

Traffic Impact Study

QuikTrip 4263

Aurora, Colorado

Prepared for:

QuikTrip Corporation

Kimley»Horn

T R A F F I C I M P A C T S T U D Y

QuikTrip 4263

Aurora, Colorado

Prepared for
QuikTrip Corporation
12000 Washington St 175
Thornton, CO 80241

Prepared by
Jeffrey R. Planck, P.E.
Kimley-Horn and Associates, Inc.
6200 South Syracuse Way
Suite 300
Greenwood Village, Colorado 80111
(303) 228-2300



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1.0 EXECUTIVE SUMMARY

QuikTrip 4263 is proposed to be located near the southeast corner of the Parker Road (SH-83) and Havana Street (SH-30) intersection in Aurora, Colorado. The project is proposed to include an 18-fueling position gas station with a 5,312 square foot convenience to redevelop the previous diner restaurant currently located within the existing retail center. It is expected that the project will be completed in the next couple years. Therefore, analysis was conducted for the 2026 short-term buildout horizon as well as the 2050 long-term twenty-year planning horizon.

The purpose of this traffic study is to identify project traffic generation characteristics to determine potential project traffic related impacts on the local street system and to develop the necessary mitigation measures required for the identified traffic impacts. The intersection of Parker Road (SH-83) and Havana Street (SH-30) was incorporated into this traffic study in accordance with the City of Aurora and State of Colorado Department of Transportation (CDOT) standards and requirements:

In addition, the existing full movement accesses along Parker Road (SH-83), Havana Street (SH-30), and Yale Avenue to remain were evaluated.

Regional access to the site will be provided by Interstate 225 (I-225). Primary access will be provided by Parker Road (SH-83) and Havana Street (SH-30). Direct access will be provided by the existing full movement intersections along Parker Road (SH-83), Havana Street (SH-30), and Yale Avenue.

With 18 fueling positions and an approximate 5,312 square foot convenience store, QuikTrip 4263 is expected to generate approximately 4,628 daily weekday driveway trips, with 487 of these trips occurring during the morning peak hour and 410 trips occurring during the afternoon peak hour. Accounting for pass-by, expected net new (non pass-by) trips to the surrounding street network results in approximately 1,158 weekday daily trips, of which 117 trips and 102 trips are anticipated during the weekday morning and afternoon peak hours, respectively.



Based on the analysis presented in this report, Kimley-Horn believes QuikTrip 4263 will be successfully incorporated into the existing and future roadway network. Analysis of the existing street network, the proposed project development, and expected traffic volumes resulted in the following conclusions and recommendations:

- The threshold for requiring an access permit along Colorado Department of Transportation (CDOT) roadways occurs when project traffic is anticipated to increase the existing access traffic volumes by more than 20 percent. Based on traffic projections, the addition of project traffic on the south leg of the Parker Road (SH-83) and east leg of the Havana Street (SH-30) project accesses are anticipated to increase existing traffic by more than 20 percent. Therefore, access permits are anticipated to be needed at these two intersections accesses as development occurs.
- Direct access to the site will utilize the three existing full movement accesses along Parker Road (SH-83), Havana Street (SH-30), and Yale Avenue that currently serve the overall shopping center. The project access intersections along Havana Street and Parker Road currently provide stop control on the approaches exiting the existing development; therefore, a R1-1 “STOP” sign is recommended to be placed on the southbound approach, exiting the site onto Yale Avenue.
- If 2050 volumes are realized, the second northbound left turn lane that is currently striped out at the Parker Road (SH-83) and Havana Street (SH-30) intersection could be striped to provide dual left turn lanes. If these dual left turn lanes are implemented, they should operate with protected-only left turn phasing. As there are geometric constraints that would not allow the northbound and southbound left turn movements to run concurrently with dual northbound lefts, it is recommended that the signal timing be adjusted to have either the northbound or southbound left turn movement lead, and the other lag.
- Any onsite or offsite improvements should be incorporated into the Civil Drawings and conform to standards of the City of Aurora, Colorado Department of Transportation, and the currently adopted version of the Manual on Uniform Traffic Control Devices (MUTCD).

2.0 INTRODUCTION

Kimley-Horn has prepared this report to document the results of a Traffic Impact Study for QuikTrip 4263 proposed to replace a previous restaurant located on the southeast corner of the Parker Road (SH-83) and Havana Street (SH-30) intersection in Aurora, Colorado. A vicinity map illustrating the project development location is shown in **Figure 1**. The project is proposed to include an 18-fueling position gas station with a 5,312 square foot convenience store. A conceptual site plan is attached in **Appendix A**. It is expected that the project will be completed in the next couple years; therefore, analysis was conducted for the 2026 short-term buildout horizon as well as the 2050 long-term twenty-year planning horizon.

The purpose of this traffic study is to identify project traffic generation characteristics to determine potential project traffic related impacts on the local street system and to develop the necessary mitigation measures required for the identified traffic impacts. The intersection of Parker Road (SH-83) and Havana Street (SH-30) was incorporated into this traffic study in accordance with the City of Aurora and State of Colorado Department of Transportation (CDOT) standards and requirements:

In addition, the existing full movement accesses along Parker Road (SH-83), Havana Street (SH-30), and Yale Avenue to remain were evaluated.

Regional access to the site will be provided by Interstate 225 (I-225). Primary access will be provided by Parker Road (SH-83) and Havana Street (SH-30). Direct access will be provided by the existing full movement intersections along Parker Road (SH-83), Havana Street (SH-30), and Yale Avenue.

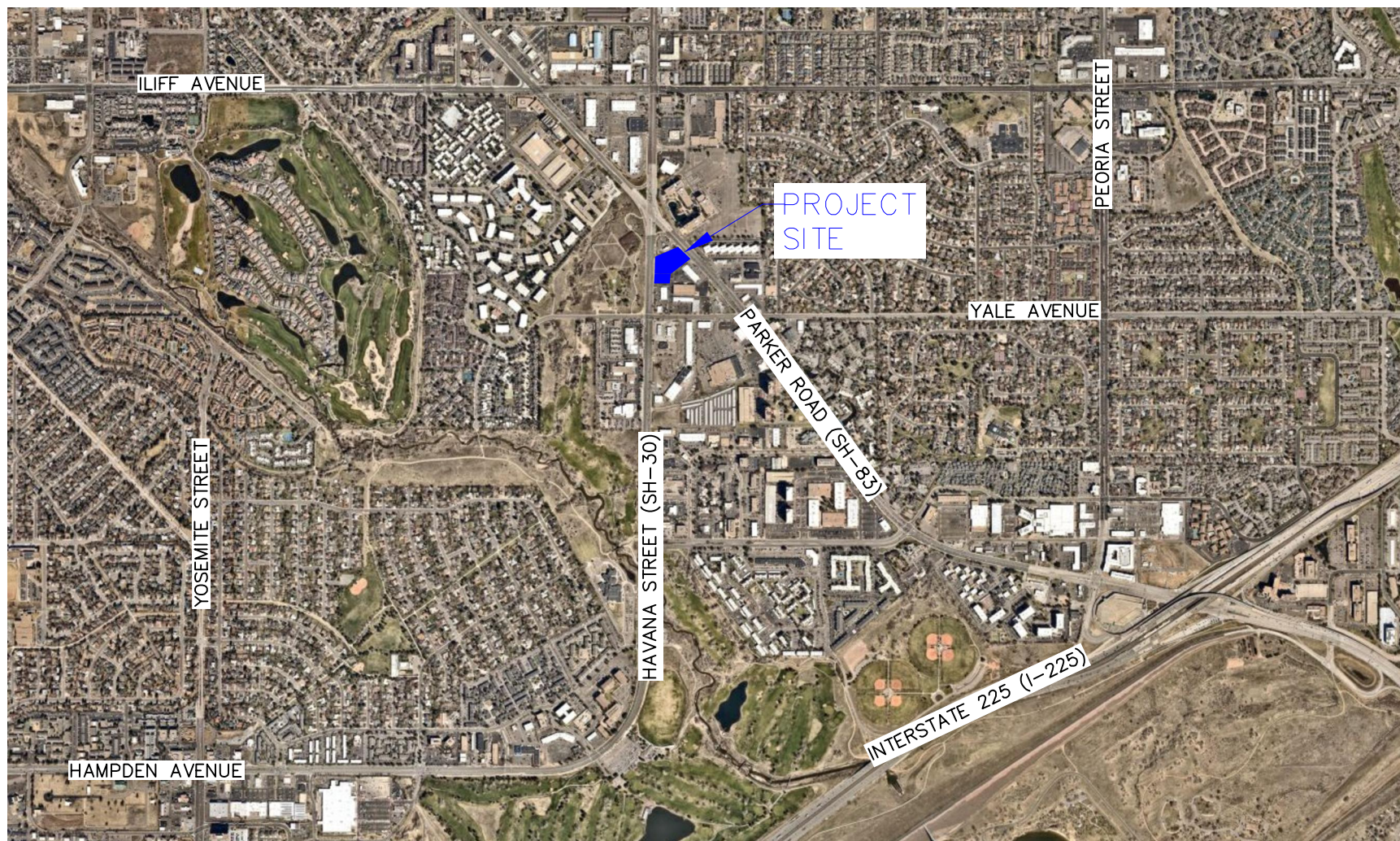


FIGURE 1
QUIKTRIP 4263
AURORA, COLORADO
VICINITY MAP

3.0 EXISTING AND FUTURE CONDITIONS

3.1 Existing Study Area

The existing site is a vacant restaurant and associated parking lot. To the north and south are commercial uses composed mainly of strip retail stores and office buildings. To the east are multi-family and single-family residential homes. To the west of the site is the Babi Yar Park, an apartment complex, and multi-family residential homes.

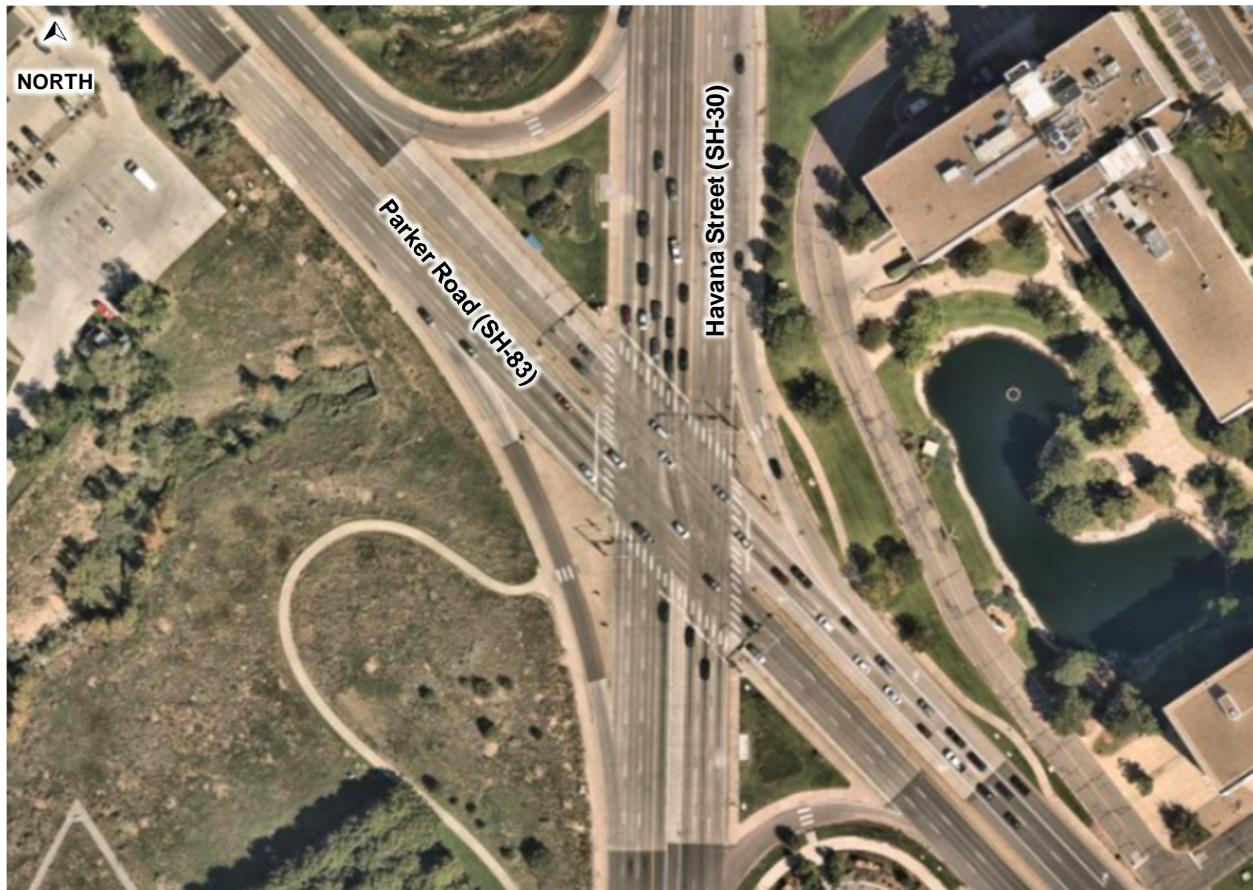
3.2 Existing Roadway Network

Parker Road (SH-83) extends primarily east/west with three through lanes in each direction and a two-way left turn lane (TWLTL) east of the studied project access along Parker Road and raised center median west of this access. The road runs diagonally from E-470 to Colorado Boulevard (CO-2) as a northeast/southwest roadway. However, in this study the roadway will be the east/west roadway in the intersection. The posted speed limit along Parker Road (SH-83) near the project site is 45 miles per hour. This roadway is classified as a R-A Regional Highway.

Havana Street (SH-30) is a north/south roadway with three through lanes in each direction. The posted speed limit along Havana Street (SH-30) is 45 miles per hour in both directions. As State Highway 30, it extends from Hamden Avenue to 6th Avenue as a NR-B Non-Rural Arterial.

Yale Avenue is an east/west roadway with two through lanes in each direction. The posted speed limit along Yale Avenue is 40 miles per hour. It extends from Elmira Street to Chamber Road as a Minor Arterial Roadway.

The signalized intersection of Parker Road (SH-83) and Havana Street (SH-30) operates with protected permissive left turn phasing on the east/west Parker Road (SH-83) legs and protected-only left turn phasing on the north/south Havana Street (SH-30) legs. The northbound approach provides a left turn lane and three through lanes with the outside through lane being a shared through/channelized right turn lane. The southbound approach provides dual left turn lanes and three through lanes with the outside through lane being a shared through/channelized right turn lane. The eastbound approach provides a left turn lane and three through lanes with the outside through lane being a shared through/channelized right turn lane. The westbound approach provides a left turn lane, two through lanes and a channelized right turn lane. An aerial photo of the existing intersection configuration is below.



Parker Road (SH-83) and Havana Street (SH-30)

The intersection lane configuration and control for the study area intersections are shown in **Figure 2**.

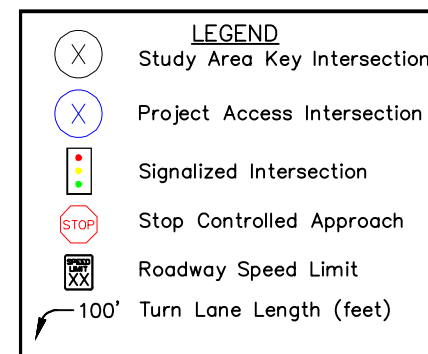
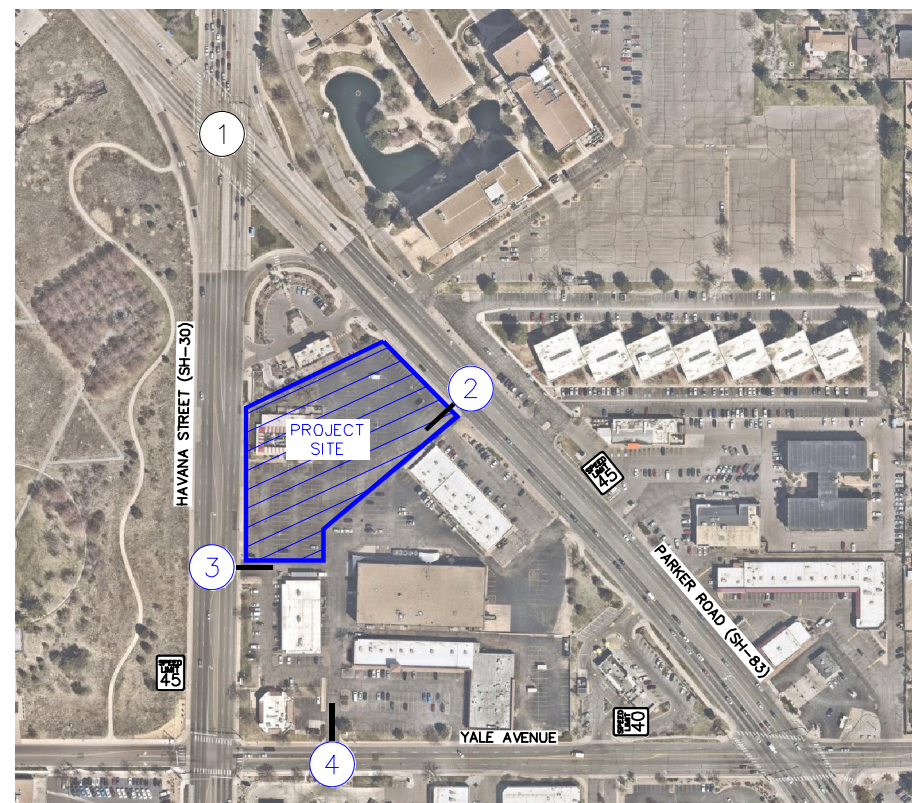
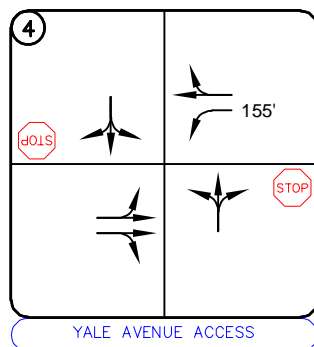
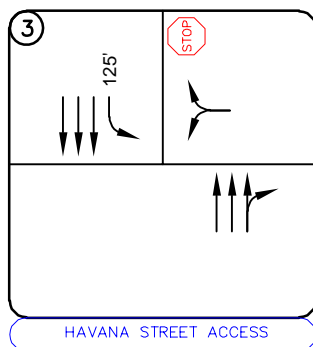
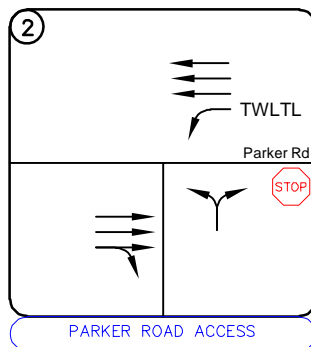
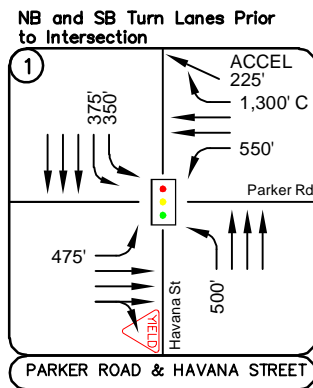


FIGURE 2
QUIKTRIP 4263
AURORA, COLORADO
EXISTING GEOMETRY AND CONTROL

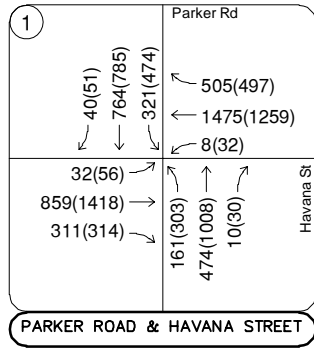
3.3 Existing Traffic Volumes

Existing turning movement counts were conducted at the study intersections on Tuesday, May 14, 2024 during the weekday morning and afternoon peak hours. The counts were conducted during the morning and afternoon peak hours of adjacent street traffic in 15-minute intervals from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM on this count date. The existing intersection traffic volumes are shown in **Figure 3** with count sheets provided in **Appendix B**.

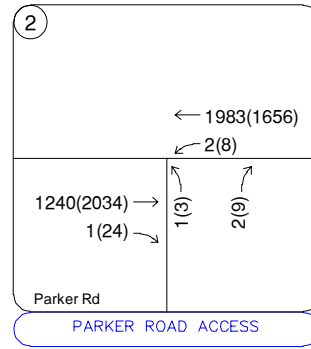
3.4 Unspecified Development Traffic Growth

According to traffic projections from the Denver Regional Council of Governments (DRCOG) traffic model, the area surrounding the site is expected to have an average 30-year growth factor of 1.17. This growth factor equates to an annual growth rate of 0.53 percent. Additionally, according to information provided on the website for the Colorado Department of Transportation (CDOT), the 20-year growth factor along Parker Road (SH-83) in the vicinity of the site is between 1.09 and 1.14 with an average of 1.11. This 20-year growth factor equates to annual growth rate of 0.54 percent. The 20-year growth factor along Havana Street (SH-30) in the vicinity of the site is between 1.09 and 1.10 with an average of approximately 1.10. This 20-year growth factor equates to annual growth rate of 0.45 percent. Traffic information from the CDOT Online Transportation Information System (OTIS) website and the DRCOG traffic projections are included in **Appendix C**. To be conservative, the highest expected growth rate of these sources of 0.54 percent was used. This annual growth rate was used to estimate near-term 2026 and long-term 2050 traffic volume projections at the key intersection. Background traffic volumes for 2026 and 2050 are shown in **Figures 4** and **5**, respectively.

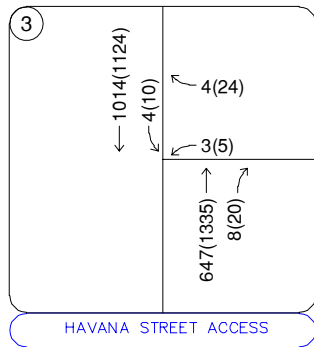
Tuesday, May 14, 2024
7:30 to 8:30AM (4:45 to 5:45PM)



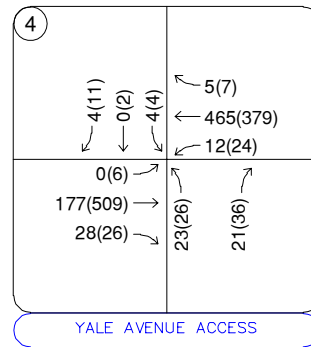
Tuesday, May 14, 2024
7:30 to 8:30 AM
(Wednesday, May 15, 2024)
(4:30 to 5:30 PM)



Tuesday, May 14, 2024
7:15 to 8:15AM (4:30 to 5:30PM)



Tuesday, May 14, 2024
7:30 to 8:30AM (4:30 to 5:30PM)



LEGEND

- (X) Study Area Key Intersection
- (X) Project Access Intersection
- XXX(XXX) Weekday AM(PM)
Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume

FIGURE 3
QUIKTRIP 4263
AURORA, COLORADO
2024 EXISTING TRAFFIC VOLUMES

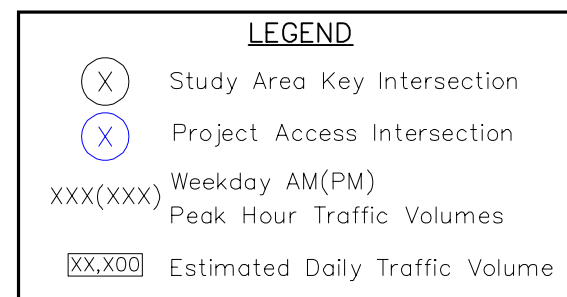
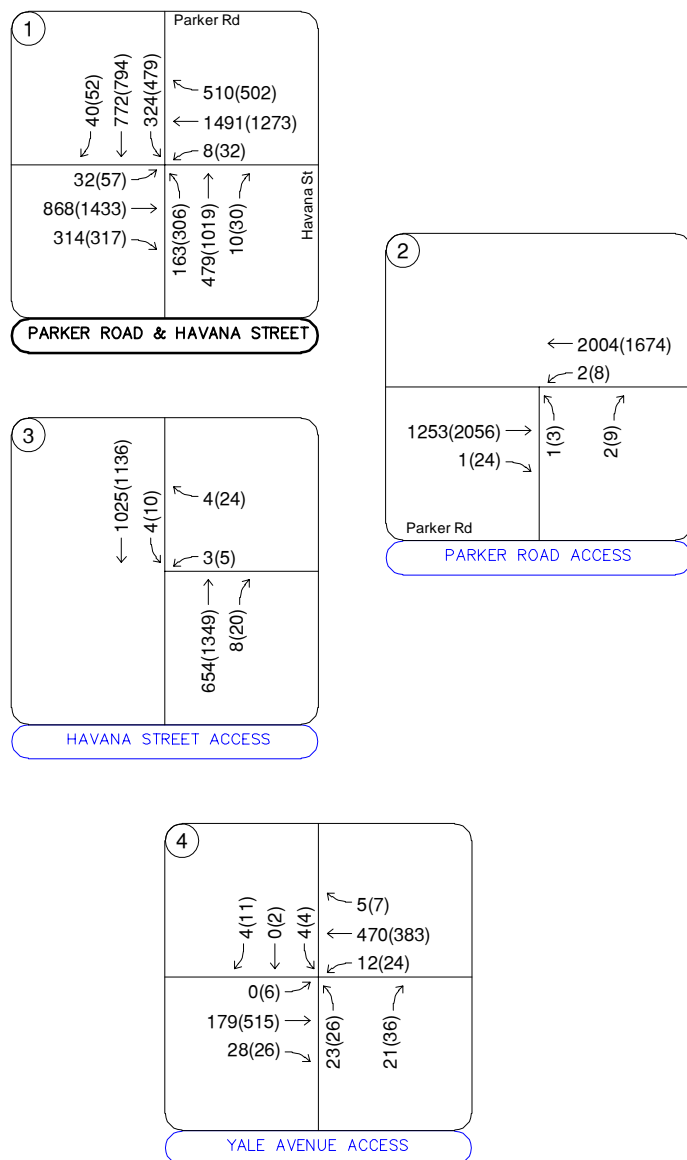


FIGURE 4
QUIKTRIP 4263
AURORA, COLORADO
2026 BACKGROUND TRAFFIC VOLUMES

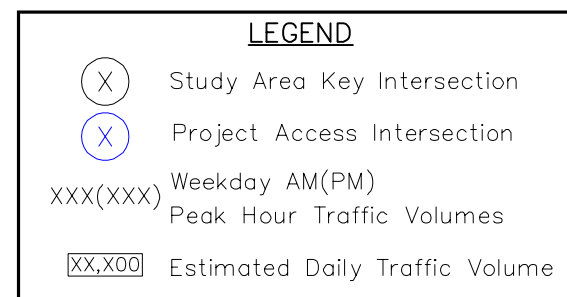
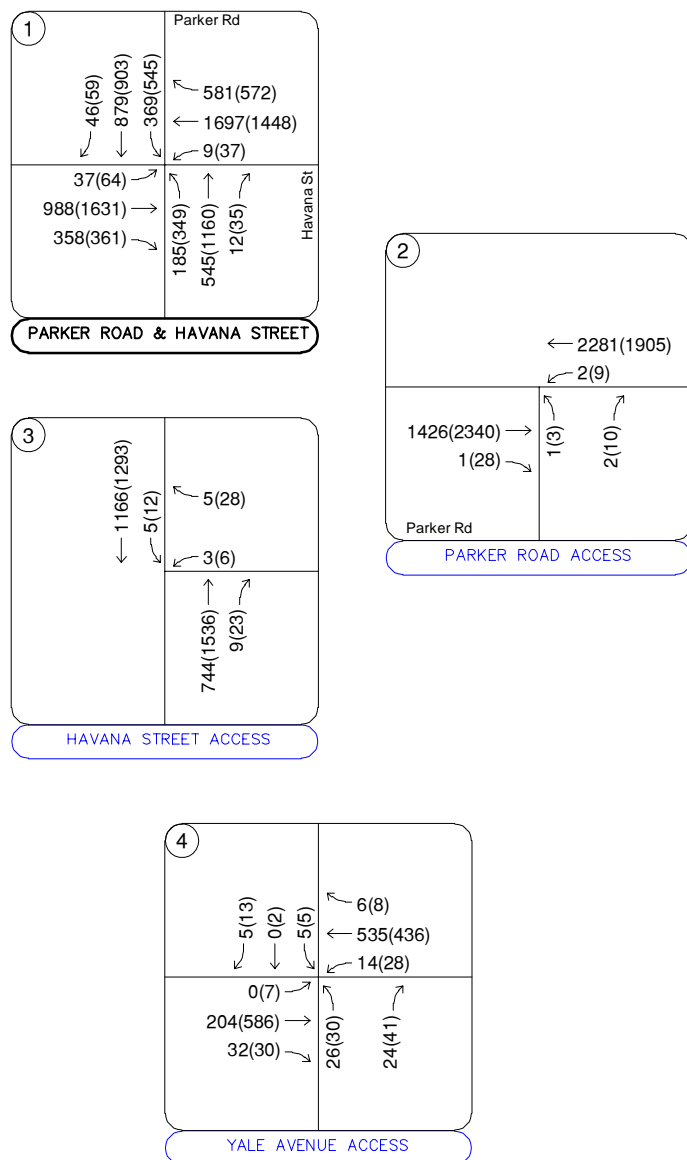


FIGURE 5
QUIKTRIP 4263
AURORA, COLORADO
2050 BACKGROUND TRAFFIC VOLUMES

4.0 PROJECT TRAFFIC CHARACTERISTICS

4.1 Trip Generation

Site-generated traffic estimates are determined through a process known as trip generation. Rates and equations are applied to the proposed land use to estimate traffic generated by the development during a specific time interval. The acknowledged source for trip generation rates is the *Trip Generation Manual*¹ published by the Institute of Transportation Engineers (ITE). ITE has established trip rates in nationwide studies of similar land uses. For this study, Kimley-Horn used the ITE Trip Generation Report average rates that apply to Convenience Store/Gas Station (ITE 945) for traffic associated with the development.

Since the project is a commercial development, pass-by trips are expected. These pass-by trips are vehicles already on the street network that will be attracted to the project site en route to a final destination. The pass-by percentages were obtained from the ITE “Trip Generation Manual”, Eleventh Edition which shows a morning peak hour pass-by percentage of 76 percent and an afternoon peak hour pass-by percentage of 75 percent.

With 18 fueling positions and an approximate 5,312 square foot convenience store, QuikTrip 4263 is expected to generate approximately 4,628 daily weekday driveway trips, with 487 of these trips occurring during the morning peak hour and 410 trips occurring during the afternoon peak hour. Accounting for pass-by, expected net new (non pass-by) trips to the surrounding street network results in approximately 1,158 weekday daily trips, of which 117 trips and 102 trips are anticipated during the weekday morning and afternoon peak hours, respectively. Calculations were based on the procedure and information provided in the ITE *Trip Generation Manual, 11th Edition – Volume 1: User’s Guide and Handbook*, 2021. **Table 1** summarizes the estimated trip generation for the site. The trip generation worksheets are included in **Appendix D**.

¹ Institute of Transportation Engineers, *Trip Generation Manual*, Eleventh Edition, Washington DC, 2021.

Table 1 – QuikTrip 4263 Traffic Generation

| Convenience Store/Gas Station (ITE 945) 18 FP/5,312 SF | Weekday Vehicle Trips | | | | | | |
|---|-----------------------|--------------|------------|------------|--------------|------------|------------|
| | Daily | AM Peak Hour | | | PM Peak Hour | | |
| | | In | Out | Total | In | Out | Total |
| Non Pass-By Trips | 1,158 | 58 | 59 | 117 | 51 | 51 | 102 |
| Pass-By Trips | 3,470 | 185 | 185 | 370 | 154 | 154 | 308 |
| Total Project Trips | 4,628 | 243 | 244 | 487 | 205 | 205 | 410 |

4.2 Trip Distribution

Distribution of site traffic on the street system was based on the area street system characteristics, existing traffic patterns, existing and anticipated surrounding demographic information, and the proposed access system for the project. The directional distribution of traffic is a means to quantify the percentage of site-generated traffic that approaches the site from a given direction and departs the site back to the original source. The project trip distribution for the proposed development is illustrated in **Figure 6**.

Since the project is a commercial development, a certain amount of traffic attracted to the gas station will already be passing by the site. This pass-by distribution is a means to quantify the amount of traffic arriving to the site from a given direction and then leaving the site in the same original direction of travel, continuing the driver's trip. The expected weekday morning and afternoon peak hour pass-by trip distributions were calculated based on actual traffic volumes at the intersection of Parker Road (SH-83) and Havana Street (SH-30). Directional differences in the morning and afternoon peak hours were accounted for in the pass-by distributions as shown in **Figures 7** and **8**, respectively.

4.3 Traffic Assignment & Total (Background Plus Project) Traffic

QuikTrip 4263 traffic assignment was obtained by applying the project trip distribution to the estimated traffic generation of the development shown in **Table 1**. The non pass-by project traffic assignment is shown in **Figure 9** while the pass-by project traffic assignment is shown in **Figure 10**. Site traffic volumes were added to the background volumes to represent estimated traffic conditions for the short-term 2026 buildout horizon and long-term 2050 twenty-year planning horizon. These total traffic volumes for the study area are illustrated for the 2026 and 2050 horizon years in **Figures 11** and **12**, respectively.

