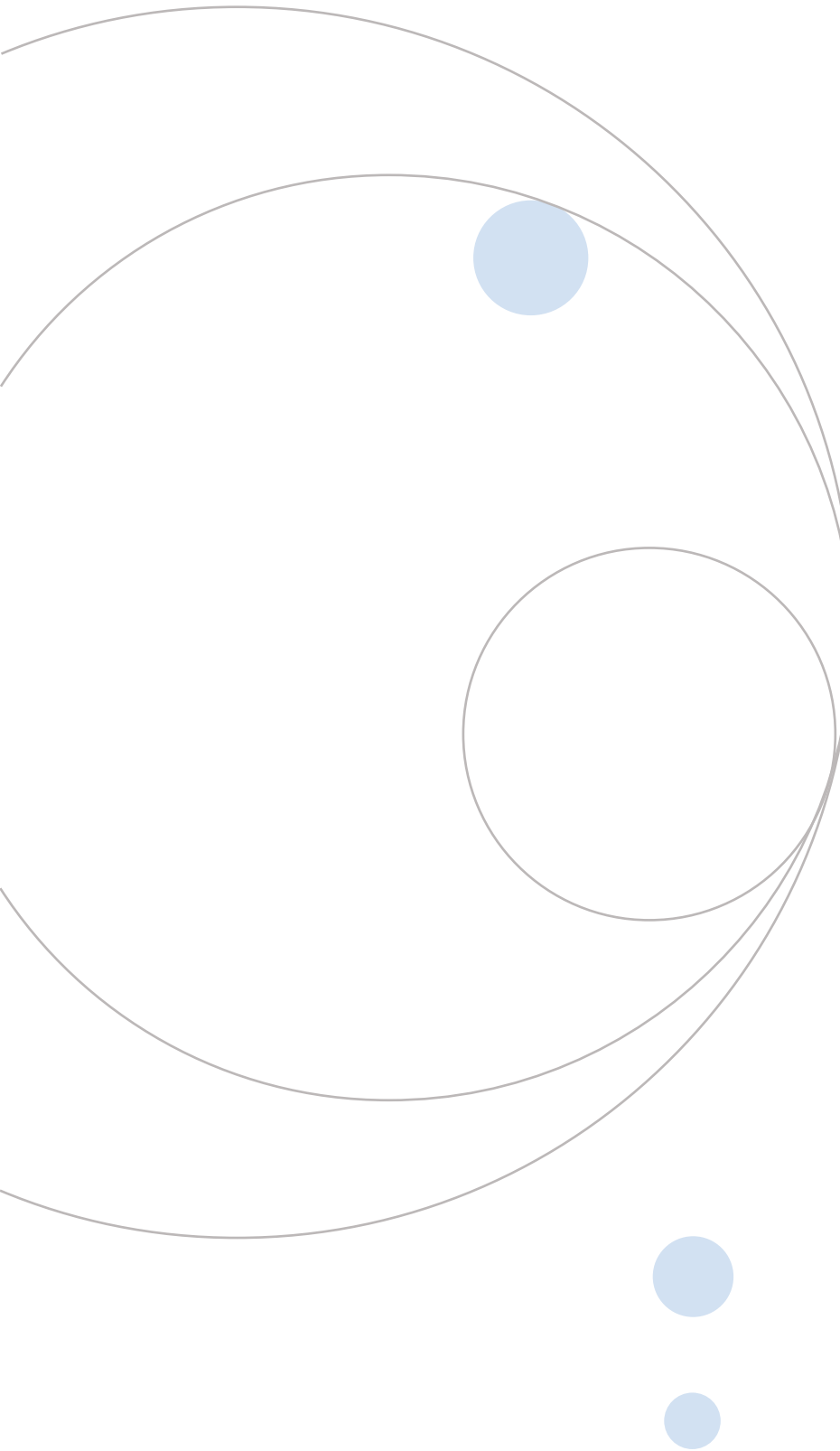




# Smoke Tree Resort

Traffic Impact Analysis

7101 E. Lincoln Drive  
Town of Paradise Valley, Arizona

February 2019  
Project No. 18-0550

Prepared For:

**Beus Gilbert, PLC**  
701 N. 44th Street  
Phoenix, Arizona 85008

For Submittal to:

**Town of Paradise Valley**

Prepared By:



10605 North Hayden Road  
Suite 140  
Scottsdale, Arizona 85260  
480-659-4250

# **SMOKE TREE RESORT TRAFFIC IMPACT ANALYSIS**

**7101 E Lincoln Drive  
Town of Paradise Valley, Arizona**

**Prepared for:**  
Beus Gilbert PLLC  
701 N 44<sup>th</sup> Street  
Phoenix, Arizona 85008

**For Submittal to:**  
Town of Paradise Valley

---

**Prepared By:**



CivTech, Inc.  
10605 North Hayden Road  
Suite 140  
Scottsdale, Arizona 85260  
(480) 659-4250



Expires 3-31-2019

---

**February 2019**

CivTech Project No. 18-0550

## TABLE OF CONTENTS

|                                               |           |
|-----------------------------------------------|-----------|
| <b>EXECUTIVE SUMMARY .....</b>                | <b>1</b>  |
| <b>INTRODUCTION.....</b>                      | <b>4</b>  |
| <b>EXISTING CONDITIONS .....</b>              | <b>6</b>  |
| SURROUNDING LAND USE .....                    | 6         |
| EXISTING ROADWAY NETWORK .....                | 6         |
| EXISTING INTERSECTION CONFIGURATION .....     | 6         |
| EXISTING TRAFFIC VOLUMES .....                | 10        |
| EXISTING CAPACITY ANALYSIS.....               | 12        |
| <b>PROPOSED DEVELOPMENT.....</b>              | <b>14</b> |
| SITE LOCATION .....                           | 14        |
| SITE ACCESS .....                             | 14        |
| TRIP GENERATION .....                         | 16        |
| TRIP DISTRIBUTION AND ASSIGNMENT .....        | 17        |
| FUTURE BACKGROUND TRAFFIC.....                | 20        |
| TOTAL TRAFFIC .....                           | 20        |
| <b>TRAFFIC AND IMPROVEMENT ANALYSIS .....</b> | <b>25</b> |
| INTERSECTION CAPACITY ANALYSIS.....           | 25        |
| QUEUE LENGTH ANALYSIS .....                   | 30        |
| SIGHT DISTANCE ANALYSIS .....                 | 31        |
| <b>CONCLUSIONS.....</b>                       | <b>33</b> |
| <b>LIST OF REFERENCES .....</b>               | <b>36</b> |
| <b>TECHNICAL APPENDIX .....</b>               | <b>37</b> |

## LIST OF TABLES

|                                                    |    |
|----------------------------------------------------|----|
| Table 1: Level of Service Criteria.....            | 12 |
| Table 2: Existing Peak Hour Levels of Service..... | 13 |
| Table 3: Trip Generation Summary.....              | 16 |
| Table 4: Site Trip Distribution .....              | 17 |
| Table 5: Growth Rate Expansion Factors .....       | 20 |
| Table 6: 2020 Peak Hour Analysis .....             | 25 |
| Table 7: 2025 Peak Hour Analysis .....             | 27 |
| Table 8: Queue Storage Lengths .....               | 30 |
| Table 9: AASHTO Sight Distance Requirements.....   | 31 |

## LIST OF FIGURES

|                                                                    |    |
|--------------------------------------------------------------------|----|
| Figure 1 - Vicinity Map .....                                      | 5  |
| Figure 2 - Existing Lane Configurations and Stop Control .....     | 9  |
| Figure 3 - Existing Traffic Volumes .....                          | 11 |
| Figure 4 - Site Plan and Access .....                              | 15 |
| Figure 5 - Trip Distribution .....                                 | 18 |
| Figure 6 - Site Generated Traffic Volumes .....                    | 19 |
| Figure 7 - 2020 Background Traffic Volumes .....                   | 21 |
| Figure 8 - 2025 Background Traffic Volumes .....                   | 22 |
| Figure 9 - 2020 Total Traffic Volumes.....                         | 23 |
| Figure 10 - 2025 Total Traffic Volumes.....                        | 24 |
| Figure 11 - Proposed Lane Configurations and Traffic Control ..... | 29 |

## EXECUTIVE SUMMARY

This report documents a traffic impact analysis performed for the proposed Smoke Tree Resort south of Lincoln Road between Mockingbird Lane and Scottsdale Road in the Town of Paradise Valley. The proposed development will consist of maximum of 120 hotel rooms and a maximum of 30 residential units of 1,200 SF each above the hotel rooms, of which 15 will have a lock-off feature.

CivTech, Inc. has been retained by Beus Gilbert PLLC to perform the traffic impact study for the proposed redevelopment. The purpose of this assessment is to address the traffic and transportation impacts of the proposed development on the surrounding streets and intersections.

The following conclusions have been documented in this study.

### General

- The proposed development is anticipated to generate approximately 1,032 weekday daily trips, with 69 trips occurring in the AM peak hour and 101 trips occurring in the PM peak hour.

### Existing Conditions

- The results of the existing conditions analysis indicates that all intersections currently operate at an overall acceptable level of service (LOS D or better), with the exception of the intersections of Apartment Driveway & Lincoln Drive and AJ's Driveway & Lincoln Drive under the existing lane configurations.
  - o The intersections of **Apartment Driveway & Lincoln Drive** and **AJ's Driveway & Lincoln Drive** experience delays in the northbound left turn approach and southbound left turn. Both of these approaches and driveways are driveways for AJ's Fine Foods and existing Apartments. It is possible that a raised median will be installed along the length of Lincoln Drive.

### Opening Year 2020

- The results of the 2020 opening year Synchro analysis indicates that all study intersections are anticipated to experience an acceptable level of service, with the exception of the following intersections:
  - o The intersection of **Mockingbird Lane & Lincoln Drive** is expected to experience delay on the northbound and southbound approaches during the no build and the full build scenario. By increasing the southbound left turn phase from 9 seconds to 19 seconds and changing the northbound left turn phase from permissive to permissive-protected, the southbound approach delay is expected to decrease from 56 seconds per vehicle to 55.1 seconds per vehicle during the AM peak hour and decrease from 58.7 seconds per vehicle to 55.4 seconds per vehicle during the PM peak hour. The northbound approach delay is expected to decrease from 48 seconds per vehicle to 43.3 seconds per vehicle during the AM peak hour and decrease from 58.7 seconds per vehicle to 57.3 seconds per vehicle

in the PM peak hour, which is very close to what is considered an acceptable level of service.

- o The intersections of **Apartment Driveway & Lincoln Drive** and **AJ's Driveway & Lincoln Drive** experience delays in the northbound left turn approach and southbound left turn. Both of these approaches and driveways are driveways for AJ's Fine Foods and the existing Lincoln Apartments. The addition of Smoke Tree Resort is not the cause of these delays, which remains consistent with the existing condition.
- o The intersection of **Scottsdale Road & Lincoln Drive** is expected to experience delay on the eastbound and westbound approaches during both the AM and PM peak hours for both the no build and full build scenarios. The intersection is expected to operate at an overall acceptable level of service (LOS D or better) during both the AM and PM peak hours of both scenarios, however, the eastbound and westbound approach delay could be improved by increasing the eastbound phase from 30 seconds to 32 seconds and increasing the westbound phase from 13 seconds to 21 seconds. This change is expected to decrease the overall intersection delay from 46.4 seconds per vehicle to 25 seconds per vehicle in the AM peak and increase the overall intersection delay from 44.9 seconds per vehicle to 52.1 seconds per vehicle in the PM peak hour. Although the PM peak hour overall intersection delay is expected to increase, the individual approach delays for the eastbound and westbound decrease significantly. The eastbound approach is expected to decrease from 82.8 seconds per vehicle to 16 seconds per vehicle and the westbound approach is expected to decrease from 63.8 seconds per vehicle to 23.7 seconds per vehicle during the PM peak hour.
- o The intersection of **Quail Run Road and Access A** reports a delay of zero seconds using the HCM 6<sup>th</sup> edition methodology. No LOS is reported in the included appendices, however zero seconds of delay would yield an LOS of A, shown in the table.

#### Horizon year 2025

- The results of the 2025 horizon year Synchro analysis summarized in **Table 7** indicates that all study intersections are anticipated to experience an acceptable level of service, with the exception of the following intersections:
  - o The intersections of **Apartment Driveway & Lincoln Drive** and **AJ's Driveway & Lincoln Drive** experience delays in the northbound left turn approach and southbound left turn. Both of these approaches and driveways are driveways for AJ's Fine Foods and the existing Lincoln Apartments. The addition of Smoke Tree Resort is not the cause of these delays, which remains consistent with the existing condition.
  - o The intersection of **Scottsdale Road & Lincoln Drive** is expected to experience delay on the southbound, eastbound and westbound approaches during both the AM and PM peak hours for both the no build

and full build scenarios. By decreasing the cycle length from 130 seconds to 120 seconds and optimizing the green times, the overall intersection delay is expected to decrease from 76 seconds per vehicle to 58.2 seconds per vehicle during the AM peak hour and decrease from 62.7 seconds per vehicle to 57.7 seconds per vehicle during the PM peak hour. Although this mitigation measure is expected to decrease the approach delays and the overall intersection delay, if this signal is coordinated with any others along Scottsdale Road, changing the cycle length will interfere with the coordination and would not be recommended. The City of Scottsdale has stated that they have plans to change the eastbound approach configuration to dual left turn lanes and a shared through/right turn lane. It is not known when this change will occur, but it could improve the delay if the intersection is retimed.

- o The intersection of **Quail Run Road and Access A** reports a delay of zero seconds using the HCM 6<sup>th</sup> edition methodology. No LOS is reported in the included appendices, however zero seconds of delay would yield an LOS of A, shown in the table.

#### Queue Storage and Sight Distance

- According to the CivTech study done for the Ritz Carlton, the newly signalized intersection of Quail Run Road and Lincoln Drive will have eastbound/westbound left turn lanes and a westbound right turn lane striped with 150 feet of storage each. While 150 feet is being proposed due to the current development agreement with Five Star Development for the Ritz Carlton, less is required to meet the recommended AASHTO length. The recommended storage lengths are provided for horizon year 2025 using the total traffic projections.
  - o The Smoke Tree Resort is requesting a new full access driveway located approximately 80 feet west of the eastern most property line. The Town of Paradise Valley has stated that an eastbound right turn deceleration lane is required at this driveway. Using AASHTO methodology only 25 feet of storage is required, however, 50 feet is the minimum that should be recommended per AASHTO standards with a 90 foot taper.
- There are no existing obstructions to sight distance within the project intersections or along the included corners of the proposed intersection. Adequate site distance must be provided at the intersections to allow safe left and right turning movements from the development
  - o The contractor should ensure that sight visibility is provided at all proposed intersections according to the distances and that sight triangles at public intersections are maintained according to the Town Code. All vegetation and trees should be maintained according to Town of Paradise Valley regulations.

## INTRODUCTION

Smoke Tree Resort is currently 26 individual suites and bungalows. The site is being redeveloped and is proposed as a hotel with a maximum of 120 hotel rooms and a maximum of 30 residential units of 1,200 SF each above the hotel rooms, of which 15 will have a lock-off feature. The site is located on the south side of Lincoln Drive between Mockingbird Lane and Scottsdale road.

### Study Requirements

This study analyzes the traffic impact due to the proposed development on the surrounding street network. The study will be prepared in conformance with the Town of Paradise Valley's Traffic Impact Analysis (TIA) Criteria and Traffic Impact Statement (TIS) Criteria, May 2015. The specific objectives of the study are:

- ◆ To determine whether the planned street system in the vicinity of the site is adequate to accommodate the increased traffic that results from the proposed development.
- ◆ To recommend additional street improvements or traffic control devices, where necessary, and to mitigate the additional site-generated traffic

### Study Area

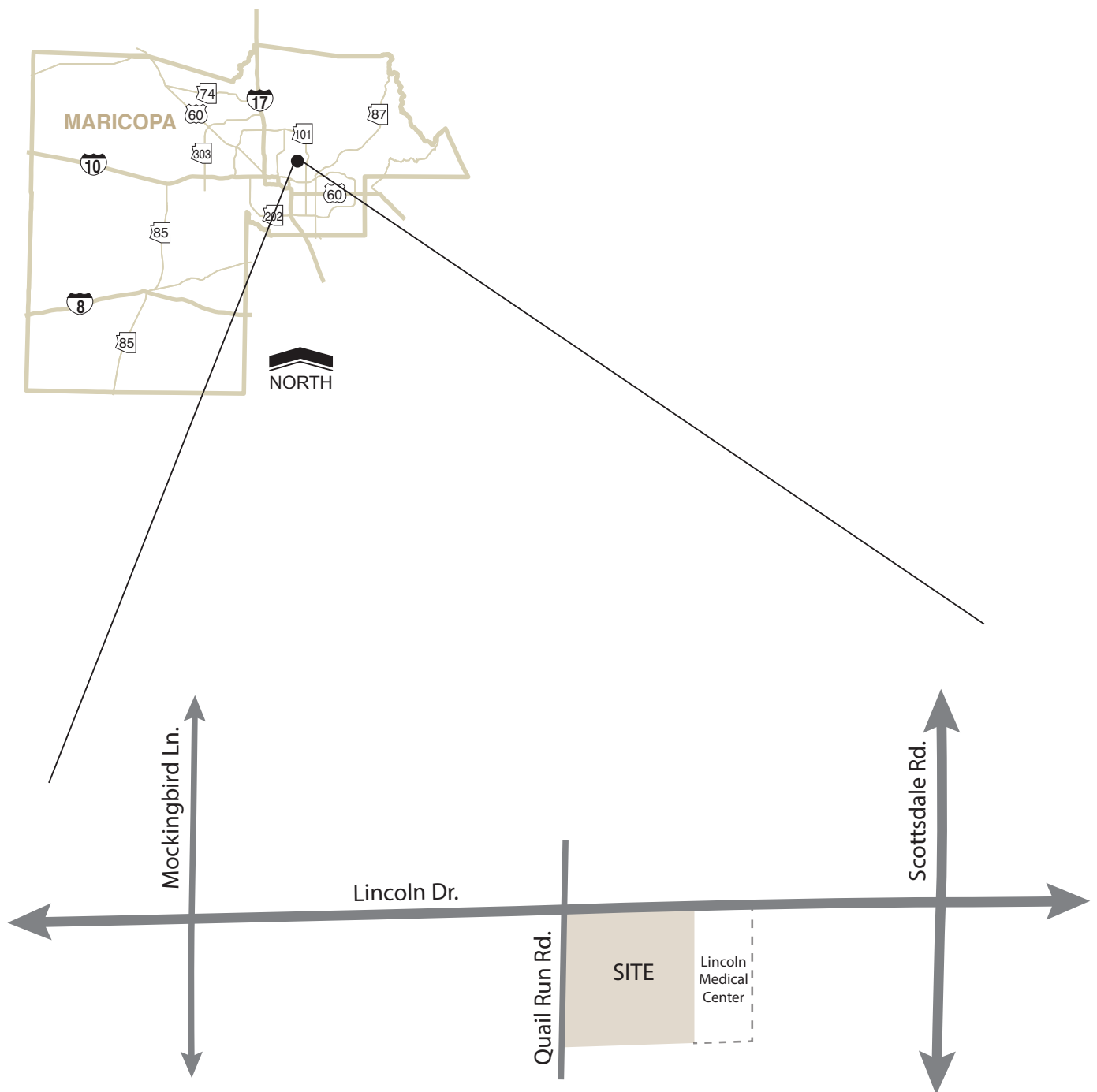
This study is classified as a Category 1 TIA meaning the study area is defined as all signalized and major unsignalized intersections within a ¼ -mile radius of the site. The following study area intersections have been evaluated:

- Mockingbird Lane & Lincoln Drive
- Quail Run Road & Lincoln Drive
- Smoke Tree Driveway West & Lincoln Drive
- Smoke Tree Driveway East & Lincoln Drive
- Medical Office Driveway West & Lincoln Drive
- Medical Office Driveway East & Lincoln Drive
- Apartment Driveway & Lincoln Drive
- AJ's Driveway & Lincoln Drive
- Scottsdale Road & Lincoln Drive

### Horizon Years

Per the study requirements, a Category 1 Traffic Impact and Mitigation Analysis is required. Analysis will be conducted on the current conditions, the opening year and opening plus five years.

It is assumed that development will open in October 2020. For purposes of this study, the development will be assumed fully built out by 2020. Therefore, the analysis years to be analyzed for this study include opening year 2020 and horizon year 2025. A location map of the study area is provided in **Figure 1**.



**Figure 1:** Vicinity Map

## EXISTING CONDITIONS

### *SURROUNDING LAND USE*

The surrounding area includes various land uses. Directly north of the site, on the north side of Lincoln Drive, is the site for the new Ritz Carlton luxury hotel. Bordering the site to the east is the site for the proposed Lincoln Medical Center expansion. West of the site are detached single-family homes. Northeast of the site is the Lincoln Scottsdale, multi-family apartment homes. Also within the vicinity of the site are many retail shops and restaurants.

### *EXISTING ROADWAY NETWORK*

The existing roadway network analyzed in this study includes Mockingbird Lane, Lincoln Drive, Quail Run Road and Scottsdale Road.

**Mockingbird Lane** is a north-south three-lane road with one lane in each travelling direction and a continuous two-way-left-turn lane north of Lincoln Drive, and a two-lane road south of Lincoln Drive. Mockingbird Lane begins at the intersection with McDonald Road and continues north for approximately 2 miles before terminating at the intersection with Northern Avenue. The posted speed limit is 35 miles per hour (mph).

**Lincoln Drive** is an east-west four-lane road with two lanes in each travelling direction. Within the vicinity of the site, there are raised medians along portions of the road. Lincoln Drive begins just east of the State Route 51 freeway and continues east for approximately 7 miles before terminating at the intersection with Cattletrack Road, just west of the Arizona Canal. The posted speed limit is 40 mph within the vicinity of the site.

**Quail Run Road** is a north-south two-lane road with one lane in each travelling direction. Quail Run Road begins just north of a private property south of the site and continues north for approximately 0.15 miles before terminating at the intersection with Lincoln Drive. There is no posted speed limit.

**Scottsdale Road** is a north-south six-lane road with three lanes in each travelling direction within the vicinity of the site. There are broken, raised medians along the whole length of road. Scottsdale Road begins at the intersection with Rio Salado Parkway and continues north for approximately 18 miles before terminating at the intersection with Carefree Highway. The posted speed limit is 45 mph.

### *EXISTING INTERSECTION CONFIGURATION*

The intersection of **Mockingbird Lane and Lincoln Drive** is a four-legged signalized intersection with protected left turns on the southbound and westbound approaches. The northbound and southbound approaches each have one dedicated left turn lane and a shared through and right turn lane. The eastbound and westbound approaches each have one dedicated left turn lane, one through lane, and one shared through and right turn lane. There are pedestrian crosswalks across all legs of the intersection.

The intersection of **Quail Run Road and Lincoln Drive** is a four-legged, stop-controlled intersection with free movements in the east and west directions. The northbound approach has one shared left turn/through/right turn lane. The eastbound approach has one through lane and one shared through and right turn lane. The westbound approach has two through lanes and a break in the median to allow for dedicated left turns. The southbound approach is currently a construction access point with one shared left turn/through/right turn lane.

The intersection of **Smoke Tree Driveway West and Lincoln Drive** is a three-legged, stop-controlled “T” intersection with free movements in the east and west directions. The northbound approach has one shared left turn and right turn lane. The eastbound approach has one through lane and one shared through and right turn lane. The westbound approach has two through lanes and a break in the median to allow for dedicated left turns.

The intersection of **Smoke Tree Driveway East and Lincoln Drive** is a three-legged, stop-controlled “T” intersection with free movements in the east and west directions. The northbound approach has one shared left turn and right turn lane. The eastbound approach has one through lane and one shared through and right turn lane. The westbound approach has two through lanes and a break in the median to allow for dedicated left turns.

The intersection of **Medical Office Driveway West and Lincoln Drive** is a three-legged, stop-controlled “T” intersection with free movements in the east and west directions. The northbound approach has one shared left turn and right turn lane. The eastbound approach has one through lane and one shared through and right turn lane. The westbound approach has two through lanes and a break in the median to allow for dedicated left turns.

The intersection of **Medical Office Driveway East and Lincoln Drive** is a three-legged, stop-controlled “T” intersection with free movements in the east and west directions. The northbound approach has one shared left turn and right turn lane. The eastbound approach has one through lane and one shared through and right turn lane. The westbound approach has two through lanes and a break in the median to allow for dedicated left turns.

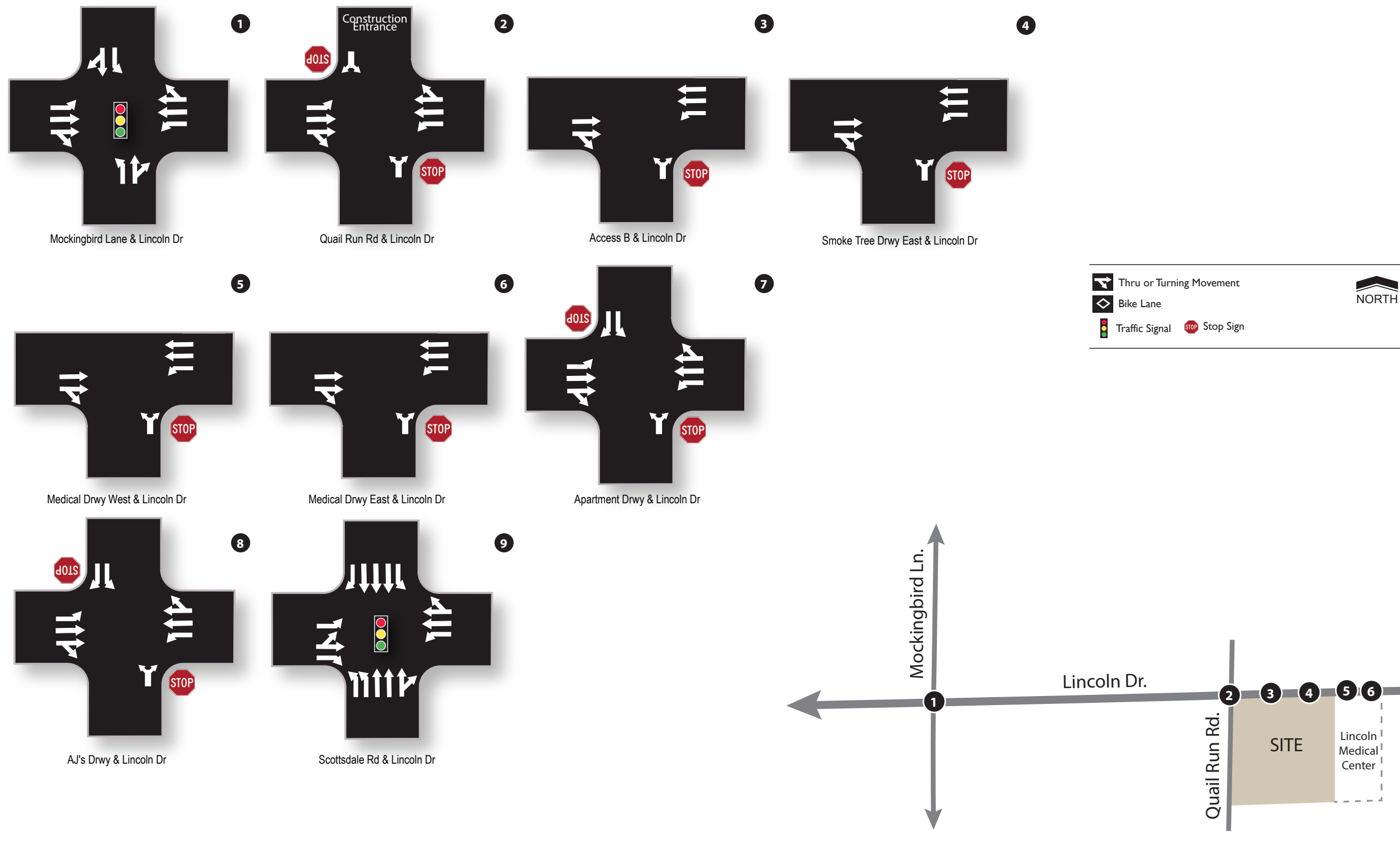
The intersection of **Apartment Driveway and Lincoln Drive** is a four-legged, stop-controlled intersection with free movements in the east and west directions. The southbound approach consists of one dedicated left turn lane and one dedicated right turn lane. The eastbound approach consists of a two-way-left turn lane one through lane and one shared through and right turn lane. The northbound approach consists of one shared left turn and right turn lane. The westbound approach consists of a two-way left turn lane, on through lane and one shared through and right turn lane.

The intersection of **AJ’s Driveway and Lincoln Drive** is a four-legged, stop-controlled intersection with free movements in the east and west directions. The northbound approach has one shared left turn and right turn lane. The eastbound approach has a

two-way-left-turn lane, one through lane and one shared through and right turn lane. The southbound approach has one dedicated left turn lane and one dedicated right turn lane. The westbound approach has a dedicated left turn lane, one through lane and one shared through and right turn lane.

The intersection of **Scottsdale Road and Lincoln Drive** is a four-legged signalized intersection with split phasing on the eastbound and westbound approaches and protected left turns on the northbound and southbound approaches. The northbound approach has two dedicated left turn lanes, two through lanes and one shared through and right turn lane. The westbound approach has one dedicated left turn lane, one through lane and one shared through and right turn lane. The southbound approach has one dedicated left turn lane, three through lanes and one dedicated right turn lane. The eastbound approach has one dedicated left turn lane, one shared left turn and through lane and one dedicated right turn lane. There are pedestrian cross walks across all legs of the intersection.

The existing intersection configurations and traffic control is illustrated in **Figure 2**.



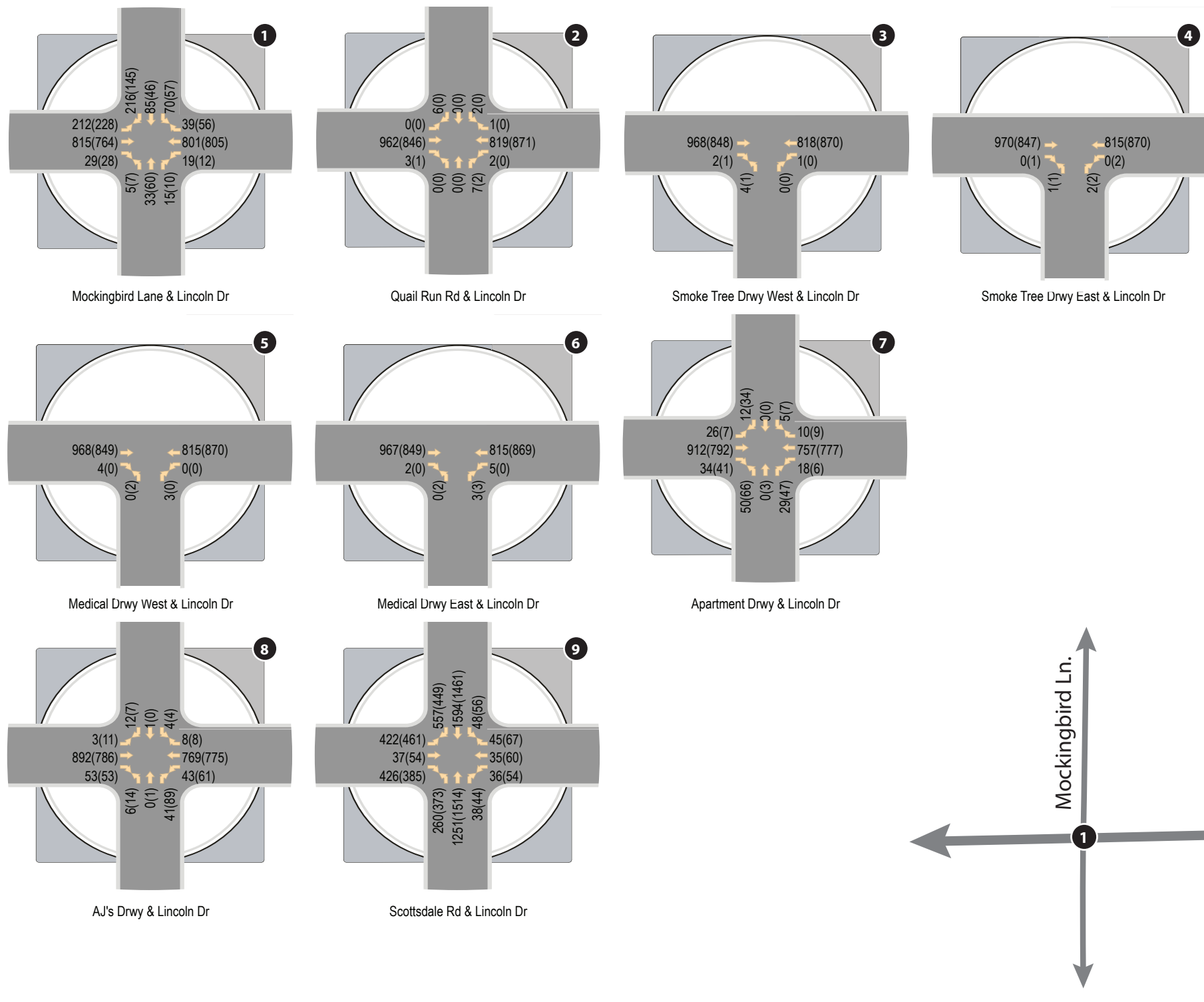
**Figure 2:** Existing Lane Configurations and Traffic Controls

## **EXISTING TRAFFIC VOLUMES**

CivTech engaged Field Data Services of Arizona, Inc. to record traffic volumes at nine study intersections within the project vicinity. Peak hour volume turning movement counts were performed from 7:00-9:00 AM and 4:00-6:00 PM on Thursday, May 31, 2018. Peak hour turning movement counts were conducted at the following study intersections:

- Mockingbird Lane & Lincoln Drive
- Quail Run Road & Lincoln Drive
- Smoke Tree Driveway West & Lincoln Drive
- Smoke Tree Driveway East & Lincoln Drive
- Medical Office Driveway West & Lincoln Drive
- Medical Office Driveway East & Lincoln Drive
- Apartment Driveway & Lincoln Drive
- AJ's Driveway & Lincoln Drive
- Scottsdale Road & Lincoln Drive

The Town of Paradise Valley requires that a seasonal adjustment factor be applied to existing traffic counts taken outside of typical months. These traffic counts were conducted in May, and summer months typically have lower amounts of traffic due to school not being in session. The seasonal adjustment factor for the month of May is 1.01, however since they were conducted on the last day of the month, the adjustment factor for the month of June will be used to be more conservative. The seasonal adjustment factor for June is 1.03, this was applied to all traffic within the study area. Existing 2018 traffic volumes with the seasonal adjustment factor applied are presented in **Figure 3** for the weekday AM and PM peak hours. Raw traffic volume data obtained for this study have been included in **Appendix B**.



**Figure 3:** Seasonally Adjusted Existing Traffic Volumes

## EXISTING CAPACITY ANALYSIS

Peak hour capacity analyses have been conducted for the study intersections based on existing intersection configurations and traffic volumes. All intersections have been analyzed using the methodologies presented in the *Highway Capacity Manual (HCM)*, *Special Report 209*, and Updated 2016 and using Synchro software, version 10.0 under the HCM 6<sup>th</sup> edition methodology.

The concept of level of service (LOS) uses qualitative measures that characterize operational conditions within the traffic stream. The individual levels of service are described by factors that include speed, travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Six levels of service are defined for each type of facility for which analysis procedures are available. They are given letter designations A through F, with LOS A representing the best operating conditions and LOS F the worst. Each level of service represents a range of operating conditions. Levels of service for intersections are defined in terms of delay ranges. **Table 1** lists the level of service criteria for signalized and unsignalized intersections, respectively.

**Table 1: Level of Service Criteria**

| Level of Service | Control Delay (seconds/vehicle) |                            |
|------------------|---------------------------------|----------------------------|
|                  | Signalized Intersections        | Unsignalized Intersections |
| A                | ≤ 10                            | ≤ 10                       |
| B                | > 10-20                         | > 10-15                    |
| C                | > 20-35                         | > 15-25                    |
| D                | > 35-55                         | > 25-35                    |
| E                | > 55-80                         | > 35-50                    |
| F                | > 80                            | > 50                       |

Source: Exhibit 19-8, Exhibit 20-2, Exhibit 21-8 and Exhibit 22-8, *Highway Capacity Manual 2017*

Synchro 10.0 software calculates the LOS per the HCM 6<sup>th</sup> edition methodology. The 6<sup>th</sup> edition HCM documents the signalized LOS calculation methodology which takes into account lane geometry, traffic volumes and cycle length/phasing to compute LOS. Synchro analysis worksheets report individual movement delay/LOS and overall delay/LOS for signalized intersections; unsignalized intersection worksheets report the worst-case delay/LOS and the average overall intersection delay. Signal timing data for the intersection of Mockingbird Lane and Lincoln Drive was provided by the Town of Paradise Valley. Timing for the intersection of Scottsdale Road and Lincoln Drive was provided by the City of Scottsdale. Results of the existing level of service analyses are shown in **Table 2** for both AM and PM peak hours. The existing conditions analysis worksheets have been included in **Appendix C**.

**Table 2: Existing Peak Hour Levels of Service**

| ID | Intersection                             | Intersection Control | Approach/Movement                                      | Existing LOS AM (PM)                 |
|----|------------------------------------------|----------------------|--------------------------------------------------------|--------------------------------------|
| 1  | Mockingbird Lane & Lincoln Drive         | Signal               | NB<br>SB<br>EB<br>WB                                   | D(E)<br>E(E)<br>B(A)<br>B(B)         |
|    |                                          |                      | <b>Overall</b>                                         | <b>C(B)</b>                          |
| 2  | Quail Run Road & Lincoln Drive           | 2-way stop (NB/SB)   | NB Shared<br>SB Shared<br>EB Left<br>WB Left           | B(B)<br>C(A)<br>A(A)<br>B(A)         |
| 3  | Smoke Tree Driveway West & Lincoln Drive | 1-way stop (NB)      | NB Shared<br>WB Left                                   | C(C)<br>B(A)                         |
| 4  | Smoke Tree Driveway East & Lincoln Drive | 1-way stop (NB)      | NB Shared<br>WB Left                                   | C(B)<br>A(A)                         |
| 5  | Medical Driveway West & Lincoln Drive    | 1-way stop (NB)      | NB Shared<br>WB Left                                   | B(C)<br>A(A)                         |
| 6  | Medical Driveway West & Lincoln Drive    | 1-way stop (NB)      | NB Shared<br>WB Left                                   | B(C)<br>B(A)                         |
| 7  | Apartment Driveway & Lincoln Drive       | 2-way stop (NB/SB)   | NB Shared<br>SB Left<br>SB Right<br>EB Left<br>WB Left | F(F)<br>F(E)<br>B(B)<br>A(A)<br>B(A) |
| 8  | AJ's Driveway & Lincoln Drive            | 2-way stop (NB/SB)   | NB Shared<br>SB Left<br>SB Right<br>EB Left<br>WB Left | C(D)<br>F(F)<br>B(B)<br>A(A)<br>B(B) |
| 9  | Scottsdale Road & Lincoln Drive          | Signal               | NB<br>SB<br>EB<br>WB                                   | C(C)<br>D(C)<br>E(E)<br>E(F)         |
|    |                                          |                      | <b>Overall</b>                                         | <b>D(D)</b>                          |

The results of the existing conditions analysis summarized in **Table 2** indicates that all intersections currently operate at an overall acceptable level of service (LOS D or better), with the exception of the intersections of Apartment Driveway & Lincoln Drive and AJ's Driveway & Lincoln Drive under the existing lane configurations depicted in **Figure 2**.

The intersections of **Apartment Driveway & Lincoln Drive** and **AJ's Driveway & Lincoln Drive** experience delays in the northbound left turn approach and southbound left turn. Both of these approaches and driveways are driveways for AJ's Fine Foods and existing Apartments. It is possible that a raised median will be installed along the length of Lincoln Drive.

## PROPOSED DEVELOPMENT

### *SITE LOCATION*

The proposed redevelopment will be located 7101 East Lincoln Drive in the Town of Paradise Valley, Arizona.

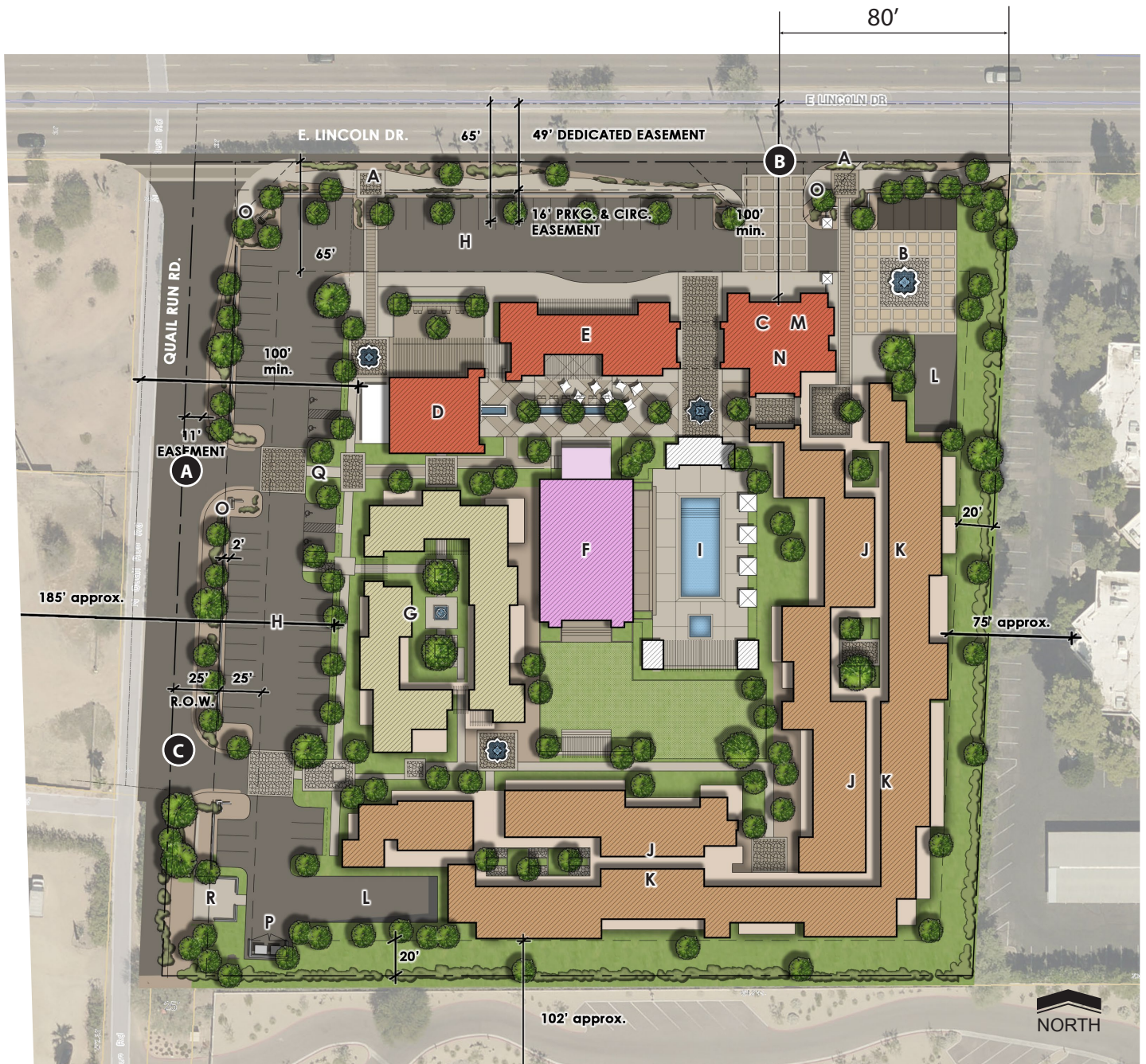
### *SITE ACCESS*

There are three access points proposed for this development, described as follows:

- Access A is a proposed access from Quail Run Road to the Smoke Tree site. The intersection of Quail Run Road and Lincoln Drive will be signalized by build out year 2020, and it is expected that some vehicles will utilize Quail Run Road to access the Smoke Tree site. This access will be a full movement access on the western border of the site.
- Access B is a proposed full movement access point on Lincoln Drive located approximately 80 feet west of the eastern Smoke Tree property line. The two existing access points to the site will be removed and replaced with this single access.
- Access C is a proposed access from Quail Run Road to Smoke Tree south of the proposed Access A. This access is proposed to be full access, however, due to the location, it is unlikely that many vehicles will be using this driveway and therefore, it was not included in the analysis of this report.

The two existing Smoke Tree Driveways, intersections 3 and 4, will both be removed by opening year 2020 and replaces with a single, full movement access located approximately 80 feet west of the eastern property line.

The proposed site plan is provided in **Figure 4**.



**Figure 4:** Site Plan and Access

## TRIP GENERATION

The potential trip generation for the proposed development was estimated utilizing the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10<sup>th</sup> Edition* and *Trip Generation Handbook, 3<sup>rd</sup> Edition*. The ITE *Trip Generation Manual* contains data collected by various transportation professionals for a wide range of different land uses. The data are summarized in the report and average rates and equations have been established that correlate the relationship between an independent variable that describes the development size and generated trips for each categorized land use. The report provides information for daily and peak hour trips.

Since the Smoke Tree Resort is a proposed redevelopment of the current resort, some of the existing traffic counts are existing trips generated by the site. To be conservative, these trips were not subtracted from the existing traffic counts, meaning that there will actually be less “new trips” than mentioned in this study.

The proposed development will consist of a maximum of 120 standard hotel rooms, 30 residential units/condos, 15 lock-off units that will be owned by individuals and rented out to the public, and a 3,500 square foot quality restaurant. The lock-off residential units have been included in the analysis as part of the total hotel room count to present a worst-case scenario where all rooms have been rented at the same time. They have been included in the hotel room count since it is assumed that the owners of each unit will not use this as their primary residence and will rent it out to guests. The restaurant will be on the resort site, but is not intended to serve guests of the resort completely. An internal capture reduction reduces the number of external trips being made to the site. It is assumed that approximately 50% of all visitors to the restaurant will be off site and the other 50% will be guests and residents of the resort. The hotel is not a standard hotel, ITE land use code 310, nor would it be considered a resort hotel, ITE land use code 330. Custom trip rates were established by averaging the trip rates for a standard hotel and a resort hotel for the AM and PM peak hours as well as the daily trips. **Table 3** depicts the trip generation summary for the proposed development. Trip generation calculations are provided in **Appendix D**.

**Table 3: Trip Generation Summary**

| Proposed Use                                         | ITE LUC | Size  | Units          | Weekday Trips |     |     |       |     |     |       |
|------------------------------------------------------|---------|-------|----------------|---------------|-----|-----|-------|-----|-----|-------|
|                                                      |         |       |                | Daily         | AM  |     |       | PM  |     |       |
|                                                      |         |       |                | Total         | In  | Out | Total | In  | Out | Total |
| Hotel                                                | 310/330 | 135   | Rooms          | 700           | 38  | 15  | 53    | 29  | 39  | 68    |
| Condos                                               | 220     | 30    | Dwelling Units | 186           | 3   | 12  | 15    | 13  | 7   | 20    |
| Quality Restaurant                                   | 931     | 3,500 | SF             | 294           | 0   | 3   | 3     | 18  | 9   | 27    |
| Total Trips                                          |         |       |                | 1,180         | 41  | 30  | 71    | 60  | 55  | 115   |
| Internal Capture Reduction (Quality Restaurants 50%) |         |       |                | (148)         | (0) | (2) | (2)   | (9) | (5) | (14)  |
| Subtotals                                            |         |       |                | 1,032         | 41  | 28  | 69    | 51  | 50  | 101   |

As shown in **Table 3**, the proposed development is anticipated to generate approximately 1,032 weekday daily trips, with 69 trips occurring in the AM peak hour and 101 trips occurring in the PM peak hour.

### **TRIP DISTRIBUTION AND ASSIGNMENT**

A single trip distribution pattern was assumed for the proposed development. It is expected that the resort development will generate trips based on future population within a 7-mile radius of the site. Future total population within a 7-mile radius of the site, as predicted by the 2020/2030 socio-economic data compiled by the Maricopa Association of Governments (MAG), was used as a basis to estimate trip distribution for the resort development.

The resulting trip distribution percentages for the study area are shown in **Table 4**. The trip distribution calculations are included in **Appendix E**.

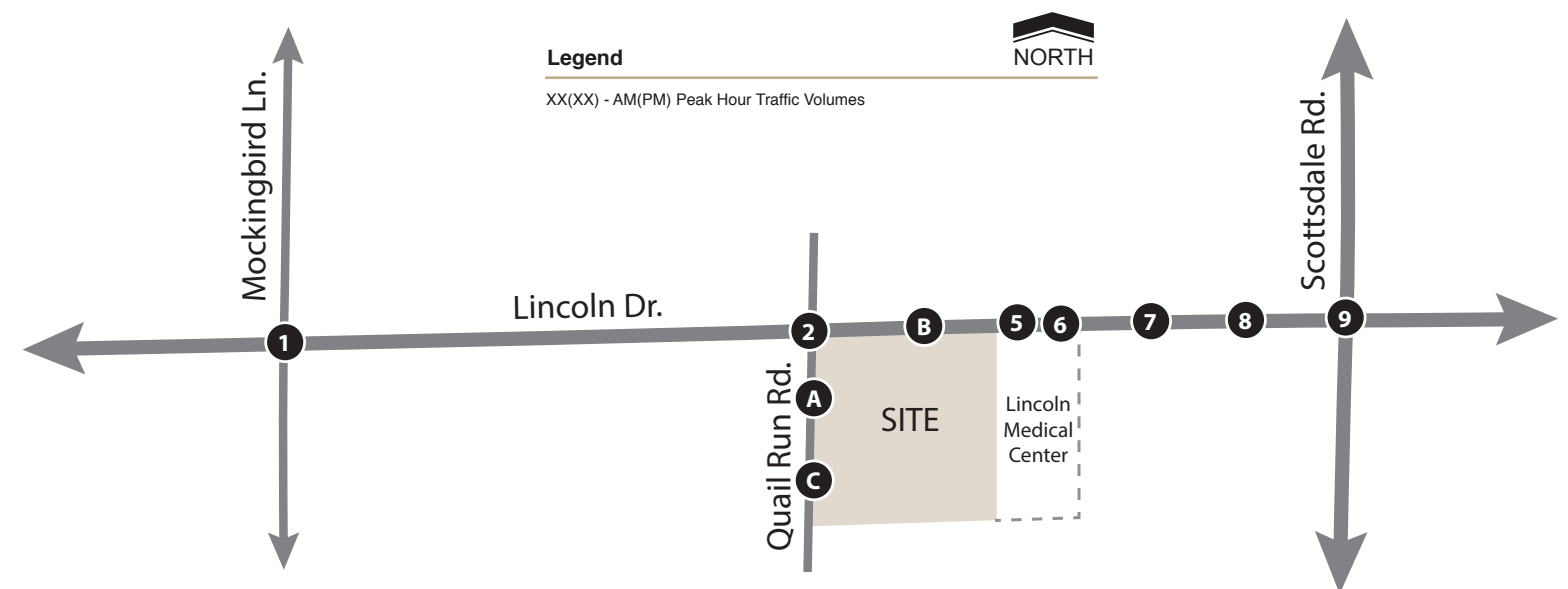
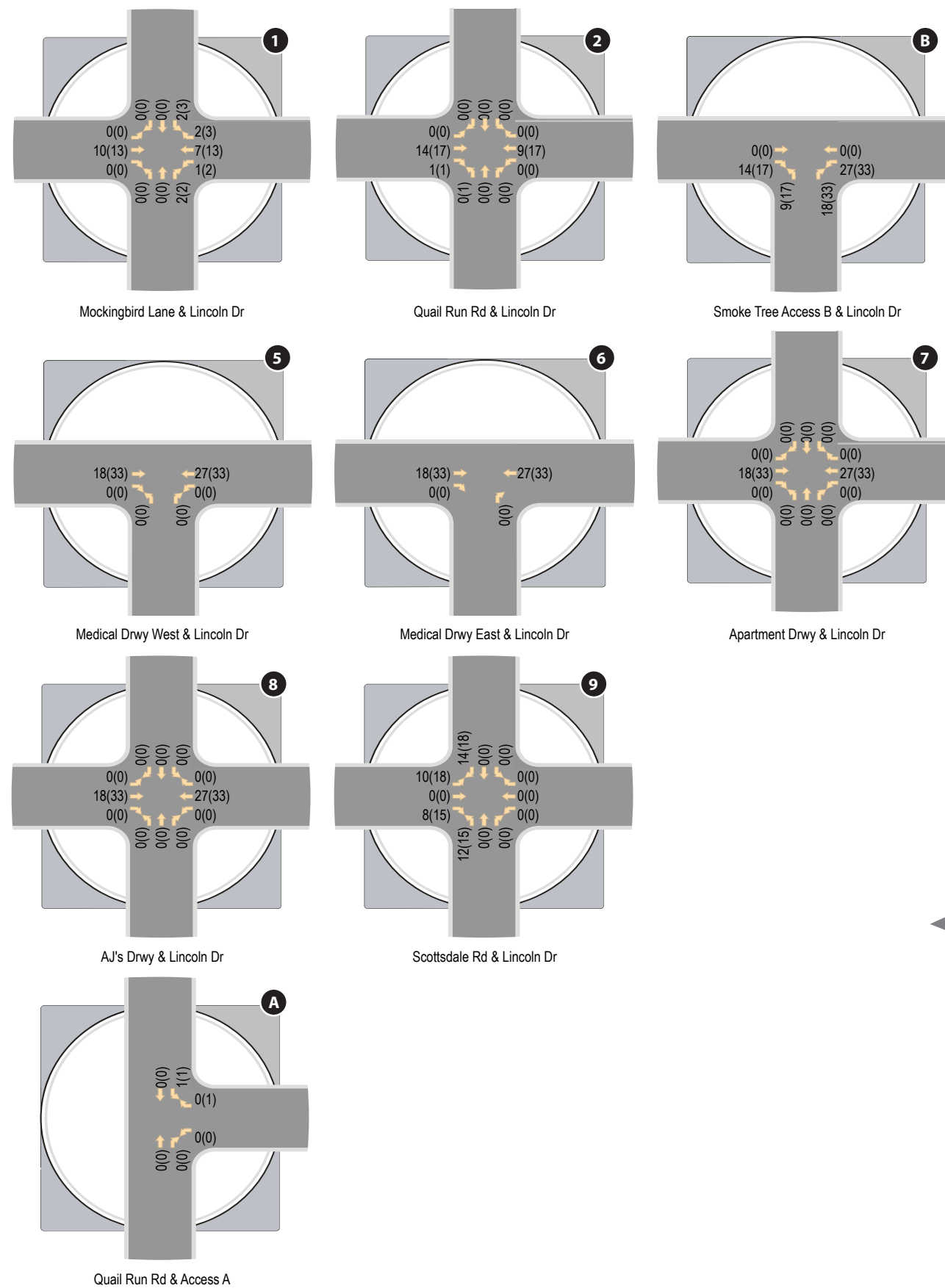
**Table 4: Site Trip Distribution**

| <b>Direction (To/From)</b> | <b>Trip Distribution</b> |
|----------------------------|--------------------------|
| North on Mockingbird Ln    | 6%                       |
| South on Mockingbird Ln    | 4%                       |
| West on Lincoln Dr         | 25%                      |
| North on Scottsdale Rd     | 35%                      |
| South on Scottsdale Rd     | 30%                      |
| <b>Total</b>               | <b>100%</b>              |

**Figure 5** illustrates the trip distribution percentages shown in **Table 4** on the existing roadway network with the study area. The percentages presented in **Figure 5** were applied to the site trips generated to determine the AM and PM peak hour site traffic at the intersections within the study area. The resulting site generated traffic for the proposed development are presented in **Figure 6**.



**Figure 5:** Trip Distribution



**Figure 6: Site Generated Traffic Volumes**

### ***FUTURE BACKGROUND TRAFFIC***

CivTech applied a growth rate to the seasonally adjusted traffic counts for this study in order to obtain the background traffic volumes along the adjacent roadway network. In reviewing the City of Scottsdale Traffic Counts Map, a 1.7% average growth rate was found within the proposed study area. **Table 5** shows the expansion factors used for the proposed opening year 2020 and horizon year 2025.

**Table 5: Growth Rate Expansion Factors**

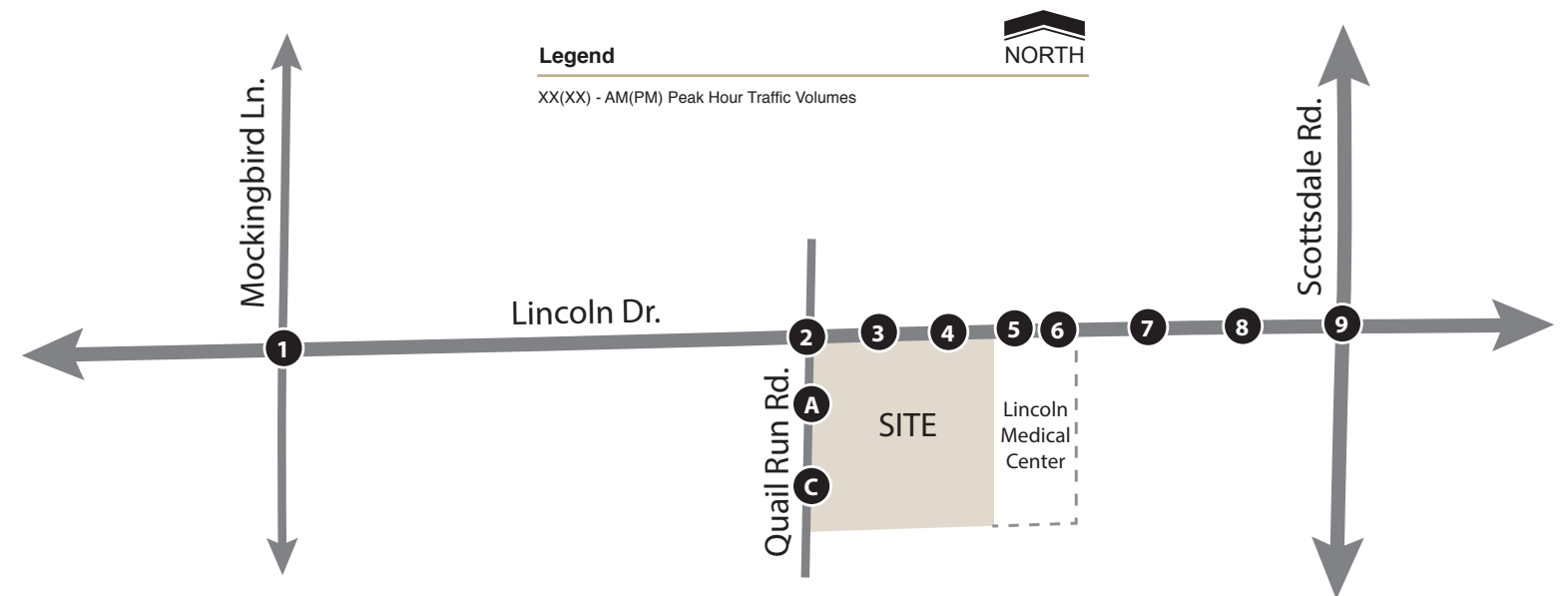
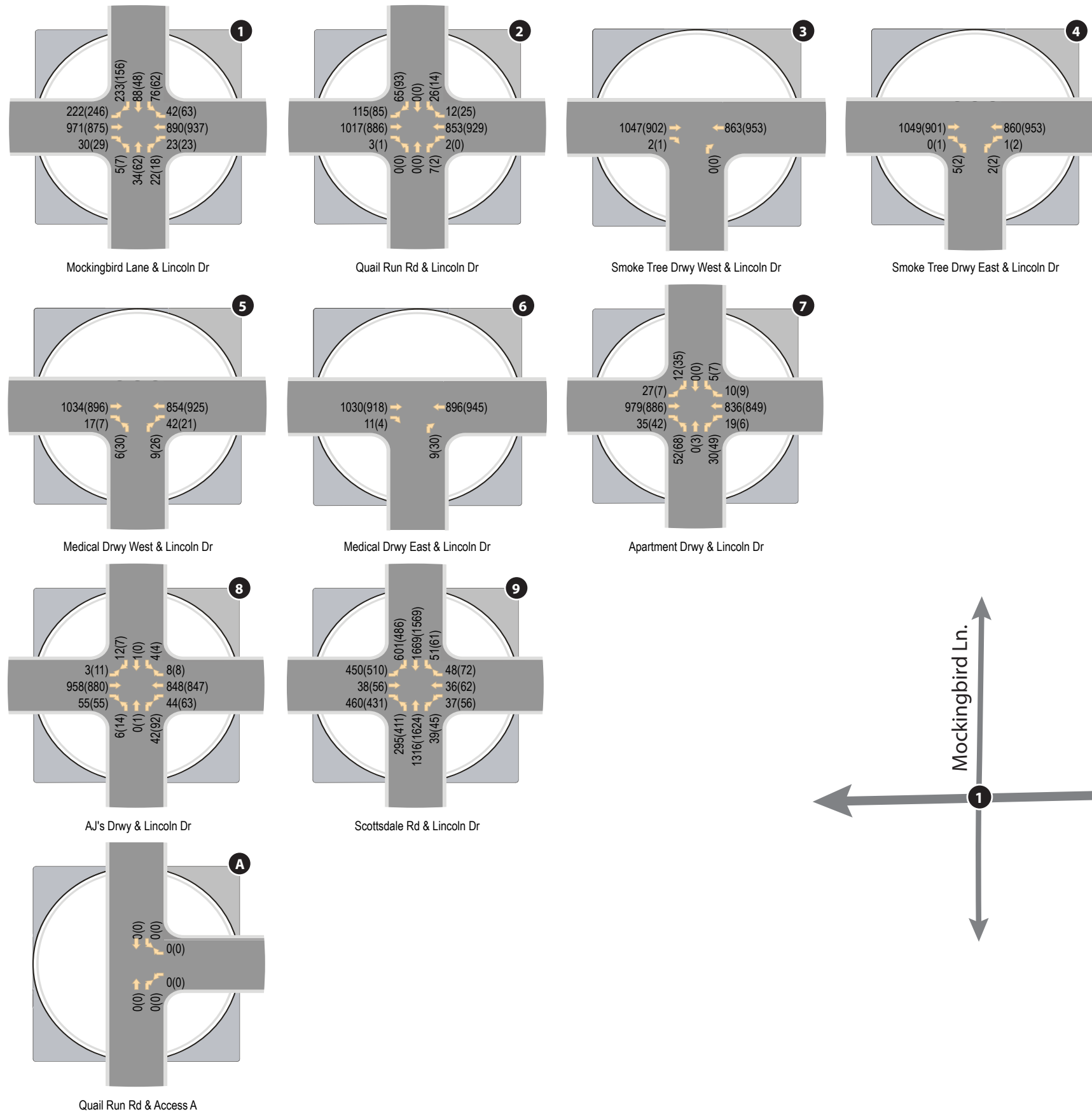
| Horizon Year | Expansion Factor |
|--------------|------------------|
| 2020         | 1.034            |
| 2025         | 1.125            |

Applying the growth rate expansion factors to the seasonally adjusted existing traffic volumes predicts the volume of traffic anticipated on the surrounding area roads for opening year 2020 and horizon year 2025. Directly north of the proposed Smoke Tree Resort is the new Ritz Carlton Resort. Phase 1 of that development is expected to be open by 2020, meaning that it will be adding some site generated trips to the surrounding roadway network. Since CivTech was the company that performed the analysis for the Ritz Carlton in 2015, the site generated volumes expected for 2020 and 2025 were added to the grown existing volumes. Directly east of the proposed site is another proposed development, Lincoln Medical Center. It is expected that the Lincoln Medical expansion and the Smoke Tree Resort will begin and end construction at roughly the same time. Lincoln Medical Center is also expected to add additional traffic to the surrounding roadway network. The proposed site generated trips were assigned to the surrounding roadway network, and these trips were also added to the grown existing volumes.

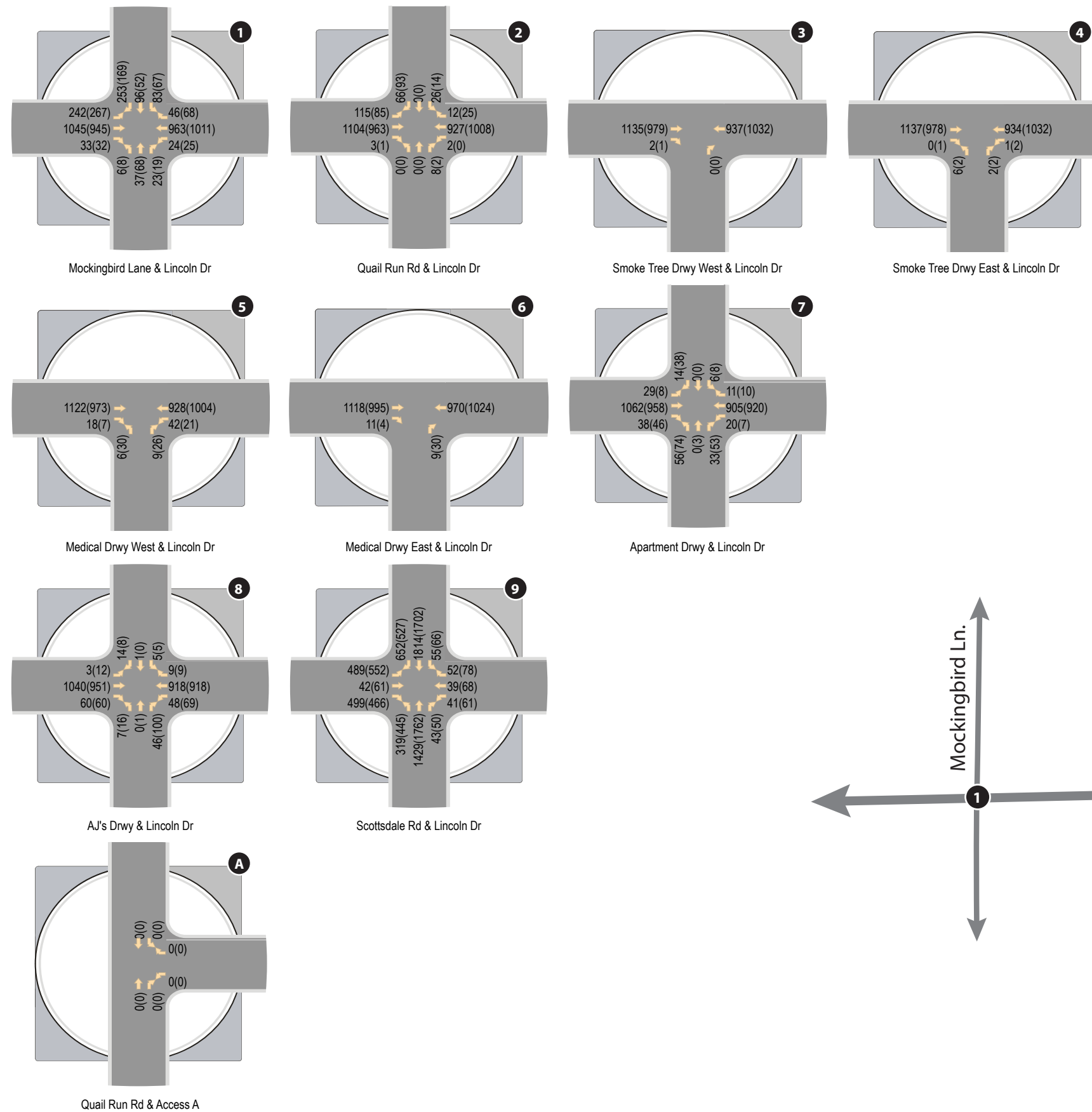
The same methodology was used for both horizon years. Calculated background traffic for opening year 2020 and horizon year 2025 is presented in **Figure 7** and **Figure 8**, respectively. Seasonally adjusted existing traffic volumes, Ritz Carlton site volumes, Smoke Tree site volumes and more detailed background traffic calculations are included in **Appendix F**.

### ***TOTAL TRAFFIC***

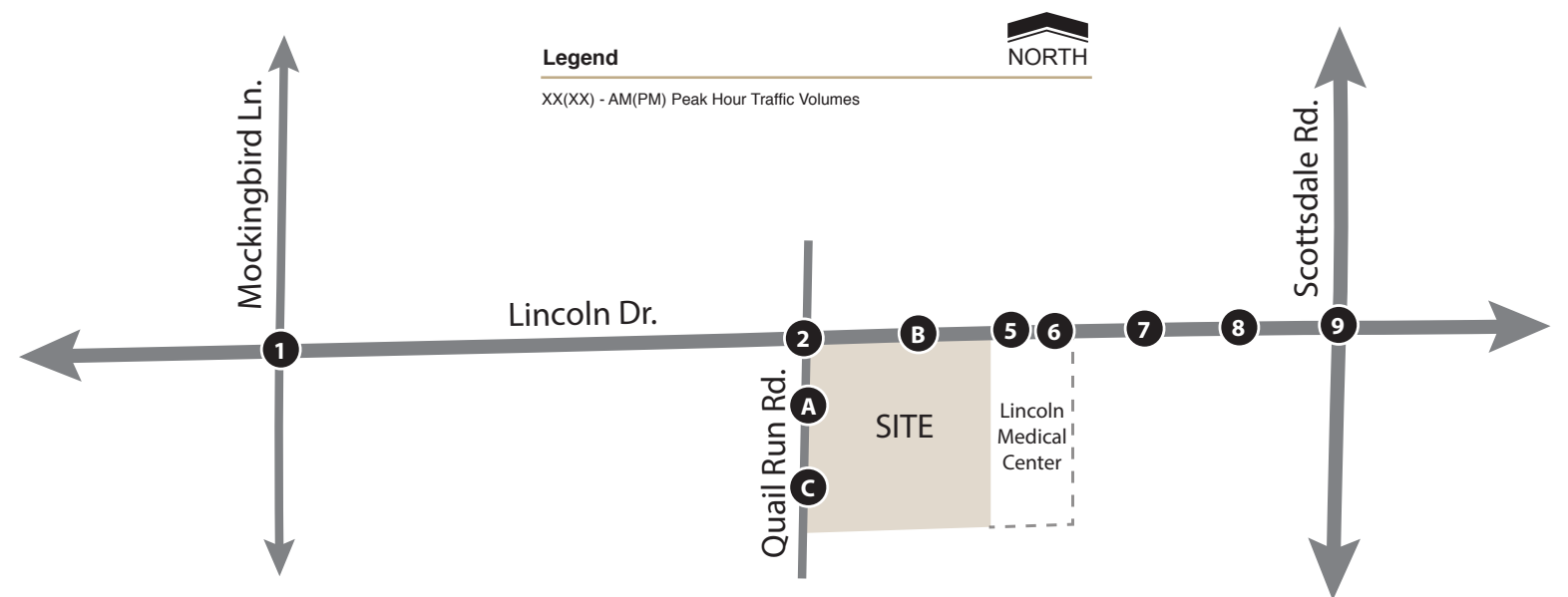
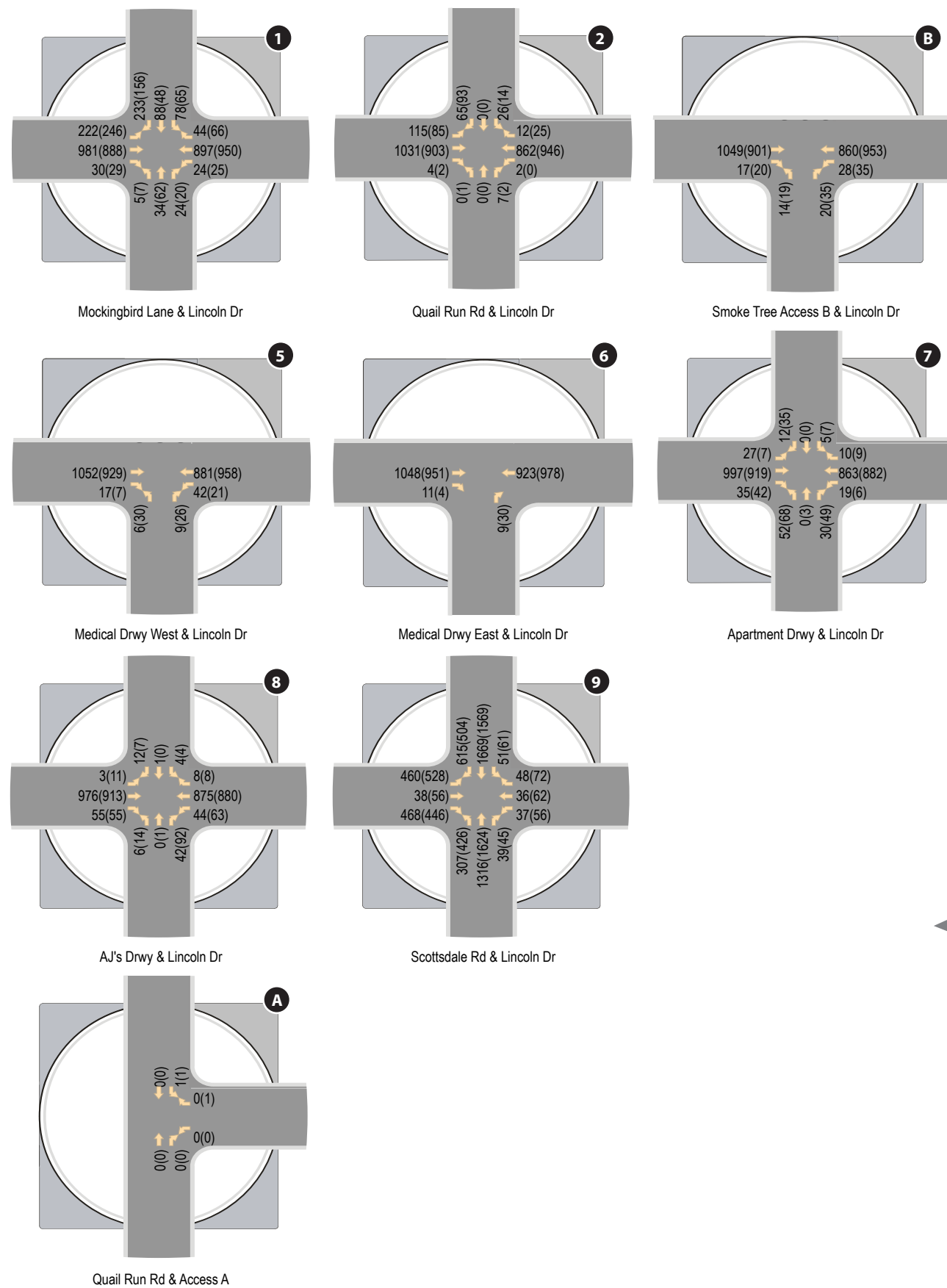
Total traffic was determined by adding the site generated traffic to the projected background traffic. Total peak hour traffic volumes for the opening year 2020 and horizon year 2025 are shown in **Figure 9** and **Figure 10**, respectively.



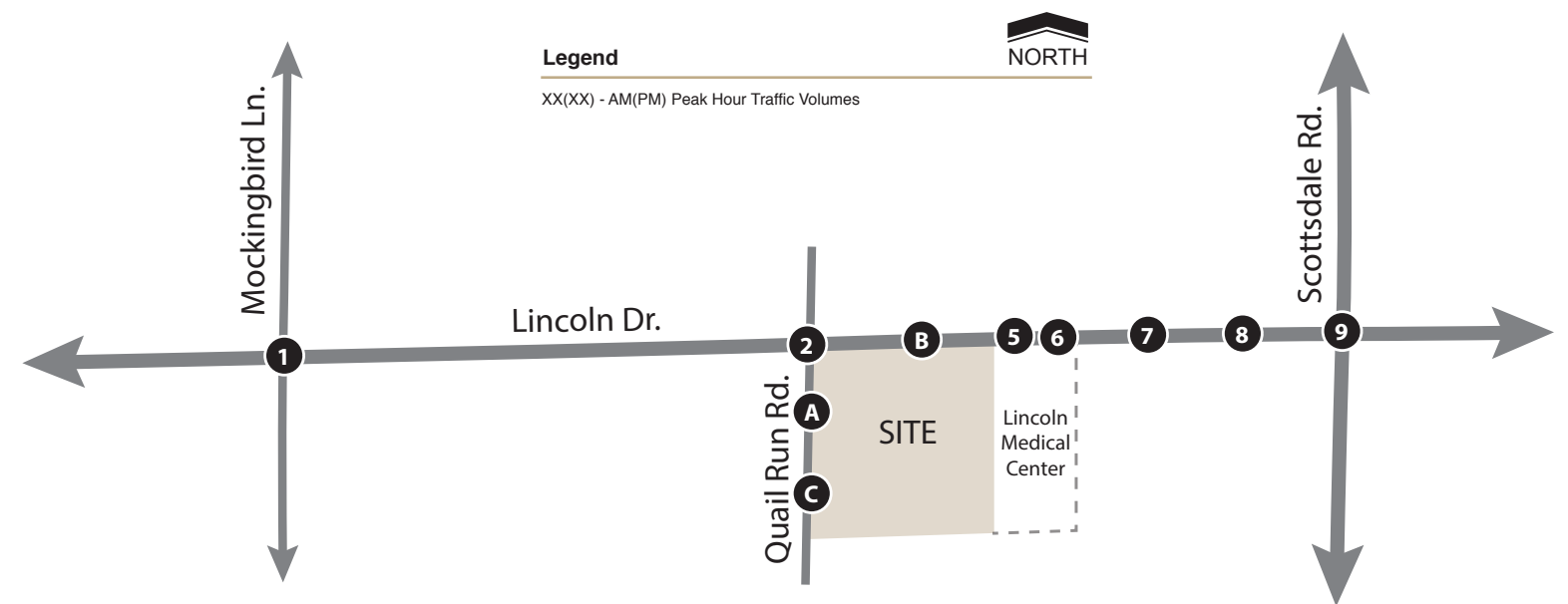
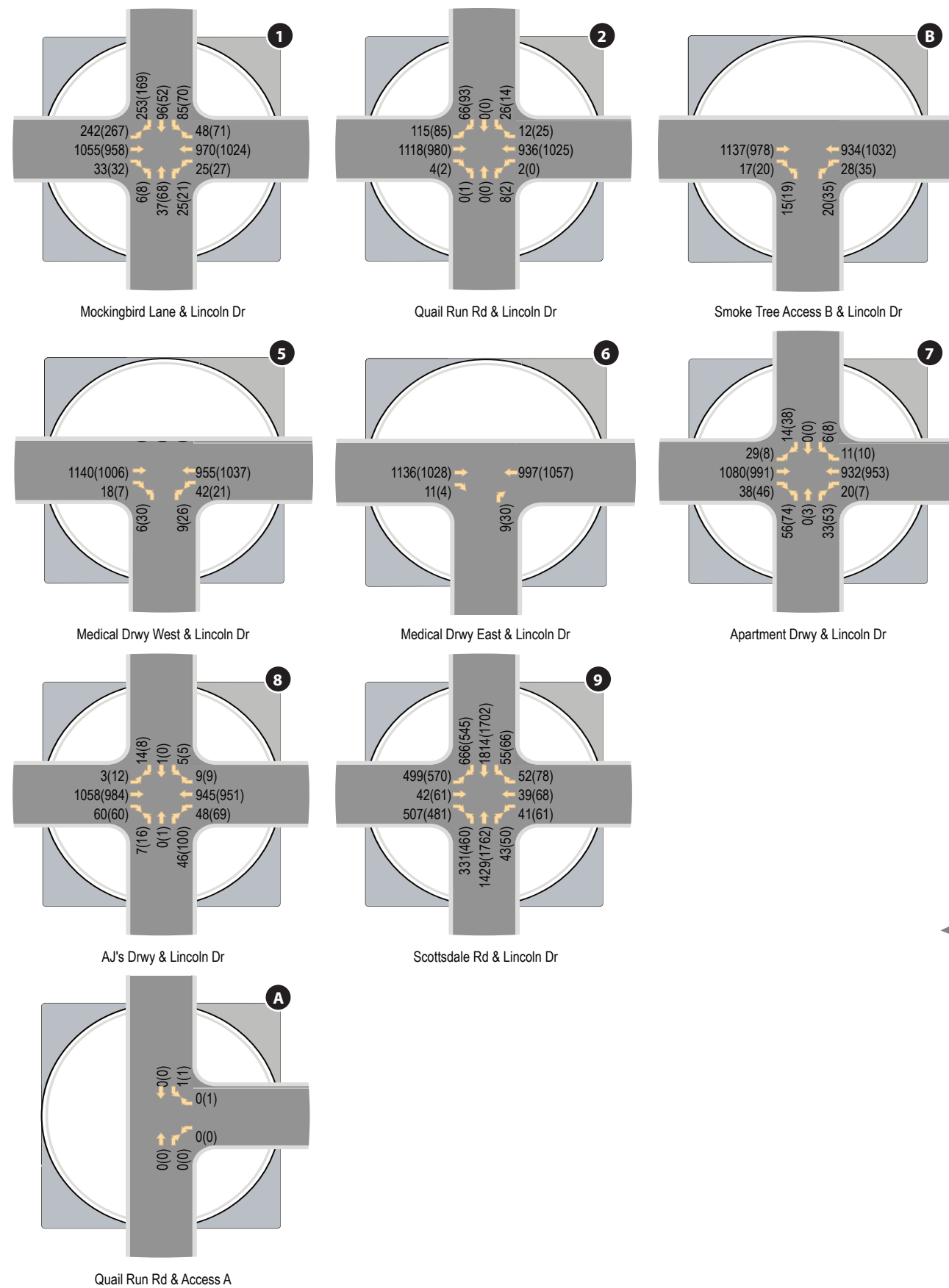
**Figure 7: 2020 Background Traffic Volumes**



**Figure 8: 2025 Background Traffic Volumes**



**Figure 9: 2020 Total Traffic Volumes**



**Figure 10: 2025 Total Traffic Volumes**

## TRAFFIC AND IMPROVEMENT ANALYSIS

### INTERSECTION CAPACITY ANALYSIS

Peak hour capacity analyses have been conducted for all of the intersections within the study area. All study area intersections were analyzed using Synchro 10.0 analysis software and the methodologies previously presented. Signalized intersections were analyzed with signal timing presented by the Town of Paradise Valley and the City of Scottsdale. According to the City of Scottsdale, the intersection of Scottsdale Road & Lincoln Drive will be restriped in the future to operate with dual left turn lanes and a shared through/right turn lane. It is unknown by what year these improvements will be made, so all analysis will be conducted using the existing lane configurations. The overall intersection and approach levels of service are summarized in **Table 6** for the 2020 opening year and **Table 7** for the 2025 horizon. Detailed analysis worksheets can be found in **Appendix G** and **Appendix H**.

**Table 6: 2020 Peak Hour Analysis**

| ID | Intersection                      | Intersection Control | Approach/<br>Movement                                  | 2020 LOS AM(PM)                      |                                      |                 |
|----|-----------------------------------|----------------------|--------------------------------------------------------|--------------------------------------|--------------------------------------|-----------------|
|    |                                   |                      |                                                        | No-Build                             | Build                                | Mitigated       |
| 1  | Mockingbird Ln & Lincoln Dr       | Signal               | NB                                                     | D(E)                                 | D(E)                                 | D(D)            |
|    |                                   |                      | SB                                                     | E(E)                                 | E(E)                                 | E(E)            |
|    |                                   |                      | EB                                                     | B(A)                                 | B(A)                                 | B(B)            |
|    |                                   |                      | WB                                                     | B(A)                                 | B(A)                                 | C(B)            |
|    |                                   |                      | <b>Overall</b>                                         | <b>C(B)</b>                          | <b>C(B)</b>                          | <b>C(B)</b>     |
| 2  | Quail Run Rd & Lincoln Dr         | Signal               | NB                                                     | B(B)                                 | B(B)                                 | [Not Mitigated] |
|    |                                   |                      | SB                                                     | B(B)                                 | B(B)                                 |                 |
|    |                                   |                      | EB                                                     | B(A)                                 | B(A)                                 |                 |
|    |                                   |                      | WB                                                     | D(D)                                 | D(D)                                 |                 |
|    |                                   |                      | <b>Overall</b>                                         | <b>C(C)</b>                          | <b>C(C)</b>                          |                 |
| 3  | Smoke Tree Drwy West & Lincoln Dr | 1-way stop (NB)      | NB Shared/Right<br>WB Left                             | A(A)<br>A(A)                         | -(-)<br>-(-)                         | [Not Mitigated] |
| 4  | Smoke Tree Drwy East & Lincoln Dr | 1-way stop (NB)      | NB Shared<br>WB Left                                   | C(C)<br>B(B)                         | -(-)<br>-(-)                         | [Not Mitigated] |
| 5  | Medical Drwy West & Lincoln Dr    | 1-way stop (NB)      | NB Shared<br>WB Left                                   | C(C)<br>B(B)                         | C(C)<br>B(B)                         | [Not Mitigated] |
| 6  | Medical Drwy East & Lincoln Dr    | 1-way stop (NB)      | NB Shared/Right<br>WB Left                             | B(B)<br>B(A)                         | B(B)<br>B(A)                         | [Not Mitigated] |
| 7  | Apartment Drwy & Lincoln Dr       | 2-way Stop (NB/SB)   | NB Shared<br>SB Left<br>SB Right<br>EB Left<br>WB Left | F(F)<br>F(F)<br>B(B)<br>B(B)<br>B(B) | F(F)<br>F(F)<br>B(B)<br>B(B)<br>B(B) | [Not Mitigated] |
| 8  | AJ's Drwy & Lincoln Dr            | 2-way Stop (NB/SB)   | NB Shared<br>SB Left<br>SB Right<br>EB Left<br>WB Left | C(D)<br>F(F)<br>B(B)<br>B(B)<br>B(B) | C(E)<br>F(F)<br>B(B)<br>B(B)<br>B(B) | [Not Mitigated] |
| 9  | Scottsdale Rd & Lincoln Dr        | Signal               | NB                                                     | C(C)                                 | C(C)                                 | D(D)            |
|    |                                   |                      | SB                                                     | D(D)                                 | D(D)                                 | E(E)            |
|    |                                   |                      | EB                                                     | F(E)                                 | F(E)                                 | E(E)            |
|    |                                   |                      | WB                                                     | E(F)                                 | E(F)                                 | E(E)            |
|    |                                   |                      | <b>Overall</b>                                         | <b>D(D)</b>                          | <b>D(D)</b>                          | <b>E(D)</b>     |
| A  | Quail Run Rd & Access A           | 1-way stop (WB)      | SB Left<br>WB Right                                    | -(-)<br>-(-)                         | A(A)<br>A(A)                         | [Not Mitigated] |

| ID | Intersection                     | Intersection Control | Approach/Movement    | 2020 LOS AM(PM) |              |                 |
|----|----------------------------------|----------------------|----------------------|-----------------|--------------|-----------------|
|    |                                  |                      |                      | No-Build        | Build        | Mitigated       |
| B  | Smoke Tree Access B & Lincoln Dr | 1-way stop (NB)      | NB Shared<br>WB Left | -(-)<br>-(-)    | C(C)<br>B(B) | [Not Mitigated] |

The results of the 2020 opening year Synchro analysis summarized in **Table 6** indicates that all study intersections are anticipated to experience an acceptable level of service, with the exception of the following intersections:

The intersection of **Mockingbird Lane & Lincoln Drive** is expected to experience delay on the northbound and southbound approaches during the no build and the full build scenario. By increasing the southbound left turn phase from 9 seconds to 19 seconds and changing the northbound left turn phase from permissive to permissive-protected, the southbound approach delay is expected to decrease from 56 seconds per vehicle to 55.1 seconds per vehicle during the AM peak hour and decrease from 58.7 seconds per vehicle to 55.4 seconds per vehicle during the PM peak hour. The northbound approach delay is expected to decrease from 48 seconds per vehicle to 43.3 seconds per vehicle during the AM peak hour and decrease from 58.7 seconds per vehicle to 57.3 seconds per vehicle in the PM peak hour, which is very close to what is considered an acceptable level of service.

The intersections of **Apartment Driveway & Lincoln Drive** and **AJ's Driveway & Lincoln Drive** experience delays in the northbound left turn approach and southbound left turn. Both of these approaches and driveways are driveways for AJ's Fine Foods and the existing Lincoln Apartments. The addition of Smoke Tree Resort is not the cause of these delays, which remains consistent with the existing condition.

The intersection of **Scottsdale Road & Lincoln Drive** is expected to experience delay on the eastbound and westbound approaches during both the AM and PM peak hours for both the no build and full build scenarios. The intersection is expected to operate at an overall acceptable level of service (LOS D or better) during both the AM and PM peak hours of both scenarios, however, the eastbound and westbound approach delay could be improved by increasing the eastbound phase from 30 seconds to 32 seconds and increasing the westbound phase from 13 seconds to 21 seconds. This change is expected to decrease the overall intersection delay from 46.4 seconds per vehicle to 25 seconds per vehicle in the AM peak and increase the overall intersection delay from 44.9 seconds per vehicle to 52.1 seconds per vehicle in the PM peak hour. Although the PM peak hour overall intersection delay is expected to increase, the individual approach delays for the eastbound and westbound decrease significantly. The eastbound approach is expected to decrease from 82.8 seconds per vehicle to 16 seconds per vehicle and the westbound approach is expected to decrease from 63.8 seconds per vehicle to 23.7 seconds per vehicle during the PM peak hour.

The intersection of **Quail Run Road and Access A** reports a delay of zero seconds using the HCM 6<sup>th</sup> edition methodology. No LOS is reported in the included appendices, however zero seconds of delay would yield an LOS of A, shown in the table.

The signal timing proposed for the 2020 mitigated scenario was applied to the 2025 horizon year.

