

September 12, 2023

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Re: Traffic Impact Study for 50th and Rainbow Development

BHC has been asked to review the traffic impact of a proposed redevelopment located in the southwest corner of 50th Street and Rainbow Boulevard. The site includes Joe D. Dennis Park and the former Westwood View Elementary School.

Westwood View Elementary School operations have relocated to the northeast corner of 50th Street and Belinder Avenue, approximately 500 feet west of this site. For the 2023-2024 school year, Rushton Elementary School operations will utilize the original Westwood View Elementary School while their school is being rebuilt. After the school year, the proposed development would replace the site for a proposed mixed-use site consisting of 85,193 square feet of general office buildings and 29,963 square feet of retail.

This traffic study provides existing traffic counts, a traffic distribution, trip generation and intersection capacity/queuing analyses for the proposed development for the AM, PM school peak, and PM peak hour traffic volumes. The traffic data was collected on Wednesday, September 6th while both Westwood View Elementary and Rushton Elementary were in session.

Sight and intersection analyses, crash analysis, and left-turn lane warrant analyses have also been completed for Rainbow Boulevard. This traffic study also provides a future 20-year condition scenario for year 2043 where a 0.5% annual traffic growth rate is applied to Rainbow Boulevard.

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EXISTING CONDITIONS

The location currently includes Joe D. Dennis Park and the former Westwood View Elementary School. Rainbow Boulevard (169 Highway) is a 35mph 4-lane road that runs along the eastern side of the site. Rainbow Boulevard provides access to Shawnee Mission Parkway approximately 1000 feet to the south, and I-35 approximately 2.5 miles to the north.

The intersection of Rainbow Boulevard and 50th Street is a signalized 4-leg intersection with 50th Street being offset by approximately 70 feet. 50th Street runs along the northern side of the site and is a 25-mph 2-lane minor collector street connecting Mission Road to State Line Road.

51st Street is a 25-mph 2-lane residential street along the southern side of the site that connects Rainbow Boulevard to 51st Terrace. 51st Street forms a T-intersection with Rainbow Boulevard that is Stop-sign controlled for 51st Street.

The existing street network along with AM and PM traffic counts were taken on Tuesday, July 18th may be seen in Figure 1.

EXISTING CONDITIONS (continued)

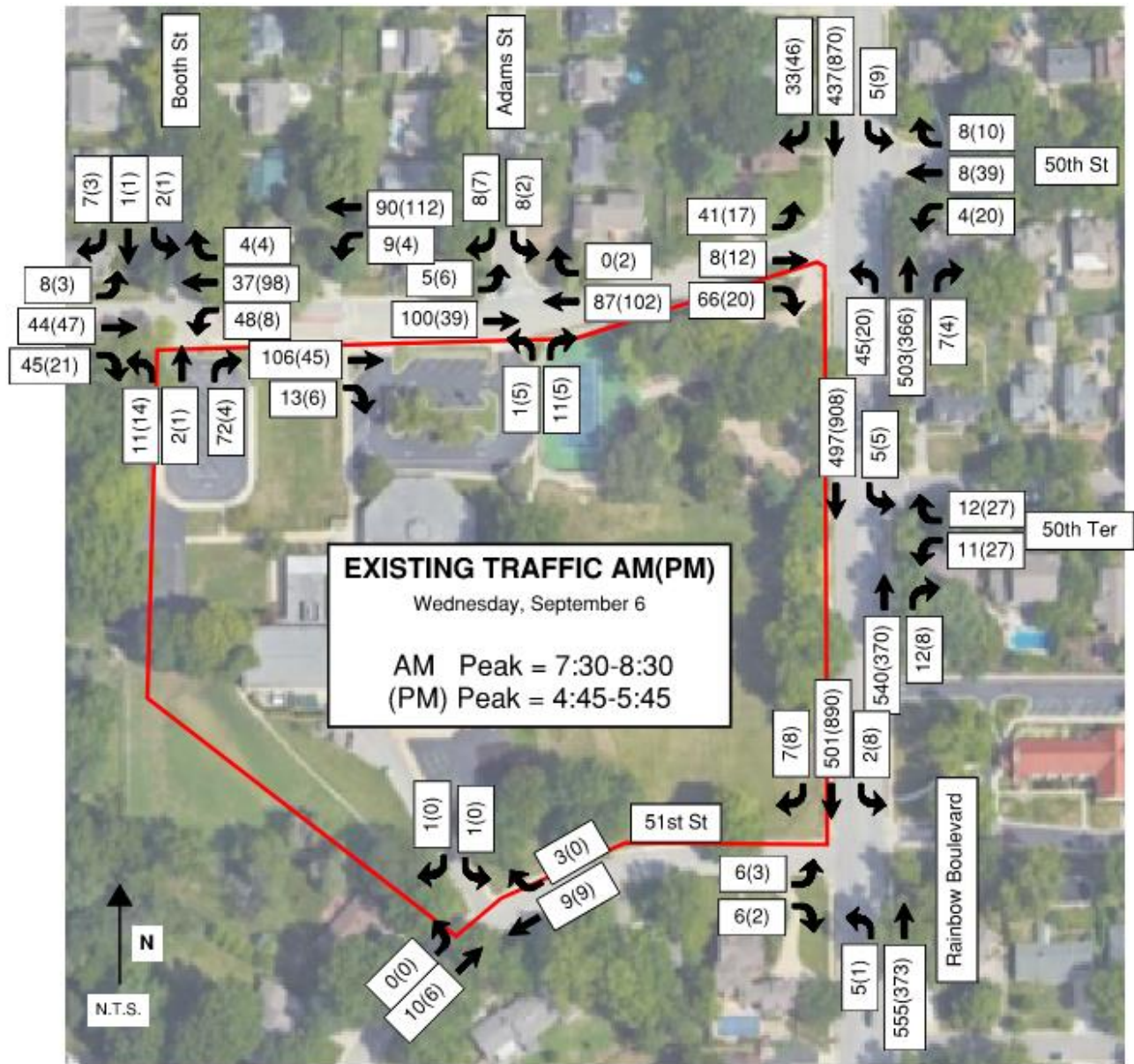


Figure 1: Existing Conditions

The intersections included in Figure 1 include:

- 50th Street and Booth Street
- 50th Street and west school drive
- 50th Street and Adams Street
- 50th Street and Rainbow Boulevard
- 50th Terrace and Rainbow Boulevard
- 51st Street and Rainbow Boulevard
- 51st Street and west school drive

EXISTING CONDITIONS (continued)

Concerns about school traffic have been heard which resulted in further analysis of the school peak times. School begins at 8:10 AM, which coincides with the regions 7:30-8:30 AM traffic peak. In the afternoon school dismisses at 3:10 PM, which correlates to a 2:45-3:45 PM school peak that is different than the regions 4:45-5:45 PM traffic peak.

The traffic count results from the 2:45-3:45 PM school peak traffic may be seen in Figure 2.

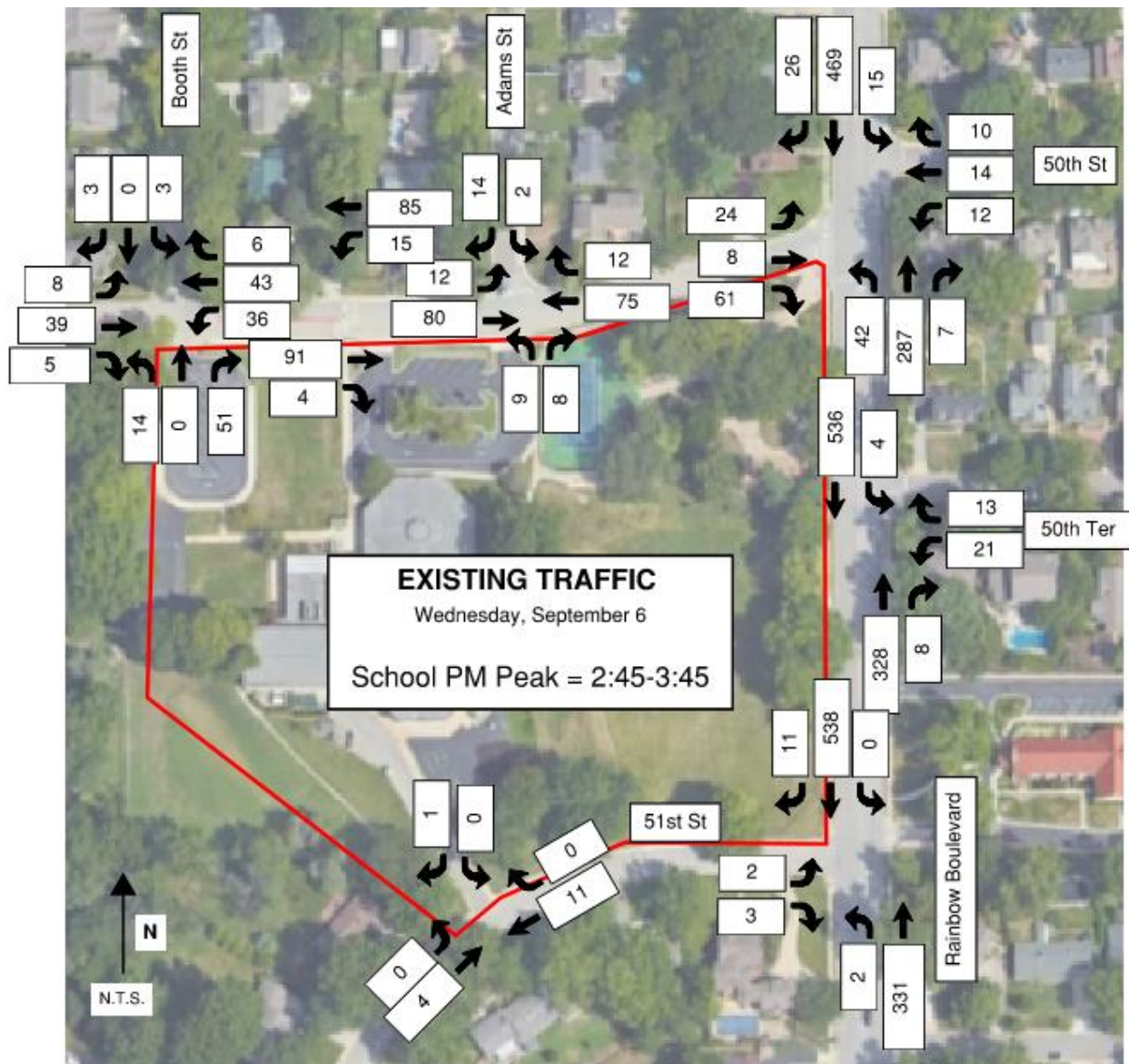


Figure 2: School PM Peak 2:45-3:45

PROPOSED CONDITIONS

The proposed mixed-use site will consist of 85,193 square feet of general office building and 29,963 square feet of retail. These are gross floor areas, not leasable space.

Along the eastern side of the site (Rainbow Boulevard), a new access driveway is proposed that would align itself across from 50th Terrace. The access driveway will provide access to the ground level of a parking garage with 215 parking spaces.

Along the northern side of the site (50th Street), a single proposed driveway that aligns with Adams Street would provide access to the second level of the parking garage with 80 parking spaces.

Along the southern side of the site (51st Street), the eastern of two proposed driveways approximately 150 feet west of Rainbow Boulevard will provide a second access point to the ground level of the parking garage. The western proposed driveway will provide a second access point the second level of the parking garage. There is no internal connectivity between the two levels of the parking garage.

The proposed site layout may be seen in Figure 3. Intersection site triangles have been provided on the plans and may also be seen in Figure 3.

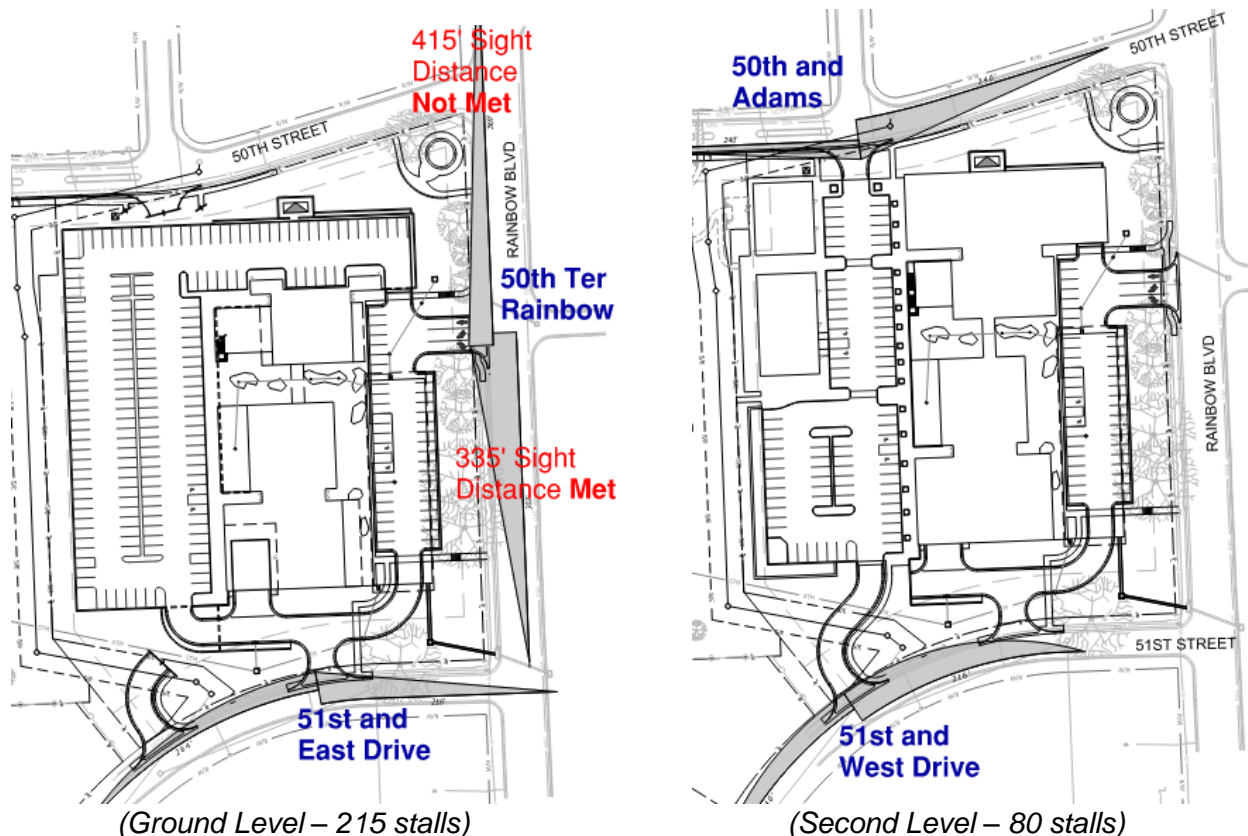


Figure 3: Proposed Site Layout

TRIP DISTRIBUTION

The project is situated within a well-established neighborhood. Rainbow Boulevard is anticipated to carry a larger percentage of the proposed site-related traffic due to the nature of a mixed-use site as opposed to a centrally located community elementary school. It is also assumed that a notable percentage of the retail traffic is expected to be pass-by and/or internal capture trips already on the surrounding roadway network.

The fact that Rushton Elementary will (and has) operated in the former Westwood View Elementary school for the 2023-2024 complicates existing traffic counts, traffic patterns, and the future trip distribution. Traffic distributions for a neighborhood school and a mixed-use development are expected to operate differently. Figure 4 illustrates where each school is relative to the project and where its traffic would be expected to originate.

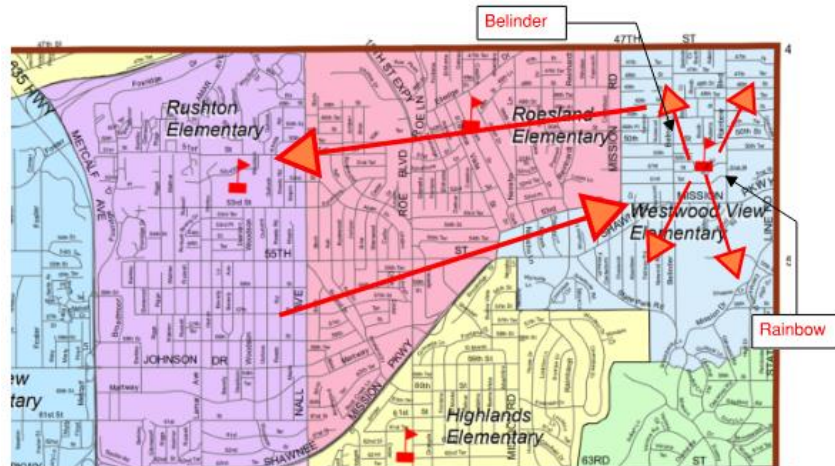


Figure 4: Rushton Elementary Traffic Flow

Figure 5 illustrates where it is anticipated the proposed site office and retail traffic will originate. General office employees would be expected to draw from a much larger population radius within the metropolitan area and less likely to use the residential street networks in their commute. The trip distribution assumptions utilized for distributing the proposed traffic are explained on the following page.

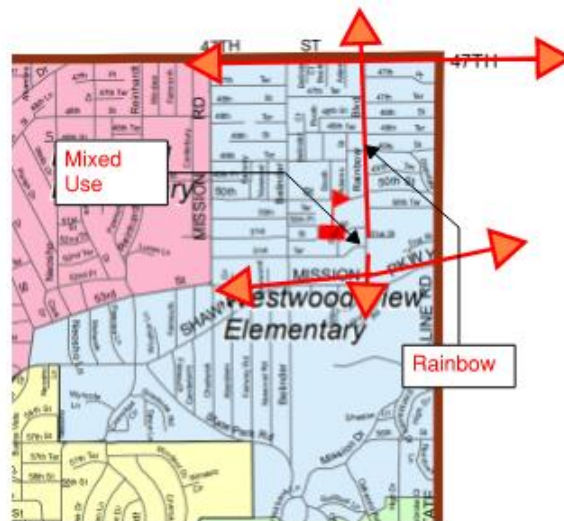


Figure 5: Proposed Mixed-Use Traffic Flow

TRIP DISTRIBUTION (continued)

A review of the surrounding population centers, existing roadway network, and September traffic counts along Rainbow Boulevard was completed to develop the trip distribution. Several assumptions were made for the distribution and are summarized below:

- 1) 15% of site generated traffic will be assigned to filter through the surrounding neighborhoods via 50th Street and 51st Street.
- 2) 85% of the site generated traffic will be assigned to Rainbow Boulevard with close to a 50%/50% northbound/southbound directional split.

Figure 6 illustrates the entering (blue numbers) and exiting (red numbers) trip distribution percentage selected based on these assumptions. The numbers in orange represent the directional distributions from each entering street/direction. The sum of the red numbers leaving the site boundary, as well as the sum of the blue numbers entering the site boundary total 100% and represent where the trip generation numbers will be assigned.

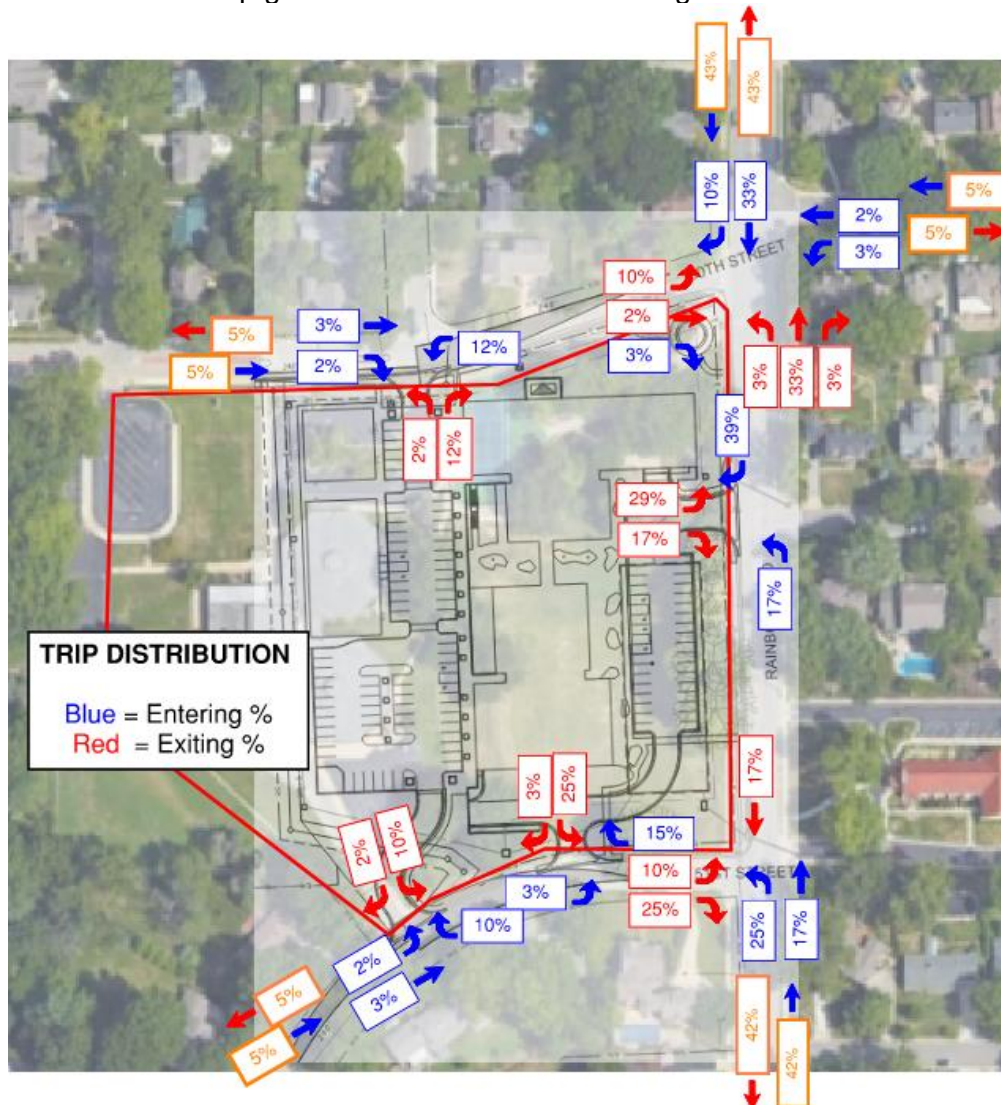


Figure 6: Proposed Trip Distribution

TRIP GENERATION

A trip generation analysis was performed using the Institute of Transportation Engineers (ITE) TripGen web-based app. The 11th edition of the Trip Generation Manual was used. The land use codes used for the proposed site were 710 – General Office Building, and 822 – Strip Retail Plaza.

The ITE Average Rate was used for General Office Building, and the ITE Fitted Curve Equation was used for the Strip Retail Plaza. The fitted curve equation was chosen as a better fit for the ITE data points collected for a Strip Retail Plaza site (the proposed retail is 29,963 square feet which is close to the 40,000 square foot threshold). See ITE Trip Gen plots in Appendix for justification between average and fitted curve rates. The number of trips generated may be seen in Table 1 for the AM peak hour, PM peak hour, and weekday total.

| Table 1 – Trip Generation | | | | | | |
|----------------------------------|---------------------------|----------------|------------------|------------------------|--------------|-------------|
| ITE Code | Land Use | 1000 SF | Avg. Rate | Trips Generated | | |
| | | | | Total | Enter | Exit |
| AM Peak Hour (7-9 AM) | | | | | | |
| 710 | General Office Building | 85.19 | 1.52 | 129 | 114 | 15 |
| 822 | Strip Retail Plaza (<40k) | 29.96 | 2.36* | 59 | 36 | 23 |
| Total AM Peak Hour | | | | 188 | 150 | 38 |
| PM Peak Hour (4-6 PM) | | | | | | |
| 710 | General Office Building | 85.19 | 1.44 | 123 | 21 | 102 |
| 822 | Strip Retail Plaza (<40k) | 29.96 | 6.59* | 170 | 85 | 85 |
| Total PM Peak Hour | | | | 293 | 106 | 187 |
| Weekday Total | | | | | | |
| 710 | General Office Building | 85.19 | 10.84 | 923 | 462 | 461 |
| 822 | Strip Retail Plaza (<40k) | 29.96 | 54.45* | 1494 | 747 | 747 |
| Total Weekday | | | | 2417 | 1209 | 1208 |

* ITE Average Rate shown, ITE Fitted Curve Equation used for Strip Retail Plaza <40k

Pass-By Assumption

Not all traffic entering or exiting a site driveway is necessarily new traffic added to the roadway network. The actual amount of new traffic is dependent upon the purpose of the trip and route used from its origin to its destination. For example, retail-oriented developments such as shopping centers, restaurants, service stations, and convenience markets are often located adjacent to busy roads with the intent of attracting motorists already on the roadway network. These developments attract a portion of their trips from existing traffic passing the site. Thus, these “pass-by” trips do not add new traffic and may be reduced from the total external trips generated by a study site.

Considering the proposed Strip Retail Plaza land use, an average pass-by percentage reduction of 30% is an acceptable practice. ITE indicates that the average pass-by rate for a Shopping Plaza is 40%. This study will stay conservative by not using any pass-by percentage which overestimates the mixed-use traffic generation lowering intersection levels of service. If a pass-by of 30% were applied to the retail plaza this study would decrease those trips by 30%.

TRIP GENERATION (continued)

Figure 7 illustrates the Trip Generations provided in Table 1 and distributes them to the proposed site and surrounding street network to the percentages provided in Figure 5.