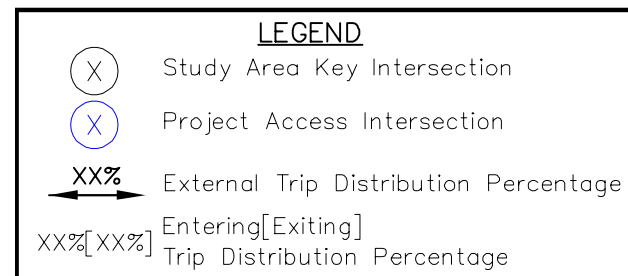
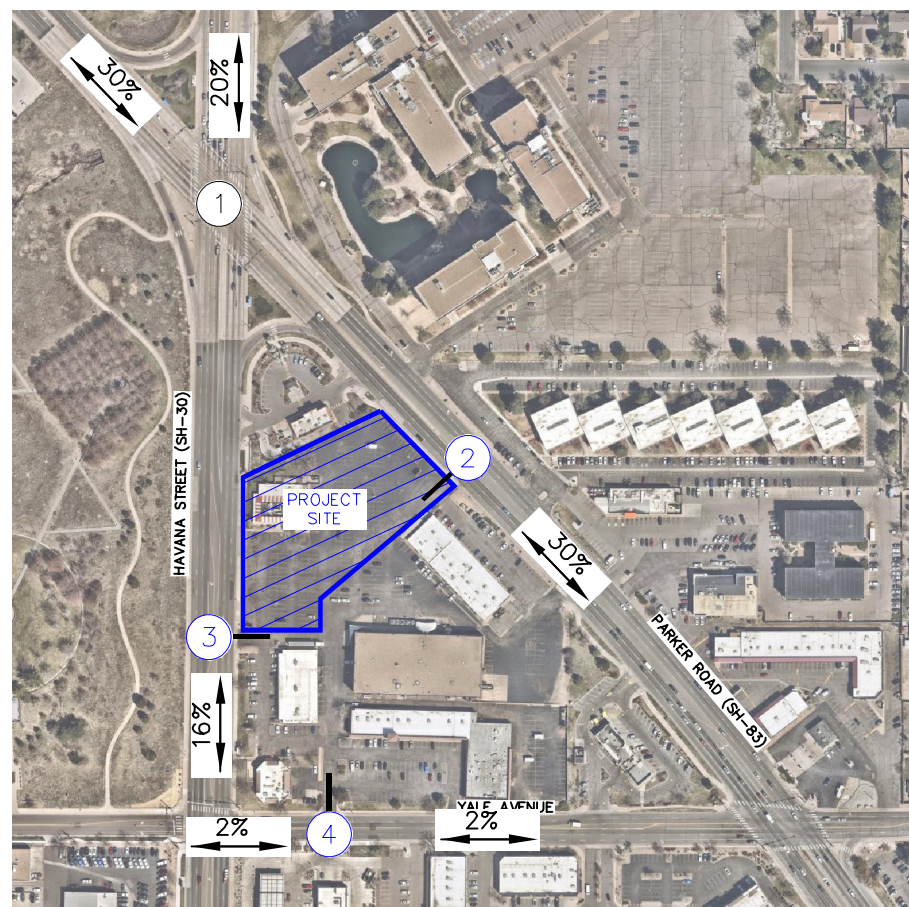
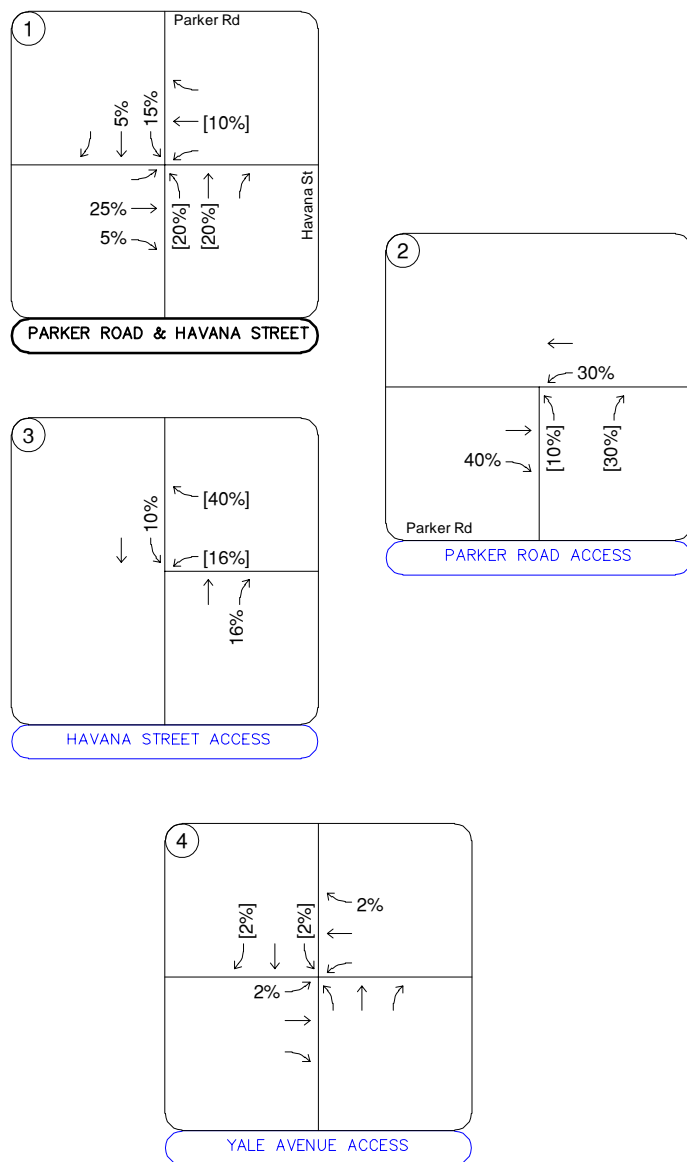


FIGURE 6
QUIKTRIP 4263
AURORA, COLORADO
NON PASS-BY PROJECT TRIP DISTRIBUTION

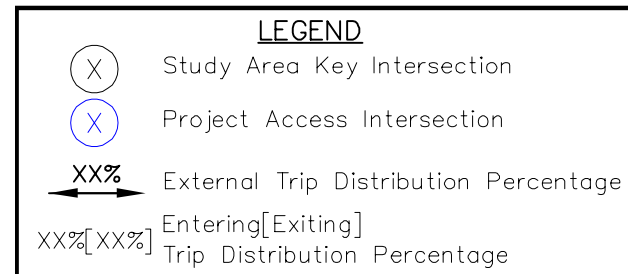
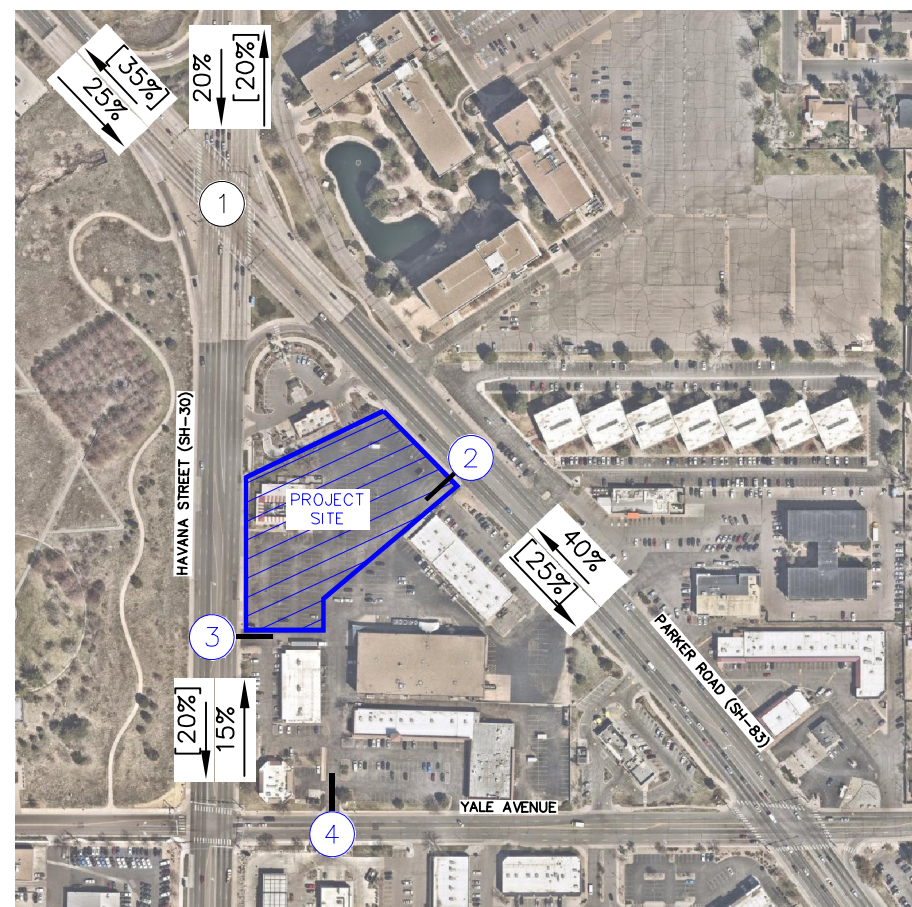
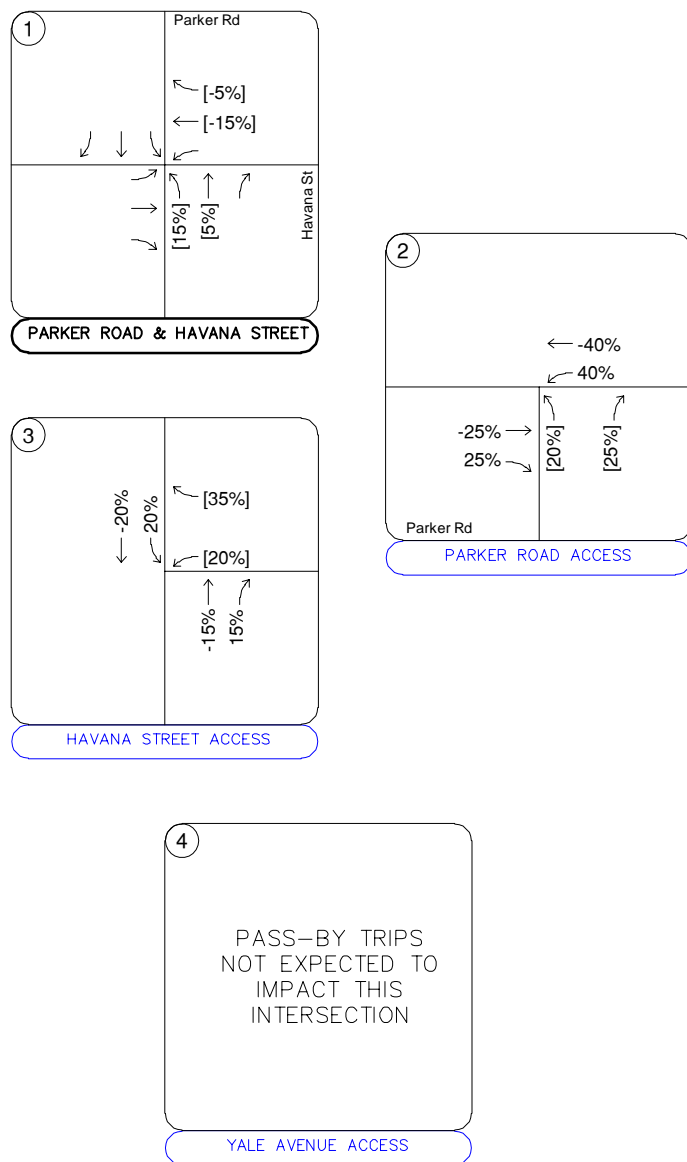


FIGURE 7
QUIKTRIP 4263
AURORA, COLORADO
AM PASS-BY PROJECT TRIP DISTRIBUTION

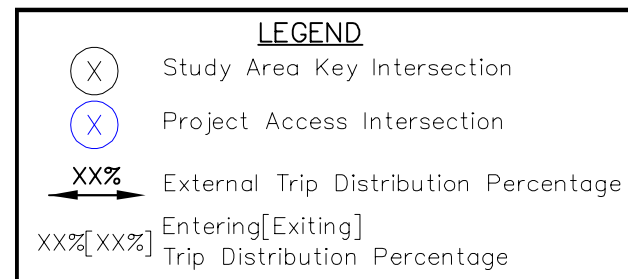
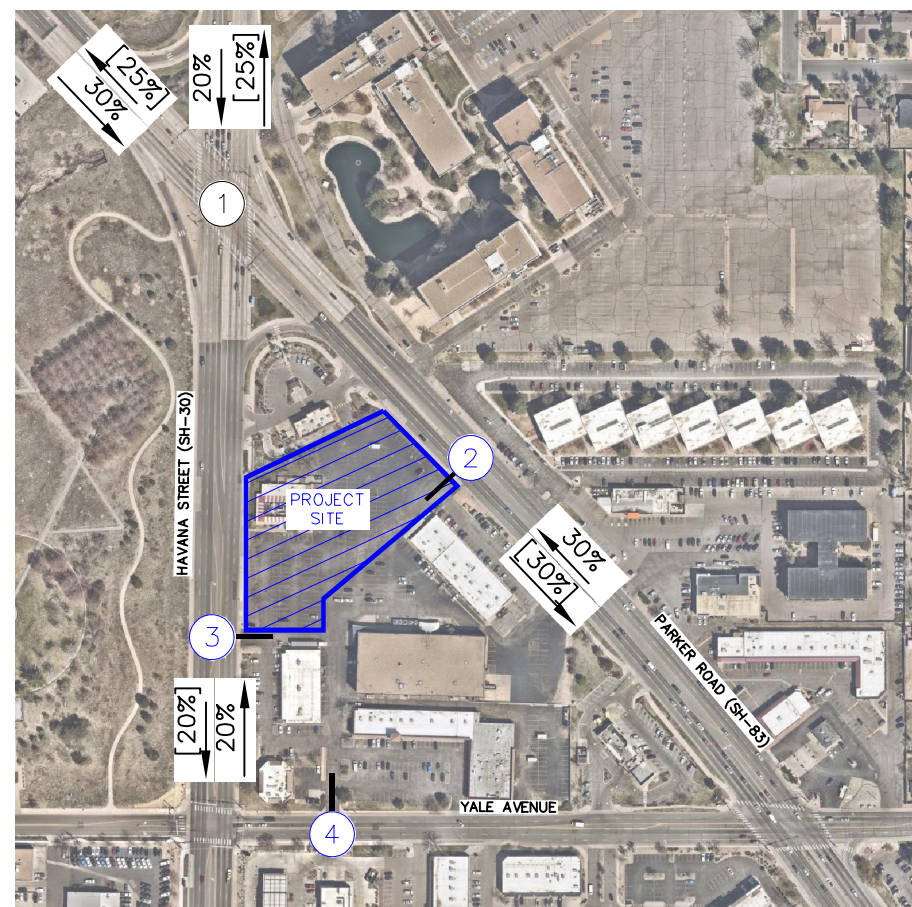
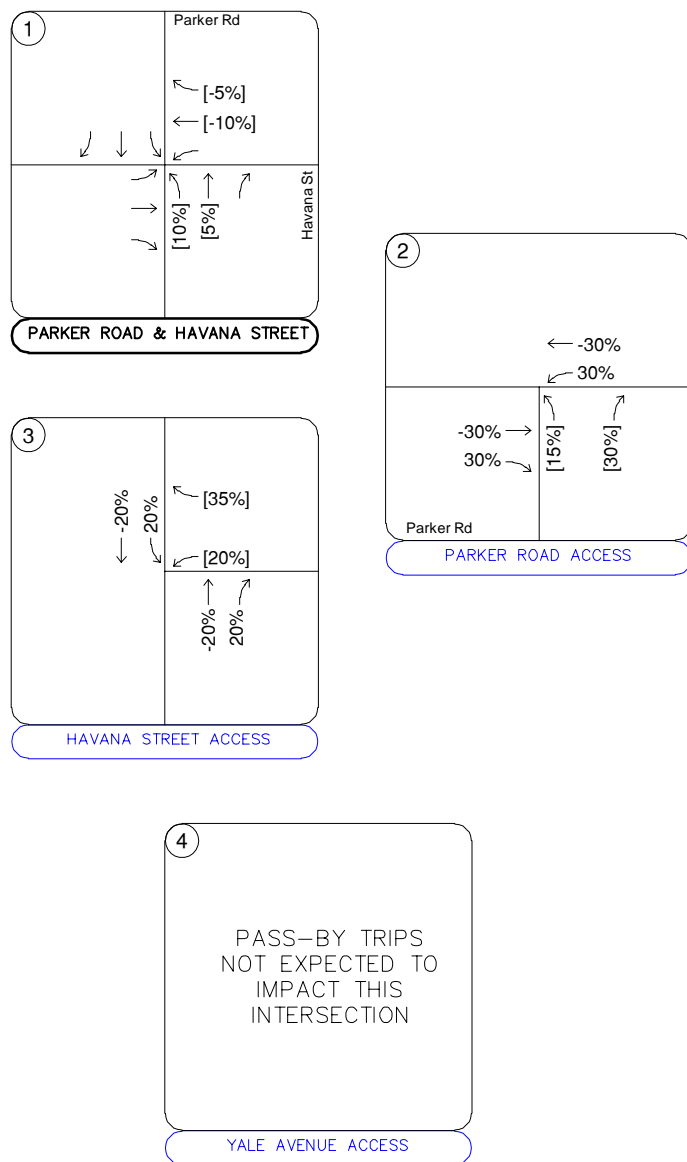
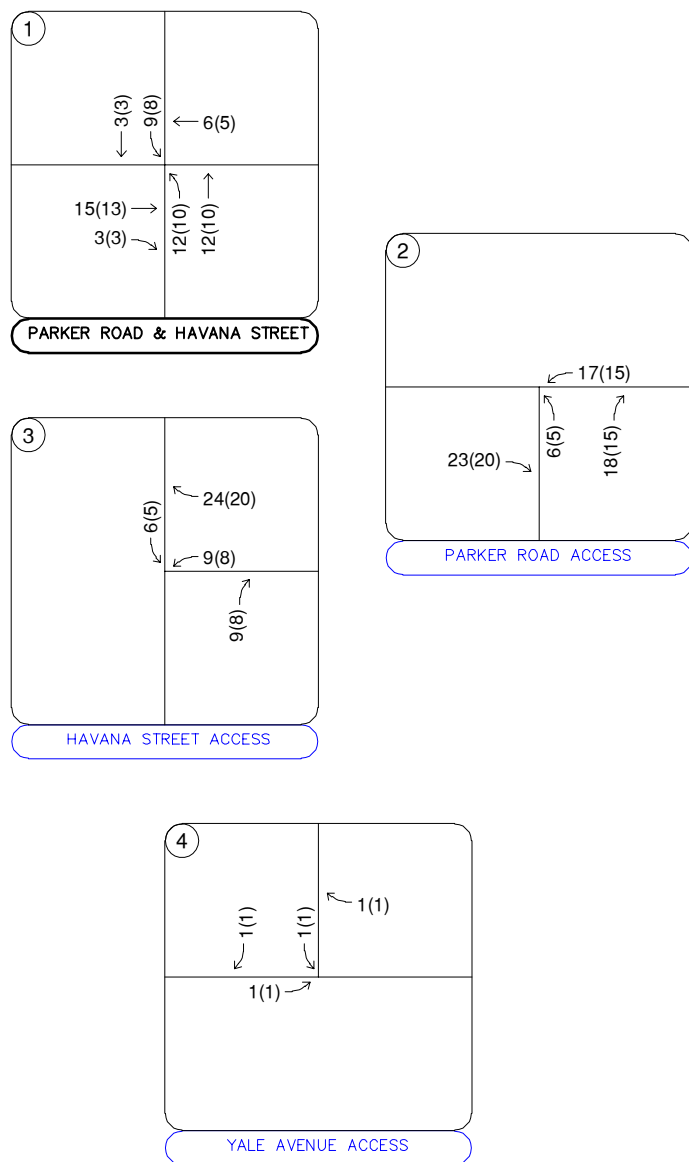
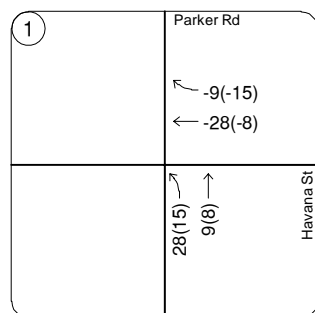


FIGURE 8
QUIKTRIP 4263
AURORA, COLORADO
PM PASS-BY PROJECT TRIP DISTRIBUTION

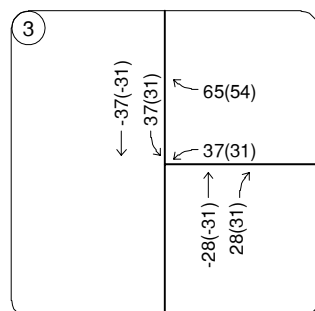


| LEGEND | |
|----------|--------------------------------|
| (X) | Study Area Key Intersection |
| (X) | Project Access Intersection |
| xxx(xxx) | Weekday AM(PM) |
| | Peak Hour Traffic Volumes |
| xx,x00 | Estimated Daily Traffic Volume |

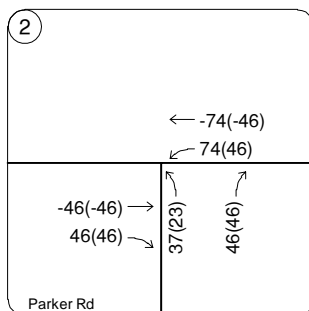
FIGURE 9
QUIKTRIP 4263
AURORA, COLORADO
NON PASS-BY PROJECT TRAFFIC ASSIGNMENT



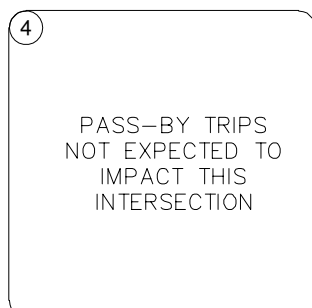
PARKER ROAD & HAVANA STREET



HAVANA STREET ACCESS



PARKER ROAD ACCESS



YALE AVENUE ACCESS



LEGEND

- (X) Study Area Key Intersection
- (X) Project Access Intersection
- xxx(xxx) Weekday AM(PM)
Peak Hour Traffic Volumes
- xx,x00 Estimated Daily Traffic Volume

FIGURE 10
QUIKTRIP 4263
AURORA, COLORADO
PASS-BY PROJECT TRAFFIC ASSIGNMENT

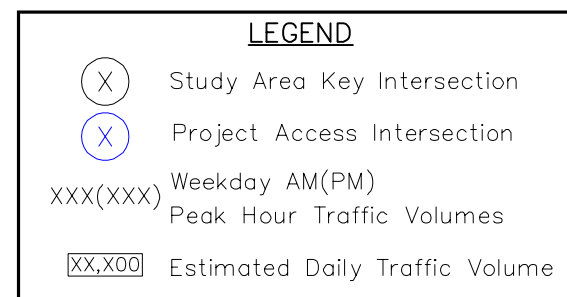
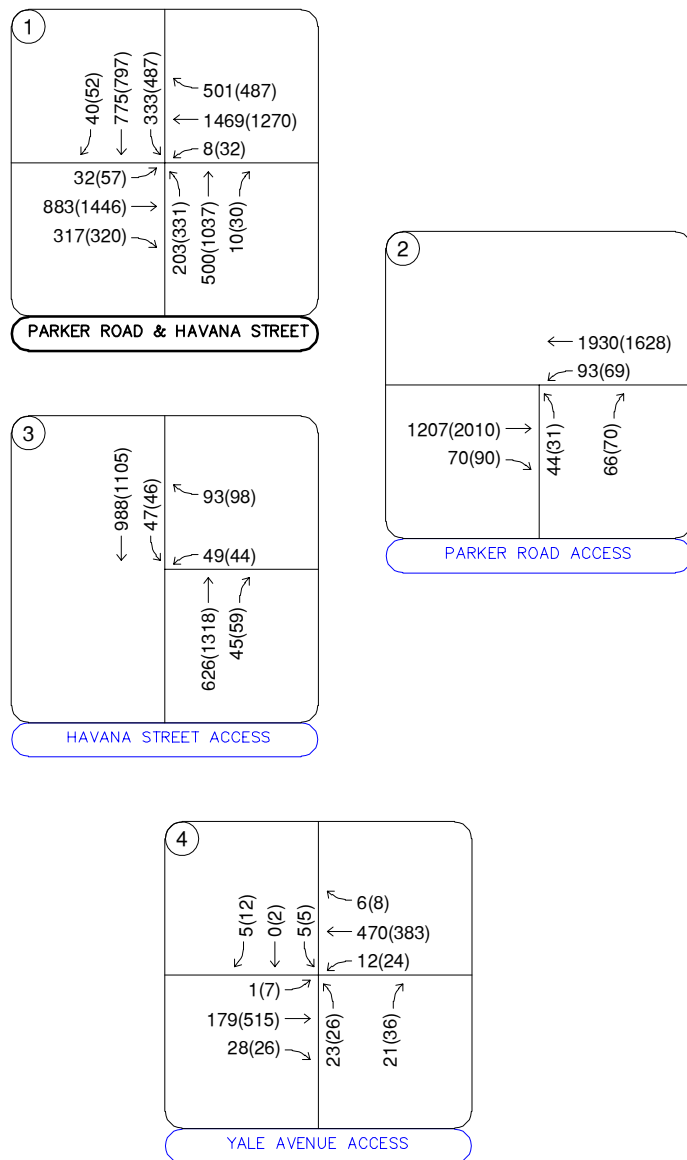
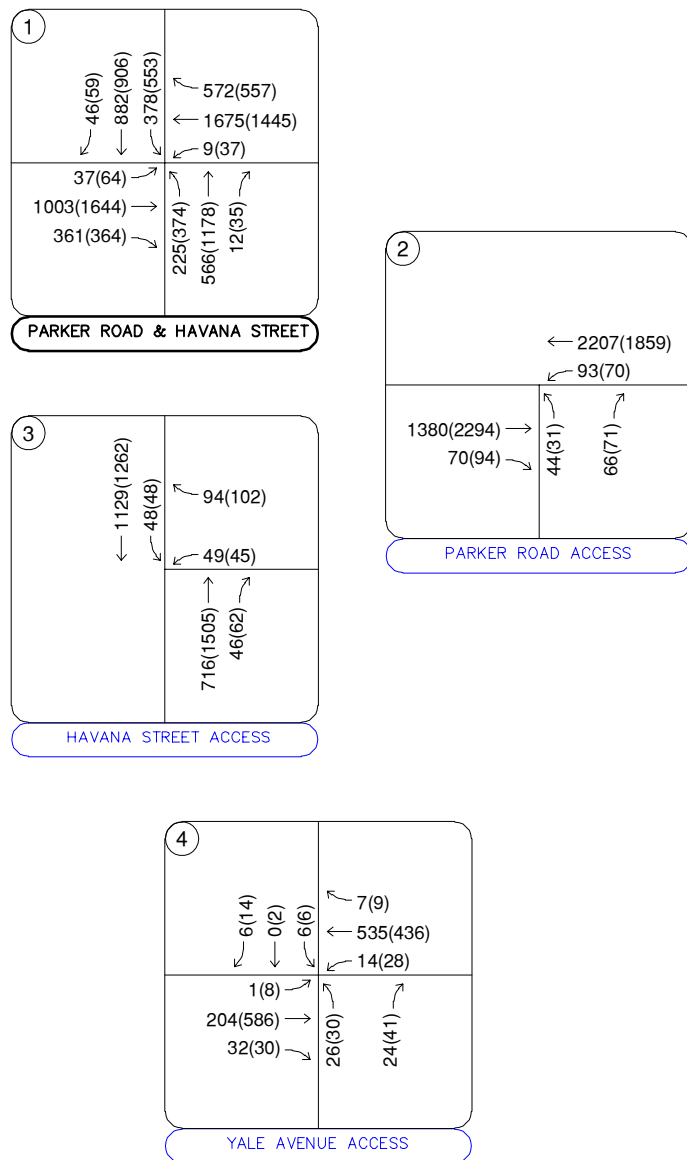


FIGURE 11
QUIKTRIP 4263
AURORA, COLORADO
2026 TOTAL TRAFFIC VOLUMES



LEGEND

- (X) Study Area Key Intersection
- (X) Project Access Intersection
- xxx(xxx) Weekday AM(PM)
Peak Hour Traffic Volumes
- xx,x00 Estimated Daily Traffic Volume

FIGURE 12
QUIKTRIP 4263
AURORA, COLORADO
2050 TOTAL TRAFFIC VOLUMES

5.0 TRAFFIC OPERATIONS ANALYSIS

Kimley-Horn's analysis of traffic operations in the site vicinity was conducted to determine potential capacity deficiencies in the 2026 and 2050 development horizons at the identified key intersections. The acknowledged source for determining overall capacity is the *Highway Capacity Manual (HCM)*².

5.1 Analysis Methodology

Capacity analysis results are listed in terms of Level of Service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from A (very little delay) to F (long delays and congestion). According to City of Aurora guidelines for signalized intersections, individual movements may be allowed to fall to LOS E, but in most cases the overall intersection must operate (or be projected to operate) at a LOS D or better during morning and afternoon peak periods. If the existing LOS for an intersection is less than LOS D, potential alternatives to improve the intersection to achieve LOS D or to maintain the existing critical lane volume with the addition of site generated traffic are provided. Minor movements at unsignalized intersections, such as left turns onto a major arterial from a side street, may be allowed to fall below LOS D pending the specific conditions. Movements which have a light traffic demand as well as a viable travel alternative may be allowed to fall below LOS D. **Table 2** shows the definition of level of service for signalized and unsignalized intersections.

Table 2 – Level of Service Definitions

| Level of Service | Signalized Intersection Average Total Delay (sec/veh) | Unsignalized Intersection Average Total Delay (sec/veh) |
|------------------|---|---|
| A | ≤ 10 | ≤ 10 |
| B | > 10 and ≤ 20 | > 10 and ≤ 15 |
| C | > 20 and ≤ 35 | > 15 and ≤ 25 |
| D | > 35 and ≤ 55 | > 25 and ≤ 35 |
| E | > 55 and ≤ 80 | > 35 and ≤ 50 |
| F | > 80 | > 50 |

Definitions provided from the Highway Capacity Manual, Seventh Edition, Transportation Research Board, 2022.

² Transportation Research Board, *Highway Capacity Manual*, Seventh Edition, Washington DC, 2022.

Study area intersections were analyzed based on average total delay analysis for signalized and unsignalized intersections. Under the unsignalized analysis, the LOS for a two-way stop-controlled intersection is determined by the computed or measured control delay and is defined for each minor movement. LOS for a two-way stop-controlled intersection is not defined for the intersection as a whole. LOS for signalized, roundabout, and all-way stop controlled intersections are defined for each approach and for the overall intersection.

5.2 Key Intersection Operational Analysis

Calculations for the operational level of service at the key intersections for the study area are provided in **Appendix E**. The existing year analysis is based on the lane geometry and intersection control shown in **Figure 2**. Existing peak hour factors were utilized in the analysis. The existing heavy vehicle percentages obtained from the turning movement counts were also used in each horizon year. The signalized intersection analysis utilizes the observed cycle lengths with optimized phasing and timing. Based on increased national attention given to establishing appropriate yellow and all-red clearance intervals to improve intersection safety, these have been calculated and are applied for approaches at the signalized intersections. The increase in yellow and all red time sacrifices intersection capacity for improved safety. Synchro traffic analysis software was used to analyze the signalized and unsignalized key intersections for HCM level of service.

Parker Road (SH-83) & Havana Street (SH-30)

The signalized intersection of Parker Road (SH-83) and Havana Street (SH-30) operates with protected permissive left turn phasing on the east/west Parker Road (SH-83) legs and protected-only left turn phasing on the north/south Havana Street (SH-30) legs. Of note, the southbound and northbound right turn movements occur prior to the intersection. Therefore, these volumes are not included in the intersection analysis. The intersection currently operates at LOS D during the morning and afternoon peak hours based on the existing intersection configuration and control. With project traffic, the intersection is expected to continue operating acceptably at LOS D during both peak hours in 2026. However, if 2050 volumes are realized, the second northbound left turn lane that is currently striped out is recommended to be striped to provide dual left turn lanes. The dual left turn lanes are recommended to operate with protected-only left turn phasing. As there are geometric constraints that would not allow the northbound and southbound left turn movements to run concurrently with dual northbound lefts, it is recommended that the signal

timing be adjusted to have either the northbound or southbound left turn movement lead, and the other lag. This would still allow for northbound and southbound through movements run concurrently for some time, while not allowing the northbound and southbound turns to run concurrently. Additionally, it was found that to improve operations to be acceptable in 2050 in the total PM scenario the third westbound through lane may need to be implemented within the existing pavement shoulder. This is not feasible as a Bus Rapid Transit (BRT) line is expected to operate in that space. With the BRT line, traffic volumes are expected to be reduced as commuters use the new transit facilities. The 2050 total traffic volumes do not account for this possible reduction, the LOS results could report worse conditions than may exist in the future. With the dual northbound left turn lanes in 2050, the intersection is anticipated to operate acceptably in the AM and with LOS E in the PM. **Table 3** provides the results of the LOS analysis conducted at this intersection.

Table 3 – Parker Road (SH-83) & Havana Street (SH-30) LOS Results

| Scenario | AM Peak Hour | | PM Peak Hour | |
|----------------------|--------------|----------|--------------|----------|
| | Delay | LOS | Delay | LOS |
| | (sec/veh) | | (sec/veh) | |
| 2024 Existing | 28.6 | C | 47.2 | D |
| Eastbound Approach | 14.1 | B | 27.7 | C |
| Eastbound Left | 16.3 | B | 31.6 | C |
| Eastbound Through | 18.8 | B | 33.4 | C |
| Eastbound Right | 1.0 | A | 1.0 | A |
| Westbound Approach | 7.3 | A | 46.5 | D |
| Westbound Left | 16.1 | B | 25.9 | C |
| Westbound Through | 9.8 | A | 65.4 | E |
| Westbound Right | 0.0 | A | 0.0 | A |
| Northbound Approach | 64.2 | E | 59.8 | E |
| Northbound Left | 97.8 | F | 73.6 | E |
| Northbound Through | 54.1 | D | 57.5 | E |
| Northbound Right | 1.0 | A | 1.0 | A |
| Southbound Approach | 61.4 | E | 61.8 | E |
| Southbound Left | 67.3 | E | 73.5 | E |
| Southbound Through | 62.1 | E | 58.8 | E |
| Southbound Right | 0.0 | A | 0.0 | A |

| Scenario | AM Peak Hour | | PM Peak Hour | |
|-------------------------------------|--------------------|----------|--------------------|----------|
| | Delay (sec/veh) | LOS | Delay (sec/veh) | LOS |
| 2026 Background | 40.6 | D | 49.1 | D |
| Eastbound Approach | 14.4 | B | 27.7 | C |
| Eastbound Left | 27.6 | C | 31.8 | C |
| Eastbound Through | 18.8 | B | 33.4 | C |
| Eastbound Right | 1.0 | A | 1.0 | A |
| Westbound Approach | 35.0 | D | 47.3 | D |
| Westbound Left | 16.3 | B | 25.9 | C |
| Westbound Through | 47.1 | D | 66.4 | E |
| Westbound Right | 0.0 | A | 0.0 | A |
| Northbound Approach | 66.1 | E | 64.4 | E |
| Northbound Left | 100.4 | F | 76.6 | E |
| Northbound Through | 54.4 | D | 60.7 | E |
| Northbound Right | 1.0 | A | 1.0 | A |
| Southbound Approach | 64.8 | E | 66.2 | E |
| Southbound Left | 66.9 | E | 75.3 | E |
| Southbound Through | 63.9 | E | 60.6 | E |
| Southbound Right | 0.0 | A | 0.0 | A |
| 2026 Background Plus Project | 42.7 | D | 51.9 | D |
| Eastbound Approach | 15.7 | B | 27.3 | C |
| Eastbound Left | 28.9 | C | 31.4 | C |
| Eastbound Through | 20.5 | C | 33.0 | C |
| Eastbound Right | 1.0 | A | 1.0 | A |
| Westbound Approach | 38.5 | D | 45.9 | D |
| Westbound Left | 17.7 | B | 25.6 | C |
| Westbound Through | 51.7 | D | 64.0 | E |
| Westbound Right | 0.0 | A | 0.0 | A |
| Northbound Approach | 64.5 | E | 67.4 | E |
| Northbound Left | 96.2 | F | 83.8 | F |
| Northbound Through | 52.8 | D | 64.2 | E |
| Northbound Right | 1.0 | A | 1.0 | A |
| Southbound Approach | 65.3 | E | 77.4 | E |
| Southbound Left | 67.1 | E | 87.5 | F |
| Southbound Through | 67.9 | E | 76.3 | E |
| Southbound Right | 0.0 | A | 0.0 | A |

| Scenario | AM Peak Hour | | PM Peak Hour | |
|-------------------------|--------------------|----------|--------------------|----------|
| | Delay (sec/veh) | LOS | Delay (sec/veh) | LOS |
| 2050 Background | 56.3 | E | 72.3 | E |
| Eastbound Approach | 15.2 | B | 30.2 | C |
| Eastbound Left | 30.3 | C | 32.9 | C |
| Eastbound Through | 19.7 | B | 36.6 | C |
| Eastbound Right | 1.0 | A | 1.0 | A |
| Westbound Approach | 56.9 | E | 69.7 | E |
| Westbound Left | 16.8 | B | 27.9 | C |
| Westbound Through | 76.6 | F | 98.2 | F |
| Westbound Right | 0.0 | A | 0.0 | A |
| Northbound Approach | 74.9 | E | 110.2 | F |
| Northbound Left | 127.4 | F | 134.4 | F |
| Northbound Through | 57.0 | E | 102.9 | F |
| Northbound Right | 1.0 | A | 1.0 | A |
| Southbound Approach | 89.7 | F | 96.4 | E |
| Southbound Left | 78.9 | E | 122.6 | F |
| Southbound Through | 94.2 | F | 80.7 | F |
| Southbound Right | 0.0 | A | 0.0 | A |
| 2050 Background# | 46.9 | E | 64.6 | E |
| Eastbound Approach | 14.2 | B | 30.2 | C |
| Eastbound Left | 30.3 | C | 32.9 | C |
| Eastbound Through | 18.3 | B | 36.6 | C |
| Eastbound Right | 1.0 | A | 1.0 | A |
| Westbound Approach | 47.8 | D | 69.7 | E |
| Westbound Left | 15.6 | B | 27.9 | C |
| Westbound Through | 64.3 | F | 98.2 | F |
| Westbound Right | 0.0 | A | 0.0 | A |
| Northbound Approach | 66.1 | E | 91.3 | F |
| Northbound Left | 86.3 | F | 52.8 | D |
| Northbound Through | 59.3 | E | 102.9 | F |
| Northbound Right | 1.0 | A | 1.0 | A |
| Southbound Approach | 70.5 | F | 78.4 | E |
| Southbound Left | 95.4 | E | 122.6 | F |
| Southbound Through | 60.0 | F | 51.7 | D |
| Southbound Right | 0.0 | A | 0.0 | A |

| Scenario | AM Peak Hour | | PM Peak Hour | |
|---------------------------------------|--------------------|----------|--------------------|----------|
| | Delay (sec/veh) | LOS | Delay (sec/veh) | LOS |
| 2050 Background Plus Project | 51.4 | D | 65.4 | E |
| Eastbound Approach | 14.6 | B | 28.5 | C |
| Eastbound Left | 30.3 | C | 32.5 | C |
| Eastbound Through | 19.0 | B | 34.4 | C |
| Eastbound Right | 1.0 | A | 1.0 | A |
| Westbound Approach | 48.3 | D | 59.7 | E |
| Westbound Left | 16.1 | B | 26.6 | C |
| Westbound Through | 65.0 | F | 83.5 | F |
| Westbound Right | 0.0 | A | 0.0 | A |
| Northbound Approach | 73.9 | E | 93.6 | F |
| Northbound Left | 123.7 | F | 108.8 | F |
| Northbound Through | 55.7 | E | 91.5 | F |
| Northbound Right | 1.0 | A | 1.0 | A |
| Southbound Approach | 82.4 | F | 93.9 | F |
| Southbound Left | 66.4 | E | 104.3 | F |
| Southbound Through | 93.6 | F | 93.6 | F |
| Southbound Right | 0.0 | A | 0.0 | A |
| 2050 Background Plus Project # | 41.3 | D | 58.7 | E |
| Eastbound Approach | 13.5 | B | 33.7 | C |
| Eastbound Left | 29.9 | C | 33.4 | C |
| Eastbound Through | 17.4 | B | 40.9 | D |
| Eastbound Right | 1.0 | A | 1.0 | A |
| Westbound Approach | 40.2 | D | 85.7 | F |
| Westbound Left | 14.8 | B | 30.1 | C |
| Westbound Through | 54.0 | D | 120.1 | F |
| Westbound Right | 0.0 | A | 0.0 | A |
| Northbound Approach | 63.9 | E | 59.6 | E |
| Northbound Left | 78.2 | E | 46.1 | D |
| Northbound Through | 59.4 | E | 65.6 | E |
| Northbound Right | 1.0 | A | 1.0 | A |
| Southbound Approach | 59.2 | E | 55.6 | E |
| Southbound Left | 70.0 | E | 75.6 | E |
| Southbound Through | 57.6 | E | 47.0 | D |
| Southbound Right | 0.0 | A | 0.0 | A |

= Dual Northbound Lefts

Project Accesses

A project access analysis has been provided for the three existing full movement accesses along Parker Road (SH-83), Havana Street (SH-30), and Yale Avenue that currently serve the existing overall shopping center. The project access intersections currently provide stop control on the approaches exiting the existing development. Of note, a R1-1 “STOP” sign is recommended to be placed on the southbound approach, exiting the site onto Yale Avenue. **Table 4** provides the results of the level of service analysis for the project access intersections. As shown in the table, the three project access intersections are anticipated to have all movements operating with acceptable LOS D or better during the peak hours in the long-term horizon with the planned configuration.

