOS | | D | | | D | | | C | | | C | |

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 9 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay (s/veh): 37.4

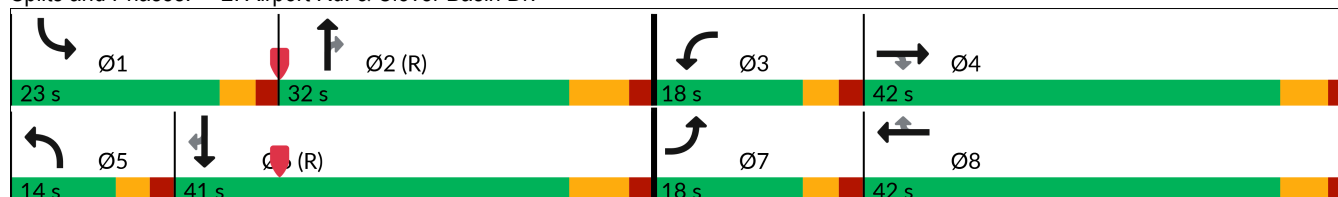
Intersection LOS: D

Intersection Capacity Utilization 65.6%

ICU Level of Service C













Analysis Period (min) 15

Splits and Phases: 2: Airport Rd. & Clover Basin Dr.



Queues
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/29/2024

























| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Group Flow (vph) | 74 | 325 | 34 | 153 | 303 | 149 | 55 | 582 | 157 | 155 | 359 | 96 |
| v/c Ratio | 0.48 | 0.78 | 0.06 | 0.80 | 0.61 | 0.27 | 0.41 | 0.48 | 0.24 | 0.66 | 0.24 | 0.13 |
| Control Delay (s/veh) | 60.1 | 55.4 | 0.2 | 79.1 | 43.4 | 3.7 | 59.4 | 34.4 | 5.1 | 61.1 | 25.4 | 2.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 60.1 | 55.4 | 0.2 | 79.1 | 43.4 | 3.7 | 59.4 | 34.4 | 5.1 | 61.1 | 25.4 | 2.8 |
| Queue Length 50th (ft) | 53 | 228 | 0 | 112 | 203 | 0 | 40 | 180 | 0 | 111 | 94 | 0 |
| Queue Length 95th (ft) | 100 | 303 | 0 | #216 | 281 | 30 | 81 | 279 | 44 | 174 | 152 | 23 |
| Internal Link Dist (ft) | | 714 | | | 587 | | | 2139 | | | 321 | |
| Turn Bay Length (ft) | 75 | | 150 | 150 | | 100 | 300 | | 250 | 250 | | 200 |
| Base Capacity (vph) | 200 | 579 | 616 | 200 | 579 | 616 | 148 | 1192 | 647 | 283 | 1454 | 724 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.37 | 0.56 | 0.06 | 0.77 | 0.52 | 0.24 | 0.37 | 0.49 | 0.24 | 0.55 | 0.25 | 0.13 |

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.






















HCM 7th Signalized Intersection Summary
2: Airport Rd. & Clover Basin Dr.









8902 Quail Road
04/29/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h) | 68 | 299 | 31 | 141 | 279 | 137 | 51 | 535 | 144 | 143 | 330 | 88 |
| Future Volume (veh/h) | 68 | 299 | 31 | 141 | 279 | 137 | 51 | 535 | 144 | 143 | 330 | 88 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width 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 |
| 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 | 74 | 325 | 34 | 153 | 303 | 149 | 55 | 582 | 157 | 155 | 359 | 96 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 95 | 375 | 318 | 181 | 465 | 394 | 71 | 1395 | 622 | 185 | 1622 | 723 |
| Arrive On Green | 0.05 | 0.20 | 0.20 | 0.10 | 0.25 | 0.25 | 0.04 | 0.39 | 0.39 | 0.10 | 0.46 | 0.46 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 74 | 325 | 34 | 153 | 303 | 149 | 55 | 582 | 157 | 155 | 359 | 96 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 4.7 | 19.3 | 2.0 | 9.7 | 16.7 | 9.0 | 3.5 | 13.7 | 7.7 | 9.8 | 7.0 | 4.0 |
| Cycle Q Clear(g_c), s | 4.7 | 19.3 | 2.0 | 9.7 | 16.7 | 9.0 | 3.5 | 13.7 | 7.7 | 9.8 | 7.0 | 4.0 |
| 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 | 95 | 375 | 318 | 181 | 465 | 394 | 71 | 1395 | 622 | 185 | 1622 | 723 |
| V/C Ratio(X) | 0.78 | 0.87 | 0.11 | 0.85 | 0.65 | 0.38 | 0.77 | 0.42 | 0.25 | 0.84 | 0.22 | 0.13 |
| Avail Cap(c_a), veh/h | 201 | 582 | 493 | 201 | 582 | 493 | 139 | 1395 | 622 | 279 | 1622 | 723 |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 0.97 | 0.97 | 0.97 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 53.8 | 44.5 | 37.6 | 50.8 | 38.7 | 35.8 | 54.7 | 25.4 | 23.6 | 50.6 | 18.9 | 18.1 |
| Incr Delay (d2), s/veh | 12.7 | 8.4 | 0.1 | 25.1 | 1.8 | 0.6 | 15.8 | 0.9 | 0.9 | 13.0 | 0.3 | 0.4 |
| 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(95%),veh/ln | 4.4 | 14.9 | 1.4 | 9.5 | 12.5 | 6.4 | 3.4 | 9.9 | 5.5 | 8.7 | 5.3 | 2.8 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d), s/veh | 66.4 | 52.9 | 37.7 | 75.9 | 40.5 | 36.4 | 70.5 | 26.3 | 24.5 | 63.6 | 19.2 | 18.5 |
| LnGrp LOS | E | D | D | E | D | D | E | C | C | E | B | B |
| Approach Vol, veh/h | 433 | | | 605 | | | 794 | | | 610 | | |
| Approach Delay, s/veh | 54.0 | | | 48.5 | | | 29.0 | | | 30.4 | | |
| Approach LOS | D | | | D | | | C | | | C | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 16.9 | 52.1 | 16.7 | 29.3 | 9.6 | 59.5 | 11.1 | 34.8 | | | | |
| Change Period (Y+Rc), s | 5.0 | 7.0 | 5.0 | 6.2 | 5.0 | 7.0 | 5.0 | 6.2 | | | | |
| Max Green Setting (Gmax), s | 18.0 | 25.0 | 13.0 | 35.8 | 9.0 | 34.0 | 13.0 | 35.8 | | | | |
| Max Q Clear Time (g_c+I1), s | 11.8 | 15.7 | 11.7 | 21.3 | 5.5 | 9.0 | 6.7 | 18.7 | | | | |
| Green Ext Time (p_c), s | 0.2 | 3.1 | 0.0 | 1.7 | 0.0 | 2.7 | 0.1 | 2.1 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 7th Control Delay, s/veh | 38.6 | | | | | | | | | | | |
| HCM 7th LOS | D | | | | | | | | | | | |

Lanes and Geometrics
3: Larkspur Dr./SE Site Access & Clover Basin Dr.

8902 Quail Road
04/29/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  | |  | | |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | | 0% | | | | 0% | | | |
| Storage Length (ft) | 100 | | 200 | 100 | | 150 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 1 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | | 0.850 | | | | 0.850 | | 0.899 | | 0.967 | |
| Flt Protected | 0.950 | | | 0.950 | | | | | 0.988 | | | 0.963 |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 0 | 1655 | 0 | 0 | 1735 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | | | 0.988 | | | 0.963 |
| Satd. Flow (perm) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 0 | 1655 | 0 | 0 | 1735 | 0 |
| Link Speed (mph) | 30 | | | | 30 | | | | 30 | | 30 | |
| Link Distance (ft) | 770 | | | | 371 | | | | 268 | | 195 | |
| Travel Time (s) | 32.7 | | | | 5.9 | | | | 6.5 | | 0.0 | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |

| Intersection | | | | | | | | | | | | |
|--------------------------|---|---|---|---|---|---|------|---|------|------|---|------|
| Int Delay, s/veh | 2.5 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  | |  | | |  | |
| Traffic Vol, veh/h | 10 | 543 | 25 | 74 | 549 | 34 | 16 | 0 | 47 | 20 | 0 | 6 |
| Future Vol, veh/h | 10 | 543 | 25 | 74 | 549 | 34 | 16 | 0 | 47 | 20 | 0 | 6 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 100 | - | 200 | 100 | - | 150 | 0 | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 11 | 590 | 27 | 80 | 597 | 37 | 17 | 0 | 51 | 22 | 0 | 7 |





















| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 634 | 0 | 0 | 617 | 0 | 0 | 1370 | 1407 | 590 | 1370 | 1397 | 597 |
| Stage 1 | - | - | - | - | - | - | 612 | 612 | - | 758 | 758 | - |
| Stage 2 | - | - | - | - | - | - | 758 | 795 | - | 612 | 639 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 949 | - | - | 963 | - | - | 124 | 139 | 507 | 124 | 141 | 503 |
| Stage 1 | - | - | - | - | - | - | 480 | 484 | - | 400 | 415 | - |
| Stage 2 | - | - | - | - | - | - | 400 | 400 | - | 480 | 470 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 949 | - | - | 963 | - | - | 111 | 126 | 507 | 101 | 128 | 503 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 111 | 126 | - | 101 | 128 | - |
| Stage 1 | - | - | - | - | - | - | 475 | 478 | - | 366 | 381 | - |
| Stage 2 | - | - | - | - | - | - | 361 | 366 | - | 427 | 465 | - |

| Approach | EB | | | WB | | | NB | | | SB | | |
|-----------------------------|----|--|--|------|--|--|-------|--|--|-------|--|--|
| HCM Control Delay, s/v 0.15 | | | | 1.02 | | | 23.21 | | | 42.57 | | |
| HCM LOS | | | | | | | C | | | E | | |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---------------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 265 | 949 | - | - | 963 | - | - | 124 |
| HCM Lane V/C Ratio | 0.258 | 0.011 | - | - | 0.084 | - | - | 0.229 |
| HCM Control Delay (s/veh) | 23.2 | 8.8 | - | - | 9.1 | - | - | 42.6 |
| HCM Lane LOS | C | A | - | - | A | - | - | E |
| HCM 95th %tile Q(veh) | 1 | 0 | - | - | 0.3 | - | - | 0.8 |









Lanes and Geometrics
4: S Fordham St. & Clover Basin Dr.

8902 Quail Road
04/29/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 100 | | 0 | 150 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.998 | | | 0.995 | | | 0.900 | | | 0.879 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1859 | 0 | 1770 | 1853 | 0 | 1770 | 1676 | 0 | 1770 | 1637 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1859 | 0 | 1770 | 1853 | 0 | 1770 | 1676 | 0 | 1770 | 1637 | 0 |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 483 | | | 921 | | | 648 | | | 640 | | |
| Travel Time (s) | 11.0 | | | 20.9 | | | 14.7 | | | 14.5 | | |

Intersection Summary

Area Type: Other

| Intersection | | | | | | | | | | | | |
|--------------------------|---|---|------|---|---|------|---|---|------|---|---|------|
| Int Delay, s/veh | 5.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Vol, veh/h | 36 | 568 | 8 | 23 | 565 | 21 | 11 | 42 | 85 | 17 | 15 | 62 |
| Future Vol, veh/h | 36 | 568 | 8 | 23 | 565 | 21 | 11 | 42 | 85 | 17 | 15 | 62 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 100 | - | - | 150 | - | - | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 39 | 617 | 9 | 25 | 614 | 23 | 12 | 46 | 92 | 18 | 16 | 67 |























| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 637 | 0 | 0 | 626 | 0 | 0 | 1372 | 1387 | 622 | 1394 | 1380 | 626 |
| Stage 1 | - | - | - | - | - | - | 700 | 700 | - | 676 | 676 | - |
| Stage 2 | - | - | - | - | - | - | 672 | 687 | - | 718 | 704 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 947 | - | - | 956 | - | - | 123 | 143 | 487 | 119 | 144 | 484 |
| Stage 1 | - | - | - | - | - | - | 430 | 441 | - | 443 | 453 | - |
| Stage 2 | - | - | - | - | - | - | 445 | 447 | - | 420 | 439 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 947 | - | - | 956 | - | - | 88 | 133 | 487 | 61 | 135 | 484 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 88 | 133 | - | 61 | 135 | - |
| Stage 1 | - | - | - | - | - | - | 412 | 423 | - | 432 | 441 | - |
| Stage 2 | - | - | - | - | - | - | 359 | 436 | - | 291 | 421 | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|------|-------|-------|
| HCM Control Delay, s/v | 0.53 | 0.33 | 35.11 | 32.48 |
| HCM LOS | | | E | D |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|---------------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h) | 88 | 259 | 947 | - | - | 956 | - | - | 61 | 322 |
| HCM Lane V/C Ratio | 0.136 | 0.532 | 0.041 | - | - | 0.026 | - | - | 0.305 | 0.26 |
| HCM Control Delay (s/veh) | 52.4 | 33.6 | 9 | - | - | 8.9 | - | - | 88.7 | 20.1 |
| HCM Lane LOS | F | D | A | - | - | A | - | - | F | C |
| HCM 95th %tile Q(veh) | 0.5 | 2.9 | 0.1 | - | - | 0.1 | - | - | 1.1 | 1 |

Lanes and Geometrics
5: Pike Rd. & Airport Rd.

8902 Quail Road
04/29/2024





















| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 150 | | 0 | 100 | | 0 | 300 | | 150 | 150 | | 200 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.910 | | | 0.904 | | | 0.850 | | | 0.850 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1695 | 0 | 1770 | 1684 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.664 | | | 0.713 | | | 0.460 | | | 0.395 | | |
| Satd. Flow (perm) | 1237 | 1695 | 0 | 1328 | 1684 | 0 | 857 | 3539 | 1583 | 736 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | 41 | | | 58 | | | 218 | | | 218 | | |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 478 | | | 955 | | | 764 | | | 2219 | | |
| Travel Time (s) | 10.9 | | | 21.7 | | | 17.4 | | | 50.4 | | |

Intersection Summary

Area Type: Other

Timings
5: Pike Rd. & Airport Rd.

8902 Quail Road
04/29/2024

| |  |  |  |  |  |  |  |  |  |  |
|------------------------|---|---|---|---|---|---|--|---|---|---|
| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 47 | 25 | 53 | 30 | 84 | 621 | 52 | 25 | 371 | 59 |
| Future Volume (vph) | 47 | 25 | 53 | 30 | 84 | 621 | 52 | 25 | 371 | 59 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 4.6 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 20.0 | 9.7 | 20.0 | 11.7 | 22.5 | 22.5 | 10.9 | 22.5 | 22.5 |
| Total Split (s) | 10.0 | 20.0 | 10.0 | 20.0 | 15.0 | 30.0 | 30.0 | 15.0 | 30.0 | 30.0 |
| Total Split (%) | 13.3% | 26.7% | 13.3% | 26.7% | 20.0% | 40.0% | 40.0% | 20.0% | 40.0% | 40.0% |
| Yellow Time (s) | 3.9 | 3.9 | 3.2 | 3.0 | 4.7 | 4.7 | 4.7 | 3.9 | 3.0 | 3.0 |
| All-Red Time (s) | 1.5 | 2.0 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.4 | 5.9 | 4.7 | 5.0 | 6.7 | 6.7 | 6.7 | 5.9 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 10.0 | 7.1 | 11.2 | 7.8 | 50.0 | 48.0 | 48.0 | 46.0 | 43.0 | 43.0 |
| Actuated g/C Ratio | 0.13 | 0.09 | 0.15 | 0.10 | 0.67 | 0.64 | 0.64 | 0.61 | 0.57 | 0.57 |
| v/c Ratio | 0.25 | 0.34 | 0.25 | 0.40 | 0.13 | 0.29 | 0.05 | 0.05 | 0.19 | 0.06 |
| Control Delay (s/veh) | 26.2 | 21.1 | 25.3 | 19.7 | 6.8 | 10.5 | 0.0 | 6.8 | 12.1 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 26.2 | 21.1 | 25.3 | 19.7 | 6.8 | 10.5 | 0.0 | 6.8 | 12.1 | 0.1 |
| LOS | C | C | C | B | A | B | A | A | B | A |
| Approach Delay (s/veh) | | 23.3 | | 21.9 | | 9.5 | | | 10.3 | |
| Approach LOS | | C | | C | | A | | | B | |

Intersection Summary

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 59 (79%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.40

Intersection Signal Delay (s/veh): 11.9

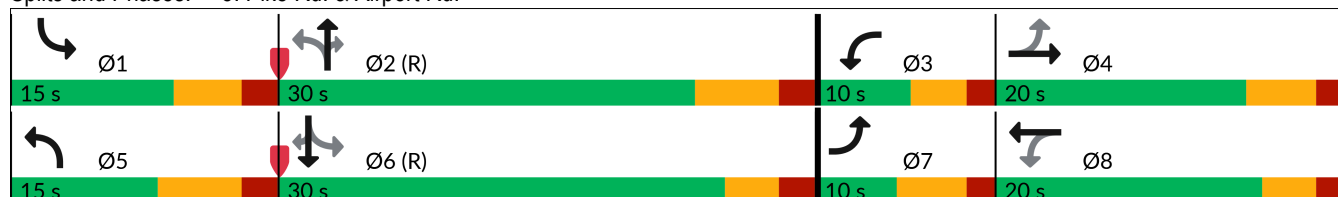
Intersection LOS: B

Intersection Capacity Utilization 46.0%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: Pike Rd. & Airport Rd.



Queues
5: Pike Rd. & Airport Rd.

8902 Quail Road
04/29/2024

























| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 51 | 68 | 58 | 91 | 91 | 675 | 57 | 27 | 403 | 64 |
| v/c Ratio | 0.25 | 0.34 | 0.25 | 0.40 | 0.13 | 0.29 | 0.05 | 0.05 | 0.19 | 0.06 |
| Control Delay (s/veh) | 26.2 | 21.1 | 25.3 | 19.7 | 6.8 | 10.5 | 0.0 | 6.8 | 12.1 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 26.2 | 21.1 | 25.3 | 19.7 | 6.8 | 10.5 | 0.0 | 6.8 | 12.1 | 0.1 |
| Queue Length 50th (ft) | 19 | 12 | 21 | 14 | 16 | 70 | 0 | 4 | 58 | 0 |
| Queue Length 95th (ft) | 43 | 46 | 47 | 53 | 37 | 165 | 0 | 14 | 100 | 0 |
| Internal Link Dist (ft) | | 398 | | 875 | | 684 | | | 2139 | |
| Turn Bay Length (ft) | 150 | | 100 | | 300 | | 150 | 150 | | 200 |
| Base Capacity (vph) | 198 | 351 | 228 | 383 | 675 | 2264 | 1091 | 600 | 2028 | 1000 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.26 | 0.19 | 0.25 | 0.24 | 0.13 | 0.30 | 0.05 | 0.05 | 0.20 | 0.06 |
| Intersection Summary | | | | | | | | | | |

HCM 7th Signalized Intersection Summary

5: Pike Rd. & Airport Rd.

8902 Quail Road

04/29/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Traffic Volume (veh/h) | 47 | 25 | 38 | 53 | 30 | 53 | 84 | 621 | 52 | 25 | 371 | 59 |
| Future Volume (veh/h) | 47 | 25 | 38 | 53 | 30 | 53 | 84 | 621 | 52 | 25 | 371 | 59 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width 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 |
| 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 | 51 | 27 | 41 | 58 | 33 | 58 | 91 | 675 | 57 | 27 | 403 | 64 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 205 | 56 | 86 | 240 | 50 | 87 | 593 | 1887 | 842 | 452 | 1749 | 780 |
| Arrive On Green | 0.04 | 0.08 | 0.08 | 0.05 | 0.08 | 0.08 | 0.06 | 0.53 | 0.53 | 0.03 | 0.49 | 0.49 |
| Sat Flow, veh/h | 1781 | 670 | 1017 | 1781 | 608 | 1069 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 51 | 0 | 68 | 58 | 0 | 91 | 91 | 675 | 57 | 27 | 403 | 64 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1687 | 1781 | 0 | 1678 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 1.9 | 0.0 | 2.9 | 2.2 | 0.0 | 3.9 | 1.8 | 8.2 | 1.3 | 0.6 | 4.9 | 1.6 |
| Cycle Q Clear(g_c), s | 1.9 | 0.0 | 2.9 | 2.2 | 0.0 | 3.9 | 1.8 | 8.2 | 1.3 | 0.6 | 4.9 | 1.6 |
| Prop In Lane | 1.00 | | 0.60 | 1.00 | | 0.64 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 205 | 0 | 142 | 240 | 0 | 137 | 593 | 1887 | 842 | 452 | 1749 | 780 |
| V/C Ratio(X) | 0.25 | 0.00 | 0.48 | 0.24 | 0.00 | 0.66 | 0.15 | 0.36 | 0.07 | 0.06 | 0.23 | 0.08 |
| Avail Cap(c_a), veh/h | 243 | 0 | 317 | 283 | 0 | 336 | 689 | 1887 | 842 | 617 | 1749 | 780 |
| 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 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.93 |
| Uniform Delay (d), s/veh | 29.9 | 0.0 | 32.8 | 29.5 | 0.0 | 33.4 | 8.2 | 10.2 | 8.6 | 8.9 | 10.9 | 10.1 |
| Incr Delay (d2), s/veh | 0.6 | 0.0 | 2.5 | 0.5 | 0.0 | 5.4 | 0.1 | 0.5 | 0.2 | 0.1 | 0.3 | 0.2 |
| 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(95%),veh/ln | 1.5 | 0.0 | 2.2 | 1.7 | 0.0 | 3.2 | 1.2 | 5.4 | 0.8 | 0.4 | 3.3 | 1.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d), s/veh | 30.5 | 0.0 | 35.2 | 30.0 | 0.0 | 38.9 | 8.3 | 10.7 | 8.7 | 9.0 | 11.2 | 10.3 |
| LnGrp LOS | C | | D | C | | D | A | B | A | A | B | B |
| Approach Vol, veh/h | 119 | | | 149 | | | 823 | | | 494 | | |
| Approach Delay, s/veh | 33.2 | | | 35.4 | | | 10.3 | | | 10.9 | | |
| Approach LOS | C | | | D | | | B | | | B | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.1 | 46.5 | 8.2 | 12.2 | 10.9 | 43.6 | 8.4 | 12.0 | | | | |
| Change Period (Y+Rc), s | 5.9 | 6.7 | 4.7 | 5.9 | 6.7 | * 6.7 | 5.4 | * 5.9 | | | | |
| Max Green Setting (Gmax), s | 9.1 | 23.3 | 5.3 | 14.1 | 8.3 | * 25 | 4.6 | * 15 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.6 | 10.2 | 4.2 | 4.9 | 3.8 | 6.9 | 3.9 | 5.9 | | | | |
| Green Ext Time (p_c), s | 0.0 | 4.0 | 0.0 | 0.2 | 0.1 | 2.7 | 0.0 | 0.2 | | | | |

