

Safety and School Zone Study

ASHLAND TERRACE AND DAYTON BOULEVARD AND OTHER ROADS WITHIN PROPOSED SCHOOL ZONE RED BANK, TENNESSEE

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NOTICE

This document and its contents have been prepared and are intended solely as information for the City of Red Bank and their use in relation to proposed safety and school zone study.

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1. INTRODUCTION

The City of Red Bank requested analysis of Ashland Terrace from Dayton Boulevard to Knollwood Drive/Crestview Drive to determine if right sizing of the corridor will improve operations and safety. In addition, the City requested an evaluation of circulation of Point Christian Academy to determine if improvements can be made and establish a school speed zone. Based on the City's request, this memorandum focuses on four areas.

1. An evaluation of Ashland Terrace from Dayton Boulevard to Knollwood Drive/Crestview Drive and determine if right sizing the roadway will improve operations and safety.
2. Evaluate Tacoma Avenue and Bank Street at Ashland Terrace to determine if vehicular movement restrictions are appropriate to improve safety.
3. Evaluate the speed limit on the public roads and establish a school zone for Point Christian Academy.
4. Recommend improved circulation pattern for drop-off and pick-up at Point Christian Academy that will increase storage for vehicles on school property during drop-off and pick-up.

2. EXISTING CONDITIONS

2.1. Existing Roadway Inventory

2.1.1. Roadway Segments

The roadway characteristics are described below for the study area.

Dayton Boulevard runs in the north-south direction in the study area and primarily operates as a 5-lane roadway with a two-way left turn lane (TWLTL). It is classified as a minor arterial road according to the City of Red Bank's Mobility Plan and an urban minor arterial road according to the Tennessee Department of Transportation (TDOT) functional classification map with an Annual Average Daily Traffic (AADT) volume of 11,195 (2024). The corridor currently serves commercial and residential uses and operates as the City's main thoroughfare. Sidewalks are provided on both sides of the road. The posted speed limit along Dayton Boulevard is 40 mph through the study area.

Ashland Terrace runs in the east-west direction in the study area and primarily operates as a 4-lane roadway. It is classified as a minor arterial road according to the City of Red Bank's Mobility Plan and an urban minor arterial road according to the TDOT functional classification map with an AADT volume of 17,604 (2024). The corridor serves as a connection between US-27, Dayton Boulevard, and Hixson Pike and provides a connection to residential uses along both sides of the roadway. The posted speed limit along Ashland Terrace is 25 mph through the study area.

Lawton Street runs in an east-west direction in the study area and operates as a 2-lane roadway. It is classified as a major collector road according to the City of Red Bank's Mobility Plan and an urban major collector road according to TDOT's functional classification map. The corridor provides access to the bank, school, and residential neighborhoods adjacent to the roadway. The posted speed limit on Lawton Street is 25 mph.

Bank Street runs in mainly a north-south direction in the study area and primarily operates as a two-way roadway between Lawton Street and Tacoma Avenue and as a one-way street between Tacoma Avenue and Ashland Terrace. It is classified as a local road according to the City of Red Bank's Mobility Plan and according to TDOT's functional classification map. The corridor connects Lawton Street to Ashland Terrace in the north. The posted speed limit along Bank Street is 25 mph.

Tacoma Avenue runs in the north-south direction in the study area and operates as a 2-lane roadway. It is classified as a local road according to the City of Red Bank's Mobility Plan and according to TDOT's functional classification map. The corridor serves residential driveways along the roadway. The posted speed limit along Tacoma Avenue is 25 mph.

2.1.2. Intersection Inventory

A description of the intersections in the study area is provided in the following.

Dayton Boulevard at Lawton Street is a three-legged unsignalized intersection. The northbound approach of Dayton Boulevard includes one through lane and a shared through/right turn lane. The southbound approach of Dayton Boulevard includes a two-way left turn lane and two through lanes that operate in free flow. The westbound approach of Lawton Street includes separate left and right turn lanes that operate under stop control. Pedestrian curb ramps are present on both corners of the east leg with truncated dome mats. There are no marked crosswalks in the intersection.

Dayton Boulevard at Ashland Terrace is a four-legged signalized intersection. The northbound approach of Dayton Boulevard includes a two-way center turn lane serving the left turn movement with protected/permissive signal phasing, two through lanes, and a signalized right turn lane with approximately 500 feet of storage and right turn overlap signal phasing. The southbound approach of Dayton Boulevard includes a left turn lane with approximately 100 feet of storage and protected / permissive signal phasing, a through lane, and a shared through / right turn lane. The eastbound approach of the commercial driveway includes a left turn lane with full storage and a shared through / right turn lane. The westbound approach of Ashland Terrace includes a left turn lane with approximately 310 feet of storage, a shared left / through lane with full storage, and a right turn lane with full storage. The eastbound and westbound approaches operate in split signal phasing. Curb ramps are provided on all four corners, marked crosswalks are provided on all four legs, and pedestrian signal heads and pushbuttons are provided for all crossings.

Ashland Terrace at Tacoma Avenue is a four-legged unsignalized intersection. The northbound and southbound approaches of Tacoma Avenue include one lane for all movements and are stop-controlled. The southbound approach has a left turn restriction. The eastbound approach includes one shared left/ through/ right lane and operates in free flow. The westbound approach includes one shared left / through lane and one shared through / right turn lane operating in free flow. A marked crosswalk is provided across the southern leg of the intersection. Sidewalk and pedestrian curb ramps are present along the southern leg of the intersection.

Ashland Terrace at Bank Street is a three-legged unsignalized intersection. The northbound approach includes a one-way shared left/ through / right turn lane that is stop-controlled. The eastbound approach includes one through lane and operates in free flow. The westbound approach includes two through lanes that operate in free flow. A marked crosswalk is provided across the southern leg of the intersection. Sidewalk and pedestrian curb ramps are present along the southern leg of the intersection.

Ashland Terrace at Knollwood Drive/Crestview Drive is a four-legged unsignalized intersection. The northbound and southbound approaches at Ashland Terrace include one left turn lane with 60 feet of storage and a shared through / right turn lane that are stop-controlled. The eastbound and westbound approaches have a left turn lane with 60 feet and 150 feet of storage, respectively, a through lane and a shared through /right turn lane. Sidewalks and curb ramps with truncated mats are present on all four corners. There are no marked crosswalks.

2.1.3. Existing Traffic

Turning movement traffic counts were collected at the study area intersections on Thursday, January 16th, 2025, from 6:00 AM to 6:00 PM to evaluate the existing traffic operations in the study area.

1. Dayton Boulevard at Lawton Street
2. Dayton Boulevard at Ashland Terrace
3. Ashland Terrace at Tacoma Avenue
4. Ashland Terrace at Bank Street
5. Ashland Terrace at Knollwood Drive/Crestview Drive

Table 2.1 – 2025 Turning Movement Collection Summary

Peak	Count Collection Period	Peak Hour
AM	6:00 AM – 12:00 PM	7:15 – 8:15 AM
PM	12:00 PM – 6:00 PM	3:45 – 4:45 PM

2.2. Field Observation

Point Christian Academy is a private school in Red Bank that serves pre-school children ages 2-5 and school age children ages Kindergarten to 3rd grade classes. The growth plan provided by the academy is to expand one additional grade level every year until the Academy reaches 8th grade.

Observations of the Point Christian Academy drop-off and pick-up were conducted on Thursday, January 16th, 2025. During the AM drop-off period, vehicles arrived individually with no more than one vehicle present at any given time, resulting in no on-site queuing. Vehicles making right turns out of the school onto Ashland Terrace exited from the easternmost access while those turning left exited from the western access when turning left. The gaps in traffic provided enough room for the left turning vehicles to enter Ashland Terrace.

During the pick-up observations, vehicles entered off Dayton Boulevard and queues reached seven vehicles on school property in the parking area. The queues lengths observed are shown in Figure 2.1.

Figure 2.1 – PM Pick-up Queue Lengths



The pre-school children often have parents that park and walk in to drop them off or pick them up. The parents will also pull onto Bank Street behind the school and drop-off/pick-up children and continue on Lawton Street travelling to Ashland Terrace on Tacoma Avenue or Bank Street. Vehicles do not continue on Bank Street behind the school due to the horizontal rise and fire hydrant as shown in the photo below.

Figure 2.2 – Bank Street



3. RIGHT SIZING ANALYSIS

3.1. Right Sizing Criteria

TDOT has developed the *Road Diet Guidance Manual* to assist local municipalities with criteria for evaluating geometry of the existing right-of-way limits based on functionality and needs of all users. These alterations could include road reconfiguration or right sizing. Criteria for evaluation of the level of the study corridor is defined from 10-year traffic projections as well as existing and proposed laneage. The analysis level criteria is detailed below in Table 3.1.

Table 3.1 – TDOT Road Diet Analysis Level Criteria

Analysis Level	Proposed Lanes	AADT	Initial Screening	Capacity/LOS Analysis	Traffic Study
1	to 3	<12,000	Required	Optional	Optional
	to 5	<18,000			
2	to 3	>12,000 – <20,000	Required	Required	Optional
	to 5	>18,000 – <30,000			
3	to 3	>20,000	Required	Required	Required
	to 5	>30,000			

TDOT outlines the following process for forecasting 10-year AADT projections:

1. Access the TN-TIMES website and find the nearest count location to the project location. If there are multiple count stations along the project corridor, use the count station with the highest AADT. Document the recorded AADT for the previous 5 years.
2. Calculate the growth rate between the most current year and the fifth previous year using the following equation:

$$5 \text{ Year Growth Rate} = \frac{\text{Current Year AADT} - \text{AADT from 5 Years Prior}}{\text{AADT from 5 Years Prior}}$$

3. Multiply the Current Year AADT by 1 plus the Growth Rate calculated in Step 2 to get the 5-year traffic projection. If the Growth Rate calculated in Step 2 was negative, assume zero to be conservative instead of forecasting a lower AADT volume in the future.
4. Assume an annual growth rate of 1% for the last 5 years. Multiply the value from Step 3 by 1.05 to calculate the 10-year traffic projection.

Count station 33000049 along Ashland Terrace is located east of Thrushwood Drive outside the proposed right sizing limits and recorded an AADT of 16,409 vehicles per day (vph) and 17,604 vph for the years of 2020 and 2024, respectively. Since TDOT does not have a count station on Ashland Terrace within the study limits, for this right sizing study, this count station represents the historic traffic volumes through the study area. The historic counts are

included in Appendix A. The following equations detail the calculated historic growth rate and projected future AADT:

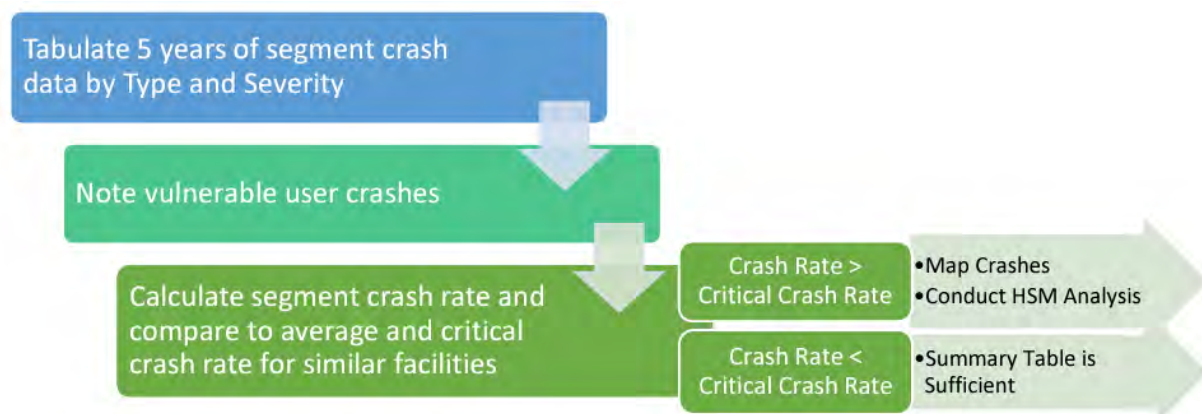
1. $7.3\% \text{ Growth Rate} = \frac{17,604 (2024 \text{ AADT}) - 16,409 (2020 \text{ AADT})}{16,409 (2020 \text{ AADT})}$
2. $18,889 (2029 \text{ AADT}) = 17,604 (2024 \text{ AADT}) * (1 + 0.073)$
3. $19,833 (2034 \text{ AADT}) = 18,889 (2029 \text{ AADT}) * (1 + 0.05)$

The calculated five-year growth rate of 7.3% was applied to the 2024 AADT for a projected 2029 AADT of 18,889. A five-year projected growth rate of 5% was then applied to the 2029 projected AADT for a 2034 projected AADT of 19,833. The 10-year projected AADT of Ashland Terrace along with its proposed 3-lane section configuration results in a Level 2 analysis per TDOT's *Road Diet Guidance Manual*. Therefore, this study will incorporate a safety analysis, initial screening criteria, and capacity/LOS analysis for the proposed study area.

