

Senior Living Facility - *Updated* Traffic Impact Study



Cedar Hills, Utah
February 2015

UT14-558

EXECUTIVE SUMMARY

This study addresses the traffic impacts associated with the proposed Senior Living Facility development in Cedar Hills, Utah. The proposed development is located on the southwest corner of the 4600 West / Cedar Hills Drive intersection. Figure 1 shows a vicinity map of the proposed development.

Included within the analyses for this study are the traffic operations and recommended mitigation measures for existing conditions and plus project conditions (conditions after development of the proposed project) at key intersections and roadways in the vicinity of the site.

TRAFFIC ANALYSIS

The following is an outline of the traffic analysis performed by Hales Engineering for the traffic conditions of this project.

Existing (2014) Background Conditions Analysis

Hales Engineering has performed numerous traffic counts in the area for previous traffic impact studies. The previous traffic count data showed that at the Cedar Hills Drive / 4800 West intersection, traffic during the a.m. peak hour is approximately 13% higher than during the p.m. peak hour, due to the close proximity of Lone Peak High School. In order to analyze the worst case conditions, this study analyzed the a.m. peak hour in each scenario. Therefore, Hales Engineering performed weekday morning (7:00 – 9:00 a.m.) peak period traffic counts at the following intersections:

- Cedar Hills Drive / 4800 West
- 4700 West (Walmart Full Access) / Cedar Hills Drive
- 4600 West / Cedar Hills Drive
- Existing Access / 4600 West

These counts were performed on Thursday, January 23, 2014. The a.m. peak hour was determined to be between the hours of 7:15 and 8:15 a.m. Detailed count data are included in Appendix A.

As shown in Table ES-1, all study intersections are currently operating at acceptable levels of service during the a.m. peak hour. No significant queuing is anticipated.

Project Conditions Analysis

The proposed land use for the development has been identified as follows:

- Senior Adult Housing - Attached: 291 units

- Office: ~2,500 sq. ft.
- Retail: ~2,500 sq. ft.

The total trip generation for the development is as follows:

- Daily Trips: 1,138
- a.m. Peak Hour Trips: 68
- p.m. Peak Hour Trips: 86

Existing (2014) Plus Project Conditions Analysis

As shown in Table ES-1, all study intersections are anticipated to continue to operate at acceptable levels of service during the a.m. peak hour. No significant queuing is anticipated.

| TABLE ES-1 A.M. Peak Hour Cedar Hills - Senior Living Facility TIS | | |
|--|-----------------------------|-------------------------------|
| Intersection | Existing 2014 Background | Existing 2014 Plus Project |
| Description | LOS (Sec/Veh ¹) | LOS (Sec/Veh ¹) |
| Cedar Hills Drive / 4800 West | B (13.9) | B (13.9) |
| Walmart Access & North Access / Cedar Hills Drive | SB / B (12.0) | NB / B (12.0) |
| 4600 West / Cedar Hills Drive | A (3.7) | A (3.6) |
| Lexington Heights & North Project Accesses / 4600 West | WB / A (3.5) | EB / A (4.6) |
| West Project & Charleston Access / 4600 West | WB / A (4.9) | EB / A (4.3) |
| 1. Intersection LOS and delay (seconds/vehicle) values represent the overall intersection average for signalized and all-way stop controlled intersections and the worst approach for all other unsignalized intersections. 2. These are project intersections and were only evaluated in "plus project" scenarios. | | |
| Source: Hales Engineering, February 2015 | | |

RECOMMENDATIONS

The following mitigation measures are recommended:

Existing (2014) Background Conditions Analysis

No mitigation measures are recommended.

Existing (2014) Plus Project Conditions Analysis

No mitigation measures are recommended.

Parking

Based on our experience and that of neighboring jurisdictions, it is our recommendation that 1.0 space per unit will more than adequately meet the parking needs for patrons, employees and visitors.

SUMMARY OF KEY FINDINGS/RECOMMENDATIONS

The following is a summary of key findings and recommendations:

- All study intersections currently operate at acceptable levels of service during the a.m. peak hour.
- With project traffic added, all study intersections continue to operate at acceptable levels of service.
- No mitigation measures are recommended.
- We recommend 1.0 spaces per unit to remain conservative, see parking in Chapter III.

TABLE OF CONTENTS

| | |
|--|-----------|
| EXECUTIVE SUMMARY | i |
| TRAFFIC ANALYSIS..... | I |
| RECOMMENDATIONS..... | III |
| SUMMARY OF KEY FINDINGS/RECOMMENDATIONS | III |
| TABLE OF CONTENTS..... | iv |
| LIST OF TABLES | v |
| I. INTRODUCTION..... | 1 |
| A. PURPOSE | 1 |
| B. SCOPE | 2 |
| C. ANALYSIS METHODOLOGY | 2 |
| D. LEVEL OF SERVICE STANDARDS..... | 2 |
| II. EXISTING (2014) BACKGROUND CONDITIONS | 4 |
| A. PURPOSE | 4 |
| B. ROADWAY SYSTEM | 4 |
| C. TRAFFIC VOLUMES | 4 |
| D. LEVEL OF SERVICE ANALYSIS | 5 |
| E. QUEUING ANALYSIS | 5 |
| F. MITIGATION MEASURES..... | 5 |
| III. PROJECT CONDITIONS..... | 7 |
| A. PURPOSE | 7 |
| B. PROJECT DESCRIPTION | 7 |
| C. TRIP GENERATION | 7 |
| D. TRIP DISTRIBUTION AND ASSIGNMENT | 7 |
| E. ACCESS..... | 9 |
| F. PARKING | 9 |
| IV. EXISTING (2014) PLUS PROJECT CONDITIONS | 11 |
| A. PURPOSE | 11 |
| B. TRAFFIC VOLUMES | 11 |
| C. LEVEL OF SERVICE ANALYSIS | 11 |
| D. QUEUING ANALYSIS | 11 |
| E. MITIGATION MEASURES..... | 11 |
| Appendix A: Turning Movement Counts | |
| Appendix B: LOS Results | |
| Appendix C: Project Site Plan | |
| Appendix D: Queuing Results | |

LIST OF TABLES

| | |
|--|----|
| Table 1 Level of Service Descriptions | 3 |
| Table 2 Existing (2014) Background a.m. Peak Hour Level of Service | 5 |
| Table 3 Trip Generation | 8 |
| Table 4 Existing (2014) Plus Project a.m. Peak Hour Level of Service | 12 |

LIST OF FIGURES

| | |
|---|----|
| Figure 1 Vicinity map showing the project location in Cedar Hills, Utah | 1 |
| Figure 2 Existing (2014) background a.m. peak hour traffic volumes..... | 6 |
| Figure 3 Trip assignment for a.m. peak hour..... | 10 |
| Figure 4 Existing (2014) plus project a.m. peak hour traffic volumes. | 13 |

I. INTRODUCTION

A. Purpose

This study addresses the traffic impacts associated with the proposed Senior Living Facility development in Cedar Hills, Utah. The proposed development is located on the southwest corner of the 4600 West / Cedar Hills Drive intersection. Figure 1 shows a vicinity map of the proposed development.

Included within the analyses for this study are the traffic operations and recommended mitigation measures for existing conditions and plus project conditions (conditions after development of the proposed project) at key intersections and roadways in the vicinity of the site.

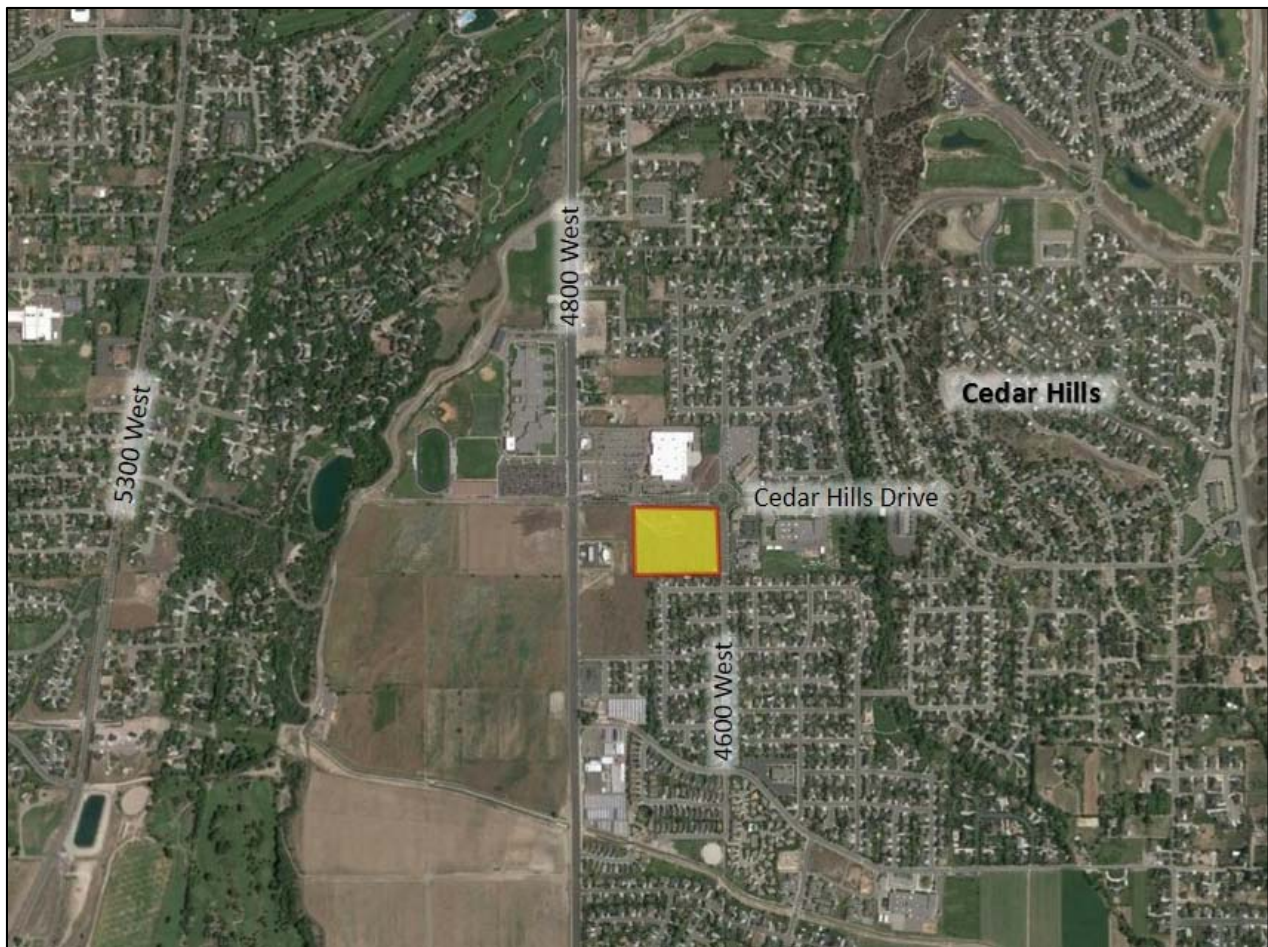


Figure 1 Vicinity map showing the project location in Cedar Hills, Utah

B. Scope

The study area was defined based on conversations with the development team. This study was scoped to evaluate the traffic operational performance impacts of the project on the following intersections:

- Cedar Hills Drive / 4800 West
- 4700 West (Walmart Full Access) / Cedar Hills Drive
- 4600 West / Cedar Hills Drive
- Existing Accesses (2) / 4600 West

C. Analysis Methodology

Level of service (LOS) is a term that describes the operating performance of an intersection or roadway. LOS is measured quantitatively and reported on a scale from A to F, with A representing the best performance and F the worst. Table 1 provides a brief description of each LOS letter designation and an accompanying average delay per vehicle for both signalized and unsignalized intersections.

The Highway Capacity Manual 2010 (HCM 2010) methodology was used in this study to remain consistent with “state-of-the-practice” professional standards. This methodology has different quantitative evaluations for signalized and unsignalized intersections. For signalized and all-way stop intersections, the LOS is provided for the overall intersection (weighted average of all approach delays). For all other unsignalized intersections LOS is reported based on the worst approach.

D. Level of Service Standards

For the purposes of this study, a minimum overall intersection performance for each of the study intersections was set at LOS D. However, if LOS E or F conditions exist, an explanation and/or mitigation measures will be presented. An LOS D threshold is consistent with “state-of-the-practice” traffic engineering principles for urbanized areas.

Table 1 Level of Service Descriptions

| Level of Service | Description of Traffic Conditions | Average Delay (seconds/vehicle) |
|-----------------------------------|--|---------------------------------|
| Signalized Intersections | | Overall Intersection |
| A | Extremely favorable progression and a very low level of control delay. Individual users are virtually unaffected by others in the traffic stream. | $0 \leq 10.0$ |
| B | Good progression and a low level of control delay. The presence of other users in the traffic stream becomes noticeable. | $> 10.0 \text{ and } \leq 20.0$ |
| C | Fair progression and a moderate level of control delay. The operation of individual users becomes somewhat affected by interactions with others in the traffic stream. | $> 20.0 \text{ and } \leq 35.0$ |
| D | Marginal progression with relatively high levels of control delay. Operating conditions are noticeably more constrained. | $> 35.0 \text{ and } \leq 55.0$ |
| E | Poor progression with unacceptably high levels of control delay. Operating conditions are at or near capacity. | $> 55.0 \text{ and } \leq 80.0$ |
| F | Unacceptable progression with forced or breakdown operating conditions. | > 80.0 |
| Unsignalized Intersections | | Worst Approach |
| A | Free Flow / Insignificant Delay | $0 \leq 10.0$ |
| B | Stable Operations / Minimum Delays | $> 10.0 \text{ and } \leq 15.0$ |
| C | Stable Operations / Acceptable Delays | $> 15.0 \text{ and } \leq 25.0$ |
| D | Approaching Unstable Flows / Tolerable Delays | $> 25.0 \text{ and } \leq 35.0$ |
| E | Unstable Operations / Significant Delays Can Occur | $> 35.0 \text{ and } \leq 50.0$ |
| F | Forced Flows / Unpredictable Flows / Excessive Delays Occur | > 50.0 |

Source: Hales Engineering Descriptions, based on Highway Capacity Manual, 2010 Methodology (Transportation Research Board, 2010)

II. EXISTING (2014) BACKGROUND CONDITIONS

A. Purpose

The purpose of the existing (2014) background analysis is to study the intersections and roadways during the peak travel periods of the day with background traffic and geometric conditions. Through this analysis, background traffic operational deficiencies can be identified and potential mitigation measures recommended. This analysis will provide a baseline condition that may be compared to the build conditions to identify the impacts of the development.

B. Roadway System

The primary roadways that will provide access to the project site is described below:

4800 West (SR-129) – is a UDOT maintained roadway that was recently changed in November 2014 from city to UDOT jurisdiction. 4800 West has two travel lanes in each direction south of Cedar Hills Drive and three southbound lanes with two northbound lanes north of Cedar Hills Drive. 4800 West also has a two-way left-turn lane (TWLTL) and right turn pockets at intersections. The posted speed limit on 4800 West is 40 mph.

Cedar Hills Drive – is a city maintained roadway classified as a Collector Street. Cedar Hills Drive has one travel lane in each direction as well as a center median that opens for left-turn pockets. The posted speed limit on Cedar Hills Drive is 25 mph.

4600 West – is a city maintained roadway classified as a Local Street. 4600 West has one travel lane in each direction with wide shoulders. The posted speed limit on 4600 West is 25 mph.

C. Traffic Volumes

Hales Engineering has performed numerous traffic counts in the area for previous traffic impact studies. The previous traffic count data showed that at the Cedar Hills Drive / 4800 West intersection, traffic during the a.m. peak hour is approximately 13% higher than the p.m. peak hour, due to the close proximity of Lone Peak High School. In order to analyze the worst case conditions, this study analyzed the a.m. peak hour in each scenario. Therefore, Hales Engineering performed weekday morning (7:00 – 9:00 a.m.) peak period traffic counts at the following intersections:

- Cedar Hills Drive / 4800 West
- 4700 West (Walmart Full Access) / Cedar Hills Drive
- 4600 West / Cedar Hills Drive
- Existing Accesses (2) / 4600 West

These counts were performed on Thursday, January 23, 2014. The a.m. peak hour was determined to be between the hours of 7:15 and 8:15 a.m. Detailed count data are included in Appendix A. Figure 2 shows the existing a.m. peak hour volume as well as intersection geometry at the study intersections.

D. Level of Service Analysis

Using Synchro/SimTraffic, which follow the Highway Capacity Manual (HCM) 2010 methodology introduced in Chapter I, the a.m. peak hour LOS was computed for each study intersection. The results of this analysis are reported in Table 2 (see Appendix B for the detailed LOS reports). Multiple runs of SimTraffic were used to provide a statistical evaluation of the interaction between the intersections. These results serve as a baseline condition for the impact analysis of the proposed development during existing (2014) conditions. As shown in Table 2, all study intersections are currently operating at acceptable levels of service during the a.m. peak hour.

E. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. The queue reports can be found in Appendix D. No significant queuing was observed.

F. Mitigation Measures

No mitigation measures are recommended.