Intersection Summary

HCM 7th Control Delay, s/veh 14.6

HCM 7th LOS B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes and Geometrics
6: Clover Basin Dr. & SW Site Access







8902 Quail Road
04/29/2024



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|---------------------|-------|------|------|-------|-------|------|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | 0% | | 0% | |
| Storage Length (ft) | 100 | | | 150 | 0 | 0 |
| Storage Lanes | 1 | | | 1 | 1 | 0 |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | |
| Frt | | | | 0.850 | 0.939 | |
| Flt Protected | 0.950 | | | | 0.973 | |
| Satd. Flow (prot) | 1770 | 1863 | 1863 | 1583 | 1702 | 0 |
| Flt Permitted | 0.950 | | | | 0.973 | |
| Satd. Flow (perm) | 1770 | 1863 | 1863 | 1583 | 1702 | 0 |
| Link Speed (mph) | | 30 | 30 | | 30 | |
| Link Distance (ft) | | 667 | 770 | | 242 | |
| Travel Time (s) | | 15.2 | 17.5 | | 5.5 | |

Intersection Summary





















Area Type: Other

| Intersection | | | | | | |
|--------------------------|---|---|---|---|---|---|
| Int Delay, s/veh | 0.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations |  |  |  |  |  |  |
| Traffic Vol, veh/h | 24 | 561 | 543 | 29 | 17 | 14 |
| Future Vol, veh/h | 24 | 561 | 543 | 29 | 17 | 14 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 100 | - | - | 150 | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 26 | 610 | 590 | 32 | 18 | 15 |









| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|---------------|
| Conflicting Flow All | 622 | 0 | 0 1252 590 |
| Stage 1 | - | - | - 590 - |
| Stage 2 | - | - | - 662 - |
| Critical Hdwy | 4.12 | - | - 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - 5.42 - |
| Critical Hdwy Stg 2 | - | - | - 5.42 - |
| Follow-up Hdwy | 2.218 | - | - 3.518 3.318 |
| Pot Cap-1 Maneuver | 959 | - | - 190 507 |
| Stage 1 | - | - | - 554 - |
| Stage 2 | - | - | - 513 - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 959 | - | - 185 507 |
| Mov Cap-2 Maneuver | - | - | - 185 - |
| Stage 1 | - | - | - 539 - |
| Stage 2 | - | - | - 513 - |

| Approach | EB | WB | SB |
|------------------------|------|----|-------|
| HCM Control Delay, s/v | 0.36 | 0 | 20.94 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---------------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 959 | - | - | - | 259 |
| HCM Lane V/C Ratio | 0.027 | - | - | - | 0.13 |
| HCM Control Delay (s/veh) | 8.9 | - | - | - | 20.9 |
| HCM Lane LOS | A | - | - | - | C |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 0.4 |

















| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 100 | | 0 | 100 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.998 | | | 0.995 | | | 0.900 | | | 0.879 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1859 | 0 | 1770 | 1853 | 0 | 1770 | 1676 | 0 | 1770 | 1637 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1859 | 0 | 1770 | 1853 | 0 | 1770 | 1676 | 0 | 1770 | 1637 | 0 |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 345 | | | 627 | | | 442 | | | 339 | | |
| Travel Time (s) | 7.8 | | | 10.2 | | | 7.8 | | | 7.7 | | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |

| Intersection | |
|---------------------------|----|
| Intersection Delay, s/veh | 82 |
| Intersection LOS | F |

















| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---------------------|---|---|------|---|---|------|---|---|------|---|---|------|
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Vol, veh/h | 36 | 568 | 8 | 23 | 565 | 21 | 11 | 42 | 85 | 17 | 15 | 62 |
| Future Vol, veh/h | 36 | 568 | 8 | 23 | 565 | 21 | 11 | 42 | 85 | 17 | 15 | 62 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 39 | 617 | 9 | 25 | 614 | 23 | 12 | 46 | 92 | 18 | 16 | 67 |
| Number of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|----------------------------|------|------|------|------|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 2 | 2 | 2 | 2 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 2 | 2 | 2 | 2 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 2 | 2 | 2 | 2 |
| HCM Control Delay, s/veh | 90.9 | 99.2 | 13.9 | 12.7 |
| HCM LOS | F | F | B | B |

| Lane | NBLn1 | NBLn2 | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 | SBLn2 |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Vol Left, % | 100% | 0% | 100% | 0% | 100% | 0% | 100% | 0% |
| Vol Thru, % | 0% | 33% | 0% | 99% | 0% | 96% | 0% | 19% |
| Vol Right, % | 0% | 67% | 0% | 1% | 0% | 4% | 0% | 81% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 11 | 127 | 36 | 576 | 23 | 586 | 17 | 77 |
| LT Vol | 11 | 0 | 36 | 0 | 23 | 0 | 17 | 0 |
| Through Vol | 0 | 42 | 0 | 568 | 0 | 565 | 0 | 15 |
| RT Vol | 0 | 85 | 0 | 8 | 0 | 21 | 0 | 62 |
| Lane Flow Rate | 12 | 138 | 39 | 626 | 25 | 637 | 18 | 84 |
| Geometry Grp | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Degree of Util (X) | 0.028 | 0.292 | 0.075 | 1.108 | 0.048 | 1.128 | 0.045 | 0.179 |
| Departure Headway (Hd) | 9.101 | 8.092 | 7.116 | 6.596 | 7.117 | 6.581 | 9.332 | 8.222 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 396 | 447 | 506 | 557 | 506 | 554 | 386 | 439 |
| Service Time | 6.801 | 5.792 | 4.816 | 4.296 | 4.817 | 4.281 | 7.032 | 5.922 |
| HCM Lane V/C Ratio | 0.03 | 0.309 | 0.077 | 1.124 | 0.049 | 1.15 | 0.047 | 0.191 |
| HCM Control Delay, s/veh | 12.1 | 14.1 | 10.4 | 95.9 | 10.2 | 102.7 | 12.5 | 12.7 |
| HCM Lane LOS | B | B | B | F | B | F | B | B |
| HCM 95th-tile Q | 0.1 | 1.2 | 0.2 | 19.2 | 0.2 | 20.2 | 0.1 | 0.6 |

| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | | |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.998 | | | 0.995 | | | 0.917 | | | 0.910 | |
| Flt Protected | | 0.997 | | | 0.998 | | | 0.996 | | | 0.991 | |
| Satd. Flow (prot) | 0 | 1853 | 0 | 0 | 1850 | 0 | 0 | 1701 | 0 | 0 | 1680 | 0 |
| Flt Permitted | | 0.997 | | | 0.998 | | | 0.996 | | | 0.991 | |
| Satd. Flow (perm) | 0 | 1853 | 0 | 0 | 1850 | 0 | 0 | 1701 | 0 | 0 | 1680 | 0 |
| Link Speed (mph) | | 30 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 352 | | | 547 | | | 471 | | | 295 | |
| Travel Time (s) | | 8.0 | | | 12.4 | | | 10.7 | | | 6.7 | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |











| | | | | |
|-----------------------------|---------|---------|---------|---------|
| Intersection | | | | |
| Intersection Delay, s/veh | 8.6 | | | |
| Intersection LOS | A | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 665 | 662 | 150 | 101 |
| Demand Flow Rate, veh/h | 678 | 675 | 153 | 102 |
| Vehicles Circulating, veh/h | 60 | 99 | 687 | 664 |
| Vehicles Exiting, veh/h | 706 | 741 | 51 | 110 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 8.5 | 9.1 | 8.0 | 6.8 |
| Approach LOS | A | A | A | A |
| Lane | Left | Left | Left | Left |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| RT Channelized | | | | |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 4.976 |
| A (Intercept) | 1380 | 1380 | 1380 | 1380 |
| B (Slope) | 1.02e-3 | 1.02e-3 | 1.02e-3 | 1.02e-3 |
| Entry Flow, veh/h | 678 | 675 | 153 | 102 |
| Cap Entry Lane, veh/h | 1298 | 1247 | 685 | 701 |
| Entry HV Adj Factor | 0.980 | 0.980 | 0.981 | 0.987 |
| Flow Entry, veh/h | 665 | 662 | 150 | 101 |
| Cap Entry, veh/h | 1272 | 1223 | 672 | 692 |
| V/C Ratio | 0.522 | 0.541 | 0.223 | 0.146 |
| Control Delay, s/veh | 8.5 | 9.1 | 8.0 | 6.8 |
| LOS | A | A | A | A |
| 95th %tile Queue, veh | 3 | 3 | 1 | 1 |

| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | | |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.994 | | | 0.993 | | | 0.899 | | | 0.967 | |
| Flt Protected | | 0.999 | | | 0.994 | | | 0.988 | | | 0.963 | |
| Satd. Flow (prot) | 0 | 1850 | 0 | 0 | 1839 | 0 | 0 | 1655 | 0 | 0 | 1735 | 0 |
| Flt Permitted | | 0.999 | | | 0.994 | | | 0.988 | | | 0.963 | |
| Satd. Flow (perm) | 0 | 1850 | 0 | 0 | 1839 | 0 | 0 | 1655 | 0 | 0 | 1735 | 0 |
| Link Speed (mph) | | 30 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 322 | | | 407 | | | 341 | | | 294 | |
| Travel Time (s) | | 7.3 | | | 9.3 | | | 7.8 | | | 6.7 | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |

| Intersection | | | | |
|-----------------------------|---------|---------|---------|---------|
| Intersection Delay, s/veh | 8.5 | | | |
| Intersection LOS | A | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 628 | 714 | 68 | 29 |
| Demand Flow Rate, veh/h | 641 | 729 | 69 | 29 |
| Vehicles Circulating, veh/h | 104 | 28 | 635 | 708 |
| Vehicles Exiting, veh/h | 633 | 676 | 110 | 49 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 8.7 | 8.7 | 6.1 | 5.8 |
| Approach LOS | A | A | A | A |
| Lane | Left | Left | Left | Left |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| RT Channelized | | | | |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 4.976 |
| A (Intercept) | 1380 | 1380 | 1380 | 1380 |
| B (Slope) | 1.02e-3 | 1.02e-3 | 1.02e-3 | 1.02e-3 |
| Entry Flow, veh/h | 641 | 729 | 69 | 29 |
| Cap Entry Lane, veh/h | 1241 | 1341 | 722 | 670 |
| Entry HV Adj Factor | 0.980 | 0.980 | 0.986 | 1.000 |
| Flow Entry, veh/h | 628 | 714 | 68 | 29 |
| Cap Entry, veh/h | 1216 | 1314 | 712 | 670 |
| V/C Ratio | 0.517 | 0.544 | 0.096 | 0.043 |
| Control Delay, s/veh | 8.7 | 8.7 | 6.1 | 5.8 |
| LOS | A | A | A | A |
| 95th %tile Queue, veh | 3 | 3 | 0 | 0 |





Lanes and Geometrics
1: Airport Rd. & Quail Rd.

8902 Quail Road
04/29/2024

| |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | 0% | | | 0% |
| Storage Length (ft) | 0 | 0 | | 0 | 200 | |
| Storage Lanes | 1 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Ped Bike Factor | | | | | | |
| Frt | 0.944 | | 0.998 | | | |
| Flt Protected | 0.972 | | | | 0.950 | |
| Satd. Flow (prot) | 1709 | 0 | 3532 | 0 | 1770 | 3539 |
| Flt Permitted | 0.972 | | | | 0.950 | |
| Satd. Flow (perm) | 1709 | 0 | 3532 | 0 | 1770 | 3539 |
| Link Speed (mph) | 30 | | 30 | | | 30 |
| Link Distance (ft) | 244 | | 284 | | | 406 |
| Travel Time (s) | 5.5 | | 6.5 | | | 9.2 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |

Intersection

Int Delay, s/veh 0.1

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------|---|------|---|------|---|---|
| Lane Configurations |  | |  | |  |  |
| Traffic Vol, veh/h | 6 | 5 | 422 | 5 | 4 | 1028 |
| Future Vol, veh/h | 6 | 5 | 422 | 5 | 4 | 1028 |
| 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 |
| Mvmt Flow | 7 | 5 | 459 | 5 | 4 | 1117 |

| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1029 | 232 | 0 |
| Stage 1 | 461 | - | - |
| Stage 2 | 567 | - | - |
| Critical Hdwy | 6.84 | 6.94 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - |
| Pot Cap-1 Maneuver | 230 | 770 | - |
| Stage 1 | 601 | - | - |
| Stage 2 | 531 | - | - |
| Platoon blocked, % | | - | - |
| Mov Cap-1 Maneuver | 229 | 770 | - |
| Mov Cap-2 Maneuver | 229 | - | - |
| Stage 1 | 601 | - | - |
| Stage 2 | 529 | - | - |

























| Approach | WB | NB | SB |
|------------------------|------|----|------|
| HCM Control Delay, s/v | 16.1 | 0 | 0.03 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|---------------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 336 | 1093 |
| HCM Lane V/C Ratio | - | - | 0.036 | 0.004 |
| HCM Control Delay (s/veh) | - | - | 16.1 | 8.3 |
| HCM Lane LOS | - | - | C | A |
| HCM 95th %tile Q(veh) | - | - | 0.1 | 0 |

Lanes and Geometrics
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road

04/29/2024

























| |  |  |  |  |  |  |  |  |  |  |  |  | |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | |
| Grade (%) | 0% | | 0% | | 0% | | 0% | | 0% | | 0% | | |
| Storage Length (ft) | 75 | | 150 | 150 | | 100 | 300 | | 250 | 250 | | 200 | |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 1 | | 1 | 1 | | 1 | |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Ped Bike Factor | | | | | | | | | | | | | |
| Frt | | | 0.850 | | | | 0.850 | | 0.850 | | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | | |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | | |
| Satd. Flow (perm) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | |
| Right Turn on Red | | | Yes | | | | Yes | | Yes | | | | Yes |
| Satd. Flow (RTOR) | | | 133 | | | | 180 | | 173 | | | | 233 |
| Link Speed (mph) | 30 | | | | 30 | | | | 30 | | | | 30 |
| Link Distance (ft) | 794 | | | | 727 | | | | 2219 | | 401 | | |
| Travel Time (s) | 18.0 | | | | 16.5 | | | | 50.4 | | 9.1 | | |

Intersection Summary

Area Type: Other

Timings
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/29/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 76 | 348 | 84 | 79 | 273 | 86 | 73 | 266 | 127 | 142 | 677 | 228 |
| Future Volume (vph) | 76 | 348 | 84 | 79 | 273 | 86 | 73 | 266 | 127 | 142 | 677 | 228 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 34.2 | 34.2 | 10.0 | 34.2 | 34.2 | 10.0 | 26.0 | 26.0 | 10.0 | 26.0 | 26.0 |
| Total Split (s) | 25.0 | 46.0 | 46.0 | 18.0 | 39.0 | 39.0 | 18.0 | 30.0 | 30.0 | 21.0 | 33.0 | 33.0 |
| Total Split (%) | 21.7% | 40.0% | 40.0% | 15.7% | 33.9% | 33.9% | 15.7% | 26.1% | 26.1% | 18.3% | 28.7% | 28.7% |
| Yellow Time (s) | 3.0 | 4.2 | 4.2 | 3.0 | 4.2 | 4.2 | 3.0 | 5.0 | 5.0 | 3.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 6.2 | 6.2 | 5.0 | 6.2 | 6.2 | 5.0 | 7.0 | 7.0 | 5.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 10.7 | 29.4 | 29.4 | 10.5 | 29.1 | 29.1 | 10.5 | 39.8 | 39.8 | 14.5 | 46.1 | 46.1 |
| Actuated g/C Ratio | 0.09 | 0.26 | 0.26 | 0.09 | 0.25 | 0.25 | 0.09 | 0.35 | 0.35 | 0.13 | 0.40 | 0.40 |
| v/c Ratio | 0.50 | 0.79 | 0.18 | 0.53 | 0.63 | 0.17 | 0.49 | 0.23 | 0.20 | 0.69 | 0.51 | 0.32 |
| Control Delay (s/veh) | 59.4 | 52.1 | 2.2 | 61.6 | 43.6 | 0.7 | 59.3 | 31.6 | 3.4 | 63.7 | 32.4 | 6.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 59.4 | 52.1 | 2.2 | 61.6 | 43.6 | 0.7 | 59.3 | 31.6 | 3.4 | 63.7 | 32.4 | 6.7 |
| LOS | E | D | A | E | D | A | E | C | A | E | C | A |
| Approach Delay (s/veh) | | 45.0 | | | 38.5 | | | 28.3 | | | 31.1 | |
| Approach LOS | | D | | | D | | | C | | | C | |

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 9 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay (s/veh): 34.8

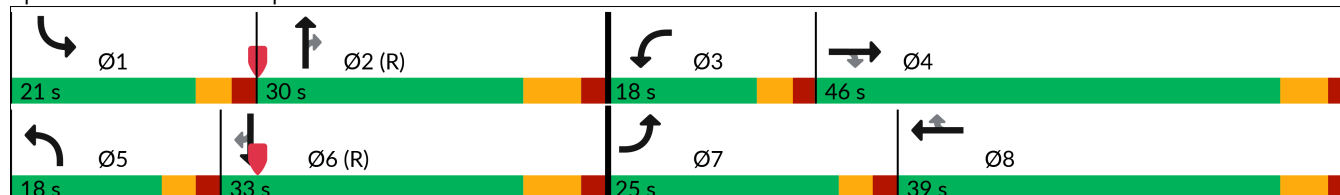
Intersection LOS: C













Intersection Capacity Utilization 64.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: Airport Rd. & Clover Basin Dr.



| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Group Flow (vph) | 83 | 378 | 91 | 86 | 297 | 93 | 79 | 289 | 138 | 154 | 736 | 248 |
| v/c Ratio | 0.50 | 0.79 | 0.18 | 0.53 | 0.63 | 0.17 | 0.49 | 0.23 | 0.20 | 0.69 | 0.51 | 0.32 |
| Control Delay (s/veh) | 59.4 | 52.1 | 2.2 | 61.6 | 43.6 | 0.7 | 59.3 | 31.6 | 3.4 | 63.7 | 32.4 | 6.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 59.4 | 52.1 | 2.2 | 61.6 | 43.6 | 0.7 | 59.3 | 31.6 | 3.4 | 63.7 | 32.4 | 6.7 |
| Queue Length 50th (ft) | 60 | 261 | 0 | 62 | 194 | 0 | 57 | 84 | 0 | 110 | 232 | 7 |
| Queue Length 95th (ft) | 107 | 337 | 14 | 113 | 265 | 0 | 104 | 142 | 30 | 177 | #395 | 77 |
| Internal Link Dist (ft) | | 714 | | | 647 | | | 2139 | | | 321 | |
| Turn Bay Length (ft) | 75 | | 150 | 150 | | 100 | 300 | | 250 | 250 | | 200 |
| Base Capacity (vph) | 307 | 644 | 634 | 200 | 544 | 590 | 205 | 1223 | 660 | 255 | 1419 | 774 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.27 | 0.59 | 0.14 | 0.43 | 0.55 | 0.16 | 0.39 | 0.24 | 0.21 | 0.60 | 0.52 | 0.32 |

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

























Queue shown is maximum after two cycles.






















HCM 7th Signalized Intersection Summary

2: Airport Rd. & Clover Basin Dr.