3.2. Safety Analysis

Safety analysis is used as an evaluation factor for right sizing projects regardless of other analysis requirements. The safety analysis is outlined by the TDOT as shown below:

Figure 3.1 – Safety Analysis Flow Chart



TDOT recommends the latest 5-year period of crash data to be obtained from the Enhanced Tennessee Roadway Information Management System (ETRIMS). Crash rate should then be calculated using either the crash rate by vehicle miles traveled or crash rate by segment length. The crash rate should then be compared to the critical crash rate provided by TDOT.

The crash per million vehicle miles traveled and crash rate per segment length can be calculated using Equation 1 and Equation 2, respectively. The segment exposure and critical crash rate can be calculated using Equation 3.

Equation 1 – Segment Crash Rate per Million Vehicle Miles Traveled

$$R = \frac{C * 1,000,000}{V * 365 * N * L}$$

Where R is the segment crash rate expressed in crashes per million vehicles miles traveled, C is the total number of crashes that have occurred within the study period, V is the segment AADT, N is the number of years within the study period, and L is the segment length expressed in miles.

Equation 2 – Segment Crash Rate per Mile

$$R = \frac{C}{N * L}$$

Where R is the segment crash rate expressed in crashes per mile, C is the total number of crashes that have occurred within the study period, N is the number of years within the study period, and L is the segment length expressed in miles.

Equation 3 – Section Exposure

$$E = \frac{V * L * N * 365}{1,000,000}$$

Where E is the section exposure, V is the segment AADT, L is the length of the segment expressed in miles, and N is the number of years within the study period.

The study corridor along Ashland Terrace was analyzed for its segment crash rates per million vehicle miles traveled for the purposes of this report. The analysis included the full study area from Dayton Boulevard to Knollwood Drive/Crestview Drive.

The crash rate and critical crash rate in the study corridor were compared to historical TDOT statewide average crash rates for similar 4-lane roadways classified as urban minor arterial. The details of these crash rates comparison can be found in Table 3.2.

Table 3.2 – Crash Rate Analysis – Ashland Terrace

Roadway Segment	Crash Rate (per Million Vehicle Miles Traveled)	Critical Crash Rate	Statewide Average Crash Rate	Is Crash Rate > Critical Crash Rate?
<i>Ashland Terrace (from Dayton Boulevard to Knollwood Dr/Crestview Dr)</i>	14.007	5.426	4.145	YES

Through the study corridor, the crash rates exceed the critical crash rate for the segment of roadway. A crash diagram of the study area is provided in Figure 3.2 showing the location of the crashes through the study area. Crash modification factors were analyzed to determine safety improvements that could be anticipated along these segments if right sizing of the Ashland Terrace is implemented.

A summary table of the historic crashes along the entire corridor can be found in Table 3.3.

Figure 3.2 – Historic Crash Map – (January 2020 – December 2024)

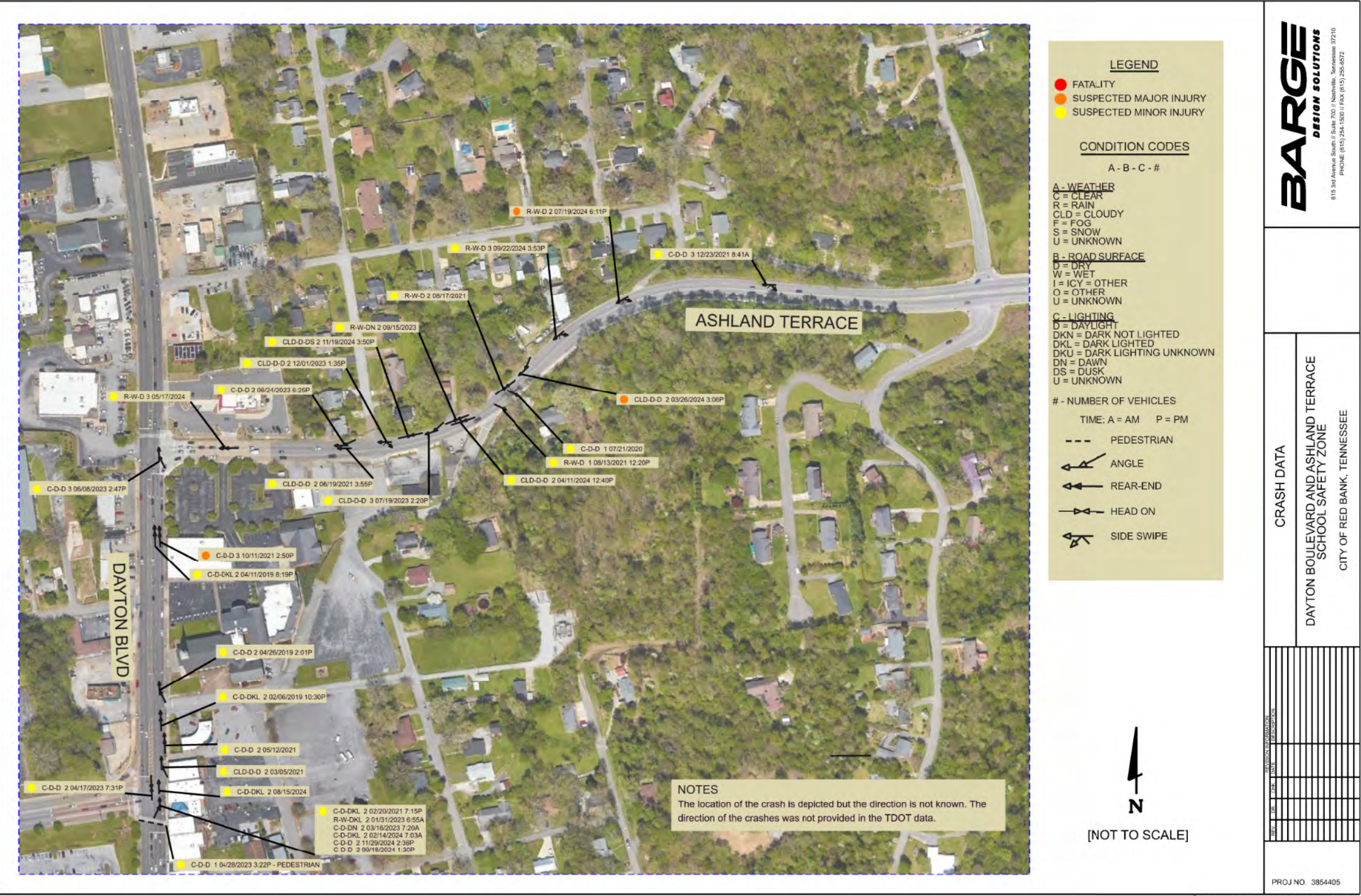


Table 3.3 – Ashland Terrace Total Crashes (January 1, 2020 – December 31, 2024)

Description	Number of Crashes	% of Crashes
<i>Fatal (K)</i>	0	0%
<i>Serious Injury (A)</i>	2	1%
<i>Minor Injury (B)</i>	18	10%
<i>Possible Injury (C)</i>	10	6%
<i>Property-Damage Only (O)</i>	152	83%
<i>Pedestrian</i>	0	0%
<i>Pedal cycle</i>	0	0%
<i>Intersection</i>	24	12%
<i>Segment</i>	158	88%
<i>Daylight</i>	127	70%
<i>Dark-Lighted</i>	15	8%
<i>Dark-Not Lighted</i>	0	0%
<i>Dawn</i>	2	1%
<i>Dusk</i>	2	1%
<i>Other/Unknown</i>	36	20%
<i>Clear</i>	42	22%
<i>Cloudy</i>	46	26%
<i>Fog</i>	1	<1%
<i>Rain</i>	57	32%
<i>Other/Unknown</i>	36	20%
<i>Angle</i>	33	18%
<i>Head-On</i>	7	4%
<i>Rear-End</i>	59	33%
<i>Rear to Rear</i>	1	<1%
<i>Side-Swipe (Opposite Direction)</i>	15	8%
<i>Side-Swipe (Same Direction)</i>	8	4%
<i>No Collision W/ Vehicle</i>	23	13%
<i>Other/Unknown</i>	36	20%
Total	182	100%

Based on the crash data gathered from the eTRIMS, there were 182 crashes that occurred on Ashland Terrace from Dayton Boulevard to Knollwood Drive/Crestview Drive. Based on the severity none of the crashes resulted in a fatality, 2 resulted in suspected serious injury, 18 resulted in minor injury, 10 resulted in possible injury, and 152 resulted in property damage. There were 33 crashes that were angle, 7 were head-on crashes, 15 were sideswipes where vehicles were travelling in the opposite direction, and 8 were side swipes where vehicles were travelling in the same direction.

There were 158 crashes along the segment and 24 crashes at intersections. There were 127 crashes during daylight and 15 during dark-lighted conditions. The number of crashes that occurred under clear weather conditions was 42, cloudy conditions was 46, and rainy conditions was 57.

Crash reports for the collisions resulting in suspected serious injury were obtained from the TITAN database. Review of these crash reports revealed that both crashes occurred due to hydroplaning causing the vehicles to cross the double yellow line into oncoming traffic.

3.3. Crash Modification Factors (CMFs) Clearinghouse

CMF Clearinghouse data was utilized to determine what, if any, proven safety benefit exists with the installation of road diet features along the study corridor. The CMF Clearinghouse is composed of a comprehensive listing of available CMFs and includes the CMFs listed in the Highway Safety Manual (HSM). A CMF is a multiplicative factor used to compute the expected number of crashes after implementing a given countermeasure at a specific site. A CMF reflects the safety effect of a countermeasure, whether it will result in a decrease in crashes (CMF below 1.0), increase in crashes (CMF over 1.0), or no change in crashes (CMF of 1.0). A countermeasure is a strategy intended to reduce crash frequency or severity on the road, and in the case of this study, the reduction of travel lanes from 4-lanes to 3-lanes along the roadway.

A CMF is graded on its star quality rating, which indicates the quality or confidence in the results of the study producing the CMF. The star rating is based on a scale (1 to 5), where a 5 indicates the highest or best rating. The review process to determine the star rating judges the accuracy and precision as well as the general applicability of the study results. Reviewers considered various factors for each study (depending on the study type used to develop the CMFs) — study design, sample size, statistical methodology, statistical significance, etc. — and judged each CMF according to its performance in the various factors (including multiple subcategories within each factor).

This study assessed CMFs from the Clearinghouse database to determine the safety impacts of a lane reduction along Ashland Terrace through the study area where the crash rates exceed the state average. Specifically, it will reduce the lanes from four to three lanes providing one lane for travel in each direction and a center turn lane. According to the *Highway Safety Information System Evaluation of Lane Reduction “Road Diet” Measures on Crashes*, reducing the lanes from two lanes in each direction to one lane with a center turn lane, speeds are expected to be reduced and vehicle interactions are expected to be reduced.

Based on the potential improvements, CMFs were quantified for the most appropriate countermeasures applied to the project. These potential countermeasures did not evaluate other factors that may limit the ability to right size the roadway.

Table 3.4 – Crash Modification Factors

CMF ID	Countermeasure	CMF Factor	CRF Factor	Star Quality Rating
2841	Converting four-lane roadways to three-lane roadways with center turn lane (road diet)	0.53	0.47	5/5

As shown in Table 3.4, converting a roadway from four lanes to three lanes, has shown a 47% reduction in crashes at locations studied with this improvement. The number of accesses and length of roadway evaluated to determine the CRF is not known but this type of modification done in an urban setting with multiple accesses will experience a higher crash reduction than on a roadway with no accesses

4. RIGHT SIZING OPERATIONAL ANALYSIS

4.1. Background and Considerations

As presented previously according to TDOT's *Road Diet Guidance Manual*, Ashland Terrace in the study area requires a Level 2 study to determine if right sizing the cross section is appropriate. This determination was made based on the roadway's existing AADT and roadway configuration.