Table 4 – Project Access Level of Service Results

| Intersection | 2026 Total | | | | 2050 Total | | | |
|-----------------------------|-----------------|-----|-----------------|-----|-----------------|-----|-----------------|-----|
| | AM Peak Hour | | PM Peak Hour | | AM Peak Hour | | PM Peak Hour | |
| | Delay (sec/veh) | LOS | Delay (sec/veh) | LOS | Delay (sec/veh) | LOS | Delay (sec/veh) | LOS |
| Parker Road Access | | | | | | | | |
| Northbound Approach | 15.3 | C | 19.1 | C | 18.0 | C | 23.1 | C |
| Westbound Left | 15.0 | B | 21.2 | C | 16.9 | C | 26.8 | D |
| Havana Street Access | | | | | | | | |
| Westbound Approach | 11.4 | B | 14.3 | B | 11.7 | B | 16.1 | C |
| Southbound Left | 9.9 | A | 12.6 | B | 10.2 | B | 14.0 | B |
| Yale Avenue Access | | | | | | | | |
| Northbound Approach | 12.8 | B | 14.3 | B | 14.2 | B | 16.9 | C |
| Eastbound Left | 8.4 | A | 8.2 | A | 8.6 | A | 8.3 | A |
| Westbound Left | 7.6 | A | 8.1 | A | 7.7 | A | 8.3 | A |
| Southbound Approach | 12.7 | B | 12.3 | B | 13.8 | B | 13.3 | B |

5.3 CDOT Access Permits

Project traffic volumes are expected to utilize three existing driveways with two of the driveways being along State of Colorado Department of Transportation (CDOT) highways. The existing access along SH-83 (Parker Road) and the existing access along SH-30 (Havana Street) are controlled by CDOT. Therefore, change in use CDOT access permits are anticipated to be needed at these two accesses intersections in association with the project.

5.4 Auxiliary Turn Lane Warrant & Length Analysis

Auxiliary turn lanes along CDOT controlled highways are to be implemented based on volume threshold requirements set forth in the State Highway Access Code. Further, turn lane lengths should be designed based on the State Highway Access Code. Parker Road (SH-83) is classified as a Regional Highway (R-A) with a posted speed limit of 45 miles per hour. Whereas Havana Street (SH-30) is classified as a Non-Rural Arterial (NR-B) with a posted speed limit of 45 miles per hour. Additionally, the City of Aurora defaults to the Colorado Department of Transportation (CDOT) State Highway Access Code guidelines to determine if turn lanes are warranted at studied intersections. CDOT classifies their state highways based on roadway types. It is believed that Yale Avenue matches the characteristics of a CDOT Non-Rural Arterial (NR-C) roadway.

Of note, since Parker Road (SH-83) and Havana Street (SH-30) both provide three through lanes in each direction near the project accesses, the auxiliary right turn lane can be absorbed within the third through lane per CDOT guidelines. It should be noted that entering left turn movements are currently being provided at the existing access along Parker Road (SH-83) by the existing two-way left turn center lane while a designated southbound left turn lane currently exists at the existing access along Havana Street (SH-30).

However, the Yale Avenue access intersection turn lane guidelines will follow the State Highway Access Code for category NR-C roadways. The following threshold applies for determining the need for a turn lane:

- A left turn lane with storage length plus taper length is required for any access with a projected peak hour left ingress turning volume greater than 25 vehicles per hour (vph). If the posted speed is greater than 40 mph, a deceleration lane and taper is required for any access with a projected peak hour left ingress turning volume greater than 10 vph.
- A right turn lane with storage length plus taper is required for any access with a projected peak hour right ingress turning volume greater than 50 vehicles per hour. If the posted speed limit is greater than 40 miles per hour, a right turn lane deceleration lane and taper is required for any access with a project peak hour right ingress turning volume greater than 25 vehicles per hour.

Based on the 2050 traffic volume projections, turn lane requirements at the project access intersection along Yale Avenue are as follows:

- An eastbound left turn lane **is not** warranted along Yale Avenue at the existing access based on projected 2050 background plus project traffic volumes being eight (8) eastbound left turns during the peak hour and the threshold being 25 vph.
- A westbound right turn lane **is not** warranted along Yale Avenue at the existing access based on projected 2050 background plus project traffic volumes being nine (9) westbound right turns during the peak hour and the threshold being 50 vph.

5.5 Vehicle Queuing Analysis

A vehicle queuing analysis was conducted for the study area intersections. The queuing analysis was performed using Synchro presenting the results of the 95th percentile queue lengths. Results are shown in the following **Table 5** with calculations provided within the level of service operational sheets of **Appendix E** for unsignalized intersections and **Appendix F** for signalized intersections.

Table 5 – Turn Lane Queuing Analysis Results

| Intersection Turn Lane | Existing Turn Lane Length | 2026 Calculated Queue | 2026 Recommended Length | 2050 Calculated Queue | 2050 Recommended Length |
|----------------------------------|---------------------------|-----------------------|-------------------------|-----------------------|-------------------------|
| Parker Rd & Havana St | | | | | |
| Eastbound Left | 475' | 48' | 475' | 56' | 475' |
| Westbound Left | 550' | 25' | 550' | 25' | 550' |
| Westbound Right | C | 370' | C | 424' | C |
| Northbound Left | 500' | 435' | 500' | 192' DL | 500'/ 375' |
| Southbound Left | 375'/350' DL | 313' DL | 375'/350' DL | 338' DL | 375'/350' DL |
| Parker Road Access | | | | | |
| Westbound Left | TWLTL | TWLTL | TWLTL | TWLTL | TWLTL |
| Havana Street Access | | | | | |
| Southbound Left | 125' | 25' | 125' | 25' | 125' |

C = Continuous Lane; DL = Dual Left Turn Lane; **Blue** Text = Recommendation; TWLTL= Two-Way Left Turn Lane

The vehicle queues are all anticipated to remain within the existing turn lane lengths though the short-term 2026 horizon. However, if 2050 volumes are realized, then the second northbound left turn lane is recommended to be striped to provide a length of 375 feet at the intersection of Parker Road (SH-83) and Havana Street (SH-30). The southbound left turn queue was calculated to exceed the provided capacity at the intersection of Parker Road (SH-83) and Havana Street (SH-30) by less than one car length under 2050 conditions. It is expected that there is at least one car length of additional queuing space within the taper length with additional space within the painted median; therefore, the southbound left turn lane is not recommended to be extended.

5.6 Crash Data Summary

Crash data was requested from CDOT along Parker Road (SH-83) and Havana Street (SH-30) in the vicinity of the project site for the latest three-year period where crash data is available (2020 – 2022). The crash data was summarized by severity, lighting, type, and location in **Tables 6, 7, 8, and 9**, respectively for Havana Street (SH-30). The crash data was summarized by severity, lighting, type, and location in **Tables 10, 11, 12, and 13**, respectively for Parker Road (SH-83).

Table 6 – SH-30 Crash Data Summarized by Severity

| Severity | | 2020 | | 2021 | | 2022 | | Total | |
|------------------------------|---|------|-----|------|-----|------|-----|-------|-----|
| | | # | % | # | % | # | % | # | % |
| Fatal | K | 0 | 0% | 1 | 6% | 0 | 0% | 1 | 2% |
| Evident, Incapacitating | A | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Evident Non-Incapacitating | B | 4 | 17% | 1 | 6% | 4 | 21% | 9 | 15% |
| Possible/Complaint of Injury | C | 6 | 25% | 2 | 12% | 4 | 21% | 12 | 20% |
| No Injury (PDO) | O | 14 | 58% | 13 | 76% | 11 | 57% | 38 | 63% |
| Total | | 24 | | 17 | | 19 | | 60 | |

Table 7 – SH-30 Crash Data Summarized by Lighting Conditions

| Lighting Condition | | 2020 | | 2021 | | 2022 | | Total | |
|--------------------|--|------|-----|------|-----|------|-----|-------|-----|
| | | # | % | # | % | # | % | # | % |
| Daylight | | 14 | 58% | 6 | 35% | 15 | 79% | 35 | 58% |
| Dawn or Dusk | | 3 | 13% | 1 | 6% | 0 | 0% | 4 | 7% |
| Dark Lighted | | 5 | 21% | 10 | 59% | 4 | 21% | 19 | 32% |
| Dark Un-Lighted | | 2 | 8% | 0 | 0% | 0 | 0% | 2 | 4% |
| Unknown | | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| Total | | 24 | | 17 | | 19 | | 60 | |

Table 8 – SH-30 Crash Data Summarized by Crash Type

| Crash Type | 2020 | | 2021 | | 2022 | | Total | |
|---|-----------|-----|-----------|-----|-----------|-----|-----------|-----|
| | # | % | # | % | # | % | # | % |
| Approach Turn | 2 | 8% | 3 | 17% | 3 | 16% | 8 | 13% |
| Broadside | 7 | 30% | 2 | 12% | 1 | 5% | 10 | 16% |
| Curb or Island | 1 | 4% | 0 | 0% | 0 | 0% | 1 | 2% |
| Head On | 0 | 0% | 0 | 0% | 2 | 11% | 2 | 3% |
| Light or Utility Pole | 0 | 0% | 1 | 6% | 0 | 0% | 1 | 2% |
| Other Object | 1 | 4% | 0 | 0% | 0 | 0% | 1 | 2% |
| Overtaking Turn | 1 | 4% | 1 | 6% | 1 | 5% | 3 | 5% |
| Pedestrian | 0 | 0% | 1 | 6% | 0 | 0% | 1 | 2% |
| Rear End | 7 | 29% | 5 | 29% | 10 | 52% | 22 | 36% |
| Sideswipe Same Direction | 3 | 13% | 4 | 24% | 2 | 11% | 9 | 15% |
| Traffic Sign or Post or Overhead Sign Structure | 1 | 4% | 0 | 0% | 0 | 0% | 1 | 2% |
| Traffic Signal Pole or Equipment | 1 | 4% | 0 | 0% | 0 | 0% | 1 | 2% |
| Total | 24 | | 17 | | 19 | | 60 | |

Table 9 – SH-30 Crash Data Summarized by Location

| Location | 2020 | | 2021 | | 2022 | | Total | |
|----------------------|-----------|-----|-----------|-----|-----------|-----|-----------|-----|
| | # | % | # | % | # | % | # | % |
| At Driveway Access | 1 | 4% | 0 | 0% | 0 | 0% | 1 | 2% |
| Intersection | 13 | 54% | 11 | 65% | 11 | 58% | 35 | 58% |
| Intersection Related | 5 | 21% | 4 | 24% | 5 | 26% | 14 | 23% |
| Non-Intersection | 5 | 21% | 2 | 12% | 1 | 5% | 8 | 13% |
| Ramp | 0 | 0% | 0 | 0% | 2 | 11% | 2 | 3% |
| Total | 24 | | 17 | | 19 | | 60 | |

Table 10 – SH-83 Crash Data Summarized by Severity

| Severity | | 2020 | | 2021 | | 2022 | | Total | |
|------------------------------|---|-----------|-----|-----------|-----|-----------|-----|------------|-----|
| | | # | % | # | % | # | % | # | % |
| Fatal | K | 0 | 0% | 1 | 2% | 0 | 0% | 1 | 1% |
| Evident, Incapacitating | A | 2 | 4% | 3 | 5% | 0 | 0% | 5 | 3% |
| Evident Non-Incapacitating | B | 5 | 10% | 4 | 7% | 9 | 17% | 18 | 11% |
| Possible/Complaint of Injury | C | 11 | 22% | 14 | 26% | 9 | 17% | 34 | 21% |
| No Injury | O | 33 | 64% | 33 | 60% | 36 | 66% | 102 | 64% |
| Total | | 51 | | 55 | | 54 | | 160 | |

Table 11 – SH-83 Crash Data Summarized by Lighting Conditions

| Lighting Condition | 2020 | | 2021 | | 2022 | | Total | |
|--------------------|-----------|-----|-----------|-----|-----------|-----|------------|-----|
| | # | % | # | % | # | % | # | % |
| Daylight | 30 | 59% | 30 | 55% | 26 | 48% | 86 | 54% |
| Dawn or Dusk | 2 | 4% | 4 | 8% | 4 | 7% | 10 | 6% |
| Dark Lighted | 15 | 29% | 17 | 31% | 21 | 39% | 53 | 33% |
| Dark Un-Lighted | 4 | 8% | 3 | 6% | 3 | 6% | 10 | 7% |
| Unknown | 0 | 0% | 1 | 2% | 0 | 0% | 1 | 1% |
| Total | 51 | | 55 | | 54 | | 160 | |

Table 12 – SH-83 Crash Data Summarized by Crash Type

| Crash Type | 2020 | | 2021 | | 2022 | | Total | |
|--------------------------|-----------|-----|-----------|-----|-----------|-----|------------|-----|
| | # | % | # | % | # | % | # | % |
| Approach Turn | 2 | 4% | 12 | 21% | 6 | 11% | 20 | 12% |
| Bicycle or Pedal Cycle | 0 | 0% | 1 | 2% | 1 | 2% | 2 | 1% |
| Broadside | 10 | 20% | 12 | 22% | 16 | 29% | 38 | 23% |
| Concrete Barrier | 0 | 0% | 0 | 0% | 1 | 2% | 1 | 1% |
| Curb or Island | 1 | 2% | 0 | 0% | 0 | 0% | 1 | 1% |
| Head On | 1 | 2% | 1 | 2% | 1 | 2% | 3 | 2% |
| Light or Utility Pole | 0 | 0% | 0 | 0% | 1 | 2% | 1 | 1% |
| Other Object | 1 | 2% | 0 | 0% | 0 | 0% | 1 | 1% |
| Overtaking Turn | 1 | 2% | 2 | 4% | 1 | 2% | 4 | 3% |
| Parked Motor Vehicle | 0 | 0% | 0 | 0% | 2 | 4% | 2 | 1% |
| Pedestrian | 1 | 2% | 2 | 4% | 3 | 6% | 6 | 4% |
| Rear End | 23 | 45% | 22 | 40% | 18 | 33% | 63 | 39% |
| Sideswipe Same Direction | 11 | 21% | 3 | 5% | 4 | 7% | 18 | 11% |
| Total | 51 | | 55 | | 54 | | 160 | |

Table 13 – SH-83 Crash Data Summarized by Location

| Location | 2020 | | 2021 | | 2022 | | Total | |
|----------------------|-----------|-----|-----------|-----|-----------|-----|------------|-----|
| | # | % | # | % | # | % | # | % |
| At Driveway Access | 5 | 10% | 11 | 20% | 4 | 7% | 20 | 13% |
| Intersection | 26 | 51% | 22 | 40% | 27 | 50% | 75 | 47% |
| Intersection Related | 11 | 22% | 15 | 27% | 10 | 19% | 36 | 23% |
| Non-Intersection | 9 | 18% | 7 | 13% | 13 | 24% | 29 | 18% |
| Total | 51 | | 55 | | 54 | | 160 | |

The following observations were made regarding the crash data for Havana Street (SH-30):

- A total of 60 crashes were reported over the three-year time period along SH 30 in the vicinity of the project site. The majority of crashes were reported to have no injury (63%), with possible/non-incapacitating injury crashes making up approximately 35% of crashes while one (1) fatal crash (2%) was reported.

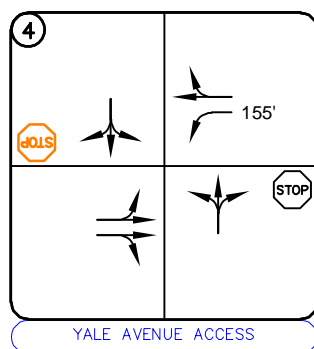
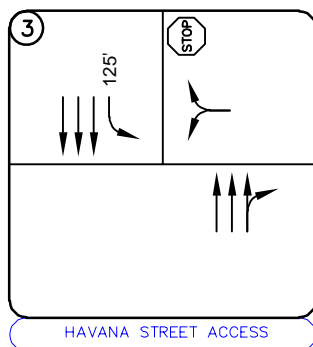
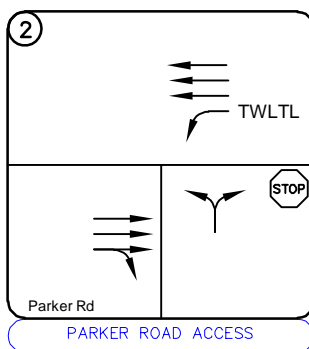
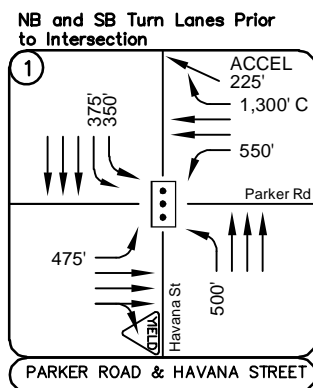
- The fatal crash was reported to occur on December 19, 2021 within the intersection of Havana Street and Parker Street, where a person who may have been emotionally upset was driving their vehicle at approximately 75 miles per hour southbound on Havana Street. The driver ran a red light and struck another vehicle traveling southbound on Parker Road, spun out of control, and struck another vehicle that was stopped at a red light. The driver of the vehicle who ran the red light died.
- The three crash types that were most observed were rear end crashes (36%), broadside crashes (16%), and sideswipe same direction crashes (15%).
- The only two crashes (approximately 4% of crashes) were reported to occur in dark unlighted conditions.
- The majority of the crashes in the provided data were reported to occur at an intersection while one (1) crash was reported to take place at a driveway access.

The following observations were made regarding the crash data for Parker Street (SH-83)

- A total of 160 crashes were reported over the three-year period along SH-83 in the vicinity of the project site. The majority of crashes were reported to have no injury (64%). While approximately 35% were reported to be injury-related crashes. One (1) fatal crash was reported (1%).
- The fatal crash was reported to occur on November 16, 2021 at 10:42 PM at the intersection of Parker Road and Yale Avenue, where a person was driving their vehicle at approximately 55 mph struck another vehicle while traveling northbound and died. A crash narrative was not provided for this crash, so additional details are unknown.
- The three crash types that were most observed were rear end crashes (39%), broadside crashes (23%), and approach turn crashes (12%).
- 10 crashes were observed to occur at dark, unlighted conditions.
- The majority of the crashes were reported to occur at an intersection or be intersection related while 13% of crashes were reported to occur at a driveway access.
- Of the 38 broadside crashes reported, seven were from vehicles making a left turn. Of those seven crashes, five were reported to have no injury.

5.7 Improvement Summary

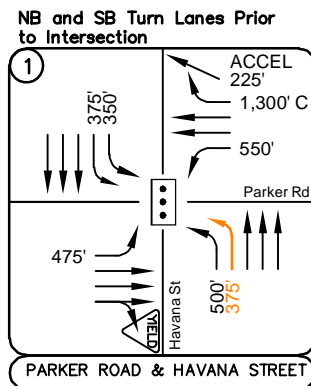
Based on the results of the intersection operational and vehicle queuing analysis, the key intersection recommended improvements and control are shown in **Figure 13** for the 2026 horizon and **Figure 14** for the 2050 horizon.



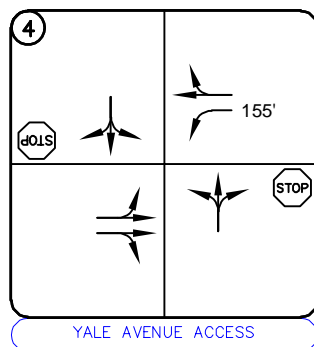
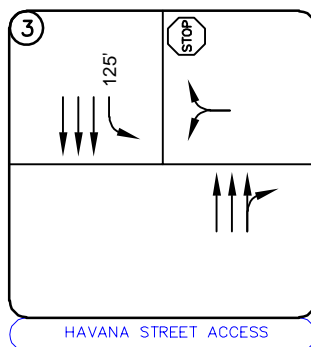
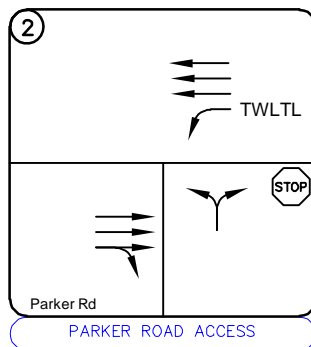
LEGEND

- (X) Study Area Key Intersection
- (X) Project Access Intersection
- Signalized Intersection
- Stop Controlled Approach
- Improvement
- 100' Turn Lane Length (feet)

FIGURE 13
QUIKTRIP 4263
AURORA, COLORADO
2026 RECOMMENDED GEOMETRY AND CONTROL



Note that CDOT could keep the existing lane configurations or implement NB dual left turn lanes operating lead/lag with the southbound left turn lane due to geometric constraints.



LEGEND

- (X) Study Area Key Intersection
- (X) Project Access Intersection
- Signalized Intersection
- Stop Controlled Approach
- Improvement
- 100' Turn Lane Length (feet)

FIGURE 14
QUIKTRIP 4263
AURORA, COLORADO
2050 RECOMMENDED GEOMETRY AND CONTROL

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis presented in this report, Kimley-Horn believes QuikTrip 4263 will be successfully incorporated into the existing and future roadway network. Analysis of the existing street network, the proposed project development, and expected traffic volumes resulted in the following conclusions and recommendations:

- The threshold for requiring an access permit along Colorado Department of Transportation (CDOT) roadways occurs when project traffic is anticipated to increase the existing access traffic volumes by more than 20 percent. Based on traffic projections, the addition of project traffic on the south leg of the Parker Road (SH-83) and east leg of the Havana Street (SH-30) project accesses are anticipated to increase existing traffic by more than 20 percent. Therefore, access permits are anticipated to be needed at these two intersections accesses as development occurs.
- Direct access to the site will utilize the three existing full movement accesses along Parker Road (SH-83), Havana Street (SH-30), and Yale Avenue that currently serve the overall shopping center. The project access intersections along Havana Street and Parker Road currently provide stop control on the approaches exiting the existing development; therefore, a R1-1 "STOP" sign is recommended to be placed on the southbound approach, exiting the site onto Yale Avenue.
- If 2050 volumes are realized, the second northbound left turn lane that is currently striped out at the Parker Road (SH-83) and Havana Street (SH-30) intersection could be striped to provide dual left turn lanes. If these dual left turn lanes are implemented, they should operate with protected-only left turn phasing. As there are geometric constraints that would not allow the northbound and southbound left turn movements to run concurrently with dual northbound lefts, it is recommended that the signal timing be adjusted to have either the northbound or southbound left turn movement lead, and the other lag.
- Any onsite or offsite improvements should be incorporated into the Civil Drawings and conform to standards of the City of Aurora, Colorado Department of Transportation, and the currently adopted version of the MUTCD.

APPENDICES

APPENDIX A

Conceptual Site Plan

PRELIMINARY

FOR REVIEW ONLY
NOT FOR
CONSTRUCTION

Kimley»Horn
Kimley-Horn and Associates, Inc.

PROJECT NO.: 096888046

Kimley»Horn

© 2003 KIMLEY-HORN AND ASSOCIATES, INC.
6200 SOUTH SYRACUSE WAY, SUITE 300
GREENWICH VILLAGE, COLORADO 80237 (303) 228-2300

QuikTrip No. 4263

PARKER RD & HAVANA
AURORA, CO



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PROTOTYPE: P-116

DIVISION:

VERSION: 001

DESIGNED BY:

DRAWN BY:

REVIEWED BY:

REV DATE DESCRIPTION

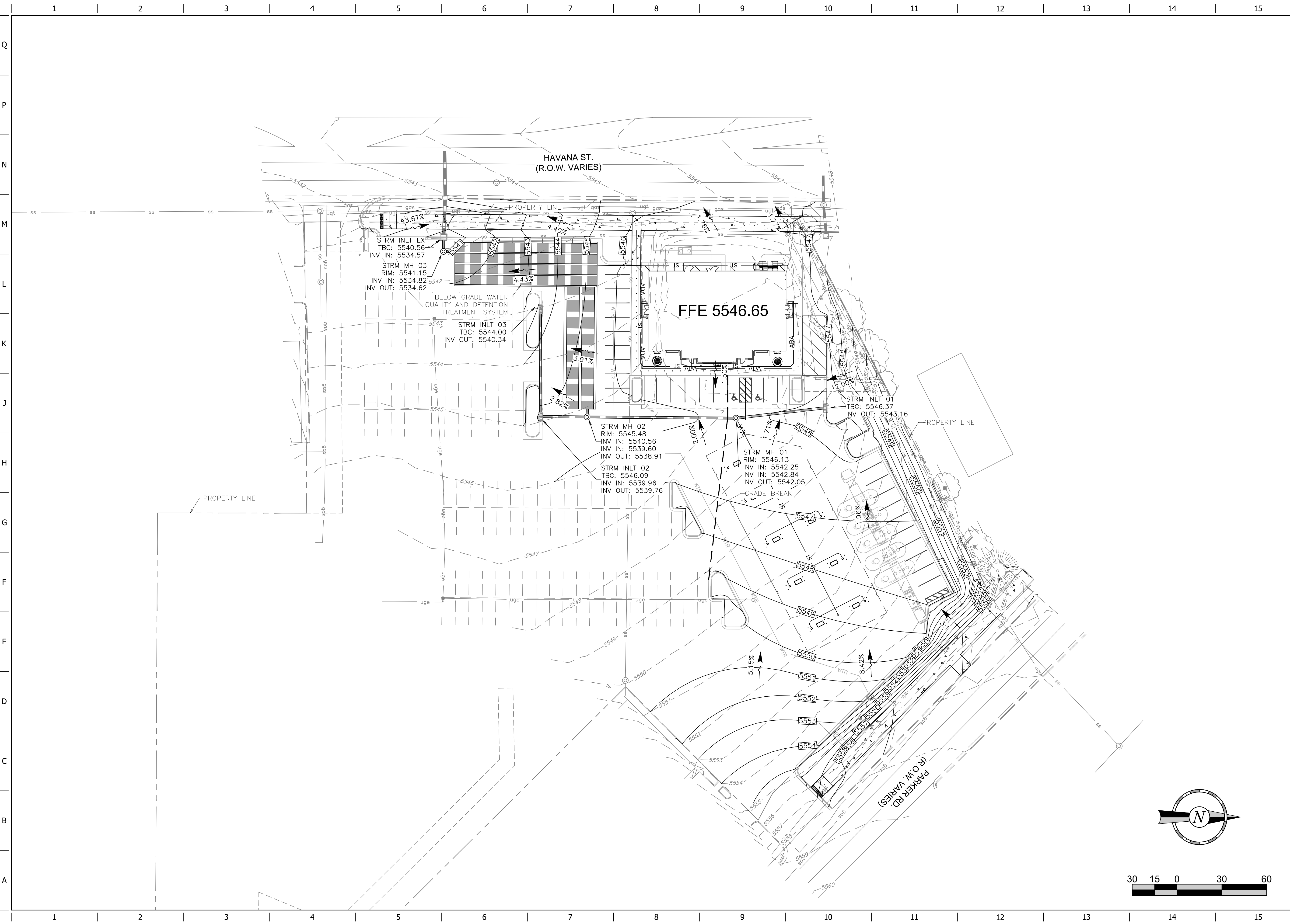
ORIGINAL ISSUE DATE:

SHEET TITLE:

GRADING PLAN

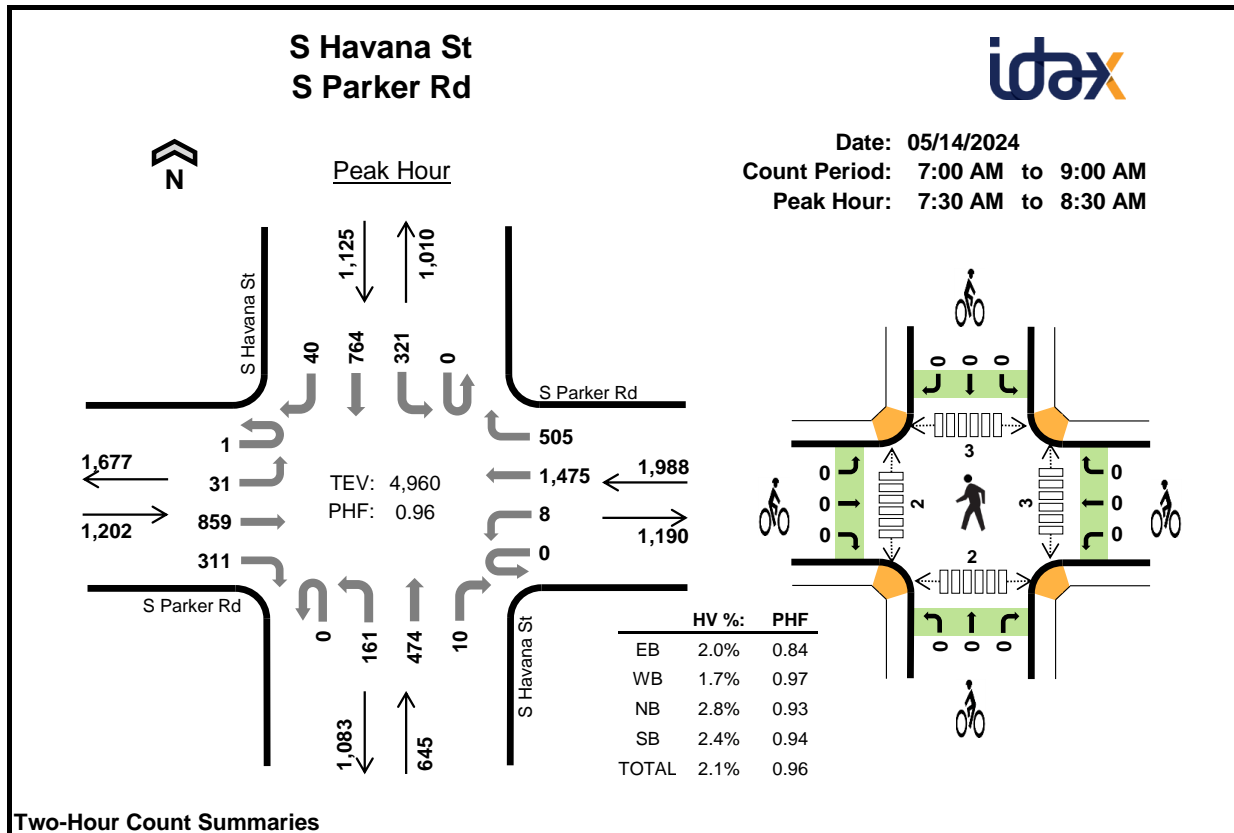
SHEET NUMBER:

2



APPENDIX B

Intersection Count Sheets

**Two-Hour Count Summaries**

| Interval Start | | S Parker Rd | | | | S Parker Rd | | | | S Havana St | | | | S Havana St | | | | 15-min Total | Rolling One Hour |
|----------------|-----|-------------|----|-------|-----|-------------|----|-------|-----|-------------|-----|-----|----|-------------|-----|-------|----|--------------|------------------|
| | | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | | 0 | 3 | 127 | 54 | 0 | 2 | 281 | 64 | 0 | 26 | 97 | 1 | 0 | 53 | 158 | 3 | 869 | 0 |
| 7:15 AM | | 0 | 11 | 219 | 71 | 0 | 4 | 347 | 78 | 0 | 27 | 106 | 0 | 0 | 76 | 167 | 6 | 1,112 | 0 |
| 7:30 AM | | 0 | 7 | 207 | 79 | 0 | 1 | 332 | 152 | 0 | 40 | 131 | 1 | 0 | 80 | 202 | 7 | 1,239 | 0 |
| 7:45 AM | | 0 | 10 | 249 | 98 | 0 | 4 | 352 | 147 | 0 | 43 | 116 | 5 | 0 | 85 | 178 | 10 | 1,297 | 4,517 |
| 8:00 AM | | 1 | 9 | 218 | 82 | 0 | 1 | 400 | 113 | 0 | 39 | 94 | 3 | 0 | 86 | 202 | 10 | 1,258 | 4,906 |
| 8:15 AM | | 0 | 5 | 185 | 52 | 0 | 2 | 391 | 93 | 0 | 39 | 133 | 1 | 0 | 70 | 182 | 13 | 1,166 | 4,960 |
| 8:30 AM | | 1 | 6 | 197 | 65 | 0 | 3 | 384 | 92 | 0 | 45 | 121 | 4 | 0 | 68 | 177 | 7 | 1,170 | 4,891 |
| 8:45 AM | | 1 | 5 | 182 | 51 | 0 | 2 | 356 | 110 | 0 | 52 | 114 | 5 | 0 | 66 | 168 | 11 | 1,123 | 4,717 |
| Count Total | | 3 | 56 | 1,584 | 552 | 0 | 19 | 2,843 | 849 | 0 | 311 | 912 | 20 | 0 | 584 | 1,434 | 67 | 9,234 | 0 |
| Peak Hour | All | 1 | 31 | 859 | 311 | 0 | 8 | 1,475 | 505 | 0 | 161 | 474 | 10 | 0 | 321 | 764 | 40 | 4,960 | 0 |
| | HV | 0 | 0 | 18 | 6 | 0 | 0 | 22 | 12 | 0 | 5 | 13 | 0 | 0 | 9 | 17 | 1 | 103 | 0 |
| | HV% | 0% | 0% | 2% | 2% | - | 0% | 1% | 2% | - | 3% | 3% | 0% | - | 3% | 2% | 3% | 2% | 0 |