8902 Quail Road









04/29/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h) | 76 | 348 | 84 | 79 | 273 | 86 | 73 | 266 | 127 | 142 | 677 | 228 |
| Future Volume (veh/h) | 76 | 348 | 84 | 79 | 273 | 86 | 73 | 266 | 127 | 142 | 677 | 228 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width 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 |
| 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 | 83 | 378 | 91 | 86 | 297 | 93 | 79 | 289 | 138 | 154 | 736 | 248 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 107 | 434 | 368 | 109 | 437 | 370 | 101 | 1429 | 637 | 183 | 1592 | 710 |
| Arrive On Green | 0.06 | 0.23 | 0.23 | 0.06 | 0.23 | 0.23 | 0.06 | 0.40 | 0.40 | 0.10 | 0.45 | 0.45 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 83 | 378 | 91 | 86 | 297 | 93 | 79 | 289 | 138 | 154 | 736 | 248 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 5.3 | 22.4 | 5.4 | 5.5 | 16.6 | 5.5 | 5.0 | 6.1 | 6.6 | 9.8 | 16.6 | 11.8 |
| Cycle Q Clear(g_c), s | 5.3 | 22.4 | 5.4 | 5.5 | 16.6 | 5.5 | 5.0 | 6.1 | 6.6 | 9.8 | 16.6 | 11.8 |
| 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 | 107 | 434 | 368 | 109 | 437 | 370 | 101 | 1429 | 637 | 183 | 1592 | 710 |
| V/C Ratio(X) | 0.78 | 0.87 | 0.25 | 0.79 | 0.68 | 0.25 | 0.78 | 0.20 | 0.22 | 0.84 | 0.46 | 0.35 |
| Avail Cap(c_a), veh/h | 310 | 647 | 549 | 201 | 533 | 452 | 201 | 1429 | 637 | 248 | 1592 | 710 |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 0.99 | 0.99 | 0.99 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 53.3 | 42.5 | 36.0 | 53.2 | 40.2 | 35.9 | 53.5 | 22.4 | 22.5 | 50.7 | 22.1 | 20.8 |
| Incr Delay (d2), s/veh | 11.4 | 8.5 | 0.3 | 11.6 | 2.6 | 0.4 | 12.1 | 0.3 | 0.8 | 17.1 | 1.0 | 1.4 |
| 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(95%),veh/ln | 4.9 | 16.8 | 3.8 | 5.0 | 12.6 | 3.9 | 4.7 | 4.7 | 4.7 | 9.0 | 11.4 | 8.1 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d), s/veh | 64.7 | 51.0 | 36.3 | 64.9 | 42.8 | 36.2 | 65.6 | 22.7 | 23.3 | 67.7 | 23.1 | 22.1 |
| LnGrp LOS | E | D | D | E | D | D | E | C | C | E | C | C |
| Approach Vol, veh/h | 552 | | | | 476 | | | | 506 | | | |
| Approach Delay, s/veh | 50.6 | | | | 45.5 | | | | 29.6 | | | |
| Approach LOS | D | | | | D | | | | C | | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 16.8 | 53.2 | 12.1 | 32.9 | 11.5 | 58.5 | 11.9 | 33.1 | | | | |
| Change Period (Y+Rc), s | 5.0 | 7.0 | 5.0 | 6.2 | 5.0 | 7.0 | 5.0 | 6.2 | | | | |
| Max Green Setting (Gmax), s | 16.0 | 23.0 | 13.0 | 39.8 | 13.0 | 26.0 | 20.0 | 32.8 | | | | |
| Max Q Clear Time (g_c+I1), s | 11.8 | 8.6 | 7.5 | 24.4 | 7.0 | 18.6 | 7.3 | 18.6 | | | | |
| Green Ext Time (p_c), s | 0.1 | 2.0 | 0.1 | 2.3 | 0.1 | 3.4 | 0.1 | 1.7 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 7th Control Delay, s/veh | 36.5 | | | | | | | | | | | |
| HCM 7th LOS | D | | | | | | | | | | | |

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  | |  | | |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | 0% | | 0% | | 0% | | 0% | | 0% | |
| Storage Length (ft) | 100 | | 200 | 100 | | 150 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 1 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | | 0.850 | | | | 0.850 | | 0.913 | | 0.970 | |
| Flt Protected | 0.950 | | | 0.950 | | | | 0.982 | | | 0.963 | |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 0 | 1670 | 0 | 0 | 1740 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | | 0.982 | | | 0.963 | |
| Satd. Flow (perm) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 0 | 1670 | 0 | 0 | 1740 | 0 |
| Link Speed (mph) | 30 | | | | 30 | | | | 30 | | 30 | |
| Link Distance (ft) | 710 | | | | 392 | | | | 268 | | 265 | |
| Travel Time (s) | 32.7 | | | | 5.9 | | | | 6.5 | | 0.0 | |

Intersection Summary

Area Type: Other

| Intersection | | | | | | | | | | | | |
|--------------------------|---|---|---|---|---|---|------|---|------|------|---|------|
| Int Delay, s/veh | 3.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  | |  | | |  | |
| Traffic Vol, veh/h | 3 | 639 | 16 | 25 | 379 | 10 | 30 | 0 | 54 | 32 | 0 | 9 |
| Future Vol, veh/h | 3 | 639 | 16 | 25 | 379 | 10 | 30 | 0 | 54 | 32 | 0 | 9 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 100 | - | 200 | 100 | - | 150 | 0 | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 3 | 695 | 17 | 27 | 412 | 11 | 33 | 0 | 59 | 35 | 0 | 10 |





















| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 423 | 0 | 0 | 712 | 0 | 0 | 1167 | 1178 | 695 | 1167 | 1185 | 412 |
| Stage 1 | - | - | - | - | - | - | 701 | 701 | - | 466 | 466 | - |
| Stage 2 | - | - | - | - | - | - | 466 | 477 | - | 701 | 718 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1136 | - | - | 888 | - | - | 170 | 191 | 442 | 170 | 189 | 640 |
| Stage 1 | - | - | - | - | - | - | 429 | 441 | - | 577 | 562 | - |
| Stage 2 | - | - | - | - | - | - | 577 | 556 | - | 429 | 433 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1136 | - | - | 888 | - | - | 162 | 184 | 442 | 143 | 183 | 640 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 162 | 184 | - | 143 | 183 | - |
| Stage 1 | - | - | - | - | - | - | 428 | 440 | - | 559 | 545 | - |
| Stage 2 | - | - | - | - | - | - | 550 | 539 | - | 371 | 432 | - |

| Approach | EB | | | WB | | | NB | | | SB | | |
|------------------------|------|--|--|------|--|--|------|--|--|-------|--|--|
| HCM Control Delay, s/v | 0.04 | | | 0.55 | | | 24.6 | | | 33.03 | | |
| HCM LOS | | | | | | | C | | | D | | |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---------------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 274 | 1136 | - | - | 888 | - | - | 172 |
| HCM Lane V/C Ratio | 0.334 | 0.003 | - | - | 0.031 | - | - | 0.259 |
| HCM Control Delay (s/veh) | 24.6 | 8.2 | - | - | 9.2 | - | - | 33 |
| HCM Lane LOS | C | A | - | - | A | - | - | D |
| HCM 95th %tile Q(veh) | 1.4 | 0 | - | - | 0.1 | - | - | 1 |









Lanes and Geometrics
4: S Fordham St. & Clover Basin Dr.

8902 Quail Road
04/29/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 100 | | 0 | 150 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | 0.995 | | | 0.994 | | | 0.889 | | | 0.934 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1853 | 0 | 1770 | 1852 | 0 | 1770 | 1656 | 0 | 1770 | 1740 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1853 | 0 | 1770 | 1852 | 0 | 1770 | 1656 | 0 | 1770 | 1740 | 0 |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 483 | | | 921 | | | 648 | | | 640 | | |
| Travel Time (s) | 11.0 | | | 20.9 | | | 14.7 | | | 14.5 | | |

Intersection Summary

Area Type: Other

| Intersection | | | | | | | | | | | | |
|--------------------------|---|---|------|---|---|------|---|---|------|---|---|------|
| Int Delay, s/veh | 5.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Vol, veh/h | 46 | 664 | 23 | 50 | 377 | 15 | 8 | 12 | 34 | 24 | 46 | 36 |
| Future Vol, veh/h | 46 | 664 | 23 | 50 | 377 | 15 | 8 | 12 | 34 | 24 | 46 | 36 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 100 | - | - | 150 | - | - | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 50 | 722 | 25 | 54 | 410 | 16 | 9 | 13 | 37 | 26 | 50 | 39 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 426 | 0 | 0 | 747 | 0 | 0 | 1378 | 1369 | 734 | 1355 | 1373 | 418 |
| Stage 1 | - | - | - | - | - | - | 834 | 834 | - | 527 | 527 | - |
| Stage 2 | - | - | - | - | - | - | 543 | 535 | - | 828 | 847 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1133 | - | - | 862 | - | - | 122 | 146 | 420 | 127 | 146 | 635 |
| Stage 1 | - | - | - | - | - | - | 362 | 383 | - | 535 | 528 | - |
| Stage 2 | - | - | - | - | - | - | 524 | 524 | - | 365 | 378 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1133 | - | - | 862 | - | - | 66 | 131 | 420 | 94 | 130 | 635 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 66 | 131 | - | 94 | 130 | - |
| Stage 1 | - | - | - | - | - | - | 346 | 366 | - | 501 | 495 | - |
| Stage 2 | - | - | - | - | - | - | 414 | 491 | - | 307 | 361 | - |























| Approach | EB | WB | NB | SB |
|------------------------|------|------|-------|-------|
| HCM Control Delay, s/v | 0.52 | 1.07 | 28.42 | 41.32 |
| HCM LOS | | | D | E |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|---------------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h) | 66 | 267 | 1133 | - | - | 862 | - | - | 94 | 200 |
| HCM Lane V/C Ratio | 0.132 | 0.187 | 0.044 | - | - | 0.063 | - | - | 0.277 | 0.445 |
| HCM Control Delay (s/veh) | 67.8 | 21.6 | 8.3 | - | - | 9.5 | - | - | 57.3 | 36.6 |
| HCM Lane LOS | F | C | A | - | - | A | - | - | F | E |
| HCM 95th %tile Q(veh) | 0.4 | 0.7 | 0.1 | - | - | 0.2 | - | - | 1 | 2.1 |

Lanes and Geometrics
5: Pike Rd. & Airport Rd.

8902 Quail Road

04/29/2024





















| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 150 | | 0 | 100 | | 0 | 300 | | 150 | 150 | | 200 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.867 | | | 0.885 | | | 0.850 | | | 0.850 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1615 | 0 | 1770 | 1649 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.720 | | | 0.503 | | | 0.295 | | | 0.539 | | |
| Satd. Flow (perm) | 1341 | 1615 | 0 | 937 | 1649 | 0 | 550 | 3539 | 1583 | 1004 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | 114 | | | 43 | | | 156 | | | 156 | | |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 478 | | | 955 | | | 764 | | | 2219 | | |
| Travel Time (s) | 10.9 | | | 21.7 | | | 17.4 | | | 50.4 | | |

Intersection Summary

Area Type: Other

Timings
5: Pike Rd. & Airport Rd.

8902 Quail Road
04/29/2024

| |  |  |  |  |  |  |  |  |  |  |
|------------------------|---|---|---|---|---|---|--|---|---|---|
| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 40 | 14 | 55 | 12 | 45 | 327 | 49 | 49 | 741 | 44 |
| Future Volume (vph) | 40 | 14 | 55 | 12 | 45 | 327 | 49 | 49 | 741 | 44 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.4 | 29.9 | 9.7 | 30.0 | 11.7 | 22.5 | 22.5 | 10.9 | 22.5 | 22.5 |
| Total Split (s) | 15.0 | 30.0 | 15.0 | 30.0 | 20.0 | 40.0 | 40.0 | 20.0 | 40.0 | 40.0 |
| Total Split (%) | 14.3% | 28.6% | 14.3% | 28.6% | 19.0% | 38.1% | 38.1% | 19.0% | 38.1% | 38.1% |
| Yellow Time (s) | 3.9 | 3.9 | 3.2 | 3.0 | 4.7 | 4.7 | 4.7 | 3.9 | 3.0 | 3.0 |
| All-Red Time (s) | 1.5 | 2.0 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.4 | 5.9 | 4.7 | 5.0 | 6.7 | 6.7 | 6.7 | 5.9 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 14.7 | 7.7 | 17.1 | 11.1 | 69.0 | 63.6 | 63.6 | 69.3 | 64.7 | 64.7 |
| Actuated g/C Ratio | 0.14 | 0.07 | 0.16 | 0.11 | 0.66 | 0.61 | 0.61 | 0.66 | 0.62 | 0.62 |
| v/c Ratio | 0.19 | 0.57 | 0.27 | 0.26 | 0.11 | 0.16 | 0.05 | 0.07 | 0.36 | 0.04 |
| Control Delay (s/veh) | 34.6 | 21.7 | 35.7 | 21.0 | 7.2 | 11.4 | 0.1 | 6.6 | 12.7 | 0.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 34.6 | 21.7 | 35.7 | 21.0 | 7.2 | 11.4 | 0.1 | 6.6 | 12.7 | 0.0 |
| LOS | C | C | D | C | A | B | A | A | B | A |
| Approach Delay (s/veh) | | 25.0 | | 28.7 | | 9.7 | | | 11.7 | |
| Approach LOS | | C | | C | | A | | | B | |

Intersection Summary

Cycle Length: 105

Actuated Cycle Length: 105

Offset: 59 (56%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay (s/veh): 13.7

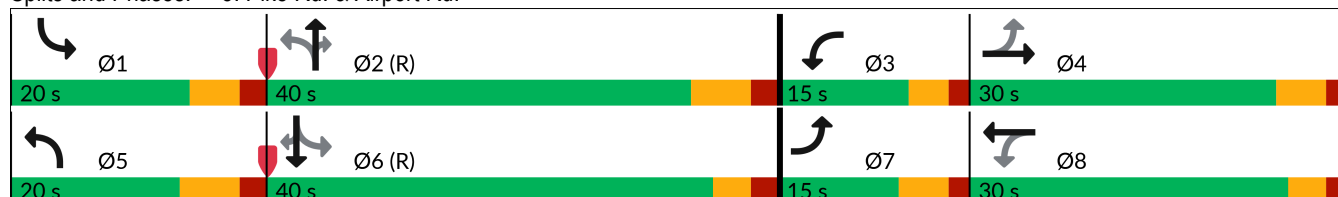
Intersection LOS: B

Intersection Capacity Utilization 48.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: Pike Rd. & Airport Rd.



























| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 43 | 129 | 60 | 56 | 49 | 355 | 53 | 53 | 805 | 48 |
| v/c Ratio | 0.19 | 0.57 | 0.27 | 0.26 | 0.11 | 0.16 | 0.05 | 0.07 | 0.36 | 0.04 |
| Control Delay (s/veh) | 34.6 | 21.7 | 35.7 | 21.0 | 7.2 | 11.4 | 0.1 | 6.6 | 12.7 | 0.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 34.6 | 21.7 | 35.7 | 21.0 | 7.2 | 11.4 | 0.1 | 6.6 | 12.7 | 0.0 |
| Queue Length 50th (ft) | 24 | 10 | 34 | 8 | 9 | 55 | 0 | 10 | 143 | 0 |
| Queue Length 95th (ft) | 50 | 64 | 64 | 45 | 26 | 97 | 0 | 27 | 228 | 0 |
| Internal Link Dist (ft) | | 398 | | 875 | | 684 | | | 2139 | |
| Turn Bay Length (ft) | 150 | | 100 | | 300 | | 150 | 150 | | 200 |
| Base Capacity (vph) | 251 | 458 | 245 | 425 | 540 | 2143 | 1020 | 815 | 2181 | 1035 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.17 | 0.28 | 0.24 | 0.13 | 0.09 | 0.17 | 0.05 | 0.07 | 0.37 | 0.05 |

Intersection Summary

HCM 7th Signalized Intersection Summary

5: Pike Rd. & Airport Rd.

8902 Quail Road
04/29/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Traffic Volume (veh/h) | 40 | 14 | 105 | 55 | 12 | 40 | 45 | 327 | 49 | 49 | 741 | 44 |
| Future Volume (veh/h) | 40 | 14 | 105 | 55 | 12 | 40 | 45 | 327 | 49 | 49 | 741 | 44 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width 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 |
| 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 | 43 | 15 | 114 | 60 | 13 | 43 | 49 | 355 | 53 | 53 | 805 | 48 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 224 | 19 | 146 | 171 | 39 | 129 | 439 | 2128 | 949 | 677 | 2105 | 939 |
| Arrive On Green | 0.03 | 0.10 | 0.10 | 0.04 | 0.10 | 0.10 | 0.04 | 0.60 | 0.60 | 0.04 | 0.59 | 0.59 |
| Sat Flow, veh/h | 1781 | 188 | 1426 | 1781 | 381 | 1262 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 43 | 0 | 129 | 60 | 0 | 56 | 49 | 355 | 53 | 53 | 805 | 48 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1614 | 1781 | 0 | 1643 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 2.2 | 0.0 | 8.2 | 3.1 | 0.0 | 3.3 | 1.1 | 4.7 | 1.5 | 1.2 | 12.5 | 1.3 |
| Cycle Q Clear(g_c), s | 2.2 | 0.0 | 8.2 | 3.1 | 0.0 | 3.3 | 1.1 | 4.7 | 1.5 | 1.2 | 12.5 | 1.3 |
| Prop In Lane | 1.00 | | 0.88 | 1.00 | | 0.77 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 224 | 0 | 165 | 171 | 0 | 168 | 439 | 2128 | 949 | 677 | 2105 | 939 |
| V/C Ratio(X) | 0.19 | 0.00 | 0.78 | 0.35 | 0.00 | 0.33 | 0.11 | 0.17 | 0.06 | 0.08 | 0.38 | 0.05 |
| Avail Cap(c_a), veh/h | 326 | 0 | 370 | 274 | 0 | 391 | 600 | 2128 | 949 | 850 | 2105 | 939 |
| 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 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.87 | 0.87 | 0.87 |
| Uniform Delay (d), s/veh | 40.2 | 0.0 | 46.0 | 40.3 | 0.0 | 43.8 | 8.3 | 9.4 | 8.7 | 7.5 | 11.3 | 9.0 |
| Incr Delay (d2), s/veh | 0.4 | 0.0 | 7.9 | 1.2 | 0.0 | 1.2 | 0.1 | 0.2 | 0.1 | 0.0 | 0.5 | 0.1 |
| 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(95%),veh/ln | 1.8 | 0.0 | 6.5 | 2.6 | 0.0 | 2.5 | 0.7 | 3.2 | 0.9 | 0.8 | 8.2 | 0.8 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d), s/veh | 40.6 | 0.0 | 53.9 | 41.5 | 0.0 | 45.0 | 8.4 | 9.6 | 8.9 | 7.5 | 11.7 | 9.1 |
| LnGrp LOS | D | | D | D | | D | A | A | A | A | B | A |
| Approach Vol, veh/h | 172 | | | 116 | | | 457 | | | 906 | | |
| Approach Delay, s/veh | 50.6 | | | 43.2 | | | 9.3 | | | 11.3 | | |
| Approach LOS | D | | | D | | | A | | | B | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.8 | 69.6 | 9.0 | 16.6 | 10.5 | 68.9 | 9.0 | 16.6 | | | | |
| Change Period (Y+Rc), s | 5.9 | 6.7 | 4.7 | 5.9 | 6.7 | * 6.7 | 5.4 | * 5.9 | | | | |
| Max Green Setting (Gmax), s | 14.1 | 33.3 | 10.3 | 24.1 | 13.3 | * 35 | 9.6 | * 25 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.2 | 6.7 | 5.1 | 10.2 | 3.1 | 14.5 | 4.2 | 5.3 | | | | |
| Green Ext Time (p_c), s | 0.1 | 2.6 | 0.0 | 0.5 | 0.1 | 5.9 | 0.0 | 0.2 | | | | |

Intersection Summary

HCM 7th Control Delay, s/veh 17.1
HCM 7th LOS B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes and Geometrics
6: Clover Basin Dr. & SW Site Access







8902 Quail Road
04/29/2024



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|---------------------|-------|------|------|-------|-------|------|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | 0% | | 0% | |
| Storage Length (ft) | 100 | | | 150 | 0 | 0 |
| Storage Lanes | 1 | | | 1 | 1 | 0 |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | |
| Frt | | | | 0.850 | 0.948 | |
| Flt Protected | 0.950 | | | | 0.970 | |
| Satd. Flow (prot) | 1770 | 1863 | 1863 | 1583 | 1713 | 0 |
| Flt Permitted | 0.950 | | | | 0.970 | |
| Satd. Flow (perm) | 1770 | 1863 | 1863 | 1583 | 1713 | 0 |
| Link Speed (mph) | | 30 | 30 | | 30 | |
| Link Distance (ft) | | 727 | 710 | | 280 | |
| Travel Time (s) | | 16.5 | 16.1 | | 4.8 | |

Intersection Summary





















Area Type: Other

| Intersection | | | | | | |
|--------------------------|---|---|---|---|---|---|
| Int Delay, s/veh | 1.9 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations |  |  |  |  |  |  |
| Traffic Vol, veh/h | 11 | 606 | 407 | 18 | 56 | 35 |
| Future Vol, veh/h | 11 | 606 | 407 | 18 | 56 | 35 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 100 | - | - | 150 | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 12 | 659 | 442 | 20 | 61 | 38 |

| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|---------------|
| Conflicting Flow All | 462 | 0 | 0 1125 442 |
| Stage 1 | - | - | - 442 - |
| Stage 2 | - | - | - 683 - |
| Critical Hdwy | 4.12 | - | - 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - 5.42 - |
| Critical Hdwy Stg 2 | - | - | - 5.42 - |
| Follow-up Hdwy | 2.218 | - | - 3.518 3.318 |
| Pot Cap-1 Maneuver | 1099 | - | - 227 615 |
| Stage 1 | - | - | - 648 - |
| Stage 2 | - | - | - 502 - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 1099 | - | - 224 615 |
| Mov Cap-2 Maneuver | - | - | - 224 - |
| Stage 1 | - | - | - 640 - |
| Stage 2 | - | - | - 502 - |

| Approach | EB | WB | SB |
|-----------------------------|----|----|-------|
| HCM Control Delay, s/v 0.15 | | 0 | 23.06 |
| HCM LOS | | | C |









| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---------------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1099 | - | - | - | 297 |
| HCM Lane V/C Ratio | 0.011 | - | - | - | 0.333 |
| HCM Control Delay (s/veh) | 8.3 | - | - | - | 23.1 |
| HCM Lane LOS | A | - | - | - | C |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 1.4 |

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 100 | | 0 | 100 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | 0.995 | | | 0.994 | | | 0.889 | | | 0.934 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1853 | 0 | 1770 | 1852 | 0 | 1770 | 1656 | 0 | 1770 | 1740 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1853 | 0 | 1770 | 1852 | 0 | 1770 | 1656 | 0 | 1770 | 1740 | 0 |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 297 | | | 624 | | | 503 | | | 339 | | |
| Travel Time (s) | 6.8 | | | 7.4 | | | 7.1 | | | 7.7 | | |