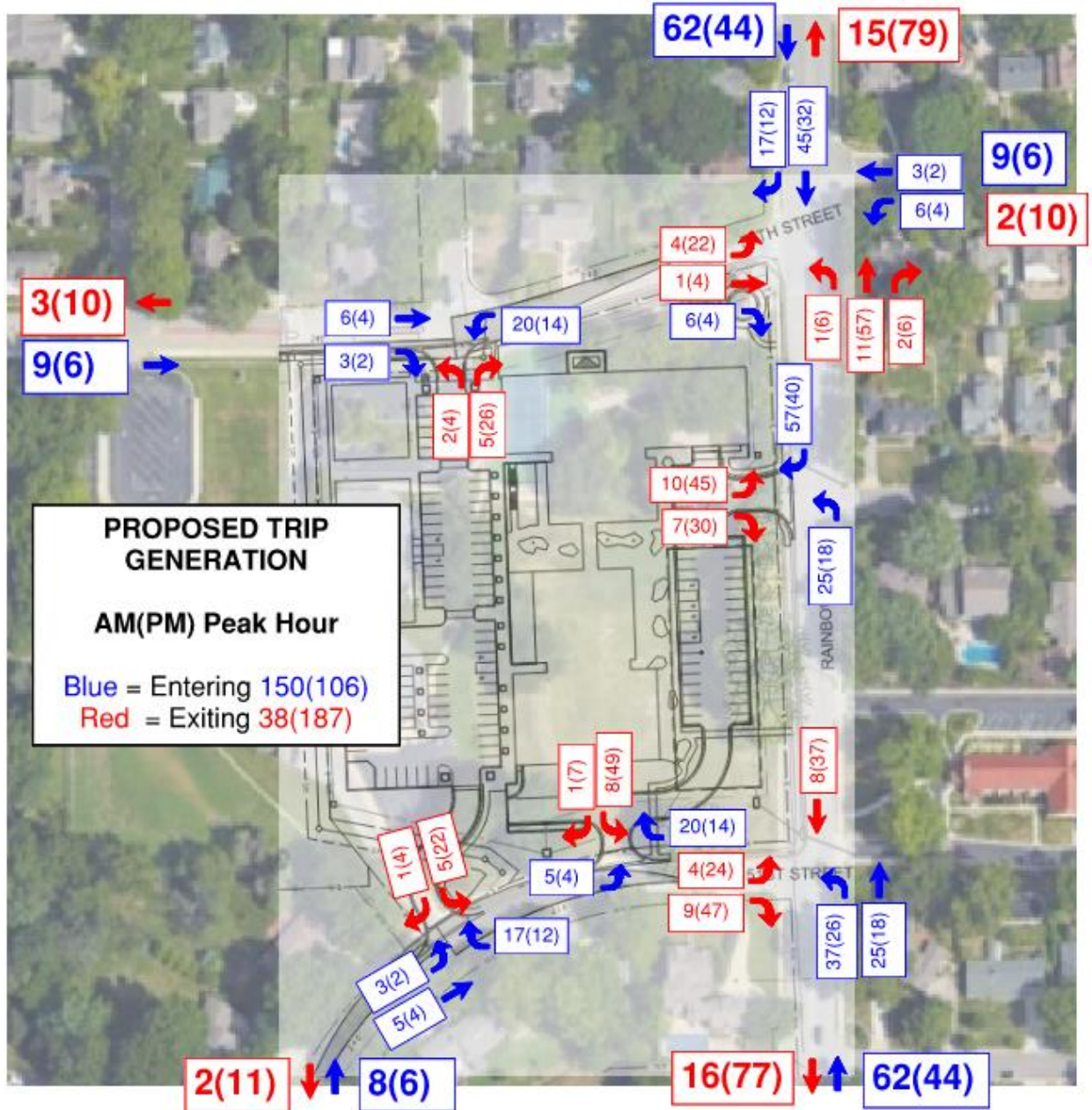


Figure 7: Proposed Trip Generation

TRIP GENERATION (continued)

Figure 7 represents the peak hour traffic increases associated with the site and the trip distribution assumptions. The information in Figure 7 helps identify intersections where projected left-turn movement increases could impact intersection operations.

The highest left-turn volume increases in Figure 7 are the southbound left-turn from the proposed driveway to 51st Street (49 vehicles) and the westbound left-turn from the proposed site driveway onto Rainbow Boulevard (45 vehicles). Both movements occur in the PM peak.

The highest left-turn increase on Rainbow Boulevard is projected to occur on northbound Rainbow at 51st Street with 37 additional vehicles in the AM peak.

EXISTING + PROPOSED CONDITIONS

The existing traffic volumes in Figure 1 from September have been added to the proposed site traffic volumes in Figure 7 to determine the existing+proposed volumes in Figure 8. These volumes will be used in the intersection capacity analyses for existing+proposed conditions.

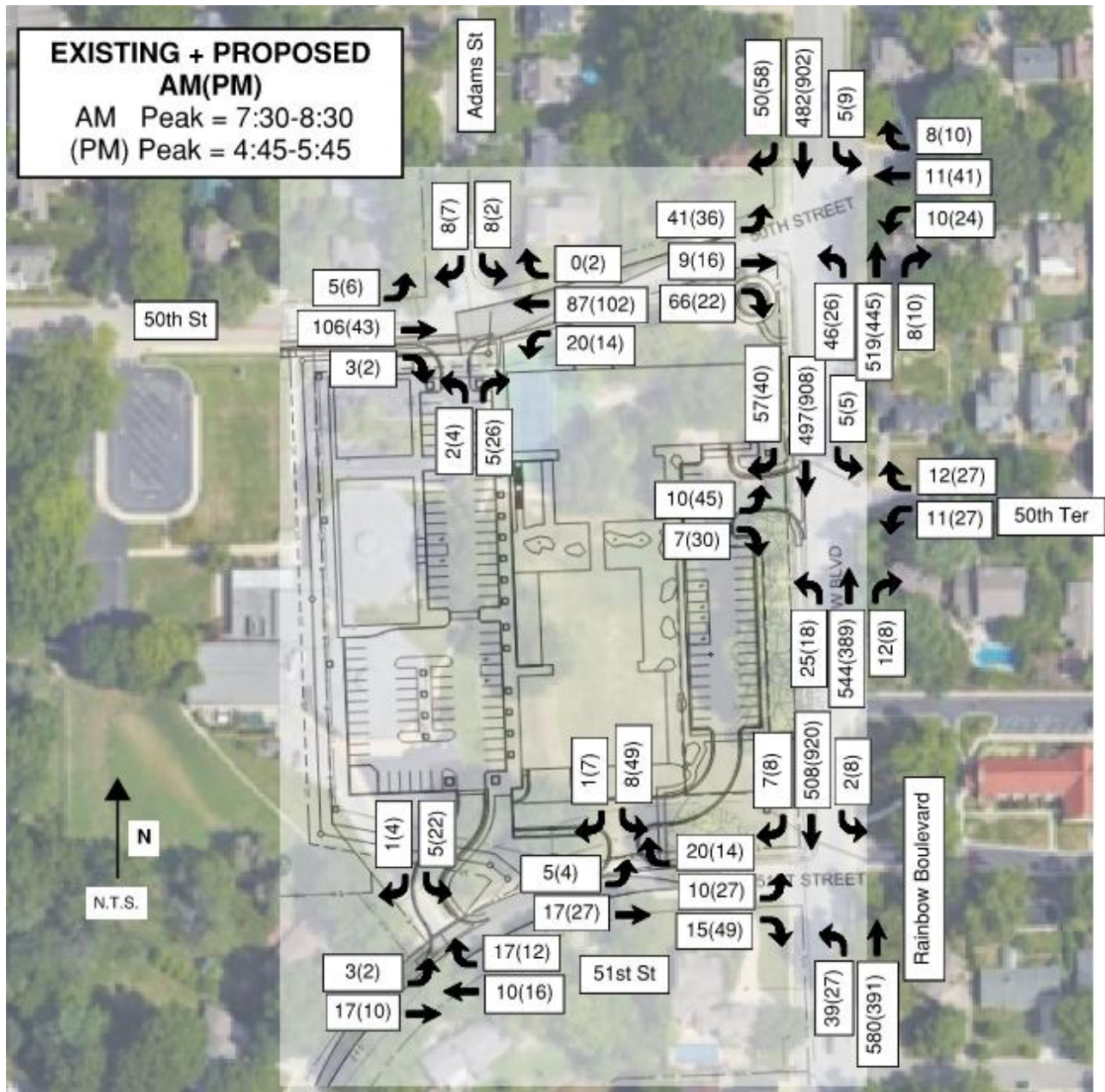


Figure 8: Existing + Proposed Traffic

INTERSECTION CAPACITY ANALYSES

Intersection capacity analyses were performed using the Highway Capacity Manual (HCM) 6th Edition Methodology provided in Synchro v11. The amount of delay is equated to a Level of Service (LOS) based on defined thresholds. A grade of A through F is assigned, with LOS A representing the best intersection operation. Table 2 shows the LOS associated with intersection approach delays, in seconds per vehicle (sec/veh), for signalized and unsignalized intersection cases.

| Table 2 – Level of Service Criteria | | |
|--|--|--|
| Level of Service (LOS) | Stop Control Approach Delay (sec/veh) | Signal Control Approach Delay (sec/veh) |
| A | ≤ 10 | ≤ 10 |
| B | > 10 and ≤ 15 | > 10 and ≤ 20 |
| C | > 15 and ≤ 25 | > 20 and ≤ 35 |
| D | > 25 and ≤ 35 | > 35 and ≤ 55 |
| E | > 35 and ≤ 50 | > 55 and ≤ 80 |
| F | > 50 | > 80 |

Existing traffic signal timings for 50th Street and Rainbow Boulevard was provided by the City of Westwood. The timings were entered into the Synchro v11 program along with the existing AM and PM peak hour traffic volumes from Figure 1. Analyses were also performed for the existing + proposed peak hour volumes in Figure 8. The results of the analyses for the project intersections may be viewed in Table 3 on the next page.

INTERSECTION CAPACITY ANALYSES (continued)

| Table 3 – Intersection Capacity Analyses | | | | | | | | | | |
|--|---------------------|------|------------------|------|---|--------------------------------|-----|------------------|-----|--|
| Intersection | Existing Conditions | | | | | Existing + Proposed Conditions | | | | |
| | AM | | PM | | | AM | | PM | | |
| | Avg. Delay (sec) | LOS | Avg. Delay (sec) | LOS | | Avg. Delay (sec) | LOS | Avg. Delay (sec) | LOS | |
| 50th and Adams Street (Two-Way Stop) | | | | | | | | | | |
| | NB | 9.0 | A | 9.1 | A | 9.3 | A | 8.8 | A | |
| | SB | 9.5 | A | 9.0 | A | 9.7 | A | 9.2 | A | |
| | EB | 0.4 | A | 1.0 | A | 0.3 | A | 0.9 | A | |
| | WB | 0.0 | A | 0.0 | A | 1.4 | A | 0.9 | A | |
| 50th and Rainbow Boulevard (Signalized Intersection) | | | | | | | | | | |
| | NB | 11.1 | B | 9.3 | A | 11.6 | B | 10.7 | B | |
| | SB | 10.5 | B | 13.1 | B | 11.2 | B | 14.9 | B | |
| | EB | 33.5 | C | 46.8 | D | 33.7 | C | 38.7 | D | |
| | WB | 47.0 | D | 38.2 | D | 45.2 | D | 37.7 | D | |
| 50th Terrace and Rainbow Boulevard (Two-Way Stop) | | | | | | | | | | |
| | NB | 0.0 | A | 0.0 | A | 0.6 | A | 0.6 | A | |
| | SB | 0.1 | A | 0.0 | A | 0.1 | A | 0.0 | A | |
| | EB | - | - | - | - | 17.8 | C | 39.2 | E | |
| | WB | 15.5 | C | 17.2 | C | 16.8 | C | 19.8 | C | |
| 51st and Rainbow Boulevard (Eastbound One-Way Stop) | | | | | | | | | | |
| | NB | 0.1 | A | 0.0 | A | 0.7 | A | 1.0 | A | |
| | SB | 0.0 | A | 0.2 | A | 0.0 | A | 0.2 | A | |
| | EB | 15.2 | C | 23.7 | C | 16.0 | C | 29.7 | D | |
| 51st Street and East Drive (Southbound One-Way Stop) | | | | | | | | | | |
| | SB | - | - | - | - | 8.8 | A | 9.0 | A | |
| | EB | - | - | - | - | 1.7 | A | 0.9 | A | |
| | WB | - | - | - | - | 0.0 | A | 0.0 | A | |
| 51st Street and West Drive (Southbound One-Way Stop) | | | | | | | | | | |
| | SB | 8.5 | A | 0.0 | A | 8.7 | A | 8.8 | A | |
| | EB | 0.0 | A | 0.0 | A | 1.1 | A | 1.2 | A | |
| | WB | 0.0 | A | 0.0 | A | 0.0 | A | 0.0 | A | |

For existing conditions, all intersections and lane movements operate at LOS of D or better. For the existing+proposed conditions, all intersections and lane movements continue to operate at LOS of D or better with one exception. The eastbound lane movement from the ground level parking garage to Rainbow Boulevard at 50th Terrace is estimated to operate at LOS E during the PM peak hour. Vehicle delays and queues associated with this movement would occur internal to the site.

Note: A pass-by reduction was not applied to the mixed-use component of the trip generation used for these analyses. If applied, average delays would improve.

INTERSECTION CAPACITY ANALYSES (continued)

PM School Peak Hour -vs- PM Peak Hour

The afternoon schools dismiss at 3:10 PM, which correlates to a 2:45-3:45 PM school peak that is different than the regional 4:45-5:45 PM traffic peak.

A comparison of the 2:45-3:45 PM school peak to the 4:45-5:45 PM peak hour may be seen in Table 4.

| Table 4 – PM School Peak -vs- PM Peak Hour | | | | | |
|--|----|----------------------------------|------------|---------------------------------|------------|
| | | Existing Conditions | | | |
| | | PM School (2:45-3:45) | | PM Peak (4:45-5:45) | |
| Intersection | | Avg. Delay (sec) | LOS | Avg. Delay (sec) | LOS |
| 50th and Adams Street (Two-Way Stop) | | | | | |
| | NB | 9.4 | A | 9.1 | A |
| | SB | 8.9 | A | 9.0 | A |
| | EB | 1.0 | A | 1.0 | A |
| | WB | 0.0 | A | 0.0 | A |
| 50th and Rainbow Boulevard (Signalized Intersection) | | | | | |
| | NB | 9.6 | A | 9.3 | A |
| | SB | 10.5 | B | 13.1 | B |
| | EB | 35.8 | D | 46.8 | D |
| | WB | 44.4 | D | 38.2 | D |
| 50th Terrace and Rainbow Boulevard (Two-Way Stop) | | | | | |
| | NB | 0.0 | A | 0.0 | A |
| | SB | 0.1 | A | 0.0 | A |
| | EB | | - | - | - |
| | WB | 13.8 | B | 17.2 | C |
| 51st and Rainbow Boulevard (Eastbound One-Way Stop) | | | | | |
| | NB | 0.1 | A | 0.0 | A |
| | SB | 0.0 | A | 0.2 | A |
| | EB | 13.2 | C | 23.7 | C |

Table 4 indicates that the study intersections operate at lower levels of service during the PM peak than the afternoon school peak.

Review of the traffic count video at 50th and Adams reveals that traffic is minimal and moves smoothly along 50th Street until 3:08 PM. At 3:10 PM, westbound traffic stops along 50th Street, and progresses slowly through 3:18 PM. Traffic normalizes around 3:20 PM and the Rushton school buses leave at 3:25 PM. Traffic is minimal and moving smoothly by 3:26 PM.

The observed school traffic congestion (less than 20-minutes) is typical of elementary schools. The proposed site traffic associated with the upper parking garage will distribute less trips during that peak congestion than Rushton School does presently.

QUEING ANALYSES

Synchro signalized intersection queuing analyses were performed using Highway Capacity Manual 6th Edition methodology in Synchro v11. The results of the analyses may be seen for the study intersections in Table 5.

| Table 5 – Intersection 95% Queues | | | | | | |
|--|------------------|---------------------|------|--------------------------------|------|--|
| Intersection | Storage Provided | Existing Conditions | | Existing + Proposed Conditions | | |
| | | 95% Queue (feet) | | 95% Queue (feet) | | |
| | | AM | PM | AM | PM | |
| 50th Street and Adams Street | | | | | | |
| Approach Lane | | | | | | |
| NB | 30' | 0' | 0' | 0' | 20' | |
| SB | 20' | 20' | 0' | 20' | 0' | |
| 50th Street and Rainbow Boulevard | | | | | | |
| Approach Lane | | | | | | |
| NB | 300' | 162' | 106' | 172' | 142' | |
| SB | 450' | 133' | 284' | 154' | 323' | |
| EB | 250' | 103' | 55' | 105' | 75' | |
| WB | 150' | 31' | 70' | 40' | 76' | |
| 50th Terrace and Rainbow Boulevard | | | | | | |
| Approach Lane | | | | | | |
| EB | 55' | 0' | 0' | 20' | 40' | |
| WB | 200' | 20' | 20' | 20' | 20' | |
| NBL | 280' | N/A | N/A | 20' | 20' | |
| 51st Street and Rainbow Boulevard | | | | | | |
| Approach Lane | | | | | | |
| EB | 140' | 20' | 20' | 20' | 40' | |
| NBL | 130' | N/A | N/A | 20' | 20' | |
| 51st Street and East Drive | | | | | | |
| Approach Lane | | | | | | |
| SB | 40' | N/A | N/A | 0' | 20' | |
| 51st Street and West Drive | | | | | | |
| Approach Lane | | | | | | |
| SB | 160' | 0' | 0' | 0' | 20' | |

All intersections lane movements are expected to have calculated 95% queues within their existing or proposed storage areas.

Note: A pass-by reduction was not applied to the mixed-use component of the trip generation used for these analyses.

INTERSECTION STOPPING AND SIGHT DISTANCE ANALYSES

Southbound Rainbow Boulevard adjacent to the proposed site is posted as 35 mph and is on a 4.5% downgrade. The required stopping sight distance is measured as the distance where from a 3.5' height, a 2' high object may be seen in the roadway. Based on Table 4-12 of KDOT's Access Management Policy, the required distance is 264'.

Field measurements were taken and found the existing stopping sight distance for southbound Rainbow Boulevard to 50th Terrace to be 292'. There is adequate stopping distance for southbound Rainbow as it approached 50th Terrace.

Intersection sight distance requirements for 50th Terrace and Rainbow were pulled from Table 4-14 of the KDOT Policy. The required intersection sight distance for a 50th Terrace right-turn onto Rainbow is 335' and is available. The required intersection sight distance for a 50th Terrace left-turn onto Rainbow is 415' and is not available.

There is not adequate intersection site distance for a left-turn movement from 50th Terrace onto Rainbow Boulevard. This distance could be met if the proposed access point was moved further south to the northern driveway of St. Rose Church and Rainbow Boulevard.

CRASH ANALYSES

The Kansas Department of Transportation (KDOT) provided accident data for Rainbow Boulevard from 50th Street to 51st Street during the 5-year period between 2018 and 2022.

Based on the provided data, no intersections reported an average of more than one accident per year during the reporting period (this is less than the requirement for an accident-based traffic signal warrant). A summary of the data can be seen in Table 6.

| Table 6 - Crash Analysis Summary | | | | | | |
|---|--|---------------|--------------|--------------|-----------------------------|----------------------------|
| Rainbow Boulevard Intersection | Five Year (2018-2022) Accident Totals | | | | | |
| | PDO | Injury | Fatal | Total | Reported Acc. / Year | Reported Acc. / MEV |
| 50 th Street | 2 | 2 | 0 | 4 | 0.8 | 0.127 |
| 50 th Terrace | 1 | 0 | 0 | 1 | 0.2 | 0.032 |
| 51 st Street | 1 | 1 | 0 | 1 | 0.2 | 0.032 |

The KDOT Traffic Count map indicates a 24-hour traffic volume of 17,200 vehicles per day on Rainbow Boulevard just north of Shawnee Mission Parkway in Year 2017. The Accident Rate per Million Entering Vehicles @ 50th and Rainbow is calculated as:

$$\frac{(4 \text{ accidents}) * (1,000,000)}{(17,200 \text{ entering vehicles per day}) * (365 \text{ days/year}) * (5 \text{ years})} = 0.127 \text{ Acc./MEV}$$

Three of the six reported accidents over the period were fixed object related.

ACCESS MANAGEMENT

By KDOT standards, Rainbow Boulevard is best classified as a Class B roadway, as it is located on the National Highway System. 50th Street, 50th Terrace, and 51st Street are best classified as Class E roadways, as they provide local service only for very short trips.

50th Terrace is situated 220 feet south of 50th Street and currently forms a T-intersection with Rainbow Boulevard. The proposed site adds a fourth leg to the existing intersection. See Figure 9.

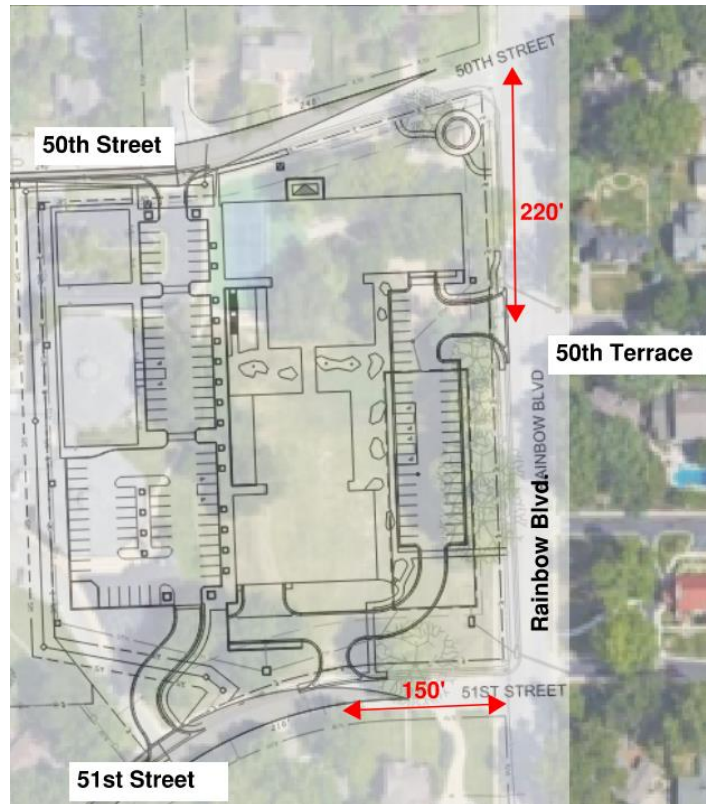


Figure 9: Access Points

With Rainbow being a 35-mph Class B roadway, Table 4-6 of the KDOT Access Management Policy was reviewed to determine unsignalized access spacing. With 50th Terrace already existing 220 feet south of 50th Street, a case for an area type of central business district (CBD) can be made. CBD indicates 205-foot spacing criteria.

Table 4-6. Unsignalized access spacing criteria

| Access Route Classification | Area Type | Posted Speed Limit (mph) | | | | | | | | | | |
|-----------------------------|-------------|--------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| | | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 |
| B | Undeveloped | | | | 350 | 420 | 515 | 610 | 720 | 825 | 955 | 1075 |
| | Developed | 115 | 170 | 225 | 295 | 365 | 450 | 535 | 640 | 740 | | |
| | CBD | 85 | 120 | 155 | 205 | | | | | | | |

Figure 10: KDOT Unsignalized Access Spacing

ACCESS MANAGEMENT (continued)

Signalized Intersection Influence Area

KDOT Access Management Policy provides guidelines for the upstream and downstream intersection influence area of a signalized intersection. Figure 4-17 and Table 4-4 of the Policy have been reviewed for the signalized intersection of 50th Street and Rainbow Boulevard which is in a developed area.

The upstream functional area for northbound Rainbow Boulevard as it approaches 50th Street is the sum of reaction time at 35mph (80') plus a deceleration distance (220') and two times the calculated northbound 95% queue ($2 * 173'$ (see Table 5) = 346') which totals 646'.

A variance would be required to meet KDOT's upstream intersection influence area for any new driveway adjacent to the proposed site.

The downstream functional area for southbound Rainbow Boulevard as it departs 50th Street is 195'. The distance from 50th Terrace to 50th Street is 220'. No variance is required.

Unsignalized Access Spacing

KDOT Access Management Policy provides guidelines for unsignalized access spacing. Table 4-6 of the Policy has been reviewed for a developed Class B route with a posted speed of 35 mph. The access spacing is found to be 295'.

A variance would be required to meet KDOT's unsignalized spacing criteria for any new driveway adjacent to the proposed site as there is only 535' between 50th Street and 51st Street

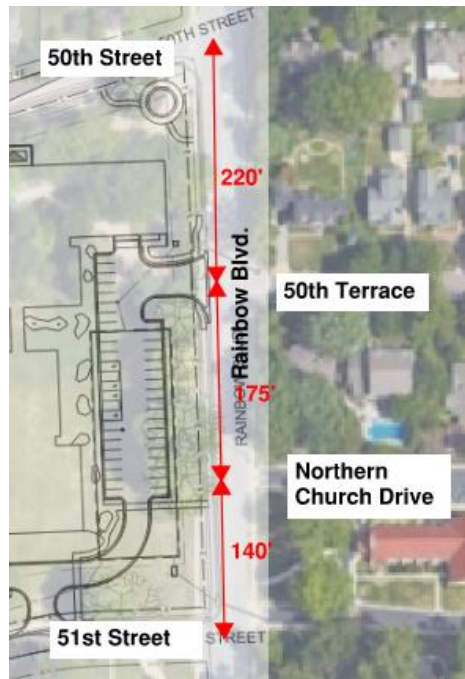


Figure 10: Access Spacing

KDOT RECOMMENDED LEFT-TURN LANE WARRANTS

KDOT Access Management Policy provides guidelines for left-turn lane warrants, which were reviewed. The northbound Rainbow Boulevard existing + proposed traffic volumes found in Figure 8 are shown in the following tables which conclude that left-turn lane recommended warrants are met at 50th Terrace and 51st Street. See Figure 11 below.

50th Terrace @ Rainbow

Table 4-28. Recommended left-turn lane warrants for four-lane highways

| Left-Turn Volume V_L (vph) | 4-Lane Undivided Opposing Volume V_o (vph) | 4-Lane Divided Opposing Volume V_o (vph) | |
|------------------------------|--|--|------|
| ≥ 29 | Turn lane not warranted unless $V_o > 400$ vph | Turn lane not warranted unless $V_o > 400$ vph | |
| 28 | | 422 | |
| 26 | | 474 | |
| 24 | | 530 | |
| 22 | | 589 | |
| 20 | | 652 | |
| 18 | | 719 | |
| 16 | | 793 | |
| 14 | | 873 | |
| 12 | | 414 962 | 962 |
| 10 | | 542 1062 | 1062 |
| 8 | | 690 1179 | 1179 |
| 6 | | 867 1319 | 1319 |
| 4 | 1094 1499 | 1499 | |
| 2 | 1429 1762 | 1762 | |

AM = 25
PM = 18
AM = 497 Warranted
PM = 908 Warranted

51st Street @ Rainbow

Table 4-28. Recommended left-turn lane warrants for four-lane highways

| Left-Turn Volume V_L (vph) | 4-Lane Undivided Opposing Volume V_o (vph) | 4-Lane Divided Opposing Volume V_o (vph) | |
|------------------------------|--|--|------|
| ≥ 29 | Turn lane not warranted unless $V_o > 400$ vph | Turn lane not warranted unless $V_o > 400$ vph | |
| 28 | | 422 | |
| 26 | | 474 | |
| 24 | | 530 | |
| 22 | | 589 | |
| 20 | | 652 | |
| 18 | | 719 | |
| 16 | | 793 | |
| 14 | | 873 | |
| 12 | | 414 962 | 962 |
| 10 | | 542 1062 | 1062 |
| 8 | | 690 1179 | 1179 |
| 6 | | 867 1319 | 1319 |
| 4 | 1094 1499 | 1499 | |
| 2 | 1429 1762 | 1762 | |

AM = 39
PM = 27
AM = 508 Warranted
PM = 920 Warranted

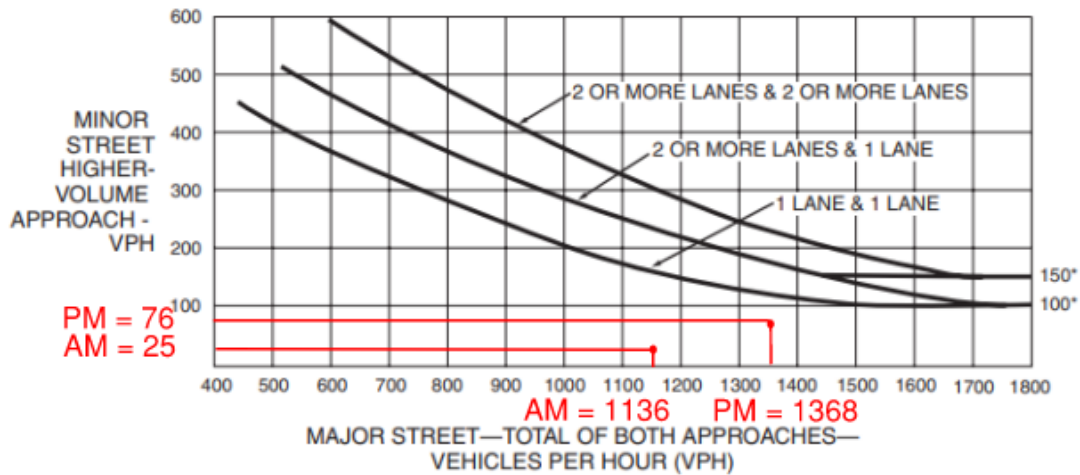
Figure 11: Left-Turn Lane Warrants

TRAFFIC SIGNAL WARRANT

The Manual on Uniform Traffic Control Devices was reviewed for a peak hour traffic warrant for the intersection of 51st Street and Rainbow Boulevard for the existing + proposed conditions. The result from that analysis may be seen in Figure 12.