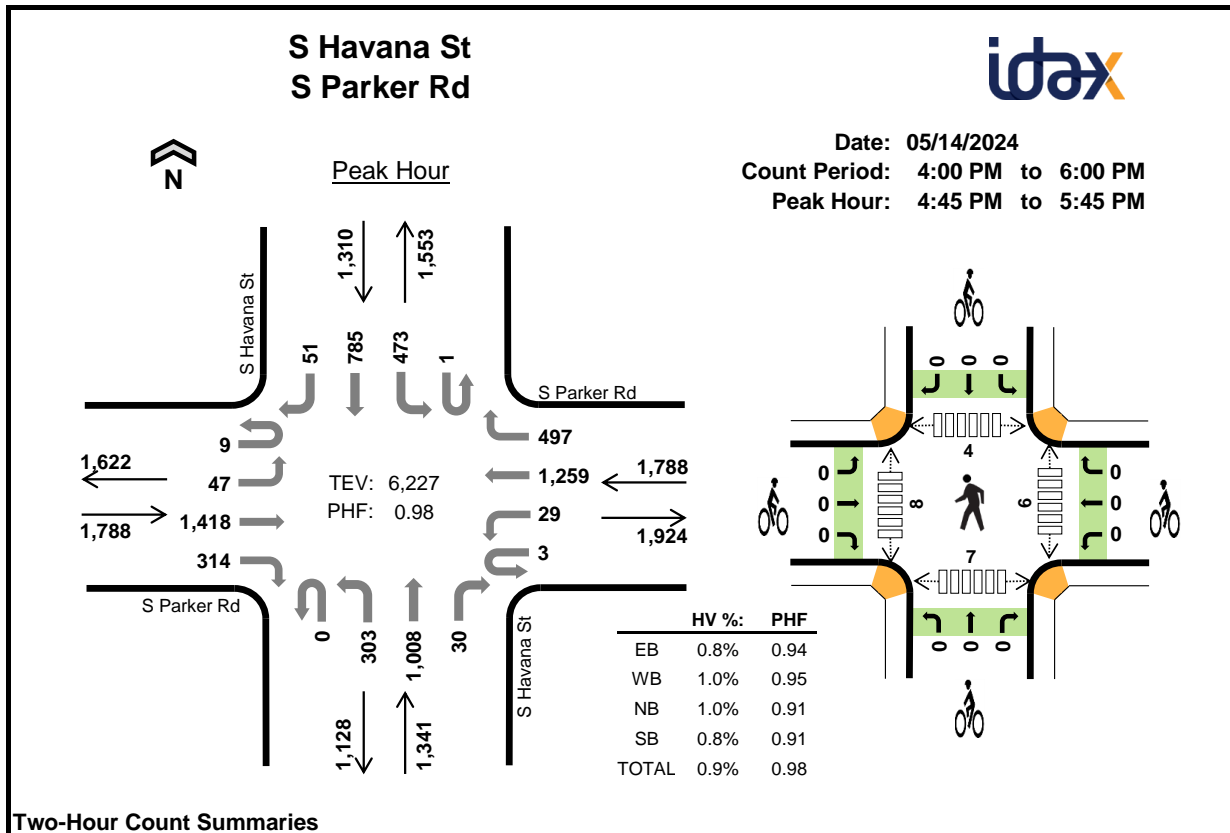
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|----------------|----------------------|----|----|----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 7:00 AM | 4 | 9 | 4 | 7 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 7:15 AM | 6 | 8 | 4 | 8 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 |
| 7:30 AM | 10 | 7 | 3 | 8 | 28 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 7:45 AM | 3 | 5 | 7 | 6 | 21 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 1 | 5 |
| 8:00 AM | 7 | 11 | 3 | 7 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 8:15 AM | 4 | 11 | 5 | 6 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 |
| 8:30 AM | 8 | 13 | 3 | 7 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| 8:45 AM | 8 | 10 | 5 | 10 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 4 |
| Count Total | 50 | 74 | 34 | 59 | 217 | 0 | 0 | 0 | 0 | 0 | 3 | 8 | 5 | 5 | 21 |
| Peak Hour | 24 | 34 | 18 | 27 | 103 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 3 | 2 | 10 |

| Two-Hour Count Summaries - Heavy Vehicles | | | | | | | | | | | | | | | | | | |
|---|-------------|----|----|----|-------------|----|----|----|-------------|----|----|----|-------------|----|----|----|--------------|------------------|
| Interval Start | S Parker Rd | | | | S Parker Rd | | | | S Havana St | | | | S Havana St | | | | 15-min Total | Rolling One Hour |
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | 0 | 0 | 2 | 2 | 0 | 0 | 4 | 5 | 0 | 1 | 2 | 1 | 0 | 2 | 5 | 0 | 24 | 0 |
| 7:15 AM | 0 | 0 | 5 | 1 | 0 | 0 | 5 | 3 | 0 | 1 | 3 | 0 | 0 | 5 | 3 | 0 | 26 | 0 |
| 7:30 AM | 0 | 0 | 8 | 2 | 0 | 0 | 3 | 4 | 0 | 0 | 3 | 0 | 0 | 3 | 5 | 0 | 28 | 0 |
| 7:45 AM | 0 | 0 | 2 | 1 | 0 | 0 | 3 | 2 | 0 | 2 | 5 | 0 | 0 | 2 | 4 | 0 | 21 | 99 |
| 8:00 AM | 0 | 0 | 4 | 3 | 0 | 0 | 8 | 3 | 0 | 2 | 1 | 0 | 0 | 1 | 5 | 1 | 28 | 103 |
| 8:15 AM | 0 | 0 | 4 | 0 | 0 | 0 | 8 | 3 | 0 | 1 | 4 | 0 | 0 | 3 | 3 | 0 | 26 | 103 |
| 8:30 AM | 0 | 0 | 7 | 1 | 0 | 1 | 8 | 4 | 0 | 0 | 3 | 0 | 0 | 3 | 4 | 0 | 31 | 106 |
| 8:45 AM | 0 | 1 | 5 | 2 | 0 | 0 | 7 | 3 | 0 | 1 | 2 | 2 | 0 | 4 | 6 | 0 | 33 | 118 |
| Count Total | 0 | 1 | 37 | 12 | 0 | 1 | 46 | 27 | 0 | 8 | 23 | 3 | 0 | 23 | 35 | 1 | 217 | 0 |
| Peak Hour | 0 | 0 | 18 | 6 | 0 | 0 | 22 | 12 | 0 | 5 | 13 | 0 | 0 | 9 | 17 | 1 | 103 | 0 |

| Two-Hour Count Summaries - Bikes | | | | | | | | | | | | | | | | |
|----------------------------------|-------------|----|----|-------------|----|----|-------------|----|----|-------------|----|----|--------------|------------------|--|--|
| Interval Start | S Parker Rd | | | S Parker Rd | | | S Havana St | | | S Havana St | | | 15-min Total | Rolling One Hour | | |
| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | | | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Count Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Peak Hour | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

**Two-Hour Count Summaries**

| Interval Start | | S Parker Rd | | | | S Parker Rd | | | | S Havana St | | | | S Havana St | | | | 15-min Total | Rolling One Hour |
|----------------|-----|-------------|----|-------|-----|-------------|----|-------|-------|-------------|-----|-------|----|-------------|-----|-------|-----|--------------|------------------|
| | | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 4:00 PM | | 3 | 10 | 365 | 80 | 0 | 2 | 317 | 135 | 0 | 73 | 244 | 4 | 0 | 117 | 173 | 16 | 1,539 | 0 |
| 4:15 PM | | 1 | 6 | 341 | 79 | 0 | 12 | 313 | 121 | 0 | 70 | 228 | 8 | 0 | 127 | 175 | 7 | 1,488 | 0 |
| 4:30 PM | | 4 | 6 | 342 | 71 | 0 | 7 | 310 | 107 | 0 | 75 | 223 | 2 | 0 | 106 | 177 | 11 | 1,441 | 0 |
| 4:45 PM | | 2 | 13 | 349 | 79 | 0 | 11 | 312 | 124 | 0 | 85 | 275 | 7 | 0 | 114 | 205 | 11 | 1,587 | 6,055 |
| 5:00 PM | | 1 | 15 | 337 | 86 | 2 | 8 | 330 | 131 | 0 | 66 | 244 | 10 | 0 | 144 | 200 | 15 | 1,589 | 6,105 |
| 5:15 PM | | 1 | 10 | 383 | 82 | 0 | 8 | 320 | 107 | 0 | 70 | 237 | 1 | 1 | 109 | 188 | 12 | 1,529 | 6,146 |
| 5:30 PM | | 5 | 9 | 349 | 67 | 1 | 2 | 297 | 135 | 0 | 82 | 252 | 12 | 0 | 106 | 192 | 13 | 1,522 | 6,227 |
| 5:45 PM | | 2 | 11 | 322 | 65 | 3 | 9 | 237 | 142 | 0 | 80 | 274 | 7 | 0 | 102 | 182 | 18 | 1,454 | 6,094 |
| Count Total | | 19 | 80 | 2,788 | 609 | 6 | 59 | 2,436 | 1,002 | 0 | 601 | 1,977 | 51 | 1 | 925 | 1,492 | 103 | 12,149 | 0 |
| Peak Hour | All | 9 | 47 | 1,418 | 314 | 3 | 29 | 1,259 | 497 | 0 | 303 | 1,008 | 30 | 1 | 473 | 785 | 51 | 6,227 | 0 |
| | HV | 0 | 0 | 12 | 3 | 0 | 0 | 14 | 4 | 0 | 1 | 12 | 0 | 0 | 3 | 8 | 0 | 57 | 0 |
| | HV% | 0% | 0% | 1% | 1% | 0% | 0% | 1% | 1% | - | 0% | 1% | 0% | 0% | 1% | 1% | 0% | 1% | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|----------------|----------------------|----|----|----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 4:00 PM | 9 | 5 | 4 | 3 | 21 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 3 |
| 4:15 PM | 7 | 4 | 6 | 8 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 5 |
| 4:30 PM | 6 | 6 | 2 | 5 | 19 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 2 |
| 4:45 PM | 6 | 7 | 6 | 3 | 22 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | 1 | 8 |
| 5:00 PM | 3 | 5 | 3 | 3 | 14 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 1 | 7 |
| 5:15 PM | 4 | 3 | 1 | 1 | 9 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 3 | 5 |
| 5:30 PM | 2 | 3 | 3 | 4 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 5 |
| 5:45 PM | 2 | 3 | 5 | 2 | 12 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | 1 | 8 |
| Count Total | 39 | 36 | 30 | 29 | 134 | 1 | 0 | 0 | 0 | 1 | 12 | 13 | 8 | 10 | 43 |
| Peak Hour | 15 | 18 | 13 | 11 | 57 | 0 | 0 | 0 | 0 | 0 | 6 | 8 | 4 | 7 | 25 |

| Two-Hour Count Summaries - Heavy Vehicles | | | | | | | | | | | | | | | | | | |
|---|-------------|----|----|----|-------------|----|----|----|-------------|----|----|----|-------------|----|----|----|-----------------|---------------------|
| Interval Start | S Parker Rd | | | | S Parker Rd | | | | S Havana St | | | | S Havana St | | | | 15-min Total | Rolling One Hour |
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 4:00 PM | 0 | 0 | 8 | 1 | 0 | 0 | 3 | 2 | 0 | 1 | 3 | 0 | 0 | 0 | 3 | 0 | 21 | 0 |
| 4:15 PM | 0 | 0 | 6 | 1 | 0 | 0 | 3 | 1 | 0 | 0 | 6 | 0 | 0 | 2 | 6 | 0 | 25 | 0 |
| 4:30 PM | 0 | 0 | 4 | 2 | 0 | 2 | 3 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 4 | 1 | 19 | 0 |
| 4:45 PM | 0 | 0 | 4 | 2 | 0 | 0 | 6 | 1 | 0 | 0 | 6 | 0 | 0 | 1 | 2 | 0 | 22 | 87 |
| 5:00 PM | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 2 | 0 | 1 | 2 | 0 | 0 | 0 | 3 | 0 | 14 | 80 |
| 5:15 PM | 0 | 0 | 3 | 1 | 0 | 0 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 9 | 64 |
| 5:30 PM | 0 | 0 | 2 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 3 | 0 | 12 | 57 |
| 5:45 PM | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | 2 | 0 | 0 | 0 | 2 | 0 | 12 | 47 |
| Count Total | 0 | 0 | 32 | 7 | 0 | 2 | 25 | 9 | 0 | 7 | 23 | 0 | 0 | 5 | 23 | 1 | 134 | 0 |
| Peak Hour | 0 | 0 | 12 | 3 | 0 | 0 | 14 | 4 | 0 | 1 | 12 | 0 | 0 | 3 | 8 | 0 | 57 | 0 |

| Two-Hour Count Summaries - Bikes | | | | | | | | | | | | | | | | | | |
|----------------------------------|-------------|----|----|-------------|----|----|-------------|----|----|-------------|----|----|-----------------|---------------------|--|--|--|--|
| Interval Start | S Parker Rd | | | S Parker Rd | | | S Havana St | | | S Havana St | | | 15-min Total | Rolling One Hour | | | | |
| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | | | | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | | | | | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 4:30 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | | | | |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | | |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | | |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Count Total | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | | | | |
| Peak Hour | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Parker Rd Access S Parker Rd

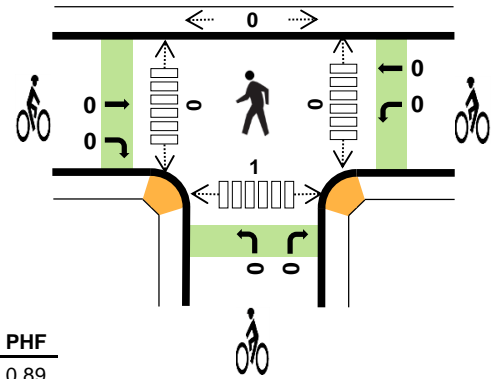
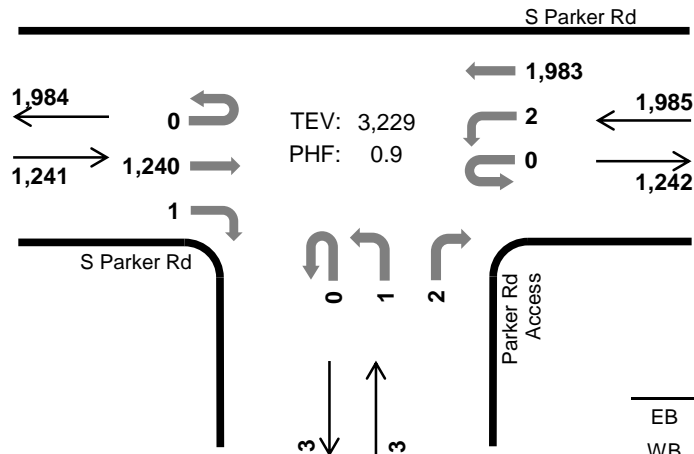


Peak Hour

Date: 05/14/2024

Count Period: 7:00 AM to 9:00 AM

Peak Hour: 7:30 AM to 8:30 AM



| | HV %: | PHF |
|-------|-------|------|
| EB | 2.0% | 0.89 |
| WB | 1.9% | 0.91 |
| NB | 0.0% | 0.38 |
| SB | - | - |
| TOTAL | 2.0% | 0.90 |

Two-Hour Count Summaries

| Interval Start | | S Parker Rd | | | | S Parker Rd | | | | Parker Rd Access | | | | n/a | | | | 15-min Total | Rolling One Hour |
|----------------|-----|-------------|----|-------|----|-------------|----|-------|----|------------------|----|----|----|------------|----|----|----|--------------|------------------|
| | | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | | 0 | 0 | 200 | 1 | 0 | 1 | 392 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 595 | 0 |
| 7:15 AM | | 0 | 0 | 301 | 0 | 0 | 0 | 405 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 706 | 0 |
| 7:30 AM | | 0 | 0 | 310 | 0 | 0 | 0 | 513 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 825 | 0 |
| 7:45 AM | | 0 | 0 | 349 | 1 | 0 | 0 | 544 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 894 | 3,020 |
| 8:00 AM | | 0 | 0 | 305 | 0 | 0 | 1 | 453 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 759 | 3,184 |
| 8:15 AM | | 0 | 0 | 276 | 0 | 0 | 1 | 473 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 751 | 3,229 |
| 8:30 AM | | 0 | 0 | 256 | 3 | 0 | 0 | 430 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 689 | 3,093 |
| 8:45 AM | | 0 | 0 | 275 | 2 | 0 | 1 | 481 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 759 | 2,958 |
| Count Total | | 0 | 0 | 2,272 | 7 | 0 | 4 | 3,691 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 5,978 | 0 |
| Peak Hour | All | 0 | 0 | 1,240 | 1 | 0 | 2 | 1,983 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 3,229 | 0 |
| | HV | 0 | 0 | 25 | 0 | 0 | 0 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 63 | 0 |
| | HV% | - | - | 2% | 0% | - | 0% | 2% | - | - | 0% | - | 0% | - | - | - | - | 2% | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|----------------|----------------------|----|----|----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 7:00 AM | 5 | 10 | 1 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 10 | 8 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 9 | 5 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 4 | 9 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 5 | 12 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 7 | 12 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 8:30 AM | 9 | 12 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 14 | 14 | 0 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 63 | 82 | 1 | 0 | 146 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Peak Hr | 25 | 38 | 0 | 0 | 63 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |

Two-Hour Count Summaries - Heavy Vehicles

| Interval Start | S Parker Rd | | | | S Parker Rd | | | | Parker Rd Access | | | | n/a | | | | 15-min Total | Rolling One Hour |
|-------------------|-------------|----|----|----|-------------|----|----|----|------------------|----|----|----|------------|----|----|----|-----------------|---------------------|
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | 0 | 0 | 5 | 0 | 0 | 1 | 9 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 16 | 0 |
| 7:15 AM | 0 | 0 | 10 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 |
| 7:30 AM | 0 | 0 | 9 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 |
| 7:45 AM | 0 | 0 | 4 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 61 |
| 8:00 AM | 0 | 0 | 5 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 62 |
| 8:15 AM | 0 | 0 | 7 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 63 |
| 8:30 AM | 0 | 0 | 9 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 70 |
| 8:45 AM | 0 | 0 | 12 | 2 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 85 |
| Count Total | 0 | 0 | 61 | 2 | 0 | 1 | 81 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 146 | 0 |
| Peak Hour | 0 | 0 | 25 | 0 | 0 | 0 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 63 | 0 |

Two-Hour Count Summaries - Bikes

| Interval Start | S Parker Rd | | | S Parker Rd | | | Parker Rd Access | | | n/a | | | 15-min Total | Rolling One Hour |
|-------------------|-------------|----|----|-------------|----|----|------------------|----|----|------------|----|----|-----------------|---------------------|
| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Peak Hour | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Parker Rd Access S Parker Rd

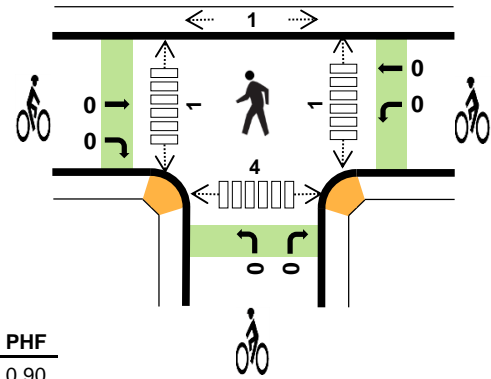
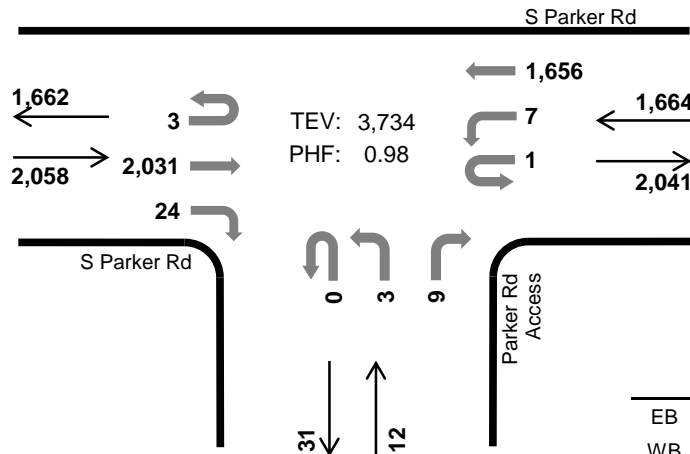


Peak Hour

Date: 05/15/2024

Count Period: 4:00 PM to 6:00 PM

Peak Hour: 4:30 PM to 5:30 PM



| | HV %: | PHF |
|-------|-------|------|
| EB | 0.9% | 0.90 |
| WB | 1.5% | 0.93 |
| NB | 0.0% | 0.50 |
| SB | - | - |
| TOTAL | 1.2% | 0.98 |

Two-Hour Count Summaries

| Interval Start | | S Parker Rd | | | | S Parker Rd | | | | Parker Rd Access | | | | n/a | | | | 15-min Total | Rolling One Hour |
|----------------|-----|-------------|----|-------|----|-------------|----|-------|----|------------------|----|----|----|------------|----|----|----|--------------|------------------|
| | | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 4:00 PM | | 0 | 0 | 491 | 3 | 0 | 3 | 407 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 907 | 0 |
| 4:15 PM | | 1 | 0 | 482 | 4 | 1 | 2 | 413 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 905 | 0 |
| 4:30 PM | | 0 | 0 | 451 | 6 | 0 | 1 | 447 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 908 | 0 |
| 4:45 PM | | 0 | 0 | 519 | 5 | 0 | 1 | 399 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 925 | 3,645 |
| 5:00 PM | | 3 | 0 | 498 | 7 | 1 | 3 | 431 | 0 | 0 | 2 | 0 | 4 | 0 | 0 | 0 | 0 | 949 | 3,687 |
| 5:15 PM | | 0 | 0 | 563 | 6 | 0 | 2 | 379 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 952 | 3,734 |
| 5:30 PM | | 2 | 0 | 468 | 4 | 0 | 4 | 395 | 0 | 0 | 4 | 0 | 3 | 0 | 0 | 0 | 0 | 880 | 3,706 |
| 5:45 PM | | 0 | 0 | 480 | 4 | 0 | 0 | 343 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 832 | 3,613 |
| Count Total | | 6 | 0 | 3,952 | 39 | 2 | 16 | 3,214 | 0 | 0 | 8 | 0 | 21 | 0 | 0 | 0 | 0 | 7,258 | 0 |
| Peak Hour | All | 3 | 0 | 2,031 | 24 | 1 | 7 | 1,656 | 0 | 0 | 3 | 0 | 9 | 0 | 0 | 0 | 0 | 3,734 | 0 |
| | HV | 0 | 0 | 18 | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 0 |
| | HV% | 0% | - | 1% | 0% | 0% | 0% | 2% | - | - | 0% | - | 0% | - | - | - | - | 1% | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|----------------|----------------------|----|----|----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 4:00 PM | 8 | 8 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 9 | 2 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 2 | 4 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 3 |
| 4:45 PM | 5 | 10 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 5:00 PM | 6 | 7 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 5:15 PM | 5 | 4 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 |
| 5:30 PM | 1 | 4 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 5:45 PM | 1 | 5 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 37 | 44 | 0 | 0 | 81 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 4 | 8 |
| Peak Hr | 18 | 25 | 0 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 4 | 7 |

Two-Hour Count Summaries - Heavy Vehicles

| Interval Start | S Parker Rd | | | | S Parker Rd | | | | Parker Rd Access | | | | n/a | | | | 15-min Total | Rolling One Hour |
|-------------------|-------------|----|----|----|-------------|----|----|----|------------------|----|----|----|------------|----|----|----|-----------------|---------------------|
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 4:00 PM | 0 | 0 | 8 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 |
| 4:15 PM | 0 | 0 | 9 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 |
| 4:30 PM | 0 | 0 | 2 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 |
| 4:45 PM | 0 | 0 | 5 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 48 |
| 5:00 PM | 0 | 0 | 6 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 45 |
| 5:15 PM | 0 | 0 | 5 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 43 |
| 5:30 PM | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 42 |
| 5:45 PM | 0 | 0 | 1 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 33 |
| Count Total | 0 | 0 | 37 | 0 | 0 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 81 | 0 |
| Peak Hour | 0 | 0 | 18 | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 0 |

Two-Hour Count Summaries - Bikes

| Interval Start | S Parker Rd | | | S Parker Rd | | | Parker Rd Access | | | n/a | | | 15-min Total | Rolling One Hour |
|-------------------|-------------|----|----|-------------|----|----|------------------|----|----|------------|----|----|-----------------|---------------------|
| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Peak Hour | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

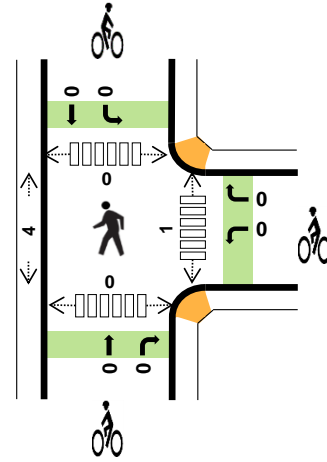
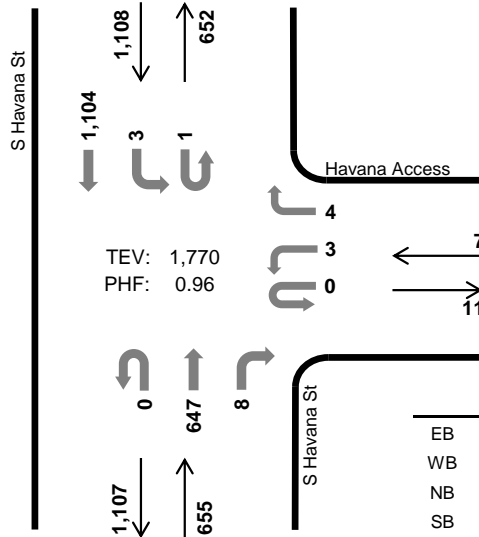
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

S Havana St Havana Access



Peak Hour

Date: 05/14/2024
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM



| | HV %: | PHF |
|-------|-------|------|
| EB | - | - |
| WB | 0.0% | 0.88 |
| NB | 2.4% | 0.94 |
| SB | 2.1% | 0.95 |
| TOTAL | 2.2% | 0.96 |

Two-Hour Count Summaries

| Interval Start | | N/A | | | | Havana Access | | | | S Havana St | | | | S Havana St | | | | 15-min Total | Rolling One Hour |
|-------------------|-----|-----------|----|----|----|---------------|----|----|----|-------------|----|-------|----|-------------|----|-------|----|-----------------|---------------------|
| | | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 118 | 0 | 1 | 1 | 208 | 0 | 329 | 0 |
| 7:15 AM | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 156 | 0 | 0 | 0 | 250 | 0 | 407 | 0 |
| 7:30 AM | | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 170 | 5 | 0 | 0 | 282 | 0 | 459 | 0 |
| 7:45 AM | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 173 | 0 | 0 | 1 | 282 | 0 | 458 | 1,653 |
| 8:00 AM | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 148 | 3 | 1 | 2 | 290 | 0 | 446 | |
| 8:15 AM | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 0 | 156 | 2 | 1 | 1 | 234 | 0 | 399 | 1,762 |
| 8:30 AM | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 187 | 1 | 0 | 2 | 244 | 0 | 437 | 1,740 |
| 8:45 AM | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 179 | 0 | 0 | 2 | 214 | 0 | 397 | 1,679 |
| Count Total | | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 13 | 0 | 0 | 1,287 | 11 | 3 | 9 | 2,004 | 0 | 3,332 | 0 |
| Peak Hour | All | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 4 | 0 | 0 | 647 | 8 | 1 | 3 | 1,104 | 0 | 1,770 | 0 |
| | HV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 1 | 0 | 22 | 0 | 39 | 0 |
| | HV% | - | - | - | - | - | 0% | - | 0% | - | - | 2% | 0% | 100% | 0% | 2% | - | 2% | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|----------------|----------------------|----|----|----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 7:00 AM | 0 | 0 | 4 | 7 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 5 | 3 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 7:30 AM | 0 | 0 | 4 | 6 | 10 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 3 |
| 7:45 AM | 0 | 0 | 5 | 6 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 8:00 AM | 0 | 0 | 2 | 8 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 5 | 5 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 3 | 7 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 1 | 5 | 4 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Count Total | 0 | 1 | 33 | 46 | 80 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 1 | 6 |
| Peak Hr | 0 | 0 | 16 | 23 | 39 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 5 |

| Two-Hour Count Summaries - Heavy Vehicles | | | | | | | | | | | | | | | | | | |
|---|-----------|----|----|----|---------------|----|----|----|-------------|----|----|----|-------------|----|----|----|-----------------|---------------------|
| Interval Start | N/A | | | | Havana Access | | | | S Havana St | | | | S Havana St | | | | 15-min Total | Rolling One Hour |
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 7 | 0 | 11 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 3 | 0 | 8 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 6 | 0 | 10 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 6 | 0 | 11 | 40 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 7 | 0 | 10 | 39 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 0 | 10 | 41 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 7 | 0 | 10 | 41 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 0 | 1 | 3 | 0 | 10 | 40 |
| Count Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 33 | 0 | 1 | 1 | 44 | 0 | 80 | 0 |
| Peak Hour | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 1 | 0 | 22 | 0 | 39 | 0 |

| Two-Hour Count Summaries - Bikes | | | | | | | | | | | | | | | | | | |
|----------------------------------|-----------|----|----|---------------|----|----|-------------|----|----|-------------|----|----|-----------------|---------------------|---|---|---|--|
| Interval Start | N/A | | | Havana Access | | | S Havana St | | | S Havana St | | | 15-min Total | Rolling One Hour | | | | |
| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | | | | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | | | | | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Count Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Peak Hour | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

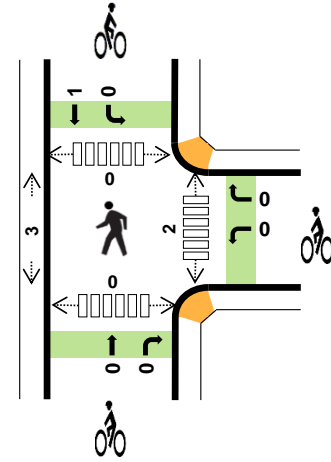
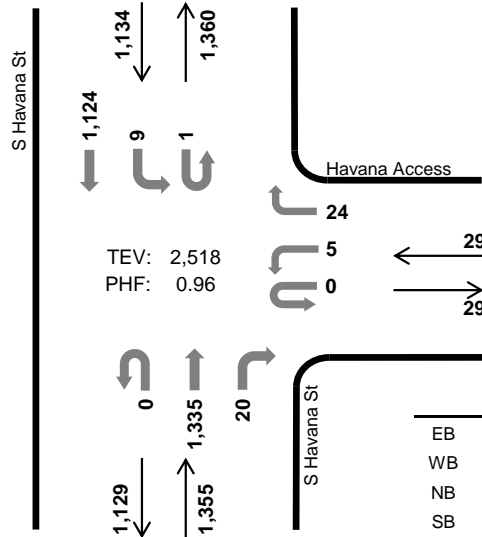
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

S Havana St Havana Access



Peak Hour

Date: 05/14/2024
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM



| | HV %: | PHF |
|-------|-------|------|
| EB | - | - |
| WB | 0.0% | 0.81 |
| NB | 0.9% | 0.96 |
| SB | 1.3% | 0.96 |
| TOTAL | 1.1% | 0.96 |

Two-Hour Count Summaries

| Interval Start | | N/A | | | | Havana Access | | | | S Havana St | | | | S Havana St | | | | 15-min Total | Rolling One Hour |
|-------------------|-----|-----------|----|----|----|---------------|----|----|----|-------------|----|-------|----|-------------|----|-------|----|-----------------|---------------------|
| | | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 4:00 PM | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 0 | 278 | 2 | 0 | 4 | 249 | 0 | 540 | 0 |
| 4:15 PM | | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 331 | 5 | 0 | 3 | 272 | 0 | 616 | 0 |
| 4:30 PM | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 0 | 346 | 6 | 1 | 1 | 265 | 0 | 627 | 0 |
| 4:45 PM | | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 7 | 0 | 0 | 312 | 6 | 0 | 4 | 281 | 0 | 612 | 2,395 |
| 5:00 PM | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 0 | 346 | 6 | 0 | 2 | 294 | 0 | 655 | 2,510 |
| 5:15 PM | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 0 | 331 | 2 | 0 | 2 | 284 | 0 | 624 | 2,518 |
| 5:30 PM | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 320 | 4 | 3 | 4 | 248 | 0 | 587 | 2,478 |
| 5:45 PM | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 359 | 2 | 0 | 4 | 256 | 0 | 624 | 2,490 |
| Count Total | | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 43 | 0 | 0 | 2,623 | 33 | 4 | 24 | 2,149 | 0 | 4,885 | 0 |
| Peak Hour | All | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 24 | 0 | 0 | 1,335 | 20 | 1 | 9 | 1,124 | 0 | 2,518 | 0 |
| | HV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 1 | 0 | 14 | 0 | 27 | 0 |
| | HV% | - | - | - | - | - | 0% | - | 0% | - | - | 1% | 0% | 100% | 0% | 1% | - | 1% | 0 |