Intersection Summary

















Area Type: Other

| Intersection | |
|---------------------------|------|
| Intersection Delay, s/veh | 72.9 |
| Intersection LOS | F |

















| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---------------------|---|---|------|---|---|------|---|---|------|---|---|------|
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Vol, veh/h | 46 | 664 | 23 | 50 | 377 | 15 | 8 | 12 | 34 | 24 | 46 | 36 |
| Future Vol, veh/h | 46 | 664 | 23 | 50 | 377 | 15 | 8 | 12 | 34 | 24 | 46 | 36 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 50 | 722 | 25 | 54 | 410 | 16 | 9 | 13 | 37 | 26 | 50 | 39 |
| Number of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|----------------------------|-------|------|------|------|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 2 | 2 | 2 | 2 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 2 | 2 | 2 | 2 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 2 | 2 | 2 | 2 |
| HCM Control Delay, s/veh | 117.7 | 20.8 | 11.3 | 11.9 |
| HCM LOS | F | C | B | B |

| Lane | NBLn1 | NBLn2 | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 | SBLn2 |
|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Vol Left, % | 100% | 0% | 100% | 0% | 100% | 0% | 100% | 0% |
| Vol Thru, % | 0% | 26% | 0% | 97% | 0% | 96% | 0% | 56% |
| Vol Right, % | 0% | 74% | 0% | 3% | 0% | 4% | 0% | 44% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 8 | 46 | 46 | 687 | 50 | 392 | 24 | 82 |
| LT Vol | 8 | 0 | 46 | 0 | 50 | 0 | 24 | 0 |
| Through Vol | 0 | 12 | 0 | 664 | 0 | 377 | 0 | 46 |
| RT Vol | 0 | 34 | 0 | 23 | 0 | 15 | 0 | 36 |
| Lane Flow Rate | 9 | 50 | 50 | 747 | 54 | 426 | 26 | 89 |
| Geometry Grp | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Degree of Util (X) | 0.02 | 0.1 | 0.088 | 1.199 | 0.098 | 0.703 | 0.058 | 0.179 |
| Departure Headway (Hd) | 8.72 | 7.667 | 6.308 | 5.778 | 6.721 | 6.186 | 8.491 | 7.658 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 413 | 470 | 569 | 635 | 536 | 588 | 424 | 471 |
| Service Time | 6.42 | 5.367 | 4.033 | 3.503 | 4.421 | 3.886 | 6.191 | 5.358 |
| HCM Lane V/C Ratio | 0.022 | 0.106 | 0.088 | 1.176 | 0.101 | 0.724 | 0.061 | 0.189 |
| HCM Control Delay, s/veh | 11.6 | 11.2 | 9.6 | 124.9 | 10.1 | 22.2 | 11.7 | 12 |
| HCM Lane LOS | B | B | A | F | B | C | B | B |
| HCM 95th-tile Q | 0.1 | 0.3 | 0.3 | 26.1 | 0.3 | 5.6 | 0.2 | 0.6 |

| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | | |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.996 | | | 0.995 | | | 0.915 | | | 0.954 | |
| Flt Protected | | 0.997 | | | 0.994 | | | 0.992 | | | 0.989 | |
| Satd. Flow (prot) | 0 | 1850 | 0 | 0 | 1842 | 0 | 0 | 1691 | 0 | 0 | 1758 | 0 |
| Flt Permitted | | 0.997 | | | 0.994 | | | 0.992 | | | 0.989 | |
| Satd. Flow (perm) | 0 | 1850 | 0 | 0 | 1842 | 0 | 0 | 1691 | 0 | 0 | 1758 | 0 |
| Link Speed (mph) | | 30 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 366 | | | 418 | | | 541 | | | 378 | |
| Travel Time (s) | | 8.3 | | | 9.5 | | | 8.8 | | | 8.6 | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |






| Intersection | | | | |
|-----------------------------|---------|---------|---------|---------|
| Intersection Delay, s/veh | 9.8 | | | |
| Intersection LOS | A | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 797 | 480 | 59 | 115 |
| Demand Flow Rate, veh/h | 813 | 489 | 60 | 118 |
| Vehicles Circulating, veh/h | 133 | 73 | 814 | 482 |
| Vehicles Exiting, veh/h | 467 | 801 | 132 | 80 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 12.5 | 6.5 | 7.3 | 5.8 |
| Approach LOS | B | A | A | A |
| Lane | Left | Left | Left | Left |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| RT Channelized | | | | |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 4.976 |
| A (Intercept) | 1380 | 1380 | 1380 | 1380 |
| B (Slope) | 1.02e-3 | 1.02e-3 | 1.02e-3 | 1.02e-3 |
| Entry Flow, veh/h | 813 | 489 | 60 | 118 |
| Cap Entry Lane, veh/h | 1205 | 1281 | 602 | 844 |
| Entry HV Adj Factor | 0.980 | 0.981 | 0.979 | 0.975 |
| Flow Entry, veh/h | 797 | 480 | 59 | 115 |
| Cap Entry, veh/h | 1180 | 1257 | 589 | 823 |
| V/C Ratio | 0.675 | 0.382 | 0.100 | 0.140 |
| Control Delay, s/veh | 12.5 | 6.5 | 7.3 | 5.8 |
| LOS | B | A | A | A |
| 95th %tile Queue, veh | 6 | 2 | 0 | 0 |





| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | | |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.997 | | | 0.997 | | | 0.913 | | | 0.970 | |
| Flt Protected | | | | | 0.997 | | | 0.982 | | | 0.963 | |
| Satd. Flow (prot) | 0 | 1857 | 0 | 0 | 1852 | 0 | 0 | 1670 | 0 | 0 | 1740 | 0 |
| Flt Permitted | | | | | 0.997 | | | 0.982 | | | 0.963 | |
| Satd. Flow (perm) | 0 | 1857 | 0 | 0 | 1852 | 0 | 0 | 1670 | 0 | 0 | 1740 | 0 |
| Link Speed (mph) | | 30 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 342 | | | 442 | | | 289 | | | 261 | |
| Travel Time (s) | | 7.8 | | | 10.0 | | | 6.6 | | | 5.9 | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |

| Intersection | | | | |
|-----------------------------|---------|---------|---------|---------|
| Intersection Delay, s/veh | 7.8 | | | |
| Intersection LOS | A | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 715 | 450 | 92 | 45 |
| Demand Flow Rate, veh/h | 729 | 459 | 94 | 46 |
| Vehicles Circulating, veh/h | 64 | 37 | 748 | 482 |
| Vehicles Exiting, veh/h | 464 | 805 | 45 | 14 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 9.3 | 5.9 | 7.4 | 4.9 |
| Approach LOS | A | A | A | A |
| Lane | Left | Left | Left | Left |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| RT Channelized | | | | |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 4.976 |
| A (Intercept) | 1380 | 1380 | 1380 | 1380 |
| B (Slope) | 1.02e-3 | 1.02e-3 | 1.02e-3 | 1.02e-3 |
| Entry Flow, veh/h | 729 | 459 | 94 | 46 |
| Cap Entry Lane, veh/h | 1293 | 1329 | 643 | 844 |
| Entry HV Adj Factor | 0.981 | 0.980 | 0.979 | 0.978 |
| Flow Entry, veh/h | 715 | 450 | 92 | 45 |
| Cap Entry, veh/h | 1268 | 1302 | 630 | 826 |
| V/C Ratio | 0.564 | 0.345 | 0.146 | 0.055 |
| Control Delay, s/veh | 9.3 | 5.9 | 7.4 | 4.9 |
| LOS | A | A | A | A |
| 95th %tile Queue, veh | 4 | 2 | 1 | 0 |

Lanes and Geometrics
1: Airport Rd. & Quail Rd.

8902 Quail Road
04/29/2024

| |  | | | | | |
|-----------------------------|---|------|---|------|---|---|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | 0% | | | 0% |
| Storage Length (ft) | 0 | 0 | | 0 | 200 | |
| Storage Lanes | 1 | 0 | | 0 | 1 | |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Ped Bike Factor | | | | | | |
| Frt | 0.892 | | 0.999 | | | |
| Flt Protected | 0.990 | | | | 0.950 | |
| Satd. Flow (prot) | 1645 | 0 | 3536 | 0 | 1770 | 3539 |
| Flt Permitted | 0.990 | | | | 0.950 | |
| Satd. Flow (perm) | 1645 | 0 | 3536 | 0 | 1770 | 3539 |
| Link Speed (mph) | 30 | | 30 | | | 30 |
| Link Distance (ft) | 244 | | 284 | | | 406 |
| Travel Time (s) | 5.5 | | 6.5 | | | 9.2 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |

| Intersection | | | | | | |
|--------------------------|---|------|---|------|---|---|
| Int Delay, s/veh | 0.1 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Traffic Vol, veh/h | 1 | 4 | 848 | 8 | 7 | 645 |
| Future Vol, veh/h | 1 | 4 | 848 | 8 | 7 | 645 |
| 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 |
| Mvmt Flow | 1 | 4 | 922 | 9 | 8 | 701 |

| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 1292 | 465 | 0 |
| Stage 1 | 926 | - | - |
| Stage 2 | 366 | - | - |
| Critical Hdwy | 6.84 | 6.94 | - |
| Critical Hdwy Stg 1 | 5.84 | - | - |
| Critical Hdwy Stg 2 | 5.84 | - | - |
| Follow-up Hdwy | 3.52 | 3.32 | - |
| Pot Cap-1 Maneuver | 155 | 544 | - |
| Stage 1 | 346 | - | - |
| Stage 2 | 672 | - | - |
| Platoon blocked, % | | - | - |
| Mov Cap-1 Maneuver | 153 | 544 | - |
| Mov Cap-2 Maneuver | 153 | - | - |
| Stage 1 | 346 | - | - |
| Stage 2 | 665 | - | - |

























| Approach | WB | NB | SB |
|-----------------------------|----|----|------|
| HCM Control Delay, s/v15.15 | | 0 | 0.11 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|---------------------------|-----|----------|-------|------|
| Capacity (veh/h) | - | - | 360 | 731 |
| HCM Lane V/C Ratio | - | - | 0.015 | 0.01 |
| HCM Control Delay (s/veh) | - | - | 15.2 | 10 |
| HCM Lane LOS | - | - | C | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 |

Lanes and Geometrics
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road

04/29/2024

























| |  |  |  |  |  |  |  |  |  |  |  |  | |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | |
| Grade (%) | 0% | | 0% | | 0% | | 0% | | 0% | | 0% | | |
| Storage Length (ft) | 75 | | 150 | 150 | | 100 | 300 | | 250 | 250 | | 200 | |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 1 | | 1 | 1 | | 1 | |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Ped Bike Factor | | | | | | | | | | | | | |
| Frt | | | 0.850 | | | | 0.850 | | 0.850 | | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | | |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | | |
| Satd. Flow (perm) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 | |
| Right Turn on Red | | | Yes | | | | Yes | | Yes | | | | Yes |
| Satd. Flow (RTOR) | | | 180 | | | | 180 | | 183 | | | | 125 |
| Link Speed (mph) | 30 | | | | 30 | | | | 30 | | | | 30 |
| Link Distance (ft) | 794 | | | | 667 | | | | 2219 | | 401 | | |
| Travel Time (s) | 18.0 | | | | 15.2 | | | | 50.4 | | 9.1 | | |

Intersection Summary

Area Type: Other

Timings
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/29/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 80 | 364 | 36 | 157 | 340 | 158 | 62 | 620 | 168 | 170 | 379 | 106 |
| Future Volume (vph) | 80 | 364 | 36 | 157 | 340 | 158 | 62 | 620 | 168 | 170 | 379 | 106 |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | 4 | | | 8 | | | 2 | | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 34.2 | 34.2 | 10.0 | 34.2 | 34.2 | 10.0 | 26.0 | 26.0 | 10.0 | 26.0 | 26.0 |
| Total Split (s) | 18.0 | 44.0 | 44.0 | 18.0 | 44.0 | 44.0 | 14.0 | 30.0 | 30.0 | 23.0 | 39.0 | 39.0 |
| Total Split (%) | 15.7% | 38.3% | 38.3% | 15.7% | 38.3% | 38.3% | 12.2% | 26.1% | 26.1% | 20.0% | 33.9% | 33.9% |
| Yellow Time (s) | 3.0 | 4.2 | 4.2 | 3.0 | 4.2 | 4.2 | 3.0 | 5.0 | 5.0 | 3.0 | 5.0 | 5.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 6.2 | 6.2 | 5.0 | 6.2 | 6.2 | 5.0 | 7.0 | 7.0 | 5.0 | 7.0 | 7.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 10.5 | 29.8 | 29.8 | 12.8 | 34.4 | 34.4 | 8.8 | 33.0 | 33.0 | 16.2 | 42.6 | 42.6 |
| Actuated g/C Ratio | 0.09 | 0.26 | 0.26 | 0.11 | 0.30 | 0.30 | 0.08 | 0.29 | 0.29 | 0.14 | 0.37 | 0.37 |
| v/c Ratio | 0.53 | 0.81 | 0.07 | 0.86 | 0.66 | 0.28 | 0.49 | 0.66 | 0.31 | 0.74 | 0.31 | 0.17 |
| Control Delay (s/veh) | 61.6 | 53.7 | 0.2 | 88.3 | 41.9 | 5.0 | 63.3 | 42.0 | 7.1 | 65.4 | 29.2 | 5.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 61.6 | 53.7 | 0.2 | 88.3 | 41.9 | 5.0 | 63.3 | 42.0 | 7.1 | 65.4 | 29.2 | 5.2 |
| LOS | E | D | A | F | D | A | E | D | A | E | C | A |
| Approach Delay (s/veh) | | 51.1 | | | 44.2 | | | 36.7 | | | 34.8 | |
| Approach LOS | | D | | | D | | | D | | | C | |

Intersection Summary

Cycle Length: 115

Actuated Cycle Length: 115

Offset: 9 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay (s/veh): 40.7

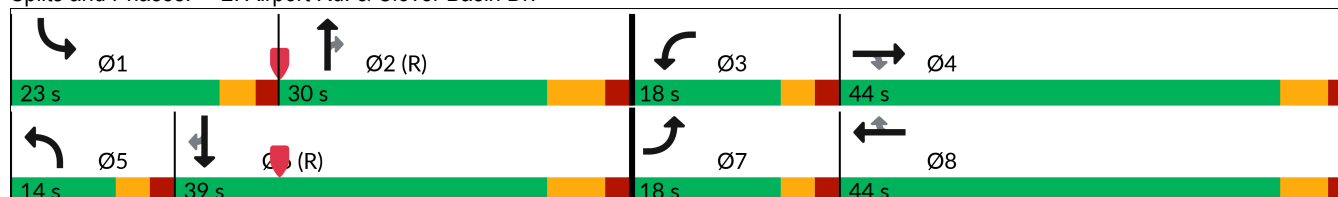
Intersection LOS: D

Intersection Capacity Utilization 73.7%

ICU Level of Service D













Analysis Period (min) 15

Splits and Phases: 2: Airport Rd. & Clover Basin Dr.



Queues
2: Airport Rd. & Clover Basin Dr.

8902 Quail Road
04/29/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Group Flow (vph) | 87 | 396 | 39 | 171 | 370 | 172 | 67 | 674 | 183 | 185 | 412 | 115 |
| v/c Ratio | 0.53 | 0.81 | 0.07 | 0.86 | 0.66 | 0.28 | 0.49 | 0.66 | 0.31 | 0.74 | 0.31 | 0.17 |
| Control Delay (s/veh) | 61.6 | 53.7 | 0.2 | 88.3 | 41.9 | 5.0 | 63.3 | 42.0 | 7.1 | 65.4 | 29.2 | 5.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 61.6 | 53.7 | 0.2 | 88.3 | 41.9 | 5.0 | 63.3 | 42.0 | 7.1 | 65.4 | 29.2 | 5.2 |
| Queue Length 50th (ft) | 62 | 276 | 0 | 126 | 247 | 0 | 48 | 235 | 0 | 132 | 118 | 0 |
| Queue Length 95th (ft) | 114 | 358 | 0 | #250 | 331 | 44 | 96 | #380 | 60 | #211 | 178 | 38 |
| Internal Link Dist (ft) | | 714 | | | 587 | | | 2139 | | | 321 | |
| Turn Bay Length (ft) | 75 | | 150 | 150 | | 100 | 300 | | 250 | 250 | | 200 |
| Base Capacity (vph) | 200 | 612 | 641 | 200 | 613 | 641 | 147 | 1015 | 584 | 282 | 1309 | 664 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.44 | 0.65 | 0.06 | 0.86 | 0.60 | 0.27 | 0.46 | 0.66 | 0.31 | 0.66 | 0.31 | 0.17 |

Intersection Summary

























95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 7th Signalized Intersection Summary

2: Airport Rd. & Clover Basin Dr.

8902 Quail Road





















04/29/2024









| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h) | 80 | 364 | 36 | 157 | 340 | 158 | 62 | 620 | 168 | 170 | 379 | 106 |
| Future Volume (veh/h) | 80 | 364 | 36 | 157 | 340 | 158 | 62 | 620 | 168 | 170 | 379 | 106 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width 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 |
| 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 | 87 | 396 | 39 | 171 | 370 | 172 | 67 | 674 | 183 | 185 | 412 | 115 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 111 | 448 | 379 | 198 | 540 | 458 | 86 | 1162 | 518 | 215 | 1419 | 633 |
| Arrive On Green | 0.06 | 0.24 | 0.24 | 0.11 | 0.29 | 0.29 | 0.05 | 0.33 | 0.33 | 0.12 | 0.40 | 0.40 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 87 | 396 | 39 | 171 | 370 | 172 | 67 | 674 | 183 | 185 | 412 | 115 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 5.5 | 23.5 | 2.2 | 10.9 | 20.2 | 10.0 | 4.3 | 18.1 | 10.1 | 11.7 | 9.1 | 5.4 |
| Cycle Q Clear(g_c), s | 5.5 | 23.5 | 2.2 | 10.9 | 20.2 | 10.0 | 4.3 | 18.1 | 10.1 | 11.7 | 9.1 | 5.4 |
| 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 | 111 | 448 | 379 | 198 | 540 | 458 | 86 | 1162 | 518 | 215 | 1419 | 633 |
| V/C Ratio(X) | 0.79 | 0.88 | 0.10 | 0.86 | 0.69 | 0.38 | 0.78 | 0.58 | 0.35 | 0.86 | 0.29 | 0.18 |
| Avail Cap(c_a), veh/h | 201 | 615 | 521 | 201 | 615 | 521 | 139 | 1162 | 518 | 279 | 1419 | 633 |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 53.2 | 42.2 | 34.1 | 50.2 | 36.3 | 32.6 | 54.1 | 32.1 | 29.4 | 49.6 | 23.5 | 22.4 |
| Incr Delay (d2), s/veh | 11.6 | 11.2 | 0.1 | 29.4 | 2.7 | 0.5 | 13.2 | 2.0 | 1.8 | 18.9 | 0.5 | 0.6 |
| 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(95%),veh/ln | 5.1 | 17.9 | 1.6 | 10.6 | 14.6 | 7.0 | 4.0 | 12.6 | 7.3 | 10.5 | 7.0 | 3.8 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d), s/veh | 64.8 | 53.4 | 34.2 | 79.6 | 39.0 | 33.1 | 67.4 | 34.2 | 31.2 | 68.5 | 24.0 | 23.0 |
| LnGrp LOS | E | D | C | E | D | C | E | C | C | E | C | C |
| Approach Vol, veh/h | 522 | | | 713 | | | 924 | | | 712 | | |
| Approach Delay, s/veh | 53.9 | | | 47.3 | | | 36.0 | | | 35.4 | | |
| Approach LOS | D | | | D | | | D | | | D | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 18.9 | 44.6 | 17.8 | 33.7 | 10.6 | 52.9 | 12.1 | 39.4 | | | | |
| Change Period (Y+Rc), s | 5.0 | 7.0 | 5.0 | 6.2 | 5.0 | 7.0 | 5.0 | 6.2 | | | | |
| Max Green Setting (Gmax), s | 18.0 | 23.0 | 13.0 | 37.8 | 9.0 | 32.0 | 13.0 | 37.8 | | | | |
| Max Q Clear Time (g_c+I1), s | 13.7 | 20.1 | 12.9 | 25.5 | 6.3 | 11.1 | 7.5 | 22.2 | | | | |
| Green Ext Time (p_c), s | 0.2 | 1.4 | 0.0 | 2.0 | 0.0 | 3.1 | 0.1 | 2.6 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 7th Control Delay, s/veh | 41.9 | | | | | | | | | | | |
| HCM 7th LOS | D | | | | | | | | | | | |

Lanes and Geometrics
3: Larkspur Dr./SE Site Access & Clover Basin Dr.

8902 Quail Road

04/29/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  | |  | | |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | | 0% | | | | 0% | | 0% | |
| Storage Length (ft) | 100 | | | 200 | 100 | | | 150 | 0 | 0 | | |
| Storage Lanes | 1 | | | 1 | 1 | | | 1 | 1 | 0 | 0 | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | | 0.850 | | | | 0.850 | | 0.899 | | 0.967 | |
| Flt Protected | 0.950 | | | 0.950 | | | | | 0.988 | | 0.963 | |
| Satd. Flow (prot) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 0 | 1655 | 0 | 0 | 1735 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | | | 0.988 | | 0.963 | |
| Satd. Flow (perm) | 1770 | 1863 | 1583 | 1770 | 1863 | 1583 | 0 | 1655 | 0 | 0 | 1735 | 0 |
| Link Speed (mph) | 30 | | | | 30 | | | | 30 | | 30 | |
| Link Distance (ft) | 770 | | | | 371 | | | | 268 | | 195 | |
| Travel Time (s) | 32.7 | | | | 5.9 | | | | 6.5 | | 0.0 | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |

| Intersection | | | | | | | | | | | | |
|--------------------------|---|---|---|---|---|---|------|---|------|------|---|------|
| Int Delay, s/veh | 3.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  | |  | | |  | |
| Traffic Vol, veh/h | 10 | 657 | 25 | 74 | 673 | 34 | 16 | 0 | 47 | 20 | 0 | 6 |
| Future Vol, veh/h | 10 | 657 | 25 | 74 | 673 | 34 | 16 | 0 | 47 | 20 | 0 | 6 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 100 | - | 200 | 100 | - | 150 | 0 | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 11 | 714 | 27 | 80 | 732 | 37 | 17 | 0 | 51 | 22 | 0 | 7 |





















| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 768 | 0 | 0 | 741 | 0 | 0 | 1628 | 1665 | 714 | 1628 | 1655 | 732 |
| Stage 1 | - | - | - | - | - | - | 736 | 736 | - | 892 | 892 | - |
| Stage 2 | - | - | - | - | - | - | 892 | 929 | - | 736 | 763 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 846 | - | - | 866 | - | - | 82 | 97 | 431 | 82 | 98 | 421 |
| Stage 1 | - | - | - | - | - | - | 411 | 425 | - | 336 | 360 | - |
| Stage 2 | - | - | - | - | - | - | 336 | 346 | - | 411 | 413 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 846 | - | - | 866 | - | - | 72 | 87 | 431 | 64 | 88 | 421 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 72 | 87 | - | 64 | 88 | - |
| Stage 1 | - | - | - | - | - | - | 405 | 420 | - | 305 | 327 | - |
| Stage 2 | - | - | - | - | - | - | 300 | 314 | - | 357 | 408 | - |









| Approach | EB | | | WB | | | NB | | | SB | | |
|------------------------|------|--|--|------|--|--|-------|--|--|-------|--|--|
| HCM Control Delay, s/v | 0.13 | | | 0.91 | | | 34.21 | | | 72.64 | | |
| HCM LOS | | | | | | | D | | | F | | |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---------------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 190 | 846 | - | - | 866 | - | - | 80 |
| HCM Lane V/C Ratio | 0.36 | 0.013 | - | - | 0.093 | - | - | 0.353 |
| HCM Control Delay (s/veh) | 34.2 | 9.3 | - | - | 9.6 | - | - | 72.6 |
| HCM Lane LOS | D | A | - | - | A | - | - | F |
| HCM 95th %tile Q(veh) | 1.5 | 0 | - | - | 0.3 | - | - | 1.4 |

Lanes and Geometrics
4: S Fordham St. & Clover Basin Dr.