**Table 7: 2025 Peak Hour Analysis**

| ID | Intersection                      | Intersection Control | Approach/Movement | 2025 LOS AM(PM) |             |                 |
|----|-----------------------------------|----------------------|-------------------|-----------------|-------------|-----------------|
|    |                                   |                      |                   | No-Build        | Build       | Mitigated       |
| 1  | Mockingbird Ln & Lincoln Dr       | Signal               | NB                | D(E)            | D(D)        | [Not Mitigated] |
|    |                                   |                      | SB                | E(E)            | E(E)        |                 |
|    |                                   |                      | EB                | B(A)            | C(B)        |                 |
|    |                                   |                      | WB                | C(B)            | D(C)        |                 |
|    |                                   |                      | <b>Overall</b>    | <b>C(B)</b>     | <b>C(C)</b> |                 |
| 2  | Quail Run Rd & Lincoln Dr         | Signal               | NB                | B(B)            | B(B)        | [Not Mitigated] |
|    |                                   |                      | SB                | B(C)            | B(B)        |                 |
|    |                                   |                      | EB                | A(A)            | B(A)        |                 |
|    |                                   |                      | WB                | D(D)            | D(C)        |                 |
|    |                                   |                      | <b>Overall</b>    | <b>C(C)</b>     | <b>C(B)</b> |                 |
| 3  | Smoke Tree Drwy West & Lincoln Dr | 1-way stop (NB)      | NB Shared/Right   | A(A)            | -(-)        | [Not Mitigated] |
|    |                                   |                      | WB Left           | A(A)            | -(-)        |                 |
| 4  | Smoke Tree Drwy East & Lincoln Dr | 1-way stop (NB)      | NB Shared         | C(C)            | -(-)        | [Not Mitigated] |
|    |                                   |                      | WB Left           | B(B)            | -(-)        |                 |
| 5  | Medical Drwy West & Lincoln Dr    | 1-way stop (NB)      | NB Shared         | C(C)            | C(C)        | [Not Mitigated] |
|    |                                   |                      | WB Left           | B(B)            | B(B)        |                 |
| 6  | Medical Drwy East & Lincoln Dr    | 1-way stop (NB)      | NB Shared/Right   | B(B)            | B(B)        | [Not Mitigated] |
|    |                                   |                      | WB Left           | B(A)            | B(A)        |                 |
| 7  | Apartment Drwy & Lincoln Dr       | 2-way Stop (NB/SB)   | NB Shared         | F(F)            | F(F)        | [Not Mitigated] |
|    |                                   |                      | SB Left           | F(F)            | F(F)        |                 |
|    |                                   |                      | SB Right          | B(B)            | B(B)        |                 |
|    |                                   |                      | EB Left           | B(B)            | B(B)        |                 |
|    |                                   |                      | WB Left           | B(B)            | B(B)        |                 |
| 8  | AJ's Drwy & Lincoln Dr            | 2-way Stop (NB/SB)   | NB Shared         | D(F)            | D(F)        | [Not Mitigated] |
|    |                                   |                      | SB Left           | F(F)            | F(F)        |                 |
|    |                                   |                      | SB Right          | B(B)            | B(B)        |                 |
|    |                                   |                      | EB Left           | B(B)            | B(B)        |                 |
|    |                                   |                      | WB Left           | B(B)            | B(B)        |                 |
| 9  | Scottsdale Rd & Lincoln Dr        | Signal               | NB                | C(D)            | D(D)        | D(E)            |
|    |                                   |                      | SB                | D(D)            | F(E)        | E(D)            |
|    |                                   |                      | EB                | F(F)            | F(E)        | E(E)            |
|    |                                   |                      | WB                | E(F)            | E(E)        | E(E)            |
|    |                                   |                      | <b>Overall</b>    | <b>D(D)</b>     | <b>E(E)</b> | <b>E(E)</b>     |
| A  | Quail Run Rd & Access A           | 1-way stop (WB)      | SB Left           | -(-)            | A(A)        | [Not Mitigated] |
|    |                                   |                      | WB Right          | -(-)            | A(A)        |                 |
| B  | Smoke Tree Access B & Lincoln Dr  | 1-way stop (NB)      | NB Shared         | -(-)            | C(C)        | [Not Mitigated] |
|    |                                   |                      | WB Left           | -(-)            | B(B)        |                 |

The results of the 2025 horizon year Synchro analysis summarized in **Table 7** indicates that all study intersections are anticipated to experience an acceptable level of service, with the exception of the following intersections:

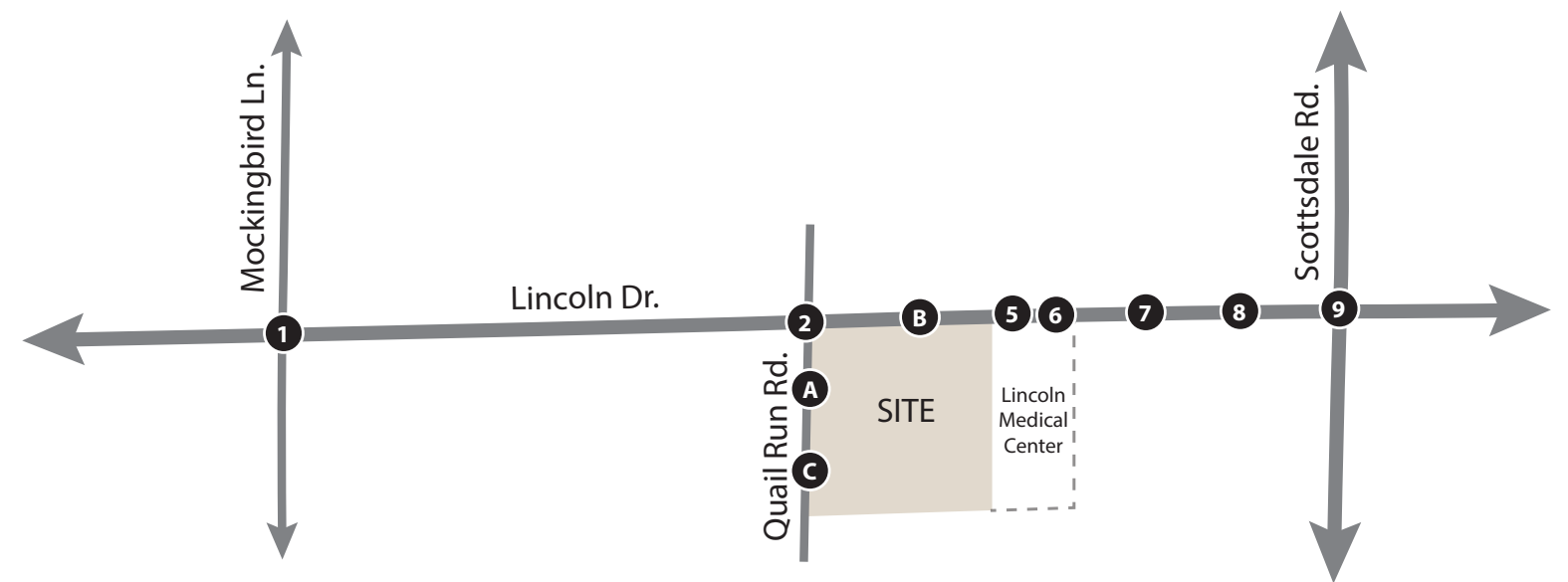
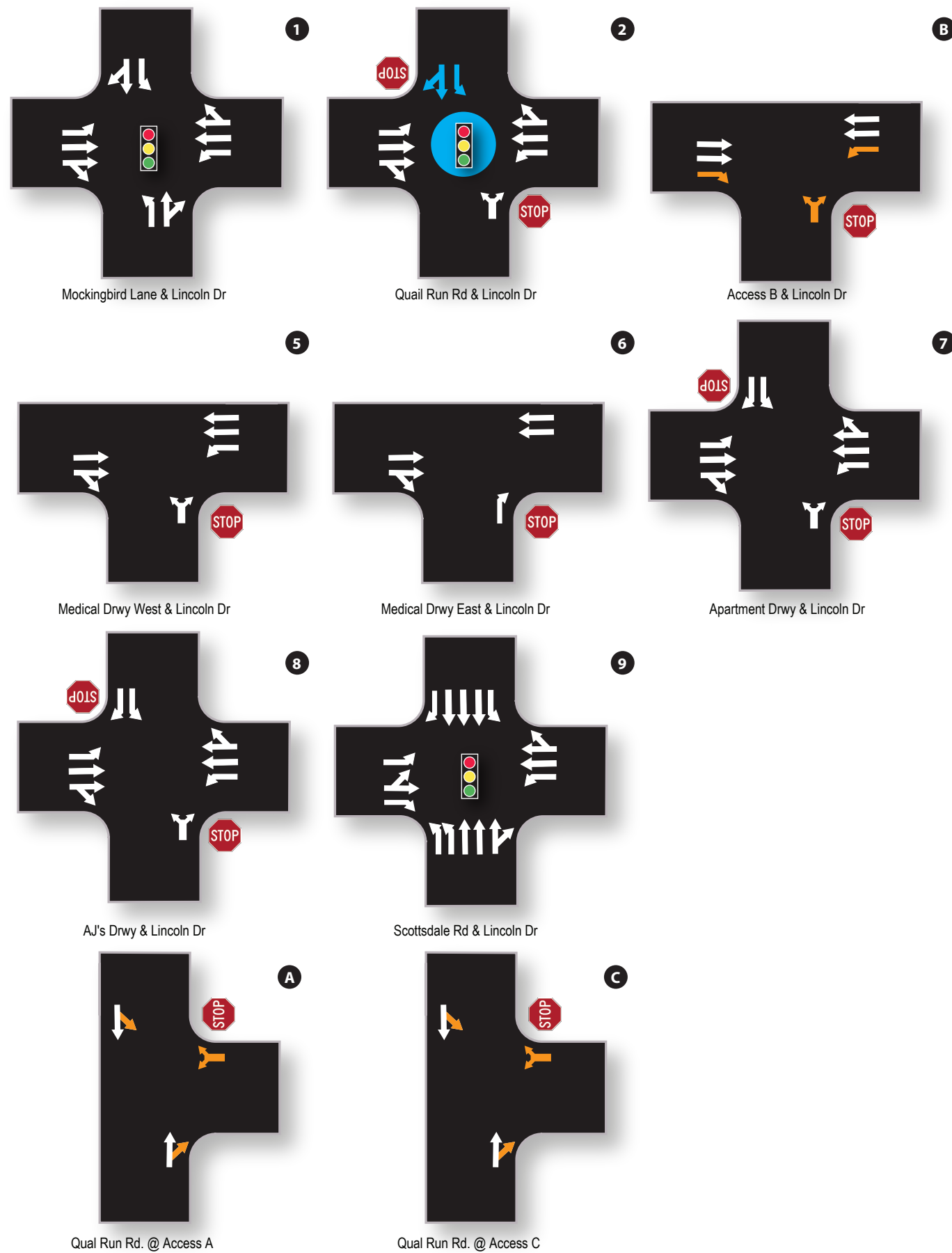
The intersection of **Mockingbird Lane & Lincoln Drive** is expected to have delay on the southbound approach during the AM and PM peak hours of both the no build and full build scenario. The delay is due to the volume of southbound right turning vehicles, however the approach delay is 55.4 seconds per vehicle during the AM peak hour of the full build scenario and 56.2 seconds per vehicle during the PM peak hour, which is lower than the no build scenario and very close to the threshold for an acceptable level of service (LOS D or better).

The intersections of **Apartment Driveway & Lincoln Drive** and **AJ's Driveway & Lincoln Drive** experience delays in the northbound left turn approach and southbound left turn. Both of these approaches and driveways are driveways for AJ's Fine Foods and the existing Lincoln Apartments. The addition of Smoke Tree Resort is not the cause of these delays, which remains consistent with the existing condition.

The intersection of **Scottsdale Road & Lincoln Drive** is expected to experience delay on the southbound, eastbound and westbound approaches during both the AM and PM peak hours for both the no build and full build scenarios. By decreasing the cycle length from 130 seconds to 120 seconds and optimizing the green times, the overall intersection delay is expected to decrease from 76 seconds per vehicle to 58.2 seconds per vehicle during the AM peak hour and decrease from 62.7 seconds per vehicle to 57.7 seconds per vehicle during the PM peak hour. Although this mitigation measure is expected to decrease the approach delays and the overall intersection delay, if this signal is coordinated with any others along Scottsdale Road, changing the cycle length will interfere with the coordination and would not be recommended. The City of Scottsdale has stated that they have plans to change the eastbound approach configuration to dual left turn lanes and a shared through/right turn lane. It is not known when this change will occur, but it could improve the delay if the intersection is retimed.

The intersection of **Quail Run Road and Access A** reports a delay of zero seconds using the HCM 6<sup>th</sup> edition methodology. No LOS is reported in the included appendices, however zero seconds of delay would yield an LOS of A, shown in the table.

The proposed lane configurations are presented in **Figure 11**.



**Figure 11: Proposed Lane Configurations and Traffic Controls**

## QUEUE LENGTH ANALYSIS

Adequate turn storage should be supplied on any approach where turn lanes are permitted and/or warranted. A queuing analysis was performed for all warranted/recommended and existing intersection turn lanes where site traffic is expected as well as left turn lanes adjacent to the site. According to the methodology documented in *A Policy on Geometric Design of Highways and Streets* (the AASHTO “Green Book”), the storage length for a turn lane is typically estimated as the length required to hold the average number of arriving vehicles per two minutes, where unsignalized, or per one-and-a half signal cycles, where signalized.<sup>1</sup> The formulas used for the calculations are shown below.

For signalized intersections, the storage length is determined by the following formula:

$$\text{Storage Length} = [1.5 \times (\text{veh/hr})/(\text{cycles/hr})] \times 25 \text{ feet}$$

For unsignalized intersections, the storage length is determined by the following formula:

$$\text{Storage Length} = [(\text{veh/hr})/(30 \text{ periods/hr})] \times 25 \text{ feet}$$

Using the traffic volumes and lane configurations projected for the 2025 horizon year, the resulting turn lane storage for turn movements affiliated with the site using AASHTO guidelines were calculated with a 130-second cycle length and are summarized in **Table 8**. Calculations for the queue storage length recommendations are provided in **Appendix I**.

**Table 8: Queue Storage Lengths**

| ID | Intersection                     | Intersection Control | Movement | Queue Storage           |                     |                             |                     |
|----|----------------------------------|----------------------|----------|-------------------------|---------------------|-----------------------------|---------------------|
|    |                                  |                      |          | Existing <sup>(1)</sup> | AASHTO              | 95 <sup>th</sup> Percentile | Recommended         |
| 1  | Mockingbird Lane & Lincoln Dr    | Signalized           | NB Left  | 85'                     | 25'                 | 25'                         | 85'                 |
|    |                                  |                      | SB Left  | 130'                    | 175'                | 95'                         | 130'                |
|    |                                  |                      | EB Left  | 145'                    | 500'                | 235'                        | <sup>(4)</sup> 145' |
|    |                                  |                      | WB Left  | 100'                    | 50'                 | 30'                         | 100'                |
| 2  | Quail Run Rd & Lincoln Dr        | Signalized           | EB Left  | -                       | 225'                | 155'                        | 150'                |
|    |                                  |                      | WB Left  | -                       | 25'                 | 25'                         | 150'                |
|    |                                  |                      | WB Right | -                       | 50'                 | -                           | 150'                |
| 9  | Scottsdale Rd & Lincoln Dr       | Signalized           | NB Left  | <sup>(2)</sup> 550'     | <sup>(2)</sup> 850' | <sup>(2)</sup> 345'         | <sup>(2)</sup> 550' |
|    |                                  |                      | SB Left  | 185'                    | 125'                | 120'                        | 185'                |
|    |                                  |                      | EB Left  | 175'                    | 1,050'              | 500'                        | <sup>(4)</sup> 175' |
|    |                                  |                      | WB Left  | 90'                     | 125'                | 100'                        | <sup>(5)</sup> 90'  |
|    |                                  |                      | SB Right | 315'                    | 1,225'              | 275'                        | <sup>(3)</sup> 350' |
|    |                                  |                      | EB Right | 175'                    | 925'                | 350'                        | <sup>(4)</sup> 175' |
| B  | Smoke Tree Access B & Lincoln Dr | 1-way stop (NB)      | WB Left  | -                       | 50'                 | 25'                         | 50'                 |
|    |                                  |                      | EB Right | -                       | 25'                 | -                           | 50'                 |

(1) Measured from stop bar to end of storage length

(2) Dual left turn lanes. Queue storage includes total storage length of both lanes

(3) Max storage length recommended for signalized intersection

<sup>1</sup> The American Association of Highway and Transportation Officials on pages 714-715 of its publication, *Geometric Design of Highways and Streets* (“AASHTO Green Book”), indicates that storage length for a turn lane, exclusive of taper, “should usually be based on one and one-half to two times the average number of vehicles that would store per cycle” at a signalized intersection.

- (4) Extending this turn will interfere with left turns into AJ's Fine Foods driveway
- (5) Not the responsibility of the developer

According to the CivTech study done for the Ritz Carlton, the newly signalized intersection of Quail Run Road and Lincoln Drive will have eastbound/westbound left turn lanes and a westbound right turn lane striped with 150 feet of storage each. The recommended storage lengths in **Table 8** are provided for horizon year 2025 using the total traffic projections.

The Smoke Tree Resort is requesting a new full access driveway located approximately 80 feet west of the eastern most property line. The Town of Paradise Valley has stated that an eastbound right turn deceleration lane is required at this driveway. Using AASHTO methodology only 25 feet of storage is required, however, 50 feet is the minimum that should be recommended per AASHTO standards with a 90 foot taper. A minimum of 75 feet of storage is recommended for the right turn deceleration lane, however, if interference with other turn lanes is expected with the 75 foot storage length, 50 feet would be an acceptable storage length.

### **SIGHT DISTANCE ANALYSIS**

Adequate sight distance must be provided at intersections and site access driveways to allow safe turning movements. There must be sufficient unobstructed sight distance along both approaches of a street/driveway intersection and across their included corners to allow operators of vehicles to see each other in time to prevent a collision.

The Town of Paradise Valley maintains sight distance requirements within their City Code, standard details and development services guidelines. The Town of Paradise Valley measures sight distance using AASHTO methodology except that the sight triangle from the driveway is measured from the center of the egress lane, 14.5 feet back from the curb return line. Sight distance calculations according to AASHTO guidelines are summarized in **Table 9**.

**Table 9: AASHTO Sight Distance Requirements**

| Roadway                          | Posted Speed Limit (mph) | Design Speed (mph) | Sight Distance Along Roadway  |                             |                        |
|----------------------------------|--------------------------|--------------------|-------------------------------|-----------------------------|------------------------|
|                                  |                          |                    | Left of Driveway (Case B2/B3) | Right of Driveway (Case B1) | On Major Road (Case F) |
| Quail Run Rd & Access A          | -                        | 30                 | 290'                          | 335'                        | 245'                   |
| Smoke Tree Access B & Lincoln Dr | 40                       | 45                 | 860'                          | 930'                        | 795'                   |
| Quail Run Rd & Access C          | -                        | 30                 | 290'                          | 335'                        | 245'                   |

There are no existing obstructions to sight distance within the project intersection or along the included corners of the proposed intersection. Adequate site distance must be provided at the intersections to allow safe left and right turning movements from the development. Recommended distances for these movements can be found in the table above.

The contractor should ensure that sight visibility is provided at all proposed intersections according to the distances shown in **Table 9** and that sight triangles at public

intersections are maintained according to the Town Code. All vegetation and trees should be maintained according to Town of Paradise Valley regulations. Sight distance worksheets have been included within **Appendix J**.

## CONCLUSIONS

The following conclusions have been documented in this study.

### General

- The proposed development is anticipated to generate approximately 1,032 weekday daily trips, with 69 trips occurring in the AM peak hour and 101 trips occurring in the PM peak hour.

### Existing Conditions

- The results of the existing conditions analysis indicates that all intersections currently operate at an overall acceptable level of service (LOS D or better), with the exception of the intersections of Apartment Driveway & Lincoln Drive and AJ's Driveway & Lincoln Drive under the existing lane configurations.
  - o The intersections of **Apartment Driveway & Lincoln Drive** and **AJ's Driveway & Lincoln Drive** experience delays in the northbound left turn approach and southbound left turn. Both of these approaches and driveways are driveways for AJ's Fine Foods and existing Apartments. It is possible that a raised median will be installed along the length of Lincoln Drive.

### Opening Year 2020

- The results of the 2020 opening year Synchro analysis indicates that all study intersections are anticipated to experience an acceptable level of service, with the exception of the following intersections:
  - o The intersection of **Mockingbird Lane & Lincoln Drive** is expected to experience delay on the northbound and southbound approaches during the no build and the full build scenario. By increasing the southbound left turn phase from 9 seconds to 19 seconds and changing the northbound left turn phase from permissive to permissive-protected, the southbound approach delay is expected to decrease from 56 seconds per vehicle to 55.1 seconds per vehicle during the AM peak hour and decrease from 58.7 seconds per vehicle to 55.4 seconds per vehicle during the PM peak hour. The northbound approach delay is expected to decrease from 48 seconds per vehicle to 43.3 seconds per vehicle during the AM peak hour and decrease from 58.7 seconds per vehicle to 57.3 seconds per vehicle in the PM peak hour, which is very close to what is considered an acceptable level of service.
  - o The intersections of **Apartment Driveway & Lincoln Drive** and **AJ's Driveway & Lincoln Drive** experience delays in the northbound left turn approach and southbound left turn. Both of these approaches and driveways are driveways for AJ's Fine Foods and the existing Lincoln Apartments. The addition of Smoke Tree Resort is not the cause of these delays, which remains consistent with the existing condition.

- o The intersection of **Scottsdale Road & Lincoln Drive** is expected to experience delay on the eastbound and westbound approaches during both the AM and PM peak hours for both the no build and full build scenarios. The intersection is expected to operate at an overall acceptable level of service (LOS D or better) during both the AM and PM peak hours of both scenarios, however, the eastbound and westbound approach delay could be improved by increasing the eastbound phase from 30 seconds to 32 seconds and increasing the westbound phase from 13 seconds to 21 seconds. This change is expected to decrease the overall intersection delay from 46.4 seconds per vehicle to 25 seconds per vehicle in the AM peak and increase the overall intersection delay from 44.9 seconds per vehicle to 52.1 seconds per vehicle in the PM peak hour. Although the PM peak hour overall intersection delay is expected to increase, the individual approach delays for the eastbound and westbound decrease significantly. The eastbound approach is expected to decrease from 82.8 seconds per vehicle to 16 seconds per vehicle and the westbound approach is expected to decrease from 63.8 seconds per vehicle to 23.7 seconds per vehicle during the PM peak hour.
- o The intersection of **Quail Run Road and Access A** reports a delay of zero seconds using the HCM 6<sup>th</sup> edition methodology. No LOS is reported in the included appendices, however zero seconds of delay would yield an LOS of A, shown in the table.

#### Horizon year 2025

- The results of the 2025 horizon year Synchro analysis summarized in **Table 7** indicates that all study intersections are anticipated to experience an acceptable level of service, with the exception of the following intersections:
  - o The intersections of **Apartment Driveway & Lincoln Drive** and **AJ's Driveway & Lincoln Drive** experience delays in the northbound left turn approach and southbound left turn. Both of these approaches and driveways are driveways for AJ's Fine Foods and the existing Lincoln Apartments. The addition of Smoke Tree Resort is not the cause of these delays, which remains consistent with the existing condition.
  - o The intersection of **Scottsdale Road & Lincoln Drive** is expected to experience delay on the southbound, eastbound and westbound approaches during both the AM and PM peak hours for both the no build and full build scenarios. By decreasing the cycle length from 130 seconds to 120 seconds and optimizing the green times, the overall intersection delay is expected to decrease from 76 seconds per vehicle to 58.2 seconds per vehicle during the AM peak hour and decrease from 62.7 seconds per vehicle to 57.7 seconds per vehicle during the PM peak hour. Although this mitigation measure is expected to decrease the approach delays and the overall intersection delay, if this signal is coordinated with any others along Scottsdale Road, changing the cycle length will interfere with the coordination and would not be recommended. The City of

Scottsdale has stated that they have plans to change the eastbound approach configuration to dual left turn lanes and a shared through/right turn lane. It is not known when this change will occur, but it could improve the delay if the intersection is retimed.

- o The intersection of **Quail Run Road and Access A** reports a delay of zero seconds using the HCM 6<sup>th</sup> edition methodology. No LOS is reported in the included appendices, however zero seconds of delay would yield an LOS of A, shown in the table.

#### Queue Storage and Sight Distance

- According to the CivTech study done for the Ritz Carlton, the newly signalized intersection of Quail Run Road and Lincoln Drive will have eastbound/westbound left turn lanes and a westbound right turn lane striped with 150 feet of storage each. While 150 feet is being proposed due to the current development agreement with Five Star Development for the Ritz Carlton, less is required to meet the recommended AASHTO length. The recommended storage lengths are provided for horizon year 2025 using the total traffic projections.
  - o The Smoke Tree Resort is requesting a new full access driveway located approximately 80 feet west of the eastern most property line. The Town of Paradise Valley has stated that an eastbound right turn deceleration lane is required at this driveway. Using AASHTO methodology only 25 feet of storage is required, however, 50 feet is the minimum that should be recommended per AASHTO standards with a 90 foot taper.
- There are no existing obstructions to sight distance within the project intersections or along the included corners of the proposed intersection. Adequate sight distance must be provided at the intersections to allow safe left and right turning movements from the development
  - o The contractor should ensure that sight visibility is provided at all proposed intersections according to the distances and that sight triangles at public intersections are maintained according to the Town Code. All vegetation and trees should be maintained according to Town of Paradise Valley regulations.

## LIST OF REFERENCES

*Highway Capacity Manual*. Transportation Research Board, Washington, D.C., 2000.

*Manual on Uniform Traffic Control Devices*. U.S. Department of Transportation, Federal Highways Administration, Washington, D.C., 2009.

*Roadway Design Manual*, Maricopa County Department of Transportation, Phoenix, Arizona, Revised April 2004.

*Trip Generation Manual, 10<sup>th</sup> Edition*, Institute of Transportation Engineers, Washington, D.C., 2016.

*Trip Generation Handbook, 3<sup>rd</sup> Edition*, Institute of Transportation Engineers, Washington, D.C., 2016.

Ritz Carlton Master Plan, Paradise Valley Traffic Impact Analysis (TIA), CivTech, Scottsdale, AZ, March 2016.

Lincoln Medical Center, Paradise Valley Traffic Impact Analysis (TIA), CivTech, Scottsdale, AZ, November 2018.

## **TECHNICAL APPENDIX**

|                    |                                      |
|--------------------|--------------------------------------|
| <b>APPENDIX A:</b> | <b>REVIEW COMMENTS AND RESPONSES</b> |
| <b>APPENDIX B:</b> | <b>EXISTING TRAFFIC COUNTS</b>       |
| <b>APPENDIX C:</b> | <b>EXISTING PEAK HOUR ANALYSIS</b>   |
| <b>APPENDIX D:</b> | <b>TRIP GENERATION</b>               |
| <b>APPENDIX E:</b> | <b>TRIP DISTRIBUTION</b>             |
| <b>APPENDIX F:</b> | <b>BACKGROUND TRAFFIC</b>            |
| <b>APPENDIX G:</b> | <b>2020 PEAK HOUR ANALYSIS</b>       |
| <b>APPENDIX H:</b> | <b>2025 PEAK HOUR ANALYSIS</b>       |
| <b>APPENDIX I:</b> | <b>QUEUE STORAGE ANALYSIS</b>        |
| <b>APPENDIX J:</b> | <b>SIGHT DISTANCE ANALYSIS</b>       |

## **APPENDIX A**

### **REVIEW COMMENTS AND RESPONSES**

**Smoke Tree Resort**  
**2ns Submittal**

**CivTech, Inc.**

**Review Comments & Responses**

Disposition Codes: (1) Will Comply (2) Will Evaluate (3) Delete Comment (4) Defer to Consultant/Owner

Reviewer Name, Agency: **Paul Mood, Town of Paradise Valley**

| Item | Review Comment                                                                                                                                                                                                                                                                                                                                       | (Code) & Response                                                                                                                                                                                                                                                                                                                                                                               |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.   | Applicant shall assume staff's recommendation for access onto Lincoln Drive which includes 65 feet of right-of-way, eliminated both existing driveways and adds a right turn deceleration lane and shared use driveway with the Lincoln Medical Plaza approximately 80 feet west of the eastern property line. The TIA should be updated accordingly | (1) The analysis and report text have been updated to reflect the change in access from the two existing driveways on Lincoln Drive to a single, full movement, shared driveway with Lincoln Medical Center. However, Lincoln Medical site traffic was not added to this shared driveway, but instead kept at their two existing driveways, per the instruction of the Town of Paradise Valley. |
| 2.   | A cross access easement with the Lincoln Medical Plaza shall be required                                                                                                                                                                                                                                                                             | (2) Cross access may be included in the site design, but for the purpose of this study, Lincoln Medical site generated traffic was not assumed to be using the shared access, but instead kept their two original driveways.                                                                                                                                                                    |
| 3.   | Update existing speed limit on Lincoln Drive from 35 mph to 40 mph in existing conditions and sight distance analysis sections                                                                                                                                                                                                                       | (1) Speed limit for Lincoln Drive has been updated from 35 mph to 40 mph                                                                                                                                                                                                                                                                                                                        |

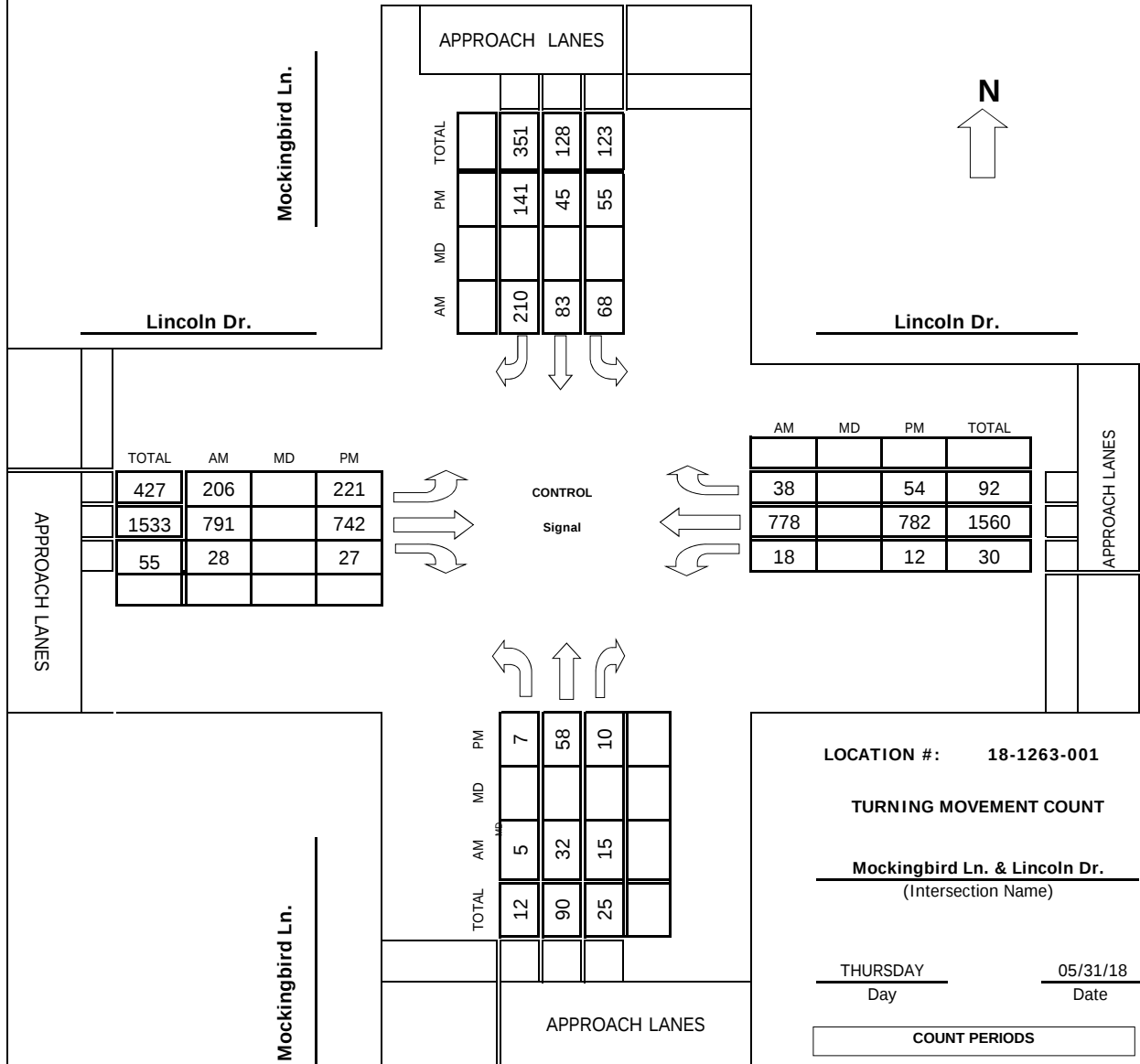


## **APPENDIX B**

### **EXISTING TRAFFIC COUNTS**

**Project #:** 18-1263-001

**TMC SUMMARY OF Mockingbird Ln. & Lincoln Dr.**



**LOCATION #:** 18-1263-001

**TURNING MOVEMENT COUNT**

**Mockingbird Ln. & Lincoln Dr.**  
(Intersection Name)

**THURSDAY**      **05/31/18**  
Day      Date

**COUNT PERIODS**

|      |       |   |       |
|------|-------|---|-------|
| AM   | 700AM | - | 900AM |
| NOON |       | - |       |
| PM   | 400PM | - | 600PM |

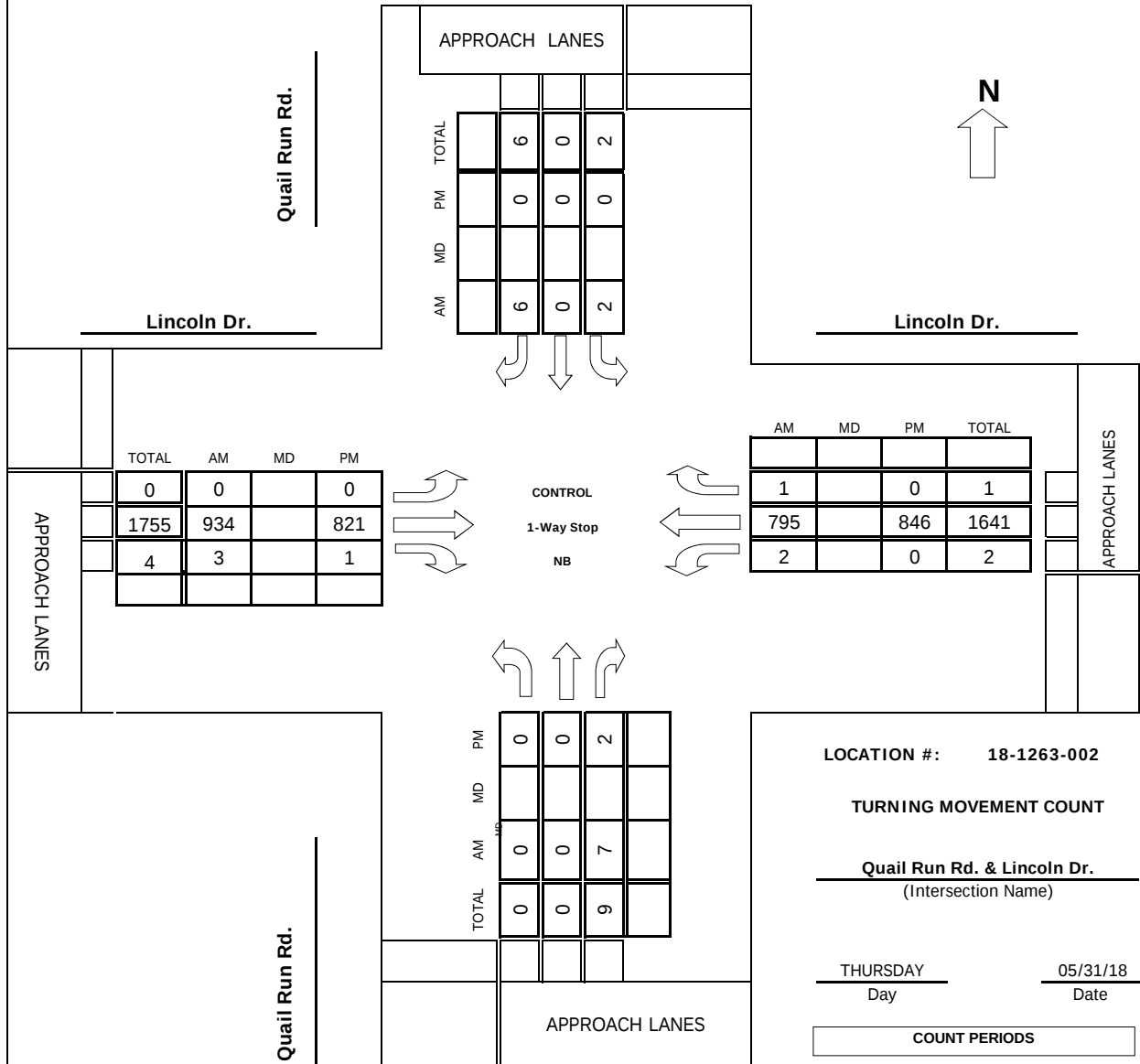
AM PEAK HOUR      745 AM

NOON PEAK HOUR                          

PM PEAK HOUR      430 PM

Project #: 18-1263-002

**TMC SUMMARY OF Quail Run Rd. & Lincoln Dr.**



LOCATION #: **18-1263-002**

**TURNING MOVEMENT COUNT**

**Quail Run Rd. & Lincoln Dr.**  
(Intersection Name)

THURSDAY      05/31/18  
Day      Date

**COUNT PERIODS**

|      |       |   |       |
|------|-------|---|-------|
| AM   | 700AM | - | 900AM |
| NOON |       | - |       |
| PM   | 400PM | - | 600PM |

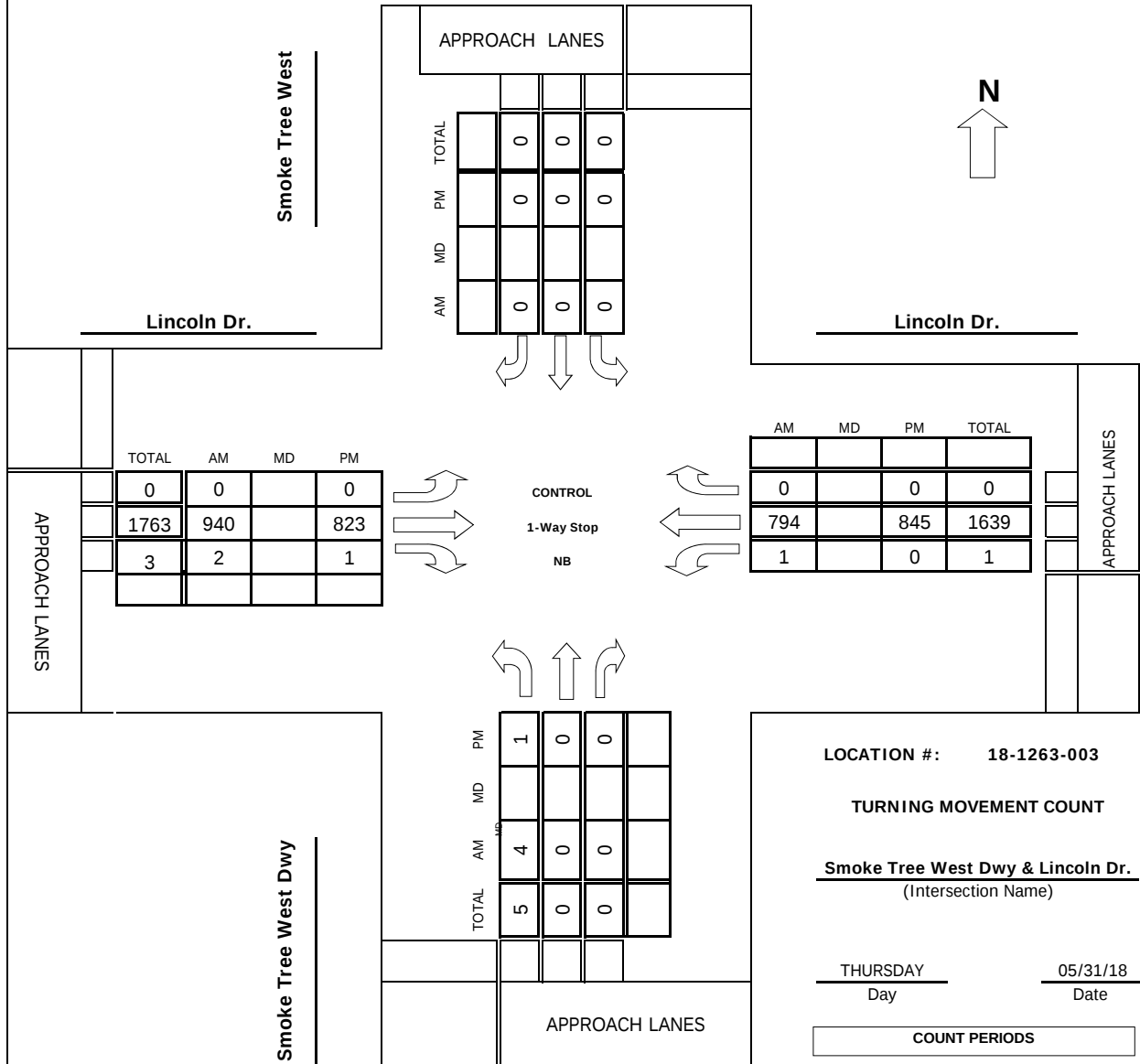
AM PEAK HOUR      800 AM

NOON PEAK HOUR     

PM PEAK HOUR      445 PM

**Project #:** 18-1263-003

**TMC SUMMARY OF Smoke Tree West Dwy & Lincoln Dr.**



**LOCATION #:** 18-1263-003

**TURNING MOVEMENT COUNT**

**Smoke Tree West Dwy & Lincoln Dr.**  
(Intersection Name)

**THURSDAY** 05/31/18  
Day Date

**COUNT PERIODS**

|             |       |   |       |
|-------------|-------|---|-------|
| <b>AM</b>   | 700AM | - | 900AM |
| <b>NOON</b> |       | - |       |
| <b>PM</b>   | 400PM | - | 600PM |

AM PEAK HOUR 800 AM

NOON PEAK HOUR

PM PEAK HOUR 445 PM

**Project #:** 18-1263-004

**TMC SUMMARY OF Smoke Tree East Dwy & Lincoln Dr.**

**Smoke Tree East**

**Lincoln Dr.**

APPROACH LANES

|       |   |   |   |
|-------|---|---|---|
|       |   |   |   |
| TOTAL | 0 | 0 | 0 |
| PM    | 0 | 0 | 0 |
| MD    |   |   |   |
| AM    | 0 | 0 | 0 |

**N**

↑

**Lincoln Dr.**

**APPROACH LANES**

|       |     |    |     |
|-------|-----|----|-----|
| TOTAL | AM  | MD | PM  |
| 0     | 0   |    | 0   |
| 1764  | 942 |    | 822 |
| 1     | 0   |    | 1   |

CONTROL

1-Way Stop

NB

**APPROACH LANES**

|     |    |     |       |
|-----|----|-----|-------|
| AM  | MD | PM  | TOTAL |
| 0   |    | 0   | 0     |
| 791 |    | 845 | 1636  |
| 0   |    | 2   | 2     |

**Smoke Tree East Dwy**

APPROACH LANES

|       |   |   |   |
|-------|---|---|---|
|       |   |   |   |
| TOTAL | 1 | 0 | 2 |
| PM    |   |   |   |
| MD    |   |   |   |
| AM    | 1 | 0 | 2 |

**LOCATION #:** 18-1263-004

**TURNING MOVEMENT COUNT**

**Smoke Tree East Dwy & Lincoln Dr.**  
(Intersection Name)

THURSDAY  
Day

05/31/18  
Date

| COUNT PERIODS |       |         |
|---------------|-------|---------|
| AM            | 700AM | - 900AM |
| NOON          |       | -       |
| PM            | 400PM | - 600PM |

AM PEAK HOUR 800 AM

NOON PEAK HOUR

PM PEAK HOUR 445 PM

**Project #:** 18-1263-005

**TMC SUMMARY OF Medical Office West Dwy & Lincoln Dr.**

**Medical Office West Dwy**

**Lincoln Dr.**

| TOTAL | AM  | MD | PM  |
|-------|-----|----|-----|
| 0     | 0   |    | 0   |
| 1764  | 940 |    | 824 |
| 4     | 4   |    | 0   |

**APPROACH LANES**

**APPROACH LANES**

|       | AM | MD | PM | TOTAL |
|-------|----|----|----|-------|
| Left  | 0  |    |    | 0     |
| Thru  | 0  |    |    | 0     |
| Right | 0  |    |    | 0     |

**CONTROL**  
1-Way Stop  
NB

| TOTAL | AM | MD | PM |
|-------|----|----|----|
| 2     | 0  |    | 2  |
| 0     | 0  |    | 0  |
| 3     | 3  |    | 0  |

**APPROACH LANES**

**Medical Office West Dwy**

**Lincoln Dr.**

| AM  | MD | PM  | TOTAL |
|-----|----|-----|-------|
| 0   |    | 0   | 0     |
| 791 |    | 845 | 1636  |
| 0   |    | 0   | 0     |

**APPROACH LANES**

**LOCATION #:** 18-1263-005

**TURNING MOVEMENT COUNT**

**Medical Office West Dwy & Lincoln Dr.**  
(Intersection Name)

THURSDAY  
Day

05/31/18  
Date

| COUNT PERIODS |       |         |
|---------------|-------|---------|
| AM            | 700AM | - 900AM |
| NOON          |       | -       |
| PM            | 400PM | - 600PM |

AM PEAK HOUR

800 AM

NOON PEAK HOUR

PM PEAK HOUR

445 PM

**Project #:** 18-1263-006

**TMC SUMMARY OF Medical Office East Dwy & Lincoln Dr.**

**Medical Office Ea:**

**Lincoln Dr.**

| APPROACH LANES |     |    |     |
|----------------|-----|----|-----|
| TOTAL          | AM  | MD | PM  |
| 0              | 0   | 0  | 0   |
| 1763           | 939 |    | 824 |
| 2              | 2   |    | 0   |

**Medical Office East Dw**

| TOTAL | AM | MD | PM |
|-------|----|----|----|
| 2     | 0  | 0  | 2  |
| 0     | 0  | 0  | 0  |
| 6     | 3  | 3  | 3  |

**APPROACH LANES**

**CONTROL**  
1-Way Stop  
NB

**Lincoln Dr.**

| AM  | MD | PM  | TOTAL |
|-----|----|-----|-------|
| 0   |    | 0   | 0     |
| 791 |    | 844 | 1635  |
| 5   |    | 0   | 5     |

**APPROACH LANES**

**N**



**LOCATION #:** 18-1263-006

**TURNING MOVEMENT COUNT**

**Medical Office East Dwy & Lincoln Dr.**  
(Intersection Name)

**THURSDAY**                      **05/31/18**  
Day                                      Date

**COUNT PERIODS**

|             |       |   |       |
|-------------|-------|---|-------|
| <b>AM</b>   | 700AM | - | 900AM |
| <b>NOON</b> |       | - |       |
| <b>PM</b>   | 400PM | - | 600PM |

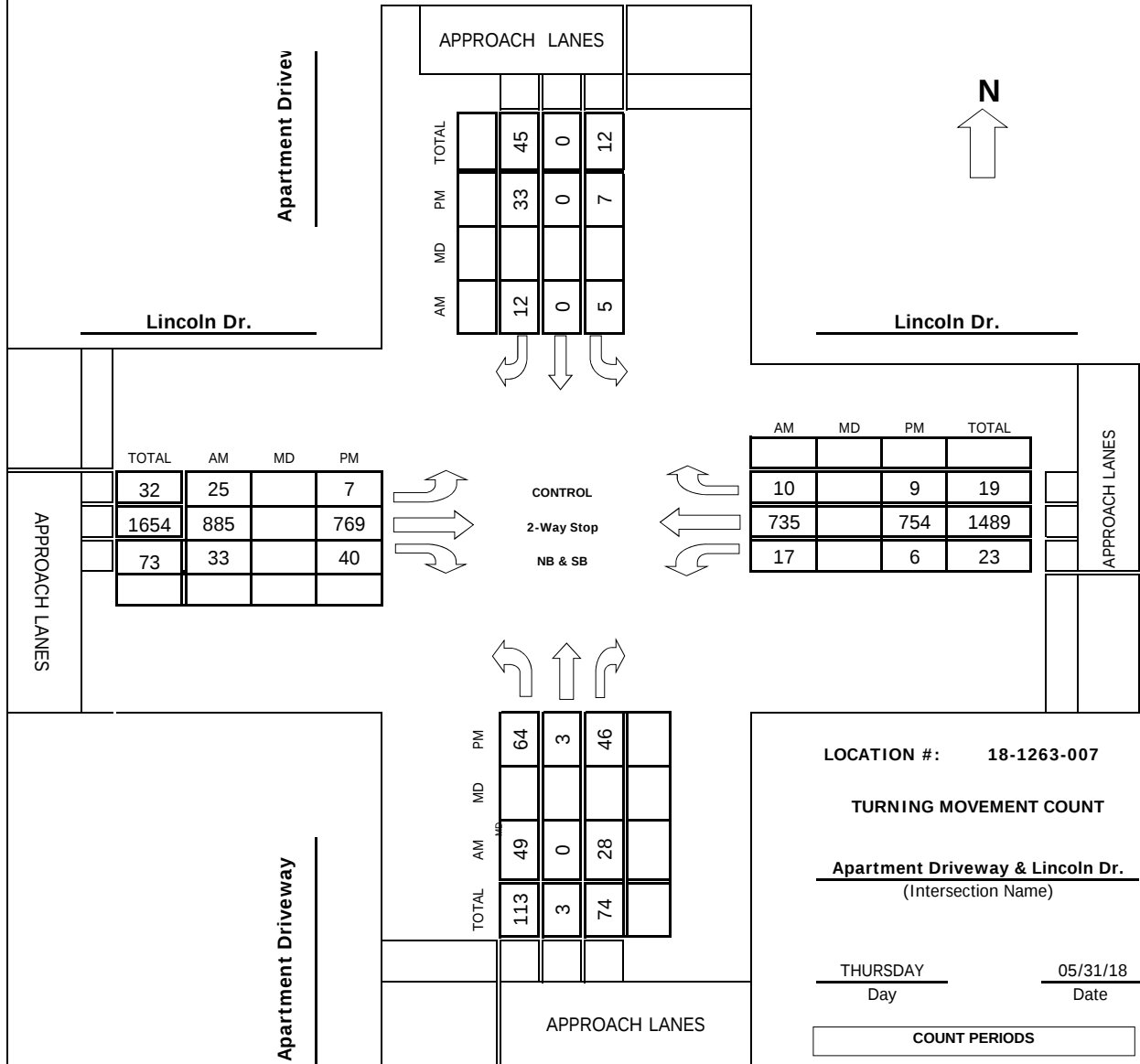
AM PEAK HOUR                      800 AM

NOON PEAK HOUR                                          

PM PEAK HOUR                      445 PM

**Project #:** 18-1263-007

**TMC SUMMARY OF Apartment Driveway & Lincoln Dr.**



**LOCATION #:** 18-1263-007

**TURNING MOVEMENT COUNT**

**Apartment Driveway & Lincoln Dr.**  
(Intersection Name)

**THURSDAY** 05/31/18  
Day Date

**COUNT PERIODS**

|             |       |   |       |
|-------------|-------|---|-------|
| <b>AM</b>   | 700AM | - | 900AM |
| <b>NOON</b> |       | - |       |
| <b>PM</b>   | 400PM | - | 600PM |

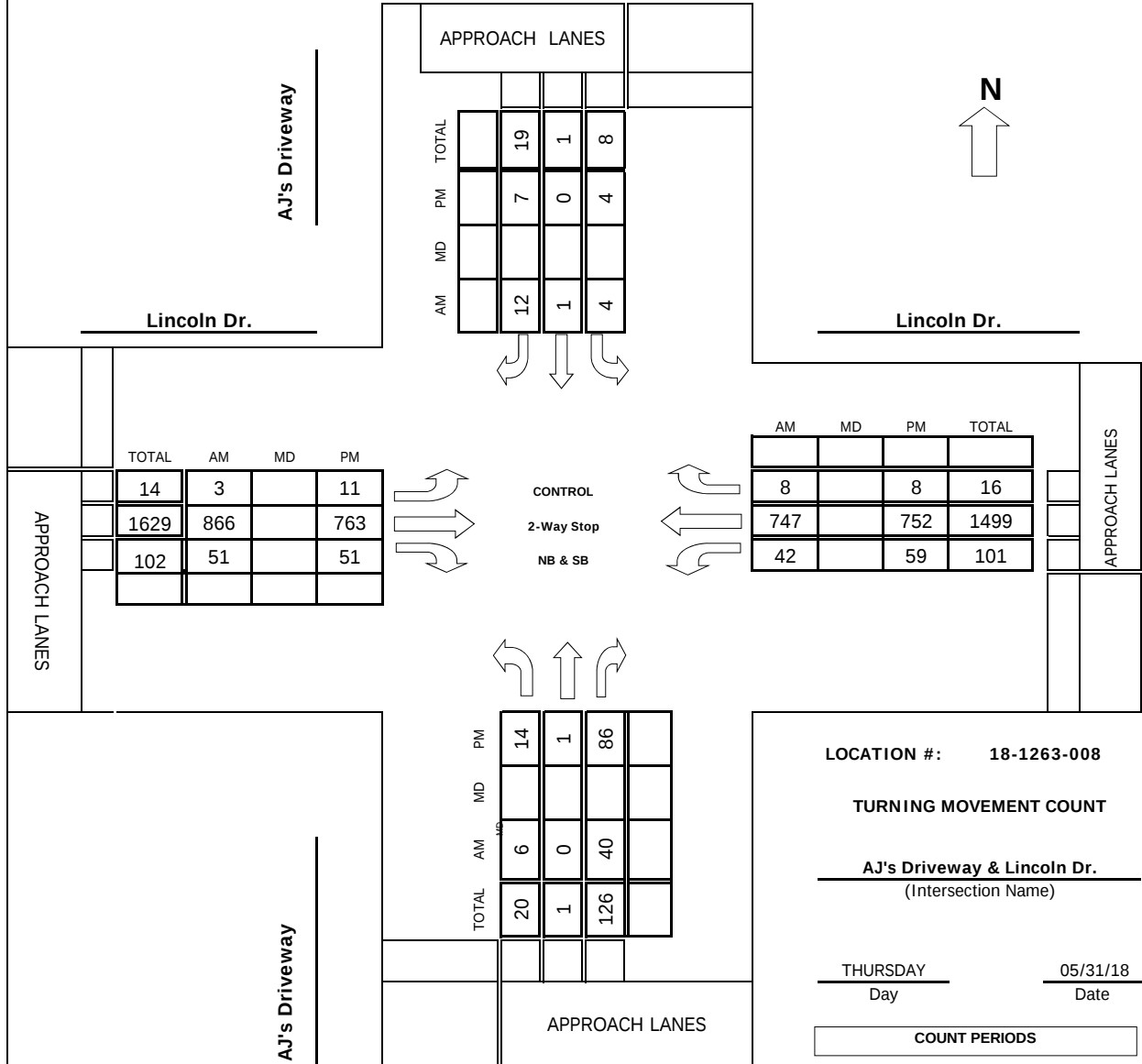
AM PEAK HOUR 800 AM

NOON PEAK HOUR

PM PEAK HOUR 430 PM

**Project #:** 18-1263-008

**TMC SUMMARY OF AJ's Driveway & Lincoln Dr.**



**LOCATION #:** 18-1263-008

**TURNING MOVEMENT COUNT**

**AJ's Driveway & Lincoln Dr.**  
(Intersection Name)

**THURSDAY**  
Day

**05/31/18**  
Date

**COUNT PERIODS**

|      |       |   |       |
|------|-------|---|-------|
| AM   | 700AM | - | 900AM |
| NOON |       | - |       |
| PM   | 400PM | - | 600PM |

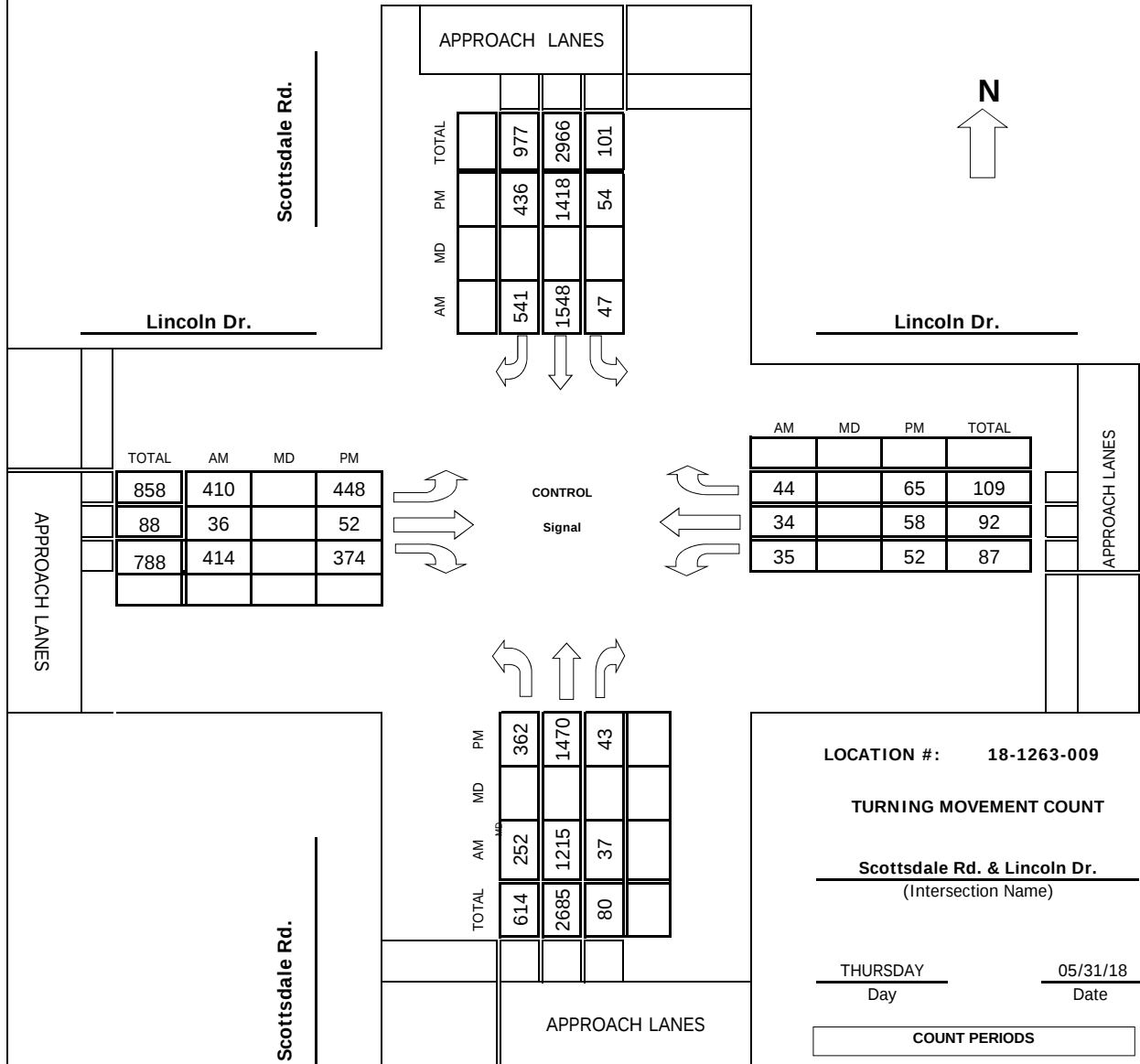
AM PEAK HOUR 800 AM

NOON PEAK HOUR

PM PEAK HOUR 430 PM

**Project #:** 18-1263-009

**TMC SUMMARY OF Scottsdale Rd. & Lincoln Dr.**



**LOCATION #:** 18-1263-009

**TURNING MOVEMENT COUNT**

**Scottsdale Rd. & Lincoln Dr.**  
(Intersection Name)

**THURSDAY**  
Day

**05/31/18**  
Date

**COUNT PERIODS**

|      |       |   |       |
|------|-------|---|-------|
| AM   | 700AM | - | 900AM |
| NOON |       | - |       |
| PM   | 400PM | - | 600PM |

AM PEAK HOUR 745 AM

NOON PEAK HOUR

PM PEAK HOUR 430 PM

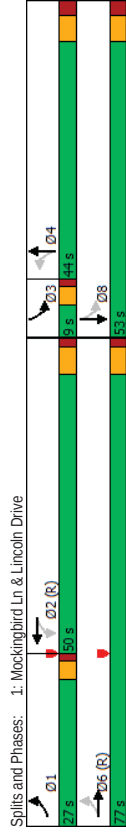
## **APPENDIX C**

### **EXISTING PEAK HOUR ANALYSIS**

Smoke Tree Resort  
Existing AM

1: Mockingbird Ln & Lincoln Drive  
Timings

|                                                                       | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|-----------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group                                                            | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
| Lane Configurations                                                   | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
| Traffic Volume (vph)                                                  | 212   | 815   | 19    | 801   | 5     | 33    | 70    | 85    |
| Future Volume (vph)                                                   | 212   | 815   | 19    | 801   | 5     | 33    | 70    | 85    |
| Turn Type                                                             | pm+pt | NA    | Perm  | NA    | Perm  | NA    | pm+pt | NA    |
| Protected Phases                                                      | 1     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |
| Permitted Phases                                                      | 6     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |
| Detector Phase                                                        | 1     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |
| Switch Phase                                                          |       |       |       |       |       |       |       |       |
| Minimum Initial (s)                                                   | 3.5   | 15.0  | 15.0  | 15.0  | 7.0   | 7.0   | 3.5   | 7.0   |
| Minimum Split (s)                                                     | 8.0   | 27.0  | 27.0  | 27.0  | 33.5  | 33.5  | 8.0   | 33.5  |
| Total Split (s)                                                       | 27.0  | 77.0  | 50.0  | 50.0  | 44.0  | 44.0  | 9.0   | 53.0  |
| Total Split (%)                                                       | 20.8% | 59.2% | 38.5% | 38.5% | 33.8% | 33.8% | 6.9%  | 40.8% |
| Yellow Time (s)                                                       | 3.0   | 4.5   | 4.5   | 4.5   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)                                                      | 1.0   | 1.5   | 1.5   | 1.5   | 2.5   | 2.5   | 1.0   | 2.5   |
| Lost Time Adjust (s)                                                  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)                                                   | 4.0   | 6.0   | 6.0   | 6.0   | 6.5   | 6.5   | 4.0   | 6.5   |
| Lead/Lag                                                              | Lead  | Lag   | Lag   | Lag   | Lag   | Lag   | Lead  | Lead  |
| Lead/Lag Optimize?                                                    | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode                                                           | None  | C-Max | C-Max | C-Max | None  | None  | None  | None  |
| Act Effct Green (s)                                                   | 95.1  | 93.1  | 74.8  | 74.8  | 17.2  | 17.2  | 26.9  | 24.4  |
| Actuated g/C Ratio                                                    | 0.73  | 0.72  | 0.58  | 0.58  | 0.13  | 0.13  | 0.21  | 0.19  |
| v/c Ratio                                                             | 0.51  | 0.37  | 0.06  | 0.46  | 0.10  | 0.22  | 0.31  | 0.83  |
| Control Delay                                                         | 10.5  | 8.4   | 18.2  | 19.1  | 49.2  | 36.8  | 43.6  | 50.8  |
| Queue Delay                                                           | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay                                                           | 10.5  | 8.4   | 18.2  | 19.1  | 49.2  | 36.8  | 43.6  | 50.8  |
| LOS                                                                   | B     | A     | B     | B     | D     | D     | D     | D     |
| Approach Delay                                                        | 8.8   | 8.8   | 19.0  | 19.0  | 38.1  | 38.1  | 49.4  | 49.4  |
| Approach LOS                                                          | A     | A     | B     | B     | D     | D     | D     | D     |
| Intersection Summary                                                  |       |       |       |       |       |       |       |       |
| Cycle Length: 130                                                     |       |       |       |       |       |       |       |       |
| Actuated Cycle Length: 130                                            |       |       |       |       |       |       |       |       |
| Offset: 0 (0%), Referenced to phase 2/WBTL and 6/EBTL, Start of Green |       |       |       |       |       |       |       |       |
| Natural Cycle: 80                                                     |       |       |       |       |       |       |       |       |
| Control Type: Actuated-Coordinated                                    |       |       |       |       |       |       |       |       |
| Maximum v/c Ratio: 0.83                                               |       |       |       |       |       |       |       |       |
| Intersection Signal Delay: 19.7                                       |       |       |       |       |       |       |       |       |
| Intersection Capacity Utilization 69.1%                               |       |       |       |       |       |       |       |       |
| Analysis Period (min) 15                                              |       |       |       |       |       |       |       |       |



Smoke Tree Resort  
Existing AM

1: Mockingbird Ln & Lincoln Drive  
HCM 6th Signalized Intersection Summary

|                              | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |
|------------------------------|------|------|------|------|------|------|------|------|
| Movement                     | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |
| Lane Configurations          | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |
| Traffic Volume (veh/h)       | 212  | 815  | 29   | 801  | 39   | 5    | 33   | 15   |
| Future Volume (veh/h)        | 212  | 815  | 29   | 801  | 39   | 5    | 33   | 15   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A, pbT)         | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h          | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 236  | 906  | 32   | 21   | 890  | 43   | 6    | 37   |
| Peak Hour Factor             | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 439  | 2371 | 84   | 393  | 1984 | 96   | 88   | 191  |
| Arrive On Green              | 0.07 | 0.68 | 0.68 | 0.58 | 0.58 | 0.16 | 0.16 | 0.16 |
| Sat Flow, veh/h              | 1781 | 3501 | 124  | 597  | 3450 | 167  | 1046 | 1213 |
| Grp Volume(V), veh/h         | 236  | 460  | 478  | 21   | 458  | 475  | 6    | 54   |
| Grp Sat Flow(s), veh/h       | 1781 | 1777 | 1848 | 597  | 1777 | 1840 | 1046 | 0    |
| Q Serve(g, s), s             | 6.7  | 14.6 | 14.6 | 2.1  | 19.2 | 19.2 | 0.7  | 3.4  |
| Cycle Q Clear(g, c), s       | 6.7  | 14.6 | 14.6 | 3.4  | 19.2 | 19.2 | 17.1 | 0.0  |
| Prop In Lane                 | 1.00 | 0.07 | 1.00 | 1.00 | 0.09 | 1.00 | 0.31 | 1.00 |
| Lane Grp Cap(c), veh/h       | 439  | 1203 | 1252 | 393  | 1022 | 1058 | 88   | 0    |
| V/C Ratio(X)                 | 0.54 | 0.38 | 0.38 | 0.05 | 0.45 | 0.07 | 0.00 | 0.19 |
| Avail Cap(c, a), veh/h       | 627  | 1203 | 1252 | 393  | 1022 | 1058 | 225  | 0    |
| HCM Platoon Ratio            | 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 |
| Uniform Delay (d), s/veh     | 11.4 | 9.1  | 9.1  | 12.8 | 15.8 | 61.4 | 0.0  | 47.6 |
| Incr Delay (d2), s/veh       | 1.0  | 0.9  | 0.9  | 0.3  | 1.4  | 0.3  | 0.0  | 0.5  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/h     | 2.7  | 5.7  | 6.0  | 0.3  | 8.1  | 8.4  | 0.2  | 0.0  |
| Unsig. Movement Delay, s/veh | 12.4 | 10.1 | 10.0 | 13.0 | 17.2 | 61.7 | 0.0  | 47.9 |
| LnGrp Delay(d), s/veh        | B    | B    | B    | B    | B    | E    | A    | D    |
| LnGrp LOS                    | B    | B    | B    | B    | B    | E    | A    | D    |
| Approach Vol, veh/h          | 1174 |      |      | 954  |      | 60   |      | 412  |
| Approach Delay, s/veh        | 10.5 |      |      | 17.1 |      | 49.3 |      | 55.8 |
| Approach LOS                 | B    |      |      | B    |      | D    |      | E    |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 6    | 8    |      |      |
| Phs Duration (G+Y+Rc), s     | 13.3 | 80.8 | 9.0  | 27.0 | 94.0 | 36.0 |      |      |
| Change Period (Y+Rc), s      | 4.0  | 6.0  | 4.0  | 6.5  | 6.0  | 6.5  |      |      |
| Max Green Setting (Gmax), s  | 23.0 | 44.0 | 5.0  | 37.5 | 71.0 | 46.5 |      |      |
| Max Q Clear Time (g_c+H), s  | 8.7  | 21.2 | 6.7  | 19.1 | 16.6 | 27.4 |      |      |
| Green Ext Time (g_c), s      | 0.6  | 6.7  | 0.0  | 0.2  | 7.6  | 2.1  |      |      |
| Intersection Summary         |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      |      |      | 21.0 |      |      |      |
| HCM 6th LOS                  |      |      |      |      | C    |      |      |      |

| Intersection             |        |        |        |      |       |      |        |       |      |      |      |      |
|--------------------------|--------|--------|--------|------|-------|------|--------|-------|------|------|------|------|
| Int Delay, s/veh         |        |        |        |      |       |      |        |       |      |      |      |      |
| 0.1                      |        |        |        |      |       |      |        |       |      |      |      |      |
| Movement                 | EBL    | EBT    | EBR    | WBL  | WBT   | WBR  | NBL    | NBT   | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↖ ↗    | ↖ ↗    |        | ↖ ↗  |       |      |        | ↖ ↗   |      |      | ↖ ↗  |      |
| Traffic Vol. veh/h       | 0      | 962    | 3      | 2    | 819   | 1    | 0      | 0     | 7    | 2    | 0    | 6    |
| Future Vol. veh/h        | 0      | 962    | 3      | 2    | 819   | 1    | 0      | 0     | 7    | 2    | 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           | 25     | -      | -      | 25   | -     | -    | -      | -     | -    | -    | -    | -    |
| Veh in Median Storage, # | -      | 0      | -      | -    | 0     | -    | -      | 0     | -    | -    | 0    | -    |
| Grade, %                 | -      | 0      | -      | -    | 0     | -    | -      | 0     | -    | -    | 0    | -    |
| Peak Hour Factor         | 90     | 90     | 90     | 90   | 90    | 90   | 90     | 90    | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2     | 2    | 2      | 2     | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 0      | 1069   | 3      | 2    | 910   | 1    | 0      | 0     | 8    | 2    | 0    | 7    |
| Major/Minor              | Major1 | Major2 | Minor1 |      |       |      | Minor2 |       |      |      |      |      |
| Conflicting Flow All     | 911    | 0      | 0      | 1072 | 0     | 0    | 1530   | 1986  | 536  | 1450 | 1987 | 456  |
| Stage 1                  | -      | -      | -      | -    | -     | -    | -      | 1071  | 1071 | -    | 915  | 915  |
| Stage 2                  | -      | -      | -      | -    | -     | -    | -      | 459   | 915  | -    | 535  | 1072 |
| Critical Hdwy            | 4.14   | -      | -      | 4.14 | -     | -    | 7.54   | 6.54  | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | -     | -    | -      | 6.54  | 5.54 | -    | 6.54 | 5.54 |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | -     | -    | -      | 6.54  | 5.54 | -    | 6.54 | 5.54 |
| Follow-up Hdwy           | 2.22   | -      | 2.22   | -    | -     | -    | 3.52   | 4.02  | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver       | 743    | -      | -      | 646  | -     | -    | 80     | 60    | 489  | 92   | 60   | 551  |
| Stage 1                  | -      | -      | -      | -    | -     | -    | 236    | 295   | -    | 294  | 350  | -    |
| Stage 2                  | -      | -      | -      | -    | -     | -    | 551    | 350   | -    | 497  | 295  | -    |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -    | -      | -     | -    | -    | -    | -    |
| Mov Cap-1 Maneuver       | 743    | -      | -      | 646  | -     | -    | 79     | 60    | 489  | 90   | 60   | 551  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | -     | -    | 79     | 60    | -    | 90   | 60   | -    |
| Stage 1                  | -      | -      | -      | -    | -     | -    | 236    | 295   | -    | 294  | 349  | -    |
| Stage 2                  | -      | -      | -      | -    | -     | -    | 543    | 349   | -    | 489  | 295  | -    |
| Approach                 | EB     | WB     | NB     | SB   |       |      |        |       |      |      |      |      |
| HCM Control Delay, s     | 0      | 0      | 12.5   | 20.4 |       |      |        |       |      |      |      |      |
| HCM LOS                  |        |        |        |      | B     |      |        |       | C    |      |      |      |
| Minor Lane/Major Mvmt    | NBLn1  | EBL    | EBT    | EBR  | WBL   | WBT  | WBR    | SBLn1 |      |      |      |      |
| Capacity (veh/h)         | 489    | 743    | -      | -    | 646   | -    | -      | 242   |      |      |      |      |
| HCM Lane V/C Ratio       | 0.016  | -      | -      | -    | 0.003 | -    | -      | 0.037 |      |      |      |      |
| HCM Control Delay (s)    | 12.5   | 0      | -      | -    | 10.6  | -    | -      | 20.4  |      |      |      |      |
| HCM Lane LOS             | B      | A      | -      | -    | B     | -    | -      | C     |      |      |      |      |
| HCM 95th %ile Q(veh)     | 0      | 0      | -      | -    | 0     | -    | -      | 0.1   |      |      |      |      |

| Intersection             |        |        |        |       |      |      |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|-------|------|------|--|--|--|--|--|--|
| Int Delay, s/veh         |        |        |        |       |      |      |  |  |  |  |  |  |
| 0                        |        |        |        |       |      |      |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT   | NBL  | NBR  |  |  |  |  |  |  |
| Lane Configurations      | ↵↵     |        | ↵      | ↵↵    |      | ↵↵   |  |  |  |  |  |  |
| Traffic Vol, veh/h       | 968    | 2      | 1      | 818   | 4    | 0    |  |  |  |  |  |  |
| Future Vol, veh/h        | 968    | 2      | 1      | 818   | 4    | 0    |  |  |  |  |  |  |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free  | Stop | Stop |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None  | -    | None |  |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -     | 0    | -    |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90    | 90   | 90   |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2     | 2    | 2    |  |  |  |  |  |  |
| Mvmt Flow                | 1076   | 2      | 1      | 909   | 4    | 0    |  |  |  |  |  |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |       |      |      |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1078   | 0     | 1534 | 539  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 1077 | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 457  | -    |  |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -     | 6.84 | 6.94 |  |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -     | 5.84 | -    |  |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -     | 5.84 | -    |  |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -     | 3.52 | 3.32 |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 643    | -     | 107  | 487  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 288  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 604  | -    |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 643    | -     | 107  | 487  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -     | 218  | -    |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 287  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 604  | -    |  |  |  |  |  |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |       |      |      |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0      | 21.9   |       |      |      |  |  |  |  |  |  |
| HCM LOS                  | C      |        |        |       |      |      |  |  |  |  |  |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL   | WBT  |      |  |  |  |  |  |  |
| Capacity (veh/h)         | 218    | -      | -      | 643   | -    |      |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.02   | -      | -      | 0.002 | -    |      |  |  |  |  |  |  |
| HCM Control Delay (s)    | 21.9   | -      | -      | 10.6  | -    |      |  |  |  |  |  |  |
| HCM Lane LOS             | C      | -      | -      | B     | -    |      |  |  |  |  |  |  |
| HCM 95th %tile Q(veh)    | 0.1    | -      | -      | 0     | -    |      |  |  |  |  |  |  |

Smoke Tree Resort  
Existing AM

4: Smoke Tree East & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |      |      |      |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|------|------|------|--|--|--|--|--|--|
| Int Delay, s/veh         |        |        |        |      |      |      |  |  |  |  |  |  |
| 0                        |        |        |        |      |      |      |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT  | NBL  | NBR  |  |  |  |  |  |  |
| Lane Configurations      | 4P     |        | 5      | 4A   | 4A   | W    |  |  |  |  |  |  |
| Traffic Vol, veh/h       | 970    | 0      | 0      | 815  | 1    | 2    |  |  |  |  |  |  |
| Future Vol, veh/h        | 970    | 0      | 0      | 815  | 1    | 2    |  |  |  |  |  |  |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free | Stop | Stop |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None | -    | None |  |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -    | 0    | -    |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90   | 90   | 90   |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2    | 2    |  |  |  |  |  |  |
| Mvmt Flow                | 1078   | 0      | 0      | 906  | 1    | 2    |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |      |      |      |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1078   | 0    | 1531 | 539  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 1078 | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 453  | -    |  |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -    | 6.84 | 6.94 |  |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.84 | -    |  |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.84 | -    |  |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -    | 3.52 | 3.32 |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 643    | -    | 108  | 487  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 288  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 607  | -    |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -    | -    | -    |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 643    | -    | 108  | 487  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 219  | -    |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 288  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 607  | -    |  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |      |      |      |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0      | 15.5   |      |      |      |  |  |  |  |  |  |
| HCM LOS                  | C      |        |        |      |      |      |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL  | WBT  |      |  |  |  |  |  |  |
| Capacity (veh/h)         | 346    | -      | -      | 643  | -    |      |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.01   | -      | -      | -    | -    |      |  |  |  |  |  |  |
| HCM Control Delay (s)    | 15.5   | -      | -      | 0    | -    |      |  |  |  |  |  |  |
| HCM Lane LOS             | C      | -      | -      | A    | -    |      |  |  |  |  |  |  |
| HCM 95th %ile Q(veh)     | 0      | -      | -      | 0    | -    |      |  |  |  |  |  |  |

Smoke Tree Resort  
Existing AM

5: Lincoln Medical West & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |      |      |      |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|------|------|------|--|--|--|--|--|--|
| Int Delay, s/veh         |        |        |        |      |      |      |  |  |  |  |  |  |
| 0                        |        |        |        |      |      |      |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT  | NBL  | NBR  |  |  |  |  |  |  |
| Lane Configurations      | ↑↑     |        | ↖      | ↑↑   |      | ↗    |  |  |  |  |  |  |
| Traffic Vol. veh/h       | 968    | 4      | 0      | 815  | 0    | 3    |  |  |  |  |  |  |
| Future Vol. veh/h        | 968    | 4      | 0      | 815  | 0    | 3    |  |  |  |  |  |  |
| Conflicting Peds. #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free | Stop | Stop |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None | -    | None |  |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -    | 0    | -    |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90   | 90   | 90   |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2    | 2    |  |  |  |  |  |  |
| Mvmt Flow                | 1076   | 4      | 0      | 906  | 0    | 3    |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |      |      |      |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1080   | 0    | 1531 | 540  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 1078 | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 453  | -    |  |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -    | 6.84 | 6.94 |  |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.84 | -    |  |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.84 | -    |  |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -    | 3.52 | 3.32 |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 641    | -    | 108  | 486  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 288  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 607  | -    |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -    | -    | -    |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 641    | -    | 108  | 486  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 219  | -    |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 288  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 607  | -    |  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |      |      |      |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0      | 12.5   |      |      |      |  |  |  |  |  |  |
| HCM LOS                  | B      |        |        |      |      |      |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL  | WBT  |      |  |  |  |  |  |  |
| Capacity (veh/h)         | 486    | -      | -      | 641  | -    |      |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.007  | -      | -      | -    | -    |      |  |  |  |  |  |  |
| HCM Control Delay (s)    | 12.5   | -      | -      | 0    | -    |      |  |  |  |  |  |  |
| HCM Lane LOS             | B      | -      | -      | A    | -    |      |  |  |  |  |  |  |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | 0    | -    |      |  |  |  |  |  |  |

| Intersection             |        |        |        |       |      |      |  |  |  |  |  |     |  |
|--------------------------|--------|--------|--------|-------|------|------|--|--|--|--|--|-----|--|
| Int Delay, s/veh         |        |        |        |       |      |      |  |  |  |  |  | 0.1 |  |
| Movement                 | EBT    | EBR    | WBL    | WBT   | NBL  | NBR  |  |  |  |  |  |     |  |
| Lane Configurations      | 4B     |        | 1B     | 4B    |      | 1B   |  |  |  |  |  |     |  |
| Traffic Vol. veh/h       | 967    | 2      | 5      | 815   | 0    | 3    |  |  |  |  |  |     |  |
| Future Vol. veh/h        | 967    | 2      | 5      | 815   | 0    | 3    |  |  |  |  |  |     |  |
| Conflicting Peds. #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |  |  |  |  |  |     |  |
| Sign Control             | Free   | Free   | Free   | Free  | Stop | Stop |  |  |  |  |  |     |  |
| RT Channelized           | -      | None   | -      | None  | -    | None |  |  |  |  |  |     |  |
| Storage Length           | -      | -      | 25     | -     | 0    | -    |  |  |  |  |  |     |  |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |     |  |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |     |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90    | 90   | 90   |  |  |  |  |  |     |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2     | 2    | 2    |  |  |  |  |  |     |  |
| Mvmt Flow                | 1074   | 2      | 6      | 906   | 0    | 3    |  |  |  |  |  |     |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |     |  |
| Major/Minor              | Major1 | Major2 | Minor1 |       |      |      |  |  |  |  |  |     |  |
| Conflicting Flow All     | 0      | 0      | 1076   | 0     | 1540 | 538  |  |  |  |  |  |     |  |
| Stage 1                  | -      | -      | -      | -     | 1075 | -    |  |  |  |  |  |     |  |
| Stage 2                  | -      | -      | -      | -     | 465  | -    |  |  |  |  |  |     |  |
| Critical Hdwy            | -      | -      | 4.14   | -     | 6.84 | 6.94 |  |  |  |  |  |     |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -     | 5.84 | -    |  |  |  |  |  |     |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -     | 5.84 | -    |  |  |  |  |  |     |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -     | 3.52 | 3.32 |  |  |  |  |  |     |  |
| Pot Cap-1 Maneuver       | -      | -      | 644    | -     | 106  | 488  |  |  |  |  |  |     |  |
| Stage 1                  | -      | -      | -      | -     | 289  | -    |  |  |  |  |  |     |  |
| Stage 2                  | -      | -      | -      | -     | 599  | -    |  |  |  |  |  |     |  |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |  |  |  |  |  |     |  |
| Mov Cap-1 Maneuver       | -      | -      | 644    | -     | 105  | 488  |  |  |  |  |  |     |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -     | 216  | -    |  |  |  |  |  |     |  |
| Stage 1                  | -      | -      | -      | -     | 286  | -    |  |  |  |  |  |     |  |
| Stage 2                  | -      | -      | -      | -     | 599  | -    |  |  |  |  |  |     |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |     |  |
| Approach                 | EB     | WB     | NB     |       |      |      |  |  |  |  |  |     |  |
| HCM Control Delay, s     | 0      | 0.1    | 12.4   |       |      |      |  |  |  |  |  |     |  |
| HCM LOS                  | B      |        |        |       |      |      |  |  |  |  |  |     |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |     |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL   | WBT  |      |  |  |  |  |  |     |  |
| Capacity (veh/h)         | 488    | -      | -      | 644   | -    |      |  |  |  |  |  |     |  |
| HCM Lane V/C Ratio       | 0.007  | -      | -      | 0.009 | -    |      |  |  |  |  |  |     |  |
| HCM Control Delay (s)    | 12.4   | -      | -      | 10.6  | -    |      |  |  |  |  |  |     |  |
| HCM Lane LOS             | B      | -      | -      | B     | -    |      |  |  |  |  |  |     |  |
| HCM 95th %ile Q(veh)     | 0      | -      | -      | 0     | -    |      |  |  |  |  |  |     |  |

| Intersection             |        |        |      |      |        |        |       |       |       |      |     |      |    |  |  |  |  |  |  |  |  |  |
|--------------------------|--------|--------|------|------|--------|--------|-------|-------|-------|------|-----|------|----|--|--|--|--|--|--|--|--|--|
| Int Delay, s/veh         |        |        |      |      |        |        |       |       |       |      |     |      |    |  |  |  |  |  |  |  |  |  |
| 5.8                      |        |        |      |      |        |        |       |       |       |      |     |      |    |  |  |  |  |  |  |  |  |  |
| Movement                 | EBL    | EBT    | WBL  | WBT  | NBL    | NBT    | NBR   | SBL   | SBT   | SBR  |     |      |    |  |  |  |  |  |  |  |  |  |
| Lane Configurations      | 4B     | 4B     | 5    | 815  | 0      | 3      |       |       |       |      |     |      |    |  |  |  |  |  |  |  |  |  |
| Traffic Vol. veh/h       | 26     | 912    | 34   | 18   | 757    | 10     | 50    | 0     | 29    | 5    | 0   | 12   | 12 |  |  |  |  |  |  |  |  |  |
| Future Vol. veh/h        | 26     | 912    | 34   | 18   | 757    | 10     | 50    | 0     | 29    | 5    | 0   | 12   | 12 |  |  |  |  |  |  |  |  |  |
| Conflicting Peds. #/hr   | 0      | 0      | 0    | 0    | 0      | 0      | 0     | 0     | 0     | 0    | 0   | 0    | 0  |  |  |  |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free | Free | Free   | Stop   | Stop  | Stop  | Stop  | Stop |     |      |    |  |  |  |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -    | None | -      | -      | None  | -     | -     | None |     |      |    |  |  |  |  |  |  |  |  |  |
| Storage Length           | 25     | -      | 25   | -    | -      | -      | -     | 0     | -     | 0    |     |      |    |  |  |  |  |  |  |  |  |  |
| Veh in Median Storage, # | -      | 0      | -    | 0    | -      | 0      | -     | 0     | -     | 0    |     |      |    |  |  |  |  |  |  |  |  |  |
| Grade, %                 | -      | 0      | -    | -    | 0      | -      | 0     | -     | 0     | -    |     |      |    |  |  |  |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90   | 90   | 90     | 90     | 90    | 90    | 90    | 90   |     |      |    |  |  |  |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2    | 2    | 2      | 2      | 2     | 2     | 2     | 2    |     |      |    |  |  |  |  |  |  |  |  |  |
| Mvmt Flow                | 29     | 1013   | 38   | 20   | 841    | 11     | 56    | 0     | 32    | 6    | 0   | 13   | 13 |  |  |  |  |  |  |  |  |  |
|                          |        |        |      |      |        |        |       |       |       |      |     |      |    |  |  |  |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 |      |      | Minor1 | Minor2 |       |       |       |      |     |      |    |  |  |  |  |  |  |  |  |  |
| Conflicting Flow All     | 852    | 0      | 0    | 1051 | 0      | 0      | 1551  | 1982  | 526   | 1452 | -   | 426  | -  |  |  |  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -    | -    | -      | -      | -     | 1090  | 1090  | -    | 887 | -    | -  |  |  |  |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -    | -    | -      | -      | -     | 461   | 892   | -    | 565 | -    | -  |  |  |  |  |  |  |  |  |  |
| Critical Hdwy            | 4.14   | -      | -    | 4.14 | -      | -      | 7.54  | 6.54  | 6.94  | 7.54 | -   | 6.94 | -  |  |  |  |  |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -    | -    | -      | -      | 6.54  | 5.54  | -     | 6.54 | -   | -    | -  |  |  |  |  |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -    | -    | -      | -      | 6.54  | 5.54  | -     | 6.54 | -   | -    | -  |  |  |  |  |  |  |  |  |  |
| Follow-up Hdwy           | 2.22   | -      | -    | 2.22 | -      | -      | 3.52  | 4.02  | 3.32  | 3.52 | -   | 3.32 | -  |  |  |  |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       | 783    | -      | -    | 658  | -      | -      | 77    | 61    | 496   | 92   | 0   | 577  | -  |  |  |  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -    | -    | -      | -      | 230   | 289   | -     | 305  | 0   | -    | -  |  |  |  |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -    | -    | -      | -      | 550   | 358   | -     | 477  | 0   | -    | -  |  |  |  |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -    | -    | -      | -      | -     | -     | -     | -    | -   | -    | -  |  |  |  |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | 783    | -      | -    | 658  | -      | -      | 71    | 57    | 496   | 82   | -   | 577  | -  |  |  |  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -    | -    | -      | -      | 71    | 57    | -     | 82   | -   | -    | -  |  |  |  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -    | -    | -      | -      | 221   | 278   | -     | 294  | -   | -    | -  |  |  |  |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -    | -    | -      | -      | 521   | 347   | -     | 429  | -   | -    | -  |  |  |  |  |  |  |  |  |  |
|                          |        |        |      |      |        |        |       |       |       |      |     |      |    |  |  |  |  |  |  |  |  |  |
| Approach                 | EB     | WB     |      |      | NB     | SB     |       |       |       |      |     |      |    |  |  |  |  |  |  |  |  |  |
| HCM Control Delay, s     | 0.3    | 0.2    |      |      | 124.4  | 23.4   | F     |       |       |      |     |      |    |  |  |  |  |  |  |  |  |  |
| HCM LOS                  |        |        |      |      |        |        |       |       |       |      |     |      |    |  |  |  |  |  |  |  |  |  |
|                          |        |        |      |      |        |        |       |       |       |      |     |      |    |  |  |  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBL    | EBT  | WBL  | WBT    | WBR    | SBLn1 | SBLn2 |       |      |     |      |    |  |  |  |  |  |  |  |  |  |
| Capacity (veh/h)         | 104    | 783    | -    | -    | 658    | -      | -     | 82    | 577   |      |     |      |    |  |  |  |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.844  | 0.037  | -    | -    | 0.03   | -      | -     | 0.068 | 0.023 |      |     |      |    |  |  |  |  |  |  |  |  |  |
| HCM Control Delay (s)    | 124.4  | 9.8    | -    | -    | 10.6   | -      | -     | 52.1  | 11.4  |      |     |      |    |  |  |  |  |  |  |  |  |  |
| HCM Lane LOS             | F      | A      | -    | -    | B      | -      | -     | F     | B     |      |     |      |    |  |  |  |  |  |  |  |  |  |
| HCM 95th %ile Q(veh)     | 4.8    | 0.1    | -    | -    | 0.1    | -      | -     | 0.2   | 0.1   |      |     |      |    |  |  |  |  |  |  |  |  |  |

Smoke Tree Resort  
Existing AM

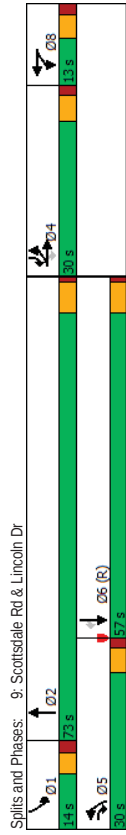
8: AJ's Drwy & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        | 1      |        |      |       |      |        |       |       |      |      |      |  |  |  |  |  |
|--------------------------|--------|--------|--------|------|-------|------|--------|-------|-------|------|------|------|--|--|--|--|--|
| Int Delay, s/veh         |        |        |        |      |       |      |        |       |       |      |      |      |  |  |  |  |  |
| Movement                 | EBL    | EBT    | EBR    | WBL  | WBT   | WBR  | NBL    | NBT   | NBR   | SBL  | SBT  | SBR  |  |  |  |  |  |
| Lane Configurations      | ↖↗     | ↖↗     |        | ↖↗   | ↖↗    |      |        | ↖↗    |       | ↖↗   |      | ↖↗   |  |  |  |  |  |
| Traffic Vol, veh/h       | 3 892  | 3 892  | 53     | 43   | 769   | 8 6  | 0 41   | 4 1   | 1 12  |      |      |      |  |  |  |  |  |
| Future Vol, veh/h        | 3 892  | 3 892  | 53     | 43   | 769   | 8 6  | 0 41   | 4 1   | 1 12  |      |      |      |  |  |  |  |  |
| 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           | 25     | -      | -      | 25   | -     | -    | -      | -     | -     | 0    | -    | 0    |  |  |  |  |  |
| Veh in Median Storage, # | -      | 0      | -      | -    | 0     | -    | -      | 0     | -     | -    | -    | 0    |  |  |  |  |  |
| Grade, %                 | -      | 0      | -      | -    | 0     | -    | -      | 0     | -     | -    | -    | 0    |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90   | 90    | 90   | 90     | 90    | 90    | 90   | 90   | 90   |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2     | 2    | 2      | 2     | 2     | 2    | 2    | 2    |  |  |  |  |  |
| Mmnt Flow                | 3 991  | 59 48  | 854    | 9 7  | 0 46  | 4 1  | 13     |       |       |      |      |      |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |      |       |      | Minor2 |       |       |      |      |      |  |  |  |  |  |
| Conflicting Flow All     | 863    | 0      | 0      | 1050 | 0     | 0    | 1551   | 1986  | 525   | 1457 | 2011 | 432  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | -     | -    | -      | 1027  | 1027  | -    | 955  | 955  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | -     | -    | -      | 524   | 959   | -    | 502  | 1056 |  |  |  |  |  |
| Critical Hdwy            | 4.14   | -      | -      | 4.14 | -     | -    | 7.54   | 6.54  | 6.94  | 7.54 | 6.54 | 6.94 |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | -     | -    | 6.54   | 5.54  | -     | 6.54 | 5.54 | -    |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | -     | -    | 6.54   | 5.54  | -     | 6.54 | 5.54 | -    |  |  |  |  |  |
| Follow-up Hdwy           | 2.22   | -      | 2.22   | -    | -     | -    | 3.52   | 4.02  | 3.32  | 3.52 | 4.02 | 3.32 |  |  |  |  |  |
| Pot Cap-1 Maneuver       | 775    | -      | -      | 659  | -     | -    | 77     | 60    | 497   | 91   | 58   | 572  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | -     | -    | 251    | 310   | -     | 278  | 335  | -    |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | -     | -    | 504    | 334   | -     | 520  | 300  | -    |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -    | -      | -     | -     | -    | -    | -    |  |  |  |  |  |
| Mov Cap-1 Maneuver       | 775    | -      | -      | 659  | -     | -    | 70     | 55    | 497   | 78   | 54   | 572  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | -     | -    | 70     | 55    | -     | 78   | 54   | -    |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | -     | -    | 250    | 309   | -     | 277  | 311  | -    |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | -     | -    | 455    | 310   | -     | 471  | 299  | -    |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     | SB   |       |      |        |       |       |      |      |      |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0.6    | 20.9   | 22   |       |      |        |       |       |      |      |      |  |  |  |  |  |
| HCM LOS                  |        |        | C      | C    |       |      |        |       |       |      |      |      |  |  |  |  |  |
| Minor Lane/Major Mmnt    | NBLn1  | EBL    | EBT    | EBR  | WBL   | WBT  | WBR    | SBLn1 | SBLn2 |      |      |      |  |  |  |  |  |
| Capacity (veh/h)         | 279    | 775    | -      | -    | 659   | -    | -      | 78    | 572   |      |      |      |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.187  | 0.004  | -      | -    | 0.073 | -    | -      | 0.057 | 0.023 |      |      |      |  |  |  |  |  |
| HCM Control Delay (s)    | 20.9   | 9.7    | -      | -    | 10.9  | -    | -      | 53.9  | 11.4  |      |      |      |  |  |  |  |  |
| HCM Lane LOS             | C      | A      | -      | -    | B     | -    | -      | F     | B     |      |      |      |  |  |  |  |  |
| HCM 95th %ile Q(veh)     | 0.7    | 0      | -      | -    | 0.2   | -    | -      | 0.2   | 0.1   |      |      |      |  |  |  |  |  |