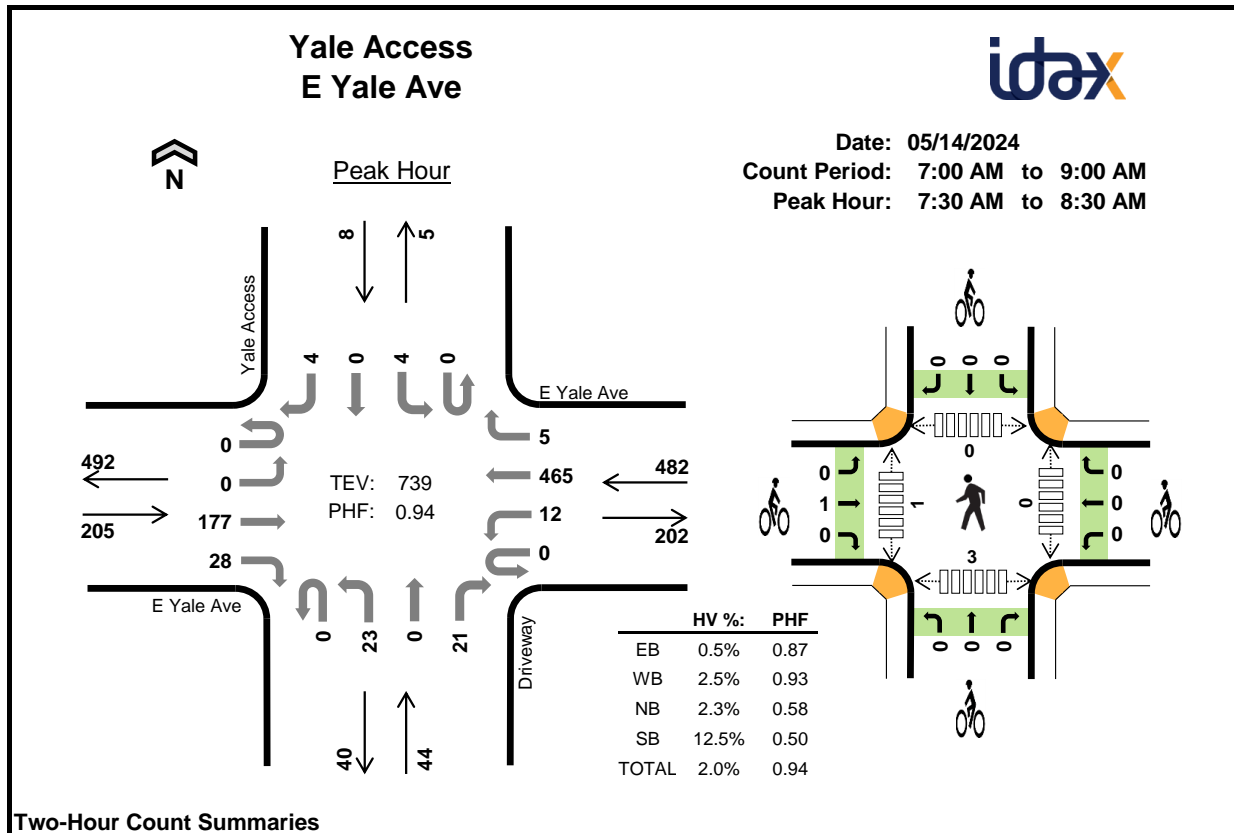
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|----------------|----------------------|----|----|----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 4:00 PM | 0 | 0 | 4 | 4 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 5 | 9 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 3 | 7 | 10 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 2 |
| 4:45 PM | 0 | 0 | 3 | 4 | 7 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 5:00 PM | 0 | 0 | 3 | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 5:15 PM | 0 | 0 | 3 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 5:30 PM | 0 | 0 | 3 | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 4 | 2 | 6 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Count Total | 0 | 0 | 28 | 33 | 61 | 0 | 0 | 0 | 1 | 1 | 3 | 3 | 0 | 0 | 6 |
| Peak Hr | 0 | 0 | 12 | 15 | 27 | 0 | 0 | 0 | 1 | 1 | 2 | 3 | 0 | 0 | 5 |

| Two-Hour Count Summaries - Heavy Vehicles | | | | | | | | | | | | | | | | | | |
|---|-----------|----|----|----|---------------|----|----|----|-------------|----|----|----|-------------|----|----|----|-----------------|---------------------|
| Interval Start | N/A | | | | Havana Access | | | | S Havana St | | | | S Havana St | | | | 15-min Total | Rolling One Hour |
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 8 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 9 | 0 | 14 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 6 | 0 | 10 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 4 | 0 | 7 | 39 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 6 | 37 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 4 | 27 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 6 | 23 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 2 | 0 | 6 | 22 |
| Count Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 1 | 0 | 32 | 0 | 61 | 0 |
| Peak Hour | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 1 | 0 | 14 | 0 | 27 | 0 |

| Two-Hour Count Summaries - Bikes | | | | | | | | | | | | | | | | | | |
|----------------------------------|-----------|----|----|---------------|----|----|-------------|----|----|-------------|----|----|-----------------|---------------------|---|---|---|---|
| Interval Start | N/A | | | Havana Access | | | S Havana St | | | S Havana St | | | 15-min Total | Rolling One Hour | | | | |
| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | | | | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | | | | | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Count Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| Peak Hour | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

**Two-Hour Count Summaries**

| Interval Start | | E Yale Ave | | | | E Yale Ave | | | | Driveway | | | | Yale Access | | | | 15-min Total | Rolling One Hour |
|----------------|-----|------------|----|-----|----|------------|----|-----|----|------------|----|----|----|-------------|----|----|-----|--------------|------------------|
| | | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | | 0 | 0 | 28 | 3 | 0 | 6 | 118 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 163 | 0 |
| 7:15 AM | | 0 | 0 | 40 | 5 | 0 | 4 | 104 | 3 | 0 | 6 | 0 | 6 | 0 | 0 | 0 | 0 | 168 | 0 |
| 7:30 AM | | 0 | 0 | 47 | 6 | 0 | 2 | 125 | 2 | 0 | 4 | 0 | 6 | 0 | 3 | 0 | 1 | 196 | 0 |
| 7:45 AM | | 0 | 0 | 34 | 9 | 0 | 2 | 115 | 1 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 1 | 170 | 697 |
| 8:00 AM | | 0 | 0 | 48 | 11 | 0 | 2 | 112 | 2 | 0 | 3 | 0 | 4 | 0 | 1 | 0 | 1 | 184 | 718 |
| 8:15 AM | | 0 | 0 | 48 | 2 | 0 | 6 | 113 | 0 | 0 | 12 | 0 | 7 | 0 | 0 | 0 | 1 | 189 | 739 |
| 8:30 AM | | 0 | 0 | 34 | 5 | 0 | 4 | 128 | 2 | 0 | 4 | 0 | 7 | 0 | 1 | 0 | 1 | 186 | 729 |
| 8:45 AM | | 0 | 0 | 58 | 4 | 0 | 2 | 101 | 2 | 0 | 6 | 0 | 5 | 0 | 2 | 0 | 0 | 180 | 739 |
| Count Total | | 0 | 0 | 337 | 45 | 0 | 28 | 916 | 12 | 0 | 43 | 0 | 43 | 0 | 7 | 0 | 5 | 1,436 | 0 |
| Peak Hour | All | 0 | 0 | 177 | 28 | 0 | 12 | 465 | 5 | 0 | 23 | 0 | 21 | 0 | 4 | 0 | 4 | 739 | 0 |
| | HV | 0 | 0 | 1 | 0 | 0 | 0 | 12 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 15 | 0 |
| | HV% | - | - | 1% | 0% | - | 0% | 3% | 0% | - | 4% | - | 0% | - | 0% | - | 25% | 2% | 0 |

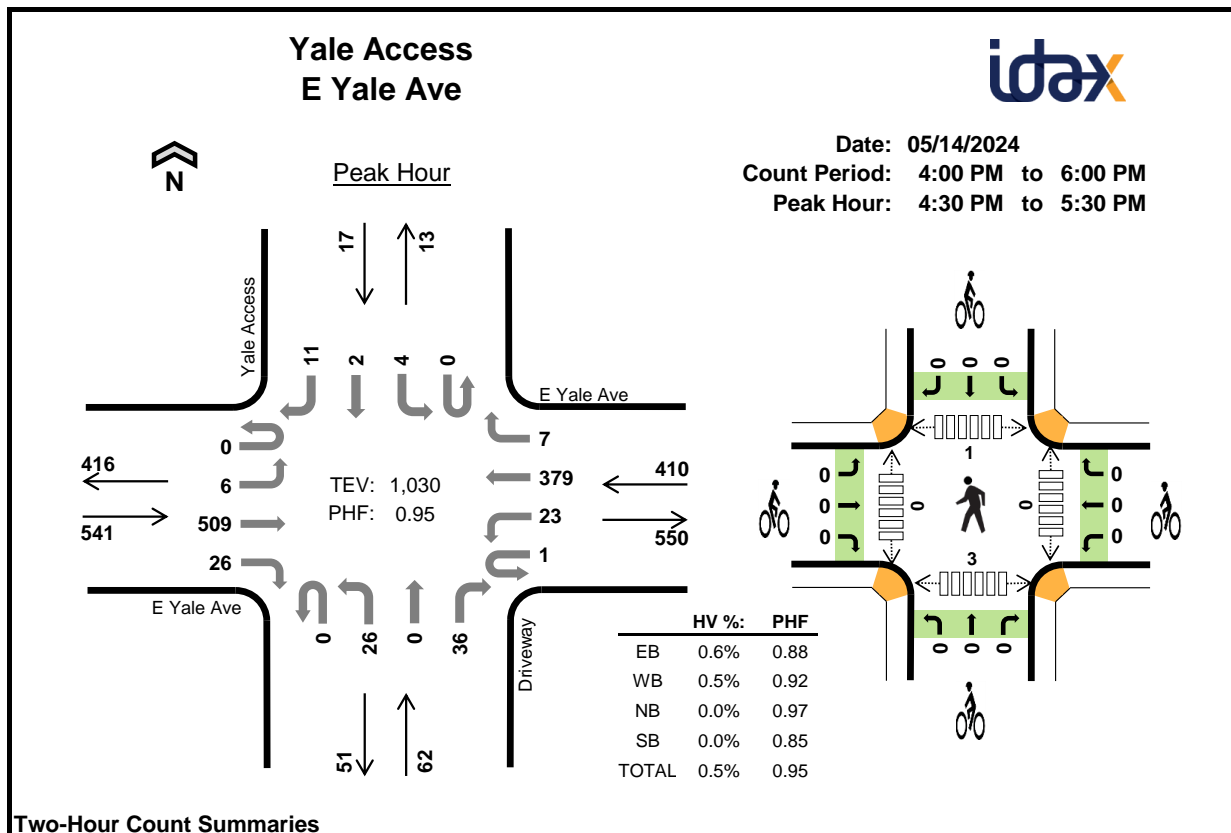
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|----------------|----------------------|----|----|----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 7:15 AM | 1 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 1 | 3 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 2 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| 8:00 AM | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 3 | 1 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 3 |
| 8:30 AM | 0 | 5 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 5 |
| Count Total | 2 | 21 | 1 | 1 | 25 | 2 | 0 | 0 | 0 | 2 | 1 | 2 | 2 | 5 | 10 |
| Peak Hour | 1 | 12 | 1 | 1 | 15 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 4 |

| Two-Hour Count Summaries - Heavy Vehicles | | | | | | | | | | | | | | | | | | |
|---|------------|----|----|----|------------|----|----|----|------------|----|----|----|-------------|----|----|----|--------------|------------------|
| Interval Start | E Yale Ave | | | | E Yale Ave | | | | Driveway | | | | Yale Access | | | | 15-min Total | Rolling One Hour |
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| 7:30 AM | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 9 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 13 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 15 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 16 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 16 |
| Count Total | 0 | 0 | 2 | 0 | 0 | 1 | 20 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 25 | 0 |
| Peak Hour | 0 | 0 | 1 | 0 | 0 | 0 | 12 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 15 | 0 |

| Two-Hour Count Summaries - Bikes | | | | | | | | | | | | | | | | | | |
|----------------------------------|------------|----|----|------------|----|----|------------|----|----|-------------|----|----|--------------|------------------|--|--|--|--|
| Interval Start | E Yale Ave | | | E Yale Ave | | | Driveway | | | Yale Access | | | 15-min Total | Rolling One Hour | | | | |
| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | | | | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | | | | | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 7:45 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | | | | |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | | |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | | |
| 8:30 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | | | | |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | | | |
| Count Total | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | | | | |
| Peak Hour | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | | | | |

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

**Two-Hour Count Summaries**

| Interval Start | | E Yale Ave | | | | E Yale Ave | | | | Driveway | | | | Yale Access | | | | 15-min Total | Rolling One Hour |
|----------------|-----|------------|----|-----|----|------------|----|-----|----|------------|----|----|----|-------------|----|----|----|--------------|------------------|
| | | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 4:00 PM | | 0 | 2 | 76 | 6 | 0 | 7 | 95 | 1 | 0 | 5 | 0 | 13 | 0 | 2 | 0 | 3 | 210 | 0 |
| 4:15 PM | | 0 | 0 | 85 | 10 | 0 | 5 | 95 | 1 | 0 | 9 | 1 | 6 | 0 | 2 | 0 | 6 | 220 | 0 |
| 4:30 PM | | 0 | 2 | 99 | 8 | 1 | 10 | 88 | 2 | 0 | 9 | 0 | 7 | 0 | 2 | 0 | 3 | 231 | 0 |
| 4:45 PM | | 0 | 0 | 123 | 5 | 0 | 4 | 106 | 1 | 0 | 3 | 0 | 13 | 0 | 0 | 1 | 4 | 260 | 921 |
| 5:00 PM | | 0 | 3 | 137 | 10 | 0 | 4 | 96 | 1 | 0 | 6 | 0 | 10 | 0 | 1 | 0 | 2 | 270 | 981 |
| 5:15 PM | | 0 | 1 | 150 | 3 | 0 | 5 | 89 | 3 | 0 | 8 | 0 | 6 | 0 | 1 | 1 | 2 | 269 | 1,030 |
| 5:30 PM | | 0 | 1 | 110 | 2 | 0 | 3 | 92 | 4 | 0 | 5 | 0 | 6 | 0 | 3 | 0 | 3 | 229 | 1,028 |
| 5:45 PM | | 0 | 1 | 90 | 5 | 0 | 2 | 87 | 4 | 0 | 4 | 0 | 8 | 0 | 4 | 0 | 2 | 207 | 975 |
| Count Total | | 0 | 10 | 870 | 49 | 1 | 40 | 748 | 17 | 0 | 49 | 1 | 69 | 0 | 15 | 2 | 25 | 1,896 | 0 |
| Peak Hour | All | 0 | 6 | 509 | 26 | 1 | 23 | 379 | 7 | 0 | 26 | 0 | 36 | 0 | 4 | 2 | 11 | 1,030 | 0 |
| | HV | 0 | 0 | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 |
| | HV% | - | 0% | 1% | 0% | 0% | 0% | 1% | 0% | - | 0% | - | 0% | - | 0% | 0% | 0% | 0% | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

| Interval Start | Heavy Vehicle Totals | | | | | Bicycles | | | | | Pedestrians (Crossing Leg) | | | | |
|----------------|----------------------|----|----|----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
| | EB | WB | NB | SB | Total | EB | WB | NB | SB | Total | East | West | North | South | Total |
| 4:00 PM | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 3 |
| 4:15 PM | 2 | 2 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 3 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 2 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| 5:15 PM | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 6 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 |
| Count Total | 7 | 4 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 6 | 11 | 19 |
| Peak Hour | 3 | 2 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 4 |

| Two-Hour Count Summaries - Heavy Vehicles | | | | | | | | | | | | | | | | | | |
|---|------------|----|----|----|------------|----|----|----|------------|----|----|----|-------------|----|----|----|--------------|------------------|
| Interval Start | E Yale Ave | | | | E Yale Ave | | | | Driveway | | | | Yale Access | | | | 15-min Total | Rolling One Hour |
| | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | | | |
| | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | UT | LT | TH | RT | | |
| 4:00 PM | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 4:15 PM | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 5:15 PM | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Count Total | 0 | 0 | 6 | 1 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 |
| Peak Hour | 0 | 0 | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 |

| Two-Hour Count Summaries - Bikes | | | | | | | | | | | | | | | | | | |
|----------------------------------|------------|----|----|------------|----|----|------------|----|----|-------------|----|----|--------------|------------------|--|--|--|--|
| Interval Start | E Yale Ave | | | E Yale Ave | | | Driveway | | | Yale Access | | | 15-min Total | Rolling One Hour | | | | |
| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | | | | | | |
| | LT | TH | RT | LT | TH | RT | LT | TH | RT | LT | TH | RT | | | | | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Count Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| Peak Hour | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

APPENDIX C

Future Traffic Projections

CDOT OTIS: QT 4263 Aurora (Parker Road)

| ROUTE | REFPT | ENDREFPT | LENGTH | UPDATEYR | AADT | YR20FACTOR | ANNUAL GROWTH RATE | DHV | DD | LOCATION |
|-----------|--------|----------|--------|----------|-------|------------|-----------------------|-----|----|---|
| 083A | 71.228 | 71.811 | 0.583 | 2022 | 37000 | 1.14 | 0.66% | 9.5 | 55 | ON SH 83 PARKER RD NW/O CORNELL ST & DARTMOUTH AVE AURORA |
| 083A | 71.811 | 72.133 | 0.312 | 2022 | 36000 | 1.09 | 0.43% | 9 | 52 | ON SH 83 PARKER RD NW/O YALE AVE AURORA |
| 083A | 72.133 | 72.491 | 0.366 | 2022 | 32000 | 1.11 | 0.52% | 10 | 54 | ON SH 83 PARKER RD NW/O SH 30 HAVANA ST AURORA |
| Averages: | | | | | | 1.11 | 0.54% | | | |

CDOT OTIS: QT 4263 Aurora (Havana Street)

| ROUTE | REFPT | ENDREFPT | LENGTH | UPDATEYR | AADT | YR20FACTOR | ANNUAL GROWTH RATE | DHV | DD | LOCATION |
|-----------|-------|----------|--------|----------|-------|------------|-----------------------|-----|----|---|
| 030A | 3.093 | 3.831 | 0.73 | 2022 | 26000 | 1.09 | 0.43% | 9.5 | 57 | ON SH 30 HAVANA ST S/O SH 83 PARKER RD DENVER |
| 030A | 3.831 | 4.276 | 0.269 | 2022 | 33000 | 1.10 | 0.48% | 10 | 52 | ON SH 30 HAVANA ST N/O SH 83 PARKER RD AURORA |
| Averages: | | | | | | 1.10 | 0.45% | | | |

DRCOG Traffic Projections:

QuikTrip 4263

| Location | 2020 | 2050 | Growth Factor | Annual Growth |
|------------------------------|---------|---------|---------------|---------------|
| Havana St South of Parker Rd | 34,000 | 44,000 | 1.29 | 0.86% |
| Havana St North of Parker Rd | 45,000 | 56,000 | 1.24 | 0.73% |
| Parker Rd West of Havana St | 53,000 | 59,000 | 1.11 | 0.36% |
| Parker Rd East of Havana St | 59,000 | 65,000 | 1.10 | 0.32% |
| Yale Ave West of Parker Rd | 9,000 | 13,000 | 1.44 | 1.23% |
| Yale Ave East of Parker Rd | 21,000 | 27,000 | 1.29 | 0.84% |
| Total | 191,000 | 224,000 | 1.17 | 0.53% |

APPENDIX D

Trip Generation Worksheets

Project QuikTrip 4263
 Subject Trip Generation for Gasoline/Service Station with Convenience Market
 Designed by CMF Date 15/15/2024 Job No. 096888046
 Checked by _____ Date _____ Sheet No. 1 of 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

Land Use Code - Convenience Store/Gas Station - GFA (4-5.5K) (945)

Independent Variable - Vehicle Fueling Positions (X)

Vehicle Fueling Positions= 18 Positions

X = 18

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (Page 873)

| | | | |
|-----------------|---------------------------|---------------------------|-----------|
| Average Weekday | Directional Distribution: | 50% ent. | 50% exit. |
| T = 27.04 (X) | T = 487 | Average Vehicle Trip Ends | |
| T = 27.04 * 18 | 243 entering | 244 exiting | |
| | 243 + 244 = 487 | | |

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (Page 874)

| | | | |
|--------------------|---------------------------|---------------------------|-----------|
| Average Weekday | Directional Distribution: | 50% ent. | 50% exit. |
| T = 22.76 (X) | T = 410 | Average Vehicle Trip Ends | |
| T = 22.76 * 18.000 | 205 entering | 205 exiting | |
| | 205 + 205 = 410 | | |

Weekday (Page 872)

| | | |
|---------------------|---------------------------|---------------------------|
| Average Weekday | Directional Distribution: | 50% entering, 50% exiting |
| T = 257.13 (X) | T = 4628 | Average Vehicle Trip Ends |
| T = 257.13 * 18.000 | 2314 entering | 2314 exiting |
| | 2314 + 2314 = 4628 | |

Non Pass-By Trip Volumes (Per ITE Trip Generation Manual, 11th Edition)

| | |
|--------------------------------|------------------------------------|
| PM Peak Hour = 25% Non-Pass By | AM Peak Hour = 24% Non-Pass By |
| IN Out Total | |
| AM Peak 58 59 117 | |
| PM Peak 51 51 102 | |
| Daily 579 579 1158 | PM Peak Hour Rate Applied to Daily |

Pass-By Trip Volumes (Per ITE Trip Generation Manual, 11th Edition)

| | |
|----------------------------|------------------------------------|
| PM Peak Hour = 75% Pass By | AM Peak Hour = 76% Pass By |
| IN Out Total | |
| AM Peak 185 185 370 | |
| PM Peak 154 154 308 | |
| Daily 1735 1735 3470 | PM Peak Hour Rate Applied to Daily |

APPENDIX E

Intersection Analysis Worksheets

Timings

Existing AM

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

08/13/2024



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↰ | ↰↰↰ | ↰ | ↰↰ | ↰ | ↰ | ↰↰↰ | ↰↰ | ↰↰↰ |
| Traffic Volume (vph) | 32 | 859 | 8 | 1475 | 505 | 161 | 474 | 321 | 764 |
| Future Volume (vph) | 32 | 859 | 8 | 1475 | 505 | 161 | 474 | 321 | 764 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | Prot | NA | Prot | NA |
| Protected Phases | 5 | 2 | 1 | 6 | | 7 | 4 | 3 | 8 |
| Permitted Phases | 2 | | 6 | | 6 | | | | |
| Detector Phase | 5 | 2 | 1 | 6 | 6 | 7 | 4 | 3 | 8 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.5 | 24.5 | 11.5 | 24.5 | 24.5 | 11.5 | 24.5 | 11.5 | 24.5 |
| Total Split (s) | 11.5 | 62.2 | 11.5 | 62.2 | 62.2 | 19.1 | 25.2 | 21.1 | 27.2 |
| Total Split (%) | 9.6% | 51.8% | 9.6% | 51.8% | 51.8% | 15.9% | 21.0% | 17.6% | 22.7% |
| Yellow Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lag | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Max | None | C-Max | C-Max | None | None | None | None |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

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

Natural Cycle: 110

Control Type: Actuated-Coordinated

Splits and Phases: 1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)


| | | |
|------------------|--------|--------|
| Ø1 Ø2 (R) | Ø3 | Ø4 |
| 11.5 s | 62.2 s | 21.1 s |
| Ø5 Ø6 (R) | Ø7 | Ø8 |
| 11.5 s | 62.2 s | 27.2 s |
| | | 19.1 s |

HCM 7th Signalized Intersection Summary

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

Existing AM

08/13/2024

| |  | | | | | | | | | | | |
|------------------------------|--|------|------|------|------|------|------|------|------|------|------|------|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↰ | ↗↗↗ | | ↰ | ↗↗ | ↗ | ↰ | ↗↗↗ | | ↰↰ | ↗↗↗ | |
| Traffic Volume (veh/h) | 32 | 859 | 311 | 8 | 1475 | 505 | 161 | 474 | 10 | 321 | 764 | 40 |
| Future Volume (veh/h) | 32 | 859 | 311 | 8 | 1475 | 505 | 161 | 474 | 10 | 321 | 764 | 40 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width Adj. | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 33 | 895 | 0 | 8 | 1536 | 0 | 168 | 494 | 0 | 334 | 796 | 0 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 |
| Cap, veh/h | 227 | 2539 | | 320 | 1703 | | 186 | 827 | | 390 | 875 | |
| Arrive On Green | 0.03 | 0.50 | 0.00 | 0.02 | 0.96 | 0.00 | 0.03 | 0.05 | 0.00 | 0.11 | 0.17 | 0.00 |
| Sat Flow, veh/h | 1781 | 5274 | 0 | 1781 | 3554 | 1585 | 1767 | 5233 | 0 | 3456 | 5274 | 0 |
| Grp Volume(v), veh/h | 33 | 895 | 0 | 8 | 1536 | 0 | 168 | 494 | 0 | 334 | 796 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1702 | 0 | 1781 | 1777 | 1585 | 1767 | 1689 | 0 | 1728 | 1702 | 0 |
| Q Serve(g_s), s | 1.1 | 12.8 | 0.0 | 0.3 | 15.9 | 0.0 | 11.4 | 11.4 | 0.0 | 11.4 | 18.4 | 0.0 |
| Cycle Q Clear(g_c), s | 1.1 | 12.8 | 0.0 | 0.3 | 15.9 | 0.0 | 11.4 | 11.4 | 0.0 | 11.4 | 18.4 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 227 | 2539 | | 320 | 1703 | | 186 | 827 | | 390 | 875 | |
| V/C Ratio(X) | 0.15 | 0.35 | | 0.02 | 0.90 | | 0.91 | 0.60 | | 0.86 | 0.91 | |
| Avail Cap(c_a), veh/h | 251 | 2539 | | 377 | 1703 | | 186 | 827 | | 420 | 881 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.00 | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 16.0 | 18.4 | 0.0 | 16.1 | 1.6 | 0.0 | 57.3 | 52.9 | 0.0 | 52.3 | 48.8 | 0.0 |
| Incr Delay (d2), s/veh | 0.3 | 0.4 | 0.0 | 0.0 | 8.2 | 0.0 | 40.5 | 1.2 | 0.0 | 15.1 | 13.3 | 0.0 |
| Initial Q Delay(d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.5 | 5.1 | 0.0 | 0.1 | 2.9 | 0.0 | 7.5 | 5.3 | 0.0 | 5.7 | 8.9 | 0.0 |
| Unsig. Movement Delay, s/veh | | | 1.00 | | | 0.00 | | | 1.00 | | | 0.00 |
| LnGrp Delay(d), s/veh | 16.3 | 18.8 | 1.0 | 16.1 | 9.8 | 0.0 | 97.8 | 54.1 | 1.0 | 67.3 | 62.1 | 0.0 |
| LnGrp LOS | B | B | A | B | A | A | F | D | A | E | E | A |
| Approach Vol, veh/h | 1252 | | | 2070 | | | 672 | | | 1172 | | |
| Approach Delay, s/veh | 14.1 | | | 7.3 | | | 64.2 | | | 61.4 | | |
| Approach LOS | B | | | A | | | E | | | E | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 7.7 | 66.2 | 20.1 | 26.1 | 9.8 | 64.0 | 19.1 | 27.1 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | | | | |
| Max Green Setting (Gmax), s | 5.0 | 55.7 | 14.6 | 18.7 | 5.0 | 55.7 | 12.6 | 20.7 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.3 | 14.8 | 13.4 | 13.4 | 3.1 | 17.9 | 13.4 | 20.4 | | | | |
| Green Ext Time (p_c), s | 0.0 | 7.7 | 0.2 | 1.5 | 0.0 | 17.0 | 0.0 | 0.2 | | | | |

Intersection Summary

| | |
|------------------------------|------|
| HCM 7th Control Delay, s/veh | 28.6 |
| HCM 7th LOS | C |

Notes

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

Timings

Existing PM

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

08/13/2024



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | |
| Traffic Volume (vph) | 56 | 1418 | 32 | 1259 | 497 | 303 | 1008 | 474 | 785 |
| Future Volume (vph) | 56 | 1418 | 32 | 1259 | 497 | 303 | 1008 | 474 | 785 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | Prot | NA | Prot | NA |
| Protected Phases | 5 | 2 | 1 | 6 | | 7 | 4 | 3 | 8 |
| Permitted Phases | 2 | | 6 | | 6 | | | | |
| Detector Phase | 5 | 2 | 1 | 6 | 6 | 7 | 4 | 3 | 8 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.5 | 24.5 | 11.5 | 24.5 | 24.5 | 11.5 | 24.5 | 11.5 | 24.5 |
| Total Split (s) | 11.5 | 51.6 | 11.6 | 51.7 | 51.7 | 28.5 | 32.2 | 24.6 | 28.3 |
| Total Split (%) | 9.6% | 43.0% | 9.7% | 43.1% | 43.1% | 23.8% | 26.8% | 20.5% | 23.6% |
| Yellow Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lag | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Max | None | C-Max | C-Max | None | None | None | None |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 61 (51%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Splits and Phases: 1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)






















| | | | | | | | |
|--------|----|--------|--------|--------|----|--------|----|
| | Ø1 | | Ø2 (R) | | Ø3 | | Ø4 |
| 11.6 s | | 51.6 s | | 24.6 s | | 32.2 s | |
| | Ø5 | | Ø6 (R) | | Ø7 | | Ø8 |
| 11.5 s | | 51.7 s | | 28.3 s | | 28.5 s | |

HCM 7th Signalized Intersection Summary

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

Existing PM

08/13/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  |  |  |  | |  |  | |
| Traffic Volume (veh/h) | 56 | 1418 | 314 | 32 | 1259 | 497 | 303 | 1008 | 30 | 474 | 785 | 51 |
| Future Volume (veh/h) | 56 | 1418 | 314 | 32 | 1259 | 497 | 303 | 1008 | 30 | 474 | 785 | 51 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width Adj. | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 57 | 1447 | 0 | 33 | 1285 | 0 | 309 | 1029 | 0 | 484 | 801 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 134 | 1995 | | 165 | 1361 | | 336 | 1093 | | 521 | 900 | |
| Arrive On Green | 0.04 | 0.39 | 0.00 | 0.01 | 0.13 | 0.00 | 0.25 | 0.28 | 0.00 | 0.15 | 0.18 | 0.00 |
| Sat Flow, veh/h | 1781 | 5274 | 0 | 1781 | 3554 | 1585 | 1781 | 5274 | 0 | 3456 | 5274 | 0 |
| Grp Volume(v), veh/h | 57 | 1447 | 0 | 33 | 1285 | 0 | 309 | 1029 | 0 | 484 | 801 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1702 | 0 | 1781 | 1777 | 1585 | 1781 | 1702 | 0 | 1728 | 1702 | 0 |
| Q Serve(g_s), s | 2.3 | 28.9 | 0.0 | 1.3 | 43.0 | 0.0 | 20.3 | 23.6 | 0.0 | 16.6 | 18.4 | 0.0 |
| Cycle Q Clear(g_c), s | 2.3 | 28.9 | 0.0 | 1.3 | 43.0 | 0.0 | 20.3 | 23.6 | 0.0 | 16.6 | 18.4 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 134 | 1995 | | 165 | 1361 | | 336 | 1093 | | 521 | 900 | |
| V/C Ratio(X) | 0.43 | 0.73 | | 0.20 | 0.94 | | 0.92 | 0.94 | | 0.93 | 0.89 | |
| Avail Cap(c_a), veh/h | 145 | 1995 | | 191 | 1361 | | 336 | 1094 | | 521 | 928 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 1.33 | 1.33 | 1.33 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 29.5 | 31.1 | 0.0 | 25.3 | 51.1 | 0.0 | 44.1 | 42.2 | 0.0 | 50.3 | 48.3 | 0.0 |
| Incr Delay (d2), s/veh | 2.1 | 2.3 | 0.0 | 0.6 | 14.2 | 0.0 | 29.6 | 15.3 | 0.0 | 23.2 | 10.5 | 0.0 |
| Initial Q Delay(d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.0 | 12.2 | 0.0 | 0.6 | 23.3 | 0.0 | 11.2 | 10.9 | 0.0 | 8.8 | 8.7 | 0.0 |
| Unsig. Movement Delay, s/veh | | | 1.00 | | | 0.00 | | | 1.00 | | | 0.00 |
| LnGrp Delay(d), s/veh | 31.6 | 33.4 | 1.0 | 25.9 | 65.4 | 0.0 | 73.6 | 57.5 | 1.0 | 73.5 | 58.8 | 0.0 |
| LnGrp LOS | C | C | A | C | E | A | E | E | A | E | E | A |
| Approach Vol, veh/h | 1824 | | | 1825 | | | 1369 | | | 1337 | | |
| Approach Delay, s/veh | 27.7 | | | 46.5 | | | 59.8 | | | 61.8 | | |
| Approach LOS | C | | | D | | | E | | | E | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.8 | 53.4 | 24.6 | 32.2 | 10.8 | 52.5 | 29.1 | 27.7 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | | | | |
| Max Green Setting (Gmax), s | 5.1 | 45.1 | 18.1 | 25.7 | 5.0 | 45.2 | 22.0 | 21.8 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.3 | 30.9 | 18.6 | 25.6 | 4.3 | 45.0 | 22.3 | 20.4 | | | | |
| Green Ext Time (p_c), s | 0.0 | 8.6 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.8 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 7th Control Delay, s/veh | 47.2 | | | | | | | | | | | |
| HCM 7th LOS | D | | | | | | | | | | | |
| Notes | | | | | | | | | | | | |
| Unsignalized Delay for [NBR, EBR, WBR, SBR] is included in calculations of the approach delay and intersection delay. | | | | | | | | | | | | |

Timings

2026 Background AM

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

08/13/2024



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | |
| Traffic Volume (vph) | 32 | 868 | 8 | 1491 | 510 | 163 | 479 | 324 | 772 |
| Future Volume (vph) | 32 | 868 | 8 | 1491 | 510 | 163 | 479 | 324 | 772 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | Prot | NA | Prot | NA |
| Protected Phases | 5 | 2 | 1 | 6 | | 7 | 4 | 3 | 8 |
| Permitted Phases | 2 | | 6 | | 6 | | | | |
| Detector Phase | 5 | 2 | 1 | 6 | 6 | 7 | 4 | 3 | 8 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.5 | 24.5 | 11.5 | 24.5 | 24.5 | 11.5 | 24.5 | 11.5 | 24.5 |
| Total Split (s) | 11.5 | 62.4 | 11.5 | 62.4 | 62.4 | 19.1 | 24.7 | 21.4 | 27.0 |
| Total Split (%) | 9.6% | 52.0% | 9.6% | 52.0% | 52.0% | 15.9% | 20.6% | 17.8% | 22.5% |
| Yellow Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lag | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Max | None | C-Max | C-Max | None | None | None | None |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 57 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Splits and Phases: 1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)























| | | | | | | | |
|--------|----|--------|--------|--------|----|--------|----|
| | Ø1 | | Ø2 (R) | | Ø3 | | Ø4 |
| 11.5 s | | 62.4 s | | 21.4 s | | 24.7 s | |
| | Ø5 | | Ø6 (R) | | Ø7 | | Ø8 |
| 11.5 s | | 62.4 s | | 27 s | | 19.1 s | |

HCM 7th Signalized Intersection Summary

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

2026 Background AM

08/13/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  |  |  |  | |  |  |  |
| Traffic Volume (veh/h) | 32 | 868 | 314 | 8 | 1491 | 510 | 163 | 479 | 0 | 324 | 772 | 0 |
| Future Volume (veh/h) | 32 | 868 | 314 | 8 | 1491 | 510 | 163 | 479 | 0 | 324 | 772 | 0 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width Adj. | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 33 | 904 | 0 | 8 | 1553 | 0 | 170 | 499 | 0 | 338 | 804 | 0 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 |
| Cap, veh/h | 130 | 2542 | | 318 | 1705 | | 186 | 819 | | 395 | 872 | |
| Arrive On Green | 0.03 | 0.50 | 0.00 | 0.01 | 0.32 | 0.00 | 0.03 | 0.05 | 0.00 | 0.11 | 0.17 | 0.00 |
| Sat Flow, veh/h | 1781 | 5274 | 0 | 1781 | 3554 | 1585 | 1767 | 5233 | 0 | 3456 | 5274 | 0 |
| Grp Volume(v), veh/h | 33 | 904 | 0 | 8 | 1553 | 0 | 170 | 499 | 0 | 338 | 804 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1702 | 0 | 1781 | 1777 | 1585 | 1767 | 1689 | 0 | 1728 | 1702 | 0 |
| Q Serve(g_s), s | 1.1 | 13.0 | 0.0 | 0.3 | 50.3 | 0.0 | 11.5 | 11.6 | 0.0 | 11.5 | 18.6 | 0.0 |
| Cycle Q Clear(g_c), s | 1.1 | 13.0 | 0.0 | 0.3 | 50.3 | 0.0 | 11.5 | 11.6 | 0.0 | 11.5 | 18.6 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 130 | 2542 | | 318 | 1705 | | 186 | 819 | | 395 | 872 | |
| V/C Ratio(X) | 0.25 | 0.36 | | 0.03 | 0.91 | | 0.92 | 0.61 | | 0.86 | 0.92 | |
| Avail Cap(c_a), veh/h | 154 | 2542 | | 375 | 1705 | | 186 | 819 | | 429 | 872 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.67 | 0.67 | 0.67 | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 26.5 | 18.4 | 0.0 | 16.3 | 38.3 | 0.0 | 57.4 | 53.1 | 0.0 | 52.2 | 49.0 | 0.0 |
| Incr Delay (d2), s/veh | 1.0 | 0.4 | 0.0 | 0.0 | 8.9 | 0.0 | 43.0 | 1.3 | 0.0 | 14.7 | 15.0 | 0.0 |
| Initial Q Delay(d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.5 | 5.2 | 0.0 | 0.1 | 24.8 | 0.0 | 7.7 | 5.4 | 0.0 | 5.8 | 9.1 | 0.0 |
| Unsig. Movement Delay, s/veh | | | 1.00 | | | 0.00 | | | 1.00 | | | 0.00 |
| LnGrp Delay(d), s/veh | 27.6 | 18.8 | 1.0 | 16.3 | 47.1 | 0.0 | 100.4 | 54.4 | 1.0 | 66.9 | 63.9 | 0.0 |
| LnGrp LOS | C | B | A | B | D | A | F | D | A | E | E | A |
| Approach Vol, veh/h | 1264 | | | 2092 | | | 669 | | | 1142 | | |
| Approach Delay, s/veh | 14.4 | | | 35.0 | | | 66.1 | | | 64.8 | | |
| Approach LOS | B | | | D | | | E | | | E | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 7.7 | 66.2 | 20.2 | 25.9 | 9.8 | 64.1 | 19.1 | 27.0 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | | | | |
| Max Green Setting (Gmax), s | 5.0 | 55.9 | 14.9 | 18.2 | 5.0 | 55.9 | 12.6 | 20.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.3 | 15.0 | 13.5 | 13.6 | 3.1 | 52.3 | 13.5 | 20.6 | | | | |
| Green Ext Time (p_c), s | 0.0 | 7.8 | 0.2 | 1.4 | 0.0 | 2.9 | 0.0 | 0.0 | | | | |

