

Comments 12.3.21:

- 1) Per notes on site plan, there are still outstanding items remaining with this proposed ROW dedication (i.e. does not accommodate enough space for a future widening project as well as the NB right turn lane. Site plan figure may need to be updated once those comments are resolved. Please also include Site Plan of Ultimate Build condition in this report, as generated by the applicant. Revise any text in this report to reflect the Ultimate Build condition for 2040 analysis.
- 2) Would like to see an analysis for the 2040 BKG assuming a 6-lane NB/SB section for Tower, given excessive queuing demonstrated on this table.
- 3) These queues do not match synchro report in the Appendices. Given excessive queuing/LOS E (as shown in the appendices), please revise this analysis to assume 6-lane section for Tower.
- 4) Queueing table appears to need to be updated. Very little improve from BKG traffic to Total.
- 5) See comments throughout.



ortation Consul tants, LLC
ortation Planning and Traffic Engineering

See responses
throughout the study.

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303-703-9112
john@atceng.com

820

- Revised
l, Aurora, CO

(ATC) is pleased to present this traffic impact study for the
ce Store located on the southeast corner of Smith and Tower

cializing in traffic engineering and transportation planning.
e is a Colorado licensed professional engineer. In the past 20
traffic impact studies, designed over 100 traffic signals, and
y on engineering design and access issues on multi-million-
dollar interchange and highway projects in Kansas and Colorado.

We acknowledge that City of Aurora's review of this study is only for general performance with
submittal requirements, current design criteria, and standard engineering principles and practice.

ATC appreciates the opportunity to be of service. Please call if you have any questions. We can be
reached at 303-703-9112.



Respectfully submitted,

Aldridge Transportation Consultants, LLC

John M.W. Aldridge, P.E.
Principal



INTRODUCTION

This Traffic Impact Study examines the potential impact on traffic caused by the development of a gas station with 16 passenger car fueling stations and an approximate 4,000 square foot convenience store. Figure 1 shows the location of the site and the surrounding streets and intersections.



Figure 1 Site Location and Surrounding Area

EXISTING CONDITIONS

Tower Road is a 2-lane Arterial on the south leg and a 4-lane Arterial on the north leg. It carries approximately 16,000 ADT on the south leg, and 19,000 ADT on the north leg. The posted speed limit is 40 mph. The south leg is divided with a painted center median. The north leg is divided with a raised concrete median.

Smith Road is a 2-lane undivided Arterial and carries approximately 7,000 ADT on the west leg and 4,500 ADT on the east leg. The posted speed limit is 40 mph.

Andes Way is a 2-lane local road. The ADT is estimated at less than 500 as it is not a through road and the roadside development is limited. The road is unpaved.



The intersection of Tower/Smith is traffic signal controlled with permitted/protected left turn phasing on the northbound, southbound, and eastbound approaches and permitted only on the westbound approach. The northbound approach consists of a 125-foot left turn lane and a shared through and right turn lane. The southbound approach consists of a 325-foot left turn lane, a through lane, and a continuous right turn lane. The eastbound and westbound approaches both have 150-foot left turn lanes and shared right turn and through lanes.

AM and PM traffic counts were taken All Traffic Data on Wednesday, August 21, 2019. The count worksheet and graphics are provided in the appendix for reference.

ACCESS LOCATIONS

The site is accessible from Tower Road at right in/right out access approximately 250 feet south of Smith Road and from Smith Road at a right in/right out only access approximately 270 feet east of Tower Road. There is also a full-movement access to Andes Way, a local north/south gravel road that connects to Smith Road at a full-movement, stop sign controlled T-type intersection.

LAND USE and TRIP GENERATION

The property will be developed with a gas station and convenience store. There will be 16 passenger car fueling stations. The convenience store is around 4,000 square feet in size. The trip generation rates are from the *ITE Trip Generation Manual, 10th Edition*. The following worksheet provides the ADT and AM/PM Peak Hour traffic volumes. The average pass-by trip percent is high at 56 percent.

| Trip Generation Worksheet | | | | | | | | |
|--|---------------------------------------|------------------|----------|-------------|------------|-----------|------------|------------|
| ITE Code | Land Use | Unit | Quantity | ADT | AM | | PM | |
| | | | | | In | Out | In | Out |
| 945 | Gas Station w/ Convenience | Fueling Stations | 16 | 205.36 | 6.36 | 6.11 | 7.13 | 6.89 |
| | | | | 3286 | 102 | 98 | 114 | 110 |
| | Pass-by Trip Reduction (56%) | | | 1840 | 57 | 55 | 64 | 62 |
| | Total Trips Assigned to Street | | | 1446 | 45 | 43 | 50 | 48 |
| Total Trips Assigned to Driveways | | | | 3286 | 102 | 98 | 114 | 110 |

TRAFFIC DISTRIBUTION & ASSIGNMENT

The distribution of the site generated traffic at each access and at the intersection (with the pass-by reduction) is shown in the following Figure 2. The existing average daily traffic and the forecast 2024 and 2040 ADT background and total traffic are shown on the Synchro graphics in the appendix.

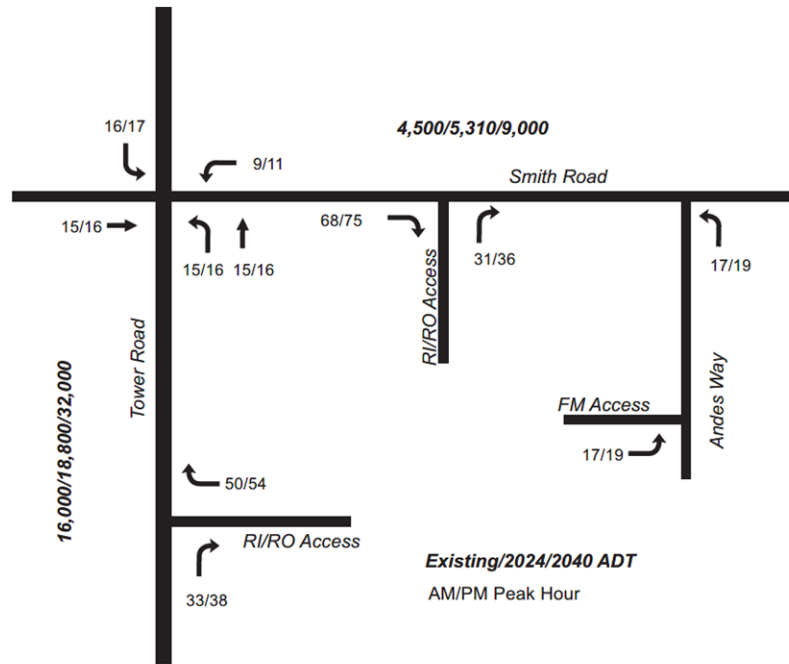


Figure 2 AM & PM Trip Assignment

FUTURE TRAFFIC VOLUMES

The DRCOG Focus Model Assigned Volumes for 2015 and 2040 shows a growth rate of approximately 3 percent per annum. This is higher than the City's standard of 2 percent per annum. Using the DRCOG assigned volumes the 5-year growth factor is 1.18 and the 20-year growth factor is 2. These were applied to determine the future impacts.

Table 2.
Recommended Traffic Volume Thresholds

| ROADWAY CLASSIFICATION | NUMBER OF LANES EACH DIRECTION | RECOMMENDED DAILY TRAFFIC VOLUME LOS THRESHOLDS (VEHICLES PER DAY) | | |
|-------------------------------|--------------------------------|--|--------------------|--------------------|
| | | C | D ⁽²⁾ | E |
| Collector | 1 | > 9,500 to 10,500 | > 10,500 to 12,000 | > 12,000 to 13,500 |
| Minor Arterial | 2 | > 22,500 to 25,500 | > 25,500 to 28,500 | > 28,500 to 32,000 |
| Minor Arterial ⁽¹⁾ | 3 | > 30,000 to 34,500 | > 34,500 to 38,500 | > 38,500 to 43,000 |
| Major Arterial | 2 | > 30,000 to 36,000 | > 36,000 to 40,000 | > 40,000 to 45,000 |
| Major Arterial | 3 | > 46,000 to 53,000 | > 53,000 to 60,000 | > 60,000 to 67,000 |
| Major Arterial ⁽¹⁾ | 4 | > 56,000 to 64,000 | > 64,000 to 72,000 | > 72,000 to 80,000 |
| Expressway | 2 | > 38,000 to 44,000 | > 44,000 to 49,000 | > 49,000 to 55,000 |
| Expressway | 3 | > 56,000 to 64,000 | > 64,000 to 72,000 | > 72,000 to 80,000 |

⁽¹⁾ System performance evaluation only.

⁽²⁾ LOS D threshold volumes used for development roadway planning consistent with traffic impact study guidelines.

Applying the growth factors shows that Tower Road will increase from 16,000 ADT to 18,800 ADT in the 5-year design horizon and 32,000 in the 20-year design horizon. Smith Road will go from 4,500 ADT to 5,310 in the 5-year design horizon and 9,000 in the 20-year design horizon. Based on the City's Recommended Daily Traffic Volume LOS Thresholds (Vehicles per Day) as published in the Northeast Area Transportation Study (NEATS), a 4-lane Major Arterial

with 32,000 ADT in 2040 will operate at LOS C > 30,000 to 36,000. Smith Road can operate at LOS B in 2040 with the current 2-lane cross-section



A site plan has been prepared with the roadway and intersection improvements necessary to address the impacts of the project, pursuant to discussions held with Public Works and the City Attorney and the relevant legal standard for imposing requirements on a development application. This site plan allows the traffic signal to remain in place until the city undertakes certain projects related to regional traffic growth, which are unrelated to the impacts of this project. However, right of way in excess of what is required to mitigate the impacts of the project is being dedicated to assist implementation of future roadway improvements to mitigate regional growth not related to the project. As a result of this right of way dedication, the traffic signal will remain within an island that has been designed to address the needs of the project, including pedestrian safety and traffic signal maintenance access. Figure 3 shows the proposed improvements.

Per notes on site plan, there are still outstanding items remaining with this proposed ROW dedication (i.e. does not accommodate enough space for a future widening project as well as the NB right turn lane. This figure may need to be updated. Please also include the Site Plan for the Ultimate Build condition in this report, and revise any text in this report to reflect the Ultimate Build condition for 2040 analysis.

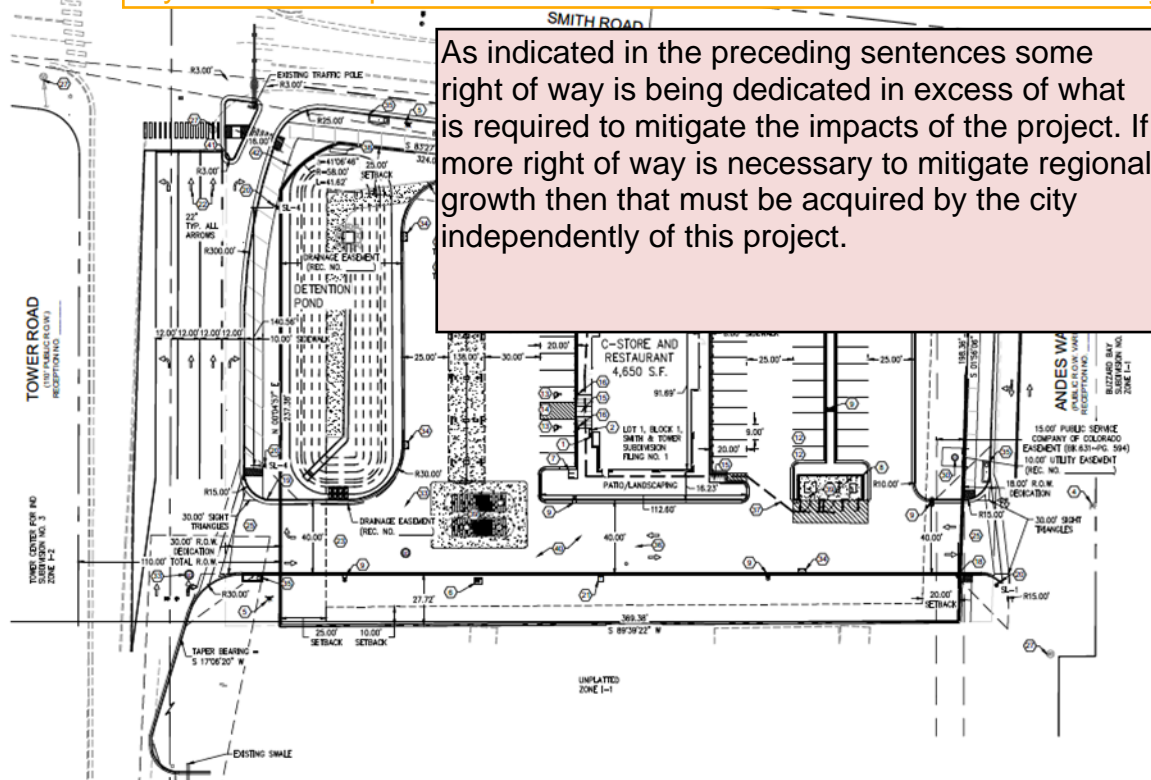


Figure 3 Recommended Roadway Improvements

The recommended roadway improvements include adding a northbound through lane and an exclusive northbound to eastbound right turn lane on Tower Road. The resulting two through lanes will match the two receiving lanes on the north leg of the intersection. Note that there is only room



for two receiving lanes on the northbound leg. Also, note that the northbound leg is constrained to two lanes by the RR crossing. The right turn movement will be channelized and “free” (no stop or yield signs) excepting the yield sign for pedestrians. The left turn lane will remain in place and function as is. Coming northbound on the existing single lane will require a large diverge area which allows for the vehicle to select an appropriate lane or move into the 7-11 and gas station without any crossing or lane change movements.

On Smith Road the eastbound single through lane will be maintained but a right turn auxiliary lane will be added to serve as an accel lane for the northbound to eastbound right turn traffic and a deceleration lane for the right in/right out only access. The auxiliary lane will continue eastward to Andes Way where at that point the right turn at Andes Way must make a right turn only. This will avoid creating a merge area to the existing through lane on Smith Road.

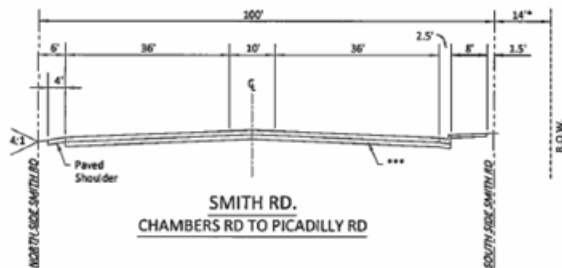
With the channelizing island the existing traffic signal pole and equipment can remain in place. This is typical configuration seen throughout Aurora and the metro area. Traffic signal improvements include an additional signal head for the new through movement on Tower Road and a right turn lane only sign on the mast arm for the new right turn lane.

Andes Way will be paved as a two-lane roadway. Sidewalks and landscaped areas per City standards are features on the frontages will enhance the appearance and walkability of the site.

The recommended partial roadway improvements are designed as the “best engineering fit” and beyond what is necessary to mitigate the impacts of the project.

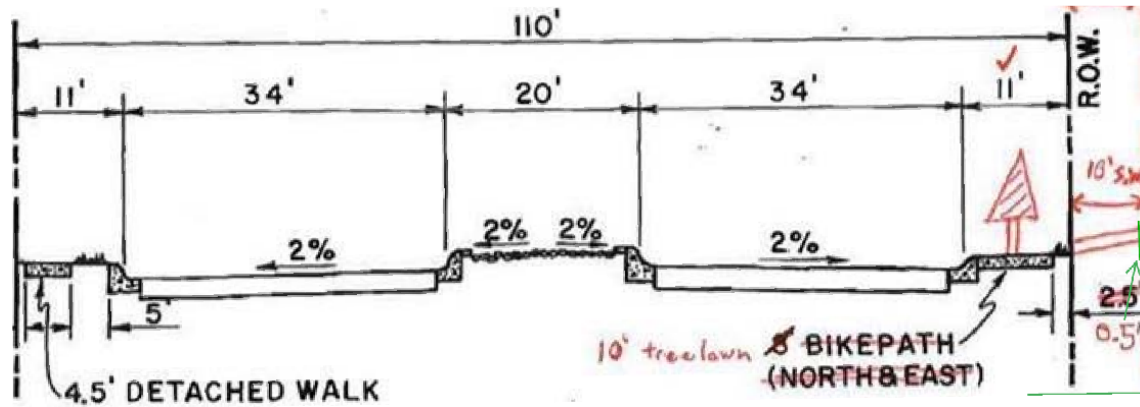
COA ULTIMATE CROSS-SECTIONS

The City has prepared cross-section designs for the “ultimate” condition on Smith Road and Tower Road. On Smith Road the cross-section on this section is shown in the figure to the left. It is



published in the City’s Roadway Design and Construction Specifications. It is a six-lane roadway within the existing 100-foot right-of-way. An additional 14 feet on the south side for an acceleration lane if needed but this would have to be acquired by the city, as it is not needed to mitigate the impacts of the project. The 8-foot sidewalk is only on the south side but placed per the cross-section. This leaves room for a landscaped buffer.