Smoke Tree Resort  
Existing AM

9: Scottsdale Rd & Lincoln Dr  
Timings

| Lane Group                                                | EBL                                          | EBT                                          | EBR                                          | WBL                                          | WBT                                          | NBL                                          | NBT                                          | SBL                                          | SBT                                          | SBR                                          |                                              |
|-----------------------------------------------------------|----------------------------------------------|----------------------------------------------|----------------------------------------------|----------------------------------------------|----------------------------------------------|----------------------------------------------|----------------------------------------------|----------------------------------------------|----------------------------------------------|----------------------------------------------|----------------------------------------------|
| Lane Configurations                                       | <div><div></div><div></div><div></div></div> | <div><div></div><div></div><div></div></div> | <div><div></div><div></div><div></div></div> | <div><div></div><div></div><div></div></div> | <div><div></div><div></div><div></div></div> | <div><div></div><div></div><div></div></div> | <div><div></div><div></div><div></div></div> | <div><div></div><div></div><div></div></div> | <div><div></div><div></div><div></div></div> | <div><div></div><div></div><div></div></div> | <div><div></div><div></div><div></div></div> |
| Traffic Volume (vph)                                      | 422                                          | 37                                           | 426                                          | 36                                           | 35                                           | 260                                          | 1251                                         | 48                                           | 1594                                         | 557                                          |                                              |
| Future Volume (vph)                                       | 422                                          | 37                                           | 426                                          | 36                                           | 35                                           | 260                                          | 1251                                         | 48                                           | 1594                                         | 557                                          |                                              |
| Turn Type                                                 | Split                                        | NA                                           | pm+ov                                        | Split                                        | NA                                           | Prot                                         | NA                                           | Prot                                         | NA                                           | pm+ov                                        |                                              |
| Protected Phases                                          | 4                                            | 4                                            | 5                                            | 8                                            | 8                                            | 5                                            | 2                                            | 1                                            | 6                                            | 4                                            |                                              |
| Permitted Phases                                          | 4                                            | 4                                            | 5                                            | 8                                            | 8                                            | 5                                            | 2                                            | 1                                            | 6                                            | 4                                            |                                              |
| Detector Phase                                            | 4                                            | 4                                            | 5                                            | 8                                            | 8                                            | 5                                            | 2                                            | 1                                            | 6                                            | 4                                            |                                              |
| Switch Phase                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |
| Minimum Initial (s)                                       | 7.0                                          | 7.0                                          | 7.0                                          | 7.0                                          | 7.0                                          | 7.0                                          | 10.0                                         | 5.0                                          | 10.0                                         | 7.0                                          |                                              |
| Minimum Split (s)                                         | 13.0                                         | 13.0                                         | 13.0                                         | 13.0                                         | 13.0                                         | 13.0                                         | 16.7                                         | 11.0                                         | 16.0                                         | 13.0                                         |                                              |
| Total Split (s)                                           | 30.0                                         | 30.0                                         | 30.0                                         | 13.0                                         | 13.0                                         | 30.0                                         | 73.0                                         | 14.0                                         | 57.0                                         | 30.0                                         |                                              |
| Total Split (%)                                           | 23.1%                                        | 23.1%                                        | 23.1%                                        | 10.0%                                        | 10.0%                                        | 23.1%                                        | 56.2%                                        | 10.8%                                        | 43.8%                                        | 23.1%                                        |                                              |
| Yellow Time (s)                                           | 4.0                                          | 4.0                                          | 4.0                                          | 3.6                                          | 3.6                                          | 4.0                                          | 4.7                                          | 3.3                                          | 4.7                                          | 4.0                                          |                                              |
| All-Red Time (s)                                          | 1.5                                          | 1.5                                          | 1.5                                          | 2.0                                          | 2.0                                          | 1.5                                          | 1.0                                          | 2.0                                          | 1.0                                          | 1.5                                          |                                              |
| 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)                                       | 5.5                                          | 5.5                                          | 5.5                                          | 5.6                                          | 5.6                                          | 5.5                                          | 5.7                                          | 5.3                                          | 5.7                                          | 5.5                                          |                                              |
| Lead/Lag                                                  | Lead                                         |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |
| Lead-Lag Optimize?                                        | Lead                                         |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |
| Recall Mode                                               | None                                         | None                                         | None                                         | None                                         | None                                         | None                                         | None                                         | None                                         | C-Max                                        | None                                         |                                              |
| Act Effct Green (s)                                       | 23.0                                         | 23.0                                         | 39.9                                         | 7.2                                          | 7.2                                          | 16.9                                         | 72.2                                         | 7.5                                          | 60.6                                         | 89.3                                         |                                              |
| Actuated g/C Ratio                                        | 0.18                                         | 0.18                                         | 0.31                                         | 0.06                                         | 0.06                                         | 0.13                                         | 0.56                                         | 0.06                                         | 0.47                                         | 0.69                                         |                                              |
| v/c Ratio                                                 | 0.85                                         | 0.86                                         | 0.89                                         | 0.41                                         | 0.39                                         | 0.65                                         | 0.51                                         | 0.52                                         | 0.75                                         | 0.53                                         |                                              |
| Control Delay                                             | 77.2                                         | 77.4                                         | 44.6                                         | 72.1                                         | 34.3                                         | 60.0                                         | 19.6                                         | 77.2                                         | 32.1                                         | 8.4                                          |                                              |
| Queue Delay                                               | 0.0                                          | 0.0                                          | 0.0                                          | 0.0                                          | 0.0                                          | 0.0                                          | 0.0                                          | 0.0                                          | 0.0                                          | 0.0                                          |                                              |
| Total Delay                                               | 77.2                                         | 77.4                                         | 44.6                                         | 72.1                                         | 34.3                                         | 60.0                                         | 19.6                                         | 77.2                                         | 32.1                                         | 8.4                                          |                                              |
| LOS                                                       | E                                            | E                                            | D                                            | E                                            | C                                            | E                                            | B                                            | E                                            | C                                            | A                                            |                                              |
| Approach Delay                                            | 61.6                                         |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |
| Approach LOS                                              | E                                            |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |
| Intersection Summary                                      |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |
| Cycle Length: 130                                         |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |
| Actuated Cycle Length: 130                                |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |
| Offset: 0 (0%), Referenced to phase 6 SBT, Start of Green |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |
| Natural Cycle: 90                                         |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |
| Control Type: Actuated-Coordinated                        |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |
| Maximum v/c Ratio: 0.89                                   |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |
| Intersection Signal Delay: 33.8                           |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |
| Intersection Capacity Utilization 77.0%                   |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |
| Analysis Period (min) 15                                  |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |
| Intersection LOS: C                                       |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |
| ICU Level of Service D                                    |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |                                              |



Smoke Tree Resort  
Existing AM

9: Scottsdale Rd & Lincoln Dr  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL   | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | ↰     | ↱    | ↰    | ↰    | ↱    | ↱    | ↰    | ↱    | ↰    | ↰    | ↱    | ↱    |
| Traffic Volume (veh/h)       | 422   | 37   | 426  | 36   | 35   | 45   | 260  | 1251 | 38   | 48   | 1594 | 557  |
| Future Volume (veh/h)        | 422   | 37   | 426  | 36   | 35   | 45   | 260  | 1251 | 38   | 48   | 1594 | 557  |
| Initial Q (Qb), veh          | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pb1)          | 1.00  | 1.00 | 1.00 | 1.00 | 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   | No   | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/hln        | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 498   | 0    | 473  | 40   | 39   | 50   | 289  | 1390 | 42   | 53   | 1771 | 619  |
| Peak Hour Factor             | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 671   | 0    | 458  | 95   | 95   | 85   | 348  | 2336 | 71   | 68   | 2015 | 924  |
| Arrive On Green              | 0.19  | 0.00 | 0.19 | 0.05 | 0.05 | 0.05 | 0.10 | 0.46 | 0.46 | 0.04 | 0.39 | 0.39 |
| Sat Flow, veh/h              | 3563  | 0    | 1585 | 1781 | 1777 | 1585 | 3456 | 5093 | 154  | 1781 | 5106 | 1585 |
| Grp Volume(v), veh/h         | 498   | 0    | 473  | 40   | 39   | 50   | 289  | 929  | 503  | 53   | 1771 | 619  |
| Grp Sat Flow(s),veh/hln      | 1781  | 0    | 1585 | 1781 | 1777 | 1585 | 1728 | 1702 | 1843 | 1781 | 1702 | 1585 |
| Q Serve(g, s), s             | 17.1  | 0.0  | 24.5 | 2.8  | 2.8  | 2.8  | 4.0  | 10.7 | 26.4 | 3.8  | 41.8 | 34.7 |
| Cycle Q Clear(g, q), s       | 17.1  | 0.0  | 24.5 | 2.8  | 2.8  | 2.8  | 4.0  | 10.7 | 26.4 | 3.8  | 41.8 | 34.7 |
| Prop In Lane                 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.08 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 671   | 0    | 458  | 95   | 95   | 85   | 348  | 1561 | 845  | 68   | 2015 | 924  |
| V/C Ratio(X)                 | 0.74  | 0.00 | 1.03 | 0.42 | 0.41 | 0.59 | 0.83 | 0.60 | 0.60 | 0.78 | 0.88 | 0.67 |
| Avail Cap(c, a), veh/h       | 671   | 0    | 458  | 101  | 101  | 90   | 651  | 1762 | 954  | 119  | 2015 | 924  |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 49.8  | 0.0  | 46.2 | 59.6 | 59.6 | 60.1 | 57.4 | 26.2 | 26.2 | 62.0 | 36.5 | 18.5 |
| Incr Delay (d2), s/veh       | 3.9   | 0.0  | 50.4 | 1.1  | 1.1  | 5.4  | 2.0  | 0.2  | 0.4  | 6.9  | 5.9  | 3.9  |
| Initial Q Delay(d3),s/veh    | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%),veh/h      | 8.0   | 0.0  | 21.1 | 1.3  | 1.3  | 1.7  | 4.8  | 10.7 | 11.6 | 1.9  | 18.2 | 20.2 |
| Unsig. Movement Delay, s/veh |       |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 53.7  | 0.0  | 96.6 | 60.7 | 60.6 | 65.5 | 59.3 | 26.4 | 26.6 | 68.8 | 42.3 | 22.4 |
| LnGrp LOS                    | D     | A    | F    | E    | E    | E    | E    | C    | C    | E    | D    | C    |
| Approach Vol, veh/h          | 971   |      |      | 129  |      |      |      | 1721 |      |      | 2443 |      |
| Approach Delay, s/veh        | 74.6  |      |      | 62.5 |      |      |      | 32.0 |      |      | 37.9 |      |
| Approach LOS                 | E     |      |      | E    |      |      |      | C    |      |      | D    |      |
| Timer - Assigned Phs         | 1     | 2    |      | 4    | 5    | 6    |      | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 10.3  | 65.3 |      | 30.0 | 18.6 | 57.0 |      | 12.5 |      |      |      |      |
| Change Period (Y+Rc), s      | * 5.3 | 5.7  |      | 5.5  | 5.5  | 5.7  |      | 5.6  |      |      |      |      |
| Max Green Sailing (Gmax), s  | * 8.7 | 67.3 |      | 24.5 | 24.5 | 51.3 |      | 7.4  |      |      |      |      |
| Max Q Clear Time (g_c+H), s  | 5.8   | 28.4 |      | 26.5 | 12.7 | 43.8 |      | 6.0  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0   | 2.1  |      | 0.0  | 0.4  | 2.5  |      | 0.0  |      |      |      |      |
| Intersection Summary         |       |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |       |      |      | 43.3 |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  |       |      |      | D    |      |      |      |      |      |      |      |      |

Notes

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

User approved volume balancing among the lanes for turning movement.

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

11/16/2018

CwTech BR

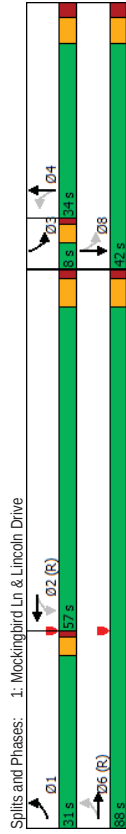
Synchro 10 Report

Page 11

Smoke Tree Resort  
Existing PM

1: Mockingbird Ln & Lincoln Drive  
Timings

| Lane Group                                                           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations                                                  | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     | ↔     |
| Traffic Volume (vph)                                                 | 228   | 764   | 12    | 805   | 7     | 60    | 57    | 46    |
| Future Volume (vph)                                                  | 228   | 764   | 12    | 805   | 7     | 60    | 57    | 46    |
| Turn Type                                                            | pm+pt | NA    | Perm  | NA    | Perm  | NA    | pm+pt | NA    |
| Protected Phases                                                     | 1     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |
| Permitted Phases                                                     | 6     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |
| Detector Phase                                                       | 1     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |
| Switch Phase                                                         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)                                                  | 4.0   | 15.0  | 15.0  | 15.0  | 7.0   | 7.0   | 4.0   | 7.0   |
| Minimum Split (s)                                                    | 8.0   | 27.0  | 27.0  | 27.0  | 33.5  | 33.5  | 8.0   | 33.5  |
| Total Split (s)                                                      | 31.0  | 88.0  | 57.0  | 57.0  | 34.0  | 34.0  | 8.0   | 42.0  |
| Total Split (%)                                                      | 23.8% | 67.7% | 43.8% | 43.8% | 26.2% | 26.2% | 6.2%  | 32.3% |
| Yellow Time (s)                                                      | 3.0   | 4.5   | 4.5   | 4.5   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)                                                     | 1.0   | 1.5   | 1.5   | 1.5   | 2.5   | 2.5   | 1.0   | 2.5   |
| Lost Time Adjust (s)                                                 | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)                                                  | 4.0   | 6.0   | 6.0   | 6.0   | 6.5   | 6.5   | 4.0   | 6.5   |
| Lead/Lag                                                             | Lead  | Lag   | Lag   | Lag   | Lag   | Lag   | Lead  | Lead  |
| Lead/Lag Optimize?                                                   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode                                                          | None  | C-Max | C-Max | C-Max | None  | None  | None  | None  |
| Act Effct Green (s)                                                  | 102.4 | 100.4 | 84.3  | 84.3  | 10.7  | 10.7  | 19.6  | 17.1  |
| Actuated g/C Ratio                                                   | 0.79  | 0.77  | 0.65  | 0.65  | 0.08  | 0.08  | 0.15  | 0.13  |
| v/c Ratio                                                            | 0.53  | 0.32  | 0.03  | 0.42  | 0.10  | 0.51  | 0.37  | 0.66  |
| Control Delay                                                        | 8.1   | 5.3   | 11.8  | 13.0  | 55.7  | 63.3  | 53.2  | 32.6  |
| Queue Delay                                                          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay                                                          | 8.1   | 5.3   | 11.8  | 13.0  | 55.7  | 63.3  | 53.2  | 32.6  |
| LOS                                                                  | A     | A     | B     | B     | E     | E     | D     | C     |
| Approach Delay                                                       | 5.9   | 5.9   | 13.0  | 13.0  | 62.6  | 62.6  | 37.3  | 37.3  |
| Approach LOS                                                         | A     | A     | B     | B     | E     | E     | D     | D     |
| Intersection Summary                                                 |       |       |       |       |       |       |       |       |
| Cycle Length: 130                                                    |       |       |       |       |       |       |       |       |
| Actuated Cycle Length: 130                                           |       |       |       |       |       |       |       |       |
| Offset: 0 (0%), Referenced to phase 2(WBTL and 6EBTL, Start of Green |       |       |       |       |       |       |       |       |
| Natural Cycle: 90                                                    |       |       |       |       |       |       |       |       |
| Control Type: Actuated-Coordinated                                   |       |       |       |       |       |       |       |       |
| Maximum v/c Ratio: 0.66                                              |       |       |       |       |       |       |       |       |
| Intersection Signal Delay: 14.2                                      |       |       |       |       |       |       |       |       |
| Intersection Capacity Utilization 61.8%                              |       |       |       |       |       |       |       |       |
| Analysis Period (min) 15                                             |       |       |       |       |       |       |       |       |



Smoke Tree Resort  
Existing PM

1: Mockingbird Ln & Lincoln Drive  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT   | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|-------|------|------|------|------|------|------|------|
| Lane Configurations          | ↔    | ↔    | ↔    | ↔    | ↔     | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    | ↔    |
| Traffic Volume (veh/h)       | 228  | 764  | 28   | 12   | 805   | 56   | 7    | 60   | 10   | 57   | 46   | 145  |
| Future Volume (veh/h)        | 228  | 764  | 28   | 12   | 805   | 56   | 7    | 60   | 10   | 57   | 46   | 145  |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Peak-Bike Adj(A, pbf)        | 1.00 | 1.00 | 1.00 | 1.00 | 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   | No    | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h          | 1870 | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 253  | 849  | 31   | 13   | 894   | 62   | 8    | 67   | 11   | 63   | 51   | 161  |
| Peak Hour Factor             | 0.90 | 0.90 | 0.90 | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 484  | 2635 | 96   | 471  | 2222  | 154  | 84   | 139  | 23   | 173  | 59   | 188  |
| Arrive On Green              | 0.06 | 0.75 | 0.75 | 0.66 | 0.66  | 0.66 | 0.09 | 0.09 | 0.09 | 0.03 | 0.15 | 0.15 |
| Sat Flow, veh/h              | 1781 | 3497 | 128  | 631  | 3371  | 234  | 1170 | 1567 | 257  | 1781 | 396  | 1250 |
| Grp Volume(V), veh/h         | 253  | 431  | 449  | 13   | 471   | 485  | 8    | 0    | 78   | 63   | 0    | 212  |
| Grp Sat Flow(s), veh/h       | 1781 | 1777 | 1847 | 631  | 1777  | 1828 | 1170 | 0    | 1824 | 1781 | 0    | 1645 |
| Q Serve(g, s), s             | 5.6  | 10.3 | 10.3 | 0.9  | 16.0  | 16.0 | 0.9  | 0.0  | 5.3  | 4.0  | 0.0  | 16.3 |
| Cycle Q Clear(g, c), s       | 5.6  | 10.3 | 10.3 | 0.9  | 16.0  | 16.0 | 0.9  | 0.0  | 5.3  | 4.0  | 0.0  | 16.3 |
| Prop In Lane                 | 1.00 | 0.07 | 1.00 | 1.00 | 0.13  | 1.00 | 0.14 | 1.00 | 0.14 | 1.00 | 0.76 | 0.76 |
| Lane Grp Cap(c), veh/h       | 484  | 1339 | 1392 | 471  | 1171  | 1205 | 84   | 0    | 162  | 173  | 0    | 247  |
| V/C Ratio(X)                 | 0.52 | 0.32 | 0.32 | 0.03 | 0.40  | 0.40 | 0.10 | 0.00 | 0.48 | 0.36 | 0.00 | 0.86 |
| Avail Cap(c, a), veh/h       | 740  | 1339 | 1392 | 471  | 1171  | 1205 | 228  | 0    | 386  | 173  | 0    | 449  |
| 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     | 7.4  | 5.2  | 5.2  | 7.7  | 10.3  | 10.3 | 62.3 | 0.0  | 56.4 | 50.9 | 0.0  | 53.9 |
| Incr Delay (d2), s/veh       | 0.9  | 0.6  | 0.6  | 0.1  | 1.0   | 1.0  | 0.5  | 0.0  | 2.2  | 1.3  | 0.0  | 8.4  |
| 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(50%), veh/ln    | 2.0  | 3.7  | 3.8  | 0.1  | 6.4   | 6.6  | 0.3  | 0.0  | 2.5  | 1.9  | 0.0  | 7.3  |
| Unsig. Movement Delay, s/veh |      |      |      |      |       |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 8.3  | 5.8  | 5.8  | 7.8  | 11.3  | 11.3 | 62.8 | 0.0  | 58.6 | 52.1 | 0.0  | 62.3 |
| LnGrp LOS                    | A    | A    | A    | A    | B     | B    | E    | A    | E    | D    | A    | E    |
| Approach Vol, veh/h          | 1133 |      |      | 969  |       |      | 86   |      |      |      | 275  |      |
| Approach Delay, s/veh        | 6.4  |      |      | 11.3 |       |      | 59.0 |      |      |      | 60.0 |      |
| Approach LOS                 | A    |      |      | B    |       |      | E    |      |      |      | E    |      |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 6     | 8    |      |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 12.3 | 91.7 | 8.0  | 18.0 | 104.0 | 26.0 |      |      |      |      |      |      |
| Change Period (Y+Rc), s      | 4.0  | 6.0  | 4.0  | 6.5  | 6.0   | 6.5  |      |      |      |      |      |      |
| Max Green Setting (Gmax), s  | 27.0 | 51.0 | 4.0  | 27.5 | 82.0  | 35.5 |      |      |      |      |      |      |
| Max Q Clear Time (g_c+lt), s | 7.6  | 18.0 | 6.0  | 11.2 | 12.3  | 18.3 |      |      |      |      |      |      |
| Green Ext Time (p_c), s      | 0.7  | 7.5  | 0.0  | 0.3  | 6.9   | 1.1  |      |      |      |      |      |      |
| Intersection Summary         |      |      |      |      |       |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      |      |      |       |      |      |      |      |      |      |      |
| HCM 6th LOS                  |      |      |      |      |       |      |      |      |      |      |      |      |

| Intersection             |        |        |        |        |      |      |      |       |      |      |      |      |      |
|--------------------------|--------|--------|--------|--------|------|------|------|-------|------|------|------|------|------|
| Int Delay, s/veh         |        |        |        |        |      |      |      |       |      |      |      |      |      |
| 0                        |        |        |        |        |      |      |      |       |      |      |      |      |      |
| Movement                 | EBL    | EBT    | EBR    | WBL    | WBT  | WBR  | NBL  | NBT   | NBR  | SBL  | SBT  | SBR  |      |
| Lane Configurations      | ↖ ↗    | ↖ ↗    |        | ↖ ↗    |      |      |      | ↖ ↗   |      |      | ↖ ↗  |      |      |
| Traffic Vol. veh/h       | 0      | 846    | 1      | 0      | 871  | 0    | 0    | 0     | 2    | 0    | 0    | 0    |      |
| Future Vol. veh/h        | 0      | 846    | 1      | 0      | 871  | 0    | 0    | 0     | 2    | 0    | 0    | 0    |      |
| 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           | 25     | -      | -      | 25     | -    | -    | -    | -     | -    | -    | -    | -    |      |
| Veh in Median Storage, # | -      | 0      | -      | -      | 0    | -    | -    | 0     | -    | -    | 0    | -    |      |
| Grade, %                 | -      | 0      | -      | -      | 0    | -    | -    | 0     | -    | -    | 0    | -    |      |
| Peak Hour Factor         | 90     | 90     | 90     | 90     | 90   | 90   | 90   | 90    | 90   | 90   | 90   | 90   |      |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2      | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    |      |
| Mvmt Flow                | 0      | 940    | 1      | 0      | 968  | 0    | 0    | 0     | 2    | 0    | 0    | 0    |      |
| Major/Minor              | Major1 | Major2 | Minor1 | Minor2 |      |      |      |       |      |      |      |      |      |
| Conflicting Flow All     | 968    | 0      | 0      | 941    | 0    | 0    | 1425 | 1909  | 471  | 1438 | 1909 | 484  |      |
| Stage 1                  | -      | -      | -      | -      | -    | -    | -    | 941   | 941  | -    | 968  | 968  | -    |
| Stage 2                  | -      | -      | -      | -      | -    | -    | -    | 484   | 968  | -    | 470  | 941  | -    |
| Critical Hdwy            | 4.14   | -      | -      | 4.14   | -    | -    | -    | 7.54  | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1      | -      | -      | -      | -      | -    | -    | -    | 6.54  | 5.54 | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2      | -      | -      | -      | -      | -    | -    | -    | 6.54  | 5.54 | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy           | 2.22   | -      | -      | 2.22   | -    | -    | -    | 3.52  | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver       | 707    | -      | -      | 724    | -    | -    | -    | 96    | 68   | 539  | 94   | 68   | 529  |
| Stage 1                  | -      | -      | -      | -      | -    | -    | -    | 283   | 340  | -    | 273  | 330  | -    |
| Stage 2                  | -      | -      | -      | -      | -    | -    | -    | 533   | 330  | -    | 543  | 340  | -    |
| Platoon blocked, %       | -      | -      | -      | -      | -    | -    | -    | -     | -    | -    | -    | -    | -    |
| Mov Cap-1 Maneuver       | 707    | -      | -      | 724    | -    | -    | -    | 96    | 68   | 539  | 94   | 68   | 529  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -      | -    | -    | -    | 96    | 68   | -    | 94   | 68   | -    |
| Stage 1                  | -      | -      | -      | -      | -    | -    | -    | 283   | 340  | -    | 273  | 330  | -    |
| Stage 2                  | -      | -      | -      | -      | -    | -    | -    | 533   | 330  | -    | 541  | 340  | -    |
| Approach                 | EB     | WB     | NB     | SB     |      |      |      |       |      |      |      |      |      |
| HCM Control Delay, s     | 0      | 0      | 11.7   | 0      |      |      |      |       |      |      |      |      |      |
| HCM LOS                  |        |        |        |        | B    |      |      |       | A    |      |      |      |      |
| Minor Lane/Major Mvmt    | NBLn1  | EBL    | EBT    | EBR    | WBL  | WBT  | WBR  | SBLn1 |      |      |      |      |      |
| Capacity (veh/h)         | 539    | 707    | -      | -      | 724  | -    | -    | -     |      |      |      |      |      |
| HCM Lane V/C Ratio       | 0.004  | -      | -      | -      | -    | -    | -    | -     |      |      |      |      |      |
| HCM Control Delay (s)    | 11.7   | 0      | -      | -      | 0    | -    | -    | 0     |      |      |      |      |      |
| HCM Lane LOS             | B      | A      | -      | -      | A    | -    | -    | A     |      |      |      |      |      |
| HCM 95th %ile Q(veh)     | 0      | 0      | -      | -      | 0    | -    | -    | -     |      |      |      |      |      |

| Intersection             |        |        |        |        |      |      |  |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|--------|------|------|--|--|--|--|--|--|--|
| Int Delay, s/veh         |        |        |        |        |      |      |  |  |  |  |  |  |  |
| 0                        |        |        |        |        |      |      |  |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT    | NBL  | NBR  |  |  |  |  |  |  |  |
| Lane Configurations      | ↖↗     |        | ↖↗     | ↖↗     | ↖↗   |      |  |  |  |  |  |  |  |
| Traffic Vol, veh/h       | 848    | 1      | 0      | 870    | 1    | 0    |  |  |  |  |  |  |  |
| Future Vol, veh/h        | 848    | 1      | 0      | 870    | 1    | 0    |  |  |  |  |  |  |  |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0      | 0    | 0    |  |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free   | Stop | Stop |  |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None   | -    | None |  |  |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -      | 0    | -    |  |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0      | 0    | -    |  |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0      | 0    | -    |  |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90     | 90   | 90   |  |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2      | 2    | 2    |  |  |  |  |  |  |  |
| Mvmt Flow                | 942    | 1      | 0      | 967    | 1    | 0    |  |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 | Minor2 |      |      |  |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 943    | 0      | 1427 | 472  |  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -      | 943  | -    |  |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -      | 484  | -    |  |  |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -      | 6.84 | 6.94 |  |  |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -      | 5.84 | -    |  |  |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -      | 5.84 | -    |  |  |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -      | 3.52 | 3.32 |  |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 723    | -      | 126  | 538  |  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -      | 339  | -    |  |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -      | 585  | -    |  |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -      | -    | -    |  |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 723    | -      | 126  | 538  |  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -      | 248  | -    |  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -      | 339  | -    |  |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -      | 585  | -    |  |  |  |  |  |  |  |
|                          |        |        |        |        |      |      |  |  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |        |      |      |  |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0      | 19.6   |        |      |      |  |  |  |  |  |  |  |
| HCM LOS                  |        |        |        | C      |      |      |  |  |  |  |  |  |  |
|                          |        |        |        |        |      |      |  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL    | WBT  |      |  |  |  |  |  |  |  |
| Capacity (veh/h)         | 248    | -      | -      | -      | 723  | -    |  |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.004  | -      | -      | -      | -    | -    |  |  |  |  |  |  |  |
| HCM Control Delay (s)    | 19.6   | -      | -      | -      | 0    | -    |  |  |  |  |  |  |  |
| HCM Lane LOS             | C      | -      | -      | -      | A    | -    |  |  |  |  |  |  |  |
| HCM 95th %ile Q(veh)     | 0      | -      | -      | -      | 0    | -    |  |  |  |  |  |  |  |

Smoke Tree Resort  
Existing PM

4: Smoke Tree East & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |      |        |      |      |  |  |  |  |  |
|--------------------------|--------|--------|------|--------|------|------|--|--|--|--|--|
| Int Delay, s/veh         |        |        |      |        |      |      |  |  |  |  |  |
| 0                        |        |        |      |        |      |      |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL  | WBT    | NBL  | NBR  |  |  |  |  |  |
| Lane Configurations      | ↕↕     |        | ↕    | ↕↕     |      | ↕↕   |  |  |  |  |  |
| Traffic Vol. veh/h       | 847    | 1      | 2    | 870    | 1    | 2    |  |  |  |  |  |
| Future Vol. veh/h        | 847    | 1      | 2    | 870    | 1    | 2    |  |  |  |  |  |
| Conflicting Peds. #/hr   | 0      | 0      | 0    | 0      | 0    | 0    |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free | Free   | Stop | Stop |  |  |  |  |  |
| RT Channelized           | -      | None   | -    | None   | -    | None |  |  |  |  |  |
| Storage Length           | -      | -      | 25   | -      | 0    | -    |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -    | 0      | 0    | -    |  |  |  |  |  |
| Grade, %                 | 0      | -      | -    | 0      | 0    | -    |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90   | 90     | 90   | 90   |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2    | 2      | 2    | 2    |  |  |  |  |  |
| Mvmt Flow                | 941    | 1      | 2    | 967    | 1    | 2    |  |  |  |  |  |
| Major/Minor              |        |        |      |        |      |      |  |  |  |  |  |
|                          | Major1 | Major2 |      | Minor1 |      |      |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 942  | 0      | 1430 | 471  |  |  |  |  |  |
| Stage 1                  | -      | -      | -    | -      | 942  | -    |  |  |  |  |  |
| Stage 2                  | -      | -      | -    | -      | 488  | -    |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14 | -      | 6.84 | 6.94 |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -    | -      | 5.84 | -    |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -    | -      | 5.84 | -    |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22 | -      | 3.52 | 3.32 |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 724  | -      | 125  | 539  |  |  |  |  |  |
| Stage 1                  | -      | -      | -    | -      | 340  | -    |  |  |  |  |  |
| Stage 2                  | -      | -      | -    | -      | 583  | -    |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -    | -      | -    | -    |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 724  | -      | 125  | 539  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -    | -      | 247  | -    |  |  |  |  |  |
| Stage 1                  | -      | -      | -    | -      | 339  | -    |  |  |  |  |  |
| Stage 2                  | -      | -      | -    | -      | 583  | -    |  |  |  |  |  |
| Approach                 |        |        |      |        |      |      |  |  |  |  |  |
| EB                       | EB     | WB     | WB   | NB     |      |      |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0      | 0    | 14.4   |      |      |  |  |  |  |  |
| HCM LOS                  | B      |        |      |        |      |      |  |  |  |  |  |
| Minor Lane/Major Mvmt    |        |        |      |        |      |      |  |  |  |  |  |
| NBLn1                    | EBT    | EBR    | WBL  | WBT    |      |      |  |  |  |  |  |
| Capacity (veh/h)         | 387    | -      | -    | 724    | -    |      |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.009  | -      | -    | 0.003  | -    |      |  |  |  |  |  |
| HCM Control Delay (s)    | 14.4   | -      | -    | 10     | -    |      |  |  |  |  |  |
| HCM Lane LOS             | B      | -      | -    | A      | -    |      |  |  |  |  |  |
| HCM 95th %ile Q(veh)     | 0      | -      | -    | 0      | -    |      |  |  |  |  |  |

Smoke Tree Resort  
Existing PM

5: Lincoln Medical West & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |      |      |      |  |  |  |  |  |
|--------------------------|--------|--------|--------|------|------|------|--|--|--|--|--|
| Int Delay, s/veh         |        |        |        |      |      | 0    |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT  | NBL  | NBR  |  |  |  |  |  |
| Lane Configurations      | ↕↕     | ↕↕     | ↕      | ↕↕   | ↕↕   | ↕↕   |  |  |  |  |  |
| Traffic Vol, veh/h       | 849    | 0      | 0      | 870  | 2    | 0    |  |  |  |  |  |
| Future Vol, veh/h        | 849    | 0      | 0      | 870  | 2    | 0    |  |  |  |  |  |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free | Stop | Stop |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None | -    | None |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -    | 0    | -    |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90   | 90   | 90   |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2    | 2    |  |  |  |  |  |
| Mvmt Flow                | 943    | 0      | 0      | 967  | 2    | 0    |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |      |      |      |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 943    | 0    | 1427 | 472  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 943  | -    |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 484  | -    |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -    | 6.84 | 6.94 |  |  |  |  |  |
| Critical Hdwy Sig 1      | -      | -      | -      | -    | 5.84 | -    |  |  |  |  |  |
| Critical Hdwy Sig 2      | -      | -      | -      | -    | 5.84 | -    |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -    | 3.52 | 3.32 |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 723    | -    | 126  | 538  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 339  | -    |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 585  | -    |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -    | -    | -    |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 723    | -    | 126  | 538  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 248  | -    |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 339  | -    |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 585  | -    |  |  |  |  |  |
| Approach                 | EB     | WB     | WB     | NB   |      |      |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0      | 0      | 19.6 |      |      |  |  |  |  |  |
| HCM LOS                  | C      |        |        |      |      |      |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL  | WBT  |      |  |  |  |  |  |
| Capacity (veh/h)         | 248    | -      | -      | 723  | -    |      |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.009  | -      | -      | -    | -    |      |  |  |  |  |  |
| HCM Control Delay (s)    | 19.6   | -      | -      | 0    | -    |      |  |  |  |  |  |
| HCM Lane LOS             | C      | -      | -      | A    | -    |      |  |  |  |  |  |
| HCM 95th %ile Q(veh)     | 0      | -      | -      | 0    | -    |      |  |  |  |  |  |

| Intersection             |        |        |        |      |      |      |  |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|------|------|------|--|--|--|--|--|--|--|
| Int Delay, s/veh         |        |        |        |      |      |      |  |  |  |  |  |  |  |
| 0                        |        |        |        |      |      |      |  |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT  | NBL  | NBR  |  |  |  |  |  |  |  |
| Lane Configurations      | 4B     |        | 5      | 4A   | W    |      |  |  |  |  |  |  |  |
| Traffic Vol. veh/h       | 849    | 0      | 0      | 869  | 2    | 3    |  |  |  |  |  |  |  |
| Future Vol. veh/h        | 849    | 0      | 0      | 869  | 2    | 3    |  |  |  |  |  |  |  |
| Conflicting Peds. #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |  |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free | Stop | Stop |  |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None | -    | None |  |  |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -    | 0    | -    |  |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90   | 90   | 90   |  |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2    | 2    |  |  |  |  |  |  |  |
| Mvmt Flow                | 943    | 0      | 0      | 966  | 2    | 3    |  |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |      |      |      |  |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 943    | 0    | 1426 | 472  |  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 943  | -    |  |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 483  | -    |  |  |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -    | 6.84 | 6.94 |  |  |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.84 | -    |  |  |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.84 | -    |  |  |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -    | 3.52 | 3.32 |  |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 723    | -    | 126  | 538  |  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 339  | -    |  |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 586  | -    |  |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -    | -    | -    |  |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 723    | -    | 126  | 538  |  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 248  | -    |  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 339  | -    |  |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 586  | -    |  |  |  |  |  |  |  |
|                          |        |        |        |      |      |      |  |  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |      |      |      |  |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0      | 15     |      |      |      |  |  |  |  |  |  |  |
| HCM LOS                  | C      |        |        |      |      |      |  |  |  |  |  |  |  |
|                          |        |        |        |      |      |      |  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL  | WBT  |      |  |  |  |  |  |  |  |
| Capacity (veh/h)         | 367    | -      | -      | 723  | -    |      |  |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.015  | -      | -      | -    | -    |      |  |  |  |  |  |  |  |
| HCM Control Delay (s)    | 15     | -      | -      | 0    | -    |      |  |  |  |  |  |  |  |
| HCM Lane LOS             | C      | -      | -      | A    | -    |      |  |  |  |  |  |  |  |
| HCM 95th %ile Q(veh)     | 0      | -      | -      | 0    | -    |      |  |  |  |  |  |  |  |

| Intersection             |        |        |        |      |       |      |        |       |       |      |      |      |      |
|--------------------------|--------|--------|--------|------|-------|------|--------|-------|-------|------|------|------|------|
| Int Delay, s/veh         |        |        |        |      |       |      |        |       |       |      |      |      |      |
| 7.6                      |        |        |        |      |       |      |        |       |       |      |      |      |      |
| Movement                 | EBL    | EBT    | EBR    | WBL  | WBT   | NBL  | NBT    | NBR   | SBL   | SBT  | SBR  |      |      |
| Lane Configurations      | 5      | 4A     |        | 5    | 4A    | 4B   |        | 5     | 5     |      | 5    |      |      |
| Traffic Vol. veh/h       | 7      | 792    | 41     | 6    | 777   | 9    | 66     | 3     | 47    | 7    | 0    | 34   |      |
| Future Vol. veh/h        | 7      | 792    | 41     | 6    | 777   | 9    | 66     | 3     | 47    | 7    | 0    | 34   |      |
| Conflicting Peds. #/hr   | 0      | 0      | 0      | 0    | 0     | 0    | 0      | 0     | 0     | 0    | 0    | 0    | 0    |
| Sign Control             | Free   | Free   | Free   | Free | Free  | Stop | Stop   | Stop  | Stop  | Stop | Stop | Stop | Stop |
| RT Channelized           | -      | None   | -      | None | -     | None | -      | None  | -     | None | -    | None | None |
| Storage Length           | 25     | -      | -      | 25   | -     | -    | -      | -     | -     | 0    | -    | 0    | 0    |
| Veh in Median Storage, # | -      | 0      | -      | -    | 0     | -    | -      | 0     | -     | -    | 0    | -    | -    |
| Grade, %                 | -      | 0      | -      | -    | 0     | -    | -      | 0     | -     | -    | 0    | -    | -    |
| Peak Hour Factor         | 90     | 90     | 90     | 90   | 90    | 90   | 90     | 90    | 90    | 90   | 90   | 90   | 90   |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2     | 2    | 2      | 2     | 2     | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 8      | 880    | 46     | 7    | 863   | 10   | 73     | 3     | 52    | 8    | 0    | 38   |      |
| Major/Minor              | Major1 | Major2 | Minor1 |      |       |      | Minor2 |       |       |      |      |      |      |
| Conflicting Flow All     | 873    | 0      | 0      | 926  | 0     | 0    | 1365   | 1806  | 463   | 1340 | -    | 437  |      |
| Stage 1                  | -      | -      | -      | -    | -     | -    | 919    | 919   | -     | 882  | -    | -    | -    |
| Stage 2                  | -      | -      | -      | -    | -     | -    | 446    | 887   | -     | 458  | -    | -    | -    |
| Critical Hdwy            | 4.14   | -      | -      | 4.14 | -     | -    | 7.54   | 6.54  | 6.94  | 7.54 | -    | 6.94 |      |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | -     | -    | 6.54   | 5.54  | -     | 6.54 | -    | -    | -    |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | -     | -    | 6.54   | 5.54  | -     | 6.54 | -    | -    | -    |
| Follow-up Hdwy           | 2.22   | -      | -      | 2.22 | -     | -    | 3.52   | 4.02  | 3.32  | 3.52 | -    | 3.32 |      |
| Pot Cap-1 Maneuver       | 768    | -      | -      | 734  | -     | -    | 106    | 78    | 546   | 111  | 0    | 567  |      |
| Stage 1                  | -      | -      | -      | -    | -     | -    | 292    | 348   | -     | 307  | 0    | -    | -    |
| Stage 2                  | -      | -      | -      | -    | -     | -    | 561    | 360   | -     | 552  | 0    | -    | -    |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -    | -      | -     | -     | -    | -    | -    | -    |
| Mov Cap-1 Maneuver       | 768    | -      | -      | 734  | -     | -    | 97     | 76    | 546   | 96   | -    | 567  |      |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | -     | -    | 97     | 76    | -     | 96   | -    | -    | -    |
| Stage 1                  | -      | -      | -      | -    | -     | -    | 289    | 345   | -     | 304  | -    | -    | -    |
| Stage 2                  | -      | -      | -      | -    | -     | -    | 519    | 356   | -     | 489  | -    | -    | -    |
| Approach                 | EB     | WB     | NB     |      |       |      | SB     |       |       |      |      |      |      |
| HCM Control Delay, s     | 0.1    | 0.1    | 109.5  |      |       |      | 17.6   |       |       |      |      |      |      |
| HCM LOS                  | F      |        |        |      |       |      |        |       |       |      |      |      |      |
|                          |        |        |        |      |       |      |        |       |       |      |      |      |      |
| Minor Lane/Major Mvmt    | NBLn1  | EBL    | EBT    | EBR  | WBL   | WBT  | WBR    | SBLn1 | SBLn2 |      |      |      |      |
| Capacity (veh/h)         | 144    | 768    | -      | -    | 734   | -    | -      | -     | 96    |      |      |      |      |
| HCM Lane V/C Ratio       | 0.895  | 0.01   | -      | -    | 0.009 | -    | -      | -     | 0.081 |      |      |      |      |
| HCM Control Delay (s)    | 109.5  | 9.7    | -      | -    | 10    | -    | -      | -     | 45.8  |      |      |      |      |
| HCM Lane LOS             | F      | A      | -      | -    | A     | -    | -      | -     | E     |      |      |      |      |
| HCM 95th %tile Q(veh)    | 6.1    | 0      | -      | -    | 0     | -    | -      | -     | 0.3   |      |      |      |      |



Smoke Tree Resort  
Existing PM

9: Scottsdale Rd & Lincoln Dr  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL   | EBT  | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|-------|------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations          | ↰     | ↰    | ↰    | ↰    | ↰    | ↰     | ↰    | ↰    | ↰    | ↰    | ↰    | ↰    |
| Traffic Volume (veh/h)       | 461   | 54   | 385  | 54   | 60   | 67    | 373  | 1514 | 44   | 56   | 1461 | 449  |
| Future Volume (veh/h)        | 461   | 54   | 385  | 54   | 60   | 67    | 373  | 1514 | 44   | 56   | 1461 | 449  |
| Initial Q (Qb), veh          | 0     | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A_pb1)          | 1.00  | 1.00 | 1.00 | 1.00 | 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   | No   | No    | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h          | 1870  | 1870 | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 555   | 0    | 428  | 60   | 67   | 74    | 414  | 1882 | 49   | 62   | 1623 | 499  |
| Peak Hour Factor             | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2     | 2    | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 671   | 0    | 516  | 101  | 101  | 90    | 473  | 2491 | 73   | 79   | 2015 | 924  |
| Arrive On Green              | 0.19  | 0.00 | 0.19 | 0.06 | 0.06 | 0.06  | 0.14 | 0.49 | 0.49 | 0.04 | 0.39 | 0.39 |
| Sat Sat Flow, veh/h          | 3563  | 0    | 1585 | 1781 | 1777 | 1585  | 3456 | 5099 | 149  | 1781 | 5106 | 1585 |
| Grp Volume(v), veh/h         | 555   | 0    | 428  | 60   | 67   | 74    | 414  | 1123 | 608  | 62   | 1623 | 499  |
| Grp Sat Flow(s),veh/h        | 1781  | 0    | 1585 | 1781 | 1777 | 1585  | 1728 | 1702 | 1844 | 1781 | 1702 | 1585 |
| Q Serve(g, s), s             | 19.5  | 0.0  | 24.5 | 4.3  | 4.8  | 6.0   | 15.3 | 32.7 | 32.7 | 4.5  | 36.7 | 24.9 |
| Cycle Q Clear(g, s)          | 19.5  | 0.0  | 24.5 | 4.3  | 4.8  | 6.0   | 15.3 | 32.7 | 32.7 | 4.5  | 36.7 | 24.9 |
| Prop In Lane                 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 0.08 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 671   | 0    | 516  | 101  | 101  | 90    | 473  | 1663 | 901  | 79   | 2015 | 924  |
| V/C Ratio(X)                 | 0.83  | 0.00 | 0.83 | 0.59 | 0.66 | 0.82  | 0.87 | 0.68 | 0.68 | 0.78 | 0.81 | 0.54 |
| Avail Cap(c, a), veh/h       | 671   | 0    | 516  | 101  | 101  | 90    | 651  | 1762 | 954  | 119  | 2015 | 924  |
| 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 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 50.7  | 0.0  | 40.5 | 59.8 | 60.1 | 60.6  | 55.0 | 25.4 | 25.4 | 61.5 | 34.9 | 16.5 |
| Incr Delay (d2), s/veh       | 7.9   | 0.0  | 10.3 | 6.2  | 12.2 | 40.6  | 7.7  | 0.7  | 1.4  | 8.7  | 3.6  | 2.3  |
| 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(50%),veh/h      | 94    | 0.0  | 14.1 | 2.1  | 2.5  | 3.4   | 7.2  | 13.2 | 14.5 | 2.2  | 15.7 | 14.4 |
| Unsig. Movement Delay, s/veh |       |      |      |      |      |       |      |      |      |      |      |      |
| LnGrp Delay(d),s/veh         | 58.6  | 0.0  | 50.8 | 66.0 | 72.3 | 101.2 | 62.7 | 26.1 | 26.7 | 70.2 | 38.5 | 18.8 |
| LnGrp LOS                    | E     | A    | D    | E    | E    | F     | E    | C    | C    | E    | D    | B    |
| Approach Vol, veh/h          | 983   |      |      | 201  |      |       |      | 2145 |      |      | 2184 |      |
| Approach Delay, s/veh        | 55.2  |      |      | 81.1 |      |       |      | 33.4 |      |      | 34.9 |      |
| Approach LOS                 | E     |      |      | F    |      |       |      | C    |      |      | C    |      |
| Timer - Assigned Phs         | 1     | 2    |      | 4    | 5    | 6     |      | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 11.1  | 69.2 |      | 30.0 | 23.3 | 57.0  |      | 13.0 |      |      |      |      |
| Change Period (Y+Rc), s      | * 5.3 | 5.7  |      | 5.5  | 5.5  | 5.7   |      | 5.6  |      |      |      |      |
| Max Green Sailing (Gmax), s  | * 8.7 | 67.3 |      | 24.5 | 24.5 | 51.3  |      | 7.4  |      |      |      |      |
| Max Q Clear Time (g_c+H), s  | 6.5   | 34.7 |      | 26.5 | 17.3 | 38.7  |      | 8.0  |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0   | 2.7  |      | 0.0  | 0.5  | 2.6   |      | 0.0  |      |      |      |      |
| Intersection Summary         |       |      |      |      |      |       |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |       |      |      | 39.6 |      |       |      |      |      |      |      |      |
| HCM 6th LOS                  |       |      |      | D    |      |       |      |      |      |      |      |      |

Notes

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

User approved volume balancing among the lanes for turning movement.

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

11/16/2018

CWTech BR

Synchro 10 Report

Page 11

## **APPENDIX D**

### **TRIP GENERATION**

# Smoke Tree Resort

Proposed

# Trip Generation

February 2019

Appendix D

## Methodology Overview

This form facilitates trip generation estimation using data within the Institute of Transportation Engineer's (ITE) *Trip Generation Manual*, 10th Edition and methodology described within ITE's *Trip Generation Handbook*, 3rd Edition. These references will be referred to as *Manual and Handbook*, respectively. The *Manual* contains data collected by various transportation professionals for a wide range of different land uses, with each land use category represented by a land use code (LUC). Average rates and equations have been established that correlate the relationship between an independent variable that describes the development size and generated trips for each categorized LUC in various settings and time periods. The *Handbook* indicates an established methodology for how to use data contained within the Manual when to use the fitted curve instead of the average rate and when to adjustments to the volume of trips are appropriate and how to do so. The methodology steps are represented visually in boxes in Figure 3.1. This worksheet applies calculations for each box if applicable.

## Box 1 - Define Study Site Land Use Type & Site Characteristics

The analyst is to pick an appropriate LUC(s) based on the subject's zoning/land use(s)/future land use(s). The size of the land use(s) is described in reference to an independent variable(s) specific to (each) the land use (example: 1,000 square feet of building area is relatively common).

### Land Use Types and Size

| Proposed Use             | Amount Units            | ITE LUC | ITE Land Use Name              |
|--------------------------|-------------------------|---------|--------------------------------|
| Hotel and Lock-off Units | 135 Rooms               | 310/330 | Standard Hotel/Resort Hotel    |
| Residential Units        | 30 Dwelling Units       | 220     | Multifamily Housing (Low-Rise) |
| Quality Restaurant       | 3.500 1,000 square feet | 931     | Quality Restaurant             |
|                          |                         |         |                                |
|                          |                         |         |                                |
|                          |                         |         |                                |
|                          |                         |         |                                |
|                          |                         |         |                                |

## Box 2 - Define Site Context

Context assessment is to "simply determine whether the study sites is in a multimodal setting" and "could have persons accessing the site by walking, bicycling, or riding transit." This assessment is used in Box 4. The *Manual* separates data into 4 setting categories - **Rural**, **General Urban/Suburban**, **Dense Multi-Urban Use** and **Center City Core**. This worksheet uses the following abbreviations, respectively: **R**, **G**, **D**, and **C**. The *Manual* does not have data for all settings of all land use codes. See the table on the next page titled "Site Context and Time Periods" - if this table is not provided, the "General Urban/Suburban" setting is used by default.

## Box 3 - Define Analysis Objectives Types of Trips & Time Period

This tool will focus on vehicular trips for a 24-hour period on a typical weekday as well as its AM peak hour and PM peak hour. Other time period(s) may be of interest.

## Smoke Tree Resort

Proposed

## Trip Generation

February 2019

Appendix D

### Box 4 - Is Study Site Multimodal?

Per the Handbook, "if the objective is to establish a local trip generation rate for a particular land use or study site, the simplified approach (Box 9) may be acceptable but the *Box 5 through 8* approach is required if the study site is located in an infill setting, contains a mix of uses on-site, or is near significant transit service."

### Box 5/Box 9 - Estimate Baseline Trips/Estimate Vehicular Trips (Determine Equation)

Vehicle trips are estimated using rates/equations applicable to each LUC. When the appropriate graph has a fitted curve, the *Handbook* has a process (Figure 4.2) to determine when to use it versus using the weighted average rate or collecting local data. The methodology requires for engineering judgement in some circumstances and permits engineering judgement to override or make adjustments when appropriate to best project (example 1: study site is expected to operate differently than data in the applicable land use code - such as restaurant that is closed in the morning or in the evening; example 2: LUC data in a localized area fails to be represented by the typically selected fitted curve/weighted average rate - a small shop/LUC 820, AM peak hour is skewed by the high y-intercept).

**Equation Type: Equation Used [Equated Rate]** (Type Abbreviations: Weighted Average Rate ("WA"), Fitted Curve ("FC"), or Custom ("C"))

| Proposed Use             | ADT                                  | AM Peak Hour                                              | PM Peak Hour                                              | (not used) |
|--------------------------|--------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|------------|
| Hotel and Lock-off Units | WA: []                               | FC: $T=0.38 \times X - 28.58$ [0.17]                      | FC: $T=0.52 \times X - 55.42$ [0.11]                      |            |
| Residential Units        | FC: $T=7.56 \times X - 40.86$ [6.20] | FC: $\text{LN}(T)=0.95 \times \text{LN}(X) - 0.51$ [0.51] | FC: $\text{LN}(T)=0.89 \times \text{LN}(X) - 0.02$ [0.67] |            |
| Quality Restaurant       | WA: $T=X \times 83.84$ [83.84]       | WA: $T=X \times 0.73$ [0.73]                              | WA: $T=X \times 7.8$ [7.80]                               |            |
|                          |                                      |                                                           |                                                           |            |
|                          |                                      |                                                           |                                                           |            |
|                          |                                      |                                                           |                                                           |            |
|                          |                                      |                                                           |                                                           |            |
|                          |                                      |                                                           |                                                           |            |

### Box 5/Box 9 - Estimate Baseline Trips/Estimate Vehicular Trips (Apply Equations and in/out Distributions)

#### Baseline Vehicular Trips

| Proposed Use             | ADT  |            |            |              | AM Peak Hour |           |           |           | PM Peak Hour |           |           |            | (not used) |
|--------------------------|------|------------|------------|--------------|--------------|-----------|-----------|-----------|--------------|-----------|-----------|------------|------------|
|                          | % In | In         | Out        | Total        | % In         | In        | Out       | Total     | % In         | In        | Out       | Total      |            |
| Hotel and Lock-off Units | 50%  | 350        | 350        | 700          | 72%          | 38        | 15        | 53        | 43%          | 29        | 39        | 68         |            |
| Residential Units        | 50%  | 93         | 93         | 186          | 23%          | 3         | 12        | 15        | 63%          | 13        | 7         | 20         |            |
| Quality Restaurant       | 50%  | 147        | 147        | 294          | 0%           | 0         | 3         | 3         | 67%          | 18        | 9         | 27         |            |
|                          |      |            |            |              |              |           |           |           |              |           |           |            |            |
|                          |      |            |            |              |              |           |           |           |              |           |           |            |            |
|                          |      |            |            |              |              |           |           |           |              |           |           |            |            |
|                          |      |            |            |              |              |           |           |           |              |           |           |            |            |
| <b>Totals</b>            |      | <b>590</b> | <b>590</b> | <b>1,180</b> |              | <b>41</b> | <b>30</b> | <b>71</b> |              | <b>60</b> | <b>55</b> | <b>115</b> |            |

**Box 6 - Convert Baseline Vehicle Trips to Person Trips**

If no vehicle trip reductions are to be applied, this portion may be ignored. The *Handbook* states "There are not enough samples to derive precise percentages by mode...however, for all but one, ...the motor vehicle percentage of total person trips is at least 96 percent." and "[vehicle occupancy for] many of the most commonly analyzed land use codes are not [available]." This form assumes that the total baseline vehicle trips for all land use codes accounts for 90% of total person trips. Unless otherwise specified, this form later reverses the conversion in Box 8.

**Box 7 - Estimate Internal Person Trips, External Walk/Bike Trips, Transit Person Trips, External Person Trips (Internal Capture)**

Internal capture occurs for mixed-use developments when a portion of the trips generated by the site are expected to have the both the origin and destination within the site. Internal capture is not dependent on mode choice. The table below presents the internal capture percentages and trips in units of vehicle trips. CivTech can provide trips in units of persons if requested.

**Adjustments for Internal Trips**

| Proposed Use             | ADT     |           |           |            | AM Peak Hour |          |          |          | PM Peak Hour |          |          |           | (not used) |
|--------------------------|---------|-----------|-----------|------------|--------------|----------|----------|----------|--------------|----------|----------|-----------|------------|
|                          | Percent | In        | Out       | Total      | Percent      | In       | Out      | Total    | Percent      | In       | Out      | Total     |            |
| Hotel and Lock-off Units | 0%      | 0         | 0         | 0          | 0%           | 0        | 0        | 0        | 0%           | 0        | 0        | 0         |            |
| Residential Units        | 0%      | 0         | 0         | 0          | 0%           | 0        | 0        | 0        | 0%           | 0        | 0        | 0         |            |
| Quality Restaurant       | 50%     | 74        | 74        | 148        | 50%          | 0        | 2        | 2        | 50%          | 9        | 5        | 14        |            |
| <b>Totals</b>            |         | <b>74</b> | <b>74</b> | <b>148</b> |              | <b>0</b> | <b>2</b> | <b>2</b> |              | <b>9</b> | <b>5</b> | <b>14</b> |            |

**Box 8 - Convert Person Trips to Final Vehicle Trips**

The vehicle occupancy and baseline alternate mode are now factored out from the external trips in vehicles, after any adjustments for internal capture and additional alternate mode from Box 7. In Box 6, vehicle trips were considered to account for 90% of total person trips. Alternate mode trips in addition to the baseline, if any, are accounted for in Box 7. It is estimated that vehicle trips should be reduced by an additional 0% due to carpooling. The final external trips in vehicles is multiplied by  $90\% - 0\% = 90\%$  to produce the external vehicle trips.

**External Vehicular Trips**

| Proposed Use  | ADT        |            |              | AM Peak Hour |           |           | PM Peak Hour |           |            | (not used) |
|---------------|------------|------------|--------------|--------------|-----------|-----------|--------------|-----------|------------|------------|
|               | In         | Out        | Total        | In           | Out       | Total     | In           | Out       | Total      |            |
| <b>Totals</b> | <b>516</b> | <b>516</b> | <b>1,032</b> | <b>41</b>    | <b>28</b> | <b>69</b> | <b>51</b>    | <b>50</b> | <b>101</b> |            |

**Box 10 - Estimate Vehicle Trip Subsets Pass-by/Diverted Trips, Truck Trips (Pass-By Trips)**

Some trips may be classified as "pass-by" trips, where some vehicle trips generated by the study site are already traveling on an adjacent road and make a stop while passing by. These trips do not add traffic volume to the roadway. The *Handbook* does not specify that a 'pair' of pass-by trips must enter and exit the same driveway. The current edition of the *Handbook* indicates that pass-by trips should have directional distribution applied (%in/%out), though reviewers often comment when pass-by trip "pairs" do not occur within a the specified time period. This is likely due to ease of calculation and traditional methodology found in the first edition of the *Handbook*. As such, the analyst may ignore the direction distribution divide the total pass-by trip volume by 2 to apply pass-by "pairs". In addition, the analyst may consider pass-by rates at a reduced rate. Data is not available for all land use codes and all periods, assumptions are highlighted. The percentage is applied to total external vehicle trips.

## **APPENDIX E**

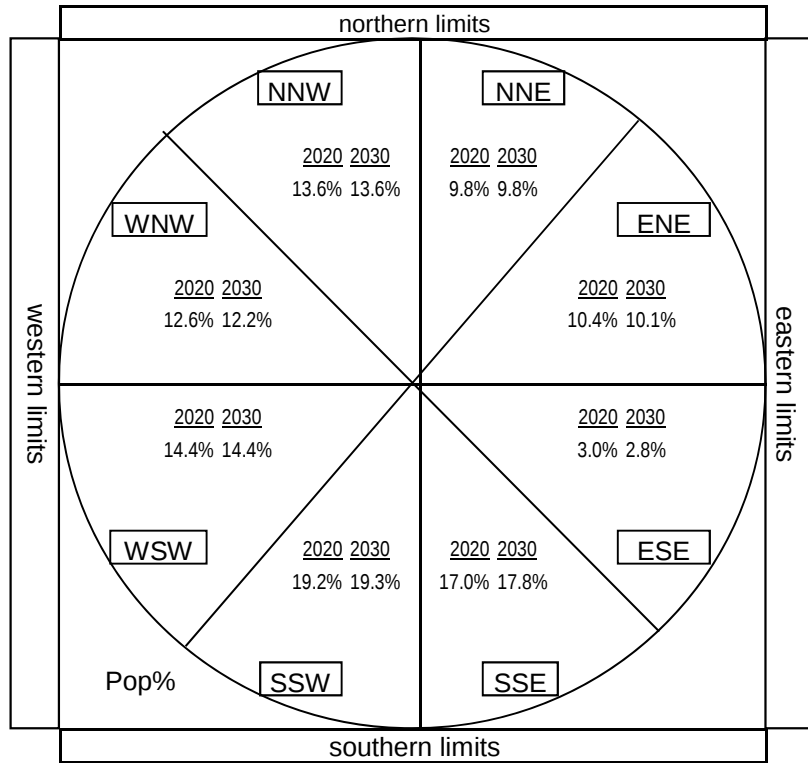
### **TRIP DISTRIBUTION**

| Quadrant        | 2020       |         |  |  | 2030       |              |  |  |
|-----------------|------------|---------|--|--|------------|--------------|--|--|
|                 | Population | Percent |  |  | Population | Percent      |  |  |
| North Northwest | 65,355     | 13.6%   |  |  | 70,346     | 13.6%        |  |  |
| North Northeast | 46,994     | 9.8%    |  |  | 50,587     | 9.8%         |  |  |
| North           | 112,348    | 23.4%   |  |  | 120,934    | <b>23.4%</b> |  |  |
| East Northeast  | 49,891     | 10.4%   |  |  | 52,124     | 10.1%        |  |  |
| East Southeast  | 14,233     | 3.0%    |  |  | 14,712     | 2.8%         |  |  |
| East            | 64,123     | 13.4%   |  |  | 66,836     | <b>12.9%</b> |  |  |
| South Southeast | 81,730     | 17.0%   |  |  | 92,480     | 17.8%        |  |  |
| South Southwest | 92,361     | 19.2%   |  |  | 99,928     | 19.3%        |  |  |
| South           | 174,091    | 36.2%   |  |  | 192,407    | <b>37.1%</b> |  |  |
| West Southwest  | 69,372     | 14.4%   |  |  | 74,834     | 14.4%        |  |  |
| West Northwest  | 60,317     | 12.6%   |  |  | 63,387     | 12.2%        |  |  |
| West            | 129,689    | 27.0%   |  |  | 138,221    | <b>26.6%</b> |  |  |
| Totals          | 480,252    | 100.0%  |  |  | 518,398    | 100.0%       |  |  |

### Radius

Population radius: 10 miles

Select Analysis Year (2020, 2030, 2040,2050)  
2020



[illegible]

[illegible]

[illegible]

**From WSW**  
**From West**

[illegible]

## **APPENDIX F**

### **BACKGROUND TRAFFIC**

**Location of counts:** Scottsdale Road between Indian Bend and Lincoln

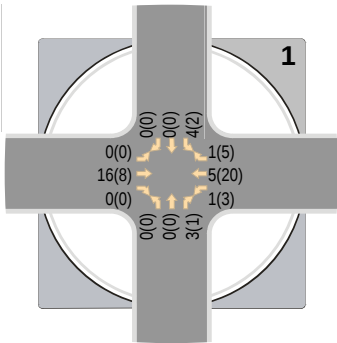
**Source(s):** <https://www.scottsdaleaz.gov/transportation/studies-reports/traffic-volume>

|           | Year | Volume | Avg Growth<br>Rate to 2012 | Expansion<br>Factor to<br>2012 |
|-----------|------|--------|----------------------------|--------------------------------|
| Beginning | 2012 | 43,500 |                            |                                |
| End       | 2014 | 45,000 | 1.7%                       | 0.967                          |

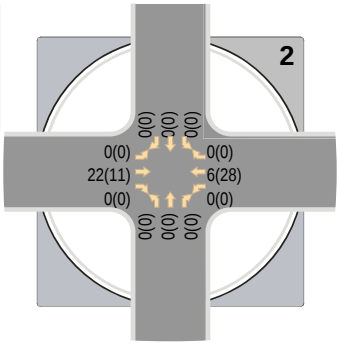
Growth Rate Used            1.7%  
Per-Year Multiplier        1.017

| Year | Expansion<br>Factor(s)                             |
|------|----------------------------------------------------|
| 2018 | 1.000                                              |
| 2019 | 1.017                                              |
| 2020 | 1.034 <- Expansion factor to opening               |
| 2021 | 1.052                                              |
| 2022 | 1.070                                              |
| 2023 | 1.088                                              |
| 2024 | 1.106                                              |
| 2025 | 1.125 <- Expansion factor to 5 years after opening |
| 2026 | 1.144                                              |
| 2027 | 1.164                                              |
| 2028 | 1.184                                              |
| 2029 | 1.204                                              |
| 2030 | 1.224                                              |
| 2031 | 1.245                                              |
| 2032 | 1.266                                              |
| 2033 | 1.288                                              |
| 2034 | 1.310                                              |
| 2035 | 1.332                                              |
| 2036 | 1.354                                              |
| 2037 | 1.378                                              |
| 2038 | 1.401                                              |

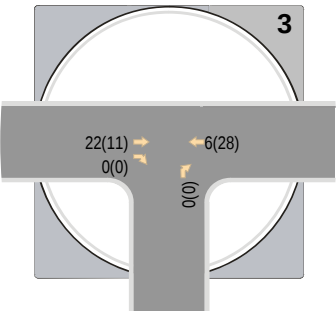
Lincoln medical site



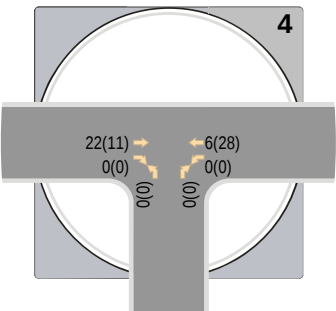
Mockingbird Lane & Lincoln Dr



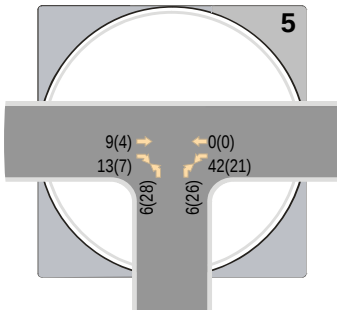
Quail Run Rd & Lincoln Dr



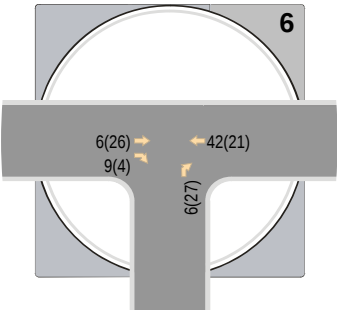
Smoke Tree Drwy West & Lincoln Dr



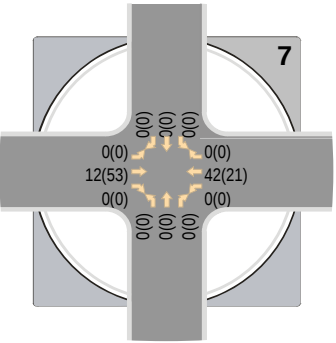
Smoke Tree Drwy East & Lincoln Dr



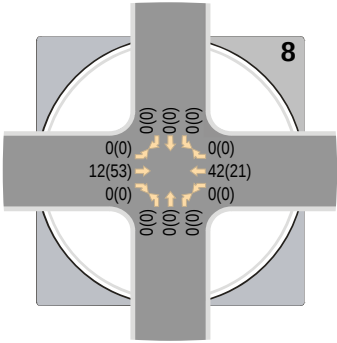
Medical Drwy West & Lincoln Dr



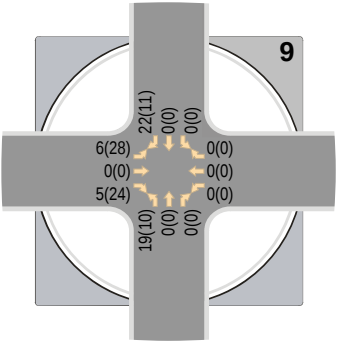
Medical Drwy East & Lincoln Dr



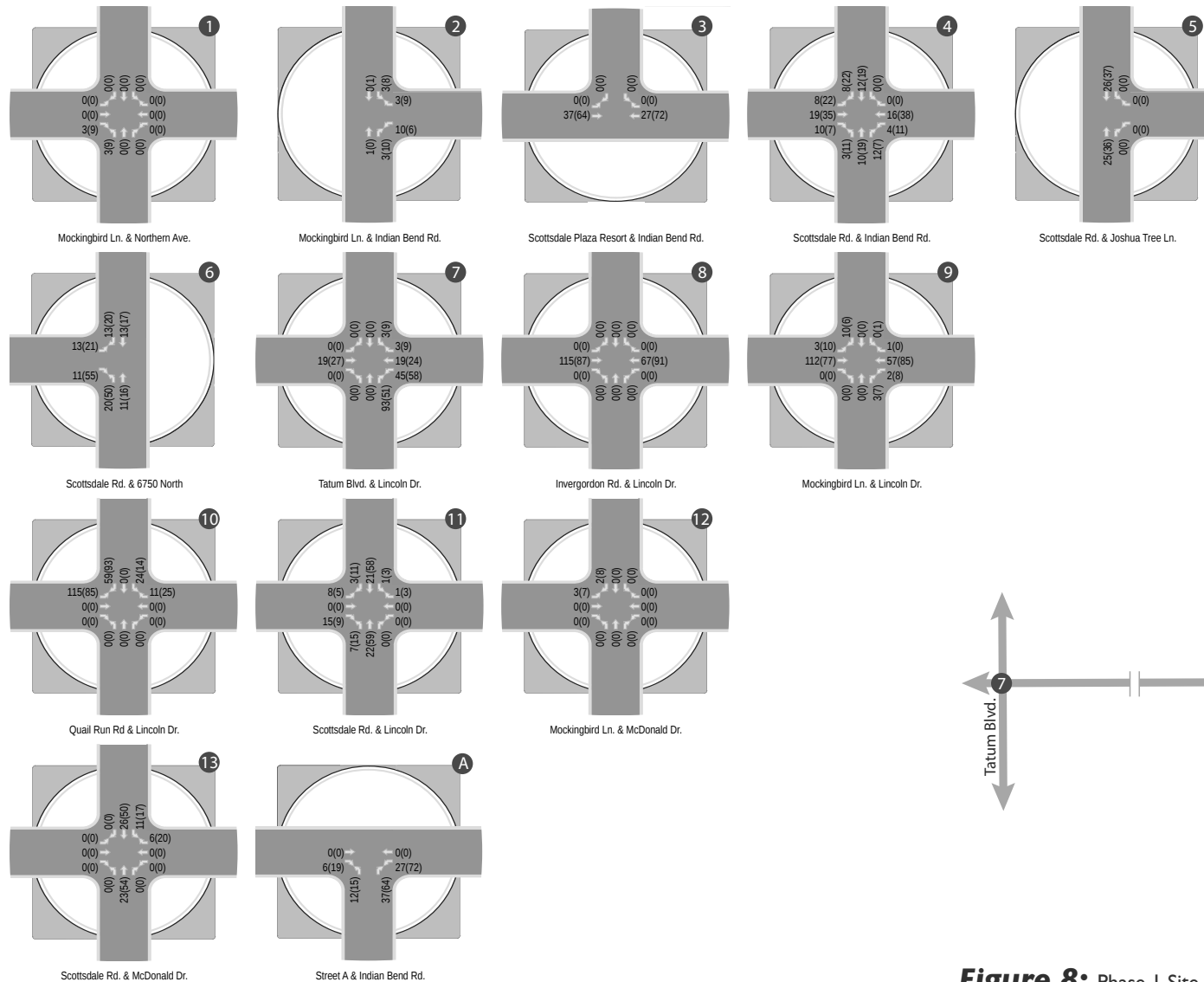
Apartment Drwy & Lincoln Dr



AJ's Drwy & Lincoln Dr

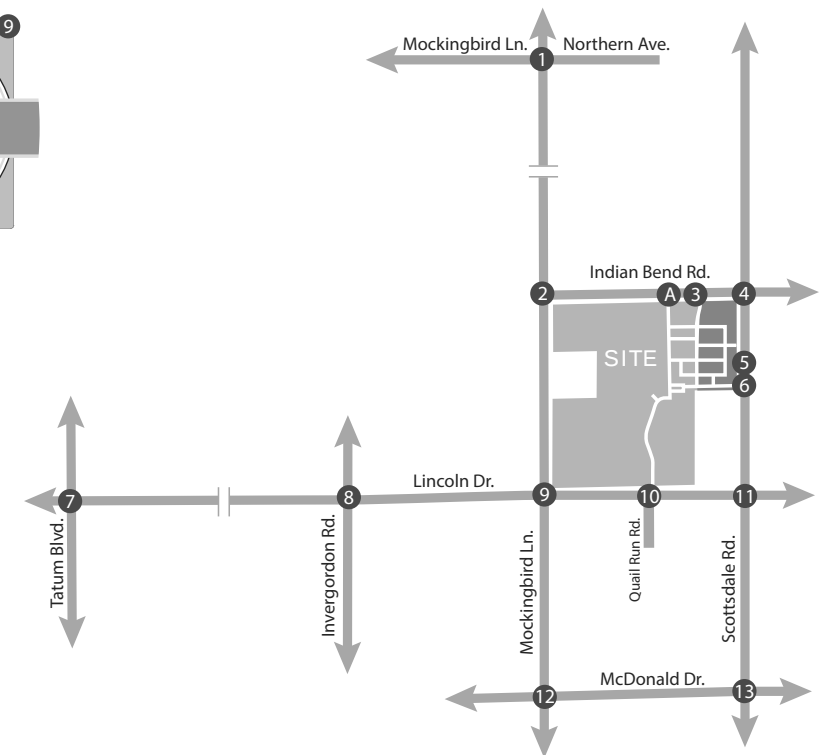


Scottsdale Rd & Lincoln Dr



# LEGEND

XX(XX) - AM(PM) Peak Hour Traffic Volumes



**Figure 8:** Phase I Site Generated Traffic Volumes without Palmeraie Access A

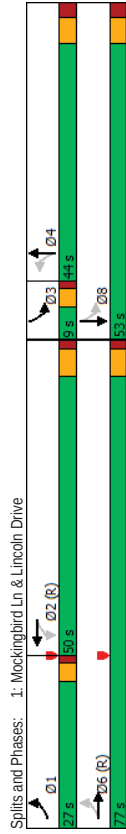
## **APPENDIX G**

### **2020 PEAK HOUR ANALYSIS**

Smoke Tree Resort  
2020 Background AM

1: Mockingbird Ln & Lincoln Drive  
Timings

|                                                                       | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|-----------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group                                                            | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
| Lane Configurations                                                   | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
| Traffic Volume (vph)                                                  | 222   | 971   | 23    | 890   | 5     | 34    | 76    | 88    |
| Future Volume (vph)                                                   | 222   | 971   | 23    | 890   | 5     | 34    | 76    | 88    |
| Turn Type                                                             | pm+pt | NA    | Perm  | NA    | Perm  | NA    | pm+pt | NA    |
| Protected Phases                                                      | 1     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |
| Permitted Phases                                                      | 6     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |
| Detector Phase                                                        | 1     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |
| Switch Phase                                                          |       |       |       |       |       |       |       |       |
| Minimum Initial (s)                                                   | 3.5   | 15.0  | 15.0  | 15.0  | 7.0   | 7.0   | 3.5   | 7.0   |
| Minimum Split (s)                                                     | 8.0   | 27.0  | 27.0  | 27.0  | 33.5  | 33.5  | 8.0   | 33.5  |
| Total Split (s)                                                       | 27.0  | 77.0  | 50.0  | 50.0  | 44.0  | 44.0  | 9.0   | 53.0  |
| Total Split (%)                                                       | 20.8% | 59.2% | 38.5% | 38.5% | 33.8% | 33.8% | 6.9%  | 40.8% |
| Yellow Time (s)                                                       | 3.0   | 4.5   | 4.5   | 4.5   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)                                                      | 1.0   | 1.5   | 1.5   | 1.5   | 2.5   | 2.5   | 1.0   | 2.5   |
| Lost Time Adjust (s)                                                  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)                                                   | 4.0   | 6.0   | 6.0   | 6.0   | 6.5   | 6.5   | 4.0   | 6.5   |
| Lead/Lag                                                              | Lead  | Lag   | Lag   | Lag   | Lag   | Lag   | Lead  | Lead  |
| Lead-Lag Optimize?                                                    | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode                                                           | None  | C-Max | C-Max | C-Max | None  | None  | None  | None  |
| Act Effct Green (s)                                                   | 93.3  | 91.3  | 70.1  | 70.1  | 17.4  | 17.4  | 28.7  | 26.2  |
| Actuated g/C Ratio                                                    | 0.72  | 0.70  | 0.54  | 0.54  | 0.13  | 0.13  | 0.22  | 0.20  |
| v/c Ratio                                                             | 0.57  | 0.45  | 0.10  | 0.10  | 0.08  | 0.08  | 0.30  | 0.84  |
| Control Delay                                                         | 13.0  | 10.1  | 18.3  | 25.3  | 46.2  | 32.4  | 41.8  | 50.2  |
| Queue Delay                                                           | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay                                                           | 13.0  | 10.1  | 18.3  | 25.3  | 46.2  | 32.4  | 41.8  | 50.2  |
| LOS                                                                   | B     | B     | B     | C     | D     | C     | D     | D     |
| Approach Delay                                                        | 10.6  | 10.6  | 25.1  | 25.1  | 33.7  | 33.7  | 48.6  | 48.6  |
| Approach LOS                                                          | B     | B     | C     | C     | C     | C     | D     | D     |
| Intersection Summary                                                  |       |       |       |       |       |       |       |       |
| Cycle Length: 130                                                     |       |       |       |       |       |       |       |       |
| Actuated Cycle Length: 130                                            |       |       |       |       |       |       |       |       |
| Offset: 0 (0%), Referenced to phase 2/WBTL and 6/EBTL, Start of Green |       |       |       |       |       |       |       |       |
| Natural Cycle: 90                                                     |       |       |       |       |       |       |       |       |
| Control Type: Actuated-Coordinated                                    |       |       |       |       |       |       |       |       |
| Maximum v/c Ratio: 0.84                                               |       |       |       |       |       |       |       |       |
| Intersection Signal Delay: 22.1                                       |       |       |       |       |       |       |       |       |
| Intersection Capacity Utilization 74.7%                               |       |       |       |       |       |       |       |       |
| Analysis Period (min) 15                                              |       |       |       |       |       |       |       |       |



Smoke Tree Resort  
2020 Background AM

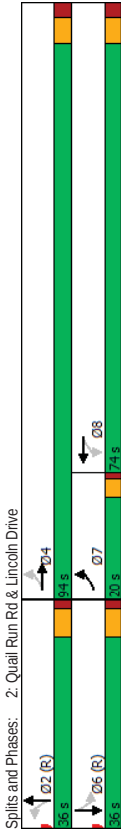
1: Mockingbird Ln & Lincoln Drive  
HCM 6th Signalized Intersection Summary

|                              | EBL  | EBT  | EBR  | WBL  | WBT  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations          | EBL  | EBT  | EBR  | WBL  | WBT  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Traffic Volume (veh/h)       | 222  | 971  | 30   | 23   | 890  | 42   | 5    | 34   | 22   | 76   | 88   |
| Future Volume (veh/h)        | 222  | 971  | 30   | 23   | 890  | 42   | 5    | 34   | 22   | 76   | 88   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Peak-Bike Adj(A, pbf)        | 1.00 | 1.00 | 1.00 | 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 |
| Work Zone On Approach        | No   | No   | No   | No   | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h          | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 247  | 1079 | 33   | 26   | 989  | 47   | 6    | 38   | 24   | 84   | 98   |
| Peak Hour Factor             | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 397  | 2334 | 71   | 316  | 1919 | 91   | 88   | 184  | 116  | 313  | 109  |
| Arrive On Green              | 0.08 | 0.66 | 0.66 | 0.56 | 0.56 | 0.17 | 0.17 | 0.17 | 0.04 | 0.24 | 0.24 |
| Sat Flow, veh/h              | 1781 | 3520 | 108  | 507  | 3454 | 164  | 1024 | 1072 | 677  | 1781 | 454  |
| Grp Volume(V), veh/h         | 247  | 545  | 567  | 26   | 509  | 527  | 6    | 62   | 84   | 0    | 357  |
| Grp Sat Flow(s), veh/h       | 1781 | 1777 | 1851 | 507  | 1777 | 1841 | 1024 | 0    | 1749 | 1781 | 0    |
| Q Serve(g, s), s             | 7.4  | 19.4 | 19.4 | 3.4  | 23.2 | 23.2 | 0.7  | 0.0  | 4.0  | 5.0  | 0.0  |
| Cycle Q Clear(g, c), s       | 7.4  | 19.4 | 19.4 | 8.8  | 23.2 | 23.2 | 18.9 | 0.0  | 4.0  | 5.0  | 0.0  |
| Prop In Lane                 | 1.00 | 0.06 | 1.00 | 1.00 | 0.09 | 1.00 | 0.39 | 1.00 | 0.73 | 1.00 | 0.73 |
| Lane Grp Cap(c), veh/h       | 397  | 1178 | 1227 | 316  | 987  | 1023 | 88   | 0    | 300  | 313  | 0    |
| V/C Ratio(X)                 | 0.62 | 0.46 | 0.46 | 0.08 | 0.52 | 0.52 | 0.07 | 0.00 | 0.21 | 0.27 | 0.00 |
| Avail Cap(c, a), veh/h       | 576  | 1178 | 1227 | 316  | 987  | 1023 | 208  | 0    | 504  | 313  | 0    |
| 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 |
| Upstream Filter(i)           | 1.00 | 1.00 | 1.00 | 0.56 | 0.56 | 0.56 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh     | 13.8 | 10.6 | 10.6 | 16.2 | 18.0 | 18.0 | 61.3 | 0.0  | 46.2 | 41.1 | 0.0  |
| Incr Delay (d2), s/veh       | 1.6  | 1.3  | 1.3  | 0.3  | 1.1  | 1.0  | 0.3  | 0.0  | 0.3  | 0.5  | 0.0  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 3.0  | 7.7  | 8.0  | 0.4  | 9.7  | 10.0 | 0.2  | 0.0  | 1.8  | 2.2  | 0.0  |
| Unsig. Movement Delay, s/veh | 15.4 | 12.0 | 11.9 | 16.5 | 19.1 | 19.0 | 61.6 | 0.0  | 46.6 | 41.5 | 0.0  |
| LnGrp Delay(d), s/veh        | B    | B    | B    | B    | B    | B    | E    | A    | D    | D    | A    |
| LnGrp LOS                    | B    | B    | B    | B    | B    | B    | E    | A    | D    | D    | A    |
| Approach Vol, veh/h          | 1359 |      |      | 1062 |      |      | 68   |      |      |      | 441  |
| Approach Delay, s/veh        | 12.6 |      |      | 19.0 |      |      | 47.9 |      |      |      | 56.1 |
| Approach LOS                 | B    | B    | B    | B    | B    | B    | D    | D    | D    | D    | E    |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 6    | 8    |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 14.0 | 78.2 | 9.0  | 28.8 | 92.2 | 37.8 |      |      |      |      |      |
| Change Period (Y+Rc), s      | 4.0  | 6.0  | 4.0  | 6.5  | 6.0  | 6.5  |      |      |      |      |      |
| Max Green Setting (Gmax), s  | 23.0 | 44.0 | 5.0  | 37.5 | 71.0 | 46.5 |      |      |      |      |      |
| Max Q Clear Time (g_c+tl), s | 9.4  | 25.2 | 7.0  | 20.9 | 21.4 | 29.2 |      |      |      |      |      |
| Green Ext Time (p_c), s      | 0.6  | 7.1  | 0.0  | 0.2  | 9.8  | 2.2  |      |      |      |      |      |
| Intersection Summary         |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  |      |      |      |      |      |      |      |      |      |      |      |

Smoke Tree Resort  
2020 Background AM

2: Quail Run Rd & Lincoln Drive  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | 115   | 1017  | 2     | 853   | 0     | 26    | 0     |
| Traffic Volume (vph) | 115   | 1017  | 2     | 853   | 0     | 26    | 0     |
| Future Volume (vph)  | 115   | 1017  | 2     | 853   | 0     | 26    | 0     |
| Turn Type            | pm+pt | NA    | Perm  | NA    | NA    | Perm  | NA    |
| Protected Phases     | 7     | 4     | 8     | 8     | 2     | 6     | 6     |
| Permitted Phases     | 4     | 4     | 8     | 8     | 2     | 6     | 6     |
| Detector Phase       | 7     | 4     | 8     | 8     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 3.5   | 15.0  | 15.0  | 15.0  | 7.0   | 7.0   | 7.0   |
| Minimum Split (s)    | 8.0   | 28.0  | 28.0  | 28.0  | 33.0  | 33.0  | 33.0  |
| Total Split (s)      | 20.0  | 94.0  | 74.0  | 74.0  | 36.0  | 36.0  | 36.0  |
| Total Split (%)      | 15.4% | 72.3% | 56.9% | 56.9% | 27.7% | 27.7% | 27.7% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 4.0   | 4.5   | 4.5   | 4.5   |
| All-Red Time (s)     | 1.0   | 2.5   | 2.5   | 2.5   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 6.5   | 6.5   | 6.5   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lag   |       |       |       |
| Lead/Lag Optimize?   | Yes   | Yes   | Yes   | Yes   |       |       |       |
| Recall Mode          | None  | None  | None  | None  | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 64.0  | 61.5  | 46.2  | 46.2  | 56.0  | 56.0  | 56.0  |
| Actuated g/C Ratio   | 0.49  | 0.47  | 0.36  | 0.36  | 0.43  | 0.43  | 0.43  |
| v/c Ratio            | 0.53  | 0.68  | 0.02  | 0.76  | 0.01  | 0.05  | 0.09  |
| Control Delay        | 29.9  | 35.8  | 23.5  | 40.9  | 0.0   | 26.1  | 0.2   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 29.9  | 35.8  | 23.5  | 40.9  | 0.0   | 26.1  | 0.2   |
| LOS                  | C     | D     | C     | D     | A     | C     | A     |
| Approach Delay       |       | 35.2  |       | 40.8  |       |       | 7.6   |
| Approach LOS         |       | D     |       | D     |       |       | A     |



Smoke Tree Resort  
2020 Background AM

2: Quail Run Rd & Lincoln Drive  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | 115  | 1017 | 3    | 2    | 853  | 12   | 0    | 0    | 7    | 26   | 0    | 65   |
| Traffic Volume (veh/h)       | 115  | 1017 | 3    | 2    | 853  | 12   | 0    | 0    | 7    | 26   | 0    | 65   |
| Future Volume (veh/h)        | 115  | 1017 | 3    | 2    | 853  | 12   | 0    | 0    | 7    | 26   | 0    | 65   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A, pbT)         | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 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   | No   | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h          | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 128  | 1130 | 3    | 2    | 948  | 13   | 0    | 0    | 8    | 29   | 0    | 72   |
| Peak Hour Factor             | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 210  | 1517 | 4    | 195  | 1161 | 16   | 0    | 0    | 771  | 737  | 0    | 771  |
| Arrive On Green              | 0.13 | 0.83 | 0.83 | 0.22 | 0.22 | 0.22 | 0.00 | 0.00 | 0.49 | 0.49 | 0.00 | 0.49 |
| Sat Flow, veh/h              | 1781 | 3636 | 10   | 497  | 3589 | 49   | 0    | 0    | 1585 | 1407 | 0    | 1585 |
| Grp Volume(V), veh/h         | 128  | 552  | 581  | 2    | 469  | 492  | 0    | 0    | 8    | 29   | 0    | 72   |
| Grp Sat Flow(s), veh/h       | 1781 | 1777 | 1869 | 497  | 1777 | 1862 | 0    | 0    | 1585 | 1407 | 0    | 1585 |
| Q Serve(g, s), s             | 6.1  | 17.7 | 17.7 | 0.4  | 32.7 | 32.7 | 0.0  | 0.0  | 0.3  | 1.4  | 0.0  | 3.2  |
| Cycle Q Clear(g, c), s       | 6.1  | 17.7 | 17.7 | 5.9  | 32.7 | 32.7 | 0.0  | 0.0  | 0.3  | 1.7  | 0.0  | 3.2  |
| Prop In Lane                 | 1.00 | 0.01 | 1.00 | 0.03 | 0.03 | 0.03 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 210  | 741  | 780  | 195  | 575  | 602  | 0    | 0    | 771  | 737  | 0    | 771  |
| V/C Ratio(X)                 | 0.61 | 0.74 | 0.74 | 0.01 | 0.82 | 0.82 | 0.00 | 0.00 | 0.01 | 0.04 | 0.00 | 0.09 |
| Avail Cap(c, a), veh/h       | 317  | 1196 | 1258 | 292  | 923  | 967  | 0    | 0    | 771  | 737  | 0    | 771  |
| HCM Platoon Ratio            | 2.00 | 2.00 | 2.00 | 0.67 | 0.67 | 0.67 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(i)           | 0.90 | 0.90 | 0.90 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh     | 28.8 | 7.7  | 7.7  | 39.0 | 47.2 | 47.2 | 0.0  | 0.0  | 17.2 | 17.7 | 0.0  | 17.9 |
| Incr Delay (d2), s/veh       | 2.6  | 1.4  | 1.3  | 0.0  | 3.1  | 2.9  | 0.0  | 0.0  | 0.0  | 0.1  | 0.0  | 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(50%), veh/ln    | 2.5  | 3.4  | 3.6  | 0.1  | 15.5 | 16.2 | 0.0  | 0.0  | 0.1  | 0.5  | 0.0  | 1.2  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 31.4 | 9.1  | 9.0  | 39.0 | 50.3 | 50.2 | 0.0  | 0.0  | 17.2 | 17.8 | 0.0  | 18.2 |
| LnGrp LOS                    | C    | A    | A    | D    | D    | D    | A    | A    | B    | B    | A    | B    |
| Approach Vol, veh/h          | 1261 |      |      | 963  |      |      | 8    |      |      |      |      | 101  |
| Approach Delay, s/veh        | 11.3 |      |      | 50.2 |      |      | 17.2 |      |      |      |      | 18.1 |
| Approach LOS                 | B    |      |      | D    |      |      | B    |      |      |      |      | B    |
| Timer - Assigned Phs         | 2    | 4    | 4    | 6    | 7    | 8    |      |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 69.3 | 60.7 | 60.7 | 69.3 | 12.2 | 48.6 |      |      |      |      |      |      |
| Change Period (Y+Rc), s      | 6.0  | 6.5  | 6.5  | 6.0  | 4.0  | 6.5  |      |      |      |      |      |      |
| Max Green Setting (Gmax), s  | 30.0 | 87.5 | 87.5 | 30.0 | 16.0 | 67.5 |      |      |      |      |      |      |
| Max Q Clear Time (g_c+H), s  | 2.3  | 19.7 | 19.7 | 5.2  | 8.1  | 34.7 |      |      |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 10.3 | 10.3 | 0.4  | 0.2  | 7.4  |      |      |      |      |      |      |
| Intersection Summary         |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      |      | 27.7 |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  |      |      |      | C    |      |      |      |      |      |      |      |      |