8902 Quail Road
04/29/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 100 | | 0 | 150 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.998 | | | 0.995 | | | 0.900 | | | 0.876 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1859 | 0 | 1770 | 1853 | 0 | 1770 | 1676 | 0 | 1770 | 1632 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1859 | 0 | 1770 | 1853 | 0 | 1770 | 1676 | 0 | 1770 | 1632 | 0 |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 483 | | | 921 | | | 648 | | | 640 | | |
| Travel Time (s) | 11.0 | | | 20.9 | | | 14.7 | | | 14.5 | | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |

| Intersection | | | | | | | | | | | | |
|--------------------------|---|---|------|---|---|------|---|---|------|---|---|------|
| Int Delay, s/veh | 9.9 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Vol, veh/h | 39 | 680 | 11 | 23 | 671 | 21 | 21 | 42 | 85 | 17 | 15 | 72 |
| Future Vol, veh/h | 39 | 680 | 11 | 23 | 671 | 21 | 21 | 42 | 85 | 17 | 15 | 72 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 100 | - | - | 150 | - | - | 100 | - | - | 100 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 42 | 739 | 12 | 25 | 729 | 23 | 23 | 46 | 92 | 18 | 16 | 78 |























| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 752 | 0 | 0 | 751 | 0 | 0 | 1617 | 1632 | 745 | 1638 | 1627 | 741 |
| Stage 1 | - | - | - | - | - | - | 830 | 830 | - | 791 | 791 | - |
| Stage 2 | - | - | - | - | - | - | 788 | 802 | - | 847 | 836 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 858 | - | - | 858 | - | - | 83 | 101 | 414 | 80 | 102 | 416 |
| Stage 1 | - | - | - | - | - | - | 364 | 385 | - | 383 | 401 | - |
| Stage 2 | - | - | - | - | - | - | 385 | 396 | - | 357 | 382 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 858 | - | - | 858 | - | - | 52 | 93 | 414 | 31 | 94 | 416 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 52 | 93 | - | 31 | 94 | - |
| Stage 1 | - | - | - | - | - | - | 346 | 366 | - | 372 | 390 | - |
| Stage 2 | - | - | - | - | - | - | 291 | 385 | - | 230 | 364 | - |

| Approach | EB | | | WB | | | NB | | | SB | | |
|------------------------|-----|--|--|-----|--|--|-------|--|--|-------|--|--|
| HCM Control Delay, s/v | 0.5 | | | 0.3 | | | 67.91 | | | 60.01 | | |
| HCM LOS | | | | | | | F | | | F | | |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|---------------------------|-------|-------|-------|-----|-----|-------|-----|-----|-------|-------|
| Capacity (veh/h) | 52 | 194 | 858 | - | - | 858 | - | - | 31 | 262 |
| HCM Lane V/C Ratio | 0.437 | 0.711 | 0.049 | - | - | 0.029 | - | - | 0.602 | 0.361 |
| HCM Control Delay (s/veh) | 119.4 | 59.4 | 9.4 | - | - | 9.3 | - | - | 232.5 | 26.3 |
| HCM Lane LOS | F | F | A | - | - | A | - | - | F | D |
| HCM 95th %tile Q(veh) | 1.6 | 4.5 | 0.2 | - | - | 0.1 | - | - | 2 | 1.6 |

Lanes and Geometrics
5: Pike Rd. & Airport Rd.

8902 Quail Road
04/29/2024





















| |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 150 | | 0 | 100 | | 0 | 300 | | 150 | 150 | | 200 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.905 | | | 0.899 | | | 0.850 | | | 0.850 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1686 | 0 | 1770 | 1675 | 0 | 1770 | 3539 | 1583 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.658 | | | 0.709 | | | 0.427 | | | 0.357 | | |
| Satd. Flow (perm) | 1226 | 1686 | 0 | 1321 | 1675 | 0 | 795 | 3539 | 1583 | 665 | 3539 | 1583 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | 47 | | | 67 | | | 218 | | | 218 | | |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 478 | | | 955 | | | 764 | | | 2219 | | |
| Travel Time (s) | 10.9 | | | 21.7 | | | 17.4 | | | 50.4 | | |

Intersection Summary

Area Type: Other

Timings
5: Pike Rd. & Airport Rd.

8902 Quail Road
04/29/2024

| |  |  |  |  |  |  |  |  |  |  |
|------------------------|---|---|---|---|---|---|--|---|---|---|
| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 55 | 25 | 56 | 30 | 84 | 717 | 52 | 25 | 420 | 59 |
| Future Volume (vph) | 55 | 25 | 56 | 30 | 84 | 717 | 52 | 25 | 420 | 59 |
| Turn Type | pm+pt | NA | pm+pt | NA | pm+pt | NA | Perm | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | 3 | 8 | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 8 | | 2 | | 2 | 6 | | 6 |
| Detector Phase | 7 | 4 | 3 | 8 | 5 | 2 | 2 | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | |
| Minimum Initial (s) | 4.6 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.0 | 20.0 | 9.7 | 20.0 | 11.7 | 22.5 | 22.5 | 10.9 | 22.5 | 22.5 |
| Total Split (s) | 10.0 | 20.0 | 10.0 | 20.0 | 15.0 | 30.0 | 30.0 | 15.0 | 30.0 | 30.0 |
| Total Split (%) | 13.3% | 26.7% | 13.3% | 26.7% | 20.0% | 40.0% | 40.0% | 20.0% | 40.0% | 40.0% |
| Yellow Time (s) | 3.9 | 3.9 | 3.2 | 3.0 | 4.7 | 4.7 | 4.7 | 3.9 | 3.0 | 3.0 |
| All-Red Time (s) | 1.5 | 2.0 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.4 | 5.9 | 4.7 | 5.0 | 6.7 | 6.7 | 6.7 | 5.9 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | C-Max | C-Max | None | C-Max | C-Max |
| Act Effect Green (s) | 10.1 | 7.1 | 11.2 | 7.8 | 50.0 | 47.9 | 47.9 | 45.9 | 42.9 | 42.9 |
| Actuated g/C Ratio | 0.13 | 0.09 | 0.15 | 0.10 | 0.67 | 0.64 | 0.64 | 0.61 | 0.57 | 0.57 |
| v/c Ratio | 0.30 | 0.36 | 0.26 | 0.42 | 0.14 | 0.34 | 0.05 | 0.05 | 0.22 | 0.06 |
| Control Delay (s/veh) | 27.2 | 20.5 | 25.5 | 19.0 | 6.9 | 11.0 | 0.0 | 6.9 | 12.3 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 27.2 | 20.5 | 25.5 | 19.0 | 6.9 | 11.0 | 0.0 | 6.9 | 12.3 | 0.1 |
| LOS | C | C | C | B | A | B | A | A | B | A |
| Approach Delay (s/veh) | | 23.5 | | 21.5 | | 10.0 | | | 10.7 | |
| Approach LOS | | C | | C | | A | | | B | |

Intersection Summary

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 59 (79%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.43

Intersection Signal Delay (s/veh): 12.3

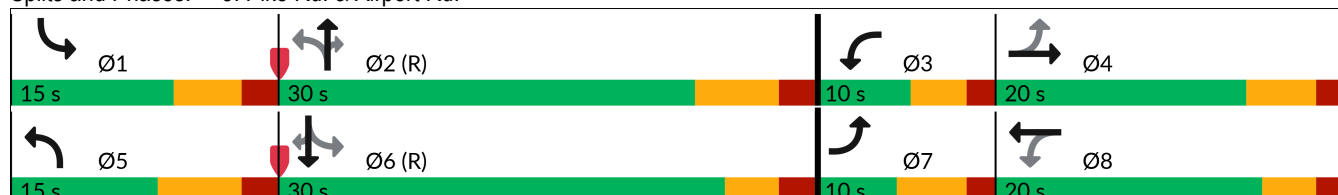
Intersection LOS: B

Intersection Capacity Utilization 49.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 5: Pike Rd. & Airport Rd.



























| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 60 | 74 | 61 | 100 | 91 | 779 | 57 | 27 | 457 | 64 |
| v/c Ratio | 0.30 | 0.36 | 0.26 | 0.42 | 0.14 | 0.34 | 0.05 | 0.05 | 0.22 | 0.06 |
| Control Delay (s/veh) | 27.2 | 20.5 | 25.5 | 19.0 | 6.9 | 11.0 | 0.0 | 6.9 | 12.3 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 27.2 | 20.5 | 25.5 | 19.0 | 6.9 | 11.0 | 0.0 | 6.9 | 12.3 | 0.1 |
| Queue Length 50th (ft) | 22 | 12 | 23 | 14 | 16 | 84 | 0 | 4 | 67 | 0 |
| Queue Length 95th (ft) | 48 | 47 | 49 | 55 | 37 | 196 | 0 | 14 | 114 | 0 |
| Internal Link Dist (ft) | | 398 | | 875 | | 684 | | | 2139 | |
| Turn Bay Length (ft) | 150 | | 100 | | 300 | | 150 | 150 | | 200 |
| Base Capacity (vph) | 198 | 355 | 229 | 388 | 640 | 2262 | 1090 | 562 | 2026 | 999 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.30 | 0.21 | 0.27 | 0.26 | 0.14 | 0.34 | 0.05 | 0.05 | 0.23 | 0.06 |

Intersection Summary

HCM 7th Signalized Intersection Summary

5: Pike Rd. & Airport Rd.

8902 Quail Road
04/29/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Traffic Volume (veh/h) | 55 | 25 | 43 | 56 | 30 | 62 | 84 | 717 | 52 | 25 | 420 | 59 |
| Future Volume (veh/h) | 55 | 25 | 43 | 56 | 30 | 62 | 84 | 717 | 52 | 25 | 420 | 59 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width 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 |
| 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 | 60 | 27 | 47 | 61 | 33 | 67 | 91 | 779 | 57 | 27 | 457 | 64 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 212 | 57 | 99 | 249 | 48 | 98 | 555 | 1852 | 826 | 401 | 1715 | 765 |
| Arrive On Green | 0.04 | 0.09 | 0.09 | 0.05 | 0.09 | 0.09 | 0.06 | 0.52 | 0.52 | 0.03 | 0.48 | 0.48 |
| Sat Flow, veh/h | 1781 | 612 | 1066 | 1781 | 551 | 1118 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 60 | 0 | 74 | 61 | 0 | 100 | 91 | 779 | 57 | 27 | 457 | 64 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1678 | 1781 | 0 | 1669 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 2.3 | 0.0 | 3.1 | 2.3 | 0.0 | 4.4 | 1.9 | 10.1 | 1.3 | 0.6 | 5.7 | 1.6 |
| Cycle Q Clear(g_c), s | 2.3 | 0.0 | 3.1 | 2.3 | 0.0 | 4.4 | 1.9 | 10.1 | 1.3 | 0.6 | 5.7 | 1.6 |
| Prop In Lane | 1.00 | | 0.64 | 1.00 | | 0.67 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 212 | 0 | 156 | 249 | 0 | 146 | 555 | 1852 | 826 | 401 | 1715 | 765 |
| V/C Ratio(X) | 0.28 | 0.00 | 0.48 | 0.24 | 0.00 | 0.68 | 0.16 | 0.42 | 0.07 | 0.07 | 0.27 | 0.08 |
| Avail Cap(c_a), veh/h | 243 | 0 | 316 | 289 | 0 | 334 | 651 | 1852 | 826 | 566 | 1715 | 765 |
| 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 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.89 | 0.89 | 0.89 |
| Uniform Delay (d), s/veh | 29.4 | 0.0 | 32.3 | 29.1 | 0.0 | 33.2 | 8.6 | 11.0 | 8.9 | 9.5 | 11.5 | 10.5 |
| Incr Delay (d2), s/veh | 0.7 | 0.0 | 2.2 | 0.5 | 0.0 | 5.5 | 0.1 | 0.7 | 0.2 | 0.1 | 0.3 | 0.2 |
| 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(95%),veh/ln | 1.8 | 0.0 | 2.4 | 1.8 | 0.0 | 3.5 | 1.2 | 6.7 | 0.8 | 0.4 | 3.9 | 1.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d), s/veh | 30.1 | 0.0 | 34.5 | 29.6 | 0.0 | 38.7 | 8.8 | 11.7 | 9.1 | 9.5 | 11.9 | 10.7 |
| LnGrp LOS | C | | C | C | | D | A | B | A | A | B | B |
| Approach Vol, veh/h | 134 | | | 161 | | | 927 | | | 548 | | |
| Approach Delay, s/veh | 32.6 | | | 35.3 | | | 11.3 | | | 11.6 | | |
| Approach LOS | C | | | D | | | B | | | B | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.1 | 45.8 | 8.3 | 12.9 | 10.9 | 42.9 | 8.7 | 12.5 | | | | |
| Change Period (Y+Rc), s | 5.9 | 6.7 | 4.7 | 5.9 | 6.7 | * 6.7 | 5.4 | * 5.9 | | | | |
| Max Green Setting (Gmax), s | 9.1 | 23.3 | 5.3 | 14.1 | 8.3 | * 25 | 4.6 | * 15 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.6 | 12.1 | 4.3 | 5.1 | 3.9 | 7.7 | 4.3 | 6.4 | | | | |
| Green Ext Time (p_c), s | 0.0 | 4.2 | 0.0 | 0.2 | 0.1 | 3.0 | 0.0 | 0.3 | | | | |

Intersection Summary

HCM 7th Control Delay, s/veh 15.2
HCM 7th LOS B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes and Geometrics
6: Clover Basin Dr. & SW Site Access







8902 Quail Road
04/29/2024



| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
|---------------------|-------|------|------|-------|-------|------|
| Lane Configurations | | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | 0% | | 0% | |
| Storage Length (ft) | 100 | | | 150 | 0 | 0 |
| Storage Lanes | 1 | | | 1 | 1 | 0 |
| Taper Length (ft) | 25 | | | | 25 | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | |
| Frt | | | | 0.850 | 0.945 | |
| Flt Protected | 0.950 | | | | 0.971 | |
| Satd. Flow (prot) | 1770 | 1863 | 1863 | 1583 | 1709 | 0 |
| Flt Permitted | 0.950 | | | | 0.971 | |
| Satd. Flow (perm) | 1770 | 1863 | 1863 | 1583 | 1709 | 0 |
| Link Speed (mph) | | 30 | 30 | | 30 | |
| Link Distance (ft) | | 667 | 770 | | 242 | |
| Travel Time (s) | | 15.2 | 17.5 | | 5.5 | |

Intersection Summary





















Area Type: Other

| Intersection | | | | | | |
|--------------------------|---|---|---|---|---|---|
| Int Delay, s/veh | 1.5 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations |  |  |  |  |  |  |
| Traffic Vol, veh/h | 36 | 665 | 641 | 58 | 32 | 22 |
| Future Vol, veh/h | 36 | 665 | 641 | 58 | 32 | 22 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 100 | - | - | 150 | 0 | - |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 39 | 723 | 697 | 63 | 35 | 24 |









| Major/Minor | Major1 | Major2 | Minor2 |
|----------------------|--------|--------|---------------|
| Conflicting Flow All | 760 | 0 | 0 1498 697 |
| Stage 1 | - | - | - 697 - |
| Stage 2 | - | - | - 801 - |
| Critical Hdwy | 4.12 | - | - 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - 5.42 - |
| Critical Hdwy Stg 2 | - | - | - 5.42 - |
| Follow-up Hdwy | 2.218 | - | - 3.518 3.318 |
| Pot Cap-1 Maneuver | 852 | - | - 135 441 |
| Stage 1 | - | - | - 494 - |
| Stage 2 | - | - | - 442 - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | 852 | - | - 129 441 |
| Mov Cap-2 Maneuver | - | - | - 129 - |
| Stage 1 | - | - | - 472 - |
| Stage 2 | - | - | - 442 - |

| Approach | EB | WB | SB |
|------------------------|------|----|------|
| HCM Control Delay, s/v | 0.48 | 0 | 34.2 |
| HCM LOS | | | D |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|---------------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 852 | - | - | - | 181 |
| HCM Lane V/C Ratio | 0.046 | - | - | - | 0.325 |
| HCM Control Delay (s/veh) | 9.4 | - | - | - | 34.2 |
| HCM Lane LOS | A | - | - | - | D |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 1.3 |

















| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | | | 0% | | | 0% | | |
| Storage Length (ft) | 100 | | 0 | 100 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | 0.998 | | | 0.995 | | | 0.900 | | | 0.876 | | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1770 | 1859 | 0 | 1770 | 1853 | 0 | 1770 | 1676 | 0 | 1770 | 1632 | 0 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1770 | 1859 | 0 | 1770 | 1853 | 0 | 1770 | 1676 | 0 | 1770 | 1632 | 0 |
| Link Speed (mph) | 30 | | | 30 | | | 30 | | | 30 | | |
| Link Distance (ft) | 345 | | | 627 | | | 442 | | | 339 | | |
| Travel Time (s) | 7.8 | | | 10.2 | | | 7.8 | | | 7.7 | | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |

| Intersection | |
|---------------------------|-------|
| Intersection Delay, s/veh | 159.3 |
| Intersection LOS | F |

















| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---------------------|---|---|------|---|---|------|--|---|------|---|---|------|
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Traffic Vol, veh/h | 39 | 680 | 11 | 23 | 671 | 21 | 21 | 42 | 85 | 17 | 15 | 72 |
| Future Vol, veh/h | 39 | 680 | 11 | 23 | 671 | 21 | 21 | 42 | 85 | 17 | 15 | 72 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 42 | 739 | 12 | 25 | 729 | 23 | 23 | 46 | 92 | 18 | 16 | 78 |
| Number of Lanes | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|----------------------------|-------|-------|------|------|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 2 | 2 | 2 | 2 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 2 | 2 | 2 | 2 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 2 | 2 | 2 | 2 |
| HCM Control Delay, s/veh | 181.9 | 187.4 | 14.7 | 13.7 |
| HCM LOS | F | F | B | B |

| Lane | NBLn1 | NBLn2 | EBLn1 | EBLn2 | WBLn1 | WBLn2 | SBLn1 | SBLn2 |
|--------------------------|-------|-------|-------|-------|-------|-------|--------|-------|
| Vol Left, % | 100% | 0% | 100% | 0% | 100% | 0% | 100% | 0% |
| Vol Thru, % | 0% | 33% | 0% | 98% | 0% | 97% | 0% | 17% |
| Vol Right, % | 0% | 67% | 0% | 2% | 0% | 3% | 0% | 83% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 21 | 127 | 39 | 691 | 23 | 692 | 17 | 87 |
| LT Vol | 21 | 0 | 39 | 0 | 23 | 0 | 17 | 0 |
| Through Vol | 0 | 42 | 0 | 680 | 0 | 671 | 0 | 15 |
| RT Vol | 0 | 85 | 0 | 11 | 0 | 21 | 0 | 72 |
| Lane Flow Rate | 23 | 138 | 42 | 751 | 25 | 752 | 18 | 95 |
| Geometry Grp | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Degree of Util (X) | 0.054 | 0.291 | 0.082 | 1.353 | 0.049 | 1.357 | 0.045 | 0.201 |
| Departure Headway (Hd) | 9.754 | 8.735 | 7.438 | 6.915 | 7.455 | 6.921 | 10.017 | 8.879 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 369 | 414 | 485 | 533 | 483 | 534 | 360 | 407 |
| Service Time | 7.454 | 6.435 | 5.138 | 4.615 | 5.155 | 4.621 | 7.717 | 6.579 |
| HCM Lane V/C Ratio | 0.062 | 0.333 | 0.087 | 1.409 | 0.052 | 1.408 | 0.05 | 0.233 |
| HCM Control Delay, s/veh | 13 | 15 | 10.8 | 191.6 | 10.5 | 193.3 | 13.2 | 13.8 |
| HCM Lane LOS | B | B | B | F | B | F | B | B |
| HCM 95th-tile Q | 0.2 | 1.2 | 0.3 | 31.4 | 0.2 | 31.6 | 0.1 | 0.7 |

| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | | |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.998 | | | 0.996 | | | 0.923 | | | 0.906 | |
| Flt Protected | | 0.997 | | | 0.998 | | | 0.993 | | | 0.992 | |
| Satd. Flow (prot) | 0 | 1853 | 0 | 0 | 1852 | 0 | 0 | 1707 | 0 | 0 | 1674 | 0 |
| Flt Permitted | | 0.997 | | | 0.998 | | | 0.993 | | | 0.992 | |
| Satd. Flow (perm) | 0 | 1853 | 0 | 0 | 1852 | 0 | 0 | 1707 | 0 | 0 | 1674 | 0 |
| Link Speed (mph) | | 30 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 352 | | | 547 | | | 471 | | | 295 | |
| Travel Time (s) | | 8.0 | | | 12.4 | | | 10.7 | | | 6.7 | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |

| | | | | |
|-----------------------------|-------------|-------------|-------------|-------------|
| Intersection | | | | |
| Intersection Delay, s/veh | 10.7 | | | |
| Intersection LOS | B | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 793 | 777 | 161 | 112 |
| Demand Flow Rate, veh/h | 809 | 793 | 164 | 114 |
| Vehicles Circulating, veh/h | 60 | 113 | 815 | 793 |
| Vehicles Exiting, veh/h | 847 | 866 | 54 | 113 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 10.5 | 11.5 | 9.7 | 8.3 |
| Approach LOS | B | B | A | A |
| Lane | Left | Left | Left | Left |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| RT Channelized | | | | |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 4.976 |
| A (Intercept) | 1380 | 1380 | 1380 | 1380 |
| B (Slope) | 1.02e-3 | 1.02e-3 | 1.02e-3 | 1.02e-3 |
| Entry Flow, veh/h | 809 | 793 | 164 | 114 |
| Cap Entry Lane, veh/h | 1298 | 1230 | 601 | 615 |
| Entry HV Adj Factor | 0.980 | 0.980 | 0.982 | 0.980 |
| Flow Entry, veh/h | 793 | 777 | 161 | 112 |
| Cap Entry, veh/h | 1273 | 1205 | 590 | 602 |
| V/C Ratio | 0.623 | 0.645 | 0.273 | 0.185 |
| Control Delay, s/veh | 10.5 | 11.5 | 9.7 | 8.3 |
| LOS | B | B | A | A |
| 95th %tile Queue, veh | 5 | 5 | 1 | 1 |

| |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | | |  | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.995 | | | 0.994 | | | 0.899 | | | 0.967 | |
| Flt Protected | | 0.999 | | | 0.995 | | | 0.988 | | | 0.963 | |
| Satd. Flow (prot) | 0 | 1852 | 0 | 0 | 1842 | 0 | 0 | 1655 | 0 | 0 | 1735 | 0 |
| Flt Permitted | | 0.999 | | | 0.995 | | | 0.988 | | | 0.963 | |
| Satd. Flow (perm) | 0 | 1852 | 0 | 0 | 1842 | 0 | 0 | 1655 | 0 | 0 | 1735 | 0 |
| Link Speed (mph) | | 30 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 341 | | | 474 | | | 336 | | | 279 | |
| Travel Time (s) | | 7.8 | | | 10.8 | | | 7.6 | | | 6.3 | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |

| Intersection | | | | |
|-----------------------------|---------|---------|---------|---------|
| Intersection Delay, s/veh | 10.6 | | | |
| Intersection LOS | B | | | |
| Approach | EB | WB | NB | SB |
| Entry Lanes | 1 | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 752 | 849 | 68 | 29 |
| Demand Flow Rate, veh/h | 767 | 867 | 69 | 29 |
| Vehicles Circulating, veh/h | 104 | 28 | 761 | 846 |
| Vehicles Exiting, veh/h | 771 | 802 | 110 | 49 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 10.7 | 10.8 | 7.0 | 6.8 |
| Approach LOS | B | B | A | A |
| Lane | Left | Left | Left | Left |
| Designated Moves | LTR | LTR | LTR | LTR |
| Assumed Moves | LTR | LTR | LTR | LTR |
| RT Channelized | | | | |
| Lane Util | 1.000 | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 | 4.976 |
| A (Intercept) | 1380 | 1380 | 1380 | 1380 |
| B (Slope) | 1.02e-3 | 1.02e-3 | 1.02e-3 | 1.02e-3 |
| Entry Flow, veh/h | 767 | 867 | 69 | 29 |
| Cap Entry Lane, veh/h | 1241 | 1341 | 635 | 582 |
| Entry HV Adj Factor | 0.980 | 0.980 | 0.986 | 1.000 |
| Flow Entry, veh/h | 752 | 849 | 68 | 29 |
| Cap Entry, veh/h | 1216 | 1314 | 626 | 582 |
| V/C Ratio | 0.618 | 0.647 | 0.109 | 0.050 |
| Control Delay, s/veh | 10.7 | 10.8 | 7.0 | 6.8 |
| LOS | B | B | A | A |
| 95th %tile Queue, veh | 5 | 5 | 0 | 0 |