The cross-section for Tower Road is not published in the Roadway Design and Construction Specifications like the Smith Road cross-section. Rather it is a hand drawing of a modified Pre-1999 Major Arterial cross-section. It is also a six-lane roadway and includes a 10-foot tree lawn and a 10-foot sidewalk only on the east side. On the west side there is an existing 4.5-foot sidewalk and a 5-foot grassy area. The sketch provided by staff is shown on the next page.



There are no matching sections on either end - east or west ends on Smith Road and north or south ends on Tower Road. Nor are there any formal plans or CIP funding to construct adjoining sections on either ends of Smith or Tower Roads. On Tower Road there are two northbound through lanes, a single southbound through lane, left turn lane and an exclusive right turn lane. On Smith Road there a single shared right turn and through lane in both directions and exclusive left turn lanes.

The recommended roadway layout is designed for the best engineering fit to the existing intersection and roadway geometry and can be utilized as is with future improvements as needed to manage the forecast volumes at an acceptable level of service. Figure 4 shows how the COA ultimate roadway improvements will fit. It is for reference only and will require the City to purchase additional right of way. Note that six-lanes on Smith Road will require considerable widening on the north side up to the existing right of way line adjacent to the RR property.

In the future, we assume that the intersection and roadways will be improved to manage the forecast volumes resulting from regional growth and not necessary to mitigate the impact from the project. It is important to note again that six lanes on Tower Road are not required based on the forecast volumes and COA's recommended LOS threshold volumes. It can operate safely and efficiently as a four-lane major arterial. Likewise, six lanes on Smith Road are not required. In fact, it can operate safely and efficiently at LOS B on the existing two-lane cross-section.

The analysis on page 9 does not show that this sentence should be revised.

Please revise this text based on notes provided later in this review.



SMITH & TOWER ROADWAY BUILD-OUT EXHIBIT

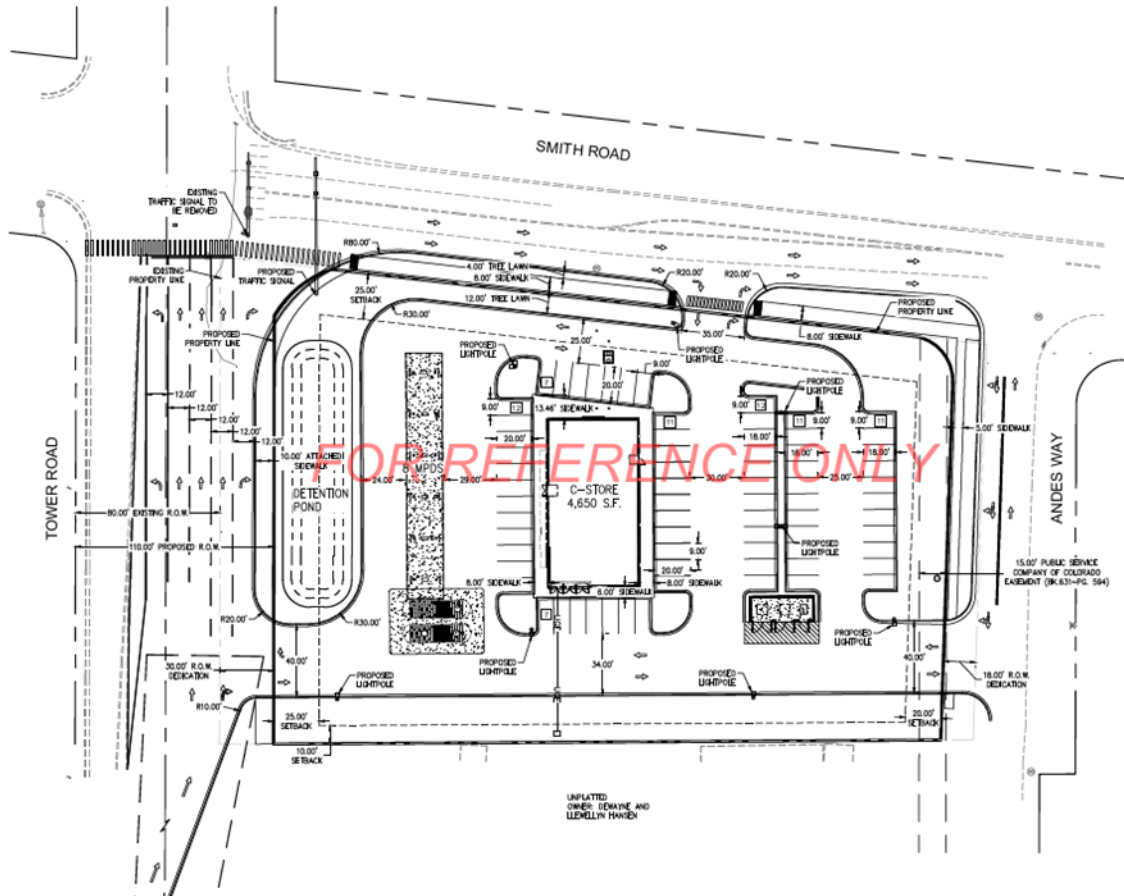


Figure 4 COA Ultimate Roadway Improvements

PEAK HOUR INTERSECTION LEVEL OF SERVICE

ATC uses Synchro v.10 for operations analyses. The Synchro methodology is based on the 6th Edition of the Highway Capacity Manual (HCM). The table summarizes the AM and PM peak hour LOS for the Existing, 2023 Background and Total, and 2038 Background and Total. LOS is a letter rating from A to F. LOS A indicates free-flow traffic conditions and no delay at intersections. LOS F is heavy traffic congestion with significant delay. LOS is provided for the overall operations at signalized intersections. LOS D is generally the benchmark for acceptable signalized intersection operations during the weekday peak hours. The critical movement, not the overall, indicates the LOS rating for unsignalized intersections, which is generally a left turn out from the minor street approach. Caution must be used when evaluating the LOS at unsignalized intersections particularly when LOS F is shown. In case of LOS, the HCM suggests that other evaluation methods should be considered such as the volume over capacity ratio and the 95th percentile queue length to make the most effective traffic control decision. LOS F at unsignalized intersections is typically normal during the weekday peak hours. Synchro graphics and reports for each timeframe are provided in the appendix.



| Unsignalized Intersection LOS Summary | | | | | | | | | | |
|--|----------|-----|-----------------|-----|------------|----|-----------------|-----|------------|----|
| LOS/Control Delay (secs) A=0-10, B=>10-15, C=>15-25, D=>25-35, E=>35-50, F=>50 | | | | | | | | | | |
| Intersection | Existing | | 2025 Background | | 2025 Total | | 2040 Background | | 2040 Total | |
| | AM | PM | AM | PM | AM | PM | AM | PM | AM | PM |
| Smith Access | n/a | n/a | n/a | n/a | A | A | n/a | n/a | B | A |
| Tower Access | n/a | n/a | n/a | n/a | C | C | n/a | n/a | C | C |
| Andes Way Access | n/a | n/a | n/a | n/a | A | A | n/a | n/a | A | A |
| Smith/Andes Way | n/a | n/a | n/a | n/a | B | B | n/a | n/a | C | C |
| | | | | | | | | | | |
| Signalized Intersection LOS Summary | | | | | | | | | | |
| LOS/Control Delay (secs) A=0-10, B=>10-20, C=>20-35, D=>35-55, E=>55-80, F=>80 | | | | | | | | | | |
| Intersection | Existing | | 2025 Background | | 2025 Total | | 2040 Background | | 2040 Total | |
| | AM | PM | AM | PM | AM | PM | AM | PM | AM | PM |
| Smith/Tower | C | C | C | C | D | D | F | F | D | D |

It is important to understand that Synchro is a macro-analysis with algorithms and default values for several of its signal timing procedures. The signal is actuated making the phase and cycle variable based on changing arrivals. Synchro is in essence a planning vs. operational tool to evaluate the impact of the project on a near apples-to-apples comparison.

The analysis shows that the Smith/Tower intersection currently operates at LOS C in the AM and PM peak hours and will continue to do so in the 2025 AM and PM peak hours background condition. With the site generated traffic, it will operate at LOS D in the AM peak hour and in the PM peak hour and LOS D. In 2040 with double the Background traffic in the AM and PM peak hour condition the intersection will operate at LOS F/F. In 2040 with the additional site generated traffic and recommended improvements it will provide LOS D/D operation in the AM and PM peak hours.

This seems to demonstrate that the 6-lane section is needed for Tower/Smith, contradicting highlighted section of Page 7. Please revise text on Page 7.

The Smith Road right in/right out excepting the 2040 AM peak hour when it will operate at LOS B. The Tower Road right in/right out only access will operate at LOS C in all conditions. The Andes Way full movement access will operate at LOS A/A in all conditions. The intersection will operate at LOS B/B in the 2025 conditions and LOS D/D in the 2040 conditions.

A review of the 95th percentile queue lengths is shown in the following table. Note that the lengths in the queue may be longer. Queue shown that the impact of the gas station and particularly on the eastbound left turn background traffic (regional growth vs. site generated traffic) is significant. The analysis indicates that with no improvements (remains as is) to the intersection and no project, the intersection will operate at LOS F/F. With the recommended improvements (essentially two NB through lanes and an exclusive NB right turn lane) the intersection will operate at LOS D/D. There is no indication that six lanes are needed as a result of this project.

There are no 95th percentile queue issues at any of the access locations or at the Smith Road and Andes Way intersection.



Would like to see an analysis for the 2040 BKG assuming a 6-lane NB/SB section for Tower, given excessive queuing demonstrated on this table.

The LOS with the recommended improvements brings it up to an acceptable level at D/D.

This table appears to need to be updated. Very little improvement from BKG traffic to Total.

| Smith Analysis | | | | | | | | | |
|-----------------------|-----|-----|-----|-----|-----|-----|------|-----|------|
| | EBL | EBL | EBL | EBL | EBL | NBL | NBL | NBL | NBL |
| Storage Length | 150 | 150 | 150 | 150 | 150 | 125 | 125 | 325 | 325 |
| Future Storage Length | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 |
| Existing AM | 170 | 121 | 95 | 155 | | | | 64 | 390 |
| Existing PM | 322 | 157 | 111 | 118 | | | | 36 | 669 |
| 2024 BKG AM | 228 | 134 | 106 | 176 | | | | 67 | 468 |
| 2024 BKG PM | 430 | 191 | 134 | 146 | | | | 40 | 947 |
| 2024 TOTAL AM | 152 | 164 | 130 | 177 | | 37 | 867 | 131 | 471 |
| 2024 TOTAL PM | 275 | 225 | 161 | 146 | | 45 | 927 | 115 | 947 |
| 2040 BKG AM | 470 | 217 | 178 | 304 | | 162 | 2008 | 496 | 1524 |
| 2040 BKG PM | 846 | 321 | 294 | 248 | | 42 | 1980 | 147 | 2092 |
| 2040 TOTAL AM | 275 | 252 | 189 | 284 | | 91 | 1975 | 544 | 1446 |
| 2040 TOTAL PM | 576 | 381 | 168 | 248 | | 43 | 2072 | 251 | 2092 |

Indicative of how small the impact of the project is.

The 2040 analysis is for the project traffic and recommended improvements needed to mitigate the project impacts and to provide the best engineering fit for a second NB through lane and an exclusive NB right turn lane in the existing intersection and roadway geometry. An analysis of a six-lane section on Smith and Tower is beyond the scope of this traffic impact study and not necessary to evaluate the project impacts and consequential mitigation.

Justification for implementation of six lanes on Tower and Smith should be based on a master plan study such as NEATS not on the trip generation of a small 7-11 gas station and convenience store.

standards for the determination of auxiliary lanes. If an NR-B classification, the required lanes for a roadway posted at 40 mph. The taper ratio is 1:10 feet on the Smith Road right turn deceleration lane.

road access with a 150-foot taper and 50-foot wide shoulders including a ditch, culvert, and proximal to the intersection. The lane should be shorter or designed with a "slip" lane (no storage).

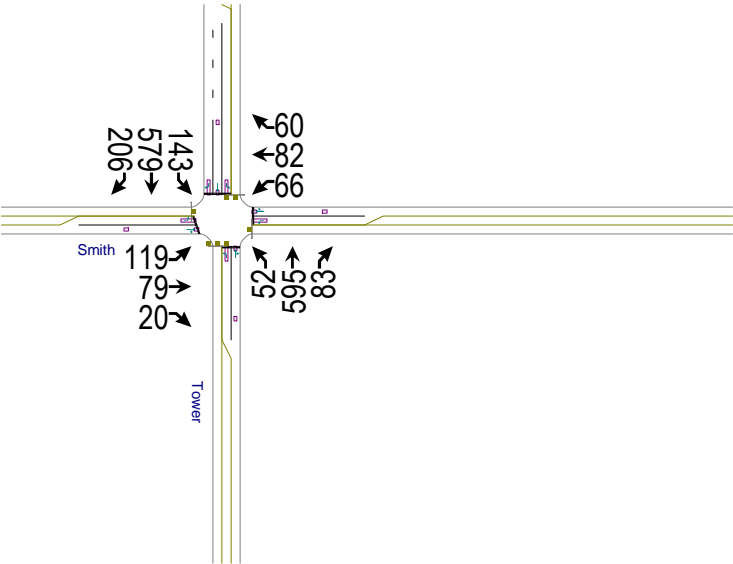
interfered by the adjacent streets and intersections. The proposed roadway and intersection improvements are the best engineering fit for the project.

These queues do not match synchro report in the Appendices. Given excessive queuing/LOS E (as shown in the appendices), please revise this analysis to assume 6-lane section for Tower.

The queue lengths are correct. The correct queuing reports are in the revised study.
