51st Street @ Rainbow

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 12: Peak Hour Traffic Signal Warrant

FUTURE YEAR 2043 CONDITIONS

KDOT approved the use of a 0.5% Annual Growth Rate for 20-years to Rainbow Boulevard traffic to identify 20-year through volumes. That growth factor was applied to the Rainbow Boulevard volumes in Figure 8 and may be seen in Figure 13.

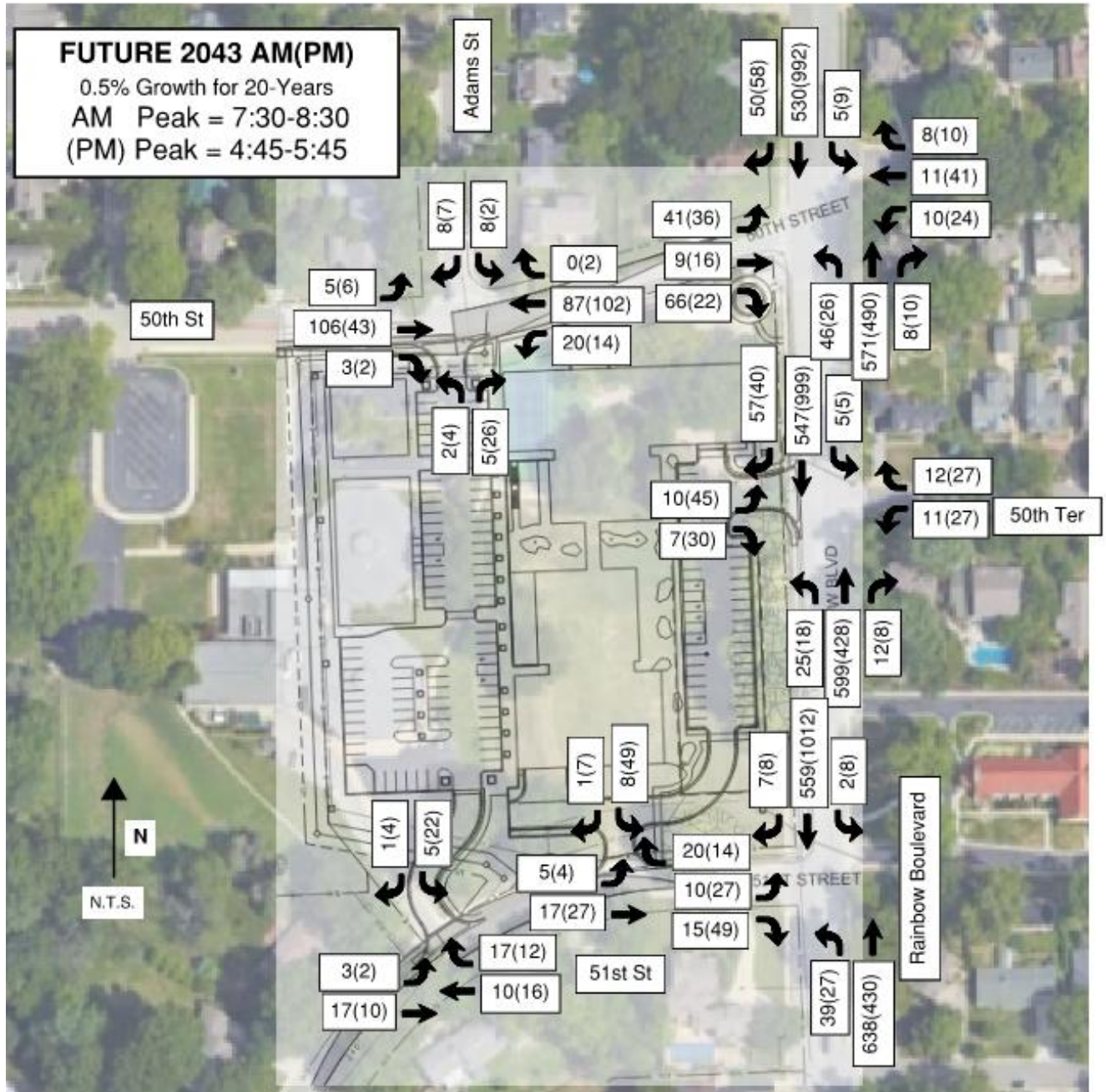


Figure 13: Future Year 2043 Conditions

FUTURE YEAR 2043 CONDITIONS (continued)

Intersection capacity analyses were conducted on the three intersections along Rainbow Boulevard for the year 2043 condition and can be seen in Table 7.

| Table 7 – Future 2043 Conditions | | | | | | |
|--|----|-------------------------|------------|-------------------------|------------|--|
| Intersection | | AM | | PM | | |
| | | Avg. Delay (sec) | LOS | Avg. Delay (sec) | LOS | |
| 50th and Rainbow Boulevard (Signalized Intersection) | | | | | | |
| | NB | 11.9 | B | 11.1 | B | |
| | SB | 11.5 | B | 16.2 | B | |
| | EB | 33.7 | D | 38.7 | D | |
| | WB | 45.2 | D | 37.7 | D | |
| 50th Terrace and Rainbow Boulevard (Two-Way Stop) | | | | | | |
| | NB | 0.5 | A | 0.6 | A | |
| | SB | 0.1 | A | 0.1 | A | |
| | EB | 19.8 | C | 52.7 | F | |
| | WB | 18.5 | C | 22.7 | C | |
| 51st and Rainbow Boulevard (Eastbound One-Way Stop) | | | | | | |
| | NB | 0.8 | A | 0.9 | A | |
| | SB | 0.0 | A | 0.2 | A | |
| | EB | 17.6 | C | 37.8 | E | |
| | | | | | | |

All intersection movements remain at LOS D or above with the exception of the eastbound movements of 50th Terrace and 51st Street which fall to LOS F and E respectively.

Consideration should be given to adding an eastbound right-turn lane for 51st Street which would keep that approach at LOS D in future conditions. This improvement would also help with the existing + proposed condition.

There is not much that can be done to improve the level of service of the 50th Terrace eastbound approach if the 20-year growth rates are indeed met.

FINDINGS AND RECOMMENDATIONS

This traffic study has conducted traffic counts, provided a traffic distribution, trip generation and analyses for the proposed 50th and Rainbow development.

The trip generation in Table 1 (page 8) is based on the ITE trip generation manual for the proposed land uses. These represent conservative estimates as pass-by and internal capture factors were not applied. The trips were added to the existing traffic counts taken on Wednesday, September 6th and may be seen in Figure 8 (page 11).

Intersection capacity analyses were completed for all of the study intersections and may be seen in Table 3 (page 13). For all movements except one (the eastbound approach of 50th Terrace and Rainbow) the anticipated LOS is D or above.

A review of the PM school peak versus the PM peak hour may be seen in Table 4 (page 14). While there is concern about the impact of the proposed development during the school peak, it is not substantiated by the study findings. PM peak hour LOS's are lower than PM school peak LOS's.

Queuing analyses were completed for all the study intersections and may be seen in Table 5 (page 15). All intersections lane movements are expected to have calculated 95% queues within their existing or proposed storage areas.

Intersection and stopping sight distances were field verified (page 16). There is adequate stopping sight distance for southbound Rainbow Boulevard as it approaches 50th Terrace. There is not; however, adequate left-turn sight distance from eastbound 50th Terrace. This requirement could be met if the proposed driveway is moved from 50th Terrace to the northern driveway of St. Rose Church.

There has been no significant reported crash experience along Rainbow Boulevard over the past 5-years.

Per KDOT policy, the upstream functional area for northbound Rainbow Boulevard as it approaches 50th Street is calculated at 646' (page 19). A KDOT variance would be required for any new driveway along Rainbow Boulevard to meet this requirement. Currently, 50th Terrace, St. Rose Church driveway and 51st Street do not meet this requirement.

Per KDOT policy, unsignalized access spacing for a 35 mph Class B roadway is 295'. Following that criterion, no access would be allowed between 50th Street and 51st Street. A variance is required.

KDOT left-turn lane warrant analyses indicate that both northbound Rainbow to 50th Terrace and 51st Street warrant consideration of an auxiliary northbound left-turn lane (page 20). Variances would be required from KDOT for these movements.

An annual 0.5% growth rate was applied for 20-years to determine ultimate year 2043 traffic volumes. Capacity analyses were completed for the three study intersections along Rainbow in Table 7 (page 23). For all movements except two (eastbound approaches of 50th Terrace and 51st Street) the anticipated LOS is D or above. The eastbound approach to 51st Street would return to LOS D with the addition of an eastbound right-turn lane.

FINDINGS AND RECOMMENDATIONS (continued)

Recommendation 1: Relocate the proposed site entrance at 50th Terrace to the northern driveway of St. Rose Church. Sign the two-lane eastbound approach as Left-Turn Only and Right-Turn Only. This driveway relocation provides adequate intersection sight distances, and should be expected to operate in a similar fashion as the analyses performed at the 50th Terrace location.

Recommendation 2: Consider widening eastbound 51st Street in the future to accommodate a second eastbound right-turn lane at Rainbow Boulevard. This public improvement would improve delays in the near term, and keep the intersection at LOS D in the future.

Recommendation 3: Make the developer aware that the eastbound approach from their lower parking area to Rainbow Boulevard may experience backups during the PM peak hour.

With implementation of these recommendations, the following KDOT variances are required:

- Variance for upstream functional area at the signalized intersection of 50th Street
- Variance for unsignalized access spacing
- Variance for northbound left-turn warrant at northern St. Rose Church driveway
- Variance for northbound left-turn warrant at 51st Street

This study has been submitted to both the City and KDOT for consideration.

If there are any questions regarding this traffic study, please contact me at your convenience at 913-663-1900 or mark.sherfy@ibhc.com.

Sincerely,



Mark Sherfy, P.E., PTOE
Traffic Engineer
BHC



LIST OF APPENDICES

APPENDIX A - TRAFFIC COUNTS

- 50th Street and Booth Street
- 50th Street and west school drive
- 50th Street and Adams Street
- 50th Street and Rainbow Boulevard
- 50th Terrace and Rainbow Boulevard
- 51st Street and Rainbow Boulevard
- 51st Street and west school drive

APPENDIX B – ITE TRIP GENERATION REPORTS

APPENDIX C - CAPACITY AND QUEUING ANALYSES

- 50th Street and Adams Street
 - AM Existing
 - PM School Existing (2:45-3:45)
 - PM Existing
 - AM Existing+Proposed
 - PM Existing+Proposed
- 50th Street and Rainbow Boulevard
 - AM Existing
 - PM School Existing (2:45-3:45)
 - PM Existing
 - AM Existing+Proposed
 - PM Existing+Proposed
 - AM Future 2043
 - PM Future 2043
- 50th Terrace and Rainbow Boulevard
 - AM Existing
 - PM School Existing (2:45-3:45)
 - PM Existing
 - AM Existing+Proposed
 - PM Existing+Proposed
 - AM Future 2043
 - PM Future 2043
- 51st Street and Rainbow Boulevard
 - AM Existing
 - PM School Existing (2:45-3:45)
 - PM Existing
 - AM Existing+Proposed
 - PM Existing+Proposed
 - AM Future 2043
 - PM Future 2043
- 51st Street and East Drive
 - AM Existing+Proposed
 - PM Existing+Proposed
- 51st and West Drive
 - AM Existing
 - PM Existing
 - AM Existing+Proposed
 - PM Existing+Proposed

West 50th Street & Booth Street - TMC

Wed Sep 6, 2023

Full Length (7:30 AM-8:30 AM, 2:45 PM-5:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1101962, Location: 39.037369, -94.614012



Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

| Leg Direction | Booth St Southbound | | | | | | W 50th St Westbound | | | | | | Elementary Driveway Northbound | | | | | | W 50th St Eastbound | | | | | | Int |
|---------------------------------------|---------------------|------|-------|----|-------|-------|---------------------|-------|-------|------|-------|------|--------------------------------|------|-------|-------|-------|------|---------------------|-------|------|-------|-------|------|-------|
| | R | T | L | U | App | Ped* | R | T | L | U | App | Ped* | R | T | L | U | App | Ped* | R | T | L | U | App | Ped* | |
| 2023-09-06 7:30AM | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 7 | 9 | 0 | 16 | 0 | 11 | 1 | 3 | 0 | 15 | 0 | 10 | 11 | 0 | 0 | 21 | 0 | 53 |
| 7:45AM | 2 | 0 | 0 | 0 | 2 | 33 | 3 | 10 | 24 | 0 | 37 | 0 | 30 | 1 | 4 | 0 | 35 | 1 | 20 | 9 | 4 | 0 | 33 | 0 | 107 |
| Hourly Total | 2 | 0 | 1 | 0 | 3 | 33 | 3 | 17 | 33 | 0 | 53 | 0 | 41 | 2 | 7 | 0 | 50 | 1 | 30 | 20 | 4 | 0 | 54 | 0 | 160 |
| 8:00AM | 2 | 1 | 0 | 0 | 3 | 99 | 1 | 11 | 15 | 0 | 27 | 1 | 29 | 0 | 1 | 0 | 30 | 2 | 14 | 11 | 4 | 0 | 29 | 0 | 89 |
| 8:15AM | 3 | 0 | 1 | 0 | 4 | 1 | 0 | 9 | 0 | 0 | 9 | 0 | 2 | 0 | 3 | 0 | 5 | 2 | 1 | 13 | 0 | 0 | 14 | 0 | 32 |
| Hourly Total | 5 | 1 | 1 | 0 | 7 | 100 | 1 | 20 | 15 | 0 | 36 | 1 | 31 | 0 | 4 | 0 | 35 | 4 | 15 | 24 | 4 | 0 | 43 | 0 | 121 |
| 2:45PM | 0 | 0 | 1 | 0 | 1 | 2 | 1 | 11 | 1 | 0 | 13 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 10 | 7 | 0 | 17 | 0 | 32 |
| Hourly Total | 0 | 0 | 1 | 0 | 1 | 2 | 1 | 11 | 1 | 0 | 13 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 10 | 7 | 0 | 17 | 0 | 32 |
| 3:00PM | 1 | 0 | 2 | 0 | 3 | 88 | 5 | 5 | 7 | 1 | 18 | 1 | 12 | 0 | 1 | 0 | 13 | 4 | 1 | 7 | 0 | 0 | 8 | 2 | 42 |
| 3:15PM | 2 | 0 | 0 | 0 | 2 | 25 | 0 | 10 | 27 | 0 | 37 | 1 | 36 | 0 | 6 | 0 | 42 | 3 | 1 | 9 | 1 | 0 | 11 | 1 | 92 |
| 3:30PM | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 17 | 1 | 0 | 18 | 0 | 3 | 0 | 6 | 0 | 9 | 20 | 3 | 13 | 0 | 0 | 16 | 0 | 43 |
| 3:45PM | 0 | 0 | 1 | 0 | 1 | 4 | 3 | 7 | 0 | 0 | 10 | 1 | 2 | 0 | 1 | 0 | 3 | 23 | 1 | 8 | 0 | 0 | 9 | 0 | 23 |
| Hourly Total | 3 | 0 | 3 | 0 | 6 | 121 | 8 | 39 | 35 | 1 | 83 | 3 | 53 | 0 | 14 | 0 | 67 | 50 | 6 | 37 | 1 | 0 | 44 | 3 | 200 |
| 4:00PM | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 0 | 0 | 10 | 0 | 1 | 0 | 2 | 0 | 3 | 3 | 2 | 15 | 0 | 0 | 17 | 0 | 31 |
| 4:15PM | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 14 | 0 | 0 | 15 | 1 | 1 | 0 | 3 | 0 | 4 | 3 | 3 | 17 | 1 | 0 | 21 | 1 | 41 |
| 4:30PM | 2 | 0 | 0 | 0 | 2 | 5 | 3 | 5 | 1 | 0 | 9 | 2 | 0 | 0 | 5 | 0 | 5 | 1 | 1 | 8 | 0 | 0 | 9 | 0 | 25 |
| 4:45PM | 2 | 0 | 0 | 0 | 2 | 6 | 0 | 14 | 4 | 0 | 18 | 1 | 0 | 0 | 2 | 0 | 2 | 1 | 2 | 12 | 0 | 0 | 14 | 3 | 36 |
| Hourly Total | 6 | 0 | 0 | 0 | 6 | 13 | 4 | 43 | 5 | 0 | 52 | 4 | 2 | 0 | 12 | 0 | 14 | 8 | 8 | 52 | 1 | 0 | 61 | 4 | 133 |
| 5:00PM | 0 | 1 | 1 | 0 | 2 | 4 | 3 | 28 | 1 | 0 | 32 | 0 | 2 | 0 | 4 | 0 | 6 | 2 | 5 | 17 | 2 | 0 | 24 | 2 | 64 |
| 5:15PM | 1 | 0 | 0 | 0 | 1 | 5 | 1 | 24 | 2 | 0 | 27 | 1 | 0 | 1 | 7 | 0 | 8 | 2 | 11 | 10 | 1 | 0 | 22 | 2 | 58 |
| 5:30PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | 1 | 0 | 33 | 0 | 2 | 0 | 1 | 0 | 3 | 6 | 3 | 8 | 0 | 0 | 11 | 0 | 47 |
| Hourly Total | 1 | 1 | 1 | 0 | 3 | 9 | 4 | 84 | 4 | 0 | 92 | 1 | 4 | 1 | 12 | 0 | 17 | 10 | 19 | 35 | 3 | 0 | 57 | 4 | 169 |
| Total | 17 | 2 | 7 | 0 | 26 | 278 | 21 | 214 | 93 | 1 | 329 | 9 | 131 | 3 | 50 | 0 | 184 | 75 | 78 | 178 | 20 | 0 | 276 | 11 | 815 |
| % Approach | 65.4% | 7.7% | 26.9% | 0% | - | - | 6.4% | 65.0% | 28.3% | 0.3% | - | - | 71.2% | 1.6% | 27.2% | 0% | - | - | 28.3% | 64.5% | 7.2% | 0% | - | - | - |
| % Total | 2.1% | 0.2% | 0.9% | 0% | 3.2% | - | 2.6% | 26.3% | 11.4% | 0.1% | 40.4% | - | 16.1% | 0.4% | 6.1% | 0% | 22.6% | - | 9.6% | 21.8% | 2.5% | 0% | 33.9% | - | - |
| Lights | 16 | 2 | 7 | 0 | 25 | - | 21 | 212 | 92 | 1 | 326 | - | 129 | 3 | 50 | 0 | 182 | - | 78 | 174 | 20 | 0 | 272 | - | 805 |
| % Lights | 94.1% | 100% | 100% | 0% | 96.2% | - | 100% | 99.1% | 98.9% | 100% | 99.1% | - | 98.5% | 100% | 100% | 0% | 98.9% | - | 100% | 97.8% | 100% | 0% | 98.6% | - | 98.8% |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 |
| % Articulated Trucks | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% |
| Buses and Single-Unit Trucks | 1 | 0 | 0 | 0 | 1 | - | 0 | 2 | 1 | 0 | 3 | - | 2 | 0 | 0 | 0 | 2 | - | 0 | 4 | 0 | 0 | 4 | - | 10 |
| % Buses and Single-Unit Trucks | 5.9% | 0% | 0% | 0% | 3.8% | - | 0% | 0.9% | 1.1% | 0% | 0.9% | - | 1.5% | 0% | 0% | 0% | 1.1% | - | 0% | 2.2% | 0% | 0% | 1.4% | - | 1.2% |
| Pedestrians | - | - | - | - | - | 259 | - | - | - | - | 8 | - | - | - | - | 72 | - | - | - | - | - | 9 | - | | |
| % Pedestrians | - | - | - | - | - | 93.2% | - | - | - | - | 88.9% | - | - | - | - | 96.0% | - | - | - | - | - | 81.8% | - | | |
| Bicycles on Crosswalk | - | - | - | - | - | 19 | - | - | - | - | 1 | - | - | - | - | 3 | - | - | - | - | - | 2 | - | | |
| % Bicycles on Crosswalk | - | - | - | - | - | 6.8% | - | - | - | - | 11.1% | - | - | - | - | 4.0% | - | - | - | - | - | 18.2% | - | | |

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

West 50th Street and west Elementary Dr - TMC

Wed Sep 6, 2023

Full Length (7:30 AM-8:30 AM, 2:45 PM-5:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1101963, Location: 39.037365, -94.613384



Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

| Leg Direction | W 50th St Westbound | | | | | Elementary Driveway Northbound | | | | | W 50th St Eastbound | | | | | Int |
|---------------------------------------|---------------------|-----------|----------|------------|----------|--------------------------------|----------|----------|----------|------------|---------------------|------------|----------|------------|------------|------------|
| | T | L | U | App | Ped* | R | L | U | App | Ped* | R | T | U | App | Ped* | |
| Time | | | | | | | | | | | | | | | | |
| 2023-09-06 7:30AM | 17 | 5 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 17 | 0 | 23 | 0 | 45 |
| 7:45AM | 39 | 2 | 0 | 41 | 0 | 0 | 0 | 1 | 1 | 15 | 5 | 35 | 0 | 40 | 13 | 82 |
| Hourly Total | 56 | 7 | 0 | 63 | 0 | 0 | 0 | 1 | 1 | 15 | 11 | 52 | 0 | 63 | 13 | 127 |
| 8:00AM | 25 | 1 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 35 | 1 | 39 | 0 | 40 | 36 | 66 |
| 8:15AM | 9 | 1 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 15 | 0 | 16 | 0 | 26 |
| Hourly Total | 34 | 2 | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 37 | 2 | 54 | 0 | 56 | 36 | 92 |
| 2:45PM | 13 | 5 | 0 | 18 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 11 | 0 | 12 | 0 | 31 |
| Hourly Total | 13 | 5 | 0 | 18 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 11 | 0 | 12 | 0 | 31 |
| 3:00PM | 24 | 4 | 1 | 29 | 1 | 0 | 0 | 0 | 0 | 13 | 1 | 20 | 0 | 21 | 14 | 50 |
| 3:15PM | 30 | 4 | 1 | 35 | 1 | 0 | 0 | 0 | 0 | 41 | 0 | 46 | 0 | 46 | 44 | 81 |
| 3:30PM | 18 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 24 | 2 | 14 | 0 | 16 | 0 | 34 |
| 3:45PM | 9 | 1 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 23 | 1 | 9 | 1 | 11 | 3 | 21 |
| Hourly Total | 81 | 9 | 2 | 92 | 2 | 0 | 0 | 0 | 0 | 101 | 4 | 89 | 1 | 94 | 61 | 186 |
| 4:00PM | 10 | 0 | 0 | 10 | 0 | 0 | 0 | 1 | 1 | 3 | 2 | 14 | 0 | 16 | 0 | 27 |
| 4:15PM | 16 | 2 | 1 | 19 | 0 | 0 | 0 | 0 | 0 | 4 | 6 | 11 | 0 | 17 | 0 | 36 |
| 4:30PM | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 8 | 0 | 9 | 0 | 18 |
| 4:45PM | 18 | 0 | 0 | 18 | 1 | 1 | 0 | 1 | 2 | 4 | 0 | 11 | 0 | 11 | 3 | 31 |
| Hourly Total | 53 | 2 | 1 | 56 | 1 | 1 | 0 | 2 | 3 | 14 | 9 | 44 | 0 | 53 | 3 | 112 |
| 5:00PM | 32 | 0 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 4 | 3 | 16 | 0 | 19 | 0 | 51 |
| 5:15PM | 29 | 3 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | 5 | 3 | 8 | 0 | 11 | 0 | 43 |
| 5:30PM | 33 | 1 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 10 | 0 | 10 | 0 | 44 |
| Hourly Total | 94 | 4 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 16 | 6 | 34 | 0 | 40 | 0 | 138 |
| Total | 331 | 29 | 3 | 363 | 3 | 2 | 0 | 3 | 5 | 183 | 33 | 284 | 1 | 318 | 113 | 686 |
| % Approach | 91.2% | 8.0% | 0.8% | - | - | 40.0% | 0% | 60.0% | - | - | 10.4% | 89.3% | 0.3% | - | - | - |
| % Total | 48.3% | 4.2% | 0.4% | 52.9% | - | 0.3% | 0% | 0.4% | 0.7% | - | 4.8% | 41.4% | 0.1% | 46.4% | - | - |
| Lights | 329 | 18 | 1 | 348 | - | 2 | 0 | 3 | 5 | - | 30 | 282 | 1 | 313 | - | 666 |
| % Lights | 99.4% | 62.1% | 33.3% | 95.9% | - | 100% | 0% | 100% | 100% | - | 90.9% | 99.3% | 100% | 98.4% | - | 97.1% |
| Articulated Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 |
| % Articulated Trucks | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% |
| Buses and Single-Unit Trucks | 2 | 11 | 2 | 15 | - | 0 | 0 | 0 | 0 | - | 3 | 2 | 0 | 5 | - | 20 |
| % Buses and Single-Unit Trucks | 0.6% | 37.9% | 66.7% | 4.1% | - | 0% | 0% | 0% | 0% | - | 9.1% | 0.7% | 0% | 1.6% | - | 2.9% |
| Pedestrians | - | - | - | - | 2 | - | - | - | - | 167 | - | - | - | - | 103 | - |
| % Pedestrians | - | - | - | - | 66.7% | - | - | - | - | 91.3% | - | - | - | - | 91.2% | - |
| Bicycles on Crosswalk | - | - | - | - | 1 | - | - | - | - | 16 | - | - | - | - | 10 | - |
| % Bicycles on Crosswalk | - | - | - | - | 33.3% | - | - | - | - | 8.7% | - | - | - | - | 8.8% | - |