Table 2 Existing (2014) Background a.m. Peak Hour Level of Service

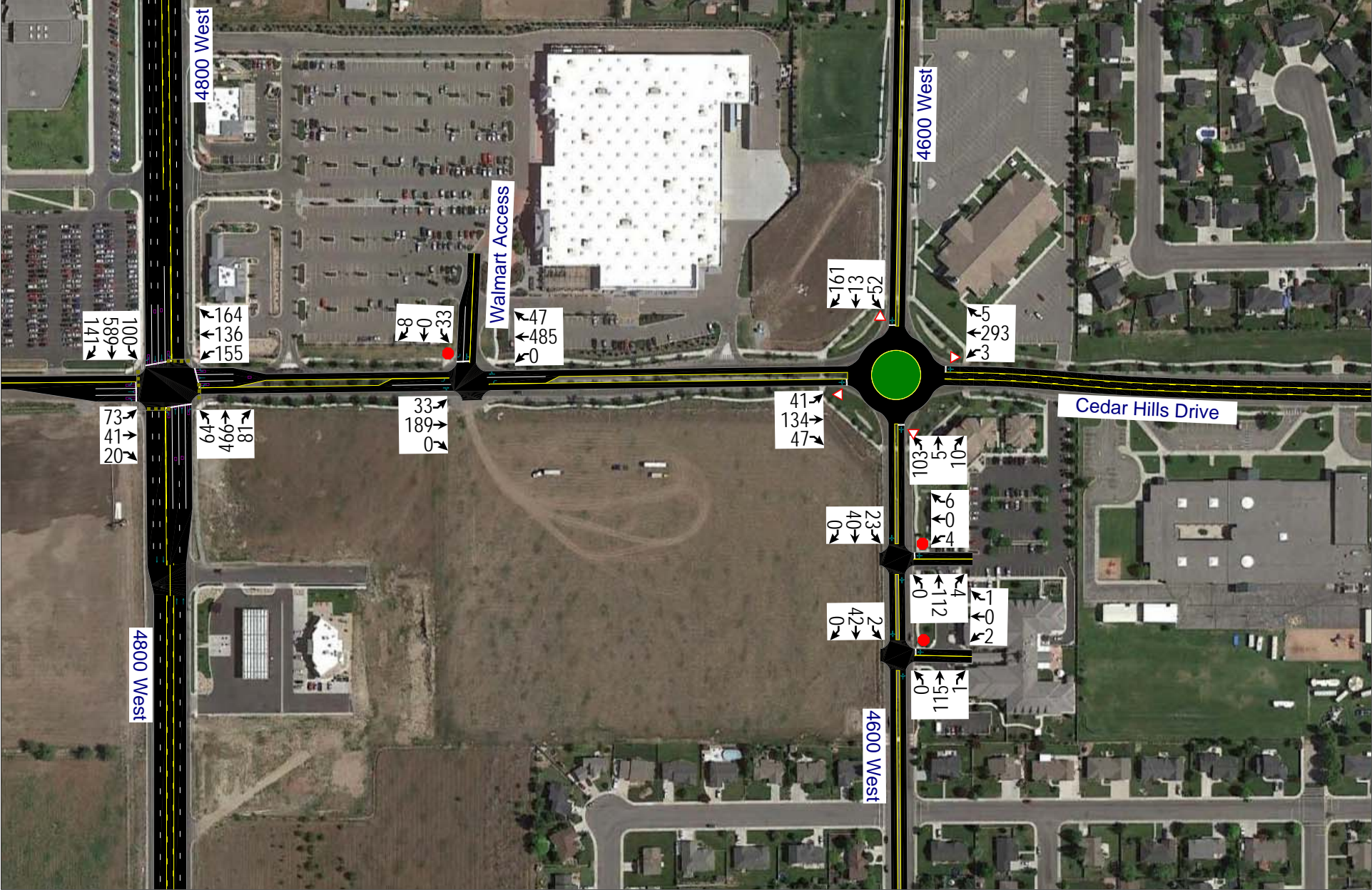
| Intersection | | Worst Approach | | | Overall Intersection | |
|--------------------------------------|-------------|-------------------------|------------------------------------|------------------|------------------------------------|------------------|
| Description | Control | Approach ^{1,3} | Aver. Delay (Sec/Veh) ¹ | LOS ¹ | Aver. Delay (Sec/Veh) ² | LOS ² |
| Cedar Hills Drive / 4800 West | Signal | - | - | - | 13.9 | B |
| Walmart Access / Cedar Hills Drive | SB Stop | SB | 12.0 | B | - | - |
| 4600 West / Cedar Hills Drive | Round-about | - | - | - | 3.7 | A |
| Lexington Heights Access / 4600 West | WB Stop | WB | 3.5 | A | - | - |
| Charleston Access / 4600 West | WB Stop | WB | 4.9 | A | - | - |

1. This represents the worst approach LOS and delay (seconds / vehicle) and is only reported for non-all-way stop unsignalized intersections.

2. This represents the overall intersection LOS and delay (seconds / vehicle) and is reported for all-way stop and signal controlled intersections.

3. SB = Southbound approach, etc.

Source: Hales Engineering, February 2015



III. PROJECT CONDITIONS

A. Purpose

The project conditions analysis explains the type and intensity of development. This provides the basis for trip generation, distribution, and assignment of project trips to the surrounding study intersections defined in the Introduction.

B. Project Description

This study addresses the traffic impacts associated with the proposed Senior Living Facility development in Cedar Hills, Utah. The proposed development is located on the southwest corner of the 4600 West / Cedar Hills Drive intersection. A concept plan for the proposed development has been included in Appendix C.

The proposed land use for the development has been identified as follows:

- Senior Adult Housing - Attached: 291 units
- Office: ~2,500 sq. ft.
- Retail: ~2,500 sq. ft.

C. Trip Generation

Trip generation for the project was calculated using trip generation rates published in the Institute of Transportation Engineers (ITE) *Trip Generation (9th Edition, 2012)*. Trip Generation for the proposed project is included in Table 3.

D. Trip Distribution and Assignment

Project traffic is assigned to the roadway network based on the type of trip and the proximity of project access points to major streets, high population densities, and regional trip attractions. Existing travel patterns observed during data collection also provide helpful guidance to establishing these distribution percentages, especially in close proximity to the site. The resulting distribution of project generated trips is as follows:

To/From Project:

- 5% South (on 4600 West)
- 10% North (on 4600 West)
- 15% East (on Cedar Hills Drive)
- 35% North (on 4800 West)
- 35% South (on 4800 West)

These trip distribution assumptions were used to assign the a.m. peak hour generated traffic at the study intersections to create trip assignment for the proposed development. Trip assignment for the development is shown in Figure 3.

| Table 3 Cedar Hills - Senior Living Facility TIS Trip Generation | | | | | | | | |
|---|-----------|-------------------|------------|----------|---------|------------|------------|------------------|
| Weekday Daily | Number of | Unit | Trip | % | % | Trips | Trips | Total Daily |
| Land Use ¹ | Units | Type | Generation | Entering | Exiting | Entering | Exiting | Trips |
| Senior Adult Housing- Attached (252) | 291 | Dwelling Units | 1,002 | 50% | 50% | 501 | 501 | 1,002 |
| General Office Building (710) [average rate] | 2.5 | 1,000 Sq. Ft. GFA | 28 | 50% | 50% | 14 | 14 | 28 |
| Shopping Center (820) [average rate] | 2.5 | 1,000 Sq. Ft. GLA | 108 | 50% | 50% | 54 | 54 | 108 |
| Project Total Daily Trips | | | | | | 569 | 569 | 1,138 |
| A.M. Peak Hour | Number of | Unit | Trip | % | % | Trips | Trips | Total a.m. |
| Land Use ¹ | Units | Type | Generation | Entering | Exiting | Entering | Exiting | Trips |
| Senior Adult Housing- Attached (252) | 291 | Dwelling Units | 60 | 34% | 66% | 20 | 40 | 60 |
| General Office Building (710) [average rate] | 2.5 | 1,000 Sq. Ft. GFA | 4 | 88% | 12% | 4 | 0 | 4 |
| Shopping Center (820) [average rate] | 2.5 | 1,000 Sq. Ft. GLA | 4 | 62% | 38% | 2 | 2 | 4 |
| Project Total a.m. Peak Hour Trips | | | | | | 26 | 42 | 68 |
| P.M. Peak Hour | Number of | Unit | Trip | % | % | Trips | Trips | Total p.m. |
| Land Use ¹ | Units | Type | Generation | Entering | Exiting | Entering | Exiting | Trips |
| Senior Adult Housing- Attached (252) | 291 | Dwelling Units | 72 | 54% | 46% | 39 | 33 | 72 |
| General Office Building (710) [average rate] | 2.5 | 1,000 Sq. Ft. GFA | 4 | 17% | 83% | 1 | 3 | 4 |
| Shopping Center (820) [average rate] | 2.5 | 1,000 Sq. Ft. GLA | 10 | 48% | 52% | 5 | 5 | 10 |
| Project Total p.m. Peak Hour Trips | | | | | | 45 | 41 | 86 |
| Saturday Daily | Number of | Unit | Trip | % | % | Trips | Trips | Total Sat. Daily |
| Land Use ¹ | Units | Type | Generation | Entering | Exiting | Entering | Exiting | Trips |
| Senior Adult Housing- Attached (252) | 291 | Dwelling Units | 760 | 50% | 50% | 380 | 380 | 760 |
| General Office Building (710) [average rate] | 2.5 | 1,000 Sq. Ft. GFA | 8 | 50% | 50% | 4 | 4 | 8 |
| Shopping Center (820) [average rate] | 2.5 | 1,000 Sq. Ft. GLA | 126 | 50% | 50% | 63 | 63 | 126 |
| Project Total Saturday Trips | | | | | | 447 | 447 | 894 |
| Saturday Peak Hour | Number of | Unit | Trip | % | % | Trips | Trips | Total Sat Pk Hr |
| Land Use ¹ | Units | Type | Generation | Entering | Exiting | Entering | Exiting | Trips |
| Senior Adult Housing- Attached (252) | 291 | Dwelling Units | 92 | 57% | 43% | 52 | 40 | 92 |
| General Office Building (710) [average rate] | 2.5 | 1,000 Sq. Ft. GFA | 2 | 54% | 46% | 1 | 1 | 2 |
| Shopping Center (820) [average rate] | 2.5 | 1,000 Sq. Ft. GLA | 14 | 52% | 48% | 7 | 7 | 14 |
| Project Total Saturday Peak Hour Trips | | | | | | 60 | 48 | 108 |

1. Land Use Code From the Institute of Transportation Engineers Trip Generation Manual (9th Edition - 2012)

SOURCE: Hales Engineering, February 2015

E. Access

The proposed access for the site will be gained at the following locations (see also site plan in Appendix C):

Cedar Hills Drive:

- North Access: The proposed full-movement access will be located approximately 460 feet east of 4800 West and will line up directly with the Walmart Access. The proposed access is also planned to serve future developments and will extend further south.

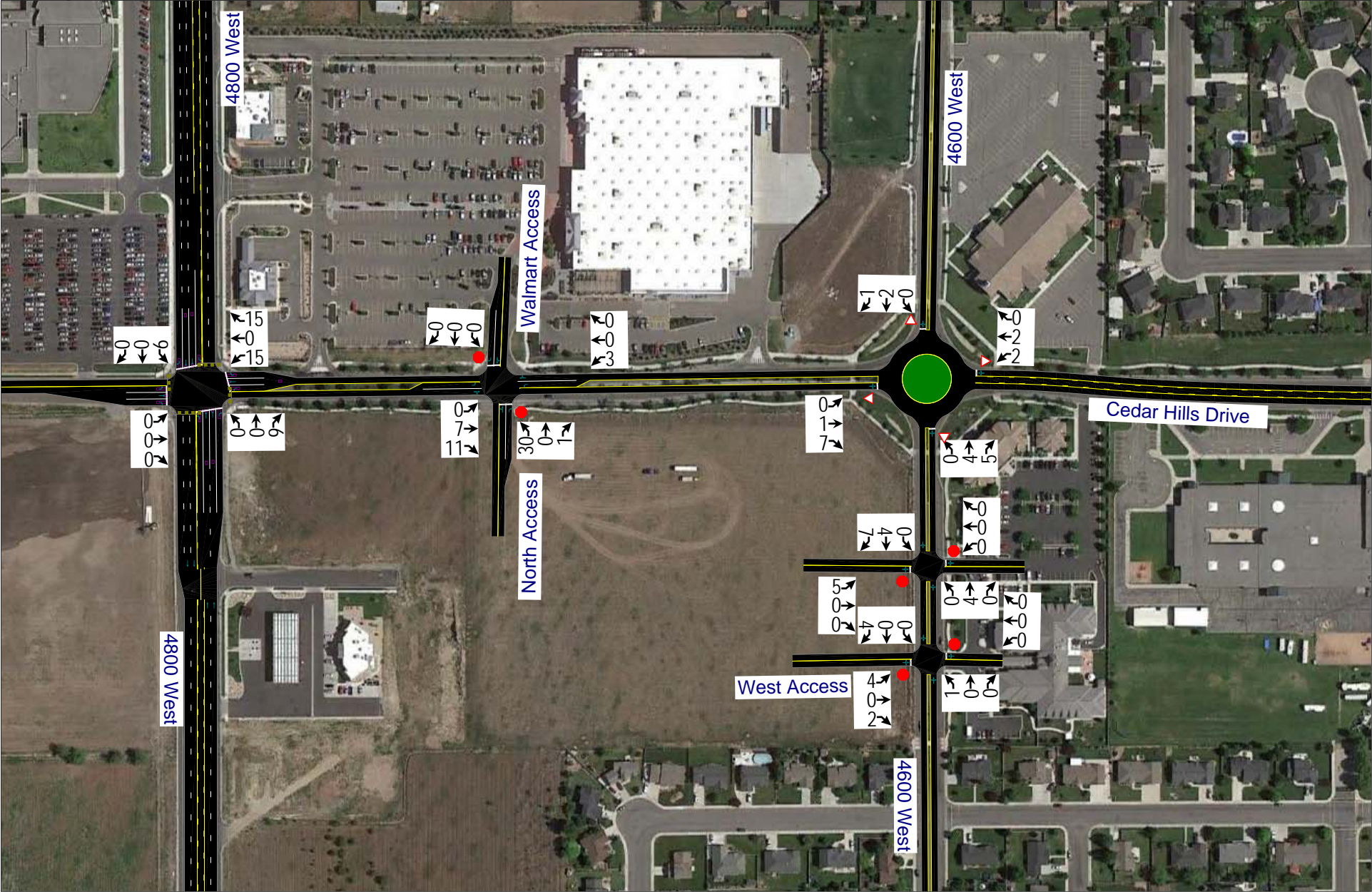
4600 West:

- North Access: The proposed full-movement access will be located approximately 250 feet south of the roundabout at the 4600 West / Cedar Hills Drive intersection. The proposed access will line up directly with the existing Lexington Heights Access.
- West Access: The proposed full-movement access will be located approximately 400 feet south of the roundabout at the 4600 West / Cedar Hills Drive intersection. The proposed access will line up directly with the existing Charleston Nursing Home access.

F. Parking

Parking generation for a “congregate care facility,” a surrogate for this site, shows that for the two sites studied, one had a peak hour demand of 0.41 vehicles per dwelling unit, and the other had 0.48 vehicles per dwelling unit. Several locations in Sandy, Utah have parking rates of 1.0 spaces for senior housing (Rosegate being one of them). Experience in Sandy at Silver Pines, Sunrise, Ranches and Wentworth show that low parking rates for these types of projects has not created a parking issue.

Based on our experience and that of neighboring jurisdictions, it is our recommendation that 1.0 space per unit will more than adequately meet the parking needs for patrons, employees and visitors.



IV. EXISTING (2014) PLUS PROJECT CONDITIONS

A. Purpose

This section of the report examines the traffic impacts of the proposed project at each of the study intersections. The net trips generated by the proposed development were combined with the existing background traffic volumes to create the existing plus project conditions. This scenario provides valuable insight into the potential impacts of the proposed project on background traffic conditions.

B. Traffic Volumes

Project trips were assigned to the study intersections based on the trip distribution percentages discussed in Chapter III and permitted intersection turning movements. The existing (2014) plus project a.m. peak hour volumes were generated for the study intersections and are shown in Figure 4.

C. Level of Service Analysis

Using Synchro/SimTraffic, which follow the Highway Capacity Manual (HCM) 2010 methodology introduced in Chapter I, the p.m. peak hour LOS was computed for each study intersection. The results of this analysis are reported in Table 4 (see Appendix B for the detailed LOS reports). Multiple runs of SimTraffic were used to provide a statistical evaluation of the interaction between the intersections. As shown in Table 4, all study intersections are anticipated to continue to operate at acceptable levels of service during the a.m. peak hour.

D. Queuing Analysis

Hales Engineering calculated the 95th percentile queue lengths for each of the study intersections. The queue reports can be found in Appendix D. No significant queuing is anticipated.

E. Mitigation Measures

No mitigation measures are recommended.

Table 4 Existing (2014) Plus Project a.m. Peak Hour Level of Service

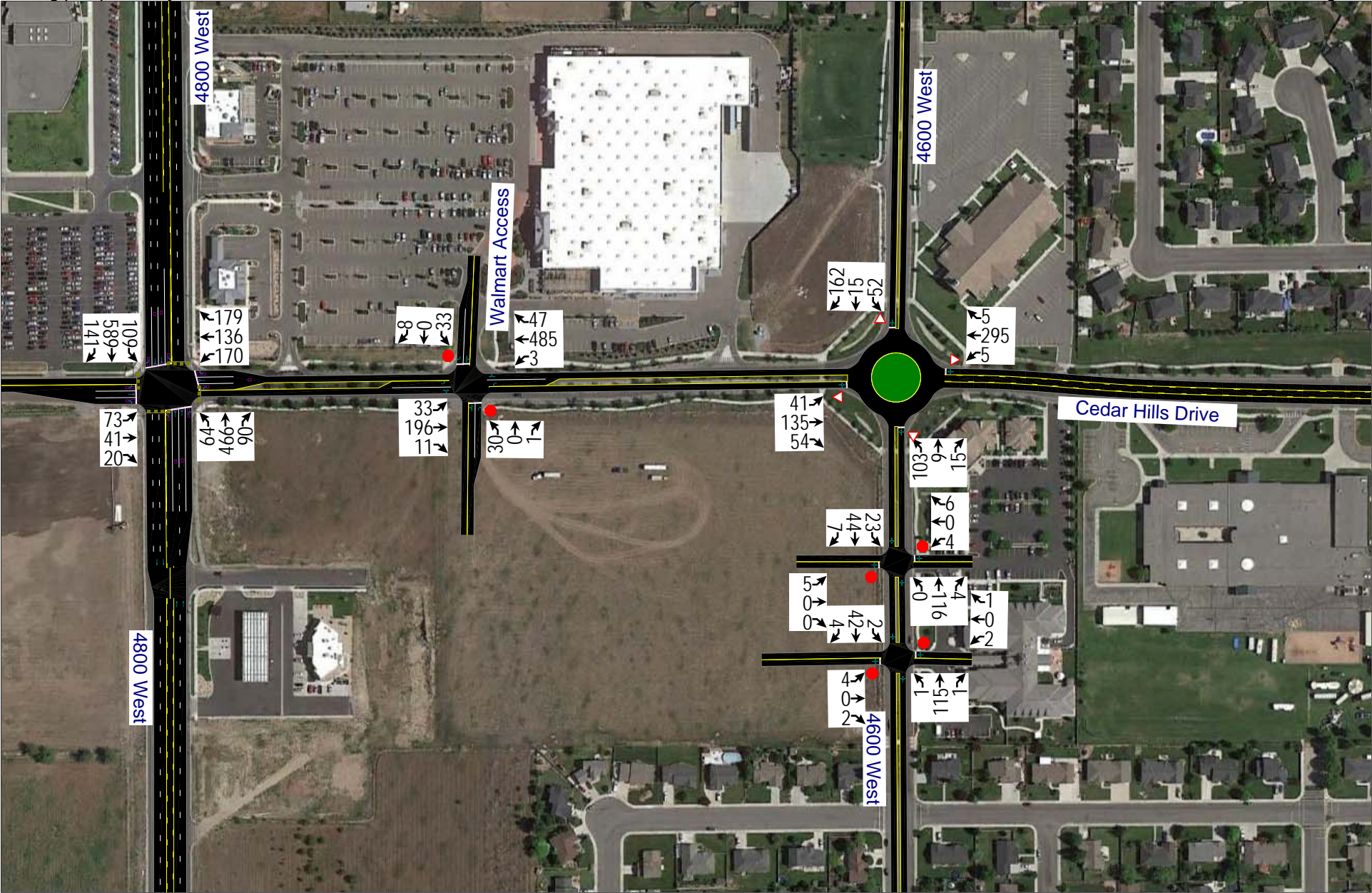
| Intersection | | Worst Approach | | | Overall Intersection | |
|--|--------------|-------------------------|------------------------------------|------------------|------------------------------------|------------------|
| Description | Control | Approach ^{1,3} | Aver. Delay (Sec/Veh) ¹ | LOS ¹ | Aver. Delay (Sec/Veh) ² | LOS ² |
| Cedar Hills Drive / 4800 West | Signal | - | - | - | 13.9 | B |
| Walmart & North Access / Cedar Hills Drive | NB & SB Stop | NB | 12.0 | B | - | - |
| 4600 West / Cedar Hills Drive | Round-about | - | - | - | 3.6 | A |
| Lexington Heights & North Project Access / 4600 West | EB & WB Stop | EB | 4.6 | A | - | - |
| West Project & Charleston Access / 4600 West | EB & WB Stop | EB | 4.3 | A | - | - |

1. This represents the worst approach LOS and delay (seconds / vehicle) and is only reported for non-all-way stop unsignalized intersections.