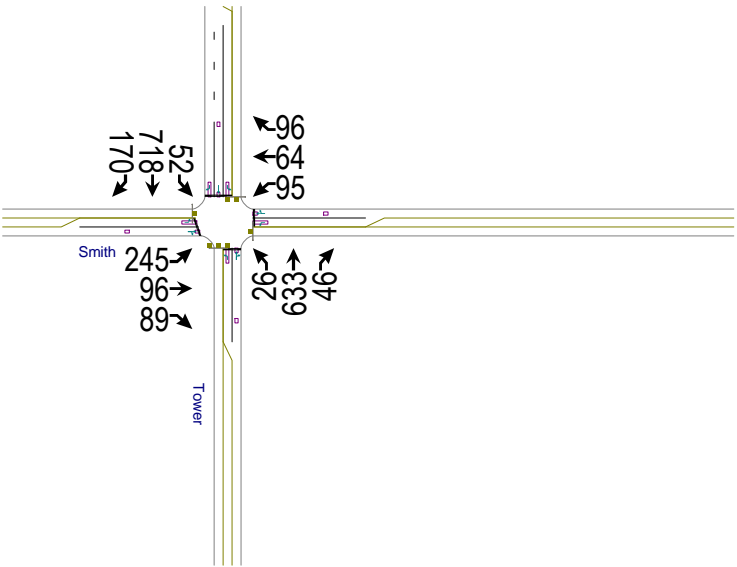
APPENDIX



Smith-Tower
3: Tower & Smith






















EX AM
09/06/2019

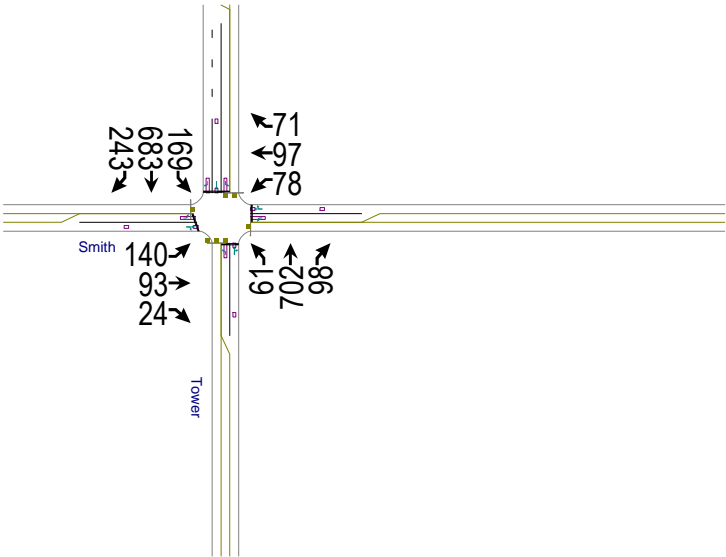
| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  |  |
| Traffic Volume (veh/h) | 119 | 79 | 20 | 66 | 82 | 60 | 52 | 595 | 83 | 143 | 579 | 206 |
| Future Volume (veh/h) | 119 | 79 | 20 | 66 | 82 | 60 | 52 | 595 | 83 | 143 | 579 | 206 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 129 | 86 | 22 | 72 | 89 | 65 | 57 | 647 | 90 | 155 | 629 | 224 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 211 | 288 | 74 | 251 | 202 | 147 | 431 | 1031 | 143 | 431 | 1223 | 1037 |
| Arrive On Green | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.03 | 0.64 | 0.64 | 0.05 | 0.65 | 0.65 |
| Sat Flow, veh/h | 1233 | 1437 | 368 | 1286 | 1005 | 734 | 1781 | 1607 | 223 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 129 | 0 | 108 | 72 | 0 | 154 | 57 | 0 | 737 | 155 | 629 | 224 |
| Grp Sat Flow(s),veh/h/ln | 1233 | 0 | 1804 | 1286 | 0 | 1738 | 1781 | 0 | 1830 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 12.5 | 0.0 | 6.2 | 6.2 | 0.0 | 9.5 | 1.3 | 0.0 | 29.6 | 3.6 | 21.5 | 7.0 |
| Cycle Q Clear(g_c), s | 22.0 | 0.0 | 6.2 | 12.4 | 0.0 | 9.5 | 1.3 | 0.0 | 29.6 | 3.6 | 21.5 | 7.0 |
| Prop In Lane | 1.00 | | 0.20 | 1.00 | | 0.42 | 1.00 | | 0.12 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 211 | 0 | 362 | 251 | 0 | 349 | 431 | 0 | 1174 | 431 | 1223 | 1037 |
| V/C Ratio(X) | 0.61 | 0.00 | 0.30 | 0.29 | 0.00 | 0.44 | 0.13 | 0.00 | 0.63 | 0.36 | 0.51 | 0.22 |
| Avail Cap(c_a), veh/h | 270 | 0 | 450 | 314 | 0 | 433 | 448 | 0 | 1174 | 516 | 1223 | 1037 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 52.5 | 0.0 | 41.6 | 46.8 | 0.0 | 42.9 | 8.4 | 0.0 | 13.2 | 11.0 | 11.0 | 8.5 |
| Incr Delay (d2), s/veh | 2.9 | 0.0 | 0.5 | 0.6 | 0.0 | 0.9 | 0.1 | 0.0 | 2.5 | 0.5 | 1.5 | 0.5 |
| 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 | 4.0 | 0.0 | 2.8 | 2.0 | 0.0 | 4.2 | 0.5 | 0.0 | 12.3 | 1.4 | 8.9 | 2.5 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 55.4 | 0.0 | 42.0 | 47.5 | 0.0 | 43.8 | 8.5 | 0.0 | 15.7 | 11.5 | 12.6 | 9.0 |
| LnGrp LOS | E | A | D | D | A | D | A | A | B | B | B | A |
| Approach Vol, veh/h | | 237 | | | 226 | | | 794 | | | 1008 | |
| Approach Delay, s/veh | | 49.3 | | | 44.9 | | | 15.2 | | | 11.6 | |
| Approach LOS | | D | | | D | | | B | | | B | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 10.3 | 83.0 | | 29.1 | 8.8 | 84.5 | | 29.1 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | 11.6 | 73.9 | | 30.5 | 5.5 | 80.0 | | 30.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 5.6 | 31.6 | | 24.0 | 3.3 | 23.5 | | 14.4 | | | | |
| Green Ext Time (p_c), s | 0.2 | 6.5 | | 0.5 | 0.0 | 6.0 | | 0.9 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 20.1 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |



Smith Tower
3: Tower & Smith






















EX PM
09/06/2019

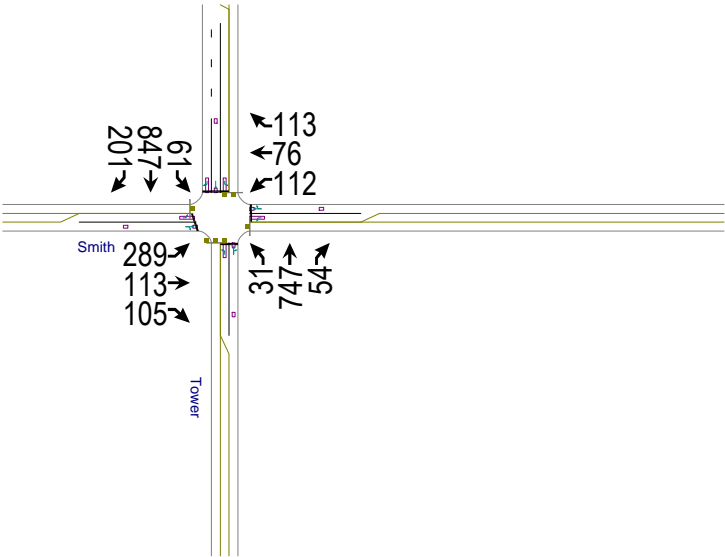
| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  |  |
| Traffic Volume (veh/h) | 245 | 96 | 89 | 95 | 64 | 96 | 26 | 633 | 46 | 52 | 718 | 170 |
| Future Volume (veh/h) | 245 | 96 | 89 | 95 | 64 | 96 | 26 | 633 | 46 | 52 | 718 | 170 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 266 | 104 | 97 | 103 | 70 | 104 | 28 | 688 | 50 | 57 | 780 | 185 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 350 | 282 | 263 | 329 | 215 | 320 | 232 | 915 | 67 | 284 | 1014 | 859 |
| Arrive On Green | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.03 | 0.53 | 0.53 | 0.04 | 0.54 | 0.54 |
| Sat Flow, veh/h | 1211 | 890 | 830 | 1181 | 679 | 1009 | 1781 | 1723 | 125 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 266 | 0 | 201 | 103 | 0 | 174 | 28 | 0 | 738 | 57 | 780 | 185 |
| Grp Sat Flow(s),veh/h/ln | 1211 | 0 | 1721 | 1181 | 0 | 1689 | 1781 | 0 | 1848 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 25.0 | 0.0 | 10.5 | 8.6 | 0.0 | 9.1 | 0.8 | 0.0 | 36.3 | 1.7 | 38.2 | 7.1 |
| Cycle Q Clear(g_c), s | 34.1 | 0.0 | 10.5 | 19.1 | 0.0 | 9.1 | 0.8 | 0.0 | 36.3 | 1.7 | 38.2 | 7.1 |
| Prop In Lane | 1.00 | | 0.48 | 1.00 | | 0.60 | 1.00 | | 0.07 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 350 | 0 | 545 | 329 | 0 | 535 | 232 | 0 | 982 | 284 | 1014 | 859 |
| V/C Ratio(X) | 0.76 | 0.00 | 0.37 | 0.31 | 0.00 | 0.33 | 0.12 | 0.00 | 0.75 | 0.20 | 0.77 | 0.22 |
| Avail Cap(c_a), veh/h | 377 | 0 | 583 | 356 | 0 | 573 | 263 | 0 | 982 | 298 | 1014 | 859 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 43.3 | 0.0 | 30.8 | 38.2 | 0.0 | 30.3 | 17.8 | 0.0 | 21.3 | 17.4 | 21.0 | 13.8 |
| Incr Delay (d2), s/veh | 8.1 | 0.0 | 0.4 | 0.5 | 0.0 | 0.4 | 0.2 | 0.0 | 5.3 | 0.3 | 5.6 | 0.6 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 8.2 | 0.0 | 4.4 | 2.5 | 0.0 | 3.8 | 0.3 | 0.0 | 16.5 | 0.7 | 17.6 | 2.6 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 51.5 | 0.0 | 31.2 | 38.7 | 0.0 | 30.7 | 18.0 | 0.0 | 26.6 | 17.7 | 26.6 | 14.4 |
| LnGrp LOS | D | A | C | D | A | C | B | A | C | B | C | B |
| Approach Vol, veh/h | | 467 | | | 277 | | | 766 | | | 1022 | |
| Approach Delay, s/veh | | 42.7 | | | 33.7 | | | 26.3 | | | 23.9 | |
| Approach LOS | | D | | | C | | | C | | | C | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.7 | 66.4 | | 41.4 | 7.5 | 67.6 | | 41.4 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | 5.1 | 61.9 | | 39.5 | 5.0 | 62.0 | | 39.5 | | | | |
| Max Q Clear Time (g_c+l1), s | 3.7 | 38.3 | | 36.1 | 2.8 | 40.2 | | 21.1 | | | | |
| Green Ext Time (p_c), s | 0.0 | 5.7 | | 0.8 | 0.0 | 6.7 | | 1.3 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 29.2 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |



Smith Tower
3: Tower & Smith






















2024 AM BKG
09/16/2019

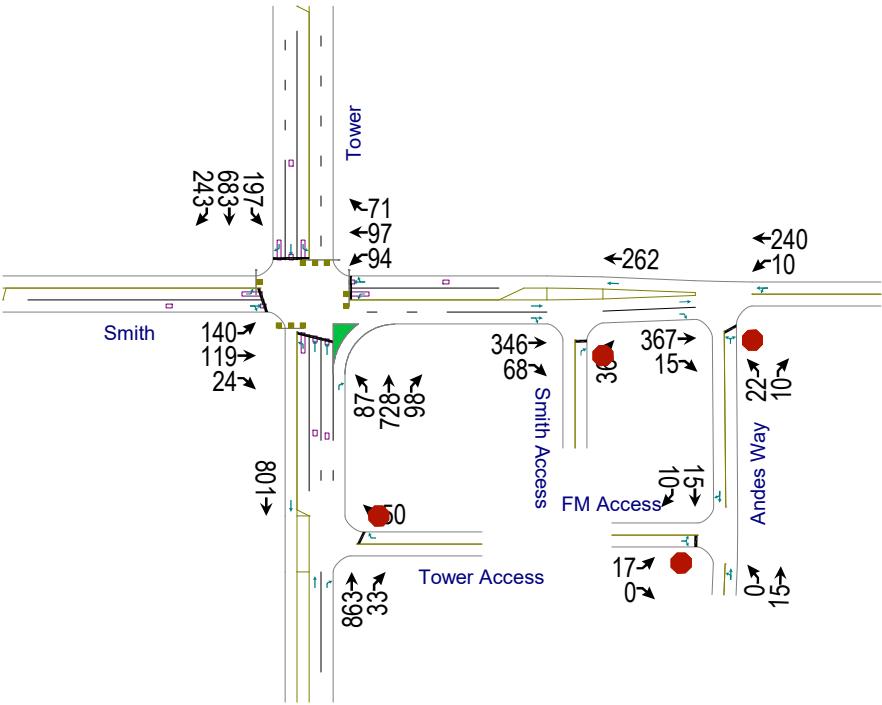
| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  |  |
| Traffic Volume (veh/h) | 119 | 79 | 20 | 66 | 82 | 60 | 52 | 595 | 83 | 143 | 579 | 206 |
| Future Volume (veh/h) | 119 | 79 | 20 | 66 | 82 | 60 | 52 | 595 | 83 | 143 | 579 | 206 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 153 | 101 | 26 | 85 | 105 | 77 | 67 | 763 | 106 | 183 | 743 | 264 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 219 | 320 | 82 | 268 | 223 | 164 | 340 | 975 | 136 | 322 | 1171 | 993 |
| Arrive On Green | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.22 | 0.04 | 0.61 | 0.61 | 0.06 | 0.63 | 0.63 |
| Sat Flow, veh/h | 1202 | 1435 | 369 | 1264 | 1003 | 735 | 1781 | 1607 | 223 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 153 | 0 | 127 | 85 | 0 | 182 | 67 | 0 | 869 | 183 | 743 | 264 |
| Grp Sat Flow(s),veh/h/ln | 1202 | 0 | 1804 | 1264 | 0 | 1738 | 1781 | 0 | 1830 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 15.1 | 0.0 | 7.0 | 7.2 | 0.0 | 10.8 | 1.7 | 0.0 | 42.3 | 4.6 | 29.3 | 8.9 |
| Cycle Q Clear(g_c), s | 25.9 | 0.0 | 7.0 | 14.2 | 0.0 | 10.8 | 1.7 | 0.0 | 42.3 | 4.6 | 29.3 | 8.9 |
| Prop In Lane | 1.00 | | 0.20 | 1.00 | | 0.42 | 1.00 | | 0.12 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 219 | 0 | 402 | 268 | 0 | 387 | 340 | 0 | 1111 | 322 | 1171 | 993 |
| V/C Ratio(X) | 0.70 | 0.00 | 0.32 | 0.32 | 0.00 | 0.47 | 0.20 | 0.00 | 0.78 | 0.57 | 0.63 | 0.27 |
| Avail Cap(c_a), veh/h | 219 | 0 | 402 | 268 | 0 | 387 | 356 | 0 | 1111 | 383 | 1171 | 993 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 51.4 | 0.0 | 38.6 | 44.6 | 0.0 | 40.1 | 11.3 | 0.0 | 17.5 | 18.0 | 13.8 | 10.0 |
| Incr Delay (d2), s/veh | 9.4 | 0.0 | 0.4 | 0.7 | 0.0 | 0.9 | 0.3 | 0.0 | 5.5 | 1.6 | 2.6 | 0.7 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 5.1 | 0.0 | 3.2 | 2.3 | 0.0 | 4.7 | 0.6 | 0.0 | 18.4 | 2.4 | 12.5 | 3.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 60.8 | 0.0 | 39.1 | 45.3 | 0.0 | 41.0 | 11.6 | 0.0 | 23.0 | 19.6 | 16.4 | 10.6 |
| LnGrp LOS | E | A | D | D | A | D | B | A | C | B | B | B |
| Approach Vol, veh/h | | 280 | | | 267 | | | 936 | | | 1190 | |
| Approach Delay, s/veh | | 50.9 | | | 42.4 | | | 22.2 | | | 15.6 | |
| Approach LOS | | D | | | D | | | C | | | B | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 11.2 | 76.7 | | 31.0 | 9.0 | 79.0 | | 31.0 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | 10.8 | 69.2 | | 26.5 | 5.5 | 74.5 | | 26.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 6.6 | 44.3 | | 27.9 | 3.7 | 31.3 | | 16.2 | | | | |
| Green Ext Time (p_c), s | 0.2 | 7.5 | | 0.0 | 0.0 | 7.7 | | 0.9 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 24.3 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |



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2024 PM BKG
09/16/2019























| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  |  |
| Traffic Volume (veh/h) | 245 | 96 | 89 | 95 | 64 | 96 | 26 | 633 | 46 | 52 | 718 | 170 |
| Future Volume (veh/h) | 245 | 96 | 89 | 95 | 64 | 96 | 26 | 633 | 46 | 52 | 718 | 170 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 314 | 123 | 114 | 122 | 82 | 123 | 33 | 812 | 59 | 67 | 921 | 218 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 332 | 290 | 268 | 308 | 219 | 328 | 151 | 905 | 66 | 192 | 1000 | 848 |
| Arrive On Green | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.03 | 0.53 | 0.53 | 0.04 | 0.53 | 0.53 |
| Sat Flow, veh/h | 1177 | 893 | 828 | 1143 | 675 | 1013 | 1781 | 1723 | 125 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 314 | 0 | 237 | 122 | 0 | 205 | 33 | 0 | 871 | 67 | 921 | 218 |
| Grp Sat Flow(s),veh/h/ln | 1177 | 0 | 1721 | 1143 | 0 | 1688 | 1781 | 0 | 1848 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 27.6 | 0.0 | 12.9 | 11.2 | 0.0 | 11.1 | 1.0 | 0.0 | 50.5 | 2.0 | 53.9 | 8.9 |
| Cycle Q Clear(g_c), s | 38.7 | 0.0 | 12.9 | 24.1 | 0.0 | 11.1 | 1.0 | 0.0 | 50.5 | 2.0 | 53.9 | 8.9 |
| Prop In Lane | 1.00 | | 0.48 | 1.00 | | 0.60 | 1.00 | | 0.07 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 332 | 0 | 558 | 308 | 0 | 547 | 151 | 0 | 971 | 192 | 1000 | 848 |
| V/C Ratio(X) | 0.95 | 0.00 | 0.42 | 0.40 | 0.00 | 0.37 | 0.22 | 0.00 | 0.90 | 0.35 | 0.92 | 0.26 |
| Avail Cap(c_a), veh/h | 332 | 0 | 558 | 308 | 0 | 547 | 176 | 0 | 971 | 201 | 1000 | 848 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 47.8 | 0.0 | 31.6 | 41.0 | 0.0 | 31.0 | 24.6 | 0.0 | 25.4 | 23.8 | 25.4 | 15.0 |
| Incr Delay (d2), s/veh | 35.3 | 0.0 | 0.5 | 0.8 | 0.0 | 0.4 | 0.7 | 0.0 | 12.7 | 1.1 | 14.8 | 0.7 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 12.8 | 0.0 | 5.4 | 3.2 | 0.0 | 4.6 | 0.4 | 0.0 | 24.6 | 0.9 | 26.9 | 3.3 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 83.1 | 0.0 | 32.1 | 41.9 | 0.0 | 31.4 | 25.3 | 0.0 | 38.1 | 24.9 | 40.2 | 15.7 |
| LnGrp LOS | F | A | C | D | A | C | C | A | D | C | D | B |
| Approach Vol, veh/h | | 551 | | | 327 | | | 904 | | | 1206 | |
| Approach Delay, s/veh | | 61.2 | | | 35.3 | | | 37.7 | | | 34.9 | |
| Approach LOS | | E | | | D | | | D | | | C | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.0 | 67.2 | | 43.2 | 7.8 | 68.3 | | 43.2 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | 5.1 | 62.7 | | 38.7 | 5.0 | 62.8 | | 38.7 | | | | |
| Max Q Clear Time (g_c+l1), s | 4.0 | 52.5 | | 40.7 | 3.0 | 55.9 | | 26.1 | | | | |
| Green Ext Time (p_c), s | 0.0 | 4.6 | | 0.0 | 0.0 | 4.1 | | 1.4 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 40.6 | | | | | | | | | |
| HCM 6th LOS | | | D | | | | | | | | | |