Smoke Tree Resort  
2020 Background AM

3: Smoke Tree West & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |      |      |      |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|------|------|------|--|--|--|--|--|--|
| Int Delay, s/veh         |        |        |        |      |      |      |  |  |  |  |  |  |
| 0                        |        |        |        |      |      |      |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT  | NBL  | NBR  |  |  |  |  |  |  |
| Lane Configurations      | 4P     | 4P     | 5      | 4P   | 4P   | W    |  |  |  |  |  |  |
| Traffic Vol. veh/h       | 1047   | 2      | 0      | 863  | 0    | 0    |  |  |  |  |  |  |
| Future Vol. veh/h        | 1047   | 2      | 0      | 863  | 0    | 0    |  |  |  |  |  |  |
| Conflicting Peds. #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free | Stop | Stop |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None | -    | None |  |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -    | 0    | -    |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90   | 90   | 90   |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2    | 2    |  |  |  |  |  |  |
| Mvmt Flow                | 1163   | 2      | 0      | 959  | 0    | 0    |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |      |      |      |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1165   | 0    | 1644 | 583  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 1164 | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 480  | -    |  |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -    | 6.84 | 6.94 |  |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.84 | -    |  |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.84 | -    |  |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -    | 3.52 | 3.32 |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 595    | -    | 90   | 456  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 259  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 588  | -    |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -    | -    | -    |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 595    | -    | 90   | 456  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 197  | -    |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 259  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 588  | -    |  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |      |      |      |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0      | 0      | 0    | 0    | 0    |  |  |  |  |  |  |
| HCM LOS                  | A      |        |        |      |      |      |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL  | WBT  | WBT  |  |  |  |  |  |  |
| Capacity (veh/h)         | -      | -      | -      | -    | 595  | -    |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | -      | -      | -      | -    | -    | -    |  |  |  |  |  |  |
| HCM Control Delay (s)    | 0      | -      | -      | 0    | -    | -    |  |  |  |  |  |  |
| HCM Lane LOS             | A      | -      | -      | A    | -    | -    |  |  |  |  |  |  |
| HCM 95th %tile Q(veh)    | -      | -      | -      | 0    | -    | -    |  |  |  |  |  |  |

Smoke Tree Resort  
2020 Background AM

4: Smoke Tree East & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |      |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|------|-------|------|--|--|--|--|--|--|
| Int Delay, s/veh         |        |        |        |      |       |      |  |  |  |  |  |  |
| 0.1                      |        |        |        |      |       |      |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT  | NBL   | NBR  |  |  |  |  |  |  |
| Lane Configurations      | ←P→    | ←P→    | ←P→    | ←P→  | ←P→   | ←P→  |  |  |  |  |  |  |
| Traffic Vol, veh/h       | 1049   | 0      | 1      | 860  | 5     | 2    |  |  |  |  |  |  |
| Future Vol, veh/h        | 1049   | 0      | 1      | 860  | 5     | 2    |  |  |  |  |  |  |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0     | 0    |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None | -     | None |  |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -    | 0     | -    |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0     | -    |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0    | 0     | -    |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90   | 90    | 90   |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2     | 2    |  |  |  |  |  |  |
| Mvmt Flow                | 1166   | 0      | 1      | 956  | 6     | 2    |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |      |       |      |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1166   | 0    | 1646  | 583  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 1166  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 480   | -    |  |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -    | 6.84  | 6.94 |  |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.84  | -    |  |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.84  | -    |  |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -    | 3.52  | 3.32 |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 595    | -    | 90    | 456  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 259   | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 588   | -    |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -    |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 595    | -    | 90    | 456  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 197   | -    |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 258   | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 588   | -    |  |  |  |  |  |  |
|                          |        |        |        |      |       |      |  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |      |       |      |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0      | 20.8   |      |       |      |  |  |  |  |  |  |
| HCM LOS                  | C      |        |        |      |       |      |  |  |  |  |  |  |
|                          |        |        |        |      |       |      |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL  | WBT   |      |  |  |  |  |  |  |
| Capacity (veh/h)         | 235    | -      | -      | -    | 595   | -    |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.033  | -      | -      | -    | 0.002 | -    |  |  |  |  |  |  |
| HCM Control Delay (s)    | 20.8   | -      | -      | -    | 11.1  | -    |  |  |  |  |  |  |
| HCM Lane LOS             | C      | -      | -      | B    | -     | -    |  |  |  |  |  |  |
| HCM 95th %tile Oveth     | 0.1    | -      | -      | 0    | -     | -    |  |  |  |  |  |  |

Smoke Tree Resort  
2020 Background AM

5: Lincoln Medical West & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |      |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|-------|------|------|--|--|--|--|--|--|
| Int Delay, s/veh         |        | 0.4    |        |       |      |      |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT   | NBL  | NBR  |  |  |  |  |  |  |
| Lane Configurations      | ↕↕     |        | ↕      | ↕↕    |      | ↕↕   |  |  |  |  |  |  |
| Traffic Vol, veh/h       | 1034   | 17     | 42     | 854   | 6    | 9    |  |  |  |  |  |  |
| Future Vol, veh/h        | 1034   | 17     | 42     | 854   | 6    | 9    |  |  |  |  |  |  |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free  | Stop | Stop |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None  | -    | None |  |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -     | 0    | -    |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90    | 90   | 90   |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2     | 2    | 2    |  |  |  |  |  |  |
| Mvmt Flow                | 1149   | 19     | 47     | 949   | 7    | 10   |  |  |  |  |  |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |       |      |      |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1168   | 0     | 1728 | 584  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 1159 | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | -    | 569  |  |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -     | 6.84 | 6.94 |  |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -     | 5.84 | -    |  |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -     | 5.84 | -    |  |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -     | 3.52 | 3.32 |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 594    | -     | 79   | 455  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 261  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 530  | -    |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 594    | -     | 73   | 455  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -     | 175  | -    |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 240  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 530  | -    |  |  |  |  |  |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |       |      |      |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0.5    | 18.8   |       |      |      |  |  |  |  |  |  |
| HCM LOS                  | C      |        |        |       |      |      |  |  |  |  |  |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL   | WBT  |      |  |  |  |  |  |  |
| Capacity (veh/h)         | 277    | -      | -      | 594   | -    |      |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.06   | -      | -      | 0.079 | -    |      |  |  |  |  |  |  |
| HCM Control Delay (s)    | 18.8   | -      | -      | 11.6  | -    |      |  |  |  |  |  |  |
| HCM Lane LOS             | C      | -      | -      | B     | -    |      |  |  |  |  |  |  |
| HCM 95th %tile Q(veh)    | 0.2    | -      | -      | 0.3   | -    |      |  |  |  |  |  |  |

Smoke Tree Resort  
2020 Background AM

6: Lincoln Medical East & Lincoln Dr  
HCM 6th TWSC

| Intersection             |  |        |        |        |       |      |      |  |  |  |  |  |
|--------------------------|--|--------|--------|--------|-------|------|------|--|--|--|--|--|
| Int Delay, s/veh         |  | 0.1    |        |        |       |      |      |  |  |  |  |  |
| Movement                 |  | EBT    | EBR    | WBL    | WBT   | NBL  | NBR  |  |  |  |  |  |
| Lane Configurations      |  | ↕↕     |        | ↕      | ↕↕    |      | ↕↕   |  |  |  |  |  |
| Traffic Vol, veh/h       |  | 1030   | 11     | 5      | 896   | 0    | 9    |  |  |  |  |  |
| Future Vol, veh/h        |  | 1030   | 11     | 5      | 896   | 0    | 9    |  |  |  |  |  |
| Conflicting Peds, #/hr   |  | 0      | 0      | 0      | 0     | 0    | 0    |  |  |  |  |  |
| Sign Control             |  | Free   | Free   | Free   | Free  | Stop | Stop |  |  |  |  |  |
| RT Channelized           |  | -      | None   | -      | None  | -    | None |  |  |  |  |  |
| Storage Length           |  | -      | -      | 25     | -     | 0    | -    |  |  |  |  |  |
| Veh in Median Storage, # |  | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |
| Grade, %                 |  | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |
| Peak Hour Factor         |  | 90     | 90     | 90     | 90    | 90   | 90   |  |  |  |  |  |
| Heavy Vehicles, %        |  | 2      | 2      | 2      | 2     | 2    | 2    |  |  |  |  |  |
| Mvmt Flow                |  | 1144   | 12     | 6      | 996   | 0    | 10   |  |  |  |  |  |
| Major/Minor              |  | Major1 | Major2 | Minor1 |       |      |      |  |  |  |  |  |
| Conflicting Flow All     |  | 0      | 0      | 1156   | 0     | 1660 | 578  |  |  |  |  |  |
| Stage 1                  |  | -      | -      | -      | -     | 1150 | -    |  |  |  |  |  |
| Stage 2                  |  | -      | -      | -      | -     | 510  | -    |  |  |  |  |  |
| Critical Hdwy            |  | -      | -      | 4.14   | -     | 6.84 | 6.94 |  |  |  |  |  |
| Critical Hdwy Stg 1      |  | -      | -      | -      | -     | 5.84 | -    |  |  |  |  |  |
| Critical Hdwy Stg 2      |  | -      | -      | -      | -     | 5.84 | -    |  |  |  |  |  |
| Follow-up Hdwy           |  | -      | -      | 2.22   | -     | 3.52 | 3.32 |  |  |  |  |  |
| Pot Cap-1 Maneuver       |  | -      | -      | 600    | -     | 88   | 459  |  |  |  |  |  |
| Stage 1                  |  | -      | -      | -      | -     | 264  | -    |  |  |  |  |  |
| Stage 2                  |  | -      | -      | -      | -     | 568  | -    |  |  |  |  |  |
| Platoon blocked, %       |  | -      | -      | -      | -     | -    | -    |  |  |  |  |  |
| Mov Cap-1 Maneuver       |  | -      | -      | 600    | -     | 87   | 459  |  |  |  |  |  |
| Mov Cap-2 Maneuver       |  | -      | -      | -      | -     | 196  | -    |  |  |  |  |  |
| Stage 1                  |  | -      | -      | -      | -     | 261  | -    |  |  |  |  |  |
| Stage 2                  |  | -      | -      | -      | -     | 568  | -    |  |  |  |  |  |
|                          |  |        |        |        |       |      |      |  |  |  |  |  |
| Approach                 |  | EB     | WB     | NB     |       |      |      |  |  |  |  |  |
| HCM Control Delay, s     |  | 0      | 0.1    | 13     |       |      |      |  |  |  |  |  |
| HCM LOS                  |  | B      |        |        |       |      |      |  |  |  |  |  |
|                          |  |        |        |        |       |      |      |  |  |  |  |  |
| Minor Lane/Major Mvmt    |  | NBLn1  | EBT    | EBR    | WBL   | WBT  |      |  |  |  |  |  |
| Capacity (veh/h)         |  | 459    | -      | -      | 600   | -    |      |  |  |  |  |  |
| HCM Lane V/C Ratio       |  | 0.022  | -      | -      | 0.009 | -    |      |  |  |  |  |  |
| HCM Control Delay (s)    |  | 13     | -      | -      | 11.1  | -    |      |  |  |  |  |  |
| HCM Lane LOS             |  | B      | -      | -      | B     | -    |      |  |  |  |  |  |
| HCM 95th %tile Overh     |  | 0.1    | -      | -      | 0     | -    |      |  |  |  |  |  |

Smoke Tree Resort  
2020 Background AM

7: Apartment Drwy & Lincoln Dr  
HCM 6th TWSC

| Intersection                                                                                                         |        | 9.2    |        |        |        |      |      |       |       |      |      |      |  |
|----------------------------------------------------------------------------------------------------------------------|--------|--------|--------|--------|--------|------|------|-------|-------|------|------|------|--|
| Int Delay, s/veh                                                                                                     |        |        |        |        |        |      |      |       |       |      |      |      |  |
| Movement                                                                                                             | EBL    | EBT    | EBR    | WBL    | WBT    | WBR  | NBL  | NBT   | NBR   | SBL  | SBT  | SBR  |  |
| Lane Configurations                                                                                                  | ↖ ↗    | ↖ ↗    | ↖ ↗    | ↖ ↗    | ↖ ↗    | ↖ ↗  | ↖ ↗  | ↖ ↗   | ↖ ↗   | ↖ ↗  | ↖ ↗  | ↖ ↗  |  |
| Traffic Vol, veh/h                                                                                                   | 27     | 979    | 35     | 19     | 836    | 10   | 52   | 0     | 30    | 5    | 0    | 12   |  |
| Future Vol, veh/h                                                                                                    | 27     | 979    | 35     | 19     | 836    | 10   | 52   | 0     | 30    | 5    | 0    | 12   |  |
| 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                                                                                                       | 25     | -      | 25     | -      | -      | -    | -    | -     | -     | 0    | -    | 0    |  |
| Veh in Median Storage, #                                                                                             | -      | 0      | -      | -      | 0      | -    | -    | 0     | -     | -    | 0    | -    |  |
| Grade, %                                                                                                             | -      | 0      | -      | -      | 0      | -    | -    | 0     | -     | -    | 0    | -    |  |
| Peak Hour Factor                                                                                                     | 90     | 90     | 90     | 90     | 90     | 90   | 90   | 90    | 90    | 90   | 90   | 90   |  |
| Heavy Vehicles, %                                                                                                    | 2      | 2      | 2      | 2      | 2      | 2    | 2    | 2     | 2     | 2    | 2    | 2    |  |
| Mvmt Flow                                                                                                            | 30     | 1088   | 39     | 21     | 929    | 11   | 58   | 0     | 33    | 6    | 0    | 13   |  |
| Major/Minor                                                                                                          | Major1 | Major2 | Major2 | Minor1 | Minor2 |      |      |       |       |      |      |      |  |
| Conflicting Flow All                                                                                                 | 940    | 0      | 0      | 1127   | 0      | 0    | 1675 | 2150  | 564   | 1581 | -    | 470  |  |
| Stage 1                                                                                                              | -      | -      | -      | -      | -      | -    | -    | 1168  | 1168  | -    | 977  | -    |  |
| Stage 2                                                                                                              | -      | -      | -      | -      | -      | -    | -    | 507   | 982   | -    | 604  | -    |  |
| Critical Hdwy                                                                                                        | 414    | -      | -      | 414    | -      | -    | 754  | 654   | 694   | 754  | -    | 694  |  |
| Critical Hdwy Stg 1                                                                                                  | -      | -      | -      | -      | -      | -    | 654  | 554   | -     | 654  | -    | -    |  |
| Critical Hdwy Stg 2                                                                                                  | -      | -      | -      | -      | -      | -    | 654  | 554   | -     | 654  | -    | -    |  |
| Follow-up Hdwy                                                                                                       | 222    | -      | -      | 222    | -      | -    | 352  | 402   | 332   | 352  | -    | 332  |  |
| Pot Cap-1 Maneuver                                                                                                   | 725    | -      | -      | 616    | -      | -    | 62   | 48    | 469   | 73   | 0    | 540  |  |
| Stage 1                                                                                                              | -      | -      | -      | -      | -      | -    | 206  | 266   | -     | 269  | 0    | -    |  |
| Stage 2                                                                                                              | -      | -      | -      | -      | -      | -    | 516  | 325   | -     | 452  | 0    | -    |  |
| Platoon blocked, %                                                                                                   | -      | -      | -      | -      | -      | -    | -    | -     | -     | -    | -    | -    |  |
| Mov Cap-1 Maneuver                                                                                                   | 725    | -      | -      | 616    | -      | -    | ~ 57 | 44    | 469   | 64   | -    | 540  |  |
| Mov Cap-2 Maneuver                                                                                                   | -      | -      | -      | -      | -      | -    | ~ 57 | 44    | -     | 64   | -    | -    |  |
| Stage 1                                                                                                              | -      | -      | -      | -      | -      | -    | 198  | 255   | -     | 258  | -    | -    |  |
| Stage 2                                                                                                              | -      | -      | -      | -      | -      | -    | 486  | 314   | -     | 403  | -    | -    |  |
| Approach                                                                                                             | EB     | WB     | WB     | NB     | SB     |      |      |       |       |      |      |      |  |
| HCM Control Delay, s                                                                                                 | 0.3    | 0.2    |        | 212.8  |        | F    |      | 27.9  |       | D    |      |      |  |
| HCM LOS                                                                                                              |        |        |        |        |        |      |      |       |       |      |      |      |  |
| Minor Lane/Major Mvmt                                                                                                | NBLn1  | EBL    | EBT    | EBR    | WBL    | WBT  | WBR  | SBLn1 | SBLn2 |      |      |      |  |
| Capacity (veh/h)                                                                                                     | 84     | 725    | -      | -      | 616    | -    | -    | 64    | 540   |      |      |      |  |
| HCM Lane V/C Ratio                                                                                                   | 1.085  | 0.041  | -      | -      | 0.034  | -    | -    | 0.087 | 0.025 |      |      |      |  |
| HCM Control Delay (s)                                                                                                | 212.8  | 10.2   | -      | -      | 11.1   | -    | -    | 66.5  | 11.8  |      |      |      |  |
| HCM Lane LOS                                                                                                         | F      | B      | -      | -      | B      | -    | -    | F     | B     |      |      |      |  |
| HCM 95th %ile Q(veh)                                                                                                 | 6.3    | 0.1    | -      | -      | 0.1    | -    | -    | 0.3   | 0.1   |      |      |      |  |
| Notes                                                                                                                |        |        |        |        |        |      |      |       |       |      |      |      |  |
| ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon |        |        |        |        |        |      |      |       |       |      |      |      |  |

Smoke Tree Resort  
2020 Background AM

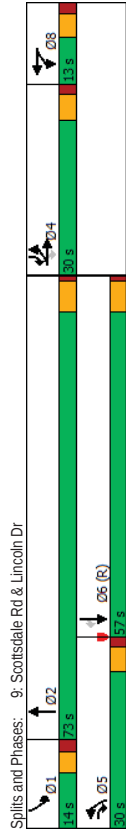
8: AJ's Drwy & Lincoln Dr  
HCM 6th TWSC

| Intersection             |      | 1.1    |      |       |      |        |      |       |      |        |      |       |       |        |       |      |  |
|--------------------------|------|--------|------|-------|------|--------|------|-------|------|--------|------|-------|-------|--------|-------|------|--|
| Int Delay, s/veh         |      |        |      |       |      |        |      |       |      |        |      |       |       |        |       |      |  |
| Movement                 | EBL  | EBT    | EBR  | WBL   | WBT  | WBR    | NBL  | NBT   | NBR  | SBL    | SBT  | SBR   |       |        |       |      |  |
| Lane Configurations      | ↖ ↗  | ↖ ↗    | ↖ ↗  | ↖ ↗   | ↖ ↗  | ↖ ↗    | ↖ ↗  | ↖ ↗   | ↖ ↗  | ↖ ↗    | ↖ ↗  | ↖ ↗   |       |        |       |      |  |
| Traffic Vol, veh/h       | 3    | 958    | 55   | 44    | 848  | 8      | 6    | 0     | 42   | 4      | 1    | 12    |       |        |       |      |  |
| Future Vol, veh/h        | 3    | 958    | 55   | 44    | 848  | 8      | 6    | 0     | 42   | 4      | 1    | 12    |       |        |       |      |  |
| 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           | 25   | -      | -    | 25    | -    | -      | -    | -     | -    | 0      | -    | 0     |       |        |       |      |  |
| Veh in Median Storage, # | -    | 0      | -    | -     | 0    | -      | -    | 0     | -    | -      | 0    | -     |       |        |       |      |  |
| Grade, %                 | -    | 0      | -    | -     | 0    | -      | -    | 0     | -    | -      | 0    | -     |       |        |       |      |  |
| Peak Hour Factor         | 90   | 90     | 90   | 90    | 90   | 90     | 90   | 90    | 90   | 90     | 90   | 90    |       |        |       |      |  |
| Heavy Vehicles, %        | 2    | 2      | 2    | 2     | 2    | 2      | 2    | 2     | 2    | 2      | 2    | 2     |       |        |       |      |  |
| Mvmt Flow                | 3    | 1064   | 61   | 49    | 942  | 9      | 7    | 0     | 47   | 4      | 1    | 13    |       |        |       |      |  |
| Major/Minor              |      | Major1 |      |       |      | Major2 |      |       |      | Minor1 |      |       |       | Minor2 |       |      |  |
| Conflicting Flow All     | 951  | 0      | 0    | 1125  | 0    | 0      | 1671 | 2150  | 563  | 1583   | 2176 | 476   |       |        |       |      |  |
| Stage 1                  | -    | -      | -    | -     | -    | -      | -    | 1101  | 1101 | -      | 1045 | 1045  |       |        |       |      |  |
| Stage 2                  | -    | -      | -    | -     | -    | -      | -    | 570   | 1049 | -      | 538  | 1131  |       |        |       |      |  |
| Critical Hdwy            | 414  | -      | -    | 414   | -    | -      | 754  | 654   | 694  | 754    | 654  | 694   |       |        |       |      |  |
| Critical Hdwy Stg 1      | -    | -      | -    | -     | -    | -      | 654  | 554   | -    | 654    | 554  | -     |       |        |       |      |  |
| Critical Hdwy Stg 2      | -    | -      | -    | -     | -    | -      | 654  | 554   | -    | 654    | 554  | -     |       |        |       |      |  |
| Follow-up Hdwy           | 222  | -      | -    | 222   | -    | -      | 352  | 402   | 332  | 352    | 402  | 332   |       |        |       |      |  |
| Pot Cap-1 Maneuver       | 718  | -      | -    | 617   | -    | -      | 63   | 48    | 470  | 73     | 46   | 535   |       |        |       |      |  |
| Stage 1                  | -    | -      | -    | -     | -    | -      | 226  | 286   | -    | 245    | 304  | -     |       |        |       |      |  |
| Stage 2                  | -    | -      | -    | -     | -    | -      | 474  | 303   | -    | 495    | 277  | -     |       |        |       |      |  |
| Platoon blocked, %       | -    | -      | -    | -     | -    | -      | -    | -     | -    | -      | -    | -     |       |        |       |      |  |
| Mov Cap-1 Maneuver       | 718  | -      | -    | 617   | -    | -      | 56   | 44    | 470  | 62     | 42   | 535   |       |        |       |      |  |
| Mov Cap-2 Maneuver       | -    | -      | -    | -     | -    | -      | 56   | 44    | -    | 62     | 42   | -     |       |        |       |      |  |
| Stage 1                  | -    | -      | -    | -     | -    | -      | 225  | 285   | -    | 244    | 280  | -     |       |        |       |      |  |
| Stage 2                  | -    | -      | -    | -     | -    | -      | 424  | 279   | -    | 444    | 276  | -     |       |        |       |      |  |
| Approach                 |      | EB     |      | WB    |      | NB     |      | SB    |      |        |      |       |       |        |       |      |  |
| HCM Control Delay, s     | 0    |        |      | 0.6   |      | 23.8   |      | 25.8  |      |        |      |       |       |        |       |      |  |
| HCM LOS                  |      |        |      |       |      | C      |      | D     |      |        |      |       |       |        |       |      |  |
| Minor Lane/Major Mvmt    |      | NBLn1  |      | EBL   |      | EBR    |      | WBL   |      | WBR    |      | SBLn1 |       | SBLn2  |       |      |  |
| Capacity (veh/h)         |      | 244    |      | 718   |      | -      |      | 617   |      | -      |      | 62    |       | 535    |       |      |  |
| HCM Lane V/C Ratio       |      | 0.219  |      | 0.005 |      | -      |      | 0.079 | -    |        | -    |       | 0.072 |        | 0.025 |      |  |
| HCM Control Delay (s)    |      | 23.8   |      | 10    |      | -      |      | 11.3  |      | -      |      | -     |       | 67.5   |       | 11.9 |  |
| HCM Lane LOS             |      | C      |      | B     |      | -      |      | B     |      | -      |      | F     |       | B      |       | B    |  |
| HCM 95th %ile Q (veh)    |      | 0.8    |      | 0     |      | -      |      | 0.3   |      | -      |      | -     |       | 0.2    |       | 0.1  |  |

Smoke Tree Resort  
2020 Background AM

9: Scottsdale Rd & Lincoln Dr  
Timings

|                                                           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |  |
|-----------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Lane Group                                                | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |  |
| Lane Configurations                                       | 450   | 38    | 460   | 37    | 36    | 295   | 1316  | 51    | 1669  | 601   |  |
| Traffic Volume (vph)                                      | 450   | 38    | 460   | 37    | 36    | 295   | 1316  | 51    | 1669  | 601   |  |
| Future Volume (vph)                                       | 450   | 38    | 460   | 37    | 36    | 295   | 1316  | 51    | 1669  | 601   |  |
| Turn Type                                                 | Split | NA    | pm+ov | Split | NA    | Prdt  | NA    | Prdt  | NA    | pm+ov |  |
| Protected Phases                                          | 4     | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     | 4     |  |
| Permitted Phases                                          | 4     | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     | 4     |  |
| Detector Phase                                            | 4     | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     | 4     |  |
| Switch Phase                                              | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 10.0  | 5.0   | 10.0  | 7.0   |  |
| Minimum Initial (s)                                       | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  | 16.7  | 11.0  | 16.0  | 13.0  |  |
| Minimum Split (s)                                         | 30.0  | 30.0  | 30.0  | 13.0  | 13.0  | 30.0  | 73.0  | 14.0  | 57.0  | 30.0  |  |
| Total Split (%)                                           | 23.1% | 23.1% | 23.1% | 10.0% | 10.0% | 23.1% | 56.2% | 10.8% | 43.8% | 23.1% |  |
| Yellow Time (s)                                           | 4.0   | 4.0   | 4.0   | 3.6   | 3.6   | 4.0   | 4.7   | 3.3   | 4.7   | 4.0   |  |
| All-Red Time (s)                                          | 1.5   | 1.5   | 1.5   | 2.0   | 2.0   | 1.5   | 1.0   | 2.0   | 1.0   | 1.5   |  |
| 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)                                       | 5.5   | 5.5   | 5.5   | 5.6   | 5.6   | 5.5   | 5.7   | 5.3   | 5.7   | 5.5   |  |
| Lead/Lag                                                  |       |       |       | Lead  |       | Lead  | Lag   | Lag   | Lead  | Lag   |  |
| Lead-Lag Optimize?                                        | None  | None  | None  | None  | None  | None  | None  | None  | C-Max | None  |  |
| Recall Mode                                               | 23.6  | 23.6  | 42.3  | 7.2   | 7.2   | 18.7  | 71.5  | 7.6   | 58.1  | 87.4  |  |
| Act Effct Green (s)                                       | 0.18  | 0.18  | 0.33  | 0.06  | 0.06  | 0.14  | 0.55  | 0.06  | 0.45  | 0.67  |  |
| Actuated g/C Ratio                                        | 0.89  | 0.88  | 0.91  | 0.42  | 0.40  | 0.66  | 0.54  | 0.55  | 0.82  | 0.59  |  |
| v/c Ratio                                                 | 81.3  | 80.8  | 47.0  | 72.5  | 33.9  | 58.8  | 20.4  | 79.0  | 35.9  | 10.8  |  |
| Control Delay                                             | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Queue Delay                                               | 81.3  | 80.8  | 47.0  | 72.5  | 33.9  | 58.8  | 20.4  | 79.0  | 35.9  | 10.8  |  |
| Total Delay                                               | F     | F     | D     | E     | C     | E     | C     | E     | D     | B     |  |
| LOS                                                       | F     | F     | D     | E     | C     | E     | C     | E     | D     | B     |  |
| Approach Delay                                            | 64.5  |       |       | 45.7  |       | 27.3  |       | 30.4  |       |       |  |
| Approach LOS                                              | E     |       |       | D     |       | C     |       | C     |       |       |  |
| Intersection Summary                                      |       |       |       |       |       |       |       |       |       |       |  |
| Cycle Length: 130                                         |       |       |       |       |       |       |       |       |       |       |  |
| Actuated Cycle Length: 130                                |       |       |       |       |       |       |       |       |       |       |  |
| Offset: 0 (0%), Referenced to phase 6 SBT, Start of Green |       |       |       |       |       |       |       |       |       |       |  |
| Natural Cycle: 90                                         |       |       |       |       |       |       |       |       |       |       |  |
| Control Type: Actuated-Coordinated                        |       |       |       |       |       |       |       |       |       |       |  |
| Maximum v/c Ratio: 0.91                                   |       |       |       |       |       |       |       |       |       |       |  |
| Intersection Signal Delay: 36.1                           |       |       |       |       |       |       |       |       |       |       |  |
| Intersection Capacity Utilization 80.6%                   |       |       |       |       |       |       |       |       |       |       |  |
| Analysis Period (min) 15                                  |       |       |       |       |       |       |       |       |       |       |  |



Smoke Tree Resort  
2020 Background AM

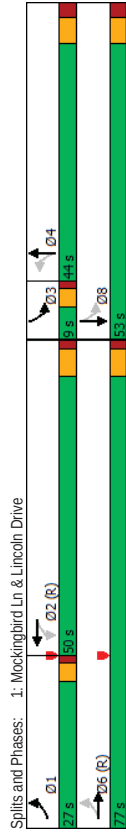
9: Scottsdale Rd & Lincoln Dr  
HCM 6th Signalized Intersection Summary

|                                                                                                    | EBL  | EBT  | EBR   | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  | SBR  |     |
|----------------------------------------------------------------------------------------------------|------|------|-------|------|------|------|------|------|------|------|-----|
| Movement                                                                                           | EBL  | EBT  | EBR   | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  | SBR  |     |
| Lane Configurations                                                                                | 450  | 38   | 460   | 37   | 36   | 295  | 1316 | 51   | 1669 | 601  |     |
| Traffic Volume (veh/h)                                                                             | 450  | 38   | 460   | 37   | 36   | 295  | 1316 | 39   | 51   | 1669 | 601 |
| Future Volume (veh/h)                                                                              | 450  | 38   | 460   | 37   | 36   | 295  | 1316 | 39   | 51   | 1669 | 601 |
| Initial Q (Qb) veh                                                                                 | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |     |
| Ped-Bike Adj(A, pbf)                                                                               | 1.00 | 1.00 | 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 |     |
| Work Zone On Approach                                                                              | No   | No   | No    | No   | No   | No   | No   | No   | No   | No   |     |
| Adj Sat Flow, veh/h                                                                                | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |     |
| Adj Flow Rate, veh/h                                                                               | 530  | 0    | 511   | 41   | 40   | 53   | 328  | 1462 | 43   | 57   |     |
| Peak Hour Factor                                                                                   | 0.90 | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |     |
| Percent Heavy Veh, %                                                                               | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    |     |
| Cap. veh/h                                                                                         | 671  | 0    | 477   | 95   | 95   | 85   | 388  | 2382 | 70   | 73   |     |
| Arrive On Green                                                                                    | 0.19 | 0.00 | 0.19  | 0.05 | 0.05 | 0.11 | 0.47 | 0.47 | 0.04 | 0.39 |     |
| Sat Flow, veh/h                                                                                    | 3563 | 0    | 1585  | 1781 | 1777 | 1585 | 3456 | 5098 | 150  | 1781 |     |
| Grp Volume(V), veh/h                                                                               | 530  | 0    | 511   | 41   | 40   | 53   | 328  | 976  | 529  | 57   |     |
| Grp Sat Flow(S), veh/h                                                                             | 1781 | 0    | 1585  | 1781 | 1777 | 1585 | 1728 | 1702 | 1843 | 1781 |     |
| Q Serve(g, s)                                                                                      | 18.4 | 0.0  | 24.5  | 2.9  | 2.8  | 4.3  | 12.1 | 27.9 | 4.1  | 44.9 |     |
| Cycle Q Clear(g, s)                                                                                | 18.4 | 0.0  | 24.5  | 2.9  | 2.8  | 4.3  | 12.1 | 27.9 | 4.1  | 44.9 |     |
| Prop In Lane                                                                                       | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |     |
| Lane Grp Cap(c), veh/h                                                                             | 671  | 0    | 477   | 95   | 95   | 85   | 388  | 1590 | 861  | 73   |     |
| VC Ratio(X)                                                                                        | 0.79 | 0.00 | 1.07  | 0.43 | 0.42 | 0.63 | 0.85 | 0.61 | 0.61 | 0.78 |     |
| Avail Cap(c, a), veh/h                                                                             | 671  | 0    | 477   | 101  | 101  | 90   | 651  | 1762 | 954  | 119  |     |
| HCM Platoon Ratio                                                                                  | 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |     |
| Uniform Delay (d), s/veh                                                                           | 50.3 | 0.0  | 45.5  | 59.6 | 59.6 | 60.3 | 56.6 | 25.9 | 25.9 | 61.7 |     |
| Incr Delay (d2), s/veh                                                                             | 5.8  | 0.0  | 61.9  | 1.1  | 1.1  | 8.2  | 2.2  | 0.3  | 0.6  | 8.4  |     |
| 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  |     |
| %ile BackOfQ(50%), veh/h                                                                           | 8.8  | 0.0  | 23.4  | 1.3  | 1.3  | 1.9  | 5.4  | 11.3 | 12.3 | 2.0  |     |
| Unsig. Movement Delay, s/veh                                                                       | 56.1 | 0.0  | 107.4 | 60.8 | 60.7 | 68.4 | 58.8 | 26.2 | 26.5 | 68.2 |     |
| LnGrp Delay(d), s/veh                                                                              | E    | A    | F     | E    | E    | E    | E    | C    | C    | E    |     |
| LnGrp LOS                                                                                          | E    | A    | F     | E    | E    | E    | E    | C    | C    | E    |     |
| Approach Vol, veh/h                                                                                | 1041 |      |       | 134  |      |      | 1833 |      |      | 2579 |     |
| Approach Delay, s/veh                                                                              | 81.3 |      |       | 63.8 |      |      | 32.1 |      |      | 40.7 |     |
| Approach LOS                                                                                       | F    |      |       | E    |      |      | C    |      |      | D    |     |
| Timer - Assigned Phs                                                                               | 1    | 2    |       | 4    | 5    | 6    | 8    |      |      |      |     |
| Phs Duration (G+Y+Rc), s                                                                           | 10.6 | 66.4 |       | 30.0 | 20.1 | 57.0 | 12.5 |      |      |      |     |
| Change Period (Y+Rc), s                                                                            | *5.3 | 5.7  |       | 5.5  | 5.5  | 5.7  | 5.6  |      |      |      |     |
| Max Green Setting (Gmax), s                                                                        | *8.7 | 67.3 |       | 24.5 | 24.5 | 51.3 | 7.4  |      |      |      |     |
| Max Q Clear Time (g_c+I1), s                                                                       | 6.1  | 29.9 |       | 26.5 | 14.1 | 46.9 | 6.3  |      |      |      |     |
| Green Ext Time (p_c), s                                                                            | 0.0  | 2.2  |       | 0.0  | 0.5  | 1.9  | 0.0  |      |      |      |     |
| Intersection Summary                                                                               |      |      |       |      |      |      |      |      |      |      |     |
| HCM 6th Ctrl Delay                                                                                 |      |      |       | 46.0 |      |      |      |      |      |      |     |
| HCM 6th LOS                                                                                        |      |      |       | D    |      |      |      |      |      |      |     |
| Notes                                                                                              |      |      |       |      |      |      |      |      |      |      |     |
| User approved pedestrian interval to be less than phase max green.                                 |      |      |       |      |      |      |      |      |      |      |     |
| User approved volume balancing among the lanes for turning movement.                               |      |      |       |      |      |      |      |      |      |      |     |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |      |      |       |      |      |      |      |      |      |      |     |

Smoke Tree Resort  
2020 Background PM

1: Mockingbird Ln & Lincoln Drive  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | EB    | EB    | EB    | EB    | EB    | EB    | EB    | EB    |
| Traffic Volume (vph) | 246   | 875   | 23    | 937   | 7     | 62    | 62    | 48    |
| Future Volume (vph)  | 246   | 875   | 23    | 937   | 7     | 62    | 62    | 48    |
| Turn Type            | pm+pt | NA    | Perm  | NA    | Perm  | NA    | pm+pt | NA    |
| Protected Phases     | 1     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |
| Permitted Phases     | 6     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |
| Detector Phase       | 1     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 3.5   | 15.0  | 15.0  | 15.0  | 7.0   | 7.0   | 3.5   | 7.0   |
| Minimum Split (s)    | 8.0   | 27.0  | 27.0  | 27.0  | 33.5  | 33.5  | 8.0   | 33.5  |
| Total Split (s)      | 27.0  | 77.0  | 50.0  | 50.0  | 44.0  | 44.0  | 9.0   | 53.0  |
| Total Split (%)      | 20.8% | 59.2% | 38.5% | 38.5% | 33.8% | 33.8% | 6.9%  | 40.8% |
| Yellow Time (s)      | 3.0   | 4.5   | 4.5   | 4.5   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 1.5   | 1.5   | 1.5   | 2.5   | 2.5   | 1.0   | 2.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 6.0   | 6.0   | 6.0   | 6.5   | 6.5   | 4.0   | 6.5   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lag   | Lag   | Lag   | Lead  | Lead  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | C-Max | C-Max | None  | None  | None  | None  |
| Act Effct Green (s)  | 101.1 | 99.1  | 76.2  | 76.2  | 11.2  | 11.2  | 20.9  | 18.4  |
| Actuated g/C Ratio   | 0.78  | 0.76  | 0.59  | 0.59  | 0.09  | 0.09  | 0.16  | 0.14  |
| v/c Ratio            | 0.98  | 0.37  | 0.08  | 0.54  | 0.09  | 0.54  | 0.37  | 0.64  |
| Control Delay        | 11.3  | 6.1   | 10.2  | 19.4  | 54.9  | 61.4  | 51.4  | 27.7  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 11.3  | 6.1   | 10.2  | 19.4  | 54.9  | 61.4  | 51.4  | 27.7  |
| LOS                  | B     | A     | B     | B     | D     | E     | D     | C     |
| Approach Delay       | 7.2   | 19.2  | 19.2  | 60.8  |       |       | 33.2  |       |
| Approach LOS         | A     | B     | B     | E     | E     | C     |       |       |



Smoke Tree Resort  
2020 Background PM

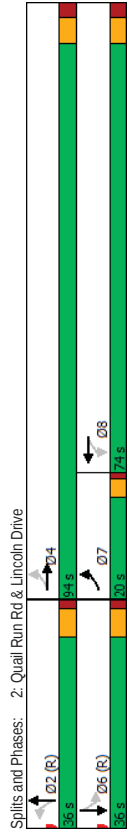
1: Mockingbird Ln & Lincoln Drive  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT   | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|-------|------|------|------|------|------|------|------|
| Lane Configurations          | EB   | EB   | EB   | EB   | EB    | EB   | EB   | EB   | EB   | EB   | EB   | EB   |
| Traffic Volume (veh/h)       | 246  | 875  | 29   | 23   | 937   | 63   | 7    | 62   | 18   | 62   | 48   | 156  |
| Future Volume (veh/h)        | 246  | 875  | 29   | 23   | 937   | 63   | 7    | 62   | 18   | 62   | 48   | 156  |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A, pbT)         | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 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   | No    | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h          | 1870 | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 273  | 972  | 32   | 26   | 1041  | 70   | 8    | 69   | 20   | 69   | 53   | 173  |
| Peak Hour Factor             | 0.90 | 0.90 | 0.90 | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 468  | 2610 | 86   | 416  | 2172  | 146  | 86   | 127  | 37   | 181  | 62   | 202  |
| Arrive On Green              | 0.07 | 0.74 | 0.74 | 0.85 | 0.85  | 0.85 | 0.09 | 0.09 | 0.09 | 0.04 | 0.16 | 0.16 |
| Sat Flow, veh/h              | 1781 | 3511 | 116  | 561  | 3379  | 227  | 1155 | 1394 | 404  | 1781 | 386  | 1258 |
| Grp Volume(V), veh/h         | 273  | 492  | 512  | 26   | 547   | 564  | 8    | 89   | 69   | 0    | 226  | 0    |
| Grp Sat Flow(s), veh/h       | 1781 | 1777 | 1850 | 561  | 1777  | 1829 | 1155 | 0    | 1798 | 1781 | 0    | 1644 |
| Q Serve(g, s), s             | 6.4  | 12.8 | 12.8 | 0.9  | 9.8   | 9.8  | 0.9  | 0.0  | 6.2  | 4.5  | 0.0  | 17.4 |
| Cycle Q Clear(g, c), s       | 6.4  | 12.8 | 12.8 | 0.9  | 9.8   | 9.8  | 0.9  | 0.0  | 6.2  | 4.5  | 0.0  | 17.4 |
| Prop In Lane                 | 1.00 | 0.06 | 1.00 | 0.12 | 1.00  | 0.12 | 1.00 | 0.22 | 1.00 | 0.77 | 0.00 | 0.00 |
| Lane Grp Cap(c), veh/h       | 468  | 1321 | 1375 | 416  | 1142  | 1176 | 86   | 0    | 164  | 181  | 0    | 264  |
| V/C Ratio(X)                 | 0.58 | 0.37 | 0.37 | 0.06 | 0.48  | 0.48 | 0.09 | 0.00 | 0.54 | 0.38 | 0.00 | 0.86 |
| Avail Cap(c, a), veh/h       | 658  | 1321 | 1375 | 416  | 1142  | 1176 | 314  | 0    | 519  | 181  | 0    | 588  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.33 | 1.33  | 1.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(i)           | 1.00 | 1.00 | 1.00 | 0.55 | 0.55  | 0.55 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh     | 6.8  | 5.9  | 5.9  | 3.4  | 4.1   | 4.1  | 62.0 | 0.0  | 56.5 | 49.7 | 0.0  | 53.1 |
| Incr Delay (d2), s/veh       | 1.2  | 0.8  | 0.8  | 0.2  | 0.8   | 0.8  | 0.5  | 0.0  | 2.8  | 1.3  | 0.0  | 7.9  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 2.4  | 4.6  | 4.8  | 0.1  | 2.8   | 2.9  | 0.3  | 0.0  | 2.9  | 2.1  | 0.0  | 7.8  |
| Unsig. Movement Delay, s/veh |      |      |      |      |       |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 8.0  | 6.7  | 6.7  | 3.6  | 4.9   | 4.9  | 62.5 | 0.0  | 59.3 | 51.0 | 0.0  | 61.0 |
| LnGrp LOS                    | A    | A    | A    | A    | A     | A    | E    | A    | E    | D    | A    | E    |
| Approach Vol, veh/h          | 1277 |      |      | 1137 |       |      | 97   |      |      |      | 295  |      |
| Approach Delay, s/veh        | 7.0  |      |      | 4.8  |       |      | 59.5 |      |      |      | 58.7 |      |
| Approach LOS                 | A    |      |      | A    |       |      | E    |      |      |      | E    |      |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 6     | 8    |      |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 13.1 | 89.6 | 9.0  | 18.3 | 102.7 | 27.3 |      |      |      |      |      |      |
| Change Period (Y+Rc), s      | 4.0  | 6.0  | 4.0  | 6.5  | 6.0   | 6.5  |      |      |      |      |      |      |
| Max Green Setting (Gmax), s  | 23.0 | 44.0 | 5.0  | 37.5 | 71.0  | 46.5 |      |      |      |      |      |      |
| Max Q Clear Time (g_c+H), s  | 8.4  | 11.8 | 6.5  | 11.3 | 14.8  | 19.4 |      |      |      |      |      |      |
| Green Ext Time (g_c), s      | 0.7  | 9.5  | 0.0  | 0.5  | 8.4   | 1.5  |      |      |      |      |      |      |
| Intersection Summary         |      |      |      |      |       |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      |      |      | 13.4  |      |      |      |      |      |      |      |
| HCM 6th LOS                  |      |      |      |      | B     |      |      |      |      |      |      |      |

Smoke Tree Resort  
2020 Background PM

2: Quail Run Rd & Lincoln Drive  
Timings

|                      | EBL    | EBT   | WBT   | NBT   | SBL   | SBT   |
|----------------------|--------|-------|-------|-------|-------|-------|
| Lane Group           | EBL    | EBT   | WBT   | NBT   | SBL   | SBT   |
| Lane Configurations  | 85     | 886   | 929   | 0     | 14    | 0     |
| Traffic Volume (vph) | 85     | 886   | 929   | 0     | 14    | 0     |
| Future Volume (vph)  | 85     | 886   | 929   | 0     | 14    | 0     |
| Turn Type            | pm-plt | NA    | NA    | NA    | Perm  | NA    |
| Protected Phases     | 7      | 4     | 8     | 2     | 6     | 6     |
| Permitted Phases     | 4      | 4     | 8     | 2     | 6     | 6     |
| Detector Phase       | 7      | 4     | 8     | 2     | 6     | 6     |
| Switch Phase         |        |       |       |       |       |       |
| Minimum Initial (s)  | 3.5    | 15.0  | 15.0  | 7.0   | 7.0   | 7.0   |
| Minimum Split (s)    | 8.0    | 28.0  | 28.0  | 33.0  | 33.0  | 33.0  |
| Total Split (s)      | 20.0   | 94.0  | 74.0  | 36.0  | 36.0  | 36.0  |
| Total Split (%)      | 15.4%  | 72.3% | 56.9% | 27.7% | 27.7% | 27.7% |
| Yellow Time (s)      | 3.0    | 4.0   | 4.0   | 4.5   | 4.5   | 4.5   |
| All-Red Time (s)     | 1.0    | 2.5   | 2.5   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0    | 6.5   | 6.5   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lead   | Lag   | Lag   | Lag   | Lag   | Lag   |
| Lead/Lag Optimize?   | Yes    | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None   | None  | None  | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 67.4   | 64.9  | 50.7  | 52.6  | 52.6  | 52.6  |
| Actuated g/C Ratio   | 0.52   | 0.50  | 0.39  | 0.40  | 0.40  | 0.40  |
| v/c Ratio            | 0.42   | 0.56  | 0.77  | 0.00  | 0.03  | 0.13  |
| Control Delay        | 30.0   | 35.1  | 38.2  | 0.0   | 28.5  | 0.3   |
| Queue Delay          | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 30.0   | 35.1  | 38.2  | 0.0   | 28.5  | 0.3   |
| LOS                  | C      | D     | D     | A     | C     | A     |
| Approach Delay       | 34.7   | 38.2  |       |       |       | 4.1   |
| Approach LOS         | C      | D     | D     |       |       | A     |



Smoke Tree Resort  
2020 Background PM

2: Quail Run Rd & Lincoln Drive  
HCM 6th Signalized Intersection Summary

|                              | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations          | 85   | 886  | 1    | 0    | 929  | 25   | 0    | 0    | 2    | 14   | 0    | 93   |
| Traffic Volume (veh/h)       | 85   | 886  | 1    | 0    | 929  | 25   | 0    | 0    | 2    | 14   | 0    | 93   |
| Future Volume (veh/h)        | 85   | 886  | 1    | 0    | 929  | 25   | 0    | 0    | 2    | 14   | 0    | 93   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A, pbf)         | 1.00 | 1.00 | 1.00 | 1.00 | 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   | No   | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h          | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 94   | 984  | 1    | 0    | 1032 | 28   | 0    | 0    | 2    | 16   | 0    | 103  |
| Peak Hour Factor             | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 183  | 1554 | 2    | 55   | 1230 | 33   | 0    | 0    | 756  | 730  | 0    | 756  |
| Arrive On Green              | 0.10 | 0.85 | 0.85 | 0.00 | 0.35 | 0.35 | 0.00 | 0.00 | 0.48 | 0.48 | 0.00 | 0.48 |
| Sat Flow, veh/h              | 1781 | 3643 | 4    | 571  | 3534 | 96   | 0    | 0    | 1585 | 1415 | 0    | 1585 |
| Grp Volume(V), veh/h         | 94   | 480  | 505  | 0    | 519  | 541  | 0    | 0    | 2    | 16   | 0    | 103  |
| Grp Sat Flow(s), veh/h       | 1781 | 1777 | 1870 | 571  | 1777 | 1853 | 0    | 0    | 1585 | 1415 | 0    | 1585 |
| Q Serve(g, s), s             | 4.3  | 11.2 | 11.2 | 0.0  | 35.0 | 35.0 | 0.0  | 0.0  | 0.1  | 0.8  | 0.0  | 4.7  |
| Cycle Q Clear(g, c), s       | 4.3  | 11.2 | 11.2 | 0.0  | 35.0 | 35.0 | 0.0  | 0.0  | 0.1  | 0.9  | 0.0  | 4.7  |
| Prop In Lane                 | 1.00 | 0.00 | 1.00 | 1.00 | 0.05 | 0.05 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 183  | 758  | 798  | 55   | 619  | 645  | 0    | 0    | 756  | 730  | 0    | 756  |
| VC Ratio(X)                  | 0.51 | 0.63 | 0.63 | 0.00 | 0.84 | 0.84 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | 0.14 |
| Avail Cap(c, a), veh/h       | 317  | 1196 | 1258 | 153  | 923  | 962  | 0    | 0    | 756  | 730  | 0    | 756  |
| HCM Platoon Ratio            | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(i)           | 0.93 | 0.93 | 0.93 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh     | 28.6 | 6.3  | 6.3  | 0.0  | 39.0 | 39.0 | 0.0  | 0.0  | 17.8 | 18.0 | 0.0  | 19.0 |
| Incrt Delay (d2), s/veh      | 2.1  | 0.8  | 0.8  | 0.0  | 4.5  | 4.3  | 0.0  | 0.0  | 0.0  | 0.1  | 0.0  | 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(50%), veh/h     | 1.8  | 2.5  | 2.6  | 0.0  | 15.9 | 16.6 | 0.0  | 0.0  | 0.0  | 0.3  | 0.0  | 1.8  |
| Unsig. Movement Delay, s/veh | 30.7 | 7.1  | 7.1  | 0.0  | 43.5 | 43.3 | 0.0  | 0.0  | 17.8 | 18.1 | 0.0  | 19.4 |
| LnGrp Delay(d), s/veh        | C    | A    | A    | A    | D    | D    | A    | A    | B    | B    | A    | B    |
| LnGrp LOS                    | C    | A    | A    | A    | D    | D    | A    | A    | B    | B    | A    | B    |
| Approach Vol, veh/h          | 1079 |      |      | 1060 |      |      | 2    |      | 119  |      |      |      |
| Approach Delay, s/veh        | 9.1  |      |      | 43.4 |      |      | 17.8 |      | 19.2 |      |      |      |
| Approach LOS                 | A    |      |      | D    |      |      | B    |      | B    |      |      |      |
| Timer - Assigned Phs         | 2    | 4    | 4    | 6    | 7    | 8    |      |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 68.0 | 62.0 | 62.0 | 68.0 | 10.2 | 51.8 |      |      |      |      |      |      |
| Change Period (Y+Rc), s      | 6.0  | 6.5  | 6.5  | 6.0  | 4.0  | 6.5  |      |      |      |      |      |      |
| Max Green Setting (Gmax), s  | 30.0 | 87.5 | 87.5 | 30.0 | 16.0 | 67.5 |      |      |      |      |      |      |
| Max Q Clear Time (g_c+H), s  | 2.1  | 13.2 | 13.2 | 6.7  | 6.3  | 37.0 |      |      |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 8.2  | 8.2  | 0.6  | 0.1  | 8.3  |      |      |      |      |      |      |
| Intersection Summary         |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           | 25.7 |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  | C    |      |      |      |      |      |      |      |      |      |      |      |

Smoke Tree Resort  
2020 Background PM

3: Smoke Tree West & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |      |      |      |  |  |  |  |  |
|--------------------------|--------|--------|--------|------|------|------|--|--|--|--|--|
| Int Delay, s/veh         |        |        |        |      |      |      |  |  |  |  |  |
| 0                        |        |        |        |      |      |      |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT  | NBL  | NBR  |  |  |  |  |  |
| Lane Configurations      | 4P     | 4P     | 5      | 4A   | 4A   | W    |  |  |  |  |  |
| Traffic Vol. veh/h       | 902    | 1      | 0      | 953  | 0    | 0    |  |  |  |  |  |
| Future Vol. veh/h        | 902    | 1      | 0      | 953  | 0    | 0    |  |  |  |  |  |
| Conflicting Peds. #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free | Stop | Stop |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None | -    | None |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -    | 0    | -    |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90   | 90   | 90   |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2    | 2    |  |  |  |  |  |
| Mvmt Flow                | 1002   | 1      | 0      | 1059 | 0    | 0    |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |      |      |      |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1003   | 0    | 1533 | 502  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 1003 | -    |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | -    | 530  |  |  |  |  |  |
| Critical Hwy             | -      | -      | 4.14   | -    | 6.84 | 6.94 |  |  |  |  |  |
| Critical Hwy Stg 1       | -      | -      | -      | -    | 5.84 | -    |  |  |  |  |  |
| Critical Hwy Stg 2       | -      | -      | -      | -    | 5.84 | -    |  |  |  |  |  |
| Follow-up Hwy            | -      | -      | 2.22   | -    | 3.52 | 3.32 |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 686    | -    | 107  | 515  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 315  | -    |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | -    | 555  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -    | -    | -    |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 686    | -    | 107  | 515  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 227  | -    |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 315  | -    |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | -    | 555  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |      |      |      |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0      | 0      |      |      |      |  |  |  |  |  |
| HCM LOS                  | A      |        |        |      |      |      |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL  | WBT  |      |  |  |  |  |  |
| Capacity (veh/h)         | -      | -      | -      | -    | 686  | -    |  |  |  |  |  |
| HCM Lane V/C Ratio       | -      | -      | -      | -    | -    | -    |  |  |  |  |  |
| HCM Control Delay (s)    | 0      | -      | -      | -    | 0    | -    |  |  |  |  |  |
| HCM Lane LOS             | A      | -      | -      | -    | A    | -    |  |  |  |  |  |
| HCM 95th %tile Q(veh)    | -      | -      | -      | -    | 0    | -    |  |  |  |  |  |

Smoke Tree Resort  
2020 Background PM

4: Smoke Tree East & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |      |  |  |  |  |  |
|--------------------------|--------|--------|--------|------|-------|------|--|--|--|--|--|
| Int Delay, s/veh         |        |        |        |      |       | 0    |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT  | NBL   | NBR  |  |  |  |  |  |
| Lane Configurations      | ↑↑     |        | ↖      | ↑↑   | ↖     |      |  |  |  |  |  |
| Traffic Vol. veh/h       | 901    | 1      | 2      | 953  | 2     | 2    |  |  |  |  |  |
| Future Vol. veh/h        | 901    | 1      | 2      | 953  | 2     | 2    |  |  |  |  |  |
| Conflicting Peds. #/hr   | 0      | 0      | 0      | 0    | 0     | 0    |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None | -     | None |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -    | 0     | -    |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0     | -    |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0    | 0     | -    |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90   | 90    | 90   |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2     | 2    |  |  |  |  |  |
| Mvmt Flow                | 1001   | 1      | 2      | 1059 | 2     | 2    |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |      |       |      |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1002   | 0    | 1536  | 501  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 1002  | -    |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 534   | -    |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -    | 6.84  | 6.94 |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.84  | -    |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.84  | -    |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -    | 3.52  | 3.32 |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 687    | -    | 107   | 515  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 316   | -    |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 552   | -    |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -    |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 687    | -    | 107   | 515  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 227   | -    |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 315   | -    |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 552   | -    |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |      |       |      |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0      | 16.6   |      |       |      |  |  |  |  |  |
| HCM LOS                  | C      |        |        |      |       |      |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL  | WBT   |      |  |  |  |  |  |
| Capacity (veh/h)         | 315    | -      | -      | -    | 687   | -    |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.014  | -      | -      | -    | 0.003 | -    |  |  |  |  |  |
| HCM Control Delay (s)    | 16.6   | -      | -      | -    | 10.3  | -    |  |  |  |  |  |
| HCM Lane LOS             | C      | -      | -      | -    | B     | -    |  |  |  |  |  |
| HCM 95th %ile Q(veh)     | 0      | -      | -      | -    | 0     | -    |  |  |  |  |  |

Smoke Tree Resort  
2020 Background PM

5: Lincoln Medical West & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |      |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|------|-------|------|--|--|--|--|--|--|
| Int Delay, s/veh         |        | 0.7    |        |      |       |      |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT  | NBL   | NBR  |  |  |  |  |  |  |
| Lane Configurations      | ↱↱     | ↱      | ↱      | ↱↱   | ↱     | ↱    |  |  |  |  |  |  |
| Traffic Vol. veh/h       | 896    | 7      | 21     | 925  | 30    | 26   |  |  |  |  |  |  |
| Future Vol. veh/h        | 896    | 7      | 21     | 925  | 30    | 26   |  |  |  |  |  |  |
| Conflicting Peds. #/hr   | 0      | 0      | 0      | 0    | 0     | 0    |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None | -     | None |  |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -    | 0     | -    |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0     | -    |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0    | 0     | -    |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90   | 90    | 90   |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2     | 2    |  |  |  |  |  |  |
| Mvmt Flow                | 996    | 8      | 23     | 1028 | 33    | 29   |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |      |       |      |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1004   | 0    | 1560  | 502  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 1000  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 560   | -    |  |  |  |  |  |  |
| Critical Hwy             | -      | -      | 4.14   | -    | 6.84  | 6.94 |  |  |  |  |  |  |
| Critical Hwy Stg 1       | -      | -      | -      | -    | 5.84  | -    |  |  |  |  |  |  |
| Critical Hwy Stg 2       | -      | -      | -      | -    | 5.84  | -    |  |  |  |  |  |  |
| Follow-up Hwy            | -      | -      | 2.22   | -    | 3.52  | 3.32 |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 686    | -    | 103   | 515  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 317   | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 535   | -    |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -    |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 686    | -    | 99    | 515  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 216   | -    |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 306   | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 535   | -    |  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |      |       |      |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0.2    | 20.4   |      |       |      |  |  |  |  |  |  |
| HCM LOS                  | C      |        |        |      |       |      |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL  | WBT   |      |  |  |  |  |  |  |
| Capacity (veh/h)         | 296    | -      | -      | -    | 686   | -    |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.21   | -      | -      | -    | 0.034 | -    |  |  |  |  |  |  |
| HCM Control Delay (s)    | 20.4   | -      | -      | -    | 10.4  | -    |  |  |  |  |  |  |
| HCM Lane LOS             | C      | -      | -      | -    | B     | -    |  |  |  |  |  |  |
| HCM 95th %ile Q(veh)     | 0.8    | -      | -      | -    | 0.1   | -    |  |  |  |  |  |  |

Smoke Tree Resort  
2020 Background PM

6: Lincoln Medical East & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |      |      |      |  |  |  |  |
|--------------------------|--------|--------|--------|------|------|------|--|--|--|--|
| Int Delay, s/veh         |        | 0.2    |        |      |      |      |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT  | NBL  | NBR  |  |  |  |  |
| Lane Configurations      | ↱↱     |        | ↱      | ↱↱   |      | ↱↱   |  |  |  |  |
| Traffic Vol, veh/h       | 918    | 4      | 0      | 945  | 2    | 30   |  |  |  |  |
| Future Vol, veh/h        | 918    | 4      | 0      | 945  | 2    | 30   |  |  |  |  |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free | Stop | Stop |  |  |  |  |
| RT Channelized           | -      | None   | -      | None | -    | None |  |  |  |  |
| Storage Length           | -      | -      | 25     | -    | 0    | -    |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90   | 90   | 90   |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2    | 2    |  |  |  |  |
| Mvmt Flow                | 1020   | 4      | 0      | 1050 | 2    | 33   |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |      |      |      |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1024   | 0    | 1547 | 512  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 1022 | -    |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 525  | -    |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -    | 6.84 | 6.94 |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.84 | -    |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.84 | -    |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -    | 3.52 | 3.32 |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 674    | -    | 105  | 507  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 308  | -    |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 558  | -    |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -    | -    | -    |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 674    | -    | 105  | 507  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 224  | -    |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 308  | -    |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 558  | -    |  |  |  |  |
| Approach                 | EB     | WB     | NB     |      |      |      |  |  |  |  |
| HCM Control Delay, s     | 0      | 0      | 13.3   |      |      |      |  |  |  |  |
| HCM LOS                  | B      |        |        |      |      |      |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL  | WBT  |      |  |  |  |  |
| Capacity (veh/h)         | 470    | -      | -      | -    | 674  | -    |  |  |  |  |
| HCM Lane V/C Ratio       | 0.076  | -      | -      | -    | -    | -    |  |  |  |  |
| HCM Control Delay (s)    | 13.3   | -      | -      | 0    | -    | -    |  |  |  |  |
| HCM Lane LOS             | B      | -      | -      | -    | A    | -    |  |  |  |  |
| HCM 95th %tile Q(veh)    | 0.2    | -      | -      | 0    | -    | -    |  |  |  |  |

Smoke Tree Resort  
2020 Background PM

7: Apartment Drwy & Lincoln Dr  
HCM 6th TWSC

| Intersection             |      | 13.1   |      |       |      |        |      |      |      |        |      |       |  |        |  |       |  |       |  |
|--------------------------|------|--------|------|-------|------|--------|------|------|------|--------|------|-------|--|--------|--|-------|--|-------|--|
| Int Delay, s/veh         |      |        |      |       |      |        |      |      |      |        |      |       |  |        |  |       |  |       |  |
| Movement                 | EBL  | EBT    | EBR  | WBL   | WBT  | WBR    | NBL  | NBT  | NBR  | SBL    | SBT  | SBR   |  |        |  |       |  |       |  |
| Lane Configurations      | ↔    | ↔      | ↔    | ↔     | ↔    | ↔      | ↔    | ↔    | ↔    | ↔      | ↔    | ↔     |  |        |  |       |  |       |  |
| Traffic Vol, veh/h       | 7    | 886    | 42   | 6     | 849  | 9      | 68   | 3    | 49   | 7      | 0    | 35    |  |        |  |       |  |       |  |
| Future Vol, veh/h        | 7    | 886    | 42   | 6     | 849  | 9      | 68   | 3    | 49   | 7      | 0    | 35    |  |        |  |       |  |       |  |
| Conflicting Peds, #/hr   | 0    | 0      | 0    | 0     | 0    | 0      | 0    | 0    | 0    | 0      | 0    | 0     |  |        |  |       |  |       |  |
| Sign Control             | Free | Free   | Free | Free  | Free | Free   | Free | Stop | Stop | Stop   | Stop | Stop  |  |        |  |       |  |       |  |
| RT Channelized           | -    | -      | None | -     | -    | None   | -    | -    | None | -      | -    | None  |  |        |  |       |  |       |  |
| Storage Length           | 25   | -      | -    | 25    | -    | -      | -    | -    | -    | 0      | -    | 0     |  |        |  |       |  |       |  |
| Veh in Median Storage, # | -    | 0      | -    | -     | 0    | -      | -    | 0    | -    | -      | 0    | -     |  |        |  |       |  |       |  |
| Grade, %                 | -    | 0      | -    | -     | 0    | -      | -    | 0    | -    | -      | 0    | -     |  |        |  |       |  |       |  |
| Peak Hour Factor         | 90   | 90     | 90   | 90    | 90   | 90     | 90   | 90   | 90   | 90     | 90   | 90    |  |        |  |       |  |       |  |
| Heavy Vehicles, %        | 2    | 2      | 2    | 2     | 2    | 2      | 2    | 2    | 2    | 2      | 2    | 2     |  |        |  |       |  |       |  |
| Mvmt Flow                | 8    | 984    | 47   | 7     | 943  | 10     | 76   | 3    | 54   | 8      | 0    | 39    |  |        |  |       |  |       |  |
| Major/Minor              |      | Major1 |      |       |      | Major2 |      |      |      | Minor1 |      |       |  | Minor2 |  |       |  |       |  |
| Conflicting Flow All     | 953  | 0      | 0    | 1031  | 0    | 0      | 1510 | 1991 | 516  | 1472   | -    | 477   |  |        |  |       |  |       |  |
| Stage 1                  | -    | -      | -    | -     | -    | -      | -    | 1024 | 1024 | -      | 962  | -     |  |        |  |       |  |       |  |
| Stage 2                  | -    | -      | -    | -     | -    | -      | -    | 486  | 967  | -      | 510  | -     |  |        |  |       |  |       |  |
| Critical Hwy             | 4.14 | -      | -    | 4.14  | -    | -      | 7.54 | 6.54 | 6.94 | 7.54   | -    | 6.94  |  |        |  |       |  |       |  |
| Critical Hwy Stg 1       | -    | -      | -    | -     | -    | -      | 6.54 | 5.54 | -    | 6.54   | -    | -     |  |        |  |       |  |       |  |
| Critical Hwy Stg 2       | -    | -      | -    | -     | -    | -      | 6.54 | 5.54 | -    | 6.54   | -    | -     |  |        |  |       |  |       |  |
| Follow-up Hwy            | 2.22 | -      | -    | 2.22  | -    | -      | 3.52 | 4.02 | 3.32 | 3.52   | -    | 3.32  |  |        |  |       |  |       |  |
| Pot Cap-1 Maneuver       | 717  | -      | -    | 670   | -    | -      | 83   | 60   | 504  | 88     | 0    | 534   |  |        |  |       |  |       |  |
| Stage 1                  | -    | -      | -    | -     | -    | -      | 252  | 311  | -    | 275    | 0    | -     |  |        |  |       |  |       |  |
| Stage 2                  | -    | -      | -    | -     | -    | -      | 531  | 331  | -    | 514    | 0    | -     |  |        |  |       |  |       |  |
| Platoon blocked, %       | -    | -      | -    | -     | -    | -      | -    | -    | -    | -      | -    | -     |  |        |  |       |  |       |  |
| Mov Cap-1 Maneuver       | 717  | -      | -    | 670   | -    | -      | 76   | 59   | 504  | 74     | -    | 534   |  |        |  |       |  |       |  |
| Mov Cap-2 Maneuver       | -    | -      | -    | -     | -    | -      | 76   | 59   | -    | 74     | -    | -     |  |        |  |       |  |       |  |
| Stage 1                  | -    | -      | -    | -     | -    | -      | 249  | 308  | -    | 272    | -    | -     |  |        |  |       |  |       |  |
| Stage 2                  | -    | -      | -    | -     | -    | -      | 487  | 328  | -    | 448    | -    | -     |  |        |  |       |  |       |  |
| Approach                 |      | EB     |      | WB    |      | NB     |      | SB   |      |        |      |       |  |        |  |       |  |       |  |
| HCM Control Delay, s     | 0.1  | 0.1    |      | 0.1   |      | 204.9  |      | 20.1 |      |        |      |       |  |        |  |       |  |       |  |
| HCM LOS                  |      |        |      |       |      | F      |      | C    |      |        |      |       |  |        |  |       |  |       |  |
| Minor Lane/Major Mvmt    |      | NBLn1  |      | EBL   |      | EBT    |      | EBR  |      | WBL    |      | WBT   |  | WBR    |  | SBLn1 |  | SBLn2 |  |
| Capacity (veh/h)         |      | 115    |      | 717   |      | -      |      | 670  |      | -      |      | 74    |  | 534    |  |       |  |       |  |
| HCM Lane V/C Ratio       |      | 1.159  |      | 0.011 |      | -      |      | 0.01 |      | -      |      | 0.105 |  | 0.073  |  |       |  |       |  |
| HCM Control Delay (s)    |      | 204.9  |      | 10.1  |      | -      |      | 10.4 |      | -      |      | 59.3  |  | 12.3   |  |       |  |       |  |
| HCM Lane LOS             |      | F      |      | B     |      | -      |      | B    |      | -      |      | F     |  | B      |  |       |  |       |  |
| HCM 95th %ile Q(veh)     |      | 8.3    |      | 0     |      | -      |      | 0    |      | -      |      | 0.3   |  | 0.2    |  |       |  |       |  |

Smoke Tree Resort  
2020 Background PM

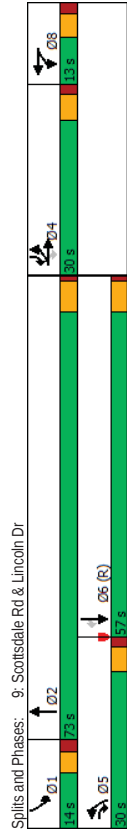
8: AJ's Drwy & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        | 2.4   |      |      |        |      |      |       |        |      |      |      |        |  |  |  |
|--------------------------|--------|-------|------|------|--------|------|------|-------|--------|------|------|------|--------|--|--|--|
| Int Delay, s/veh         |        |       |      |      |        |      |      |       |        |      |      |      |        |  |  |  |
| Movement                 | EBL    | EBT   | EBR  | WBL  | WBT    | WBR  | NBL  | NBT   | NBR    | SBL  | SBT  | SBR  |        |  |  |  |
| Lane Configurations      |        | ↔↔    |      | ↔↔   | ↔↔     |      | ↔↔   |       | ↔↔     |      | ↔    | ↔    |        |  |  |  |
| Traffic Vol, veh/h       | 11     | 880   | 55   | 63   | 847    | 8    | 14   | 1     | 92     | 4    | 0    | 7    |        |  |  |  |
| Future Vol, veh/h        | 11     | 880   | 55   | 63   | 847    | 8    | 14   | 1     | 92     | 4    | 0    | 7    |        |  |  |  |
| 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           | 25     | -     | 25   | -    | -      | -    | -    | -     | -      | 0    | -    | 0    |        |  |  |  |
| Veh in Median Storage, # | -      | 0     | -    | -    | 0      | -    | -    | 0     | -      | -    | 0    | -    |        |  |  |  |
| Grade, %                 | -      | 0     | -    | -    | 0      | -    | -    | 0     | -      | -    | 0    | -    |        |  |  |  |
| Peak Hour Factor         | 90     | 90    | 90   | 90   | 90     | 90   | 90   | 90    | 90     | 90   | 90   | 90   |        |  |  |  |
| Heavy Vehicles, %        | 2      | 2     | 2    | 2    | 2      | 2    | 2    | 2     | 2      | 2    | 2    | 2    |        |  |  |  |
| Mvmt Flow                | 12     | 978   | 61   | 70   | 941    | 9    | 16   | 1     | 102    | 4    | 0    | 8    |        |  |  |  |
| Major/Minor              | Major1 |       |      |      | Major2 |      |      |       | Minor1 |      |      |      | Minor2 |  |  |  |
| Conflicting Flow All     | 950    | 0     | 0    | 1039 | 0      | 0    | 1644 | 2123  | 520    | 1600 | -    | 475  |        |  |  |  |
| Stage 1                  | -      | -     | -    | -    | -      | -    | -    | 1033  | 1033   | -    | 1086 | -    |        |  |  |  |
| Stage 2                  | -      | -     | -    | -    | -      | -    | -    | 611   | 1090   | -    | 514  | -    |        |  |  |  |
| Critical Hdwy            | 4.14   | -     | -    | 4.14 | -      | -    | 7.54 | 6.54  | 6.94   | 7.54 | -    | 6.94 |        |  |  |  |
| Critical Hdwy Stg 1      | -      | -     | -    | -    | -      | -    | 6.54 | 5.54  | -      | 6.54 | -    | -    |        |  |  |  |
| Critical Hdwy Stg 2      | -      | -     | -    | -    | -      | -    | 6.54 | 5.54  | -      | 6.54 | -    | -    |        |  |  |  |
| Follow-up Hdwy           | 2.22   | -     | -    | 2.22 | -      | -    | 3.52 | 4.02  | 3.32   | 3.52 | -    | 3.32 |        |  |  |  |
| Pot Cap-1 Maneuver       | 719    | -     | -    | 665  | -      | -    | 66   | 49    | 501    | 71   | 0    | 536  |        |  |  |  |
| Stage 1                  | -      | -     | -    | -    | -      | -    | 249  | 308   | -      | 231  | 0    | -    |        |  |  |  |
| Stage 2                  | -      | -     | -    | -    | -      | -    | 448  | 289   | -      | 511  | 0    | -    |        |  |  |  |
| Platoon blocked, %       | -      | -     | -    | -    | -      | -    | -    | -     | -      | -    | -    | -    |        |  |  |  |
| Mov Cap-1 Maneuver       | 719    | -     | -    | 665  | -      | -    | 59   | 43    | 501    | 50   | -    | 536  |        |  |  |  |
| Mov Cap-2 Maneuver       | -      | -     | -    | -    | -      | -    | 59   | 43    | -      | 50   | -    | -    |        |  |  |  |
| Stage 1                  | -      | -     | -    | -    | -      | -    | 245  | 303   | -      | 227  | -    | -    |        |  |  |  |
| Stage 2                  | -      | -     | -    | -    | -      | -    | 395  | 259   | -      | 398  | -    | -    |        |  |  |  |
| Approach                 | EB     | WB    | NB   | SB   |        |      |      |       |        |      |      |      |        |  |  |  |
| HCM Control Delay, s     | 0.1    | 0.8   | 33.7 | 38   |        |      |      |       |        |      |      |      |        |  |  |  |
| HCM LOS                  |        |       | D    | E    |        |      |      |       |        |      |      |      |        |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBL   | EBT  | EBR  | WBL    | WBT  | WBR  | SBLn1 | SBLn2  |      |      |      |        |  |  |  |
| Capacity (veh/h)         | 241    | 719   | -    | -    | 665    | -    | -    | 50    | 536    |      |      |      |        |  |  |  |
| HCM Lane V/C Ratio       | 0.493  | 0.017 | -    | -    | 0.105  | -    | -    | 0.089 | 0.015  |      |      |      |        |  |  |  |
| HCM Control Delay (s)    | 33.7   | 10.1  | -    | -    | 11     | -    | -    | 83.9  | 11.8   |      |      |      |        |  |  |  |
| HCM Lane LOS             | D      | B     | -    | -    | B      | -    | -    | F     | B      |      |      |      |        |  |  |  |
| HCM 95th %tile Q(veh)    | 2.5    | 0.1   | -    | -    | 0.4    | -    | -    | 0.3   | 0      |      |      |      |        |  |  |  |

Smoke Tree Resort  
2020 Background PM

9: Scottsdale Rd & Lincoln Dr  
Timings

|                      | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |  |
| Lane Configurations  | 510   | 56    | 431   | 56    | 62    | 411   | 1624  | 61    | 1569  | 486   |  |
| Traffic Volume (vph) | 510   | 56    | 431   | 56    | 62    | 411   | 1624  | 61    | 1569  | 486   |  |
| Future Volume (vph)  | 510   | 56    | 431   | 56    | 62    | 411   | 1624  | 61    | 1569  | 486   |  |
| Turn Type            | Split | NA    | pm+ov | Split | NA    | Prdt  | NA    | Prdt  | NA    | pm+ov |  |
| Protected Phases     | 4     | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     | 4     |  |
| Permitted Phases     | 4     | 4     | 4     | 8     | 8     | 5     | 2     | 1     | 6     | 4     |  |
| Detector Phase       | 4     | 4     | 4     | 8     | 8     | 5     | 2     | 1     | 6     | 4     |  |
| Switch Phase         | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 10.0  | 5.0   | 10.0  | 7.0   |  |
| Minimum Initial (s)  | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  | 16.7  | 11.0  | 16.0  | 13.0  |  |
| Minimum Split (s)    | 30.0  | 30.0  | 30.0  | 13.0  | 13.0  | 30.0  | 73.0  | 14.0  | 57.0  | 30.0  |  |
| Total Split (%)      | 23.1% | 23.1% | 23.1% | 10.0% | 10.0% | 23.1% | 56.2% | 10.8% | 43.8% | 23.1% |  |
| Yellow Time (s)      | 4.0   | 4.0   | 4.0   | 3.6   | 3.6   | 4.0   | 4.7   | 3.3   | 4.7   | 4.0   |  |
| All-Red Time (s)     | 1.5   | 1.5   | 1.5   | 2.0   | 2.0   | 1.5   | 1.0   | 2.0   | 1.0   | 1.5   |  |
| 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)  | 5.5   | 5.5   | 5.5   | 5.6   | 5.6   | 5.5   | 5.7   | 5.3   | 5.7   | 5.5   |  |
| Lead/Lag             |       |       |       | Lead  |       | Lead  | Lag   | Lead  | Lag   |       |  |
| Lead-Lag Optimize?   | None  | None  | None  | None  | None  | None  | None  | None  | C-Max | None  |  |
| Recall Mode          | 24.5  | 24.5  | 45.7  | 7.3   | 7.3   | 21.2  | 70.4  | 7.9   | 54.6  | 84.8  |  |
| Act Effct Green (s)  | 0.19  | 0.19  | 0.35  | 0.06  | 0.06  | 0.15  | 0.54  | 0.06  | 0.42  | 0.65  |  |
| Actuated g/C Ratio   | 0.99  | 0.99  | 0.80  | 0.63  | 0.58  | 0.82  | 0.88  | 0.64  | 0.82  | 0.50  |  |
| v/c Ratio            | 100.1 | 100.6 | 33.0  | 86.8  | 37.9  | 64.6  | 23.7  | 85.4  | 37.6  | 11.3  |  |
| Control Delay        | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 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          | 100.1 | 100.6 | 33.0  | 86.8  | 37.9  | 64.6  | 23.7  | 85.4  | 37.6  | 11.3  |  |
| LOS                  | F     | F     | C     | F     | D     | E     | C     | F     | D     | B     |  |
| Approach Delay       |       |       |       |       |       |       |       |       |       |       |  |
| Approach LOS         | E     | E     | D     | D     | D     | C     | C     | C     | C     | C     |  |



Smoke Tree Resort  
2020 Background PM

9: Scottsdale Rd & Lincoln Dr  
HCM 6th Signalized Intersection Summary

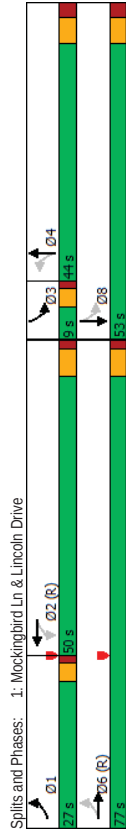
|                              | EBL  | EBT  | EBR  | WBL  | WBT  | NBL   | NBT  | SBL  | SBT  | SBR  |  |
|------------------------------|------|------|------|------|------|-------|------|------|------|------|--|
| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | NBL   | NBT  | SBL  | SBT  | SBR  |  |
| Lane Configurations          | 510  | 56   | 431  | 56   | 62   | 411   | 1624 | 45   | 61   | 1569 |  |
| Traffic Volume (veh/h)       | 510  | 56   | 431  | 56   | 62   | 411   | 1624 | 45   | 61   | 1569 |  |
| Future Volume (veh/h)        | 510  | 56   | 431  | 56   | 62   | 411   | 1624 | 45   | 61   | 1569 |  |
| Initial Q (Qb) veh           | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    |  |
| Ped-Bike Adj(A, pbf)         | 1.00 | 1.00 | 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 |  |
| Work Zone On Approach        | No   | No   | No   | No   | No   | No    | No   | No   | No   | No   |  |
| Adj Sat Flow, veh/h          | 1870 | 1870 | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 |  |
| Adj Flow Rate, veh/h         | 611  | 0    | 479  | 62   | 69   | 80    | 457  | 1804 | 50   | 68   |  |
| Peak Hour Factor             | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 |  |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    |  |
| Cap, veh/h                   | 671  | 0    | 535  | 101  | 101  | 90    | 515  | 2537 | 70   | 87   |  |
| Arrive On Green              | 0.06 | 0.00 | 0.06 | 0.06 | 0.06 | 0.15  | 0.50 | 0.50 | 0.05 | 0.39 |  |
| Sat Flow, veh/h              | 3563 | 0    | 1585 | 1781 | 1777 | 1585  | 3456 | 5107 | 141  | 1781 |  |
| Grp Volume(V), veh/h         | 611  | 0    | 479  | 62   | 69   | 80    | 457  | 1202 | 652  | 68   |  |
| Grp Sat Flow(s), veh/h       | 1781 | 0    | 1585 | 1781 | 1777 | 1585  | 1728 | 1702 | 1845 | 1781 |  |
| Q Serve(g, s)                | 22.2 | 0.0  | 24.5 | 4.4  | 5.0  | 6.5   | 16.9 | 35.7 | 35.8 | 4.9  |  |
| Cycle Q Clear(g, c), s       | 22.2 | 0.0  | 24.5 | 4.4  | 5.0  | 6.5   | 16.9 | 35.7 | 35.8 | 4.9  |  |
| Prop In Lane                 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |  |
| Lane Grp Cap(c), veh/h       | 671  | 0    | 535  | 101  | 101  | 90    | 515  | 1691 | 916  | 87   |  |
| VC Ratio(X)                  | 0.91 | 0.00 | 0.90 | 0.61 | 0.68 | 0.89  | 0.89 | 0.71 | 0.71 | 0.78 |  |
| Avail Cap(c, a), veh/h       | 671  | 0    | 535  | 101  | 101  | 90    | 515  | 1762 | 955  | 119  |  |
| HCM Platoon Ratio            | 0.33 | 0.33 | 0.33 | 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 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 |  |
| Uniform Delay (d), s/veh     | 59.9 | 0.0  | 46.1 | 59.9 | 60.1 | 60.9  | 54.2 | 25.5 | 25.5 | 61.2 |  |
| Incr Delay (d2), s/veh       | 16.2 | 0.0  | 17.0 | 7.6  | 14.4 | 57.9  | 10.3 | 1.1  | 2.0  | 13.9 |  |
| 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  |  |
| %ile BackOfQ(50%), veh/h     | 12.2 | 0.0  | 16.7 | 2.2  | 2.6  | 4.1   | 8.1  | 14.5 | 15.9 | 2.6  |  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |       |      |      |      |      |  |
| LnGrp Delay(d), s/veh        | 76.0 | 0.0  | 63.1 | 67.5 | 74.6 | 118.8 | 64.5 | 28.5 | 27.5 | 75.1 |  |
| LnGrp LOS                    | E    | A    | E    | E    | E    | F     | E    | C    | C    | E    |  |
| Approach Vol, veh/h          | 1090 |      |      | 211  |      |       | 2311 |      |      | 2351 |  |
| Approach Delay, s/veh        | 70.4 |      |      | 89.3 |      |       | 34.3 |      |      | 37.4 |  |
| Approach LOS                 | E    |      |      | F    |      |       | C    |      |      | D    |  |
| Timer - Assigned Phs         | 1    | 2    | 4    | 5    | 6    | 8     |      |      |      |      |  |
| Phs Duration (G+Y+Rc), s     | 11.6 | 70.3 | 30.0 | 24.9 | 57.0 | 13.0  |      |      |      |      |  |
| Change Period (Y+Rc), s      | *5.3 | 5.7  | 5.5  | 5.5  | 5.7  | 5.6   |      |      |      |      |  |
| Max Green Setting (Gmax), s  | *8.7 | 67.3 | 24.5 | 24.5 | 51.3 | 7.4   |      |      |      |      |  |
| Max Q Clear Time (g_c+1), s  | 6.9  | 37.8 | 26.5 | 18.9 | 42.8 | 8.5   |      |      |      |      |  |
| Green Ext Time (p_c), s      | 0.0  | 2.9  | 0.0  | 0.5  | 2.5  | 0.0   |      |      |      |      |  |
| Intersection Summary         |      |      |      |      |      |       |      |      |      |      |  |
| HCM 6th Ctrl Delay           |      |      | 44.1 |      |      |       |      |      |      |      |  |
| HCM 6th LOS                  |      |      | D    |      |      |       |      |      |      |      |  |

Notes  
User approved pedestrian interval to be less than phase max green.  
User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Smoke Tree Resort  
2020 Total AM

1: Mockingbird Ln & Lincoln Drive  
Timings

|                      | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
| Lane Configurations  | 222   | 981   | 24    | 898   | 5     | 34    | 78    | 88    |
| Traffic Volume (vph) | 222   | 981   | 24    | 898   | 5     | 34    | 78    | 88    |
| Future Volume (vph)  | 222   | 981   | 24    | 898   | 5     | 34    | 78    | 88    |
| Turn Type            | pm+pt | NA    | Perm  | NA    | Perm  | NA    | pm+pt | NA    |
| Protected Phases     | 1     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |
| Permitted Phases     | 6     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |
| Detector Phase       | 1     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 3.5   | 15.0  | 15.0  | 15.0  | 7.0   | 7.0   | 3.5   | 7.0   |
| Minimum Split (s)    | 8.0   | 27.0  | 27.0  | 27.0  | 33.5  | 33.5  | 8.0   | 33.5  |
| Total Split (s)      | 27.0  | 77.0  | 50.0  | 50.0  | 44.0  | 44.0  | 9.0   | 53.0  |
| Total Split (%)      | 20.8% | 59.2% | 38.5% | 38.5% | 33.8% | 33.8% | 6.9%  | 40.8% |
| Yellow Time (s)      | 3.0   | 4.5   | 4.5   | 4.5   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 1.5   | 1.5   | 1.5   | 2.5   | 2.5   | 1.0   | 2.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 6.0   | 6.0   | 6.0   | 6.5   | 6.5   | 4.0   | 6.5   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lag   | Lag   | Lag   | Lead  | Lead  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | C-Max | C-Max | None  | None  | None  | None  |
| Act Effct Green (s)  | 93.3  | 91.3  | 70.1  | 70.1  | 17.4  | 17.4  | 28.7  | 26.2  |
| Actuated g/C Ratio   | 0.72  | 0.70  | 0.54  | 0.54  | 0.13  | 0.13  | 0.22  | 0.20  |
| v/c Ratio            | 0.98  | 0.45  | 0.11  | 0.55  | 0.08  | 0.25  | 0.32  | 0.84  |
| Control Delay        | 13.3  | 10.2  | 18.5  | 25.6  | 46.2  | 31.3  | 42.1  | 50.2  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 13.3  | 10.2  | 18.5  | 25.6  | 46.2  | 31.3  | 42.1  | 50.2  |
| LOS                  | B     | B     | B     | C     | D     | C     | D     | D     |
| Approach Delay       | 10.7  | 25.4  | 25.4  | 32.6  | 32.6  | 32.6  | 48.6  | 48.6  |
| Approach LOS         | B     | C     | C     | C     | C     | C     | D     | D     |



Smoke Tree Resort  
2020 Total AM

1: Mockingbird Ln & Lincoln Drive  
HCM 6th Signalized Intersection Summary

|                              | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |
|------------------------------|------|------|------|------|------|------|------|------|
| Movement                     | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |
| Lane Configurations          | 222  | 981  | 30   | 24   | 898  | 44   | 5    | 34   |
| Traffic Volume (veh/h)       | 222  | 981  | 30   | 24   | 898  | 44   | 5    | 34   |
| Future Volume (veh/h)        | 222  | 981  | 30   | 24   | 898  | 44   | 5    | 34   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A, pbT)         | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach        | No   | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h          | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 247  | 1090 | 33   | 27   | 998  | 49   | 6    | 38   |
| Peak Hour Factor             | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 394  | 2335 | 71   | 312  | 1915 | 94   | 88   | 175  |
| Arrive On Green              | 0.08 | 0.66 | 0.66 | 0.56 | 0.56 | 0.17 | 0.17 | 0.04 |
| Sat Flow, veh/h              | 1781 | 3521 | 107  | 502  | 3447 | 169  | 1024 | 1017 |
| Grp Volume(V), veh/h         | 247  | 550  | 573  | 27   | 514  | 533  | 6    | 65   |
| Grp Sat Flow(s), veh/h       | 1781 | 1777 | 1851 | 502  | 1777 | 1840 | 1024 | 0    |
| Q Serve(g, s), s             | 7.4  | 19.6 | 19.6 | 3.6  | 23.5 | 23.5 | 0.7  | 4.2  |
| Cycle Q Clear(g, c), s       | 7.4  | 19.6 | 19.6 | 9.3  | 23.5 | 23.5 | 18.9 | 0.0  |
| Prop In Lane                 | 1.00 | 0.06 | 1.00 | 0.09 | 1.00 | 0.04 | 1.00 | 0.73 |
| Lane Grp Cap(c), veh/h       | 394  | 1178 | 1227 | 312  | 987  | 1022 | 88   | 0    |
| VC Ratio(X)                  | 0.63 | 0.47 | 0.47 | 0.09 | 0.52 | 0.07 | 0.22 | 0.28 |
| Avail Cap(c, a), veh/h       | 572  | 1178 | 1227 | 312  | 987  | 1022 | 208  | 0    |
| HCM Platoon Ratio            | 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 | 0.55 | 0.55 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh     | 14.0 | 10.7 | 10.7 | 16.4 | 18.1 | 18.1 | 61.3 | 0.0  |
| Incr Delay (d2), s/veh       | 1.6  | 1.3  | 1.3  | 0.3  | 1.1  | 1.0  | 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  |
| %ile BackOfQ(50%), veh/h     | 3.0  | 7.8  | 8.2  | 0.4  | 9.8  | 10.2 | 0.2  | 0.0  |
| Unsig. Movement Delay, s/veh | 15.7 | 12.0 | 12.0 | 16.7 | 19.2 | 19.1 | 61.6 | 0.0  |
| LnGrp Delay(d), s/veh        | 15.7 | 12.0 | 12.0 | 16.7 | 19.2 | 19.1 | 61.6 | 0.0  |
| LnGrp LOS                    | B    | B    | B    | B    | B    | B    | E    | A    |
| Approach Vol, veh/h          | 1370 |      |      | 1074 |      | 71   |      | 444  |
| Approach Delay, s/veh        | 12.7 |      |      | 19.1 |      | 48.0 |      | 56.0 |
| Approach LOS                 | B    | B    | B    | B    | B    | D    | D    | E    |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 6    | 8    |      |      |
| Phs Duration (G+Y+Rc), s     | 14.0 | 78.2 | 9.0  | 28.8 | 92.2 | 37.8 |      |      |
| Change Period (Y+Rc), s      | 4.0  | 6.0  | 4.0  | 6.5  | 6.0  | 6.5  |      |      |
| Max Green Setting (Gmax), s  | 23.0 | 44.0 | 5.0  | 37.5 | 71.0 | 46.5 |      |      |
| Max Q Clear Time (g_c+tl), s | 9.4  | 25.5 | 7.0  | 20.9 | 21.6 | 29.2 |      |      |
| Green Ext Time (p_c), s      | 0.6  | 7.1  | 0.0  | 0.2  | 9.9  | 2.2  |      |      |
| Intersection Summary         |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  |      |      |      |      |      |      |      |      |