2. This represents the overall intersection LOS and delay (seconds / vehicle) and is reported for all-way stop and signal controlled intersections.

3. SB = Southbound approach, etc.

Source: Hales Engineering, February 2015



APPENDIX A

Turning Movement Counts

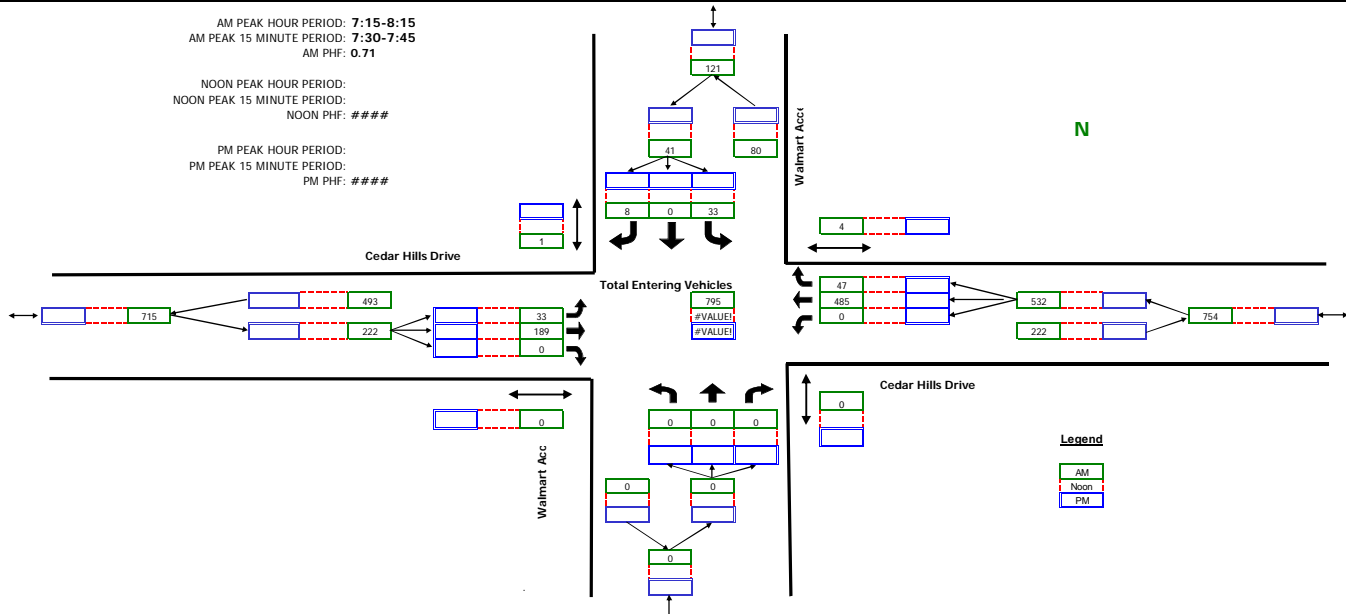
Intersection: 4800 West / Cedar Hills Parkway
North/South: 4800 West
East/West: Cedar Hills Parkway
Jurisdiction: Cedar Hills
Project Title: Cedar Hills Senior Living Facility TIS
Project No: P543
Weather: Clear

| | |
|---------------------------|--------------|
| Date: | 1-23-14, Thu |
| Day of Week Adjustment: | 100.0% |
| Month of Year Adjustment: | 100.0% |
| Adjustment Station #: | 0 |
| Growth Rate: | 0.0% |
| Number of Years: | 0 |

[illegible]

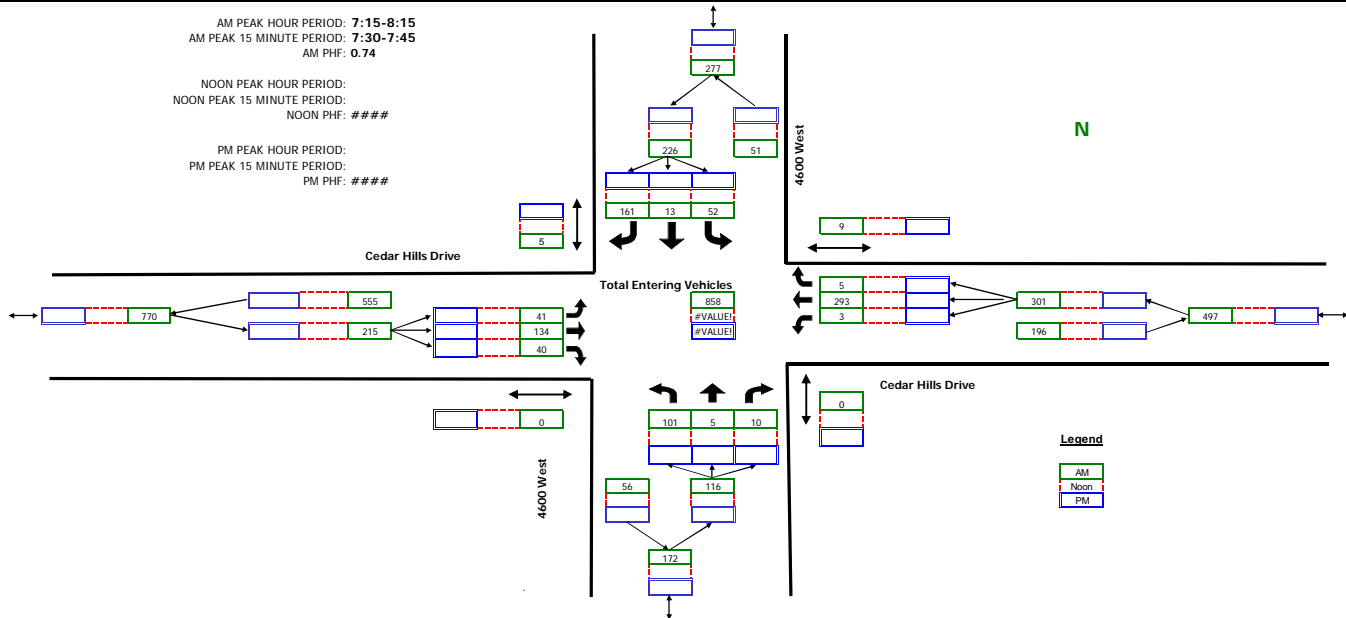
Intersection: Walmart Access / Cedar Hills Drive
North/South: Walmart Access
East/West: Cedar Hills Drive
Jurisdiction: Cedar Hills
Project Title: Cedar Hills Senior Living Facility TIS
Project No: P543
Weather: Clear

| | |
|---------------------------|-------------------|
| Date: | 1-23-14, Thursday |
| Day of Week Adjustment: | 100.0% |
| Month of Year Adjustment: | 100.0% |
| Adjustment Station #: | 0 |
| Growth Rate: | 0.0% |
| Number of Years: | 0 |

[illegible]

Intersection: 4600 West / Cedar Hills Drive
North/South: 4600 West
East/West: Cedar Hills Drive
Jurisdiction: Cedar Hills
Project Title: Cedar Hills Senior Living Facility TIS
Project No: P543
Weather: Clear

| | |
|---------------------------|-------------------|
| Date: | 1-23-14, Thursday |
| Day of Week Adjustment: | 100.0% |
| Month of Year Adjustment: | 100.0% |
| Adjustment Station #: | 0 |
| Growth Rate: | 0.0% |
| Number of Years: | 0 |

[illegible]

Intersection: 4600 West / Nursing Home Access
North/South: 4600 West
East/West: Nursing Home Access
Jurisdiction: Cedar Hills
Project Title: Cedar Hills Senior Living Facility TIS
Project No: P543
Weather: Clear

| | |
|---------------------------|--------------|
| Date: | 1-23-14, Thu |
| Day of Week Adjustment: | 100.0% |
| Month of Year Adjustment: | 100.0% |
| Adjustment Station #: | 0 |
| Growth Rate: | 0.0% |
| Number of Years: | 0 |



| RAW COUNT SUMMARIES | 4600 West Northbound | | | | 4600 West Southbound | | | | Nursing Home Access Eastbound | | | | Nursing Home Access Westbound | | | | |
|---------------------------|-------------------------|------|-------|------|-------------------------|------|-------|------|----------------------------------|------|-------|------|----------------------------------|------|-------|------|-------|
| | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | Left | Thru | Right | Peds | |
| AM PERIOD COUNTS | | | | | | | | | | | | | | | | | |
| Period | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | TOTAL |
| 7:00-7:15 | 0 | 11 | 0 | 1 | 3 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| 7:15-7:30 | 0 | 20 | 0 | 5 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| 7:30-7:45 | 0 | 21 | 0 | 1 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| 7:45-8:00 | 0 | 28 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 44 |
| 8:00-8:15 | 0 | 23 | 0 | 0 | 1 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 36 |
| 8:15-8:30 | 0 | 10 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 8:30-8:45 | 0 | 10 | 0 | 0 | 1 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| 8:45-9:00 | 0 | 10 | 1 | 3 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 22 |
| NOON PERIOD COUNTS | | | | | | | | | | | | | | | | | |
| Period | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | TOTAL |
| 11:30-11:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:45-12:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:00-12:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:15-12:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:30-12:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12:45-13:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13:00-13:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13:15-13:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PM PERIOD COUNTS | | | | | | | | | | | | | | | | | |
| Period | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | TOTAL |
| 16:00-16:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:15-16:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:30-16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:45-17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:00-17:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:15-17:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:30-17:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:45-18:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

APPENDIX B

LOS Results

SimTraffic LOS Report

Project: Cedar Hills - Senior Living Facility TIS
Analysis Period: Existing 2014 Conditions
Time Period: a.m. peak hour **Project #:** UT14-558

Intersection: 4800 West & Cedar Hills Drive
Type: Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|--------------|----------|---------------|---------------|-----|-----------------|-----|
| | | | Avg | % | Avg | LOS |
| NB | L | 64 | 63 | 99 | 15.3 | B |
| | T | 466 | 474 | 102 | 15.4 | B |
| | R | 81 | 83 | 103 | 2.6 | A |
| | Subtotal | 611 | 620 | 101 | 13.7 | B |
| SB | L | 100 | 99 | 99 | 15.3 | B |
| | T | 589 | 581 | 99 | 14.6 | B |
| | R | 141 | 149 | 105 | 3.8 | A |
| | Subtotal | 830 | 829 | 100 | 12.7 | B |
| EB | L | 73 | 76 | 104 | 23.7 | C |
| | T | 41 | 44 | 108 | 28.9 | C |
| | R | 20 | 18 | 89 | 3.7 | A |
| | Subtotal | 134 | 138 | 103 | 22.7 | C |
| WB | L | 155 | 153 | 99 | 17.3 | B |
| | T | 174 | 178 | 103 | 17.4 | B |
| | R | 164 | 168 | 102 | 6.1 | A |
| | Subtotal | 493 | 499 | 101 | 13.6 | B |
| Total | | 2,067 | 2,086 | 101 | 13.9 | B |

Intersection: Cedar Hills Drive & Walmart Access
Type: Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|--------------|-----------------|---------------|---------------|------------|-----------------|----------|
| | | | Avg | % | Avg | LOS |
| SB | L | 33 | 37 | 112 | 13.6 | B |
| | R | 8 | 10 | 125 | 6.3 | A |
| | Subtotal | 41 | 47 | 115 | 12.0 | B |
| EB | L | 33 | 32 | 97 | 5.6 | A |
| | T | 196 | 202 | 103 | 0.9 | A |
| | Subtotal | 229 | 234 | 102 | 1.5 | A |
| WB | T | 510 | 514 | 101 | 1.3 | A |
| | R | 47 | 49 | 105 | 1.0 | A |
| | Subtotal | 557 | 563 | 101 | 1.3 | A |
| Total | | 828 | 844 | 102 | 1.9 | A |

SimTraffic LOS Report

Project: Cedar Hills - Senior Living Facility TIS
Analysis Period: Existing 2014 Conditions
Time Period: a.m. peak hour **Project #:** UT14-558

Intersection: 4600 West & Cedar Hills Drive
Type: Roundabout

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|--------------|----------|---------------|---------------|------------|-----------------|----------|
| | | | Avg | % | Avg | LOS |
| NB | L | 103 | 100 | 97 | 2.9 | A |
| | T | 10 | 10 | 100 | 1.6 | A |
| | R | 10 | 11 | 107 | 2.3 | A |
| | Subtotal | 123 | 121 | 98 | 2.7 | A |
| SB | L | 52 | 52 | 100 | 4.8 | A |
| | T | 13 | 13 | 102 | 5.6 | A |
| | R | 161 | 163 | 101 | 4.9 | A |
| | Subtotal | 226 | 228 | 101 | 4.9 | A |
| EB | L | 41 | 43 | 106 | 2.6 | A |
| | T | 134 | 139 | 103 | 3.1 | A |
| | R | 47 | 48 | 103 | 2.7 | A |
| | Subtotal | 222 | 230 | 104 | 2.9 | A |
| WB | L | 3 | 2 | 62 | 2.7 | A |
| | T | 293 | 300 | 102 | 3.9 | A |
| | R | 5 | 5 | 105 | 3.5 | A |
| | Subtotal | 301 | 307 | 102 | 3.9 | A |
| Total | | 872 | 886 | 102 | 3.7 | A |

Intersection: 4600 West & Lexington Heights Access
Type: Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|--------------|-----------------|---------------|---------------|------------|-----------------|----------|
| | | | Avg | % | Avg | LOS |
| NB | T | 116 | 116 | 100 | 0.1 | A |
| | R | 4 | 5 | 118 | 0.0 | A |
| | Subtotal | 120 | 121 | 101 | 0.1 | A |
| SB | L | 23 | 25 | 108 | 2.1 | A |
| | T | 44 | 42 | 97 | 0.4 | A |
| | Subtotal | 67 | 67 | 100 | 1.0 | A |
| WB | L | 4 | 4 | 94 | 4.4 | A |
| | R | 6 | 6 | 96 | 2.9 | A |
| | Subtotal | 10 | 10 | 100 | 3.5 | A |
| Total | | 198 | 198 | 100 | 0.6 | A |

SimTraffic LOS Report

Project: Cedar Hills - Senior Living Facility TIS
Analysis Period: Existing 2014 Conditions
Time Period: a.m. peak hour **Project #:** UT14-558

Intersection: 4600 West & Charleston Access
Type: Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|----------|----------|---------------|---------------|-----|-----------------|-----|
| | | | Avg | % | Avg | LOS |
| NB | T | 115 | 116 | 101 | 0.1 | A |
| | R | 1 | 1 | 100 | 0.0 | A |
| | Subtotal | 116 | 117 | 101 | 0.1 | A |
| SB | L | 2 | 1 | 44 | 1.9 | A |
| | T | 44 | 44 | 99 | 0.1 | A |
| | Subtotal | 46 | 45 | 98 | 0.1 | A |
| WB | L | 2 | 1 | 44 | 6.0 | A |
| | R | 1 | 1 | 100 | 3.7 | A |
| | Subtotal | 3 | 2 | 67 | 4.9 | A |
| | | | | | | |
| Total | | 166 | 164 | 99 | 0.2 | A |

Intersection:
Type:

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|----------|----------|---------------|---------------|---|-----------------|-----|
| | | | Avg | % | Avg | LOS |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Total | | | | | | |

1: 4800 West & Cedar Hills Drive Performance by movement Interval #1 7:15

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.3 | 3.1 | 3.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.9 | 0.1 | 0.2 |
| Total Delay (hr) | 0.1 | 0.1 | 0.0 | 0.2 | 0.2 | 0.1 | 0.1 | 0.4 | 0.0 | 0.1 | 0.5 | 0.0 |
| Total Del/Veh (s) | 19.7 | 28.0 | 3.9 | 16.0 | 15.8 | 5.3 | 13.4 | 12.7 | 2.5 | 12.9 | 12.6 | 3.4 |
| Vehicles Entered | 16 | 10 | 4 | 32 | 40 | 39 | 15 | 114 | 21 | 23 | 141 | 34 |
| Vehicles Exited | 16 | 10 | 4 | 33 | 40 | 38 | 15 | 114 | 21 | 22 | 140 | 34 |
| Hourly Exit Rate | 64 | 40 | 16 | 132 | 160 | 152 | 60 | 456 | 84 | 88 | 560 | 136 |
| Input Volume | 64 | 36 | 18 | 137 | 153 | 145 | 60 | 439 | 76 | 94 | 554 | 133 |
| % of Volume | 100 | 111 | 89 | 96 | 105 | 105 | 100 | 104 | 111 | 94 | 101 | 102 |

1: 4800 West & Cedar Hills Drive Performance by movement Interval #1 7:15

| Movement | All |
|--------------------|------|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.3 |
| Total Delay (hr) | 1.7 |
| Total Del/Veh (s) | 12.1 |
| Vehicles Entered | 489 |
| Vehicles Exited | 487 |
| Hourly Exit Rate | 1948 |
| Input Volume | 1909 |
| % of Volume | 102 |

1: 4800 West & Cedar Hills Drive Performance by movement Interval #2 7:30

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.3 | 3.0 | 4.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.6 | 0.2 | 0.2 |
| Total Delay (hr) | 0.2 | 0.1 | 0.0 | 0.3 | 0.3 | 0.1 | 0.1 | 0.7 | 0.0 | 0.1 | 0.8 | 0.1 |
| Total Del/Veh (s) | 25.5 | 25.6 | 3.8 | 17.7 | 18.8 | 7.3 | 18.5 | 19.3 | 3.4 | 16.5 | 17.7 | 4.3 |
| Vehicles Entered | 26 | 14 | 6 | 51 | 57 | 54 | 20 | 137 | 23 | 30 | 162 | 44 |
| Vehicles Exited | 24 | 13 | 6 | 49 | 57 | 54 | 20 | 137 | 23 | 30 | 160 | 44 |
| Hourly Exit Rate | 96 | 52 | 24 | 196 | 228 | 216 | 80 | 548 | 92 | 120 | 640 | 176 |
| Input Volume | 99 | 55 | 27 | 209 | 235 | 222 | 75 | 548 | 95 | 118 | 693 | 166 |
| % of Volume | 97 | 95 | 89 | 94 | 97 | 97 | 107 | 100 | 97 | 102 | 92 | 106 |

1: 4800 West & Cedar Hills Drive Performance by movement Interval #2 7:30

| Movement | All |
|--------------------|------|
| Denied Delay (hr) | 0.1 |
| Denied Del/Veh (s) | 0.3 |
| Total Delay (hr) | 2.9 |
| Total Del/Veh (s) | 16.2 |
| Vehicles Entered | 624 |
| Vehicles Exited | 617 |
| Hourly Exit Rate | 2468 |
| Input Volume | 2542 |
| % of Volume | 97 |