Smith-Tower
3: Smith & Tower

2025 AM TOTAL





07/05/2021

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  |  |  |  |  |
| Traffic Volume (veh/h) | 119 | 101 | 20 | 80 | 82 | 60 | 74 | 617 | 83 | 167 | 579 | 206 |
| Future Volume (veh/h) | 119 | 101 | 20 | 80 | 82 | 60 | 74 | 617 | 83 | 167 | 579 | 206 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 153 | 130 | 26 | 103 | 105 | 77 | 95 | 791 | 0 | 214 | 743 | 264 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 250 | 385 | 77 | 217 | 125 | 92 | 312 | 1979 | | 483 | 1095 | 928 |
| Arrive On Green | 0.09 | 0.25 | 0.25 | 0.13 | 0.13 | 0.13 | 0.04 | 0.56 | 0.00 | 0.07 | 0.59 | 0.59 |
| Sat Flow, veh/h | 1781 | 1513 | 303 | 1231 | 1003 | 735 | 1781 | 3554 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 153 | 0 | 156 | 103 | 0 | 182 | 95 | 791 | 0 | 214 | 743 | 264 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 0 | 1816 | 1231 | 0 | 1738 | 1781 | 1777 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 8.2 | 0.0 | 8.0 | 9.1 | 0.0 | 11.6 | 2.6 | 14.4 | 0.0 | 5.7 | 31.1 | 9.4 |
| Cycle Q Clear(g_c), s | 8.2 | 0.0 | 8.0 | 9.1 | 0.0 | 11.6 | 2.6 | 14.4 | 0.0 | 5.7 | 31.1 | 9.4 |
| Prop In Lane | 1.00 | | 0.17 | 1.00 | | 0.42 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 250 | 0 | 462 | 217 | 0 | 217 | 312 | 1979 | | 483 | 1095 | 928 |
| V/C Ratio(X) | 0.61 | 0.00 | 0.34 | 0.47 | 0.00 | 0.84 | 0.30 | 0.40 | | 0.44 | 0.68 | 0.28 |
| Avail Cap(c_a), veh/h | 271 | 0 | 551 | 264 | 0 | 283 | 324 | 1979 | | 565 | 1095 | 928 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 37.6 | 0.0 | 34.6 | 47.5 | 0.0 | 48.6 | 13.8 | 14.3 | 0.0 | 10.1 | 16.2 | 11.7 |
| Incr Delay (d2), s/veh | 3.5 | 0.0 | 0.4 | 1.6 | 0.0 | 15.5 | 0.5 | 0.6 | 0.0 | 0.6 | 3.4 | 0.8 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 3.8 | 0.0 | 3.6 | 2.9 | 0.0 | 6.0 | 1.0 | 5.8 | 0.0 | 2.2 | 13.6 | 3.4 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 41.1 | 0.0 | 35.0 | 49.1 | 0.0 | 64.0 | 14.3 | 14.9 | 0.0 | 10.8 | 19.6 | 12.5 |
| LnGrp LOS | D | A | D | D | A | E | B | B | | B | B | B |
| Approach Vol, veh/h | | 309 | | | 285 | | | 886 | A | | 1221 | |
| Approach Delay, s/veh | | 38.0 | | | 58.6 | | | 14.9 | | | 16.5 | |
| Approach LOS | | D | | | E | | | B | | | B | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 12.5 | 67.8 | | 33.4 | 9.3 | 71.0 | 14.7 | 18.7 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 13.2 | 58.8 | | 34.5 | 5.5 | 66.5 | 11.5 | 18.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 7.7 | 16.4 | | 10.0 | 4.6 | 33.1 | 10.2 | 13.6 | | | | |
| Green Ext Time (p_c), s | 0.3 | 6.7 | | 0.8 | 0.0 | 7.4 | 0.0 | 0.6 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 22.9 | | | | | | | | | |
| HCM 6th LOS | | | C | | | | | | | | | |
| Notes | | | | | | | | | | | | |
| Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay. | | | | | | | | | | | | |




| Intersection | | | | | | |
|--------------------------|--------|------|--------|------|--------|-------|
| Int Delay, s/veh | 0.5 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑↑↱ | | | ↑ | | ↱ |
| Traffic Vol, veh/h | 346 | 68 | 0 | 262 | 0 | 36 |
| Future Vol, veh/h | 346 | 68 | 0 | 262 | 0 | 36 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 376 | 74 | 0 | 285 | 0 | 39 |
| | | | | | | |
| Major/Minor | Major1 | | Major2 | | Minor1 | |
| Conflicting Flow All | 0 | 0 | - | - | - | 225 |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Critical Hdwy | - | - | - | - | - | 6.93 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - |
| Follow-up Hdwy | - | - | - | - | - | 3.319 |
| Pot Cap-1 Maneuver | - | - | 0 | - | 0 | 779 |
| Stage 1 | - | - | 0 | - | 0 | - |
| Stage 2 | - | - | 0 | - | 0 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | - | - | - | 779 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| | | | | | | |
| | | | | | | |
| Approach | EB | | WB | | NB | |
| HCM Control Delay, s | 0 | | 0 | | 9.9 | |
| HCM LOS | | | | | A | |
| | | | | | | |
| | | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT | | |
| Capacity (veh/h) | 779 | - | - | - | | |
| HCM Lane V/C Ratio | 0.05 | - | - | - | | |
| HCM Control Delay (s) | 9.9 | - | - | - | | |
| HCM Lane LOS | A | - | - | - | | |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | | |

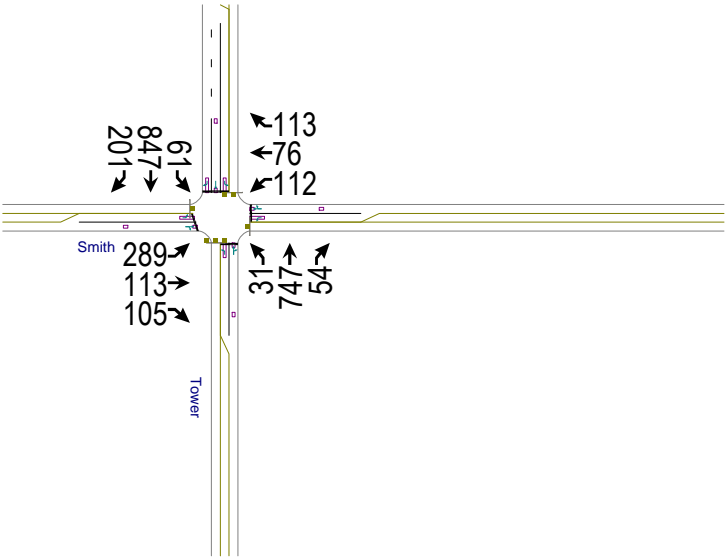
Smith-Tower
8: Tower Access

2025 AM TOTAL
07/05/2021

| Intersection | | | | | | |
|--------------------------|--------|---|---|---|------|---|
| Int Delay, s/veh | 0.5 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | |  |  |  | |  |
| Traffic Vol, veh/h | 0 | 50 | 863 | 33 | 0 | 801 |
| Future Vol, veh/h | 0 | 50 | 863 | 33 | 0 | 801 |
| 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 | - | 0 | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 54 | 938 | 36 | 0 | 871 |
| Major/Minor | Minor1 | Major1 | | Major2 | | |
| Conflicting Flow All | - | 938 | 0 | 0 | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Critical Hdwy | - | 6.22 | - | - | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - |
| Follow-up Hdwy | - | 3.318 | - | - | - | - |
| Pot Cap-1 Maneuver | 0 | 321 | - | - | 0 | - |
| Stage 1 | 0 | - | - | - | 0 | - |
| Stage 2 | 0 | - | - | - | 0 | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | - | 321 | - | - | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Approach | WB | NB | | SB | | |
| HCM Control Delay, s | 18.5 | 0 | | 0 | | |
| HCM LOS | C | | | | | |
| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | | SBT | | |
| Capacity (veh/h) | - | - 321 | | - | | |
| HCM Lane V/C Ratio | - | - 0.169 | | - | | |
| HCM Control Delay (s) | - | - 18.5 | | - | | |
| HCM Lane LOS | - | - C | | - | | |
| HCM 95th %tile Q(veh) | - | - 0.6 | | - | | |






















| Intersection | | | | | | |
|--------------------------|--------|------|--------|------|--------|-------|
| Int Delay, s/veh | 0.8 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↗ | | ↖ | ↘ | |
| Traffic Vol, veh/h | 367 | 15 | 10 | 240 | 22 | 10 |
| Future Vol, veh/h | 367 | 15 | 10 | 240 | 22 | 10 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 0 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 399 | 16 | 11 | 261 | 24 | 11 |
| | | | | | | |
| Major/Minor | Major1 | | Major2 | | Minor1 | |
| Conflicting Flow All | 0 | 0 | 415 | 0 | 682 | 399 |
| Stage 1 | - | - | - | - | 399 | - |
| Stage 2 | - | - | - | - | 283 | - |
| Critical Hdwy | - | - | 4.12 | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | - | - | 1144 | - | 415 | 651 |
| Stage 1 | - | - | - | - | 678 | - |
| Stage 2 | - | - | - | - | 765 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1144 | - | 410 | 651 |
| Mov Cap-2 Maneuver | - | - | - | - | 410 | - |
| Stage 1 | - | - | - | - | 678 | - |
| Stage 2 | - | - | - | - | 757 | - |
| | | | | | | |
| | | | | | | |
| Approach | EB | | WB | | NB | |
| HCM Control Delay, s | 0 | | 0.3 | | 13.4 | |
| HCM LOS | B | | | | | |
| | | | | | | |
| | | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 464 | - | - | 1144 | - | |
| HCM Lane V/C Ratio | 0.075 | - | - | 0.01 | - | |
| HCM Control Delay (s) | 13.4 | - | - | 8.2 | 0 | |
| HCM Lane LOS | B | - | - | A | A | |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 0 | - | |

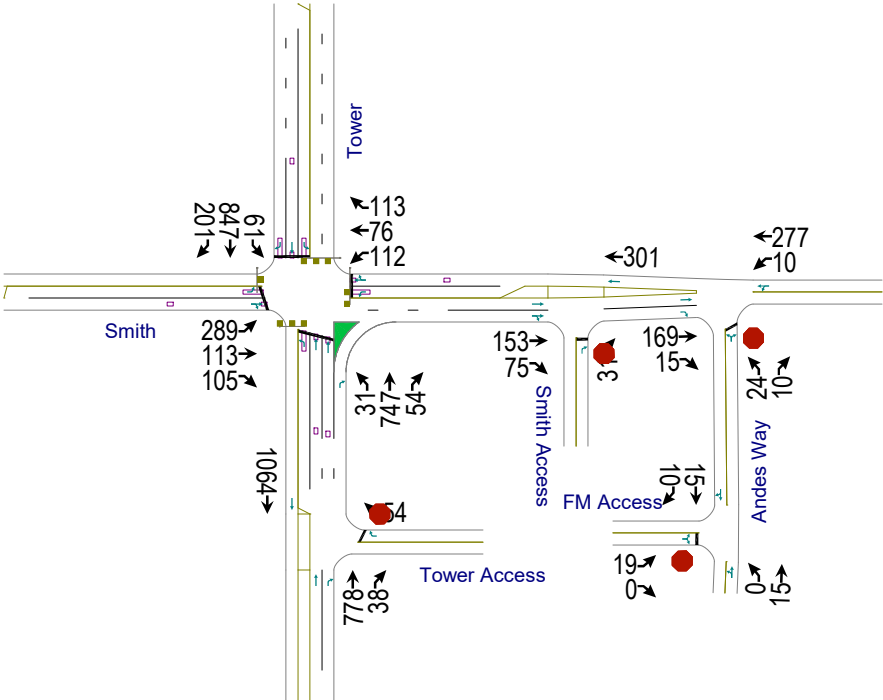
| Intersection | | | | | | |
|--------------------------|---|--------|-------|---|---|------|
| Int Delay, s/veh | 2.6 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations |  | | |  |  | |
| Traffic Vol, veh/h | 17 | 0 | 0 | 15 | 15 | 10 |
| Future Vol, veh/h | 17 | 0 | 0 | 15 | 15 | 10 |
| 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 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 18 | 0 | 0 | 16 | 16 | 11 |
| Major/Minor | Minor2 | Major1 | | Major2 | | |
| Conflicting Flow All | 38 | 22 | 27 | 0 | - | 0 |
| Stage 1 | 22 | - | - | - | - | - |
| Stage 2 | 16 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 974 | 1055 | 1587 | - | - | - |
| Stage 1 | 1001 | - | - | - | - | - |
| Stage 2 | 1007 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 974 | 1055 | 1587 | - | - | - |
| Mov Cap-2 Maneuver | 974 | - | - | - | - | - |
| Stage 1 | 1001 | - | - | - | - | - |
| Stage 2 | 1007 | - | - | - | - | - |
| Approach | EB | NB | | SB | | |
| HCM Control Delay, s | 8.8 | 0 | | 0 | | |
| HCM LOS | A | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR | |
| Capacity (veh/h) | 1587 | - | 974 | - | - | |
| HCM Lane V/C Ratio | - | - | 0.019 | - | - | |
| HCM Control Delay (s) | 0 | - | 8.8 | - | - | |
| HCM Lane LOS | A | - | A | - | - | |
| HCM 95th %tile Q(veh) | 0 | - | 0.1 | - | - | |



Smith Tower
3: Tower & Smith

2024 PM BKG
09/16/2019

























| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  |  |
| Traffic Volume (veh/h) | 245 | 96 | 89 | 95 | 64 | 96 | 26 | 633 | 46 | 52 | 718 | 170 |
| Future Volume (veh/h) | 245 | 96 | 89 | 95 | 64 | 96 | 26 | 633 | 46 | 52 | 718 | 170 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 314 | 123 | 114 | 122 | 82 | 123 | 33 | 812 | 59 | 67 | 921 | 218 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 332 | 290 | 268 | 308 | 219 | 328 | 151 | 905 | 66 | 192 | 1000 | 848 |
| Arrive On Green | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.03 | 0.53 | 0.53 | 0.04 | 0.53 | 0.53 |
| Sat Flow, veh/h | 1177 | 893 | 828 | 1143 | 675 | 1013 | 1781 | 1723 | 125 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 314 | 0 | 237 | 122 | 0 | 205 | 33 | 0 | 871 | 67 | 921 | 218 |
| Grp Sat Flow(s),veh/h/ln | 1177 | 0 | 1721 | 1143 | 0 | 1688 | 1781 | 0 | 1848 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 27.6 | 0.0 | 12.9 | 11.2 | 0.0 | 11.1 | 1.0 | 0.0 | 50.5 | 2.0 | 53.9 | 8.9 |
| Cycle Q Clear(g_c), s | 38.7 | 0.0 | 12.9 | 24.1 | 0.0 | 11.1 | 1.0 | 0.0 | 50.5 | 2.0 | 53.9 | 8.9 |
| Prop In Lane | 1.00 | | 0.48 | 1.00 | | 0.60 | 1.00 | | 0.07 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 332 | 0 | 558 | 308 | 0 | 547 | 151 | 0 | 971 | 192 | 1000 | 848 |
| V/C Ratio(X) | 0.95 | 0.00 | 0.42 | 0.40 | 0.00 | 0.37 | 0.22 | 0.00 | 0.90 | 0.35 | 0.92 | 0.26 |
| Avail Cap(c_a), veh/h | 332 | 0 | 558 | 308 | 0 | 547 | 176 | 0 | 971 | 201 | 1000 | 848 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 47.8 | 0.0 | 31.6 | 41.0 | 0.0 | 31.0 | 24.6 | 0.0 | 25.4 | 23.8 | 25.4 | 15.0 |
| Incr Delay (d2), s/veh | 35.3 | 0.0 | 0.5 | 0.8 | 0.0 | 0.4 | 0.7 | 0.0 | 12.7 | 1.1 | 14.8 | 0.7 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 12.8 | 0.0 | 5.4 | 3.2 | 0.0 | 4.6 | 0.4 | 0.0 | 24.6 | 0.9 | 26.9 | 3.3 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 83.1 | 0.0 | 32.1 | 41.9 | 0.0 | 31.4 | 25.3 | 0.0 | 38.1 | 24.9 | 40.2 | 15.7 |
| LnGrp LOS | F | A | C | D | A | C | C | A | D | C | D | B |
| Approach Vol, veh/h | | 551 | | | 327 | | | 904 | | | 1206 | |
| Approach Delay, s/veh | | 61.2 | | | 35.3 | | | 37.7 | | | 34.9 | |
| Approach LOS | | E | | | D | | | D | | | C | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.0 | 67.2 | | 43.2 | 7.8 | 68.3 | | 43.2 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | 5.1 | 62.7 | | 38.7 | 5.0 | 62.8 | | 38.7 | | | | |
| Max Q Clear Time (g_c+l1), s | 4.0 | 52.5 | | 40.7 | 3.0 | 55.9 | | 26.1 | | | | |
| Green Ext Time (p_c), s | 0.0 | 4.6 | | 0.0 | 0.0 | 4.1 | | 1.4 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 40.6 | | | | | | | | | |
| HCM 6th LOS | | | D | | | | | | | | | |