Smoke Tree Resort  
2020 Total AM

4: Smoke Tree Access B & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |      |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|-------|------|------|--|--|--|--|--|--|
| Int Delay, s/veh         |        |        |        |       |      |      |  |  |  |  |  |  |
| 0.5                      |        |        |        |       |      |      |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT   | NBL  | NBR  |  |  |  |  |  |  |
| Lane Configurations      | ↕↕     |        | ↕      | ↕↕    |      | ↕↕   |  |  |  |  |  |  |
| Traffic Vol, veh/h       | 1049   | 17     | 26     | 860   | 15   | 22   |  |  |  |  |  |  |
| Future Vol, veh/h        | 1049   | 17     | 26     | 860   | 15   | 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           | -      | -      | 25     | -     | 0    | -    |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90    | 90   | 90   |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2     | 2    | 2    |  |  |  |  |  |  |
| Mvmt Flow                | 1166   | 19     | 29     | 956   | 17   | 24   |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |       |      |      |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1185   | 0     | 1712 | 593  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 1176 | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 536  | -    |  |  |  |  |  |  |
| Critical Hwy             | -      | -      | 4.14   | -     | 6.84 | 6.94 |  |  |  |  |  |  |
| Critical Hwy Stg 1       | -      | -      | -      | -     | 5.84 | -    |  |  |  |  |  |  |
| Critical Hwy Stg 2       | -      | -      | -      | -     | 5.84 | -    |  |  |  |  |  |  |
| Follow-up Hwy            | -      | -      | 2.22   | -     | 3.52 | 3.32 |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 585    | -     | 81   | 449  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 255  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 551  | -    |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 585    | -     | 77   | 449  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -     | 180  | -    |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 242  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 551  | -    |  |  |  |  |  |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |       |      |      |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0.3    | 20.1   |       |      |      |  |  |  |  |  |  |
| HCM LOS                  | C      |        |        |       |      |      |  |  |  |  |  |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL   | WBT  |      |  |  |  |  |  |  |
| Capacity (veh/h)         | 280    | -      | -      | 585   | -    |      |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.147  | -      | -      | 0.049 | -    |      |  |  |  |  |  |  |
| HCM Control Delay (s)    | 20.1   | -      | -      | 11.5  | -    |      |  |  |  |  |  |  |
| HCM Lane LOS             | C      | -      | -      | B     | -    |      |  |  |  |  |  |  |
| HCM 95th %ile Q(veh)     | 0.5    | -      | -      | 0.2   | -    |      |  |  |  |  |  |  |

Smoke Tree Resort  
2020 Total AM

5: Lincoln Medical West & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |      |      |      |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|------|------|------|--|--|--|--|--|--|
| Int Delay, s/veh         |        |        |        |      |      |      |  |  |  |  |  |  |
| 0.4                      |        |        |        |      |      |      |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT  | NBL  | NBR  |  |  |  |  |  |  |
| Lane Configurations      | ↔↔     |        | ↔      | ↔↔   |      | ↔↔   |  |  |  |  |  |  |
| Traffic Vol, veh/h       | 1054   | 17     | 42     | 879  | 6    | 9    |  |  |  |  |  |  |
| Future Vol, veh/h        | 1054   | 17     | 42     | 879  | 6    | 9    |  |  |  |  |  |  |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free | Stop | Stop |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None | -    | None |  |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -    | 0    | -    |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90   | 90   | 90   |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2    | 2    |  |  |  |  |  |  |
| Mvmt Flow                | 1171   | 19     | 47     | 977  | 7    | 10   |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |      |      |      |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1190   | 0    | 1764 | 595  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 1181 | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 583  | -    |  |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -    | 6.84 | 6.94 |  |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.84 | -    |  |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.84 | -    |  |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -    | 3.52 | 3.32 |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 582    | -    | 75   | 447  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 254  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 521  | -    |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -    | -    | -    |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 582    | -    | 69   | 447  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 170  | -    |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 233  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 521  | -    |  |  |  |  |  |  |
|                          |        |        |        |      |      |      |  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |      |      |      |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0.5    | 19.2   |      |      |      |  |  |  |  |  |  |
| HCM LOS                  | C      |        |        |      |      |      |  |  |  |  |  |  |
|                          |        |        |        |      |      |      |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL  | WBT  |      |  |  |  |  |  |  |
| Capacity (veh/h)         | 271    | -      | -      | 582  | -    |      |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.062  | -      | -      | 0.08 | -    |      |  |  |  |  |  |  |
| HCM Control Delay (s)    | 19.2   | -      | -      | 11.7 | -    |      |  |  |  |  |  |  |
| HCM Lane LOS             | C      | -      | -      | B    | -    |      |  |  |  |  |  |  |
| HCM 95th %tile Ovht      | 0.2    | -      | -      | 0.3  | -    |      |  |  |  |  |  |  |

Smoke Tree Resort  
2020 Total AM

6: Lincoln Medical East & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|-------|------|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Int Delay, s/veh         |        |        |        |       |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0.1                      |        |        |        |       |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT   | NBL  | NBR  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Configurations      | ↖↗     |        |        | ↖↗    |      | ↖    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Vol, veh/h       | 1050   | 11     | 5      | 921   | 0    | 9    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Future Vol, veh/h        | 1050   | 11     | 5      | 921   | 0    | 9    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free  | Stop | Stop |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None  | -    | None |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Storage Length           | -      | -      | -      | -     | -    | 0    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90    | 90   | 90   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2     | 2    | 2    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mvmt Flow                | 1167   | 12     | 6      | 1023  | 0    | 10   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |       |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1179   | 0     | -    | 590  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | -    | -    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | -    | -    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -     | -    | 6.94 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -     | -    | -    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -     | -    | -    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -     | -    | 3.32 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 588    | -     | 0    | 451  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 0    | -    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 0    | -    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 588    | -     | -    | 451  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -     | -    | -    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | -    | -    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | -    | -    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |       |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0.1    | 13.2   |       |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HCM LOS                  | B      |        |        |       |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL   | WBT  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Capacity (veh/h)         | 451    | -      | -      | 588   | -    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.022  | -      | -      | 0.009 | -    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HCM Control Delay (s)    | 13.2   | -      | -      | 11.2  | -    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HCM Lane LOS             | B      | -      | -      | B     | -    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HCM 95th %ile Q(veh)     | 0.1    | -      | -      | 0     | -    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Smoke Tree Resort  
2020 Total AM

7: Apartment Drwy & Lincoln Dr  
HCM 6th TWSC

| 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                                                                                               | 27                                                                                | 999                                                                               | 35                                                                                | 19                                                                                | 861                                                                               | 10                                                                                | 52                                                                                | 0                                                                                 | 30                                                                                | 5                                                                                 | 0                                                                                 | 12                                                                                |  |
| Future Vol. veh/h                                                                                                | 27                                                                                | 999                                                                               | 35                                                                                | 19                                                                                | 861                                                                               | 10                                                                                | 52                                                                                | 0                                                                                 | 30                                                                                | 5                                                                                 | 0                                                                                 | 12                                                                                |  |
| 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                                                                                                   | 25                                                                                | -                                                                                 | -                                                                                 | 25                                                                                | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -                                                                                 | 0                                                                                 |  |
| Veh in Median Storage, #                                                                                         | -                                                                                 | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -                                                                                 |  |
| Grade, %                                                                                                         | -                                                                                 | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -                                                                                 |  |
| Peak Hour Factor                                                                                                 | 90                                                                                | 90                                                                                | 90                                                                                | 90                                                                                | 90                                                                                | 90                                                                                | 90                                                                                | 90                                                                                | 90                                                                                | 90                                                                                | 90                                                                                | 90                                                                                |  |
| Heavy Vehicles, %                                                                                                | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 |  |
| Mvmt Flow                                                                                                        | 30                                                                                | 1110                                                                              | 39                                                                                | 21                                                                                | 957                                                                               | 11                                                                                | 58                                                                                | 0                                                                                 | 33                                                                                | 6                                                                                 | 0                                                                                 | 13                                                                                |  |
| Major/Minor                                                                                                      | Major1                                                                            | Major2                                                                            | Minor1                                                                            |                                                                                   |                                                                                   |                                                                                   | Minor2                                                                            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |  |
| Conflicting Flow All                                                                                             | 968                                                                               | 0                                                                                 | 0                                                                                 | 1149                                                                              | 0                                                                                 | 0                                                                                 | 1711                                                                              | 2200                                                                              | 575                                                                               | 1620                                                                              | -                                                                                 | 484                                                                               |  |
| Stage 1                                                                                                          | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | 1190                                                                              | 1190                                                                              | -                                                                                 | 1005                                                                              | -                                                                                 |  |
| Stage 2                                                                                                          | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | 521                                                                               | 1010                                                                              | -                                                                                 | 615                                                                               | -                                                                                 |  |
| Critical Hdwy                                                                                                    | 4.14                                                                              | -                                                                                 | -                                                                                 | 4.14                                                                              | -                                                                                 | -                                                                                 | 7.54                                                                              | 6.54                                                                              | 6.94                                                                              | 7.54                                                                              | -                                                                                 | 6.94                                                                              |  |
| Critical Hdwy Stg 1                                                                                              | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | 6.54                                                                              | 5.54                                                                              | -                                                                                 | 6.54                                                                              | -                                                                                 |  |
| Critical Hdwy Stg 2                                                                                              | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | 6.54                                                                              | 5.54                                                                              | -                                                                                 | 6.54                                                                              | -                                                                                 |  |
| Follow-up Hdwy                                                                                                   | 2.22                                                                              | -                                                                                 | -                                                                                 | 2.22                                                                              | -                                                                                 | -                                                                                 | 3.52                                                                              | 4.02                                                                              | 3.32                                                                              | 3.52                                                                              | -                                                                                 | 3.32                                                                              |  |
| Pot Cap-1 Maneuver                                                                                               | 707                                                                               | -                                                                                 | -                                                                                 | 604                                                                               | -                                                                                 | -                                                                                 | 59                                                                                | 44                                                                                | 461                                                                               | 68                                                                                | 0                                                                                 | 529                                                                               |  |
| Stage 1                                                                                                          | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | 199                                                                               | 259                                                                               | -                                                                                 | 259                                                                               | 0                                                                                 | -                                                                                 |  |
| Stage 2                                                                                                          | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | 507                                                                               | 316                                                                               | -                                                                                 | 445                                                                               | 0                                                                                 | -                                                                                 |  |
| Platoon blocked, %                                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 |  |
| Mov Cap-1 Maneuver                                                                                               | 707                                                                               | -                                                                                 | -                                                                                 | 604                                                                               | -                                                                                 | -                                                                                 | ~54                                                                               | 41                                                                                | 461                                                                               | 59                                                                                | -                                                                                 | 529                                                                               |  |
| Mov Cap-2 Maneuver                                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | ~54                                                                               | 41                                                                                | -                                                                                 | 59                                                                                | -                                                                                 | -                                                                                 |  |
| Stage 1                                                                                                          | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | 191                                                                               | 248                                                                               | -                                                                                 | 248                                                                               | -                                                                                 | -                                                                                 |  |
| Stage 2                                                                                                          | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | 477                                                                               | 305                                                                               | -                                                                                 | 395                                                                               | -                                                                                 | -                                                                                 |  |
| Approach                                                                                                         | EB                                                                                | WB                                                                                | NB                                                                                |                                                                                   |                                                                                   |                                                                                   | SB                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |  |
| HCM Control Delay, s                                                                                             | 0.3                                                                               | 0.2                                                                               | 236.3                                                                             |                                                                                   |                                                                                   |                                                                                   | 29.7                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |  |
| HCM LOS                                                                                                          | F D                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |  |
| Minor Lane/Major Mvmt                                                                                            | NBLn1                                                                             | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | SBLn1                                                                             | SBLn2                                                                             |                                                                                   |                                                                                   |                                                                                   |  |
| Capacity (veh/h)                                                                                                 | 80                                                                                | 707                                                                               | -                                                                                 | -                                                                                 | 604                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | 59                                                                                | 529                                                                               |                                                                                   |                                                                                   |  |
| HCM Lane V/C Ratio                                                                                               | 1.139                                                                             | 0.042                                                                             | -                                                                                 | -                                                                                 | 0.035                                                                             | -                                                                                 | -                                                                                 | -                                                                                 | 0.094                                                                             | 0.025                                                                             |                                                                                   |                                                                                   |  |
| HCM Control Delay (s)                                                                                            | 236.3                                                                             | 10.3                                                                              | -                                                                                 | -                                                                                 | 11.2                                                                              | -                                                                                 | -                                                                                 | -                                                                                 | 72.3                                                                              | 12                                                                                |                                                                                   |                                                                                   |  |
| HCM Lane LOS                                                                                                     | F                                                                                 | B                                                                                 | -                                                                                 | -                                                                                 | B                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | F                                                                                 | B                                                                                 |                                                                                   |                                                                                   |  |
| HCM 95th %tile Q(veh)                                                                                            | 6.6                                                                               | 0.1                                                                               | -                                                                                 | -                                                                                 | 0.1                                                                               | -                                                                                 | -                                                                                 | -                                                                                 | 0.3                                                                               | 0.1                                                                               |                                                                                   |                                                                                   |  |
| Notes                                                                                                            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |  |
| - Volume exceeds capacity    \$ Delay exceeds 300s    + Computation Not Defined    * All major volume in platoon |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |  |



Smoke Tree Resort  
2020 Total AM

9: Scottsdale Rd & Lincoln Dr  
HCM 6th Signalized Intersection Summary

| Movement                          | EBL   | EBT  | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|-----------------------------------|-------|------|-------|------|------|------|------|------|------|------|------|------|
| Lane Configurations               | 4     | 4    | 4     | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |
| Traffic Volume (veh/h)            | 461   | 38   | 469   | 37   | 36   | 48   | 307  | 1316 | 39   | 51   | 1669 | 615  |
| Future Volume (veh/h)             | 461   | 38   | 469   | 37   | 36   | 48   | 307  | 1316 | 39   | 51   | 1669 | 615  |
| Initial Q (Q <sub>bb</sub> ), veh | 0     | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A <sub>pbt</sub> )   | 1.00  | 1.00 | 1.00  | 1.00 | 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   | No   | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h               | 1870  | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h              | 542   | 0    | 521   | 41   | 40   | 53   | 341  | 1462 | 43   | 57   | 1854 | 683  |
| Peak Hour Factor                  | 0.90  | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %              | 2     | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                        | 671   | 0    | 483   | 95   | 95   | 85   | 401  | 2401 | 71   | 73   | 2015 | 924  |
| Arrive On Green                   | 0.19  | 0.00 | 0.19  | 0.05 | 0.05 | 0.05 | 0.12 | 0.47 | 0.47 | 0.04 | 0.39 | 0.39 |
| Sat Flow, veh/h                   | 3563  | 0    | 1585  | 1781 | 1777 | 1585 | 3456 | 5098 | 150  | 1781 | 5106 | 1585 |
| Grp Volume(V), veh/h              | 542   | 0    | 521   | 41   | 40   | 53   | 341  | 976  | 529  | 57   | 1854 | 683  |
| Grp Sat Flow(S), veh/h            | 1781  | 0    | 1585  | 1781 | 1777 | 1585 | 1728 | 1702 | 1843 | 1781 | 1702 | 1585 |
| Q Serve(g, s), s                  | 18.9  | 0.0  | 24.5  | 2.9  | 2.8  | 4.3  | 12.6 | 27.7 | 27.7 | 4.1  | 44.9 | 41.0 |
| Cycle Q Clear(g, c), s            | 18.9  | 0.0  | 24.5  | 2.9  | 2.8  | 4.3  | 12.6 | 27.7 | 27.7 | 4.1  | 44.9 | 41.0 |
| Prop In Lane                      | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h            | 671   | 0    | 483   | 95   | 95   | 85   | 401  | 1603 | 868  | 73   | 2015 | 924  |
| V/C Ratio(X)                      | 0.81  | 0.00 | 1.08  | 0.43 | 0.42 | 0.63 | 0.85 | 0.61 | 0.61 | 0.78 | 0.92 | 0.74 |
| Avail Cap(c), veh/h               | 671   | 0    | 483   | 101  | 101  | 90   | 651  | 1762 | 954  | 119  | 2015 | 924  |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh          | 50.5  | 0.0  | 45.2  | 59.6 | 59.6 | 60.3 | 56.4 | 25.5 | 25.5 | 61.7 | 37.4 | 19.9 |
| Incr Delay (d2), s/veh            | 6.7   | 0.0  | 64.1  | 1.1  | 1.1  | 8.2  | 3.0  | 0.3  | 0.6  | 6.5  | 8.4  | 5.3  |
| 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(50%), veh/h          | 9.1   | 0.0  | 24.0  | 1.3  | 1.3  | 1.9  | 5.7  | 11.2 | 12.2 | 2.0  | 20.0 | 24.0 |
| Unsig. Movement Delay, s/veh      | 57.2  | 0.0  | 109.3 | 60.8 | 60.7 | 68.4 | 59.4 | 25.8 | 26.1 | 68.2 | 45.8 | 25.1 |
| LnGrp Delay(d), s/veh             | E     | A    | F     | E    | E    | E    | E    | C    | C    | E    | D    | C    |
| LnGrp LOS                         | E     | A    | F     | E    | E    | E    | E    | C    | C    | E    | D    | C    |
| Approach Vol, veh/h               | 1063  |      |       | 134  |      |      |      | 1946 |      |      | 2594 |      |
| Approach Delay, s/veh             | 82.8  |      |       | 63.8 |      |      |      | 32.1 |      |      | 40.8 |      |
| Approach LOS                      | F     |      |       | E    |      |      |      | C    |      |      | D    |      |
| Timer - Assigned Phs              | 1     | 2    | 4     | 5    | 6    | 8    |      |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s          | 10.6  | 66.9 | 30.0  | 20.6 | 57.0 | 12.5 |      |      |      |      |      |      |
| Change Period (Y+Rc), s           | * 5.3 | 5.7  | 5.5   | 5.5  | 5.7  | 5.6  |      |      |      |      |      |      |
| Max Green Sating (Gmax), s        | * 8.7 | 67.3 | 24.5  | 24.5 | 51.3 | 7.4  |      |      |      |      |      |      |
| Max Q Clear Time (g, c+H), s      | 6.1   | 29.7 | 26.5  | 14.6 | 46.9 | 6.3  |      |      |      |      |      |      |
| Green Ext Time (p, c), s          | 0.0   | 2.2  | 0.0   | 0.5  | 1.9  | 0.0  |      |      |      |      |      |      |
| Intersection Summary              |       |      |       |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay                |       |      | 46.4  |      |      |      |      |      |      |      |      |      |
| HCM 6th LOS                       |       |      | D     |      |      |      |      |      |      |      |      |      |

Notes  
User approved pedestrian interval to be less than phase max green.  
User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Smoke Tree Resort  
2020 Total AM

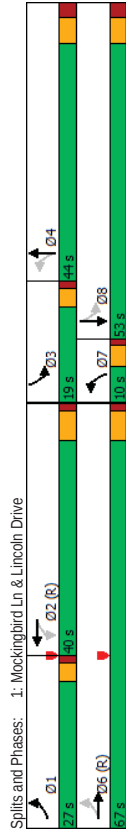
10: Quail Run Rd & Access A  
HCM 6th TWSC

| Intersection             | WBL    | WBR      | NBT    | NBR    | SBL    | SBT    |
|--------------------------|--------|----------|--------|--------|--------|--------|
| In Delay, s/veh          | 0      |          |        |        |        |        |
| Movement                 | WBL    | WBR      | NBT    | NBR    | SBL    | SBT    |
| Lane Configurations      | W      | W        | W      | W      | W      | W      |
| Traffic Vol, veh/h       | 0      | 1        | 0      | 0      | 1      | 0      |
| Future Vol, veh/h        | 0      | 1        | 0      | 0      | 1      | 0      |
| Conflicting Peds, #/hr   | 0      | 0        | 0      | 0      | 0      | 0      |
| Sign Control             | Stop   | Stop     | Free   | Free   | Free   | Free   |
| RT Channelized           | - None | - None   | - None | - None | - None | - None |
| Storage Length           | 0      | -        | -      | -      | -      | -      |
| Veh in Median Storage, # | 0      | -        | 0      | -      | -      | 0      |
| Grade, %                 | 0      | -        | 0      | -      | -      | 0      |
| Peak Hour Factor         | 90     | 90       | 90     | 90     | 90     | 90     |
| Heavy Vehicles, %        | 2      | 2        | 2      | 2      | 2      | 2      |
| Mvmt Flow                | 0      | 1        | 0      | 0      | 1      | 0      |
| Major/Minor              | Minor1 | Major1   | Major1 | Major2 |        |        |
| Conflicting Flow All     | 2      | 0        | 0      | 0      | 0      | 0      |
| Stage 1                  | 0      | -        | -      | -      | -      | -      |
| Stage 2                  | 2      | -        | -      | -      | -      | -      |
| Critical Hwy             | 6.42   | 6.22     | -      | -      | 4.12   | -      |
| Critical Hwy Stg 1       | 5.42   | -        | -      | -      | -      | -      |
| Critical Hwy Stg 2       | 5.42   | -        | -      | -      | -      | -      |
| Follow-up Hwy            | 3.518  | 3.318    | -      | -      | 2.218  | -      |
| Pot Cap-1 Maneuver       | 1021   | -        | -      | -      | -      | -      |
| Stage 1                  | -      | -        | -      | -      | -      | -      |
| Stage 2                  | 1021   | -        | -      | -      | -      | -      |
| Platoon blocked, %       | -      | -        | -      | -      | -      | -      |
| Mov Cap-1 Maneuver       | 1021   | -        | -      | -      | -      | -      |
| Mov Cap-2 Maneuver       | 1021   | -        | -      | -      | -      | -      |
| Stage 1                  | -      | -        | -      | -      | -      | -      |
| Stage 2                  | 1021   | -        | -      | -      | -      | -      |
| Approach                 | WB     | NB       | SB     |        |        |        |
| HCM Control Delay, s     | -      | 0        |        |        |        |        |
| HCM LOS                  |        |          |        |        |        |        |
| Minor Lane/Major Mvmt    | NBT    | NBRWBLn1 | SBL    | SBT    |        |        |
| Capacity (veh/h)         | -      | -        | -      | -      | -      | -      |
| HCM Lane V/C Ratio       | -      | -        | -      | -      | -      | -      |
| HCM Control Delay (s)    | -      | -        | -      | -      | -      | -      |
| HCM Lane LOS             | -      | -        | -      | -      | -      | -      |
| HCM 95th %ile Q(veh)     | -      | -        | -      | -      | -      | -      |

Smoke Tree Resort  
2020 Total AM Mitigated

1: Mockingbird Ln & Lincoln Drive  
Timings

|                                                                      | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |  |
|----------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Lane Group                                                           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |  |
| Lane Configurations                                                  | 222   | 981   | 24    | 898   | 5     | 34    | 78    | 88    |  |
| Traffic Volume (vph)                                                 | 222   | 981   | 24    | 898   | 5     | 34    | 78    | 88    |  |
| Future Volume (vph)                                                  | 222   | 981   | 24    | 898   | 5     | 34    | 78    | 88    |  |
| Turn Type                                                            | pm+pt | NA    | Perm  | NA    | pm+pt | NA    | pm+pt | NA    |  |
| Protected Phases                                                     | 1     | 6     | 2     | 7     | 4     | 3     | 8     |       |  |
| Permitted Phases                                                     | 6     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |  |
| Detector Phase                                                       | 1     | 6     | 2     | 2     | 7     | 4     | 3     | 8     |  |
| Switch Phase                                                         |       |       |       |       |       |       |       |       |  |
| Minimum Initial (s)                                                  | 3.5   | 15.0  | 15.0  | 15.0  | 5.0   | 7.0   | 3.5   | 7.0   |  |
| Minimum Split (s)                                                    | 8.0   | 27.0  | 27.0  | 27.0  | 9.5   | 33.5  | 8.0   | 33.5  |  |
| Total Split (s)                                                      | 27.0  | 67.0  | 40.0  | 40.0  | 10.0  | 44.0  | 19.0  | 53.0  |  |
| Total Split (%)                                                      | 20.8% | 51.5% | 30.8% | 30.8% | 7.7%  | 33.8% | 14.6% | 40.8% |  |
| Yellow Time (s)                                                      | 3.0   | 4.5   | 4.5   | 4.5   | 3.5   | 4.0   | 3.0   | 4.0   |  |
| All-Red Time (s)                                                     | 1.0   | 1.5   | 1.5   | 1.5   | 1.0   | 2.5   | 1.0   | 2.5   |  |
| Lost Time Adjust (s)                                                 | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Total Lost Time (s)                                                  | 4.0   | 6.0   | 6.0   | 6.0   | 4.5   | 6.5   | 4.0   | 6.5   |  |
| Lead/Lag                                                             | Lead  | Lag   | Lag   | Lag   | Lead  | Lag   | Lead  | Lag   |  |
| Lead/Lag Optimize?                                                   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |  |
| Recall Mode                                                          | None  | C-Max | C-Max | C-Max | None  | None  | None  | None  |  |
| Act Effct Green (s)                                                  | 91.3  | 89.3  | 68.7  | 68.7  | 19.9  | 14.2  | 30.7  | 26.2  |  |
| Actuated g/C Ratio                                                   | 0.70  | 0.69  | 0.53  | 0.53  | 0.15  | 0.11  | 0.24  | 0.20  |  |
| v/c Ratio                                                            | 0.61  | 0.46  | 0.11  | 0.56  | 0.05  | 0.30  | 0.27  | 0.84  |  |
| Control Delay                                                        | 16.5  | 11.8  | 15.2  | 19.1  | 32.0  | 34.2  | 38.7  | 50.3  |  |
| Queue Delay                                                          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Total Delay                                                          | 16.5  | 11.8  | 15.2  | 19.1  | 32.0  | 34.2  | 38.7  | 50.3  |  |
| LOS                                                                  | B     | B     | B     | B     | C     | C     | D     | D     |  |
| Approach Delay                                                       |       |       |       |       |       |       |       |       |  |
| Approach LOS                                                         | B     | B     | B     | B     | C     | C     | D     | D     |  |
| Intersection Summary                                                 |       |       |       |       |       |       |       |       |  |
| Cycle Length: 130                                                    |       |       |       |       |       |       |       |       |  |
| Actuated Cycle Length: 130                                           |       |       |       |       |       |       |       |       |  |
| Offset: 0 (0%), Referenced to phase 2(WBTL and 6EBTL, Start of Green |       |       |       |       |       |       |       |       |  |
| Natural Cycle: 90                                                    |       |       |       |       |       |       |       |       |  |
| Control Type: Actuated-Coordinated                                   |       |       |       |       |       |       |       |       |  |
| Maximum v/c Ratio: 0.84                                              |       |       |       |       |       |       |       |       |  |
| Intersection Signal Delay: 20.8                                      |       |       |       |       |       |       |       |       |  |
| Intersection Capacity Utilization 74.9%                              |       |       |       |       |       |       |       |       |  |
| Analysis Period (min) 15                                             |       |       |       |       |       |       |       |       |  |



Smoke Tree Resort  
2020 Total AM Mitigated

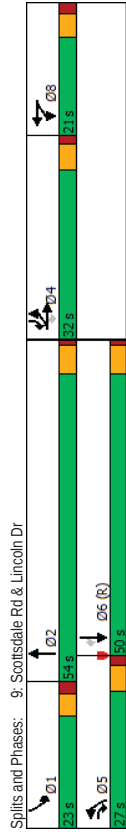
1: Mockingbird Ln & Lincoln Drive  
HCM 6th Signalized Intersection Summary

|                                                                    | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|--------------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Movement                                                           | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations                                                | 222  | 981  | 30   | 24   | 898  | 44   | 5    | 34   | 24   | 78   | 88   | 233  |
| Traffic Volume (veh/h)                                             | 222  | 981  | 30   | 24   | 898  | 44   | 5    | 34   | 24   | 78   | 88   | 233  |
| Future Volume (veh/h)                                              | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Q (Qb), veh                                                | 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 | 1.00 | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj                                                   | No   | No   | No   | No   | No   | No   | No   | No   | No   | No   | No   | No   |
| Work Zone On Approach                                              | No   | No   | No   | No   | No   | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h                                                | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h                                               | 247  | 1090 | 33   | 27   | 998  | 49   | 6    | 38   | 27   | 87   | 98   | 259  |
| Peak Hour Factor                                                   | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %                                               | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                                                         | 369  | 2186 | 66   | 282  | 1747 | 86   | 101  | 204  | 145  | 374  | 109  | 289  |
| Arrive On Green                                                    | 0.08 | 0.62 | 0.62 | 0.51 | 0.51 | 0.51 | 0.01 | 0.20 | 0.20 | 0.05 | 0.24 | 0.24 |
| Sat Flow, veh/h                                                    | 1781 | 3521 | 107  | 502  | 3447 | 169  | 1781 | 1017 | 723  | 1781 | 454  | 1200 |
| Grp Volume(V), veh/h                                               | 247  | 550  | 573  | 27   | 514  | 533  | 6    | 0    | 65   | 87   | 0    | 357  |
| Grp Sat Flow(s), veh/h                                             | 1781 | 1777 | 1851 | 502  | 1777 | 1840 | 1781 | 0    | 1740 | 1781 | 0    | 1654 |
| Q Serve(g, s), s                                                   | 8.3  | 22.1 | 22.1 | 4.1  | 26.1 | 26.1 | 0.3  | 0.0  | 4.0  | 4.9  | 0.0  | 27.2 |
| Cycle Q Clear(g, c), s                                             | 8.3  | 22.1 | 22.1 | 11.3 | 26.1 | 26.1 | 0.3  | 0.0  | 4.0  | 4.9  | 0.0  | 27.2 |
| Prop In Lane                                                       | 1.00 | 0.06 | 1.00 | 0.09 | 1.00 | 0.09 | 1.00 | 0.42 | 1.00 | 0.73 | 0.00 | 0.73 |
| Lane Grp Cap(c), veh/h                                             | 369  | 1103 | 1149 | 282  | 901  | 933  | 101  | 0    | 349  | 374  | 0    | 398  |
| VC Ratio(X)                                                        | 0.67 | 0.50 | 0.50 | 0.10 | 0.57 | 0.57 | 0.06 | 0.00 | 0.19 | 0.23 | 0.00 | 0.90 |
| Avail Cap(c, a), veh/h                                             | 535  | 1103 | 1149 | 282  | 901  | 933  | 163  | 0    | 502  | 488  | 0    | 592  |
| 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 | 0.55 | 0.55 | 0.55 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh                                           | 17.4 | 13.5 | 13.5 | 20.7 | 22.3 | 22.3 | 42.7 | 0.0  | 43.1 | 36.8 | 0.0  | 47.8 |
| Incr Delay (d2), s/veh                                             | 2.1  | 1.6  | 1.5  | 0.4  | 1.5  | 1.4  | 0.2  | 0.0  | 0.3  | 0.3  | 0.0  | 11.7 |
| Initial Q Delay(Q3), s/veh                                         | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/h                                           | 3.5  | 9.1  | 9.5  | 0.5  | 11.2 | 11.6 | 0.2  | 0.0  | 1.8  | 2.2  | 0.0  | 12.5 |
| Unsig. Movement Delay, s/veh                                       |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh                                              | 19.5 | 15.1 | 15.1 | 21.1 | 23.7 | 23.7 | 43.0 | 0.0  | 43.4 | 37.1 | 0.0  | 59.5 |
| LnGrp LOS                                                          | B    | B    | B    | C    | C    | C    | D    | A    | D    | D    | A    | E    |
| Approach Vol, veh/h                                                | 1370 |      |      | 1074 |      |      | 71   |      |      |      | 444  |      |
| Approach Delay, s/veh                                              | 15.9 |      |      | 23.6 |      |      | 43.4 |      |      |      | 55.1 |      |
| Approach LOS                                                       | B    | B    | B    | C    |      |      | D    |      |      |      | E    |      |
| Timer - Assigned Phs                                               | 1    | 2    | 3    | 4    | 6    | 7    | 8    |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s                                           | 14.8 | 71.9 | 10.7 | 32.6 | 86.7 | 5.5  | 37.8 |      |      |      |      |      |
| Change Period (Y+Rc), s                                            | 4.0  | 6.0  | 4.0  | 6.5  | 6.0  | 4.5  | 6.5  |      |      |      |      |      |
| Max Green Setting (Gmax), s                                        | 23.0 | 34.0 | 15.0 | 37.5 | 61.0 | 5.5  | 46.5 |      |      |      |      |      |
| Max Q Clear Time (g_c+tl), s                                       | 10.3 | 28.1 | 6.9  | 6.0  | 24.1 | 2.3  | 29.2 |      |      |      |      |      |
| Green Ext Time (g_c), s                                            | 0.6  | 3.3  | 0.1  | 0.3  | 9.5  | 0.0  | 2.2  |      |      |      |      |      |
| Intersection Summary                                               |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay                                                 |      |      |      |      | 25.2 |      |      |      |      |      |      |      |
| HCM 6th LOS                                                        |      |      |      |      | C    |      |      |      |      |      |      |      |
| Notes                                                              |      |      |      |      |      |      |      |      |      |      |      |      |
| User approved pedestrian interval to be less than phase max green. |      |      |      |      |      |      |      |      |      |      |      |      |

Smoke Tree Resort  
2020 Total AM Mitigated

9: Scottsdale Rd & Lincoln Dr  
Timings

| Movement                                                  | EBL   | EBT   | EBR    | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR    |
|-----------------------------------------------------------|-------|-------|--------|-------|-------|-------|-------|-------|-------|--------|
| Lane Configurations                                       | 4     | 4     | 4      | 4     | 4     | 4     | 4     | 4     | 4     | 4      |
| Traffic Volume (vph)                                      | 461   | 38    | 469    | 37    | 36    | 307   | 1316  | 51    | 1669  | 615    |
| Future Volume (vph)                                       | 461   | 38    | 469    | 37    | 36    | 307   | 1316  | 51    | 1669  | 615    |
| Turn Type                                                 | Split | NA    | pm+row | Split | NA    | Prdt  | NA    | Prdt  | NA    | pm+row |
| Protected Phases                                          | 4     | 4     | 5      | 8     | 8     | 5     | 2     | 1     | 6     | 4      |
| Permitted Phases                                          | 4     | 4     | 4      | 8     | 8     | 5     | 2     | 1     | 6     | 4      |
| Detector Phase                                            | 4     | 4     | 5      | 8     | 8     | 5     | 2     | 1     | 6     | 4      |
| Switch Phase                                              | 7.0   | 7.0   | 7.0    | 7.0   | 7.0   | 7.0   | 10.0  | 5.0   | 10.0  | 7.0    |
| Minimum Initial (s)                                       | 13.0  | 13.0  | 13.0   | 13.0  | 13.0  | 13.0  | 16.7  | 11.0  | 16.0  | 13.0   |
| Minimum Split (s)                                         | 32.0  | 32.0  | 27.0   | 21.0  | 21.0  | 27.0  | 54.0  | 23.0  | 50.0  | 32.0   |
| Total Split (%)                                           | 24.6% | 24.6% | 20.8%  | 16.2% | 16.2% | 20.8% | 41.5% | 17.7% | 38.5% | 24.6%  |
| Yellow Time (s)                                           | 4.0   | 4.0   | 4.0    | 3.6   | 3.6   | 4.0   | 4.7   | 3.3   | 4.7   | 4.0    |
| All-Red Time (s)                                          | 1.5   | 1.5   | 1.5    | 2.0   | 2.0   | 1.5   | 1.0   | 2.0   | 1.0   | 1.5    |
| 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)                                       | 5.5   | 5.5   | 5.5    | 5.6   | 5.6   | 5.5   | 5.7   | 5.3   | 5.7   | 5.5    |
| Lead/Lag                                                  |       |       | Lead   |       |       | Lead  | Lag   | Lag   | Lead  | Lag    |
| Lead-Lag Optimize?                                        | None  | None  | None   | None  | None  | None  | None  | None  | C-Max | None   |
| Recall Mode                                               | 24.9  | 24.9  | 42.4   | 8.1   | 8.1   | 17.4  | 68.3  | 8.6   | 57.2  | 87.8   |
| Act Effct Green (s)                                       | 0.19  | 0.19  | 0.33   | 0.06  | 0.06  | 0.13  | 0.53  | 0.07  | 0.44  | 0.68   |
| Actuated g/C Ratio                                        | 0.86  | 0.86  | 0.82   | 0.37  | 0.37  | 0.74  | 0.57  | 0.49  | 0.83  | 0.57   |
| v/c Ratio                                                 | 95.4  | 95.1  | 34.7   | 67.7  | 32.0  | 63.9  | 23.3  | 71.6  | 37.1  | 7.2    |
| Control Delay                                             | 0.0   | 0.0   | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0    |
| Queue Delay                                               | 95.4  | 95.1  | 34.7   | 67.7  | 32.0  | 63.9  | 23.3  | 71.6  | 37.1  | 7.2    |
| Total Delay                                               | F     | F     | C      | E     | C     | E     | C     | E     | D     | A      |
| Approach Delay                                            | 65.9  |       |        | 42.9  |       |       | 30.8  |       | 30.0  |        |
| Approach LOS                                              | E     |       |        | D     |       |       | C     |       | C     |        |
| Intersection Summary                                      |       |       |        |       |       |       |       |       |       |        |
| Cycle Length: 130                                         |       |       |        |       |       |       |       |       |       |        |
| Actuated Cycle Length: 130                                |       |       |        |       |       |       |       |       |       |        |
| Offset: 0 (0%), Referenced to phase 6 SBT, Start of Green |       |       |        |       |       |       |       |       |       |        |
| Natural Cycle: 90                                         |       |       |        |       |       |       |       |       |       |        |
| Control Type: Actuated-Coordinated                        |       |       |        |       |       |       |       |       |       |        |
| Maximum v/c Ratio: 0.86                                   |       |       |        |       |       |       |       |       |       |        |
| Intersection Signal Delay: 37.4                           |       |       |        |       |       |       |       |       |       |        |
| Intersection Capacity Utilization 81.1%                   |       |       |        |       |       |       |       |       |       |        |
| Analysis Period (min) 15                                  |       |       |        |       |       |       |       |       |       |        |



Smoke Tree Resort  
2020 Total AM Mitigated

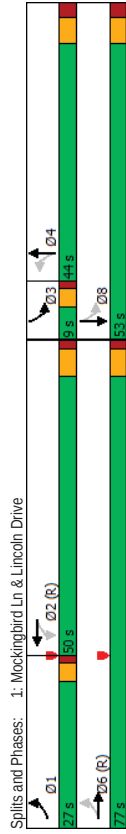
9: Scottsdale Rd & Lincoln Dr  
HCM 6th Signalized Intersection Summary

| Movement                                                                                           | EBL   | EBT  | EBR  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  | SBR  |
|----------------------------------------------------------------------------------------------------|-------|------|------|------|------|------|------|------|------|------|
| Lane Configurations                                                                                | 4     | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |
| Traffic Volume (veh/h)                                                                             | 461   | 38   | 469  | 37   | 36   | 307  | 1316 | 51   | 1669 | 615  |
| Future Volume (veh/h)                                                                              | 461   | 38   | 469  | 37   | 36   | 307  | 1316 | 51   | 1669 | 615  |
| Initial Q (Qb) veh                                                                                 | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A, pbf)                                                                               | 1.00  | 1.00 | 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 |
| Work Zone On Approach                                                                              | No    | No   | No   | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h                                                                                | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h                                                                               | 542   | 0    | 521  | 41   | 40   | 53   | 341  | 1462 | 43   | 57   |
| Peak Hour Factor                                                                                   | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %                                                                               | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap. veh/h                                                                                         | 726   | 0    | 506  | 95   | 85   | 39   | 2123 | 62   | 74   | 1740 |
| Arrive On Green                                                                                    | 0.20  | 0.00 | 0.20 | 0.05 | 0.05 | 0.12 | 0.42 | 0.42 | 0.04 | 0.34 |
| Sat Flow, veh/h                                                                                    | 3563  | 0    | 1585 | 1781 | 1777 | 1585 | 3456 | 5098 | 150  | 1781 |
| Grp Volume(V), veh/h                                                                               | 542   | 0    | 521  | 41   | 40   | 53   | 341  | 976  | 529  | 57   |
| Grp Sat Flow(s), veh/h                                                                             | 1781  | 0    | 1585 | 1781 | 1777 | 1585 | 1728 | 1702 | 1843 | 1781 |
| Q Serve(g, s)                                                                                      | 18.6  | 0.0  | 26.5 | 2.9  | 2.8  | 4.3  | 12.6 | 30.5 | 30.5 | 4.1  |
| Cycle Q Clear(g, s)                                                                                | 18.6  | 0.0  | 26.5 | 2.9  | 2.8  | 4.3  | 12.6 | 30.5 | 30.5 | 4.1  |
| Prop In Lane                                                                                       | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h                                                                             | 726   | 0    | 506  | 95   | 85   | 39   | 2123 | 62   | 74   | 1740 |
| V/C Ratio(X)                                                                                       | 0.75  | 0.00 | 1.03 | 0.43 | 0.42 | 0.63 | 0.86 | 0.69 | 0.69 | 0.77 |
| Avail Cap(c, a), veh/h                                                                             | 726   | 0    | 506  | 211  | 210  | 188  | 572  | 1417 | 768  | 243  |
| HCM Platoon Ratio                                                                                  | 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh                                                                           | 48.6  | 0.0  | 44.2 | 59.6 | 59.6 | 60.3 | 56.4 | 31.0 | 31.0 | 61.7 |
| Incr Delay (d2), s/veh                                                                             | 3.8   | 0.0  | 47.8 | 1.1  | 1.1  | 2.8  | 6.3  | 1.2  | 2.2  | 6.4  |
| 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  |
| %ile BackQ(50%), veh/h                                                                             | 8.6   | 0.0  | 22.8 | 1.3  | 1.3  | 1.8  | 5.8  | 12.7 | 13.9 | 2.0  |
| Unsig. Movement Delay, s/veh                                                                       | 52.4  | 0.0  | 92.1 | 60.8 | 60.7 | 63.1 | 62.7 | 32.2 | 33.2 | 68.1 |
| LnGrp Delay(d), s/veh                                                                              | D     | A    | F    | E    | E    | E    | E    | C    | C    | F    |
| LnGrp LOS                                                                                          | D     | A    | F    | E    | E    | E    | E    | C    | C    | F    |
| Approach Vol, veh/h                                                                                | 1063  |      |      | 134  |      |      | 1846 |      |      | 2594 |
| Approach Delay, s/veh                                                                              | 71.8  |      |      | 61.6 |      |      | 38.1 |      |      | 69.9 |
| Approach LOS                                                                                       | E     |      |      | E    |      |      | D    |      |      | E    |
| Timer - Assigned Phs                                                                               | 1     | 2    | 4    | 5    | 6    | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s                                                                           | 10.7  | 59.8 | 32.0 | 20.5 | 50.0 | 12.5 |      |      |      |      |
| Change Period (Y+Rc), s                                                                            | * 5.3 | 5.7  | 5.5  | 5.5  | 5.7  | 5.6  |      |      |      |      |
| Max Green Setting (Gmax), s                                                                        | * 18  | 48.3 | 26.5 | 21.5 | 44.3 | 15.4 |      |      |      |      |
| Max Q Clear Time (g_c+1), s                                                                        | 6.1   | 32.5 | 28.5 | 14.6 | 46.3 | 6.3  |      |      |      |      |
| Green Ext Time (p_c), s                                                                            | 0.0   | 2.1  | 0.0  | 0.4  | 0.0  | 0.2  |      |      |      |      |
| Intersection Summary                                                                               |       |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay                                                                                 | 59.7  |      |      |      |      |      |      |      |      |      |
| HCM 6th LOS                                                                                        | E     |      |      |      |      |      |      |      |      |      |
| Notes                                                                                              |       |      |      |      |      |      |      |      |      |      |
| User approved pedestrian interval to be less than phase max green.                                 |       |      |      |      |      |      |      |      |      |      |
| User approved volume balancing among the lanes for turning movement.                               |       |      |      |      |      |      |      |      |      |      |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |       |      |      |      |      |      |      |      |      |      |

Smoke Tree Resort  
2020 Total PM

1: Mockingbird Ln & Lincoln Drive  
Timings

|                                                                        | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group                                                             | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
| Lane Configurations                                                    | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
| Traffic Volume (vph)                                                   | 246   | 888   | 25    | 949   | 7     | 62    | 65    | 48    |
| Future Volume (vph)                                                    | 246   | 888   | 25    | 949   | 7     | 62    | 65    | 48    |
| Turn Type                                                              | pm+pt | NA    | Perm  | NA    | Perm  | NA    | pm+pt | NA    |
| Protected Phases                                                       | 1     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |
| Permitted Phases                                                       | 6     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |
| Detector Phase                                                         | 1     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |
| Switch Phase                                                           |       |       |       |       |       |       |       |       |
| Minimum Initial (s)                                                    | 3.5   | 15.0  | 15.0  | 15.0  | 7.0   | 7.0   | 3.5   | 7.0   |
| Minimum Split (s)                                                      | 8.0   | 27.0  | 27.0  | 27.0  | 33.5  | 33.5  | 8.0   | 33.5  |
| Total Split (s)                                                        | 27.0  | 77.0  | 50.0  | 50.0  | 44.0  | 44.0  | 9.0   | 53.0  |
| Total Split (%)                                                        | 20.8% | 59.2% | 38.5% | 38.5% | 33.8% | 33.8% | 6.9%  | 40.8% |
| Yellow Time (s)                                                        | 3.0   | 4.5   | 4.5   | 4.5   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)                                                       | 1.0   | 1.5   | 1.5   | 1.5   | 2.5   | 2.5   | 1.0   | 2.5   |
| Lost Time Adjust (s)                                                   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)                                                    | 4.0   | 6.0   | 6.0   | 6.0   | 6.5   | 6.5   | 4.0   | 6.5   |
| Lead/Lag                                                               | Lead  | Lag   | Lag   | Lag   | Lag   | Lag   | Lead  | Lead  |
| Lead/Lag Optimize?                                                     | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode                                                            | None  | C-Max | C-Max | C-Max | None  | None  | None  | None  |
| Act Effct Green (s)                                                    | 101.1 | 99.1  | 76.2  | 76.2  | 11.2  | 11.2  | 20.9  | 18.4  |
| Actuated g/C Ratio                                                     | 0.78  | 0.76  | 0.59  | 0.59  | 0.09  | 0.09  | 0.16  | 0.14  |
| v/c Ratio                                                              | 0.59  | 0.38  | 0.09  | 0.55  | 0.09  | 0.55  | 0.39  | 0.64  |
| Control Delay                                                          | 11.8  | 6.2   | 10.4  | 19.8  | 54.7  | 61.1  | 51.9  | 27.6  |
| Queue Delay                                                            | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay                                                            | 11.8  | 6.2   | 10.4  | 19.8  | 54.7  | 61.1  | 51.9  | 27.6  |
| LOS                                                                    | B     | A     | B     | B     | D     | E     | D     | C     |
| Approach Delay                                                         | 7.4   | 19.6  | 19.6  | 60.6  | 60.6  | 33.5  | 33.5  | 33.5  |
| Approach LOS                                                           | A     | B     | B     | E     | E     | C     | C     | C     |
| Intersection Summary                                                   |       |       |       |       |       |       |       |       |
| Cycle Length: 130                                                      |       |       |       |       |       |       |       |       |
| Actuated Cycle Length: 130                                             |       |       |       |       |       |       |       |       |
| Offset: 0 (0%), Referenced to phase 2(WBTL and 6(EBTL), Start of Green |       |       |       |       |       |       |       |       |
| Natural Cycle: 90                                                      |       |       |       |       |       |       |       |       |
| Control Type: Actuated-Coordinated                                     |       |       |       |       |       |       |       |       |
| Maximum v/c Ratio: 0.64                                                |       |       |       |       |       |       |       |       |
| Intersection Signal Delay: 16.9                                        |       |       |       |       |       |       |       |       |
| Intersection Capacity Utilization 67.8%                                |       |       |       |       |       |       |       |       |
| Analysis Period (min) 15                                               |       |       |       |       |       |       |       |       |



Smoke Tree Resort  
2020 Total PM

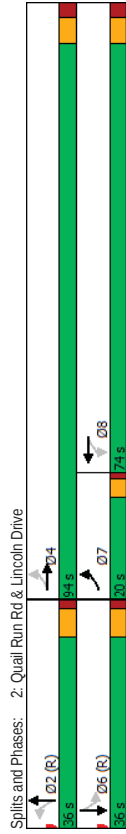
1: Mockingbird Ln & Lincoln Drive  
HCM 6th Signalized Intersection Summary

|                              | EBL  | EBT  | WBL  | WBT  | NBL   | NBT  | SBL  | SBT  |
|------------------------------|------|------|------|------|-------|------|------|------|
| Movement                     | EBL  | EBT  | WBL  | WBT  | NBL   | NBT  | SBL  | SBT  |
| Lane Configurations          | EBL  | EBT  | WBL  | WBT  | NBL   | NBT  | SBL  | SBT  |
| Traffic Volume (veh/h)       | 246  | 888  | 25   | 949  | 66    | 7    | 62   | 65   |
| Future Volume (veh/h)        | 246  | 888  | 25   | 949  | 66    | 7    | 62   | 65   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    |
| Peak-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 |
| Work Zone On Approach        | No   | No   | No   | No   | No    | No   | No   | No   |
| Adj Sat Flow, veh/h          | 1870 | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 273  | 987  | 32   | 28   | 1054  | 73   | 8    | 69   |
| Peak Hour Factor             | 0.90 | 0.90 | 0.90 | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2     | 2    | 2    | 2    |
| Cap, veh/h                   | 462  | 2612 | 85   | 411  | 2167  | 150  | 86   | 124  |
| Arrive On Green              | 0.07 | 0.74 | 0.14 | 0.85 | 0.85  | 0.09 | 0.09 | 0.04 |
| Sat Flow, veh/h              | 1781 | 3513 | 114  | 553  | 3372  | 233  | 1155 | 433  |
| Grp Volume(V), veh/h         | 273  | 499  | 520  | 28   | 552   | 72   | 8    | 91   |
| Grp Sat Flow(s), veh/h       | 1781 | 1777 | 1850 | 553  | 1777  | 1828 | 1155 | 0    |
| Q Serve(g, s), s             | 6.4  | 13.0 | 13.0 | 1.0  | 10.1  | 10.1 | 0.9  | 0.3  |
| Cycle Q Clear(g, c), s       | 6.4  | 13.0 | 13.0 | 1.0  | 10.1  | 10.1 | 0.9  | 0.3  |
| Prop In Lane                 | 1.00 | 0.06 | 1.00 | 1.00 | 0.13  | 1.00 | 0.24 | 1.00 |
| Lane Grp Cap(c), veh/h       | 462  | 1321 | 1375 | 411  | 1142  | 1175 | 86   | 163  |
| V/C Ratio(x)                 | 0.59 | 0.38 | 0.38 | 0.07 | 0.49  | 0.49 | 0.09 | 0.56 |
| Avail Cap(c, a), veh/h       | 653  | 1321 | 1375 | 411  | 1142  | 1175 | 314  | 0    |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 1.33 | 1.33  | 1.33 | 1.00 | 1.00 |
| Upstream Filter(i)           | 1.00 | 1.00 | 1.00 | 0.54 | 0.54  | 0.54 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 6.9  | 5.9  | 5.9  | 3.4  | 4.1   | 62.0 | 0.0  | 56.6 |
| Incr Delay (d2), s/veh       | 1.2  | 0.8  | 0.8  | 0.2  | 0.8   | 0.5  | 0.0  | 2.9  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln    | 2.4  | 4.7  | 4.9  | 0.1  | 2.8   | 2.9  | 0.3  | 3.0  |
| Unsig. Movement Delay, s/veh | 8.1  | 6.8  | 6.7  | 3.6  | 4.9   | 62.5 | 0.0  | 59.5 |
| LnGrp Delay(d), s/veh        | A    | A    | A    | A    | A     | E    | D    | A    |
| LnGrp LOS                    | A    | A    | A    | A    | A     | E    | D    | A    |
| Approach Vol, veh/h          | 1292 |      |      | 1155 |       | 99   |      | 298  |
| Approach Delay, s/veh        | 7.0  |      |      | 4.9  |       | 59.8 |      | 58.7 |
| Approach LOS                 | A    |      |      | A    |       | E    |      | E    |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 6     | 8    |      |      |
| Phs Duration (G+Y+Rc), s     | 13.1 | 89.6 | 9.0  | 18.3 | 102.7 | 27.3 |      |      |
| Change Period (Y+Rc), s      | 4.0  | 6.0  | 4.0  | 6.5  | 6.0   | 6.5  |      |      |
| Max Green Setting (Gmax), s  | 23.0 | 44.0 | 5.0  | 37.5 | 71.0  | 46.5 |      |      |
| Max Q Clear Time (g_c+tl), s | 8.4  | 12.1 | 6.7  | 11.3 | 15.0  | 19.4 |      |      |
| Green Ext Time (g_c), s      | 0.7  | 9.7  | 0.0  | 0.5  | 8.6   | 1.5  |      |      |
| Intersection Summary         |      |      |      |      |       |      |      |      |
| HCM 6th Ctrl Delay           |      |      | 13.4 |      |       |      |      |      |
| HCM 6th LOS                  |      |      | B    |      |       |      |      |      |

Smoke Tree Resort  
2020 Total PM

2: Quail Run Rd & Lincoln Drive  
Timings

| Lane Group           | EBL    | EBT   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|--------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | 85     | 904   | 945   | 1     | 0     | 14    | 0     |
| Traffic Volume (vph) | 85     | 904   | 945   | 1     | 0     | 14    | 0     |
| Future Volume (vph)  | 85     | 904   | 945   | 1     | 0     | 14    | 0     |
| Turn Type            | pm-plt | NA    | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 7      | 4     | 8     | 2     | 2     | 6     | 6     |
| Permitted Phases     | 4      | 4     | 8     | 2     | 2     | 6     | 6     |
| Detector Phase       | 7      | 4     | 8     | 2     | 2     | 6     | 6     |
| Switch Phase         |        |       |       |       |       |       |       |
| Minimum Initial (s)  | 3.5    | 15.0  | 15.0  | 7.0   | 7.0   | 7.0   | 7.0   |
| Minimum Split (s)    | 8.0    | 28.0  | 28.0  | 33.0  | 33.0  | 33.0  | 33.0  |
| Total Split (s)      | 20.0   | 94.0  | 74.0  | 36.0  | 36.0  | 36.0  | 36.0  |
| Total Split (%)      | 15.4%  | 72.3% | 56.9% | 27.7% | 27.7% | 27.7% | 27.7% |
| Yellow Time (s)      | 3.0    | 4.0   | 4.0   | 4.5   | 4.5   | 4.5   | 4.5   |
| All-Red Time (s)     | 1.0    | 2.5   | 2.5   | 1.5   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0    | 6.5   | 6.5   | 6.0   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lead   | Lag   | Yes   |       |       |       |       |
| Lead-Lag Optimize?   | Yes    | None  | Yes   | C-Max | C-Max | C-Max | C-Max |
| Recall Mode          | None   | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 68.0   | 65.5  | 51.3  | 52.0  | 52.0  | 52.0  | 52.0  |
| Actuated g/C Ratio   | 0.52   | 0.50  | 0.39  | 0.40  | 0.40  | 0.40  | 0.40  |
| v/c Ratio            | 0.42   | 0.56  | 0.77  | 0.00  | 0.03  | 0.13  | 0.13  |
| Control Delay        | 29.9   | 35.0  | 44.1  | 0.0   | 28.9  | 0.3   | 0.3   |
| Queue Delay          | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 29.9   | 35.0  | 44.1  | 0.0   | 28.9  | 0.3   | 0.3   |
| LOS                  | C      | C     | D     | A     | C     | A     | A     |
| Approach Delay       |        |       |       |       |       |       |       |
| Approach LOS         | C      | C     | D     | A     | A     | A     | A     |



Smoke Tree Resort  
2020 Total PM

2: Quail Run Rd & Lincoln Drive  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | 85   | 904  | 2    | 0    | 945  | 25   | 1    | 0    | 2    | 14   | 0    | 93   |
| Traffic Volume (veh/h)       | 85   | 904  | 2    | 0    | 945  | 25   | 1    | 0    | 2    | 14   | 0    | 93   |
| Future Volume (veh/h)        | 85   | 904  | 2    | 0    | 945  | 25   | 1    | 0    | 2    | 14   | 0    | 93   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A, pbf)         | 1.00 | 1.00 | 1.00 | 1.00 | 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   | No   | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h          | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 94   | 1004 | 2    | 0    | 1050 | 28   | 1    | 0    | 2    | 16   | 0    | 103  |
| Peak Hour Factor             | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 182  | 1571 | 3    | 55   | 1250 | 33   | 251  | 17   | 462  | 726  | 0    | 748  |
| Arrive On Green              | 0.09 | 0.86 | 0.86 | 0.00 | 0.35 | 0.35 | 0.47 | 0.00 | 0.47 | 0.47 | 0.00 | 0.47 |
| Sat Flow, veh/h              | 1781 | 3639 | 7    | 560  | 3536 | 94   | 453  | 36   | 978  | 1415 | 0    | 1585 |
| Grp Volume(V), veh/h         | 94   | 490  | 516  | 0    | 528  | 550  | 3    | 0    | 0    | 16   | 0    | 103  |
| Grp Sat Flow(s), veh/h       | 1781 | 1777 | 1869 | 560  | 1777 | 1853 | 1468 | 0    | 0    | 1415 | 0    | 1585 |
| Q Serve(g, s), s             | 4.3  | 10.9 | 10.9 | 0.0  | 35.5 | 35.5 | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 4.8  |
| Cycle Q Clear(g, c), s       | 4.3  | 10.9 | 10.9 | 0.0  | 35.5 | 35.5 | 4.8  | 0.0  | 0.0  | 0.7  | 0.0  | 4.8  |
| Prop In Lane                 | 1.00 | 0.00 | 1.00 | 0.00 | 0.05 | 0.33 | 0.06 | 0.00 | 0.67 | 1.00 | 0.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 182  | 767  | 807  | 55   | 628  | 655  | 730  | 0    | 0    | 726  | 0    | 748  |
| V/C Ratio(X)                 | 0.52 | 0.64 | 0.64 | 0.00 | 0.84 | 0.84 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.14 |
| Avail Cap(c, a), veh/h       | 317  | 1196 | 1258 | 148  | 923  | 962  | 730  | 0    | 0    | 726  | 0    | 748  |
| HCM Platoon Ratio            | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(i)           | 0.93 | 0.93 | 0.93 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh     | 28.4 | 5.8  | 5.8  | 0.0  | 38.6 | 38.6 | 18.2 | 0.0  | 0.0  | 18.3 | 0.0  | 19.4 |
| Incr Delay (d2), s/veh       | 2.1  | 0.8  | 0.8  | 0.0  | 4.6  | 4.6  | 0.0  | 0.0  | 0.0  | 0.1  | 0.0  | 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(50%), veh/ln    | 1.8  | 2.4  | 2.5  | 0.0  | 16.2 | 16.8 | 0.1  | 0.0  | 0.0  | 0.3  | 0.0  | 1.9  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 30.5 | 6.6  | 6.6  | 0.0  | 43.3 | 43.1 | 18.2 | 0.0  | 0.0  | 18.4 | 0.0  | 19.8 |
| LnGrp LOS                    | C    | A    | A    | A    | D    | D    | B    | A    | A    | B    | A    | B    |
| Approach Vol, veh/h          | 1100 |      |      | 1078 |      |      | 3    |      |      | 119  |      |      |
| Approach Delay, s/veh        | 8.6  |      |      | 43.2 |      |      | 18.2 |      |      | 19.6 |      |      |
| Approach LOS                 | A    |      |      | D    |      |      | B    |      |      | B    |      |      |
| Timer - Assigned Phs         | 2    | 4    | 4    | 6    | 7    | 8    |      |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 67.4 | 62.6 | 62.6 | 67.4 | 10.2 | 52.5 |      |      |      |      |      |      |
| Change Period (Y+Rc), s      | 6.0  | 6.5  | 6.5  | 6.0  | 4.0  | 6.5  |      |      |      |      |      |      |
| Max Green Setting (Gmax), s  | 30.0 | 87.5 | 87.5 | 30.0 | 16.0 | 67.5 |      |      |      |      |      |      |
| Max Q Clear Time (g_c+H), s  | 6.8  | 12.9 | 12.9 | 6.8  | 6.3  | 37.5 |      |      |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 8.5  | 8.5  | 0.6  | 0.1  | 8.5  |      |      |      |      |      |      |
| Intersection Summary         |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      |      | 25.4 |      |      | C    |      |      |      |      |      |
| HCM 6th LOS                  |      |      |      |      |      |      |      |      |      |      |      |      |

Smoke Tree Resort  
2020 Total PM

4: Smoke Tree Access B & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |      |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|-------|------|------|--|--|--|--|--|--|
| Int Delay, s/veh 0.7     |        |        |        |       |      |      |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT   | NBL  | NBR  |  |  |  |  |  |  |
| Lane Configurations      | 4B     |        | 5      | 4A    | 4A   | W    |  |  |  |  |  |  |
| Traffic Vol. veh/h       | 901    | 20     | 36     | 953   | 18   | 34   |  |  |  |  |  |  |
| Future Vol. veh/h        | 901    | 20     | 36     | 953   | 18   | 34   |  |  |  |  |  |  |
| Conflicting Peds. #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free  | Stop | Stop |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None  | -    | None |  |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -     | 0    | -    |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90    | 90   | 90   |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2     | 2    | 2    |  |  |  |  |  |  |
| Mvmt Flow                | 1001   | 22     | 40     | 1059  | 20   | 38   |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |       |      |      |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1023   | 0     | 1622 | 512  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 1012 | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 610  | -    |  |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -     | 6.84 | 6.94 |  |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -     | 5.84 | -    |  |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -     | 5.84 | -    |  |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -     | 3.52 | 3.32 |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 674    | -     | 94   | 507  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 312  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 505  | -    |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 674    | -     | 88   | 507  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -     | 202  | -    |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 294  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 505  | -    |  |  |  |  |  |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |       |      |      |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0.4    | 18.1   |       |      |      |  |  |  |  |  |  |
| HCM LOS                  | C      |        |        |       |      |      |  |  |  |  |  |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL   | WBT  |      |  |  |  |  |  |  |
| Capacity (veh/h)         | 333    | -      | -      | 674   | -    |      |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.174  | -      | -      | 0.059 | -    |      |  |  |  |  |  |  |
| HCM Control Delay (s)    | 18.1   | -      | -      | 10.7  | -    |      |  |  |  |  |  |  |
| HCM Lane LOS             | C      | -      | -      | B     | -    |      |  |  |  |  |  |  |
| HCM 95th %ile Q(veh)     | 0.6    | -      | -      | 0.2   | -    |      |  |  |  |  |  |  |

Smoke Tree Resort  
2020 Total PM

5: Lincoln Medical West & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |      |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|-------|------|------|--|--|--|--|--|--|
| Int Delay, s/veh 0.7     |        |        |        |       |      |      |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT   | NBL  | NBR  |  |  |  |  |  |  |
| Lane Configurations      | 4A     |        | 5      | 4A    | 4A   | W    |  |  |  |  |  |  |
| Traffic Vol, veh/h       | 928    | 7      | 21     | 959   | 30   | 26   |  |  |  |  |  |  |
| Future Vol, veh/h        | 928    | 7      | 21     | 959   | 30   | 26   |  |  |  |  |  |  |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free  | Stop | Stop |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None  | -    | None |  |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -     | 0    | -    |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90    | 90   | 90   |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2     | 2    | 2    |  |  |  |  |  |  |
| Mvmt Flow                | 1031   | 8      | 23     | 1066  | 33   | 29   |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |       |      |      |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1039   | 0     | 1614 | 520  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 1035 | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 579  | -    |  |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -     | 6.84 | 6.94 |  |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -     | 5.84 | -    |  |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -     | 5.84 | -    |  |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -     | 3.52 | 3.32 |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 665    | -     | 95   | 501  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 303  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 524  | -    |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 665    | -     | 92   | 501  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -     | 207  | -    |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 292  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 524  | -    |  |  |  |  |  |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |       |      |      |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0.2    | 21.1   |       |      |      |  |  |  |  |  |  |
| HCM LOS                  | C      |        |        |       |      |      |  |  |  |  |  |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL   | WBT  |      |  |  |  |  |  |  |
| Capacity (veh/h)         | 285    | -      | -      | 665   | -    |      |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.218  | -      | -      | 0.035 | -    |      |  |  |  |  |  |  |
| HCM Control Delay (s)    | 21.1   | -      | -      | 10.6  | -    |      |  |  |  |  |  |  |
| HCM Lane LOS             | C      | -      | -      | B     | -    |      |  |  |  |  |  |  |
| HCM 95th %tile Ovht      | 0.8    | -      | -      | 0.1   | -    |      |  |  |  |  |  |  |

Smoke Tree Resort  
2020 Total PM

6: Lincoln Medical East & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |      |      |      |  |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|------|------|------|--|--|--|--|--|--|--|
| Int Delay, s/veh         |        |        |        |      |      |      |  |  |  |  |  |  |  |
| 0.2                      |        |        |        |      |      |      |  |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT  | NBL  | NBR  |  |  |  |  |  |  |  |
| Lane Configurations      | ↖↗     |        |        | ↖↗   |      | ↖    |  |  |  |  |  |  |  |
| Traffic Vol. veh/h       | 950    | 4      | 0      | 979  | 2    | 30   |  |  |  |  |  |  |  |
| Future Vol. veh/h        | 950    | 4      | 0      | 979  | 2    | 30   |  |  |  |  |  |  |  |
| Conflicting Peds. #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |  |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free | Stop | Stop |  |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None | -    | None |  |  |  |  |  |  |  |
| Storage Length           | -      | -      | -      | -    | -    | 0    |  |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90   | 90   | 90   |  |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2    | 2    |  |  |  |  |  |  |  |
| Mvmt Flow                | 1056   | 4      | 0      | 1088 | 2    | 33   |  |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |      |      |      |  |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | -      | -    | 1602 | 530  |  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 1058 | -    |  |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 544  | -    |  |  |  |  |  |  |  |
| 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       | -      | -      | 0      | -    | 96   | 493  |  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | 0      | -    | 295  | -    |  |  |  |  |  |  |  |
| Stage 2                  | -      | -      | 0      | -    | 546  | -    |  |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -    | -    | -    |  |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | -      | -    | 96   | 493  |  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 214  | -    |  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 295  | -    |  |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 546  | -    |  |  |  |  |  |  |  |
|                          |        |        |        |      |      |      |  |  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |      |      |      |  |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0      | 12.8   |      |      |      |  |  |  |  |  |  |  |
| HCM LOS                  | B      |        |        |      |      |      |  |  |  |  |  |  |  |
|                          |        |        |        |      |      |      |  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBT  |      |      |  |  |  |  |  |  |  |
| Capacity (veh/h)         | 493    | -      | -      | -    |      |      |  |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.068  | -      | -      | -    |      |      |  |  |  |  |  |  |  |
| HCM Control Delay (s)    | 12.8   | -      | -      | -    |      |      |  |  |  |  |  |  |  |
| HCM Lane LOS             | B      | -      | -      | -    |      |      |  |  |  |  |  |  |  |
| HCM 95th %ile Q(veh)     | 0.2    | -      | -      | -    |      |      |  |  |  |  |  |  |  |

Smoke Tree Resort  
2020 Total PM

7: Apartment Drwy & Lincoln Dr  
HCM 6th TWSC

| Intersection               |                                |        |        |        |      |       |       |       |       |      |      |      |     |
|----------------------------|--------------------------------|--------|--------|--------|------|-------|-------|-------|-------|------|------|------|-----|
| Int Delay, s/veh           |                                |        |        |        |      |       |       |       |       |      |      |      |     |
| 15.8                       |                                |        |        |        |      |       |       |       |       |      |      |      |     |
| Movement                   | EBL                            | EBT    | EBR    | WBL    | WBT  | WBR   | NBL   | NBT   | NBR   | SBL  | SBT  | SBR  |     |
| Lane Configurations        | ↖↗                             | ↖↗     | ↖↗     | ↖↗     | ↖↗   | ↖↗    | ↖↗    | ↖↗    | ↖↗    | ↖↗   | ↖↗   | ↖↗   |     |
| Traffic Vol. veh/h         | 7                              | 918    | 42     | 6      | 883  | 9     | 68    | 3     | 49    | 7    | 0    | 35   |     |
| Future Vol. veh/h          | 7                              | 918    | 42     | 6      | 883  | 9     | 68    | 3     | 49    | 7    | 0    | 35   |     |
| 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  | -    | None | -    |     |
| Storage Length             | 25                             | -      | -      | 25     | -    | -     | -     | -     | -     | 0    | -    | 0    |     |
| Veh in Median Storage, #   | -                              | 0      | -      | -      | 0    | -     | -     | 0     | -     | -    | 0    | -    |     |
| Grade, %                   | -                              | 0      | -      | -      | 0    | -     | -     | 0     | -     | -    | 0    | -    |     |
| Peak Hour Factor           | 90                             | 90     | 90     | 90     | 90   | 90    | 90    | 90    | 90    | 90   | 90   | 90   |     |
| Heavy Vehicles, %          | 2                              | 2      | 2      | 2      | 2    | 2     | 2     | 2     | 2     | 2    | 2    | 2    |     |
| Mvmt Flow                  | 8                              | 1020   | 47     | 7      | 981  | 10    | 76    | 3     | 54    | 8    | 0    | 39   |     |
| Major/Minor                | Major1                         | Major2 | Minor1 | Minor2 |      |       |       |       |       |      |      |      |     |
| Conflicting Flow All       | 991                            | 0      | 0      | 1067   | 0    | 0     | 1565  | 2065  | 534   | 1528 | -    | 496  |     |
| Stage 1                    | -                              | -      | -      | -      | -    | -     | -     | 1060  | 1060  | -    | 1000 | -    |     |
| Stage 2                    | -                              | -      | -      | -      | -    | -     | -     | 505   | 1005  | -    | 528  | -    |     |
| Critical Hdwy              | 4.14                           | -      | -      | 4.14   | -    | -     | 7.54  | 6.54  | 6.94  | 7.54 | -    | 6.94 |     |
| Critical Hdwy Stg 1        | -                              | -      | -      | -      | -    | -     | 6.54  | 5.54  | -     | 6.54 | -    | -    |     |
| Critical Hdwy Stg 2        | -                              | -      | -      | -      | -    | -     | 6.54  | 5.54  | -     | 6.54 | -    | -    |     |
| Follow-up Hdwy             | 2.22                           | -      | -      | 2.22   | -    | -     | 3.52  | 4.02  | 3.32  | 3.52 | -    | 3.32 |     |
| Pot Cap-1 Maneuver         | 693                            | -      | -      | 649    | -    | -     | -     | 75    | 54    | 491  | 80   | 0    | 519 |
| Stage 1                    | -                              | -      | -      | -      | -    | -     | 239   | 299   | -     | 261  | 0    | -    |     |
| Stage 2                    | -                              | -      | -      | -      | -    | -     | 518   | 317   | -     | 502  | 0    | -    |     |
| Platoon blocked, %         | -                              | -      | -      | -      | -    | -     | -     | -     | -     | -    | -    | -    |     |
| Mov Cap-1 Maneuver         | 693                            | -      | -      | 649    | -    | -     | -     | 68    | 53    | 491  | 67   | -    | 519 |
| Mov Cap-2 Maneuver         | -                              | -      | -      | -      | -    | -     | -     | 68    | 53    | -    | 67   | -    |     |
| Stage 1                    | -                              | -      | -      | -      | -    | -     | -     | 236   | 295   | -    | 258  | -    |     |
| Stage 2                    | -                              | -      | -      | -      | -    | -     | -     | 474   | 314   | -    | 436  | -    |     |
| Approach                   | EB                             | WB     | NB     | SB     |      |       |       |       |       |      |      |      |     |
| HCM Control Delay, s       | 0.1                            | 0.1    | 258    | 21.4   |      |       |       |       |       |      |      |      |     |
| HCM LOS                    | F C                            |        |        |        |      |       |       |       |       |      |      |      |     |
| Minor Lane/Major Mvmt      | NBLn1                          | EBT    | EBR    | WBT    | WBR  | SBLn1 | SBLn2 |       |       |      |      |      |     |
| Capacity (veh/h)           | 104                            | 693    | -      | -      | 649  | -     | -     | 67    | 519   |      |      |      |     |
| HCM Lane V/C Ratio         | 1.282                          | 0.011  | -      | -      | 0.01 | -     | -     | 0.116 | 0.075 |      |      |      |     |
| HCM Control Delay (s)      | 258                            | 10.3   | -      | -      | 10.6 | -     | -     | 65.7  | 12.5  |      |      |      |     |
| HCM Lane LOS               | F                              | B      | -      | -      | B    | -     | -     | F     | B     |      |      |      |     |
| HCM 95th %ile Q(veh)       | 9.1                            | 0      | -      | -      | 0    | -     | -     | 0.4   | 0.2   |      |      |      |     |
| Notes                      |                                |        |        |        |      |       |       |       |       |      |      |      |     |
| ~: Volume exceeds capacity | \$: Delay exceeds 300s         |        |        |        |      |       |       |       |       |      |      |      |     |
| *: Computation Not Defined | *: All major volume in platoon |        |        |        |      |       |       |       |       |      |      |      |     |

Smoke Tree Resort  
2020 Total PM

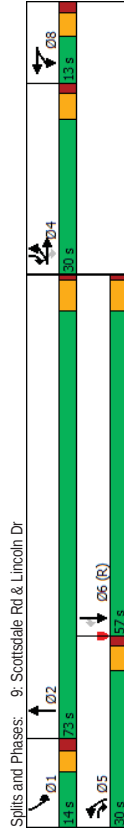
8: AJ's Drwy & Lincoln Dr  
HCM 6th TWSC

| Intersection             | EBL    | EBT    | EBR    | WBL    | WBT    | WBR    | NBL    | NBT    | NBR    | SBL    | SBT    | SBR    |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Int Delay, s/veh         | 2.5    |        |        |        |        |        |        |        |        |        |        |        |
| Lane Configurations      | 11     | 912    | 55     | 63     | 881    | 8      | 14     | 1      | 92     | 4      | 0      | 7      |
| Traffic Vol, veh/h       | 11     | 912    | 55     | 63     | 881    | 8      | 14     | 1      | 92     | 4      | 0      | 7      |
| Future Vol, veh/h        | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| 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           | 25     | -      | -      | 25     | -      | -      | -      | -      | -      | 0      | -      | 0      |
| Veh in Median Storage, # | -      | 0      | -      | -      | 0      | -      | -      | 0      | -      | -      | 0      | -      |
| Grade, %                 | -      | 0      | -      | -      | 0      | -      | -      | 0      | -      | -      | 0      | -      |
| Peak Hour Factor         | 90     | 90     | 90     | 90     | 90     | 90     | 90     | 90     | 90     | 90     | 90     | 90     |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2      | 2      | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| Mvmt Flow                | 12     | 1013   | 61     | 70     | 979    | 9      | 16     | 1      | 102    | 4      | 0      | 8      |
| Major/Minor              | Major1 | Minor2 | Minor1 | Minor2 | Minor1 | Minor2 | Minor1 | Minor2 | Minor1 | Minor2 | Minor1 | Minor2 |
| Conflicting Flow All     | 988    | 0      | 0      | 1074   | 0      | 0      | 1698   | 2196   | 537    | 1655   | -      | 494    |
| Stage 1                  | -      | -      | -      | -      | -      | -      | -      | 1068   | 1068   | -      | 1124   | -      |
| Stage 2                  | -      | -      | -      | -      | -      | -      | -      | 630    | 1128   | -      | 531    | -      |
| Critical Hdwy            | 414    | -      | -      | 414    | -      | -      | 754    | 654    | 694    | 754    | -      | 694    |
| Critical Hdwy Stg 1      | -      | -      | -      | -      | -      | -      | 654    | 554    | -      | 654    | -      | -      |
| Critical Hdwy Stg 2      | -      | -      | -      | -      | -      | -      | 654    | 554    | -      | 654    | -      | -      |
| Follow-up Hdwy           | 222    | -      | -      | 222    | -      | -      | 352    | 402    | 332    | 352    | -      | 332    |
| Pot Cap-1 Maneuver       | 695    | -      | -      | 645    | -      | -      | 60     | 44     | 488    | 64     | 0      | 521    |
| Stage 1                  | -      | -      | -      | -      | -      | -      | 237    | 296    | -      | 219    | 0      | -      |
| Stage 2                  | -      | -      | -      | -      | -      | -      | 436    | 278    | -      | 500    | 0      | -      |
| Platoon blocked, %       | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      |
| Mov Cap-1 Maneuver       | 695    | -      | -      | 645    | -      | -      | 54     | 39     | 488    | 45     | -      | 521    |
| Mov Cap-2 Maneuver       | -      | -      | -      | -      | -      | -      | 54     | 39     | -      | 45     | -      | -      |
| Stage 1                  | -      | -      | -      | -      | -      | -      | 233    | 291    | -      | 215    | -      | -      |
| Stage 2                  | -      | -      | -      | -      | -      | -      | 383    | 248    | -      | 387    | -      | -      |
| Approach                 | EB     | WB     | NB     | SB     | EB     | WB     | NB     | SB     | EB     | WB     | NB     | SB     |
| HCM Control Delay, s     | 0.1    | 0.7    | 37.3   | 41.7   | 0.1    | 0.7    | 37.3   | 41.7   | 0.1    | 0.7    | 37.3   | 41.7   |
| HCM LOS                  | E      | E      | E      | E      | E      | E      | E      | E      | E      | E      | E      | E      |
| Minor Lane/Major Mvmt    | NBLn1  | EBL    | EBT    | EBR    | WBL    | WBT    | WBR    | SBLn1  | SBLn2  | SBLn1  | SBLn2  | SBLn1  |
| Capacity (veh/h)         | 226    | 695    | -      | -      | 645    | -      | -      | 45     | 521    | -      | -      | -      |
| HCM Lane V/C Ratio       | 0.526  | 0.018  | -      | -      | 0.109  | -      | -      | 0.099  | 0.015  | -      | -      | -      |
| HCM Control Delay (s)    | 37.3   | 10.3   | -      | -      | 11.3   | -      | -      | 93.6   | 12     | -      | -      | -      |
| HCM Lane LOS             | E      | B      | -      | -      | B      | -      | -      | F      | B      | -      | -      | -      |
| HCM 95th %ile Q(veh)     | 2.8    | 0.1    | -      | -      | 0.4    | -      | -      | 0.3    | 0      | -      | -      | -      |

Smoke Tree Resort  
2020 Total PM

9: Scottsdale Rd & Lincoln Dr  
Timings

| Lane Group                                                | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|-----------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations                                       | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 5     |
| Traffic Volume (vph)                                      | 527   | 56    | 446   | 56    | 446   | 56    | 446   | 56    | 446   | 505   |
| Future Volume (vph)                                       | 527   | 56    | 446   | 56    | 446   | 56    | 446   | 56    | 446   | 505   |
| Turn Type                                                 | Split | NA    | pm+ov | Split | NA    | pm+ov | Split | NA    | pm+ov | pm+ov |
| Protected Phases                                          | 4     | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     | 4     |
| Permitted Phases                                          | 4     | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     | 4     |
| Detector Phase                                            | 4     | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     | 4     |
| Switch Phase                                              | 4     | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     | 4     |
| Minimum Initial (s)                                       | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 10.0  | 5.0   | 10.0  | 7.0   |
| Minimum Split (s)                                         | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  | 16.7  | 11.0  | 16.0  | 13.0  |
| Total Split (s)                                           | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  | 73.0  | 14.0  | 57.0  | 30.0  |
| Total Split (%)                                           | 23.1% | 23.1% | 23.1% | 10.0% | 10.0% | 23.1% | 56.2% | 10.8% | 43.8% | 23.1% |
| Yellow Time (s)                                           | 4.0   | 4.0   | 4.0   | 3.6   | 3.6   | 4.0   | 4.7   | 3.3   | 4.7   | 4.0   |
| All-Red Time (s)                                          | 1.5   | 1.5   | 1.5   | 2.0   | 2.0   | 1.5   | 1.0   | 2.0   | 1.0   | 1.5   |
| 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)                                       | 5.5   | 5.5   | 5.5   | 5.6   | 5.6   | 5.5   | 5.7   | 5.3   | 5.7   | 5.5   |
| Lead/Lag                                                  | Lead  | Lead  | Lead  | Lead  | Lead  | Lead  | Lag   | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?                                        | None  | None  | None  | None  | None  | None  | None  | None  | None  | None  |
| Recall Mode                                               | 24.5  | 24.5  | 46.1  | 7.3   | 7.3   | 21.6  | 70.4  | 7.9   | 54.3  | 84.5  |
| Act Effct Green (s)                                       | 0.19  | 0.19  | 0.35  | 0.06  | 0.06  | 0.17  | 0.54  | 0.06  | 0.42  | 0.65  |
| Actuated g/C Ratio                                        | 1.02  | 1.02  | 0.82  | 0.63  | 0.63  | 0.88  | 0.68  | 0.64  | 0.82  | 0.53  |
| v/c Ratio                                                 | 111.5 | 111.1 | 22.9  | 86.8  | 37.9  | 65.6  | 23.7  | 85.4  | 38.0  | 11.8  |
| Control Delay                                             | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Queue Delay                                               | 111.5 | 111.1 | 22.9  | 86.8  | 37.9  | 65.6  | 23.7  | 85.4  | 38.0  | 11.8  |
| Total Delay                                               | 111.5 | 111.1 | 22.9  | 86.8  | 37.9  | 65.6  | 23.7  | 85.4  | 38.0  | 11.8  |
| LOS                                                       | F     | F     | C     | F     | D     | E     | C     | F     | D     | B     |
| Approach Delay                                            | 73.0  | E     | E     | D     | D     | D     | C     | C     | C     | C     |
| Approach LOS                                              | E     | E     | E     | D     | D     | D     | C     | C     | C     | C     |
| Intersection Summary                                      |       |       |       |       |       |       |       |       |       |       |
| Cycle Length: 130                                         |       |       |       |       |       |       |       |       |       |       |
| Actuated Cycle Length: 130                                |       |       |       |       |       |       |       |       |       |       |
| Offset: 0 (0%), Referenced to phase 6 SBT, Start of Green |       |       |       |       |       |       |       |       |       |       |
| Natural Cycle: 90                                         |       |       |       |       |       |       |       |       |       |       |
| Control Type: Actuated-Coordinated                        |       |       |       |       |       |       |       |       |       |       |
| Maximum v/c Ratio: 1.02                                   |       |       |       |       |       |       |       |       |       |       |
| Intersection Signal Delay: 41.0                           |       |       |       |       |       |       |       |       |       |       |
| Intersection Capacity Utilization 83.0%                   |       |       |       |       |       |       |       |       |       |       |
| Analysis Period (min) 15                                  |       |       |       |       |       |       |       |       |       |       |



Smoke Tree Resort  
2020 Total PM

9: Scottsdale Rd & Lincoln Dr  
HCM 6th Signalized Intersection Summary

| Movement                          | EBL   | EBT  | EBR  | WBL  | WBT  | WBR   | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|-----------------------------------|-------|------|------|------|------|-------|------|------|------|------|------|------|
| Lane Configurations               | 527   | 56   | 446  | 56   | 62   | 72    | 427  | 1624 | 45   | 61   | 1569 | 505  |
| Traffic Volume (veh/h)            | 527   | 56   | 446  | 56   | 62   | 72    | 427  | 1624 | 45   | 61   | 1569 | 505  |
| Future Volume (veh/h)             | 0     | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    |
| Initial Q (Q <sub>bb</sub> ), veh | 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 | 1.00 | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj                  | No    | No   | No   | No   | No   | No    | No   | No   | No   | No   | No   | No   |
| Work Zone On Approach             | No    | No   | No   | No   | No   | No    | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/hln             | 1870  | 1870 | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h              | 630   | 0    | 496  | 62   | 69   | 80    | 474  | 1804 | 50   | 68   | 1743 | 561  |
| Peak Hour Factor                  | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %              | 2     | 2    | 2    | 2    | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                        | 671   | 0    | 543  | 101  | 101  | 90    | 532  | 2561 | 71   | 87   | 2015 | 924  |
| Arrive On Green                   | 0.06  | 0.00 | 0.06 | 0.06 | 0.06 | 0.06  | 0.15 | 0.50 | 0.50 | 0.05 | 0.39 | 0.39 |
| Sat Flow, veh/h                   | 3563  | 0    | 1585 | 1781 | 1777 | 1585  | 3456 | 5107 | 141  | 1781 | 5106 | 1585 |
| Grp Volume(v), veh/h              | 630   | 0    | 496  | 62   | 69   | 80    | 474  | 1202 | 652  | 68   | 1743 | 561  |
| Grp Sat Flow(s), veh/hln          | 1781  | 0    | 1585 | 1781 | 1777 | 1585  | 1728 | 1702 | 1845 | 1781 | 1702 | 1585 |
| Q Serve(g, s), s                  | 22.9  | 0.0  | 24.5 | 4.4  | 5.0  | 6.5   | 17.5 | 35.4 | 35.4 | 4.9  | 40.8 | 29.7 |
| Cycle Q Clear(g, q), s            | 22.9  | 0.0  | 24.5 | 4.4  | 5.0  | 6.5   | 17.5 | 35.4 | 35.4 | 4.9  | 40.8 | 29.7 |
| Prop In Lane                      | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h            | 671   | 0    | 543  | 101  | 101  | 90    | 532  | 1707 | 925  | 87   | 2015 | 924  |
| V/C Ratio(X)                      | 0.94  | 0.00 | 0.91 | 0.61 | 0.68 | 0.89  | 0.89 | 0.70 | 0.70 | 0.78 | 0.87 | 0.61 |
| Avail Cap(c), veh/h               | 671   | 0    | 543  | 101  | 101  | 90    | 651  | 1762 | 955  | 119  | 2015 | 924  |
| HCM Platoon Ratio                 | 0.33  | 0.33 | 0.33 | 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 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh          | 60.2  | 0.0  | 46.0 | 59.9 | 60.1 | 60.9  | 53.9 | 25.0 | 25.0 | 61.2 | 36.2 | 17.5 |
| Incr Delay (d2), s/veh            | 20.7  | 0.0  | 19.7 | 7.6  | 14.4 | 57.9  | 11.3 | 1.0  | 1.9  | 13.9 | 5.3  | 3.0  |
| Initial Q Delay(d3), s/veh        | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln         | 12.9  | 0.0  | 17.6 | 2.2  | 2.6  | 4.1   | 8.4  | 14.3 | 15.7 | 2.6  | 17.7 | 17.2 |
| Unsig. Movement Delay, s/veh      | 80.9  | 0.0  | 65.7 | 67.5 | 74.6 | 118.8 | 65.2 | 26.0 | 26.9 | 75.1 | 41.4 | 20.4 |
| LnGrp Delay(d), s/veh             | F     | A    | E    | E    | E    | F     | E    | C    | C    | E    | D    | C    |
| LnGrp LOS                         | F     | A    | E    | E    | E    | F     | E    | C    | C    | E    | D    | C    |
| Approach Vol, veh/h               | 1126  |      |      | 211  |      |       |      | 2328 |      |      | 2372 |      |
| Approach Delay, s/veh             | 74.2  |      |      | 89.3 |      |       |      | 34.2 |      |      | 37.4 |      |
| Approach LOS                      | E     |      |      | F    |      |       |      | C    |      |      | D    |      |
| Timer - Assigned Phs              | 1     | 2    | 4    | 5    | 6    | 8     |      |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s          | 11.6  | 70.9 | 30.0 | 25.5 | 57.0 | 13.0  |      |      |      |      |      |      |
| Change Period (Y+Rc), s           | * 5.3 | 5.7  | 5.5  | 5.5  | 5.7  | 5.6   |      |      |      |      |      |      |
| Max Green Sating (Gmax), s        | * 8.7 | 67.3 | 24.5 | 24.5 | 51.3 | 7.4   |      |      |      |      |      |      |
| Max Q Clear Time (g, c+H), s      | 6.9   | 37.4 | 26.5 | 19.5 | 42.8 | 8.5   |      |      |      |      |      |      |
| Green Ext Time (p, c), s          | 0.0   | 2.9  | 0.0  | 0.5  | 2.5  | 0.0   |      |      |      |      |      |      |

**Intersection Summary**  
HCM 6th Ctrl Delay 44.9  
HCM 6th LOS D

**Notes**  
User approved pedestrian interval to be less than phase max green.  
User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Smoke Tree Resort  
2020 Total PM

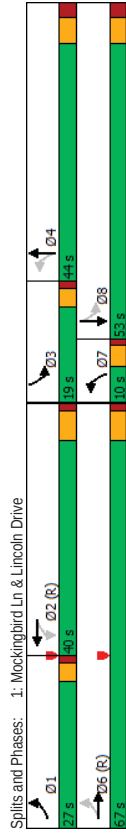
10: Quail Run Rd & Access A  
HCM 6th TWSC

| Intersection             | WBL    | WBR       | NBT    | NBR    | SBL    | SBT    |
|--------------------------|--------|-----------|--------|--------|--------|--------|
| In Delay, s/veh          | 0      |           |        |        |        |        |
| Movement                 | WBL    | WBR       | NBT    | NBR    | SBL    | SBT    |
| Lane Configurations      | W      | W         | W      | W      | W      | W      |
| Traffic Vol, veh/h       | 0      | 1         | 0      | 0      | 1      | 0      |
| Future Vol, veh/h        | 0      | 1         | 0      | 0      | 1      | 0      |
| Conflicting Peds, #/hr   | 0      | 0         | 0      | 0      | 0      | 0      |
| Sign Control             | Stop   | Stop      | Free   | Free   | Free   | Free   |
| RT Channelized           | - None | - None    | - None | - None | - None | - None |
| Storage Length           | 0      | -         | -      | -      | -      | -      |
| Veh in Median Storage, # | 0      | -         | 0      | -      | -      | 0      |
| Grade, %                 | 0      | -         | 0      | -      | -      | 0      |
| Peak Hour Factor         | 90     | 90        | 90     | 90     | 90     | 90     |
| Heavy Vehicles, %        | 2      | 2         | 2      | 2      | 2      | 2      |
| Mvmt Flow                | 0      | 1         | 0      | 0      | 1      | 0      |
| Major/Minor              | Minor1 | Major1    | Major1 | Major2 |        |        |
| Conflicting Flow All     | 2      | 0         | 0      | 0      | 0      | 0      |
| Stage 1                  | 0      | -         | -      | -      | -      | -      |
| Stage 2                  | 2      | -         | -      | -      | -      | -      |
| Critical Hwy             | 6.42   | 6.22      | -      | -      | 4.12   | -      |
| Critical Hwy Stg 1       | 5.42   | -         | -      | -      | -      | -      |
| Critical Hwy Stg 2       | 5.42   | -         | -      | -      | -      | -      |
| Follow-up Hwy            | 3.518  | 3.318     | -      | -      | 2.218  | -      |
| Pot Cap-1 Maneuver       | 1021   | -         | -      | -      | -      | -      |
| Stage 1                  | -      | -         | -      | -      | -      | -      |
| Stage 2                  | 1021   | -         | -      | -      | -      | -      |
| Platoon blocked, %       | -      | -         | -      | -      | -      | -      |
| Mov Cap-1 Maneuver       | 1021   | -         | -      | -      | -      | -      |
| Mov Cap-2 Maneuver       | 1021   | -         | -      | -      | -      | -      |
| Stage 1                  | -      | -         | -      | -      | -      | -      |
| Stage 2                  | 1021   | -         | -      | -      | -      | -      |
| Approach                 | WB     | NB        | SB     |        |        |        |
| HCM Control Delay, s     | -      | 0         |        |        |        |        |
| HCM LOS                  |        |           |        |        |        |        |
| Minor Lane/Major Mvmt    | NBT    | NBR/WBLn1 | SBL    | SBT    |        |        |
| Capacity (veh/h)         | -      | -         | -      | -      | -      | -      |
| HCM Lane V/C Ratio       | -      | -         | -      | -      | -      | -      |
| HCM Control Delay (s)    | -      | -         | -      | -      | -      | -      |
| HCM Lane LOS             | -      | -         | -      | -      | -      | -      |
| HCM 95th %tile Q(veh)    | -      | -         | -      | -      | -      | -      |