1: 4800 West & Cedar Hills Drive Performance by movement Interval #3 7:45

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 3.1 | 4.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.8 | 0.2 | 0.2 |
| Total Delay (hr) | 0.1 | 0.1 | 0.0 | 0.2 | 0.2 | 0.1 | 0.1 | 0.5 | 0.0 | 0.1 | 0.5 | 0.0 |
| Total Del/Veh (s) | 19.6 | 26.7 | 3.5 | 16.6 | 16.0 | 5.3 | 14.2 | 14.6 | 2.6 | 14.9 | 13.6 | 3.6 |
| Vehicles Entered | 16 | 11 | 4 | 35 | 40 | 40 | 13 | 114 | 19 | 23 | 139 | 36 |
| Vehicles Exited | 18 | 11 | 4 | 35 | 42 | 41 | 13 | 114 | 19 | 24 | 140 | 36 |
| Hourly Exit Rate | 72 | 44 | 16 | 140 | 168 | 164 | 52 | 456 | 76 | 96 | 560 | 144 |
| Input Volume | 64 | 36 | 18 | 137 | 153 | 145 | 60 | 439 | 76 | 94 | 554 | 133 |
| % of Volume | 112 | 122 | 89 | 102 | 110 | 113 | 87 | 104 | 100 | 102 | 101 | 108 |

1: 4800 West & Cedar Hills Drive Performance by movement Interval #3 7:45

| Movement | All |
|--------------------|------|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.3 |
| Total Delay (hr) | 1.8 |
| Total Del/Veh (s) | 13.0 |
| Vehicles Entered | 490 |
| Vehicles Exited | 497 |
| Hourly Exit Rate | 1988 |
| Input Volume | 1909 |
| % of Volume | 104 |

1: 4800 West & Cedar Hills Drive Performance by movement Interval #4 8:00

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.3 | 3.4 | 4.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.7 | 0.1 | 0.2 |
| Total Delay (hr) | 0.1 | 0.1 | 0.0 | 0.2 | 0.2 | 0.1 | 0.1 | 0.4 | 0.0 | 0.1 | 0.5 | 0.0 |
| Total Del/Veh (s) | 22.4 | 25.7 | 2.8 | 15.9 | 16.0 | 5.2 | 13.0 | 13.3 | 2.0 | 13.8 | 12.5 | 3.6 |
| Vehicles Entered | 17 | 9 | 3 | 35 | 40 | 35 | 15 | 111 | 21 | 23 | 140 | 34 |
| Vehicles Exited | 18 | 9 | 4 | 36 | 40 | 35 | 15 | 110 | 20 | 23 | 141 | 34 |
| Hourly Exit Rate | 72 | 36 | 16 | 144 | 160 | 140 | 60 | 440 | 80 | 92 | 564 | 136 |
| Input Volume | 64 | 36 | 18 | 137 | 153 | 145 | 60 | 439 | 76 | 94 | 554 | 133 |
| % of Volume | 112 | 100 | 89 | 105 | 105 | 97 | 100 | 100 | 105 | 98 | 102 | 102 |

1: 4800 West & Cedar Hills Drive Performance by movement Interval #4 8:00

| Movement | All |
|--------------------|------|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.3 |
| Total Delay (hr) | 1.7 |
| Total Del/Veh (s) | 12.3 |
| Vehicles Entered | 483 |
| Vehicles Exited | 485 |
| Hourly Exit Rate | 1940 |
| Input Volume | 1909 |
| % of Volume | 102 |

1: 4800 West & Cedar Hills Drive Performance by movement Entire Run

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.3 | 3.1 | 3.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.7 | 0.2 | 0.2 |
| Total Delay (hr) | 0.5 | 0.4 | 0.0 | 0.7 | 0.9 | 0.3 | 0.3 | 2.0 | 0.1 | 0.4 | 2.4 | 0.2 |
| Total Del/Veh (s) | 23.7 | 28.9 | 3.7 | 17.3 | 17.4 | 6.1 | 15.3 | 15.4 | 2.6 | 15.3 | 14.6 | 3.8 |
| Vehicles Entered | 76 | 44 | 18 | 153 | 178 | 168 | 63 | 476 | 84 | 99 | 581 | 149 |
| Vehicles Exited | 76 | 44 | 18 | 153 | 178 | 168 | 63 | 474 | 83 | 99 | 581 | 149 |
| Hourly Exit Rate | 76 | 44 | 18 | 153 | 178 | 168 | 63 | 474 | 83 | 99 | 581 | 149 |
| Input Volume | 73 | 41 | 20 | 155 | 174 | 164 | 64 | 466 | 81 | 100 | 589 | 141 |
| % of Volume | 104 | 108 | 89 | 99 | 103 | 102 | 99 | 102 | 103 | 99 | 99 | 105 |

1: 4800 West & Cedar Hills Drive Performance by movement Entire Run

| Movement | All |
|--------------------|------|
| Denied Delay (hr) | 0.2 |
| Denied Del/Veh (s) | 0.3 |
| Total Delay (hr) | 8.1 |
| Total Del/Veh (s) | 13.9 |
| Vehicles Entered | 2089 |
| Vehicles Exited | 2086 |
| Hourly Exit Rate | 2086 |
| Input Volume | 2067 |
| % of Volume | 101 |

2: Cedar Hills Drive & Walmart Access Performance by movement Interval #1 7:15

| Movement | EBL | EBT | WBT | WBR | SBL | SBR | All |
|--------------------|-----|-----|-----|-----|------|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 5.9 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 4.8 | 0.9 | 1.0 | 0.7 | 11.1 | 8.0 | 1.7 |
| Vehicles Entered | 8 | 45 | 115 | 10 | 9 | 1 | 188 |
| Vehicles Exited | 8 | 45 | 115 | 10 | 9 | 1 | 188 |
| Hourly Exit Rate | 32 | 180 | 460 | 40 | 36 | 4 | 752 |
| Input Volume | 29 | 177 | 451 | 41 | 29 | 7 | 734 |
| % of Volume | 110 | 102 | 102 | 98 | 124 | 57 | 102 |

2: Cedar Hills Drive & Walmart Access Performance by movement Interval #2 7:30

| Movement | EBL | EBT | WBT | WBR | SBL | SBR | All |
|--------------------|-----|-----|-----|-----|------|-----|------|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.3 | 0.0 | 0.0 | 0.0 | 0.2 | 3.9 | 0.1 |
| Total Delay (hr) | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 | 0.2 |
| Total Del/Veh (s) | 7.2 | 0.9 | 1.7 | 1.3 | 18.3 | 6.7 | 2.6 |
| Vehicles Entered | 11 | 64 | 168 | 17 | 13 | 5 | 278 |
| Vehicles Exited | 11 | 64 | 166 | 17 | 12 | 5 | 275 |
| Hourly Exit Rate | 44 | 256 | 664 | 68 | 48 | 20 | 1100 |
| Input Volume | 45 | 255 | 689 | 64 | 45 | 11 | 1109 |
| % of Volume | 98 | 100 | 96 | 106 | 107 | 182 | 99 |

2: Cedar Hills Drive & Walmart Access Performance by movement Interval #3 7:45

| Movement | EBL | EBT | WBT | WBR | SBL | SBR | All |
|--------------------|-----|-----|-----|-----|------|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 5.9 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 4.8 | 0.9 | 1.2 | 0.8 | 11.6 | 4.5 | 1.7 |
| Vehicles Entered | 7 | 47 | 117 | 12 | 8 | 1 | 192 |
| Vehicles Exited | 7 | 46 | 119 | 13 | 8 | 2 | 195 |
| Hourly Exit Rate | 28 | 184 | 476 | 52 | 32 | 8 | 780 |
| Input Volume | 29 | 177 | 451 | 41 | 29 | 7 | 734 |
| % of Volume | 97 | 104 | 106 | 127 | 110 | 114 | 106 |

2: Cedar Hills Drive & Walmart Access Performance by movement Interval #4 8:00

| Movement | EBL | EBT | WBT | WBR | SBL | SBR | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 4.8 | 0.1 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 4.4 | 0.8 | 1.0 | 0.7 | 9.0 | 6.2 | 1.4 |
| Vehicles Entered | 6 | 46 | 115 | 10 | 8 | 2 | 187 |
| Vehicles Exited | 6 | 46 | 114 | 10 | 8 | 2 | 186 |
| Hourly Exit Rate | 24 | 184 | 456 | 40 | 32 | 8 | 744 |
| Input Volume | 29 | 177 | 451 | 41 | 29 | 7 | 734 |
| % of Volume | 83 | 104 | 101 | 98 | 110 | 114 | 101 |

2: Cedar Hills Drive & Walmart Access Performance by movement Entire Run

| Movement | EBL | EBT | WBT | WBR | SBL | SBR | All |
|--------------------|-----|-----|-----|-----|------|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 4.1 | 0.1 |
| Total Delay (hr) | 0.0 | 0.1 | 0.2 | 0.0 | 0.1 | 0.0 | 0.5 |
| Total Del/Veh (s) | 5.6 | 0.9 | 1.3 | 1.0 | 13.6 | 6.3 | 1.9 |
| Vehicles Entered | 32 | 202 | 514 | 49 | 37 | 10 | 844 |
| Vehicles Exited | 32 | 202 | 514 | 49 | 37 | 10 | 844 |
| Hourly Exit Rate | 32 | 202 | 514 | 49 | 37 | 10 | 844 |
| Input Volume | 33 | 196 | 510 | 47 | 33 | 8 | 828 |
| % of Volume | 97 | 103 | 101 | 105 | 112 | 125 | 102 |

3: 4600 West & Cedar Hills Drive Performance by movement Interval #1 7:15

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | 0.2 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 2.3 | 2.8 | 2.6 | 1.9 | 3.2 | 3.1 | 2.4 | 1.3 | 2.0 | 3.9 | 3.7 | 3.4 |
| Vehicles Entered | 9 | 32 | 10 | 1 | 69 | 1 | 21 | 2 | 3 | 10 | 3 | 35 |
| Vehicles Exited | 9 | 32 | 10 | 1 | 68 | 1 | 21 | 2 | 3 | 10 | 3 | 35 |
| Hourly Exit Rate | 36 | 128 | 40 | 4 | 272 | 4 | 84 | 8 | 12 | 40 | 12 | 140 |
| Input Volume | 36 | 119 | 41 | 3 | 259 | 4 | 91 | 11 | 9 | 46 | 11 | 142 |
| % of Volume | 100 | 108 | 98 | 133 | 105 | 100 | 92 | 73 | 133 | 87 | 109 | 99 |

3: 4600 West & Cedar Hills Drive Performance by movement Interval #1 7:15

| Movement | All |
|--------------------|-----|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 0.2 |
| Total Del/Veh (s) | 3.0 |
| Vehicles Entered | 196 |
| Vehicles Exited | 195 |
| Hourly Exit Rate | 780 |
| Input Volume | 772 |
| % of Volume | 101 |

3: 4600 West & Cedar Hills Drive Performance by movement Interval #2 7:30

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 0.4 | 0.0 | 0.0 | 0.1 | 0.2 | 0.4 | 0.3 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 2.6 | 3.5 | 3.1 | 1.9 | 4.8 | 4.9 | 3.2 | 3.2 | 3.0 | 6.1 | 8.6 | 6.3 |
| Vehicles Entered | 16 | 45 | 15 | 1 | 96 | 2 | 36 | 2 | 3 | 20 | 4 | 56 |
| Vehicles Exited | 15 | 44 | 15 | 1 | 95 | 2 | 36 | 2 | 3 | 19 | 4 | 55 |
| Hourly Exit Rate | 60 | 176 | 60 | 4 | 380 | 8 | 144 | 8 | 12 | 76 | 16 | 220 |
| Input Volume | 55 | 181 | 64 | 4 | 396 | 7 | 139 | 7 | 14 | 70 | 18 | 218 |
| % of Volume | 109 | 97 | 94 | 100 | 96 | 114 | 104 | 114 | 86 | 109 | 89 | 101 |

3: 4600 West & Cedar Hills Drive Performance by movement Interval #2 7:30

| Movement | All |
|--------------------|------|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.2 |
| Total Delay (hr) | 0.4 |
| Total Del/Veh (s) | 4.6 |
| Vehicles Entered | 296 |
| Vehicles Exited | 291 |
| Hourly Exit Rate | 1164 |
| Input Volume | 1173 |
| % of Volume | 99 |

3: 4600 West & Cedar Hills Drive Performance by movement Interval #3 7:45

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | 0.2 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 2.6 | 3.0 | 2.4 | | 3.5 | 2.5 | 2.6 | 0.9 | 3.1 | 4.4 | 3.9 | 4.7 |
| Vehicles Entered | 9 | 31 | 12 | 0 | 69 | 1 | 20 | 3 | 2 | 11 | 2 | 37 |
| Vehicles Exited | 10 | 32 | 13 | 0 | 70 | 1 | 21 | 3 | 2 | 11 | 2 | 38 |
| Hourly Exit Rate | 40 | 128 | 52 | 0 | 280 | 4 | 84 | 12 | 8 | 44 | 8 | 152 |
| Input Volume | 36 | 119 | 41 | 3 | 259 | 4 | 91 | 11 | 9 | 46 | 11 | 142 |
| % of Volume | 111 | 108 | 127 | 0 | 108 | 100 | 92 | 109 | 89 | 96 | 73 | 107 |

3: 4600 West & Cedar Hills Drive Performance by movement Interval #3 7:45

| Movement | All |
|--------------------|-----|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 0.2 |
| Total Del/Veh (s) | 3.5 |
| Vehicles Entered | 197 |
| Vehicles Exited | 203 |
| Hourly Exit Rate | 812 |
| Input Volume | 772 |
| % of Volume | 105 |

3: 4600 West & Cedar Hills Drive Performance by movement Interval #4 8:00

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | 0.2 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 2.6 | 2.7 | 2.4 | | 3.2 | 2.2 | 2.6 | 1.3 | 2.2 | 3.4 | 3.9 | 3.8 |
| Vehicles Entered | 9 | 31 | 12 | 0 | 66 | 1 | 22 | 3 | 2 | 13 | 4 | 36 |
| Vehicles Exited | 9 | 31 | 11 | 0 | 67 | 1 | 22 | 3 | 2 | 13 | 4 | 36 |
| Hourly Exit Rate | 36 | 124 | 44 | 0 | 268 | 4 | 88 | 12 | 8 | 52 | 16 | 144 |
| Input Volume | 36 | 119 | 41 | 3 | 259 | 4 | 91 | 11 | 9 | 46 | 11 | 142 |
| % of Volume | 100 | 104 | 107 | 0 | 103 | 100 | 97 | 109 | 89 | 113 | 145 | 101 |

3: 4600 West & Cedar Hills Drive Performance by movement Interval #4 8:00

| Movement | All |
|--------------------|-----|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 0.2 |
| Total Del/Veh (s) | 3.1 |
| Vehicles Entered | 199 |
| Vehicles Exited | 199 |
| Hourly Exit Rate | 796 |
| Input Volume | 772 |
| % of Volume | 103 |

3: 4600 West & Cedar Hills Drive Performance by movement Entire Run

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | 0.2 |
| Total Delay (hr) | 0.0 | 0.1 | 0.0 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.2 |
| Total Del/Veh (s) | 2.6 | 3.1 | 2.7 | 2.7 | 3.9 | 3.5 | 2.9 | 1.6 | 2.3 | 4.8 | 5.6 | 4.9 |
| Vehicles Entered | 43 | 138 | 49 | 2 | 300 | 5 | 100 | 10 | 11 | 53 | 13 | 163 |
| Vehicles Exited | 43 | 139 | 48 | 2 | 300 | 5 | 100 | 10 | 11 | 52 | 13 | 163 |
| Hourly Exit Rate | 43 | 139 | 48 | 2 | 300 | 5 | 100 | 10 | 11 | 52 | 13 | 163 |
| Input Volume | 41 | 134 | 47 | 3 | 293 | 5 | 103 | 10 | 10 | 52 | 13 | 161 |
| % of Volume | 106 | 103 | 103 | 62 | 102 | 105 | 97 | 100 | 107 | 100 | 102 | 101 |

3: 4600 West & Cedar Hills Drive Performance by movement Entire Run

| Movement | All |
|--------------------|-----|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.2 |
| Total Delay (hr) | 0.9 |
| Total Del/Veh (s) | 3.7 |
| Vehicles Entered | 887 |
| Vehicles Exited | 886 |
| Hourly Exit Rate | 886 |
| Input Volume | 872 |
| % of Volume | 102 |

4: 4600 West & Lexington Heights Access Performance by movement Interval #1 7:15

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 5.8 | 2.0 | 0.1 | 0.0 | 2.1 | 0.3 | 0.6 |
| Vehicles Entered | 1 | 2 | 25 | 1 | 6 | 8 | 43 |
| Vehicles Exited | 1 | 2 | 25 | 1 | 6 | 9 | 44 |
| Hourly Exit Rate | 4 | 8 | 100 | 4 | 24 | 36 | 176 |
| Input Volume | 4 | 6 | 105 | 4 | 22 | 38 | 179 |
| % of Volume | 100 | 133 | 95 | 100 | 109 | 95 | 98 |

4: 4600 West & Lexington Heights Access Performance by movement Interval #2 7:30

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 6.8 | 3.5 | 0.1 | 0.0 | 1.9 | 0.5 | 0.6 |
| Vehicles Entered | 1 | 2 | 41 | 1 | 6 | 13 | 64 |
| Vehicles Exited | 1 | 2 | 40 | 1 | 7 | 13 | 64 |
| Hourly Exit Rate | 4 | 8 | 160 | 4 | 28 | 52 | 256 |
| Input Volume | 5 | 7 | 151 | 5 | 27 | 60 | 255 |
| % of Volume | 80 | 114 | 106 | 80 | 104 | 87 | 100 |

4: 4600 West & Lexington Heights Access Performance by movement Interval #3 7:45

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 2.6 | 3.1 | 0.1 | 0.0 | 1.9 | 0.3 | 0.5 |
| Vehicles Entered | 1 | 1 | 24 | 2 | 7 | 10 | 45 |
| Vehicles Exited | 1 | 1 | 25 | 2 | 7 | 10 | 46 |
| Hourly Exit Rate | 4 | 4 | 100 | 8 | 28 | 40 | 184 |
| Input Volume | 4 | 6 | 105 | 4 | 22 | 38 | 179 |
| % of Volume | 100 | 67 | 95 | 200 | 127 | 105 | 103 |

4: 4600 West & Lexington Heights Access Performance by movement Interval #4 8:00

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 2.3 | 3.5 | 0.1 | 0.1 | 2.1 | 0.3 | 0.5 |
| Vehicles Entered | 1 | 1 | 27 | 2 | 6 | 10 | 47 |
| Vehicles Exited | 1 | 1 | 26 | 2 | 6 | 10 | 46 |
| Hourly Exit Rate | 4 | 4 | 104 | 8 | 24 | 40 | 184 |
| Input Volume | 4 | 6 | 105 | 4 | 22 | 38 | 179 |
| % of Volume | 100 | 67 | 99 | 200 | 109 | 105 | 103 |

4: 4600 West & Lexington Heights Access Performance by movement Entire Run

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 4.4 | 2.9 | 0.1 | 0.0 | 2.1 | 0.4 | 0.6 |
| Vehicles Entered | 4 | 6 | 116 | 5 | 25 | 42 | 198 |
| Vehicles Exited | 4 | 6 | 116 | 5 | 25 | 42 | 198 |
| Hourly Exit Rate | 4 | 6 | 116 | 5 | 25 | 42 | 198 |
| Input Volume | 4 | 6 | 116 | 4 | 23 | 44 | 198 |
| % of Volume | 94 | 96 | 100 | 118 | 108 | 97 | 100 |