Smith-Tower
3: Smith & Tower

2025 PM TOTAL

07/05/2021

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h) | 119 | 101 | 20 | 80 | 82 | 60 | 74 | 617 | 83 | 167 | 579 | 206 |
| Future Volume (veh/h) | 119 | 101 | 20 | 80 | 82 | 60 | 74 | 617 | 83 | 167 | 579 | 206 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 259 | 220 | 43 | 174 | 178 | 130 | 161 | 1341 | 0 | 363 | 1259 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 291 | 270 | 228 | 251 | 219 | 186 | 312 | 1597 | | 395 | 1923 | |
| Arrive On Green | 0.11 | 0.14 | 0.14 | 0.09 | 0.12 | 0.12 | 0.07 | 0.45 | 0.00 | 0.16 | 0.54 | 0.00 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 259 | 220 | 43 | 174 | 178 | 130 | 161 | 1341 | 0 | 363 | 1259 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 12.5 | 12.7 | 2.6 | 9.5 | 10.3 | 8.8 | 5.3 | 37.0 | 0.0 | 15.1 | 27.9 | 0.0 |
| Cycle Q Clear(g_c), s | 12.5 | 12.7 | 2.6 | 9.5 | 10.3 | 8.8 | 5.3 | 37.0 | 0.0 | 15.1 | 27.9 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 291 | 270 | 228 | 251 | 219 | 186 | 312 | 1597 | | 395 | 1923 | |
| V/C Ratio(X) | 0.89 | 0.82 | 0.19 | 0.69 | 0.81 | 0.70 | 0.52 | 0.84 | | 0.92 | 0.65 | |
| Avail Cap(c_a), veh/h | 291 | 355 | 301 | 251 | 305 | 258 | 379 | 1597 | | 457 | 1923 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 40.1 | 46.1 | 41.8 | 39.7 | 47.8 | 47.1 | 16.5 | 27.0 | 0.0 | 29.7 | 18.1 | 0.0 |
| Incr Delay (d2), s/veh | 26.6 | 10.6 | 0.4 | 8.0 | 11.0 | 4.8 | 1.3 | 5.5 | 0.0 | 22.0 | 1.8 | 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 | 3.2 | 6.7 | 1.1 | 4.7 | 5.5 | 3.7 | 2.2 | 16.4 | 0.0 | 6.6 | 11.4 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 66.7 | 56.7 | 42.2 | 47.7 | 58.8 | 52.0 | 17.8 | 32.5 | 0.0 | 51.6 | 19.8 | 0.0 |
| LnGrp LOS | E | E | D | D | E | D | B | C | | D | B | |
| Approach Vol, veh/h | | 522 | | | 482 | | | 1502 | A | | 1622 | A |
| Approach Delay, s/veh | | 60.5 | | | 52.9 | | | 30.9 | | | 27.0 | |
| Approach LOS | | E | | | D | | | C | | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 22.1 | 54.4 | 14.0 | 20.5 | 11.9 | 64.6 | 17.0 | 17.5 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 21.5 | 49.9 | 9.5 | 21.1 | 11.6 | 59.8 | 12.5 | 18.1 | | | | |
| Max Q Clear Time (g_c+I1), s | 17.1 | 39.0 | 11.5 | 14.7 | 7.3 | 29.9 | 14.5 | 12.3 | | | | |
| Green Ext Time (p_c), s | 0.5 | 6.8 | 0.0 | 0.7 | 0.2 | 11.6 | 0.0 | 0.7 | | | | |

Intersection Summary

HCM 6th Ctrl Delay 35.7

HCM 6th LOS D





Notes






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




| Intersection | | | | | | |
|--------------------------|--------|------|--------|------|--------|-------|
| Int Delay, s/veh | 0.3 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑↑↱ | | | ↑ | | ↱ |
| Traffic Vol, veh/h | 634 | 68 | 0 | 444 | 0 | 36 |
| Future Vol, veh/h | 634 | 68 | 0 | 444 | 0 | 36 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 689 | 74 | 0 | 483 | 0 | 39 |
| | | | | | | |
| Major/Minor | Major1 | | Major2 | | Minor1 | |
| Conflicting Flow All | 0 | 0 | - | - | - | 382 |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Critical Hdwy | - | - | - | - | - | 6.93 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - |
| Follow-up Hdwy | - | - | - | - | - | 3.319 |
| Pot Cap-1 Maneuver | - | - | 0 | - | 0 | 617 |
| Stage 1 | - | - | 0 | - | 0 | - |
| Stage 2 | - | - | 0 | - | 0 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | - | - | - | 617 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| | | | | | | |
| | | | | | | |
| Approach | EB | | WB | | NB | |
| HCM Control Delay, s | 0 | | 0 | | 11.2 | |
| HCM LOS | | | | | B | |
| | | | | | | |
| | | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT | | |
| Capacity (veh/h) | 617 | - | - | - | | |
| HCM Lane V/C Ratio | 0.063 | - | - | - | | |
| HCM Control Delay (s) | 11.2 | - | - | - | | |
| HCM Lane LOS | B | - | - | - | | |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | | |

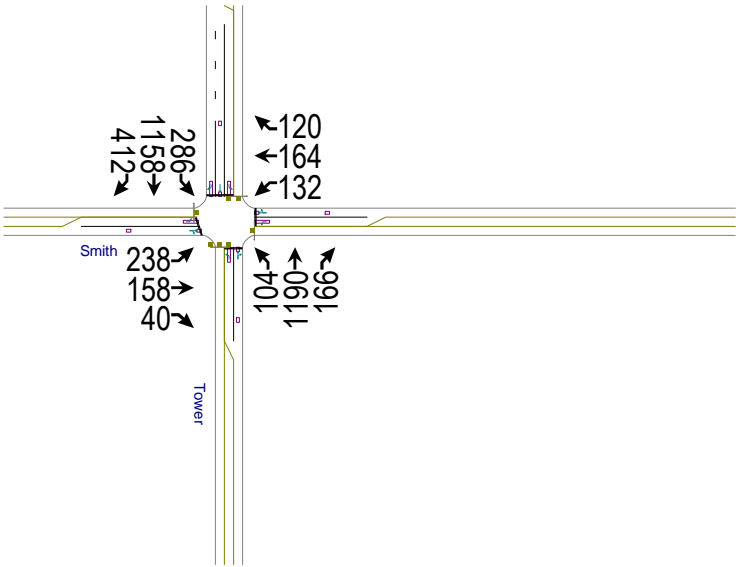
Smith-Tower
8: Tower Access

2025 PM TOTAL
07/05/2021

| Intersection | | | | | | |
|--------------------------|--------|---|---|---|------|---|
| Int Delay, s/veh | 0.3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | |  |  |  | |  |
| Traffic Vol, veh/h | 0 | 50 | 1498 | 33 | 0 | 1358 |
| Future Vol, veh/h | 0 | 50 | 1498 | 33 | 0 | 1358 |
| 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 | - | 0 | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 54 | 1628 | 36 | 0 | 1476 |
| Major/Minor | Minor1 | Major1 | | Major2 | | |
| Conflicting Flow All | - | 814 | 0 | 0 | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Critical Hdwy | - | 6.94 | - | - | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - |
| Follow-up Hdwy | - | 3.32 | - | - | - | - |
| Pot Cap-1 Maneuver | 0 | 321 | - | - | 0 | - |
| Stage 1 | 0 | - | - | - | 0 | - |
| Stage 2 | 0 | - | - | - | 0 | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | - | 321 | - | - | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Approach | WB | NB | | SB | | |
| HCM Control Delay, s | 18.5 | 0 | | 0 | | |
| HCM LOS | C | | | | | |
| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | | SBT | | |
| Capacity (veh/h) | - | - 321 | | - | | |
| HCM Lane V/C Ratio | - | - 0.169 | | - | | |
| HCM Control Delay (s) | - | - 18.5 | | - | | |
| HCM Lane LOS | - | - C | | - | | |
| HCM 95th %tile Q(veh) | - | - 0.6 | | - | | |






















| Intersection | | | | | | |
|--------------------------|---|---|--------|---|---|---|
| Int Delay, s/veh | 0.7 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations |  |  | |  |  |  |
| Traffic Vol, veh/h | 655 | 15 | 10 | 422 | 22 | 10 |
| Future Vol, veh/h | 655 | 15 | 10 | 422 | 22 | 10 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 0 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 712 | 16 | 11 | 459 | 24 | 11 |
| | | | | | | |
| Major/Minor | Major1 | | Major2 | | Minor1 | |
| Conflicting Flow All | 0 | 0 | 728 | 0 | 1193 | 712 |
| Stage 1 | - | - | - | - | 712 | - |
| Stage 2 | - | - | - | - | 481 | - |
| Critical Hdwy | - | - | 4.12 | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | - | - | 876 | - | 206 | 432 |
| Stage 1 | - | - | - | - | 486 | - |
| Stage 2 | - | - | - | - | 622 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 876 | - | 202 | 432 |
| Mov Cap-2 Maneuver | - | - | - | - | 202 | - |
| Stage 1 | - | - | - | - | 486 | - |
| Stage 2 | - | - | - | - | 611 | - |
| | | | | | | |
| | | | | | | |
| Approach | EB | | WB | | NB | |
| HCM Control Delay, s | 0 | | 0.2 | | 22.4 | |
| HCM LOS | | | | | C | |
| | | | | | | |
| | | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 242 | - | - | 876 | - | |
| HCM Lane V/C Ratio | 0.144 | - | - | 0.012 | - | |
| HCM Control Delay (s) | 22.4 | - | - | 9.2 | 0 | |
| HCM Lane LOS | C | - | - | A | A | |
| HCM 95th %tile Q(veh) | 0.5 | - | - | 0 | - | |

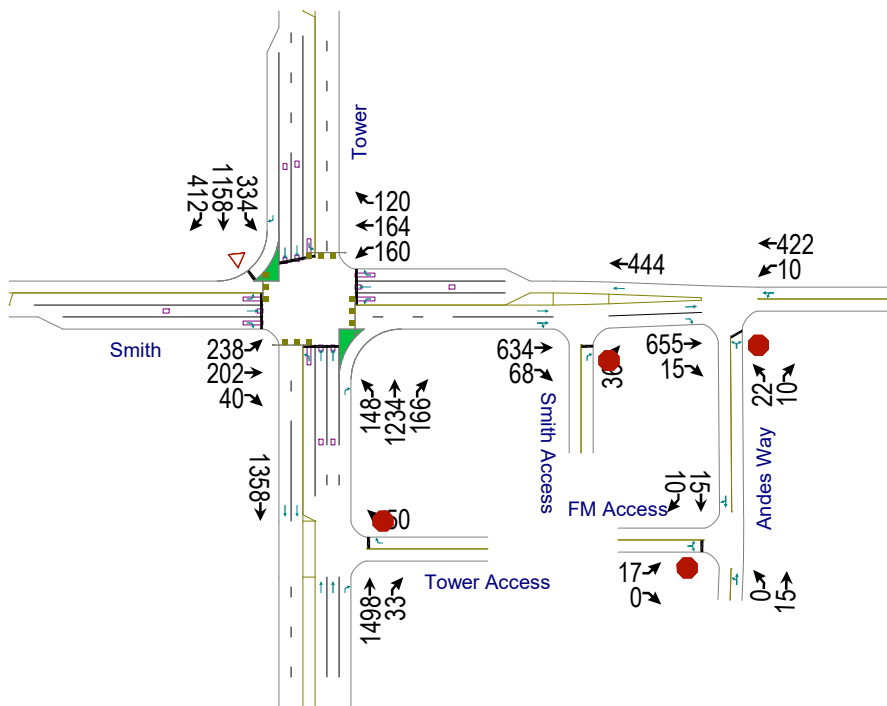
| Intersection | | | | | | |
|--------------------------|---|--------|-------|---|---|------|
| Int Delay, s/veh | 2.6 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations |  | | |  |  | |
| Traffic Vol, veh/h | 17 | 0 | 0 | 15 | 15 | 10 |
| Future Vol, veh/h | 17 | 0 | 0 | 15 | 15 | 10 |
| 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 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 18 | 0 | 0 | 16 | 16 | 11 |
| Major/Minor | Minor2 | Major1 | | Major2 | | |
| Conflicting Flow All | 38 | 22 | 27 | 0 | - | 0 |
| Stage 1 | 22 | - | - | - | - | - |
| Stage 2 | 16 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 974 | 1055 | 1587 | - | - | - |
| Stage 1 | 1001 | - | - | - | - | - |
| Stage 2 | 1007 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 974 | 1055 | 1587 | - | - | - |
| Mov Cap-2 Maneuver | 974 | - | - | - | - | - |
| Stage 1 | 1001 | - | - | - | - | - |
| Stage 2 | 1007 | - | - | - | - | - |
| Approach | EB | NB | | SB | | |
| HCM Control Delay, s | 8.8 | 0 | | 0 | | |
| HCM LOS | A | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR | |
| Capacity (veh/h) | 1587 | - | 974 | - | - | |
| HCM Lane V/C Ratio | - | - | 0.019 | - | - | |
| HCM Control Delay (s) | 0 | - | 8.8 | - | - | |
| HCM Lane LOS | A | - | A | - | - | |
| HCM 95th %tile Q(veh) | 0 | - | 0.1 | - | - | |