Smoke Tree Resort  
2020 Total PM Mitigated

1: Mockingbird Ln & Lincoln Drive  
Timings

|                                                                       | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |  |
|-----------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Lane Group                                                            | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |  |
| Lane Configurations                                                   | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |  |
| Traffic Volume (vph)                                                  | 246   | 888   | 25    | 949   | 7     | 62    | 65    | 48    |  |
| Future Volume (vph)                                                   | 246   | 888   | 25    | 949   | 7     | 62    | 65    | 48    |  |
| Turn Type                                                             | pm-pt | NA    | Perm  | NA    | pm-pt | NA    | pm-pt | NA    |  |
| Protected Phases                                                      | 1     | 6     | 2     | 7     | 4     | 3     | 8     |       |  |
| Permitted Phases                                                      | 6     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |  |
| Detector Phase                                                        | 1     | 6     | 2     | 2     | 7     | 4     | 3     | 8     |  |
| Switch Phase                                                          |       |       |       |       |       |       |       |       |  |
| Minimum Initial (s)                                                   | 3.5   | 15.0  | 15.0  | 15.0  | 5.0   | 7.0   | 3.5   | 7.0   |  |
| Minimum Split (s)                                                     | 8.0   | 27.0  | 27.0  | 27.0  | 9.5   | 33.5  | 8.0   | 33.5  |  |
| Total Split (s)                                                       | 27.0  | 67.0  | 40.0  | 40.0  | 10.0  | 44.0  | 19.0  | 53.0  |  |
| Total Split (%)                                                       | 20.8% | 51.5% | 30.8% | 30.8% | 7.7%  | 33.8% | 14.6% | 40.8% |  |
| Yellow Time (s)                                                       | 3.0   | 4.5   | 4.5   | 4.5   | 3.5   | 4.0   | 3.0   | 4.0   |  |
| All-Red Time (s)                                                      | 1.0   | 1.5   | 1.5   | 1.5   | 1.0   | 2.5   | 1.0   | 2.5   |  |
| Lost Time Adjust (s)                                                  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Total Lost Time (s)                                                   | 4.0   | 6.0   | 6.0   | 6.0   | 4.5   | 6.5   | 4.0   | 6.5   |  |
| Lead/Lag                                                              | Lead  | Lag   | Lag   | Lag   | Lead  | Lag   | Lead  | Lag   |  |
| Lead-Lag Optimize?                                                    | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |  |
| Recall Mode                                                           | None  | C-Max | C-Max | C-Max | None  | None  | None  | None  |  |
| Act Effct Green (s)                                                   | 96.5  | 94.5  | 72.2  | 72.2  | 17.6  | 11.2  | 25.5  | 21.0  |  |
| Actuated g/C Ratio                                                    | 0.74  | 0.73  | 0.56  | 0.56  | 0.14  | 0.09  | 0.20  | 0.16  |  |
| v/c Ratio                                                             | 0.65  | 0.40  | 0.10  | 0.58  | 0.05  | 0.55  | 0.28  | 0.59  |  |
| Queue Delay                                                           | 17.6  | 8.4   | 8.5   | 16.5  | 38.1  | 61.1  | 43.4  | 24.8  |  |
| Total Delay                                                           | 17.6  | 8.4   | 8.5   | 16.5  | 38.1  | 61.1  | 43.4  | 24.8  |  |
| LOS                                                                   | B     | A     | A     | B     | D     | E     | D     | C     |  |
| Approach Delay                                                        | 10.3  | B     | B     | B     | E     | E     | C     | C     |  |
| Approach LOS                                                          | B     | B     | B     | B     | E     | E     | C     | C     |  |
| Intersection Summary                                                  |       |       |       |       |       |       |       |       |  |
| Cycle Length: 130                                                     |       |       |       |       |       |       |       |       |  |
| Actuated Cycle Length: 130                                            |       |       |       |       |       |       |       |       |  |
| Offset: 0 (0%), Referenced to phase 2/WBTL and 6/EBTL, Start of Green |       |       |       |       |       |       |       |       |  |
| Natural Cycle: 90                                                     |       |       |       |       |       |       |       |       |  |
| Control Type: Actuated-Coordinated                                    |       |       |       |       |       |       |       |       |  |
| Maximum v/c Ratio: 0.65                                               |       |       |       |       |       |       |       |       |  |
| Intersection Signal Delay: 16.4                                       |       |       |       |       |       |       |       |       |  |
| Intersection Capacity Utilization 67.8%                               |       |       |       |       |       |       |       |       |  |
| Analysis Period (min) 15                                              |       |       |       |       |       |       |       |       |  |



Smoke Tree Resort  
2020 Total PM Mitigated

1: Mockingbird Ln & Lincoln Drive  
HCM 6th Signalized Intersection Summary

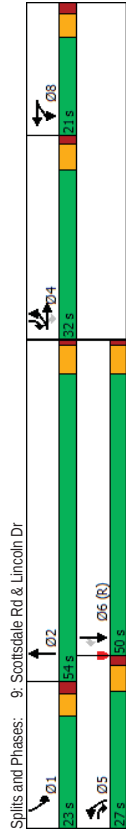
|                              | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |  |
|------------------------------|------|------|------|------|------|------|------|------|--|
| Movement                     | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |  |
| Lane Configurations          | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |  |
| Traffic Volume (veh/h)       | 246  | 888  | 29   | 25   | 949  | 66   | 7    | 62   |  |
| Future Volume (veh/h)        | 246  | 888  | 29   | 25   | 949  | 66   | 7    | 62   |  |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |  |
| Ped-Bike Adj(A, pbT)         | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |  |
| Parking Bus, Adj             | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |  |
| Work Zone On Approach        | No   | No   | No   | No   | No   | No   | No   | No   |  |
| Adj Sat Flow, veh/h          | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |  |
| Adj Flow Rate, veh/h         | 273  | 987  | 32   | 28   | 1054 | 73   | 8    | 69   |  |
| Peak Hour Factor             | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |  |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |  |
| Cap, veh/h                   | 386  | 2456 | 80   | 377  | 1992 | 138  | 103  | 173  |  |
| Arrive On Green              | 0.08 | 0.70 | 0.70 | 0.59 | 0.59 | 0.01 | 0.13 | 0.13 |  |
| Sat Flow, veh/h              | 1781 | 3513 | 114  | 553  | 3372 | 233  | 1781 | 1359 |  |
| Grp Volume(V), veh/h         | 273  | 499  | 520  | 28   | 552  | 8    | 91   | 72   |  |
| Grp Sat Flow(s), veh/h       | 1781 | 1777 | 1850 | 553  | 1777 | 1828 | 1781 | 0    |  |
| Q Serve(g, s), s             | 7.4  | 15.3 | 15.3 | 2.9  | 24.2 | 0.5  | 0.0  | 6.1  |  |
| Cycle Q Clear(g, c), s       | 7.4  | 15.3 | 15.3 | 4.1  | 24.2 | 0.5  | 0.0  | 6.1  |  |
| Prop In Lane                 | 1.00 | 0.06 | 1.00 | 1.00 | 0.13 | 1.00 | 0.24 | 1.00 |  |
| Lane Grp Cap(c), veh/h       | 386  | 1242 | 1293 | 377  | 1050 | 1080 | 103  | 0    |  |
| V/C Ratio(X)                 | 0.69 | 0.40 | 0.40 | 0.07 | 0.53 | 0.08 | 0.40 | 0.30 |  |
| Avail Cap(c, a), veh/h       | 573  | 1242 | 1293 | 377  | 1050 | 1080 | 161  | 0    |  |
| HCM Platoon Ratio            | 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 | 0.54 | 0.54 | 0.54 | 1.00 | 1.00 |  |
| Uniform Delay (d), s/veh     | 13.5 | 8.2  | 8.2  | 12.0 | 15.8 | 49.3 | 0.0  | 52.1 |  |
| Incr Delay (d2), s/veh       | 2.1  | 1.0  | 0.9  | 0.2  | 1.0  | 0.3  | 0.0  | 1.1  |  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |  |
| %ile BackOfQ(50%), veh/h     | 30   | 5.9  | 6.1  | 0.4  | 9.9  | 10.2 | 0.2  | 0.0  |  |
| Unsig. Movement Delay, s/veh | 15.6 | 9.1  | 9.1  | 12.2 | 16.9 | 49.6 | 0.0  | 53.3 |  |
| LnGrp Delay(d), s/veh        | B    | A    | A    | B    | B    | D    | A    | D    |  |
| LnGrp LOS                    | B    | A    | A    | B    | B    | D    | A    | D    |  |
| Approach Vol, veh/h          | 1292 |      |      | 1155 |      | 99   |      | 298  |  |
| Approach Delay, s/veh        | 10.5 |      |      | 16.7 |      | 53.0 |      | 57.3 |  |
| Approach LOS                 | B    |      |      | B    |      | D    |      | E    |  |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 6    | 7    | 8    |      |  |
| Phs Duration (G+Y+Rc), s     | 14.1 | 82.8 | 10.0 | 23.1 | 96.9 | 5.8  | 27.3 |      |  |
| Change Period (Y+Rc), s      | 4.0  | 6.0  | 4.0  | 6.5  | 6.0  | 4.5  | 6.5  |      |  |
| Max Green Setting (Gmax), s  | 23.0 | 34.0 | 15.0 | 37.5 | 61.0 | 5.5  | 46.5 |      |  |
| Max Q Clear Time (g_c+tl), s | 9.4  | 26.2 | 6.4  | 8.1  | 17.3 | 2.5  | 19.4 |      |  |
| Green Ext Time (g_c), s      | 0.7  | 4.4  | 0.1  | 0.5  | 8.4  | 0.0  | 1.5  |      |  |
| Intersection Summary         |      |      |      |      |      |      |      |      |  |
| HCM 6th Ctrl Delay           |      |      |      |      |      |      |      |      |  |
| HCM 6th LOS                  |      |      |      |      |      |      |      |      |  |
| Notes                        |      |      |      |      |      |      |      |      |  |

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

Smoke Tree Resort  
2020 Total PM Mitigated

9: Scottsdale Rd & Lincoln Dr  
Timings

| Lane Group           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | 527   | 56    | 446   | 56    | 62    | 427   | 1624  | 61    | 1569  | 505   |
| Traffic Volume (vph) | 527   | 56    | 446   | 56    | 62    | 427   | 1624  | 61    | 1569  | 505   |
| Future Volume (vph)  | 527   | 56    | 446   | 56    | 62    | 427   | 1624  | 61    | 1569  | 505   |
| Turn Type            | Split | NA    | pm+ov | Split | NA    | Prdt  | NA    | Prdt  | NA    | pm+ov |
| Protected Phases     | 4     | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     | 4     |
| Permitted Phases     | 4     | 4     | 4     | 8     | 8     | 5     | 2     | 1     | 6     | 4     |
| Detector Phase       | 4     | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     | 4     |
| Switch Phase         | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 10.0  | 5.0   | 10.0  | 7.0   |
| Minimum Initial (s)  | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  | 16.7  | 11.0  | 16.0  | 13.0  |
| Minimum Split (s)    | 32.0  | 32.0  | 27.0  | 21.0  | 21.0  | 27.0  | 54.0  | 23.0  | 50.0  | 32.0  |
| Total Split (%)      | 24.6% | 24.6% | 20.8% | 16.2% | 16.2% | 20.8% | 41.5% | 17.7% | 38.5% | 24.6% |
| Yellow Time (s)      | 4.0   | 4.0   | 4.0   | 3.6   | 3.6   | 4.0   | 4.7   | 3.3   | 4.7   | 4.0   |
| All-Red Time (s)     | 1.5   | 1.5   | 1.5   | 2.0   | 2.0   | 1.5   | 1.0   | 2.0   | 1.0   | 1.5   |
| 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)  | 5.5   | 5.5   | 5.5   | 5.6   | 5.6   | 5.5   | 5.7   | 5.3   | 5.7   | 5.5   |
| Lead/Lag             |       |       | Lead  |       |       | Lead  | Lag   | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?   | None  | None  | None  | None  | None  | None  | None  | None  | C-Max | None  |
| Recall Mode          | 26.4  | 26.4  | 48.4  | 9.3   | 9.3   | 22.0  | 65.0  | 9.4   | 50.0  | 82.1  |
| Act Effct Green (s)  | 0.20  | 0.20  | 0.37  | 0.07  | 0.07  | 0.17  | 0.50  | 0.07  | 0.38  | 0.63  |
| Actuated g/C Ratio   | 0.95  | 0.95  | 0.73  | 0.49  | 0.49  | 0.82  | 0.73  | 0.54  | 0.89  | 0.51  |
| v/c Ratio            | 101.2 | 101.1 | 20.1  | 70.6  | 32.6  | 64.0  | 29.2  | 72.5  | 44.8  | 9.0   |
| Control Delay        | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Queue Delay          | 101.2 | 101.1 | 20.1  | 70.6  | 32.6  | 64.0  | 29.2  | 72.5  | 44.8  | 9.0   |
| Total Delay          | F     | F     | C     | E     | C     | E     | C     | E     | D     | A     |
| Approach Delay       | 66.0  |       |       | 43.8  |       | 36.3  |       |       | 37.2  |       |
| Approach LOS         | E     |       |       | D     |       | D     |       |       | D     |       |



Smoke Tree Resort  
2020 Total PM Mitigated

9: Scottsdale Rd & Lincoln Dr  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | 527  | 56   | 446  | 56   | 62   | 427  | 1624 | 45   | 61   | 1569 |
| Traffic Volume (veh/h)       | 527  | 56   | 446  | 56   | 62   | 427  | 1624 | 45   | 61   | 1569 |
| Future Volume (veh/h)        | 527  | 56   | 446  | 56   | 62   | 427  | 1624 | 45   | 61   | 1569 |
| Initial Q (Qb) veh           | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A, pbf)         | 1.00 | 1.00 | 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 |
| Work Zone On Approach        | No   | No   | No   | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h          | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 630  | 0    | 496  | 62   | 69   | 80   | 474  | 1804 | 50   | 68   |
| Peak Hour Factor             | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap. veh/h                   | 726  | 0    | 564  | 120  | 120  | 107  | 526  | 2276 | 63   | 87   |
| Arrive On Green              | 0.07 | 0.00 | 0.07 | 0.07 | 0.07 | 0.07 | 0.15 | 0.45 | 0.05 | 0.34 |
| Sat Flow, veh/h              | 3563 | 0    | 1585 | 1781 | 1777 | 1585 | 3456 | 5107 | 141  | 1781 |
| Grp Volume(V), veh/h         | 630  | 0    | 496  | 62   | 69   | 80   | 474  | 1202 | 652  | 68   |
| Grp Sat Flow(s), veh/h       | 1781 | 0    | 1585 | 1781 | 1777 | 1585 | 1728 | 1702 | 1845 | 1781 |
| Q Serve(g, s)                | 22.8 | 0.0  | 26.5 | 4.4  | 4.9  | 6.4  | 17.5 | 39.3 | 39.4 | 4.9  |
| Cycle Q Clear(g, c), s       | 22.8 | 0.0  | 26.5 | 4.4  | 4.9  | 6.4  | 17.5 | 39.3 | 39.4 | 4.9  |
| Prop In Lane                 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 726  | 0    | 564  | 120  | 120  | 107  | 526  | 1517 | 822  | 87   |
| V/C Ratio(X)                 | 0.87 | 0.00 | 0.88 | 0.52 | 0.58 | 0.75 | 0.90 | 0.79 | 0.79 | 0.78 |
| Avail Cap(c, a), veh/h       | 726  | 0    | 564  | 211  | 210  | 188  | 572  | 1517 | 822  | 243  |
| HCM Platoon Ratio            | 0.33 | 0.33 | 0.33 | 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 58.9 | 0.0  | 44.8 | 58.6 | 58.8 | 59.5 | 54.2 | 30.9 | 61.1 | 42.9 |
| Incr Delay (d2), s/veh       | 10.4 | 0.0  | 14.3 | 1.3  | 1.6  | 3.9  | 15.9 | 2.7  | 4.9  | 5.6  |
| 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  |
| %ile BackOfQ(50%), veh/h     | 12.0 | 0.0  | 16.8 | 2.0  | 2.3  | 2.7  | 8.8  | 16.5 | 18.4 | 2.4  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 69.3 | 0.0  | 59.1 | 59.8 | 60.4 | 63.4 | 70.0 | 33.6 | 35.9 | 66.7 |
| LnGrp LOS                    | E    | A    | E    | E    | E    | E    | C    | D    | E    | F    |
| Approach Vol, veh/h          | 1126 |      |      | 211  |      |      | 2328 |      |      | 2372 |
| Approach Delay, s/veh        | 64.8 |      |      | 61.4 |      |      | 41.7 |      |      | 55.4 |
| Approach LOS                 | E    |      |      | E    |      |      | D    |      |      | E    |

Timer - Assigned Phs 1 2 4 5 6 8  
Phs Duration (G+Y+Rc), s 11.7 63.6 32.0 25.3 50.0 14.4  
Change Period (Y+Rc), s \*5.3 5.7 5.5 5.5 5.7 5.6  
Max Green Setting (Gmax), s \*18 48.3 26.5 21.5 44.3 15.4  
Max Q Clear Time (g\_c+1), s 6.9 41.4 28.5 19.5 46.3 8.4  
Green Ext Time (p\_c), s 0.0 2.2 0.0 0.3 0.0 0.3

Intersection Summary  
HCM 6th Ctrl Delay 52.1  
HCM 6th LOS D

Notes  
User approved pedestrian interval to be less than phase max green.  
User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

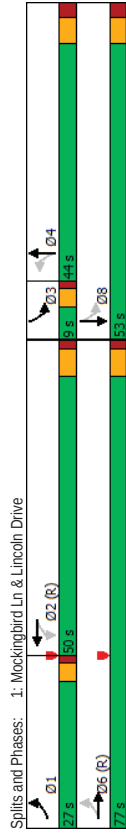
## **APPENDIX H**

### **2025 PEAK HOUR ANALYSIS**

Smoke Tree Resort  
2025 Background AM

1: Mockingbird Ln & Lincoln Drive  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | EB    | EB    | EB    | EB    | EB    | EB    | EB    | EB    |
| Traffic Volume (vph) | 242   | 1045  | 24    | 963   | 6     | 37    | 83    | 96    |
| Future Volume (vph)  | 242   | 1045  | 24    | 963   | 6     | 37    | 83    | 96    |
| Turn Type            | pm+pt | NA    | Perm  | NA    | Perm  | NA    | pm+pt | NA    |
| Protected Phases     | 1     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |
| Permitted Phases     | 6     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |
| Detector Phase       | 1     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 3.5   | 15.0  | 15.0  | 15.0  | 7.0   | 7.0   | 3.5   | 7.0   |
| Minimum Split (s)    | 8.0   | 27.0  | 27.0  | 27.0  | 33.5  | 33.5  | 8.0   | 33.5  |
| Total Split (s)      | 27.0  | 77.0  | 50.0  | 50.0  | 44.0  | 44.0  | 9.0   | 53.0  |
| Total Split (%)      | 20.8% | 59.2% | 38.5% | 38.5% | 33.8% | 33.8% | 6.9%  | 40.8% |
| Yellow Time (s)      | 3.0   | 4.5   | 4.5   | 4.5   | 4.0   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)     | 1.0   | 1.5   | 1.5   | 1.5   | 2.5   | 2.5   | 1.0   | 2.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 6.0   | 6.0   | 6.0   | 6.5   | 6.5   | 4.0   | 6.5   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lag   | Lag   | Lag   | Lead  | Lead  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None  | C-Max | C-Max | C-Max | None  | None  | None  | None  |
| Act Effct Green (s)  | 90.6  | 88.6  | 65.5  | 65.5  | 19.6  | 19.6  | 31.4  | 28.9  |
| Actuated g/C Ratio   | 0.70  | 0.68  | 0.50  | 0.50  | 0.15  | 0.15  | 0.24  | 0.22  |
| v/c Ratio            | 0.66  | 0.50  | 0.12  | 0.63  | 0.09  | 0.23  | 0.30  | 0.85  |
| Control Delay        | 21.5  | 12.0  | 22.8  | 30.5  | 44.3  | 30.9  | 39.7  | 50.6  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 21.5  | 12.0  | 22.8  | 30.5  | 44.3  | 30.9  | 39.7  | 50.6  |
| LOS                  | C     | B     | C     | C     | D     | C     | D     | D     |
| Approach Delay       |       |       |       |       |       |       |       |       |
| Approach LOS         |       | B     | C     | C     | C     | C     | D     | D     |



Smoke Tree Resort  
2025 Background AM

1: Mockingbird Ln & Lincoln Drive  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | EB   | EB   | EB   | EB   | EB   | EB   | EB   | EB   | EB   | EB   | EB   | EB   |
| Traffic Volume (veh/h)       | 242  | 1045 | 33   | 24   | 963  | 46   | 6    | 37   | 23   | 83   | 96   | 253  |
| Future Volume (veh/h)        | 242  | 1045 | 33   | 24   | 963  | 46   | 6    | 37   | 23   | 83   | 96   | 253  |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A, pbT)         | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 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   | No   | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h          | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 269  | 1161 | 37   | 27   | 1070 | 51   | 7    | 41   | 26   | 92   | 107  | 281  |
| Peak Hour Factor             | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 347  | 2265 | 72   | 274  | 1821 | 87   | 88   | 204  | 129  | 335  | 118  | 311  |
| Arrive On Green              | 0.09 | 0.64 | 0.64 | 0.35 | 0.35 | 0.35 | 0.19 | 0.19 | 0.19 | 0.04 | 0.26 | 0.26 |
| Sat Flow, veh/h              | 1781 | 3515 | 112  | 467  | 3453 | 165  | 996  | 1070 | 678  | 1781 | 456  | 1198 |
| Grp Volume(V), veh/h         | 269  | 587  | 611  | 27   | 550  | 571  | 7    | 0    | 67   | 92   | 0    | 388  |
| Grp Sat Flow(s), veh/h       | 1781 | 1777 | 1850 | 467  | 1777 | 1841 | 996  | 0    | 1748 | 1781 | 0    | 1655 |
| Q Serve(g, s), s             | 8.6  | 22.8 | 22.8 | 5.4  | 32.9 | 32.9 | 0.9  | 0.0  | 4.2  | 5.0  | 0.0  | 29.5 |
| Cycle Q Clear(g, c), s       | 8.6  | 22.8 | 22.8 | 13.0 | 32.9 | 32.9 | 21.4 | 0.0  | 4.2  | 5.0  | 0.0  | 29.5 |
| Prop In Lane                 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 347  | 1145 | 1192 | 274  | 937  | 971  | 88   | 0    | 333  | 335  | 0    | 429  |
| V/C Ratio(X)                 | 0.78 | 0.51 | 0.51 | 0.10 | 0.59 | 0.59 | 0.08 | 0.00 | 0.20 | 0.27 | 0.00 | 0.90 |
| Avail Cap(c, a), veh/h       | 508  | 1145 | 1192 | 274  | 937  | 971  | 186  | 0    | 504  | 335  | 0    | 592  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 0.67 | 0.67 | 0.67 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(i)           | 1.00 | 1.00 | 1.00 | 0.55 | 0.55 | 0.55 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 20.5 | 12.3 | 12.3 | 26.8 | 30.5 | 30.5 | 61.3 | 0.0  | 44.3 | 39.7 | 0.0  | 46.6 |
| Incr Delay (d2), s/veh       | 4.5  | 1.6  | 1.6  | 0.4  | 1.5  | 1.4  | 0.4  | 0.0  | 0.3  | 0.4  | 0.0  | 13.7 |
| 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(50%), veh/h     | 4.4  | 9.2  | 9.6  | 0.7  | 15.3 | 15.8 | 0.2  | 0.0  | 1.9  | 2.4  | 0.0  | 13.7 |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 25.0 | 13.9 | 13.9 | 27.2 | 32.0 | 31.9 | 61.6 | 0.0  | 44.6 | 40.1 | 0.0  | 60.3 |
| LnGrp LOS                    | C    | B    | B    | C    | C    | C    | E    | A    | D    | D    | A    | E    |
| Approach Vol, veh/h          |      | 1467 |      |      | 1148 |      |      | 74   |      |      | 480  |      |
| Approach Delay, s/veh        |      | 15.9 |      |      | 31.8 |      |      | 46.2 |      |      | 56.4 |      |
| Approach LOS                 |      | B    |      |      | C    |      |      | D    |      |      | E    |      |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 6    | 8    |      |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 15.2 | 74.6 | 9.0  | 31.2 | 89.8 | 40.2 |      |      |      |      |      |      |
| Change Period (Y+Rc), s      | 4.0  | 6.0  | 4.0  | 6.5  | 6.0  | 6.5  |      |      |      |      |      |      |
| Max Green Setting (Gmax), s  | 23.0 | 44.0 | 5.0  | 37.5 | 71.0 | 46.5 |      |      |      |      |      |      |
| Max Q Clear Time (g_c+H), s  | 10.6 | 34.9 | 7.0  | 23.4 | 24.8 | 31.5 |      |      |      |      |      |      |
| Green Ext Time (g_c), s      | 0.6  | 5.0  | 0.0  | 0.2  | 10.9 | 2.2  |      |      |      |      |      |      |
| Intersection Summary         |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  |      |      |      |      |      |      |      |      |      |      |      |      |

Smoke Tree Resort  
2025 Background AM

2: Quail Run Rd & Lincoln Drive  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | 115   | 1104  | 2     | 927   | 0     | 26    | 0     |
| Traffic Volume (vph) | 115   | 1104  | 2     | 927   | 0     | 26    | 0     |
| Future Volume (vph)  | 115   | 1104  | 2     | 927   | 0     | 26    | 0     |
| Turn Type            | pm+pt | NA    | Perm  | NA    | NA    | Perm  | NA    |
| Protected Phases     | 7     | 4     | 8     | 8     | 2     | 6     | 6     |
| Permitted Phases     | 4     | 4     | 8     | 8     | 2     | 6     | 6     |
| Detector Phase       | 7     | 4     | 8     | 8     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 3.5   | 15.0  | 15.0  | 15.0  | 7.0   | 7.0   | 7.0   |
| Minimum Split (s)    | 8.0   | 28.0  | 28.0  | 28.0  | 33.0  | 33.0  | 33.0  |
| Total Split (s)      | 20.0  | 94.0  | 74.0  | 74.0  | 36.0  | 36.0  | 36.0  |
| Total Split (%)      | 15.4% | 72.3% | 56.9% | 56.9% | 27.7% | 27.7% | 27.7% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 4.0   | 4.5   | 4.5   | 4.5   |
| All-Red Time (s)     | 1.0   | 2.5   | 2.5   | 2.5   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 6.5   | 6.5   | 6.5   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lag   |       |       |       |
| Lead/Lag Optimize?   | Yes   | Yes   | Yes   | Yes   |       |       |       |
| Recall Mode          | None  | None  | None  | None  | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 67.4  | 64.9  | 50.0  | 50.0  | 52.6  | 52.6  | 52.6  |
| Actuated g/C Ratio   | 0.52  | 0.50  | 0.38  | 0.38  | 0.40  | 0.40  | 0.40  |
| v/c Ratio            | 0.54  | 0.70  | 0.02  | 0.77  | 0.01  | 0.05  | 0.09  |
| Control Delay        | 28.5  | 35.5  | 21.5  | 38.6  | 0.0   | 28.2  | 0.2   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 28.5  | 35.5  | 21.5  | 38.6  | 0.0   | 28.2  | 0.2   |
| LOS                  | C     | D     | C     | D     | A     | C     | A     |
| Approach Delay       |       | 34.9  |       | 38.6  |       |       | 8.2   |
| Approach LOS         |       | C     |       | D     |       |       | A     |

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

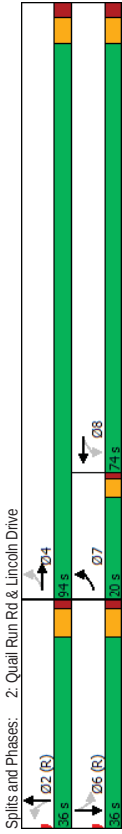
Intersection Signal Delay: 35.2

Intersection Capacity Utilization 67.1%

Analysis Period (min) 15

Intersection LOS: D

ICU Level of Service C



Smoke Tree Resort  
2025 Background AM

2: Quail Run Rd & Lincoln Drive  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | 115  | 1104 | 3    | 2    | 927  | 12   | 0    | 0    | 8    | 26   | 0    | 66   |
| Traffic Volume (veh/h)       | 115  | 1104 | 3    | 2    | 927  | 12   | 0    | 0    | 8    | 26   | 0    | 66   |
| Future Volume (veh/h)        | 115  | 1104 | 3    | 2    | 927  | 12   | 0    | 0    | 8    | 26   | 0    | 66   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Per-Bike Adj(A_pbT)          | 1.00 | 1.00 | 1.00 | 1.00 | 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   | No   | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h          | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 128  | 1227 | 3    | 2    | 1030 | 13   | 0    | 0    | 9    | 29   | 0    | 73   |
| Peak Hour Factor             | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 208  | 1582 | 4    | 191  | 1231 | 16   | 0    | 0    | 743  | 710  | 0    | 743  |
| Arrive On Green              | 0.12 | 0.87 | 0.87 | 0.34 | 0.34 | 0.34 | 0.00 | 0.00 | 0.47 | 0.47 | 0.00 | 0.47 |
| Sat Flow, veh/h              | 1781 | 3637 | 9    | 453  | 3594 | 45   | 0    | 0    | 1585 | 1406 | 0    | 1585 |
| Grp Volume(V), veh/h         | 128  | 599  | 631  | 2    | 509  | 534  | 0    | 0    | 9    | 29   | 0    | 73   |
| Grp Sat Flow(s), veh/h       | 1781 | 1777 | 1869 | 453  | 1777 | 1862 | 0    | 0    | 1585 | 1406 | 0    | 1585 |
| Q Serve(g, s), s             | 5.9  | 17.6 | 17.6 | 0.4  | 34.3 | 34.3 | 0.0  | 0.0  | 0.4  | 1.5  | 0.0  | 3.3  |
| Cycle Q Clear(g, c), s       | 5.9  | 17.6 | 17.6 | 5.9  | 34.3 | 34.3 | 0.0  | 0.0  | 0.4  | 1.9  | 0.0  | 3.3  |
| Prop In Lane                 | 1.00 | 0.00 | 1.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 208  | 773  | 813  | 191  | 609  | 638  | 0    | 0    | 743  | 710  | 0    | 743  |
| V/C Ratio(X)                 | 0.62 | 0.78 | 0.78 | 0.01 | 0.84 | 0.84 | 0.00 | 0.00 | 0.01 | 0.04 | 0.00 | 0.10 |
| Avail Cap(c, a), veh/h       | 317  | 1196 | 1258 | 271  | 923  | 967  | 0    | 0    | 743  | 710  | 0    | 743  |
| HCM Platoon Ratio            | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(i)           | 0.87 | 0.87 | 0.87 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh     | 28.2 | 5.9  | 5.9  | 32.0 | 39.4 | 39.4 | 0.0  | 0.0  | 18.4 | 18.9 | 0.0  | 19.2 |
| Incr Delay (d2), s/veh       | 2.6  | 1.5  | 1.4  | 0.0  | 4.3  | 4.1  | 0.0  | 0.0  | 0.0  | 0.1  | 0.0  | 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(50%), veh/ln    | 2.5  | 2.9  | 3.1  | 0.0  | 15.6 | 16.3 | 0.0  | 0.0  | 0.2  | 0.5  | 0.0  | 1.3  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 30.7 | 7.4  | 7.4  | 32.0 | 43.7 | 43.5 | 0.0  | 0.0  | 18.5 | 19.0 | 0.0  | 19.5 |
| LnGrp LOS                    | C    | A    | A    | C    | D    | D    | A    | A    | B    | B    | A    | B    |
| Approach Vol, veh/h          |      | 1358 |      |      | 1045 |      |      | 9    |      |      |      | 102  |
| Approach Delay, s/veh        |      | 9.6  |      |      | 43.5 |      |      | 18.5 |      |      |      | 19.4 |
| Approach LOS                 |      | A    |      |      | D    |      |      | B    |      |      |      | B    |
| Timer - Assigned Phs         | 2    | 4    | 4    | 6    | 7    | 8    |      |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 67.0 | 63.0 | 63.0 | 67.0 | 120  | 51.0 |      |      |      |      |      |      |
| Change Period (Y+Rc), s      | 6.0  | 6.5  | 6.5  | 6.0  | 4.0  | 6.5  |      |      |      |      |      |      |
| Max Green Setting (Gmax), s  | 30.0 | 87.5 | 87.5 | 30.0 | 16.0 | 67.5 |      |      |      |      |      |      |
| Max Q Clear Time (g_c+H), s  | 2.4  | 19.6 | 19.6 | 5.3  | 7.9  | 36.3 |      |      |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 11.9 | 11.9 | 0.4  | 0.2  | 8.2  |      |      |      |      |      |      |
| Intersection Summary         |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      |      | 24.1 |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  |      |      |      | C    |      |      |      |      |      |      |      |      |

Smoke Tree Resort  
2025 Background AM

3: Smoke Tree West & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |      |      |      |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|------|------|------|--|--|--|--|--|--|
| Int Delay, s/veh         |        | 0      |        |      |      |      |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT  | NBL  | NBR  |  |  |  |  |  |  |
| Lane Configurations      | 4B     |        | 5      | 4A   | 4A   | W    |  |  |  |  |  |  |
| Traffic Vol, veh/h       | 1135   | 2      | 0      | 937  | 0    | 0    |  |  |  |  |  |  |
| Future Vol, veh/h        | 1135   | 2      | 0      | 937  | 0    | 0    |  |  |  |  |  |  |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free | Stop | Stop |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None | -    | None |  |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -    | 0    | -    |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90   | 90   | 90   |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2    | 2    |  |  |  |  |  |  |
| Mvmt Flow                | 1261   | 2      | 0      | 1041 | 0    | 0    |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |      |      |      |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1263   | 0    | 1783 | 632  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 1262 | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | -    | 521  |  |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -    | 6.84 | 6.94 |  |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.84 | -    |  |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.84 | -    |  |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -    | 3.52 | 3.32 |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 546    | -    | 73   | 423  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 230  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 561  | -    |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -    | -    | -    |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 546    | -    | 73   | 423  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 175  | -    |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 230  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 561  | -    |  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |      |      |      |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0      | 0      |      |      |      |  |  |  |  |  |  |
| HCM LOS                  | A      |        |        |      |      |      |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL  | WBT  |      |  |  |  |  |  |  |
| Capacity (veh/h)         | -      | -      | -      | -    | 546  | -    |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | -      | -      | -      | -    | -    | -    |  |  |  |  |  |  |
| HCM Control Delay (s)    | 0      | -      | -      | 0    | -    | -    |  |  |  |  |  |  |
| HCM Lane LOS             | A      | -      | -      | A    | -    | -    |  |  |  |  |  |  |
| HCM 95th %tile Q(veh)    | -      | -      | -      | 0    | -    | -    |  |  |  |  |  |  |

Smoke Tree Resort  
2025 Background AM

4: Smoke Tree East & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |      |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|-------|------|------|--|--|--|--|--|--|
| Int Delay, s/veh         |        | 0.1    |        |       |      |      |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT   | NBL  | NBR  |  |  |  |  |  |  |
| Lane Configurations      | 4B     |        | 5      | 4A    | 4A   | W    |  |  |  |  |  |  |
| Traffic Vol, veh/h       | 1137   | 0      | 1      | 934   | 6    | 2    |  |  |  |  |  |  |
| Future Vol, veh/h        | 1137   | 0      | 1      | 934   | 6    | 2    |  |  |  |  |  |  |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free  | Stop | Stop |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None  | -    | None |  |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -     | 0    | -    |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90    | 90   | 90   |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2     | 2    | 2    |  |  |  |  |  |  |
| Mvmt Flow                | 1263   | 0      | 1      | 1038  | 7    | 2    |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |       |      |      |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1263   | 0     | 1784 | 632  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 1263 | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | -    | 521  |  |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -     | 6.84 | 6.94 |  |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -     | 5.84 | -    |  |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -     | 5.84 | -    |  |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -     | 3.52 | 3.32 |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 546    | -     | 73   | 423  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 230  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 561  | -    |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 546    | -     | 73   | 423  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -     | 175  | -    |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 230  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 561  | -    |  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |       |      |      |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0      | 23.4   |       |      |      |  |  |  |  |  |  |
| HCM LOS                  | C      |        |        |       |      |      |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL   | WBT  |      |  |  |  |  |  |  |
| Capacity (veh/h)         | 205    | -      | -      | 546   | -    |      |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.043  | -      | -      | 0.002 | -    |      |  |  |  |  |  |  |
| HCM Control Delay (s)    | 23.4   | -      | -      | 11.6  | -    |      |  |  |  |  |  |  |
| HCM Lane LOS             | C      | -      | -      | B     | -    |      |  |  |  |  |  |  |
| HCM 95th %tile Oveth     | 0.1    | -      | -      | 0     | -    |      |  |  |  |  |  |  |

Smoke Tree Resort  
2025 Background AM

5: Lincoln Medical West & Lincoln Dr  
HCM 6th TWSC

| Intersection             |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------|--|--|--|--|--|--|--|--|--|--|--|--|
| Int Delay, s/veh         |  |  |  |  |  |  |  |  |  |  |  |  |
| 0.4                      |  |  |  |  |  |  |  |  |  |  |  |  |
| Movement                 |  |  |  |  |  |  |  |  |  |  |  |  |
| EBT EBR WBL WBT NBL NBR  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Configurations      |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Vol. veh/h       |  |  |  |  |  |  |  |  |  |  |  |  |
| Future Vol. veh/h        |  |  |  |  |  |  |  |  |  |  |  |  |
| Conflicting Peds. #/hr   |  |  |  |  |  |  |  |  |  |  |  |  |
| Sign Control             |  |  |  |  |  |  |  |  |  |  |  |  |
| RT Channelized           |  |  |  |  |  |  |  |  |  |  |  |  |
| Storage Length           |  |  |  |  |  |  |  |  |  |  |  |  |
| Veh in Median Storage, # |  |  |  |  |  |  |  |  |  |  |  |  |
| Grade, %                 |  |  |  |  |  |  |  |  |  |  |  |  |
| Peak Hour Factor         |  |  |  |  |  |  |  |  |  |  |  |  |
| Heavy Vehicles, %        |  |  |  |  |  |  |  |  |  |  |  |  |
| Mvmt Flow                |  |  |  |  |  |  |  |  |  |  |  |  |
| Major/Minor              |  |  |  |  |  |  |  |  |  |  |  |  |
| Major1 Major2 Minor1     |  |  |  |  |  |  |  |  |  |  |  |  |
| Conflicting Flow All     |  |  |  |  |  |  |  |  |  |  |  |  |
| Stage 1                  |  |  |  |  |  |  |  |  |  |  |  |  |
| Stage 2                  |  |  |  |  |  |  |  |  |  |  |  |  |
| Critical Hwy             |  |  |  |  |  |  |  |  |  |  |  |  |
| Critical Hwy Stg 1       |  |  |  |  |  |  |  |  |  |  |  |  |
| Critical Hwy Stg 2       |  |  |  |  |  |  |  |  |  |  |  |  |
| Follow-up Hwy            |  |  |  |  |  |  |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       |  |  |  |  |  |  |  |  |  |  |  |  |
| Stage 1                  |  |  |  |  |  |  |  |  |  |  |  |  |
| Stage 2                  |  |  |  |  |  |  |  |  |  |  |  |  |
| Platoon blocked, %       |  |  |  |  |  |  |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       |  |  |  |  |  |  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       |  |  |  |  |  |  |  |  |  |  |  |  |
| Stage 1                  |  |  |  |  |  |  |  |  |  |  |  |  |
| Stage 2                  |  |  |  |  |  |  |  |  |  |  |  |  |
| Approach                 |  |  |  |  |  |  |  |  |  |  |  |  |
| EB WB NB                 |  |  |  |  |  |  |  |  |  |  |  |  |
| HCM Control Delay, s     |  |  |  |  |  |  |  |  |  |  |  |  |
| 0 0.5 20.5               |  |  |  |  |  |  |  |  |  |  |  |  |
| HCM LOS                  |  |  |  |  |  |  |  |  |  |  |  |  |
| C                        |  |  |  |  |  |  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    |  |  |  |  |  |  |  |  |  |  |  |  |
| NBLn1 EBT EBR WBL WBT    |  |  |  |  |  |  |  |  |  |  |  |  |
| Capacity (veh/h)         |  |  |  |  |  |  |  |  |  |  |  |  |
| HCM Lane V/C Ratio       |  |  |  |  |  |  |  |  |  |  |  |  |
| HCM Control Delay (s)    |  |  |  |  |  |  |  |  |  |  |  |  |
| HCM Lane LOS             |  |  |  |  |  |  |  |  |  |  |  |  |
| HCM 95th %tile Q(veh)    |  |  |  |  |  |  |  |  |  |  |  |  |

Smoke Tree Resort  
2025 Background AM

6: Lincoln Medical East & Lincoln Dr  
HCM 6th TWSC

| Intersection             |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------|--|--|--|--|--|--|--|--|--|--|--|--|
| Int Delay, s/veh         |  |  |  |  |  |  |  |  |  |  |  |  |
| 0.1                      |  |  |  |  |  |  |  |  |  |  |  |  |
| Movement                 |  |  |  |  |  |  |  |  |  |  |  |  |
| EBT EBR WBL WBT NBL NBR  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Configurations      |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Vol. veh/h       |  |  |  |  |  |  |  |  |  |  |  |  |
| Future Vol. veh/h        |  |  |  |  |  |  |  |  |  |  |  |  |
| Conflicting Peds. #/hr   |  |  |  |  |  |  |  |  |  |  |  |  |
| Sign Control             |  |  |  |  |  |  |  |  |  |  |  |  |
| RT Channelized           |  |  |  |  |  |  |  |  |  |  |  |  |
| Storage Length           |  |  |  |  |  |  |  |  |  |  |  |  |
| Veh in Median Storage, # |  |  |  |  |  |  |  |  |  |  |  |  |
| Grade, %                 |  |  |  |  |  |  |  |  |  |  |  |  |
| Peak Hour Factor         |  |  |  |  |  |  |  |  |  |  |  |  |
| Heavy Vehicles, %        |  |  |  |  |  |  |  |  |  |  |  |  |
| Mvmt Flow                |  |  |  |  |  |  |  |  |  |  |  |  |
| Major/Minor              |  |  |  |  |  |  |  |  |  |  |  |  |
| Major1 Major2 Minor1     |  |  |  |  |  |  |  |  |  |  |  |  |
| Conflicting Flow All     |  |  |  |  |  |  |  |  |  |  |  |  |
| Stage 1                  |  |  |  |  |  |  |  |  |  |  |  |  |
| Stage 2                  |  |  |  |  |  |  |  |  |  |  |  |  |
| Critical Hwy             |  |  |  |  |  |  |  |  |  |  |  |  |
| Critical Hwy Stg 1       |  |  |  |  |  |  |  |  |  |  |  |  |
| Critical Hwy Stg 2       |  |  |  |  |  |  |  |  |  |  |  |  |
| Follow-up Hwy            |  |  |  |  |  |  |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       |  |  |  |  |  |  |  |  |  |  |  |  |
| Stage 1                  |  |  |  |  |  |  |  |  |  |  |  |  |
| Stage 2                  |  |  |  |  |  |  |  |  |  |  |  |  |
| Platoon blocked, %       |  |  |  |  |  |  |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       |  |  |  |  |  |  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       |  |  |  |  |  |  |  |  |  |  |  |  |
| Stage 1                  |  |  |  |  |  |  |  |  |  |  |  |  |
| Stage 2                  |  |  |  |  |  |  |  |  |  |  |  |  |
| Approach                 |  |  |  |  |  |  |  |  |  |  |  |  |
| EB WB NB                 |  |  |  |  |  |  |  |  |  |  |  |  |
| HCM Control Delay, s     |  |  |  |  |  |  |  |  |  |  |  |  |
| 0 0.1 13.7               |  |  |  |  |  |  |  |  |  |  |  |  |
| HCM LOS                  |  |  |  |  |  |  |  |  |  |  |  |  |
| B                        |  |  |  |  |  |  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    |  |  |  |  |  |  |  |  |  |  |  |  |
| NBLn1 EBT EBR WBL WBT    |  |  |  |  |  |  |  |  |  |  |  |  |
| Capacity (veh/h)         |  |  |  |  |  |  |  |  |  |  |  |  |
| HCM Lane V/C Ratio       |  |  |  |  |  |  |  |  |  |  |  |  |
| HCM Control Delay (s)    |  |  |  |  |  |  |  |  |  |  |  |  |
| HCM Lane LOS             |  |  |  |  |  |  |  |  |  |  |  |  |
| HCM 95th %tile Q(veh)    |  |  |  |  |  |  |  |  |  |  |  |  |

Smoke Tree Resort  
2025 Background AM

7: Apartment Drwy & Lincoln Dr  
HCM 6th TWSC

| Intersection               |      | 16.7                           |      |        |      |      |      |          |      |        |      |      |      |     |       |       |  |
|----------------------------|------|--------------------------------|------|--------|------|------|------|----------|------|--------|------|------|------|-----|-------|-------|--|
| Int Delay, s/veh           |      |                                |      |        |      |      |      |          |      |        |      |      |      |     |       |       |  |
| Movement                   |      | EBL                            | EBT  | EBR    | WBL  | WBT  | WBR  | NBL      | NBT  | NBR    | SBL  | SBT  | SBR  |     |       |       |  |
| Lane Configurations        |      | EBL                            | EBT  | EBR    | WBL  | WBT  | WBR  | NBL      | NBT  | NBR    | SBL  | SBT  | SBR  |     |       |       |  |
| Traffic Vol, veh/h         | 29   | 1062                           | 38   | 20     | 905  | 11   | 56   | 0        | 33   | 6      | 0    | 14   |      |     |       |       |  |
| Future Vol, veh/h          | 29   | 1062                           | 38   | 20     | 905  | 11   | 56   | 0        | 33   | 6      | 0    | 14   |      |     |       |       |  |
| Conflicting Peds, #/hr     | 0    | 0                              | 0    | 0      | 0    | 0    | 0    | 0        | 0    | 0      | 0    | 0    | 0    |     |       |       |  |
| Sign Control               | Free | Free                           | Free | Free   | Free | Free | Free | Stop     | Stop | Stop   | Stop | Stop | Stop |     |       |       |  |
| RT Channelized             | -    | -                              | None | -      | -    | None | -    | -        | -    | None   | -    | -    | None |     |       |       |  |
| Storage Length             | 25   | -                              | -    | 25     | -    | -    | -    | -        | -    | -      | 0    | -    | 0    |     |       |       |  |
| Veh in Median Storage, #   | -    | 0                              | -    | -      | 0    | -    | -    | -        | 0    | -      | -    | -    | 0    |     |       |       |  |
| Grade, %                   | -    | 0                              | -    | -      | 0    | -    | -    | -        | 0    | -      | -    | -    | 0    |     |       |       |  |
| Peak Hour Factor           | 90   | 90                             | 90   | 90     | 90   | 90   | 90   | 90       | 90   | 90     | 90   | 90   | 90   |     |       |       |  |
| Heavy Vehicles, %          | 2    | 2                              | 2    | 2      | 2    | 2    | 2    | 2        | 2    | 2      | 2    | 2    | 2    |     |       |       |  |
| Mvmt Flow                  | 32   | 1180                           | 42   | 22     | 1006 | 12   | 62   | 0        | 37   | 7      | 0    | 16   |      |     |       |       |  |
| Major/Minor                |      | Major1                         |      | Major2 |      |      |      | Minor1   |      | Minor2 |      |      |      |     |       |       |  |
| Conflicting Flow All       | 1018 | 0                              | 0    | 1222   | 0    | 0    | 1812 | 2327     | 611  | 1710   | -    | 509  |      |     |       |       |  |
| Stage 1                    | -    | -                              | -    | -      | -    | -    | -    | 1265     | 1265 | -      | 1056 | -    | -    |     |       |       |  |
| Stage 2                    | -    | -                              | -    | -      | -    | -    | -    | 547      | 1062 | -      | 654  | -    | -    |     |       |       |  |
| Critical Hdwy              | 414  | -                              | -    | 414    | -    | -    | -    | 754      | 654  | 694    | 754  | -    | 694  |     |       |       |  |
| Critical Hdwy Stg 1        | -    | -                              | -    | -      | -    | -    | -    | 654      | 554  | -      | 654  | -    | -    |     |       |       |  |
| Critical Hdwy Stg 2        | -    | -                              | -    | -      | -    | -    | -    | 654      | 554  | -      | 654  | -    | -    |     |       |       |  |
| Follow-up Hdwy             | 222  | -                              | -    | 222    | -    | -    | -    | 352      | 402  | 332    | 352  | -    | 332  |     |       |       |  |
| Pot Cap-1 Maneuver         | 677  | -                              | -    | 566    | -    | -    | -    | ~49      | 37   | 437    | 59   | 0    | 509  |     |       |       |  |
| Stage 1                    | -    | -                              | -    | -      | -    | -    | -    | 179      | 239  | -      | 241  | 0    | -    |     |       |       |  |
| Stage 2                    | -    | -                              | -    | -      | -    | -    | -    | 489      | 298  | -      | 422  | 0    | -    |     |       |       |  |
| Platoon blocked, %         | -    | -                              | -    | -      | -    | -    | -    | -        | -    | -      | -    | -    | -    |     |       |       |  |
| Mov Cap-1 Maneuver         | 677  | -                              | -    | 566    | -    | -    | -    | ~44      | 34   | 437    | 51   | -    | 509  |     |       |       |  |
| Mov Cap-2 Maneuver         | -    | -                              | -    | -      | -    | -    | -    | ~44      | 34   | -      | 51   | -    | -    |     |       |       |  |
| Stage 1                    | -    | -                              | -    | -      | -    | -    | -    | 171      | 228  | -      | 230  | -    | -    |     |       |       |  |
| Stage 2                    | -    | -                              | -    | -      | -    | -    | -    | 456      | 286  | -      | 368  | -    | -    |     |       |       |  |
| Approach                   |      | EB                             |      | WB     |      |      |      | NB       |      | SB     |      |      |      |     |       |       |  |
| HCM Control Delay, s       | 0.3  |                                |      | 0.2    |      |      |      | \$ 393.8 |      | 34.4   |      |      | D    |     |       |       |  |
| HCM LOS                    |      |                                |      |        |      |      |      | F        |      |        |      |      |      |     |       |       |  |
| Minor Lane/Major Mvmt      |      | NBLn1                          |      | EBL    |      | EBT  |      | EBR      |      | WBL    |      | WBT  |      | WBR | SBLn1 | SBLn2 |  |
| Capacity (veh/h)           |      | 66                             |      | 677    |      | -    |      | -        |      | 566    |      | -    |      | -   | 51    | 509   |  |
| HCM Lane V/C Ratio         |      | 1.498                          |      | 0.048  |      | -    |      | 0.039    |      | -      |      | -    |      | -   | 0.131 | 0.031 |  |
| HCM Control Delay (s)      |      | \$ 393.8                       |      | 10.6   |      | -    |      | -        |      | 11.6   |      | -    |      | -   | 85.9  | 12.3  |  |
| HCM Lane LOS               |      | F                              |      | B      |      | -    |      | B        |      | -      |      | F    |      | -   | F     | B     |  |
| HCM 95th %tile Q(veh)      |      | 8.5                            |      | 0.1    |      | -    |      | 0.1      |      | -      |      | -    |      | -   | 0.4   | 0.1   |  |
| Notes                      |      |                                |      |        |      |      |      |          |      |        |      |      |      |     |       |       |  |
| ~: Volume exceeds capacity |      | \$: Delay exceeds 300s         |      |        |      |      |      |          |      |        |      |      |      |     |       |       |  |
|                            |      | *: Computation Not Defined     |      |        |      |      |      |          |      |        |      |      |      |     |       |       |  |
|                            |      | *: All major volume in platoon |      |        |      |      |      |          |      |        |      |      |      |     |       |       |  |

Smoke Tree Resort  
2025 Background AM

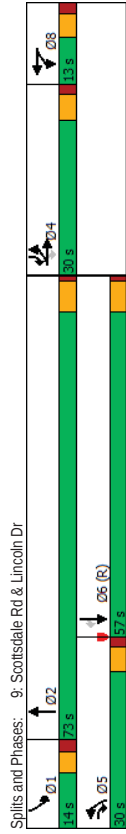
8: AJ's Drwy & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        | 1.3   |        |       |        |       |        |       |       |       |       |       |       |  |
|--------------------------|--------|-------|--------|-------|--------|-------|--------|-------|-------|-------|-------|-------|-------|--|
| Int Delay, s/veh         |        |       |        |       |        |       |        |       |       |       |       |       |       |  |
| Movement                 | EBL    | EBT   | EBR    | WBL   | WBT    | WBR   | NBL    | NBT   | NBR   | SBL   | SBT   | SBR   |       |  |
| Lane Configurations      | ↖ ↗    | ↖ ↗   | ↖ ↗    | ↖ ↗   | ↖ ↗    | ↖ ↗   | ↖ ↗    | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   | ↖ ↗   |       |  |
| Traffic Vol, veh/h       | 3      | 1040  | 60     | 48    | 918    | 9     | 7      | 0     | 46    | 5     | 1     | 14    |       |  |
| Future Vol, veh/h        | 3      | 1040  | 60     | 48    | 918    | 9     | 7      | 0     | 46    | 5     | 1     | 14    |       |  |
| 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           | 25     | -     | 25     | -     | -      | -     | -      | -     | -     | 0     | -     | 0     |       |  |
| Veh in Median Storage, # | -      | 0     | -      | -     | 0      | -     | -      | 0     | -     | -     | 0     | -     |       |  |
| Grade, %                 | -      | 0     | -      | -     | 0      | -     | -      | 0     | -     | -     | 0     | -     |       |  |
| Peak Hour Factor         | 90     | 90    | 90     | 90    | 90     | 90    | 90     | 90    | 90    | 90    | 90    | 90    |       |  |
| Heavy Vehicles, %        | 2      | 2     | 2      | 2     | 2      | 2     | 2      | 2     | 2     | 2     | 2     | 2     |       |  |
| Mvmt Flow                | 3      | 1156  | 67     | 53    | 1020   | 10    | 8      | 0     | 51    | 6     | 1     | 16    |       |  |
| Major/Minor              | Major1 |       | Major2 |       | Minor1 |       | Minor2 |       |       |       |       |       |       |  |
| Conflicting Flow All     | 1030   | 0     | 0      | 1223  | 0      | 0     | 1813   | 2332  | 612   | 1715  | 2360  | 515   |       |  |
| Stage 1                  | -      | -     | -      | -     | -      | -     | -      | 1196  | 1196  | -     | 1131  | 1131  | -     |  |
| Stage 2                  | -      | -     | -      | -     | -      | -     | -      | 617   | 1136  | -     | 584   | 1229  | -     |  |
| Critical Hdwy            | 414    | -     | -      | 414   | -      | -     | 754    | 654   | 694   | 754   | 654   | 694   | -     |  |
| Critical Hdwy Stg 1      | -      | -     | -      | -     | -      | -     | 654    | 554   | -     | 654   | 554   | -     | -     |  |
| Critical Hdwy Stg 2      | -      | -     | -      | -     | -      | -     | 654    | 554   | -     | 654   | 554   | -     | -     |  |
| Follow-up Hdwy           | 2.22   | -     | -      | 2.22  | -      | -     | 352    | 402   | 332   | 352   | 402   | 332   | -     |  |
| Pot Cap-1 Maneuver       | 670    | -     | -      | 566   | -      | -     | 49     | 36    | 436   | 58    | 35    | 505   | -     |  |
| Stage 1                  | -      | -     | -      | -     | -      | -     | 198    | 258   | -     | 217   | 277   | -     | -     |  |
| Stage 2                  | -      | -     | -      | -     | -      | -     | 444    | 275   | -     | 465   | 248   | -     | -     |  |
| Platoon blocked, %       | -      | -     | -      | -     | -      | -     | -      | -     | -     | -     | -     | -     | -     |  |
| Mov Cap-1 Maneuver       | 670    | -     | -      | 566   | -      | -     | 43     | 32    | 436   | 47    | 32    | 505   | -     |  |
| Mov Cap-2 Maneuver       | -      | -     | -      | -     | -      | -     | 43     | 32    | -     | 47    | 32    | -     | -     |  |
| Stage 1                  | -      | -     | -      | -     | -      | -     | 197    | 257   | -     | 216   | 251   | -     | -     |  |
| Stage 2                  | -      | -     | -      | -     | -      | -     | 388    | 249   | -     | 409   | 247   | -     | -     |  |
| Approach                 | EB     | WB    | WB     | NB    | NB     | SB    |        |       |       |       |       |       |       |  |
| HCM Control Delay, s     | 0      | 0.6   | 30.7   | 33.2  | 33.2   |       |        |       |       |       |       |       |       |  |
| HCM LOS                  |        |       | D      | D     | D      |       |        |       |       |       |       |       |       |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBLn1 | EBLn1  | WBLn1 | WBLn1  | WBLn1 | WBLn1  | WBLn1 | WBLn1 | WBLn1 | WBLn1 | WBLn1 | WBLn1 |  |
| Capacity (veh/h)         | 198    | 670   | -      | -     | 566    | -     | -      | 47    | 505   |       |       |       |       |  |
| HCM Lane V/C Ratio       | 0.297  | 0.005 | -      | -     | 0.094  | -     | -      | 0.118 | 0.031 |       |       |       |       |  |
| HCM Control Delay (s)    | 30.7   | 10.4  | -      | -     | 12     | -     | -      | 91.6  | 12.4  |       |       |       |       |  |
| HCM Lane LOS             | D      | B     | -      | -     | B      | -     | -      | F     | B     |       |       |       |       |  |
| HCM 95th %ile Q(veh)     | 1.2    | 0     | -      | -     | 0.3    | -     | -      | 0.4   | 0.1   |       |       |       |       |  |

Smoke Tree Resort  
2025 Background AM

9: Scottsdale Rd & Lincoln Dr  
Timings

|                                                           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |  |
|-----------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Lane Group                                                | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |  |
| Lane Configurations                                       | 489   | 42    | 499   | 41    | 39    | 319   | 1429  | 55    | 1814  | 652   |  |
| Traffic Volume (vph)                                      | 489   | 42    | 499   | 41    | 39    | 319   | 1429  | 55    | 1814  | 652   |  |
| Future Volume (vph)                                       | 489   | 42    | 499   | 41    | 39    | 319   | 1429  | 55    | 1814  | 652   |  |
| Turn Type                                                 | Split | NA    | pm+ov | Split | NA    | Prdt  | NA    | Prdt  | NA    | pm+ov |  |
| Protected Phases                                          | 4     | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     | 4     |  |
| Permitted Phases                                          | 4     | 4     | 4     | 8     | 8     | 5     | 2     | 1     | 6     | 4     |  |
| Detector Phase                                            | 4     | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     | 4     |  |
| Switch Phase                                              | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 10.0  | 5.0   | 10.0  | 7.0   |  |
| Minimum Initial (s)                                       | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  | 16.7  | 11.0  | 16.0  | 13.0  |  |
| Minimum Split (s)                                         | 30.0  | 30.0  | 30.0  | 13.0  | 13.0  | 30.0  | 73.0  | 14.0  | 57.0  | 30.0  |  |
| Total Split (%)                                           | 23.1% | 23.1% | 23.1% | 10.0% | 10.0% | 23.1% | 56.2% | 10.8% | 43.8% | 23.1% |  |
| Yellow Time (s)                                           | 4.0   | 4.0   | 4.0   | 3.6   | 3.6   | 4.0   | 4.7   | 3.3   | 4.7   | 4.0   |  |
| All-Red Time (s)                                          | 1.5   | 1.5   | 1.5   | 2.0   | 2.0   | 1.5   | 1.0   | 2.0   | 1.0   | 1.5   |  |
| 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)                                       | 5.5   | 5.5   | 5.5   | 5.6   | 5.6   | 5.5   | 5.7   | 5.3   | 5.7   | 5.5   |  |
| Lead/Lag                                                  | Lead  |       |       |       |       |       |       |       |       |       |  |
| Lead-Lag Optimize?                                        | None  |       |       |       |       |       |       |       |       |       |  |
| Recall Mode                                               | None  |       |       |       |       |       |       |       |       |       |  |
| Act Effct Green (s)                                       | 24.3  | 24.3  | 44.8  | 7.2   | 7.2   | 20.5  | 70.7  | 7.7   | 55.6  | 85.6  |  |
| Actuated g/C Ratio                                        | 0.19  | 0.19  | 0.34  | 0.06  | 0.06  | 0.16  | 0.54  | 0.06  | 0.43  | 0.66  |  |
| v/c Ratio                                                 | 0.94  | 0.94  | 0.94  | 0.47  | 0.43  | 0.65  | 0.59  | 0.59  | 0.93  | 0.66  |  |
| Control Delay                                             | 88.8  | 88.7  | 50.9  | 75.4  | 33.9  | 56.8  | 21.7  | 81.5  | 44.4  | 13.7  |  |
| Queue Delay                                               | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Total Delay                                               | 88.8  | 88.7  | 50.9  | 75.4  | 33.9  | 56.8  | 21.7  | 81.5  | 44.4  | 13.7  |  |
| LOS                                                       | F     | F     | D     | E     | C     | E     | C     | F     | D     | B     |  |
| Approach Delay                                            | 70.4  |       |       |       |       |       |       |       |       |       |  |
| Approach LOS                                              | E     |       |       |       |       |       |       |       |       |       |  |
| Intersection Summary                                      |       |       |       |       |       |       |       |       |       |       |  |
| Cycle Length: 130                                         |       |       |       |       |       |       |       |       |       |       |  |
| Actuated Cycle Length: 130                                |       |       |       |       |       |       |       |       |       |       |  |
| Offset: 0 (0%), Referenced to phase 6 SBT, Start of Green |       |       |       |       |       |       |       |       |       |       |  |
| Natural Cycle: 90                                         |       |       |       |       |       |       |       |       |       |       |  |
| Control Type: Actuated-Coordinated                        |       |       |       |       |       |       |       |       |       |       |  |
| Maximum v/c Ratio: 0.94                                   |       |       |       |       |       |       |       |       |       |       |  |
| Intersection Signal Delay: 40.7                           |       |       |       |       |       |       |       |       |       |       |  |
| Intersection Capacity Utilization 85.8%                   |       |       |       |       |       |       |       |       |       |       |  |
| Analysis Period (min) 15                                  |       |       |       |       |       |       |       |       |       |       |  |



Smoke Tree Resort  
2025 Background AM

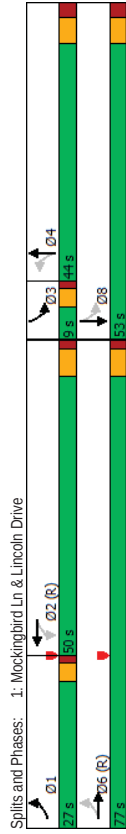
9: Scottsdale Rd & Lincoln Dr  
HCM 6th Signalized Intersection Summary

|                                                                                                    | EBL   | EBT  | EBR   | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  | SBR  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------------------------------------------------------------------------------|-------|------|-------|------|------|------|------|------|------|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Movement                                                                                           | EBL   | EBT  | EBR   | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  | SBR  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Configurations                                                                                | 489   | 42   | 499   | 41   | 39   | 319  | 1429 | 43   | 55   | 1814 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h)                                                                             | 489   | 42   | 499   | 41   | 39   | 319  | 1429 | 43   | 55   | 1814 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Future Volume (veh/h)                                                                              | 489   | 42   | 499   | 41   | 39   | 319  | 1429 | 43   | 55   | 1814 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Initial Q (Qb) veh                                                                                 | 0     | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ped-Bike Adj(A, pbf)                                                                               | 1.00  | 1.00 | 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 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Work Zone On Approach                                                                              | No    |      |       |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Adj Sat Flow, veh/h                                                                                | 1870  | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Adj Flow Rate, veh/h                                                                               | 577   | 0    | 554   | 46   | 43   | 58   | 354  | 1588 | 48   | 61   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Peak Hour Factor                                                                                   | 0.90  | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Percent Heavy Veh, %                                                                               | 2     | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cap. veh/h                                                                                         | 671   | 0    | 489   | 95   | 95   | 85   | 414  | 2404 | 73   | 78   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Arrive On Green                                                                                    | 0.06  | 0.00 | 0.06  | 0.05 | 0.05 | 0.12 | 0.47 | 0.47 | 0.04 | 0.39 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sat Flow, veh/h                                                                                    | 3563  | 0    | 1585  | 1781 | 1777 | 1585 | 3456 | 5093 | 154  | 1781 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Grp Volume(V), veh/h                                                                               | 577   | 0    | 554   | 46   | 43   | 58   | 354  | 1661 | 575  | 61   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Grp Sat Flow(S), veh/h                                                                             | 1781  | 0    | 1585  | 1781 | 1777 | 1585 | 1728 | 1702 | 1843 | 1781 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Q Serve(g, s)                                                                                      | 20.9  | 0.0  | 24.5  | 3.3  | 3.1  | 4.7  | 13.1 | 31.1 | 4.4  | 51.3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cycle Q Clear(g, c), s                                                                             | 20.9  | 0.0  | 24.5  | 3.3  | 3.1  | 4.7  | 13.1 | 31.1 | 4.4  | 51.3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Prop In Lane                                                                                       | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 0.08 | 1.00 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Grp Cap(c), veh/h                                                                             | 671   | 0    | 489   | 95   | 95   | 85   | 414  | 1607 | 870  | 78   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| VC Ratio(X)                                                                                        | 0.86  | 0.00 | 1.13  | 0.48 | 0.45 | 0.68 | 0.86 | 0.66 | 0.78 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Avail Cap(c, a), veh/h                                                                             | 671   | 0    | 489   | 101  | 101  | 90   | 651  | 1762 | 954  | 119  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HCM Platoon Ratio                                                                                  | 0.33  | 0.33 | 0.33  | 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Uniform Delay (d), s/veh                                                                           | 59.3  | 0.0  | 50.8  | 59.8 | 59.7 | 60.4 | 56.1 | 26.3 | 61.5 | 39.3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Incr Delay (d2), s/veh                                                                             | 10.4  | 0.0  | 83.0  | 1.4  | 1.2  | 14.2 | 3.9  | 0.6  | 1.1  | 7.7  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 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  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| %ile BackOfQ(50%), veh/h                                                                           | 11.0  | 0.0  | 26.4  | 1.5  | 1.4  | 2.2  | 5.9  | 12.6 | 13.8 | 2.2  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Unsig. Movement Delay, s/veh                                                                       |       |      |       |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LnGrp Delay(d), s/veh                                                                              | 69.7  | 0.0  | 133.7 | 61.2 | 60.9 | 74.7 | 60.0 | 26.9 | 72.4 | 59.5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LnGrp LOS                                                                                          | E     | A    | F     | E    | E    | E    | C    | C    | E    | F    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Approach Vol, veh/h                                                                                | 1131  |      |       |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Approach Delay, s/veh                                                                              | 101.0 |      |       |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Approach LOS                                                                                       | F     |      |       |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Timer - Assigned Phs                                                                               | 1     | 2    | 4     | 5    | 6    | 8    |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Phs Duration (G+Y+Rc), s                                                                           | 11.0  | 67.1 | 30.0  | 21.1 | 57.0 | 12.6 |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Change Period (Y+Rc), s                                                                            | *5.3  | 5.7  | 5.5   | 5.5  | 5.7  | 5.6  |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Max Green Setting (Gmax), s                                                                        | *8.7  | 67.3 | 24.5  | 24.5 | 51.3 | 7.4  |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Max Q Clear Time (g_c+H), s                                                                        | 6.4   | 33.1 | 26.5  | 15.1 | 53.3 | 6.7  |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Green Ext Time (p_c), s                                                                            | 0.0   | 2.5  | 0.0   | 0.5  | 0.0  | 0.0  |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Intersection Summary                                                                               |       |      |       |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HCM 6th Ctrl Delay                                                                                 | 55.0  |      |       |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HCM 6th LOS                                                                                        | D     |      |       |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Notes                                                                                              |       |      |       |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| User approved pedestrian interval to be less than phase max green.                                 |       |      |       |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| User approved volume balancing among the lanes for turning movement.                               |       |      |       |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |       |      |       |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Smoke Tree Resort  
2025 Background PM

1: Mockingbird Ln & Lincoln Drive  
Timings

|                      | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |  |
| Lane Configurations  | 4     | 4     | 4     | 4     | 4     | 4     | 4     | 4     |  |
| Traffic Volume (vph) | 267   | 945   | 25    | 1011  | 8     | 68    | 67    | 52    |  |
| Future Volume (vph)  | 267   | 945   | 25    | 1011  | 8     | 68    | 67    | 52    |  |
| Turn Type            | pm+pt | NA    | Perm  | NA    | Perm  | NA    | pm+pt | NA    |  |
| Protected Phases     | 1     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |  |
| Permitted Phases     | 6     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |  |
| Detector Phase       | 1     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |  |
| Switch Phase         |       |       |       |       |       |       |       |       |  |
| Minimum Initial (s)  | 3.5   | 15.0  | 15.0  | 15.0  | 7.0   | 7.0   | 3.5   | 7.0   |  |
| Minimum Split (s)    | 8.0   | 27.0  | 27.0  | 27.0  | 33.5  | 33.5  | 8.0   | 33.5  |  |
| Total Split (s)      | 27.0  | 77.0  | 50.0  | 50.0  | 44.0  | 44.0  | 9.0   | 53.0  |  |
| Total Split (%)      | 20.8% | 59.2% | 38.5% | 38.5% | 33.8% | 33.8% | 6.9%  | 40.8% |  |
| Yellow Time (s)      | 3.0   | 4.5   | 4.5   | 4.5   | 4.0   | 4.0   | 3.0   | 4.0   |  |
| All-Red Time (s)     | 1.0   | 1.5   | 1.5   | 1.5   | 2.5   | 2.5   | 1.0   | 2.5   |  |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Total Lost Time (s)  | 4.0   | 6.0   | 6.0   | 6.0   | 6.5   | 6.5   | 4.0   | 6.5   |  |
| Lead/Lag             | Lead  | Lag   | Lag   | Lag   | Lag   | Lag   | Lead  | Lead  |  |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |  |
| Recall Mode          | None  | C-Max | C-Max | C-Max | None  | None  | None  | None  |  |
| Act Effct Green (s)  | 100.6 | 98.6  | 73.6  | 73.6  | 11.7  | 11.7  | 21.4  | 18.9  |  |
| Actuated g/C Ratio   | 0.77  | 0.76  | 0.57  | 0.57  | 0.09  | 0.09  | 0.16  | 0.15  |  |
| v/c Ratio            | 0.66  | 0.41  | 0.10  | 0.60  | 0.12  | 0.57  | 0.40  | 0.69  |  |
| Control Delay        | 18.8  | 6.6   | 12.1  | 22.4  | 55.8  | 62.3  | 51.7  | 31.4  |  |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Total Delay          | 18.8  | 6.6   | 12.1  | 22.4  | 55.8  | 62.3  | 51.7  | 31.4  |  |
| LOS                  | B     | A     | B     | C     | E     | E     | D     | C     |  |
| Approach Delay       | 9.2   | 22.1  | 22.1  | 22.1  | 61.7  | 61.7  | 36.1  | 36.1  |  |
| Approach LOS         | A     | C     | C     | C     | E     | E     | D     | D     |  |



Smoke Tree Resort  
2025 Background PM

1: Mockingbird Ln & Lincoln Drive  
HCM 6th Signalized Intersection Summary

|                              | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |  |
|------------------------------|------|------|------|------|------|------|------|------|--|
| Movement                     | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |  |
| Lane Configurations          | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4    |  |
| Traffic Volume (veh/h)       | 267  | 945  | 25   | 1011 | 8    | 68   | 19   | 67   |  |
| Future Volume (veh/h)        | 267  | 945  | 25   | 1011 | 8    | 68   | 19   | 67   |  |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |  |
| Ped-Bike Adj(A, pbf)         | 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 |  |
| Work Zone On Approach        | No   | No   | No   | No   | No   | No   | No   | No   |  |
| Adj Sat Flow, veh/h          | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |  |
| Adj Flow Rate, veh/h         | 297  | 1050 | 36   | 28   | 1123 | 76   | 9    | 76   |  |
| Peak Hour Factor             | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |  |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |  |
| Cap, veh/h                   | 397  | 2562 | 88   | 375  | 2101 | 142  | 87   | 146  |  |
| Arrive On Green              | 0.08 | 0.73 | 0.73 | 0.62 | 0.62 | 0.10 | 0.10 | 0.04 |  |
| Sat Flow, veh/h              | 1781 | 3505 | 120  | 519  | 3378 | 228  | 1134 | 390  |  |
| Grp Volume(V), veh/h         | 297  | 532  | 554  | 28   | 590  | 609  | 9    | 74   |  |
| Grp Sat Flow(s), veh/h       | 1781 | 1777 | 1849 | 519  | 1777 | 1829 | 1134 | 0    |  |
| Q Serve(g, s), s             | 7.4  | 15.0 | 15.0 | 2.8  | 24.5 | 24.5 | 1.0  | 6.6  |  |
| Cycle Q Clear(g, c), s       | 7.4  | 15.0 | 15.0 | 3.7  | 24.5 | 24.5 | 10.9 | 6.6  |  |
| Prop In Lane                 | 1.00 | 0.07 | 1.00 | 1.00 | 0.12 | 1.00 | 0.22 | 1.00 |  |
| Lane Grp Cap(c), veh/h       | 397  | 1299 | 1351 | 375  | 1105 | 1138 | 87   | 187  |  |
| V/C Ratio(X)                 | 0.75 | 0.41 | 0.41 | 0.07 | 0.53 | 0.10 | 0.00 | 0.52 |  |
| Avail Cap(c, a), veh/h       | 573  | 1299 | 1351 | 375  | 1105 | 1138 | 296  | 0    |  |
| HCM Platoon Ratio            | 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 | 0.54 | 0.54 | 0.54 | 1.00 | 1.00 |  |
| Uniform Delay (d), s/veh     | 13.7 | 6.7  | 6.7  | 10.1 | 13.9 | 62.0 | 0.0  | 55.2 |  |
| Incr Delay (d2), s/veh       | 3.2  | 1.0  | 0.9  | 0.2  | 1.0  | 0.5  | 0.0  | 2.2  |  |
| Initial Q Delay(d3), s/veh   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |  |
| %ile BackOfQ(50%), veh/ln    | 4.0  | 5.5  | 5.7  | 0.3  | 9.8  | 10.1 | 0.3  | 3.1  |  |
| Unsig. Movement Delay, s/veh | 17.0 | 7.7  | 7.6  | 10.4 | 14.9 | 62.5 | 0.0  | 57.4 |  |
| LnGrp Delay(d), s/veh        | B    | A    | A    | B    | B    | E    | A    | D    |  |
| LnGrp LOS                    | B    | A    | A    | B    | B    | E    | A    | D    |  |
| Approach Vol, veh/h          | 1383 | 1383 | 1383 | 1227 | 106  | 106  | 320  | 320  |  |
| Approach Delay, s/veh        | 9.7  | 9.7  | 9.7  | 14.8 | 57.8 | 57.8 | 57.6 | 57.6 |  |
| Approach LOS                 | A    | A    | A    | B    | E    | E    | E    | E    |  |

|                              |      |      |     |      |       |      |
|------------------------------|------|------|-----|------|-------|------|
| Timer - Assigned Phs         | 1    | 2    | 3   | 4    | 6     | 8    |
| Phs Duration (G+Y+Rc), s     | 14.1 | 86.9 | 9.0 | 20.0 | 101.0 | 29.0 |
| Change Period (Y+Rc), s      | 4.0  | 6.0  | 4.0 | 6.5  | 6.0   | 6.5  |
| Max Green Setting (Gmax), s  | 23.0 | 44.0 | 5.0 | 37.5 | 71.0  | 46.5 |
| Max Q Clear Time (g_c+tl), s | 9.4  | 26.5 | 6.7 | 12.9 | 17.0  | 20.9 |
| Green Ext Time (p_c), s      | 0.7  | 8.1  | 0.0 | 0.5  | 9.5   | 1.6  |

|                      |      |  |  |  |  |  |
|----------------------|------|--|--|--|--|--|
| Intersection Summary |      |  |  |  |  |  |
| HCM 6th Ctrl Delay   | 18.5 |  |  |  |  |  |
| HCM 6th LOS          | B    |  |  |  |  |  |

Smoke Tree Resort  
2025 Background PM

2: Quail Run Rd & Lincoln Drive  
Timings

|                      | EBL    | EBT   | WBT   | NBT   | SBL   | SBT   |
|----------------------|--------|-------|-------|-------|-------|-------|
| Lane Group           | EBL    | EBT   | WBT   | NBT   | SBL   | SBT   |
| Lane Configurations  | 85     | 963   | 1008  | 0     | 14    | 0     |
| Traffic Volume (vph) | 85     | 963   | 1008  | 0     | 14    | 0     |
| Future Volume (vph)  | 85     | 963   | 1008  | 0     | 14    | 0     |
| Turn Type            | pm-plt | NA    | NA    | NA    | Perm  | NA    |
| Protected Phases     | 7      | 4     | 8     | 2     | 6     | 6     |
| Permitted Phases     | 4      | 4     | 8     | 2     | 6     | 6     |
| Detector Phase       | 7      | 4     | 8     | 2     | 6     | 6     |
| Switch Phase         |        |       |       |       |       |       |
| Minimum Initial (s)  | 3.5    | 15.0  | 15.0  | 7.0   | 7.0   | 7.0   |
| Minimum Split (s)    | 8.0    | 28.0  | 28.0  | 33.0  | 33.0  | 33.0  |
| Total Split (s)      | 20.0   | 94.0  | 74.0  | 36.0  | 36.0  | 36.0  |
| Total Split (%)      | 15.4%  | 72.3% | 56.9% | 27.7% | 27.7% | 27.7% |
| Yellow Time (s)      | 3.0    | 4.0   | 4.0   | 4.5   | 4.5   | 4.5   |
| All-Red Time (s)     | 1.0    | 2.5   | 2.5   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0    | 6.5   | 6.5   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lead   | Lag   | Lag   | Lag   | Lag   | Lag   |
| Lead-Lag Optimize?   | Yes    | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode          | None   | None  | None  | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 71.0   | 68.5  | 54.4  | 49.0  | 49.0  | 49.0  |
| Actuated g/C Ratio   | 0.55   | 0.53  | 0.42  | 0.38  | 0.38  | 0.38  |
| v/c Ratio            | 0.43   | 0.57  | 0.78  | 0.00  | 0.03  | 0.14  |
| Control Delay        | 28.9   | 34.6  | 36.1  | 0.0   | 30.9  | 0.4   |
| Queue Delay          | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 28.9   | 34.6  | 36.1  | 0.0   | 30.9  | 0.4   |
| LOS                  | C      | C     | D     | A     | C     | A     |
| Approach Delay       | 34.2   | 36.1  |       |       | 4.5   |       |
| Approach LOS         | C      | D     |       |       | A     |       |

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

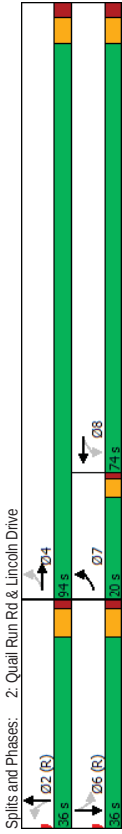
Intersection Signal Delay: 33.6

Intersection Capacity Utilization 62.4%

Analysis Period (min) 15

Intersection LOS: C

ICU Level of Service B



Smoke Tree Resort  
2025 Background PM

2: Quail Run Rd & Lincoln Drive  
HCM 6th Signalized Intersection Summary

|                              | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations          | 85   | 963  | 1    | 0    | 1008 | 25   | 0    | 0    | 2    | 14   | 0    | 93   |
| Traffic Volume (veh/h)       | 85   | 963  | 1    | 0    | 1008 | 25   | 0    | 0    | 2    | 14   | 0    | 93   |
| Future Volume (veh/h)        | 85   | 963  | 1    | 0    | 1008 | 25   | 0    | 0    | 2    | 14   | 0    | 93   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A, pbf)         | 1.00 | 1.00 | 1.00 | 1.00 | 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   | No   | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h          | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 94   | 1070 | 1    | 0    | 1120 | 28   | 0    | 0    | 2    | 16   | 0    | 103  |
| Peak Hour Factor             | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 180  | 1645 | 2    | 55   | 1326 | 33   | 0    | 0    | 717  | 695  | 0    | 717  |
| Arrive On Green              | 0.09 | 0.90 | 0.90 | 0.00 | 0.37 | 0.37 | 0.00 | 0.00 | 0.45 | 0.45 | 0.00 | 0.45 |
| Sat Flow, veh/h              | 1781 | 3643 | 3    | 527  | 3543 | 89   | 0    | 0    | 1585 | 1415 | 0    | 1585 |
| Grp Volume(V), veh/h         | 94   | 522  | 549  | 0    | 562  | 586  | 0    | 0    | 2    | 16   | 0    | 103  |
| Grp Sat Flow(s),veh/h        | 1781 | 1777 | 1870 | 527  | 1777 | 1854 | 0    | 0    | 1585 | 1415 | 0    | 1585 |
| Q Serve(g, s), s             | 4.1  | 9.0  | 9.0  | 0.0  | 37.6 | 37.6 | 0.0  | 0.0  | 0.1  | 0.8  | 0.0  | 4.9  |
| Cycle Q Clear(g, c), s       | 4.1  | 9.0  | 9.0  | 0.0  | 37.6 | 37.6 | 0.0  | 0.0  | 0.1  | 0.9  | 0.0  | 4.9  |
| Prop In Lane                 | 1.00 | 0.00 | 1.00 | 0.00 | 1.00 | 0.05 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 180  | 802  | 844  | 55   | 665  | 694  | 0    | 0    | 717  | 695  | 0    | 717  |
| V/C Ratio(X)                 | 0.52 | 0.65 | 0.65 | 0.00 | 0.84 | 0.84 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | 0.14 |
| Avail Cap(c, a), veh/h       | 316  | 1196 | 1258 | 132  | 923  | 963  | 0    | 0    | 717  | 695  | 0    | 717  |
| HCM Platoon Ratio            | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(i)           | 0.92 | 0.92 | 0.92 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh     | 27.8 | 3.9  | 3.9  | 0.0  | 37.2 | 37.2 | 0.0  | 0.0  | 19.5 | 19.8 | 0.0  | 20.8 |
| Incr Delay (d2), s/veh       | 2.2  | 0.8  | 0.8  | 0.0  | 5.3  | 5.1  | 0.0  | 0.0  | 0.0  | 0.1  | 0.0  | 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(50%),veh/ln     | 1.7  | 1.8  | 1.9  | 0.0  | 17.2 | 17.9 | 0.0  | 0.0  | 0.0  | 0.3  | 0.0  | 1.9  |
| Unsig. Movement Delay, s/veh | 30.0 | 4.7  | 4.7  | 0.0  | 42.5 | 42.3 | 0.0  | 0.0  | 19.5 | 19.8 | 0.0  | 21.3 |
| LnGrp Delay(d),s/veh         | C    | A    | A    | A    | D    | D    | A    | A    | A    | B    | A    | C    |
| LnGrp LOS                    | C    | A    | A    | A    | D    | D    | A    | A    | A    | B    | A    | C    |
| Approach Vol, veh/h          | 1165 |      |      |      | 1148 |      |      | 2    |      |      |      | 119  |
| Approach Delay, s/veh        | 6.7  |      |      |      | 42.4 |      |      | 19.5 |      |      |      | 21.1 |
| Approach LOS                 | A    |      |      |      | D    |      |      | B    |      |      |      | C    |
| Timer - Assigned Phs         | 2    | 4    | 4    | 6    | 7    | 8    |      |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 64.8 | 65.2 | 64.8 | 10.0 | 55.2 |      |      |      |      |      |      |      |
| Change Period (Y+Rc), s      | 6.0  | 6.5  | 6.0  | 6.0  | 4.0  | 6.5  |      |      |      |      |      |      |
| Max Green Setting (Gmax), s  | 30.0 | 87.5 | 30.0 | 16.0 | 67.5 |      |      |      |      |      |      |      |
| Max Q Clear Time (g_c+lt), s | 2.1  | 11.0 | 6.9  | 6.1  | 39.6 |      |      |      |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 9.4  | 0.6  | 0.1  | 9.0  |      |      |      |      |      |      |      |
| Intersection Summary         |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      | 24.3 |      |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  |      |      | C    |      |      |      |      |      |      |      |      |      |

Smoke Tree Resort  
2025 Background PM

3: Smoke Tree West & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |      |      |      |  |  |  |  |  |
|--------------------------|--------|--------|--------|------|------|------|--|--|--|--|--|
| Int Delay, s/veh         |        |        |        |      |      |      |  |  |  |  |  |
| 0                        |        |        |        |      |      |      |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT  | NBL  | NBR  |  |  |  |  |  |
| Lane Configurations      | 4B     |        | 5      | 4A   | 4A   | W    |  |  |  |  |  |
| Traffic Vol. veh/h       | 979    | 1      | 0      | 1032 | 0    | 0    |  |  |  |  |  |
| Future Vol. veh/h        | 979    | 1      | 0      | 1032 | 0    | 0    |  |  |  |  |  |
| Conflicting Peds. #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free | Stop | Stop |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None | -    | None |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -    | 0    | -    |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90   | 90   | 90   |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2    | 2    |  |  |  |  |  |
| Mvmt Flow                | 1088   | 1      | 0      | 1147 | 0    | 0    |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |      |      |      |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1089   | 0    | 1663 | 545  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 1089 | -    |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 574  | -    |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -    | 6.84 | 6.94 |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.84 | -    |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.84 | -    |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -    | 3.52 | 3.32 |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 636    | -    | 88   | 482  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 284  | -    |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 527  | -    |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -    | -    | -    |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 636    | -    | 88   | 482  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 204  | -    |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 284  | -    |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 527  | -    |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |      |      |      |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0      | 0      |      |      |      |  |  |  |  |  |
| HCM LOS                  | A      |        |        |      |      |      |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL  | WBT  |      |  |  |  |  |  |
| Capacity (veh/h)         | -      | -      | -      | -    | 636  | -    |  |  |  |  |  |
| HCM Lane V/C Ratio       | -      | -      | -      | -    | -    | -    |  |  |  |  |  |
| HCM Control Delay (s)    | 0      | -      | -      | 0    | -    | -    |  |  |  |  |  |
| HCM Lane LOS             | A      | -      | -      | A    | -    | -    |  |  |  |  |  |
| HCM 95th %tile Q(veh)    | -      | -      | -      | 0    | -    | -    |  |  |  |  |  |

Smoke Tree Resort  
2025 Background PM

4: Smoke Tree East & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |      |  |  |  |  |  |
|--------------------------|--------|--------|--------|------|-------|------|--|--|--|--|--|
| Int Delay, s/veh         |        |        |        |      |       |      |  |  |  |  |  |
| 0                        |        |        |        |      |       |      |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT  | NBL   | NBR  |  |  |  |  |  |
| Lane Configurations      | ↑↑     |        | ↖      | ↑↑   |       | ↗    |  |  |  |  |  |
| Traffic Vol, veh/h       | 978    | 1      | 2      | 1032 | 2     | 2    |  |  |  |  |  |
| Future Vol, veh/h        | 978    | 1      | 2      | 1032 | 2     | 2    |  |  |  |  |  |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0     | 0    |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None | -     | None |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -    | 0     | -    |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0     | -    |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0    | 0     | -    |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90   | 90    | 90   |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2     | 2    |  |  |  |  |  |
| Mvmt Flow                | 1087   | 1      | 2      | 1147 | 2     | 2    |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |      |       |      |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1088   | 0    | 1666  | 544  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 1088  | -    |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 578   | -    |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -    | 6.84  | 6.94 |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.84  | -    |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.84  | -    |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -    | 3.52  | 3.32 |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 637    | -    | 87    | 483  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 284   | -    |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 524   | -    |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -    |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 637    | -    | 87    | 483  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 203   | -    |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 283   | -    |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 524   | -    |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |      |       |      |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0      | 17.8   |      |       |      |  |  |  |  |  |
| HCM LOS                  | C      |        |        |      |       |      |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL  | WBT   |      |  |  |  |  |  |
| Capacity (veh/h)         | 286    | -      | -      | -    | 637   | -    |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.016  | -      | -      | -    | 0.003 | -    |  |  |  |  |  |
| HCM Control Delay (s)    | 17.8   | -      | -      | -    | 10.7  | -    |  |  |  |  |  |
| HCM Lane LOS             | C      | -      | -      | B    | -     | -    |  |  |  |  |  |
| HCM 95th %tile Q(veh)    | 0      | -      | -      | 0    | -     | -    |  |  |  |  |  |

Smoke Tree Resort  
2025 Background PM

5: Lincoln Medical West & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |      |       |      |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|------|-------|------|--|--|--|--|--|--|
| Int Delay, s/veh         |        | 0.7    |        |      |       |      |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT  | NBL   | NBR  |  |  |  |  |  |  |
| Lane Configurations      | 4P     | 4P     | 5      | 4A   | 4A    | W    |  |  |  |  |  |  |
| Traffic Vol. veh/h       | 973    | 7      | 21     | 1004 | 30    | 26   |  |  |  |  |  |  |
| Future Vol. veh/h        | 973    | 7      | 21     | 1004 | 30    | 26   |  |  |  |  |  |  |
| Conflicting Peds. #/hr   | 0      | 0      | 0      | 0    | 0     | 0    |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free | Stop  | Stop |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None | -     | None |  |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -    | 0     | -    |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0     | -    |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0    | 0     | -    |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90   | 90    | 90   |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2     | 2    |  |  |  |  |  |  |
| Mvmt Flow                | 1081   | 8      | 23     | 1116 | 33    | 29   |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |      |       |      |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1089   | 0    | 1689  | 545  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 1085  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 604   | -    |  |  |  |  |  |  |
| Critical Hwy             | -      | -      | 4.14   | -    | 6.84  | 6.94 |  |  |  |  |  |  |
| Critical Hwy Stg 1       | -      | -      | -      | -    | 5.84  | -    |  |  |  |  |  |  |
| Critical Hwy Stg 2       | -      | -      | -      | -    | 5.84  | -    |  |  |  |  |  |  |
| Follow-up Hwy            | -      | -      | 2.22   | -    | 3.52  | 3.32 |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 636    | -    | 84    | 482  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 285   | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 508   | -    |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -    | -     | -    |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 636    | -    | 81    | 482  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 194   | -    |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 275   | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 508   | -    |  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |      |       |      |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0.2    | 22.4   |      |       |      |  |  |  |  |  |  |
| HCM LOS                  | C      |        |        |      |       |      |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL  | WBT   |      |  |  |  |  |  |  |
| Capacity (veh/h)         | 268    | -      | -      | -    | 636   | -    |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.232  | -      | -      | -    | 0.037 | -    |  |  |  |  |  |  |
| HCM Control Delay (s)    | 22.4   | -      | -      | -    | 10.9  | -    |  |  |  |  |  |  |
| HCM Lane LOS             | C      | -      | -      | -    | B     | -    |  |  |  |  |  |  |
| HCM 95th %ile Q(veh)     | 0.9    | -      | -      | -    | 0.1   | -    |  |  |  |  |  |  |