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

West 50th Street and east Elementary Dr - TMC

Wed Sep 6, 2023

Full Length (7:30 AM-8:30 AM, 2:45 PM-5:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1101964, Location: 39.037377, -94.612976



Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

| Leg Direction | Adams St Southbound | | | | | | W 50th St Westbound | | | | | | Elementary Driveway Northbound | | | | | | W 50th St Eastbound | | | | | | |
|---------------------------------------|---------------------|----|-------|----|------|-------|---------------------|-------|----|----|-------|------|--------------------------------|----|-------|----|-------|-------|---------------------|-------|-------|------|-------|-------|-------|
| Time | R | T | L | U | App | Ped* | R | T | L | U | App | Ped* | R | T | L | U | App | Ped* | R | T | L | U | App | Ped* | Int |
| 2023-09-06 7:30AM | 2 | 0 | 2 | 0 | 4 | 0 | 0 | 19 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 14 | 0 | 37 |
| 7:45AM | 1 | 0 | 2 | 0 | 3 | 1 | 0 | 38 | 0 | 0 | 38 | 0 | 6 | 0 | 0 | 0 | 6 | 18 | 0 | 33 | 2 | 0 | 35 | 0 | 82 |
| Hourly Total | 3 | 0 | 4 | 0 | 7 | 1 | 0 | 57 | 0 | 0 | 57 | 0 | 6 | 0 | 0 | 0 | 6 | 18 | 0 | 47 | 2 | 0 | 49 | 0 | 119 |
| 8:00AM | 3 | 0 | 4 | 0 | 7 | 9 | 0 | 22 | 0 | 0 | 22 | 0 | 3 | 0 | 0 | 0 | 3 | 32 | 0 | 37 | 3 | 0 | 40 | 2 | 72 |
| 8:15AM | 2 | 0 | 0 | 0 | 2 | 1 | 0 | 8 | 0 | 0 | 8 | 0 | 2 | 0 | 1 | 0 | 3 | 2 | 0 | 16 | 0 | 0 | 16 | 0 | 29 |
| Hourly Total | 5 | 0 | 4 | 0 | 9 | 10 | 0 | 30 | 0 | 0 | 30 | 0 | 5 | 0 | 1 | 0 | 6 | 34 | 0 | 53 | 3 | 0 | 56 | 2 | 101 |
| 2:45PM | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 15 | 0 | 0 | 17 | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 10 | 1 | 0 | 11 | 0 | 31 |
| Hourly Total | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 15 | 0 | 0 | 17 | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 10 | 1 | 0 | 11 | 0 | 31 |
| 3:00PM | 8 | 0 | 0 | 0 | 8 | 4 | 6 | 24 | 0 | 0 | 30 | 0 | 1 | 0 | 0 | 0 | 1 | 10 | 0 | 14 | 4 | 0 | 18 | 1 | 57 |
| 3:15PM | 4 | 0 | 1 | 0 | 5 | 5 | 3 | 27 | 0 | 0 | 30 | 5 | 7 | 0 | 0 | 0 | 7 | 31 | 0 | 43 | 6 | 0 | 49 | 1 | 91 |
| 3:30PM | 1 | 0 | 1 | 0 | 2 | 0 | 1 | 9 | 0 | 0 | 10 | 1 | 0 | 0 | 7 | 0 | 7 | 20 | 0 | 13 | 1 | 0 | 14 | 0 | 33 |
| 3:45PM | 2 | 0 | 1 | 0 | 3 | 1 | 0 | 8 | 0 | 0 | 8 | 1 | 0 | 0 | 1 | 0 | 1 | 13 | 0 | 10 | 0 | 1 | 11 | 0 | 23 |
| Hourly Total | 15 | 0 | 3 | 0 | 18 | 10 | 10 | 68 | 0 | 0 | 78 | 7 | 8 | 0 | 8 | 0 | 16 | 74 | 0 | 80 | 11 | 1 | 92 | 2 | 204 |
| 4:00PM | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 0 | 0 | 8 | 1 | 1 | 0 | 1 | 0 | 2 | 9 | 0 | 11 | 2 | 0 | 13 | 0 | 24 |
| 4:15PM | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 16 | 0 | 0 | 18 | 0 | 5 | 0 | 1 | 0 | 6 | 4 | 0 | 12 | 0 | 0 | 12 | 0 | 37 |
| 4:30PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 0 | 0 | 8 | 0 | 4 | 0 | 1 | 0 | 5 | 1 | 0 | 8 | 1 | 0 | 9 | 0 | 22 |
| 4:45PM | 3 | 0 | 0 | 0 | 3 | 0 | 1 | 14 | 0 | 0 | 15 | 1 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 11 | 0 | 0 | 11 | 0 | 29 |
| Hourly Total | 5 | 0 | 0 | 0 | 5 | 2 | 3 | 46 | 0 | 0 | 49 | 2 | 10 | 0 | 3 | 0 | 13 | 21 | 0 | 42 | 3 | 0 | 45 | 0 | 112 |
| 5:00PM | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 28 | 0 | 0 | 28 | 7 | 1 | 0 | 2 | 0 | 3 | 5 | 0 | 12 | 3 | 0 | 15 | 2 | 47 |
| 5:15PM | 1 | 0 | 1 | 0 | 2 | 2 | 1 | 29 | 0 | 0 | 30 | 0 | 1 | 0 | 2 | 0 | 3 | 4 | 0 | 6 | 3 | 0 | 9 | 2 | 44 |
| 5:30PM | 2 | 0 | 1 | 0 | 3 | 0 | 0 | 31 | 0 | 0 | 31 | 2 | 3 | 0 | 1 | 0 | 4 | 6 | 0 | 10 | 0 | 0 | 10 | 0 | 48 |
| Hourly Total | 4 | 0 | 2 | 0 | 6 | 3 | 1 | 88 | 0 | 0 | 89 | 9 | 5 | 0 | 5 | 0 | 10 | 15 | 0 | 28 | 6 | 0 | 34 | 4 | 139 |
| Total | 33 | 0 | 13 | 0 | 46 | 27 | 16 | 304 | 0 | 0 | 320 | 18 | 34 | 0 | 19 | 0 | 53 | 163 | 0 | 260 | 26 | 1 | 287 | 8 | 706 |
| % Approach | 71.7% | 0% | 28.3% | 0% | - | - | 5.0% | 95.0% | 0% | 0% | - | - | 64.2% | 0% | 35.8% | 0% | - | - | 0% | 90.6% | 9.1% | 0.3% | - | - | - |
| % Total | 4.7% | 0% | 1.8% | 0% | 6.5% | - | 2.3% | 43.1% | 0% | 0% | 45.3% | - | 4.8% | 0% | 2.7% | 0% | 7.5% | - | 0% | 36.8% | 3.7% | 0.1% | 40.7% | - | - |
| Lights | 33 | 0 | 13 | 0 | 46 | - | 16 | 290 | 0 | 0 | 306 | - | 22 | 0 | 19 | 0 | 41 | - | 0 | 258 | 25 | 1 | 284 | - | 677 |
| % Lights | 100% | 0% | 100% | 0% | 100% | - | 100% | 95.4% | 0% | 0% | 95.6% | - | 64.7% | 0% | 100% | 0% | 77.4% | - | 0% | 99.2% | 96.2% | 100% | 99.0% | - | 95.9% |
| Articulated Trucks | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 |
| % Articulated Trucks | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | 0% | - | 0% |
| Buses and Single-Unit Trucks | 0 | 0 | 0 | 0 | 0 | - | 0 | 14 | 0 | 0 | 14 | - | 12 | 0 | 0 | 0 | 12 | - | 0 | 2 | 1 | 0 | 3 | - | 29 |
| % Buses and Single-Unit Trucks | 0% | 0% | 0% | 0% | 0% | - | 0% | 4.6% | 0% | 0% | 4.4% | - | 35.3% | 0% | 0% | 0% | 22.6% | - | 0% | 0.8% | 3.8% | 0% | 1.0% | - | 4.1% |
| Pedestrians | - | - | - | - | - | 25 | - | - | - | - | - | 18 | - | - | - | - | - | 145 | - | - | - | - | - | 6 | - |
| % Pedestrians | - | - | - | - | - | 92.6% | - | - | - | - | - | 100% | - | - | - | - | - | 89.0% | - | - | - | - | - | 75.0% | - |
| Bicycles on Crosswalk | - | - | - | - | - | 2 | - | - | - | - | - | 0 | - | - | - | - | - | 18 | - | - | - | - | - | 2 | - |
| % Bicycles on Crosswalk | - | - | - | - | - | 7.4% | - | - | - | - | - | 0% | - | - | - | - | - | 11.0% | - | - | - | - | - | 25.0% | - |

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

West 50th Street & Rainbow Boulevard - TMC

Wed Sep 6, 2023

Full Length (7:30 AM-8:30 AM, 2:45 PM-5:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1101966, Location: 39.037647, -94.611883



Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

| Leg Direction | Rainbow Blvd Southbound | | | | | | W 50th St Westbound | | | | | | Rainbow Blvd Northbound | | | | | | W 50th St Eastbound | | | | | | Int |
|---------------------------------------|-------------------------|-------|------|----|-------|------|---------------------|-------|-------|----|-------|------|-------------------------|-------|-------|----|-------|-------|---------------------|-------|-------|----|-------|-------|-------|
| | R | T | L | U | App | Ped* | R | T | L | U | App | Ped* | R | T | L | U | App | Ped* | R | T | L | U | App | Ped* | |
| 2023-09-06 7:30AM | 4 | 89 | 0 | 0 | 93 | 0 | 3 | 2 | 0 | 0 | 5 | 0 | 2 | 132 | 15 | 0 | 149 | 0 | 9 | 4 | 3 | 0 | 16 | 0 | 263 |
| 7:45AM | 14 | 118 | 0 | 0 | 132 | 0 | 1 | 4 | 1 | 0 | 6 | 12 | 1 | 133 | 19 | 0 | 153 | 16 | 24 | 1 | 12 | 0 | 37 | 6 | 328 |
| Hourly Total | 18 | 207 | 0 | 0 | 225 | 0 | 4 | 6 | 1 | 0 | 11 | 12 | 3 | 265 | 34 | 0 | 302 | 16 | 33 | 5 | 15 | 0 | 53 | 6 | 591 |
| 8:00AM | 10 | 117 | 3 | 0 | 130 | 0 | 2 | 2 | 1 | 0 | 5 | 5 | 4 | 113 | 9 | 0 | 126 | 27 | 28 | 0 | 17 | 0 | 45 | 1 | 306 |
| 8:15AM | 5 | 113 | 2 | 0 | 120 | 0 | 2 | 0 | 2 | 0 | 4 | 4 | 0 | 125 | 2 | 0 | 127 | 3 | 5 | 3 | 9 | 0 | 17 | 1 | 268 |
| Hourly Total | 15 | 230 | 5 | 0 | 250 | 0 | 4 | 2 | 3 | 0 | 9 | 9 | 4 | 238 | 11 | 0 | 253 | 30 | 33 | 3 | 26 | 0 | 62 | 2 | 574 |
| 2:45PM | 2 | 112 | 2 | 0 | 116 | 0 | 4 | 4 | 3 | 0 | 11 | 3 | 3 | 74 | 7 | 0 | 84 | 4 | 6 | 3 | 3 | 0 | 12 | 1 | 223 |
| Hourly Total | 2 | 112 | 2 | 0 | 116 | 0 | 4 | 4 | 3 | 0 | 11 | 3 | 3 | 74 | 7 | 0 | 84 | 4 | 6 | 3 | 3 | 0 | 12 | 1 | 223 |
| 3:00PM | 13 | 127 | 4 | 0 | 144 | 0 | 3 | 2 | 1 | 0 | 6 | 5 | 2 | 70 | 23 | 0 | 95 | 6 | 10 | 1 | 3 | 0 | 14 | 2 | 259 |
| 3:15PM | 9 | 118 | 6 | 0 | 133 | 1 | 3 | 4 | 6 | 0 | 13 | 14 | 1 | 75 | 9 | 0 | 85 | 23 | 38 | 1 | 13 | 0 | 52 | 1 | 283 |
| 3:30PM | 2 | 112 | 3 | 0 | 117 | 0 | 2 | 4 | 0 | 0 | 6 | 1 | 1 | 68 | 3 | 0 | 72 | 21 | 7 | 3 | 5 | 0 | 15 | 0 | 210 |
| 3:45PM | 5 | 150 | 0 | 0 | 155 | 0 | 0 | 2 | 1 | 0 | 3 | 3 | 4 | 81 | 1 | 0 | 86 | 6 | 4 | 1 | 7 | 0 | 12 | 0 | 256 |
| Hourly Total | 29 | 507 | 13 | 0 | 549 | 1 | 8 | 12 | 8 | 0 | 28 | 23 | 8 | 294 | 36 | 0 | 338 | 56 | 59 | 6 | 28 | 0 | 93 | 3 | 1008 |
| 4:00PM | 3 | 180 | 6 | 0 | 189 | 0 | 2 | 5 | 3 | 0 | 10 | 0 | 2 | 86 | 0 | 0 | 88 | 23 | 2 | 2 | 8 | 0 | 12 | 0 | 299 |
| 4:15PM | 8 | 194 | 3 | 0 | 205 | 0 | 1 | 6 | 2 | 0 | 9 | 2 | 5 | 78 | 5 | 0 | 88 | 3 | 9 | 3 | 5 | 0 | 17 | 0 | 319 |
| 4:30PM | 3 | 220 | 1 | 0 | 224 | 0 | 1 | 1 | 2 | 0 | 4 | 1 | 2 | 91 | 3 | 0 | 96 | 1 | 4 | 2 | 6 | 0 | 12 | 0 | 336 |
| 4:45PM | 6 | 201 | 2 | 0 | 209 | 0 | 1 | 7 | 1 | 0 | 9 | 0 | 2 | 92 | 4 | 0 | 98 | 0 | 5 | 1 | 7 | 0 | 13 | 3 | 329 |
| Hourly Total | 20 | 795 | 12 | 0 | 827 | 0 | 5 | 19 | 8 | 0 | 32 | 3 | 11 | 347 | 12 | 0 | 370 | 27 | 20 | 8 | 26 | 0 | 54 | 3 | 1283 |
| 5:00PM | 13 | 224 | 2 | 0 | 239 | 0 | 1 | 10 | 2 | 0 | 13 | 12 | 1 | 82 | 4 | 0 | 87 | 13 | 3 | 5 | 4 | 0 | 12 | 0 | 351 |
| 5:15PM | 10 | 228 | 2 | 0 | 240 | 0 | 1 | 12 | 8 | 0 | 21 | 4 | 1 | 93 | 8 | 0 | 102 | 7 | 6 | 2 | 2 | 0 | 10 | 5 | 373 |
| 5:30PM | 17 | 217 | 3 | 0 | 237 | 0 | 7 | 10 | 9 | 0 | 26 | 2 | 0 | 99 | 4 | 0 | 103 | 5 | 6 | 4 | 4 | 0 | 14 | 1 | 380 |
| Hourly Total | 40 | 669 | 7 | 0 | 716 | 0 | 9 | 32 | 19 | 0 | 60 | 18 | 2 | 274 | 16 | 0 | 292 | 25 | 15 | 11 | 10 | 0 | 36 | 6 | 1104 |
| Total | 124 | 2520 | 39 | 0 | 2683 | 1 | 34 | 75 | 42 | 0 | 151 | 68 | 31 | 1492 | 116 | 0 | 1639 | 158 | 166 | 36 | 108 | 0 | 310 | 21 | 4783 |
| % Approach | 4.6% | 93.9% | 1.5% | 0% | - | - | 22.5% | 49.7% | 27.8% | 0% | - | - | 1.9% | 91.0% | 7.1% | 0% | - | - | 53.5% | 11.6% | 34.8% | 0% | - | - | - |
| % Total | 2.6% | 52.7% | 0.8% | 0% | 56.1% | - | 0.7% | 1.6% | 0.9% | 0% | 3.2% | - | 0.6% | 31.2% | 2.4% | 0% | 34.3% | - | 3.5% | 0.8% | 2.3% | 0% | 6.5% | - | - |
| Lights | 124 | 2484 | 39 | 0 | 2647 | - | 34 | 75 | 41 | 0 | 150 | - | 31 | 1460 | 103 | 0 | 1594 | - | 153 | 36 | 106 | 0 | 295 | - | 4686 |
| % Lights | 100% | 98.6% | 100% | 0% | 98.7% | - | 100% | 100% | 97.6% | 0% | 99.3% | - | 100% | 97.9% | 88.8% | 0% | 97.3% | - | 92.2% | 100% | 98.1% | 0% | 95.2% | - | 98.0% |
| Articulated Trucks | 0 | 4 | 0 | 0 | 4 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 3 | 0 | 0 | 3 | - | 0 | 0 | 0 | 0 | 0 | - | 7 |
| % Articulated Trucks | 0% | 0.2% | 0% | 0% | 0.1% | - | 0% | 0% | 0% | 0% | 0% | - | 0% | 0.2% | 0% | 0% | 0.2% | - | 0% | 0% | 0% | 0% | 0% | - | 0.1% |
| Buses and Single-Unit Trucks | 0 | 32 | 0 | 0 | 32 | - | 0 | 0 | 1 | 0 | 1 | - | 0 | 29 | 13 | 0 | 42 | - | 13 | 0 | 2 | 0 | 15 | - | 90 |
| % Buses and Single-Unit Trucks | 0% | 1.3% | 0% | 0% | 1.2% | - | 0% | 0% | 2.4% | 0% | 0.7% | - | 0% | 1.9% | 11.2% | 0% | 2.6% | - | 7.8% | 0% | 1.9% | 0% | 4.8% | - | 1.9% |
| Pedestrians | - | - | - | - | - | 1 | - | - | - | - | - | 68 | - | - | - | - | - | 154 | - | - | - | - | - | 20 | |
| % Pedestrians | - | - | - | - | - | 100% | - | - | - | - | - | 100% | - | - | - | - | - | 97.5% | - | - | - | - | - | 95.2% | - |
| Bicycles on Crosswalk | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 4 | - | - | - | - | - | 1 | |
| % Bicycles on Crosswalk | - | - | - | - | - | 0% | - | - | - | - | - | 0% | - | - | - | - | - | 2.5% | - | - | - | - | - | 4.8% | - |

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

West 50th Terrace & Rainbow Boulevard - TMC

Wed Sep 6, 2023

Full Length (7:30 AM-8:30 AM, 2:45 PM-5:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1101965, Location: 39.036957, -94.611879



Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

| Leg Direction | Rainbow Blvd Southbound | | | | | W 50th Terr Westbound | | | | | Rainbow Blvd Northbound | | | | | |
|---------------------------------------|-------------------------|-------|----|-------|------|-----------------------|-------|----|------|------|-------------------------|-------|----|-------|------|-------|
| Time | T | L | U | App | Ped* | R | L | U | App | Ped* | R | T | U | App | Ped* | Int |
| 2023-09-06 7:30AM | 99 | 0 | 0 | 99 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 144 | 0 | 146 | 0 | 246 |
| 7:45AM | 146 | 1 | 0 | 147 | 0 | 4 | 1 | 0 | 5 | 1 | 3 | 153 | 0 | 156 | 0 | 308 |
| Hourly Total | 245 | 1 | 0 | 246 | 0 | 5 | 1 | 0 | 6 | 1 | 5 | 297 | 0 | 302 | 0 | 554 |
| 8:00AM | 140 | 2 | 0 | 142 | 0 | 6 | 1 | 0 | 7 | 0 | 2 | 116 | 0 | 118 | 0 | 267 |
| 8:15AM | 112 | 2 | 0 | 114 | 0 | 1 | 9 | 0 | 10 | 0 | 5 | 127 | 0 | 132 | 0 | 256 |
| Hourly Total | 252 | 4 | 0 | 256 | 0 | 7 | 10 | 0 | 17 | 0 | 7 | 243 | 0 | 250 | 0 | 523 |
| 2:45PM | 116 | 2 | 0 | 118 | 0 | 2 | 0 | 0 | 2 | 0 | 2 | 91 | 0 | 93 | 0 | 213 |
| Hourly Total | 116 | 2 | 0 | 118 | 0 | 2 | 0 | 0 | 2 | 0 | 2 | 91 | 0 | 93 | 0 | 213 |
| 3:00PM | 132 | 1 | 0 | 133 | 0 | 4 | 0 | 0 | 4 | 0 | 1 | 91 | 0 | 92 | 0 | 229 |
| 3:15PM | 168 | 1 | 0 | 169 | 0 | 5 | 14 | 0 | 19 | 0 | 2 | 78 | 0 | 80 | 0 | 268 |
| 3:30PM | 120 | 0 | 0 | 120 | 0 | 2 | 7 | 0 | 9 | 0 | 3 | 68 | 0 | 71 | 0 | 200 |
| 3:45PM | 157 | 1 | 0 | 158 | 0 | 3 | 2 | 0 | 5 | 0 | 1 | 83 | 0 | 84 | 0 | 247 |
| Hourly Total | 577 | 3 | 0 | 580 | 0 | 14 | 23 | 0 | 37 | 0 | 7 | 320 | 0 | 327 | 0 | 944 |
| 4:00PM | 183 | 0 | 0 | 183 | 0 | 5 | 7 | 0 | 12 | 0 | 1 | 81 | 0 | 82 | 0 | 277 |
| 4:15PM | 200 | 2 | 0 | 202 | 0 | 6 | 5 | 0 | 11 | 1 | 1 | 84 | 0 | 85 | 0 | 298 |
| 4:30PM | 213 | 2 | 0 | 215 | 0 | 1 | 6 | 0 | 7 | 0 | 3 | 90 | 0 | 93 | 0 | 315 |
| 4:45PM | 208 | 0 | 0 | 208 | 0 | 6 | 4 | 0 | 10 | 0 | 2 | 93 | 0 | 95 | 0 | 313 |
| Hourly Total | 804 | 4 | 0 | 808 | 0 | 18 | 22 | 0 | 40 | 1 | 7 | 348 | 0 | 355 | 0 | 1203 |
| 5:00PM | 225 | 2 | 0 | 227 | 0 | 6 | 4 | 0 | 10 | 0 | 0 | 87 | 0 | 87 | 0 | 324 |
| 5:15PM | 243 | 2 | 0 | 245 | 0 | 7 | 12 | 0 | 19 | 0 | 4 | 94 | 0 | 98 | 0 | 362 |
| 5:30PM | 232 | 1 | 0 | 233 | 0 | 8 | 7 | 0 | 15 | 0 | 2 | 96 | 0 | 98 | 0 | 346 |
| Hourly Total | 700 | 5 | 0 | 705 | 0 | 21 | 23 | 0 | 44 | 0 | 6 | 277 | 0 | 283 | 0 | 1032 |
| Total | 2694 | 19 | 0 | 2713 | 0 | 67 | 79 | 0 | 146 | 2 | 34 | 1576 | 0 | 1610 | 0 | 4469 |
| % Approach | 99.3% | 0.7% | 0% | - | - | 45.9% | 54.1% | 0% | - | - | 2.1% | 97.9% | 0% | - | - | - |
| % Total | 60.3% | 0.4% | 0% | 60.7% | - | 1.5% | 1.8% | 0% | 3.3% | - | 0.8% | 35.3% | 0% | 36.0% | - | - |
| Lights | 2643 | 18 | 0 | 2661 | - | 67 | 79 | 0 | 146 | - | 33 | 1533 | 0 | 1566 | - | 4373 |
| % Lights | 98.1% | 94.7% | 0% | 98.1% | - | 100% | 100% | 0% | 100% | - | 97.1% | 97.3% | 0% | 97.3% | - | 97.9% |
| Articulated Trucks | 3 | 0 | 0 | 3 | - | 0 | 0 | 0 | 0 | - | 0 | 2 | 0 | 2 | - | 5 |
| % Articulated Trucks | 0.1% | 0% | 0% | 0.1% | - | 0% | 0% | 0% | 0% | - | 0% | 0.1% | 0% | 0.1% | - | 0.1% |
| Buses and Single-Unit Trucks | 48 | 1 | 0 | 49 | - | 0 | 0 | 0 | 0 | - | 1 | 41 | 0 | 42 | - | 91 |
| % Buses and Single-Unit Trucks | 1.8% | 5.3% | 0% | 1.8% | - | 0% | 0% | 0% | 0% | - | 2.9% | 2.6% | 0% | 2.6% | - | 2.0% |
| Pedestrians | - | - | - | - | 0 | - | - | - | - | 2 | - | - | - | - | 0 | - |
| % Pedestrians | - | - | - | - | - | - | - | - | - | 100% | - | - | - | - | - | - |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 0 | - |
| % Bicycles on Crosswalk | - | - | - | - | - | - | - | - | - | 0% | - | - | - | - | - | - |

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

West 51st Street & Rainbow Boulevard (north) - TMC

Wed Sep 6, 2023

Full Length (7:30 AM-8:30 AM, 2:45 PM-5:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1101967, Location: 39.036062, -94.611884



Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

| Leg Direction | Rainbow Blvd Southbound | | | | | Access Westbound | | | | | Rainbow Blvd Northbound | | | | | W 51st St Eastbound | | | | | Int | | | | |
|---------------------------------------|-------------------------|-------|------|----|--------------|------------------|----|----|----|----------|-------------------------|---|------|-------|----------|---------------------|--------------|----|-------|----------|-------|-----------|--------------|-------------|-------|
| | R | T | L | U | App Ped* | R | T | L | U | App Ped* | R | T | L | U | App Ped* | R | T | L | U | App Ped* | | | | | |
| 2023-09-06 7:30AM | 3 | 95 | 0 | 0 | 98 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 150 | 1 | 0 | 151 | 0 | 1 | 0 | 3 | 0 | 4 | 0 | 253 | |
| 7:45AM | 0 | 148 | 0 | 0 | 148 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 155 | 4 | 0 | 159 | 0 | 2 | 0 | 2 | 0 | 4 | 6 | 311 | |
| Hourly Total | 3 | 243 | 0 | 0 | 246 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 305 | 5 | 0 | 310 | 0 | 3 | 0 | 5 | 0 | 8 | 6 | 564 | |
| 8:00AM | 1 | 138 | 2 | 0 | 141 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 120 | 0 | 0 | 120 | 0 | 1 | 0 | 1 | 0 | 2 | 7 | 263 | |
| 8:15AM | 3 | 120 | 0 | 0 | 123 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 130 | 0 | 0 | 130 | 0 | 2 | 0 | 0 | 0 | 2 | 1 | 255 | |
| Hourly Total | 4 | 258 | 2 | 0 | 264 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 0 | 250 | 0 | 3 | 0 | 1 | 0 | 4 | 8 | 518 | |
| 2:45PM | 2 | 114 | 0 | 0 | 116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 92 | 0 | 0 | 92 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 208 | |
| Hourly Total | 2 | 114 | 0 | 0 | 116 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 92 | 0 | 0 | 92 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 208 | |
| 3:00PM | 3 | 130 | 0 | 0 | 133 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 92 | 1 | 0 | 93 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 226 | |
| 3:15PM | 6 | 173 | 0 | 0 | 179 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 77 | 1 | 0 | 78 | 0 | 2 | 0 | 2 | 0 | 4 | 11 | 261 | |
| 3:30PM | 0 | 121 | 0 | 0 | 121 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 70 | 0 | 0 | 70 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 192 | |
| 3:45PM | 1 | 161 | 0 | 0 | 162 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 85 | 0 | 0 | 85 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 247 | |
| Hourly Total | 10 | 585 | 0 | 0 | 595 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 324 | 2 | 0 | 326 | 0 | 3 | 0 | 2 | 0 | 5 | 15 | 926 | |
| 4:00PM | 3 | 185 | 0 | 0 | 188 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 91 | 0 | 0 | 91 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 279 | |
| 4:15PM | 2 | 210 | 0 | 0 | 212 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 87 | 0 | 0 | 87 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 300 | |
| 4:30PM | 4 | 222 | 1 | 0 | 227 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 94 | 1 | 0 | 95 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 325 | |
| 4:45PM | 3 | 203 | 2 | 0 | 208 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 95 | 0 | 0 | 95 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 304 | |
| Hourly Total | 12 | 820 | 3 | 0 | 835 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 367 | 1 | 0 | 368 | 0 | 1 | 0 | 4 | 0 | 5 | 4 | 1208 | |
| 5:00PM | 1 | 216 | 0 | 0 | 217 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 89 | 0 | 0 | 92 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 310 | |
| 5:15PM | 4 | 245 | 2 | 0 | 251 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 94 | 0 | 0 | 95 | 0 | 1 | 0 | 1 | 0 | 2 | 1 | 348 | |
| 5:30PM | 0 | 226 | 4 | 0 | 230 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 95 | 1 | 0 | 99 | 0 | 1 | 0 | 1 | 0 | 2 | 1 | 331 | |
| Hourly Total | 5 | 687 | 6 | 0 | 698 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 278 | 1 | 0 | 286 | 0 | 2 | 1 | 2 | 0 | 5 | 2 | 989 | |
| Total | 36 | 2707 | 11 | 0 | 2754 | 0 | 0 | 0 | 0 | 0 | 5 | 7 | 1616 | 9 | 0 | 1632 | 0 | 12 | 1 | 14 | 0 | 27 | 35 | 4413 | |
| % Approach | 1.3% | 98.3% | 0.4% | 0% | - | - | 0% | 0% | 0% | 0% | - | - | 0.4% | 99.0% | 0.6% | 0% | - | - | 44.4% | 3.7% | 51.9% | 0% | - | - | - |
| % Total | 0.8% | 61.3% | 0.2% | 0% | 62.4% | - | 0% | 0% | 0% | 0% | 0% | - | 0.2% | 36.6% | 0.2% | 0% | 37.0% | - | 0.3% | 0% | 0.3% | 0% | 0.6% | - | - |
| Lights | 34 | 2657 | 11 | 0 | 2702 | - | 0 | 0 | 0 | 0 | 0 | - | 7 | 1570 | 7 | 0 | 1584 | - | 10 | 1 | 13 | 0 | 24 | - | 4310 |
| % Lights | 94.4% | 98.2% | 100% | 0% | 98.1% | - | 0% | 0% | 0% | 0% | - | - | 100% | 97.2% | 77.8% | 0% | 97.1% | - | 83.3% | 100% | 92.9% | 0% | 88.9% | - | 97.7% |
| Articulated Trucks | 0 | 3 | 0 | 0 | 3 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 3 | 0 | 0 | 3 | - | 0 | 0 | 0 | 0 | 0 | - | 6 |
| % Articulated Trucks | 0% | 0.1% | 0% | 0% | 0.1% | - | 0% | 0% | 0% | 0% | - | - | 0% | 0.2% | 0% | 0% | 0.2% | - | 0% | 0% | 0% | 0% | 0% | - | 0.1% |
| Buses and Single-Unit Trucks | 2 | 47 | 0 | 0 | 49 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 43 | 2 | 0 | 45 | - | 2 | 0 | 1 | 0 | 3 | - | 97 |
| % Buses and Single-Unit Trucks | 5.6% | 1.7% | 0% | 0% | 1.8% | - | 0% | 0% | 0% | 0% | - | - | 0% | 2.7% | 22.2% | 0% | 2.8% | - | 16.7% | 0% | 7.1% | 0% | 11.1% | - | 2.2% |
| Pedestrians | - | - | - | - | 0 | - | - | - | - | - | 3 | - | - | - | - | - | 0 | - | - | - | - | - | 25 | - | - |
| % Pedestrians | - | - | - | - | - | - | - | - | - | - | 60.0% | - | - | - | - | - | - | - | - | - | - | - | 71.4% | - | - |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | - | 2 | - | - | - | - | - | 0 | - | - | - | - | - | 10 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | - | - | - | - | - | - | 40.0% | - | - | - | - | - | - | - | - | - | - | - | 28.6% | - | - |

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

West 51st Terrace & rear driveway of Element... - TMC

Wed Sep 6, 2023

Full Length (7:30 AM-8:30 AM, 2:45 PM-5:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 1101968, Location: 39.035909, -94.613021



Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

| Leg Direction | Elementary Driveway Rear Southbound | | | | | W 51st St Westbound | | | | | W 51st St Eastbound | | | | | Int |
|---------------------------------------|-------------------------------------|----------|----------|--------------|-----------|---------------------|-----------|----------|--------------|----------|---------------------|----------|----------|--------------|----------|-----------|
| | R | L | U | App | Ped* | R | T | U | App | Ped* | T | L | U | App | Ped* | |
| Time | | | | | | | | | | | | | | | | |
| 2023-09-06 7:30AM | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 4 | 0 | 4 | 0 | 0 | 4 | 0 | 8 |
| 7:45AM | 0 | 1 | 0 | 1 | 0 | 1 | 3 | 0 | 4 | 0 | 3 | 0 | 0 | 3 | 0 | 8 |
| Hourly Total | 0 | 1 | 0 | 1 | 0 | 2 | 6 | 0 | 8 | 0 | 7 | 0 | 0 | 7 | 0 | 16 |
| 8:00AM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| 8:15AM | 1 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 3 | 0 | 2 | 0 | 0 | 2 | 0 | 6 |
| Hourly Total | 1 | 0 | 0 | 1 | 1 | 1 | 3 | 0 | 4 | 0 | 3 | 0 | 0 | 3 | 0 | 8 |
| 2:45PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 3:00PM | 1 | 0 | 0 | 1 | 1 | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 3:15PM | 0 | 0 | 0 | 0 | 3 | 0 | 5 | 0 | 5 | 0 | 3 | 0 | 0 | 3 | 0 | 8 |
| 3:30PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| 3:45PM | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Hourly Total | 1 | 0 | 0 | 1 | 7 | 0 | 11 | 0 | 11 | 0 | 4 | 0 | 0 | 4 | 0 | 16 |
| 4:00PM | 0 | 0 | 0 | 0 | 4 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 4:15PM | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 3 |
| 4:30PM | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 3 | 0 | 0 | 3 | 0 | 7 |
| 4:45PM | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Hourly Total | 0 | 0 | 0 | 0 | 10 | 0 | 12 | 0 | 12 | 0 | 4 | 0 | 0 | 4 | 0 | 16 |
| 5:00PM | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| 5:15PM | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 3 | 0 | 2 | 0 | 0 | 2 | 0 | 5 |
| 5:30PM | 0 | 0 | 0 | 0 | 4 | 0 | 2 | 0 | 2 | 0 | 3 | 0 | 0 | 3 | 0 | 5 |
| Hourly Total | 0 | 0 | 0 | 0 | 8 | 0 | 6 | 0 | 6 | 0 | 6 | 0 | 0 | 6 | 0 | 12 |
| Total | 2 | 1 | 0 | 3 | 26 | 3 | 39 | 0 | 42 | 0 | 24 | 0 | 0 | 24 | 0 | 69 |
| % Approach | 66.7% | 33.3% | 0% | - | - | 7.1% | 92.9% | 0% | - | - | 100% | 0% | 0% | - | - | - |
| % Total | 2.9% | 1.4% | 0% | 4.3% | - | 4.3% | 56.5% | 0% | 60.9% | - | 34.8% | 0% | 0% | 34.8% | - | - |
| Lights | 2 | 0 | 0 | 2 | - | 3 | 35 | 0 | 38 | - | 22 | 0 | 0 | 22 | - | 62 |
| % Lights | 100% | 0% | 0% | 66.7% | - | 100% | 89.7% | 0% | 90.5% | - | 91.7% | 0% | 0% | 91.7% | - | 89.9% |
| Articulated Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 |
| % Articulated Trucks | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% | 0% | 0% | 0% | - | 0% |
| Buses and Single-Unit Trucks | 0 | 1 | 0 | 1 | - | 0 | 4 | 0 | 4 | - | 2 | 0 | 0 | 2 | - | 7 |
| % Buses and Single-Unit Trucks | 0% | 100% | 0% | 33.3% | - | 0% | 10.3% | 0% | 9.5% | - | 8.3% | 0% | 0% | 8.3% | - | 10.1% |
| Pedestrians | - | - | - | - | 22 | - | - | - | - | 0 | - | - | - | - | 0 | - |
| % Pedestrians | - | - | - | - | 84.6% | - | - | - | - | - | - | - | - | - | - | - |
| Bicycles on Crosswalk | - | - | - | - | 4 | - | - | - | - | 0 | - | - | - | - | 0 | - |
| % Bicycles on Crosswalk | - | - | - | - | 15.4% | - | - | - | - | - | - | - | - | - | - | - |

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

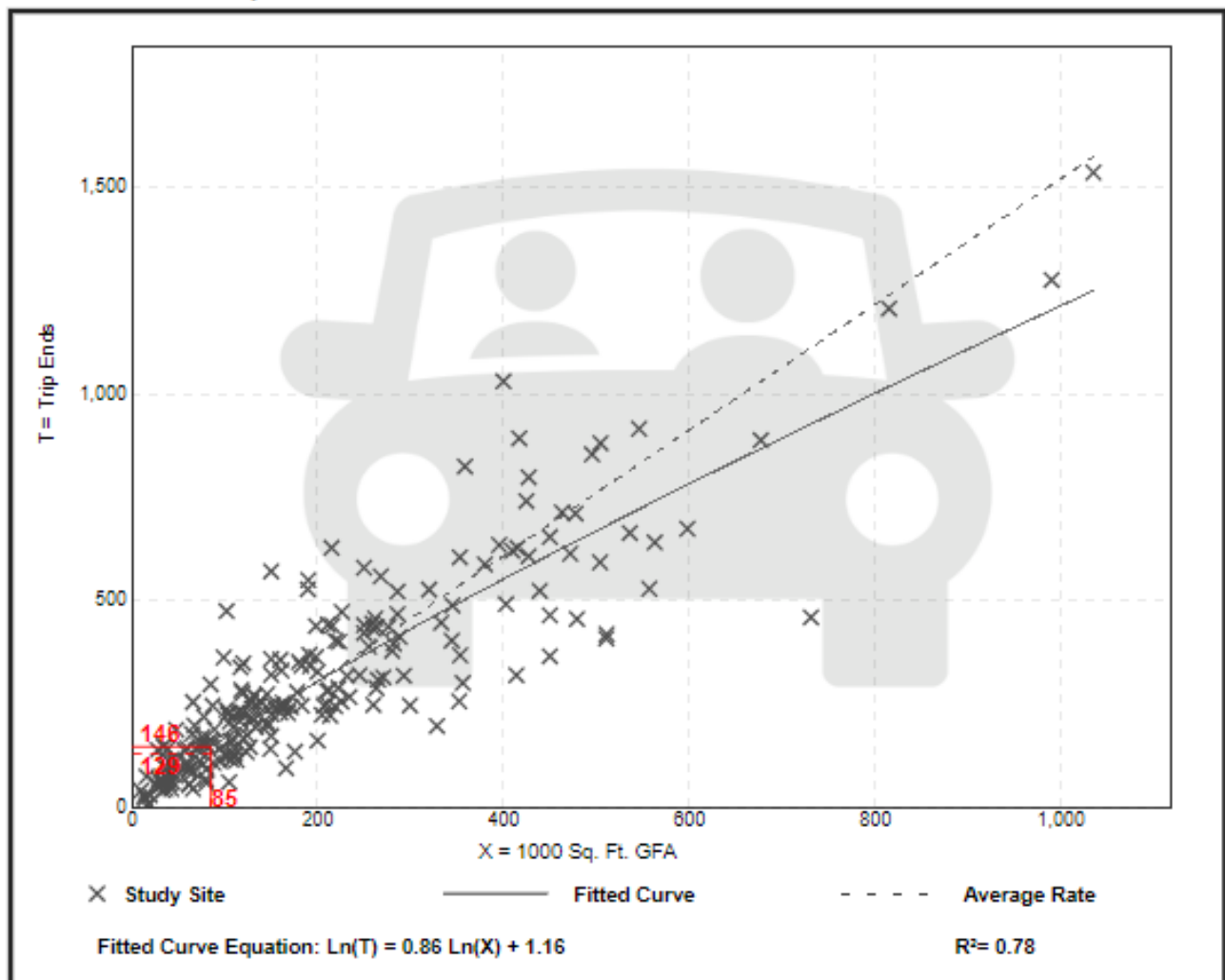
General Office Building (710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 221
 Avg. 1000 Sq. Ft. GFA: 201
 Directional Distribution: 88% entering, 12% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 1.52 | 0.32 - 4.93 | 0.58 |

Data Plot and Equation



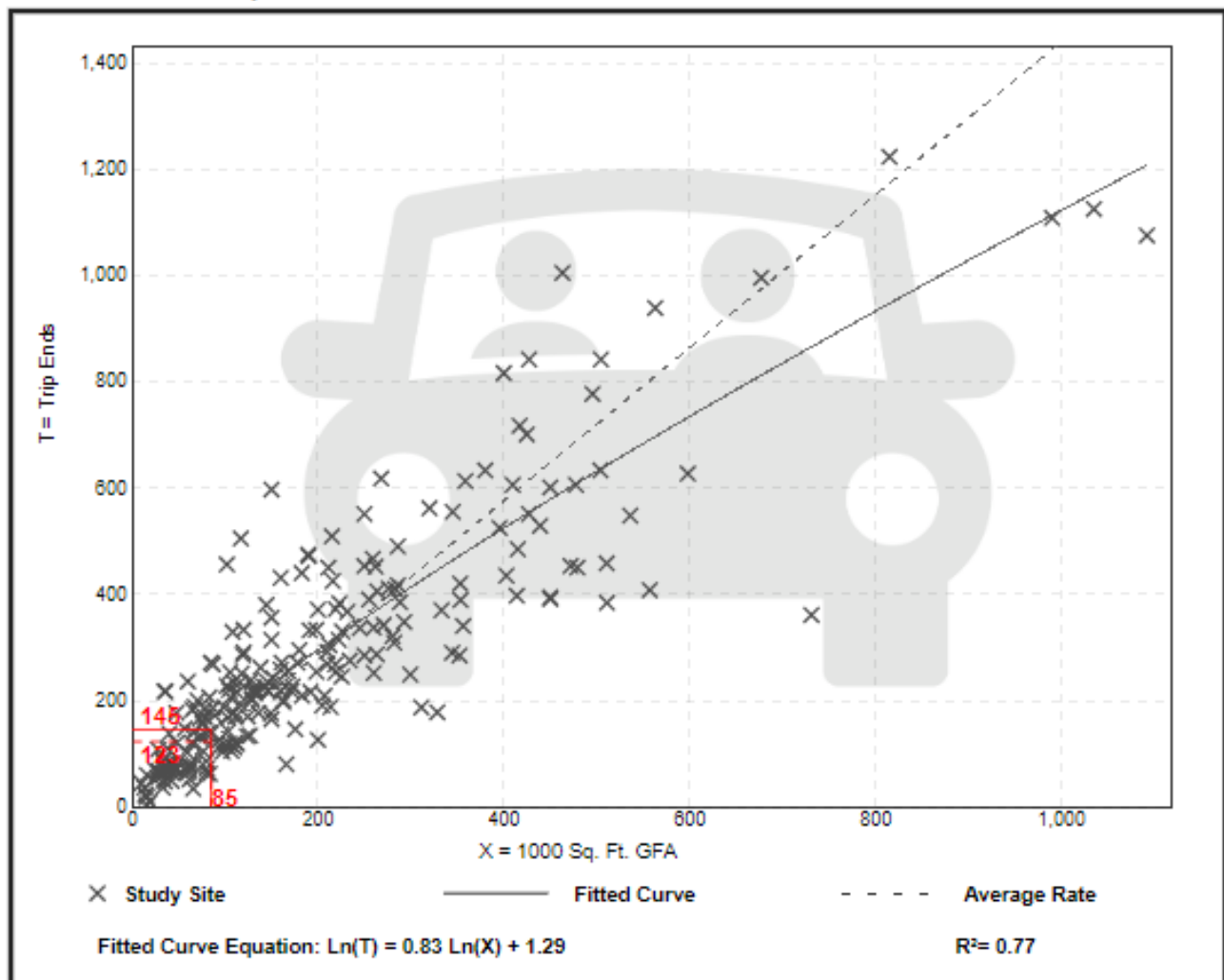
General Office Building (710)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 232
 Avg. 1000 Sq. Ft. GFA: 199
 Directional Distribution: 17% entering, 83% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 1.44 | 0.26 - 6.20 | 0.60 |

Data Plot and Equation



Strip Retail Plaza (<40k)

(822)

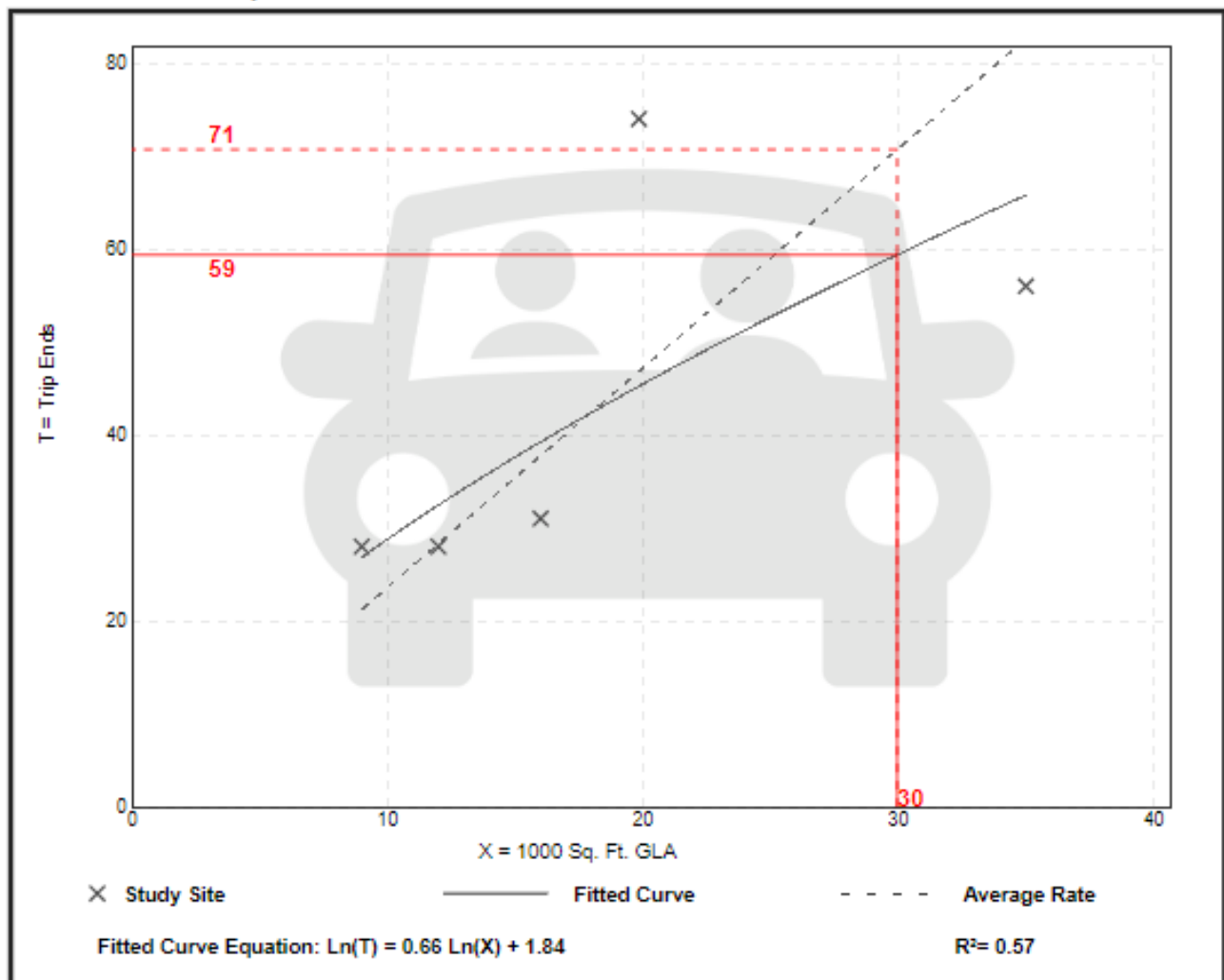
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 5
 Avg. 1000 Sq. Ft. GLA: 18
 Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 2.36 | 1.60 - 3.73 | 0.94 |

Data Plot and Equation

Caution – Small Sample Size



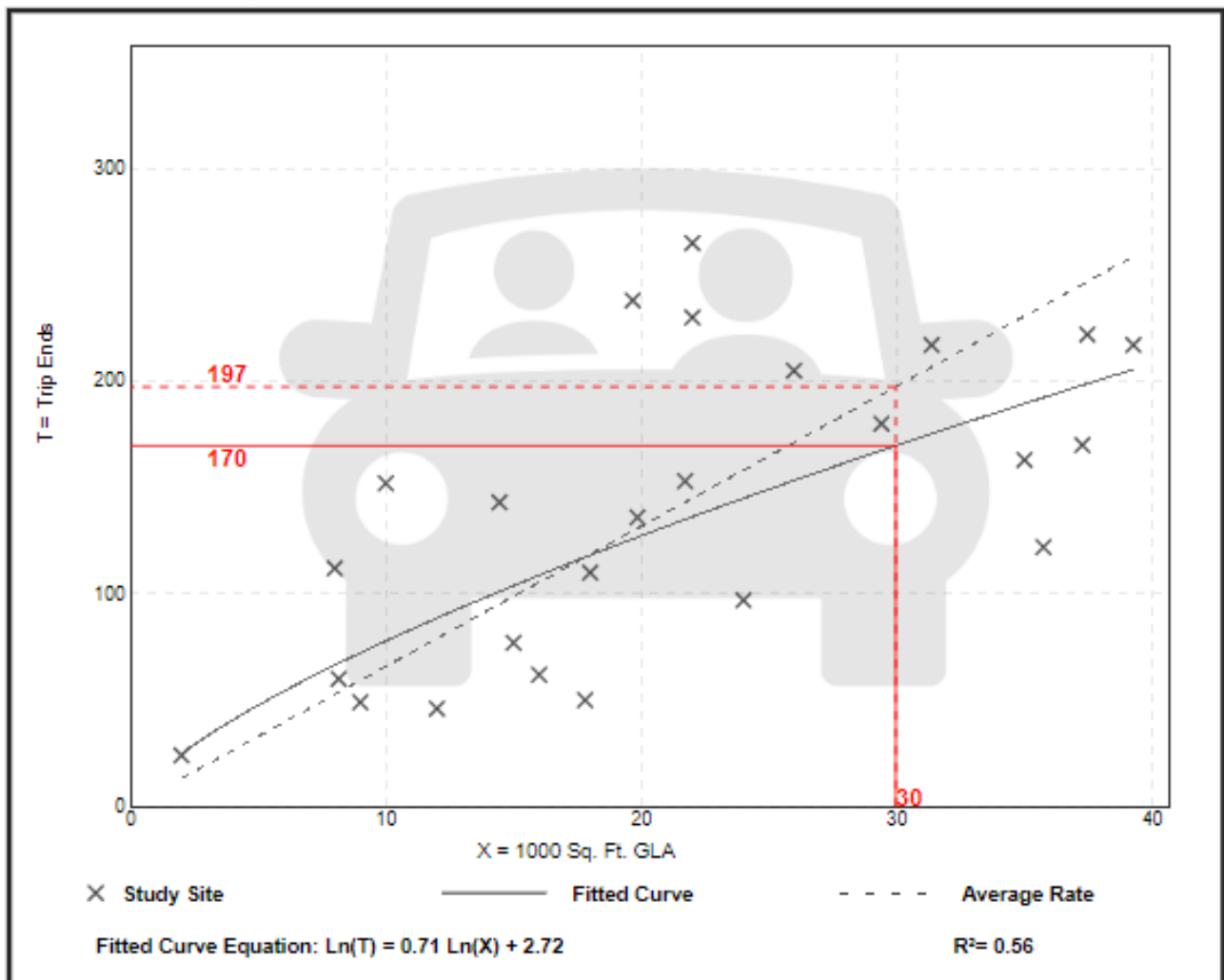
Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 25
 Avg. 1000 Sq. Ft. GLA: 21
 Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 6.59 | 2.81 - 15.20 | 2.94 |

Data Plot and Equation



Intersection

Int Delay, s/veh 1.4

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 5 | 100 | 0 | 0 | 87 | 0 | 1 | 0 | 11 | 8 | 0 | 8 |
| Future Vol, veh/h | 5 | 100 | 0 | 0 | 87 | 0 | 1 | 0 | 11 | 8 | 0 | 8 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 109 | 0 | 0 | 95 | 0 | 1 | 0 | 12 | 9 | 0 | 9 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 95 | 0 | 0 | 109 |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |
| Critical Hdwy | 4.12 | - | - | 4.12 |
| Critical Hdwy Stg 1 | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 1499 | - | - | 1481 |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |
| Platoon blocked, % | - | - | - | - |
| Mov Cap-1 Maneuver | 1499 | - | - | 1481 |
| Mov Cap-2 Maneuver | - | - | - | - |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|----|----|-----|
| HCM Control Delay, s | 0.4 | 0 | 9 | 9.5 |
| HCM LOS | | | A | A |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h) | 922 | 1499 | - | - | 1481 | - | - | 826 |
| HCM Lane V/C Ratio | 0.014 | 0.004 | - | - | - | - | - | 0.021 |
| HCM Control Delay (s) | 9 | 7.4 | 0 | - | 0 | - | - | 9.5 |
| HCM Lane LOS | A | A | A | - | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | 0 | - | - | 0 | - | - | 0.1 |