Smith Tower
3: Tower & Smith

2040 AM BKG
09/06/2019

























| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  |  |
| Traffic Volume (veh/h) | 119 | 79 | 20 | 66 | 82 | 60 | 52 | 595 | 83 | 143 | 579 | 206 |
| Future Volume (veh/h) | 119 | 79 | 20 | 66 | 82 | 60 | 52 | 595 | 83 | 143 | 579 | 206 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 259 | 172 | 43 | 143 | 178 | 130 | 113 | 1293 | 180 | 311 | 1259 | 448 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 192 | 407 | 102 | 271 | 283 | 207 | 124 | 844 | 117 | 214 | 1076 | 912 |
| Arrive On Green | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.04 | 0.53 | 0.53 | 0.09 | 0.58 | 0.58 |
| Sat Flow, veh/h | 1071 | 1444 | 361 | 1166 | 1005 | 734 | 1781 | 1606 | 224 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 259 | 0 | 215 | 143 | 0 | 308 | 113 | 0 | 1473 | 311 | 1259 | 448 |
| Grp Sat Flow(s),veh/h/ln | 1071 | 0 | 1805 | 1166 | 0 | 1738 | 1781 | 0 | 1830 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 16.5 | 0.0 | 12.6 | 14.8 | 0.0 | 20.0 | 4.1 | 0.0 | 68.0 | 11.5 | 74.5 | 21.7 |
| Cycle Q Clear(g_c), s | 36.5 | 0.0 | 12.6 | 27.3 | 0.0 | 20.0 | 4.1 | 0.0 | 68.0 | 11.5 | 74.5 | 21.7 |
| Prop In Lane | 1.00 | | 0.20 | 1.00 | | 0.42 | 1.00 | | 0.12 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 192 | 0 | 509 | 271 | 0 | 490 | 124 | 0 | 961 | 214 | 1076 | 912 |
| V/C Ratio(X) | 1.35 | 0.00 | 0.42 | 0.53 | 0.00 | 0.63 | 0.91 | 0.00 | 1.53 | 1.45 | 1.17 | 0.49 |
| Avail Cap(c_a), veh/h | 192 | 0 | 509 | 271 | 0 | 490 | 124 | 0 | 961 | 214 | 1076 | 912 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 58.9 | 0.0 | 37.9 | 49.0 | 0.0 | 40.6 | 33.0 | 0.0 | 30.8 | 45.0 | 27.5 | 16.3 |
| Incr Delay (d2), s/veh | 187.7 | 0.0 | 0.6 | 1.9 | 0.0 | 2.6 | 53.5 | 0.0 | 245.0 | 228.7 | 86.7 | 1.9 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 16.4 | 0.0 | 5.7 | 4.5 | 0.0 | 8.9 | 3.7 | 0.0 | 94.1 | 17.1 | 57.3 | 8.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 246.6 | 0.0 | 38.5 | 50.9 | 0.0 | 43.1 | 86.5 | 0.0 | 275.8 | 273.8 | 114.2 | 18.2 |
| LnGrp LOS | F | A | D | D | A | D | F | A | F | F | F | B |
| Approach Vol, veh/h | | 474 | | | 451 | | | 1586 | | | 2018 | |
| Approach Delay, s/veh | | 152.2 | | | 45.6 | | | 262.3 | | | 117.5 | |
| Approach LOS | | F | | | D | | | F | | | F | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 16.0 | 72.5 | | 41.0 | 9.5 | 79.0 | | 41.0 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | 11.5 | 68.0 | | 36.5 | 5.0 | 74.5 | | 36.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 13.5 | 70.0 | | 38.5 | 6.1 | 76.5 | | 29.3 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 1.4 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 164.7 | | | | | | | | | |
| HCM 6th LOS | | | F | | | | | | | | | |



Smith Tower
3: Smith & Tower

2040 AM TOTAL

07/05/2021

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h) | 119 | 101 | 20 | 80 | 82 | 60 | 74 | 617 | 83 | 167 | 579 | 206 |
| Future Volume (veh/h) | 119 | 101 | 20 | 80 | 82 | 60 | 74 | 617 | 83 | 167 | 579 | 206 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 259 | 220 | 43 | 174 | 178 | 130 | 161 | 1341 | 0 | 363 | 1259 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 291 | 270 | 228 | 251 | 219 | 186 | 312 | 1597 | | 395 | 1923 | |
| Arrive On Green | 0.11 | 0.14 | 0.14 | 0.09 | 0.12 | 0.12 | 0.07 | 0.45 | 0.00 | 0.16 | 0.54 | 0.00 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 259 | 220 | 43 | 174 | 178 | 130 | 161 | 1341 | 0 | 363 | 1259 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 12.5 | 12.7 | 2.6 | 9.5 | 10.3 | 8.8 | 5.3 | 37.0 | 0.0 | 15.1 | 27.9 | 0.0 |
| Cycle Q Clear(g_c), s | 12.5 | 12.7 | 2.6 | 9.5 | 10.3 | 8.8 | 5.3 | 37.0 | 0.0 | 15.1 | 27.9 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 291 | 270 | 228 | 251 | 219 | 186 | 312 | 1597 | | 395 | 1923 | |
| V/C Ratio(X) | 0.89 | 0.82 | 0.19 | 0.69 | 0.81 | 0.70 | 0.52 | 0.84 | | 0.92 | 0.65 | |
| Avail Cap(c_a), veh/h | 291 | 355 | 301 | 251 | 305 | 258 | 379 | 1597 | | 457 | 1923 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 40.1 | 46.1 | 41.8 | 39.7 | 47.8 | 47.1 | 16.5 | 27.0 | 0.0 | 29.7 | 18.1 | 0.0 |
| Incr Delay (d2), s/veh | 26.6 | 10.6 | 0.4 | 8.0 | 11.0 | 4.8 | 1.3 | 5.5 | 0.0 | 22.0 | 1.8 | 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 | 3.2 | 6.7 | 1.1 | 4.7 | 5.5 | 3.7 | 2.2 | 16.4 | 0.0 | 6.6 | 11.4 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 66.7 | 56.7 | 42.2 | 47.7 | 58.8 | 52.0 | 17.8 | 32.5 | 0.0 | 51.6 | 19.8 | 0.0 |
| LnGrp LOS | E | E | D | D | E | D | B | C | | D | B | |
| Approach Vol, veh/h | | 522 | | | 482 | | | 1502 | A | | 1622 | A |
| Approach Delay, s/veh | | 60.5 | | | 52.9 | | | 30.9 | | | 27.0 | |
| Approach LOS | | E | | | D | | | C | | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 22.1 | 54.4 | 14.0 | 20.5 | 11.9 | 64.6 | 17.0 | 17.5 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 21.5 | 49.9 | 9.5 | 21.1 | 11.6 | 59.8 | 12.5 | 18.1 | | | | |
| Max Q Clear Time (g_c+l1), s | 17.1 | 39.0 | 11.5 | 14.7 | 7.3 | 29.9 | 14.5 | 12.3 | | | | |
| Green Ext Time (p_c), s | 0.5 | 6.8 | 0.0 | 0.7 | 0.2 | 11.6 | 0.0 | 0.7 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 35.7 |
| HCM 6th LOS | D |





Notes

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




| Intersection | | | | | | |
|--------------------------|--------|------|--------|------|--------|-------|
| Int Delay, s/veh | 0.3 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑↑↱ | | | ↑ | | ↱ |
| Traffic Vol, veh/h | 634 | 68 | 0 | 444 | 0 | 36 |
| Future Vol, veh/h | 634 | 68 | 0 | 444 | 0 | 36 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 689 | 74 | 0 | 483 | 0 | 39 |
| | | | | | | |
| Major/Minor | Major1 | | Major2 | | Minor1 | |
| Conflicting Flow All | 0 | 0 | - | - | - | 382 |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Critical Hdwy | - | - | - | - | - | 6.93 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - |
| Follow-up Hdwy | - | - | - | - | - | 3.319 |
| Pot Cap-1 Maneuver | - | - | 0 | - | 0 | 617 |
| Stage 1 | - | - | 0 | - | 0 | - |
| Stage 2 | - | - | 0 | - | 0 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | - | - | - | 617 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| | | | | | | |
| | | | | | | |
| Approach | EB | | WB | | NB | |
| HCM Control Delay, s | 0 | | 0 | | 11.2 | |
| HCM LOS | | | | | B | |
| | | | | | | |
| | | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT | | |
| Capacity (veh/h) | 617 | - | - | - | | |
| HCM Lane V/C Ratio | 0.063 | - | - | - | | |
| HCM Control Delay (s) | 11.2 | - | - | - | | |
| HCM Lane LOS | B | - | - | - | | |
| HCM 95th %tile Q(veh) | 0.2 | - | - | - | | |

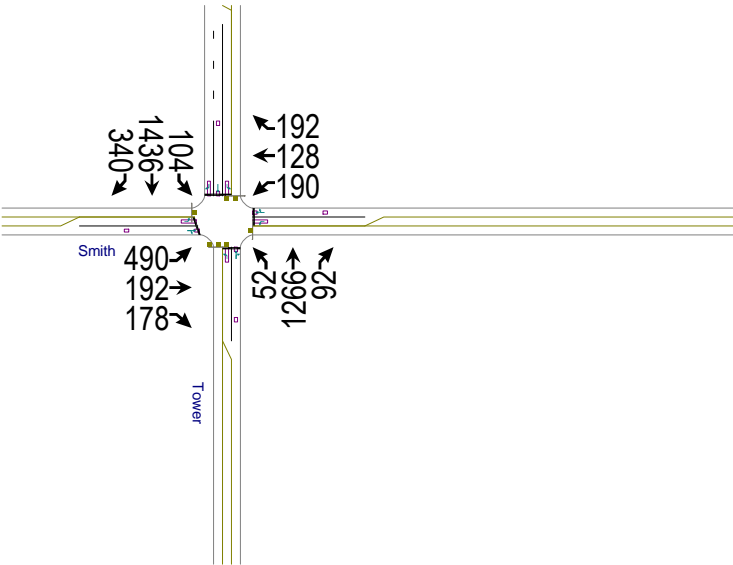
Smith Tower
8: Tower Access

2040 AM TOTAL
07/05/2021

| Intersection | | | | | | |
|--------------------------|--------|---|---|---|------|---|
| Int Delay, s/veh | 0.3 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | |  |  |  | |  |
| Traffic Vol, veh/h | 0 | 50 | 1498 | 33 | 0 | 1358 |
| Future Vol, veh/h | 0 | 50 | 1498 | 33 | 0 | 1358 |
| 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 | - | 0 | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 54 | 1628 | 36 | 0 | 1476 |
| Major/Minor | Minor1 | Major1 | | Major2 | | |
| Conflicting Flow All | - | 814 | 0 | 0 | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Critical Hdwy | - | 6.94 | - | - | - | - |
| Critical Hdwy Stg 1 | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - |
| Follow-up Hdwy | - | 3.32 | - | - | - | - |
| Pot Cap-1 Maneuver | 0 | 321 | - | - | 0 | - |
| Stage 1 | 0 | - | - | - | 0 | - |
| Stage 2 | 0 | - | - | - | 0 | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | - | 321 | - | - | - | - |
| Mov Cap-2 Maneuver | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - |
| Approach | WB | NB | | SB | | |
| HCM Control Delay, s | 18.5 | 0 | | 0 | | |
| HCM LOS | C | | | | | |
| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | | SBT | | |
| Capacity (veh/h) | - | - 321 | | - | | |
| HCM Lane V/C Ratio | - | - 0.169 | | - | | |
| HCM Control Delay (s) | - | - 18.5 | | - | | |
| HCM Lane LOS | - | - C | | - | | |
| HCM 95th %tile Q(veh) | - | - 0.6 | | - | | |






















| Intersection | | | | | | |
|--------------------------|--------|------|--------|-------|--------|-------|
| Int Delay, s/veh | 0.7 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑ | ↗ | | ↖ | ↘ | |
| Traffic Vol, veh/h | 655 | 15 | 10 | 422 | 22 | 10 |
| Future Vol, veh/h | 655 | 15 | 10 | 422 | 22 | 10 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 0 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 712 | 16 | 11 | 459 | 24 | 11 |
| | | | | | | |
| Major/Minor | Major1 | | Major2 | | Minor1 | |
| Conflicting Flow All | 0 | 0 | 728 | 0 | 1193 | 712 |
| Stage 1 | - | - | - | - | 712 | - |
| Stage 2 | - | - | - | - | 481 | - |
| Critical Hdwy | - | - | 4.12 | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | - | - | 2.218 | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | - | - | 876 | - | 206 | 432 |
| Stage 1 | - | - | - | - | 486 | - |
| Stage 2 | - | - | - | - | 622 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 876 | - | 202 | 432 |
| Mov Cap-2 Maneuver | - | - | - | - | 202 | - |
| Stage 1 | - | - | - | - | 486 | - |
| Stage 2 | - | - | - | - | 611 | - |
| | | | | | | |
| | | | | | | |
| Approach | EB | | WB | | NB | |
| HCM Control Delay, s | 0 | | 0.2 | | 22.4 | |
| HCM LOS | C | | | | | |
| | | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT | |
| Capacity (veh/h) | 242 | - | - | 876 | - | |
| HCM Lane V/C Ratio | 0.144 | - | - | 0.012 | - | |
| HCM Control Delay (s) | 22.4 | - | - | 9.2 | 0 | |
| HCM Lane LOS | C | - | - | A | A | |
| HCM 95th %tile Q(veh) | 0.5 | - | - | 0 | - | |

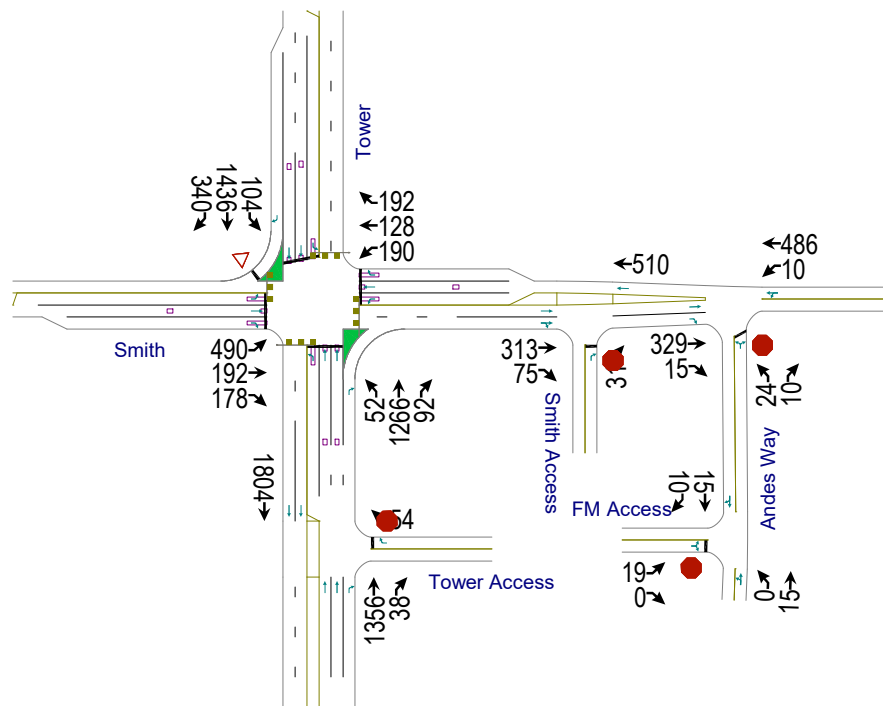
| Intersection | | | | | | |
|--------------------------|---|--------|-------|---|---|------|
| Int Delay, s/veh | 2.6 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations |  | | |  |  | |
| Traffic Vol, veh/h | 17 | 0 | 0 | 15 | 15 | 10 |
| Future Vol, veh/h | 17 | 0 | 0 | 15 | 15 | 10 |
| 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 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 18 | 0 | 0 | 16 | 16 | 11 |
| Major/Minor | Minor2 | Major1 | | Major2 | | |
| Conflicting Flow All | 38 | 22 | 27 | 0 | - | 0 |
| Stage 1 | 22 | - | - | - | - | - |
| Stage 2 | 16 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 974 | 1055 | 1587 | - | - | - |
| Stage 1 | 1001 | - | - | - | - | - |
| Stage 2 | 1007 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 974 | 1055 | 1587 | - | - | - |
| Mov Cap-2 Maneuver | 974 | - | - | - | - | - |
| Stage 1 | 1001 | - | - | - | - | - |
| Stage 2 | 1007 | - | - | - | - | - |
| Approach | EB | NB | | SB | | |
| HCM Control Delay, s | 8.8 | 0 | | 0 | | |
| HCM LOS | A | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR | |
| Capacity (veh/h) | 1587 | - | 974 | - | - | |
| HCM Lane V/C Ratio | - | - | 0.019 | - | - | |
| HCM Control Delay (s) | 0 | - | 8.8 | - | - | |
| HCM Lane LOS | A | - | A | - | - | |
| HCM 95th %tile Q(veh) | 0 | - | 0.1 | - | - | |