In addition to TDOT's *Road Diet Guidance Manual*, Federal Highway Administration (FHWA) provides guidance for when to consider right sizing a roadway. According to FHWA's Road Diet Informational Guide, FHWA recommends good candidates for right sizing corridors to have an AADT of 20,000 or less vehicles per day (vpd). A peak hour volume of above 875 vehicles per hour per direction (vphpd) is regarded as less feasible for right sizing criteria with expected reduced arterial LOS during the peak period. Additionally, Kentucky Transportation Center (KTC) Guidelines for Road Diet Conversions recommends road diets are feasible for corridors with AADT as high as 23,000 vpd. The City of Seattle, which assesses right sizing candidates with AADT as high as 25,000 vpd, has determined their own criteria for feasibility. When determining feasibility for roadways with AADT greater than 16,000 vpd, a corridor is deemed feasible if analysis shows less than a 30% travel time increase and LOS change of less than 2+.

There is also guidance provided by FHWA for peak hour and peak direction volumes. This states the right sizing is probably feasible at or below 750 vehicles per hour per direction (vphpd). If the volumes are between 750-875 vphpd cautious consideration should be given. Feasibility of lane reductions is less likely when 875 vphpd are expected due to the level of service falling below an acceptable level.

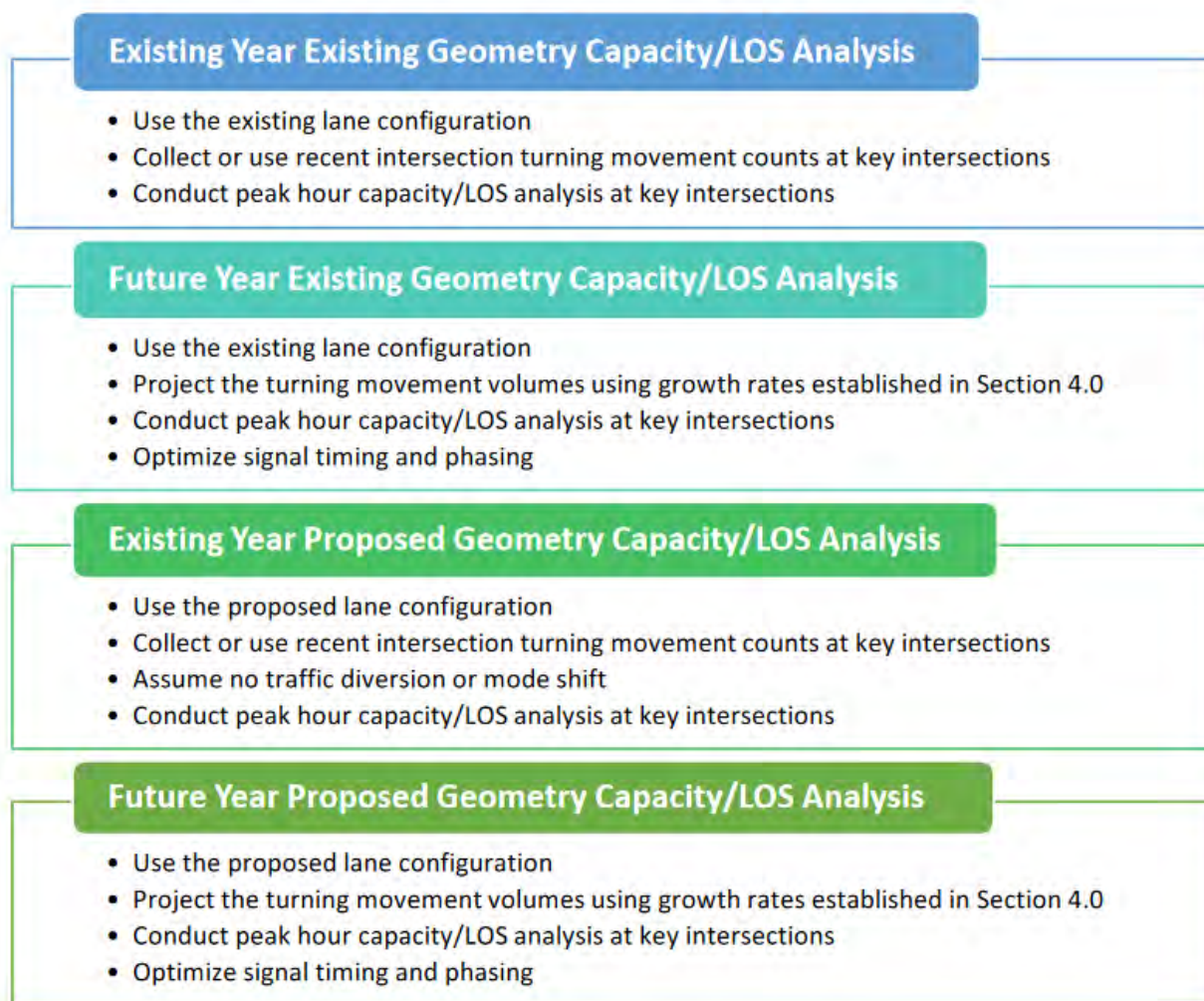
Ashland Terrace was evaluated with the above criteria to determine if right sizing is feasible between Dayton Boulevard and Knollwood Drive / Crestview Road. The projected 2034 AADT according to TDOT's Road Diet guidance criteria is anticipated to be 19,833 vpd, meeting the industry standard for acceptable AADT along the corridor for a lane reduction. The bi-directional class count collected on Ashland Terrace on January 16th, 2025 showed a one direction traffic volume of over 875 peak hour trips for five hours and the volumes in at least one direction are between 750-875 vphpd for another four hours. These volumes were collected in the segment between Bank Street and Knollwood Drive / Crestview Road where the right sizing is proposed. A capacity and LOS assessment was completed along the entire study corridor to determine the operational impacts of a potential reconfiguration.

4.2. Capacity / LOS Analysis

According to TDOT's *Road Diet Guidance Manual*, Ashland Terrace meets the Level 2 study threshold for analysis of right sizing the roadway which warrants a capacity / LOS analysis to be performed for the study corridor. The primary intent of the existing capacity / LOS analysis is to determine a baseline of how key intersections perform now and in the future without the road diet. This baseline analysis is then compared to how the key intersections will perform with fewer lanes now and in the future, assuming 10 years of traffic growth. All signalized intersections within the limits of the road diet should be analyzed, however, judgment is required in determining which unsignalized intersections need to be included in the capacity / LOS analysis. Since this corridor has three unsignalized intersections within the limits, the unsignalized intersections are included in the analysis.

The guidelines for existing and proposed capacity / LOS analysis based on TDOT's *Road Diet Guidance Manual* are shown in Figure 4.1, requirements are more stringent, necessitating a LOS of E or better, a v/c ratio of less than 0.9, and the ability to accommodate queues.

Figure 4.1 – Capacity / LOS Analysis



4.2.1. Operational Analysis

The *Highway Capacity Manual, 7th Edition* (HCM) outlines the methodology used for conducting operational analysis of the study intersections. The performance measures used in this methodology are based on the average delay, in seconds, experienced per vehicle at the intersection. Delay is further summarized in terms of Level of Service (LOS), a letter grade based on the calculated delay that ranges from A, the best, to F, the worst. The relationship between control delay and LOS for signalized and unsignalized intersections is summarized in Table 4.1.

Table 4.1 – Level of Service Criteria

Level of Service	Description	Average Control Delay (seconds per vehicle)	
		Signalized	Unsignalized
A	<i>Free flow</i>	≤ 10	≤ 10
B	<i>Stable flow, slight delay</i>	> 10 - 20	> 10 - 15
C	<i>Stable flow, acceptable delay</i>	> 20 - 35	> 15 - 25
D	<i>Near-unstable flow, tolerable delay</i>	> 35 - 55	> 25 - 35
E	<i>Unstable flow, intolerable delay</i>	> 55 - 80	> 35 - 50
F	<i>Forced flow, failure</i>	> 80	> 50

4.2.2. Operational Analysis

Per the TDOT guidelines, the results of the Existing 2025, No Build 2035, Build 2025, and No Build 2035, scenarios are summarized for the peak hours in Table 4.2.

Existing 2025

This analysis used the existing roadway geometry, traffic control, signal timings, and counts collected for this study in January 2025. As shown in Table 4.2, the northbound and southbound approaches at the unsignalized intersection of Ashland Terrace at Knollwood Drive / Crestview Drive operates at LOS F during both peak hours. The northbound and southbound approaches at the unsignalized intersection of Ashland Terrace at Tacoma Avenue operates at LOS F during AM peak and the northbound approach operates at LOS E during the PM peak hour.

No Build 2035

The No Build 2035 analysis was conducted with the same roadway geometry as the Existing 2025 analysis. Due to the historic annual growth anticipated for the study area, an increase in delay is expected through the corridor. The intersection of Dayton Boulevard at Ashland Terrace is expected to operate at LOS E during the AM peak hour and LOS F during the PM peak hour. The unsignalized intersections are expected to continue to operate similar to the

Existing 2025 with a couple exceptions. The intersection of Ashland Terrace at Bank Street is expected to operate at LOS F during both peak hours.

Build 2025 (with Right Sizing)

The Build 2025 implements the right sizing of Ashland Terrace by restriping from Bank Street to Knollwood Drive / Crestview Drive to provide one lane in each direction of travel. The signal timings at the intersection of Dayton Boulevard at Ashland Terrace were maintained for comparison purposes. The same approaches that operate at LOS F under existing conditions are expected to operate at LOS F with a higher delay if Ashland Terrace was right sized to one lane in each direction.

Build 2035 (With Right Sizing)

The Build 2035 implements the same right sizing improvements and maintains the signal timings at the signalized intersection. The LOS and delays are similar to those expected under No Build 2035 conditions with expected increase in some delays and queues.

Table 4.2 – Capacity Analysis Results – AM and PM Peak Hours

			Existing 2025			No Build 2035			Build 2025 (with Right Sizing)			Build 2035 (with Right Sizing)		
			Delay	LOS	Queue	Delay	LOS	Queue	Delay	LOS	Queue	Delay	LOS	Queue
AM Peak Hour														
1	Dayton Boulevard at Ashland Terrace	Overall	24.8	C		63.2	E		24.8	C		63.2	E	
		Eastbound	47.8	D	4'	55.0	D	4'	47.8	D	4'	55.0	D	4'
		Westbound	35.0	C	329'	46.3	D	570'	34.9	C	329'	46.3	D	570'
		Northbound	22.6	C	129'	99.8	F	993'	22.6	C	129'	99.8	F	993'
		Southbound	17.5	B	218'	28.5	C	327'	17.5	B	218'	28.5	C	327'
2	Ashland Terrace at Knollwood Drive / Crestview Drive	Eastbound Left	9.4	A	0.0	11.0	B	25'	9.4	A	0'	11.0	B	25'
		Westbound Left	11.1	B	25'	14.5	B	25'	11.0	B	0'	14.4	B	0'
		Northbound Left	71.5	F	25'	> 300	F	55'	63.7	F	25'	> 300	F	50'
		Southbound Left	58.2	F	25'	> 300	F	90'	211.5	F	55'	> 300	F	130'
3	Ashland Terrace at Bank Street	Northbound	26.8	D	40'	141.4	F	178'	26.7	D	40'	138.9	F	175'
4	Ashland Terrace at Tacoma Ave	Eastbound Left	11.3	B	0'	15.1	C	0'	11.3	B	0.0	15.1	C	0'
		Westbound Left	11.1	B	25'	14.8	B	25'	11.1	B	25'	14.8	B	25'
		Northbound	51.5	F	25'	> 300	F	50'	51.5	F	25'	> 300	F	50'
		Southbound	71.6	F	25'	> 300	F	25'	71.6	F	25'	> 300	F	25'
PM Peak Hour														
1	Dayton Boulevard at Ashland Terrace	Overall	32.4	C		84.4	F		32.4	C		84.4	F	
		Eastbound	51.9	D	50'	52.1	D	50'	51.9	D	50'	52.1	D	50'
		Westbound	35.9	D	382'	36.0	D	392'	35.9	D	382'	36.0	D	392'
		Northbound	32.7	C	248'	129.1	F	1245'	32.7	C	248'	129.1	F	1245'
		Southbound	23.4	C	199'	27.5	C	296'	23.4	C	199'	27.5	C	296'
2	Ashland Terrace at Knollwood Drive / Crestview Drive	Eastbound Left	10.7	B	0'	13.8	B	25'	10.7	B	0'	13.8	B	25'
		Westbound Left	10.6	B	25'	13.5	B	25'	10.6	B	25'	13.5	B	25'
		Northbound Left	64.0	F	25'	267.3	F	25'	58.6	F	25'	232	F	25'
		Southbound Left	75.5	F	25'	> 300	F	52'	198.9	F	25'	> 300	F	68'
3	Ashland Terrace at Bank Street	Northbound	21.3	C	25'	56.7	F	78'	21.2	C	25'	56.3	F	78'
4	Ashland Terrace at Tacoma Ave	Eastbound Left	10.2	B	0'	12.6	B	0.0	10.2	B	0'	12.6	A	0'
		Westbound Left	10.7	B	25'	14.1	B	25'	10.7	B	25'	14.1	B	25'
		Northbound	49.4	E	25'	221.4	F	38'	49.4	E	25'	224.1	F	25'
		Southbound	30.9	D	25'	121.5	F	25'	30.9	D	25'	121.5	F	25'

4.3. Context Elements

TDOT's Road Diet Criteria includes the 'Context Elements' category, which allows agencies to provide further justification for right sizing. This information explains the beneficial implications of right sizing beyond an operational analysis of vehicular traffic along the corridor. Local agencies are encouraged to provide contextual evidence that right sizing will be beneficial for their community and why it is desired. Some potential contextual elements for consideration are shown in Figure 4.2.