APPENDIX “C”

TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

2024 Existing - Clover Basin Dr./Fordham St. Traffic Signal Warrant

Summary Worksheet

100%

The Worksheet(s) attached are provided as an attachment to the Engineering Investigation Study for:

Intersection: Clover Basin Dr./Fordham St.
County: Boulder
City: Longmont

Major Street: Clover Basin Dr.
Critical Approach Speed: 35 mph
Lanes: 2 or more lanes

Minor Street: S Fordham St.
Critical Approach Speed: 35 mph
Lanes: 2 or more lanes

% Right Turns Included
From North (SB) 100%
From East (WB) 100%
From South (NB) 100%
From West (EB) 100%

In built-up area of isolated community of < 10,000 population? No
Total number of approaches at intersection? 4 or more
If it is a "T" intersection, inflate minor threshold to 150%? No
Manually set volume level? No

Analysis based on EXISTING volume data.

| Date | Day of the Week | Time (HH:MM) | | | |
|------|-----------------|--------------|---------|----|---------|
| | | From | AM / PM | To | AM / PM |
| 2024 | | | | | |

| Warrant Evaluation Summary | Warrant Met: |
|--|--------------|
| Warrant 1: Eight - Hour Vehicular Volume | No |
| Condition A: Minimum Vehicular Volume | No |
| Condition B: Interruption of Continuous Traffic | No |
| Condition C: Combination: 80% of A and B | No |
| Warrant 2: Four-Hour Volume | No |
| Warrant 3: Peak Hour Volume | No |
| Warrant 4: Pedestrian Volume | N/A |
| Criterion A: Four-Hour | N/A |
| Criterion B: Peak-Hour | N/A |
| Warrant 5: School Crossing | N/A |
| Warrant 6: Coordinated Signal System | N/A |
| Warrant 7: Crash Experience | N/A |
| Warrant 8: Roadway Network | N/A |
| Warrant 9: Intersection Near a Grade Crossing | N/A |

Warrant Analysis Conducted By:

Name: BSL
Agency: HKS
Date: 4/1/2024

Warrant 1: Eight - Hour Vehicular Volume

100%

Warrant Evaluated? Yes

| Condition A : Min. Veh. Volume | | |
|-----------------------------------|------|-----|
| Volume Level | 100% | 80% |
| Major Rd. Req | 600 | 480 |
| Minor Rd. Req | 200 | 160 |
| Number of Hours | 0 | 0 |

Satisfied? No

| Condition B: Interruption of Continuous Traffic | | |
|--|------|-----|
| Volume Level | 100% | 80% |
| Major Rd. Req | 900 | 720 |
| Minor Rd. Req | 100 | 80 |
| Number of Hours | 3 | 4 |

Satisfied? No

| Condition C: Combination of A & B at 80% | | |
|---|--|--|
|---|--|--|

Satisfied? No

Warrant Satisfied? No

Manually Set To:

| 6:00 AM | | Enter Start Time (Military Time) (HH:MM) | | | Total |
|-------------|-------|--|-----------------------------|-----------------------------|-------|
| Time Period | From | To | Major Road: Both App. (VPH) | Minor Road: High App. (VPH) | |
| 1 | 6:00 | 7:00 | 280 | 21 | 301 |
| 2 | 7:00 | 8:00 | 645 | 43 | 688 |
| 3 | 8:00 | 9:00 | 782 | 58 | 840 |
| 4 | 9:00 | 10:00 | 591 | 51 | 642 |
| 5 | 10:00 | 11:00 | 543 | 55 | 598 |
| 6 | 11:00 | 12:00 | 689 | 102 | 791 |
| 7 | 12:00 | 13:00 | 774 | 108 | 882 |
| 8 | 13:00 | 14:00 | 690 | 67 | 757 |
| 9 | 14:00 | 15:00 | 673 | 96 | 769 |
| 10 | 15:00 | 16:00 | 965 | 127 | 1092 |
| 11 | 16:00 | 17:00 | 923 | 115 | 1038 |
| 12 | 17:00 | 18:00 | 970 | 107 | 1077 |
| 13 | 18:00 | 19:00 | 722 | 77 | 799 |
| 14 | 19:00 | 20:00 | 523 | 44 | 567 |
| 15 | 20:00 | 21:00 | 357 | 22 | 379 |
| 16 | 21:00 | 22:00 | 195 | 15 | 210 |

Warrant 2: Four-Hour Volume

100%

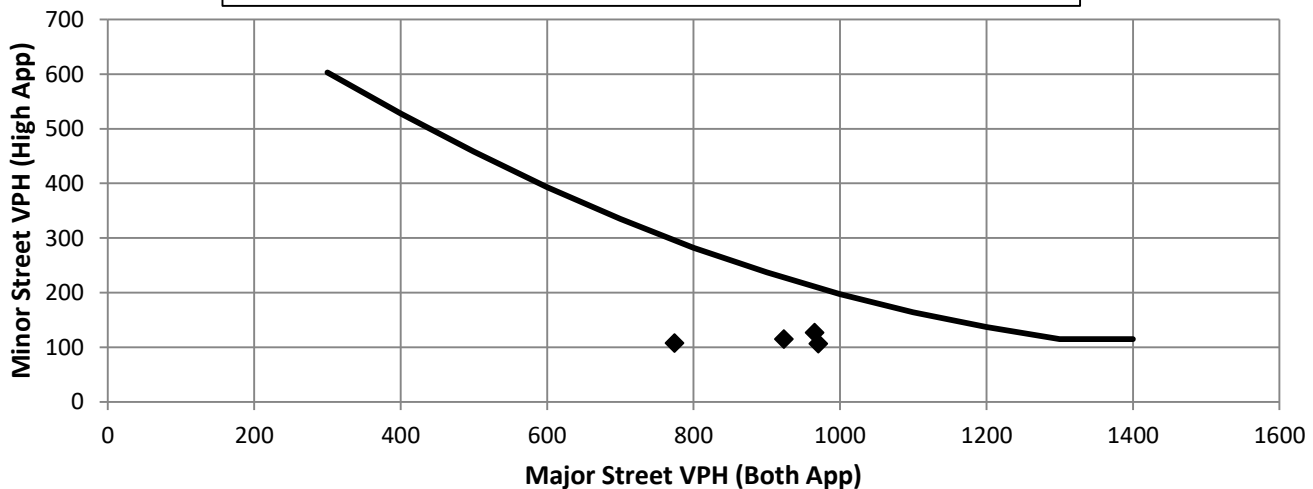
Warrant Evaluated? Yes

Warrant Satisfied? No

Manually Set To:

| | | | | |
|-----------------|-------|-------|-------|-------|
| Hour Start | 15:00 | 17:00 | 16:00 | 12:00 |
| Major Road Vol. | 965 | 970 | 923 | 774 |
| Minor Road Vol. | 127 | 107 | 115 | 108 |

Figure 4C-1 Warrant 2, Four-Hour Vehicular Volume



Warrant 3: Peak Hour Volume

100%

Warrant Evaluated? Yes

Warrant Satisfied? No

Manually Set To:

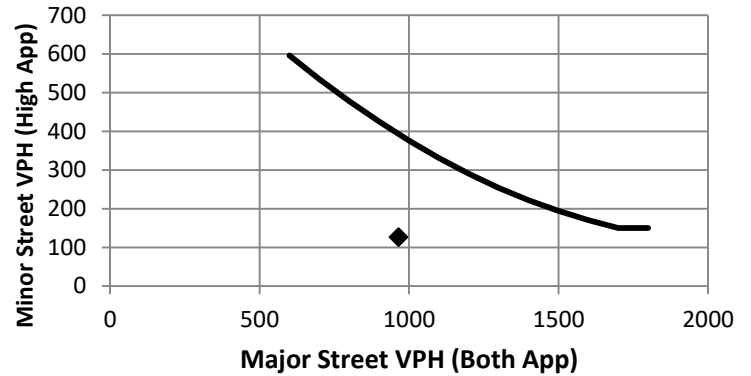
Condition justifying use of warrant:

| Criteria | | Met? |
|-------------------------------|-----|------|
| Delay on Minor Approach | 5 | No |
| Volume on Minor Approach | 150 | |
| Total Entering Volume (veh/h) | 800 | |

Manually Set Peak Hour? No

| Peak Hour | Major Road Vol. (Both App.) | Minor Road Vol. (High App.) |
|-----------|--------------------------------|--------------------------------|
| 15:00 | 965 | 127 |

Figure 4C-3 Warrant 3, Peak Hour



2027 Background - Clover Basin Dr./Fordham St. Traffic Signal

Warrant Summary Worksheet

100%

The Worksheet(s) attached are provided as an attachment to the Engineering Investigation Study for:

Intersection: Clover Basin Dr./Fordham St.

County: Boulder

City: Longmont

Major Street: Clover Basin Dr.

Minor Street: S Fordham St.

Critical Approach Speed: 35 mph

Critical Approach Speed: 35 mph

Lanes: 2 or more lanes

Lanes: 2 or more lanes

% Right Turns Included

From North (SB) 100%

From East (WB) 100%

From South (NB) 100%

From West (EB) 100%

In built-up area of isolated community of < 10,000 population? No

Total number of approaches at intersection? 4 or more

If it is a "T" intersection, inflate minor threshold to 150%? No

Manually set volume level? No

Analysis based on **PROJECTED** volume data.

| Forecast Year | Within 5 Years of Construction? | Time (HH:MM) | | | |
|---------------|---------------------------------|--------------|---------|----|---------|
| | | From | AM / PM | To | AM / PM |
| 2027 | Yes | | | | |

| Warrant Evaluation Summary | Warrant Met: |
|--|--------------|
| Warrant 1: Eight - Hour Vehicular Volume | No |
| Condition A: Minimum Vehicular Volume | No |
| Condition B: Interruption of Continuous Traffic | No |
| Condition C: Combination: 80% of A and B | No |
| Warrant 2: Four-Hour Volume | No |
| Warrant 3: Peak Hour Volume | No |
| Warrant 4: Pedestrian Volume | N/A |
| Criterion A: Four-Hour | N/A |
| Criterion B: Peak-Hour | N/A |
| Warrant 5: School Crossing | N/A |
| Warrant 6: Coordinated Signal System | N/A |
| Warrant 7: Crash Experience | N/A |
| Warrant 8: Roadway Network | N/A |
| Warrant 9: Intersection Near a Grade Crossing | N/A |

Warrant Analysis Conducted By:

Name: BSL

Agency: HKS

Date: 4/1/2024

Warrant 1: Eight - Hour Vehicular Volume

100%

Warrant Evaluated? Yes

| Condition A : Min. Veh. Volume | | |
|-----------------------------------|------|-----|
| Volume Level | 100% | 80% |
| Major Rd. Req | 600 | 480 |
| Minor Rd. Req | 200 | 160 |
| Number of Hours | 0 | 0 |

Satisfied? No

| Condition B: Interruption of Continuous Traffic | | |
|--|------|-----|
| Volume Level | 100% | 80% |
| Major Rd. Req | 900 | 720 |
| Minor Rd. Req | 100 | 80 |
| Number of Hours | 3 | 6 |

Satisfied? No

| Condition C: Combination of A & B at 80% | | |
|---|--|--|
|---|--|--|

Satisfied? No

Warrant Satisfied? No

Manually Set To:

| 6:00 AM | | Enter Start Time (Military Time) (HH:MM) | | | Total |
|-------------|-------|--|-----------------------------|-----------------------------|-------|
| Time Period | From | To | Major Road: Both App. (VPH) | Minor Road: High App. (VPH) | |
| 1 | 6:00 | 7:00 | 313 | 21 | 334 |
| 2 | 7:00 | 8:00 | 721 | 43 | 764 |
| 3 | 8:00 | 9:00 | 874 | 58 | 932 |
| 4 | 9:00 | 10:00 | 660 | 51 | 711 |
| 5 | 10:00 | 11:00 | 606 | 55 | 661 |
| 6 | 11:00 | 12:00 | 770 | 102 | 872 |
| 7 | 12:00 | 13:00 | 865 | 108 | 973 |
| 8 | 13:00 | 14:00 | 770 | 67 | 837 |
| 9 | 14:00 | 15:00 | 751 | 96 | 847 |
| 10 | 15:00 | 16:00 | 1078 | 127 | 1205 |
| 11 | 16:00 | 17:00 | 1031 | 115 | 1146 |
| 12 | 17:00 | 18:00 | 1084 | 107 | 1191 |
| 13 | 18:00 | 19:00 | 804 | 77 | 881 |
| 14 | 19:00 | 20:00 | 584 | 44 | 628 |
| 15 | 20:00 | 21:00 | 399 | 22 | 421 |
| 16 | 21:00 | 22:00 | 217 | 15 | 232 |

Warrant 2: Four-Hour Volume

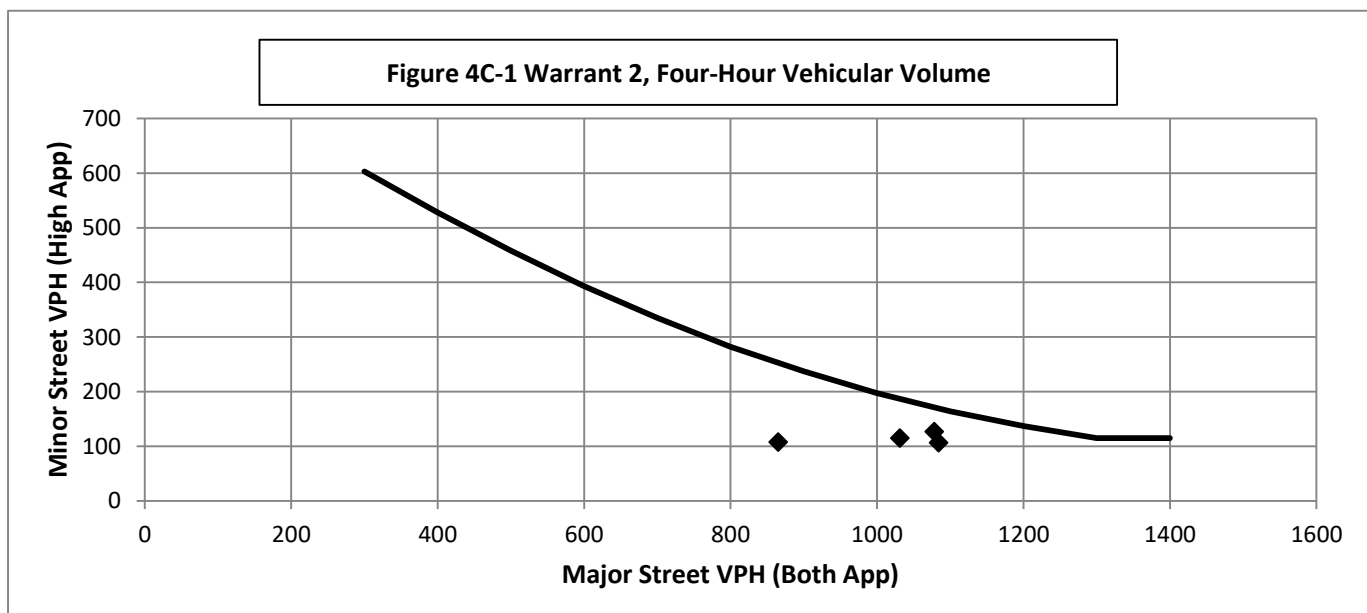
100%

Warrant Evaluated? Yes

Warrant Satisfied? No

Manually Set To:

| | | | | |
|-----------------|-------|-------|-------|-------|
| Hour Start | 15:00 | 17:00 | 16:00 | 12:00 |
| Major Road Vol. | 1078 | 1084 | 1031 | 865 |
| Minor Road Vol. | 127 | 107 | 115 | 108 |



Warrant 3: Peak Hour Volume

100%

Warrant Evaluated? Yes

Warrant Satisfied? No

Manually Set To:

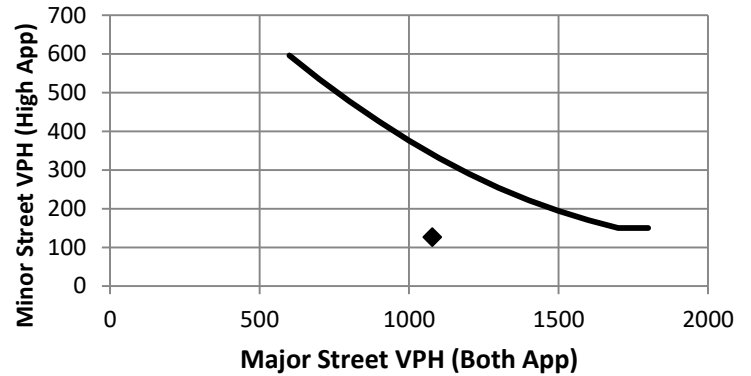
Condition justifying use of warrant:

| Criteria | | Met? |
|-------------------------------|-----|------|
| Delay on Minor Approach | 5 | No |
| Volume on Minor Approach | 150 | |
| Total Entering Volume (veh/h) | 800 | |

Manually Set Peak Hour? No

| Peak Hour | Major Road Vol. (Both App.) | Minor Road Vol. (High App.) |
|-----------|--------------------------------|--------------------------------|
| 15:00 | 1078 | 127 |

Figure 4C-3 Warrant 3, Peak Hour



2027 Total - Clover Basin Dr./Fordham St. Traffic Signal Warrant

Summary Worksheet

100%

The Worksheet(s) attached are provided as an attachment to the Engineering Investigation Study for:

Intersection: Clover Basin Dr./Fordham St.

County: Boulder

City: Longmont

Major Street: Clover Basin Dr.

Minor Street: S Fordham St.