5: 4600 West & Charleston Access Performance by movement Interval #1 7:15

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | | 0.1 | 0.1 | | | 0.0 | 0.1 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | | 1.4 | 0.1 | | | 0.2 | 0.2 |
| Vehicles Entered | 0 | 1 | 23 | 0 | 0 | 10 | 34 |
| Vehicles Exited | 0 | 1 | 24 | 0 | 0 | 10 | 35 |
| Hourly Exit Rate | 0 | 4 | 96 | 0 | 0 | 40 | 140 |
| Input Volume | 2 | 1 | 102 | 1 | 2 | 40 | 148 |
| % of Volume | 0 | 400 | 94 | 0 | 0 | 100 | 95 |

5: 4600 West & Charleston Access Performance by movement Interval #2 7:30

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | | | 0.2 | | 0.0 | 0.0 | 0.2 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | | | 0.2 | | 0.8 | 0.2 | 0.3 |
| Vehicles Entered | 0 | 0 | 41 | 0 | 1 | 14 | 56 |
| Vehicles Exited | 0 | 0 | 41 | 0 | 1 | 13 | 55 |
| Hourly Exit Rate | 0 | 0 | 164 | 0 | 4 | 52 | 220 |
| Input Volume | 3 | 1 | 155 | 1 | 3 | 57 | 220 |
| % of Volume | 0 | 0 | 106 | 0 | 133 | 91 | 100 |

5: 4600 West & Charleston Access Performance by movement Interval #3 7:45

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | | | 0.1 | | | 0.0 | 0.1 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | | | 0.1 | | | 0.1 | 0.2 |
| Vehicles Entered | 0 | 0 | 24 | 0 | 0 | 11 | 35 |
| Vehicles Exited | 0 | 0 | 24 | 0 | 0 | 11 | 35 |
| Hourly Exit Rate | 0 | 0 | 96 | 0 | 0 | 44 | 140 |
| Input Volume | 2 | 1 | 102 | 1 | 2 | 40 | 148 |
| % of Volume | 0 | 0 | 94 | 0 | 0 | 110 | 95 |

5: 4600 West & Charleston Access Performance by movement Interval #4 8:00

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | | | 0.1 | | | 0.0 | 0.1 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | | | 0.1 | | | 0.1 | 0.2 |
| Vehicles Entered | 0 | 0 | 26 | 0 | 0 | 10 | 36 |
| Vehicles Exited | 0 | 0 | 26 | 0 | 0 | 10 | 36 |
| Hourly Exit Rate | 0 | 0 | 104 | 0 | 0 | 40 | 144 |
| Input Volume | 2 | 1 | 102 | 1 | 2 | 40 | 148 |
| % of Volume | 0 | 0 | 102 | 0 | 0 | 100 | 97 |

5: 4600 West & Charleston Access Performance by movement Entire Run

| Movement | WBL | WBR | NBT | NBR | SBL | SBT | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.2 | 0.1 | 0.0 | 0.0 | 0.1 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 6.0 | 3.7 | 0.1 | 0.0 | 1.9 | 0.1 | 0.2 |
| Vehicles Entered | 1 | 1 | 115 | 1 | 1 | 44 | 163 |
| Vehicles Exited | 1 | 1 | 116 | 1 | 1 | 44 | 164 |
| Hourly Exit Rate | 1 | 1 | 116 | 1 | 1 | 44 | 164 |
| Input Volume | 2 | 1 | 115 | 1 | 2 | 44 | 166 |
| % of Volume | 44 | 100 | 101 | 100 | 44 | 99 | 99 |

Total Zone Performance By Interval

| Interval Start | 7:15 | 7:30 | 7:45 | 8:00 | All |
|--------------------|------|------|------|------|------|
| Denied Delay (hr) | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 |
| Denied Del/Veh (s) | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| Total Delay (hr) | 2.2 | 3.9 | 2.4 | 2.2 | 10.9 |
| Total Del/Veh (s) | 14.1 | 18.6 | 14.7 | 14.1 | 16.6 |
| Vehicles Entered | 537 | 718 | 533 | 533 | 2323 |
| Vehicles Exited | 534 | 693 | 562 | 535 | 2322 |
| Hourly Exit Rate | 2136 | 2772 | 2248 | 2140 | 2322 |
| Input Volume | 7051 | 9708 | 7051 | 7051 | 7715 |
| % of Volume | 30 | 29 | 32 | 30 | 30 |

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #1

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | NB | NB | SB | SB |
|-----------------------|------|----|----|----|-----|----|-----|-----|-----|-----|-----|------|
| Directions Served | L | T | R | L | T | R | L | T | T | R | L | T |
| Maximum Queue (ft) | 76 | 57 | 28 | 94 | 126 | 79 | 54 | 121 | 105 | 35 | 74 | 132 |
| Average Queue (ft) | 38 | 31 | 11 | 50 | 63 | 39 | 26 | 78 | 48 | 17 | 37 | 90 |
| 95th Queue (ft) | 81 | 66 | 35 | 92 | 133 | 83 | 54 | 128 | 111 | 39 | 73 | 138 |
| Link Distance (ft) | 1025 | | | | 450 | | | 283 | 283 | | | 1110 |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | | 75 | 75 | 60 | | 60 | 180 | | | 180 | 170 | |
| Storage Blk Time (%) | 3 | 0 | | 5 | 8 | 1 | | 0 | | | | 0 |
| Queuing Penalty (veh) | 1 | 0 | | 12 | 24 | 2 | | 0 | | | | 0 |

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #1

| Movement | SB | SB |
|-----------------------|------|------|
| Directions Served | T | R |
| Maximum Queue (ft) | 112 | 51 |
| Average Queue (ft) | 53 | 26 |
| 95th Queue (ft) | 109 | 51 |
| Link Distance (ft) | 1110 | 1110 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #2

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | NB | NB | SB | SB |
|-----------------------|------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Directions Served | L | T | R | L | T | R | L | T | T | R | L | T |
| Maximum Queue (ft) | 100 | 69 | 41 | 116 | 191 | 114 | 89 | 184 | 146 | 42 | 80 | 185 |
| Average Queue (ft) | 54 | 39 | 15 | 73 | 99 | 65 | 39 | 118 | 84 | 21 | 43 | 118 |
| 95th Queue (ft) | 104 | 77 | 44 | 123 | 186 | 126 | 86 | 188 | 157 | 44 | 78 | 184 |
| Link Distance (ft) | 1025 | | | | 450 | | | 283 | 283 | | | 1110 |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | | 75 | 75 | 60 | | 60 | 180 | | | 180 | 170 | |
| Storage Blk Time (%) | 8 | 2 | 0 | 13 | 17 | 3 | 0 | 1 | 0 | | | 2 |
| Queuing Penalty (veh) | 7 | 2 | 0 | 54 | 73 | 14 | 0 | 1 | 0 | | | 2 |

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #2

| Movement | SB | SB |
|-----------------------|------|------|
| Directions Served | T | R |
| Maximum Queue (ft) | 162 | 55 |
| Average Queue (ft) | 88 | 30 |
| 95th Queue (ft) | 164 | 56 |
| Link Distance (ft) | 1110 | 1110 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #3

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | NB | NB | SB | SB |
|-----------------------|------|----|----|-----|-----|----|-----|-----|-----|-----|-----|------|
| Directions Served | L | T | R | L | T | R | L | T | T | R | L | T |
| Maximum Queue (ft) | 75 | 67 | 31 | 106 | 118 | 89 | 49 | 140 | 119 | 38 | 73 | 143 |
| Average Queue (ft) | 42 | 35 | 12 | 61 | 62 | 41 | 25 | 87 | 58 | 19 | 42 | 94 |
| 95th Queue (ft) | 78 | 73 | 36 | 111 | 131 | 91 | 54 | 148 | 123 | 40 | 76 | 150 |
| Link Distance (ft) | 1025 | | | | 450 | | | 283 | 283 | | | 1110 |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | | 75 | 75 | 60 | | 60 | 180 | | | 180 | 170 | |
| Storage Blk Time (%) | 1 | 2 | | 6 | 9 | 1 | | 0 | 0 | | | 0 |
| Queuing Penalty (veh) | 1 | 1 | | 17 | 26 | 2 | | 0 | 0 | | | 0 |

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #3

| Movement | SB | SB |
|-----------------------|------|------|
| Directions Served | T | R |
| Maximum Queue (ft) | 128 | 46 |
| Average Queue (ft) | 66 | 25 |
| 95th Queue (ft) | 128 | 51 |
| Link Distance (ft) | 1110 | 1110 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #4

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | NB | NB | SB | SB |
|-----------------------|------|----|----|-----|-----|----|-----|-----|-----|-----|-----|------|
| Directions Served | L | T | R | L | T | R | L | T | T | R | L | T |
| Maximum Queue (ft) | 74 | 55 | 31 | 98 | 107 | 89 | 59 | 129 | 87 | 28 | 76 | 142 |
| Average Queue (ft) | 44 | 27 | 10 | 57 | 59 | 42 | 30 | 84 | 47 | 16 | 35 | 90 |
| 95th Queue (ft) | 84 | 62 | 34 | 102 | 112 | 90 | 60 | 135 | 96 | 32 | 73 | 154 |
| Link Distance (ft) | 1025 | | | | 450 | | | 283 | 283 | | | 1110 |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | | 75 | 75 | 60 | | 60 | 180 | | | 180 | 170 | |
| Storage Blk Time (%) | 3 | 1 | | 6 | 6 | 1 | | | | | | 0 |
| Queuing Penalty (veh) | 1 | 1 | | 16 | 17 | 2 | | | | | | 0 |

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #4

| Movement | SB | SB |
|-----------------------|------|------|
| Directions Served | T | R |
| Maximum Queue (ft) | 110 | 49 |
| Average Queue (ft) | 58 | 24 |
| 95th Queue (ft) | 120 | 51 |
| Link Distance (ft) | 1110 | 1110 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 1: 4800 West & Cedar Hills Drive, All Intervals

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | NB | NB | SB | SB |
|-----------------------|------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Directions Served | L | T | R | L | T | R | L | T | T | R | L | T |
| Maximum Queue (ft) | 109 | 80 | 41 | 118 | 207 | 119 | 93 | 184 | 150 | 45 | 104 | 188 |
| Average Queue (ft) | 44 | 33 | 12 | 60 | 71 | 47 | 30 | 91 | 59 | 18 | 39 | 98 |
| 95th Queue (ft) | 88 | 70 | 37 | 109 | 146 | 101 | 65 | 156 | 127 | 39 | 75 | 160 |
| Link Distance (ft) | 1025 | | | | 450 | | | 283 | 283 | | | 1110 |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | | 75 | 75 | 60 | | 60 | 180 | | | 180 | 170 | |
| Storage Blk Time (%) | 4 | 1 | 0 | 8 | 10 | 1 | 0 | 0 | 0 | | | 0 |
| Queuing Penalty (veh) | 3 | 1 | 0 | 25 | 35 | 5 | 0 | 0 | 0 | | | 1 |

Intersection: 1: 4800 West & Cedar Hills Drive, All Intervals

| Movement | SB | SB |
|-----------------------|------|------|
| Directions Served | T | R |
| Maximum Queue (ft) | 169 | 61 |
| Average Queue (ft) | 66 | 26 |
| 95th Queue (ft) | 134 | 53 |
| Link Distance (ft) | 1110 | 1110 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 2: Cedar Hills Drive & Walmart Access, Interval #1

| Movement | EB | WB | SB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | L | TR | LT | R |
| Maximum Queue (ft) | 33 | 5 | 46 | 23 |
| Average Queue (ft) | 10 | 1 | 24 | 5 |
| 95th Queue (ft) | 35 | 11 | 50 | 23 |
| Link Distance (ft) | | 651 | 198 | |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 100 | | | 100 |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 2: Cedar Hills Drive & Walmart Access, Interval #2

| Movement | EB | WB | SB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | L | TR | LT | R |
| Maximum Queue (ft) | 35 | 3 | 57 | 30 |
| Average Queue (ft) | 16 | 0 | 31 | 14 |
| 95th Queue (ft) | 41 | 4 | 61 | 39 |
| Link Distance (ft) | | 651 | 198 | |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 100 | | | 100 |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 2: Cedar Hills Drive & Walmart Access, Interval #3

| Movement | EB | SB | SB |
|-----------------------|-----|-----|-----|
| Directions Served | L | LT | R |
| Maximum Queue (ft) | 31 | 53 | 25 |
| Average Queue (ft) | 11 | 26 | 4 |
| 95th Queue (ft) | 33 | 57 | 21 |
| Link Distance (ft) | | 198 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | 100 | | 100 |
| Storage Blk Time (%) | | 0 | |
| Queuing Penalty (veh) | | 0 | |

Intersection: 2: Cedar Hills Drive & Walmart Access, Interval #4

| Movement | EB | SB | SB |
|-----------------------|-----|-----|-----|
| Directions Served | L | LT | R |
| Maximum Queue (ft) | 30 | 38 | 26 |
| Average Queue (ft) | 8 | 21 | 7 |
| 95th Queue (ft) | 30 | 47 | 27 |
| Link Distance (ft) | | 198 | |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | 100 | | 100 |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 2: Cedar Hills Drive & Walmart Access, All Intervals

| Movement | EB | WB | SB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | L | TR | LT | R |
| Maximum Queue (ft) | 46 | 6 | 68 | 33 |
| Average Queue (ft) | 11 | 0 | 25 | 8 |
| 95th Queue (ft) | 35 | 6 | 55 | 29 |
| Link Distance (ft) | | 651 | 198 | |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 100 | | | 100 |
| Storage Blk Time (%) | | | 0 | |
| Queuing Penalty (veh) | | | 0 | |

Intersection: 3: 4600 West & Cedar Hills Drive, Interval #1

| Movement | EB | WB | NB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 27 | 52 | 36 | 58 |
| Average Queue (ft) | 8 | 19 | 11 | 33 |
| 95th Queue (ft) | 31 | 57 | 37 | 62 |
| Link Distance (ft) | 651 | 989 | 218 | 774 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 3: 4600 West & Cedar Hills Drive, Interval #2

| Movement | EB | WB | NB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 62 | 90 | 56 | 111 |
| Average Queue (ft) | 21 | 49 | 27 | 58 |
| 95th Queue (ft) | 62 | 97 | 59 | 114 |
| Link Distance (ft) | 651 | 989 | 218 | 774 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 3: 4600 West & Cedar Hills Drive, Interval #3

| Movement | EB | WB | NB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 44 | 70 | 43 | 80 |
| Average Queue (ft) | 15 | 25 | 14 | 39 |
| 95th Queue (ft) | 48 | 71 | 46 | 83 |
| Link Distance (ft) | 651 | 989 | 218 | 774 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 3: 4600 West & Cedar Hills Drive, Interval #4

| Movement | EB | WB | NB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 38 | 51 | 39 | 65 |
| Average Queue (ft) | 12 | 22 | 12 | 35 |
| 95th Queue (ft) | 40 | 60 | 40 | 66 |
| Link Distance (ft) | 651 | 989 | 218 | 774 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 3: 4600 West & Cedar Hills Drive, All Intervals

| Movement | EB | WB | NB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 69 | 101 | 62 | 118 |
| Average Queue (ft) | 14 | 29 | 16 | 41 |
| 95th Queue (ft) | 47 | 76 | 48 | 86 |
| Link Distance (ft) | 651 | 989 | 218 | 774 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 4: 4600 West & Lexington Heights Access, Interval #1

| Movement | WB | SB |
|-----------------------|-----|-----|
| Directions Served | LTR | LTR |
| Maximum Queue (ft) | 30 | 25 |
| Average Queue (ft) | 10 | 4 |
| 95th Queue (ft) | 33 | 22 |
| Link Distance (ft) | 107 | 218 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 4: 4600 West & Lexington Heights Access, Interval #2

| Movement | WB | SB |
|-----------------------|-----|-----|
| Directions Served | LTR | LTR |
| Maximum Queue (ft) | 30 | 12 |
| Average Queue (ft) | 12 | 2 |
| 95th Queue (ft) | 35 | 15 |
| Link Distance (ft) | 107 | 218 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 4: 4600 West & Lexington Heights Access, Interval #3

| Movement | WB | SB |
|-----------------------|-----|-----|
| Directions Served | LTR | LTR |
| Maximum Queue (ft) | 26 | 16 |
| Average Queue (ft) | 5 | 4 |
| 95th Queue (ft) | 24 | 21 |
| Link Distance (ft) | 107 | 218 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 4: 4600 West & Lexington Heights Access, Interval #4

| Movement | WB | SB |
|-----------------------|-----|-----|
| Directions Served | LTR | LTR |
| Maximum Queue (ft) | 29 | 19 |
| Average Queue (ft) | 6 | 4 |
| 95th Queue (ft) | 25 | 21 |
| Link Distance (ft) | 107 | 218 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 4: 4600 West & Lexington Heights Access, All Intervals

| Movement | WB | SB |
|-----------------------|-----|-----|
| Directions Served | LTR | LTR |
| Maximum Queue (ft) | 30 | 28 |
| Average Queue (ft) | 8 | 4 |
| 95th Queue (ft) | 30 | 20 |
| Link Distance (ft) | 107 | 218 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 5: 4600 West & Charleston Access, Interval #1

| Movement | WB |
|-----------------------|-----|
| Directions Served | LTR |
| Maximum Queue (ft) | 15 |
| Average Queue (ft) | 3 |
| 95th Queue (ft) | 17 |
| Link Distance (ft) | 104 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

Intersection: 5: 4600 West & Charleston Access, Interval #2

| Movement | WB | SB |
|-----------------------|-----|-----|
| Directions Served | LTR | LTR |
| Maximum Queue (ft) | 18 | 3 |
| Average Queue (ft) | 3 | 0 |
| 95th Queue (ft) | 17 | 6 |
| Link Distance (ft) | 104 | 119 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 5: 4600 West & Charleston Access, Interval #3

| Movement | WB |
|-----------------------|-----|
| Directions Served | LTR |
| Maximum Queue (ft) | 14 |
| Average Queue (ft) | 2 |
| 95th Queue (ft) | 16 |
| Link Distance (ft) | 104 |
| Upstream Blk Time (%) | |
| Queuing Penalty (veh) | |
| Storage Bay Dist (ft) | |
| Storage Blk Time (%) | |
| Queuing Penalty (veh) | |

Intersection: 5: 4600 West & Charleston Access, Interval #4

| Movement | WB | SB |
|-----------------------|-----|-----|
| Directions Served | LTR | LTR |
| Maximum Queue (ft) | 12 | 3 |
| Average Queue (ft) | 2 | 0 |
| 95th Queue (ft) | 14 | 6 |
| Link Distance (ft) | 104 | 119 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 5: 4600 West & Charleston Access, All Intervals

| Movement | WB | SB |
|-----------------------|-----|-----|
| Directions Served | LTR | LTR |
| Maximum Queue (ft) | 29 | 6 |
| Average Queue (ft) | 3 | 0 |
| 95th Queue (ft) | 16 | 4 |
| Link Distance (ft) | 104 | 119 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Zone Summary

| |
|--|
| Zone wide Queuing Penalty, Interval #1: 40 |
| Zone wide Queuing Penalty, Interval #2: 152 |
| Zone wide Queuing Penalty, Interval #3: 46 |
| Zone wide Queuing Penalty, Interval #4: 38 |
| Zone wide Queuing Penalty, All Intervals: 69 |