Figure 4.2 – Road Diet Context Elements



The right sizing of Ashland Terrace should be evaluated further by the City of Red Bank given the context elements criteria:

- Land Use / Economic Growth Impacts
 - The portion of Ashland Terrace from Bank Street to Knollwood Drive/Crestview Drive does not have any additional accesses to uses and serves through traffic only. Right sizing of this corridor is not expected to have an effect on the economic growth in the area.
- Fulfillment of a Bike Route / Network Need
 - The proposed right sizing will provide one lane for traffic in each direction. Bike facilities are not proposed as part of the right sizing project due to the horizontal and vertical curvature of Ashland Terrace.
- In Harmony with Community Goals
 - Red Bank's Community Mobility Plan outlines the City's vision to *"enhance the City's unique character by safely interconnecting our residents, employees, and visitors to open spaces, neighborhoods, jobs, Red Bank's downtown, and the surrounding region through investments that improve roadway flow, and are walkable, bikeable, transit supportive, and sustainable"*. This study's goal is consistent with the City's vision to improve roadway flow for all residents of Red

Bank. The right sizing of Ashland Terrace, which involves reducing vehicular through lanes, is not expected to have a significant impact on safety or operational efficiency due to the short length of the corridor being studied, which limits the potential for substantial benefits.

5. EXISTING SPEED LIMITS AND OPERATIONS

The City of Red Bank requested an evaluation of the speed limits and operations in the travel area. During the field observations, the speed limits and operation restrictions were noted. The functional classification of the roadways was taken from the Red Bank Mobility Study.

Table 5.1 – Roadway Speed Limits and Operations

Roadway	Functional Classification	Speed Limit	Restrictions
<i>Dayton Boulevard</i>	Minor Arterial	40	No restrictions
<i>Ashland Terrace</i>	Minor Arterial	25	No restrictions
<i>Lawton Street</i>	Major Collector	25	No restrictions
<i>Tacoma Avenue</i>	Local	25	No Southbound left turn
<i>Bank Street</i>	Local	25	No Northbound left turn

Speeds were collected on Dayton Boulevard between Trenton Street and Ashland Terrace to determine the 85th percentile speed. Based on the study, the 85th percentile speed in the northbound direction is 30 mph and in the southbound direction is 34 mph. The recently completed study of Dayton Boulevard recommends a speed limit of 35 mph through this area. Based on the measured, 85th percentile speed, a 35 mph speed limit along this segment of Dayton Boulevard is recommended.

Ashland Terrace currently has a posted speed limit of 25 mph. While this may have previously aligned with the roadway's use, geometry, and access characteristics, speed data collected within the study segment indicates an average 85th percentile speed of 37 mph. Given that this measured operating speed significantly exceeds the posted limit, it is recommended that the posted speed limit be increased to 35 mph to better align with prevailing operating conditions and promote speed compliance. Based on the functional classification, and residential land uses on Lawton Street, Tacoma Avenue, and Bank Street the existing 25 mph speed limit is appropriate.

The sight distance is limited on the north leg of Tacoma Avenue due to vegetation and roadway geometry. The restricted left turn should remain in place. The south leg of Tacoma does not currently have turning restrictions. The sight distance of vehicles coming down the hill is approximately 300 feet which does not meet the AASHTO standard of 390 feet for intersection sight distance for a passenger car for a posted speed of 35 mph. If the speed limit on Ashland Terrace is raised to 35 mph, left turns should be restricted on the south leg of Tacoma Avenue.

The approach of the south leg on Bank Street at Ashland Street is skewed making the left turn movement have a wide turn radius. Due to this and the observed speed of the westbound vehicles travelling down the hill, the restricted left turn should remain.

6. SCHOOL SPEED ZONE

Point Christian Academy is located on the corner of Dayton Boulevard and Ashland Terrace with one access on Dayton Boulevard and two accesses on Ashland Terrace. The City of Red Bank requested a school speed zone be identified for Point Christian Academy to improve safety in the area. Standards for establishing school speed zones are not provided by FHWA, but they do suggest an engineering study be conducted. When establishing a school speed zone several characteristics are considered such as traffic volumes, functional classification, roadway features, land use in the area, number of accesses and intersections, sight distance, presence of on-street parking, pedestrian and bicycle activity, crash history, and pavement conditions. The characteristics that have been presented previously in the report for Dayton Boulevard and Ashland Terrace are summarized in Table 6.1.

Table 6.1 – Roadway Characteristics

Characteristic	Ashland Terrace	Dayton Boulevard
<i>Traffic Volumes</i>	17,604 (AADT 2024)	11,195 (AADT 2024)
<i>Roadway type</i>	Minor Arterial	Minor Arterial
<i>Roadway Features</i>	Horizontal and vertical curvature	Straight roadway
<i>Land Use</i>	School and Residential	School and Commercial
<i>Roadway Setting</i>	Urban	Urban
<i>Number and spacing of driveways or intersections</i>	10 (Dayton Blvd. to Bank St.)	10 (Morrison Springs Rd. to Ashland Terr.)
<i>Sight Distances</i>	Tacoma Avenue has about 300 feet for vehicles coming westbound	Acceptable for the accesses in the area
<i>Presence of on-street parking</i>	None	None
<i>Pedestrian or bicyclist activity</i>	None observed	None observed
<i>Crash History</i>	Summary in Table 3.3	Summary in Appendix B

Vehicles travelling between Highway 27 and Hixson Pike travel on Morrison Springs Road, Dayton Boulevard, and Ashland Terrace. In both the AM and PM peak hours, the heaviest movements at the intersection of Dayton Boulevard and Ashland Terrace are the northbound right turning and westbound left turning movements.

Observations of the school circulation noted the queues for drop-off and pick-up remain on school property for the kindergarten through third grade children. Some of the preschool parents parked on school property and walked their children to and from school. The other parents parked on Bank Street for drop-off/pick-up and continued on to exit onto Ashland Terrace from Tacoma Avenue or Bank Street.

Based on the existing circulation, the school speed zone with a reduced speed limit of 25 mph should be established on Dayton Boulevard from south of Morrison Springs Road to just south of Woodrow Avenue. Given the recommended increase in the posted speed limit on Ashland Terrace to 35 mph, it is further recommended that a school zone with a reduced speed limit of 25 mph be established on Ashland Terrace from Dayton Boulevard to just

east of Bank Street. This school zone should be equipped with flashing beacons integrated with the school zone signage to enhance driver awareness and promote speed compliance during designated school operating hours. The recommended school speed zone signing is shown on Figure 6.1.

During the observations, vehicles entered and exited the school property without excessive delays. The school intends to add a grade every year until it reaches 8th grade. Currently the average class size is less than 10 students which is the expected size of the future classes. Based on the expected growth, vehicles are not expected to have circulation problems that will affect operations of Dayton Boulevard or Ashland Terrace.

Figure 6.1 – Proposed School Zone Layout



7. SCHOOL CIRCULATION

Observations of the circulation at Point Christian Academy were presented previously in this memorandum. During observations, it was noted, existing queueing occurs on school property and entering and exiting traffic did not experience long delays. However, the school growth plans indicate queue lengths will continue to grow so the school has requested a circulation plan to provide additional storage for vehicles during drop-off and pick-up before the queue lengths cause operational issues on the roadway network. Based on the observations, the options to be considered include:

1. Moving the drop-off/pick-up location to Tacoma Street parking area
2. Moving the drop-off/pick-up location to Bank Street
3. Provide two lanes for storage in the parking area off Dayton Boulevard

Alternative 1 – Drop/off/Pick-up Location - Tacoma Street Parking Area

This recommendation will require the students to enter/exit the school from the Bank Street entrance. Vehicles can enter the parking area of Tacoma Street and drop-off/pick-up in the parking area. This will provide approximately 1,150 feet of storage in the parking area, along Tacoma Avenue and along Lawton Street. The total number of vehicles that can queue in the parking area, along Lawton Street and along Tacoma Avenue is estimated to be 37 as shown in Figure 7.21.

Figure 7.1 – Alternative 1 Tacoma Street Back Parking Area



Alternative 2 – Drop-off/Pick-up on Bank Street

Another alternative that was considered per the school’s request was opening Bank Street to traffic at Lawton Street and providing drop-off/pick-up behind the school. The alignment of Bank Street behind the school has a hill and fire hydrant that was shown previously. The road will need to be realigned to cut the vertical displacement, and the fire hydrant will need to be relocated. Approximately 25 vehicles will be able to queue between Tacoma Avenue and Dayton Boulevard as shown in Figure 7.2.

Figure 7.2 – Alternative 2 Bank Street



Alternative 3 – Provide two storage lanes in Front of School

The existing drop-off/pick area in front of school can provide additional storage in the driving aisle that connects Dayton Boulevard and Ashland Terrace. Both drive aisles will serve the queueing vehicles creating a one-way drive aisle. The vehicles will be released one row at a time so only one vehicle approaches Ashland Terrace. At Ashland Terrace all the vehicles will turn right. Those needing to travel southbound on Dayton Boulevard can use Tacoma Avenue and Unaka Street to reach Dayton Boulevard. This will provide storage for approximately 27 vehicles as shown in Figure 7.3.

Figure 7.3 – Alternative 3 Front Parking



General Circulation Improvements

Based on the heavy turning movements at the intersection of Dayton Boulevard and Ashland Terrace, restricting left turning movements out of the parking areas onto Ashland Terrace should be considered. As an alternative, vehicles can exit the parking area and turn right on Tacoma Avenue to Unaka Street. Unaka Street intersects Dayton Boulevard south of Morrison Springs Road where vehicles can make a left turn to travel south on Dayton Boulevard. Currently the sight distance to the north on Dayton Boulevard is limited by the building. However, when the proposed right sizing of Dayton Boulevard is installed the sight distance will be improved.

As the school grows, the double queueing lanes can be incorporated in the front of the school to provide additional storage for vehicles during drop-off and pick-up.

8. CONCLUSIONS AND RECOMMENDATIONS

The study addressed four issues in the study area including right sizing Ashland Terrace from Bank Street to Knollwood Drive/Crestview Drive, evaluating existing speed limits, establishing a school speed zone, and evaluating the school circulation at Point Christian Academy.

Right Sizing Ashland Terrace

Since the intersection of Ashland Terrace at Dayton Boulevard has previously been evaluated and it was determined the geometry is needed for adequate traffic operations; the boundaries of the right sizing were from Bank Street to the city limits at Knollwood Drive / Crestview Drive. Ashland Terrace becomes four lanes east of Bank Street. This segment of roadway is approximately 0.25 miles long and does not provide access to any parcels. There is horizontal and vertical curvature in this segment with a sidewalk on the south side of the road. The north side of the road has a guardrail through most of the corridor and there are no pedestrian crossings provided. For these reasons, there does not seem to be a safety or operational benefit to right sizing this short segment of Ashland Terrace. If Ashland Terrace is right sized east of Knollwood Drive/Crestview Drive the City of Red Bank should reconsider right sizing this segment of the corridor.