Smoke Tree Resort  
2025 Background PM

6: Lincoln Medical East & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |      |      |      |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|------|------|------|--|--|--|--|--|--|
| Int Delay, s/veh         |        | 0.2    |        |      |      |      |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT  | NBL  | NBR  |  |  |  |  |  |  |
| Lane Configurations      | 4P     | 4P     | 5      | 4A   | 4A   | W    |  |  |  |  |  |  |
| Traffic Vol. veh/h       | 995    | 4      | 0      | 1024 | 2    | 30   |  |  |  |  |  |  |
| Future Vol. veh/h        | 995    | 4      | 0      | 1024 | 2    | 30   |  |  |  |  |  |  |
| Conflicting Peds. #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free | Stop | Stop |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None | -    | None |  |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -    | 0    | -    |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90   | 90   | 90   |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2    | 2    |  |  |  |  |  |  |
| Mvmt Flow                | 1106   | 4      | 0      | 1138 | 2    | 33   |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |      |      |      |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1110   | 0    | 1677 | 555  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 1108 | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 569  | -    |  |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -    | 6.84 | 6.94 |  |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -    | 5.84 | -    |  |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -    | 5.84 | -    |  |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -    | 3.52 | 3.32 |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 625    | -    | 86   | 475  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 278  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 530  | -    |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -    | -    | -    |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 625    | -    | 86   | 475  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 201  | -    |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 278  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 530  | -    |  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |      |      |      |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0      | 13.9   |      |      |      |  |  |  |  |  |  |
| HCM LOS                  | B      |        |        |      |      |      |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL  | WBT  |      |  |  |  |  |  |  |
| Capacity (veh/h)         | 438    | -      | -      | 625  | -    |      |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.081  | -      | -      | -    | -    |      |  |  |  |  |  |  |
| HCM Control Delay (s)    | 13.9   | -      | -      | 0    | -    |      |  |  |  |  |  |  |
| HCM Lane LOS             | B      | -      | -      | A    | -    |      |  |  |  |  |  |  |
| HCM 95th %tile Q(veh)    | 0.3    | -      | -      | 0    | -    |      |  |  |  |  |  |  |

Smoke Tree Resort  
2025 Background PM

7: Apartment Drwy & Lincoln Dr  
HCM 6th TWSC

| Intersection              |                       | 24     |          |      |       |      |        |       |       |      |      |      |                               |  |  |  |  |
|---------------------------|-----------------------|--------|----------|------|-------|------|--------|-------|-------|------|------|------|-------------------------------|--|--|--|--|
| Int Delay, s/veh          |                       |        |          |      |       |      |        |       |       |      |      |      |                               |  |  |  |  |
| Movement                  | EBL                   | EBT    | EBR      | WBL  | WBT   | WBR  | NBL    | NBT   | NBR   | SBL  | SBT  | SBR  |                               |  |  |  |  |
| Lane Configurations       | ↔                     | ↔      | ↔        | ↔    | ↔     | ↔    | ↔      | ↔     | ↔     | ↔    | ↔    | ↔    |                               |  |  |  |  |
| Traffic Vol, veh/h        | 8                     | 958    | 46       | 7    | 920   | 10   | 74     | 3     | 53    | 8    | 0    | 38   |                               |  |  |  |  |
| Future Vol, veh/h         | 8                     | 958    | 46       | 7    | 920   | 10   | 74     | 3     | 53    | 8    | 0    | 38   |                               |  |  |  |  |
| 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            | 25                    | -      | 25       | -    | -     | -    | -      | -     | -     | 0    | -    | 0    |                               |  |  |  |  |
| Veh in Median Storage, #  | -                     | 0      | -        | -    | 0     | -    | -      | 0     | -     | -    | -    | 0    |                               |  |  |  |  |
| Grade, %                  | -                     | 0      | -        | 0    | -     | 0    | -      | 0     | -     | 0    | -    | 0    |                               |  |  |  |  |
| Peak Hour Factor          | 90                    | 90     | 90       | 90   | 90    | 90   | 90     | 90    | 90    | 90   | 90   | 90   |                               |  |  |  |  |
| Heavy Vehicles, %         | 2                     | 2      | 2        | 2    | 2     | 2    | 2      | 2     | 2     | 2    | 2    | 2    |                               |  |  |  |  |
| Mvmt Flow                 | 9                     | 1064   | 51       | 8    | 1022  | 11   | 82     | 3     | 59    | 9    | 0    | 42   |                               |  |  |  |  |
| Major/Minor               | Major1                | Major2 | Minor1   |      |       |      | Minor2 |       |       |      |      |      |                               |  |  |  |  |
| Conflicting Flow All      | 1033                  | 0      | 0        | 1115 | 0     | 0    | 1635   | 2157  | 558   | 1596 | -    | 517  |                               |  |  |  |  |
| Stage 1                   | -                     | -      | -        | -    | -     | -    | 1108   | 1108  | -     | 1044 | -    | -    |                               |  |  |  |  |
| Stage 2                   | -                     | -      | -        | -    | -     | -    | 527    | 1049  | -     | 552  | -    | -    |                               |  |  |  |  |
| Critical Hdwy             | 4.14                  | -      | -        | 4.14 | -     | -    | 7.54   | 6.54  | 6.94  | 7.54 | -    | 6.94 |                               |  |  |  |  |
| Critical Hdwy Stg 1       | -                     | -      | -        | -    | -     | -    | 6.54   | 5.54  | -     | 6.54 | -    | -    |                               |  |  |  |  |
| Critical Hdwy Stg 2       | -                     | -      | -        | -    | -     | -    | 6.54   | 5.54  | -     | 6.54 | -    | -    |                               |  |  |  |  |
| Follow-up Hdwy            | 2.22                  | -      | 2.22     | -    | -     | -    | 3.52   | 4.02  | 3.32  | 3.52 | -    | 3.32 |                               |  |  |  |  |
| Pot Cap-1 Maneuver        | 668                   | -      | -        | 622  | -     | -    | ~67    | 47    | 473   | 71   | 0    | 503  |                               |  |  |  |  |
| Stage 1                   | -                     | -      | -        | -    | -     | -    | 224    | 284   | -     | 245  | 0    | -    |                               |  |  |  |  |
| Stage 2                   | -                     | -      | -        | -    | -     | -    | 502    | 303   | -     | 486  | 0    | -    |                               |  |  |  |  |
| Platoon blocked, %        | -                     | -      | -        | -    | -     | -    | -      | -     | -     | -    | -    | -    |                               |  |  |  |  |
| Mov Cap-1 Maneuver        | 668                   | -      | -        | 622  | -     | -    | ~60    | 46    | 473   | 58   | -    | 503  |                               |  |  |  |  |
| Mov Cap-2 Maneuver        | -                     | -      | -        | -    | -     | -    | ~60    | 46    | -     | 58   | -    | -    |                               |  |  |  |  |
| Stage 1                   | -                     | -      | -        | -    | -     | -    | 221    | 280   | -     | 242  | -    | -    |                               |  |  |  |  |
| Stage 2                   | -                     | -      | -        | -    | -     | -    | 454    | 299   | -     | 415  | -    | -    |                               |  |  |  |  |
| Approach                  | EB                    | WB     | NB       |      |       |      | SB     |       |       |      |      |      |                               |  |  |  |  |
| HCM Control Delay, s      | 0.1                   | 0.1    | \$ 382.4 |      |       |      | 24.1   |       |       |      | C    |      |                               |  |  |  |  |
| HCM LOS                   |                       |        | F        |      |       |      |        |       |       |      |      |      |                               |  |  |  |  |
| Minor Lane/Major Mvmt     | NBLn1                 | EBL    | EBT      | EBR  | WBL   | WBT  | WBR    | SBLn1 | SBLn2 |      |      |      |                               |  |  |  |  |
| Capacity (veh/h)          | 92                    | 668    | -        | -    | 622   | -    | -      | -     | 58    | 503  |      |      |                               |  |  |  |  |
| HCM Lane V/C Ratio        | 1.57                  | 0.013  | -        | -    | 0.013 | -    | -      | 0.153 | 0.084 |      |      |      |                               |  |  |  |  |
| HCM Control Delay (s)     | \$ 382.4              | 10.5   | -        | -    | 10.9  | -    | -      | -     | 78    | 12.8 |      |      |                               |  |  |  |  |
| HCM Lane LOS              | F                     | B      | -        | -    | B     | -    | -      | -     | F     | B    |      |      |                               |  |  |  |  |
| HCM 95th %ile Q(veh)      | 11.3                  | 0      | -        | -    | 0     | -    | -      | -     | 0.5   | 0.3  |      |      |                               |  |  |  |  |
| Notes                     |                       |        |          |      |       |      |        |       |       |      |      |      |                               |  |  |  |  |
| - Volume exceeds capacity | \$ Delay exceeds 300s |        |          |      |       |      |        |       |       |      |      |      | + Computation Not Defined     |  |  |  |  |
| - Volume exceeds capacity |                       |        |          |      |       |      |        |       |       |      |      |      | * All major volume in platoon |  |  |  |  |

Notes  
- Volume exceeds capacity \$ Delay exceeds 300s + Computation Not Defined \* All major volume in platoon

Smoke Tree Resort  
2025 Background PM

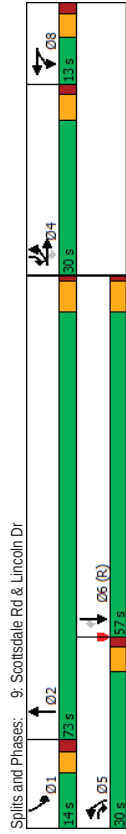
8: AJ's Drwy & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        | 3.6  |        |      |        |      |        |       |       |       |      |      |  |  |  |  |  |
|--------------------------|--------|------|--------|------|--------|------|--------|-------|-------|-------|------|------|--|--|--|--|--|
| Int Delay, s/veh         |        |      |        |      |        |      |        |       |       |       |      |      |  |  |  |  |  |
| Movement                 | EBL    | EBT  | EBR    | WBL  | WBT    | WBR  | NBL    | NBT   | NBR   | SBL   | SBT  | SBR  |  |  |  |  |  |
| Lane Configurations      | ↔      | ↔    | ↔      | ↔    | ↔      | ↔    | ↔      | ↔     | ↔     | ↔     | ↔    | ↔    |  |  |  |  |  |
| Traffic Vol, veh/h       | 12     | 951  | 60     | 69   | 918    | 9    | 16     | 1     | 100   | 5     | 0    | 8    |  |  |  |  |  |
| Future Vol, veh/h        | 12     | 951  | 60     | 69   | 918    | 9    | 16     | 1     | 100   | 5     | 0    | 8    |  |  |  |  |  |
| Conflicting Peds, #/hr   | 0      | 0    | 0      | 0    | 0      | 0    | 0      | 0     | 0     | 0     | 0    | 0    |  |  |  |  |  |
| Sign Control             | Free   | Free | Free   | Free | Free   | Free | Free   | Stop  | Stop  | Stop  | Stop | Stop |  |  |  |  |  |
| RT Channelized           | -      | -    | None   | -    | -      | None | -      | -     | None  | -     | -    | None |  |  |  |  |  |
| Storage Length           | 25     | -    | -      | 25   | -      | -    | -      | -     | -     | 0     | -    | 0    |  |  |  |  |  |
| Veh in Median Storage, # | -      | 0    | -      | -    | 0      | -    | -      | -     | 0     | -     | -    | 0    |  |  |  |  |  |
| Grade, %                 | -      | 0    | -      | -    | 0      | -    | -      | -     | 0     | -     | -    | 0    |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90   | 90     | 90   | 90     | 90   | 90     | 90    | 90    | 90    | 90   | 90   |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2    | 2      | 2    | 2      | 2    | 2      | 2     | 2     | 2     | 2    | 2    |  |  |  |  |  |
| Mvmt Flow                | 13     | 1057 | 67     | 77   | 1020   | 10   | 18     | 1     | 111   | 6     | 0    | 9    |  |  |  |  |  |
| Major/Minor              | Major1 |      | Major2 |      | Minor1 |      | Minor2 |       |       |       |      |      |  |  |  |  |  |
| Conflicting Flow All     | 1030   | 0    | 0      | 1124 | 0      | 0    | 1781   | 2301  | 562   | 1734  | -    | 515  |  |  |  |  |  |
| Stage 1                  | -      | -    | -      | -    | -      | -    | -      | 1117  | 1117  | -     | 1179 | -    |  |  |  |  |  |
| Stage 2                  | -      | -    | -      | -    | -      | -    | -      | 664   | 1184  | -     | 555  | -    |  |  |  |  |  |
| Critical Hdwy            | 4.14   | -    | -      | 4.14 | -      | -    | 7.54   | 6.54  | 6.94  | 7.54  | -    | 6.94 |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -    | -      | -    | -      | -    | 6.54   | 5.54  | -     | 6.54  | -    | -    |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -    | -      | -    | -      | -    | 6.54   | 5.54  | -     | 6.54  | -    | -    |  |  |  |  |  |
| Follow-up Hdwy           | 2.22   | -    | -      | 2.22 | -      | -    | 3.52   | 4.02  | 3.32  | 3.52  | -    | 3.32 |  |  |  |  |  |
| Pot Cap-1 Maneuver       | 670    | -    | -      | 617  | -      | -    | 52     | 38    | 470   | 56    | 0    | 505  |  |  |  |  |  |
| Stage 1                  | -      | -    | -      | -    | -      | -    | 221    | 281   | -     | 202   | 0    | -    |  |  |  |  |  |
| Stage 2                  | -      | -    | -      | -    | -      | -    | 416    | 261   | -     | 484   | 0    | -    |  |  |  |  |  |
| Platoon blocked, %       | -      | -    | -      | -    | -      | -    | -      | -     | -     | -     | -    | -    |  |  |  |  |  |
| Mov Cap-1 Maneuver       | 670    | -    | -      | 617  | -      | -    | 46     | 33    | 470   | 37    | -    | 505  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -    | -      | -    | -      | -    | 46     | 33    | -     | 37    | -    | -    |  |  |  |  |  |
| Stage 1                  | -      | -    | -      | -    | -      | -    | 217    | 276   | -     | 198   | -    | -    |  |  |  |  |  |
| Stage 2                  | -      | -    | -      | -    | -      | -    | 358    | 228   | -     | 361   | -    | -    |  |  |  |  |  |
| Approach                 | EB     | WB   | WB     | NB   | NB     | SB   | SB     |       |       |       |      |      |  |  |  |  |  |
| HCM Control Delay, s     | 0.1    | 0.8  |        | 52.4 |        | 53.3 |        | F     |       |       |      |      |  |  |  |  |  |
| HCM LOS                  |        |      |        | F    |        |      |        | F     |       |       |      |      |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBL  | EBT    | EBR  | WBL    | WBT  | WBR    | SBLn1 | SBLn2 |       |      |      |  |  |  |  |  |
| Capacity (veh/h)         | 198    | 670  | -      | -    | 617    | -    | -      | -     | 37    | 505   |      |      |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.657  | 0.02 | -      | -    | 0.124  | -    | -      | -     | 0.15  | 0.018 |      |      |  |  |  |  |  |
| HCM Control Delay (s)    | 52.4   | 10.5 | -      | -    | 11.7   | -    | -      | -     | 118.8 | 12.3  |      |      |  |  |  |  |  |
| HCM Lane LOS             | F      | B    | -      | -    | B      | -    | -      | -     | F     | B     |      |      |  |  |  |  |  |
| HCM 95th %tile Q(veh)    | 3.9    | 0.1  | -      | -    | 0.4    | -    | -      | -     | 0.5   | 0.1   |      |      |  |  |  |  |  |

Smoke Tree Resort  
2025 Background PM

9: Scottsdale Rd & Lincoln Dr  
Timings

|                                                           | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |  |
|-----------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Lane Group                                                | EBL   | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |  |
| Lane Configurations                                       | 552   | 61    | 466   | 61    | 68    | 445   | 1762  | 66    | 1702  | 527   |  |
| Traffic Volume (vph)                                      | 552   | 61    | 466   | 61    | 68    | 445   | 1762  | 66    | 1702  | 527   |  |
| Future Volume (vph)                                       | 552   | 61    | 466   | 61    | 68    | 445   | 1762  | 66    | 1702  | 527   |  |
| Turn Type                                                 | Split | NA    | pm+ov | Split | NA    | Prdt  | NA    | Prdt  | NA    | pm+ov |  |
| Protected Phases                                          | 4     | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     | 4     |  |
| Permitted Phases                                          | 4     | 4     | 4     | 8     | 8     | 5     | 2     | 1     | 6     | 4     |  |
| Detector Phase                                            | 4     | 4     | 4     | 8     | 8     | 5     | 2     | 1     | 6     | 4     |  |
| Switch Phase                                              | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 10.0  | 5.0   | 10.0  | 7.0   |  |
| Minimum Initial (s)                                       | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  | 16.7  | 11.0  | 16.0  | 13.0  |  |
| Minimum Split (s)                                         | 30.0  | 30.0  | 30.0  | 13.0  | 13.0  | 30.0  | 73.0  | 14.0  | 57.0  | 30.0  |  |
| Total Split (%)                                           | 23.1% | 23.1% | 23.1% | 10.0% | 10.0% | 23.1% | 56.2% | 10.8% | 43.8% | 23.1% |  |
| Yellow Time (s)                                           | 4.0   | 4.0   | 4.0   | 3.6   | 3.6   | 4.0   | 4.7   | 3.3   | 4.7   | 4.0   |  |
| All-Red Time (s)                                          | 1.5   | 1.5   | 1.5   | 2.0   | 2.0   | 1.5   | 1.0   | 2.0   | 1.0   | 1.5   |  |
| 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)                                       | 5.5   | 5.5   | 5.5   | 5.6   | 5.6   | 5.5   | 5.7   | 5.3   | 5.7   | 5.5   |  |
| Lead/Lag                                                  |       |       | Lead  |       |       | Lead  | Lag   | Lag   | Lead  | Lag   |  |
| Lead-Lag Optimize?                                        |       |       |       |       |       |       |       |       |       |       |  |
| Recall Mode                                               | None  | None  | None  | None  | None  | None  | None  | None  | C-Max | None  |  |
| Act Effct Green (s)                                       | 24.5  | 24.5  | 46.7  | 7.3   | 7.3   | 22.2  | 70.3  | 8.0   | 53.7  | 83.9  |  |
| Actuated g/C Ratio                                        | 0.19  | 0.19  | 0.36  | 0.06  | 0.06  | 0.17  | 0.54  | 0.06  | 0.41  | 0.65  |  |
| v/c Ratio                                                 | 1.07  | 1.07  | 0.85  | 0.69  | 0.62  | 0.84  | 0.74  | 0.67  | 0.90  | 0.55  |  |
| Control Delay                                             | 119.1 | 121.1 | 37.3  | 92.9  | 39.0  | 66.0  | 25.4  | 88.3  | 43.0  | 12.6  |  |
| Queue Delay                                               | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Total Delay                                               | 119.1 | 121.1 | 37.3  | 92.9  | 39.0  | 66.0  | 25.4  | 88.3  | 43.0  | 12.6  |  |
| LOS                                                       | F     | F     | D     | F     | D     | E     | C     | F     | D     | B     |  |
| Approach Delay                                            |       |       |       |       |       |       |       |       |       |       |  |
| Approach LOS                                              |       |       |       |       |       |       |       |       |       |       |  |
| Intersection Summary                                      |       |       |       |       |       |       |       |       |       |       |  |
| Cycle Length: 130                                         |       |       |       |       |       |       |       |       |       |       |  |
| Actuated Cycle Length: 130                                |       |       |       |       |       |       |       |       |       |       |  |
| Offset: 0 (0%), Referenced to phase 6 SBT, Start of Green |       |       |       |       |       |       |       |       |       |       |  |
| Natural Cycle: 100                                        |       |       |       |       |       |       |       |       |       |       |  |
| Control Type: Actuated-Coordinated                        |       |       |       |       |       |       |       |       |       |       |  |
| Maximum v/c Ratio: 1.07                                   |       |       |       |       |       |       |       |       |       |       |  |
| Intersection Signal Delay: 45.1                           |       |       |       |       |       |       |       |       |       |       |  |
| Intersection Capacity Utilization 86.9%                   |       |       |       |       |       |       |       |       |       |       |  |
| Analysis Period (min) 15                                  |       |       |       |       |       |       |       |       |       |       |  |



Smoke Tree Resort  
2025 Background PM

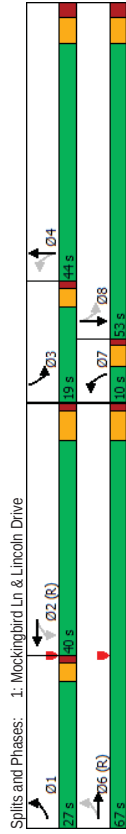
9: Scottsdale Rd & Lincoln Dr  
HCM 6th Signalized Intersection Summary

|                                                                                                    | EBL   | EBT  | EBR  | WBL   | WBT  | NBL   | NBT  | SBL  | SBT  | SBR  |      |
|----------------------------------------------------------------------------------------------------|-------|------|------|-------|------|-------|------|------|------|------|------|
| Movement                                                                                           | EBL   | EBT  | EBR  | WBL   | WBT  | NBL   | NBT  | SBL  | SBT  | SBR  |      |
| Lane Configurations                                                                                | 552   | 61   | 466  | 61    | 68   | 445   | 1762 | 50   | 66   | 1702 | 527  |
| Traffic Volume (veh/h)                                                                             | 552   | 61   | 466  | 61    | 68   | 445   | 1762 | 50   | 66   | 1702 | 527  |
| Future Volume (veh/h)                                                                              | 552   | 61   | 466  | 61    | 68   | 445   | 1762 | 50   | 66   | 1702 | 527  |
| Initial Q (Qb) veh                                                                                 | 0     | 0    | 0    | 0     | 0    | 0     | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A, pbf)                                                                               | 1.00  | 1.00 | 1.00 | 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 |
| Work Zone On Approach                                                                              | No    | No   | No   | No    | No   | No    | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h                                                                                | 1870  | 1870 | 1870 | 1870  | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h                                                                               | 662   | 0    | 518  | 68    | 76   | 87    | 494  | 1958 | 56   | 73   | 1891 |
| Peak Hour Factor                                                                                   | 0.90  | 0.90 | 0.90 | 0.90  | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %                                                                               | 2     | 2    | 2    | 2     | 2    | 2     | 2    | 2    | 2    | 2    | 2    |
| Cap. veh/h                                                                                         | 671   | 0    | 551  | 101   | 101  | 90    | 551  | 2569 | 73   | 93   | 2015 |
| Arrive On Green                                                                                    | 0.06  | 0.00 | 0.06 | 0.06  | 0.06 | 0.06  | 0.16 | 0.50 | 0.05 | 0.39 | 0.39 |
| Sat Flow, veh/h                                                                                    | 3563  | 0    | 1585 | 1781  | 1777 | 1585  | 3456 | 5102 | 146  | 1781 | 5106 |
| Grp Volume(V), veh/h                                                                               | 662   | 0    | 518  | 68    | 76   | 87    | 494  | 1305 | 709  | 73   | 1891 |
| Grp Sat Flow(s), veh/h                                                                             | 1781  | 0    | 1585 | 1781  | 1777 | 1585  | 1728 | 1702 | 1844 | 1781 | 1702 |
| Q Serve(g, s)                                                                                      | 24.1  | 0.0  | 24.5 | 4.9   | 5.5  | 7.1   | 18.2 | 40.1 | 40.3 | 5.3  | 46.3 |
| Cycle Q Clear(g, c), s                                                                             | 24.1  | 0.0  | 24.5 | 4.9   | 5.5  | 7.1   | 18.2 | 40.1 | 40.3 | 5.3  | 46.3 |
| Prop In Lane                                                                                       | 1.00  | 1.00 | 1.00 | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h                                                                             | 671   | 0    | 551  | 101   | 101  | 90    | 551  | 1714 | 929  | 93   | 2015 |
| VC Ratio(X)                                                                                        | 0.99  | 0.00 | 0.94 | 0.67  | 0.75 | 0.96  | 0.90 | 0.76 | 0.76 | 0.79 | 0.94 |
| Avail Cap(c, a), veh/h                                                                             | 671   | 0    | 551  | 101   | 101  | 90    | 551  | 1762 | 955  | 119  | 2015 |
| HCM Platoon Ratio                                                                                  | 0.33  | 0.33 | 0.33 | 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  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh                                                                           | 60.8  | 0.0  | 46.1 | 60.1  | 60.4 | 61.2  | 53.6 | 26.0 | 26.0 | 60.9 | 37.8 |
| Incr Delay (d2), s/veh                                                                             | 31.0  | 0.0  | 24.0 | 13.1  | 24.0 | 12.5  | 1.7  | 3.2  | 17.6 | 10.0 | 3.3  |
| 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  |
| %ile BackOfQ(50%) veh/h                                                                            | 14.5  | 0.0  | 18.9 | 2.6   | 3.1  | 4.9   | 8.9  | 16.3 | 18.1 | 2.8  | 20.8 |
| Unsig. Movement Delay, s/veh                                                                       |       |      |      |       |      |       |      |      |      |      |      |
| LnGrp Delay(d), s/veh                                                                              | 91.8  | 0.0  | 70.0 | 73.2  | 84.4 | 143.4 | 66.1 | 27.7 | 29.2 | 78.5 | 47.8 |
| LnGrp LOS                                                                                          | F     | A    | E    | E     | F    | F     | E    | C    | E    | D    | C    |
| Approach Vol, veh/h                                                                                | 1180  |      |      | 231   |      |       | 2508 |      |      | 2550 |      |
| Approach Delay, s/veh                                                                              | 82.3  |      |      | 103.3 |      |       | 35.7 |      |      | 42.6 |      |
| Approach LOS                                                                                       | F     |      |      | F     |      |       | D    |      |      | D    |      |
| Timer - Assigned Phs                                                                               | 1     | 2    |      | 4     | 5    | 6     | 8    |      |      |      |      |
| Phs Duration (G+Y+Rc), s                                                                           | 12.1  | 71.2 |      | 30.0  | 26.2 | 57.0  | 13.0 |      |      |      |      |
| Change Period (Y+Rc), s                                                                            | * 5.3 | 5.7  |      | 5.5   | 5.5  | 5.7   | 5.6  |      |      |      |      |
| Max Green Setting (Gmax), s                                                                        | * 8.7 | 67.3 |      | 24.5  | 24.5 | 51.3  | 7.4  |      |      |      |      |
| Max Q Clear Time (g_c+1), s                                                                        | 7.3   | 42.3 |      | 26.5  | 20.2 | 48.3  | 9.1  |      |      |      |      |
| Green Ext Time (p_c), s                                                                            | 0.0   | 3.3  |      | 0.0   | 0.5  | 1.5   | 0.0  |      |      |      |      |
| Intersection Summary                                                                               |       |      |      |       |      |       |      |      |      |      |      |
| HCM 6th Ctrl Delay                                                                                 |       |      |      | 49.3  |      |       |      |      |      |      |      |
| HCM 6th LOS                                                                                        |       |      |      | D     |      |       |      |      |      |      |      |
| Notes                                                                                              |       |      |      |       |      |       |      |      |      |      |      |
| User approved pedestrian interval to be less than phase max green.                                 |       |      |      |       |      |       |      |      |      |      |      |
| User approved volume balancing among the lanes for turning movement.                               |       |      |      |       |      |       |      |      |      |      |      |
| * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier. |       |      |      |       |      |       |      |      |      |      |      |

Smoke Tree Resort  
2025 Total AM

1: Mockingbird Ln & Lincoln Drive  
Timings

|                                                                      | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |  |
|----------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Lane Group                                                           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |  |
| Lane Configurations                                                  | 242   | 1055  | 25    | 971   | 6     | 37    | 85    | 96    |  |
| Traffic Volume (vph)                                                 | 242   | 1055  | 25    | 971   | 6     | 37    | 85    | 96    |  |
| Future Volume (vph)                                                  | 242   | 1055  | 25    | 971   | 6     | 37    | 85    | 96    |  |
| Turn Type                                                            | pm+pt | NA    | Perm  | NA    | pm+pt | NA    | pm+pt | NA    |  |
| Protected Phases                                                     | 1     | 6     | 2     | 7     | 4     | 3     | 8     |       |  |
| Permitted Phases                                                     | 6     | 6     | 2     | 2     | 4     | 4     | 3     | 8     |  |
| Detector Phase                                                       | 1     | 6     | 2     | 2     | 7     | 4     | 3     | 8     |  |
| Switch Phase                                                         |       |       |       |       |       |       |       |       |  |
| Minimum Initial (s)                                                  | 3.5   | 15.0  | 15.0  | 15.0  | 5.0   | 7.0   | 3.5   | 7.0   |  |
| Minimum Split (s)                                                    | 8.0   | 27.0  | 27.0  | 27.0  | 9.5   | 33.5  | 8.0   | 33.5  |  |
| Total Split (s)                                                      | 27.0  | 67.0  | 40.0  | 40.0  | 10.0  | 44.0  | 19.0  | 53.0  |  |
| Total Split (%)                                                      | 20.8% | 51.5% | 30.8% | 30.8% | 7.7%  | 33.8% | 14.6% | 40.8% |  |
| Yellow Time (s)                                                      | 3.0   | 4.5   | 4.5   | 4.5   | 3.5   | 4.0   | 3.0   | 4.0   |  |
| All-Red Time (s)                                                     | 1.0   | 1.5   | 1.5   | 1.5   | 1.0   | 2.5   | 1.0   | 2.5   |  |
| Lost Time Adjust (s)                                                 | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Total Lost Time (s)                                                  | 4.0   | 6.0   | 6.0   | 6.0   | 4.5   | 6.5   | 4.0   | 6.5   |  |
| Lead/Lag                                                             | Lead  | Lag   | Lag   | Lag   | Lead  | Lag   | Lead  | Lag   |  |
| Lead-Lag Optimize?                                                   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |  |
| Recall Mode                                                          | None  | C-Max | C-Max | C-Max | None  | None  | None  | None  |  |
| Act Effct Green (s)                                                  | 88.6  | 86.6  | 64.1  | 64.1  | 21.9  | 16.2  | 33.4  | 28.9  |  |
| Actuated g/C Ratio                                                   | 0.68  | 0.67  | 0.49  | 0.49  | 0.17  | 0.12  | 0.26  | 0.22  |  |
| v/c Ratio                                                            | 0.72  | 0.52  | 0.13  | 0.65  | 0.05  | 0.29  | 0.27  | 0.85  |  |
| Control Delay                                                        | 28.3  | 13.9  | 19.5  | 23.8  | 30.3  | 33.0  | 36.6  | 50.6  |  |
| Queue Delay                                                          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |  |
| Total Delay                                                          | 28.3  | 13.9  | 19.5  | 23.8  | 30.3  | 33.0  | 36.6  | 50.6  |  |
| LOS                                                                  | C     | B     | B     | C     | C     | C     | D     | D     |  |
| Approach Delay                                                       |       |       |       |       |       |       |       |       |  |
| Approach LOS                                                         | B     | C     | C     | C     | C     | C     | D     | D     |  |
| Intersection Summary                                                 |       |       |       |       |       |       |       |       |  |
| Cycle Length: 130                                                    |       |       |       |       |       |       |       |       |  |
| Actuated Cycle Length: 130                                           |       |       |       |       |       |       |       |       |  |
| Offset: 0 (0%), Referenced to phase 2(WBTL and 6EBTL, Start of Green |       |       |       |       |       |       |       |       |  |
| Natural Cycle: 90                                                    |       |       |       |       |       |       |       |       |  |
| Control Type: Actuated-Coordinated                                   |       |       |       |       |       |       |       |       |  |
| Maximum v/c Ratio: 0.85                                              |       |       |       |       |       |       |       |       |  |
| Intersection Signal Delay: 24.2                                      |       |       |       |       |       |       |       |       |  |
| Intersection Capacity Utilization 78.7%                              |       |       |       |       |       |       |       |       |  |
| Analysis Period (min) 15                                             |       |       |       |       |       |       |       |       |  |



Smoke Tree Resort  
2025 Total AM

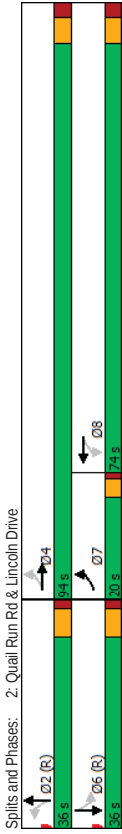
1: Mockingbird Ln & Lincoln Drive  
HCM 6th Signalized Intersection Summary

|                                                                    | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |  |
|--------------------------------------------------------------------|------|------|------|------|------|------|------|------|--|
| Movement                                                           | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |  |
| Lane Configurations                                                | 242  | 1055 | 33   | 25   | 971  | 48   | 6    | 37   |  |
| Traffic Volume (veh/h)                                             | 242  | 1055 | 33   | 25   | 971  | 48   | 6    | 37   |  |
| Future Volume (veh/h)                                              | 242  | 1055 | 33   | 25   | 971  | 48   | 6    | 37   |  |
| Initial Q (Qb), veh                                                | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |  |
| Ped-Bike Adj(A, pbT)                                               | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |  |
| Parking Bus, Adj                                                   | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |  |
| Work Zone On Approach                                              | No   | No   | No   | No   | No   | No   | No   | No   |  |
| Adj Sat Flow, veh/h                                                | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |  |
| Adj Flow Rate, veh/h                                               | 269  | 1172 | 37   | 28   | 1079 | 53   | 7    | 41   |  |
| Peak Hour Factor                                                   | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |  |
| Percent Heavy Veh, %                                               | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |  |
| Cap, veh/h                                                         | 325  | 2114 | 67   | 241  | 1643 | 81   | 103  | 226  |  |
| Arrive On Green                                                    | 0.09 | 0.60 | 0.60 | 0.32 | 0.32 | 0.01 | 0.22 | 0.05 |  |
| Sat Flow, veh/h                                                    | 1781 | 3516 | 111  | 462  | 3447 | 169  | 1781 | 1036 |  |
| Grp Volume(V), veh/h                                               | 269  | 592  | 617  | 28   | 556  | 576  | 7    | 69   |  |
| Grp Sat Flow(s), veh/h                                             | 1781 | 1777 | 1850 | 462  | 1777 | 1840 | 1781 | 0    |  |
| Q Serve(g, s), s                                                   | 9.6  | 25.9 | 25.9 | 6.0  | 35.0 | 35.1 | 0.4  | 0.0  |  |
| Cycle Q Clear(g, c), s                                             | 9.6  | 25.9 | 25.9 | 15.8 | 35.0 | 35.1 | 0.4  | 0.0  |  |
| Prop In Lane                                                       | 1.00 | 1.00 | 0.06 | 1.00 | 0.09 | 1.00 | 0.41 | 1.00 |  |
| Lane Grp Cap(c), veh/h                                             | 325  | 1068 | 1112 | 241  | 847  | 877  | 103  | 0    |  |
| V/C Ratio(X)                                                       | 0.83 | 0.55 | 0.55 | 0.12 | 0.66 | 0.66 | 0.07 | 0.00 |  |
| Avail Cap(c, a), veh/h                                             | 474  | 1068 | 1112 | 241  | 847  | 877  | 163  | 0    |  |
| HCM Platoon Ratio                                                  | 1.00 | 1.00 | 1.00 | 0.67 | 0.67 | 0.67 | 1.00 | 1.00 |  |
| Upstream Filter(i)                                                 | 1.00 | 1.00 | 1.00 | 0.55 | 0.55 | 0.55 | 1.00 | 1.00 |  |
| Uniform Delay (d), s/veh                                           | 23.7 | 15.5 | 15.5 | 32.2 | 35.1 | 41.3 | 0.0  | 41.4 |  |
| Incr Delay (d2), s/veh                                             | 7.8  | 2.1  | 2.0  | 0.5  | 2.2  | 2.1  | 0.3  | 0.0  |  |
| Initial Q Delay(d3), s/veh                                         | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |  |
| %ile BackOfQ(50%), veh/h                                           | 4.7  | 10.8 | 11.3 | 0.8  | 16.5 | 17.0 | 0.2  | 0.0  |  |
| Unsig. Movement Delay, s/veh                                       |      |      |      |      |      |      |      |      |  |
| LnGrp Delay(d), s/veh                                              | 31.5 | 17.6 | 17.5 | 32.8 | 37.3 | 37.2 | 41.6 | 0.0  |  |
| LnGrp LOS                                                          | C    | B    | B    | C    | D    | D    | A    | D    |  |
| Approach Vol, veh/h                                                | 1478 |      |      | 1160 |      |      | 76   |      |  |
| Approach Delay, s/veh                                              | 20.1 |      |      | 37.1 |      |      | 41.6 |      |  |
| Approach LOS                                                       | C    |      |      | D    |      |      | D    |      |  |
| Timer - Assigned Phs                                               | 1    | 2    | 3    | 4    | 6    | 7    | 8    |      |  |
| Phs Duration (G+Y+Rc), s                                           | 16.2 | 68.0 | 11.0 | 34.8 | 84.2 | 5.6  | 40.2 |      |  |
| Change Period (Y+Rc), s                                            | 4.0  | 6.0  | 4.0  | 6.5  | 6.0  | 4.5  | 6.5  |      |  |
| Max Green Setting (Gmax), s                                        | 23.0 | 34.0 | 15.0 | 37.5 | 61.0 | 5.5  | 46.5 |      |  |
| Max Q Clear Time (g_c+H), s                                        | 11.6 | 37.1 | 7.2  | 6.2  | 27.9 | 2.4  | 31.5 |      |  |
| Green Ext Time (p_c), s                                            | 0.6  | 0.0  | 0.1  | 0.3  | 10.3 | 0.0  | 2.2  |      |  |
| Intersection Summary                                               |      |      |      |      |      |      |      |      |  |
| HCM 6th Ctrl Delay                                                 |      |      |      |      | 32.1 |      |      |      |  |
| HCM 6th LOS                                                        |      |      |      |      | C    |      |      |      |  |
| Notes                                                              |      |      |      |      |      |      |      |      |  |
| User approved pedestrian interval to be less than phase max green. |      |      |      |      |      |      |      |      |  |

Smoke Tree Resort  
2025 Total AM

2: Quail Run Rd & Lincoln Drive  
Timings

| Lane Group           | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations  | 115   | 1117  | 2     | 937   | 1     | 0     | 26    | 0     |
| Traffic Volume (vph) | 115   | 1117  | 2     | 937   | 1     | 0     | 26    | 0     |
| Future Volume (vph)  | 115   | 1117  | 2     | 937   | 1     | 0     | 26    | 0     |
| Turn Type            | pm+pt | NA    | Perm  | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 7     | 4     | 8     | 8     | 2     | 2     | 6     | 6     |
| Permitted Phases     | 4     | 4     | 8     | 8     | 2     | 2     | 6     | 6     |
| Detector Phase       | 7     | 4     | 8     | 8     | 2     | 2     | 6     | 6     |
| Switch Phase         |       |       |       |       |       |       |       |       |
| Minimum Initial (s)  | 3.5   | 15.0  | 15.0  | 15.0  | 7.0   | 7.0   | 7.0   | 7.0   |
| Minimum Split (s)    | 8.0   | 28.0  | 28.0  | 28.0  | 33.0  | 33.0  | 33.0  | 33.0  |
| Total Split (s)      | 20.0  | 94.0  | 74.0  | 74.0  | 36.0  | 36.0  | 36.0  | 36.0  |
| Total Split (%)      | 15.4% | 72.3% | 56.9% | 56.9% | 27.7% | 27.7% | 27.7% | 27.7% |
| Yellow Time (s)      | 3.0   | 4.0   | 4.0   | 4.0   | 4.5   | 4.5   | 4.5   | 4.5   |
| All-Red Time (s)     | 1.0   | 2.5   | 2.5   | 2.5   | 1.5   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0   | 6.5   | 6.5   | 6.5   | 6.0   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lead  | Lag   | Lag   | Lag   |       |       |       |       |
| Lead-Lag Optimize?   | Yes   | Yes   | Yes   | Yes   | C-Max | C-Max | C-Max | C-Max |
| Recall Mode          | None  | None  | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Act Effct Green (s)  | 67.7  | 65.2  | 50.4  | 50.4  | 52.3  | 52.3  | 52.3  | 52.3  |
| Actuated g/C Ratio   | 0.52  | 0.50  | 0.39  | 0.39  | 0.40  | 0.40  | 0.40  | 0.40  |
| v/c Ratio            | 0.55  | 0.70  | 0.02  | 0.77  | 0.01  | 0.05  | 0.09  | 0.09  |
| Control Delay        | 33.2  | 42.4  | 29.0  | 44.3  | 0.0   | 28.4  | 0.2   | 0.2   |
| Queue Delay          | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 33.2  | 42.4  | 29.0  | 44.3  | 0.0   | 28.4  | 0.2   | 0.2   |
| LOS                  | C     | D     | C     | D     | A     | A     | C     | A     |
| Approach Delay       |       |       |       |       |       |       |       |       |
| Approach LOS         | D     | D     | D     | D     |       |       |       |       |



Smoke Tree Resort  
2025 Total AM

2: Quail Run Rd & Lincoln Drive  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations          | 115  | 1117 | 4    | 2    | 937  | 12   | 1    | 0    | 8    | 26   | 0    | 66   |
| Traffic Volume (veh/h)       | 115  | 1117 | 4    | 2    | 937  | 12   | 1    | 0    | 8    | 26   | 0    | 66   |
| Future Volume (veh/h)        | 115  | 1117 | 4    | 2    | 937  | 12   | 1    | 0    | 8    | 26   | 0    | 66   |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Per-Bike Adj(A, pbT)         | 1.00 | 1.00 | 1.00 | 1.00 | 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   | No   | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h          | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 128  | 1241 | 4    | 2    | 1041 | 13   | 1    | 0    | 9    | 29   | 0    | 73   |
| Peak Hour Factor             | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 208  | 1567 | 5    | 182  | 1217 | 15   | 83   | 21   | 668  | 721  | 0    | 749  |
| Arrive On Green              | 0.12 | 0.86 | 0.86 | 0.45 | 0.45 | 0.45 | 0.47 | 0.00 | 0.47 | 0.47 | 0.00 | 0.47 |
| Sat Flow, veh/h              | 1781 | 3633 | 12   | 447  | 3594 | 45   | 112  | 45   | 1413 | 1406 | 0    | 1585 |
| Grp Volume(V), veh/h         | 128  | 607  | 638  | 2    | 515  | 539  | 10   | 0    | 29   | 0    | 73   | 73   |
| Grp Sat Flow(s), veh/h       | 1781 | 1777 | 1868 | 447  | 1777 | 1862 | 1570 | 0    | 0    | 1406 | 0    | 1585 |
| Q Serve(g, s), s             | 6.0  | 19.3 | 19.3 | 0.4  | 33.7 | 33.7 | 0.0  | 0.0  | 0.0  | 0.9  | 0.0  | 3.3  |
| Cycle Q Clear(g, c), s       | 6.0  | 19.3 | 19.3 | 7.6  | 33.7 | 33.7 | 0.4  | 0.0  | 0.0  | 1.3  | 0.0  | 3.3  |
| Prop In Lane                 | 1.00 | 0.01 | 1.00 | 0.02 | 0.10 | 0.02 | 0.10 | 0.00 | 0.90 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 208  | 766  | 806  | 182  | 602  | 631  | 773  | 0    | 0    | 721  | 0    | 749  |
| V/C Ratio(X)                 | 0.61 | 0.79 | 0.79 | 0.01 | 0.86 | 0.86 | 0.01 | 0.00 | 0.00 | 0.04 | 0.00 | 0.10 |
| Avail Cap(c, a), veh/h       | 317  | 1196 | 1257 | 262  | 923  | 967  | 773  | 0    | 0    | 721  | 0    | 749  |
| HCM Platoon Ratio            | 2.00 | 2.00 | 2.00 | 1.33 | 1.33 | 1.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(i)           | 0.86 | 0.86 | 0.86 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh     | 28.2 | 6.4  | 6.4  | 28.0 | 32.9 | 32.9 | 18.2 | 0.0  | 0.0  | 18.4 | 0.0  | 19.0 |
| Incr Delay (d2), s/veh       | 2.5  | 1.7  | 1.6  | 0.0  | 5.0  | 4.8  | 0.0  | 0.0  | 0.0  | 0.1  | 0.0  | 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(50%), veh/h     | 2.5  | 3.2  | 3.3  | 0.0  | 14.2 | 14.9 | 0.2  | 0.0  | 0.0  | 0.5  | 0.0  | 1.3  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 30.7 | 8.1  | 8.0  | 28.0 | 37.9 | 37.7 | 18.2 | 0.0  | 0.0  | 18.5 | 0.0  | 19.2 |
| LnGrp LOS                    | C    | A    | A    | C    | D    | D    | B    | A    | A    | B    | A    | B    |
| Approach Vol, veh/h          | 1373 |      |      | 1056 |      |      | 10   |      |      | 102  |      |      |
| Approach Delay, s/veh        | 10.2 |      |      | 37.8 |      |      | 18.2 |      |      | 19.0 |      |      |
| Approach LOS                 | B    |      |      | D    |      |      | B    |      |      | B    |      |      |
| Timer - Assigned Phs         | 2    | 4    | 4    | 6    | 7    | 8    |      |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 67.4 | 62.6 | 62.6 | 67.4 | 12.0 | 50.5 |      |      |      |      |      |      |
| Change Period (Y+Rc), s      | 6.0  | 6.5  | 6.5  | 6.0  | 4.0  | 6.5  |      |      |      |      |      |      |
| Max Green Setting (Gmax), s  | 30.0 | 87.5 | 87.5 | 30.0 | 16.0 | 67.5 |      |      |      |      |      |      |
| Max Q Clear Time (g_c+H), s  | 2.4  | 21.3 | 21.3 | 5.3  | 8.0  | 35.7 |      |      |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 12.1 | 12.1 | 0.4  | 0.2  | 8.3  |      |      |      |      |      |      |
| Intersection Summary         |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      |      | 22.1 |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  |      |      |      | C    |      |      |      |      |      |      |      |      |

Smoke Tree Resort  
2025 Total AM

4: Smoke Tree Access B & Lincoln Dr  
HCM 6th TWSC

| Intersection             |  |        |        |      |        |      |      |  |  |  |  |  |
|--------------------------|--|--------|--------|------|--------|------|------|--|--|--|--|--|
| Int Delay, s/veh         |  | 0.5    |        |      |        |      |      |  |  |  |  |  |
| Movement                 |  | EBT    | EBR    | WBL  | WBT    | NBL  | NBR  |  |  |  |  |  |
| Lane Configurations      |  | 4B     | 4B     | 4A   | 4A     | W    | W    |  |  |  |  |  |
| Traffic Vol, veh/h       |  | 1137   | 17     | 26   | 934    | 16   | 22   |  |  |  |  |  |
| Future Vol, veh/h        |  | 1137   | 17     | 26   | 934    | 16   | 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           |  | -      | -      | 25   | -      | 0    | -    |  |  |  |  |  |
| Veh in Median Storage, # |  | 0      | -      | -    | 0      | 0    | -    |  |  |  |  |  |
| Grade, %                 |  | 0      | -      | -    | 0      | 0    | -    |  |  |  |  |  |
| Peak Hour Factor         |  | 90     | 90     | 90   | 90     | 90   | 90   |  |  |  |  |  |
| Heavy Vehicles, %        |  | 2      | 2      | 2    | 2      | 2    | 2    |  |  |  |  |  |
| Mvmt Flow                |  | 1263   | 19     | 29   | 1038   | 18   | 24   |  |  |  |  |  |
|                          |  |        |        |      |        |      |      |  |  |  |  |  |
| Major/Minor              |  | Major1 | Major2 |      | Minor1 |      |      |  |  |  |  |  |
| Conflicting Flow All     |  | 0      | 0      | 1282 | 0      | 1850 | 641  |  |  |  |  |  |
| Stage 1                  |  | -      | -      | -    | -      | 1273 | -    |  |  |  |  |  |
| Stage 2                  |  | -      | -      | -    | -      | 577  | -    |  |  |  |  |  |
| Critical Hdwy            |  | -      | -      | 4.14 | -      | 6.84 | 6.94 |  |  |  |  |  |
| Critical Hdwy Stg 1      |  | -      | -      | -    | -      | 5.84 | -    |  |  |  |  |  |
| Critical Hdwy Stg 2      |  | -      | -      | -    | -      | 5.84 | -    |  |  |  |  |  |
| Follow-up Hdwy           |  | -      | -      | 2.22 | -      | 3.52 | 3.32 |  |  |  |  |  |
| Pot Cap-1 Maneuver       |  | -      | -      | 537  | -      | 66   | 417  |  |  |  |  |  |
| Stage 1                  |  | -      | -      | -    | -      | 227  | -    |  |  |  |  |  |
| Stage 2                  |  | -      | -      | -    | -      | 525  | -    |  |  |  |  |  |
| Platoon blocked, %       |  | -      | -      | -    | -      | -    | -    |  |  |  |  |  |
| Mov Cap-1 Maneuver       |  | -      | -      | 537  | -      | 62   | 417  |  |  |  |  |  |
| Mov Cap-2 Maneuver       |  | -      | -      | -    | -      | 160  | -    |  |  |  |  |  |
| Stage 1                  |  | -      | -      | -    | -      | 215  | -    |  |  |  |  |  |
| Stage 2                  |  | -      | -      | -    | -      | 525  | -    |  |  |  |  |  |
|                          |  |        |        |      |        |      |      |  |  |  |  |  |
| Approach                 |  | EB     | WB     |      | NB     |      |      |  |  |  |  |  |
| HCM Control Delay, s     |  | 0      | 0.3    |      | 22.4   |      |      |  |  |  |  |  |
| HCM LOS                  |  | C      |        |      |        |      |      |  |  |  |  |  |
|                          |  |        |        |      |        |      |      |  |  |  |  |  |
| Minor Lane/Major Mvmt    |  | NBLn1  | EBT    | EBR  | WBL    | WBT  |      |  |  |  |  |  |
| Capacity (veh/h)         |  | 249    | -      | -    | 537    | -    |      |  |  |  |  |  |
| HCM Lane V/C Ratio       |  | 0.17   | -      | -    | 0.054  | -    |      |  |  |  |  |  |
| HCM Control Delay (s)    |  | 22.4   | -      | -    | 12.1   | -    |      |  |  |  |  |  |
| HCM Lane LOS             |  | C      | -      | -    | B      | -    |      |  |  |  |  |  |
| HCM 95th %ile Q(veh)     |  | 0.6    | -      | -    | 0.2    | -    |      |  |  |  |  |  |

Smoke Tree Resort  
2025 Total AM

5: Lincoln Medical West & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |      |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|-------|------|------|--|--|--|--|--|--|
| Int Delay, s/veh         |        | 0.4    |        |       |      |      |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT   | NBL  | NBR  |  |  |  |  |  |  |
| Lane Configurations      | 4B     | 5      | 4A     | 4A    | W    | W    |  |  |  |  |  |  |
| Traffic Vol, veh/h       | 1142   | 18     | 42     | 953   | 6    | 9    |  |  |  |  |  |  |
| Future Vol, veh/h        | 1142   | 18     | 42     | 953   | 6    | 9    |  |  |  |  |  |  |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free  | Stop | Stop |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None  | -    | None |  |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -     | 0    | -    |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90    | 90   | 90   |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2     | 2    | 2    |  |  |  |  |  |  |
| Mvmt Flow                | 1269   | 20     | 47     | 1059  | 7    | 10   |  |  |  |  |  |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |       |      |      |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1289   | 0     | 1903 | 645  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 1279 | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 624  | -    |  |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -     | 6.84 | 6.94 |  |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -     | 5.84 | -    |  |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -     | 5.84 | -    |  |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -     | 3.52 | 3.32 |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 534    | -     | 61   | 415  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 225  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 496  | -    |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 534    | -     | 56   | 415  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -     | 150  | -    |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 205  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 496  | -    |  |  |  |  |  |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |       |      |      |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0.5    | 20.9   |       |      |      |  |  |  |  |  |  |
| HCM LOS                  | C      |        |        |       |      |      |  |  |  |  |  |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL   | WBT  |      |  |  |  |  |  |  |
| Capacity (veh/h)         | 243    | -      | -      | 534   | -    |      |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.069  | -      | -      | 0.087 | -    |      |  |  |  |  |  |  |
| HCM Control Delay (s)    | 20.9   | -      | -      | 12.4  | -    |      |  |  |  |  |  |  |
| HCM Lane LOS             | C      | -      | -      | B     | -    |      |  |  |  |  |  |  |
| HCM 95th %tile Ovth      | 0.2    | -      | -      | 0.3   | -    |      |  |  |  |  |  |  |

Smoke Tree Resort  
2025 Total AM

6: Lincoln Medical East & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |      |  |  |  |  |  |     |  |
|--------------------------|--------|--------|--------|-------|------|------|--|--|--|--|--|-----|--|
| Int Delay, s/veh         |        |        |        |       |      |      |  |  |  |  |  | 0.1 |  |
| Movement                 | EBT    | EBR    | WBL    | WBT   | NBL  | NBR  |  |  |  |  |  |     |  |
| Lane Configurations      | ↔↔     |        |        | ↔↔    |      | ↔    |  |  |  |  |  |     |  |
| Traffic Vol. veh/h       | 1138   | 11     | 6      | 995   | 0    | 9    |  |  |  |  |  |     |  |
| Future Vol. veh/h        | 1138   | 11     | 6      | 995   | 0    | 9    |  |  |  |  |  |     |  |
| Conflicting Peds. #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |  |  |  |  |  |     |  |
| Sign Control             | Free   | Free   | Free   | Free  | Stop | Stop |  |  |  |  |  |     |  |
| RT Channelized           | -      | None   | -      | None  | -    | None |  |  |  |  |  |     |  |
| Storage Length           | -      | -      | -      | -     | -    | 0    |  |  |  |  |  |     |  |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |     |  |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |     |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90    | 90   | 90   |  |  |  |  |  |     |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2     | 2    | 2    |  |  |  |  |  |     |  |
| Mvmt Flow                | 1264   | 12     | 7      | 1106  | 0    | 10   |  |  |  |  |  |     |  |
| Major/Minor              |        |        |        |       |      |      |  |  |  |  |  |     |  |
|                          | Major1 | Major2 | Minor1 |       |      |      |  |  |  |  |  |     |  |
| Conflicting Flow All     | 0      | 0      | 1276   | 0     | -    | 638  |  |  |  |  |  |     |  |
| Stage 1                  | -      | -      | -      | -     | -    | -    |  |  |  |  |  |     |  |
| Stage 2                  | -      | -      | -      | -     | -    | -    |  |  |  |  |  |     |  |
| Critical Hdwy            | -      | -      | 4.14   | -     | -    | 6.94 |  |  |  |  |  |     |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -     | -    | -    |  |  |  |  |  |     |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -     | -    | -    |  |  |  |  |  |     |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -     | -    | 3.32 |  |  |  |  |  |     |  |
| Pot Cap-1 Maneuver       | -      | -      | 540    | -     | 0    | 419  |  |  |  |  |  |     |  |
| Stage 1                  | -      | -      | -      | -     | 0    | -    |  |  |  |  |  |     |  |
| Stage 2                  | -      | -      | -      | -     | 0    | -    |  |  |  |  |  |     |  |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |  |  |  |  |  |     |  |
| Mov Cap-1 Maneuver       | -      | -      | 540    | -     | -    | 419  |  |  |  |  |  |     |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -     | -    | -    |  |  |  |  |  |     |  |
| Stage 1                  | -      | -      | -      | -     | -    | -    |  |  |  |  |  |     |  |
| Stage 2                  | -      | -      | -      | -     | -    | -    |  |  |  |  |  |     |  |
| Approach                 |        |        |        |       |      |      |  |  |  |  |  |     |  |
|                          | EB     | WB     | NB     |       |      |      |  |  |  |  |  |     |  |
| HCM Control Delay, s     | 0      | 0.1    | 13.8   |       |      |      |  |  |  |  |  |     |  |
| HCM LOS                  | B      |        |        |       |      |      |  |  |  |  |  |     |  |
| Minor Lane/Major Mvmt    |        |        |        |       |      |      |  |  |  |  |  |     |  |
|                          | NBLn1  | EBT    | EBR    | WBL   | WBT  |      |  |  |  |  |  |     |  |
| Capacity (veh/h)         | 419    | -      | -      | 540   | -    |      |  |  |  |  |  |     |  |
| HCM Lane V/C Ratio       | 0.024  | -      | -      | 0.012 | -    |      |  |  |  |  |  |     |  |
| HCM Control Delay (s)    | 13.8   | -      | -      | 11.8  | -    |      |  |  |  |  |  |     |  |
| HCM Lane LOS             | B      | -      | -      | B     | -    |      |  |  |  |  |  |     |  |
| HCM 95th %ile Q(veh)     | 0.1    | -      | -      | 0     | -    |      |  |  |  |  |  |     |  |

Smoke Tree Resort  
2025 Total AM

7: Apartment Drwy & Lincoln Dr  
HCM 6th TWSC

| Intersection                                                                                                         |          |       |      |      |      |      |      |      |       |       |      |      |  | 17.8     |  |
|----------------------------------------------------------------------------------------------------------------------|----------|-------|------|------|------|------|------|------|-------|-------|------|------|--|----------|--|
| Int Delay, s/veh                                                                                                     |          |       |      |      |      |      |      |      |       |       |      |      |  |          |  |
| Movement                                                                                                             | EBL      | EBT   | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR   | SBL   | SBT  | SBR  |  |          |  |
| Lane Configurations                                                                                                  | ↔↔       | ↔↔    |      | ↔↔   | ↔↔   |      |      | ↔↔   |       | ↔     | ↔    | ↔    |  |          |  |
| Traffic Vol. veh/h                                                                                                   | 29       | 1082  | 38   | 20   | 930  | 11   | 56   | 0    | 33    | 6     | 0    | 14   |  |          |  |
| Future Vol. veh/h                                                                                                    | 29       | 1082  | 38   | 20   | 930  | 11   | 56   | 0    | 33    | 6     | 0    | 14   |  |          |  |
| 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                                                                                                       | 25       | -     | -    | 25   | -    | -    | -    | -    | -     | 0     | -    | 0    |  |          |  |
| Veh in Median Storage, #                                                                                             | -        | 0     | -    | -    | 0    | -    | -    | 0    | -     | -     | 0    | -    |  |          |  |
| Grade, %                                                                                                             | -        | 0     | -    | 0    | -    | 0    | -    | 0    | -     | -     | 0    | -    |  |          |  |
| Peak Hour Factor                                                                                                     | 90       | 90    | 90   | 90   | 90   | 90   | 90   | 90   | 90    | 90    | 90   | 90   |  |          |  |
| Heavy Vehicles, %                                                                                                    | 2        | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2     | 2     | 2    | 2    |  |          |  |
| Mvmt Flow                                                                                                            | 32       | 1202  | 42   | 22   | 1033 | 12   | 62   | 0    | 37    | 7     | 0    | 16   |  |          |  |
| Major/Minor                                                                                                          |          |       |      |      |      |      |      |      |       |       |      |      |  |          |  |
| Major1                                                                                                               |          |       |      |      |      |      |      |      |       |       |      |      |  | Minor1   |  |
| Conflicting Flow All                                                                                                 | 1045     | 0     | 0    | 1244 | 0    | 0    | 1848 | 2376 | 622   | 1748  | -    | 523  |  |          |  |
| Stage 1                                                                                                              | -        | -     | -    | -    | -    | -    | -    | 1287 | 1287  | -     | 1083 | -    |  |          |  |
| Stage 2                                                                                                              | -        | -     | -    | -    | -    | -    | -    | 561  | 1089  | -     | 665  | -    |  |          |  |
| Critical Hdwy                                                                                                        | 4.14     | -     | -    | 4.14 | -    | -    | -    | 7.54 | 6.54  | 6.94  | 7.54 | -    |  |          |  |
| Critical Hdwy Stg 1                                                                                                  | -        | -     | -    | -    | -    | -    | -    | 6.54 | 5.54  | -     | 6.54 | -    |  |          |  |
| Critical Hdwy Stg 2                                                                                                  | -        | -     | -    | -    | -    | -    | -    | 6.54 | 5.54  | -     | 6.54 | -    |  |          |  |
| Follow-up Hdwy                                                                                                       | 2.22     | -     | -    | 2.22 | -    | -    | -    | 3.52 | 4.02  | 3.32  | 3.52 | -    |  |          |  |
| Pot Cap-1 Maneuver                                                                                                   | 661      | -     | -    | 555  | -    | -    | -    | ~46  | 34    | 430   | 55   | 0    |  |          |  |
| Stage 1                                                                                                              | -        | -     | -    | -    | -    | -    | -    | 174  | 233   | -     | 232  | 0    |  |          |  |
| Stage 2                                                                                                              | -        | -     | -    | -    | -    | -    | -    | 480  | 290   | -     | 416  | 0    |  |          |  |
| Platoon blocked, %                                                                                                   | -        | -     | -    | -    | -    | -    | -    | -    | -     | -     | -    | -    |  |          |  |
| Mov Cap-1 Maneuver                                                                                                   | 661      | -     | -    | 555  | -    | -    | -    | ~42  | 31    | 430   | 47   | -    |  |          |  |
| Mov Cap-2 Maneuver                                                                                                   | -        | -     | -    | -    | -    | -    | -    | ~42  | 31    | -     | 47   | -    |  |          |  |
| Stage 1                                                                                                              | -        | -     | -    | -    | -    | -    | -    | 166  | 222   | -     | 221  | -    |  |          |  |
| Stage 2                                                                                                              | -        | -     | -    | -    | -    | -    | -    | 447  | 278   | -     | 362  | -    |  |          |  |
| Approach                                                                                                             |          |       |      |      |      |      |      |      |       |       |      |      |  |          |  |
| EB                                                                                                                   |          |       |      |      |      |      |      |      |       |       |      |      |  | WB       |  |
| HCM Control Delay, s                                                                                                 |          |       |      |      |      |      |      |      |       |       |      |      |  | 0.2      |  |
| HCM LOS                                                                                                              |          |       |      |      |      |      |      |      |       |       |      |      |  | \$ 428.6 |  |
|                                                                                                                      |          |       |      |      |      |      |      |      |       |       |      |      |  | F        |  |
|                                                                                                                      |          |       |      |      |      |      |      |      |       |       |      |      |  | E        |  |
| Minor Lane/Major Mvmt                                                                                                |          |       |      |      |      |      |      |      |       |       |      |      |  | NBLn1    |  |
| NBLn1                                                                                                                |          |       |      |      |      |      |      |      |       |       |      |      |  | EBL      |  |
| Capacity (veh/h)                                                                                                     | 63       | 661   | -    | -    | 555  | -    | -    | -    | 47    | 499   |      |      |  |          |  |
| HCM Lane V/C Ratio                                                                                                   | 1.57     | 0.049 | -    | -    | 0.04 | -    | -    | -    | 0.142 | 0.031 |      |      |  |          |  |
| HCM Control Delay (s)                                                                                                | \$ 428.6 | 10.7  | -    | -    | 11.8 | -    | -    | -    | 93.9  | 12.4  |      |      |  |          |  |
| HCM Lane LOS                                                                                                         | F        | B     | -    | -    | B    | -    | -    | -    | F     | B     |      |      |  |          |  |
| HCM 95th %tile Q(veh)                                                                                                | 8.7      | 0.2   | -    | -    | 0.1  | -    | -    | -    | 0.5   | 0.1   |      |      |  |          |  |
| Notes                                                                                                                |          |       |      |      |      |      |      |      |       |       |      |      |  |          |  |
| ~: Volume exceeds capacity    \$: Delay exceeds 300s    *: Computation Not Defined    *: All major volume in platoon |          |       |      |      |      |      |      |      |       |       |      |      |  |          |  |



Smoke Tree Resort  
2025 Total AM

9: Scottsdale Rd & Lincoln Dr  
HCM 6th Signalized Intersection Summary

| Movement                          | EBL   | EBT  | EBR   | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT   | SBR  |
|-----------------------------------|-------|------|-------|------|------|------|------|------|------|------|-------|------|
| Lane Configurations               | 5     | 4    | 4     | 4    | 4    | 4    | 4    | 4    | 4    | 4    | 4     | 4    |
| Traffic Volume (veh/h)            | 500   | 42   | 508   | 41   | 39   | 52   | 331  | 1429 | 43   | 55   | 1814  | 666  |
| Future Volume (veh/h)             | 500   | 42   | 508   | 41   | 39   | 52   | 331  | 1429 | 43   | 55   | 1814  | 666  |
| Initial Q (Q <sub>bb</sub> ), veh | 0     | 0    | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    |
| Ped-Bike Adj(A, pbt)              | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 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   | No   | No   | No   | No   | No   | No   | No    | No   |
| Adj Sat Flow, veh/hln             | 1870  | 1870 | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870  | 1870 |
| Adj Flow Rate, veh/h              | 590   | 0    | 564   | 46   | 43   | 58   | 388  | 1588 | 48   | 61   | 2016  | 740  |
| Peak Hour Factor                  | 0.90  | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90  | 0.90 |
| Percent Heavy Veh, %              | 2     | 2    | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2     | 2    |
| Cap, veh/h                        | 726   | 0    | 518   | 95   | 95   | 85   | 425  | 2145 | 65   | 79   | 1740  | 863  |
| Arrive On Green                   | 0.07  | 0.00 | 0.07  | 0.05 | 0.05 | 0.05 | 0.12 | 0.42 | 0.42 | 0.04 | 0.34  | 0.34 |
| Sat Flow, veh/h                   | 3563  | 0    | 1585  | 1781 | 1777 | 1585 | 3456 | 5093 | 154  | 1781 | 5106  | 1585 |
| Grp Volume(V), veh/h              | 590   | 0    | 564   | 46   | 43   | 58   | 368  | 1061 | 575  | 61   | 2016  | 740  |
| Grp Sat Flow(s), veh/hln          | 1781  | 0    | 1585  | 1781 | 1777 | 1585 | 1728 | 1702 | 1843 | 1781 | 1702  | 1585 |
| Q Serve(g, s), s                  | 21.2  | 0.0  | 26.5  | 3.3  | 3.1  | 4.7  | 13.6 | 34.1 | 34.1 | 4.4  | 44.3  | 44.3 |
| Cycle Q Clear(g, c), s            | 21.2  | 0.0  | 26.5  | 3.3  | 3.1  | 4.7  | 13.6 | 34.1 | 34.1 | 4.4  | 44.3  | 44.3 |
| Prop In Lane                      | 1.00  | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.08 | 1.00 | 1.00  | 1.00 |
| Lane Grp Cap(c), veh/h            | 726   | 0    | 518   | 95   | 95   | 85   | 425  | 1434 | 776  | 79   | 1740  | 863  |
| V/C Ratio(X)                      | 0.81  | 0.00 | 1.09  | 0.48 | 0.45 | 0.68 | 0.87 | 0.74 | 0.74 | 0.78 | 1.16  | 0.86 |
| Avail Cap(c, a), veh/h            | 726   | 0    | 518   | 211  | 210  | 188  | 572  | 1434 | 776  | 243  | 1740  | 863  |
| HCM Platoon Ratio                 | 0.33  | 0.33 | 0.33  | 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 |
| Uniform Delay (d), s/veh          | 58.2  | 0.0  | 49.9  | 59.8 | 59.7 | 60.4 | 55.9 | 31.6 | 31.6 | 61.5 | 42.9  | 23.6 |
| Incr Delay (d2), s/veh            | 6.5   | 0.0  | 65.7  | 1.4  | 1.2  | 3.6  | 8.3  | 1.8  | 3.4  | 6.0  | 78.3  | 10.7 |
| 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(50%), veh/ln         | 10.9  | 0.0  | 25.4  | 1.5  | 1.4  | 2.0  | 6.4  | 14.3 | 15.8 | 2.1  | 31.0  | 27.2 |
| Unsig. Movement Delay, s/veh      | 64.7  | 0.0  | 115.6 | 61.2 | 60.9 | 64.0 | 64.2 | 33.5 | 35.0 | 67.5 | 121.1 | 34.3 |
| LnGrp Delay(d), s/veh             | E     | A    | F     | E    | E    | E    | E    | C    | C    | E    | F     | C    |
| LnGrp LOS                         | E     | A    | F     | E    | E    | E    | E    | C    | C    | E    | F     | C    |
| Approach Vol, veh/h               | 1154  |      |       | 147  |      |      |      | 2004 |      |      | 2817  |      |
| Approach Delay, s/veh             | 89.6  |      |       | 62.2 |      |      |      | 39.5 |      |      | 97.2  |      |
| Approach LOS                      | F     |      |       | E    |      |      |      | D    |      |      | F     |      |
| Timer - Assigned Phs              | 1     | 2    |       | 4    | 5    | 6    |      | 8    |      |      |       |      |
| Phs Duration (G+Y+Rc), s          | 11.0  | 60.5 |       | 32.0 | 21.5 | 50.0 |      | 12.6 |      |      |       |      |
| Change Period (Y+Rc), s           | * 5.3 | 5.7  |       | 5.5  | 5.5  | 5.7  |      | 5.6  |      |      |       |      |
| Max Green Sating (Gmax), s        | * 18  | 48.3 |       | 26.5 | 21.5 | 44.3 |      | 15.4 |      |      |       |      |
| Max Q Clear Time (g, c+H), s      | 6.4   | 36.1 |       | 28.5 | 15.6 | 46.3 |      | 6.7  |      |      |       |      |
| Green Ext Time (p, c), s          | 0.0   | 2.3  |       | 0.0  | 0.4  | 0.0  |      | 0.2  |      |      |       |      |
| Intersection Summary              |       |      |       |      |      |      |      |      |      |      |       |      |
| HCM 6th Ctrl Delay                |       |      |       | 76.0 |      |      |      |      |      |      |       |      |
| HCM 6th LOS                       |       |      |       | E    |      |      |      |      |      |      |       |      |

Notes  
User approved pedestrian interval to be less than phase max green.  
User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Smoke Tree Resort  
2025 Total AM

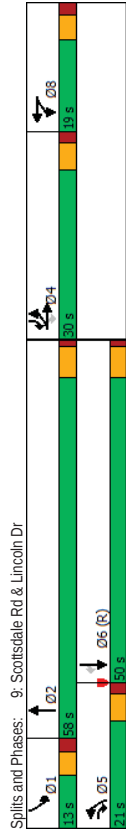
10: Quail Run Rd & Access A  
HCM 6th TWSC

| Intersection             | WBL    | WBR      | NBT    | NBR    | SBL    | SBT    |
|--------------------------|--------|----------|--------|--------|--------|--------|
| In Delay, s/veh          | 0      |          |        |        |        |        |
| Movement                 | WBL    | WBR      | NBT    | NBR    | SBL    | SBT    |
| Lane Configurations      | W      | W        | W      | W      | W      | W      |
| Traffic Vol, veh/h       | 0      | 1        | 0      | 0      | 1      | 0      |
| Future Vol, veh/h        | 0      | 1        | 0      | 0      | 1      | 0      |
| Conflicting Peds, #/hr   | 0      | 0        | 0      | 0      | 0      | 0      |
| Sign Control             | Stop   | Stop     | Free   | Free   | Free   | Free   |
| RT Channelized           | - None | - None   | - None | - None | - None | - None |
| Storage Length           | 0      | -        | -      | -      | -      | -      |
| Veh in Median Storage, # | 0      | -        | 0      | -      | -      | 0      |
| Grade, %                 | 0      | -        | 0      | -      | -      | 0      |
| Peak Hour Factor         | 90     | 90       | 90     | 90     | 90     | 90     |
| Heavy Vehicles, %        | 2      | 2        | 2      | 2      | 2      | 2      |
| Mvmt Flow                | 0      | 1        | 0      | 0      | 1      | 0      |
| Major/Minor              | Minor1 | Major1   | Major1 | Major2 |        |        |
| Conflicting Flow All     | 2      | 0        | 0      | 0      | 0      | 0      |
| Stage 1                  | 0      | -        | -      | -      | -      | -      |
| Stage 2                  | 2      | -        | -      | -      | -      | -      |
| Critical Hwy             | 6.42   | 6.22     | -      | -      | 4.12   | -      |
| Critical Hwy Stg 1       | 5.42   | -        | -      | -      | -      | -      |
| Critical Hwy Stg 2       | 5.42   | -        | -      | -      | -      | -      |
| Follow-up Hwy            | 3.518  | 3.318    | -      | -      | 2.218  | -      |
| Pot Cap-1 Maneuver       | 1021   | -        | -      | -      | -      | -      |
| Stage 1                  | -      | -        | -      | -      | -      | -      |
| Stage 2                  | 1021   | -        | -      | -      | -      | -      |
| Platoon blocked, %       | -      | -        | -      | -      | -      | -      |
| Mov Cap-1 Maneuver       | 1021   | -        | -      | -      | -      | -      |
| Mov Cap-2 Maneuver       | 1021   | -        | -      | -      | -      | -      |
| Stage 1                  | -      | -        | -      | -      | -      | -      |
| Stage 2                  | 1021   | -        | -      | -      | -      | -      |
| Approach                 | WB     | NB       | SB     |        |        |        |
| HCM Control Delay, s     | -      | 0        |        |        |        |        |
| HCM LOS                  |        |          |        |        |        |        |
| Minor Lane/Major Mvmt    | NBT    | NBRWBln1 | SBL    | SBT    |        |        |
| Capacity (veh/h)         | -      | -        | -      | -      | -      | -      |
| HCM Lane V/C Ratio       | -      | -        | -      | -      | -      | -      |
| HCM Control Delay (s)    | -      | -        | -      | -      | -      | -      |
| HCM Lane LOS             | -      | -        | -      | -      | -      | -      |
| HCM 95th %ile Q(veh)     | -      | -        | -      | -      | -      | -      |

Smoke Tree Resort  
2025 Total AM Mitigated

9: Scottsdale Rd & Lincoln Dr  
Timings

| Lane Group                                                | EBL                        | EBT   | EBR   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR   |
|-----------------------------------------------------------|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations                                       | 500                        | 42    | 508   | 41    | 39    | 331   | 1429  | 55    | 1814  | 666   |
| Traffic Volume (vph)                                      | 500                        | 42    | 508   | 41    | 39    | 331   | 1429  | 55    | 1814  | 666   |
| Future Volume (vph)                                       | 500                        | 42    | 508   | 41    | 39    | 331   | 1429  | 55    | 1814  | 666   |
| Turn Type                                                 | Split                      | NA    | pm+ov | Split | NA    | Prdt  | NA    | Prdt  | NA    | pm+ov |
| Protected Phases                                          | 4                          | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     | 4     |
| Permitted Phases                                          | 4                          | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     | 4     |
| Detector Phase                                            | 4                          | 4     | 5     | 8     | 8     | 5     | 2     | 1     | 6     | 4     |
| Switch Phase                                              | 7.0                        | 7.0   | 7.0   | 7.0   | 7.0   | 7.0   | 10.0  | 5.0   | 10.0  | 7.0   |
| Minimum Initial (s)                                       | 13.0                       | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  | 16.7  | 11.0  | 16.0  | 13.0  |
| Minimum Split (s)                                         | 30.0                       | 30.0  | 21.0  | 19.0  | 19.0  | 21.0  | 58.0  | 13.0  | 50.0  | 30.0  |
| Total Split (%)                                           | 25.0%                      | 25.0% | 17.5% | 15.8% | 15.8% | 17.5% | 48.3% | 10.8% | 41.7% | 25.0% |
| Yellow Time (s)                                           | 4.0                        | 4.0   | 4.0   | 3.6   | 3.6   | 4.0   | 4.7   | 3.3   | 4.7   | 4.0   |
| All-Red Time (s)                                          | 1.5                        | 1.5   | 1.5   | 2.0   | 2.0   | 1.5   | 1.0   | 2.0   | 1.0   | 1.5   |
| 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)                                       | 5.5                        | 5.5   | 5.5   | 5.6   | 5.6   | 5.5   | 5.7   | 5.3   | 5.7   | 5.5   |
| Lead/Lag                                                  | Lead                       |       |       |       |       |       |       |       |       |       |
| Lead-Lag Optimize?                                        | Lead                       |       |       |       |       |       |       |       |       |       |
| Recall Mode                                               | None                       | None  | None  | None  | None  | None  | None  | None  | C-Max | None  |
| Act Effct Green (s)                                       | 23.8                       | 23.8  | 40.7  | 8.2   | 8.2   | 16.9  | 59.7  | 8.2   | 48.8  | 78.3  |
| Actuated g/C Ratio                                        | 0.20                       | 0.20  | 0.34  | 0.07  | 0.07  | 0.14  | 0.50  | 0.07  | 0.41  | 0.65  |
| v/c Ratio                                                 | 0.90                       | 0.90  | 0.89  | 0.38  | 0.37  | 0.76  | 0.85  | 0.50  | 0.98  | 0.63  |
| Control Delay                                             | 77.0                       | 77.0  | 35.4  | 62.1  | 28.9  | 60.3  | 25.1  | 67.8  | 50.5  | 8.4   |
| Queue Delay                                               | 0.0                        | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay                                               | 77.0                       | 77.0  | 35.4  | 62.1  | 28.9  | 60.3  | 25.1  | 67.8  | 50.5  | 8.4   |
| LOS                                                       | E                          | E     | D     | E     | C     | E     | C     | E     | D     | A     |
| Approach Delay                                            | 56.9                       |       |       |       |       |       |       |       |       |       |
| Approach LOS                                              | E                          |       |       |       |       |       |       |       |       |       |
| Intersection Summary                                      | Cycle Length: 120          |       |       |       |       |       |       |       |       |       |
| Cycle Length: 120                                         | Actuated Cycle Length: 120 |       |       |       |       |       |       |       |       |       |
| Offset: 0 (0%), Referenced to phase 6 SBT, Start of Green | Natural Cycle: 90          |       |       |       |       |       |       |       |       |       |
| Control Type: Actuated-Coordinated                        | Maximum v/c Ratio: 0.98    |       |       |       |       |       |       |       |       |       |
| Intersection Signal Delay: 40.3                           | Intersection LOS: D        |       |       |       |       |       |       |       |       |       |
| Intersection Capacity Utilization 86.3%                   | ICU Level of Service E     |       |       |       |       |       |       |       |       |       |
| Analysis Period (min) 15                                  |                            |       |       |       |       |       |       |       |       |       |



Smoke Tree Resort  
2025 Total AM Mitigated

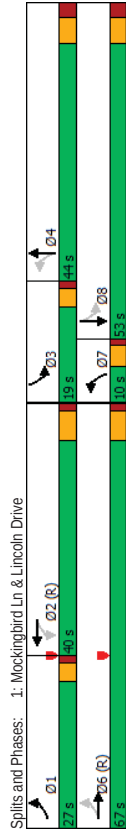
9: Scottsdale Rd & Lincoln Dr  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               | SBR                                                                               |
|------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Configurations          |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h)       | 500                                                                               | 42                                                                                | 508                                                                               | 41                                                                                | 39                                                                                | 52                                                                                | 331                                                                               | 1429                                                                              | 43                                                                                | 55                                                                                | 1814                                                                              | 666                                                                               |
| Future Volume (veh/h)        | 500                                                                               | 42                                                                                | 508                                                                               | 41                                                                                | 39                                                                                | 52                                                                                | 331                                                                               | 1429                                                                              | 43                                                                                | 55                                                                                | 1814                                                                              | 666                                                                               |
| Initial Q (Qb), veh          | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Ped-Bike Adj(A, pbf)         | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 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                                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Adj Sat Flow, veh/hln        | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              |
| Adj Sat Flow, veh/hln        | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              | 1870                                                                              |
| Adj Flow Rate, veh/h         | 590                                                                               | 0                                                                                 | 564                                                                               | 46                                                                                | 43                                                                                | 58                                                                                | 368                                                                               | 1588                                                                              | 48                                                                                | 61                                                                                | 2016                                                                              | 740                                                                               |
| Peak Hour Factor             | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              | 0.90                                                                              |
| Percent Heavy Veh, %         | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                 |
| Cap. veh/h                   | 727                                                                               | 0                                                                                 | 517                                                                               | 103                                                                               | 103                                                                               | 92                                                                                | 422                                                                               | 2286                                                                              | 69                                                                                | 78                                                                                | 1885                                                                              | 909                                                                               |
| Arrive On Green              | 0.20                                                                              | 0.00                                                                              | 0.20                                                                              | 0.06                                                                              | 0.06                                                                              | 0.06                                                                              | 0.12                                                                              | 0.45                                                                              | 0.45                                                                              | 0.04                                                                              | 0.37                                                                              | 0.37                                                                              |
| Sat. Flow, veh/h             | 3563                                                                              | 0                                                                                 | 1585                                                                              | 1781                                                                              | 1777                                                                              | 1585                                                                              | 3456                                                                              | 5093                                                                              | 154                                                                               | 1781                                                                              | 5106                                                                              | 1585                                                                              |
| Grp Volume(V), veh/h         | 590                                                                               | 0                                                                                 | 564                                                                               | 46                                                                                | 43                                                                                | 58                                                                                | 368                                                                               | 1061                                                                              | 575                                                                               | 61                                                                                | 2016                                                                              | 740                                                                               |
| Grp Sat Flow(s),veh/hln      | 1781                                                                              | 0                                                                                 | 1585                                                                              | 1781                                                                              | 1777                                                                              | 1585                                                                              | 1728                                                                              | 1702                                                                              | 1843                                                                              | 1781                                                                              | 1702                                                                              | 1585                                                                              |
| Q Serve(Q, s)                | 19.0                                                                              | 0.0                                                                               | 24.5                                                                              | 3.0                                                                               | 2.8                                                                               | 4.3                                                                               | 12.6                                                                              | 30.0                                                                              | 3.0                                                                               | 4.1                                                                               | 44.3                                                                              | 44.3                                                                              |
| Cycle Q Clear(g, c), s       | 19.0                                                                              | 0.0                                                                               | 24.5                                                                              | 3.0                                                                               | 2.8                                                                               | 4.3                                                                               | 12.6                                                                              | 30.0                                                                              | 3.0                                                                               | 4.1                                                                               | 44.3                                                                              | 44.3                                                                              |
| Prop In Lane                 | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 0.08                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |
| Lane Grp Cap(c), veh/h       | 727                                                                               | 0                                                                                 | 517                                                                               | 103                                                                               | 103                                                                               | 92                                                                                | 422                                                                               | 1528                                                                              | 827                                                                               | 78                                                                                | 1885                                                                              | 909                                                                               |
| V/C Ratio(X)                 | 0.81                                                                              | 0.00                                                                              | 1.09                                                                              | 0.45                                                                              | 0.42                                                                              | 0.63                                                                              | 0.87                                                                              | 0.69                                                                              | 0.69                                                                              | 0.78                                                                              | 1.07                                                                              | 0.81                                                                              |
| Avail Cap(c, a), veh/h       | 727                                                                               | 0                                                                                 | 517                                                                               | 199                                                                               | 198                                                                               | 177                                                                               | 446                                                                               | 1528                                                                              | 827                                                                               | 114                                                                               | 1885                                                                              | 909                                                                               |
| 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                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              | 1.00                                                                              |
| Uniform Delay (d), s/veh     | 45.5                                                                              | 0.0                                                                               | 40.4                                                                              | 54.7                                                                              | 54.6                                                                              | 55.3                                                                              | 51.8                                                                              | 26.5                                                                              | 26.5                                                                              | 56.8                                                                              | 37.8                                                                              | 20.4                                                                              |
| Incr Delay (d2), s/veh       | 6.4                                                                               | 0.0                                                                               | 66.5                                                                              | 1.1                                                                               | 1.0                                                                               | 2.7                                                                               | 15.5                                                                              | 1.2                                                                               | 2.1                                                                               | 10.4                                                                              | 42.2                                                                              | 7.9                                                                               |
| Initial Q Delay(d3), s/veh   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               |
| %ile BackOfQ(50%)veh/hln     | 9.0                                                                               | 0.0                                                                               | 24.6                                                                              | 1.4                                                                               | 1.3                                                                               | 1.8                                                                               | 6.3                                                                               | 12.2                                                                              | 13.4                                                                              | 2.1                                                                               | 25.4                                                                              | 24.5                                                                              |
| Unsig. Movement Delay, s/veh | 52.0                                                                              | 0.0                                                                               | 106.9                                                                             | 55.8                                                                              | 55.6                                                                              | 57.9                                                                              | 67.3                                                                              | 27.6                                                                              | 28.6                                                                              | 67.2                                                                              | 80.0                                                                              | 28.3                                                                              |
| LnGrp Delay(d),s/veh         | D                                                                                 | A                                                                                 | F                                                                                 | E                                                                                 | E                                                                                 | E                                                                                 | E                                                                                 | C                                                                                 | C                                                                                 | E                                                                                 | F                                                                                 | C                                                                                 |
| LnGrp LOS                    | D                                                                                 | A                                                                                 | F                                                                                 | E                                                                                 | E                                                                                 | E                                                                                 | E                                                                                 | C                                                                                 | C                                                                                 | E                                                                                 | F                                                                                 | C                                                                                 |
| Approach Vol, veh/h          | 1154                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Approach Delay, s/veh        | 78.8                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Approach LOS                 | E                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Timer - Assigned Phs         | 1                                                                                 | 2                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 8                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Phs Duration (G+Y+Rc), s     | 10.6                                                                              | 59.6                                                                              | 30.0                                                                              | 20.1                                                                              | 50.0                                                                              | 12.5                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Change Period (Y+Rc), s      | *5.3                                                                              | 5.7                                                                               | 5.5                                                                               | 5.5                                                                               | 5.7                                                                               | 5.6                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Max Green Setting (Gmax), s  | *7.7                                                                              | 52.3                                                                              | 24.5                                                                              | 15.5                                                                              | 44.3                                                                              | 13.4                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Max Q Clear Time (g_c+1), s  | 6.1                                                                               | 32.0                                                                              | 26.5                                                                              | 14.6                                                                              | 46.3                                                                              | 6.3                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Green Ext Time (p_c), s      | 0.0                                                                               | 2.4                                                                               | 0.0                                                                               | 0.1                                                                               | 0.0                                                                               | 0.2                                                                               |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Intersection Summary         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| HCM 6th Ctrl Delay           | 58.2                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| HCM 6th LOS                  | E                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Notes                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

Smoke Tree Resort  
2025 Total PM

1: Mockingbird Ln & Lincoln Drive  
Timings

|                                                                        | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
|------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Group                                                             | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
| Lane Configurations                                                    | EBL   | EBT   | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   |
| Traffic Volume (vph)                                                   | 267   | 958   | 27    | 1023  | 8     | 68    | 70    | 52    |
| Future Volume (vph)                                                    | 267   | 958   | 27    | 1023  | 8     | 68    | 70    | 52    |
| Turn Type                                                              | pm+pt | NA    | Perm  | NA    | pm+pt | NA    | pm+pt | NA    |
| Protected Phases                                                       | 1     | 6     | 2     | 2     | 7     | 4     | 3     | 8     |
| Permitted Phases                                                       | 6     | 6     | 2     | 2     | 4     | 4     | 8     | 8     |
| Detector Phase                                                         | 1     | 6     | 2     | 2     | 7     | 4     | 3     | 8     |
| Switch Phase                                                           |       |       |       |       |       |       |       |       |
| Minimum Initial (s)                                                    | 3.5   | 15.0  | 15.0  | 15.0  | 5.0   | 7.0   | 3.5   | 7.0   |
| Minimum Split (s)                                                      | 8.0   | 27.0  | 27.0  | 27.0  | 9.5   | 33.5  | 8.0   | 33.5  |
| Total Split (s)                                                        | 27.0  | 67.0  | 40.0  | 40.0  | 10.0  | 44.0  | 19.0  | 53.0  |
| Total Split (%)                                                        | 20.8% | 51.5% | 30.8% | 30.8% | 7.7%  | 33.8% | 14.6% | 40.8% |
| Yellow Time (s)                                                        | 3.0   | 4.5   | 4.5   | 4.5   | 3.5   | 4.0   | 3.0   | 4.0   |
| All-Red Time (s)                                                       | 1.0   | 1.5   | 1.5   | 1.5   | 1.0   | 2.5   | 1.0   | 2.5   |
| Lost Time Adjust (s)                                                   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)                                                    | 4.0   | 6.0   | 6.0   | 6.0   | 4.5   | 6.5   | 4.0   | 6.5   |
| Lead/Lag                                                               | Lead  | Lag   | Lag   | Lag   | Lead  | Lag   | Lead  | Lag   |
| Lead-Lag Optimize?                                                     | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Recall Mode                                                            | None  | C-Max | C-Max | C-Max | None  | None  | None  | None  |
| Act Effct Green (s)                                                    | 95.6  | 93.6  | 69.2  | 69.2  | 18.2  | 11.8  | 26.4  | 21.9  |
| Actuated g/C Ratio                                                     | 0.74  | 0.72  | 0.53  | 0.53  | 0.14  | 0.09  | 0.20  | 0.17  |
| v/c Ratio                                                              | 0.73  | 0.43  | 0.12  | 0.65  | 0.06  | 0.57  | 0.30  | 0.63  |
| Control Delay                                                          | 29.7  | 9.2   | 10.7  | 19.9  | 37.6  | 61.9  | 42.9  | 27.4  |
| Queue Delay                                                            | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay                                                            | 29.7  | 9.2   | 10.7  | 19.9  | 37.6  | 61.9  | 42.9  | 27.4  |
| LOS                                                                    | C     | A     | B     | B     | D     | E     | D     | C     |
| Approach Delay                                                         | 13.5  |       | 19.6  |       | 59.9  |       | 31.1  |       |
| Approach LOS                                                           | B     | B     | B     | B     | E     | E     | C     | C     |
| Intersection Summary                                                   |       |       |       |       |       |       |       |       |
| Cycle Length: 130                                                      |       |       |       |       |       |       |       |       |
| Actuated Cycle Length: 130                                             |       |       |       |       |       |       |       |       |
| Offset: 0 (0%), Referenced to phase 2(WBTL and 6(EBTL), Start of Green |       |       |       |       |       |       |       |       |
| Natural Cycle: 90                                                      |       |       |       |       |       |       |       |       |
| Control Type: Actuated-Coordinated                                     |       |       |       |       |       |       |       |       |
| Maximum v/c Ratio: 0.73                                                |       |       |       |       |       |       |       |       |
| Intersection Signal Delay: 19.5                                        |       |       |       |       |       |       |       |       |
| Intersection Capacity Utilization 72.2%                                |       |       |       |       |       |       |       |       |
| Analysis Period (min) 15                                               |       |       |       |       |       |       |       |       |