SimTraffic LOS Report

Project: Cedar Hills - Senior Living Facility TIS
Analysis Period: Existing 2014 Plus Project
Time Period: a.m. peak hour **Project #:** UT14-558

Intersection: 4800 West & Cedar Hills Drive
Type: Signalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|--------------|----------|---------------|---------------|-----|-----------------|-----|
| | | | Avg | % | Avg | LOS |
| NB | L | 64 | 63 | 99 | 16.2 | B |
| | T | 466 | 476 | 102 | 15.5 | B |
| | R | 90 | 90 | 100 | 2.8 | A |
| | Subtotal | 620 | 629 | 101 | 13.8 | B |
| SB | L | 109 | 105 | 96 | 15.1 | B |
| | T | 589 | 589 | 100 | 14.7 | B |
| | R | 141 | 146 | 103 | 3.8 | A |
| | Subtotal | 839 | 840 | 100 | 12.9 | B |
| EB | L | 73 | 66 | 91 | 24.5 | C |
| | T | 41 | 43 | 106 | 31.3 | C |
| | R | 20 | 21 | 104 | 4.1 | A |
| | Subtotal | 134 | 130 | 97 | 23.5 | C |
| WB | L | 170 | 173 | 102 | 17.7 | B |
| | T | 174 | 172 | 99 | 16.7 | B |
| | R | 179 | 182 | 102 | 6.5 | A |
| | Subtotal | 523 | 527 | 101 | 13.5 | B |
| Total | | 2,116 | 2,126 | 100 | 13.9 | B |

Intersection: Cedar Hills Drive & Walmart Access
Type: Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|--------------|-----------------|---------------|---------------|------------|-----------------|----------|
| | | | Avg | % | Avg | LOS |
| NB | L | 30 | 31 | 104 | 12.3 | B |
| | R | 1 | 1 | 100 | 3.9 | A |
| | Subtotal | 31 | 32 | 103 | 12.0 | B |
| SB | L | 33 | 30 | 91 | 13.6 | B |
| | R | 8 | 11 | 138 | 6.3 | A |
| | Subtotal | 41 | 41 | 100 | 11.6 | B |
| EB | L | 33 | 34 | 103 | 5.5 | A |
| | T | 205 | 201 | 98 | 1.0 | A |
| | R | 11 | 11 | 98 | 1.0 | A |
| | Subtotal | 249 | 246 | 99 | 1.6 | A |
| WB | L | 3 | 3 | 92 | 2.5 | A |
| | T | 510 | 510 | 100 | 1.4 | A |
| | R | 47 | 48 | 103 | 1.1 | A |
| | Subtotal | 560 | 561 | 100 | 1.4 | A |
| Total | | 881 | 880 | 100 | 2.3 | A |

SimTraffic LOS Report

Project: Cedar Hills - Senior Living Facility TIS
Analysis Period: Existing 2014 Plus Project
Time Period: a.m. peak hour **Project #:** UT14-558

Intersection: 4600 West & Cedar Hills Drive
Type: Roundabout

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|--------------|----------|---------------|---------------|-----|-----------------|-----|
| | | | Avg | % | Avg | LOS |
| NB | L | 103 | 103 | 100 | 2.7 | A |
| | T | 15 | 13 | 87 | 1.9 | A |
| | R | 15 | 16 | 108 | 2.6 | A |
| | Subtotal | 133 | 132 | 99 | 2.6 | A |
| SB | L | 52 | 55 | 106 | 4.6 | A |
| | T | 15 | 13 | 88 | 4.5 | A |
| | R | 162 | 163 | 101 | 4.9 | A |
| | Subtotal | 229 | 231 | 101 | 4.8 | A |
| EB | L | 41 | 40 | 98 | 2.6 | A |
| | T | 135 | 127 | 94 | 3.0 | A |
| | R | 54 | 53 | 98 | 2.7 | A |
| | Subtotal | 230 | 220 | 96 | 2.9 | A |
| WB | L | 5 | 5 | 105 | 2.8 | A |
| | T | 295 | 295 | 100 | 3.9 | A |
| | R | 5 | 6 | 126 | 3.3 | A |
| | Subtotal | 305 | 306 | 100 | 3.9 | A |
| Total | | 896 | 889 | 99 | 3.6 | A |

Intersection: 4600 West & Lexington Heights Access
Type: Unsignalized

| Approach | Movement | Demand Volume | Volume Served | | Delay/Veh (sec) | |
|--------------|-----------------|---------------|---------------|------------|-----------------|----------|
| | | | Avg | % | Avg | LOS |
| NB | T | 121 | 121 | 100 | 0.1 | A |
| | R | 4 | 5 | 118 | 0.1 | A |
| | Subtotal | 125 | 126 | 101 | 0.1 | A |
| SB | L | 23 | 22 | 95 | 2.0 | A |
| | T | 47 | 47 | 99 | 0.3 | A |
| | R | 7 | 6 | 83 | 0.4 | A |
| | Subtotal | 77 | 75 | 97 | 0.8 | A |
| EB | L | 5 | 5 | 95 | 4.6 | A |
| | Subtotal | 5 | 5 | 100 | 4.6 | A |
| WB | L | 4 | 4 | 94 | 4.6 | A |
| | R | 6 | 7 | 112 | 3.1 | A |
| | Subtotal | 10 | 11 | 110 | 3.6 | A |
| Total | | 218 | 217 | 99 | 0.6 | A |

1: 4800 West & Cedar Hills Drive Performance by movement Interval #1 7:15

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.3 | 3.2 | 3.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.1 | 0.1 | 0.2 |
| Total Delay (hr) | 0.1 | 0.1 | 0.0 | 0.2 | 0.2 | 0.1 | 0.1 | 0.5 | 0.0 | 0.1 | 0.5 | 0.0 |
| Total Del/Veh (s) | 22.2 | 30.4 | 3.6 | 16.9 | 15.9 | 5.2 | 14.5 | 14.7 | 2.5 | 13.5 | 13.2 | 3.0 |
| Vehicles Entered | 14 | 11 | 6 | 41 | 36 | 37 | 13 | 115 | 20 | 24 | 135 | 33 |
| Vehicles Exited | 14 | 12 | 6 | 41 | 36 | 37 | 13 | 116 | 21 | 24 | 134 | 32 |
| Hourly Exit Rate | 56 | 48 | 24 | 164 | 144 | 148 | 52 | 464 | 84 | 96 | 536 | 128 |
| Input Volume | 64 | 36 | 18 | 150 | 155 | 158 | 60 | 439 | 85 | 103 | 554 | 133 |
| % of Volume | 88 | 133 | 133 | 109 | 93 | 94 | 87 | 106 | 99 | 93 | 97 | 96 |

1: 4800 West & Cedar Hills Drive Performance by movement Interval #1 7:15

| Movement | All |
|--------------------|------|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.3 |
| Total Delay (hr) | 1.8 |
| Total Del/Veh (s) | 13.0 |
| Vehicles Entered | 485 |
| Vehicles Exited | 486 |
| Hourly Exit Rate | 1944 |
| Input Volume | 1955 |
| % of Volume | 99 |

1: 4800 West & Cedar Hills Drive Performance by movement Interval #2 7:30

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.3 | 3.1 | 3.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.5 | 0.2 | 0.2 |
| Total Delay (hr) | 0.2 | 0.1 | 0.0 | 0.3 | 0.2 | 0.1 | 0.1 | 0.7 | 0.0 | 0.2 | 0.9 | 0.1 |
| Total Del/Veh (s) | 23.3 | 32.8 | 4.2 | 18.2 | 16.0 | 8.2 | 20.4 | 18.7 | 3.6 | 17.5 | 18.1 | 4.8 |
| Vehicles Entered | 24 | 14 | 6 | 56 | 55 | 62 | 20 | 140 | 26 | 30 | 182 | 45 |
| Vehicles Exited | 23 | 13 | 6 | 56 | 54 | 61 | 20 | 138 | 26 | 29 | 179 | 45 |
| Hourly Exit Rate | 92 | 52 | 24 | 224 | 216 | 244 | 80 | 552 | 104 | 116 | 716 | 180 |
| Input Volume | 99 | 55 | 27 | 230 | 229 | 242 | 75 | 548 | 106 | 128 | 693 | 166 |
| % of Volume | 93 | 95 | 89 | 97 | 94 | 101 | 107 | 101 | 98 | 91 | 103 | 108 |

1: 4800 West & Cedar Hills Drive Performance by movement Interval #2 7:30

| Movement | All |
|--------------------|------|
| Denied Delay (hr) | 0.1 |
| Denied Del/Veh (s) | 0.3 |
| Total Delay (hr) | 3.0 |
| Total Del/Veh (s) | 16.0 |
| Vehicles Entered | 660 |
| Vehicles Exited | 650 |
| Hourly Exit Rate | 2600 |
| Input Volume | 2598 |
| % of Volume | 100 |

1: 4800 West & Cedar Hills Drive Performance by movement Interval #3 7:45

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.3 | 3.1 | 4.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.9 | 0.2 | 0.2 |
| Total Delay (hr) | 0.1 | 0.1 | 0.0 | 0.2 | 0.2 | 0.1 | 0.1 | 0.4 | 0.0 | 0.1 | 0.5 | 0.0 |
| Total Del/Veh (s) | 23.4 | 25.3 | 4.2 | 17.0 | 16.8 | 5.8 | 13.2 | 13.3 | 2.4 | 14.2 | 12.4 | 2.9 |
| Vehicles Entered | 14 | 9 | 4 | 38 | 38 | 43 | 15 | 107 | 20 | 25 | 140 | 33 |
| Vehicles Exited | 16 | 9 | 4 | 39 | 39 | 44 | 15 | 110 | 19 | 26 | 142 | 34 |
| Hourly Exit Rate | 64 | 36 | 16 | 156 | 156 | 176 | 60 | 440 | 76 | 104 | 568 | 136 |
| Input Volume | 64 | 36 | 18 | 150 | 155 | 158 | 60 | 439 | 85 | 103 | 554 | 133 |
| % of Volume | 100 | 100 | 89 | 104 | 101 | 111 | 100 | 100 | 89 | 101 | 103 | 102 |

1: 4800 West & Cedar Hills Drive Performance by movement Interval #3 7:45

| Movement | All |
|--------------------|------|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.3 |
| Total Delay (hr) | 1.8 |
| Total Del/Veh (s) | 12.4 |
| Vehicles Entered | 486 |
| Vehicles Exited | 497 |
| Hourly Exit Rate | 1988 |
| Input Volume | 1955 |
| % of Volume | 102 |

1: 4800 West & Cedar Hills Drive Performance by movement Interval #4 8:00

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 3.2 | 3.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.1 | 0.2 |
| Total Delay (hr) | 0.1 | 0.1 | 0.0 | 0.2 | 0.2 | 0.1 | 0.1 | 0.4 | 0.0 | 0.1 | 0.5 | 0.0 |
| Total Del/Veh (s) | 23.5 | 29.9 | 4.4 | 16.3 | 16.7 | 5.5 | 13.4 | 13.2 | 2.4 | 13.1 | 12.1 | 3.6 |
| Vehicles Entered | 13 | 9 | 5 | 39 | 43 | 39 | 15 | 113 | 24 | 25 | 132 | 36 |
| Vehicles Exited | 13 | 9 | 5 | 38 | 43 | 39 | 15 | 113 | 24 | 25 | 133 | 35 |
| Hourly Exit Rate | 52 | 36 | 20 | 152 | 172 | 156 | 60 | 452 | 96 | 100 | 532 | 140 |
| Input Volume | 64 | 36 | 18 | 150 | 155 | 158 | 60 | 439 | 85 | 103 | 554 | 133 |
| % of Volume | 81 | 100 | 111 | 101 | 111 | 99 | 100 | 103 | 113 | 97 | 96 | 105 |

1: 4800 West & Cedar Hills Drive Performance by movement Interval #4 8:00

| Movement | All |
|--------------------|------|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.3 |
| Total Delay (hr) | 1.7 |
| Total Del/Veh (s) | 12.1 |
| Vehicles Entered | 493 |
| Vehicles Exited | 492 |
| Hourly Exit Rate | 1968 |
| Input Volume | 1955 |
| % of Volume | 101 |

1: 4800 West & Cedar Hills Drive Performance by movement Entire Run

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.3 | 3.2 | 3.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.9 | 0.2 | 0.2 |
| Total Delay (hr) | 0.4 | 0.4 | 0.0 | 0.9 | 0.8 | 0.3 | 0.3 | 2.1 | 0.1 | 0.4 | 2.4 | 0.2 |
| Total Del/Veh (s) | 24.5 | 31.3 | 4.1 | 17.7 | 16.7 | 6.5 | 16.2 | 15.5 | 2.8 | 15.1 | 14.7 | 3.8 |
| Vehicles Entered | 66 | 43 | 21 | 173 | 172 | 182 | 62 | 475 | 90 | 104 | 589 | 146 |
| Vehicles Exited | 66 | 43 | 21 | 173 | 172 | 182 | 63 | 476 | 90 | 105 | 589 | 146 |
| Hourly Exit Rate | 66 | 43 | 21 | 173 | 172 | 182 | 63 | 476 | 90 | 105 | 589 | 146 |
| Input Volume | 73 | 41 | 20 | 170 | 174 | 179 | 64 | 466 | 90 | 109 | 589 | 141 |
| % of Volume | 91 | 106 | 104 | 102 | 99 | 102 | 99 | 102 | 100 | 96 | 100 | 103 |

1: 4800 West & Cedar Hills Drive Performance by movement Entire Run

| Movement | All |
|--------------------|------|
| Denied Delay (hr) | 0.2 |
| Denied Del/Veh (s) | 0.3 |
| Total Delay (hr) | 8.3 |
| Total Del/Veh (s) | 13.9 |
| Vehicles Entered | 2123 |
| Vehicles Exited | 2126 |
| Hourly Exit Rate | 2126 |
| Input Volume | 2116 |
| % of Volume | 100 |

2: Cedar Hills Drive & Walmart Access Performance by movement Interval #1 7:15

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SBL | SBR | All |
|--------------------|-----|-----|-----|-----|-----|-----|------|-----|------|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | | 0.2 | 4.4 | 0.1 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 3.9 | 1.0 | 1.0 | 2.1 | 1.0 | 0.7 | 10.1 | | 10.0 | 5.2 | 1.8 |
| Vehicles Entered | 9 | 44 | 4 | 1 | 111 | 11 | 6 | 0 | 7 | 2 | 195 |
| Vehicles Exited | 9 | 45 | 3 | 1 | 112 | 12 | 6 | 0 | 7 | 2 | 197 |
| Hourly Exit Rate | 36 | 180 | 12 | 4 | 448 | 48 | 24 | 0 | 28 | 8 | 788 |
| Input Volume | 29 | 185 | 10 | 3 | 450 | 41 | 28 | 1 | 29 | 7 | 783 |
| % of Volume | 124 | 97 | 120 | 133 | 100 | 117 | 86 | 0 | 97 | 114 | 101 |

2: Cedar Hills Drive & Walmart Access Performance by movement Interval #2 7:30

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SBL | SBR | All |
|--------------------|-----|-----|-----|-----|-----|-----|------|-----|------|------|------|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | | 0.2 | 4.5 | 0.1 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 |
| Total Del/Veh (s) | 6.0 | 1.0 | 1.0 | 2.3 | 1.9 | 1.6 | 19.0 | | 19.5 | 10.0 | 3.0 |
| Vehicles Entered | 10 | 63 | 3 | 1 | 169 | 15 | 9 | 0 | 9 | 4 | 283 |
| Vehicles Exited | 10 | 62 | 3 | 1 | 168 | 15 | 8 | 0 | 9 | 4 | 280 |
| Hourly Exit Rate | 40 | 248 | 12 | 4 | 672 | 60 | 32 | 0 | 36 | 16 | 1120 |
| Input Volume | 45 | 265 | 15 | 4 | 689 | 64 | 35 | 1 | 45 | 11 | 1174 |
| % of Volume | 89 | 94 | 80 | 100 | 98 | 94 | 91 | 0 | 80 | 145 | 95 |

2: Cedar Hills Drive & Walmart Access Performance by movement Interval #3 7:45

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SBL | SBR | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.1 | 2.5 | 0.2 | 4.2 | 0.1 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 5.9 | 0.9 | 0.8 | | 1.1 | 0.9 | 8.5 | 2.5 | 11.2 | 4.3 | 2.0 |
| Vehicles Entered | 7 | 45 | 3 | 0 | 112 | 12 | 9 | 1 | 7 | 2 | 198 |
| Vehicles Exited | 7 | 46 | 3 | 0 | 113 | 11 | 9 | 1 | 7 | 2 | 199 |
| Hourly Exit Rate | 28 | 184 | 12 | 0 | 452 | 44 | 36 | 4 | 28 | 8 | 796 |
| Input Volume | 29 | 185 | 10 | 3 | 450 | 41 | 28 | 1 | 29 | 7 | 783 |
| % of Volume | 97 | 99 | 120 | 0 | 100 | 107 | 129 | 400 | 97 | 114 | 102 |

2: Cedar Hills Drive & Walmart Access Performance by movement Interval #4 8:00

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SBL | SBR | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | | 0.2 | 5.0 | 0.1 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 5.5 | 0.9 | 0.8 | 2.0 | 1.1 | 0.8 | 9.2 | | 9.0 | 5.0 | 1.8 |
| Vehicles Entered | 9 | 48 | 2 | 1 | 117 | 9 | 7 | 0 | 6 | 2 | 201 |
| Vehicles Exited | 9 | 49 | 2 | 1 | 117 | 10 | 8 | 0 | 6 | 2 | 204 |
| Hourly Exit Rate | 36 | 196 | 8 | 4 | 468 | 40 | 32 | 0 | 24 | 8 | 816 |
| Input Volume | 29 | 185 | 10 | 3 | 450 | 41 | 28 | 1 | 29 | 7 | 783 |
| % of Volume | 124 | 106 | 80 | 133 | 104 | 98 | 114 | 0 | 83 | 114 | 104 |

2: Cedar Hills Drive & Walmart Access Performance by movement Entire Run

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBR | SBL | SBR | All |
|--------------------|-----|-----|-----|-----|-----|-----|------|-----|------|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 4.6 | 0.2 | 4.1 | 0.1 |
| Total Delay (hr) | 0.1 | 0.1 | 0.0 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 | 0.6 |
| Total Del/Veh (s) | 5.5 | 1.0 | 1.0 | 2.5 | 1.4 | 1.1 | 12.3 | 3.9 | 13.6 | 6.3 | 2.3 |
| Vehicles Entered | 34 | 200 | 11 | 3 | 510 | 48 | 31 | 1 | 30 | 11 | 879 |
| Vehicles Exited | 34 | 201 | 11 | 3 | 510 | 48 | 31 | 1 | 30 | 11 | 880 |
| Hourly Exit Rate | 34 | 201 | 11 | 3 | 510 | 48 | 31 | 1 | 30 | 11 | 880 |
| Input Volume | 33 | 205 | 11 | 3 | 510 | 47 | 30 | 1 | 33 | 8 | 881 |
| % of Volume | 103 | 98 | 98 | 92 | 100 | 103 | 104 | 100 | 91 | 138 | 100 |