Existing Speed Limits and Traffic Operations

The existing speed limits of 25 mph on Tacoma Avenue, Bank Street, and Lawton Street are all appropriate based on the functional classification, land use, and accesses. In concurrence with the previous study on Dayton Boulevard, a posted speed limit of 35 mph on this segment of the corridor is recommended. The speed limit on Ashland Terrace should be raised to 35 mph to better align with prevailing operating conditions and promote speed compliance. With this change in speed limit on Ashland Terrace, it is further recommended to restrict left turns from the south leg of Tacoma Avenue at Ashland Terrace.

School Speed Zone

The school speed zone for Point Christian Academy should extend along Dayton Boulevard from Morrison Springs Road to just south of Woodrow Avenue and be posted as 25 mph during school hours. Given the recommended increase in the posted speed limit on Ashland Terrace to 35 mph, it is further recommended that a school zone with a reduced speed limit of 25 mph be established on Ashland Terrace from Dayton Boulevard to just east of Bank Street. This school zone should be equipped with flashing beacons integrated with school zone signage to enhance driver awareness and promote speed compliance during designated school operating hours.

School Circulation Plan

Three alternatives were presented to be considered as the school grows. The existing circulation should restrict left turning movements onto Ashland Terrace at both accesses from the parking areas in front of school. Vehicles can make a right out of the school and use Tacoma Avenue and Unaka Street to connect to Dayton Boulevard and travel north or south.

APPENDIX A – DATA COLLECTION

Traffic Counts

TDOT Counts

TRAFFIC COUNT RECORD															BARGE DESIGN SOLUTIONS.					Marr Traffic Subconsultant					Site 1 of 2				
																				Dayton Boulevard									
																				Dayton Boulevard									
Date										Lat/Long					Project					Driveway									
Thursday, January 16, 2025															Red Bank School Safety					Ashland Terrace									
15-Minute Traffic Data																													
TIME	↑ Northbound↑					↓ Southbound↓					→Eastbound→					←Westbound←													
	Dayton Boulevard					Dayton Boulevard					Driveway					Ashland Terrace													
	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped									
6:00 – 6:15	0	18	58	0	0	6	23	0	0	0	0	0	0	0	0	47	0	5	0	0									
6:15 – 6:30	1	26	68	0	0	17	34	0	0	0	0	0	0	0	0	46	0	3	0	0									
6:30 – 6:45	0	27	99	0	0	31	77	0	0	0	0	0	0	0	0	89	0	7	0	0									
6:45 – 7:00	0	49	128	0	0	27	113	0	0	0	0	0	0	1	0	127	0	6	0	0									
7:00 – 7:15	0	55	135	0	0	34	112	0	0	0	0	0	0	0	0	135	1	9	0	0									
7:15 – 7:30	0	58	184	0	0	40	118	0	0	0	0	0	1	0	0	121	1	21	0	0									
7:30 – 7:45	0	52	192	0	0	46	124	0	0	0	0	0	0	0	0	141	0	20	0	0									
7:45 – 8:00	0	71	212	0	0	55	148	0	0	0	0	0	0	0	0	174	1	22	0	0									
8:00 – 8:15	5	75	173	0	0	22	102	0	0	0	0	0	4	0	0	174	0	17	0	0									
8:15 – 8:30	6	55	168	0	0	41	120	0	0	0	1	0	3	0	0	128	1	12	0	0									
8:30 – 8:45	3	53	160	0	0	25	116	0	0	0	0	3	4	0	0	122	0	22	0	0									
8:45 – 9:00	3	78	177	0	0	26	103	0	0	0	1	1	5	0	0	145	1	21	0	0									
9:00 – 9:15	1	60	149	0	0	26	97	0	0	0	0	1	3	0	0	98	0	16	0	0									
9:15 – 9:30	4	76	127	0	0	25	88	0	0	0	0	1	3	0	0	100	4	21	0	0									
9:30 – 9:45	3	60	133	0	0	20	81	0	0	0	1	2	3	0	0	106	2	25	0	0									
9:45 – 10:00	1	69	133	0	0	20	72	0	0	0	0	0	8	0	0	105	3	19	0	0									
10:00 – 10:15	1	59	125	0	0	14	87	1	0	0	1	0	9	0	0	105	4	27	0	0									
10:15 – 10:30	6	51	148	0	0	21	74	0	0	0	2	1	8	0	0	128	0	22	0	0									
10:30 – 10:45	4	84	92	0	0	23	88	1	0	0	2	0	3	0	0	109	0	20	0	0									
10:45 – 11:00	2	82	149	0	0	29	73	0	0	0	0	4	4	0	0	100	0	25	0	0									
11:00 – 11:15	6	54	131	0	0	27	78	2	0	0	1	5	4	0	0	100	2	20	0	0									
11:15 – 11:30	6	60	160	0	0	13	56	0	0	0	5	1	10	0	0	95	3	11	0	0									
11:30 – 11:45	3	72	121	0	0	24	76	1	0	0	3	1	7	0	0	131	2	19	0	0									
11:45 – 12:00	11	109	159	0	0	33	105	0	0	0	3	2	9	0	0	120	0	21	0	0									
12:00 – 12:15	7	94	149	0	0	28	103	0	0	0	0	3	7	0	0	101	2	28	0	0									
12:15 – 12:30	6	91	159	0	0	37	85	1	0	0	3	3	9	0	0	122	4	23	0	0									
12:30 – 12:45	9	105	163	0	0	26	98	0	0	0	2	3	8	0	0	131	6	25	0	0									
12:45 – 13:00	4	73	147	0	0	22	90	0	0	0	5	2	5	0	0	137	2	18	0	0									
13:00 – 13:15	2	91	158	0	0	34	82	0	0	0	0	3	10	0	0	131	5	17	0	0									
13:15 – 13:30	7	79	144	0	0	29	88	2	0	0	2	2	8	0	0	146	2	36	0	0									
13:30 – 13:45	0	83	159	0	0	29	98	2	0	0	2	2	10	0	0	115	0	28	0	0									
13:45 – 14:00	5	107	167	0	0	35	75	2	0	0	1	4	8	0	0	155	1	20	0	0									
14:00 – 14:15	7	97	150	0	0	22	105	0	0	0	2	3	4	0	0	148	1	24	0	0									
14:15 – 14:30	4	98	201	0	0	32	104	0	0	0	2	0	5	0	0	141	1	15	0	0									
14:30 – 14:45	4	109	209	0	0	36	86	1	0	0	1	3	7	0	0	144	2	24	0	0									
14:45 – 15:00	5	99	178	0	0	30	96	0	0	0	1	3	5	0	0	148	2	47	0	0									
15:00 – 15:15	6	108	167	0	0	22	89	0	0	0	0	6	3	0	0	162	1	22	0	0									
15:15 – 15:30	6	112	173	0	0	20	132	0	0	0	3	5	11	0	0	168	3	42	0	0									
15:30 – 15:45	14	105	179	0	0	23	99	0	0	0	3	1	6	0	0	183	1	36	0	0									
15:45 – 16:00	13	115	224	0	0	26	126	0	0	0	4	5	16	0	0	171	3	55	0	0									
16:00 – 16:15	11	118	217	0	0	30	115	1	0	0	4	1	17	0	0	175	3	56	0	0									
16:15 – 16:30	10	154	203	0	0	34	116	0	0	0	6	2	11	0	0	165	3	43	0	0									
16:30 – 16:45	12	146	224	0	0	35	106	0	0	0	1	4	12	0	0	181	5	46	0	0									
16:45 – 17:00	5	140	210	0	0	34	111	0	0	0	4	6	15	0	0	173	2	55	0	0									
17:00 – 17:15	7	143	213	0	0	42	133	0	0	0	3	0	5	0	0	186	0	39	0	0									
17:15 – 17:30	10	134	202	0	0	36	101	0	0	0	4	3	11	0	0	180	2	44	0	0									
17:30 – 17:45	8	142	219	0	0	34	107	0	0	0	4	1	9	0	0	178	2	41	0	0									
17:45 – 18:00	8	144	188	0	0	40	125	0	0	0	0	2	14	0	0	174	3	49	0	0									
Summary																													
PEAK HOUR	↑ Northbound↑					↓ Southbound↓					→Eastbound→					←Westbound←													
	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped									
07:15 – 08:15	5	256	761	0	0	163	492	0	0	0	0	0	5	0	0	610	2	80	0	0									
PHF	0.9					0.81					0.31					0.88													
Heavy Veh	1%					3%					80%					3%													
14:45 – 15:45	31	424	697	0	0	95	416	0	0	0	7	15	25	0	0	661	7	147	0	0									
PHF	0.97					0.84					0.62					0.93													
Heavy Veh	1%					2%					17%					2%													
15:45 – 16:45	46	533	868	0	0	125	463	1	0	0	15	12	56	0	0	692	14	200	0	0									
PHF	0.95					0.97					0.83					0.97													
Heavy Veh	2%					1%					10%					2%													

TRAFFIC COUNT RECORD															Marr Traffic Subconsultant					Site 2 of 6				
Dayton Boulevard																								
Dayton Boulevard																								
Driveway																								
Lawton Street																								
Date										Lat/Long					Project									
Thursday, January 16, 2025															Red Bank School Safety									
15-Minute Traffic Data																								
TIME	↑ Northbound ↑					↓ Southbound ↓					→ Eastbound →					← Westbound ←								
	Dayton Boulevard					Dayton Boulevard					Driveway					Lawton Street								
	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped				
6:00 – 6:15	0	70	0	0	0	1	69	0			0	0	0	0	0	1	0	2						
6:15 – 6:30	0	99	1	0	0	0	80	0			1	0	0	0	0	0	0	0						
6:30 – 6:45	0	129	0	0	0	1	169	0			0	0	0	0	0	1	0	0						
6:45 – 7:00	0	186	2	0	0	0	225	0			0	0	0	0	0	1	0	0						
7:00 – 7:15	0	175	1	0	0	0	253	0			0	0	0	0	0	1	0	0						
7:15 – 7:30	0	249	3	0	0	0	233	0			1	0	0	0	0	1	0	0						
7:30 – 7:45	0	244	3	0	0	2	275	0			0	0	0	0	0	0	0	2						
7:45 – 8:00	0	277	2	0	0	3	308	0			2	0	0	0	0	0	0	3						
8:00 – 8:15	0	253	5	0	0	0	269	0			1	0	0	0	0	1	0	1						
8:15 – 8:30	0	243	4	0	0	2	250	1			0	0	0	0	0	1	0	0						
8:30 – 8:45	0	227	1	0	0	1	248	0			3	0	0	0	0	2	0	2						
8:45 – 9:00	0	237	4	0	0	2	238	0			1	0	0	0	0	0	0	1						
9:00 – 9:15	0	220	1	0	0	4	195	1			2	0	0	0	0	0	0	2						
9:15 – 9:30	1	232	0	0	0	3	188	0			2	0	1	0	0	0	0	1						
9:30 – 9:45	0	197	3	0	0	2	188	0			2	0	0	0	0	2	0	1						
9:45 – 10:00	0	201	3	0	0	3	182	0			0	0	0	0	0	0	0	5						
10:00 – 10:15	0	186	3	0	0	2	201	0			1	0	0	0	0	0	0	1						
10:15 – 10:30	0	210	1	0	0	1	209	0			2	0	0	0	0	1	0	4						
10:30 – 10:45	0	175	3	0	0	2	200	0			0	0	0	0	0	0	0	2						
10:45 – 11:00	0	233	1	0	0	5	177	0			3	0	0	0	0	0	0	4						
11:00 – 11:15	1	187	3	0	0	2	177	1			2	0	1	0	0	0	0	4						
11:15 – 11:30	3	224	1	0	0	5	164	0			1	0	0	0	0	0	0	2						
11:30 – 11:45	3	194	0	0	0	2	205	1			0	0	1	0	0	2	0	3						
11:45 – 12:00	1	272	4	0	0	1	240	0			1	0	0	0	0	1	0	3						
12:00 – 12:15	0	252	4	0	0	3	204	2			1	0	4	0	0	1	0	1						
12:15 – 12:30	0	251	1	0	0	2	218	1			1	0	3	0	0	1	0	0						
12:30 – 12:45	0	276	4	0	0	1	234	1			0	0	2	0	0	0	0	3						
12:45 – 13:00	2	221	2	0	0	2	234	2			1	0	1	0	0	1	0	4						
13:00 – 13:15	1	239	5	0	0	2	221	3			1	0	0	0	0	1	0	4						
13:15 – 13:30	2	233	4	0	0	4	225	0			1	0	4	0	0	0	0	3						
13:30 – 13:45	2	242	1	0	0	3	229	0			0	0	4	0	0	2	0	3						
13:45 – 14:00	0	272	4	0	0	4	237	0			1	0	0	0	0	1	0	6						
14:00 – 14:15	0	250	1	0	0	1	264	0			4	0	1	0	0	1	1	4						
14:15 – 14:30	3	302	1	0	0	3	256	0			0	0	0	0	0	0	0	1						
14:30 – 14:45	1	318	3	0	0	4	231	1			1	0	1	0	0	2	0	1						
14:45 – 15:00	0	284	2	0	0	1	240	0			2	0	0	0	0	2	0	4						
15:00 – 15:15	1	286	2	0	0	2	245	0			1	0	1	0	0	0	0	3						
15:15 – 15:30	0	281	6	0	0	3	313	0			0	0	0	0	0	0	0	4						
15:30 – 15:45	1	316	1	0	0	4	287	0			1	0	0	0	0	1	0	5						
15:45 – 16:00	0	361	8	0	0	2	307	0			2	0	0	0	0	0	0	3						
16:00 – 16:15	1	324	6	0	0	2	314	1			1	0	1	0	0	1	0	3						
16:15 – 16:30	1	382	3	0	0	4	284	1			2	0	1	0	0	0	0	4						
16:30 – 16:45	0	355	7	0	0	1	309	1			0	0	2	0	0	0	0	3						
16:45 – 17:00	3	361	3	0	0	1	291	1			1	0	1	0	0	0	0	5						
17:00 – 17:15	1	337	1	0	0	1	313	1			1	0	2	0	0	0	0	11						
17:15 – 17:30	0	348	3	0	0	1	282	3			2	0	2	0	0	0	0	0						
17:30 – 17:45	0	361	3	0	0	2	297	3			2	0	1	0	0	1	0	3						
17:45 – 18:00	2	351	5	0	0	2	291	2			1	0	1	0	0	1	0	5						
Summary																								
PEAK HOUR	↑ Northbound ↑					↓ Southbound ↓					→ Eastbound →					← Westbound ←								
	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped				
07:15 – 08:15	0	1023	13	0	0	5	1085	0	0	0	4	0	0	0	0	2	0	6	0	0				
PHF	0.93					0.88					0.5					0.67								
Heavy Veh	2%					3%					0%					0%								
14:45 – 15:45	2	1167	11	0	0	10	1085	0	0	0	4	0	1	0	0	3	0	16	0	0				
PHF	0.93					0.87					0.63					0.79								
Heavy Veh	2%					2%					0%					0%								
15:45 – 16:45	2	1422	24	0	0	9	1214	3	0	0	5	0	4	0	0	1	0	13	0	0				
PHF	0.94					0.97					0.75					0.88								
Heavy Veh	2%					2%					0%					0%								