Smoke Tree Resort  
2025 Total PM

1: Mockingbird Ln & Lincoln Drive  
HCM 6th Signalized Intersection Summary

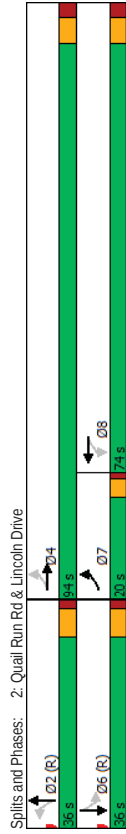
|                              | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations          | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Traffic Volume (veh/h)       | 267  | 958  | 32   | 27   | 1023 | 71   | 8    | 68   | 21   | 70   | 52   | 169  |
| Future Volume (veh/h)        | 267  | 958  | 32   | 27   | 1023 | 71   | 8    | 68   | 21   | 70   | 52   | 169  |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A, pbT)         | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 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   | No   | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h          | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 297  | 1064 | 36   | 30   | 1137 | 79   | 9    | 76   | 23   | 78   | 58   | 188  |
| Peak Hour Factor             | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 347  | 2404 | 81   | 337  | 1914 | 133  | 106  | 190  | 58   | 257  | 67   | 217  |
| Arrive On Green              | 0.09 | 0.69 | 0.69 | 0.38 | 0.38 | 0.38 | 0.01 | 0.14 | 0.14 | 0.05 | 0.17 | 0.17 |
| Sat Flow, veh/h              | 1781 | 3507 | 119  | 513  | 3371 | 234  | 1781 | 1378 | 417  | 1781 | 388  | 1257 |
| Grp Volume(V), veh/h         | 297  | 539  | 561  | 30   | 599  | 617  | 9    | 99   | 78   | 0    | 246  |      |
| Grp Sat Flow(s), veh/h       | 1781 | 1777 | 1849 | 513  | 1777 | 1828 | 1781 | 0    | 1795 | 1781 | 0    | 1644 |
| Q Serve(g, s), s             | 8.6  | 17.8 | 17.8 | 5.0  | 35.1 | 35.1 | 0.6  | 0.0  | 6.5  | 4.7  | 0.0  | 18.9 |
| Cycle Q Clear(g, c), s       | 8.6  | 17.8 | 17.8 | 7.5  | 35.1 | 35.1 | 0.6  | 0.0  | 6.5  | 4.7  | 0.0  | 18.9 |
| Prop In Lane                 | 1.00 | 0.06 | 1.00 | 0.06 | 1.00 | 0.13 | 1.00 | 0.23 | 1.00 | 0.76 | 0.00 | 0.76 |
| Lane Grp Cap(c), veh/h       | 347  | 1218 | 1268 | 337  | 1009 | 1038 | 106  | 0    | 248  | 257  | 0    | 284  |
| V/C Ratio(X)                 | 0.86 | 0.44 | 0.44 | 0.09 | 0.59 | 0.59 | 0.09 | 0.00 | 0.40 | 0.30 | 0.00 | 0.86 |
| Avail Cap(c, a), veh/h       | 507  | 1218 | 1268 | 337  | 1009 | 1038 | 162  | 0    | 518  | 375  | 0    | 588  |
| HCM Platoon Ratio            | 1.00 | 1.00 | 1.00 | 0.67 | 0.67 | 0.67 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(i)           | 1.00 | 1.00 | 1.00 | 0.53 | 0.53 | 0.53 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh     | 21.7 | 9.2  | 9.2  | 20.6 | 28.3 | 28.3 | 48.1 | 0.0  | 51.1 | 43.5 | 0.0  | 52.3 |
| Incr Delay (d2), s/veh       | 9.5  | 1.2  | 1.1  | 0.3  | 1.4  | 1.3  | 0.3  | 0.0  | 1.0  | 0.7  | 0.0  | 7.7  |
| 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(50%), veh/h     | 6.3  | 6.9  | 7.2  | 0.7  | 16.2 | 16.7 | 0.3  | 0.0  | 3.0  | 2.2  | 0.0  | 8.4  |
| Unsig. Movement Delay, s/veh |      |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh        | 31.2 | 10.4 | 10.4 | 20.8 | 29.6 | 29.6 | 48.5 | 0.0  | 52.1 | 44.1 | 0.0  | 60.0 |
| LnGrp LOS                    | C    | B    | B    | C    | C    | C    | D    | A    | D    | D    | A    | E    |
| Approach Vol, veh/h          | 1397 |      |      | 1246 |      |      | 108  |      |      |      | 324  |      |
| Approach Delay, s/veh        | 14.8 |      |      | 29.4 |      |      | 51.8 |      |      |      | 56.2 |      |
| Approach LOS                 | B    | B    | B    | C    |      |      | D    |      |      |      | E    |      |
| Timer - Assigned Phs         | 1    | 2    | 3    | 4    | 6    | 7    | 8    |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 15.3 | 79.8 | 10.4 | 24.5 | 95.1 | 5.9  | 29.0 |      |      |      |      |      |
| Change Period (Y+Rc), s      | 4.0  | 6.0  | 4.0  | 6.5  | 6.0  | 4.5  | 6.5  |      |      |      |      |      |
| Max Green Setting (Gmax), s  | 23.0 | 34.0 | 15.0 | 37.5 | 61.0 | 5.5  | 46.5 |      |      |      |      |      |
| Max Q Clear Time (g_c+tl), s | 10.6 | 37.1 | 6.7  | 8.5  | 19.8 | 2.6  | 20.9 |      |      |      |      |      |
| Green Ext Time (g_c), s      | 0.7  | 0.0  | 0.1  | 0.5  | 9.4  | 0.0  | 1.6  |      |      |      |      |      |
| Intersection Summary         |      |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      |      | 26.4 |      |      |      |      |      |      |      |      |
| HCM 6th LOS                  |      |      |      | C    |      |      |      |      |      |      |      |      |
| Notes                        |      |      |      |      |      |      |      |      |      |      |      |      |

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

Smoke Tree Resort  
2025 Total PM

2: Quail Run Rd & Lincoln Drive  
Timings

|                      | EBL    | EBT   | WBT   | NBL   | NBT   | SBL   | SBT   |
|----------------------|--------|-------|-------|-------|-------|-------|-------|
| Lane Group           | EBL    | EBT   | WBT   | NBL   | NBT   | SBL   | SBT   |
| Lane Configurations  | 85     | 981   | 1024  | 1     | 0     | 14    | 0     |
| Traffic Volume (vph) | 85     | 981   | 1024  | 1     | 0     | 14    | 0     |
| Future Volume (vph)  | 85     | 981   | 1024  | 1     | 0     | 14    | 0     |
| Turn Type            | pm-plt | NA    | NA    | Perm  | NA    | Perm  | NA    |
| Protected Phases     | 7      | 4     | 8     | 2     | 2     | 6     | 6     |
| Permitted Phases     | 4      | 4     | 8     | 2     | 2     | 6     | 6     |
| Detector Phase       | 7      | 4     | 8     | 2     | 2     | 6     | 6     |
| Switch Phase         |        |       |       |       |       |       |       |
| Minimum Initial (s)  | 3.5    | 15.0  | 15.0  | 7.0   | 7.0   | 7.0   | 7.0   |
| Minimum Split (s)    | 8.0    | 28.0  | 28.0  | 33.0  | 33.0  | 33.0  | 33.0  |
| Total Split (s)      | 20.0   | 94.0  | 74.0  | 36.0  | 36.0  | 36.0  | 36.0  |
| Total Split (%)      | 15.4%  | 72.3% | 56.9% | 27.7% | 27.7% | 27.7% | 27.7% |
| Yellow Time (s)      | 3.0    | 4.0   | 4.0   | 4.5   | 4.5   | 4.5   | 4.5   |
| All-Red Time (s)     | 1.0    | 2.5   | 2.5   | 1.5   | 1.5   | 1.5   | 1.5   |
| Lost Time Adjust (s) | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)  | 4.0    | 6.5   | 6.5   | 6.0   | 6.0   | 6.0   | 6.0   |
| Lead/Lag             | Lead   | Lag   | Lag   |       |       |       |       |
| Lead-Lag Optimize?   | Yes    | Yes   | Yes   |       |       |       |       |
| Recall Mode          | None   | None  | None  | C-Max | C-Max | C-Max | C-Max |
| Act Effect Green (s) | 71.6   | 69.1  | 55.1  | 48.4  | 48.4  | 48.4  | 48.4  |
| Actuated g/c Ratio   | 0.55   | 0.53  | 0.42  | 0.37  | 0.37  | 0.37  | 0.37  |
| v/c Ratio            | 0.43   | 0.58  | 0.78  | 0.00  | 0.03  | 0.14  | 0.14  |
| Control Delay        | 29.8   | 34.5  | 44.3  | 0.0   | 31.2  | 0.4   | 0.4   |
| Queue Delay          | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay          | 29.8   | 34.5  | 44.3  | 0.0   | 31.2  | 0.4   | 0.4   |
| LOS                  | C      | C     | D     | A     | C     | A     | A     |
| Approach Delay       |        |       |       |       |       |       |       |
| Approach LOS         | C      | D     | D     | A     | A     | A     | A     |



Smoke Tree Resort  
2025 Total PM

2: Quail Run Rd & Lincoln Drive  
HCM 6th Signalized Intersection Summary

|                              | EBL  | EBT  | EBR  | WBL  | WBT  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Movement                     | EBL  | EBT  | EBR  | WBL  | WBT  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations          | 85   | 981  | 2    | 0    | 1024 | 25   | 1    | 0    | 2    | 14   | 0    |
| Traffic Volume (veh/h)       | 85   | 981  | 2    | 0    | 1024 | 25   | 1    | 0    | 2    | 14   | 0    |
| Future Volume (veh/h)        | 85   | 981  | 2    | 0    | 1024 | 25   | 1    | 0    | 2    | 14   | 0    |
| Initial Q (Qb), veh          | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A, pbf)         | 1.00 | 1.00 | 1.00 | 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 |
| Work Zone On Approach        | No   | No   | No   | No   | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/h          | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 94   | 1090 | 2    | 0    | 1138 | 28   | 1    | 0    | 2    | 16   | 0    |
| Peak Hour Factor             | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                   | 183  | 1569 | 3    | 55   | 1251 | 31   | 251  | 17   | 462  | 727  | 0    |
| Arrive On Green              | 0.09 | 0.86 | 0.86 | 0.00 | 0.71 | 0.71 | 0.47 | 0.00 | 0.47 | 0.00 | 0.47 |
| Sat Flow, veh/h              | 1781 | 3639 | 7    | 516  | 3544 | 87   | 453  | 36   | 979  | 1415 | 0    |
| Grp Volume(V), veh/h         | 94   | 532  | 560  | 0    | 570  | 596  | 3    | 0    | 16   | 0    | 103  |
| Grp Sat Flow(s), veh/h       | 1781 | 1777 | 1869 | 516  | 1777 | 1855 | 1468 | 0    | 0    | 1415 | 0    |
| Q Serve(g, s), s             | 4.3  | 13.4 | 13.4 | 0.0  | 34.3 | 34.3 | 0.0  | 0.0  | 0.0  | 0.0  | 4.8  |
| Cycle Q Clear(g, c), s       | 4.3  | 13.4 | 13.4 | 0.0  | 34.3 | 34.3 | 4.8  | 0.0  | 0.0  | 0.7  | 4.8  |
| Prop In Lane                 | 1.00 | 0.00 | 1.00 | 0.00 | 0.05 | 0.33 | 0.06 | 0.07 | 0.00 | 0.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 183  | 766  | 806  | 55   | 627  | 655  | 731  | 0    | 0    | 727  | 0    |
| V/C Ratio(X)                 | 0.51 | 0.69 | 0.69 | 0.00 | 0.91 | 0.91 | 0.00 | 0.00 | 0.00 | 0.02 | 0.14 |
| Avail Cap(c, a), veh/h       | 318  | 1196 | 1258 | 141  | 923  | 963  | 731  | 0    | 0    | 727  | 0    |
| HCM Platoon Ratio            | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(i)           | 0.91 | 0.91 | 0.91 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 28.2 | 6.0  | 6.0  | 0.0  | 17.4 | 17.4 | 18.1 | 0.0  | 0.0  | 18.3 | 0.0  |
| Incr Delay (d2), s/veh       | 2.0  | 1.0  | 1.0  | 0.0  | 9.4  | 9.1  | 0.0  | 0.0  | 0.1  | 0.1  | 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  |
| %ile BackOfQ(50%), veh/ln    | 1.8  | 2.7  | 2.8  | 0.0  | 9.3  | 9.7  | 0.1  | 0.0  | 0.0  | 0.3  | 0.0  |
| Unsig. Movement Delay, s/veh | 30.2 | 7.0  | 7.0  | 0.0  | 26.8 | 26.5 | 18.1 | 0.0  | 0.0  | 18.3 | 0.0  |
| LnGrp Delay(d), s/veh        | C    | A    | A    | A    | C    | C    | B    | A    | A    | B    | A    |
| LnGrp LOS                    | C    | A    | A    | A    | C    | C    | B    | A    | A    | B    | A    |
| Approach Vol, veh/h          | 1186 |      |      |      | 1166 |      | 3    |      |      | 119  |      |
| Approach Delay, s/veh        | 8.9  |      |      |      | 26.7 |      | 18.1 |      |      | 19.5 |      |
| Approach LOS                 | A    |      |      |      | C    |      | B    |      |      | B    |      |
| Timer - Assigned Phs         | 2    | 4    | 4    | 6    | 7    | 8    |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s     | 67.4 | 62.6 | 62.6 | 67.4 | 10.2 | 52.4 |      |      |      |      |      |
| Change Period (Y+Rc), s      | 6.0  | 6.5  | 6.5  | 6.0  | 4.0  | 6.5  |      |      |      |      |      |
| Max Green Setting (Gmax), s  | 30.0 | 87.5 | 87.5 | 30.0 | 16.0 | 67.5 |      |      |      |      |      |
| Max Q Clear Time (g_c+1), s  | 6.8  | 15.4 | 15.4 | 6.8  | 6.3  | 36.3 |      |      |      |      |      |
| Green Ext Time (p_c), s      | 0.0  | 9.7  | 9.7  | 0.6  | 0.1  | 9.6  |      |      |      |      |      |
| Intersection Summary         |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay           |      |      |      | 17.8 |      |      |      |      |      |      |      |
| HCM 6th LOS                  |      |      |      | B    |      |      |      |      |      |      |      |

Smoke Tree Resort  
2025 Total PM

4: Smoke Tree Access B & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |      |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|-------|------|------|--|--|--|--|--|--|
| Int Delay, s/veh         |        |        |        |       |      | 0.7  |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT   | NBL  | NBR  |  |  |  |  |  |  |
| Lane Configurations      | ↔↔     |        | ↔      | ↔↔    | ↔↔   | ↔↔   |  |  |  |  |  |  |
| Traffic Vol. veh/h       | 978    | 20     | 36     | 1032  | 18   | 34   |  |  |  |  |  |  |
| Future Vol. veh/h        | 978    | 20     | 36     | 1032  | 18   | 34   |  |  |  |  |  |  |
| Conflicting Peds. #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free  | Stop | Stop |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None  | -    | None |  |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -     | 0    | -    |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90    | 90   | 90   |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2     | 2    | 2    |  |  |  |  |  |  |
| Mvmt Flow                | 1087   | 22     | 40     | 1147  | 20   | 38   |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |       |      |      |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1109   | 0     | 1752 | 555  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 1098 | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 654  | -    |  |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -     | 6.84 | 6.94 |  |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -     | 5.84 | -    |  |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -     | 5.84 | -    |  |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -     | 3.52 | 3.32 |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 625    | -     | 77   | 475  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 281  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 479  | -    |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 625    | -     | 72   | 475  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -     | 180  | -    |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 263  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 479  | -    |  |  |  |  |  |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |  |
| Approach                 | EB     | WB     | WB     | NB    |      |      |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0.4    | 19.7   |       |      |      |  |  |  |  |  |  |
| HCM LOS                  | C      |        |        |       |      |      |  |  |  |  |  |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL   | WBT  |      |  |  |  |  |  |  |
| Capacity (veh/h)         | 303    | -      | -      | 625   | -    |      |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.191  | -      | -      | 0.064 | -    |      |  |  |  |  |  |  |
| HCM Control Delay (s)    | 19.7   | -      | -      | 11.2  | -    |      |  |  |  |  |  |  |
| HCM Lane LOS             | C      | -      | -      | B     | -    |      |  |  |  |  |  |  |
| HCM 95th %ile Q(veh)     | 0.7    | -      | -      | 0.2   | -    |      |  |  |  |  |  |  |

Smoke Tree Resort  
2025 Total PM

5: Lincoln Medical West & Lincoln Dr  
HCM 6th TWSC

| Intersection             |        |        |        |       |      |      |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|-------|------|------|--|--|--|--|--|--|
| Int Delay, s/veh         |        |        |        |       |      |      |  |  |  |  |  |  |
| 0.7                      |        |        |        |       |      |      |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT   | NBL  | NBR  |  |  |  |  |  |  |
| Lane Configurations      | ↔↔     |        | ↔      | ↔↔    |      | ↔↔   |  |  |  |  |  |  |
| Traffic Vol, veh/h       | 1005   | 7      | 21     | 1038  | 30   | 26   |  |  |  |  |  |  |
| Future Vol, veh/h        | 1005   | 7      | 21     | 1038  | 30   | 26   |  |  |  |  |  |  |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0     | 0    | 0    |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free  | Stop | Stop |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None  | -    | None |  |  |  |  |  |  |
| Storage Length           | -      | -      | 25     | -     | 0    | -    |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0     | 0    | -    |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90    | 90   | 90   |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2     | 2    | 2    |  |  |  |  |  |  |
| Mvmt Flow                | 1117   | 8      | 23     | 1153  | 33   | 29   |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |       |      |      |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | 1125   | 0     | 1744 | 563  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 1121 | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 623  | -    |  |  |  |  |  |  |
| Critical Hdwy            | -      | -      | 4.14   | -     | 6.84 | 6.94 |  |  |  |  |  |  |
| Critical Hdwy Stg 1      | -      | -      | -      | -     | 5.84 | -    |  |  |  |  |  |  |
| Critical Hdwy Stg 2      | -      | -      | -      | -     | 5.84 | -    |  |  |  |  |  |  |
| Follow-up Hdwy           | -      | -      | 2.22   | -     | 3.52 | 3.32 |  |  |  |  |  |  |
| Pot Cap-1 Maneuver       | -      | -      | 617    | -     | 78   | 470  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 273  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 497  | -    |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -     | -    | -    |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | 617    | -     | 75   | 470  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -     | 185  | -    |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -     | 263  | -    |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -     | 497  | -    |  |  |  |  |  |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |       |      |      |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0.2    | 23.4   |       |      |      |  |  |  |  |  |  |
| HCM LOS                  | C      |        |        |       |      |      |  |  |  |  |  |  |
|                          |        |        |        |       |      |      |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBL   | WBT  |      |  |  |  |  |  |  |
| Capacity (veh/h)         | 257    | -      | -      | 617   | -    |      |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.242  | -      | -      | 0.038 | -    |      |  |  |  |  |  |  |
| HCM Control Delay (s)    | 23.4   | -      | -      | 11.1  | -    |      |  |  |  |  |  |  |
| HCM Lane LOS             | C      | -      | -      | B     | -    |      |  |  |  |  |  |  |
| HCM 95th %tile Ovrht     | 0.9    | -      | -      | 0.1   | -    |      |  |  |  |  |  |  |

| Intersection             |        |        |        |      |      |      |  |  |  |  |  |  |  |
|--------------------------|--------|--------|--------|------|------|------|--|--|--|--|--|--|--|
| Int Delay, s/veh         |        |        |        |      |      |      |  |  |  |  |  |  |  |
| 0.2                      |        |        |        |      |      |      |  |  |  |  |  |  |  |
| Movement                 | EBT    | EBR    | WBL    | WBT  | NBL  | NBR  |  |  |  |  |  |  |  |
| Lane Configurations      | ↖↗     | ↖↗     |        | ↖↗   |      | ↖    |  |  |  |  |  |  |  |
| Traffic Vol. veh/h       | 1027   | 4      | 0      | 1058 | 2    | 30   |  |  |  |  |  |  |  |
| Future Vol. veh/h        | 1027   | 4      | 0      | 1058 | 2    | 30   |  |  |  |  |  |  |  |
| Conflicting Peds. #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |  |  |  |  |  |  |  |
| Sign Control             | Free   | Free   | Free   | Free | Stop | Stop |  |  |  |  |  |  |  |
| RT Channelized           | -      | None   | -      | None | -    | None |  |  |  |  |  |  |  |
| Storage Length           | -      | -      | -      | -    | -    | 0    |  |  |  |  |  |  |  |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |  |  |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |  |  |  |  |  |  |  |
| Peak Hour Factor         | 90     | 90     | 90     | 90   | 90   | 90   |  |  |  |  |  |  |  |
| Heavy Vehicles, %        | 2      | 2      | 2      | 2    | 2    | 2    |  |  |  |  |  |  |  |
| Mvmt Flow                | 1141   | 4      | 0      | 1176 | 2    | 33   |  |  |  |  |  |  |  |
| Major/Minor              | Major1 | Major2 | Minor1 |      |      |      |  |  |  |  |  |  |  |
| Conflicting Flow All     | 0      | 0      | -      | -    | 1731 | 573  |  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 1143 | -    |  |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 588  | -    |  |  |  |  |  |  |  |
| 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       | -      | 0      | -      | 79   | 463  | -    |  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | 0      | -    | 266  | -    |  |  |  |  |  |  |  |
| Stage 2                  | -      | -      | 0      | -    | 518  | -    |  |  |  |  |  |  |  |
| Platoon blocked, %       | -      | -      | -      | -    | -    | -    |  |  |  |  |  |  |  |
| Mov Cap-1 Maneuver       | -      | -      | -      | -    | 79   | 463  |  |  |  |  |  |  |  |
| Mov Cap-2 Maneuver       | -      | -      | -      | -    | 192  | -    |  |  |  |  |  |  |  |
| Stage 1                  | -      | -      | -      | -    | 266  | -    |  |  |  |  |  |  |  |
| Stage 2                  | -      | -      | -      | -    | 518  | -    |  |  |  |  |  |  |  |
|                          |        |        |        |      |      |      |  |  |  |  |  |  |  |
| Approach                 | EB     | WB     | NB     |      |      |      |  |  |  |  |  |  |  |
| HCM Control Delay, s     | 0      | 0      | 13.4   |      |      |      |  |  |  |  |  |  |  |
| HCM LOS                  | B      |        |        |      |      |      |  |  |  |  |  |  |  |
|                          |        |        |        |      |      |      |  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt    | NBLn1  | EBT    | EBR    | WBT  |      |      |  |  |  |  |  |  |  |
| Capacity (veh/h)         | 463    | -      | -      | -    |      |      |  |  |  |  |  |  |  |
| HCM Lane V/C Ratio       | 0.072  | -      | -      | -    |      |      |  |  |  |  |  |  |  |
| HCM Control Delay (s)    | 13.4   | -      | -      | -    |      |      |  |  |  |  |  |  |  |
| HCM Lane LOS             | B      | -      | -      | -    |      |      |  |  |  |  |  |  |  |
| HCM 95th %tile Q(veh)    | 0.2    | -      | -      | -    |      |      |  |  |  |  |  |  |  |

| Intersection              |                               |        |          |        |       |        |      |       |       |       |      |       |  |
|---------------------------|-------------------------------|--------|----------|--------|-------|--------|------|-------|-------|-------|------|-------|--|
| Int Delay, s/veh          |                               |        |          |        |       |        |      |       |       |       |      |       |  |
| 27                        |                               |        |          |        |       |        |      |       |       |       |      |       |  |
| Movement                  | EBL                           | EBT    | EBR      | WBL    | WBT   | NBL    | NBT  | NBR   | SBL   | SBT   | SBR  |       |  |
| Lane Configurations       | ↖↗                            | ↖↗     | ↖↗       | ↖↗     | ↖↗    | ↖↗     | ↖↗   | ↖↗    | ↖↗    | ↖↗    | ↖↗   |       |  |
| Traffic Vol, veh/h        | 8                             | 990    | 46       | 7      | 954   | 10     | 74   | 3     | 53    | 8     | 0    | 38    |  |
| Future Vol, veh/h         | 8                             | 990    | 46       | 7      | 954   | 10     | 74   | 3     | 53    | 8     | 0    | 38    |  |
| Conflicting Peds, #/hr    | 0                             | 0      | 0        | 0      | 0     | 0      | 0    | 0     | 0     | 0     | 0    | 0     |  |
| Sign Control              | Free                          | Free   | Free     | Free   | Free  | Stop   | Stop | Stop  | Stop  | Stop  | Stop |       |  |
| RT Channelized            | -                             | None   | -        | None   | -     | -      | None | -     | None  | -     | None |       |  |
| Storage Length            | 25                            | -      | 25       | -      | -     | -      | -    | -     | 0     | -     | 0    |       |  |
| Veh in Median Storage, #  | -                             | 0      | -        | -      | 0     | -      | -    | 0     | -     | -     | 0    |       |  |
| Grade, %                  | -                             | 0      | -        | -      | 0     | -      | -    | 0     | -     | -     | 0    |       |  |
| Peak Hour Factor          | 90                            | 90     | 90       | 90     | 90    | 90     | 90   | 90    | 90    | 90    | 90   |       |  |
| Heavy Vehicles, %         | 2                             | 2      | 2        | 2      | 2     | 2      | 2    | 2     | 2     | 2     | 2    |       |  |
| Mvmt Flow                 | 9                             | 1100   | 51       | 8      | 1060  | 11     | 82   | 3     | 59    | 9     | 0    | 42    |  |
| Major/Minor               | Major1                        | Major2 |          | Minor1 |       | Minor2 |      |       |       |       |      |       |  |
| Conflicting Flow All      | 1071                          | 0      | 0        | 1151   | 0     | 0      | 1690 | 2231  | 576   | 1652  | -    | 536   |  |
| Stage 1                   | -                             | -      | -        | -      | -     | -      | -    | 1144  | 1144  | -     | 1082 | -     |  |
| Stage 2                   | -                             | -      | -        | -      | -     | -      | -    | 546   | 1087  | -     | 570  | -     |  |
| Critical Hdwy             | 4.14                          | -      | -        | 4.14   | -     | -      | 7.54 | 6.54  | 6.94  | 7.54  | -    | 6.94  |  |
| Critical Hdwy Sig 1       | -                             | -      | -        | -      | -     | -      | 6.54 | 5.54  | -     | 6.54  | -    | -     |  |
| Critical Hdwy Sig 2       | -                             | -      | -        | -      | -     | -      | 6.54 | 5.54  | -     | 6.54  | -    | -     |  |
| Follow-up Hdwy            | 2.22                          | -      | 2.22     | -      | -     | -      | 3.52 | 4.02  | 3.32  | 3.52  | -    | 3.32  |  |
| Pot Cap-1 Maneuver        | 647                           | -      | -        | 603    | -     | -      | -    | 61    | 42    | 460   | 65   | 0 489 |  |
| Stage 1                   | -                             | -      | -        | -      | -     | -      | 213  | 273   | -     | 232   | 0    | -     |  |
| Stage 2                   | -                             | -      | -        | -      | -     | -      | 490  | 290   | -     | 474   | 0    | -     |  |
| Platoon blocked, %        | -                             | -      | -        | -      | -     | -      | -    | -     | -     | -     | -    | -     |  |
| Mov Cap-1 Maneuver        | 647                           | -      | -        | 603    | -     | -      | -    | 55    | 41    | 460   | 52   | - 489 |  |
| Mov Cap-2 Maneuver        | -                             | -      | -        | -      | -     | -      | -    | 55    | 41    | -     | 52   | -     |  |
| Stage 1                   | -                             | -      | -        | -      | -     | -      | 210  | 269   | -     | 229   | -    | -     |  |
| Stage 2                   | -                             | -      | -        | -      | -     | -      | 442  | 286   | -     | 403   | -    | -     |  |
| Approach                  | EB                            | WB     | NB       |        |       |        |      |       |       |       |      |       |  |
| HCM Control Delay, s      | 0.1                           | 0.1    | \$ 443.8 |        | F     |        | 26.1 |       |       |       |      |       |  |
| HCM LOS                   | D                             |        |          |        |       |        |      |       |       |       |      |       |  |
| Minor Lane/Major Mvmt     | NBLn1                         | EBL    | EBT      | EBR    | WBL   | WBT    | WBR  | SBLn1 | SBLn2 |       |      |       |  |
| Capacity (veh/h)          | 85                            | 647    | -        | -      | 603   | -      | -    | -     | 52    | 489   |      |       |  |
| HCM Lane V/C Ratio        | 1.699                         | 0.014  | -        | -      | 0.013 | -      | -    | -     | 0.171 | 0.086 |      |       |  |
| HCM Control Delay (s)     | \$ 443.8                      | 10.6   | -        | -      | 11    | -      | -    | -     | 88    | 13.1  |      |       |  |
| HCM Lane LOS              | F                             | B      | -        | -      | B     | -      | -    | -     | F     | B     |      |       |  |
| HCM 95th %ile Q(veh)      | 12                            | 0      | -        | -      | 0     | -      | -    | -     | 0.6   | 0.3   |      |       |  |
| Notes                     |                               |        |          |        |       |        |      |       |       |       |      |       |  |
| - Volume exceeds capacity | \$ Delay exceeds 300s         |        |          |        |       |        |      |       |       |       |      |       |  |
| - Computation Not Defined | * All major volume in platoon |        |          |        |       |        |      |       |       |       |      |       |  |

Smoke Tree Resort  
2025 Total PM

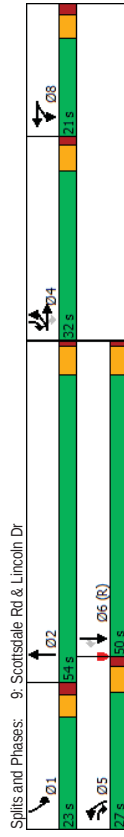
8: AJ's Drwy & Lincoln Dr  
HCM 6th TWSC

| Intersection             | Major1                                            | Major2 | Minor1 | Minor2 | Minor3 |
|--------------------------|---------------------------------------------------|--------|--------|--------|--------|
| Int Delay, s/veh         | 4.1                                               |        |        |        |        |
| Movement                 | EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR   |        |        |        |        |
| Lane Configurations      | 12 983 60 69 952 9 16 1 100 5 0 8                 |        |        |        |        |
| Traffic Vol, veh/h       | 12 983 60 69 952 9 16 1 100 5 0 8                 |        |        |        |        |
| Future Vol, veh/h        | 12 983 60 69 952 9 16 1 100 5 0 8                 |        |        |        |        |
| 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 |        |        |        |        |
| RT Channelized           | - - None - - None - - None - - None               |        |        |        |        |
| Storage Length           | 25 - - 25 - - - - - - - - - - - - - - - - - -     |        |        |        |        |
| Veh in Median Storage, # | - - - - - - - - - - - - - - - - - - - - - - -     |        |        |        |        |
| Grade, %                 | - - - - - - - - - - - - - - - - - - - - - - -     |        |        |        |        |
| Peak Hour Factor         | 90 90 90 90 90 90 90 90 90 90 90 90               |        |        |        |        |
| Heavy Vehicles, %        | 2 2 2 2 2 2 2 2 2 2 2 2                           |        |        |        |        |
| Mvmt Flow                | 13 1092 67 77 1068 10 18 1 111 6 0 9              |        |        |        |        |
| Major/Minor              | Major1                                            | Major2 | Minor1 | Minor2 | Minor3 |
| Conflicting Flow All     | 1068 0 0 1159 0 0 1835 2374 580 1790 - 534        |        |        |        |        |
| Stage 1                  | - - - - - - - - - - - - - - - - - - - - - - -     |        |        |        |        |
| Stage 2                  | - - - - - - - - - - - - - - - - - - - - - - -     |        |        |        |        |
| Critical Hdwy            | 4.14 - - 4.14 - - 7.54 6.54 6.94 7.54 - 6.94      |        |        |        |        |
| Critical Hdwy Stg 1      | - - - - - - - - - - - - - - - - - - - - - - -     |        |        |        |        |
| Critical Hdwy Stg 2      | - - - - - - - - - - - - - - - - - - - - - - -     |        |        |        |        |
| Follow-up Hdwy           | 2.22 - - 2.22 - - 3.52 4.02 3.32 3.52 - 3.32      |        |        |        |        |
| Pot Cap-1 Maneuver       | 648 - - 599 - - 47 34 488 51 0 491                |        |        |        |        |
| Stage 1                  | - - - - - - - - - - - - - - - - - - - - - - -     |        |        |        |        |
| Stage 2                  | - - - - - - - - - - - - - - - - - - - - - - -     |        |        |        |        |
| Platoon blocked, %       | - - - - - - - - - - - - - - - - - - - - - - -     |        |        |        |        |
| Mov Cap-1 Maneuver       | 648 - - 599 - - 41 29 458 33 - 491                |        |        |        |        |
| Mov Cap-2 Maneuver       | - - - - - - - - - - - - - - - - - - - - - - -     |        |        |        |        |
| Stage 1                  | - - - - - - - - - - - - - - - - - - - - - - -     |        |        |        |        |
| Stage 2                  | - - - - - - - - - - - - - - - - - - - - - - -     |        |        |        |        |
| Approach                 | EB WB NB SB                                       |        |        |        |        |
| HCM Control Delay, s     | 0.1 0.8 62.9 59.6                                 |        |        |        |        |
| HCM LOS                  | F F F F                                           |        |        |        |        |
| Minor Lane/Major Mvmt    | NBLn1 EBL EBT EBR WBL WBT WBR SBLn1 SBLn2         |        |        |        |        |
| Capacity (veh/h)         | 182 648 - - 599 - - 33 491                        |        |        |        |        |
| HCM Lane V/C Ratio       | 0.714 0.021 - - 0.128 - - 0.168 0.018             |        |        |        |        |
| HCM Control Delay (s)    | 62.9 10.7 - - 11.9 - - 135 12.5                   |        |        |        |        |
| HCM Lane LOS             | F B - - B - - F B                                 |        |        |        |        |
| HCM 95th %ile Q(veh)     | 4.5 0.1 - - 0.4 - - 0.5 0.1                       |        |        |        |        |

Smoke Tree Resort  
2025 Total PM

9: Scottsdale Rd & Lincoln Dr  
Timings

| Lane Group                                                | EBL                                                         | EBT  | EBR  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT   | SBR  |
|-----------------------------------------------------------|-------------------------------------------------------------|------|------|------|------|------|------|------|-------|------|
| Lane Configurations                                       | EBL EBT EBR WBL WBT WBR NBL NBT SBL SBT SBR                 |      |      |      |      |      |      |      |       |      |
| Traffic Volume (vph)                                      | 569 61 481 61 481 61 481 61 481 61 481                      |      |      |      |      |      |      |      |       |      |
| Future Volume (vph)                                       | 569 61 481 61 481 61 481 61 481 61 481                      |      |      |      |      |      |      |      |       |      |
| Turn Type                                                 | Split NA pm+ov Split NA Prot NA pm+ov                       |      |      |      |      |      |      |      |       |      |
| Protected Phases                                          | 4 4 5 8 8 5 2 1 6 4                                         |      |      |      |      |      |      |      |       |      |
| Permitted Phases                                          | 4 4 5 8 8 5 2 1 6 4                                         |      |      |      |      |      |      |      |       |      |
| Detector Phase                                            | 4 4 5 8 8 5 2 1 6 4                                         |      |      |      |      |      |      |      |       |      |
| Switch Phase                                              | 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0                     |      |      |      |      |      |      |      |       |      |
| Minimum Initial (s)                                       | 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0           |      |      |      |      |      |      |      |       |      |
| Minimum Split (s)                                         | 32.0 32.0 27.0 21.0 21.0 27.0 54.0 23.0 50.0 32.0           |      |      |      |      |      |      |      |       |      |
| Total Split (%)                                           | 24.6% 24.6% 20.8% 16.2% 16.2% 20.8% 41.5% 17.7% 38.5% 24.6% |      |      |      |      |      |      |      |       |      |
| Yellow Time (s)                                           | 4.0 4.0 4.0 3.6 3.6 4.0 4.7 3.3 4.7 4.0                     |      |      |      |      |      |      |      |       |      |
| All-Red Time (s)                                          | 1.5 1.5 1.5 2.0 2.0 1.5 1.0 2.0 1.0 1.5                     |      |      |      |      |      |      |      |       |      |
| 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)                                       | 5.5 5.5 5.5 5.6 5.6 5.5 5.7 5.3 5.7 5.5                     |      |      |      |      |      |      |      |       |      |
| Lead/Lag                                                  | Lead                                                        | Lead | Lead | Lead | Lead | Lead | Lead | Lead | Lag   | Lag  |
| Lead-Lag Optimize?                                        | None                                                        | None | None | None | None | None | None | None | C-Max | None |
| Recall Mode                                               | 26.5 26.5 49.8 9.7 9.7 23.3 64.1 9.7 48.2 80.4              |      |      |      |      |      |      |      |       |      |
| Act Effort Green (s)                                      | 0.20 0.20 0.38 0.07 0.07 0.18 0.49 0.07 0.37 0.62           |      |      |      |      |      |      |      |       |      |
| Actuated g/C Ratio                                        | 1.02 1.02 0.77 0.52 0.50 0.83 0.81 0.95 1.00 0.57           |      |      |      |      |      |      |      |       |      |
| v/c Ratio                                                 | 116.0 115.7 24.0 71.2 32.4 63.8 32.3 72.8 62.7 11.4         |      |      |      |      |      |      |      |       |      |
| Control Delay                                             | 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0                     |      |      |      |      |      |      |      |       |      |
| Queue Delay                                               | 116.0 115.7 24.0 71.2 32.4 63.8 32.3 72.8 62.7 11.4         |      |      |      |      |      |      |      |       |      |
| Total Delay                                               | F F C C E C E C E C E E B                                   |      |      |      |      |      |      |      |       |      |
| LOS                                                       | Approach Delay                                              | 76.1 | E    | 43.9 | D    | D    | D    | D    | D     | D    |
| Approach LOS                                              | Intersection Summary                                        |      |      |      |      |      |      |      |       |      |
| Cycle Length: 130                                         | Actuated Cycle Length: 130                                  |      |      |      |      |      |      |      |       |      |
| Offset: 0 (0%), Referenced to phase 6 SBT, Start of Green | Natural Cycle: 100                                          |      |      |      |      |      |      |      |       |      |
| Control Type: Actuated-Coordinated                        | Maximum v/c Ratio: 1.02                                     |      |      |      |      |      |      |      |       |      |
| Intersection Signal Delay: 50.6                           | Intersection LOS: D                                         |      |      |      |      |      |      |      |       |      |
| Intersection Capacity Utilization 87.8%                   | ICU Level of Service E                                      |      |      |      |      |      |      |      |       |      |
| Analysis Period (min) 15                                  |                                                             |      |      |      |      |      |      |      |       |      |



Smoke Tree Resort  
2025 Total PM

9: Scottsdale Rd & Lincoln Dr  
HCM 6th Signalized Intersection Summary

| Movement                                | EBL   | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|-----------------------------------------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations                     | ↰     | ↰    | ↰    | ↰    | ↰    | ↰    | ↰    | ↰    | ↰    | ↰    | ↰    | ↰    |
| Traffic Volume (veh/h)                  | 569   | 61   | 481  | 61   | 68   | 78   | 461  | 1762 | 50   | 66   | 1702 | 546  |
| Future Volume (veh/h)                   | 569   | 61   | 481  | 61   | 68   | 78   | 461  | 1762 | 50   | 66   | 1702 | 546  |
| Initial Q (Q <sub>bb</sub> ), veh       | 0     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Ped-Bike Adj(A <sub>pbt</sub> )         | 1.00  | 1.00 | 1.00 | 1.00 | 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   | No   | No   | No   | No   | No   | No   | No   | No   |
| Adj Sat Flow, veh/hln                   | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h                    | 681   | 0    | 534  | 68   | 76   | 87   | 512  | 1958 | 56   | 73   | 1891 | 607  |
| Peak Hour Factor                        | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %                    | 2     | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Cap, veh/h                              | 726   | 0    | 580  | 128  | 128  | 114  | 559  | 2306 | 66   | 93   | 1740 | 863  |
| Arrive On Green                         | 0.07  | 0.00 | 0.07 | 0.07 | 0.07 | 0.07 | 0.16 | 0.45 | 0.45 | 0.05 | 0.34 | 0.34 |
| Sat Flow, veh/h                         | 3563  | 0    | 1585 | 1781 | 1777 | 1585 | 3456 | 5102 | 146  | 1781 | 5106 | 1585 |
| Grp Volume(V), veh/h                    | 681   | 0    | 534  | 68   | 76   | 87   | 512  | 1305 | 709  | 73   | 1891 | 607  |
| Grp Sat Flow(S), veh/hln                | 1781  | 0    | 1585 | 1781 | 1777 | 1585 | 1728 | 1702 | 1844 | 1781 | 1702 | 1585 |
| Q Serve(g, s), s                        | 24.7  | 0.0  | 26.5 | 4.8  | 5.4  | 7.0  | 19.0 | 44.3 | 44.5 | 5.3  | 44.3 | 36.7 |
| Cycle Q Clear(g, c), s                  | 24.7  | 0.0  | 26.5 | 4.8  | 5.4  | 7.0  | 19.0 | 44.3 | 44.5 | 5.3  | 44.3 | 36.7 |
| Prop In Lane                            | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.08 | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h                  | 726   | 0    | 580  | 128  | 128  | 114  | 559  | 1538 | 833  | 93   | 1740 | 863  |
| V/C Ratio(X)                            | 0.94  | 0.00 | 0.92 | 0.53 | 0.59 | 0.76 | 0.92 | 0.85 | 0.85 | 0.78 | 1.09 | 0.70 |
| Avail Cap(c, a), veh/h                  | 726   | 0    | 580  | 211  | 210  | 188  | 572  | 1538 | 833  | 243  | 1740 | 863  |
| HCM Platoon Ratio                       | 0.33  | 0.33 | 0.33 | 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh                | 59.8  | 0.0  | 44.7 | 58.2 | 58.5 | 59.2 | 53.6 | 31.7 | 31.7 | 60.9 | 42.9 | 21.8 |
| Incr Delay (d <sub>2</sub> ), s/veh     | 19.5  | 0.0  | 19.9 | 1.3  | 1.6  | 3.9  | 18.8 | 4.4  | 7.9  | 5.4  | 49.3 | 4.8  |
| Initial Q Delay(d <sub>3</sub> ), s/veh | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| %ile BackOfQ(50%), veh/ln               | 13.9  | 0.0  | 18.8 | 2.2  | 2.5  | 2.9  | 9.7  | 18.8 | 21.3 | 2.5  | 26.3 | 21.3 |
| Unsig. Movement Delay, s/veh            |       |      |      |      |      |      |      |      |      |      |      |      |
| LnGrp Delay(d), s/veh                   | 79.3  | 0.0  | 64.6 | 59.5 | 60.1 | 63.1 | 72.5 | 36.1 | 39.7 | 66.2 | 92.2 | 26.6 |
| LnGrp LOS                               | E     | A    | E    | E    | E    | E    | E    | D    | D    | E    | F    | C    |
| Approach Vol, veh/h                     | 1215  |      | 231  |      |      |      | 2526 |      |      |      | 2571 |      |
| Approach Delay, s/veh                   | 72.9  |      | 61.1 |      |      |      | 44.5 |      |      |      | 76.0 |      |
| Approach LOS                            | E     |      | E    |      |      |      | D    |      |      |      | E    |      |
| Timer - Assigned Phs                    | 1     | 2    | 4    | 5    | 6    | 8    |      |      |      |      |      |      |
| Phs Duration (G+Y+Rc), s                | 12.1  | 64.4 | 32.0 | 26.5 | 50.0 | 15.0 |      |      |      |      |      |      |
| Change Period (Y+Rc), s                 | * 5.3 | 5.7  | 5.5  | 5.5  | 5.7  | 5.6  |      |      |      |      |      |      |
| Max Green Sating (Gmax), s              | * 18  | 48.3 | 26.5 | 21.5 | 44.3 | 15.4 |      |      |      |      |      |      |
| Max Q Clear Time (g <sub>c+H</sub> ), s | 7.3   | 46.5 | 28.5 | 21.0 | 46.3 | 9.0  |      |      |      |      |      |      |
| Green Ext Time (p <sub>c</sub> ), s     | 0.0   | 1.0  | 0.0  | 0.1  | 0.0  | 0.4  |      |      |      |      |      |      |
| Intersection Summary                    |       |      |      |      |      |      |      |      |      |      |      |      |
| HCM 6th Ctrl Delay                      |       |      | 62.7 |      |      |      |      |      |      |      |      |      |
| HCM 6th LOS                             |       |      | E    |      |      |      |      |      |      |      |      |      |

Notes  
User approved pedestrian interval to be less than phase max green.  
User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Smoke Tree Resort  
2025 Total PM

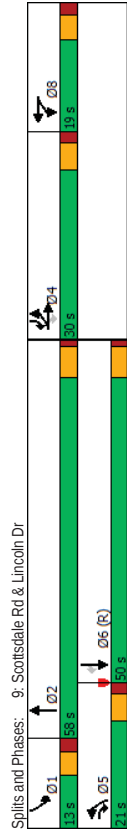
10: Quail Run Rd & Access A  
HCM 6th TWSC

| Intersection             | WBL    | WBR       | NBT    | NBR    | SBL    | SBT    |
|--------------------------|--------|-----------|--------|--------|--------|--------|
| Int Delay, s/veh         | 0      |           |        |        |        |        |
| Movement                 | WBL    | WBR       | NBT    | NBR    | SBL    | SBT    |
| Lane Configurations      | ↰      | ↰         | ↰      | ↰      | ↰      | ↰      |
| Traffic Vol, veh/h       | 0      | 1         | 0      | 0      | 1      | 0      |
| Future Vol, veh/h        | 0      | 1         | 0      | 0      | 1      | 0      |
| Conflicting Peds, #/hr   | 0      | 0         | 0      | 0      | 0      | 0      |
| Sign Control             | Stop   | Stop      | Free   | Free   | Free   | Free   |
| RT Channelized           | - None | - None    | - None | - None | - None | - None |
| Storage Length           | 0      | -         | -      | -      | -      | -      |
| Veh in Median Storage, # | 0      | -         | 0      | -      | -      | 0      |
| Grade, %                 | 0      | -         | 0      | -      | -      | 0      |
| Peak Hour Factor         | 90     | 90        | 90     | 90     | 90     | 90     |
| Heavy Vehicles, %        | 2      | 2         | 2      | 2      | 2      | 2      |
| Mvmt Flow                | 0      | 1         | 0      | 0      | 1      | 0      |
| Major/Minor              | Minor1 | Major1    | Major1 | Major2 |        |        |
| Conflicting Flow All     | 2      | 0         | 0      | 0      | 0      | 0      |
| Stage 1                  | 0      | -         | -      | -      | -      | -      |
| Stage 2                  | 2      | -         | -      | -      | -      | -      |
| Critical Hwy             | 6.42   | 6.22      | -      | -      | 4.12   | -      |
| Critical Hwy Stg 1       | 5.42   | -         | -      | -      | -      | -      |
| Critical Hwy Stg 2       | 5.42   | -         | -      | -      | -      | -      |
| Follow-up Hwy            | 3.518  | 3.318     | -      | -      | 2.218  | -      |
| Pot Cap-1 Maneuver       | 1021   | -         | -      | -      | -      | -      |
| Stage 1                  | -      | -         | -      | -      | -      | -      |
| Stage 2                  | 1021   | -         | -      | -      | -      | -      |
| Platoon blocked, %       | -      | -         | -      | -      | -      | -      |
| Mov Cap-1 Maneuver       | 1021   | -         | -      | -      | -      | -      |
| Mov Cap-2 Maneuver       | 1021   | -         | -      | -      | -      | -      |
| Stage 1                  | -      | -         | -      | -      | -      | -      |
| Stage 2                  | 1021   | -         | -      | -      | -      | -      |
| Approach                 | WB     | NB        | SB     |        |        |        |
| HCM Control Delay, s     | -      | 0         |        |        |        |        |
| HCM LOS                  |        |           |        |        |        |        |
| Minor Lane/Major Mvmt    | NBT    | NBR/WBLn1 | SBL    | SBT    |        |        |
| Capacity (veh/h)         | -      | -         | -      | -      | -      | -      |
| HCM Lane V/C Ratio       | -      | -         | -      | -      | -      | -      |
| HCM Control Delay (s)    | -      | -         | -      | -      | -      | -      |
| HCM Lane LOS             | -      | -         | -      | -      | -      | -      |
| HCM 95th %ile Q(veh)     | -      | -         | -      | -      | -      | -      |

Smoke Tree Resort  
2025 Total PM Mitigated

9: Scottsdale Rd & Lincoln Dr  
Timings

| Lane Group           | EBL   | EBT   | EBR    | WBL   | WBT   | NBL   | NBT   | SBL   | SBT   | SBR    |
|----------------------|-------|-------|--------|-------|-------|-------|-------|-------|-------|--------|
| Lane Configurations  | 569   | 61    | 481    | 61    | 68    | 461   | 1762  | 66    | 1702  | 546    |
| Traffic Volume (vph) | 569   | 61    | 481    | 61    | 68    | 461   | 1762  | 66    | 1702  | 546    |
| Future Volume (vph)  | 569   | 61    | 481    | 61    | 68    | 461   | 1762  | 66    | 1702  | 546    |
| Turn Type            | Split | NA    | pm+row | Split | NA    | Prdt  | NA    | Prdt  | NA    | pm+row |
| Protected Phases     | 4     | 4     | 5      | 8     | 8     | 5     | 2     | 1     | 6     | 4      |
| Permitted Phases     | 4     | 4     | 4      | 8     | 8     | 5     | 2     | 1     | 6     | 4      |
| Detector Phase       | 4     | 4     | 5      | 8     | 8     | 5     | 2     | 1     | 6     | 4      |
| Switch Phase         | 7.0   | 7.0   | 7.0    | 7.0   | 7.0   | 7.0   | 10.0  | 5.0   | 10.0  | 7.0    |
| Minimum Initial (s)  | 13.0  | 13.0  | 13.0   | 13.0  | 13.0  | 13.0  | 16.7  | 11.0  | 16.0  | 13.0   |
| Minimum Split (s)    | 30.0  | 30.0  | 21.0   | 19.0  | 19.0  | 21.0  | 58.0  | 13.0  | 50.0  | 30.0   |
| Total Split (%)      | 25.0% | 25.0% | 17.5%  | 15.8% | 15.8% | 17.5% | 48.3% | 10.8% | 41.7% | 25.0%  |
| Yellow Time (s)      | 4.0   | 4.0   | 4.0    | 3.6   | 3.6   | 4.0   | 4.7   | 3.3   | 4.7   | 4.0    |
| All-Red Time (s)     | 1.5   | 1.5   | 1.5    | 2.0   | 2.0   | 1.5   | 1.0   | 2.0   | 1.0   | 1.5    |
| 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)  | 5.5   | 5.5   | 5.5    | 5.6   | 5.6   | 5.5   | 5.7   | 5.3   | 5.7   | 5.5    |
| Lead/Lag             | Lead  | Lead  | Lead   | Lead  | Lead  | Lead  | Lag   | Lag   | Lag   | Lag    |
| Lead-Lag Optimize?   | None  | None  | None   | None  | None  | None  | None  | None  | C-Max | None   |
| Recall Mode          | 24.5  | 24.5  | 44.0   | 9.4   | 9.4   | 19.5  | 57.8  | 8.4   | 44.3  | 74.5   |
| Act Effct Green (s)  | 0.20  | 0.20  | 0.37   | 0.08  | 0.08  | 0.16  | 0.48  | 0.07  | 0.37  | 0.62   |
| Actuated g/C Ratio   | 1.01  | 1.01  | 0.82   | 0.49  | 0.49  | 0.92  | 0.83  | 0.59  | 1.01  | 0.56   |
| v/c Ratio            | 100.0 | 99.6  | 29.0   | 64.6  | 29.9  | 72.4  | 31.6  | 73.2  | 60.5  | 9.2    |
| Control Delay        | 0.0   | 0.0   | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 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          | 100.0 | 99.6  | 29.0   | 64.6  | 29.9  | 72.4  | 31.6  | 73.2  | 60.5  | 9.2    |
| LOS                  | F     | F     | C      | E     | C     | E     | C     | E     | E     | A      |
| Approach Delay       | 69.2  |       |        | 40.1  |       |       | 39.9  |       | 48.7  |        |
| Approach LOS         | E     |       |        | D     |       |       | D     |       | D     |        |



Smoke Tree Resort  
2025 Total PM Mitigated

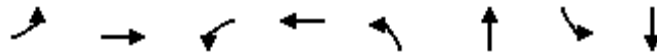
9: Scottsdale Rd & Lincoln Dr  
HCM 6th Signalized Intersection Summary

| Movement                     | EBL   | EBT  | EBR  | WBL  | WBT  | NBL  | NBT   | SBL  | SBT  | SBR  |
|------------------------------|-------|------|------|------|------|------|-------|------|------|------|
| Lane Configurations          | 569   | 61   | 481  | 61   | 68   | 461  | 1762  | 50   | 66   | 1702 |
| Traffic Volume (veh/h)       | 569   | 61   | 481  | 61   | 68   | 461  | 1762  | 50   | 66   | 1702 |
| Future Volume (veh/h)        | 569   | 61   | 481  | 61   | 68   | 461  | 1762  | 50   | 66   | 1702 |
| Initial Q (Qb) veh           | 0     | 0    | 0    | 0    | 0    | 0    | 0     | 0    | 0    | 0    |
| Ped-Bike Adj(A, pbf)         | 1.00  | 1.00 | 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 |
| Work Zone On Approach        | No    | No   | No   | No   | No   | No   | No    | No   | No   | No   |
| Adj Sat Flow, veh/h          | 1870  | 1870 | 1870 | 1870 | 1870 | 1870 | 1870  | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h         | 681   | 0    | 534  | 68   | 76   | 87   | 512   | 1958 | 56   | 73   |
| Peak Hour Factor             | 0.90  | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90  | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, %         | 2     | 2    | 2    | 2    | 2    | 2    | 2     | 2    | 2    | 2    |
| Cap, veh/h                   | 727   | 0    | 528  | 130  | 130  | 116  | 446   | 2285 | 65   | 93   |
| Arrive On Green              | 0.20  | 0.00 | 0.20 | 0.07 | 0.07 | 0.07 | 0.13  | 0.45 | 0.05 | 0.37 |
| Sat Flow, veh/h              | 3563  | 0    | 1585 | 1781 | 1777 | 1585 | 3456  | 5102 | 146  | 1781 |
| Grp Volume(V), veh/h         | 681   | 0    | 534  | 68   | 76   | 87   | 512   | 1305 | 709  | 73   |
| Grp Sat Flow(s), veh/h       | 1781  | 0    | 1585 | 1781 | 1777 | 1585 | 1728  | 1702 | 1844 | 1781 |
| Q Serve(g, s)                | 22.6  | 0.0  | 24.5 | 4.4  | 5.0  | 6.5  | 15.5  | 41.2 | 41.4 | 4.9  |
| Cycle Q Clear(g, s)          | 22.6  | 0.0  | 24.5 | 4.4  | 5.0  | 6.5  | 15.5  | 41.2 | 41.4 | 4.9  |
| Prop In Lane                 | 1.00  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 |
| Lane Grp Cap(c), veh/h       | 727   | 0    | 528  | 130  | 130  | 116  | 446   | 1524 | 826  | 93   |
| V/C Ratio(X)                 | 0.94  | 0.00 | 1.01 | 0.52 | 0.59 | 0.75 | 1.15  | 0.86 | 0.86 | 0.79 |
| Avail Cap(c, a), veh/h       | 727   | 0    | 528  | 199  | 198  | 177  | 446   | 1524 | 826  | 114  |
| HCM Platoon Ratio            | 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 | 1.00 | 1.00 | 1.00  | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh     | 47.0  | 0.0  | 40.0 | 53.6 | 53.9 | 54.6 | 52.3  | 29.7 | 29.7 | 56.2 |
| Incr Delay (d2), s/veh       | 19.2  | 0.0  | 41.8 | 1.2  | 1.6  | 3.7  | 89.4  | 4.8  | 8.6  | 19.7 |
| 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  |
| %ile BackOfQ(50%) veh/h      | 11.9  | 0.0  | 21.5 | 2.0  | 2.3  | 2.7  | 12.2  | 17.4 | 19.8 | 2.7  |
| Unsig. Movement Delay, s/veh | 66.2  | 0.0  | 81.8 | 54.8 | 55.4 | 58.2 | 141.7 | 34.5 | 38.3 | 75.9 |
| LnGrp Delay(d), s/veh        | E     | A    | F    | D    | E    | E    | F     | C    | D    | E    |
| LnGrp LOS                    | E     | A    | F    | D    | E    | E    | F     | C    | D    | E    |
| Approach Vol, veh/h          | 1215  |      |      | 231  |      |      | 2526  |      | 2571 |      |
| Approach Delay, s/veh        | 73.1  |      |      | 56.3 |      |      | 57.3  |      | 50.9 |      |
| Approach LOS                 | E     |      |      | E    |      |      | E     |      | D    |      |
| Timer - Assigned Phs         | 1     | 2    | 4    | 5    | 6    | 8    |       |      |      |      |
| Phs Duration (G+Y+Rc), s     | 11.6  | 59.4 | 30.0 | 21.0 | 50.0 | 14.4 |       |      |      |      |
| Change Period (Y+Rc), s      | * 5.3 | 5.7  | 5.5  | 5.5  | 5.7  | 5.6  |       |      |      |      |
| Max Green Setting (Gmax), s  | * 7.7 | 52.3 | 24.5 | 15.5 | 44.3 | 13.4 |       |      |      |      |
| Max Q Clear Time (g_c+1), s  | 6.9   | 43.4 | 26.5 | 17.5 | 46.3 | 8.5  |       |      |      |      |
| Green Ext Time (p_c), s      | 0.0   | 2.7  | 0.0  | 0.0  | 0.0  | 0.3  |       |      |      |      |
| Intersection Summary         |       |      |      |      |      |      |       |      |      |      |
| HCM 6th Ctrl Delay           |       |      | 57.7 |      |      |      |       |      |      |      |
| HCM 6th LOS                  |       |      | E    |      |      |      |       |      |      |      |

Notes  
User approved pedestrian interval to be less than phase max green.  
User approved volume balancing among the lanes for turning movement.  
\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

## **APPENDIX I**

### **QUEUE STORAGE ANALYSIS**



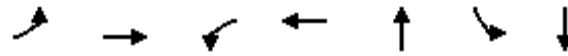
| Lane Group              | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |
|-------------------------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 269  | 1209 | 28   | 1132 | 7    | 69   | 94   | 388  |
| v/c Ratio               | 0.75 | 0.52 | 0.13 | 0.63 | 0.05 | 0.29 | 0.27 | 0.85 |
| Control Delay           | 30.1 | 14.1 | 8.6  | 11.4 | 29.7 | 34.6 | 36.4 | 49.1 |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 30.1 | 14.1 | 8.6  | 11.4 | 29.7 | 34.6 | 36.4 | 49.1 |
| Queue Length 50th (ft)  | 86   | 235  | 1    | 23   | 5    | 36   | 64   | 225  |
| Queue Length 95th (ft)  | 231  | 473  | m29  | #729 | 13   | 68   | 85   | 310  |
| Internal Link Dist (ft) |      | 105  |      | 1255 |      | 475  |      | 337  |
| Turn Bay Length (ft)    | 150  |      | 95   |      | 80   |      | 135  |      |
| Base Capacity (vph)     | 430  | 2345 | 221  | 1794 | 299  | 422  | 588  | 730  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.63 | 0.52 | 0.13 | 0.63 | 0.02 | 0.16 | 0.16 | 0.53 |

#### Intersection Summary

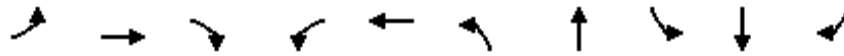
# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



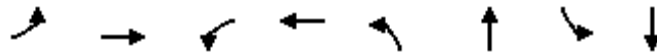
| Lane Group              | EBL  | EBT  | WBL  | WBT  | NBT  | SBL  | SBT  |
|-------------------------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 128  | 1245 | 2    | 1054 | 10   | 29   | 73   |
| v/c Ratio               | 0.55 | 0.70 | 0.02 | 0.77 | 0.01 | 0.05 | 0.09 |
| Control Delay           | 35.4 | 35.7 | 21.5 | 38.4 | 0.0  | 28.4 | 0.2  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 35.4 | 35.7 | 21.5 | 38.4 | 0.0  | 28.4 | 0.2  |
| Queue Length 50th (ft)  | 73   | 416  | 1    | 402  | 0    | 15   | 0    |
| Queue Length 95th (ft)  | 151  | 626  | 6    | 426  | 0    | 42   | 0    |
| Internal Link Dist (ft) |      | 1255 |      | 319  | 137  |      | 291  |
| Turn Bay Length (ft)    | 25   |      | 25   |      |      |      |      |
| Base Capacity (vph)     | 297  | 2382 | 149  | 1834 | 689  | 562  | 798  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.43 | 0.52 | 0.01 | 0.57 | 0.01 | 0.05 | 0.09 |
| Intersection Summary    |      |      |      |      |      |      |      |



| Lane Group              | EBL  | EBT  | EBR  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  | SBR  |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 300  | 303  | 564  | 46   | 101  | 368  | 1636 | 61   | 2016 | 740  |
| v/c Ratio               | 0.90 | 0.90 | 0.89 | 0.38 | 0.37 | 0.76 | 0.65 | 0.50 | 0.98 | 0.63 |
| Control Delay           | 77.0 | 77.0 | 35.4 | 62.1 | 28.9 | 60.3 | 25.1 | 67.8 | 50.5 | 8.4  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 77.0 | 77.0 | 35.4 | 62.1 | 28.9 | 60.3 | 25.1 | 67.8 | 50.5 | 8.4  |
| Queue Length 50th (ft)  | 238  | 241  | 228  | 35   | 16   | 142  | 347  | 46   | 560  | 133  |
| Queue Length 95th (ft)  | #404 | #408 | #317 | 73   | 45   | 194  | 436  | 91   | #732 | 274  |
| Internal Link Dist (ft) |      | 389  |      |      | 130  |      | 477  |      | 335  |      |
| Turn Bay Length (ft)    | 175  |      |      | 90   |      | 275  |      | 185  |      |      |
| Base Capacity (vph)     | 343  | 346  | 641  | 197  | 412  | 497  | 2524 | 130  | 2067 | 1175 |
| 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       | 0.87 | 0.88 | 0.88 | 0.23 | 0.25 | 0.74 | 0.65 | 0.47 | 0.98 | 0.63 |

#### Intersection Summary

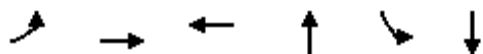
# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.



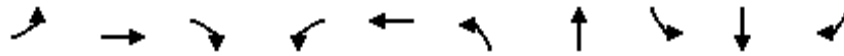
| Lane Group              | EBL  | EBT  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  |
|-------------------------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 297  | 1100 | 30   | 1216 | 9    | 99   | 78   | 246  |
| v/c Ratio               | 0.76 | 0.43 | 0.11 | 0.63 | 0.05 | 0.57 | 0.30 | 0.62 |
| Control Delay           | 30.7 | 9.2  | 3.3  | 6.4  | 37.2 | 62.3 | 42.7 | 25.8 |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 30.7 | 9.2  | 3.3  | 6.4  | 37.2 | 62.3 | 42.7 | 25.8 |
| Queue Length 50th (ft)  | 115  | 190  | 1    | 22   | 6    | 72   | 54   | 70   |
| Queue Length 95th (ft)  | 230  | 291  | m8   | 578  | 20   | 127  | 91   | 164  |
| Internal Link Dist (ft) |      | 105  |      | 1255 |      | 475  |      | 337  |
| Turn Bay Length (ft)    | 150  |      | 95   |      | 80   |      | 135  |      |
| Base Capacity (vph)     | 441  | 2534 | 263  | 1915 | 313  | 408  | 566  | 743  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.67 | 0.43 | 0.11 | 0.63 | 0.03 | 0.24 | 0.14 | 0.33 |

#### Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



| Lane Group              | EBL  | EBT  | WBT  | NBT  | SBL  | SBT  |
|-------------------------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 94   | 1092 | 1166 | 3    | 16   | 103  |
| v/c Ratio               | 0.43 | 0.58 | 0.78 | 0.00 | 0.03 | 0.14 |
| Control Delay           | 28.4 | 19.9 | 35.7 | 0.0  | 31.2 | 0.4  |
| Queue Delay             | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 28.4 | 19.9 | 35.7 | 0.0  | 31.2 | 0.4  |
| Queue Length 50th (ft)  | 41   | 264  | 436  | 0    | 9    | 0    |
| Queue Length 95th (ft)  | 92   | 289  | 458  | 0    | 29   | 0    |
| Internal Link Dist (ft) |      | 1255 | 319  | 137  |      | 291  |
| Turn Bay Length (ft)    | 25   |      |      |      |      |      |
| Base Capacity (vph)     | 292  | 2382 | 1831 | 648  | 524  | 749  |
| Starvation Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    | 0    | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.32 | 0.46 | 0.64 | 0.00 | 0.03 | 0.14 |
| Intersection Summary    |      |      |      |      |      |      |



| Lane Group              | EBL   | EBT  | EBR  | WBL  | WBT  | NBL  | NBT  | SBL  | SBT  | SBR  |
|-------------------------|-------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph)   | 348   | 352  | 534  | 68   | 163  | 512  | 2014 | 73   | 1891 | 607  |
| v/c Ratio               | 1.01  | 1.01 | 0.82 | 0.49 | 0.49 | 0.92 | 0.83 | 0.59 | 1.01 | 0.56 |
| Control Delay           | 100.0 | 99.6 | 29.0 | 64.6 | 29.9 | 72.4 | 31.6 | 73.2 | 60.5 | 9.2  |
| Queue Delay             | 0.0   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Total Delay             | 100.0 | 99.6 | 29.0 | 64.6 | 29.9 | 72.4 | 31.6 | 73.2 | 60.5 | 9.2  |
| Queue Length 50th (ft)  | ~292  | ~295 | 210  | 52   | 30   | 202  | 503  | 55   | ~540 | 138  |
| Queue Length 95th (ft)  | #495  | #501 | #346 | 97   | 63   | #344 | 597  | #120 | #658 | 232  |
| Internal Link Dist (ft) |       | 389  |      |      | 130  |      | 477  |      | 335  |      |
| Turn Bay Length (ft)    | 175   |      |      | 90   |      | 275  |      | 185  |      |      |
| Base Capacity (vph)     | 343   | 347  | 654  | 197  | 440  | 558  | 2441 | 130  | 1877 | 1080 |
| 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       | 1.01  | 1.01 | 0.82 | 0.35 | 0.37 | 0.92 | 0.83 | 0.56 | 1.01 | 0.56 |

#### Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

### Signalized Intersection 2025

Average Vehicle Length (ft): 25

Cycles: 2

Intersection Cycle Length (sec): 130

Equation Used: storage length = 2 x (vehicles/hour)/(cycles/hour) x average vehicle length

| Intersection                  | Approach | AM Peak<br>(veh/hr) | Midday<br>Peak | PM Peak<br>(veh/hr) | Max vehs per<br>2 cycles | Max trucks<br>per 2 cycles | Storage<br>Length |
|-------------------------------|----------|---------------------|----------------|---------------------|--------------------------|----------------------------|-------------------|
| Mockingbird Lane & Lincoln Dr | NB Left  | 6                   | 0              | 8                   | 1                        | 0                          | 25'               |
|                               | SB Left  | 85                  | 0              | 70                  | 7                        | 0                          | 175'              |
|                               | EB Left  | 242                 | 0              | 267                 | 20                       | 0                          | 500'              |
|                               | WB Left  | 25                  | 0              | 27                  | 2                        | 0                          | 50'               |
|                               | NB Right | 25                  | 0              | 21                  | 2                        | 0                          | 50'               |
|                               | SB Right | 253                 | 0              | 169                 | 19                       | 0                          | 475'              |
|                               | EB Right | 33                  | 0              | 32                  | 3                        | 0                          | 75'               |
|                               | WB Right | 48                  | 0              | 71                  | 6                        | 0                          | 150'              |
| Quail Run Rd & Lincoln Dr     | NB Left  | 1                   | 0              | 1                   | 1                        | 0                          | 25'               |
|                               | SB Left  | 26                  | 0              | 14                  | 2                        | 0                          | 50'               |
|                               | EB Left  | 115                 | 0              | 85                  | 9                        | 0                          | 225'              |
|                               | WB Left  | 2                   | 0              | 0                   | 1                        | 0                          | 25'               |
|                               | NB Right | 8                   | 0              | 2                   | 1                        | 0                          | 25'               |
|                               | SB Right | 66                  | 0              | 93                  | 7                        | 0                          | 175'              |
|                               | EB Right | 4                   | 0              | 2                   | 1                        | 0                          | 25'               |
|                               | WB Right | 12                  | 0              | 25                  | 2                        | 0                          | 50'               |
| Scottsdale Rd & Lincoln Dr    | NB Left  | 331                 | 0              | 461                 | 34                       | 0                          | 850'              |
|                               | SB Left  | 55                  | 0              | 66                  | 5                        | 0                          | 125'              |
|                               | EB Left  | 500                 | 0              | 569                 | 42                       | 0                          | 1050'             |
|                               | WB Left  | 41                  | 0              | 61                  | 5                        | 0                          | 125'              |
|                               | NB Right | 43                  | 0              | 50                  | 4                        | 0                          | 100'              |
|                               | SB Right | 666                 | 0              | 546                 | 49                       | 0                          | 1225'             |
|                               | EB Right | 508                 | 0              | 481                 | 37                       | 0                          | 925'              |
|                               | WB Right | 52                  | 0              | 78                  | 6                        | 0                          | 150'              |

### Unsignalized Intersection 2025

Average Vehicle Length (ft): 25

Equation Used: storage length =  $2 \times (\text{vehicles/hour}) / (60 \text{ minutes/hour}) \times \text{average vehicle length}$

| Intersection                        | Approach | AM Peak<br>(veh/hr) | Midday<br>Peak | PM Peak<br>(veh/hr) | Veh per 2<br>minutes | Trucks per<br>2 minutes | Storage<br>Length |
|-------------------------------------|----------|---------------------|----------------|---------------------|----------------------|-------------------------|-------------------|
| Smoke Tree Access B & Lincoln<br>Dr | NB Left  | 16                  | 0              | 18                  | 1                    | 0                       | 25'               |
|                                     | SB Left  | 0                   | 0              | 0                   | 0                    | 0                       | 0'                |
|                                     | EB Left  | 0                   | 0              | 0                   | 0                    | 0                       | 0'                |
|                                     | WB Left  | 26                  | 0              | 36                  | 2                    | 0                       | 50'               |
|                                     | NB Right | 22                  | 0              | 34                  | 2                    | 0                       | 50'               |
|                                     | SB Right | 0                   | 0              | 0                   | 0                    | 0                       | 0'                |
|                                     | EB Right | 17                  | 0              | 20                  | 1                    | 0                       | 25'               |
|                                     | WB Right | 0                   | 0              | 0                   | 0                    | 0                       | 0'                |

## **APPENDIX J**

### **SIGHT DISTANCE ANALYSIS**

## Smoke Tree

## Sight Distance Analysis

Location: Smoke Tree Access B & Lincoln Dr

### Assumptions and/or Givens

#### Elements of Design from AASHTO

#### 6th Edition

#### AASHTO Ref

|                                    |                           |                |
|------------------------------------|---------------------------|----------------|
| Driver Eye Height                  |                           |                |
| Passenger Vehicle                  | 3.50 ft                   | §3.2.6, p 3-14 |
| Truck                              | 7.60 ft                   | §3.2.6, p 3-14 |
| Object Height                      |                           |                |
| Stopping Sight Distance            | 2.00 ft                   | §3.2.6, p 3-14 |
| Passing Sight Distance             | 3.50 ft                   | §3.2.6, p 3-14 |
| Vehicle Height                     | 4.25 ft                   | §3.2.6, p 3-14 |
| Driver Eye Location                |                           |                |
| From Edge of Major Rd Traveled Way | 14.50 ft                  | 9.5.3, B1      |
| Deceleration Rate (a)              |                           |                |
| Passenger Vehicle                  | 11.20 ft/sec <sup>2</sup> | §3.2.2, p 3-3  |
| Truck                              | N/A ft                    |                |
| Brake reaction time (t)            | 2.50 sec                  | §3.2.2, p 3-4  |

#### Site Specific Data (Bike & turn lanes are outside traveled way and are not considered)

|                                                                    |           |                             |
|--------------------------------------------------------------------|-----------|-----------------------------|
| Major Street Design Speed ( $V_{major}$ )                          | 45        | MPH                         |
| Grades - Approaching Minor Street from: (— = approaching downhill) |           |                             |
| Left ( $G_L$ )                                                     | 0.00      | %                           |
| Right ( $G_R$ )                                                    | 0.00      | %                           |
| Approach Grade Adjustment Factor                                   | Left 1.0  | Tbl 9-4, p 9-35             |
|                                                                    | Right 1.0 |                             |
| Major Road Through Lanes on Each Approach                          | 2.0       | (Use 1 for RI/RO/[LI] only) |
| Median Width (in "Lane Equivalents")                               | 12.0      | (Use 0 for RI/RO/[LI] only) |
| Minor Road Approach Upgrade, if >3%                                | 0.00      | %                           |
| Minor Road Access (check restricted)                               |           |                             |
|                                                                    | LI        | LO/Th RO                    |

### Stopping Sight Distance = Brake Reaction Distance + Braking Distance

#### Neglecting Effect of Grade

$$d = 1.47Vt + 1.075 \frac{V^2}{a} \quad \text{Eq 3-2, p 3-4}$$

Calculated d= 359.8 ft  
Design d= 360 ft

#### With Effect of Grade

$$d = 1.47Vt + \frac{V^2}{30 \left( \left( \frac{a}{32.2} \right) \pm G \right)} \quad \text{Eq 3-3, p 3-5}$$

Calculated d= 359.1 ft - left  
360 ft - right  
Design d= 359.1 ft - left  
360 ft - right

SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance.

§3.2.2, p 3-6



**Smoke Tree****Sight Distance Analysis****Location: Smoke Tree Access B & Lincoln Dr****Intersection Sight Distances****Case B—Intersections with Stop Control on the Minor Road****AASHTO Ref**  
§9.5.3, p 9-36Case B1—Left Turn from the Minor Road

§9.5.3, p 9-36

| Design Vehicle    | Time Gap ( $t_g$ ) |                 |
|-------------------|--------------------|-----------------|
| Passenger Car     | 7.5 sec            | Tbl 9-5, p 9-37 |
| Single-Unit Truck | 9.5 sec            | Tbl 9-5, p 9-37 |
| Combination Truck | 11.5 sec           | Tbl 9-5, p 9-37 |

## Time gap adjustments

Add'l lanes to cross (1<sup>st</sup> is assumed)

|                                         |         |                 |
|-----------------------------------------|---------|-----------------|
| Passenger Car                           | 0.5 sec | See Notes       |
| Trucks                                  | 0.7 sec | below           |
| Minor Approach Upgrade (Per each 1%>3%) | 0.2 sec | Tbl 9-5, p 9-37 |

## Site data

|                                     |     |                |
|-------------------------------------|-----|----------------|
| Major Road Lanes on Left Approach   | 2.0 | §9.5.3, p 9-37 |
| Minor Road Approach Upgrade, if >3% | 0 % | §9.5.3, p 9-37 |

## Time Gap based on site data

*Design Vehicle Gap+Adj for Approach Grade>3%+Adjs for Add'l Lanes & Median*

|                   |          |
|-------------------|----------|
| Passenger Car     | 14.0 sec |
| Single-Unit Truck | 18.6 sec |
| Combination Truck | 20.6 sec |

ISD to left & right along Major Road      $ISD=1.47V_{major}t_g$      (ft)     Eq 9-1, p 9-37

|                   |                 | ISD to Left<br>and Right |
|-------------------|-----------------|--------------------------|
| Passenger Car     | calculated ISD= | 926.1 ft                 |
|                   | design ISD=     | 930 ft                   |
| Single-Unit Truck | calculated ISD= | 1230.4 ft                |
|                   | design ISD=     | 1235 ft                  |
| Combination Truck | calculated ISD= | 1362.7 ft                |
|                   | design ISD=     | 1365 ft                  |

## Smoke Tree

### Location: Smoke Tree Access B & Lincoln Dr

## Sight Distance Analysis

### Intersection Sight Distances (cont'd)

|                                                      |                   |
|------------------------------------------------------|-------------------|
| <u>Case B2—Right Turn from the Minor Road</u>        | <b>AASHTO Ref</b> |
| &                                                    | §9.5.3, p 9-40    |
| <u>Case B3—Crossing Maneuver from the Minor Road</u> | §9.5.3, p 9-43    |

| Design Vehicle    | Time Gap ( $t_g$ ) |                 |
|-------------------|--------------------|-----------------|
| Passenger Car     | 6.5 sec            | Tbl 9-7, p 9-40 |
| Single-Unit Truck | 8.5 sec            | Tbl 9-7, p 9-40 |
| Combination Truck | 10.5 sec           | Tbl 9-7, p 9-40 |

#### Time gap adjustments - Case B-3 Only\*

Add'l lanes to cross (1<sup>st</sup> is assumed)

|                                         |         |                 |
|-----------------------------------------|---------|-----------------|
| Passenger Car                           | 0.5 sec | See Notes       |
| Trucks                                  | 0.7 sec | below           |
| Minor Approach Upgrade (Per each 1%>3%) | 0.1 sec | Tbl 9-7, p 9-40 |

#### Site data

|                                     |     |                |
|-------------------------------------|-----|----------------|
| Major Road Lanes on Left Approach   | 2.0 | §9.5.3, p 9-40 |
| Minor Road Approach Upgrade, if >3% | 0 % | §9.5.3, p 9-40 |

#### Time Gap based on site data (sec)

|                                                                                                   | B2 & B3 | B3 Only |
|---------------------------------------------------------------------------------------------------|---------|---------|
| <i>Design Vehicle Gap+Adj for Approach Grade&gt;3%(+Adjs for Add'l Lanes &amp; Median for B3)</i> |         |         |
| Passenger Car                                                                                     | 13.0    | 13.5    |
| Single-Unit Truck                                                                                 | 17.6    | 18.3    |
| Combination Truck                                                                                 | 19.6    | 20.3    |

ISD to left (B2/B3) & right (B3) along Major Rd  $ISD = 1.47 V_{major} t_g$  (ft) Eq 9-1, p 9-37

|                   |                 |        | ISD to Left<br>(B2 & B3) | ISD to right<br>(B3 Only) |
|-------------------|-----------------|--------|--------------------------|---------------------------|
| Passenger Car     | calculated ISD= |        | 860.0                    | 893.0                     |
|                   | design ISD=     |        | 860                      | 895                       |
| Single-Unit Truck | calculated ISD= | 1164.2 |                          | 1210.5                    |
|                   | design ISD=     | 1165   |                          | 1215                      |
| Combination Truck | calculated ISD= | 1296.5 |                          | 1342.8                    |
|                   | design ISD=     | 1300   |                          | 1345                      |

\*Number of major road lanes is irrelevant in Case B2.

The differences between Case B1 and Cases B2 & B3 are reduced time gaps and time gap adjustment for the minor approach upgrade. §9.5.3, p 9-43

## Smoke Tree

Location: Smoke Tree Access B & Lincoln Dr

## Sight Distance Analysis

### Intersection Sight Distances (cont'd)

#### Case F—Left Turns from the Major Road

**AASHTO Ref**  
§9.5.3, p 9-51

|                                                 |                                                  |                 |
|-------------------------------------------------|--------------------------------------------------|-----------------|
| Design Vehicle                                  | Time Gap ( $t_g$ )                               |                 |
| Passenger Car                                   | 5.5 sec                                          | bl 9-13, p 9-51 |
| Single-Unit Truck                               | 6.5 sec                                          | bl 9-13, p 9-51 |
| Combination Truck                               | 7.5 sec                                          | bl 9-13, p 9-51 |
| Time gap adjustments                            |                                                  |                 |
| Add'l lanes to cross (1 assumed)                |                                                  |                 |
| Passenger Car                                   | 0.5 sec                                          | See Notes to    |
| Trucks                                          | 0.7 sec                                          | bl 9-13, p 9-51 |
| Site data                                       |                                                  |                 |
| Opposing Lanes (adj'd for x-wide median)        | 13.0                                             |                 |
| Time Gap based on site data                     |                                                  |                 |
| Design Vehicle Gap+Adj for Add'l Opposing Lanes |                                                  |                 |
| Passenger Car                                   | 12.0 sec                                         |                 |
| Single-Unit Truck                               | 15.6 sec                                         |                 |
| Combination Truck                               | 16.6 sec                                         |                 |
| ISD to front along Major Road                   | $ISD = 1.47V_{major}t_g$ (ft)                    | Eq 9-1, p 9-37  |
| Passenger Car                                   | calculated ISD= 793.8 ft<br>design ISD= 795 ft   |                 |
| Single-Unit Truck                               | calculated ISD= 1031.9 ft<br>design ISD= 1035 ft |                 |
| Combination Truck                               | calculated ISD= 1098.1 ft<br>design ISD= 1100 ft |                 |

The differences between Case F and Cases B1, B2 & B3 are reduced time gaps and no time gap adjustment for any minor approach upgrade. §9.5.3, p 9-43

### SIGHT DISTANCE SUMMARY

| Sight Distance Type           | Governing Case | Car | SU Truck | Combo Truck |
|-------------------------------|----------------|-----|----------|-------------|
| Stopping                      |                |     |          |             |
| Without effect of grade       |                | 360 | N/A      | N/A         |
| With effect of grade on left  |                | 360 | N/A      | N/A         |
| With effect of grade on right |                | 360 | N/A      | N/A         |
| Intersection                  |                |     |          |             |
| To Right                      | B1             | 930 | 1235     | 1365        |
| To Left                       | B2/B3          | 860 | 1165     | 1300        |
| On Major Road                 | F              | 795 | 1035     | 1100        |



**Smoke Tree Resort**  
**Location: Quail Run Road**

**Sight Distance Analysis**

**Assumptions and/or Given**

**Elements of Design from AASHTO**

|                                    | 6th Edition               | AASHTO Ref     |
|------------------------------------|---------------------------|----------------|
| Driver Eye Height                  |                           |                |
| Passenger Vehicle                  | 3.50 ft                   | §3.2.6, p 3-14 |
| Truck                              | 7.60 ft                   | §3.2.6, p 3-14 |
| Object Height                      |                           |                |
| Stopping Sight Distance            | 2.00 ft                   | §3.2.6, p 3-14 |
| Passing Sight Distance             | 3.50 ft                   | §3.2.6, p 3-14 |
| Vehicle Height                     | 4.25 ft                   | §3.2.6, p 3-14 |
| Driver Eye Location                |                           |                |
| From Edge of Major Rd Traveled Way | 14.50 ft                  | 9.5.3, B1      |
| Deceleration Rate (a)              |                           |                |
| Passenger Vehicle                  | 11.20 ft/sec <sup>2</sup> | §3.2.2, p 3-3  |
| Truck                              | N/A ft                    |                |
| Brake reaction time (t)            | 2.50 sec                  | §3.2.2, p 3-4  |

**Site Specific Data (Bike & turn lanes are outside traveled way and are not considered)**

|                                                                    |                       |                             |
|--------------------------------------------------------------------|-----------------------|-----------------------------|
| Major Street Design Speed ( $V_{major}$ )                          | 30                    | MPH                         |
| Grades - Approaching Minor Street from: (— = approaching downhill) |                       |                             |
| Left ( $G_L$ )                                                     |                       | %                           |
| Right ( $G_R$ )                                                    |                       | %                           |
| Approach Grade Adjustment Factor                                   | Left 1.0<br>Right 1.0 | Tbl 9-4, p 9-35             |
| Major Road Through Lanes on Each Approach                          | 1.0                   | (Use 1 for RI/RO/[LI] only) |
| Median Width (in "Lane Equivalents")                               | 0.0                   | (Use 0 for RI/RO/[LI] only) |
| Minor Road Approach Upgrade, if >3%                                |                       | %                           |
| Minor Road Access (check restricted)                               |                       |                             |
|                                                                    | LI                    | LO/Th RO                    |

**Stopping Sight Distance = Brake Reaction Distance + Braking Distance**

Neglecting Effect of Grade

$$d = 1.47Vt + 1.075 \frac{V^2}{a} \quad \text{Eq 3-2, p 3-4}$$

Calculated d= 196.7 ft  
 Design d= 200 ft

With Effect of Grade

$$d = 1.47Vt + \frac{V^2}{30\left(\left(\frac{a}{32.2}\right) \pm G\right)} \quad \text{Eq 3-3, p 3-5}$$

Calculated d= 196.3 ft - left  
 200 ft - right  
 Design d= 196.3 ft - left  
 200 ft - right

SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance. §3.2.2, p 3-6



**Smoke Tree Resort**  
**Location: Quail Run Road**

**Sight Distance Analysis**

**Intersection Sight Distances**

**Case B—Intersections with Stop Control on the Minor Road**

**AASHTO Ref**  
 §9.5.3, p 9-36

Case B1—Left Turn from the Minor Road

§9.5.3, p 9-36

| Design Vehicle    | Time Gap ( $t_g$ ) |                 |
|-------------------|--------------------|-----------------|
| Passenger Car     | 7.5 sec            | Tbl 9-5, p 9-37 |
| Single-Unit Truck | 9.5 sec            | Tbl 9-5, p 9-37 |
| Combination Truck | 11.5 sec           | Tbl 9-5, p 9-37 |

**Time gap adjustments**

|                                                   |         |                 |
|---------------------------------------------------|---------|-----------------|
| Add'l lanes to cross (1 <sup>st</sup> is assumed) |         |                 |
| Passenger Car                                     | 0.5 sec | See Notes       |
| Trucks                                            | 0.7 sec | below           |
| Minor Approach Upgrade (Per each 1%>3%)           | 0.2 sec | Tbl 9-5, p 9-37 |

**Site data**

|                                     |     |                |
|-------------------------------------|-----|----------------|
| Major Road Lanes on Left Approach   | 1.0 | §9.5.3, p 9-37 |
| Minor Road Approach Upgrade, if >3% | 0 % | §9.5.3, p 9-37 |

**Time Gap based on site data**

*Design Vehicle Gap+Adj for Approach Grade>3%+Adjs for Add'l Lanes & Median*

|                   |          |
|-------------------|----------|
| Passenger Car     | 7.5 sec  |
| Single-Unit Truck | 9.5 sec  |
| Combination Truck | 11.5 sec |

ISD to left & right along Major Road  $ISD = 1.47V_{major}t_g$  (ft) Eq 9-1, p 9-37

|                   |                                                | ISD to Left<br>and Right |
|-------------------|------------------------------------------------|--------------------------|
| Passenger Car     | calculated ISD= 330.8 ft<br>design ISD= 335 ft |                          |
| Single-Unit Truck | calculated ISD= 419.0 ft<br>design ISD= 420 ft |                          |
| Combination Truck | calculated ISD= 507.2 ft<br>design ISD= 510 ft |                          |



**Smoke Tree Resort**  
**Location: Quail Run Road**

**Sight Distance Analysis**

**Intersection Sight Distances (cont'd)**

Case B2—Right Turn from the Minor Road  
&  
Case B3—Crossing Maneuver from the Minor Road

*AASHTO Ref*  
§9.5.3, p 9-40  
§9.5.3, p 9-43

| Design Vehicle    | Time Gap ( $t_g$ ) |                 |
|-------------------|--------------------|-----------------|
| Passenger Car     | 6.5 sec            | Tbl 9-7, p 9-40 |
| Single-Unit Tuck  | 8.5 sec            | Tbl 9-7, p 9-40 |
| Combination Truck | 10.5 sec           | Tbl 9-7, p 9-40 |

|                                                   |         |                 |
|---------------------------------------------------|---------|-----------------|
| Time gap adjustments - Case B-3 Only*             |         |                 |
| Add'l lanes to cross (1 <sup>st</sup> is assumed) |         |                 |
| Passenger Car                                     | 0.5 sec | See Notes       |
| Trucks                                            | 0.7 sec | below           |
| Minor Approach Upgrade (Per each 1%>3%)           | 0.1 sec | Tbl 9-7, p 9-40 |

|                                     |     |                |
|-------------------------------------|-----|----------------|
| Site data                           |     |                |
| Major Road Lanes on Left Approach   | 1.0 | §9.5.3, p 9-40 |
| Minor Road Approach Upgrade, if >3% | 0 % | §9.5.3, p 9-40 |

|                                                                                                    |                    |                |
|----------------------------------------------------------------------------------------------------|--------------------|----------------|
| Time Gap based on site data (sec)                                                                  |                    |                |
|                                                                                                    | <u>B2 &amp; B3</u> | <u>B3 Only</u> |
| <i>Design Vehicle Gap+Adj for Approach Grade&gt;3% (+Adjs for Add'l Lanes &amp; Median for B3)</i> |                    |                |
| Passenger Car                                                                                      | 6.5                | 6.5            |
| Single-Unit Tuck                                                                                   | 8.5                | 8.5            |
| Combination Truck                                                                                  | 10.5               | 10.5           |

ISD to left (B2/B3) & right (B3) along Major Rd  $ISD=1.47V_{major}t_g$  (ft) Eq 9-1, p 9-37

|                   |            |      | ISD to Left<br>(B2 & B3) | ISD to right<br>(B3 Only) |
|-------------------|------------|------|--------------------------|---------------------------|
| Passenger Car     | calculated | ISD= | 286.7                    | 286.7                     |
|                   | design     | ISD= | 290                      | 290                       |
| Single-Unit Tuck  | calculated | ISD= | 374.9                    | 374.9                     |
|                   | design     | ISD= | 375                      | 375                       |
| Combination Truck | calculated | ISD= | 463.1                    | 463.1                     |
|                   | design     | ISD= | 465                      | 465                       |

\*Number of major road lanes is irrelevant in Case B2.

The differences between Case B1 and Cases B2 & B3 are reduced time gaps and time gap adjustment for the minor approach upgrade. §9.5.3, p 9-43



**Smoke Tree Resort**  
**Location: Quail Run Road**

**Sight Distance Analysis**

**Intersection Sight Distances (cont'd)**

Case F—Left Turns from the Major Road

*AASHTO Ref*  
§9.5.3, p 9-51

| Design Vehicle    | Time Gap ( $t_g$ ) |                 |
|-------------------|--------------------|-----------------|
| Passenger Car     | 5.5 sec            | bl 9-13, p 9-51 |
| Single-Unit Tuck  | 6.5 sec            | bl 9-13, p 9-51 |
| Combination Truck | 7.5 sec            | bl 9-13, p 9-51 |

|                                  |         |                 |
|----------------------------------|---------|-----------------|
| Time gap adjustments             |         |                 |
| Add'l lanes to cross (1 assumed) |         |                 |
| Passenger Car                    | 0.5 sec | See Notes to    |
| Trucks                           | 0.7 sec | bl 9-13, p 9-51 |

|                                          |     |
|------------------------------------------|-----|
| Site data                                |     |
| Opposing Lanes (adj'd for x-wide median) | 0.0 |

|                                                        |         |
|--------------------------------------------------------|---------|
| Time Gap based on site data                            |         |
| <i>Design Vehicle Gap+Adj for Add'l Opposing Lanes</i> |         |
| Passenger Car                                          | 5.5 sec |
| Single-Unit Tuck                                       | 6.5 sec |
| Combination Truck                                      | 7.5 sec |

|                               |                             |                |
|-------------------------------|-----------------------------|----------------|
| ISD to front along Major Road | $ISD=1.47V_{major}t_g$ (ft) | Eq 9-1, p 9-37 |
| Passenger Car                 | calculated ISD= 242.6 ft    |                |
|                               | design ISD= 245 ft          |                |
| Single-Unit Tuck              | calculated ISD= 286.7 ft    |                |
|                               | design ISD= 290 ft          |                |
| Combination Truck             | calculated ISD= 330.8 ft    |                |
|                               | design ISD= 335 ft          |                |

The differences between Case F and Cases B1, B2 & B3 are reduced time gaps and no time gap adjustment for any minor approach upgrade. §9.5.3, p 9-43

**SIGHT DISTANCE SUMMARY**

| Sight Distance Type           | Governing Case | Car | SU Truck | Combo Truck |
|-------------------------------|----------------|-----|----------|-------------|
| Stopping                      |                |     |          |             |
| Without effect of grade       |                | 200 | N/A      | N/A         |
| With effect of grade on left  |                | 200 | N/A      | N/A         |
| With effect of grade on right |                | 200 | N/A      | N/A         |
| Intersection                  |                |     |          |             |
| To Right                      | B1             | 335 | 420      | 510         |
| To Left                       | B2/B3          | 290 | 375      | 465         |
| On Major Road                 | F              | 245 | 290      | 335         |