3: 4600 West & Cedar Hills Drive Performance by movement Interval #1 7:15

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.3 | 0.2 | 0.2 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 2.4 | 2.7 | 2.5 | 2.3 | 3.3 | 2.3 | 2.5 | 1.8 | 2.1 | 4.0 | 4.0 | 3.7 |
| Vehicles Entered | 8 | 28 | 12 | 1 | 65 | 1 | 23 | 3 | 3 | 13 | 3 | 35 |
| Vehicles Exited | 8 | 28 | 12 | 1 | 64 | 1 | 24 | 3 | 2 | 13 | 3 | 36 |
| Hourly Exit Rate | 32 | 112 | 48 | 4 | 256 | 4 | 96 | 12 | 8 | 52 | 12 | 144 |
| Input Volume | 36 | 119 | 48 | 4 | 260 | 4 | 91 | 16 | 13 | 46 | 13 | 143 |
| % of Volume | 89 | 94 | 100 | 100 | 98 | 100 | 105 | 75 | 62 | 113 | 92 | 101 |

3: 4600 West & Cedar Hills Drive Performance by movement Interval #1 7:15

| Movement | All |
|--------------------|-----|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 0.2 |
| Total Del/Veh (s) | 3.1 |
| Vehicles Entered | 195 |
| Vehicles Exited | 195 |
| Hourly Exit Rate | 780 |
| Input Volume | 793 |
| % of Volume | 98 |

3: 4600 West & Cedar Hills Drive Performance by movement Interval #2 7:30

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 0.3 | 0.4 | 0.2 | 0.0 | 0.1 | 0.0 | 0.3 | 0.2 | 0.3 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Del/Veh (s) | 3.0 | 3.2 | 3.2 | 3.4 | 4.6 | 4.8 | 3.2 | 3.2 | 2.9 | 5.9 | 5.6 | 6.7 |
| Vehicles Entered | 15 | 41 | 15 | 2 | 100 | 2 | 33 | 3 | 6 | 16 | 4 | 54 |
| Vehicles Exited | 14 | 41 | 15 | 2 | 99 | 2 | 33 | 3 | 6 | 16 | 4 | 53 |
| Hourly Exit Rate | 56 | 164 | 60 | 8 | 396 | 8 | 132 | 12 | 24 | 64 | 16 | 212 |
| Input Volume | 55 | 183 | 73 | 7 | 399 | 7 | 139 | 12 | 20 | 70 | 20 | 219 |
| % of Volume | 102 | 90 | 82 | 114 | 99 | 114 | 95 | 100 | 120 | 91 | 80 | 97 |

3: 4600 West & Cedar Hills Drive Performance by movement Interval #2 7:30

| Movement | All |
|--------------------|------|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.2 |
| Total Delay (hr) | 0.4 |
| Total Del/Veh (s) | 4.5 |
| Vehicles Entered | 291 |
| Vehicles Exited | 288 |
| Hourly Exit Rate | 1152 |
| Input Volume | 1204 |
| % of Volume | 96 |

3: 4600 West & Cedar Hills Drive Performance by movement Interval #3 7:45

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 0.2 | 0.3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | 0.2 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 2.3 | 2.8 | 2.5 | 2.8 | 3.5 | 2.1 | 2.4 | 1.6 | 2.6 | 4.0 | 3.4 | 3.7 |
| Vehicles Entered | 8 | 29 | 14 | 1 | 64 | 2 | 24 | 4 | 4 | 13 | 4 | 35 |
| Vehicles Exited | 8 | 29 | 14 | 1 | 64 | 2 | 24 | 4 | 4 | 13 | 4 | 36 |
| Hourly Exit Rate | 32 | 116 | 56 | 4 | 256 | 8 | 96 | 16 | 16 | 52 | 16 | 144 |
| Input Volume | 36 | 119 | 48 | 4 | 260 | 4 | 91 | 16 | 13 | 46 | 13 | 143 |
| % of Volume | 89 | 97 | 117 | 100 | 98 | 200 | 105 | 100 | 123 | 113 | 123 | 101 |

3: 4600 West & Cedar Hills Drive Performance by movement Interval #3 7:45

| Movement | All |
|--------------------|-----|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 0.2 |
| Total Del/Veh (s) | 3.2 |
| Vehicles Entered | 202 |
| Vehicles Exited | 203 |
| Hourly Exit Rate | 812 |
| Input Volume | 793 |
| % of Volume | 102 |

3: 4600 West & Cedar Hills Drive Performance by movement Interval #4 8:00

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 0.4 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | 0.3 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 2.2 | 2.9 | 2.4 | 2.2 | 3.2 | 3.6 | 2.4 | 1.0 | 2.5 | 3.8 | 5.2 | 4.0 |
| Vehicles Entered | 9 | 29 | 13 | 1 | 66 | 1 | 23 | 4 | 3 | 13 | 2 | 38 |
| Vehicles Exited | 9 | 29 | 13 | 1 | 67 | 1 | 23 | 3 | 3 | 13 | 2 | 38 |
| Hourly Exit Rate | 36 | 116 | 52 | 4 | 268 | 4 | 92 | 12 | 12 | 52 | 8 | 152 |
| Input Volume | 36 | 119 | 48 | 4 | 260 | 4 | 91 | 16 | 13 | 46 | 13 | 143 |
| % of Volume | 100 | 97 | 108 | 100 | 103 | 100 | 101 | 75 | 92 | 113 | 62 | 106 |

3: 4600 West & Cedar Hills Drive Performance by movement Interval #4 8:00

| Movement | All |
|--------------------|-----|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.1 |
| Total Delay (hr) | 0.2 |
| Total Del/Veh (s) | 3.1 |
| Vehicles Entered | 202 |
| Vehicles Exited | 202 |
| Hourly Exit Rate | 808 |
| Input Volume | 793 |
| % of Volume | 102 |

3: 4600 West & Cedar Hills Drive Performance by movement Entire Run

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 | 0.3 | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | 0.2 |
| Total Delay (hr) | 0.0 | 0.1 | 0.0 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.2 |
| Total Del/Veh (s) | 2.6 | 3.0 | 2.7 | 2.8 | 3.9 | 3.3 | 2.7 | 1.9 | 2.6 | 4.6 | 4.5 | 4.9 |
| Vehicles Entered | 40 | 127 | 53 | 5 | 294 | 6 | 104 | 13 | 16 | 55 | 13 | 163 |
| Vehicles Exited | 40 | 127 | 53 | 5 | 295 | 6 | 103 | 13 | 16 | 55 | 13 | 163 |
| Hourly Exit Rate | 40 | 127 | 53 | 5 | 295 | 6 | 103 | 13 | 16 | 55 | 13 | 163 |
| Input Volume | 41 | 135 | 54 | 5 | 295 | 5 | 103 | 15 | 15 | 52 | 15 | 162 |
| % of Volume | 98 | 94 | 98 | 105 | 100 | 126 | 100 | 87 | 108 | 106 | 88 | 101 |

3: 4600 West & Cedar Hills Drive Performance by movement Entire Run

| Movement | All |
|--------------------|-----|
| Denied Delay (hr) | 0.0 |
| Denied Del/Veh (s) | 0.2 |
| Total Delay (hr) | 0.9 |
| Total Del/Veh (s) | 3.6 |
| Vehicles Entered | 889 |
| Vehicles Exited | 889 |
| Hourly Exit Rate | 889 |
| Input Volume | 896 |
| % of Volume | 99 |

4: 4600 West & Lexington Heights Access Performance by movement Interval #1 7:15

| Movement | EBL | WBL | WBR | NBT | NBR | SBL | SBT | SBR | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 4.4 | 5.3 | 3.7 | 0.2 | 0.0 | 1.9 | 0.2 | 0.5 | 0.7 |
| Vehicles Entered | 1 | 1 | 2 | 26 | 2 | 5 | 11 | 1 | 49 |
| Vehicles Exited | 1 | 1 | 2 | 26 | 2 | 5 | 11 | 1 | 49 |
| Hourly Exit Rate | 4 | 4 | 8 | 104 | 8 | 20 | 44 | 4 | 196 |
| Input Volume | 5 | 4 | 6 | 109 | 4 | 22 | 41 | 7 | 198 |
| % of Volume | 80 | 100 | 133 | 95 | 200 | 91 | 107 | 57 | 99 |

4: 4600 West & Lexington Heights Access Performance by movement Interval #2 7:30

| Movement | EBL | WBL | WBR | NBT | NBR | SBL | SBT | SBR | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 4.6 | 3.0 | 3.0 | 0.1 | 0.1 | 2.5 | 0.4 | 0.3 | 0.6 |
| Vehicles Entered | 2 | 1 | 2 | 38 | 2 | 5 | 15 | 2 | 67 |
| Vehicles Exited | 2 | 1 | 2 | 38 | 2 | 5 | 15 | 2 | 67 |
| Hourly Exit Rate | 8 | 4 | 8 | 152 | 8 | 20 | 60 | 8 | 268 |
| Input Volume | 6 | 5 | 7 | 156 | 5 | 27 | 66 | 8 | 280 |
| % of Volume | 133 | 80 | 114 | 97 | 160 | 74 | 91 | 100 | 96 |

4: 4600 West & Lexington Heights Access Performance by movement Interval #3 7:45

| Movement | EBL | WBL | WBR | NBT | NBR | SBL | SBT | SBR | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 3.7 | 7.6 | 2.4 | 0.1 | 0.0 | 2.0 | 0.3 | 0.2 | 0.7 |
| Vehicles Entered | 1 | 1 | 2 | 29 | 1 | 6 | 12 | 2 | 54 |
| Vehicles Exited | 1 | 1 | 2 | 29 | 1 | 6 | 12 | 2 | 54 |
| Hourly Exit Rate | 4 | 4 | 8 | 116 | 4 | 24 | 48 | 8 | 216 |
| Input Volume | 5 | 4 | 6 | 109 | 4 | 22 | 41 | 7 | 198 |
| % of Volume | 80 | 100 | 133 | 106 | 100 | 109 | 117 | 114 | 109 |

4: 4600 West & Lexington Heights Access Performance by movement Interval #4 8:00

| Movement | EBL | WBL | WBR | NBT | NBR | SBL | SBT | SBR | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 5.6 | 2.3 | 3.3 | 0.1 | 0.1 | 2.1 | 0.3 | 0.5 | 0.6 |
| Vehicles Entered | 1 | 1 | 1 | 28 | 1 | 5 | 10 | 2 | 49 |
| Vehicles Exited | 1 | 1 | 1 | 28 | 1 | 5 | 10 | 2 | 49 |
| Hourly Exit Rate | 4 | 4 | 4 | 112 | 4 | 20 | 40 | 8 | 196 |
| Input Volume | 5 | 4 | 6 | 109 | 4 | 22 | 41 | 7 | 198 |
| % of Volume | 80 | 100 | 67 | 103 | 100 | 91 | 98 | 114 | 99 |

4: 4600 West & Lexington Heights Access Performance by movement Entire Run

| Movement | EBL | WBL | WBR | NBT | NBR | SBL | SBT | SBR | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 4.6 | 4.6 | 3.1 | 0.1 | 0.1 | 2.0 | 0.3 | 0.4 | 0.6 |
| Vehicles Entered | 5 | 4 | 7 | 122 | 5 | 22 | 47 | 6 | 218 |
| Vehicles Exited | 5 | 4 | 7 | 121 | 5 | 22 | 47 | 6 | 217 |
| Hourly Exit Rate | 5 | 4 | 7 | 121 | 5 | 22 | 47 | 6 | 217 |
| Input Volume | 5 | 4 | 6 | 121 | 4 | 23 | 47 | 7 | 218 |
| % of Volume | 95 | 94 | 112 | 100 | 118 | 95 | 99 | 83 | 99 |

5: 4600 West & Charleston Access Performance by movement Interval #1 7:15

| Movement | EBL | EBR | WBL | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | | | 0.1 | | 0.1 | | | 0.0 | 0.0 | 0.1 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 2.9 | | | 1.6 | | 0.1 | | | 0.1 | 0.0 | 0.3 |
| Vehicles Entered | 1 | 0 | 0 | 1 | 0 | 25 | 0 | 0 | 11 | 1 | 39 |
| Vehicles Exited | 1 | 0 | 0 | 1 | 0 | 25 | 0 | 0 | 11 | 1 | 39 |
| Hourly Exit Rate | 4 | 0 | 0 | 4 | 0 | 100 | 0 | 0 | 44 | 4 | 156 |
| Input Volume | 4 | 2 | 2 | 1 | 1 | 102 | 1 | 2 | 39 | 4 | 158 |
| % of Volume | 100 | 0 | 0 | 400 | 0 | 98 | 0 | 0 | 113 | 100 | 99 |

5: 4600 West & Charleston Access Performance by movement Interval #2 7:30

| Movement | EBL | EBR | WBL | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | | | | | 0.2 | | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 5.5 | | | | | 0.3 | | 0.8 | 0.2 | 0.0 | 0.4 |
| Vehicles Entered | 1 | 0 | 0 | 0 | 0 | 38 | 0 | 1 | 11 | 2 | 53 |
| Vehicles Exited | 1 | 0 | 0 | 0 | 0 | 38 | 0 | 1 | 11 | 2 | 53 |
| Hourly Exit Rate | 4 | 0 | 0 | 0 | 0 | 152 | 0 | 4 | 44 | 8 | 212 |
| Input Volume | 5 | 2 | 3 | 1 | 1 | 155 | 1 | 3 | 57 | 5 | 233 |
| % of Volume | 80 | 0 | 0 | 0 | 0 | 98 | 0 | 133 | 77 | 160 | 91 |

5: 4600 West & Charleston Access Performance by movement Interval #3 7:45

| Movement | EBL | EBR | WBL | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.2 | 0.1 | | | | 0.1 | | | 0.0 | 0.0 | 0.1 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 5.8 | 2.1 | | | | 0.1 | | | 0.2 | 0.1 | 0.4 |
| Vehicles Entered | 1 | 1 | 0 | 0 | 0 | 26 | 0 | 0 | 11 | 1 | 40 |
| Vehicles Exited | 1 | 1 | 0 | 0 | 0 | 26 | 0 | 0 | 12 | 1 | 41 |
| Hourly Exit Rate | 4 | 4 | 0 | 0 | 0 | 104 | 0 | 0 | 48 | 4 | 164 |
| Input Volume | 4 | 2 | 2 | 1 | 1 | 102 | 1 | 2 | 39 | 4 | 158 |
| % of Volume | 100 | 200 | 0 | 0 | 0 | 102 | 0 | 0 | 123 | 100 | 104 |

5: 4600 West & Charleston Access Performance by movement Interval #4 8:00

| Movement | EBL | EBR | WBL | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | | | | | 0.2 | 0.1 | | 0.0 | | 0.1 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 5.2 | 1.6 | | | | 0.1 | 0.0 | | 0.1 | | 0.3 |
| Vehicles Entered | 1 | 0 | 0 | 0 | 0 | 27 | 1 | 0 | 10 | 0 | 39 |
| Vehicles Exited | 1 | 1 | 0 | 0 | 0 | 26 | 1 | 0 | 10 | 0 | 39 |
| Hourly Exit Rate | 4 | 4 | 0 | 0 | 0 | 104 | 4 | 0 | 40 | 0 | 156 |
| Input Volume | 4 | 2 | 2 | 1 | 1 | 102 | 1 | 2 | 39 | 4 | 158 |
| % of Volume | 100 | 200 | 0 | 0 | 0 | 102 | 400 | 0 | 103 | 0 | 99 |

5: 4600 West & Charleston Access Performance by movement Entire Run

| Movement | EBL | EBR | WBL | WBR | NBL | NBT | NBR | SBL | SBT | SBR | All |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Denied Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Denied Del/Veh (s) | 0.1 | 0.1 | 0.1 | 0.1 | | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 |
| Total Delay (hr) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 4.8 | 3.2 | 5.3 | 2.0 | | 0.2 | 0.2 | 1.1 | 0.1 | 0.0 | 0.4 |
| Vehicles Entered | 4 | 2 | 1 | 2 | 0 | 116 | 2 | 2 | 43 | 5 | 177 |
| Vehicles Exited | 4 | 2 | 1 | 2 | 0 | 116 | 2 | 2 | 43 | 5 | 177 |
| Hourly Exit Rate | 4 | 2 | 1 | 2 | 0 | 116 | 2 | 2 | 43 | 5 | 177 |
| Input Volume | 4 | 2 | 2 | 1 | 1 | 115 | 1 | 2 | 44 | 4 | 177 |
| % of Volume | 94 | 100 | 44 | 200 | 0 | 101 | 200 | 89 | 99 | 118 | 100 |

Total Zone Performance By Interval

| Interval Start | 7:15 | 7:30 | 7:45 | 8:00 | All |
|--------------------|------|-------|------|------|------|
| Denied Delay (hr) | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 |
| Denied Del/Veh (s) | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| Total Delay (hr) | 2.4 | 4.1 | 2.4 | 2.3 | 11.2 |
| Total Del/Veh (s) | 15.0 | 18.8 | 14.2 | 14.0 | 16.7 |
| Vehicles Entered | 539 | 745 | 540 | 541 | 2372 |
| Vehicles Exited | 535 | 729 | 558 | 546 | 2368 |
| Hourly Exit Rate | 2140 | 2916 | 2232 | 2184 | 2368 |
| Input Volume | 7280 | 10018 | 7280 | 7280 | 7964 |
| % of Volume | 29 | 29 | 31 | 30 | 30 |

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #1

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | NB | NB | SB | SB |
|-----------------------|------|----|----|-----|-----|----|-----|-----|-----|-----|-----|------|
| Directions Served | L | T | R | L | T | R | L | T | T | R | L | T |
| Maximum Queue (ft) | 72 | 64 | 37 | 103 | 113 | 85 | 48 | 138 | 115 | 42 | 63 | 145 |
| Average Queue (ft) | 38 | 36 | 17 | 62 | 57 | 39 | 26 | 87 | 61 | 18 | 37 | 81 |
| 95th Queue (ft) | 78 | 74 | 44 | 104 | 110 | 88 | 54 | 149 | 122 | 40 | 65 | 140 |
| Link Distance (ft) | 1025 | | | | 450 | | | 283 | 283 | | | 1110 |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | | 75 | 75 | 60 | | 60 | 180 | | | 180 | 170 | |
| Storage Blk Time (%) | 2 | 1 | | 9 | 6 | 1 | | 0 | | | | 0 |
| Queuing Penalty (veh) | 1 | 1 | | 24 | 18 | 2 | | 0 | | | | 0 |

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #1

| Movement | SB | SB |
|-----------------------|------|------|
| Directions Served | T | R |
| Maximum Queue (ft) | 110 | 45 |
| Average Queue (ft) | 61 | 22 |
| 95th Queue (ft) | 120 | 48 |
| Link Distance (ft) | 1110 | 1110 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #2