Critical Approach Speed: 35 mph

Critical Approach Speed: 35 mph

Lanes: 2 or more lanes

Lanes: 2 or more lanes

% Right Turns Included

From North (SB) 100%

From East (WB) 100%

From South (NB) 100%

From West (EB) 100%

In built-up area of isolated community of < 10,000 population? No

Total number of approaches at intersection? 4 or more

If it is a "T" intersection, inflate minor threshold to 150%? No

Manually set volume level? No

Analysis based on **PROJECTED** volume data.

| Forecast Year | Within 5 Years of Construction? | Time (HH:MM) | | | |
|---------------|---------------------------------|--------------|---------|----|---------|
| | | From | AM / PM | To | AM / PM |
| 2027 | Yes | | | | |

| Warrant Evaluation Summary | Warrant Met: |
|--|--------------|
| Warrant 1: Eight - Hour Vehicular Volume | No |
| Condition A: Minimum Vehicular Volume | No |
| Condition B: Interruption of Continuous Traffic | No |
| Condition C: Combination: 80% of A and B | No |
| Warrant 2: Four-Hour Volume | No |
| Warrant 3: Peak Hour Volume | No |
| Warrant 4: Pedestrian Volume | N/A |
| Criterion A: Four-Hour | N/A |
| Criterion B: Peak-Hour | N/A |
| Warrant 5: School Crossing | N/A |
| Warrant 6: Coordinated Signal System | N/A |
| Warrant 7: Crash Experience | N/A |
| Warrant 8: Roadway Network | N/A |
| Warrant 9: Intersection Near a Grade Crossing | N/A |

Warrant Analysis Conducted By:

Name: BSL

Agency: HKS

Date: 4/1/2024

Warrant 1: Eight - Hour Vehicular Volume

100%

Warrant Evaluated? Yes

| Condition A : Min. Veh. Volume | | |
|-----------------------------------|------|-----|
| Volume Level | 100% | 80% |
| Major Rd. Req | 600 | 480 |
| Minor Rd. Req | 200 | 160 |
| Number of Hours | 0 | 0 |

Satisfied? No

| Condition B: Interruption of Continuous Traffic | | |
|--|------|-----|
| Volume Level | 100% | 80% |
| Major Rd. Req | 900 | 720 |
| Minor Rd. Req | 100 | 80 |
| Number of Hours | 4 | 8 |

Satisfied? No

| Condition C: Combination of A & B at 80% | | |
|---|--|--|
|---|--|--|

Satisfied? No

Warrant Satisfied? No

Manually Set To:

| 6:00 AM | | Enter Start Time (Military Time) (HH:MM) | | | Total |
|-------------|-------|--|-----------------------------|-----------------------------|-------|
| Time Period | From | To | Major Road: Both App. (VPH) | Minor Road: High App. (VPH) | |
| 1 | 6:00 | 7:00 | 340 | 27 | 367 |
| 2 | 7:00 | 8:00 | 783 | 55 | 838 |
| 3 | 8:00 | 9:00 | 949 | 73 | 1022 |
| 4 | 9:00 | 10:00 | 717 | 63 | 780 |
| 5 | 10:00 | 11:00 | 659 | 66 | 725 |
| 6 | 11:00 | 12:00 | 836 | 116 | 952 |
| 7 | 12:00 | 13:00 | 940 | 123 | 1063 |
| 8 | 13:00 | 14:00 | 837 | 81 | 918 |
| 9 | 14:00 | 15:00 | 816 | 109 | 925 |
| 10 | 15:00 | 16:00 | 1171 | 146 | 1317 |
| 11 | 16:00 | 17:00 | 1120 | 133 | 1253 |
| 12 | 17:00 | 18:00 | 1178 | 126 | 1304 |
| 13 | 18:00 | 19:00 | 876 | 91 | 967 |
| 14 | 19:00 | 20:00 | 635 | 54 | 689 |
| 15 | 20:00 | 21:00 | 433 | 29 | 462 |
| 16 | 21:00 | 22:00 | 236 | 19 | 255 |

Warrant 2: Four-Hour Volume

100%

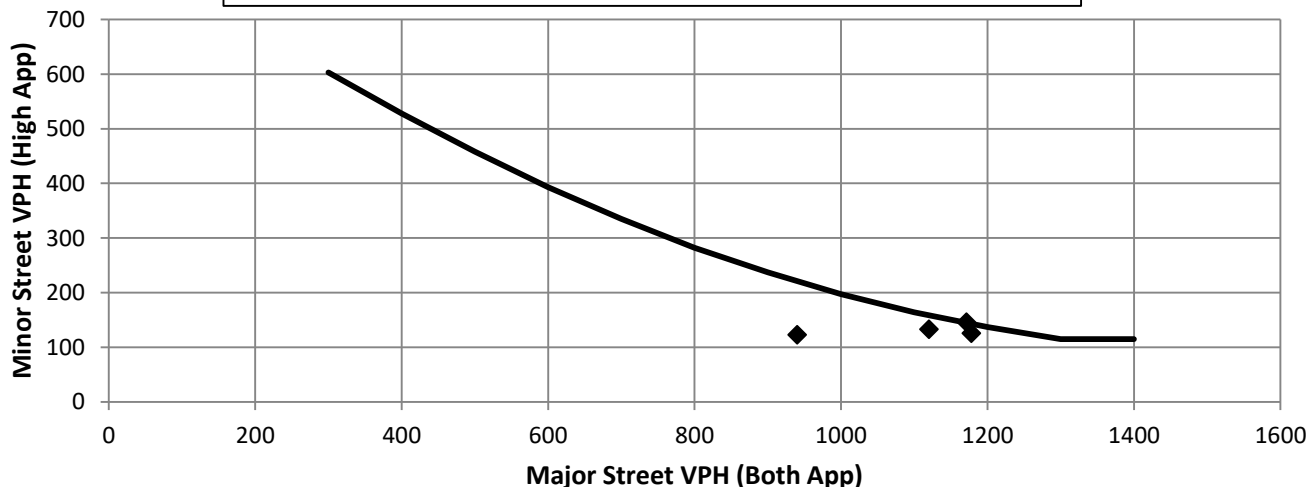
Warrant Evaluated? Yes

Warrant Satisfied? No

Manually Set To:

| | | | | |
|-----------------|-------|-------|-------|-------|
| Hour Start | 15:00 | 17:00 | 16:00 | 12:00 |
| Major Road Vol. | 1171 | 1178 | 1120 | 940 |
| Minor Road Vol. | 146 | 126 | 133 | 123 |

Figure 4C-1 Warrant 2, Four-Hour Vehicular Volume



Warrant 3: Peak Hour Volume

100%

Warrant Evaluated? Yes

Warrant Satisfied? No

Manually Set To:

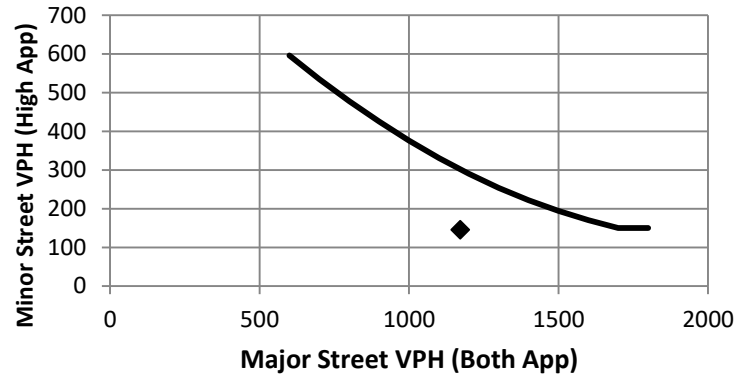
Condition justifying use of warrant:

| Criteria | | Met? |
|-------------------------------|-----|------|
| Delay on Minor Approach | 5 | No |
| Volume on Minor Approach | 150 | |
| Total Entering Volume (veh/h) | 800 | |

Manually Set Peak Hour? No

| Peak Hour | Major Road Vol. (Both App.) | Minor Road Vol. (High App.) |
|-----------|--------------------------------|--------------------------------|
| 15:00 | 1171 | 146 |

Figure 4C-3 Warrant 3, Peak Hour



2050 Background - Clover Basin Dr./Fordham St. Traffic Signal

Warrant Summary Worksheet

100%

The Worksheet(s) attached are provided as an attachment to the Engineering Investigation Study for:

Intersection: Clover Basin Dr./Fordham St.

County: Boulder

City: Longmont

Major Street: Clover Basin Dr.

Minor Street: S Fordham St.

Critical Approach Speed: 35 mph

Critical Approach Speed: 35 mph

Lanes: 2 or more lanes

Lanes: 2 or more lanes

% Right Turns Included

From North (SB) 100%

From East (WB) 100%

From South (NB) 100%

From West (EB) 100%

In built-up area of isolated community of < 10,000 population? No

Total number of approaches at intersection? 4 or more

If it is a "T" intersection, inflate minor threshold to 150%? No

Manually set volume level? No

Analysis based on **PROJECTED** volume data.

| Forecast Year | Within 5 Years of Construction? | Time (HH:MM) | | | |
|---------------|---------------------------------|--------------|---------|----|---------|
| | | From | AM / PM | To | AM / PM |
| 2050 | No | | | | |

| Warrant Evaluation Summary | Warrant Met: |
|--|--------------|
| Warrant 1: Eight - Hour Vehicular Volume | No |
| Condition A: Minimum Vehicular Volume | No |
| Condition B: Interruption of Continuous Traffic | No |
| Condition C: Combination: 80% of A and B | No |
| Warrant 2: Four-Hour Volume | No |
| Warrant 3: Peak Hour Volume | No |
| Warrant 4: Pedestrian Volume | N/A |
| Criterion A: Four-Hour | N/A |
| Criterion B: Peak-Hour | N/A |
| Warrant 5: School Crossing | N/A |
| Warrant 6: Coordinated Signal System | N/A |
| Warrant 7: Crash Experience | N/A |
| Warrant 8: Roadway Network | N/A |
| Warrant 9: Intersection Near a Grade Crossing | N/A |

Warrant Analysis Conducted By:

Name: BSL

Agency: HKS

Date: 4/1/2024

Warrant 1: Eight - Hour Vehicular Volume

100%

Warrant Evaluated? Yes

| Condition A : Min. Veh. Volume | | |
|-----------------------------------|------|-----|
| Volume Level | 100% | 80% |
| Major Rd. Req | 600 | 480 |
| Minor Rd. Req | 200 | 160 |
| Number of Hours | 0 | 0 |

Satisfied? No

| Condition B: Interruption of Continuous Traffic | | |
|--|------|-----|
| Volume Level | 100% | 80% |
| Major Rd. Req | 900 | 720 |
| Minor Rd. Req | 100 | 80 |
| Number of Hours | 5 | 7 |

Satisfied? No

| Condition C: Combination of A & B at 80% | | |
|---|--|--|
|---|--|--|

Satisfied? No

Warrant Satisfied? No

Manually Set To:

| 6:00 AM | | Enter Start Time (Military Time) (HH:MM) | | | Total |
|-------------|-------|--|-----------------------------|-----------------------------|-------|
| Time Period | From | To | Major Road: Both App. (VPH) | Minor Road: High App. (VPH) | |
| 1 | 6:00 | 7:00 | 376 | 22 | 398 |
| 2 | 7:00 | 8:00 | 866 | 45 | 911 |
| 3 | 8:00 | 9:00 | 1050 | 61 | 1111 |
| 4 | 9:00 | 10:00 | 793 | 53 | 846 |
| 5 | 10:00 | 11:00 | 728 | 57 | 785 |
| 6 | 11:00 | 12:00 | 925 | 105 | 1030 |
| 7 | 12:00 | 13:00 | 1039 | 111 | 1150 |
| 8 | 13:00 | 14:00 | 925 | 70 | 995 |
| 9 | 14:00 | 15:00 | 903 | 99 | 1002 |
| 10 | 15:00 | 16:00 | 1295 | 131 | 1426 |
| 11 | 16:00 | 17:00 | 1239 | 119 | 1358 |
| 12 | 17:00 | 18:00 | 1302 | 111 | 1413 |
| 13 | 18:00 | 19:00 | 969 | 80 | 1049 |
| 14 | 19:00 | 20:00 | 702 | 46 | 748 |
| 15 | 20:00 | 21:00 | 479 | 23 | 502 |
| 16 | 21:00 | 22:00 | 261 | 16 | 277 |

Warrant 2: Four-Hour Volume

100%

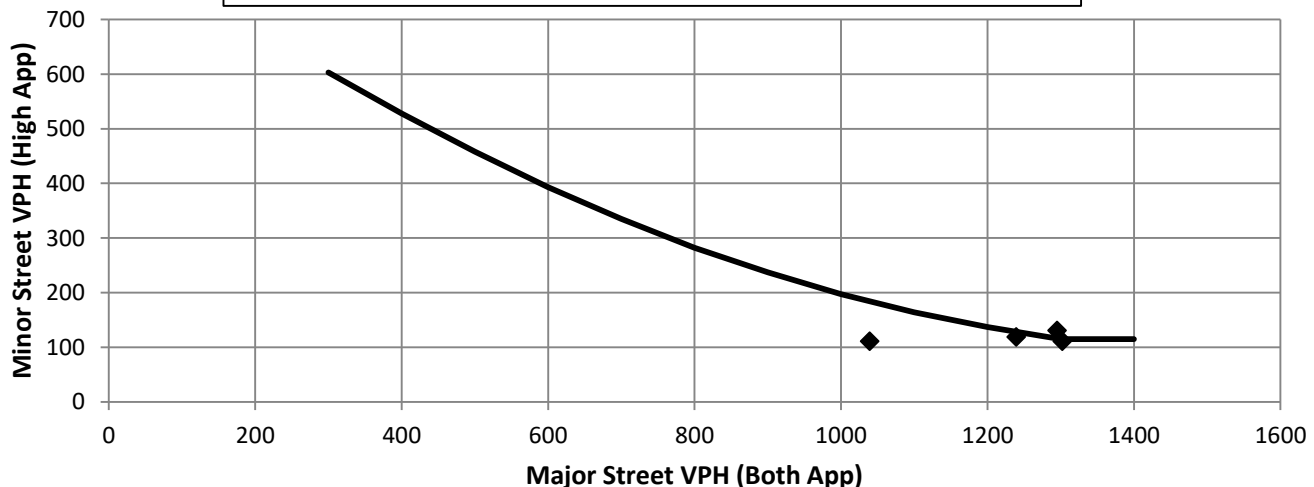
Warrant Evaluated? Yes

Warrant Satisfied? No

Manually Set To:

| | | | | |
|-----------------|-------|-------|-------|-------|
| Hour Start | 15:00 | 17:00 | 16:00 | 12:00 |
| Major Road Vol. | 1295 | 1302 | 1239 | 1039 |
| Minor Road Vol. | 131 | 111 | 119 | 111 |

Figure 4C-1 Warrant 2, Four-Hour Vehicular Volume



Warrant 3: Peak Hour Volume

100%

Warrant Evaluated? Yes

Warrant Satisfied? No

Manually Set To:

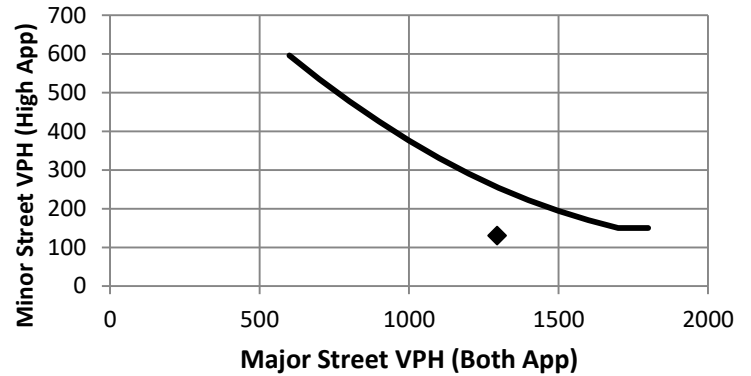
Condition justifying use of warrant:

| Criteria | | Met? |
|-------------------------------|-----|------|
| Delay on Minor Approach | 5 | No |
| Volume on Minor Approach | 150 | |
| Total Entering Volume (veh/h) | 800 | |

Manually Set Peak Hour? No

| Peak Hour | Major Road Vol. (Both App.) | Minor Road Vol. (High App.) |
|-----------|--------------------------------|--------------------------------|
| 15:00 | 1295 | 131 |

Figure 4C-3 Warrant 3, Peak Hour



2050 Total - Clover Basin Dr./Fordham St. Traffic Signal Warrant Summary Worksheet

100%

The Worksheet(s) attached are provided as an attachment to the Engineering Investigation Study for:

Intersection: Clover Basin Dr./Fordham St.

County: Boulder

City: Longmont

Major Street: Clover Basin Dr.

Minor Street: S Fordham St.

Critical Approach Speed: 35 mph

Critical Approach Speed: 35 mph

Lanes: 2 or more lanes

Lanes: 2 or more lanes

% Right Turns Included

From North (SB) 100%

From East (WB) 100%

From South (NB) 100%

From West (EB) 100%

In built-up area of isolated community of < 10,000 population? No

Total number of approaches at intersection? 4 or more

If it is a "T" intersection, inflate minor threshold to 150%? No

Manually set volume level? No

Analysis based on **PROJECTED** volume data.

| Forecast Year | Within 5 Years of Construction? | Time (HH:MM) | | | |
|---------------|---------------------------------|--------------|---------|----|---------|
| | | From | AM / PM | To | AM / PM |
| 2050 | No | | | | |

| Warrant Evaluation Summary | Warrant Met: |
|--|--------------|
| Warrant 1: Eight - Hour Vehicular Volume | No |
| Condition A: Minimum Vehicular Volume | No |
| Condition B: Interruption of Continuous Traffic | No |
| Condition C: Combination: 80% of A and B | No |
| Warrant 2: Four-Hour Volume | No |
| Warrant 3: Peak Hour Volume | No |
| Warrant 4: Pedestrian Volume | N/A |
| Criterion A: Four-Hour | N/A |
| Criterion B: Peak-Hour | N/A |
| Warrant 5: School Crossing | N/A |
| Warrant 6: Coordinated Signal System | N/A |
| Warrant 7: Crash Experience | N/A |
| Warrant 8: Roadway Network | N/A |
| Warrant 9: Intersection Near a Grade Crossing | N/A |

Warrant Analysis Conducted By:

Name: BSL

Agency: HKS

Date: 4/1/2024

Warrant 1: Eight - Hour Vehicular Volume

100%

Warrant Evaluated? Yes

| Condition A : Min. Veh. Volume | | |
|-----------------------------------|------|-----|
| Volume Level | 100% | 80% |
| Major Rd. Req | 600 | 480 |
| Minor Rd. Req | 200 | 160 |
| Number of Hours | 0 | 0 |

Satisfied? No

| Condition B: Interruption of Continuous Traffic | | |
|--|------|-----|
| Volume Level | 100% | 80% |
| Major Rd. Req | 900 | 720 |
| Minor Rd. Req | 100 | 80 |
| Number of Hours | 6 | 8 |

Satisfied? No

| Condition C: Combination of A & B at 80% | | |
|---|--|--|
|---|--|--|

Satisfied? No

Warrant Satisfied? No

Manually Set To:

| 6:00 AM | | Enter Start Time (Military Time) (HH:MM) | | | Total |
|-------------|-------|--|-----------------------------|-----------------------------|-------|
| Time Period | From | To | Major Road: Both App. (VPH) | Minor Road: High App. (VPH) | |
| 1 | 6:00 | 7:00 | 403 | 28 | 431 |
| 2 | 7:00 | 8:00 | 928 | 58 | 986 |
| 3 | 8:00 | 9:00 | 1125 | 76 | 1201 |
| 4 | 9:00 | 10:00 | 850 | 65 | 915 |
| 5 | 10:00 | 11:00 | 781 | 68 | 849 |
| 6 | 11:00 | 12:00 | 991 | 118 | 1109 |
| 7 | 12:00 | 13:00 | 1114 | 126 | 1240 |
| 8 | 13:00 | 14:00 | 992 | 83 | 1075 |
| 9 | 14:00 | 15:00 | 968 | 112 | 1080 |
| 10 | 15:00 | 16:00 | 1388 | 150 | 1538 |
| 11 | 16:00 | 17:00 | 1328 | 137 | 1465 |
| 12 | 17:00 | 18:00 | 1396 | 130 | 1526 |
| 13 | 18:00 | 19:00 | 1039 | 94 | 1133 |
| 14 | 19:00 | 20:00 | 752 | 57 | 809 |
| 15 | 20:00 | 21:00 | 514 | 30 | 544 |
| 16 | 21:00 | 22:00 | 280 | 20 | 300 |

Warrant 2: Four-Hour Volume

100%

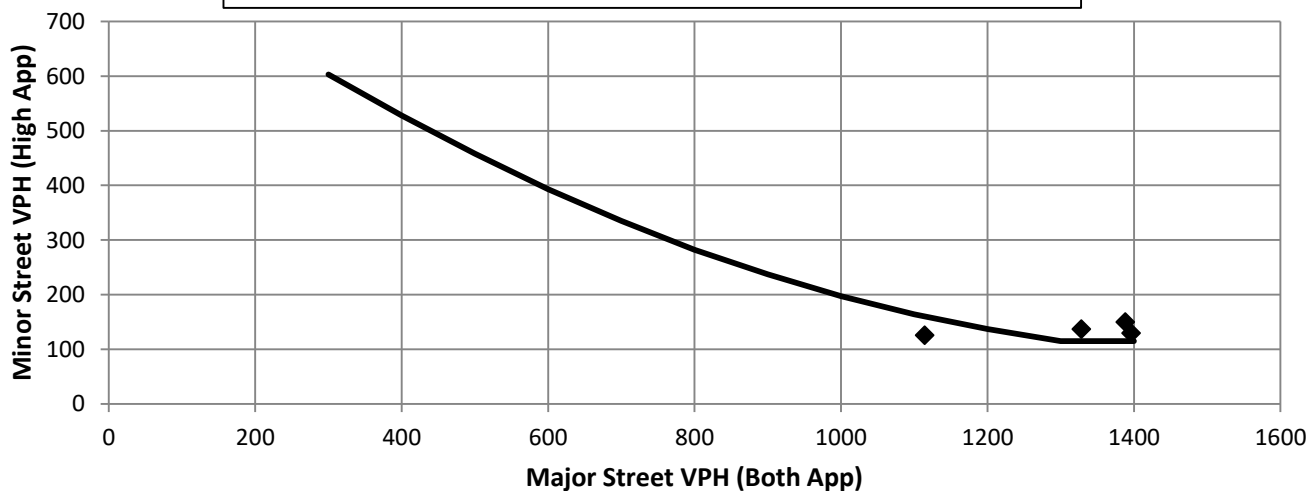
Warrant Evaluated? Yes

Warrant Satisfied? No

Manually Set To:

| | | | | |
|-----------------|-------|-------|-------|-------|
| Hour Start | 15:00 | 17:00 | 16:00 | 12:00 |
| Major Road Vol. | 1388 | 1396 | 1328 | 1114 |
| Minor Road Vol. | 150 | 130 | 137 | 126 |

Figure 4C-1 Warrant 2, Four-Hour Vehicular Volume



Warrant 3: Peak Hour Volume

100%

Warrant Evaluated? Yes

Warrant Satisfied? No

Manually Set To:

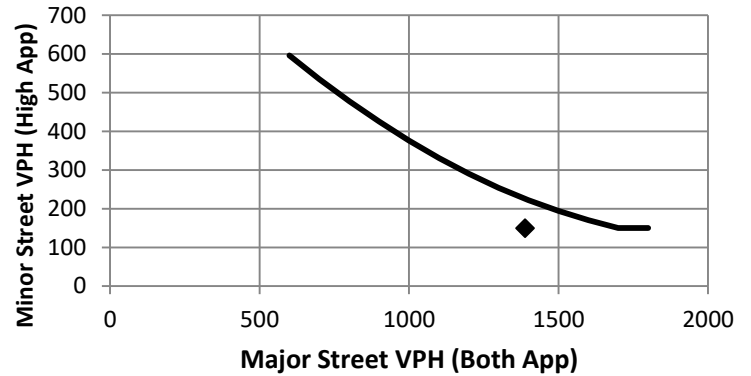
Condition justifying use of warrant:

| Criteria | | Met? |
|-------------------------------|-----|------|
| Delay on Minor Approach | 5 | Yes |
| Volume on Minor Approach | 150 | |
| Total Entering Volume (veh/h) | 800 | |

Manually Set Peak Hour? No

| Peak Hour | Major Road Vol. (Both App.) | Minor Road Vol. (High App.) |
|-----------|--------------------------------|--------------------------------|
| 15:00 | 1388 | 150 |