TRAFFIC COUNT RECORD																				Marr Traffic Subconsultant					Site X of X				
																									Tacoma Avenue				
																									Tacoma Avenue				
Date															Lat/Long					Project					Ashland Terrace				
Thursday, January 16, 2025																				Red Bank School Safety					Ashland Terrace				
15-Minute Traffic Data																													
TIME	↑ Northbound ↑					↓ Southbound ↓					→ Eastbound →					← Westbound ←													
	Tacoma Avenue					Tacoma Avenue					Ashland Terrace					Ashland Terrace													
	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped									
6:00 – 6:15	0	0	0	0	0	0	0	0	0	0	0	64	0	0	0	1	56	0	0	0									
6:15 – 6:30	0	0	0	0	0	0	0	0	0	0	0	86	0	0	0	0	51	0	0	0									
6:30 – 6:45	0	0	0	0	0	0	0	0	0	0	0	130	0	0	0	0	102	0	0	0									
6:45 – 7:00	0	0	0	0	0	0	0	1	0	0	0	153	0	0	0	0	135	0	0	0									
7:00 – 7:15	0	0	0	0	0	0	0	0	0	0	0	164	3	0	0	2	143	1	0	0									
7:15 – 7:30	0	0	0	0	0	0	1	0	0	0	0	216	1	0	0	3	153	0	0	0									
7:30 – 7:45	0	0	2	0	0	0	0	0	0	0	0	235	1	0	0	9	173	0	0	0									
7:45 – 8:00	0	0	2	0	0	0	0	0	0	0	0	269	4	0	0	3	190	2	0	0									
8:00 – 8:15	0	0	0	0	0	0	0	1	0	0	0	196	2	0	0	6	189	0	0	0									
8:15 – 8:30	0	0	0	0	0	0	0	0	0	0	1	201	1	0	0	6	140	0	0	0									
8:30 – 8:45	1	0	0	0	0	0	0	0	0	0	0	193	0	0	0	5	153	0	0	0									
8:45 – 9:00	1	0	1	0	0	0	0	0	0	0	0	210	0	0	0	7	168	1	0	0									
9:00 – 9:15	2	0	0	0	0	1	0	0	0	0	0	174	0	0	0	4	130	0	0	0									
9:15 – 9:30	0	0	0	0	0	0	0	0	0	0	0	149	1	0	0	2	134	0	0	0									
9:30 – 9:45	0	0	0	0	0	1	0	0	0	0	0	153	1	0	0	4	127	1	0	0									
9:45 – 10:00	0	0	1	0	0	0	0	0	0	0	0	152	1	0	0	9	132	3	0	0									
10:00 – 10:15	0	0	1	0	0	0	0	0	0	0	0	144	1	0	0	4	135	1	0	0									
10:15 – 10:30	0	0	0	0	0	0	0	0	0	0	0	169	0	0	0	5	148	1	0	0									
10:30 – 10:45	0	0	1	0	0	0	0	0	0	0	0	123	0	0	0	4	122	1	0	0									
10:45 – 11:00	1	0	1	0	0	1	0	2	0	0	0	182	0	0	0	4	137	1	0	0									
11:00 – 11:15	1	0	0	0	0	0	0	0	0	0	0	169	0	0	0	4	103	0	0	0									
11:15 – 11:30	0	0	1	0	0	0	0	0	0	0	0	180	0	0	0	3	111	1	0	0									
11:30 – 11:45	2	0	1	0	0	0	0	0	0	0	0	152	2	0	0	3	152	0	0	0									
11:45 – 12:00	2	0	4	0	0	0	0	0	0	0	0	189	1	0	0	4	140	0	0	0									
12:00 – 12:15	1	0	2	0	0	0	0	1	0	0	0	177	0	0	0	8	135	4	0	0									
12:15 – 12:30	0	0	2	0	0	1	0	0	0	0	1	205	0	0	0	5	144	1	0	0									
12:30 – 12:45	0	0	0	0	0	0	0	1	0	0	0	189	2	0	0	3	184	1	0	0									
12:45 – 13:00	0	0	1	0	0	0	0	1	0	0	0	170	0	0	0	8	149	7	0	0									
13:00 – 13:15	0	0	0	0	0	0	0	0	0	0	0	189	0	0	0	8	156	1	0	0									
13:15 – 13:30	0	0	0	0	0	0	0	2	0	0	1	176	1	0	0	5	170	3	0	0									
13:30 – 13:45	0	0	0	0	0	0	0	0	0	0	0	187	2	0	0	3	159	3	0	0									
13:45 – 14:00	0	0	2	0	0	0	0	0	0	0	1	206	0	0	0	5	170	2	0	0									
14:00 – 14:15	0	0	2	0	0	0	0	0	0	0	0	175	1	0	0	2	174	2	0	0									
14:15 – 14:30	0	0	0	0	0	1	0	0	0	0	0	227	0	0	0	3	157	0	0	0									
14:30 – 14:45	0	0	1	0	0	1	0	0	0	0	0	248	1	0	0	2	174	0	0	0									
14:45 – 15:00	0	0	2	0	0	0	0	1	0	0	0	215	1	0	0	11	198	2	0	0									
15:00 – 15:15	0	0	0	0	0	0	0	0	0	0	0	195	5	0	0	5	190	4	0	0									
15:15 – 15:30	0	0	2	0	0	0	0	0	0	0	0	196	4	0	0	11	226	9	0	0									
15:30 – 15:45	0	0	2	0	0	1	0	1	0	0	0	226	1	0	0	8	215	7	0	0									
15:45 – 16:00	0	0	0	0	0	0	0	1	0	0	0	246	2	0	0	6	250	3	0	0									
16:00 – 16:15	0	0	0	0	0	0	0	0	0	0	0	256	0	0	0	16	222	6	0	0									
16:15 – 16:30	0	0	2	0	0	0	0	1	0	0	0	240	0	0	0	8	230	0	0	0									
16:30 – 16:45	1	0	0	0	0	0	1	1	0	0	0	258	4	0	0	4	232	3	0	0									
16:45 – 17:00	0	0	3	0	0	0	0	2	0	0	0	246	1	0	0	5	229	10	0	0									
17:00 – 17:15	0	0	3	0	0	0	0	0	0	0	0	248	4	0	0	8	216	4	0	0									
17:15 – 17:30	0	0	1	0	0	0	0	0	0	0	0	236	3	0	0	4	239	3	0	0									
17:30 – 17:45	0	0	3	0	0	0	0	0	0	0	0	251	3	0	0	6	228	4	0	0									
17:45 – 18:00	0	0	0	0	0	0	0	1	0	0	1	232	2	0	0	8	220	8	0	0									
Summary																													
PEAK HOUR	↑ Northbound ↑					↓ Southbound ↓					→ Eastbound →					← Westbound ←													
	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped									
07:15 – 08:15	0	0	4	0	0	0	1	1	0	0	0	916	8	0	0	21	705	2	0	0									
PHF	0.5					0.5					0.85					0.58													
Heavy Veh	0%					0%					2%					4%													
14:45 – 15:45	0	0	6	0	0	1	0	2	0	0	0	832	11	0	0	35	829	22	0	0									
PHF	0.75					0.38					0.93					0.9													
Heavy Veh	0%					0%					2%					2%													
15:45 – 16:45	1	0	2	0	0	0	1	3	0	0	0	1000	6	0	0	34	934	12	0	0									
PHF	0.38					0.5					0.96					0.95													
Heavy Veh	0%					0%					2%					2%													