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | NB | NB | SB | SB |
|-----------------------|------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Directions Served | L | T | R | L | T | R | L | T | T | R | L | T |
| Maximum Queue (ft) | 95 | 73 | 43 | 114 | 186 | 116 | 74 | 164 | 134 | 43 | 77 | 186 |
| Average Queue (ft) | 54 | 43 | 17 | 79 | 104 | 69 | 39 | 118 | 88 | 24 | 48 | 128 |
| 95th Queue (ft) | 92 | 83 | 49 | 130 | 204 | 129 | 79 | 179 | 150 | 46 | 83 | 190 |
| Link Distance (ft) | 1025 | | | | 450 | | | 283 | 283 | | | 1110 |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | | 75 | 75 | 60 | | 60 | 180 | | | 180 | 170 | |
| Storage Blk Time (%) | 5 | 3 | | 14 | 13 | 5 | | 1 | 0 | | | 2 |
| Queuing Penalty (veh) | 4 | 3 | | 59 | 60 | 23 | | 0 | 0 | | | 2 |

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #2

| Movement | SB | SB |
|-----------------------|------|------|
| Directions Served | T | R |
| Maximum Queue (ft) | 166 | 59 |
| Average Queue (ft) | 101 | 31 |
| 95th Queue (ft) | 172 | 64 |
| Link Distance (ft) | 1110 | 1110 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #3

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | NB | NB | SB | SB |
|-----------------------|------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Directions Served | L | T | R | L | T | R | L | T | T | R | L | T |
| Maximum Queue (ft) | 76 | 60 | 38 | 106 | 146 | 100 | 52 | 139 | 109 | 43 | 72 | 146 |
| Average Queue (ft) | 39 | 27 | 11 | 62 | 71 | 53 | 27 | 85 | 51 | 17 | 41 | 88 |
| 95th Queue (ft) | 78 | 63 | 39 | 110 | 144 | 110 | 55 | 140 | 115 | 41 | 73 | 153 |
| Link Distance (ft) | 1025 | | | | 450 | | | 283 | 283 | | | 1110 |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | | 75 | 75 | 60 | | 60 | 180 | | | 180 | 170 | |
| Storage Blk Time (%) | 1 | 1 | 0 | 8 | 8 | 1 | | 0 | | | | 0 |
| Queuing Penalty (veh) | 1 | 0 | 0 | 23 | 24 | 3 | | 0 | | | | 0 |

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #3

| Movement | SB | SB |
|-----------------------|------|------|
| Directions Served | T | R |
| Maximum Queue (ft) | 126 | 47 |
| Average Queue (ft) | 61 | 19 |
| 95th Queue (ft) | 131 | 41 |
| Link Distance (ft) | 1110 | 1110 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #4

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | NB | NB | SB | SB |
|-----------------------|------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Directions Served | L | T | R | L | T | R | L | T | T | R | L | T |
| Maximum Queue (ft) | 61 | 60 | 35 | 104 | 127 | 88 | 53 | 134 | 106 | 38 | 61 | 132 |
| Average Queue (ft) | 37 | 33 | 15 | 58 | 65 | 46 | 25 | 83 | 51 | 17 | 38 | 84 |
| 95th Queue (ft) | 67 | 72 | 41 | 105 | 123 | 100 | 55 | 139 | 111 | 41 | 67 | 138 |
| Link Distance (ft) | 1025 | | | | 450 | | | 283 | 283 | | | 1110 |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | | 75 | 75 | 60 | | 60 | 180 | | | 180 | 170 | |
| Storage Blk Time (%) | 1 | 2 | | 7 | 9 | 1 | | 0 | 0 | | | 0 |
| Queuing Penalty (veh) | 0 | 1 | | 19 | 26 | 3 | | 0 | 0 | | | 0 |

Intersection: 1: 4800 West & Cedar Hills Drive, Interval #4

| Movement | SB | SB |
|-----------------------|------|------|
| Directions Served | T | R |
| Maximum Queue (ft) | 106 | 54 |
| Average Queue (ft) | 53 | 25 |
| 95th Queue (ft) | 111 | 57 |
| Link Distance (ft) | 1110 | 1110 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 1: 4800 West & Cedar Hills Drive, All Intervals

| Movement | EB | EB | EB | WB | WB | WB | NB | NB | NB | NB | SB | SB |
|-----------------------|------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Directions Served | L | T | R | L | T | R | L | T | T | R | L | T |
| Maximum Queue (ft) | 108 | 89 | 56 | 120 | 199 | 118 | 79 | 178 | 146 | 55 | 86 | 193 |
| Average Queue (ft) | 42 | 35 | 15 | 66 | 74 | 52 | 29 | 93 | 63 | 19 | 41 | 95 |
| 95th Queue (ft) | 81 | 74 | 44 | 114 | 154 | 110 | 62 | 156 | 129 | 42 | 73 | 163 |
| Link Distance (ft) | 1025 | | | | 450 | | | 283 | 283 | | | 1110 |
| Upstream Blk Time (%) | | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | | |
| Storage Bay Dist (ft) | | 75 | 75 | 60 | | 60 | 180 | | | 180 | 170 | |
| Storage Blk Time (%) | 2 | 2 | 0 | 9 | 9 | 2 | | 0 | 0 | | | 1 |
| Queuing Penalty (veh) | 2 | 1 | 0 | 31 | 32 | 8 | | 0 | 0 | | | 1 |

Intersection: 1: 4800 West & Cedar Hills Drive, All Intervals

| Movement | SB | SB |
|-----------------------|------|------|
| Directions Served | T | R |
| Maximum Queue (ft) | 174 | 74 |
| Average Queue (ft) | 69 | 24 |
| 95th Queue (ft) | 141 | 54 |
| Link Distance (ft) | 1110 | 1110 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 2: Cedar Hills Drive & Walmart Access, Interval #1

| Movement | EB | WB | NB | NB | SB | SB |
|-----------------------|-----|-----|-----|-----|-----|-----|
| Directions Served | L | L | LT | R | LT | R |
| Maximum Queue (ft) | 26 | 5 | 32 | 12 | 43 | 26 |
| Average Queue (ft) | 11 | 1 | 19 | 1 | 22 | 7 |
| 95th Queue (ft) | 31 | 8 | 43 | 11 | 51 | 28 |
| Link Distance (ft) | | | 241 | | 198 | |
| Upstream Blk Time (%) | | | | | | |
| Queuing Penalty (veh) | | | | | | |
| Storage Bay Dist (ft) | 100 | 100 | | 100 | | 100 |
| Storage Blk Time (%) | | | | | | |
| Queuing Penalty (veh) | | | | | | |

Intersection: 2: Cedar Hills Drive & Walmart Access, Interval #2

| Movement | EB | WB | WB | NB | NB | SB | SB |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | L | TR | LT | R | LT | R |
| Maximum Queue (ft) | 34 | 3 | 4 | 55 | 2 | 49 | 26 |
| Average Queue (ft) | 16 | 0 | 1 | 25 | 0 | 24 | 13 |
| 95th Queue (ft) | 39 | 6 | 6 | 58 | 4 | 56 | 36 |
| Link Distance (ft) | | | 651 | 241 | | 198 | |
| Upstream Blk Time (%) | | | | | | | |
| Queuing Penalty (veh) | | | | | | | |
| Storage Bay Dist (ft) | 100 | 100 | | | 100 | | 100 |
| Storage Blk Time (%) | | | | 0 | | 0 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | |

Intersection: 2: Cedar Hills Drive & Walmart Access, Interval #3

| Movement | EB | WB | NB | NB | SB | SB |
|-----------------------|-----|-----|-----|-----|-----|-----|
| Directions Served | L | TR | LT | R | LT | R |
| Maximum Queue (ft) | 36 | 4 | 45 | 15 | 49 | 23 |
| Average Queue (ft) | 13 | 1 | 25 | 3 | 23 | 7 |
| 95th Queue (ft) | 38 | 9 | 50 | 16 | 54 | 27 |
| Link Distance (ft) | | 651 | 241 | | 198 | |
| Upstream Blk Time (%) | | | | | | |
| Queuing Penalty (veh) | | | | | | |
| Storage Bay Dist (ft) | 100 | | | 100 | | 100 |
| Storage Blk Time (%) | | | | | | |
| Queuing Penalty (veh) | | | | | | |

Intersection: 2: Cedar Hills Drive & Walmart Access, Interval #4

| Movement | EB | WB | NB | NB | SB | SB |
|-----------------------|-----|-----|-----|-----|-----|-----|
| Directions Served | L | L | LT | R | LT | R |
| Maximum Queue (ft) | 35 | 3 | 42 | 3 | 48 | 26 |
| Average Queue (ft) | 13 | 0 | 21 | 0 | 21 | 9 |
| 95th Queue (ft) | 38 | 6 | 48 | 6 | 54 | 30 |
| Link Distance (ft) | | | 241 | | 198 | |
| Upstream Blk Time (%) | | | | | | |
| Queuing Penalty (veh) | | | | | | |
| Storage Bay Dist (ft) | 100 | 100 | | 100 | | 100 |
| Storage Blk Time (%) | | | | | 0 | |
| Queuing Penalty (veh) | | | | | 0 | |

Intersection: 2: Cedar Hills Drive & Walmart Access, All Intervals

| Movement | EB | WB | WB | NB | NB | SB | SB |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|
| Directions Served | L | L | TR | LT | R | LT | R |
| Maximum Queue (ft) | 43 | 10 | 6 | 61 | 24 | 64 | 29 |
| Average Queue (ft) | 13 | 0 | 0 | 22 | 1 | 22 | 9 |
| 95th Queue (ft) | 37 | 6 | 5 | 50 | 10 | 54 | 31 |
| Link Distance (ft) | | | 651 | 241 | | 198 | |
| Upstream Blk Time (%) | | | | | | | |
| Queuing Penalty (veh) | | | | | | | |
| Storage Bay Dist (ft) | 100 | 100 | | | 100 | | 100 |
| Storage Blk Time (%) | | | | 0 | | 0 | |
| Queuing Penalty (veh) | | | | 0 | | 0 | |

Intersection: 3: 4600 West & Cedar Hills Drive, Interval #1

| Movement | EB | WB | NB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 32 | 57 | 40 | 62 |
| Average Queue (ft) | 8 | 22 | 15 | 36 |
| 95th Queue (ft) | 32 | 60 | 46 | 66 |
| Link Distance (ft) | 651 | 989 | 218 | 774 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 3: 4600 West & Cedar Hills Drive, Interval #2

| Movement | EB | WB | NB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 53 | 84 | 56 | 99 |
| Average Queue (ft) | 14 | 44 | 26 | 57 |
| 95th Queue (ft) | 51 | 89 | 63 | 104 |
| Link Distance (ft) | 651 | 989 | 218 | 774 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 3: 4600 West & Cedar Hills Drive, Interval #3

| Movement | EB | WB | NB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 34 | 56 | 34 | 64 |
| Average Queue (ft) | 10 | 21 | 13 | 36 |
| 95th Queue (ft) | 36 | 60 | 39 | 70 |
| Link Distance (ft) | 651 | 989 | 218 | 774 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 3: 4600 West & Cedar Hills Drive, Interval #4

| Movement | EB | WB | NB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 37 | 52 | 39 | 67 |
| Average Queue (ft) | 11 | 24 | 11 | 32 |
| 95th Queue (ft) | 39 | 59 | 40 | 67 |
| Link Distance (ft) | 651 | 989 | 218 | 774 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 3: 4600 West & Cedar Hills Drive, All Intervals

| Movement | EB | WB | NB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 58 | 86 | 59 | 102 |
| Average Queue (ft) | 10 | 28 | 17 | 40 |
| 95th Queue (ft) | 40 | 70 | 49 | 81 |
| Link Distance (ft) | 651 | 989 | 218 | 774 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 4: 4600 West & Lexington Heights Access, Interval #1

| Movement | EB | WB | NB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 24 | 31 | 3 | 15 |
| Average Queue (ft) | 4 | 9 | 0 | 3 |
| 95th Queue (ft) | 22 | 33 | 6 | 16 |
| Link Distance (ft) | 152 | 107 | 119 | 218 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 4: 4600 West & Lexington Heights Access, Interval #2

| Movement | EB | WB | SB |
|-----------------------|-----|-----|-----|
| Directions Served | LTR | LTR | LTR |
| Maximum Queue (ft) | 27 | 30 | 24 |
| Average Queue (ft) | 8 | 10 | 4 |
| 95th Queue (ft) | 30 | 34 | 21 |
| Link Distance (ft) | 152 | 107 | 218 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 4: 4600 West & Lexington Heights Access, Interval #3

| Movement | EB | WB | SB |
|-----------------------|-----|-----|-----|
| Directions Served | LTR | LTR | LTR |
| Maximum Queue (ft) | 15 | 32 | 18 |
| Average Queue (ft) | 3 | 12 | 3 |
| 95th Queue (ft) | 19 | 37 | 17 |
| Link Distance (ft) | 152 | 107 | 218 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 4: 4600 West & Lexington Heights Access, Interval #4

| Movement | EB | WB | SB |
|-----------------------|-----|-----|-----|
| Directions Served | LTR | LTR | LTR |
| Maximum Queue (ft) | 18 | 29 | 18 |
| Average Queue (ft) | 4 | 6 | 2 |
| 95th Queue (ft) | 22 | 26 | 15 |
| Link Distance (ft) | 152 | 107 | 218 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 4: 4600 West & Lexington Heights Access, All Intervals

| Movement | EB | WB | NB | SB |
|-----------------------|-----|-----|-----|-----|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 30 | 37 | 3 | 31 |
| Average Queue (ft) | 5 | 9 | 0 | 3 |
| 95th Queue (ft) | 23 | 33 | 3 | 17 |
| Link Distance (ft) | 152 | 107 | 119 | 218 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

Intersection: 5: 4600 West & Charleston Access, Interval #1

| Movement | EB | WB | NB |
|-----------------------|-----|-----|-----|
| Directions Served | LTR | LTR | LTR |
| Maximum Queue (ft) | 24 | 20 | 3 |
| Average Queue (ft) | 4 | 4 | 0 |
| 95th Queue (ft) | 22 | 20 | 6 |
| Link Distance (ft) | 217 | 104 | 625 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Intersection: 5: 4600 West & Charleston Access, Interval #2

| Movement | EB | WB |
|-----------------------|-----|-----|
| Directions Served | LTR | LTR |
| Maximum Queue (ft) | 27 | 12 |
| Average Queue (ft) | 5 | 2 |
| 95th Queue (ft) | 24 | 16 |
| Link Distance (ft) | 217 | 104 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 5: 4600 West & Charleston Access, Interval #3

| Movement | EB | WB |
|-----------------------|-----|-----|
| Directions Served | LTR | LTR |
| Maximum Queue (ft) | 27 | 17 |
| Average Queue (ft) | 6 | 3 |
| 95th Queue (ft) | 27 | 17 |
| Link Distance (ft) | 217 | 104 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 5: 4600 West & Charleston Access, Interval #4

| Movement | EB | WB |
|-----------------------|-----|-----|
| Directions Served | LTR | LTR |
| Maximum Queue (ft) | 27 | 15 |
| Average Queue (ft) | 6 | 3 |
| 95th Queue (ft) | 26 | 17 |
| Link Distance (ft) | 217 | 104 |
| Upstream Blk Time (%) | | |
| Queuing Penalty (veh) | | |
| Storage Bay Dist (ft) | | |
| Storage Blk Time (%) | | |
| Queuing Penalty (veh) | | |

Intersection: 5: 4600 West & Charleston Access, All Intervals

| Movement | EB | WB | NB |
|-----------------------|-----|-----|-----|
| Directions Served | LTR | LTR | LTR |
| Maximum Queue (ft) | 33 | 29 | 3 |
| Average Queue (ft) | 5 | 3 | 0 |
| 95th Queue (ft) | 25 | 17 | 3 |
| Link Distance (ft) | 217 | 104 | 625 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

Zone Summary

| |
|--|
| Zone wide Queuing Penalty, Interval #1: 47 |
| Zone wide Queuing Penalty, Interval #2: 151 |
| Zone wide Queuing Penalty, Interval #3: 52 |
| Zone wide Queuing Penalty, Interval #4: 51 |
| Zone wide Queuing Penalty, All Intervals: 75 |

APPENDIX C

Site Plan



APPENDIX D

95th Percentile Queue Length Reports

SimTraffic Queueing Report

Project: Cedar Hills - Senior Living Facility TIS

Time Period: a.m. peak hour

95th Percentile Queue Length (feet)

HALES ENGINEERING
Innovative transportation solutions

Project #: UT14-558

| Intersection | Time Period | EB | | | | NB | | | | SB | | | | | WB | | | | |
|--------------------------------------|--------------------------|----|-----|----|----|----|-----|----|-----|----|----|-----|----|-----|-----|-----|-----|-----|----|
| | | L | LTR | R | T | L | LTR | R | T | L | LT | LTR | R | T | L | LTR | R | T | TR |
| 4600 West & Cedar Hills Drive | Existing 2014 Conditions | -- | 47 | -- | -- | -- | 48 | -- | -- | -- | -- | 86 | -- | -- | -- | 76 | -- | -- | -- |
| 4600 West & Charleston Access | Existing 2014 Conditions | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4 | -- | -- | -- | 16 | -- | -- | -- |
| 4600 West & Lexington Heights Access | Existing 2014 Conditions | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 20 | -- | -- | -- | 30 | -- | -- | -- |
| 4800 West & Cedar Hills Drive | Existing 2014 Conditions | 88 | -- | 37 | 70 | 65 | -- | 39 | 142 | 75 | -- | -- | 53 | 147 | 109 | -- | 101 | 146 | -- |
| Cedar Hills Drive & Walmart Access | Existing 2014 Conditions | 35 | -- | -- | -- | -- | -- | -- | -- | -- | 55 | -- | 29 | -- | -- | -- | -- | -- | 6 |

SimTraffic Queueing Report

Project: Cedar Hills - Senior Living Facility TIS

Time Period: a.m. peak hour

95th Percentile Queue Length (feet)

Project #: UT14-558

| Intersection | Time Period | EB | | | | NB | | | | | SB | | | | | WB | | | | |
|--------------------------------------|----------------------------|----|-----|----|----|----|----|-----|----|-----|----|----|-----|----|-----|-----|-----|-----|-----|----|
| | | L | LTR | R | T | L | LT | LTR | R | T | L | LT | LTR | R | T | L | LTR | R | T | TR |
| 4600 West & Cedar Hills Drive | Existing 2014 Plus Project | -- | 40 | -- | -- | -- | -- | 49 | -- | -- | -- | -- | 81 | -- | -- | -- | 70 | -- | -- | -- |
| 4600 West & Charleston Access | Existing 2014 Plus Project | -- | 25 | -- | -- | -- | -- | 3 | -- | -- | -- | -- | -- | -- | -- | -- | 17 | -- | -- | -- |
| 4600 West & Lexington Heights Access | Existing 2014 Plus Project | -- | 23 | -- | -- | -- | -- | 3 | -- | -- | -- | -- | 17 | -- | -- | -- | 33 | -- | -- | -- |
| 4800 West & Cedar Hills Drive | Existing 2014 Plus Project | 81 | -- | 44 | 74 | 62 | -- | -- | 42 | 143 | 73 | -- | -- | 54 | 152 | 114 | -- | 110 | 154 | -- |
| Cedar Hills Drive & Walmart Access | Existing 2014 Plus Project | 37 | -- | -- | -- | -- | 50 | -- | 10 | -- | -- | 54 | -- | 31 | -- | 6 | -- | -- | -- | 5 |