Intersection

Int Delay, s/veh 1.9

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 12 | 80 | 0 | 0 | 75 | 12 | 9 | 0 | 8 | 2 | 0 | 14 |
| Future Vol, veh/h | 12 | 80 | 0 | 0 | 75 | 12 | 9 | 0 | 8 | 2 | 0 | 14 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 13 | 87 | 0 | 0 | 82 | 13 | 10 | 0 | 9 | 2 | 0 | 15 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 95 | 0 | 0 | 87 |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |
| Critical Hdwy | 4.12 | - | - | 4.12 |
| Critical Hdwy Stg 1 | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 1499 | - | - | 1509 |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |
| Platoon blocked, % | - | - | - | - |
| Mov Cap-1 Maneuver | 1499 | - | - | 1509 |
| Mov Cap-2 Maneuver | - | - | - | - |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|----|----|-----|-----|
| HCM Control Delay, s | 1 | 0 | 9.4 | 8.9 |
| HCM LOS | | | A | A |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h) | 828 | 1499 | - | - | 1509 | - | - | 933 |
| HCM Lane V/C Ratio | 0.022 | 0.009 | - | - | - | - | - | 0.019 |
| HCM Control Delay (s) | 9.4 | 7.4 | 0 | - | 0 | - | - | 8.9 |
| HCM Lane LOS | A | A | A | - | A | - | - | A |
| HCM 95th %tile Q(veh) | 0.1 | 0 | - | - | 0 | - | - | 0.1 |

Intersection

Int Delay, s/veh 1.3

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 6 | 39 | 0 | 0 | 102 | 2 | 5 | 0 | 5 | 2 | 0 | 7 |
| Future Vol, veh/h | 6 | 39 | 0 | 0 | 102 | 2 | 5 | 0 | 5 | 2 | 0 | 7 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 7 | 42 | 0 | 0 | 111 | 2 | 5 | 0 | 5 | 2 | 0 | 8 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 113 | 0 | 0 | 42 |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |
| Critical Hdwy | 4.12 | - | - | 4.12 |
| Critical Hdwy Stg 1 | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 1476 | - | - | 1567 |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |
| Platoon blocked, % | - | - | - | - |
| Mov Cap-1 Maneuver | 1476 | - | - | 1567 |
| Mov Cap-2 Maneuver | - | - | - | - |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|----|----|-----|----|
| HCM Control Delay, s | 1 | 0 | 9.1 | 9 |
| HCM LOS | | | A | A |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h) | 889 | 1476 | - | - | 1567 | - | - | 901 |
| HCM Lane V/C Ratio | 0.012 | 0.004 | - | - | - | - | - | 0.011 |
| HCM Control Delay (s) | 9.1 | 7.5 | 0 | - | 0 | - | - | 9 |
| HCM Lane LOS | A | A | A | - | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | 0 | - | - | 0 | - | - | 0 |

Intersection

Int Delay, s/veh 1.7

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 5 | 106 | 3 | 20 | 87 | 0 | 2 | 0 | 5 | 8 | 0 | 8 |
| Future Vol, veh/h | 5 | 106 | 3 | 20 | 87 | 0 | 2 | 0 | 5 | 8 | 0 | 8 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 115 | 3 | 22 | 95 | 0 | 2 | 0 | 5 | 9 | 0 | 9 |

| Major/Minor | Major1 | Major2 | Minor1 | Minor2 |
|----------------------|--------|--------|--------|--------|
| Conflicting Flow All | 95 | 0 | 0 | 118 |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |
| Critical Hdwy | 4.12 | - | - | 4.12 |
| Critical Hdwy Stg 1 | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 |
| Pot Cap-1 Maneuver | 1499 | - | - | 1470 |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |
| Platoon blocked, % | - | - | - | - |
| Mov Cap-1 Maneuver | 1499 | - | - | 1470 |
| Mov Cap-2 Maneuver | - | - | - | - |
| Stage 1 | - | - | - | - |
| Stage 2 | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|-----|-----|-----|-----|
| HCM Control Delay, s | 0.3 | 1.4 | 9.3 | 9.7 |
| HCM LOS | | | A | A |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h) | 838 | 1499 | - | - | 1470 | - | - | 791 |
| HCM Lane V/C Ratio | 0.009 | 0.004 | - | - | 0.015 | - | - | 0.022 |
| HCM Control Delay (s) | 9.3 | 7.4 | 0 | - | 7.5 | 0 | - | 9.7 |
| HCM Lane LOS | A | A | A | - | A | A | - | A |
| HCM 95th %tile Q(veh) | 0 | 0 | - | - | 0 | - | - | 0.1 |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.4 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 6 | 43 | 2 | 14 | 102 | 2 | 4 | 0 | 26 | 2 | 0 | 7 |
| Future Vol, veh/h | 6 | 43 | 2 | 14 | 102 | 2 | 4 | 0 | 26 | 2 | 0 | 7 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 7 | 47 | 2 | 15 | 111 | 2 | 4 | 0 | 28 | 2 | 0 | 8 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|----------------------|--------|---|---|--------|---|---|--------|-------|-------|--------|-------|-------|
| Conflicting Flow All | 113 | 0 | 0 | 49 | 0 | 0 | 208 | 205 | 48 | 218 | 205 | 112 |
| Stage 1 | - | - | - | - | - | - | 62 | 62 | - | 142 | 142 | - |
| Stage 2 | - | - | - | - | - | - | 146 | 143 | - | 76 | 63 | - |
| Critical Hdwy | 4.12 | - | - | 4.12 | - | - | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.12 | 5.52 | - | 6.12 | 5.52 | - |
| Follow-up Hdwy | 2.218 | - | - | 2.218 | - | - | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver | 1476 | - | - | 1558 | - | - | 749 | 691 | 1021 | 738 | 691 | 941 |
| Stage 1 | - | - | - | - | - | - | 949 | 843 | - | 861 | 779 | - |
| Stage 2 | - | - | - | - | - | - | 857 | 779 | - | 933 | 842 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | 1476 | - | - | 1558 | - | - | 735 | 681 | 1021 | 709 | 681 | 941 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 735 | 681 | - | 709 | 681 | - |
| Stage 1 | - | - | - | - | - | - | 944 | 839 | - | 857 | 771 | - |
| Stage 2 | - | - | - | - | - | - | 842 | 771 | - | 903 | 838 | - |

| Approach | EB | | | WB | | | NB | | | SB | | |
|----------------------|-----|--|--|-----|--|--|-----|--|--|-----|--|--|
| HCM Control Delay, s | 0.9 | | | 0.9 | | | 8.8 | | | 9.2 | | |
| HCM LOS | | | | | | | A | | | A | | |

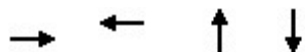
| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|------|-----|-----|-------|
| Capacity (veh/h) | 971 | 1476 | - | - | 1558 | - | - | 877 |
| HCM Lane V/C Ratio | 0.034 | 0.004 | - | - | 0.01 | - | - | 0.011 |
| HCM Control Delay (s) | 8.8 | 7.5 | 0 | - | 7.3 | 0 | - | 9.2 |
| HCM Lane LOS | A | A | A | - | A | A | - | A |
| HCM 95th %tile Q(veh) | 0.1 | 0 | - | - | 0 | - | - | 0 |

4: Rainbow & 50th St
 HCM 6th Signalized Intersection Summary

AM_Existing_SEP.syn
 09/09/2023



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Volume (veh/h) | 41 | 8 | 66 | 4 | 8 | 8 | 45 | 503 | 7 | 5 | 437 | 33 |
| Future Volume (veh/h) | 41 | 8 | 66 | 4 | 8 | 8 | 45 | 503 | 7 | 5 | 437 | 33 |
| 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 | 45 | 9 | 72 | 4 | 9 | 9 | 49 | 547 | 8 | 5 | 475 | 36 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 60 | 12 | 96 | 6 | 14 | 14 | 151 | 1526 | 22 | 62 | 1580 | 119 |
| Arrive On Green | 0.10 | 0.10 | 0.10 | 0.02 | 0.02 | 0.02 | 0.48 | 0.48 | 0.48 | 0.48 | 0.48 | 0.48 |
| Sat Flow, veh/h | 596 | 119 | 954 | 314 | 707 | 707 | 173 | 3155 | 45 | 7 | 3268 | 245 |
| Grp Volume(v), veh/h | 126 | 0 | 0 | 22 | 0 | 0 | 305 | 0 | 299 | 273 | 0 | 243 |
| Grp Sat Flow(s),veh/h/ln | 1669 | 0 | 0 | 1727 | 0 | 0 | 1679 | 0 | 1694 | 1862 | 0 | 1658 |
| Q Serve(g_s), s | 4.6 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 6.9 | 0.0 | 0.0 | 5.5 |
| Cycle Q Clear(g_c), s | 4.6 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 | 6.2 | 0.0 | 6.9 | 5.5 | 0.0 | 5.5 |
| Prop In Lane | 0.36 | | 0.57 | 0.18 | | 0.41 | 0.16 | | 0.03 | 0.02 | | 0.15 |
| Lane Grp Cap(c), veh/h | 169 | 0 | 0 | 35 | 0 | 0 | 880 | 0 | 819 | 960 | 0 | 802 |
| V/C Ratio(X) | 0.75 | 0.00 | 0.00 | 0.63 | 0.00 | 0.00 | 0.35 | 0.00 | 0.37 | 0.28 | 0.00 | 0.30 |
| Avail Cap(c_a), veh/h | 538 | 0 | 0 | 557 | 0 | 0 | 880 | 0 | 819 | 960 | 0 | 802 |
| 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 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 27.1 | 0.0 | 0.0 | 30.2 | 0.0 | 0.0 | 9.9 | 0.0 | 10.0 | 9.7 | 0.0 | 9.7 |
| Incr Delay (d2), s/veh | 6.4 | 0.0 | 0.0 | 16.8 | 0.0 | 0.0 | 1.1 | 0.0 | 1.3 | 0.7 | 0.0 | 1.0 |
| 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 | 2.0 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | 2.4 | 0.0 | 2.4 | 2.0 | 0.0 | 1.9 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 33.5 | 0.0 | 0.0 | 47.0 | 0.0 | 0.0 | 11.0 | 0.0 | 11.3 | 10.4 | 0.0 | 10.7 |
| LnGrp LOS | C | A | A | D | A | A | B | A | B | B | A | B |
| Approach Vol, veh/h | | 126 | | | 22 | | | 604 | | | | 516 |
| Approach Delay, s/veh | | 33.5 | | | 47.0 | | | 11.1 | | | | 10.5 |
| Approach LOS | | C | | | D | | | B | | | | B |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 38.5 | | 14.3 | | 38.5 | | 9.3 | | | | |
| Change Period (Y+Rc), s | | 8.5 | | 8.0 | | 8.5 | | 8.0 | | | | |
| Max Green Setting (Gmax), s | | 30.0 | | 20.0 | | 30.0 | | 20.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 8.9 | | 6.6 | | 7.5 | | 2.8 | | | | |
| Green Ext Time (p_c), s | | 3.7 | | 0.5 | | 3.0 | | 0.0 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 13.7 | | | | | | | | |
| HCM 6th LOS | | | | B | | | | | | | | |



| Lane Group | EBT | WBT | NBT | SBT |
|-----------------------------|------|------|------|------|
| Lane Group Flow (vph) | 126 | 22 | 604 | 516 |
| v/c Ratio | 0.48 | 0.13 | 0.33 | 0.26 |
| Control Delay | 32.8 | 31.8 | 12.4 | 11.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 32.8 | 31.8 | 12.4 | 11.6 |
| Queue Length 50th (ft) | 40 | 7 | 55 | 44 |
| Queue Length 95th (ft) | 103 | 31 | 162 | 133 |
| Internal Link Dist (ft) | 236 | 436 | 184 | 566 |
| Turn Bay Length (ft) | | | | |
| Base Capacity (vph) | 523 | 540 | 1805 | 1969 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.24 | 0.04 | 0.33 | 0.26 |
| Intersection Summary | | | | |

4: Rainbow & 50th St
 HCM 6th Signalized Intersection Summary



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Volume (veh/h) | 24 | 8 | 61 | 12 | 14 | 10 | 42 | 287 | 7 | 15 | 469 | 26 |
| Future Volume (veh/h) | 24 | 8 | 61 | 12 | 14 | 10 | 42 | 287 | 7 | 15 | 469 | 26 |
| 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 | 26 | 9 | 66 | 13 | 15 | 11 | 46 | 312 | 8 | 16 | 510 | 28 |
| 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 | 35 | 12 | 88 | 18 | 21 | 16 | 217 | 1392 | 36 | 79 | 1611 | 87 |
| Arrive On Green | 0.08 | 0.08 | 0.08 | 0.03 | 0.03 | 0.03 | 0.49 | 0.49 | 0.49 | 0.49 | 0.49 | 0.49 |
| Sat Flow, veh/h | 426 | 147 | 1081 | 584 | 674 | 494 | 294 | 2850 | 74 | 36 | 3300 | 178 |
| Grp Volume(v), veh/h | 101 | 0 | 0 | 39 | 0 | 0 | 182 | 0 | 184 | 291 | 0 | 263 |
| Grp Sat Flow(s),veh/h/ln | 1654 | 0 | 0 | 1752 | 0 | 0 | 1529 | 0 | 1689 | 1843 | 0 | 1670 |
| Q Serve(g_s), s | 3.7 | 0.0 | 0.0 | 1.4 | 0.0 | 0.0 | 0.0 | 0.0 | 3.8 | 0.0 | 0.0 | 5.9 |
| Cycle Q Clear(g_c), s | 3.7 | 0.0 | 0.0 | 1.4 | 0.0 | 0.0 | 5.9 | 0.0 | 3.8 | 5.8 | 0.0 | 5.9 |
| Prop In Lane | 0.26 | | 0.65 | 0.33 | | 0.28 | 0.25 | | 0.04 | 0.05 | | 0.11 |
| Lane Grp Cap(c), veh/h | 134 | 0 | 0 | 55 | 0 | 0 | 820 | 0 | 825 | 962 | 0 | 815 |
| V/C Ratio(X) | 0.75 | 0.00 | 0.00 | 0.70 | 0.00 | 0.00 | 0.22 | 0.00 | 0.22 | 0.30 | 0.00 | 0.32 |
| Avail Cap(c_a), veh/h | 539 | 0 | 0 | 570 | 0 | 0 | 820 | 0 | 825 | 962 | 0 | 815 |
| 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(l) | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 27.6 | 0.0 | 0.0 | 29.5 | 0.0 | 0.0 | 8.9 | 0.0 | 9.0 | 9.5 | 0.0 | 9.5 |
| Incr Delay (d2), s/veh | 8.1 | 0.0 | 0.0 | 15.0 | 0.0 | 0.0 | 0.6 | 0.0 | 0.6 | 0.8 | 0.0 | 1.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.7 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 | 1.3 | 0.0 | 1.3 | 2.2 | 0.0 | 2.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 35.8 | 0.0 | 0.0 | 44.4 | 0.0 | 0.0 | 9.5 | 0.0 | 9.6 | 10.3 | 0.0 | 10.6 |
| LnGrp LOS | D | A | A | D | A | A | A | A | A | B | A | B |
| Approach Vol, veh/h | | 101 | | | 39 | | | 366 | | | | 554 |
| Approach Delay, s/veh | | 35.8 | | | 44.4 | | | 9.6 | | | | 10.5 |
| Approach LOS | | D | | | D | | | A | | | | B |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 38.5 | | 13.0 | | 38.5 | | 9.9 | | | | |
| Change Period (Y+Rc), s | | 8.5 | | 8.0 | | 8.5 | | 8.0 | | | | |
| Max Green Setting (Gmax), s | | 30.0 | | 20.0 | | 30.0 | | 20.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 7.9 | | 5.7 | | 7.9 | | 3.4 | | | | |
| Green Ext Time (p_c), s | | 2.1 | | 0.4 | | 3.3 | | 0.1 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 13.8 | | | | | | | | |
| HCM 6th LOS | | | | B | | | | | | | | |

HCM 6th Signalized Intersection Summary

4: Rainbow & 50th St

09/09/2023

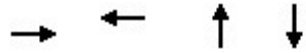


| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Volume (veh/h) | 17 | 12 | 20 | 20 | 39 | 10 | 20 | 366 | 4 | 9 | 870 | 46 |
| Future Volume (veh/h) | 17 | 12 | 20 | 20 | 39 | 10 | 20 | 366 | 4 | 9 | 870 | 46 |
| 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 | 18 | 13 | 22 | 22 | 42 | 11 | 22 | 398 | 4 | 10 | 946 | 50 |
| 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 | 23 | 16 | 28 | 30 | 57 | 15 | 107 | 1624 | 16 | 66 | 1666 | 87 |
| Arrive On Green | 0.04 | 0.04 | 0.04 | 0.06 | 0.06 | 0.06 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| Sat Flow, veh/h | 582 | 420 | 711 | 527 | 1006 | 263 | 82 | 3262 | 32 | 10 | 3346 | 176 |
| Grp Volume(v), veh/h | 53 | 0 | 0 | 75 | 0 | 0 | 215 | 0 | 209 | 531 | 0 | 475 |
| Grp Sat Flow(s),veh/h/ln | 1713 | 0 | 0 | 1797 | 0 | 0 | 1681 | 0 | 1696 | 1861 | 0 | 1670 |
| Q Serve(g_s), s | 1.8 | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 | 4.3 | 0.0 | 0.0 | 12.0 |
| Cycle Q Clear(g_c), s | 1.8 | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 | 3.9 | 0.0 | 4.3 | 12.0 | 0.0 | 12.0 |
| Prop In Lane | 0.34 | | 0.42 | 0.29 | | 0.15 | 0.10 | | 0.02 | 0.02 | | 0.11 |
| Lane Grp Cap(c), veh/h | 67 | 0 | 0 | 101 | 0 | 0 | 903 | 0 | 844 | 988 | 0 | 832 |
| V/C Ratio(X) | 0.79 | 0.00 | 0.00 | 0.74 | 0.00 | 0.00 | 0.24 | 0.00 | 0.25 | 0.54 | 0.00 | 0.57 |
| Avail Cap(c_a), veh/h | 569 | 0 | 0 | 596 | 0 | 0 | 903 | 0 | 844 | 988 | 0 | 832 |
| 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(l) | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 28.7 | 0.0 | 0.0 | 28.0 | 0.0 | 0.0 | 8.6 | 0.0 | 8.7 | 10.6 | 0.0 | 10.6 |
| Incr Delay (d2), s/veh | 18.1 | 0.0 | 0.0 | 10.2 | 0.0 | 0.0 | 0.6 | 0.0 | 0.7 | 2.1 | 0.0 | 2.8 |
| 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 | 1.1 | 0.0 | 0.0 | 1.3 | 0.0 | 0.0 | 1.4 | 0.0 | 1.4 | 4.5 | 0.0 | 4.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 46.8 | 0.0 | 0.0 | 38.2 | 0.0 | 0.0 | 9.2 | 0.0 | 9.4 | 12.7 | 0.0 | 13.5 |
| LnGrp LOS | D | A | A | D | A | A | A | A | A | B | A | B |
| Approach Vol, veh/h | | 53 | | | 75 | | | 424 | | | | 1006 |
| Approach Delay, s/veh | | 46.8 | | | 38.2 | | | 9.3 | | | | 13.1 |
| Approach LOS | | D | | | D | | | A | | | | B |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 38.5 | | 10.4 | | 38.5 | | 11.4 | | | | |
| Change Period (Y+Rc), s | | 8.5 | | 8.0 | | 8.5 | | 8.0 | | | | |
| Max Green Setting (Gmax), s | | 30.0 | | 20.0 | | 30.0 | | 20.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 6.3 | | 3.8 | | 14.0 | | 4.5 | | | | |
| Green Ext Time (p_c), s | | 2.6 | | 0.2 | | 5.8 | | 0.3 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 14.4 | | | | | | | | |
| HCM 6th LOS | | | | B | | | | | | | | |

Queues

4: Rainbow & 50th St

09/10/2023



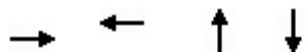
| Lane Group | EBT | WBT | NBT | SBT |
|-------------------------|------|------|------|------|
| Lane Group Flow (vph) | 53 | 75 | 424 | 1006 |
| v/c Ratio | 0.28 | 0.34 | 0.24 | 0.52 |
| Control Delay | 33.2 | 33.5 | 12.4 | 15.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 33.2 | 33.5 | 12.4 | 15.5 |
| Queue Length 50th (ft) | 22 | 30 | 61 | 180 |
| Queue Length 95th (ft) | 55 | 70 | 106 | 284 |
| Internal Link Dist (ft) | 236 | 436 | 184 | 566 |
| Turn Bay Length (ft) | | | | |
| Base Capacity (vph) | 516 | 536 | 1771 | 1925 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.10 | 0.14 | 0.24 | 0.52 |

Intersection Summary

4: Rainbow & 50th St
 HCM 6th Signalized Intersection Summary



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Volume (veh/h) | 41 | 9 | 66 | 10 | 11 | 8 | 46 | 519 | 8 | 5 | 482 | 50 |
| Future Volume (veh/h) | 41 | 9 | 66 | 10 | 11 | 8 | 46 | 519 | 8 | 5 | 482 | 50 |
| 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 | 45 | 10 | 72 | 11 | 12 | 9 | 50 | 564 | 9 | 5 | 524 | 54 |
| 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 | 60 | 13 | 96 | 16 | 18 | 13 | 148 | 1504 | 24 | 61 | 1523 | 155 |
| Arrive On Green | 0.10 | 0.10 | 0.10 | 0.03 | 0.03 | 0.03 | 0.48 | 0.48 | 0.48 | 0.48 | 0.48 | 0.48 |
| Sat Flow, veh/h | 592 | 132 | 947 | 602 | 657 | 493 | 169 | 3137 | 49 | 6 | 3176 | 324 |
| Grp Volume(v), veh/h | 127 | 0 | 0 | 32 | 0 | 0 | 313 | 0 | 310 | 309 | 0 | 274 |
| Grp Sat Flow(s),veh/h/ln | 1670 | 0 | 0 | 1752 | 0 | 0 | 1662 | 0 | 1693 | 1863 | 0 | 1644 |
| Q Serve(g_s), s | 4.6 | 0.0 | 0.0 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 7.3 | 0.0 | 0.0 | 6.5 |
| Cycle Q Clear(g_c), s | 4.6 | 0.0 | 0.0 | 1.1 | 0.0 | 0.0 | 6.5 | 0.0 | 7.3 | 6.5 | 0.0 | 6.5 |
| Prop In Lane | 0.35 | | 0.57 | 0.34 | | 0.28 | 0.16 | | 0.03 | 0.02 | | 0.20 |
| Lane Grp Cap(c), veh/h | 170 | 0 | 0 | 48 | 0 | 0 | 863 | 0 | 812 | 952 | 0 | 788 |
| V/C Ratio(X) | 0.75 | 0.00 | 0.00 | 0.67 | 0.00 | 0.00 | 0.36 | 0.00 | 0.38 | 0.32 | 0.00 | 0.35 |
| Avail Cap(c_a), veh/h | 534 | 0 | 0 | 560 | 0 | 0 | 863 | 0 | 812 | 952 | 0 | 788 |
| 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(l) | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 27.3 | 0.0 | 0.0 | 30.2 | 0.0 | 0.0 | 10.2 | 0.0 | 10.4 | 10.2 | 0.0 | 10.2 |
| Incr Delay (d2), s/veh | 6.4 | 0.0 | 0.0 | 15.0 | 0.0 | 0.0 | 1.2 | 0.0 | 1.4 | 0.9 | 0.0 | 1.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.1 | 0.0 | 0.0 | 0.7 | 0.0 | 0.0 | 2.5 | 0.0 | 2.6 | 2.4 | 0.0 | 2.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 33.7 | 0.0 | 0.0 | 45.2 | 0.0 | 0.0 | 11.4 | 0.0 | 11.7 | 11.1 | 0.0 | 11.4 |
| LnGrp LOS | C | A | A | D | A | A | B | A | B | B | A | B |
| Approach Vol, veh/h | | 127 | | | 32 | | | 623 | | | | 583 |
| Approach Delay, s/veh | | 33.7 | | | 45.2 | | | 11.6 | | | | 11.2 |
| Approach LOS | | C | | | D | | | B | | | | B |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 38.5 | | 14.4 | | 38.5 | | 9.7 | | | | |
| Change Period (Y+Rc), s | | 8.5 | | 8.0 | | 8.5 | | 8.0 | | | | |
| Max Green Setting (Gmax), s | | 30.0 | | 20.0 | | 30.0 | | 20.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 9.3 | | 6.6 | | 8.5 | | 3.1 | | | | |
| Green Ext Time (p_c), s | | 3.8 | | 0.5 | | 3.4 | | 0.1 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 14.3 | | | | | | | | |
| HCM 6th LOS | | | | B | | | | | | | | |



| Lane Group | EBT | WBT | NBT | SBT |
|-----------------------------|------|------|------|------|
| Lane Group Flow (vph) | 127 | 32 | 623 | 583 |
| v/c Ratio | 0.48 | 0.17 | 0.35 | 0.30 |
| Control Delay | 32.9 | 32.0 | 12.8 | 12.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 32.9 | 32.0 | 12.8 | 12.2 |
| Queue Length 50th (ft) | 40 | 10 | 57 | 52 |
| Queue Length 95th (ft) | 105 | 40 | 172 | 154 |
| Internal Link Dist (ft) | 236 | 436 | 184 | 566 |
| Turn Bay Length (ft) | | | | |
| Base Capacity (vph) | 525 | 547 | 1772 | 1948 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.24 | 0.06 | 0.35 | 0.30 |
| Intersection Summary | | | | |

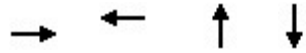
HCM 6th Signalized Intersection Summary
 4: Rainbow & 50th St