Intersection Summary

| | |
|------------------------------|------|
| HCM 7th Control Delay, s/veh | 40.6 |
| HCM 7th LOS | D |

Notes

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

Timings

2026 Background PM

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

08/13/2024



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | |
| Traffic Volume (vph) | 57 | 1433 | 32 | 1273 | 502 | 306 | 1019 | 479 | 794 |
| Future Volume (vph) | 57 | 1433 | 32 | 1273 | 502 | 306 | 1019 | 479 | 794 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | Prot | NA | Prot | NA |
| Protected Phases | 5 | 2 | 1 | 6 | | 7 | 4 | 3 | 8 |
| Permitted Phases | 2 | | 6 | | 6 | | | | |
| Detector Phase | 5 | 2 | 1 | 6 | 6 | 7 | 4 | 3 | 8 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.5 | 24.5 | 11.5 | 24.5 | 24.5 | 11.5 | 24.5 | 11.5 | 24.5 |
| Total Split (s) | 11.5 | 51.8 | 11.6 | 51.9 | 51.9 | 28.7 | 32.0 | 24.6 | 27.9 |
| Total Split (%) | 9.6% | 43.2% | 9.7% | 43.3% | 43.3% | 23.9% | 26.7% | 20.5% | 23.3% |
| Yellow Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lag | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Max | None | C-Max | C-Max | None | None | None | None |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 61 (51%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated























Splits and Phases: 1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

| | | | | | | | |
|--------|----|--------|--------|--------|----|--------|----|
| | Ø1 | | Ø2 (R) | | Ø3 | | Ø4 |
| 11.6 s | | 51.8 s | | 24.6 s | | 32 s | |
| | Ø5 | | Ø6 (R) | | Ø7 | | Ø8 |
| 11.5 s | | 51.9 s | | 27.9 s | | 28.7 s | |

HCM 7th Signalized Intersection Summary
1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

2026 Background PM

08/13/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  |  |  |  | |  |  |  |
| Traffic Volume (veh/h) | 57 | 1433 | 317 | 32 | 1273 | 502 | 306 | 1019 | 0 | 479 | 794 | 0 |
| Future Volume (veh/h) | 57 | 1433 | 317 | 32 | 1273 | 502 | 306 | 1019 | 0 | 479 | 794 | 0 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width Adj. | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 58 | 1462 | 0 | 33 | 1299 | 0 | 312 | 1040 | 0 | 489 | 810 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 133 | 2003 | | 163 | 1366 | | 334 | 1085 | | 521 | 897 | |
| Arrive On Green | 0.04 | 0.39 | 0.00 | 0.01 | 0.13 | 0.00 | 0.25 | 0.28 | 0.00 | 0.15 | 0.18 | 0.00 |
| Sat Flow, veh/h | 1781 | 5274 | 0 | 1781 | 3554 | 1585 | 1781 | 5274 | 0 | 3456 | 5274 | 0 |
| Grp Volume(v), veh/h | 58 | 1462 | 0 | 33 | 1299 | 0 | 312 | 1040 | 0 | 489 | 810 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1702 | 0 | 1781 | 1777 | 1585 | 1781 | 1702 | 0 | 1728 | 1702 | 0 |
| Q Serve(g_s), s | 2.3 | 29.3 | 0.0 | 1.3 | 43.6 | 0.0 | 20.6 | 24.0 | 0.0 | 16.8 | 18.7 | 0.0 |
| Cycle Q Clear(g_c), s | 2.3 | 29.3 | 0.0 | 1.3 | 43.6 | 0.0 | 20.6 | 24.0 | 0.0 | 16.8 | 18.7 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 133 | 2003 | | 163 | 1366 | | 334 | 1085 | | 521 | 897 | |
| V/C Ratio(X) | 0.44 | 0.73 | | 0.20 | 0.95 | | 0.93 | 0.96 | | 0.94 | 0.90 | |
| Avail Cap(c_a), veh/h | 143 | 2003 | | 190 | 1366 | | 334 | 1085 | | 521 | 911 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 1.33 | 1.33 | 1.33 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 29.5 | 31.1 | 0.0 | 25.3 | 51.3 | 0.0 | 44.3 | 42.5 | 0.0 | 50.4 | 48.5 | 0.0 |
| Incr Delay (d2), s/veh | 2.3 | 2.4 | 0.0 | 0.6 | 15.2 | 0.0 | 32.3 | 18.2 | 0.0 | 24.9 | 12.1 | 0.0 |
| Initial Q Delay(d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.1 | 12.3 | 0.0 | 0.6 | 23.7 | 0.0 | 11.6 | 11.4 | 0.0 | 9.0 | 8.9 | 0.0 |
| Unsig. Movement Delay, s/veh | | | 1.00 | | | 0.00 | | | 1.00 | | | 0.00 |
| LnGrp Delay(d), s/veh | 31.8 | 33.4 | 1.0 | 25.9 | 66.4 | 0.0 | 76.6 | 60.7 | 1.0 | 75.3 | 60.6 | 0.0 |
| LnGrp LOS | C | C | A | C | E | A | E | E | A | E | E | A |
| Approach Vol, veh/h | 1843 | | | 1844 | | | 1352 | | | 1299 | | |
| Approach Delay, s/veh | 27.7 | | | 47.3 | | | 64.4 | | | 66.2 | | |
| Approach LOS | C | | | D | | | E | | | E | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.8 | 53.6 | 24.6 | 32.0 | 10.8 | 52.6 | 29.0 | 27.6 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | | | | |
| Max Green Setting (Gmax), s | 5.1 | 45.3 | 18.1 | 25.5 | 5.0 | 45.4 | 22.2 | 21.4 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.3 | 31.3 | 18.8 | 26.0 | 4.3 | 45.6 | 22.6 | 20.7 | | | | |
| Green Ext Time (p_c), s | 0.0 | 8.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | | | | |

Intersection Summary

| | |
|------------------------------|------|
| HCM 7th Control Delay, s/veh | 49.1 |
| HCM 7th LOS | D |

Notes



















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

Timings

2026 Total AM

11/01/2024

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

| |  |  |  |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
| Lane Configurations |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 32 | 883 | 8 | 1469 | 501 | 203 | 500 | 333 | 775 |
| Future Volume (vph) | 32 | 883 | 8 | 1469 | 501 | 203 | 500 | 333 | 775 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | Prot | NA | Prot | NA |
| Protected Phases | 5 | 2 | 1 | 6 | | 7 | 4 | 3 | 8 |
| Permitted Phases | 2 | | 6 | | 6 | | | | |
| Detector Phase | 5 | 2 | 1 | 6 | 6 | 7 | 4 | 3 | 8 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.5 | 24.5 | 11.5 | 24.5 | 24.5 | 11.5 | 24.5 | 11.5 | 24.5 |
| Total Split (s) | 11.5 | 59.9 | 11.5 | 59.9 | 59.9 | 22.0 | 27.0 | 21.6 | 26.6 |
| Total Split (%) | 9.6% | 49.9% | 9.6% | 49.9% | 49.9% | 18.3% | 22.5% | 18.0% | 22.2% |
| Yellow Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lag | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Max | None | C-Max | C-Max | None | None | None | None |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 56 (47%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Splits and Phases: 1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)






























| | | | | | | | |
|---|----|---|--------|--|----|---|----|
|  | Ø1 |  | Ø2 (R) |  | Ø3 |  | Ø4 |
| 11.5 s | | 59.9 s | | 21.6 s | | 27 s | |
|  | Ø5 |  | Ø6 (R) |  | Ø8 |  | Ø7 |
| 11.5 s | | 59.9 s | | 26.6 s | | 22 s | |

HCM 7th Signalized Intersection Summary

2026 Total AM

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

11/01/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |    | |  |   |  |  |    | |   |    | |
| Traffic Volume (veh/h) | 32 | 883 | 317 | 8 | 1469 | 501 | 203 | 500 | 10 | 333 | 775 | 40 |
| Future Volume (veh/h) | 32 | 883 | 317 | 8 | 1469 | 501 | 203 | 500 | 10 | 333 | 775 | 40 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width Adj. | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 33 | 920 | 0 | 8 | 1530 | 0 | 211 | 521 | 0 | 347 | 807 | 0 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 |
| Cap, veh/h | 123 | 2435 | | 297 | 1631 | | 228 | 911 | | 403 | 855 | |
| Arrive On Green | 0.03 | 0.48 | 0.00 | 0.01 | 0.31 | 0.00 | 0.04 | 0.06 | 0.00 | 0.12 | 0.17 | 0.00 |
| Sat Flow, veh/h | 1781 | 5274 | 0 | 1781 | 3554 | 1585 | 1767 | 5233 | 0 | 3456 | 5274 | 0 |
| Grp Volume(v), veh/h | 33 | 920 | 0 | 8 | 1530 | 0 | 211 | 521 | 0 | 347 | 807 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1702 | 0 | 1781 | 1777 | 1585 | 1767 | 1689 | 0 | 1728 | 1702 | 0 |
| Q Serve(g_s), s | 1.2 | 13.8 | 0.0 | 0.3 | 50.3 | 0.0 | 14.3 | 12.0 | 0.0 | 11.8 | 18.8 | 0.0 |
| Cycle Q Clear(g_c), s | 1.2 | 13.8 | 0.0 | 0.3 | 50.3 | 0.0 | 14.3 | 12.0 | 0.0 | 11.8 | 18.8 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 123 | 2435 | | 297 | 1631 | | 228 | 911 | | 403 | 855 | |
| V/C Ratio(X) | 0.27 | 0.38 | | 0.03 | 0.94 | | 0.92 | 0.57 | | 0.86 | 0.94 | |
| Avail Cap(c_a), veh/h | 148 | 2435 | | 354 | 1631 | | 228 | 911 | | 435 | 855 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.67 | 0.67 | 0.67 | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 27.8 | 20.0 | 0.0 | 17.6 | 39.9 | 0.0 | 56.9 | 51.9 | 0.0 | 52.0 | 49.4 | 0.0 |
| Incr Delay (d2), s/veh | 1.2 | 0.4 | 0.0 | 0.0 | 11.8 | 0.0 | 39.4 | 0.9 | 0.0 | 15.1 | 18.5 | 0.0 |
| Initial Q Delay(d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.5 | 5.5 | 0.0 | 0.1 | 25.4 | 0.0 | 9.3 | 5.5 | 0.0 | 6.0 | 9.4 | 0.0 |
| Unsig. Movement Delay, s/veh | | | 1.00 | | | 0.00 | | | 1.00 | | | 0.00 |
| LnGrp Delay(d), s/veh | 28.9 | 20.5 | 1.0 | 17.7 | 51.7 | 0.0 | 96.2 | 52.8 | 1.0 | 67.1 | 67.9 | 0.0 |
| LnGrp LOS | C | C | A | B | D | A | F | D | A | E | E | A |
| Approach Vol, veh/h | 1283 | | | 2060 | | | 742 | | | 1196 | | |
| Approach Delay, s/veh | 15.7 | | | 38.5 | | | 64.5 | | | 65.3 | | |
| Approach LOS | B | | | D | | | E | | | E | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 7.7 | 63.7 | 20.5 | 28.1 | 9.8 | 61.6 | 22.0 | 26.6 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | | | | |
| Max Green Setting (Gmax), s | 5.0 | 53.4 | 15.1 | 20.5 | 5.0 | 53.4 | 15.5 | 20.1 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.3 | 15.8 | 13.8 | 14.0 | 3.2 | 52.3 | 16.3 | 20.8 | | | | |
| Green Ext Time (p_c), s | 0.0 | 7.9 | 0.2 | 1.9 | 0.0 | 0.9 | 0.0 | 0.0 | | | | |

Intersection Summary

| | |
|------------------------------|------|
| HCM 7th Control Delay, s/veh | 42.7 |
| HCM 7th LOS | D |

Notes

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

Timings

2026 Total PM

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

11/01/2024



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | |
| Traffic Volume (vph) | 57 | 1446 | 32 | 1270 | 487 | 331 | 1037 | 487 | 797 |
| Future Volume (vph) | 57 | 1446 | 32 | 1270 | 487 | 331 | 1037 | 487 | 797 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | Prot | NA | Prot | NA |
| Protected Phases | 5 | 2 | 1 | 6 | | 7 | 4 | 3 | 8 |
| Permitted Phases | 2 | | 6 | | 6 | | | | |
| Detector Phase | 5 | 2 | 1 | 6 | 6 | 7 | 4 | 3 | 8 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.5 | 24.5 | 11.5 | 24.5 | 24.5 | 11.5 | 24.5 | 11.5 | 24.5 |
| Total Split (s) | 11.5 | 52.4 | 11.6 | 52.5 | 52.5 | 30.0 | 32.0 | 24.0 | 26.0 |
| Total Split (%) | 9.6% | 43.7% | 9.7% | 43.8% | 43.8% | 25.0% | 26.7% | 20.0% | 21.7% |
| Yellow Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lag | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Max | None | C-Max | C-Max | None | None | None | None |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 61 (51%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Splits and Phases: 1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)
































HCM 7th Signalized Intersection Summary

2026 Total PM

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

11/01/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |    | |  |   |  |  |    | |   |    | |
| Traffic Volume (veh/h) | 57 | 1446 | 320 | 32 | 1270 | 487 | 331 | 1037 | 30 | 487 | 797 | 52 |
| Future Volume (veh/h) | 57 | 1446 | 320 | 32 | 1270 | 487 | 331 | 1037 | 30 | 487 | 797 | 52 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width Adj. | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 58 | 1476 | 0 | 33 | 1296 | 0 | 338 | 1058 | 0 | 497 | 813 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 135 | 2028 | | 164 | 1384 | | 349 | 1085 | | 504 | 830 | |
| Arrive On Green | 0.04 | 0.40 | 0.00 | 0.01 | 0.13 | 0.00 | 0.26 | 0.28 | 0.00 | 0.15 | 0.16 | 0.00 |
| Sat Flow, veh/h | 1781 | 5274 | 0 | 1781 | 3554 | 1585 | 1781 | 5274 | 0 | 3456 | 5274 | 0 |
| Grp Volume(v), veh/h | 58 | 1476 | 0 | 33 | 1296 | 0 | 338 | 1058 | 0 | 497 | 813 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1702 | 0 | 1781 | 1777 | 1585 | 1781 | 1702 | 0 | 1728 | 1702 | 0 |
| Q Serve(g_s), s | 2.3 | 29.4 | 0.0 | 1.3 | 43.4 | 0.0 | 22.5 | 24.6 | 0.0 | 17.2 | 19.0 | 0.0 |
| Cycle Q Clear(g_c), s | 2.3 | 29.4 | 0.0 | 1.3 | 43.4 | 0.0 | 22.5 | 24.6 | 0.0 | 17.2 | 19.0 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 135 | 2028 | | 164 | 1384 | | 349 | 1085 | | 504 | 830 | |
| V/C Ratio(X) | 0.43 | 0.73 | | 0.20 | 0.94 | | 0.97 | 0.98 | | 0.99 | 0.98 | |
| Avail Cap(c_a), veh/h | 146 | 2028 | | 190 | 1384 | | 349 | 1085 | | 504 | 830 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 1.33 | 1.33 | 1.33 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 29.3 | 30.7 | 0.0 | 25.0 | 50.8 | 0.0 | 44.0 | 42.7 | 0.0 | 51.1 | 50.1 | 0.0 |
| Incr Delay (d2), s/veh | 2.1 | 2.3 | 0.0 | 0.6 | 13.2 | 0.0 | 39.8 | 21.4 | 0.0 | 36.4 | 26.2 | 0.0 |
| Initial Q Delay(d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.1 | 12.4 | 0.0 | 0.6 | 23.2 | 0.0 | 13.3 | 11.9 | 0.0 | 10.0 | 10.1 | 0.0 |
| Unsig. Movement Delay, s/veh | 1.00 | | | 0.00 | | | 1.00 | | | 0.00 | | |
| LnGrp Delay(d), s/veh | 31.4 | 33.0 | 1.0 | 25.6 | 64.0 | 0.0 | 83.8 | 64.2 | 1.0 | 87.5 | 76.3 | 0.0 |
| LnGrp LOS | C | C | A | C | E | A | F | E | A | F | E | A |
| Approach Vol, veh/h | 1861 | | | 1826 | | | 1427 | | | 1363 | | |
| Approach Delay, s/veh | 27.3 | | | 45.9 | | | 67.4 | | | 77.4 | | |
| Approach LOS | C | | | D | | | E | | | E | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.8 | 54.2 | 24.0 | 32.0 | 10.8 | 53.2 | 30.0 | 26.0 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | | | | |
| Max Green Setting (Gmax), s | 5.1 | 45.9 | 17.5 | 25.5 | 5.0 | 46.0 | 23.5 | 19.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.3 | 31.4 | 19.2 | 26.6 | 4.3 | 45.4 | 24.5 | 21.0 | | | | |
| Green Ext Time (p_c), s | 0.0 | 8.9 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | | | | |

Intersection Summary

| | |
|------------------------------|------|
| HCM 7th Control Delay, s/veh | 51.9 |
| HCM 7th LOS | D |

Notes

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

Timings

2050 Background AM

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

08/14/2024



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↰ | ↷ | ↰ | ↷ | ↰ | ↰ | ↷ | ↰ | ↷ |
| Traffic Volume (vph) | 37 | 988 | 9 | 1697 | 581 | 185 | 545 | 369 | 879 |
| Future Volume (vph) | 37 | 988 | 9 | 1697 | 581 | 185 | 545 | 369 | 879 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | Prot | NA | Prot | NA |
| Protected Phases | 5 | 2 | 1 | 6 | | 7 | 4 | 3 | 8 |
| Permitted Phases | 2 | | 6 | | 6 | | | | |
| Detector Phase | 5 | 2 | 1 | 6 | 6 | 7 | 4 | 3 | 8 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.5 | 24.5 | 11.5 | 24.5 | 24.5 | 11.5 | 24.5 | 11.5 | 24.5 |
| Total Split (s) | 11.5 | 62.1 | 11.5 | 62.1 | 62.1 | 19.4 | 25.5 | 20.9 | 27.0 |
| Total Split (%) | 9.6% | 51.8% | 9.6% | 51.8% | 51.8% | 16.2% | 21.3% | 17.4% | 22.5% |
| Yellow Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lag | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Max | None | C-Max | C-Max | None | None | None | None |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 56 (47%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated






















Splits and Phases: 1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

| | | | |
|--------|------------|--------|--------|
| Ø1 | Ø2 (R) | Ø3 | Ø4 |
| 11.5 s | 62.1 s | 20.9 s | 25.5 s |
| Ø5 | Ø6 (R) | Ø7 | Ø8 |
| 11.5 s | 62.1 s | 27 s | 19.4 s |

HCM 7th Signalized Intersection Summary
1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

2050 Background AM

08/14/2024

| |  |  |  |  |  |  |  |  |  |  |  | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  |  |  |  | |  |  |  |
| Traffic Volume (veh/h) | 37 | 988 | 358 | 9 | 1697 | 581 | 185 | 545 | 0 | 369 | 879 | 0 |
| Future Volume (veh/h) | 37 | 988 | 358 | 9 | 1697 | 581 | 185 | 545 | 0 | 369 | 879 | 0 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width Adj. | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 39 | 1029 | 0 | 9 | 1768 | 0 | 193 | 568 | 0 | 384 | 916 | 0 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 |
| Cap, veh/h | 114 | 2523 | | 280 | 1687 | | 190 | 802 | | 415 | 872 | |
| Arrive On Green | 0.03 | 0.49 | 0.00 | 0.01 | 0.32 | 0.00 | 0.04 | 0.05 | 0.00 | 0.12 | 0.17 | 0.00 |
| Sat Flow, veh/h | 1781 | 5274 | 0 | 1781 | 3554 | 1585 | 1767 | 5233 | 0 | 3456 | 5274 | 0 |
| Grp Volume(v), veh/h | 39 | 1029 | 0 | 9 | 1768 | 0 | 193 | 568 | 0 | 384 | 916 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1702 | 0 | 1781 | 1777 | 1585 | 1767 | 1689 | 0 | 1728 | 1702 | 0 |
| Q Serve(g_s), s | 1.3 | 15.3 | 0.0 | 0.3 | 57.0 | 0.0 | 12.9 | 13.2 | 0.0 | 13.2 | 20.5 | 0.0 |
| Cycle Q Clear(g_c), s | 1.3 | 15.3 | 0.0 | 0.3 | 57.0 | 0.0 | 12.9 | 13.2 | 0.0 | 13.2 | 20.5 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 114 | 2523 | | 280 | 1687 | | 190 | 802 | | 415 | 872 | |
| V/C Ratio(X) | 0.34 | 0.41 | | 0.03 | 1.05 | | 1.02 | 0.71 | | 0.93 | 1.05 | |
| Avail Cap(c_a), veh/h | 134 | 2523 | | 335 | 1687 | | 190 | 802 | | 415 | 872 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.67 | 0.67 | 0.67 | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 28.6 | 19.2 | 0.0 | 16.7 | 40.9 | 0.0 | 57.9 | 54.1 | 0.0 | 52.3 | 49.7 | 0.0 |
| Incr Delay (d2), s/veh | 1.8 | 0.5 | 0.0 | 0.0 | 35.7 | 0.0 | 69.5 | 2.9 | 0.0 | 26.7 | 44.5 | 0.0 |
| Initial Q Delay(d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.6 | 6.1 | 0.0 | 0.1 | 34.1 | 0.0 | 9.8 | 6.2 | 0.0 | 7.2 | 12.3 | 0.0 |
| Unsig. Movement Delay, s/veh | 1.00 | | | 0.00 | | | 1.00 | | | 0.00 | | |
| LnGrp Delay(d), s/veh | 30.3 | 19.7 | 1.0 | 16.8 | 76.6 | 0.0 | 127.4 | 57.0 | 1.0 | 78.9 | 94.2 | 0.0 |
| LnGrp LOS | C | B | A | B | F | A | F | E | A | E | F | A |
| Approach Vol, veh/h | 1441 | | | 2382 | | | 761 | | | 1300 | | |
| Approach Delay, s/veh | 15.2 | | | 56.9 | | | 74.9 | | | 89.7 | | |
| Approach LOS | B | | | E | | | E | | | F | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 7.8 | 65.8 | 20.9 | 25.5 | 10.1 | 63.5 | 19.4 | 27.0 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | | | | |
| Max Green Setting (Gmax), s | 5.0 | 55.6 | 14.4 | 19.0 | 5.0 | 55.6 | 12.9 | 20.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.3 | 17.3 | 15.2 | 15.2 | 3.3 | 59.0 | 14.9 | 22.5 | | | | |
| Green Ext Time (p_c), s | 0.0 | 9.2 | 0.0 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | | | | |

Intersection Summary

| | |
|------------------------------|------|
| HCM 7th Control Delay, s/veh | 56.3 |
| HCM 7th LOS | E |

Notes

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

Timings

2050 Background PM

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

08/14/2024



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | |
| Traffic Volume (vph) | 64 | 1631 | 37 | 1448 | 572 | 349 | 1160 | 545 | 903 |
| Future Volume (vph) | 64 | 1631 | 37 | 1448 | 572 | 349 | 1160 | 545 | 903 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | Prot | NA | Prot | NA |
| Protected Phases | 5 | 2 | 1 | 6 | | 7 | 4 | 3 | 8 |
| Permitted Phases | 2 | | 6 | | 6 | | | | |
| Detector Phase | 5 | 2 | 1 | 6 | 6 | 7 | 4 | 3 | 8 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.5 | 24.5 | 11.5 | 24.5 | 24.5 | 11.5 | 24.5 | 11.5 | 24.5 |
| Total Split (s) | 11.5 | 52.4 | 11.6 | 52.5 | 52.5 | 28.0 | 32.0 | 24.0 | 28.0 |
| Total Split (%) | 9.6% | 43.7% | 9.7% | 43.8% | 43.8% | 23.3% | 26.7% | 20.0% | 23.3% |
| Yellow Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lag | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Max | None | C-Max | C-Max | None | None | None | None |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 60 (50%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Splits and Phases: 1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)






















| | | | | | | | |
|--------|----|--------|--------|------|----|------|----|
| | Ø1 | | Ø2 (R) | | Ø3 | | Ø4 |
| 11.6 s | | 52.4 s | | 24 s | | 32 s | |
| | Ø5 | | Ø6 (R) | | Ø7 | | Ø8 |
| 11.5 s | | 52.5 s | | 28 s | | 28 s | |

HCM 7th Signalized Intersection Summary

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

2050 Background PM

08/14/2024

| |  |  |  |  |  |  |  |  |  |  |  | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  |  |  |  | |  |  |  |
| Traffic Volume (veh/h) | 64 | 1631 | 361 | 37 | 1448 | 572 | 349 | 1160 | 0 | 545 | 903 | 0 |
| Future Volume (veh/h) | 64 | 1631 | 361 | 37 | 1448 | 572 | 349 | 1160 | 0 | 545 | 903 | 0 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width Adj. | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 65 | 1664 | 0 | 38 | 1478 | 0 | 356 | 1184 | 0 | 556 | 921 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 126 | 2017 | | 144 | 1379 | | 319 | 1085 | | 504 | 915 | |
| Arrive On Green | 0.04 | 0.40 | 0.00 | 0.01 | 0.13 | 0.00 | 0.18 | 0.21 | 0.00 | 0.15 | 0.18 | 0.00 |
| Sat Flow, veh/h | 1781 | 5274 | 0 | 1781 | 3554 | 1585 | 1781 | 5274 | 0 | 3456 | 5274 | 0 |
| Grp Volume(v), veh/h | 65 | 1664 | 0 | 38 | 1478 | 0 | 356 | 1184 | 0 | 556 | 921 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1702 | 0 | 1781 | 1777 | 1585 | 1781 | 1702 | 0 | 1728 | 1702 | 0 |
| Q Serve(g_s), s | 2.6 | 35.1 | 0.0 | 1.5 | 46.6 | 0.0 | 21.5 | 25.5 | 0.0 | 17.5 | 21.5 | 0.0 |
| Cycle Q Clear(g_c), s | 2.6 | 35.1 | 0.0 | 1.5 | 46.6 | 0.0 | 21.5 | 25.5 | 0.0 | 17.5 | 21.5 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 126 | 2017 | | 144 | 1379 | | 319 | 1085 | | 504 | 915 | |
| V/C Ratio(X) | 0.52 | 0.82 | | 0.26 | 1.07 | | 1.12 | 1.09 | | 1.10 | 1.01 | |
| Avail Cap(c_a), veh/h | 134 | 2017 | | 166 | 1379 | | 319 | 1085 | | 504 | 915 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 29.6 | 32.6 | 0.0 | 26.9 | 52.3 | 0.0 | 49.3 | 47.3 | 0.0 | 51.2 | 49.3 | 0.0 |
| Incr Delay (d2), s/veh | 3.3 | 4.0 | 0.0 | 1.0 | 45.9 | 0.0 | 85.2 | 55.7 | 0.0 | 71.3 | 31.4 | 0.0 |
| Initial Q Delay(d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.2 | 15.0 | 0.0 | 0.7 | 31.0 | 0.0 | 17.1 | 16.3 | 0.0 | 12.5 | 11.7 | 0.0 |
| Unsig. Movement Delay, s/veh | 1.00 | | | 0.00 | | | 1.00 | | | 0.00 | | |
| LnGrp Delay(d), s/veh | 32.9 | 36.6 | 1.0 | 27.9 | 98.2 | 0.0 | 134.4 | 102.9 | 1.0 | 122.6 | 80.7 | 0.0 |
| LnGrp LOS | C | D | A | C | F | A | F | F | A | F | F | A |
| Approach Vol, veh/h | 2097 | | | 2100 | | | 1540 | | | 1477 | | |
| Approach Delay, s/veh | 30.2 | | | 69.7 | | | 110.2 | | | 96.4 | | |
| Approach LOS | C | | | E | | | F | | | F | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 10.1 | 53.9 | 24.0 | 32.0 | 10.9 | 53.1 | 28.0 | 28.0 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | | | | |
| Max Green Setting (Gmax), s | 5.1 | 45.9 | 17.5 | 25.5 | 5.0 | 46.0 | 21.5 | 21.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.5 | 37.1 | 19.5 | 27.5 | 4.6 | 48.6 | 23.5 | 23.5 | | | | |
| Green Ext Time (p_c), s | 0.0 | 6.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 7th Control Delay, s/veh | 72.3 | | | | | | | | | | | |
| HCM 7th LOS | E | | | | | | | | | | | |
| Notes | | | | | | | | | | | | |
| Unsignalized Delay for [NBR, EBR, WBR, SBR] is included in calculations of the approach delay and intersection delay. | | | | | | | | | | | | |

Timings

2050 Background AM (Dual Lefts)

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

08/14/2024



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | |
| Traffic Volume (vph) | 37 | 988 | 9 | 1697 | 581 | 185 | 545 | 369 | 879 |
| Future Volume (vph) | 37 | 988 | 9 | 1697 | 581 | 185 | 545 | 369 | 879 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | Prot | NA | Prot | NA |
| Protected Phases | 5 | 2 | 1 | 6 | | 7 | 4 | 3 | 8 |
| Permitted Phases | 2 | | 6 | | 6 | | | | |
| Detector Phase | 5 | 2 | 1 | 6 | 6 | 7 | 4 | 3 | 8 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.5 | 24.5 | 11.5 | 24.5 | 24.5 | 11.5 | 24.5 | 11.5 | 24.5 |
| Total Split (s) | 11.5 | 64.0 | 11.5 | 64.0 | 64.0 | 14.3 | 24.5 | 20.0 | 30.2 |
| Total Split (%) | 9.6% | 53.3% | 9.6% | 53.3% | 53.3% | 11.9% | 20.4% | 16.7% | 25.2% |
| Yellow Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lag | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Max | None | C-Max | C-Max | None | None | None | None |

Intersection Summary

Cycle Length: 120

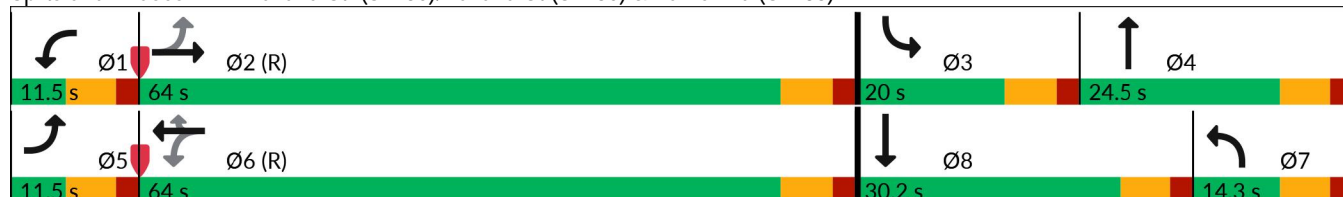
Actuated Cycle Length: 120

Offset: 56 (47%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Splits and Phases: 1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)


































HCM 7th Signalized Intersection Summary

2050 Background AM (Dual Lefts)

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

08/14/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |    | |  |   |  |   |    | |    |    | |
| Traffic Volume (veh/h) | 37 | 988 | 358 | 9 | 1697 | 581 | 185 | 545 | 0 | 369 | 879 | 0 |
| Future Volume (veh/h) | 37 | 988 | 358 | 9 | 1697 | 581 | 185 | 545 | 0 | 369 | 879 | 0 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width Adj. | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 39 | 1029 | 0 | 9 | 1768 | 0 | 193 | 568 | 0 | 384 | 916 | 0 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 |
| Cap, veh/h | 114 | 2614 | | 292 | 1750 | | 223 | 750 | | 389 | 999 | |
| Arrive On Green | 0.03 | 0.51 | 0.00 | 0.01 | 0.33 | 0.00 | 0.02 | 0.05 | 0.00 | 0.11 | 0.20 | 0.00 |
| Sat Flow, veh/h | 1781 | 5274 | 0 | 1781 | 3554 | 1585 | 3428 | 5233 | 0 | 3456 | 5274 | 0 |
| Grp Volume(v), veh/h | 39 | 1029 | 0 | 9 | 1768 | 0 | 193 | 568 | 0 | 384 | 916 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1702 | 0 | 1781 | 1777 | 1585 | 1714 | 1689 | 0 | 1728 | 1702 | 0 |
| Q Serve(g_s), s | 1.3 | 14.8 | 0.0 | 0.3 | 59.1 | 0.0 | 6.7 | 13.3 | 0.0 | 13.3 | 21.1 | 0.0 |
| Cycle Q Clear(g_c), s | 1.3 | 14.8 | 0.0 | 0.3 | 59.1 | 0.0 | 6.7 | 13.3 | 0.0 | 13.3 | 21.1 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 114 | 2614 | | 292 | 1750 | | 223 | 750 | | 389 | 999 | |
| V/C Ratio(X) | 0.34 | 0.39 | | 0.03 | 1.01 | | 0.87 | 0.76 | | 0.99 | 0.92 | |
| Avail Cap(c_a), veh/h | 134 | 2614 | | 347 | 1750 | | 223 | 760 | | 389 | 1008 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.67 | 0.67 | 0.67 | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 28.5 | 17.9 | 0.0 | 15.6 | 40.2 | 0.0 | 58.2 | 54.9 | 0.0 | 53.2 | 47.3 | 0.0 |
| Incr Delay (d2), s/veh | 1.8 | 0.4 | 0.0 | 0.0 | 24.1 | 0.0 | 28.1 | 4.3 | 0.0 | 42.3 | 12.7 | 0.0 |
| Initial Q Delay(d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.6 | 5.9 | 0.0 | 0.1 | 32.5 | 0.0 | 3.9 | 6.3 | 0.0 | 8.0 | 10.1 | 0.0 |
| Unsig. Movement Delay, s/veh | 1.00 | | | 0.00 | | | 1.00 | | | 0.00 | | |
| LnGrp Delay(d), s/veh | 30.3 | 18.3 | 1.0 | 15.6 | 64.3 | 0.0 | 86.3 | 59.3 | 1.0 | 95.4 | 60.0 | 0.0 |
| LnGrp LOS | C | B | A | B | F | A | F | E | A | F | E | A |
| Approach Vol, veh/h | 1441 | | | 2382 | | | 761 | | | 1300 | | |
| Approach Delay, s/veh | 14.2 | | | 47.8 | | | 66.1 | | | 70.5 | | |
| Approach LOS | B | | | D | | | E | | | E | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 7.8 | 67.9 | 20.0 | 24.3 | 10.1 | 65.6 | 14.3 | 30.0 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | | | | |
| Max Green Setting (Gmax), s | 5.0 | 57.5 | 13.5 | 18.0 | 5.0 | 57.5 | 7.8 | 23.7 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.3 | 16.8 | 15.3 | 15.3 | 3.3 | 61.1 | 8.7 | 23.1 | | | | |
| Green Ext Time (p_c), s | 0.0 | 9.3 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.4 | | | | |