TRAFFIC COUNT RECORD																				Marr Traffic Subconsultant					Site 4 of 6				
																									Bank Street				
Date															Lat/Long					Project					-				
Thursday, January 16, 2025																				Red Bank School Safety					Ashland Terrace				
15-Minute Traffic Data																													
TIME	↑ Northbound ↑					↓ Southbound ↓					→ Eastbound →					← Westbound ←													
	Bank Street					-					Ashland Terrace					Ashland Terrace													
	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped									
6:00 – 6:15	0	0	1	0	0	0	0	0			0	64	0	0	0	0	57	0											
6:15 – 6:30	0	0	1	0	0	0	0	0			0	87	0	0	0	0	51	0											
6:30 – 6:45	0	0	7	0	0	0	0	0			0	130	0	0	0	0	103	0											
6:45 – 7:00	0	0	4	0	0	0	0	0			0	153	0	0	0	0	138	0											
7:00 – 7:15	0	0	6	0	0	0	0	0			0	168	0	0	0	0	144	0											
7:15 – 7:30	0	0	5	0	0	0	0	0			0	213	0	0	0	0	157	0											
7:30 – 7:45	0	0	4	0	0	0	0	0			0	238	0	0	0	0	183	0											
7:45 – 8:00	0	0	23	0	0	0	0	0			0	275	0	0	0	0	194	0											
8:00 – 8:15	0	0	7	0	0	0	0	0			0	197	0	0	0	0	198	0											
8:15 – 8:30	0	0	9	0	0	0	0	0			0	194	0	0	0	0	146	0											
8:30 – 8:45	0	0	6	0	0	0	0	0			0	192	0	0	0	0	155	0											
8:45 – 9:00	0	0	12	0	0	0	0	0			0	209	0	0	0	0	175	0											
9:00 – 9:15	0	0	5	0	0	0	0	0			0	178	0	0	0	0	134	0											
9:15 – 9:30	0	0	2	0	0	0	0	0			0	147	0	0	0	0	142	0											
9:30 – 9:45	0	0	11	0	0	0	0	0			0	153	0	0	0	0	129	0											
9:45 – 10:00	0	0	6	0	0	0	0	0			0	154	0	0	0	0	138	0											
10:00 – 10:15	0	0	5	0	0	0	0	0			0	146	0	0	0	0	145	0											
10:15 – 10:30	0	0	2	0	0	0	0	0			0	168	0	0	0	0	147	0											
10:30 – 10:45	1	0	7	0	0	0	0	0			0	125	0	0	0	0	127	0											
10:45 – 11:00	0	0	7	0	0	0	0	0			0	183	0	0	0	0	143	0											
11:00 – 11:15	0	0	9	0	0	0	0	0			0	170	0	0	0	0	105	0											
11:15 – 11:30	0	0	10	0	0	0	0	0			0	181	0	0	0	0	116	0											
11:30 – 11:45	0	0	7	0	0	0	0	0			0	153	0	0	0	0	160	0											
11:45 – 12:00	0	0	7	0	0	0	0	0			0	194	0	0	0	0	142	0											
12:00 – 12:15	0	0	5	0	0	0	0	0			0	180	0	0	0	0	147	0											
12:15 – 12:30	0	0	12	0	0	0	0	0			0	207	0	0	0	0	150	0											
12:30 – 12:45	0	0	8	0	0	0	0	0			0	190	0	0	0	0	179	0											
12:45 – 13:00	0	0	4	0	0	0	0	0			0	169	0	0	0	0	170	0											
13:00 – 13:15	0	0	5	0	0	0	0	0			0	189	0	0	0	0	167	0											
13:15 – 13:30	0	0	7	0	0	0	0	0			0	177	0	0	0	0	176	0											
13:30 – 13:45	0	0	11	0	0	0	0	0			0	187	0	0	0	0	160	0											
13:45 – 14:00	0	0	9	0	0	0	0	0			0	207	0	0	0	0	176	0											
14:00 – 14:15	0	0	5	0	0	0	0	0			0	179	0	0	0	0	180	0											
14:15 – 14:30	0	0	4	0	0	0	0	0			0	227	0	0	0	0	160	0											
14:30 – 14:45	0	0	14	0	0	0	0	0			0	252	0	0	0	0	173	0											
14:45 – 15:00	0	0	10	0	0	0	0	0			0	216	0	0	0	0	211	0											
15:00 – 15:15	0	0	5	0	0	0	0	0			0	193	0	0	0	0	203	0											
15:15 – 15:30	0	0	11	0	0	0	0	0			0	200	0	0	0	1	243	0											
15:30 – 15:45	0	0	9	0	0	0	0	0			0	230	0	0	0	0	227	0											
15:45 – 16:00	0	0	16	0	0	0	0	0			0	246	0	0	0	0	264	0											
16:00 – 16:15	0	0	11	0	0	0	0	0			0	256	0	0	0	0	237	0											
16:15 – 16:30	0	0	13	0	0	0	0	0			0	245	0	0	0	0	238	0											
16:30 – 16:45	0	0	12	0	0	0	0	0			0	256	0	0	0	0	239	0											
16:45 – 17:00	0	0	20	0	0	0	0	0			0	250	0	0	0	0	239	0											
17:00 – 17:15	0	0	15	0	0	0	0	0			0	253	0	0	0	0	232	0											
17:15 – 17:30	1	0	19	0	0	0	0	0			0	237	0	0	0	0	243	0											
17:30 – 17:45	0	0	20	0	0	0	0	0			0	253	0	0	0	0	240	0											
17:45 – 18:00	0	0	19	0	0	0	0	0			0	232	0	0	0	0	236	0											
Summary																													
PEAK HOUR	↑ Northbound ↑					↓ Southbound ↓					→ Eastbound →					← Westbound ←													
	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped									
07:15 – 08:15	0	0	39	0	0	0	0	0	0	0	0	923	0	0	0	0	0	732	0	0	0								
PHF	0.42					0					0.84					0.92													
Heavy Veh	3%					0%					2%					4%													
14:45 – 15:45	0	0	35	0	0	0	0	0	0	0	0	839	0	0	0	0	1	884	0	0	0								
PHF	0.8					0					0.91					0.91													
Heavy Veh	0%					0%					2%					2%													
15:45 – 16:45	0	0	52	0	0	0	0	0	0	0	0	1003	0	0	0	0	0	978	0	0	0								
PHF	0.81					0					0.98					0.93													
Heavy Veh	2%					0%					2%					2%													

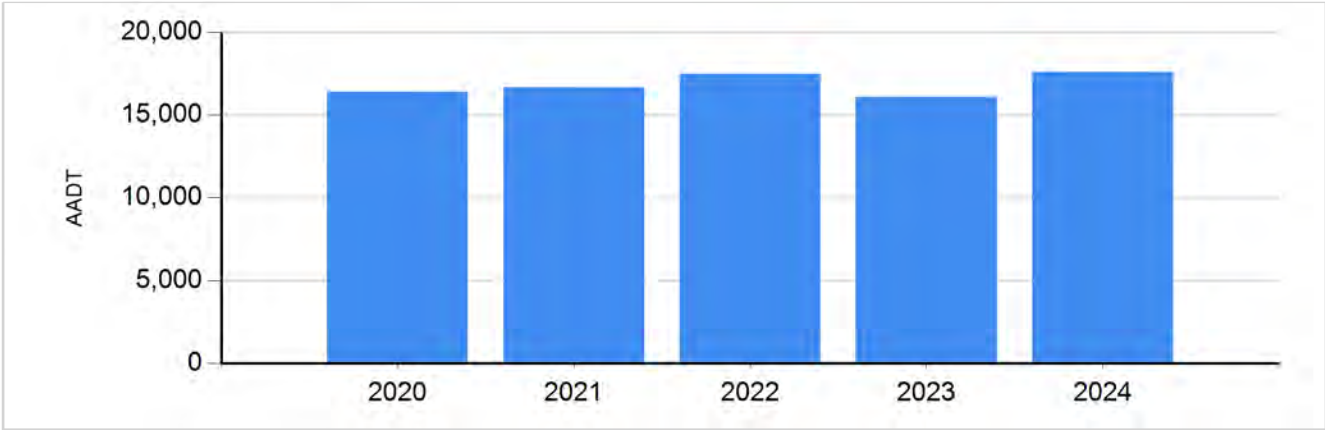
TRAFFIC COUNT RECORD																				Marr Traffic Subconsultant					Site 3 of 6				
																									Knollwood Drive				
																									Crestview Drive				
Date															Lat/Long					Project					Ashland Terrace				
Thursday, January 16, 2025																				Red Bank School Safety					Ashland Terrace				
15-Minute Traffic Data																													
TIME	↑ Northbound↑					↓ Southbound↓					→Eastbound→					←Westbound←													
	Knollwood Drive					Crestview Drive					Ashland Terrace					Ashland Terrace													
	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped									
6:00 – 6:15	0	0	1	0	0	1	0	1			1	64	0	0	0	0	56	0											
6:15 – 6:30	0	0	3	0	0	2	0	1			0	85	0	0	0	0	48	0											
6:30 – 6:45	1	0	2	0	0	1	0	1			3	131	0	0	0	0	100	1											
6:45 – 7:00	1	0	2	0	0	5	0	1			1	155	0	0	0	1	124	2											
7:00 – 7:15	0	0	0	0	0	0	0	4			1	165	1	0	0	0	128	1											
7:15 – 7:30	2	0	3	0	0	4	0	1			5	197	0	0	0	1	147	1											
7:30 – 7:45	2	0	4	0	0	2	0	2			1	248	0	0	0	0	182	0											
7:45 – 8:00	1	0	1	0	0	4	0	5			1	292	0	0	0	2	198	0											
8:00 – 8:15	1	0	0	0	0	3	0	1			1	204	0	0	0	0	185	0											
8:15 – 8:30	0	0	3	0	0	1	0	2			2	209	1	0	0	1	151	1											
8:30 – 8:45	0	0	0	0	0	1	0	3			1	208	0	0	0	2	153	3											
8:45 – 9:00	1	0	0	0	0	3	0	0			1	213	0	0	0	1	177	3											
9:00 – 9:15	1	0	2	0	0	4	0	3			4	186	1	0	0	0	127	2											
9:15 – 9:30	0	0	3	0	0	1	0	2			0	139	0	0	0	0	143	2											
9:30 – 9:45	1	0	1	0	0	1	0	3			0	165	1	0	0	1	132	1											
9:45 – 10:00	2	0	3	0	0	0	0	1			1	156	1	0	0	2	131	0											
10:00 – 10:15	1	0	2	0	0	0	0	3			0	154	0	0	0	0	145	2											
10:15 – 10:30	0	0	1	0	0	1	0	1			0	175	2	0	0	2	148	0											
10:30 – 10:45	1	0	1	0	0	1	0	2			1	137	0	0	0	1	122	2											
10:45 – 11:00	0	0	1	0	0	2	1	3			2	187	0	0	0	3	141	3											
11:00 – 11:15	1	0	1	0	0	0	0	3			2	173	0	0	0	1	104	0											
11:15 – 11:30	1	0	1	0	0	1	0	0			1	195	0	0	0	1	110	1											
11:30 – 11:45	0	0	3	0	0	0	0	3			5	146	2	0	0	1	162	0											
11:45 – 12:00	0	0	1	0	0	0	0	1			1	201	3	0	0	0	147	1											
12:00 – 12:15	0	1	2	0	0	0	0	1			1	188	1	0	0	4	141	2											
12:15 – 12:30	2	0	0	0	0	2	0	1			1	222	0	0	0	5	152	0											
12:30 – 12:45	0	0	2	0	0	1	0	1			1	191	1	0	0	0	173	0											
12:45 – 13:00	0	0	4	0	0	2	0	2			1	170	2	0	0	3	170	4											
13:00 – 13:15	3	0	1	0	0	1	0	2			2	190	1	0	0	6	165	2											
13:15 – 13:30	1	0	1	0	0	2	0	1			2	183	0	0	0	0	169	0											
13:30 – 13:45	0	0	2	0	0	1	0	3			0	192	0	0	0	1	161	0											
13:45 – 14:00	2	0	1	0	0	0	1	1			2	216	0	0	0	2	175	2											
14:00 – 14:15	2	0	1	0	0	0	0	1			1	189	1	0	0	2	173	0											
14:15 – 14:30	0	0	2	0	0	0	0	1			2	222	0	0	0	1	157	1											
14:30 – 14:45	0	0	3	0	0	2	0	1			8	257	2	0	0	2	171	2											
14:45 – 15:00	0	0	4	0	0	0	0	3			1	218	0	0	0	2	204	1											
15:00 – 15:15	0	0	1	0	0	2	0	2			4	192	0	0	0	3	199	3											
15:15 – 15:30	1	0	0	0	0	0	0	0			1	214	1	0	0	5	249	2											
15:30 – 15:45	0	0	3	0	0	1	0	2			2	232	3	0	0	4	223	2											
15:45 – 16:00	0	0	1	0	0	0	1	2			2	261	0	0	0	5	266	5											
16:00 – 16:15	0	0	4	0	0	2	0	3			2	260	1	0	0	6	229	4											
16:15 – 16:30	0	0	4	0	0	1	0	0			3	252	0	0	0	2	240	2											
16:30 – 16:45	0	0	3	0	0	2	0	0			2	259	2	0	0	1	242	2											
16:45 – 17:00	1	0	2	0	0	2	0	0			2	264	2	0	0	4	241	4											
17:00 – 17:15	0	0	3	0	0	0	0	0			5	256	2	0	0	9	237	2											
17:15 – 17:30	0	0	2	0	0	0	0	2			1	260	0	0	0	3	241	5											
17:30 – 17:45	0	0	1	0	0	1	0	3			4	269	1	0	0	2	242	7											
17:45 – 18:00	1	0	0	0	0	2	0	1			2	247	1	0	0	1	235	3											
Summary																													
PEAK HOUR	↑ Northbound↑					↓ Southbound↓					→Eastbound→					←Westbound←													
	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped	Left	Thru	Right	U	Ped									
07:15 – 08:15	6	0	8	0	0	13	0	9	0	0	8	941	0	0	0	3	712	1	0	0									
PHF	0.58					0.61					0.81					0.9													
Heavy Veh	7%					5%					2%					3%													
14:45 – 15:45	1	0	8	0	0	3	0	7	0	0	8	856	4	0	0	14	875	8	0	0									
PHF	0.56					0.63					0.92					0.88													
Heavy Veh	0%					0%					2%					2%													
15:45 – 16:45	0	0	12	0	0	5	1	5	0	0	9	1032	3	0	0	14	977	13	0	0									
PHF	0.75					0.55					0.99					0.91													
Heavy Veh	0%					0%					2%					2%													

AADT by Year Comparison for 1/1/2020 - 12/31/2024
Criteria: Location ID = 33000049