PM_Existing+Prop_SEP.syn
 09/12/2023



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Volume (veh/h) | 36 | 16 | 22 | 24 | 41 | 10 | 26 | 445 | 10 | 9 | 902 | 58 |
| Future Volume (veh/h) | 36 | 16 | 22 | 24 | 41 | 10 | 26 | 445 | 10 | 9 | 902 | 58 |
| 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 | 39 | 17 | 24 | 26 | 45 | 11 | 28 | 484 | 11 | 10 | 980 | 63 |
| 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 | 52 | 23 | 32 | 35 | 61 | 15 | 105 | 1539 | 34 | 64 | 1594 | 102 |
| Arrive On Green | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.48 | 0.48 | 0.48 | 0.48 | 0.48 | 0.48 |
| Sat Flow, veh/h | 846 | 369 | 520 | 570 | 987 | 241 | 86 | 3190 | 71 | 10 | 3304 | 211 |
| Grp Volume(v), veh/h | 80 | 0 | 0 | 82 | 0 | 0 | 263 | 0 | 260 | 556 | 0 | 497 |
| Grp Sat Flow(s),veh/h/ln | 1734 | 0 | 0 | 1798 | 0 | 0 | 1658 | 0 | 1689 | 1860 | 0 | 1664 |
| Q Serve(g_s), s | 2.8 | 0.0 | 0.0 | 2.8 | 0.0 | 0.0 | 0.0 | 0.0 | 5.9 | 0.0 | 0.0 | 13.7 |
| Cycle Q Clear(g_c), s | 2.8 | 0.0 | 0.0 | 2.8 | 0.0 | 0.0 | 13.7 | 0.0 | 5.9 | 13.6 | 0.0 | 13.7 |
| Prop In Lane | 0.49 | | 0.30 | 0.32 | | 0.13 | 0.11 | | 0.04 | 0.02 | | 0.13 |
| Lane Grp Cap(c), veh/h | 107 | 0 | 0 | 111 | 0 | 0 | 864 | 0 | 815 | 956 | 0 | 803 |
| V/C Ratio(X) | 0.75 | 0.00 | 0.00 | 0.74 | 0.00 | 0.00 | 0.30 | 0.00 | 0.32 | 0.58 | 0.00 | 0.62 |
| Avail Cap(c_a), veh/h | 558 | 0 | 0 | 578 | 0 | 0 | 864 | 0 | 815 | 956 | 0 | 803 |
| 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(l) | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 28.7 | 0.0 | 0.0 | 28.7 | 0.0 | 0.0 | 9.7 | 0.0 | 9.8 | 11.9 | 0.0 | 11.9 |
| Incr Delay (d2), s/veh | 10.0 | 0.0 | 0.0 | 9.1 | 0.0 | 0.0 | 0.9 | 0.0 | 1.0 | 2.6 | 0.0 | 3.6 |
| 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 | 1.4 | 0.0 | 0.0 | 1.4 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 5.3 | 0.0 | 4.9 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 38.7 | 0.0 | 0.0 | 37.7 | 0.0 | 0.0 | 10.6 | 0.0 | 10.9 | 14.4 | 0.0 | 15.4 |
| LnGrp LOS | D | A | A | D | A | A | B | A | B | B | A | B |
| Approach Vol, veh/h | | 80 | | | 82 | | | 523 | | | | 1053 |
| Approach Delay, s/veh | | 38.7 | | | 37.7 | | | 10.7 | | | | 14.9 |
| Approach LOS | | D | | | D | | | B | | | | B |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 38.5 | | 11.8 | | 38.5 | | 11.9 | | | | |
| Change Period (Y+Rc), s | | 8.5 | | 8.0 | | 8.5 | | 8.0 | | | | |
| Max Green Setting (Gmax), s | | 30.0 | | 20.0 | | 30.0 | | 20.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 15.7 | | 4.8 | | 15.7 | | 4.8 | | | | |
| Green Ext Time (p_c), s | | 2.8 | | 0.3 | | 5.8 | | 0.3 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 15.8 | | | | | | | | |
| HCM 6th LOS | | | | B | | | | | | | | |

Queues
4: Rainbow & 50th St



| Lane Group | EBT | WBT | NBT | SBT |
|-------------------------|------|------|------|------|
| Lane Group Flow (vph) | 80 | 82 | 523 | 1053 |
| v/c Ratio | 0.37 | 0.37 | 0.33 | 0.60 |
| Control Delay | 34.8 | 34.7 | 15.2 | 19.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 34.8 | 34.7 | 15.2 | 19.1 |
| Queue Length 50th (ft) | 33 | 34 | 83 | 201 |
| Queue Length 95th (ft) | 75 | 76 | 142 | #323 |
| Internal Link Dist (ft) | 236 | 436 | 184 | 566 |
| Turn Bay Length (ft) | | | | |
| Base Capacity (vph) | 509 | 526 | 1580 | 1756 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.16 | 0.16 | 0.33 | 0.60 |

Intersection Summary

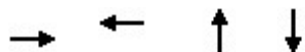
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

4: Rainbow & 50th St
 HCM 6th Signalized Intersection Summary

AM_Future 2043_SEP.syn
 09/12/2023



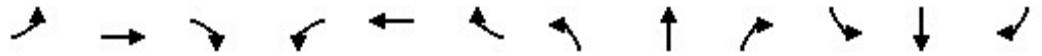
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Volume (veh/h) | 41 | 9 | 66 | 10 | 11 | 8 | 46 | 571 | 8 | 5 | 530 | 50 |
| Future Volume (veh/h) | 41 | 9 | 66 | 10 | 11 | 8 | 46 | 571 | 8 | 5 | 530 | 50 |
| 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 | 45 | 10 | 72 | 11 | 12 | 9 | 50 | 621 | 9 | 5 | 576 | 54 |
| 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 | 60 | 13 | 96 | 16 | 18 | 13 | 137 | 1520 | 22 | 61 | 1538 | 143 |
| Arrive On Green | 0.10 | 0.10 | 0.10 | 0.03 | 0.03 | 0.03 | 0.48 | 0.48 | 0.48 | 0.48 | 0.48 | 0.48 |
| Sat Flow, veh/h | 592 | 132 | 947 | 602 | 657 | 493 | 148 | 3171 | 45 | 6 | 3207 | 298 |
| Grp Volume(v), veh/h | 127 | 0 | 0 | 32 | 0 | 0 | 341 | 0 | 339 | 337 | 0 | 298 |
| Grp Sat Flow(s),veh/h/ln | 1670 | 0 | 0 | 1752 | 0 | 0 | 1670 | 0 | 1694 | 1863 | 0 | 1648 |
| Q Serve(g_s), s | 4.6 | 0.0 | 0.0 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 8.1 | 0.0 | 0.0 | 7.2 |
| Cycle Q Clear(g_c), s | 4.6 | 0.0 | 0.0 | 1.1 | 0.0 | 0.0 | 7.3 | 0.0 | 8.1 | 7.1 | 0.0 | 7.2 |
| Prop In Lane | 0.35 | | 0.57 | 0.34 | | 0.28 | 0.15 | | 0.03 | 0.01 | | 0.18 |
| Lane Grp Cap(c), veh/h | 170 | 0 | 0 | 48 | 0 | 0 | 867 | 0 | 812 | 951 | 0 | 790 |
| V/C Ratio(X) | 0.75 | 0.00 | 0.00 | 0.67 | 0.00 | 0.00 | 0.39 | 0.00 | 0.42 | 0.35 | 0.00 | 0.38 |
| Avail Cap(c_a), veh/h | 534 | 0 | 0 | 560 | 0 | 0 | 867 | 0 | 812 | 951 | 0 | 790 |
| 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(l) | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 27.3 | 0.0 | 0.0 | 30.2 | 0.0 | 0.0 | 10.4 | 0.0 | 10.6 | 10.3 | 0.0 | 10.4 |
| Incr Delay (d2), s/veh | 6.4 | 0.0 | 0.0 | 15.0 | 0.0 | 0.0 | 1.3 | 0.0 | 1.6 | 1.0 | 0.0 | 1.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.1 | 0.0 | 0.0 | 0.7 | 0.0 | 0.0 | 2.8 | 0.0 | 2.9 | 2.7 | 0.0 | 2.5 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 33.7 | 0.0 | 0.0 | 45.2 | 0.0 | 0.0 | 11.7 | 0.0 | 12.2 | 11.4 | 0.0 | 11.7 |
| LnGrp LOS | C | A | A | D | A | A | B | A | B | B | A | B |
| Approach Vol, veh/h | | 127 | | | 32 | | | 680 | | | | 635 |
| Approach Delay, s/veh | | 33.7 | | | 45.2 | | | 11.9 | | | | 11.5 |
| Approach LOS | | C | | | D | | | B | | | | B |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 38.5 | | 14.4 | | 38.5 | | 9.7 | | | | |
| Change Period (Y+Rc), s | | 8.5 | | 8.0 | | 8.5 | | 8.0 | | | | |
| Max Green Setting (Gmax), s | | 30.0 | | 20.0 | | 30.0 | | 20.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 10.1 | | 6.6 | | 9.2 | | 3.1 | | | | |
| Green Ext Time (p_c), s | | 4.2 | | 0.5 | | 3.8 | | 0.1 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 14.4 | | | | | | | | |
| HCM 6th LOS | | | | B | | | | | | | | |



| Lane Group | EBT | WBT | NBT | SBT |
|-----------------------------|------|------|------|------|
| Lane Group Flow (vph) | 127 | 32 | 684 | 648 |
| v/c Ratio | 0.48 | 0.17 | 0.39 | 0.33 |
| Control Delay | 32.9 | 32.0 | 13.2 | 12.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 32.9 | 32.0 | 13.2 | 12.4 |
| Queue Length 50th (ft) | 40 | 10 | 65 | 59 |
| Queue Length 95th (ft) | 105 | 40 | 192 | 174 |
| Internal Link Dist (ft) | 236 | 436 | 184 | 566 |
| Turn Bay Length (ft) | | | | |
| Base Capacity (vph) | 525 | 547 | 1766 | 1950 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.24 | 0.06 | 0.39 | 0.33 |
| Intersection Summary | | | | |

HCM 6th Signalized Intersection Summary
 4: Rainbow & 50th St

PM_Future 2043_SEP.syn
 09/12/2023

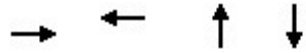


| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Volume (veh/h) | 36 | 16 | 22 | 24 | 41 | 10 | 26 | 490 | 10 | 9 | 992 | 58 |
| Future Volume (veh/h) | 36 | 16 | 22 | 24 | 41 | 10 | 26 | 490 | 10 | 9 | 992 | 58 |
| 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 | 39 | 17 | 24 | 26 | 45 | 11 | 28 | 533 | 11 | 10 | 1078 | 63 |
| 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 | 52 | 23 | 32 | 35 | 61 | 15 | 97 | 1528 | 31 | 63 | 1604 | 93 |
| Arrive On Green | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.48 | 0.48 | 0.48 | 0.48 | 0.48 | 0.48 |
| Sat Flow, veh/h | 846 | 369 | 520 | 570 | 987 | 241 | 69 | 3167 | 65 | 9 | 3326 | 193 |
| Grp Volume(v), veh/h | 80 | 0 | 0 | 82 | 0 | 0 | 286 | 0 | 286 | 607 | 0 | 544 |
| Grp Sat Flow(s),veh/h/ln | 1734 | 0 | 0 | 1798 | 0 | 0 | 1611 | 0 | 1690 | 1860 | 0 | 1667 |
| Q Serve(g_s), s | 2.8 | 0.0 | 0.0 | 2.8 | 0.0 | 0.0 | 0.3 | 0.0 | 6.5 | 0.0 | 0.0 | 15.6 |
| Cycle Q Clear(g_c), s | 2.8 | 0.0 | 0.0 | 2.8 | 0.0 | 0.0 | 15.8 | 0.0 | 6.5 | 15.5 | 0.0 | 15.6 |
| Prop In Lane | 0.49 | | 0.30 | 0.32 | | 0.13 | 0.10 | | 0.04 | 0.02 | | 0.12 |
| Lane Grp Cap(c), veh/h | 107 | 0 | 0 | 111 | 0 | 0 | 841 | 0 | 815 | 956 | 0 | 804 |
| V/C Ratio(X) | 0.75 | 0.00 | 0.00 | 0.74 | 0.00 | 0.00 | 0.34 | 0.00 | 0.35 | 0.63 | 0.00 | 0.68 |
| Avail Cap(c_a), veh/h | 558 | 0 | 0 | 578 | 0 | 0 | 841 | 0 | 815 | 956 | 0 | 804 |
| 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 | 0.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 |
| Uniform Delay (d), s/veh | 28.7 | 0.0 | 0.0 | 28.7 | 0.0 | 0.0 | 9.8 | 0.0 | 10.0 | 12.3 | 0.0 | 12.4 |
| Incr Delay (d2), s/veh | 10.0 | 0.0 | 0.0 | 9.1 | 0.0 | 0.0 | 1.1 | 0.0 | 1.2 | 3.2 | 0.0 | 4.5 |
| 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 | 1.4 | 0.0 | 0.0 | 1.4 | 0.0 | 0.0 | 2.2 | 0.0 | 2.3 | 6.1 | 0.0 | 5.7 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 38.7 | 0.0 | 0.0 | 37.7 | 0.0 | 0.0 | 10.9 | 0.0 | 11.2 | 15.5 | 0.0 | 16.9 |
| LnGrp LOS | D | A | A | D | A | A | B | A | B | B | A | B |
| Approach Vol, veh/h | | 80 | | | 82 | | | 572 | | | | 1151 |
| Approach Delay, s/veh | | 38.7 | | | 37.7 | | | 11.1 | | | | 16.2 |
| Approach LOS | | D | | | D | | | B | | | | B |
| Timer - Assigned Phs | | 2 | | 4 | | 6 | | 8 | | | | |
| Phs Duration (G+Y+Rc), s | | 38.5 | | 11.8 | | 38.5 | | 11.9 | | | | |
| Change Period (Y+Rc), s | | 8.5 | | 8.0 | | 8.5 | | 8.0 | | | | |
| Max Green Setting (Gmax), s | | 30.0 | | 20.0 | | 30.0 | | 20.0 | | | | |
| Max Q Clear Time (g_c+I1), s | | 17.8 | | 4.8 | | 17.6 | | 4.8 | | | | |
| Green Ext Time (p_c), s | | 2.8 | | 0.3 | | 5.9 | | 0.3 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 16.5 | | | | | | | | |
| HCM 6th LOS | | | | B | | | | | | | | |

Queues

4: Rainbow & 50th St

09/10/2023



| Lane Group | EBT | WBT | NBT | SBT |
|-------------------------|------|------|------|------|
| Lane Group Flow (vph) | 80 | 82 | 588 | 1161 |
| v/c Ratio | 0.37 | 0.37 | 0.38 | 0.66 |
| Control Delay | 34.8 | 34.7 | 15.7 | 20.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 34.8 | 34.7 | 15.7 | 20.8 |
| Queue Length 50th (ft) | 33 | 34 | 95 | 232 |
| Queue Length 95th (ft) | 75 | 76 | 163 | #410 |
| Internal Link Dist (ft) | 236 | 436 | 184 | 566 |
| Turn Bay Length (ft) | | | | |
| Base Capacity (vph) | 509 | 526 | 1559 | 1757 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.16 | 0.16 | 0.38 | 0.66 |

Intersection Summary

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

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.4 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 11 | 0 | 12 | 0 | 540 | 12 | 5 | 497 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 11 | 0 | 12 | 0 | 540 | 12 | 5 | 497 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 0 | - | 0 | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 12 | 0 | 13 | 0 | 587 | 13 | 5 | 540 | 0 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|---|--------|------|--------|------|------|--------|---|------|---|---|
| Conflicting Flow All | 844 | - | 270 | 874 | 1144 | 300 | 540 | 0 | 0 | 600 | 0 | 0 |
| Stage 1 | 550 | - | - | 594 | 594 | - | - | - | - | - | - | - |
| Stage 2 | 294 | - | - | 280 | 550 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.54 | - | 6.94 | 7.54 | 6.54 | 6.94 | 4.14 | - | - | 4.14 | - | - |
| Critical Hdwy Stg 1 | 6.54 | - | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.54 | - | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | - | 3.32 | 3.52 | 4.02 | 3.32 | 2.22 | - | - | 2.22 | - | - |
| Pot Cap-1 Maneuver | 256 | 0 | 728 | 244 | 198 | 696 | 1025 | - | - | 973 | - | - |
| Stage 1 | 487 | 0 | - | 458 | 491 | - | - | - | - | - | - | - |
| Stage 2 | 690 | 0 | - | 703 | 514 | - | - | - | - | - | - | - |
| Platoon blocked, % | - | | | | | | | | | | | |
| Mov Cap-1 Maneuver | 250 | - | 728 | 243 | 197 | 696 | 1025 | - | - | 973 | - | - |
| Mov Cap-2 Maneuver | 250 | - | - | 243 | 197 | - | - | - | - | - | - | - |
| Stage 1 | 487 | - | - | 458 | 491 | - | - | - | - | - | - | - |
| Stage 2 | 677 | - | - | 698 | 510 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|----|--|------|--|----|--|-----|--|
| HCM Control Delay, s | 0 | | 15.5 | | 0 | | 0.1 | |
| HCM LOS | A | | C | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | SBL | SBT | SBR |
|-----------------------|------|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1025 | - | - | - | - | 368 | 973 | - | - |
| HCM Lane V/C Ratio | - | - | - | - | - | 0.068 | 0.006 | - | - |
| HCM Control Delay (s) | 0 | - | - | 0 | 0 | 15.5 | 8.7 | 0 | - |
| HCM Lane LOS | A | - | - | A | A | C | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | - | - | 0.2 | 0 | - | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.6 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 21 | 0 | 13 | 0 | 328 | 8 | 4 | 536 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 21 | 0 | 13 | 0 | 328 | 8 | 4 | 536 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 0 | - | 0 | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 23 | 0 | 14 | 0 | 357 | 9 | 4 | 583 | 0 |

| Major/Minor | Minor2 | | Minor1 | | | Major1 | | | Major2 | | | |
|----------------------|--------|---|--------|------|------|--------|------|---|--------|------|---|---|
| Conflicting Flow All | 770 | - | 292 | 662 | 953 | 183 | 583 | 0 | 0 | 366 | 0 | 0 |
| Stage 1 | 591 | - | - | 362 | 362 | - | - | - | - | - | - | - |
| Stage 2 | 179 | - | - | 300 | 591 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.54 | - | 6.94 | 7.54 | 6.54 | 6.94 | 4.14 | - | - | 4.14 | - | - |
| Critical Hdwy Stg 1 | 6.54 | - | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.54 | - | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | - | 3.32 | 3.52 | 4.02 | 3.32 | 2.22 | - | - | 2.22 | - | - |
| Pot Cap-1 Maneuver | 290 | 0 | 704 | 347 | 258 | 828 | 987 | - | - | 1189 | - | - |
| Stage 1 | 460 | 0 | - | 629 | 624 | - | - | - | - | - | - | - |
| Stage 2 | 805 | 0 | - | 684 | 493 | - | - | - | - | - | - | - |
| Platoon blocked, % | - | | | | | | | | | | | |
| Mov Cap-1 Maneuver | 284 | - | 704 | 346 | 257 | 828 | 987 | - | - | 1189 | - | - |
| Mov Cap-2 Maneuver | 284 | - | - | 346 | 257 | - | - | - | - | - | - | - |
| Stage 1 | 460 | - | - | 629 | 624 | - | - | - | - | - | - | - |
| Stage 2 | 791 | - | - | 681 | 491 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | | NB | | | SB | | |
|----------------------|----|--|------|--|--|----|--|--|-----|--|--|
| HCM Control Delay, s | 0 | | 13.8 | | | 0 | | | 0.1 | | |
| HCM LOS | A | | B | | | | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-----|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 987 | - | - | - | - | 445 | 1189 | - | - |
| HCM Lane V/C Ratio | - | - | - | - | - | 0.083 | 0.004 | - | - |
| HCM Control Delay (s) | 0 | - | - | 0 | 0 | 13.8 | 8 | 0 | - |
| HCM Lane LOS | A | - | - | A | A | B | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | - | - | 0.3 | 0 | - | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.7 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 0 | 0 | 0 | 27 | 0 | 27 | 0 | 370 | 8 | 5 | 908 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 27 | 0 | 27 | 0 | 370 | 8 | 5 | 908 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 0 | - | 0 | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 29 | 0 | 29 | 0 | 402 | 9 | 5 | 987 | 0 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|---|--------|------|--------|------|------|--------|---|------|---|---|
| Conflicting Flow All | 1198 | - | 494 | 911 | 1404 | 206 | 987 | 0 | 0 | 411 | 0 | 0 |
| Stage 1 | 997 | - | - | 407 | 407 | - | - | - | - | - | - | - |
| Stage 2 | 201 | - | - | 504 | 997 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.54 | - | 6.94 | 7.54 | 6.54 | 6.94 | 4.14 | - | - | 4.14 | - | - |
| Critical Hdwy Stg 1 | 6.54 | - | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.54 | - | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | - | 3.32 | 3.52 | 4.02 | 3.32 | 2.22 | - | - | 2.22 | - | - |
| Pot Cap-1 Maneuver | 141 | 0 | 521 | 229 | 138 | 800 | 696 | - | - | 1144 | - | - |
| Stage 1 | 262 | 0 | - | 592 | 596 | - | - | - | - | - | - | - |
| Stage 2 | 782 | 0 | - | 518 | 320 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 135 | - | 521 | 227 | 137 | 800 | 696 | - | - | 1144 | - | - |
| Mov Cap-2 Maneuver | 135 | - | - | 227 | 137 | - | - | - | - | - | - | - |
| Stage 1 | 262 | - | - | 592 | 596 | - | - | - | - | - | - | - |
| Stage 2 | 753 | - | - | 513 | 317 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|----|------|----|----|
| HCM Control Delay, s | 0 | 17.2 | 0 | 0 |
| HCM LOS | A | C | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-----|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 696 | - | - | - | - | 354 | 1144 | - | - |
| HCM Lane V/C Ratio | - | - | - | - | - | 0.166 | 0.005 | - | - |
| HCM Control Delay (s) | 0 | - | - | 0 | 0 | 17.2 | 8.2 | 0 | - |
| HCM Lane LOS | A | - | - | A | A | C | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | - | - | 0.6 | 0 | - | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.9 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 10 | 0 | 7 | 11 | 0 | 12 | 25 | 544 | 12 | 5 | 497 | 57 |
| Future Vol, veh/h | 10 | 0 | 7 | 11 | 0 | 12 | 25 | 544 | 12 | 5 | 497 | 57 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 0 | - | 0 | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 11 | 0 | 8 | 12 | 0 | 13 | 27 | 591 | 13 | 5 | 540 | 62 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|---|--------|------|--------|------|------|--------|---|------|---|---|
| Conflicting Flow All | 931 | - | 301 | 932 | 1264 | 302 | 602 | 0 | 0 | 604 | 0 | 0 |
| Stage 1 | 581 | - | - | 652 | 652 | - | - | - | - | - | - | - |
| Stage 2 | 350 | - | - | 280 | 612 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.54 | - | 6.94 | 7.54 | 6.54 | 6.94 | 4.14 | - | - | 4.14 | - | - |
| Critical Hdwy Stg 1 | 6.54 | - | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.54 | - | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | - | 3.32 | 3.52 | 4.02 | 3.32 | 2.22 | - | - | 2.22 | - | - |
| Pot Cap-1 Maneuver | 222 | 0 | 695 | 221 | 168 | 694 | 971 | - | - | 970 | - | - |
| Stage 1 | 467 | 0 | - | 423 | 462 | - | - | - | - | - | - | - |
| Stage 2 | 639 | 0 | - | 703 | 482 | - | - | - | - | - | - | - |
| Platoon blocked, % | - | | | | | | | | | | | |
| Mov Cap-1 Maneuver | 210 | - | 695 | 210 | 160 | 694 | 971 | - | - | 970 | - | - |
| Mov Cap-2 Maneuver | 210 | - | - | 210 | 160 | - | - | - | - | - | - | - |
| Stage 1 | 447 | - | - | 405 | 443 | - | - | - | - | - | - | - |
| Stage 2 | 601 | - | - | 690 | 478 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|------|--|-----|--|-----|--|
| HCM Control Delay, s | 17.8 | | 16.8 | | 0.6 | | 0.1 | |
| HCM LOS | C | | C | | | | | |


| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 971 | - | - | 210 | 695 | 330 | 970 | - | - |
| HCM Lane V/C Ratio | 0.028 | - | - | 0.052 | 0.011 | 0.076 | 0.006 | - | - |
| HCM Control Delay (s) | 8.8 | 0.2 | - | 23.1 | 10.2 | 16.8 | 8.7 | 0 | - |
| HCM Lane LOS | A | A | - | C | B | C | A | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.2 | 0 | 0.2 | 0 | - | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 45 | 0 | 30 | 27 | 0 | 27 | 18 | 389 | 8 | 5 | 908 | 40 |
| Future Vol, veh/h | 45 | 0 | 30 | 27 | 0 | 27 | 18 | 389 | 8 | 5 | 908 | 40 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 0 | - | 0 | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 49 | 0 | 33 | 29 | 0 | 29 | 20 | 423 | 9 | 5 | 987 | 43 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|---|--------|------|--------|------|--------|---|---|------|---|---|
| Conflicting Flow All | 1271 | - | 515 | 972 | 1508 | 216 | 1030 | 0 | 0 | 432 | 0 | 0 |
| Stage 1 | 1019 | - | - | 468 | 468 | - | - | - | - | - | - | - |
| Stage 2 | 252 | - | - | 504 | 1040 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.54 | - | 6.94 | 7.54 | 6.54 | 6.94 | 4.14 | - | - | 4.14 | - | - |
| Critical Hdwy Stg 1 | 6.54 | - | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.54 | - | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | - | 3.32 | 3.52 | 4.02 | 3.32 | 2.22 | - | - | 2.22 | - | - |
| Pot Cap-1 Maneuver | 125 | 0 | 505 | 207 | 120 | 789 | 670 | - | - | 1124 | - | - |
| Stage 1 | 254 | 0 | - | 545 | 560 | - | - | - | - | - | - | - |
| Stage 2 | 730 | 0 | - | 518 | 306 | - | - | - | - | - | - | - |
| Platoon blocked, % | - | | | | | | | | | | | |
| Mov Cap-1 Maneuver | 116 | - | 505 | 186 | 114 | 789 | 670 | - | - | 1124 | - | - |
| Mov Cap-2 Maneuver | 116 | - | - | 186 | 114 | - | - | - | - | - | - | - |
| Stage 1 | 244 | - | - | 524 | 538 | - | - | - | - | - | - | - |
| Stage 2 | 675 | - | - | 479 | 303 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | | | |
|----------------------|------|--|------|--|-----|--|----|--|--|--|
| HCM Control Delay, s | 39.2 | | 19.8 | | 0.6 | | 0 | | | |
| HCM LOS | E | | C | | | | | | | |


| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 670 | - | - | 116 | 505 | 301 | 1124 | - | - |
| HCM Lane V/C Ratio | 0.029 | - | - | 0.422 | 0.065 | 0.195 | 0.005 | - | - |
| HCM Control Delay (s) | 10.5 | 0.2 | - | 57 | 12.6 | 19.8 | 8.2 | 0 | - |
| HCM Lane LOS | B | A | - | F | B | C | A | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 1.8 | 0.2 | 0.7 | 0 | - | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|--|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.9 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  | | | | | | | | | | | |
| Traffic Vol, veh/h | 10 | 0 | 7 | 11 | 0 | 12 | 25 | 599 | 12 | 5 | 547 | 57 |
| Future Vol, veh/h | 10 | 0 | 7 | 11 | 0 | 12 | 25 | 599 | 12 | 5 | 547 | 57 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 0 | - | 0 | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 11 | 0 | 8 | 12 | 0 | 13 | 27 | 651 | 13 | 5 | 595 | 62 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|---|--------|------|--------|------|------|--------|---|------|---|---|
| Conflicting Flow All | 1016 | - | 329 | 1020 | 1379 | 332 | 657 | 0 | 0 | 664 | 0 | 0 |
| Stage 1 | 636 | - | - | 712 | 712 | - | - | - | - | - | - | - |
| Stage 2 | 380 | - | - | 308 | 667 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.54 | - | 6.94 | 7.54 | 6.54 | 6.94 | 4.14 | - | - | 4.14 | - | - |
| Critical Hdwy Stg 1 | 6.54 | - | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.54 | - | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | - | 3.32 | 3.52 | 4.02 | 3.32 | 2.22 | - | - | 2.22 | - | - |
| Pot Cap-1 Maneuver | 192 | 0 | 667 | 191 | 143 | 664 | 926 | - | - | 921 | - | - |
| Stage 1 | 433 | 0 | - | 389 | 434 | - | - | - | - | - | - | - |
| Stage 2 | 614 | 0 | - | 677 | 455 | - | - | - | - | - | - | - |
| Platoon blocked, % | - | | | | | | | | | | | |
| Mov Cap-1 Maneuver | 180 | - | 667 | 181 | 135 | 664 | 926 | - | - | 921 | - | - |
| Mov Cap-2 Maneuver | 180 | - | - | 181 | 135 | - | - | - | - | - | - | - |
| Stage 1 | 413 | - | - | 371 | 414 | - | - | - | - | - | - | - |
| Stage 2 | 574 | - | - | 663 | 451 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|------|--|-----|--|-----|--|
| HCM Control Delay, s | 19.8 | | 18.5 | | 0.5 | | 0.1 | |
| HCM LOS | C | | C | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 926 | - | - | 180 | 667 | 292 | 921 | - | - |
| HCM Lane V/C Ratio | 0.029 | - | - | 0.06 | 0.011 | 0.086 | 0.006 | - | - |
| HCM Control Delay (s) | 9 | 0.2 | - | 26.3 | 10.5 | 18.5 | 8.9 | 0 | - |
| HCM Lane LOS | A | A | - | D | B | C | A | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.2 | 0 | 0.3 | 0 | - | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|--|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.4 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  | | | | | | | | | | | |
| Traffic Vol, veh/h | 45 | 0 | 30 | 27 | 0 | 27 | 18 | 428 | 8 | 5 | 999 | 40 |
| Future Vol, veh/h | 45 | 0 | 30 | 27 | 0 | 27 | 18 | 428 | 8 | 5 | 999 | 40 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 0 | - | 0 | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 49 | 0 | 33 | 29 | 0 | 29 | 20 | 465 | 9 | 5 | 1086 | 43 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|---|--------|------|--------|------|------|--------|---|------|---|---|
| Conflicting Flow All | 1391 | - | 565 | 1063 | 1649 | 237 | 1129 | 0 | 0 | 474 | 0 | 0 |
| Stage 1 | 1118 | - | - | 510 | 510 | - | - | - | - | - | - | - |
| Stage 2 | 273 | - | - | 553 | 1139 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.54 | - | 6.94 | 7.54 | 6.54 | 6.94 | 4.14 | - | - | 4.14 | - | - |
| Critical Hdwy Stg 1 | 6.54 | - | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.54 | - | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | - | 3.32 | 3.52 | 4.02 | 3.32 | 2.22 | - | - | 2.22 | - | - |
| Pot Cap-1 Maneuver | 102 | 0 | 468 | 177 | 98 | 764 | 615 | - | - | 1084 | - | - |
| Stage 1 | 221 | 0 | - | 514 | 536 | - | - | - | - | - | - | - |
| Stage 2 | 710 | 0 | - | 485 | 274 | - | - | - | - | - | - | - |
| Platoon blocked, % | - | | | | | | | | | | | |
| Mov Cap-1 Maneuver | 94 | - | 468 | 158 | 93 | 764 | 615 | - | - | 1084 | - | - |
| Mov Cap-2 Maneuver | 94 | - | - | 158 | 93 | - | - | - | - | - | - | - |
| Stage 1 | 211 | - | - | 491 | 512 | - | - | - | - | - | - | - |
| Stage 2 | 653 | - | - | 445 | 270 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|------|--|-----|--|-----|--|
| HCM Control Delay, s | 52.7 | | 22.7 | | 0.6 | | 0.1 | |
| HCM LOS | F | | C | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | EBLn2 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 615 | - | - | 94 | 468 | 262 | 1084 | - | - |
| HCM Lane V/C Ratio | 0.032 | - | - | 0.52 | 0.07 | 0.224 | 0.005 | - | - |
| HCM Control Delay (s) | 11 | 0.2 | - | 79 | 13.3 | 22.7 | 8.3 | 0.1 | - |
| HCM Lane LOS | B | A | - | F | B | C | A | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 2.3 | 0.2 | 0.8 | 0 | - | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 6 | 0 | 6 | 0 | 0 | 0 | 5 | 555 | 0 | 2 | 501 | 7 |
| Future Vol, veh/h | 6 | 0 | 6 | 0 | 0 | 0 | 5 | 555 | 0 | 2 | 501 | 7 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 7 | 0 | 7 | 0 | 0 | 0 | 5 | 603 | 0 | 2 | 545 | 8 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|------|--------|------|--------|------|--------|---|---|------|---|---|
| Conflicting Flow All | 865 | 1166 | 277 | 890 | 1170 | 302 | 553 | 0 | 0 | 603 | 0 | 0 |
| Stage 1 | 553 | 553 | - | 613 | 613 | - | - | - | - | - | - | - |
| Stage 2 | 312 | 613 | - | 277 | 557 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 | 4.14 | - | - | 4.14 | - | - |
| Critical Hdwy Stg 1 | 6.54 | 5.54 | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.54 | 5.54 | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 | 2.22 | - | - | 2.22 | - | - |
| Pot Cap-1 Maneuver | 248 | 193 | 720 | 237 | 192 | 694 | 1013 | - | - | 971 | - | - |
| Stage 1 | 485 | 513 | - | 446 | 481 | - | - | - | - | - | - | - |
| Stage 2 | 673 | 481 | - | 706 | 510 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 246 | 191 | 720 | 233 | 190 | 694 | 1013 | - | - | 971 | - | - |
| Mov Cap-2 Maneuver | 246 | 191 | - | 233 | 190 | - | - | - | - | - | - | - |
| Stage 1 | 482 | 511 | - | 443 | 478 | - | - | - | - | - | - | - |
| Stage 2 | 668 | 478 | - | 698 | 508 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|----|--|-----|--|----|--|
| HCM Control Delay, s | 15.2 | | 0 | | 0.1 | | 0 | |
| HCM LOS | C | | A | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-----|-------|-----|
| Capacity (veh/h) | 1013 | - | - | 367 | - | 971 | - |
| HCM Lane V/C Ratio | 0.005 | - | - | 0.036 | - | 0.002 | - |
| HCM Control Delay (s) | 8.6 | 0 | - | 15.2 | 0 | 8.7 | 0 |
| HCM Lane LOS | A | A | - | C | A | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.1 | - | 0 | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 2 | 0 | 3 | 0 | 0 | 0 | 2 | 331 | 0 | 0 | 538 | 11 |
| Future Vol, veh/h | 2 | 0 | 3 | 0 | 0 | 0 | 2 | 331 | 0 | 0 | 538 | 11 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 2 | 0 | 3 | 0 | 0 | 0 | 2 | 360 | 0 | 0 | 585 | 12 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|------|--------|------|--------|------|--------|---|---|------|---|---|
| Conflicting Flow All | 775 | 955 | 299 | 657 | 961 | 180 | 597 | 0 | 0 | 360 | 0 | 0 |
| Stage 1 | 591 | 591 | - | 364 | 364 | - | - | - | - | - | - | - |
| Stage 2 | 184 | 364 | - | 293 | 597 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 | 4.14 | - | - | 4.14 | - | - |
| Critical Hdwy Stg 1 | 6.54 | 5.54 | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.54 | 5.54 | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 | 2.22 | - | - | 2.22 | - | - |
| Pot Cap-1 Maneuver | 288 | 257 | 697 | 350 | 255 | 832 | 976 | - | - | 1195 | - | - |
| Stage 1 | 460 | 493 | - | 627 | 622 | - | - | - | - | - | - | - |
| Stage 2 | 800 | 622 | - | 691 | 490 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 287 | 256 | 697 | 348 | 254 | 832 | 976 | - | - | 1195 | - | - |
| Mov Cap-2 Maneuver | 287 | 256 | - | 348 | 254 | - | - | - | - | - | - | - |
| Stage 1 | 459 | 493 | - | 625 | 620 | - | - | - | - | - | - | - |
| Stage 2 | 798 | 620 | - | 688 | 490 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|----|--|-----|--|----|--|
| HCM Control Delay, s | 13.2 | | 0 | | 0.1 | | 0 | |
| HCM LOS | B | | A | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|------|-----|-----|
| Capacity (veh/h) | 976 | - | - | 444 | - | 1195 | - | - |
| HCM Lane V/C Ratio | 0.002 | - | - | 0.012 | - | - | - | - |
| HCM Control Delay (s) | 8.7 | 0 | - | 13.2 | 0 | 0 | - | - |
| HCM Lane LOS | A | A | - | B | A | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - | 0 | - | - |

HCM 6th TWSC
7: Rainbow & 51st

09/09/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 3 | 0 | 2 | 0 | 0 | 0 | 1 | 373 | 0 | 8 | 890 | 8 |
| Future Vol, veh/h | 3 | 0 | 2 | 0 | 0 | 0 | 1 | 373 | 0 | 8 | 890 | 8 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 3 | 0 | 2 | 0 | 0 | 0 | 1 | 405 | 0 | 9 | 967 | 9 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|------|--------|------|--------|------|--------|---|---|------|---|---|
| Conflicting Flow All | 1195 | 1397 | 488 | 909 | 1401 | 203 | 976 | 0 | 0 | 405 | 0 | 0 |
| Stage 1 | 990 | 990 | - | 407 | 407 | - | - | - | - | - | - | - |
| Stage 2 | 205 | 407 | - | 502 | 994 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 | 4.14 | - | - | 4.14 | - | - |
| Critical Hdwy Stg 1 | 6.54 | 5.54 | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.54 | 5.54 | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 | 2.22 | - | - | 2.22 | - | - |
| Pot Cap-1 Maneuver | 142 | 140 | 526 | 230 | 139 | 804 | 703 | - | - | 1150 | - | - |
| Stage 1 | 264 | 323 | - | 592 | 596 | - | - | - | - | - | - | - |
| Stage 2 | 778 | 596 | - | 520 | 321 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 140 | 137 | 526 | 226 | 136 | 804 | 703 | - | - | 1150 | - | - |
| Mov Cap-2 Maneuver | 140 | 137 | - | 226 | 136 | - | - | - | - | - | - | - |
| Stage 1 | 263 | 318 | - | 591 | 595 | - | - | - | - | - | - | - |
| Stage 2 | 776 | 595 | - | 509 | 316 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|------|----|----|-----|
| HCM Control Delay, s | 23.7 | 0 | 0 | 0.2 |
| HCM LOS | C | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 703 | - | - | 198 | - | 1150 | - | - |
| HCM Lane V/C Ratio | 0.002 | - | - | 0.027 | - | 0.008 | - | - |
| HCM Control Delay (s) | 10.1 | 0 | - | 23.7 | 0 | 8.2 | 0.1 | - |
| HCM Lane LOS | B | A | - | C | A | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.1 | - | 0 | - | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.7 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 10 | 0 | 15 | 0 | 0 | 0 | 39 | 580 | 0 | 2 | 508 | 7 |
| Future Vol, veh/h | 10 | 0 | 15 | 0 | 0 | 0 | 39 | 580 | 0 | 2 | 508 | 7 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 11 | 0 | 16 | 0 | 0 | 0 | 42 | 630 | 0 | 2 | 552 | 8 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|------|--------|------|--------|------|--------|---|---|------|---|---|
| Conflicting Flow All | 959 | 1274 | 280 | 994 | 1278 | 315 | 560 | 0 | 0 | 630 | 0 | 0 |
| Stage 1 | 560 | 560 | - | 714 | 714 | - | - | - | - | - | - | - |
| Stage 2 | 399 | 714 | - | 280 | 564 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 | 4.14 | - | - | 4.14 | - | - |
| Critical Hdwy Stg 1 | 6.54 | 5.54 | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.54 | 5.54 | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 | 2.22 | - | - | 2.22 | - | - |
| Pot Cap-1 Maneuver | 211 | 166 | 717 | 199 | 165 | 681 | 1007 | - | - | 948 | - | - |
| Stage 1 | 480 | 509 | - | 388 | 433 | - | - | - | - | - | - | - |
| Stage 2 | 598 | 433 | - | 703 | 507 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 200 | 155 | 717 | 184 | 154 | 681 | 1007 | - | - | 948 | - | - |
| Mov Cap-2 Maneuver | 200 | 155 | - | 184 | 154 | - | - | - | - | - | - | - |
| Stage 1 | 449 | 507 | - | 363 | 405 | - | - | - | - | - | - | - |
| Stage 2 | 560 | 405 | - | 685 | 505 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|----|--|----|--|-----|--|----|--|
| HCM Control Delay, s | 16 | | 0 | | 0.7 | | 0 | |
| HCM LOS | C | | A | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1007 | - | - | 353 | - | 948 | - | - |
| HCM Lane V/C Ratio | 0.042 | - | - | 0.077 | - | 0.002 | - | - |
| HCM Control Delay (s) | 8.7 | 0.2 | - | 16 | 0 | 8.8 | 0 | - |
| HCM Lane LOS | A | A | - | C | A | A | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.2 | - | 0 | - | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 27 | 0 | 49 | 0 | 0 | 0 | 27 | 391 | 0 | 8 | 920 | 8 |
| Future Vol, veh/h | 27 | 0 | 49 | 0 | 0 | 0 | 27 | 391 | 0 | 8 | 920 | 8 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 29 | 0 | 53 | 0 | 0 | 0 | 29 | 425 | 0 | 9 | 1000 | 9 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|------|--------|------|--------|------|------|--------|---|------|---|---|
| Conflicting Flow All | 1294 | 1506 | 505 | 1001 | 1510 | 213 | 1009 | 0 | 0 | 425 | 0 | 0 |
| Stage 1 | 1023 | 1023 | - | 483 | 483 | - | - | - | - | - | - | - |
| Stage 2 | 271 | 483 | - | 518 | 1027 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 | 4.14 | - | - | 4.14 | - | - |
| Critical Hdwy Stg 1 | 6.54 | 5.54 | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.54 | 5.54 | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 | 2.22 | - | - | 2.22 | - | - |
| Pot Cap-1 Maneuver | 120 | 120 | 512 | 197 | 119 | 792 | 683 | - | - | 1131 | - | - |
| Stage 1 | 252 | 311 | - | 534 | 551 | - | - | - | - | - | - | - |
| Stage 2 | 712 | 551 | - | 509 | 310 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 113 | 111 | 512 | 167 | 110 | 792 | 683 | - | - | 1131 | - | - |
| Mov Cap-2 Maneuver | 113 | 111 | - | 167 | 110 | - | - | - | - | - | - | - |
| Stage 1 | 238 | 305 | - | 504 | 520 | - | - | - | - | - | - | - |
| Stage 2 | 672 | 520 | - | 448 | 304 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|------|----|----|-----|
| HCM Control Delay, s | 29.7 | 0 | 1 | 0.2 |
| HCM LOS | D | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-----|-------|-----|
| Capacity (veh/h) | 683 | - | - | 227 | - | 1131 | - |
| HCM Lane V/C Ratio | 0.043 | - | - | 0.364 | - | 0.008 | - |
| HCM Control Delay (s) | 10.5 | 0.3 | - | 29.7 | 0 | 8.2 | 0.1 |
| HCM Lane LOS | B | A | - | D | A | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 1.6 | - | 0 | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 10 | 0 | 15 | 0 | 0 | 0 | 39 | 638 | 0 | 2 | 559 | 7 |
| Future Vol, veh/h | 10 | 0 | 15 | 0 | 0 | 0 | 39 | 638 | 0 | 2 | 559 | 7 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 11 | 0 | 16 | 0 | 0 | 0 | 42 | 693 | 0 | 2 | 608 | 8 |

| Major/Minor | Minor2 | | Minor1 | | | Major1 | | | Major2 | | | |
|----------------------|--------|------|--------|------|------|--------|------|---|--------|------|---|---|
| Conflicting Flow All | 1047 | 1393 | 308 | 1085 | 1397 | 347 | 616 | 0 | 0 | 693 | 0 | 0 |
| Stage 1 | 616 | 616 | - | 777 | 777 | - | - | - | - | - | - | - |
| Stage 2 | 431 | 777 | - | 308 | 620 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 | 4.14 | - | - | 4.14 | - | - |
| Critical Hdwy Stg 1 | 6.54 | 5.54 | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.54 | 5.54 | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 | 2.22 | - | - | 2.22 | - | - |
| Pot Cap-1 Maneuver | 182 | 141 | 688 | 171 | 140 | 649 | 960 | - | - | 898 | - | - |
| Stage 1 | 445 | 480 | - | 356 | 405 | - | - | - | - | - | - | - |
| Stage 2 | 573 | 405 | - | 677 | 478 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 172 | 131 | 688 | 157 | 130 | 649 | 960 | - | - | 898 | - | - |
| Mov Cap-2 Maneuver | 172 | 131 | - | 157 | 130 | - | - | - | - | - | - | - |
| Stage 1 | 413 | 479 | - | 331 | 376 | - | - | - | - | - | - | - |
| Stage 2 | 532 | 376 | - | 659 | 477 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | | NB | | | SB | | |
|----------------------|------|--|----|--|--|-----|--|--|----|--|--|
| HCM Control Delay, s | 17.6 | | 0 | | | 0.8 | | | 0 | | |
| HCM LOS | C | | A | | | | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 960 | - | - | 313 | - | 898 | - | - |
| HCM Lane V/C Ratio | 0.044 | - | - | 0.087 | - | 0.002 | - | - |
| HCM Control Delay (s) | 8.9 | 0.3 | - | 17.6 | 0 | 9 | 0 | - |
| HCM Lane LOS | A | A | - | C | A | A | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.3 | - | 0 | - | - |

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 2.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 27 | 0 | 49 | 0 | 0 | 0 | 27 | 430 | 0 | 8 | 1012 | 8 |
| Future Vol, veh/h | 27 | 0 | 49 | 0 | 0 | 0 | 27 | 430 | 0 | 8 | 1012 | 8 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 29 | 0 | 53 | 0 | 0 | 0 | 29 | 467 | 0 | 9 | 1100 | 9 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|------|--------|------|--------|------|------|--------|---|------|---|---|
| Conflicting Flow All | 1415 | 1648 | 555 | 1093 | 1652 | 234 | 1109 | 0 | 0 | 467 | 0 | 0 |
| Stage 1 | 1123 | 1123 | - | 525 | 525 | - | - | - | - | - | - | - |
| Stage 2 | 292 | 525 | - | 568 | 1127 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.54 | 6.54 | 6.94 | 7.54 | 6.54 | 6.94 | 4.14 | - | - | 4.14 | - | - |
| Critical Hdwy Stg 1 | 6.54 | 5.54 | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.54 | 5.54 | - | 6.54 | 5.54 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.52 | 4.02 | 3.32 | 3.52 | 4.02 | 3.32 | 2.22 | - | - | 2.22 | - | - |
| Pot Cap-1 Maneuver | 97 | 98 | 475 | 169 | 98 | 768 | 625 | - | - | 1091 | - | - |
| Stage 1 | 219 | 279 | - | 504 | 528 | - | - | - | - | - | - | - |
| Stage 2 | 692 | 528 | - | 475 | 278 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 91 | 90 | 475 | 140 | 90 | 768 | 625 | - | - | 1091 | - | - |
| Mov Cap-2 Maneuver | 91 | 90 | - | 140 | 90 | - | - | - | - | - | - | - |
| Stage 1 | 205 | 273 | - | 472 | 495 | - | - | - | - | - | - | - |
| Stage 2 | 648 | 495 | - | 412 | 272 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|----|--|-----|--|-----|--|
| HCM Control Delay, s | 37.8 | | 0 | | 0.9 | | 0.2 | |
| HCM LOS | E | | A | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 625 | - | - | 190 | - | 1091 | - | - |
| HCM Lane V/C Ratio | 0.047 | - | - | 0.435 | - | 0.008 | - | - |
| HCM Control Delay (s) | 11 | 0.3 | - | 37.8 | 0 | 8.3 | 0.1 | - |
| HCM Lane LOS | B | A | - | E | A | A | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 2 | - | 0 | - | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.5 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↶ | ↷ | | ↶ | ↷ |
| Traffic Vol, veh/h | 5 | 17 | 26 | 20 | 8 | 1 |
| Future Vol, veh/h | 5 | 17 | 26 | 20 | 8 | 1 |
| 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 | 5 | 18 | 28 | 22 | 9 | 1 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 50 | 0 | - | 0 | 67 39 |
| Stage 1 | - | - | - | - | 39 - |
| Stage 2 | - | - | - | - | 28 - |
| 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 | 1557 | - | - | - | 938 1033 |
| Stage 1 | - | - | - | - | 983 - |
| Stage 2 | - | - | - | - | 995 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1557 | - | - | - | 935 1033 |
| Mov Cap-2 Maneuver | - | - | - | - | 935 - |
| Stage 1 | - | - | - | - | 980 - |
| Stage 2 | - | - | - | - | 995 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 1.7 | 0 | 8.8 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1557 | - | - | - | 945 |
| HCM Lane V/C Ratio | 0.003 | - | - | - | 0.01 |
| HCM Control Delay (s) | 7.3 | 0 | - | - | 8.8 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 4.8 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↶ | ↷ | | ↶ | ↷ |
| Traffic Vol, veh/h | 4 | 27 | 9 | 14 | 49 | 7 |
| Future Vol, veh/h | 4 | 27 | 9 | 14 | 49 | 7 |
| 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 | 4 | 29 | 10 | 15 | 53 | 8 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 25 | 0 | - | 0 | 55 18 |
| Stage 1 | - | - | - | - | 18 - |
| Stage 2 | - | - | - | - | 37 - |
| 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 | 1589 | - | - | - | 953 1061 |
| Stage 1 | - | - | - | - | 1005 - |
| Stage 2 | - | - | - | - | 985 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1589 | - | - | - | 950 1061 |
| Mov Cap-2 Maneuver | - | - | - | - | 950 - |
| Stage 1 | - | - | - | - | 1002 - |
| Stage 2 | - | - | - | - | 985 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 0.9 | 0 | 9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1589 | - | - | - | 963 |
| HCM Lane V/C Ratio | 0.003 | - | - | - | 0.063 |
| HCM Control Delay (s) | 7.3 | 0 | - | - | 9 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.2 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↶ | ↷ | | ↶ | |
| Traffic Vol, veh/h | 0 | 10 | 9 | 3 | 1 | 1 |
| Future Vol, veh/h | 0 | 10 | 9 | 3 | 1 | 1 |
| 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 | 0 | 11 | 10 | 3 | 1 | 1 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 13 | 0 | - | 0 | 23 |
| Stage 1 | - | - | - | - | 12 |
| Stage 2 | - | - | - | - | 11 |
| Critical Hdwy | 4.12 | - | - | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 |
| Pot Cap-1 Maneuver | 1606 | - | - | - | 993 |
| Stage 1 | - | - | - | - | 1011 |
| Stage 2 | - | - | - | - | 1012 |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1606 | - | - | - | 993 |
| Mov Cap-2 Maneuver | - | - | - | - | 993 |
| Stage 1 | - | - | - | - | 1011 |
| Stage 2 | - | - | - | - | 1012 |

| Approach | EB | WB | SB |
|----------------------|----|----|-----|
| HCM Control Delay, s | 0 | 0 | 8.5 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h) | 1606 | - | - | - | 1030 |
| HCM Lane V/C Ratio | - | - | - | - | 0.002 |
| HCM Control Delay (s) | 0 | - | - | - | 8.5 |
| HCM Lane LOS | A | - | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 0 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↶ | ↷ | | ↶ | |
| Traffic Vol, veh/h | 0 | 6 | 9 | 0 | 0 | 0 |
| Future Vol, veh/h | 0 | 6 | 9 | 0 | 0 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 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 | 7 | 10 | 0 | 0 | 0 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 10 | 0 | - | 0 | 17 |
| Stage 1 | - | - | - | - | 10 |
| Stage 2 | - | - | - | - | 7 |
| Critical Hdwy | 4.12 | - | - | - | 6.42 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 |
| Pot Cap-1 Maneuver | 1610 | - | - | - | 1001 |
| Stage 1 | - | - | - | - | 1013 |
| Stage 2 | - | - | - | - | 1016 |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1610 | - | - | - | 1001 |
| Mov Cap-2 Maneuver | - | - | - | - | 1001 |
| Stage 1 | - | - | - | - | 1013 |
| Stage 2 | - | - | - | - | 1016 |

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

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|------|-----|-----|-----|-------|
| Capacity (veh/h) | 1610 | - | - | - | - |
| HCM Lane V/C Ratio | - | - | - | - | - |
| HCM Control Delay (s) | 0 | - | - | - | 0 |
| HCM Lane LOS | A | - | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 1.4 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↶ | ↷ | | ↶ | |
| Traffic Vol, veh/h | 3 | 17 | 10 | 17 | 5 | 1 |
| Future Vol, veh/h | 3 | 17 | 10 | 17 | 5 | 1 |
| 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 | 3 | 18 | 11 | 18 | 5 | 1 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 29 | 0 | - | 0 | 44 20 |
| Stage 1 | - | - | - | - | 20 - |
| Stage 2 | - | - | - | - | 24 - |
| 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 | 1584 | - | - | - | 967 1058 |
| Stage 1 | - | - | - | - | 1003 - |
| Stage 2 | - | - | - | - | 999 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1584 | - | - | - | 965 1058 |
| Mov Cap-2 Maneuver | - | - | - | - | 965 - |
| Stage 1 | - | - | - | - | 1001 - |
| Stage 2 | - | - | - | - | 999 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 1.1 | 0 | 8.7 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1584 | - | - | - | 979 |
| HCM Lane V/C Ratio | 0.002 | - | - | - | 0.007 |
| HCM Control Delay (s) | 7.3 | 0 | - | - | 8.7 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0 |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ↕ | ↕ | | ↕ | |
| Traffic Vol, veh/h | 2 | 10 | 16 | 12 | 22 | 4 |
| Future Vol, veh/h | 2 | 10 | 16 | 12 | 22 | 4 |
| 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 | 2 | 11 | 17 | 13 | 24 | 4 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 30 | 0 | - | 0 | 39 24 |
| Stage 1 | - | - | - | - | 24 - |
| Stage 2 | - | - | - | - | 15 - |
| 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 | 1583 | - | - | - | 973 1052 |
| Stage 1 | - | - | - | - | 999 - |
| Stage 2 | - | - | - | - | 1008 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1583 | - | - | - | 972 1052 |
| Mov Cap-2 Maneuver | - | - | - | - | 972 - |
| Stage 1 | - | - | - | - | 998 - |
| Stage 2 | - | - | - | - | 1008 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 1.2 | 0 | 8.8 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h) | 1583 | - | - | - | 984 |
| HCM Lane V/C Ratio | 0.001 | - | - | - | 0.029 |
| HCM Control Delay (s) | 7.3 | 0 | - | - | 8.8 |
| HCM Lane LOS | A | A | - | - | A |
| HCM 95th %tile Q(veh) | 0 | - | - | - | 0.1 |