Intersection Summary

| | |
|------------------------------|------|
| HCM 7th Control Delay, s/veh | 46.9 |
| HCM 7th LOS | D |

Notes

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

Timings

2050 Background PM (Dual Lefts)

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

08/14/2024



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | ↰ | ↰↰↰ | ↰ | ↰↰ | ↰ | ↰↰ | ↰↰↰ | ↰↰ | ↰↰↰ |
| Traffic Volume (vph) | 64 | 1631 | 37 | 1448 | 572 | 349 | 1160 | 545 | 903 |
| Future Volume (vph) | 64 | 1631 | 37 | 1448 | 572 | 349 | 1160 | 545 | 903 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | Prot | NA | Prot | NA |
| Protected Phases | 5 | 2 | 1 | 6 | | 7 | 4 | 3 | 8 |
| Permitted Phases | 2 | | 6 | | 6 | | | | |
| Detector Phase | 5 | 2 | 1 | 6 | 6 | 7 | 4 | 3 | 8 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 11.5 | 24.5 | 11.5 | 24.5 | 24.5 | 11.5 | 24.5 | 11.5 | 24.5 |
| Total Split (s) | 11.5 | 52.4 | 11.6 | 52.5 | 52.5 | 22.1 | 32.0 | 24.0 | 33.9 |
| Total Split (%) | 9.6% | 43.7% | 9.7% | 43.8% | 43.8% | 18.4% | 26.7% | 20.0% | 28.3% |
| Yellow Time (s) | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lag | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Max | None | C-Max | C-Max | None | None | None | None |

Intersection Summary

Cycle Length: 120

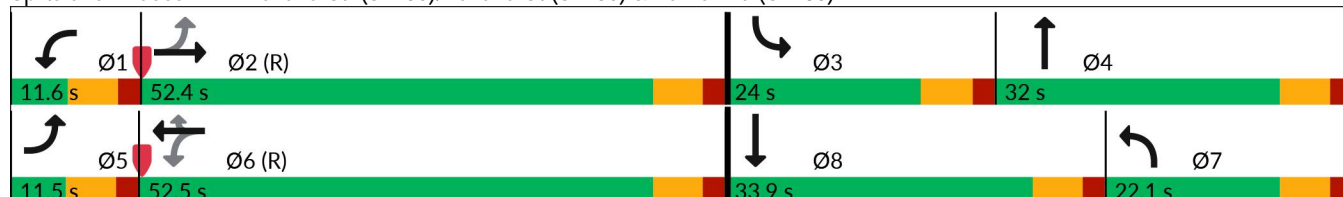
Actuated Cycle Length: 120

Offset: 60 (50%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

Splits and Phases: 1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)



HCM 7th Signalized Intersection Summary

2050 Background PM (Dual Lefts)

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

08/14/2024



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|-------|------|-------|------|------|
| Lane Configurations | ↰ | ↑↑↑ | | ↰ | ↑↑ | ↰ | ↰ | ↑↑↑ | | ↰ | ↑↑↑ | |
| Traffic Volume (veh/h) | 64 | 1631 | 361 | 37 | 1448 | 572 | 349 | 1160 | 0 | 545 | 903 | 0 |
| Future Volume (veh/h) | 64 | 1631 | 361 | 37 | 1448 | 572 | 349 | 1160 | 0 | 545 | 903 | 0 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width Adj. | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 65 | 1664 | 0 | 38 | 1478 | 0 | 356 | 1184 | 0 | 556 | 921 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 126 | 2017 | | 144 | 1379 | | 510 | 1085 | | 504 | 1076 | |
| Arrive On Green | 0.04 | 0.40 | 0.00 | 0.01 | 0.13 | 0.00 | 0.15 | 0.21 | 0.00 | 0.15 | 0.21 | 0.00 |
| Sat Flow, veh/h | 1781 | 5274 | 0 | 1781 | 3554 | 1585 | 3456 | 5274 | 0 | 3456 | 5274 | 0 |
| Grp Volume(v), veh/h | 65 | 1664 | 0 | 38 | 1478 | 0 | 356 | 1184 | 0 | 556 | 921 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1702 | 0 | 1781 | 1777 | 1585 | 1728 | 1702 | 0 | 1728 | 1702 | 0 |
| Q Serve(g_s), s | 2.6 | 35.1 | 0.0 | 1.5 | 46.6 | 0.0 | 11.7 | 25.5 | 0.0 | 17.5 | 20.8 | 0.0 |
| Cycle Q Clear(g_c), s | 2.6 | 35.1 | 0.0 | 1.5 | 46.6 | 0.0 | 11.7 | 25.5 | 0.0 | 17.5 | 20.8 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 126 | 2017 | | 144 | 1379 | | 510 | 1085 | | 504 | 1076 | |
| V/C Ratio(X) | 0.52 | 0.82 | | 0.26 | 1.07 | | 0.70 | 1.09 | | 1.10 | 0.86 | |
| Avail Cap(c_a), veh/h | 134 | 2017 | | 166 | 1379 | | 510 | 1085 | | 504 | 1166 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 29.6 | 32.6 | 0.0 | 26.9 | 52.3 | 0.0 | 48.6 | 47.3 | 0.0 | 51.2 | 45.6 | 0.0 |
| Incr Delay (d2), s/veh | 3.3 | 4.0 | 0.0 | 1.0 | 45.9 | 0.0 | 4.2 | 55.7 | 0.0 | 71.3 | 6.1 | 0.0 |
| Initial Q Delay(d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.2 | 15.0 | 0.0 | 0.7 | 31.0 | 0.0 | 5.4 | 16.3 | 0.0 | 12.5 | 9.4 | 0.0 |
| Unsig. Movement Delay, s/veh | 1.00 | | | 0.00 | | | 1.00 | | | 0.00 | | |
| LnGrp Delay(d), s/veh | 32.9 | 36.6 | 1.0 | 27.9 | 98.2 | 0.0 | 52.8 | 102.9 | 1.0 | 122.6 | 51.7 | 0.0 |
| LnGrp LOS | C | D | A | C | F | A | D | F | A | F | D | A |
| Approach Vol, veh/h | 2097 | | | 2100 | | | 1540 | | | 1477 | | |
| Approach Delay, s/veh | 30.2 | | | 69.7 | | | 91.3 | | | 78.4 | | |
| Approach LOS | C | | | E | | | F | | | E | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 10.1 | 53.9 | 24.0 | 32.0 | 10.9 | 53.1 | 24.2 | 31.8 | | | | |
| Change Period (Y+Rc), s | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | | | | |
| Max Green Setting (Gmax), s | 5.1 | 45.9 | 17.5 | 25.5 | 5.0 | 46.0 | 15.6 | 27.4 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.5 | 37.1 | 19.5 | 27.5 | 4.6 | 48.6 | 13.7 | 22.8 | | | | |
| Green Ext Time (p_c), s | 0.0 | 6.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 2.5 | | | | |

Intersection Summary

| | |
|------------------------------|------|
| HCM 7th Control Delay, s/veh | 64.6 |
| HCM 7th LOS | E |

Notes

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

Timings

2050 Total AM

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

11/01/2024



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | |
| Traffic Volume (vph) | 37 | 1003 | 9 | 1675 | 572 | 225 | 566 | 378 | 882 |
| Future Volume (vph) | 37 | 1003 | 9 | 1675 | 572 | 225 | 566 | 378 | 882 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | Prot | NA | Prot | NA |
| Protected Phases | 5 | 2 | 1 | 6 | | 7 | 4 | 3 | 8 |
| Permitted Phases | 2 | | 6 | | 6 | | | | |
| Detector Phase | 5 | 2 | 1 | 6 | 6 | 7 | 4 | 3 | 8 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.5 | 23.5 | 10.5 | 23.5 | 23.5 | 10.5 | 23.5 | 10.5 | 23.5 |
| Total Split (s) | 10.5 | 62.4 | 10.5 | 62.4 | 62.4 | 21.0 | 24.7 | 22.4 | 26.1 |
| Total Split (%) | 8.8% | 52.0% | 8.8% | 52.0% | 52.0% | 17.5% | 20.6% | 18.7% | 21.8% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lag | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Max | None | C-Max | C-Max | None | None | None | None |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 50 (42%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Splits and Phases: 1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)






























| | | | | | | | |
|--------|----|--------|--------|--------|----|--------|----|
| | Ø1 | | Ø2 (R) | | Ø3 | | Ø4 |
| 10.5 s | | 62.4 s | | 22.4 s | | 24.7 s | |
| | Ø5 | | Ø6 (R) | | Ø7 | | Ø8 |
| 10.5 s | | 62.4 s | | 26.1 s | | 21 s | |

HCM 7th Signalized Intersection Summary

2050 Total AM

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

11/01/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |    | |  |   |  |  |    | |   |    | |
| Traffic Volume (veh/h) | 37 | 1003 | 361 | 9 | 1675 | 572 | 225 | 566 | 12 | 378 | 882 | 46 |
| Future Volume (veh/h) | 37 | 1003 | 361 | 9 | 1675 | 572 | 225 | 566 | 12 | 378 | 882 | 46 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width Adj. | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 39 | 1045 | 0 | 9 | 1745 | 0 | 234 | 590 | 0 | 394 | 919 | 0 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 |
| Cap, veh/h | 114 | 2579 | | 283 | 1725 | | 228 | 862 | | 451 | 877 | |
| Arrive On Green | 0.03 | 0.51 | 0.00 | 0.01 | 0.33 | 0.00 | 0.04 | 0.06 | 0.00 | 0.13 | 0.17 | 0.00 |
| Sat Flow, veh/h | 1781 | 5274 | 0 | 1781 | 3554 | 1585 | 1767 | 5233 | 0 | 3456 | 5274 | 0 |
| Grp Volume(v), veh/h | 39 | 1045 | 0 | 9 | 1745 | 0 | 234 | 590 | 0 | 394 | 919 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1702 | 0 | 1781 | 1777 | 1585 | 1767 | 1689 | 0 | 1728 | 1702 | 0 |
| Q Serve(g_s), s | 1.3 | 15.3 | 0.0 | 0.3 | 58.3 | 0.0 | 15.5 | 13.7 | 0.0 | 13.4 | 20.6 | 0.0 |
| Cycle Q Clear(g_c), s | 1.3 | 15.3 | 0.0 | 0.3 | 58.3 | 0.0 | 15.5 | 13.7 | 0.0 | 13.4 | 20.6 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 114 | 2579 | | 283 | 1725 | | 228 | 862 | | 451 | 877 | |
| V/C Ratio(X) | 0.34 | 0.41 | | 0.03 | 1.01 | | 1.03 | 0.68 | | 0.87 | 1.05 | |
| Avail Cap(c_a), veh/h | 134 | 2579 | | 338 | 1725 | | 228 | 862 | | 487 | 877 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.67 | 0.67 | 0.67 | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 28.5 | 18.5 | 0.0 | 16.1 | 40.5 | 0.0 | 57.4 | 53.5 | 0.0 | 51.2 | 49.7 | 0.0 |
| Incr Delay (d2), s/veh | 1.8 | 0.5 | 0.0 | 0.0 | 24.5 | 0.0 | 66.2 | 2.2 | 0.0 | 15.2 | 43.9 | 0.0 |
| Initial Q Delay(d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.6 | 6.1 | 0.0 | 0.1 | 32.2 | 0.0 | 11.6 | 6.4 | 0.0 | 6.8 | 12.3 | 0.0 |
| Unsig. Movement Delay, s/veh | 1.00 | | | 0.00 | | | 1.00 | | | 0.00 | | |
| LnGrp Delay(d), s/veh | 30.3 | 19.0 | 1.0 | 16.1 | 65.0 | 0.0 | 123.7 | 55.7 | 1.0 | 66.4 | 93.6 | 0.0 |
| LnGrp LOS | C | B | A | B | F | A | F | E | A | E | F | A |
| Approach Vol, veh/h | 1460 | | | 2350 | | | 836 | | | 1361 | | |
| Approach Delay, s/veh | 14.6 | | | 48.3 | | | 73.9 | | | 82.4 | | |
| Approach LOS | B | | | D | | | E | | | F | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 6.8 | 66.1 | 21.2 | 25.9 | 9.1 | 63.8 | 21.0 | 26.1 | | | | |
| Change Period (Y+Rc), s | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | | | | |
| Max Green Setting (Gmax), s | 5.0 | 56.9 | 16.9 | 19.2 | 5.0 | 56.9 | 15.5 | 20.6 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.3 | 17.3 | 15.4 | 15.7 | 3.3 | 60.3 | 17.5 | 22.6 | | | | |
| Green Ext Time (p_c), s | 0.0 | 9.4 | 0.2 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | | | | |

Intersection Summary

| | |
|------------------------------|------|
| HCM 7th Control Delay, s/veh | 51.4 |
| HCM 7th LOS | D |

Notes

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

Timings

2050 Total PM

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

11/01/2024



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | |
| Traffic Volume (vph) | 64 | 1644 | 37 | 1445 | 557 | 374 | 1178 | 553 | 906 |
| Future Volume (vph) | 64 | 1644 | 37 | 1445 | 557 | 374 | 1178 | 553 | 906 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | Prot | NA | Prot | NA |
| Protected Phases | 5 | 2 | 1 | 6 | | 7 | 4 | 3 | 8 |
| Permitted Phases | 2 | | 6 | | 6 | | | | |
| Detector Phase | 5 | 2 | 1 | 6 | 6 | 7 | 4 | 3 | 8 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.5 | 23.5 | 10.5 | 23.5 | 23.5 | 10.5 | 23.5 | 10.5 | 23.5 |
| Total Split (s) | 10.5 | 53.2 | 10.6 | 53.3 | 53.3 | 30.0 | 32.1 | 24.1 | 26.2 |
| Total Split (%) | 8.8% | 44.3% | 8.8% | 44.4% | 44.4% | 25.0% | 26.8% | 20.1% | 21.8% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lag | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Max | None | C-Max | C-Max | None | None | None | None |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 60 (50%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 140

Control Type: Actuated-Coordinated

Splits and Phases: 1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)





























| | | | | | | | |
|--------|----|--------|--------|--------|----|--------|----|
| | Ø1 | | Ø2 (R) | | Ø3 | | Ø4 |
| 10.6 s | | 53.2 s | | 24.1 s | | 32.1 s | |
| | Ø5 | | Ø6 (R) | | Ø7 | | Ø8 |
| 10.5 s | | 53.3 s | | 26.2 s | | 30 s | |

HCM 7th Signalized Intersection Summary

2050 Total PM

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

11/01/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |    | |  |   |  |  |    | |  |    | |
| Traffic Volume (veh/h) | 64 | 1644 | 364 | 37 | 1445 | 557 | 374 | 1178 | 35 | 553 | 906 | 59 |
| Future Volume (veh/h) | 64 | 1644 | 364 | 37 | 1445 | 557 | 374 | 1178 | 35 | 553 | 906 | 59 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width Adj. | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 65 | 1678 | 0 | 38 | 1474 | 0 | 382 | 1202 | 0 | 564 | 924 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 126 | 2094 | | 149 | 1433 | | 364 | 1132 | | 536 | 881 | |
| Arrive On Green | 0.04 | 0.41 | 0.00 | 0.01 | 0.13 | 0.00 | 0.20 | 0.22 | 0.00 | 0.16 | 0.17 | 0.00 |
| Sat Flow, veh/h | 1781 | 5274 | 0 | 1781 | 3554 | 1585 | 1781 | 5274 | 0 | 3456 | 5274 | 0 |
| Grp Volume(v), veh/h | 65 | 1678 | 0 | 38 | 1474 | 0 | 382 | 1202 | 0 | 564 | 924 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1702 | 0 | 1781 | 1777 | 1585 | 1781 | 1702 | 0 | 1728 | 1702 | 0 |
| Q Serve(g_s), s | 2.5 | 34.7 | 0.0 | 1.5 | 48.4 | 0.0 | 24.5 | 26.6 | 0.0 | 18.6 | 20.7 | 0.0 |
| Cycle Q Clear(g_c), s | 2.5 | 34.7 | 0.0 | 1.5 | 48.4 | 0.0 | 24.5 | 26.6 | 0.0 | 18.6 | 20.7 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 126 | 2094 | | 149 | 1433 | | 364 | 1132 | | 536 | 881 | |
| V/C Ratio(X) | 0.52 | 0.80 | | 0.25 | 1.03 | | 1.05 | 1.06 | | 1.05 | 1.05 | |
| Avail Cap(c_a), veh/h | 134 | 2094 | | 171 | 1433 | | 364 | 1132 | | 536 | 881 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 29.3 | 31.1 | 0.0 | 25.7 | 52.0 | 0.0 | 47.8 | 46.7 | 0.0 | 50.7 | 49.7 | 0.0 |
| Incr Delay (d2), s/veh | 3.3 | 3.3 | 0.0 | 0.9 | 31.5 | 0.0 | 61.0 | 44.8 | 0.0 | 53.6 | 44.0 | 0.0 |
| Initial Q Delay(d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.2 | 14.6 | 0.0 | 0.7 | 29.4 | 0.0 | 17.0 | 15.9 | 0.0 | 12.0 | 12.3 | 0.0 |
| Unsig. Movement Delay, s/veh | 1.00 | | | 0.00 | | | 1.00 | | | 0.00 | | |
| LnGrp Delay(d), s/veh | 32.5 | 34.4 | 1.0 | 26.6 | 83.5 | 0.0 | 108.8 | 91.5 | 1.0 | 104.3 | 93.6 | 0.0 |
| LnGrp LOS | C | C | A | C | F | A | F | F | A | F | F | A |
| Approach Vol, veh/h | 2114 | | | 2080 | | | 1620 | | | 1548 | | |
| Approach Delay, s/veh | 28.5 | | | 59.7 | | | 93.6 | | | 93.9 | | |
| Approach LOS | C | | | E | | | F | | | F | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.1 | 54.7 | 24.1 | 32.1 | 9.9 | 53.9 | 30.0 | 26.2 | | | | |
| Change Period (Y+Rc), s | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | | | | |
| Max Green Setting (Gmax), s | 5.1 | 47.7 | 18.6 | 26.6 | 5.0 | 47.8 | 24.5 | 20.7 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.5 | 36.7 | 20.6 | 28.6 | 4.5 | 50.4 | 26.5 | 22.7 | | | | |
| Green Ext Time (p_c), s | 0.0 | 8.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | |

Intersection Summary

HCM 7th Control Delay, s/veh 65.4

HCM 7th LOS E

Notes



















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

Timings

2050 Total AM (Dual Lefts)

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

11/01/2024

| |  |  |  |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
| Lane Configurations |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 37 | 1003 | 9 | 1675 | 572 | 225 | 566 | 378 | 882 |
| Future Volume (vph) | 37 | 1003 | 9 | 1675 | 572 | 225 | 566 | 378 | 882 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | Prot | NA | Prot | NA |
| Protected Phases | 5 | 2 | 1 | 6 | | 7 | 4 | 3 | 8 |
| Permitted Phases | 2 | | 6 | | 6 | | | | |
| Detector Phase | 5 | 2 | 1 | 6 | 6 | 7 | 4 | 3 | 8 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.5 | 23.5 | 10.5 | 23.5 | 23.5 | 10.5 | 23.5 | 10.5 | 23.5 |
| Total Split (s) | 10.6 | 64.2 | 10.6 | 64.2 | 64.2 | 15.2 | 24.2 | 21.0 | 30.0 |
| Total Split (%) | 8.8% | 53.5% | 8.8% | 53.5% | 53.5% | 12.7% | 20.2% | 17.5% | 25.0% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lag | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Max | None | C-Max | C-Max | None | None | None | None |

Intersection Summary

Cycle Length: 120

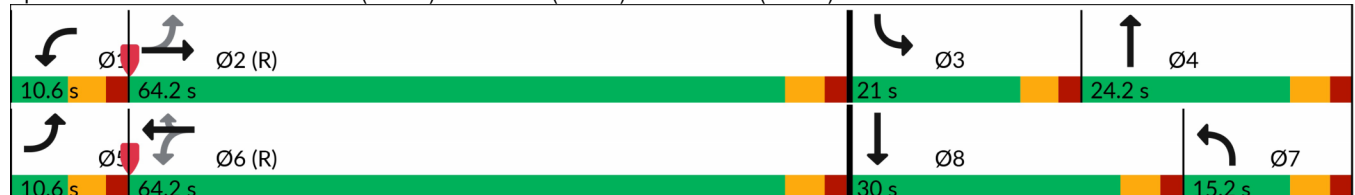
Actuated Cycle Length: 120

Offset: 50 (42%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 120

Control Type: Actuated-Coordinated

Splits and Phases: 1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

























HCM 7th Signalized Intersection Summary

2050 Total AM (Dual Lefts)

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

11/01/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  |  |  |  | |  |  |  |
| Traffic Volume (veh/h) | 37 | 1003 | 361 | 9 | 1675 | 572 | 225 | 566 | 12 | 378 | 882 | 46 |
| Future Volume (veh/h) | 37 | 1003 | 361 | 9 | 1675 | 572 | 225 | 566 | 12 | 378 | 882 | 46 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width Adj. | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1856 | 1856 | 1856 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 39 | 1045 | 0 | 9 | 1745 | 0 | 234 | 590 | 0 | 394 | 919 | 0 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 |
| Cap, veh/h | 120 | 2683 | | 297 | 1798 | | 277 | 767 | | 445 | 1019 | |
| Arrive On Green | 0.03 | 0.53 | 0.00 | 0.01 | 0.34 | 0.00 | 0.03 | 0.05 | 0.00 | 0.13 | 0.20 | 0.00 |
| Sat Flow, veh/h | 1781 | 5274 | 0 | 1781 | 3554 | 1585 | 3428 | 5233 | 0 | 3456 | 5274 | 0 |
| Grp Volume(v), veh/h | 39 | 1045 | 0 | 9 | 1745 | 0 | 234 | 590 | 0 | 394 | 919 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1702 | 0 | 1781 | 1777 | 1585 | 1714 | 1689 | 0 | 1728 | 1702 | 0 |
| Q Serve(g_s), s | 1.2 | 14.7 | 0.0 | 0.3 | 58.0 | 0.0 | 8.2 | 13.8 | 0.0 | 13.5 | 21.1 | 0.0 |
| Cycle Q Clear(g_c), s | 1.2 | 14.7 | 0.0 | 0.3 | 58.0 | 0.0 | 8.2 | 13.8 | 0.0 | 13.5 | 21.1 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 120 | 2683 | | 297 | 1798 | | 277 | 767 | | 445 | 1019 | |
| V/C Ratio(X) | 0.32 | 0.39 | | 0.03 | 0.97 | | 0.84 | 0.77 | | 0.88 | 0.90 | |
| Avail Cap(c_a), veh/h | 142 | 2683 | | 354 | 1798 | | 277 | 789 | | 446 | 1042 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.67 | 0.67 | 0.67 | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 28.3 | 17.0 | 0.0 | 14.8 | 38.8 | 0.0 | 57.6 | 54.9 | 0.0 | 51.4 | 46.9 | 0.0 |
| Incr Delay (d2), s/veh | 1.5 | 0.4 | 0.0 | 0.0 | 15.3 | 0.0 | 20.6 | 4.5 | 0.0 | 18.7 | 10.7 | 0.0 |
| Initial Q Delay(d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.6 | 5.8 | 0.0 | 0.1 | 29.9 | 0.0 | 4.5 | 6.6 | 0.0 | 7.0 | 9.9 | 0.0 |
| Unsig. Movement Delay, s/veh | | | 1.00 | | | 0.00 | | | 1.00 | | | 0.00 |
| LnGrp Delay(d), s/veh | 29.9 | 17.4 | 1.0 | 14.8 | 54.0 | 0.0 | 78.2 | 59.4 | 1.0 | 70.0 | 57.6 | 0.0 |
| LnGrp LOS | C | B | A | B | D | A | E | E | A | E | E | A |
| Approach Vol, veh/h | 1460 | | | 2350 | | | 836 | | | 1361 | | |
| Approach Delay, s/veh | 13.5 | | | 40.2 | | | 63.9 | | | 59.2 | | |
| Approach LOS | B | | | D | | | E | | | E | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 6.8 | 68.6 | 21.0 | 23.7 | 9.1 | 66.2 | 15.2 | 29.4 | | | | |
| Change Period (Y+Rc), s | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | | | | |
| Max Green Setting (Gmax), s | 5.1 | 58.7 | 15.5 | 18.7 | 5.1 | 58.7 | 9.7 | 24.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.3 | 16.7 | 15.5 | 15.8 | 3.2 | 60.0 | 10.2 | 23.1 | | | | |
| Green Ext Time (p_c), s | 0.0 | 9.5 | 0.0 | 1.1 | 0.0 | 0.0 | 0.0 | 0.9 | | | | |

Intersection Summary

| | |
|------------------------------|------|
| HCM 7th Control Delay, s/veh | 41.3 |
| HCM 7th LOS | D |

Notes



















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

Timings

2050 Total PM (Dual Lefts)

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

11/01/2024

| |  |  |  |  |  |  |  |  |  |
|----------------------|---|---|---|---|---|---|--|---|---|
| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
| Lane Configurations |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 64 | 1644 | 37 | 1445 | 557 | 374 | 1178 | 553 | 906 |
| Future Volume (vph) | 64 | 1644 | 37 | 1445 | 557 | 374 | 1178 | 553 | 906 |
| Turn Type | pm+pt | NA | pm+pt | NA | Perm | Prot | NA | Prot | NA |
| Protected Phases | 5 | 2 | 1 | 6 | | 7 | 4 | 3 | 8 |
| Permitted Phases | 2 | | 6 | | 6 | | | | |
| Detector Phase | 5 | 2 | 1 | 6 | 6 | 7 | 4 | 3 | 8 |
| Switch Phase | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 10.5 | 23.5 | 10.5 | 23.5 | 23.5 | 10.5 | 23.5 | 10.5 | 23.5 |
| Total Split (s) | 10.6 | 49.0 | 10.6 | 49.0 | 49.0 | 22.4 | 34.4 | 26.0 | 38.0 |
| Total Split (%) | 8.8% | 40.8% | 8.8% | 40.8% | 40.8% | 18.7% | 28.7% | 21.7% | 31.7% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lag | Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Max | None | C-Max | C-Max | None | None | None | None |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 60 (50%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Splits and Phases: 1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)































| | | | | | | | |
|---|----|---|--------|---|----|---|----|
|  | Ø1 |  | Ø2 (R) |  | Ø3 |  | Ø4 |
| 10.6 s | | 49 s | | 26 s | | 34.4 s | |
|  | Ø5 |  | Ø6 (R) |  | Ø8 |  | Ø7 |
| 10.6 s | | 49 s | | 38 s | | 22.4 s | |

HCM 7th Signalized Intersection Summary

2050 Total PM (Dual Lefts)

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

11/01/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |    | |  |   |  |   |    | |   |    | |
| Traffic Volume (veh/h) | 64 | 1644 | 364 | 37 | 1445 | 557 | 374 | 1178 | 35 | 553 | 906 | 59 |
| Future Volume (veh/h) | 64 | 1644 | 364 | 37 | 1445 | 557 | 374 | 1178 | 35 | 553 | 906 | 59 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Width Adj. | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | No | | | No | | | No | | | No | | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 65 | 1678 | 0 | 38 | 1474 | 0 | 382 | 1202 | 0 | 564 | 924 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 126 | 1915 | | 134 | 1308 | | 645 | 1230 | | 590 | 1149 | |
| Arrive On Green | 0.04 | 0.38 | 0.00 | 0.01 | 0.12 | 0.00 | 0.19 | 0.24 | 0.00 | 0.17 | 0.23 | 0.00 |
| Sat Flow, veh/h | 1781 | 5274 | 0 | 1781 | 3554 | 1585 | 3456 | 5274 | 0 | 3456 | 5274 | 0 |
| Grp Volume(v), veh/h | 65 | 1678 | 0 | 38 | 1474 | 0 | 382 | 1202 | 0 | 564 | 924 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1702 | 0 | 1781 | 1777 | 1585 | 1728 | 1702 | 0 | 1728 | 1702 | 0 |
| Q Serve(g_s), s | 2.7 | 36.7 | 0.0 | 1.6 | 44.2 | 0.0 | 12.1 | 28.0 | 0.0 | 19.4 | 20.5 | 0.0 |
| Cycle Q Clear(g_c), s | 2.7 | 36.7 | 0.0 | 1.6 | 44.2 | 0.0 | 12.1 | 28.0 | 0.0 | 19.4 | 20.5 | 0.0 |
| Prop In Lane | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 0.00 |
| Lane Grp Cap(c), veh/h | 126 | 1915 | | 134 | 1308 | | 645 | 1230 | | 590 | 1149 | |
| V/C Ratio(X) | 0.52 | 0.88 | | 0.28 | 1.13 | | 0.59 | 0.98 | | 0.96 | 0.80 | |
| Avail Cap(c_a), veh/h | 136 | 1915 | | 156 | 1308 | | 645 | 1230 | | 590 | 1383 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 0.33 | 0.33 | 0.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 30.2 | 34.9 | 0.0 | 29.0 | 52.7 | 0.0 | 44.6 | 45.2 | 0.0 | 49.3 | 44.0 | 0.0 |
| Incr Delay (d2), s/veh | 3.3 | 6.0 | 0.0 | 1.2 | 67.4 | 0.0 | 1.5 | 20.4 | 0.0 | 26.3 | 3.0 | 0.0 |
| Initial Q Delay(d3), s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.3 | 16.0 | 0.0 | 0.7 | 33.4 | 0.0 | 5.3 | 14.1 | 0.0 | 10.5 | 8.9 | 0.0 |
| Unsig. Movement Delay, s/veh | 1.00 | | | 0.00 | | | 1.00 | | | 0.00 | | |
| LnGrp Delay(d), s/veh | 33.4 | 40.9 | 1.0 | 30.1 | 120.1 | 0.0 | 46.1 | 65.6 | 1.0 | 75.6 | 47.0 | 0.0 |
| LnGrp LOS | C | D | A | C | F | A | D | E | A | E | D | A |
| Approach Vol, veh/h | 2114 | | | 2080 | | | 1620 | | | 1548 | | |
| Approach Delay, s/veh | 33.7 | | | 85.7 | | | 59.6 | | | 55.6 | | |
| Approach LOS | C | | | F | | | E | | | E | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.1 | 50.5 | 26.0 | 34.4 | 9.9 | 49.7 | 27.9 | 32.5 | | | | |
| Change Period (Y+Rc), s | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | | | | |
| Max Green Setting (Gmax), s | 5.1 | 43.5 | 20.5 | 28.9 | 5.1 | 43.5 | 16.9 | 32.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.6 | 38.7 | 21.4 | 30.0 | 4.7 | 46.2 | 14.1 | 22.5 | | | | |
| Green Ext Time (p_c), s | 0.0 | 3.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 4.5 | | | | |

Intersection Summary

| | |
|------------------------------|------|
| HCM 7th Control Delay, s/veh | 58.7 |
| HCM 7th LOS | E |

Notes

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

HCM 7th TWSC
2: Parker Rd Access & Parker Rd (SH-83)

2026 Total AM
11/01/2024

| Intersection | | | | | | |
|--|--------|--------|------|--------|------|------|
| Int Delay, s/veh | 0.9 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑↑↑ | | ↑ | ↑↑↑ | ↑ | |
| Traffic Vol, veh/h | 1207 | 70 | 93 | 1930 | 44 | 66 |
| Future Vol, veh/h | 1207 | 70 | 93 | 1930 | 44 | 66 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 200 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 1 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 90 | 90 | 90 | 90 | 90 | 90 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 1341 | 78 | 103 | 2144 | 49 | 73 |
| Major/Minor | Major1 | Major2 | | Minor1 | | |
| Conflicting Flow All | 0 | 0 | 1419 | 0 | 2444 | 709 |
| Stage 1 | - | - | - | - | 1380 | - |
| Stage 2 | - | - | - | - | 1064 | - |
| Critical Hdwy | - | - | 5.34 | - | 5.74 | 7.14 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.64 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.04 | - |
| Follow-up Hdwy | - | - | 3.12 | - | 3.82 | 3.92 |
| Pot Cap-1 Maneuver | - | - | 464 | - | *400 | *733 |
| Stage 1 | - | - | - | - | *340 | - |
| Stage 2 | - | - | - | - | *629 | - |
| Platoon blocked, % | - | - | 0 | - | 1 | 0 |
| Mov Cap-1 Maneuver | - | - | 464 | - | *311 | *733 |
| Mov Cap-2 Maneuver | - | - | - | - | *307 | - |
| Stage 1 | - | - | - | - | *340 | - |
| Stage 2 | - | - | - | - | *489 | - |
| Approach | EB | | WB | | NB | |
| HCM Control Delay, s/v | 0 | | 0.69 | | 15.3 | |
| HCM LOS | | | | | C | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 471 | - | - | 464 | - | |
| HCM Lane V/C Ratio | 0.259 | - | - | 0.223 | - | |
| HCM Control Delay (s/veh) | 15.3 | - | - | 15 | - | |
| HCM Lane LOS | C | - | - | B | - | |
| HCM 95th %tile Q(veh) | 1 | - | - | 0.8 | - | |
| Notes | | | | | | |
| ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon | | | | | | |

HCM 7th TWSC
2: Parker Rd Access & Parker Rd (SH-83)

2026 Total PM
11/01/2024

| Intersection | | | | | | |
|----------------------------|--------|------------------------|--------|----------------------------|--------|--------------------------------|
| Int Delay, s/veh | 0.9 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑↑↑↑ | | ↘↑↑↑ | | ↘↘ | |
| Traffic Vol, veh/h | 2010 | 90 | 69 | 1628 | 31 | 70 |
| Future Vol, veh/h | 2010 | 90 | 69 | 1628 | 31 | 70 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 200 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 1 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 2051 | 92 | 70 | 1661 | 32 | 71 |
| | | | | | | |
| Major/Minor | Major1 | | Major2 | | Minor1 | |
| Conflicting Flow All | 0 | 0 | 2143 | 0 | 2902 | 1071 |
| Stage 1 | - | - | - | - | 2097 | - |
| Stage 2 | - | - | - | - | 805 | - |
| Critical Hdwy | - | - | 5.34 | - | 5.74 | 7.14 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.64 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.04 | - |
| Follow-up Hdwy | - | - | 3.12 | - | 3.82 | 3.92 |
| Pot Cap-1 Maneuver | - | - | 292 | - | *295 | *598 |
| Stage 1 | - | - | - | - | *206 | - |
| Stage 2 | - | - | - | - | *675 | - |
| Platoon blocked, % | - | - | 0 | - | 1 | 0 |
| Mov Cap-1 Maneuver | - | - | 292 | - | *224 | *598 |
| Mov Cap-2 Maneuver | - | - | - | - | *187 | - |
| Stage 1 | - | - | - | - | *206 | - |
| Stage 2 | - | - | - | - | *512 | - |
| | | | | | | |
| | | | | | | |
| Approach | EB | | WB | | NB | |
| HCM Control Delay, s/v | 0 | | 0.86 | | 19.13 | |
| HCM LOS | | | | | C | |
| | | | | | | |
| | | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 357 | - | - | 292 | - | |
| HCM Lane V/C Ratio | 0.289 | - | - | 0.242 | - | |
| HCM Control Delay (s/veh) | 19.1 | - | - | 21.2 | - | |
| HCM Lane LOS | C | - | - | C | - | |
| HCM 95th %tile Q(veh) | 1.2 | - | - | 0.9 | - | |
| Notes | | | | | | |
| ~: Volume exceeds capacity | | \$: Delay exceeds 300s | | +: Computation Not Defined | | *: All major volume in platoon |