Smith Tower
3: Tower & Smith

2040 PM BKG
09/06/2019

























| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  |  |
| Traffic Volume (veh/h) | 245 | 96 | 89 | 95 | 64 | 96 | 26 | 633 | 46 | 52 | 718 | 170 |
| Future Volume (veh/h) | 245 | 96 | 89 | 95 | 64 | 96 | 26 | 633 | 46 | 52 | 718 | 170 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 533 | 209 | 193 | 207 | 139 | 209 | 57 | 1376 | 100 | 113 | 1561 | 370 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 296 | 347 | 320 | 257 | 261 | 393 | 123 | 790 | 57 | 134 | 869 | 736 |
| Arrive On Green | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.39 | 0.04 | 0.46 | 0.46 | 0.04 | 0.46 | 0.46 |
| Sat Flow, veh/h | 1033 | 895 | 827 | 983 | 674 | 1014 | 1781 | 1723 | 125 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 533 | 0 | 402 | 207 | 0 | 348 | 57 | 0 | 1476 | 113 | 1561 | 370 |
| Grp Sat Flow(s),veh/h/ln | 1033 | 0 | 1722 | 983 | 0 | 1688 | 1781 | 0 | 1848 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 27.4 | 0.0 | 22.4 | 24.1 | 0.0 | 19.1 | 2.0 | 0.0 | 55.0 | 4.1 | 55.7 | 19.6 |
| Cycle Q Clear(g_c), s | 46.5 | 0.0 | 22.4 | 46.5 | 0.0 | 19.1 | 2.0 | 0.0 | 55.0 | 4.1 | 55.7 | 19.6 |
| Prop In Lane | 1.00 | | 0.48 | 1.00 | | 0.60 | 1.00 | | 0.07 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 296 | 0 | 667 | 257 | 0 | 654 | 123 | 0 | 847 | 134 | 869 | 736 |
| V/C Ratio(X) | 1.80 | 0.00 | 0.60 | 0.80 | 0.00 | 0.53 | 0.46 | 0.00 | 1.74 | 0.84 | 1.80 | 0.50 |
| Avail Cap(c_a), veh/h | 296 | 0 | 667 | 257 | 0 | 654 | 134 | 0 | 847 | 134 | 869 | 736 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 49.1 | 0.0 | 29.4 | 48.5 | 0.0 | 28.4 | 28.5 | 0.0 | 32.5 | 28.6 | 32.1 | 22.4 |
| Incr Delay (d2), s/veh | 373.7 | 0.0 | 1.5 | 16.7 | 0.0 | 0.8 | 2.7 | 0.0 | 339.2 | 35.7 | 363.0 | 2.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 39.7 | 0.0 | 9.5 | 7.4 | 0.0 | 7.8 | 0.9 | 0.0 | 103.5 | 3.0 | 111.9 | 7.7 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 422.8 | 0.0 | 30.9 | 65.2 | 0.0 | 29.2 | 31.2 | 0.0 | 371.7 | 64.4 | 395.2 | 24.9 |
| LnGrp LOS | F | A | C | E | A | C | C | A | F | E | F | C |
| Approach Vol, veh/h | | 935 | | | 555 | | | 1533 | | | 2044 | |
| Approach Delay, s/veh | | 254.3 | | | 42.6 | | | 359.0 | | | 309.9 | |
| Approach LOS | | F | | | D | | | F | | | F | |
| Timer - Assigned Phs | 1 | 2 | | 4 | 5 | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 9.5 | 59.5 | | 51.0 | 8.8 | 60.2 | | 51.0 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | | 4.5 | 4.5 | 4.5 | | 4.5 | | | | |
| Max Green Setting (Gmax), s | 5.0 | 55.0 | | 46.5 | 5.0 | 55.0 | | 46.5 | | | | |
| Max Q Clear Time (g_c+l1), s | 6.1 | 57.0 | | 48.5 | 4.0 | 57.7 | | 48.5 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 285.2 | | | | | | | | | |
| HCM 6th LOS | | | F | | | | | | | | | |



Smith Tower
3: Smith & Tower

2040 PM TOTAL

07/05/2021

| |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h) | 245 | 96 | 89 | 95 | 64 | 96 | 26 | 633 | 46 | 52 | 718 | 170 |
| Future Volume (veh/h) | 245 | 96 | 89 | 95 | 64 | 96 | 26 | 633 | 46 | 52 | 718 | 170 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 533 | 209 | 193 | 207 | 139 | 209 | 57 | 1376 | 0 | 113 | 1561 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 521 | 460 | 390 | 409 | 275 | 233 | 132 | 1575 | | 178 | 1612 | |
| Arrive On Green | 0.21 | 0.25 | 0.25 | 0.11 | 0.15 | 0.15 | 0.04 | 0.44 | 0.00 | 0.05 | 0.45 | 0.00 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 3554 | 1585 | 1781 | 3554 | 1585 |
| Grp Volume(v), veh/h | 533 | 209 | 193 | 207 | 139 | 209 | 57 | 1376 | 0 | 113 | 1561 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 | 1781 | 1777 | 1585 | 1781 | 1777 | 1585 |
| Q Serve(g_s), s | 25.5 | 11.3 | 12.5 | 11.6 | 8.2 | 15.5 | 2.1 | 42.1 | 0.0 | 4.1 | 51.2 | 0.0 |
| Cycle Q Clear(g_c), s | 25.5 | 11.3 | 12.5 | 11.6 | 8.2 | 15.5 | 2.1 | 42.1 | 0.0 | 4.1 | 51.2 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 521 | 460 | 390 | 409 | 275 | 233 | 132 | 1575 | | 178 | 1612 | |
| V/C Ratio(X) | 1.02 | 0.45 | 0.50 | 0.51 | 0.51 | 0.90 | 0.43 | 0.87 | | 0.63 | 0.97 | |
| Avail Cap(c_a), veh/h | 521 | 460 | 390 | 430 | 282 | 239 | 143 | 1575 | | 178 | 1612 | |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 35.5 | 38.3 | 38.7 | 36.9 | 47.0 | 50.1 | 28.3 | 30.2 | 0.0 | 26.7 | 31.8 | 0.0 |
| Incr Delay (d2), s/veh | 45.3 | 0.7 | 1.0 | 1.0 | 1.4 | 32.0 | 2.2 | 7.0 | 0.0 | 7.2 | 16.0 | 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 | 9.7 | 5.3 | 5.0 | 5.2 | 3.9 | 8.2 | 0.9 | 19.1 | 0.0 | 2.0 | 24.8 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 80.8 | 39.0 | 39.7 | 37.9 | 48.4 | 82.2 | 30.5 | 37.3 | 0.0 | 33.8 | 47.8 | 0.0 |
| LnGrp LOS | F | D | D | D | D | F | C | D | | C | D | |
| Approach Vol, veh/h | | 935 | | | 555 | | | 1433 | A | | 1674 | A |
| Approach Delay, s/veh | | 63.0 | | | 57.2 | | | 37.0 | | | 46.9 | |
| Approach LOS | | E | | | E | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 10.0 | 57.5 | 18.2 | 33.9 | 8.7 | 58.8 | 30.0 | 22.1 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 5.5 | 53.0 | 15.1 | 28.4 | 5.0 | 53.5 | 25.5 | 18.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 6.1 | 44.1 | 13.6 | 14.5 | 4.1 | 53.2 | 27.5 | 17.5 | | | | |
| Green Ext Time (p_c), s | 0.0 | 6.0 | 0.1 | 1.6 | 0.0 | 0.3 | 0.0 | 0.1 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 48.3 | | | | | | | | | |
| HCM 6th LOS | | | D | | | | | | | | | |
| Notes | | | | | | | | | | | | |
| Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay. | | | | | | | | | | | | |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.3 | | | | | |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↑↑ | | | ↑ | | ↑ |
| Traffic Vol, veh/h | 313 | 75 | 0 | 510 | 0 | 31 |
| Future Vol, veh/h | 313 | 75 | 0 | 510 | 0 | 31 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | - | 0 |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 340 | 82 | 0 | 554 | 0 | 34 |

| Major/Minor | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|-------------|
| Conflicting Flow All | 0 | 0 | - - - 211 |
| Stage 1 | - | - | - - - |
| Stage 2 | - | - | - - - |
| Critical Hdwy | - | - | - - - 6.93 |
| Critical Hdwy Stg 1 | - | - | - - - |
| Critical Hdwy Stg 2 | - | - | - - - |
| Follow-up Hdwy | - | - | - - - 3.319 |
| Pot Cap-1 Maneuver | - | - | 0 - 0 795 |
| Stage 1 | - | - | 0 - 0 - |
| Stage 2 | - | - | 0 - 0 - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | - | - | - - - 795 |
| Mov Cap-2 Maneuver | - | - | - - - |
| Stage 1 | - | - | - - - |
| Stage 2 | - | - | - - - |

| Approach | EB | WB | NB |
|----------------------|----|----|-----|
| HCM Control Delay, s | 0 | 0 | 9.7 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBT |
|-----------------------|-------|-----|-----|-----|
| Capacity (veh/h) | 795 | - | - | - |
| HCM Lane V/C Ratio | 0.042 | - | - | - |
| HCM Control Delay (s) | 9.7 | - | - | - |
| HCM Lane LOS | A | - | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - |

Smith Tower
8: Tower Access

2040 PM TOTAL
07/05/2021

Intersection

Int Delay, s/veh 0.3

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|--------------------------|------|------|------|------|------|------|
| Lane Configurations | | ↗ | ↗↗ | ↗ | | ↗↗ |
| Traffic Vol, veh/h | 0 | 54 | 1356 | 38 | 0 | 1804 |
| Future Vol, veh/h | 0 | 54 | 1356 | 38 | 0 | 1804 |
| 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 | - | 0 | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 59 | 1474 | 41 | 0 | 1961 |





| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | - | 737 | 0 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Critical Hdwy | - | 6.94 | - |
| Critical Hdwy Stg 1 | - | - | - |
| Critical Hdwy Stg 2 | - | - | - |
| Follow-up Hdwy | - | 3.32 | - |
| Pot Cap-1 Maneuver | 0 | 361 | - |
| Stage 1 | 0 | - | - |
| Stage 2 | 0 | - | - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | - | 361 | - |
| Mov Cap-2 Maneuver | - | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |

| Approach | WB | NB | SB |
|----------------------|------|----|----|
| HCM Control Delay, s | 16.9 | 0 | 0 |
| HCM LOS | C | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBT |
|-----------------------|-----|----------|-------|
| Capacity (veh/h) | - | - | 361 |
| HCM Lane V/C Ratio | - | - | 0.163 |
| HCM Control Delay (s) | - | - | 16.9 |
| HCM Lane LOS | - | - | C |
| HCM 95th %tile Q(veh) | - | - | 0.6 |

Intersection




Int Delay, s/veh 0.7

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|--------------------------|---|---|------|---|---|------|
| Lane Configurations |  |  | |  |  | |
| Traffic Vol, veh/h | 329 | 15 | 10 | 486 | 24 | 10 |
| Future Vol, veh/h | 329 | 15 | 10 | 486 | 24 | 10 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | 0 | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 358 | 16 | 11 | 528 | 26 | 11 |

| Major/Minor | Major1 | Major2 | Minor1 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 0 | 0 | 374 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Critical Hdwy | - | - | 4.12 |
| Critical Hdwy Stg 1 | - | - | - |
| Critical Hdwy Stg 2 | - | - | - |
| Follow-up Hdwy | - | - | 2.218 |
| Pot Cap-1 Maneuver | - | - | 1184 |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |
| Platoon blocked, % | - | - | - |
| Mov Cap-1 Maneuver | - | - | 1184 |
| Mov Cap-2 Maneuver | - | - | - |
| Stage 1 | - | - | - |
| Stage 2 | - | - | - |

| Approach | EB | WB | NB |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0 | 0.2 | 16.1 |
| HCM LOS | | | C |










| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|-----------------------|-------|-----|-----|-------|-----|
| Capacity (veh/h) | 362 | - | - | 1184 | - |
| HCM Lane V/C Ratio | 0.102 | - | - | 0.009 | - |
| HCM Control Delay (s) | 16.1 | - | - | 8.1 | 0 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.3 | - | - | 0 | - |

| Intersection | | | | | | |
|--------------------------|---|------|------|---|---|------|
| Int Delay, s/veh | 2.8 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations |  | | |  |  | |
| Traffic Vol, veh/h | 19 | 0 | 0 | 15 | 15 | 10 |
| Future Vol, veh/h | 19 | 0 | 0 | 15 | 15 | 10 |
| 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 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 21 | 0 | 0 | 16 | 16 | 11 |

| Major/Minor | Minor2 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 38 | 22 | 27 |
| Stage 1 | 22 | - | - |
| Stage 2 | 16 | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 |
| Critical Hdwy Stg 1 | 5.42 | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 |
| Pot Cap-1 Maneuver | 974 | 1055 | 1587 |
| Stage 1 | 1001 | - | - |
| Stage 2 | 1007 | - | - |
| Platoon blocked, % | | | |
| Mov Cap-1 Maneuver | 974 | 1055 | 1587 |
| Mov Cap-2 Maneuver | 974 | - | - |
| Stage 1 | 1001 | - | - |
| Stage 2 | 1007 | - | - |

| Approach | EB | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 8.8 | 0 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR |
|-----------------------|------|-----|-------|-----|-----|
| Capacity (veh/h) | 1587 | - | 974 | - | - |
| HCM Lane V/C Ratio | - | - | 0.021 | - | - |
| HCM Control Delay (s) | 0 | - | 8.8 | - | - |
| HCM Lane LOS | A | - | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0.1 | - | - |

| |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|
| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
| Lane Group Flow (vph) | 129 | 108 | 72 | 154 | 57 | 737 | 155 | 629 | 224 |
| v/c Ratio | 0.83 | 0.35 | 0.37 | 0.49 | 0.11 | 0.62 | 0.35 | 0.49 | 0.19 |
| Control Delay | 85.3 | 42.3 | 48.6 | 41.4 | 5.7 | 16.9 | 7.0 | 11.9 | 1.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 85.3 | 42.3 | 48.6 | 41.4 | 5.7 | 16.9 | 7.0 | 11.9 | 1.6 |
| Queue Length 50th (ft) | 97 | 68 | 50 | 89 | 9 | 301 | 27 | 217 | 0 |
| Queue Length 95th (ft) | 170 | 121 | 95 | 155 | 27 | 571 | 64 | 390 | 31 |
| Internal Link Dist (ft) | | 220 | | 595 | | 377 | | 208 | |
| Turn Bay Length (ft) | 150 | | 150 | | 125 | | 325 | | |
| Base Capacity (vph) | 241 | 474 | 301 | 472 | 519 | 1183 | 480 | 1284 | 1161 |
| 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 | 0.54 | 0.23 | 0.24 | 0.33 | 0.11 | 0.62 | 0.32 | 0.49 | 0.19 |
| Intersection Summary | | | | | | | | | |



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 266 | 201 | 103 | 174 | 28 | 738 | 57 | 780 | 185 |
| v/c Ratio | 0.90 | 0.39 | 0.38 | 0.33 | 0.10 | 0.70 | 0.19 | 0.71 | 0.19 |
| Control Delay | 71.4 | 26.9 | 36.1 | 20.4 | 10.2 | 24.1 | 10.9 | 23.9 | 3.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 71.4 | 26.9 | 36.1 | 20.4 | 10.2 | 24.1 | 10.9 | 23.9 | 3.7 |
| Queue Length 50th (ft) | 185 | 91 | 60 | 60 | 7 | 391 | 15 | 429 | 7 |
| Queue Length 95th (ft) | #322 | 157 | 111 | 118 | 21 | 613 | 36 | 669 | 45 |
| Internal Link Dist (ft) | | 220 | | 595 | | 377 | | 208 | |
| Turn Bay Length (ft) | 150 | | 150 | | 125 | | 325 | | |
| Base Capacity (vph) | 378 | 654 | 348 | 656 | 280 | 1050 | 298 | 1093 | 995 |
| 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 | 0.70 | 0.31 | 0.30 | 0.27 | 0.10 | 0.70 | 0.19 | 0.71 | 0.19 |

Intersection Summary

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



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 153 | 127 | 85 | 182 | 67 | 869 | 183 | 743 | 264 |
| v/c Ratio | 0.90 | 0.35 | 0.39 | 0.50 | 0.17 | 0.78 | 0.57 | 0.61 | 0.23 |
| Control Delay | 93.2 | 39.6 | 46.2 | 39.8 | 6.6 | 24.0 | 12.5 | 15.2 | 1.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 93.2 | 39.6 | 46.2 | 39.8 | 6.6 | 24.0 | 12.5 | 15.2 | 1.6 |
| Queue Length 50th (ft) | 113 | 76 | 56 | 103 | 14 | 486 | 41 | 334 | 0 |
| Queue Length 95th (ft) | #228 | 134 | 106 | 176 | 28 | 714 | 67 | 468 | 31 |
| Internal Link Dist (ft) | | 220 | | 595 | | 377 | | 208 | |
| Turn Bay Length (ft) | 150 | | 150 | | 125 | | 325 | | |
| Base Capacity (vph) | 201 | 423 | 256 | 423 | 403 | 1117 | 345 | 1228 | 1133 |
| 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 | 0.76 | 0.30 | 0.33 | 0.43 | 0.17 | 0.78 | 0.53 | 0.61 | 0.23 |

Intersection Summary

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



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 314 | 237 | 122 | 205 | 33 | 871 | 67 | 921 | 218 |
| v/c Ratio | 0.97 | 0.40 | 0.41 | 0.34 | 0.24 | 0.89 | 0.43 | 0.90 | 0.23 |
| Control Delay | 83.0 | 28.0 | 36.8 | 22.3 | 14.2 | 37.4 | 18.6 | 38.1 | 4.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 83.0 | 28.0 | 36.8 | 22.3 | 14.2 | 37.4 | 18.6 | 38.1 | 4.9 |
| Queue Length 50th (ft) | 240 | 117 | 74 | 80 | 10 | 584 | 20 | 648 | 20 |
| Queue Length 95th (ft) | #430 | 191 | 134 | 146 | 23 | #870 | 40 | #947 | 60 |
| Internal Link Dist (ft) | | 220 | | 595 | | 377 | | 208 | |
| Turn Bay Length (ft) | 150 | | 150 | | 125 | | 325 | | |
| Base Capacity (vph) | 326 | 595 | 298 | 601 | 136 | 983 | 156 | 1022 | 942 |
| 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 | 0.96 | 0.40 | 0.41 | 0.34 | 0.24 | 0.89 | 0.43 | 0.90 | 0.23 |