Figure 4C-3 Warrant 3, Peak Hour



Clover Basin Dr. & Fordham St. Traffic Volume Counts

| 2024 Existing Traffic Volumes | | | | | | | | | | | | |
|-------------------------------|-----|------------|-------------|----|------------|-------------|-----|------------|-------------|-----|------------|---------|
| NB (2 Days) | | NB Average | SB (2 Days) | | SB Average | EB (2 Days) | | EB Average | WB (2 Days) | | WB Average | |
| 0:00 | 2 | 1 | 2 | 0 | 1 | 5 | 6 | 6 | 13 | 16 | 15 | EB + WB |
| 1:00 | 0 | 1 | 1 | 3 | 1 | 5 | 3 | 4 | 7 | 6 | 7 | NB |
| 2:00 | 3 | 2 | 0 | 2 | 1 | 3 | 1 | 2 | 2 | 2 | 2 | |
| 3:00 | 0 | 0 | 0 | 1 | 1 | 5 | 9 | 7 | 2 | 3 | 3 | |
| 4:00 | 11 | 1 | 1 | 3 | 3 | 31 | 34 | 33 | 12 | 17 | 15 | |
| 5:00 | 3 | 5 | 4 | 11 | 11 | 86 | 84 | 85 | 42 | 43 | 43 | |
| 6:00 | 19 | 23 | 21 | 33 | 41 | 139 | 150 | 145 | 136 | 135 | 136 | |
| 7:00 | 40 | 45 | 43 | 92 | 95 | 407 | 371 | 389 | 258 | 254 | 256 | |
| 8:00 | 50 | 65 | 58 | 94 | 94 | 435 | 449 | 442 | 338 | 342 | 340 | |
| 9:00 | 47 | 55 | 51 | 54 | 49 | 314 | 343 | 329 | 231 | 293 | 262 | |
| 10:00 | 51 | 59 | 55 | 50 | 61 | 56 | 258 | 287 | 273 | 244 | 296 | |
| 11:00 | 102 | 102 | 102 | 58 | 63 | 341 | 357 | 349 | 329 | 351 | 340 | |
| 12:00 | 108 | 107 | 108 | 58 | 69 | 64 | 351 | 351 | 414 | 433 | 424 | |
| 13:00 | 77 | 57 | 67 | 65 | 69 | 67 | 307 | 339 | 323 | 370 | 363 | |
| 14:00 | 107 | 85 | 96 | 56 | 66 | 61 | 304 | 313 | 309 | 369 | 359 | |
| 15:00 | 126 | 128 | 127 | 66 | 68 | 62 | 501 | 472 | 486 | 502 | 456 | |
| 16:00 | 125 | 105 | 115 | 68 | 56 | 62 | 478 | 418 | 448 | 500 | 450 | |
| 17:00 | 104 | 109 | 107 | 58 | 76 | 67 | 480 | 410 | 450 | 526 | 514 | |
| 18:00 | 78 | 75 | 77 | 64 | 56 | 60 | 314 | 288 | 301 | 445 | 397 | |
| 19:00 | 45 | 43 | 44 | 29 | 39 | 34 | 206 | 204 | 205 | 318 | 318 | |
| 20:00 | 23 | 20 | 22 | 27 | 19 | 23 | 116 | 103 | 110 | 261 | 234 | |
| 21:00 | 13 | 17 | 15 | 12 | 10 | 11 | 69 | 62 | 66 | 131 | 127 | |
| 22:00 | 6 | 4 | 5 | 7 | 7 | 7 | 42 | 35 | 75 | 50 | 63 | |
| 23:00 | 4 | 4 | | 2 | 3 | 13 | 8 | 11 | 26 | 19 | 23 | |
| | | 1123 | | | 933 | | | 5154 | | | 5515 | |

| | |
|-------|------|
| 20 | 2 |
| 11 | 1 |
| 4 | 2 |
| 10 | 0 |
| 47 | 1 |
| 128 | 4 |
| 280 | 21 |
| 645 | 43 |
| 782 | 58 |
| 591 | 51 |
| 543 | 55 |
| 689 | 102 |
| 774 | 108 |
| 690 | 67 |
| 673 | 96 |
| 965 | 127 |
| 923 | 115 |
| 970 | 107 |
| 722 | 77 |
| 523 | 44 |
| 357 | 22 |
| 195 | 15 |
| 98 | 5 |
| 33 | 4 |
| 10669 | 1123 |

| 2027 Background Traffic Volumes | | | | | | | | | | | | |
|---------------------------------|---------|--------------------------|---------|-----------------------|---------------|-----------------------|-------------|----------|------------|--------|---|-----|
| 2024 Volumes | | 2027 Regional Background | | 2027 Local Background | | 2027 Total Background | | | | | | |
| 2024 EB + WB | 2024 NB | 2027 EB + WB | 2027 NB | Hourly Distribution | EB/WB Traffic | NB Traffic | EB/WB Total | NB Total | 3-Year GF: | 1.0245 | Local Background | 990 |
| 0:00 | 20 | 2 | 2 | 0.19% | 2 | 0 | 22 | 2 | | | EB/WB Site Traffic: | 0 |
| 1:00 | 11 | 1 | 11 | 0.10% | 1 | 0 | 12 | 1 | | | NB Site Traffic: | 0 |
| 2:00 | 4 | 4 | 2 | 0.04% | 0 | 4 | 4 | 2 | | | *ADT's determined from Local Background Higher Peak Hour Approach Volumes (PM) & assuming peak hour volume to be 9.5% of daily traffic on each approach leg | |
| 3:00 | 0 | 0 | 10 | 0.09% | 1 | 0 | 11 | 0 | | | | |
| 4:00 | 47 | 1 | 48 | 0.44% | 4 | 0 | 53 | 1 | | | | |
| 5:00 | 128 | 4 | 131 | 1.20% | 12 | 0 | 142 | 4 | | | | |
| 6:00 | 280 | 21 | 287 | 2.62% | 26 | 0 | 313 | 21 | | | | |
| 7:00 | 645 | 43 | 661 | 6.05% | 60 | 0 | 721 | 43 | | | | |
| 8:00 | 782 | 58 | 801 | 7.33% | 73 | 0 | 874 | 58 | | | | |
| 9:00 | 591 | 51 | 605 | 5.53% | 55 | 0 | 640 | 51 | | | | |
| 10:00 | 543 | 55 | 556 | 5.09% | 50 | 0 | 606 | 55 | | | | |
| 11:00 | 689 | 102 | 706 | 6.46% | 64 | 0 | 770 | 102 | | | | |
| 12:00 | 774 | 108 | 793 | 7.26% | 72 | 0 | 865 | 108 | | | | |
| 13:00 | 690 | 67 | 706 | 6.46% | 67 | 64 | 770 | 67 | | | | |
| 14:00 | 673 | 96 | 689 | 6.30% | 62 | 0 | 751 | 96 | | | | |
| 15:00 | 965 | 127 | 989 | 9.05% | 90 | 0 | 1078 | 127 | | | | |
| 16:00 | 923 | 115 | 946 | 8.65% | 86 | 0 | 1031 | 115 | | | | |
| 17:00 | 970 | 107 | 994 | 9.09% | 90 | 0 | 1084 | 107 | | | | |
| 18:00 | 722 | 77 | 740 | 6.77% | 67 | 0 | 807 | 77 | | | | |
| 19:00 | 523 | 44 | 536 | 4.90% | 49 | 0 | 584 | 44 | | | | |
| 20:00 | 357 | 22 | 366 | 3.35% | 33 | 0 | 399 | 22 | | | | |
| 21:00 | 195 | 15 | 199 | 1.82% | 18 | 0 | 217 | 15 | | | | |
| 22:00 | 98 | 5 | 100 | 0.91% | 9 | 0 | 109 | 5 | | | | |
| 23:00 | 33 | 4 | 34 | 0.31% | 3 | 0 | 37 | 4 | | | | |
| | | 10669 | 1123 | 100.00% | 990 | 0 | 11920 | 1123 | | | | |

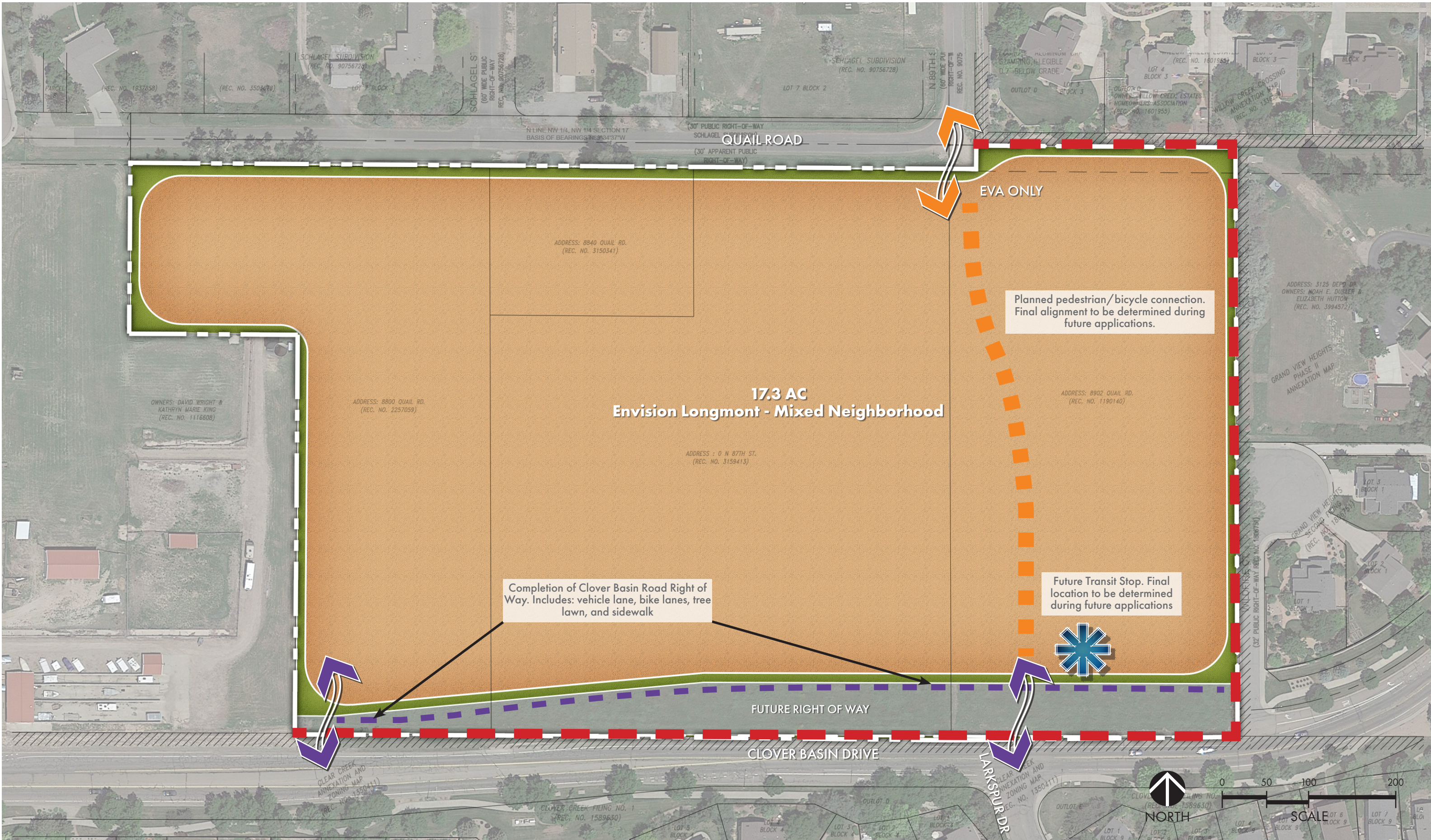
| 2027 Total Traffic Volumes | | | | | | | | | | | | |
|----------------------------|---------|----------------|-------------|---------------------|--------------------|-----------------|-------------|----------|---------------------|------------------|---|--|
| 2024 EB + WB | 2024 NB | EB/WB BG Total | NB BG Total | Hourly Distribution | EB/WB Site Traffic | NB Site Traffic | EB/WB Total | NB Total | EB/WB Site Traffic: | NB Site Traffic: | | |
| 0:00 | 20 | 2 | 2 | 0.19% | 2 | 0 | 24 | 2 | 1031 | 210 | *Site Traffic ADT's determined from Site Generated Trip Distribution & Assignment for 2027 Analysis Horizon | |
| 1:00 | 11 | 1 | 12 | 0.10% | 1 | 0 | 13 | 1 | | | | |
| 2:00 | 4 | 4 | 2 | 0.04% | 0 | 0 | 5 | 2 | | | | |
| 3:00 | 0 | 0 | 11 | 0.09% | 1 | 0 | 12 | 0 | | | | |
| 4:00 | 47 | 1 | 53 | 0.44% | 5 | 1 | 57 | 2 | | | | |
| 5:00 | 128 | 4 | 142 | 1.20% | 12 | 3 | 155 | 7 | | | | |
| 6:00 | 280 | 21 | 313 | 2.62% | 27 | 6 | 340 | 27 | | | | |
| 7:00 | 645 | 43 | 721 | 6.05% | 62 | 13 | 783 | 55 | | | | |
| 8:00 | 782 | 58 | 874 | 7.33% | 76 | 15 | 949 | 73 | | | | |
| 9:00 | 591 | 51 | 660 | 5.53% | 57 | 12 | 717 | 63 | | | | |
| 10:00 | 543 | 55 | 606 | 5.09% | 52 | 11 | 609 | 66 | | | | |
| 11:00 | 689 | 102 | 770 | 6.46% | 67 | 14 | 836 | 116 | | | | |
| 12:00 | 774 | 108 | 865 | 7.26% | 75 | 15 | 940 | 123 | | | | |
| 13:00 | 690 | 67 | 770 | 6.46% | 67 | 14 | 837 | 81 | | | | |
| 14:00 | 673 | 96 | 751 | 6.30% | 65 | 13 | 816 | 109 | | | | |
| 15:00 | 965 | 127 | 1078 | 9.05% | 93 | 19 | 1171 | 146 | | | | |
| 16:00 | 923 | 115 | 1031 | 8.65% | 89 | 18 | 1120 | 133 | | | | |
| 17:00 | 970 | 107 | 1084 | 9.09% | 94 | 19 | 1178 | 126 | | | | |
| 18:00 | 722 | 77 | 807 | 6.77% | 70 | 14 | 876 | 91 | | | | |
| 19:00 | 523 | 44 | 584 | 4.90% | 51 | 10 | 635 | 54 | | | | |
| 20:00 | 357 | 22 | 399 | 3.35% | 35 | 7 | 433 | 29 | | | | |
| 21:00 | 195 | 15 | 217 | 1.82% | 19 | 4 | 236 | 19 | | | | |
| 22:00 | 98 | 5 | 109 | 0.91% | 9 | 2 | 118 | 7 | | | | |
| 23:00 | 33 | 4 | 37 | 0.31% | 3 | 1 | 40 | 5 | | | | |
| | | 10669 | 1123 | 11920 | 1123 | 100.00% | 1031 | 210 | 12951 | 1333 | | |

| 2050 Background Traffic Volumes | | | | | | | | | | | | |
|---------------------------------|---------|--------------------------|---------|-----------------------|---------------|-----------------------|-------------|----------|-------------|--------|---|------|
| 2024 Volumes | | 2050 Regional Background | | 2050 Local Background | | 2050 Total Background | | | | | | |
| 2024 EB + WB | 2024 NB | 2050 EB + WB | 2050 NB | Hourly Distribution | EB/WB Traffic | NB Traffic | EB/WB Total | NB Total | 26-Year GF: | 1.2334 | Local Background | 1160 |
| 0:00 | 20 | 2 | 25 | 0.19% | 2 | 0 | 27 | 2 | | | EB/WB Site Traffic: | 0 |
| 1:00 | 11 | 1 | 13 | 0.10% | 1 | 0 | 14 | 1 | | | NB Site Traffic: | 45 |
| 2:00 | 4 | 2 | 5 | 0.04% | 0 | 0 | 5 | 2 | | | *ADT's determined from Local Background Higher Peak Hour Approach Volumes (PM) & assuming peak hour volume to be 9.5% of daily traffic on each approach leg | |
| 3:00 | 0 | 0 | 12 | 0.09% | 1 | 0 | 13 | 0 | | | | |
| 4:00 | 47 | 1 | 58 | 0.44% | 5 | 1 | 63 | 1 | | | | |
| 5:00 | 128 | 4 | 157 | 1.20% | 14 | 1 | 171 | 5 | | | | |
| 6:00 | 280 | 21 | 345 | 2.62% | 30 | 1 | 376 | 22 | | | | |
| 7:00 | 645 | 43 | 796 | 6.05% | 70 | 3 | 866 | 45 | | | | |
| 8:00 | 782 | 58 | 965 | 7.33% | 85 | 3 | 1050 | 61 | | | | |
| 9:00 | 591 | 51 | 728 | 5.53% | 64 | 2 | 793 | 53 | | | | |
| 10:00 | 543 | 55 | 669 | 5.09% | 59 | 2 | 728 | 57 | | | | |
| 11:00 | 689 | 102 | 850 | 6.46% | 75 | 3 | 925 | 105 | | | | |
| 12:00 | 774 | 108 | 955 | 7.26% | 84 | 3 | 1039 | 111 | | | | |
| 13:00 | 690 | 67 | 850 | 6.46% | 75 | 3 | 925 | 70 | | | | |
| 14:00 | 673 | 96 | 829 | 6.30% | 73 | 3 | 903 | 99 | | | | |
| 15:00 | 965 | 127 | 1100 | 9.05% | 105 | 4 | 1295 | 111 | | | | |
| 16:00 | 923 | 115 | 1138 | 8.65% | 100 | 4 | 1239 | 119 | | | | |
| 17:00 | 970 | 107 | 1196 | 9.09% | 105 | 4 | 1302 | 111 | | | | |
| 18:00 | 722 | 77 | 891 | 6.77% | 79 | 3 | 969 | 80 | | | | |
| 19:00 | 523 | 44 | 645 | 4.90% | 57 | 2 | 702 | 56 | | | | |
| 20:00 | 357 | 22 | 440 | 3.35% | 39 | 2 | 479 | 23 | | | | |
| 21:00 | 195 | 15 | 240 | 1.82% | 21 | 1 | 261 | 16 | | | | |
| 22:00 | 98 | 5 | 120 | 0.91% | 11 | 0 | 131 | 5 | | | | |
| 23:00 | 33 | 4 | 43 | 0.31% | 4 | 0 | 44 | 4 | | | | |
| | | 10669 | 1123 | 14319 | 1168 | 100.00% | 1160 | 45 | 14319 | 1168 | | |

| 2050 Total Traffic Volumes | | | | | | | | | | EB/WB Site Traffic: 1031 | |
|----------------------------|---------|----------------|-------------|---------------------|---|-----------------|-------------|----------|---|--------------------------|-----|
| 2024 EB + WB | 2024 NB | EB/WB BG Total | NB BG Total | Hourly Distribution | EB/WB Site Traffic | NB Site Traffic | EB/WB Total | NB Total | NB Site Traffic: 210 | | |
| 0:00 | 20 | 2 | 27 | 2 | 0 | 0 | 29 | 2 | *Site Traffic ADT's determined from Site Generated Trip Distribution & Assignment for 2025 Analysis Horizon | | |
| 1:00 | 11 | 1 | 14 | 0.10% | 1 | 15 | 16 | 1 | | | |
| 2:00 | 4 | 2 | 5 | 2 | 0.04% | 0 | 0 | 2 | | | |
| 3:00 | 10 | 0 | 13 | 0 | 0.09% | 1 | 0 | 14 | | | |
| 4:00 | 47 | 1 | 63 | 1 | 0.44% | 5 | 68 | 1 | | | |
| 5:00 | 128 | 4 | 171 | 5 | 1.20% | 3 | 183 | 7 | | | |
| 6:00 | 280 | 21 | 376 | 22 | 2.62% | 27 | 6 | 403 | | | 28 |
| 7:00 | 645 | 43 | 866 | 45 | 6.05% | 62 | 13 | 928 | | | 58 |
| 8:00 | 782 | 58 | 1050 | 61 | 7.31% | 76 | 125 | 156 | | | |
| 9:00 | 591 | 51 | 793 | 53 | 5.53% | 57 | 12 | 850 | | | 65 |
| 10:00 | 543 | 55 | 728 | 57 | 5.09% | 52 | 11 | 781 | | | 68 |
| 11:00 | 689 | 102 | 925 | 105 | 6.46% | 67 | 14 | 991 | | | 118 |
| 12:00 | 774 | 108 | 1111 | 109 | 7.26% | 111 | 75 | 1186 | | | 126 |
| 13:00 | 690 | 67 | 925 | 70 | 6.46% | 67 | 14 | 992 | | | 83 |
| 14:00 | 673 | 96 | 903 | 99 | 6.30% | 65 | 13 | 968 | | | 112 |
| 15:00 | 965 | 127 | 1295 | 131 | 9.05% </td <td>131</td> <td>138</td> <td>1380</td> <td>190</td> | 131 | 138 | 1380 | | | 190 |
| 16:00 | 923 | 115 | 1239 | 119 | 8.65% </td <td>89</td> <td>18</td> <td>1328</td> <td>137</td> | 89 | 18 | 1328 | 137 | | |
| 17:00 | 970 | 107 | 1302 | 111 | 9.09% </td <td>94</td> <td>19</td> <td>1396</td> <td>130</td> | 94 | 19 | 1396 | 130 | | |
| 18:00 | 722 | 77 | 969 | 80 | 6.77% | 70 | 14 | 1039 | 94 | | |
| 19:00 | 523 | 44 | 702 | 46 | 4.90% </td <td>46</td> <td>7</td> <td>752</td> <td>57</td> | 46 | 7 | 752 | 57 | | |
| 20:00 | 357 | 22 | 479 | 23 | 3.35% </td <td>35</td> <td>7</td> <td>514</td> <td>30</td> | 35 | 7 | 514 | 30 | | |
| 21:00 | 195 | 15 | 261 | 16 | 1.82% </td <td>19</td> <td>4</td> <td>280</td> <td>20</td> | 19 | 4 | 280 | 20 | | |
| 22:00 | 98 | 5 | 131 | 5 | 0.91% </td <td>9</td> <td>2</td> <td>140</td> <td>7</td> | 9 | 2 | 140 | 7 | | |
| 23:00 | 33 | 4 | 44 | 4 | 0.31% </td <td>3</td> <td>1</td> <td>47</td> <td>1</td> | 3 | 1 | 47 | 1 | | |
| 10669 | 1123 | 14319 | 1168 | 100.00% | 1031 | 210 | 15350 | 1378 | | | |

APPENDIX “D”

**PRELIMINARY
MULTI-MODAL PLAN**



8902 QUAIL ROAD ANNEXATION MULTI-MODAL PLAN