HCM 7th TWSC
2: Parker Rd Access & Parker Rd (SH-83)

2050 Total AM
11/01/2024

| Intersection | | | | | | |
|----------------------------|--------|------------------------|--------|----------------------------|--------|--------------------------------|
| Int Delay, s/veh | 0.9 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑↑↑ | | ↓ | ↑↑↑ | ↓ | |
| Traffic Vol, veh/h | 1380 | 70 | 93 | 2207 | 44 | 66 |
| Future Vol, veh/h | 1380 | 70 | 93 | 2207 | 44 | 66 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 200 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 1 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 90 | 90 | 90 | 90 | 90 | 90 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 1533 | 78 | 103 | 2452 | 49 | 73 |
| | | | | | | |
| Major/Minor | Major1 | | Major2 | | Minor1 | |
| Conflicting Flow All | 0 | 0 | 1611 | 0 | 2760 | 806 |
| Stage 1 | - | - | - | - | 1572 | - |
| Stage 2 | - | - | - | - | 1188 | - |
| Critical Hdwy | - | - | 5.34 | - | 5.74 | 7.14 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.64 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.04 | - |
| Follow-up Hdwy | - | - | 3.12 | - | 3.82 | 3.92 |
| Pot Cap-1 Maneuver | - | - | 405 | - | *265 | *703 |
| Stage 1 | - | - | - | - | *291 | - |
| Stage 2 | - | - | - | - | *567 | - |
| Platoon blocked, % | - | - | 0 | - | 1 | 0 |
| Mov Cap-1 Maneuver | - | - | 405 | - | *197 | *703 |
| Mov Cap-2 Maneuver | - | - | - | - | *240 | - |
| Stage 1 | - | - | - | - | *291 | - |
| Stage 2 | - | - | - | - | *422 | - |
| | | | | | | |
| Approach | EB | | WB | | NB | |
| HCM Control Delay, s/v | 0 | | 0.68 | | 18.04 | |
| HCM LOS | C | | | | | |
| | | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 397 | - | - | 405 | - | |
| HCM Lane V/C Ratio | 0.308 | - | - | 0.255 | - | |
| HCM Control Delay (s/veh) | 18 | - | - | 16.9 | - | |
| HCM Lane LOS | C | - | - | C | - | |
| HCM 95th %tile Q(veh) | 1.3 | - | - | 1 | - | |
| Notes | | | | | | |
| ~: Volume exceeds capacity | | \$: Delay exceeds 300s | | +: Computation Not Defined | | *: All major volume in platoon |





HCM 7th TWSC
2: Parker Rd Access & Parker Rd (SH-83)

2050 Total PM
11/01/2024

| Intersection | | | | | | |
|----------------------------|--------|------------------------|------|----------------------------|------|--------------------------------|
| Int Delay, s/veh | 1 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑↑↑↑ | | ↑↑↑↑ | | ↑↑ | |
| Traffic Vol, veh/h | 2294 | 94 | 70 | 1859 | 31 | 71 |
| Future Vol, veh/h | 2294 | 94 | 70 | 1859 | 31 | 71 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | 200 | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 1 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 2341 | 96 | 71 | 1897 | 32 | 72 |
| | | | | | | |
| Major/Minor | Major1 | Major2 | | Minor1 | | |
| Conflicting Flow All | 0 | 0 | 2437 | 0 | 3290 | 1218 |
| Stage 1 | - | - | - | - | 2389 | - |
| Stage 2 | - | - | - | - | 902 | - |
| Critical Hdwy | - | - | 5.34 | - | 5.74 | 7.14 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.64 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.04 | - |
| Follow-up Hdwy | - | - | 3.12 | - | 3.82 | 3.92 |
| Pot Cap-1 Maneuver | - | - | 236 | - | *238 | *537 |
| Stage 1 | - | - | - | - | *165 | - |
| Stage 2 | - | - | - | - | *629 | - |
| Platoon blocked, % | - | - | 0 | - | 1 | 0 |
| Mov Cap-1 Maneuver | - | - | 236 | - | *166 | *537 |
| Mov Cap-2 Maneuver | - | - | - | - | *150 | - |
| Stage 1 | - | - | - | - | *165 | - |
| Stage 2 | - | - | - | - | *438 | - |
| | | | | | | |
| | | | | | | |
| Approach | EB | WB | | NB | | |
| HCM Control Delay, s/v | 0 | 0.97 | | 23.13 | | |
| HCM LOS | C | | | | | |
| | | | | | | |
| | | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 301 | - | - | 236 | - | |
| HCM Lane V/C Ratio | 0.345 | - | - | 0.303 | - | |
| HCM Control Delay (s/veh) | 23.1 | - | - | 26.8 | - | |
| HCM Lane LOS | C | - | - | D | - | |
| HCM 95th %tile Q(veh) | 1.5 | - | - | 1.2 | - | |
| Notes | | | | | | |
| ~: Volume exceeds capacity | | \$: Delay exceeds 300s | | +: Computation Not Defined | | *: All major volume in platoon |

HCM 7th TWSC
3: Havana St (SH-30) & Havana St Access

2026 Total AM
11/01/2024

| Intersection | | | | | | |
|----------------------------|---|------------------------|---|----------------------------|---|---|
| Int Delay, s/veh | 1.1 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Traffic Vol, veh/h | 49 | 93 | 626 | 45 | 47 | 988 |
| Future Vol, veh/h | 49 | 93 | 626 | 45 | 47 | 988 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 200 | - |
| Veh in Median Storage, # | 1 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 51 | 97 | 652 | 47 | 49 | 1029 |
| | | | | | | |
| Major/Minor | Minor1 | Major1 | | Major2 | | |
| Conflicting Flow All | 1185 | 349 | 0 | 0 | 699 | 0 |
| Stage 1 | 676 | - | - | - | - | - |
| Stage 2 | 510 | - | - | - | - | - |
| Critical Hdwy | 5.74 | 7.14 | - | - | 5.34 | - |
| Critical Hdwy Stg 1 | 6.64 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.04 | - | - | - | - | - |
| Follow-up Hdwy | 3.82 | 3.92 | - | - | 3.12 | - |
| Pot Cap-1 Maneuver | *686 | *824 | - | - | 784 | - |
| Stage 1 | *619 | - | - | - | - | - |
| Stage 2 | *783 | - | - | - | - | - |
| Platoon blocked, % | 0 | 0 | - | - | 0 | - |
| Mov Cap-1 Maneuver | *643 | *824 | - | - | 784 | - |
| Mov Cap-2 Maneuver | *556 | - | - | - | - | - |
| Stage 1 | *619 | - | - | - | - | - |
| Stage 2 | *734 | - | - | - | - | - |
| | | | | | | |
| Approach | WB | NB | | SB | | |
| HCM Control Delay, s/v | 11.44 | 0 | | 0.45 | | |
| HCM LOS | B | | | | | |
| | | | | | | |
| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT | |
| Capacity (veh/h) | - | - | 706 | 784 | - | |
| HCM Lane V/C Ratio | - | - | 0.209 | 0.062 | - | |
| HCM Control Delay (s/veh) | - | - | 11.4 | 9.9 | - | |
| HCM Lane LOS | - | - | B | A | - | |
| HCM 95th %tile Q(veh) | - | - | 0.8 | 0.2 | - | |
| Notes | | | | | | |
| ~: Volume exceeds capacity | | \$: Delay exceeds 300s | | +: Computation Not Defined | | *: All major volume in platoon |





HCM 7th TWSC
3: Havana St (SH-30) & Havana St Access

2026 Total PM
11/01/2024

| Intersection | | | | | | |
|-----------------------------|--------|------------------------|-------|----------------------------|------|--------------------------------|
| Int Delay, s/veh | 1 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | ↔↔ | | ↑↑↑↵ | | ↵↑↑↑ | |
| Traffic Vol, veh/h | 44 | 98 | 1318 | 59 | 46 | 1105 |
| Future Vol, veh/h | 44 | 98 | 1318 | 59 | 46 | 1105 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 200 | - |
| Veh in Median Storage, # | 1 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 46 | 102 | 1373 | 61 | 48 | 1151 |
| | | | | | | |
| Major/Minor | Minor1 | Major1 | | Major2 | | |
| Conflicting Flow All | 1960 | 717 | 0 | 0 | 1434 | 0 |
| Stage 1 | 1404 | - | - | - | - | - |
| Stage 2 | 556 | - | - | - | - | - |
| Critical Hdwy | 5.74 | 7.14 | - | - | 5.34 | - |
| Critical Hdwy Stg 1 | 6.64 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.04 | - | - | - | - | - |
| Follow-up Hdwy | 3.82 | 3.92 | - | - | 3.12 | - |
| Pot Cap-1 Maneuver | *479 | *703 | - | - | 521 | - |
| Stage 1 | *393 | - | - | - | - | - |
| Stage 2 | *768 | - | - | - | - | - |
| Platoon blocked, % | 0 | 0 | - | - | 0 | - |
| Mov Cap-1 Maneuver | *435 | *703 | - | - | 521 | - |
| Mov Cap-2 Maneuver | *351 | - | - | - | - | - |
| Stage 1 | *393 | - | - | - | - | - |
| Stage 2 | *697 | - | - | - | - | - |
| | | | | | | |
| Approach | WB | NB | | SB | | |
| HCM Control Delay, s/v14.25 | | 0 | | 0.5 | | |
| HCM LOS | B | | | | | |
| | | | | | | |
| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT | | |
| Capacity (veh/h) | - | - | 536 | 521 | - | |
| HCM Lane V/C Ratio | - | - | 0.276 | 0.092 | - | |
| HCM Control Delay (s/veh) | - | - | 14.2 | 12.6 | - | |
| HCM Lane LOS | - | - | B | B | - | |
| HCM 95th %tile Q(veh) | - | - | 1.1 | 0.3 | - | |
| Notes | | | | | | |
| ~: Volume exceeds capacity | | \$: Delay exceeds 300s | | +: Computation Not Defined | | *: All major volume in platoon |





HCM 7th TWSC
3: Havana St (SH-30) & Havana St Access






2050 Total AM
11/01/2024

| Intersection | | | | | | |
|----------------------------|---|------------------------|---|----------------------------|---|---|
| Int Delay, s/veh | 1 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Traffic Vol, veh/h | 49 | 94 | 716 | 46 | 48 | 1129 |
| Future Vol, veh/h | 49 | 94 | 716 | 46 | 48 | 1129 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 200 | - |
| Veh in Median Storage, # | 1 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 51 | 98 | 746 | 48 | 50 | 1176 |
| | | | | | | |
| Major/Minor | Minor1 | Major1 | | Major2 | | |
| Conflicting Flow All | 1340 | 397 | 0 | 0 | 794 | 0 |
| Stage 1 | 770 | - | - | - | - | - |
| Stage 2 | 570 | - | - | - | - | - |
| Critical Hdwy | 5.74 | 7.14 | - | - | 5.34 | - |
| Critical Hdwy Stg 1 | 6.64 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.04 | - | - | - | - | - |
| Follow-up Hdwy | 3.82 | 3.92 | - | - | 3.12 | - |
| Pot Cap-1 Maneuver | *640 | *809 | - | - | 747 | - |
| Stage 1 | *585 | - | - | - | - | - |
| Stage 2 | *752 | - | - | - | - | - |
| Platoon blocked, % | 0 | 0 | - | - | 0 | - |
| Mov Cap-1 Maneuver | *597 | *809 | - | - | 747 | - |
| Mov Cap-2 Maneuver | *533 | - | - | - | - | - |
| Stage 1 | *585 | - | - | - | - | - |
| Stage 2 | *702 | - | - | - | - | - |
| | | | | | | |
| Approach | WB | NB | | SB | | |
| HCM Control Delay, s/v | 11.69 | 0 | | 0.41 | | |
| HCM LOS | B | | | | | |
| | | | | | | |
| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT | |
| Capacity (veh/h) | - | - | 687 | 747 | - | |
| HCM Lane V/C Ratio | - | - | 0.217 | 0.067 | - | |
| HCM Control Delay (s/veh) | - | - | 11.7 | 10.2 | - | |
| HCM Lane LOS | - | - | B | B | - | |
| HCM 95th %tile Q(veh) | - | - | 0.8 | 0.2 | - | |
| Notes | | | | | | |
| ~: Volume exceeds capacity | | \$: Delay exceeds 300s | | +: Computation Not Defined | | *: All major volume in platoon |

HCM 7th TWSC
3: Havana St (SH-30) & Havana St Access

2050 Total PM
11/01/2024

| Intersection | | | | | | |
|--|---|------|---|------|---|---|
| Int Delay, s/veh | 1 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | |  |  |
| Traffic Vol, veh/h | 45 | 102 | 1505 | 62 | 48 | 1262 |
| Future Vol, veh/h | 45 | 102 | 1505 | 62 | 48 | 1262 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | 200 | - |
| Veh in Median Storage, # | 1 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 47 | 106 | 1568 | 65 | 50 | 1315 |
| | | | | | | |
| Major/Minor | Minor1 | | Major1 | | Major2 | |
| Conflicting Flow All | 2226 | 816 | 0 | 0 | 1632 | 0 |
| Stage 1 | 1600 | - | - | - | - | - |
| Stage 2 | 626 | - | - | - | - | - |
| Critical Hdwy | 5.74 | 7.14 | - | - | 5.34 | - |
| Critical Hdwy Stg 1 | 6.64 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.04 | - | - | - | - | - |
| Follow-up Hdwy | 3.82 | 3.92 | - | - | 3.12 | - |
| Pot Cap-1 Maneuver | *444 | *673 | - | - | 452 | - |
| Stage 1 | *334 | - | - | - | - | - |
| Stage 2 | *737 | - | - | - | - | - |
| Platoon blocked, % | 0 | 0 | - | - | 0 | - |
| Mov Cap-1 Maneuver | *395 | *673 | - | - | 452 | - |
| Mov Cap-2 Maneuver | *288 | - | - | - | - | - |
| Stage 1 | *334 | - | - | - | - | - |
| Stage 2 | *655 | - | - | - | - | - |
| | | | | | | |
| Approach | WB | | NB | | SB | |
| HCM Control Delay, s/v16.06 | | | 0 | | 0.51 | |
| HCM LOS | C | | | | | |
| | | | | | | |
| Minor Lane/Major Mvmt | NBT | | NBRWBLn1 | | SBL | SBT |
| Capacity (veh/h) | - | | - | | 477 | 452 |
| HCM Lane V/C Ratio | - | | - | | 0.321 | 0.111 |
| HCM Control Delay (s/veh) | - | | - | | 16.1 | 14 |
| HCM Lane LOS | - | | - | | C | B |
| HCM 95th %tile Q(veh) | - | | - | | 1.4 | 0.4 |
| | | | | | | |
| Notes | | | | | | |
| ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon | | | | | | |

| Intersection | | | | | | | | | | | | |
|----------------------------|--------|---|------|---|---|------|--------|---|--------------------------------|--------|---|-------|
| Int Delay, s/veh | 1.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | |  |  | | |  | | |  | |
| Traffic Vol, veh/h | 1 | 179 | 28 | 12 | 470 | 6 | 23 | 0 | 21 | 5 | 0 | 5 |
| Future Vol, veh/h | 1 | 179 | 28 | 12 | 470 | 6 | 23 | 0 | 21 | 5 | 0 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | 0 | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 |
| Heavy Vehicles, % | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 1 | 190 | 30 | 13 | 500 | 6 | 24 | 0 | 22 | 5 | 0 | 5 |
| | | | | | | | | | | | | |
| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
| Conflicting Flow All | 506 | 0 | 0 | 220 | 0 | 0 | 733 | 739 | 110 | 626 | 751 | 503 |
| Stage 1 | - | - | - | - | - | - | 207 | 207 | - | 529 | 529 | - |
| Stage 2 | - | - | - | - | - | - | 526 | 532 | - | 97 | 222 | - |
| Critical Hdwy | 4.13 | - | - | 4.145 | - | - | 7.33 | 6.53 | 6.93 | 7.33 | 6.53 | 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.53 | 5.53 | - | 6.13 | 5.53 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.13 | 5.53 | - | 6.53 | 5.53 | - |
| Follow-up Hdwy | 2.219 | - | - | 2.2285 | - | - | 3.519 | 4.019 | 3.319 | 3.519 | 4.019 | 3.319 |
| Pot Cap-1 Maneuver | 1056 | - | - | 1410 | - | - | 355 | 371 | 1040 | *424 | 365 | 567 |
| Stage 1 | - | - | - | - | - | - | 858 | 779 | - | *532 | 526 | - |
| Stage 2 | - | - | - | - | - | - | 535 | 525 | - | *987 | 767 | - |
| Platoon blocked, % | | - | - | 0 | - | - | 0 | 0 | 0 | 0 | 0 | |
| Mov Cap-1 Maneuver | 1056 | - | - | 1410 | - | - | 348 | 367 | 1040 | *410 | 361 | 567 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 348 | 367 | - | *410 | 361 | - |
| Stage 1 | - | - | - | - | - | - | 857 | 778 | - | *528 | 522 | - |
| Stage 2 | - | - | - | - | - | - | 525 | 520 | - | *965 | 767 | - |
| | | | | | | | | | | | | |
| Approach | EB | | | WB | | | NB | | | SB | | |
| HCM Control Delay, s/v | 0.05 | | | 0.19 | | | 12.77 | | | 12.73 | | |
| HCM LOS | | | | | | | B | | | B | | |
| | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | | | | |
| Capacity (veh/h) | 510 | 15 | - | - | 1410 | - | - | 476 | | | | |
| HCM Lane V/C Ratio | 0.092 | 0.001 | - | - | 0.009 | - | - | 0.022 | | | | |
| HCM Control Delay (s/veh) | 12.8 | 8.4 | 0 | - | 7.6 | - | - | 12.7 | | | | |
| HCM Lane LOS | B | A | A | - | A | - | - | B | | | | |
| HCM 95th %tile Q(veh) | 0.3 | 0 | - | - | 0 | - | - | 0.1 | | | | |
| Notes | | | | | | | | | | | | |
| ~: Volume exceeds capacity | | \$: Delay exceeds 300s | | | +: Computation Not Defined | | | | *: All major volume in platoon | | | |

HCM 7th TWSC
4: Yale Ave Access

2026 Total PM
11/01/2024






| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↔↔ | | ↔ | ↔ | | | ↔ | | | ↔ | |
| Traffic Vol, veh/h | 7 | 515 | 26 | 24 | 383 | 8 | 26 | 0 | 36 | 5 | 2 | 12 |
| Future Vol, veh/h | 7 | 515 | 26 | 24 | 383 | 8 | 26 | 0 | 36 | 5 | 2 | 12 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | 0 | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 7 | 542 | 27 | 25 | 403 | 8 | 27 | 0 | 38 | 5 | 2 | 13 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 412 | 0 | 0 | 569 | 0 | 0 | 1025 | 1033 | 285 | 744 | 1042 | 407 |
| Stage 1 | - | - | - | - | - | - | 571 | 571 | - | 458 | 458 | - |
| Stage 2 | - | - | - | - | - | - | 455 | 462 | - | 286 | 584 | - |
| Critical Hdwy | 4.13 | - | - | 4.13 | - | - | 7.33 | 6.53 | 6.93 | 7.33 | 6.53 | 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.53 | 5.53 | - | 6.13 | 5.53 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.13 | 5.53 | - | 6.53 | 5.53 | - |
| Follow-up Hdwy | 2.219 | - | - | 2.219 | - | - | 3.519 | 4.019 | 3.319 | 3.519 | 4.019 | 3.319 |
| Pot Cap-1 Maneuver | 1146 | - | - | 1181 | - | - | 279 | 298 | *947 | *466 | 293 | 643 |
| Stage 1 | - | - | - | - | - | - | 669 | 631 | - | *582 | 566 | - |
| Stage 2 | - | - | - | - | - | - | 584 | 564 | - | *893 | 621 | - |
| Platoon blocked, % | - | - | - | 0 | - | - | 0 | 0 | 0 | 0 | 0 | 0 |
| Mov Cap-1 Maneuver | 1146 | - | - | 1181 | - | - | 264 | 289 | *947 | *435 | 285 | 643 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 264 | 289 | - | *435 | 285 | - |
| Stage 1 | - | - | - | - | - | - | 663 | 626 | - | *569 | 554 | - |
| Stage 2 | - | - | - | - | - | - | 558 | 552 | - | *851 | 616 | - |

| Approach | EB | WB | NB | SB |
|------------------------|------|------|-------|-------|
| HCM Control Delay, s/v | 0.16 | 0.47 | 14.26 | 12.33 |
| HCM LOS | | | B | B |






| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|---------------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 454 | 43 | - | - | 1181 | - | - | 511 |
| HCM Lane V/C Ratio | 0.144 | 0.006 | - | - | 0.021 | - | - | 0.039 |
| HCM Control Delay (s/veh) | 14.3 | 8.2 | 0.1 | - | 8.1 | - | - | 12.3 |
| HCM Lane LOS | B | A | A | - | A | - | - | B |
| HCM 95th %tile Q(veh) | 0.5 | 0 | - | - | 0.1 | - | - | 0.1 |

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

| Intersection | | | | | | | | | | | | |
|---------------------------|--------|---|------|---|---|------|--------|---|-------|--------|---|-------|
| Int Delay, s/veh | 1.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | |  |  | | |  | | |  | |
| Traffic Vol, veh/h | 1 | 204 | 32 | 14 | 535 | 7 | 26 | 0 | 24 | 6 | 0 | 6 |
| Future Vol, veh/h | 1 | 204 | 32 | 14 | 535 | 7 | 26 | 0 | 24 | 6 | 0 | 6 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | 0 | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 94 |
| Heavy Vehicles, % | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 1 | 217 | 34 | 15 | 569 | 7 | 28 | 0 | 26 | 6 | 0 | 6 |
| | | | | | | | | | | | | |
| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
| Conflicting Flow All | 577 | 0 | 0 | 251 | 0 | 0 | 835 | 843 | 126 | 713 | 856 | 573 |
| Stage 1 | - | - | - | - | - | - | 236 | 236 | - | 603 | 603 | - |
| Stage 2 | - | - | - | - | - | - | 599 | 606 | - | 111 | 253 | - |
| Critical Hdwy | 4.13 | - | - | 4.145 | - | - | 7.33 | 6.53 | 6.93 | 7.33 | 6.53 | 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.53 | 5.53 | - | 6.13 | 5.53 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.13 | 5.53 | - | 6.53 | 5.53 | - |
| Follow-up Hdwy | 2.219 | - | - | 2.2285 | - | - | 3.519 | 4.019 | 3.319 | 3.519 | 4.019 | 3.319 |
| Pot Cap-1 Maneuver | 995 | - | - | 1372 | - | - | 300 | 321 | 1016 | 367 | 316 | 518 |
| Stage 1 | - | - | - | - | - | - | 825 | 757 | - | 485 | 488 | - |
| Stage 2 | - | - | - | - | - | - | 487 | 486 | - | 980 | 743 | - |
| Platoon blocked, % | | - | - | 0 | - | - | 0 | 0 | 0 | 0 | 0 | |
| Mov Cap-1 Maneuver | 995 | - | - | 1372 | - | - | 292 | 318 | 1016 | 353 | 312 | 518 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 292 | 318 | - | 353 | 312 | - |
| Stage 1 | - | - | - | - | - | - | 824 | 756 | - | 480 | 482 | - |
| Stage 2 | - | - | - | - | - | - | 476 | 480 | - | 955 | 743 | - |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Approach | EB | | | WB | | | NB | | | SB | | |
| HCM Control Delay, s/v | 0.04 | | | 0.19 | | | 14.21 | | | 13.84 | | |
| HCM LOS | | | | | | | B | | | B | | |
| | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | | | | |
| Capacity (veh/h) | 444 | 13 | - | - | 1372 | - | - | 420 | | | | |
| HCM Lane V/C Ratio | 0.12 | 0.001 | - | - | 0.011 | - | - | 0.03 | | | | |
| HCM Control Delay (s/veh) | 14.2 | 8.6 | 0 | - | 7.7 | - | - | 13.8 | | | | |
| HCM Lane LOS | B | A | A | - | A | - | - | B | | | | |
| HCM 95th %tile Q(veh) | 0.4 | 0 | - | - | 0 | - | - | 0.1 | | | | |

HCM 7th TWSC
4: Yale Ave Access

2050 Total PM
11/01/2024

| Intersection | | | | | | | | | | | | |
|----------------------------|--------|---|------|---|---|----------------------------|--------|---|-------|--------------------------------|---|-------|
| Int Delay, s/veh | 1.5 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | |  |  | | |  | | |  | |
| Traffic Vol, veh/h | 8 | 586 | 30 | 28 | 436 | 9 | 30 | 0 | 41 | 6 | 2 | 14 |
| Future Vol, veh/h | 8 | 586 | 30 | 28 | 436 | 9 | 30 | 0 | 41 | 6 | 2 | 14 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | 0 | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 8 | 617 | 32 | 29 | 459 | 9 | 32 | 0 | 43 | 6 | 2 | 15 |
| | | | | | | | | | | | | |
| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
| Conflicting Flow All | 468 | 0 | 0 | 648 | 0 | 0 | 1168 | 1177 | 324 | 848 | 1188 | 464 |
| Stage 1 | - | - | - | - | - | - | 649 | 649 | - | 523 | 523 | - |
| Stage 2 | - | - | - | - | - | - | 519 | 527 | - | 325 | 665 | - |
| Critical Hdwy | 4.13 | - | - | 4.13 | - | - | 7.33 | 6.53 | 6.93 | 7.33 | 6.53 | 6.23 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.53 | 5.53 | - | 6.13 | 5.53 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.13 | 5.53 | - | 6.53 | 5.53 | - |
| Follow-up Hdwy | 2.219 | - | - | 2.219 | - | - | 3.519 | 4.019 | 3.319 | 3.519 | 4.019 | 3.319 |
| Pot Cap-1 Maneuver | 1091 | - | - | 1119 | - | - | 224 | 246 | *930 | *407 | 242 | 597 |
| Stage 1 | - | - | - | - | - | - | 620 | 594 | - | *537 | 530 | - |
| Stage 2 | - | - | - | - | - | - | 539 | 527 | - | *877 | 583 | - |
| Platoon blocked, % | | - | - | 0 | - | - | 0 | 0 | 0 | 0 | 0 | |
| Mov Cap-1 Maneuver | 1091 | - | - | 1119 | - | - | 208 | 238 | *930 | *374 | 234 | 597 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 208 | 238 | - | *374 | 234 | - |
| Stage 1 | - | - | - | - | - | - | 615 | 588 | - | *522 | 516 | - |
| Stage 2 | - | - | - | - | - | - | 510 | 513 | - | *829 | 578 | - |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Approach | EB | | | WB | | | NB | | | SB | | |
| HCM Control Delay, s/v | 0.18 | | | 0.49 | | | 16.87 | | | 13.28 | | |
| HCM LOS | | | | | | | C | | | B | | |
| | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | | | | |
| Capacity (veh/h) | 378 | 43 | - | - | 1119 | - | - | 458 | | | | |
| HCM Lane V/C Ratio | 0.198 | 0.008 | - | - | 0.026 | - | - | 0.051 | | | | |
| HCM Control Delay (s/veh) | 16.9 | 8.3 | 0.1 | - | 8.3 | - | - | 13.3 | | | | |
| HCM Lane LOS | C | A | A | - | A | - | - | B | | | | |
| HCM 95th %tile Q(veh) | 0.7 | 0 | - | - | 0.1 | - | - | 0.2 | | | | |
| Notes | | | | | | | | | | | | |
| ~: Volume exceeds capacity | | \$: Delay exceeds 300s | | | | +: Computation Not Defined | | | | *: All major volume in platoon | | |



APPENDIX F

Queue Analysis Worksheets

Queues

2026 Total AM

11/01/2024

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|-------------------------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 33 | 1250 | 8 | 1530 | 522 | 211 | 531 | 347 | 849 |
| v/c Ratio | 0.24 | 0.48 | 0.04 | 0.89 | 0.54 | 0.93 | 0.61 | 0.83 | 1.00 |
| Control Delay (s/veh) | 17.3 | 18.0 | 3.8 | 20.3 | 3.6 | 85.6 | 36.8 | 68.3 | 80.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 17.3 | 18.0 | 3.8 | 20.3 | 3.6 | 85.6 | 36.8 | 68.3 | 80.3 |
| Queue Length 50th (ft) | 12 | 191 | 1 | 652 | 67 | 165 | 143 | 136 | 242 |
| Queue Length 95th (ft) | 27 | 283 | m1 | #779 | 62 | #317 | 130 | #206 | #339 |
| Internal Link Dist (ft) | | 1670 | | 675 | | | 873 | | 710 |
| Turn Bay Length (ft) | 550 | | 550 | | | 550 | | 425 | |
| Base Capacity (vph) | 137 | 2592 | 214 | 1710 | 964 | 226 | 875 | 431 | 850 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.24 | 0.48 | 0.04 | 0.89 | 0.54 | 0.93 | 0.61 | 0.81 | 1.00 |

Intersection Summary

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

Queue shown is maximum after two cycles.

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

Queues

2026 Total PM

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

11/01/2024



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|-------------------------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 58 | 1803 | 33 | 1296 | 497 | 338 | 1089 | 497 | 866 |
| v/c Ratio | 0.42 | 0.85 | 0.24 | 0.91 | 0.57 | 0.98 | 1.01 | 0.99 | 1.05 |
| Control Delay (s/veh) | 26.8 | 36.4 | 11.2 | 30.9 | 9.3 | 71.6 | 58.6 | 90.2 | 93.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 26.8 | 36.4 | 11.2 | 30.9 | 9.3 | 71.6 | 58.6 | 90.2 | 93.5 |
| Queue Length 50th (ft) | 24 | 477 | 4 | 549 | 242 | 266 | ~318 | 201 | ~266 |
| Queue Length 95th (ft) | 48 | #585 | m5 | #671 | 370 | #435 | #399 | #313 | #357 |
| Internal Link Dist (ft) | | 1670 | | 675 | | | 873 | | 710 |
| Turn Bay Length (ft) | 550 | | 550 | | | 550 | | 425 | |
| Base Capacity (vph) | 137 | 2111 | 137 | 1424 | 870 | 346 | 1078 | 500 | 824 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.42 | 0.85 | 0.24 | 0.91 | 0.57 | 0.98 | 1.01 | 0.99 | 1.05 |

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Queues

2050 Total AM

11/01/2024

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|-------------------------|------|------|------|------|------|-------|------|------|-------|
| Lane Group Flow (vph) | 39 | 1421 | 9 | 1745 | 596 | 234 | 603 | 394 | 967 |
| v/c Ratio | 0.29 | 0.53 | 0.05 | 0.97 | 0.59 | 1.04 | 0.73 | 0.84 | 1.11 |
| Control Delay (s/veh) | 17.3 | 17.3 | 4.4 | 28.8 | 3.2 | 110.6 | 42.0 | 67.0 | 110.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 17.3 | 17.3 | 4.4 | 28.8 | 3.2 | 110.6 | 42.0 | 67.0 | 110.8 |
| Queue Length 50th (ft) | 13 | 217 | 1 | ~773 | 13 | ~197 | 167 | 154 | ~312 |
| Queue Length 95th (ft) | 29 | 316 | m2 | #922 | 17 | #362 | 145 | #227 | #406 |
| Internal Link Dist (ft) | | 1670 | | 675 | | | 873 | | 710 |
| Turn Bay Length (ft) | 550 | | 550 | | | 550 | | 425 | |
| Base Capacity (vph) | 136 | 2703 | 190 | 1802 | 1005 | 226 | 824 | 483 | 871 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.29 | 0.53 | 0.05 | 0.97 | 0.59 | 1.04 | 0.73 | 0.82 | 1.11 |

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Queues

2050 Total PM

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

11/01/2024



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|-------------------------|------|------|------|------|------|------|------|-------|-------|
| Lane Group Flow (vph) | 65 | 2049 | 38 | 1474 | 568 | 382 | 1238 | 564 | 984 |
| v/c Ratio | 0.48 | 0.94 | 0.28 | 1.00 | 0.64 | 1.06 | 1.10 | 1.06 | 1.12 |
| Control Delay (s/veh) | 28.9 | 42.9 | 12.6 | 47.2 | 10.2 | 94.4 | 88.9 | 104.4 | 115.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 28.9 | 42.9 | 12.6 | 47.2 | 10.2 | 94.4 | 88.9 | 104.4 | 115.6 |
| Queue Length 50th (ft) | 26 | ~612 | 5 | ~659 | 279 | ~327 | ~401 | ~247 | ~321 |
| Queue Length 95th (ft) | 52 | #709 | m7 | #805 | 419 | #503 | #477 | #360 | #415 |
| Internal Link Dist (ft) | | 1670 | | 675 | | | 873 | | 710 |
| Turn Bay Length (ft) | 550 | | 550 | | | 550 | | 425 | |
| Base Capacity (vph) | 135 | 2169 | 137 | 1471 | 892 | 361 | 1125 | 532 | 875 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.48 | 0.94 | 0.28 | 1.00 | 0.64 | 1.06 | 1.10 | 1.06 | 1.12 |

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Queues

2050 Total AM (Dual Lefts)

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

11/01/2024



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|-------------------------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 39 | 1421 | 9 | 1745 | 596 | 234 | 603 | 394 | 967 |
| v/c Ratio | 0.28 | 0.51 | 0.05 | 0.94 | 0.58 | 0.85 | 0.77 | 0.89 | 0.93 |
| Control Delay (s/veh) | 16.4 | 16.1 | 3.9 | 23.8 | 3.0 | 70.5 | 44.1 | 74.6 | 62.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 16.4 | 16.1 | 3.9 | 23.8 | 3.0 | 70.5 | 44.1 | 74.6 | 62.9 |
| Queue Length 50th (ft) | 12 | 208 | 1 | ~737 | 13 | 94 | 168 | 156 | 270 |
| Queue Length 95th (ft) | 28 | 305 | m2 | #898 | 16 | #165 | 152 | #244 | #356 |
| Internal Link Dist (ft) | | 1670 | | 675 | | | 873 | | 710 |
| Turn Bay Length (ft) | 550 | | 550 | | | 550 | | 425 | |
| Base Capacity (vph) | 137 | 2780 | 198 | 1856 | 1029 | 274 | 786 | 443 | 1035 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.28 | 0.51 | 0.05 | 0.94 | 0.58 | 0.85 | 0.77 | 0.89 | 0.93 |

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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

Queues

2050 Total PM (Dual Lefts)

1: Havana St (SH-30)/Havana St (SH-30) & Parker Rd (SH-83)

11/01/2024



| Lane Group | EBL | EBT | WBL | WBT | WBR | NBL | NBT | SBL | SBT |
|-------------------------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 65 | 2049 | 38 | 1474 | 568 | 382 | 1238 | 564 | 984 |
| v/c Ratio | 0.47 | 1.03 | 0.28 | 1.10 | 0.68 | 0.70 | 1.01 | 0.96 | 0.77 |
| Control Delay (s/veh) | 30.6 | 62.8 | 13.5 | 79.8 | 11.3 | 40.3 | 58.8 | 78.6 | 45.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay (s/veh) | 30.6 | 62.8 | 13.5 | 79.8 | 11.3 | 40.3 | 58.8 | 78.6 | 45.8 |
| Queue Length 50th (ft) | 28 | ~664 | 6 | ~721 | 283 | 142 | ~364 | 225 | 254 |
| Queue Length 95th (ft) | 56 | #762 | m8 | #864 | 424 | #192 | #447 | #338 | 303 |
| Internal Link Dist (ft) | | 1670 | | 675 | | | 873 | | 710 |
| Turn Bay Length (ft) | 550 | | 550 | | | 550 | | 425 | |
| Base Capacity (vph) | 137 | 1995 | 137 | 1345 | 836 | 549 | 1222 | 586 | 1370 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.47 | 1.03 | 0.28 | 1.10 | 0.68 | 0.70 | 1.01 | 0.96 | 0.72 |

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

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