Intersection Summary

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

Smith-Tower
3: Smith & Tower

2025 AM TOTAL

07/05/2021















| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | NBR | SBL | SBT | SBR |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Group Flow (vph) | 153 | 156 | 103 | 182 | 95 | 791 | 106 | 214 | 743 | 264 |
| v/c Ratio | 0.61 | 0.32 | 0.66 | 0.74 | 0.31 | 0.42 | 0.12 | 0.49 | 0.70 | 0.26 |
| Control Delay | 45.3 | 34.3 | 68.0 | 59.8 | 11.2 | 18.4 | 1.6 | 12.1 | 22.6 | 2.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 45.3 | 34.3 | 68.0 | 59.8 | 11.2 | 18.4 | 1.6 | 12.1 | 22.6 | 2.2 |
| Queue Length 50th (ft) | 92 | 89 | 75 | 114 | 24 | 187 | 0 | 59 | 385 | 0 |
| Queue Length 95th (ft) | 152 | 149 | 135 | 194 | 47 | 258 | 17 | 98 | 563 | 38 |
| Internal Link Dist (ft) | | 220 | | 192 | | 170 | | | 208 | |
| Turn Bay Length (ft) | 250 | | 150 | | 250 | | | 325 | | |
| Base Capacity (vph) | 256 | 545 | 196 | 300 | 307 | 1869 | 900 | 470 | 1069 | 1020 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.60 | 0.29 | 0.53 | 0.61 | 0.31 | 0.42 | 0.12 | 0.46 | 0.70 | 0.26 |
| Intersection Summary | | | | | | | | | | |

Smith-Tower
3: Smith & Tower

2025 PM TOTAL

07/05/2021

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Group Flow (vph) | 259 | 220 | 43 | 174 | 178 | 130 | 161 | 1341 | 180 | 363 | 1259 | 448 |
| v/c Ratio | 0.93 | 0.76 | 0.12 | 0.75 | 0.73 | 0.40 | 0.61 | 0.89 | 0.24 | 0.95 | 0.68 | 0.45 |
| Control Delay | 77.4 | 64.1 | 0.7 | 55.9 | 66.6 | 10.7 | 23.4 | 39.9 | 6.6 | 69.3 | 23.4 | 5.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 77.4 | 64.1 | 0.7 | 55.9 | 66.6 | 10.7 | 23.4 | 39.9 | 6.6 | 69.3 | 23.4 | 5.2 |
| Queue Length 50th (ft) | 166 | 161 | 0 | 106 | 131 | 0 | 45 | 493 | 16 | 224 | 362 | 31 |
| Queue Length 95th (ft) | #275 | 248 | 0 | #189 | 209 | 52 | 91 | #651 | 61 | #423 | 470 | 101 |
| Internal Link Dist (ft) | | 220 | | | 192 | | | 170 | | | 208 | |
| Turn Bay Length (ft) | 250 | | 200 | 150 | | 150 | 250 | | | 325 | | 200 |
| Base Capacity (vph) | 278 | 336 | 397 | 233 | 288 | 360 | 294 | 1511 | 758 | 388 | 1859 | 1004 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.93 | 0.65 | 0.11 | 0.75 | 0.62 | 0.36 | 0.55 | 0.89 | 0.24 | 0.94 | 0.68 | 0.45 |

Intersection Summary

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



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|-------------------------|-------|------|------|------|------|-------|-------|-------|------|
| Lane Group Flow (vph) | 259 | 215 | 143 | 308 | 113 | 1473 | 311 | 1259 | 448 |
| v/c Ratio | 1.45 | 0.42 | 0.56 | 0.60 | 0.90 | 1.53 | 1.45 | 1.18 | 0.44 |
| Control Delay | 264.6 | 39.0 | 49.7 | 42.2 | 81.3 | 269.5 | 257.8 | 116.5 | 7.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 264.6 | 39.0 | 49.7 | 42.2 | 81.3 | 269.5 | 257.8 | 116.5 | 7.5 |
| Queue Length 50th (ft) | ~295 | 140 | 103 | 204 | 44 | ~1738 | ~307 | ~1261 | 77 |
| Queue Length 95th (ft) | #470 | 217 | 178 | 304 | #162 | #2008 | #496 | #1524 | 150 |
| Internal Link Dist (ft) | | 220 | | 595 | | 377 | | 208 | |
| Turn Bay Length (ft) | 150 | | 150 | | 125 | | 325 | | |
| Base Capacity (vph) | 179 | 516 | 254 | 511 | 126 | 964 | 214 | 1071 | 1019 |
| 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 | 1.45 | 0.42 | 0.56 | 0.60 | 0.90 | 1.53 | 1.45 | 1.18 | 0.44 |

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.



| Lane Group | EBL | EBT | WBL | WBT | NBL | NBT | SBL | SBT | SBR |
|-------------------------|-------|------|------|------|------|-------|------|-------|------|
| Lane Group Flow (vph) | 533 | 402 | 207 | 348 | 57 | 1476 | 113 | 1561 | 370 |
| v/c Ratio | 1.88 | 0.58 | 0.86 | 0.50 | 0.42 | 1.74 | 0.84 | 1.77 | 0.45 |
| Control Delay | 433.0 | 29.4 | 66.4 | 24.4 | 23.1 | 364.4 | 66.1 | 375.3 | 14.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 433.0 | 29.4 | 66.4 | 24.4 | 23.1 | 364.4 | 66.1 | 375.3 | 14.7 |
| Queue Length 50th (ft) | ~630 | 216 | 145 | 158 | 20 | ~1712 | 42 | ~1828 | 113 |
| Queue Length 95th (ft) | #846 | 321 | #294 | 248 | 42 | #1980 | #147 | #2092 | 196 |
| Internal Link Dist (ft) | | 220 | | 595 | | 377 | | 208 | |
| Turn Bay Length (ft) | 150 | | 150 | | 125 | | 325 | | |
| Base Capacity (vph) | 284 | 697 | 241 | 702 | 135 | 847 | 134 | 883 | 826 |
| 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 | 1.88 | 0.58 | 0.86 | 0.50 | 0.42 | 1.74 | 0.84 | 1.77 | 0.45 |

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.

Smith Tower
3: Smith & Tower

2040 PM TOTAL
07/05/2021

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Group Flow (vph) | 533 | 209 | 193 | 207 | 139 | 209 | 57 | 1376 | 100 | 113 | 1561 | 370 |
| v/c Ratio | 1.08 | 0.51 | 0.42 | 0.60 | 0.64 | 0.68 | 0.41 | 0.85 | 0.13 | 0.77 | 0.92 | 0.42 |
| Control Delay | 96.9 | 44.8 | 13.6 | 34.4 | 62.0 | 30.0 | 22.3 | 34.4 | 1.6 | 52.2 | 39.1 | 9.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 96.9 | 44.8 | 13.6 | 34.4 | 62.0 | 30.0 | 22.3 | 34.4 | 1.6 | 52.2 | 39.1 | 9.9 |
| Queue Length 50th (ft) | ~363 | 140 | 27 | 108 | 100 | 51 | 19 | 468 | 0 | 39 | 575 | 65 |
| Queue Length 95th (ft) | #576 | 217 | 92 | 168 | 167 | 133 | 43 | 607 | 15 | #141 | #794 | 151 |
| Internal Link Dist (ft) | | 220 | | | 192 | | | 170 | | | 208 | |
| Turn Bay Length (ft) | 250 | | 200 | 150 | | 150 | 250 | | | 325 | | 200 |
| Base Capacity (vph) | 492 | 457 | 501 | 368 | 289 | 361 | 139 | 1622 | 799 | 147 | 1698 | 873 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 1.08 | 0.46 | 0.39 | 0.56 | 0.48 | 0.58 | 0.41 | 0.85 | 0.13 | 0.77 | 0.92 | 0.42 |

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.

Smith Tower
3: Smith & Tower

2040 AM TOTAL

07/05/2021

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Group Flow (vph) | 259 | 220 | 43 | 174 | 178 | 130 | 161 | 1341 | 180 | 363 | 1259 | 448 |
| v/c Ratio | 0.93 | 0.76 | 0.12 | 0.75 | 0.73 | 0.40 | 0.61 | 0.89 | 0.24 | 0.95 | 0.68 | 0.45 |
| Control Delay | 77.4 | 64.1 | 0.7 | 55.9 | 66.6 | 10.7 | 23.4 | 39.9 | 6.6 | 69.3 | 23.4 | 5.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 77.4 | 64.1 | 0.7 | 55.9 | 66.6 | 10.7 | 23.4 | 39.9 | 6.6 | 69.3 | 23.4 | 5.2 |
| Queue Length 50th (ft) | 166 | 161 | 0 | 106 | 131 | 0 | 45 | 493 | 16 | 224 | 362 | 31 |
| Queue Length 95th (ft) | #275 | 248 | 0 | #189 | 209 | 52 | 91 | #651 | 61 | #423 | 470 | 101 |
| Internal Link Dist (ft) | | 220 | | | 192 | | | 170 | | | 208 | |
| Turn Bay Length (ft) | 250 | | 200 | 150 | | 150 | 250 | | | 325 | | 200 |
| Base Capacity (vph) | 278 | 336 | 397 | 233 | 288 | 360 | 294 | 1511 | 758 | 388 | 1859 | 1004 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.93 | 0.65 | 0.11 | 0.75 | 0.62 | 0.36 | 0.55 | 0.89 | 0.24 | 0.94 | 0.68 | 0.45 |

Intersection Summary

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



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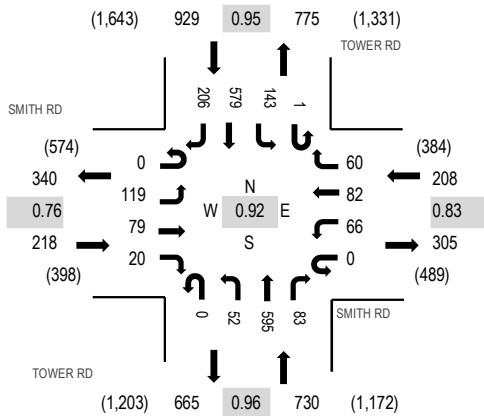
Location: 1 TOWER RD & SMITH RD AM

Date: Wednesday, August 21, 2019

Peak Hour: 07:00 AM - 08:00 AM

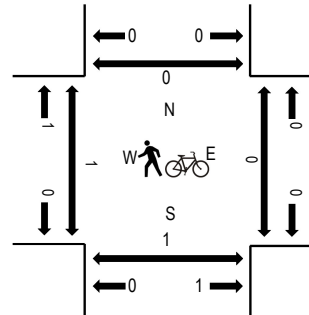
Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

| Interval Start Time | SMITH RD Eastbound | | | | SMITH RD Westbound | | | | TOWER RD Northbound | | | | TOWER RD Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|-----------------------|------|------|-------|-----------------------|------|------|-------|------------------------|------|------|-------|------------------------|------|-------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 7:00 AM | 0 | 16 | 19 | 5 | 0 | 12 | 14 | 17 | 0 | 14 | 133 | 37 | 1 | 39 | 135 | 40 | 482 | 2,085 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 31 | 27 | 3 | 0 | 22 | 24 | 17 | 0 | 18 | 152 | 20 | 0 | 43 | 149 | 61 | 567 | 2,066 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 34 | 8 | 2 | 0 | 21 | 28 | 12 | 0 | 9 | 148 | 12 | 0 | 28 | 149 | 59 | 510 | 1,886 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 38 | 25 | 10 | 0 | 11 | 16 | 14 | 0 | 11 | 162 | 14 | 0 | 33 | 146 | 46 | 526 | 1,731 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 25 | 14 | 4 | 0 | 13 | 15 | 16 | 0 | 10 | 114 | 8 | 1 | 28 | 153 | 62 | 463 | 1,512 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 24 | 14 | 8 | 0 | 17 | 17 | 14 | 0 | 7 | 99 | 10 | 0 | 31 | 115 | 31 | 387 | | 1 | 0 | 0 | 1 |
| 8:30 AM | 0 | 27 | 8 | 5 | 0 | 12 | 7 | 29 | 0 | 7 | 105 | 6 | 0 | 18 | 97 | 34 | 355 | | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 22 | 20 | 9 | 0 | 6 | 16 | 14 | 0 | 3 | 66 | 7 | 0 | 20 | 99 | 25 | 307 | | 0 | 0 | 0 | 0 |
| Count Total | 0 | 217 | 135 | 46 | 0 | 114 | 137 | 133 | 0 | 79 | 979 | 114 | 2 | 240 | 1,043 | 358 | 3,597 | | 1 | 0 | 0 | 1 |
| Peak Hour | 0 | 119 | 79 | 20 | 0 | 66 | 82 | 60 | 0 | 52 | 595 | 83 | 1 | 143 | 579 | 206 | 2,085 | | 0 | 0 | 0 | 0 |



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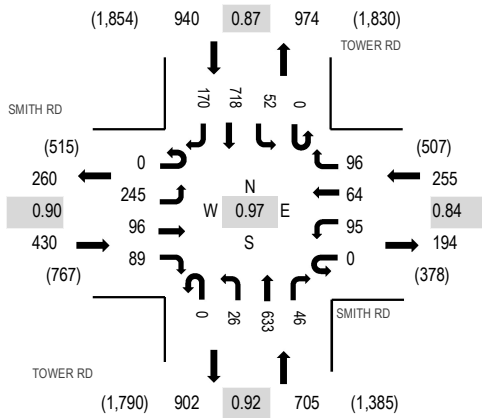
Location: 1 TOWER RD & SMITH RD PM

Date: Wednesday, August 21, 2019

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

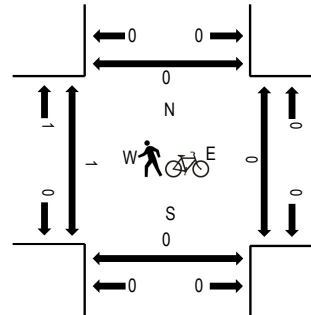
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

| Interval Start Time | SMITH RD Eastbound | | | | SMITH RD Westbound | | | | TOWER RD Northbound | | | | TOWER RD Southbound | | | | Total | Rolling Hour | Pedestrian Crossings | | | |
|------------------------|-----------------------|------|------|-------|-----------------------|------|------|-------|------------------------|------|-------|-------|------------------------|------|-------|-------|-------|-----------------|----------------------|------|-------|-------|
| | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | U-Turn | Left | Thru | Right | | | West | East | South | North |
| 4:00 PM | 0 | 52 | 24 | 15 | 0 | 17 | 15 | 18 | 0 | 7 | 169 | 16 | 0 | 7 | 202 | 41 | 583 | 2,229 | 1 | 0 | 0 | 0 |
| 4:15 PM | 0 | 49 | 14 | 16 | 0 | 14 | 11 | 10 | 0 | 6 | 121 | 9 | 0 | 5 | 188 | 41 | 484 | 2,248 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 55 | 23 | 21 | 0 | 33 | 20 | 33 | 0 | 4 | 171 | 11 | 0 | 8 | 166 | 53 | 598 | 2,330 | 1 | 0 | 0 | 0 |
| 4:45 PM | 0 | 68 | 21 | 30 | 0 | 14 | 13 | 15 | 0 | 9 | 178 | 5 | 0 | 15 | 160 | 36 | 564 | 2,296 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 64 | 30 | 17 | 0 | 24 | 14 | 18 | 0 | 8 | 140 | 16 | 0 | 17 | 215 | 39 | 602 | 2,284 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 58 | 22 | 21 | 0 | 24 | 17 | 30 | 0 | 5 | 144 | 14 | 0 | 12 | 177 | 42 | 566 | | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 37 | 20 | 17 | 0 | 33 | 20 | 26 | 0 | 10 | 152 | 22 | 0 | 9 | 178 | 40 | 564 | | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 47 | 29 | 17 | 0 | 31 | 31 | 26 | 0 | 2 | 149 | 17 | 0 | 12 | 160 | 31 | 552 | | 1 | 0 | 0 | 0 |
| Count Total | 0 | 430 | 183 | 154 | 0 | 190 | 141 | 176 | 0 | 51 | 1,224 | 110 | 0 | 85 | 1,446 | 323 | 4,513 | | 3 | 0 | 0 | 0 |
| Peak Hour | 0 | 245 | 96 | 89 | 0 | 95 | 64 | 96 | 0 | 26 | 633 | 46 | 0 | 52 | 718 | 170 | 2,330 | | 1 | 0 | 0 | 0 |