District: Region 2
County: Hamilton
Community: Chattanooga

Location ID: 33000049
Located On: 03587
At: NORTHEAST OF RED BANK

LRS ID: 33L358701P000
LRS Point: 0.9070000



Year	AADT	% Change YOY
2020	16,409	3.0%
2021	16,664	1.6%
2022	17,478	4.9%
2023	16,084	-8.0%
2024	17,604	9.5%

NOTE: Red text means percent change is >20%

Bi-Directional Speed & Class Count || NB EB Speed DOT 60min

Red Bank, TN



Site 1
Dayton Blvd,
north of Trenton St

Date
Thursday, January 16, 2025

Weather
Fair
40°F

Lat/Long
35.121071°, -85.288506°

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0000 - 2400 (Weekday 24h Session)

NB EB Speed DOT 60min

Time	Northbound (Movement 1.1)															60min Total	Pace Speed	Number In Pace
	<15 mph	16-20 mph	21-25 mph	26-30 mph	31-35 mph	36-40 mph	41-45 mph	46-50 mph	51-55 mph	56-60 mph	61-65 mph	66-70 mph	71-75 mph	>76 mph				
0000 - 0100	0	1	4	15	15	5	1	0	0	0	0	0	0	0	41	27-36	30 (73.2%)	
0100 - 0200	0	0	1	9	9	6	3	1	0	0	0	0	0	0	29	30-39	18 (62.1%)	
0200 - 0300	0	1	3	14	18	7	0	0	0	0	0	0	0	0	43	27-36	32 (74.4%)	
0300 - 0400	0	0	8	29	22	12	0	0	0	0	0	0	0	0	71	27-36	55 (77.5%)	
0400 - 0500	0	3	34	82	52	13	2	0	0	0	0	0	0	0	186	25-34	139 (74.7%)	
0500 - 0600	31	56	145	148	60	25	5	0	1	0	0	0	0	0	471	21-30	293 (62.2%)	
0600 - 0700	156	201	232	129	39	20	4	0	0	0	0	0	0	0	781	17-26	409 (52.4%)	
0700 - 0800	108	147	287	161	68	22	4	1	0	0	0	0	0	0	798	19-28	425 (53.2%)	
0800 - 0900	46	142	232	191	78	21	5	0	0	0	0	0	0	0	715	20-29	406 (56.8%)	
0900 - 1000	40	124	267	192	67	28	5	0	0	0	0	0	0	0	723	20-29	448 (61.9%)	
1000 - 1100	78	151	285	181	67	14	2	0	0	0	0	0	0	0	778	19-28	463 (59.5%)	
1100 - 1200	151	199	255	157	60	13	4	0	0	0	0	0	0	0	839	17-26	428 (51.0%)	
1200 - 1300	116	213	221	133	53	14	2	1	0	1	0	0	0	0	754	17-26	411 (54.5%)	
1300 - 1400	163	228	287	138	60	13	2	0	0	0	0	0	0	0	891	17-26	496 (55.7%)	
1400 - 1500	209	265	246	121	72	12	2	0	2	0	0	0	0	0	929	16-25	511 (55.0%)	
1500 - 1600	229	252	221	127	51	12	0	0	0	0	0	0	0	0	892	16-25	473 (53.0%)	
1600 - 1700	256	255	225	102	36	11	1	0	0	0	0	0	0	0	886	15-24	481 (54.3%)	
1700 - 1800	79	176	260	177	77	17	8	1	0	0	0	0	0	0	795	19-28	439 (55.2%)	
1800 - 1900	24	70	192	170	85	29	5	3	0	0	0	0	0	0	578	22-31	366 (63.2%)	
1900 - 2000	5	20	112	181	100	30	3	0	0	0	0	0	0	0	451	24-33	308 (68.3%)	
2000 - 2100	0	10	69	136	81	27	4	0	0	0	0	0	0	0	327	25-34	224 (68.5%)	
2100 - 2200	0	3	30	66	48	22	6	0	1	0	0	0	0	0	176	26-35	114 (64.8%)	
2200 - 2300	1	0	9	39	31	17	4	0	1	0	0	0	0	0	102	27-36	71 (69.6%)	
2300 - 2400	0	2	4	28	19	11	2	0	0	0	0	0	0	0	66	27-36	44 (66.7%)	

Session Total	1692	2519	3629	2726	1268	401	74	7	5	1	0	0	0	0	12322
Percentage	13.7%	20.4%	29.5%	22.1%	10.3%	3.3%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

AM Peak Hour	0600 - 0700	0600 - 0700	0700 - 0800	0900 - 1000	0800 - 0900	0900 - 1000	0500 - 0600	0100 - 0200	0500 - 0600	-	-	-	-	-	1100 - 1200
AM Peak Hour Volume	156	201	287	192	78	28	5	1	1	0	0	0	0	0	839

PM Peak Hour	1600 - 1700	1400 - 1500	1300 - 1400	1900 - 2000	1900 - 2000	1900 - 2000	1700 - 1800	1800 - 1900	1400 - 1500	1200 - 1300	-	-	-	-	1400 - 1500
PM Peak Hour Volume	256	265	287	181	100	30	8	3	2	1	0	0	0	0	929

15th Percentile	16 mph
50th Percentile	23 mph
85th Percentile	30 mph
95th Percentile	35 mph

10mph Pace Speed	19-28 mph
Number in Pace	6133
Percent in Pace (%)	49.8
>PSL (40mph)	87
>PSL % (40mph) (%)	0.7
Mean Speed (Average)	23 mph

Bi-Directional Speed & Class Count || SB WB Speed DOT 60min

Red Bank, TN



Site 1
Dayton Blvd,
north of Trenton St

Date
Thursday, January 16, 2025

Weather
Fair
40°F

Lat/Long
35.121071°, -85.288506°

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0000 - 2400 (Weekday 24h Session)

SB WB Speed DOT 60min

Time	Southbound (Movement 1,2)															60min Total	Pace Speed	Number in Pace
	<15 mph	16-20 mph	21-25 mph	26-30 mph	31-35 mph	36-40 mph	41-45 mph	46-50 mph	51-55 mph	56-60 mph	61-65 mph	66-70 mph	71-75 mph	>76 mph				
0000 - 0100	0	1	3	11	7	9	1	1	0	0	0	0	0	0	33	28-37	19 (57.6%)	
0100 - 0200	0	1	1	7	7	3	1	0	0	1	0	0	0	0	21	28-37	12 (57.1%)	
0200 - 0300	0	0	4	10	27	7	5	2	1	1	0	0	0	0	57	30-39	38 (66.7%)	
0300 - 0400	0	1	3	14	22	15	7	3	1	0	0	0	0	0	66	30-39	36 (54.5%)	
0400 - 0500	0	0	10	61	78	39	9	4	0	0	0	0	0	0	201	28-37	146 (72.6%)	
0500 - 0600	0	15	35	254	198	62	25	9	0	0	0	0	0	0	598	27-36	439 (73.4%)	
0600 - 0700	11	53	220	350	262	65	28	4	0	0	0	0	0	0	993	24-33	639 (64.4%)	
0700 - 0800	7	33	204	433	192	68	17	5	1	1	0	0	0	0	961	24-33	713 (74.1%)	
0800 - 0900	1	8	146	316	189	51	14	1	0	0	0	0	0	0	726	25-34	531 (73.1%)	
0900 - 1000	0	4	167	317	182	51	17	5	0	0	0	0	0	0	743	25-34	552 (74.3%)	
1000 - 1100	7	12	175	356	155	51	10	0	0	0	0	0	0	0	766	24-33	580 (75.7%)	
1100 - 1200	5	27	225	378	163	49	12	1	0	0	0	0	0	0	860	24-33	620 (72.1%)	
1200 - 1300	9	67	223	374	147	37	12	1	1	0	0	0	0	0	871	23-32	632 (72.6%)	
1300 - 1400	17	72	299	345	159	47	10	0	0	0	0	0	0	0	949	23-32	637 (67.1%)	
1400 - 1500	20	84	398	377	136	33	7	0	0	0	0	0	0	0	1055	22-31	763 (72.3%)	
1500 - 1600	7	121	407	375	144	54	11	0	0	0	0	0	0	0	1119	22-31	737 (65.9%)	
1600 - 1700	37	112	369	355	136	56	14	0	0	0	0	0	0	0	1079	22-31	685 (63.4%)	
1700 - 1800	9	75	274	337	162	51	4	5	2	0	0	0	0	0	919	23-32	610 (66.4%)	
1800 - 1900	0	12	121	277	141	55	23	3	0	0	0	0	0	0	632	25-34	455 (72.0%)	
1900 - 2000	1	1	66	217	118	31	12	0	0	0	0	0	0	0	446	25-34	353 (79.1%)	
2000 - 2100	0	0	27	150	102	45	12	1	0	0	0	0	0	0	337	27-36	243 (72.1%)	
2100 - 2200	0	1	16	74	83	28	9	2	0	0	0	0	0	0	213	27-36	162 (76.1%)	
2200 - 2300	0	1	12	45	42	26	7	1	0	0	0	0	0	0	134	28-37	90 (67.2%)	
2300 - 2400	0	2	2	22	19	10	5	1	0	0	0	0	0	0	61	28-37	41 (67.2%)	

Session Total	131	703	3407	5455	2871	943	272	49	6	3	0	0	0	0	13840
Percentage	0.9%	5.1%	24.6%	39.4%	20.7%	6.8%	2.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

AM Peak Hour	0600 - 0700	0600 - 0700	1100 - 1200	0700 - 0800	0600 - 0700	0700 - 0800	0600 - 0700	0500 - 0600	0200 - 0300	0100 - 0200	-	-	-	-	0600 - 0700
AM Peak Hour Volume	11	53	225	433	262	68	28	9	1	1	0	0	0	0	993

PM Peak Hour	1600 - 1700	1500 - 1600	1500 - 1600	1400 - 1500	1700 - 1800	1600 - 1700	1800 - 1900	1700 - 1800	1700 - 1800	-	-	-	-	-	1500 - 1600
PM Peak Hour Volume	37	121	407	377	162	56	23	5	2	0	0	0	0	0	1119

15th Percentile	23 mph
50th Percentile	28 mph
85th Percentile	34 mph
95th Percentile	38 mph

10mph Pace Speed	24-33 mph
Number in Pace	9342
Percent in Pace (%)	67.5
>PSL (40mph)	330
>PSL % (40mph) (%)	2.4
Mean Speed (Average)	28 mph

Bi-Directional Speed & Class Count || Bi-Directional Speed DOT 60min

Red Bank, TN



Site 1
Dayton Blvd,
north of Trenton St

Date
Thursday, January 16, 2025

Weather
Fair
40°F

Lat/Long
35.121071°, -85.288506°

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0000 - 2400 (Weekday 24h Session)

Bi-Directional Speed DOT 60min

Time	Bi-Directional 60min														60min	Pace	Number
	<15 mph	16-20 mph	21-25 mph	26-30 mph	31-35 mph	36-40 mph	41-45 mph	46-50 mph	51-55 mph	56-60 mph	61-65 mph	66-70 mph	71-75 mph	>76 mph	Total	Speed	In Pace
0000 - 0100	0	2	7	26	22	14	2	1	0	0	0	0	0	0	74	27-36	47 (63.5%)
0100 - 0200	0	1	2	16	16	9	4	1	0	1	0	0	0	0	50	29-38	29 (58.0%)
0200 - 0300	0	1	7	24	45	14	5	2	1	1	0	0	0	0	100	29-38	70 (70.0%)
0300 - 0400	0	1	11	43	44	27	7	3	1	0	0	0	0	0	137	28-37	95 (69.3%)
0400 - 0500	0	3	44	143	130	52	11	4	0	0	0	0	0	0	387	27-36	272 (70.3%)
0500 - 0600	31	71	180	402	258	87	30	9	1	0	0	0	0	0	1069	24-33	649 (60.7%)
0600 - 0700	167	254	452	479	301	85	32	4	0	0	0	0	0	0	1774	21-30	931 (52.5%)
0700 - 0800	115	180	491	594	260	90	21	6	1	1	0	0	0	0	1759	22-31	1060 (60.2%)
0800 - 0900	47	150	378	507	267	72	19	1	0	0	0	0	0	0	1441	22-31	871 (60.4%)
0900 - 1000	40	128	434	509	249	79	22	5	0	0	0	0	0	0	1466	23-32	938 (63.9%)
1000 - 1100	85	163	460	537	222	65	12	0	0	0	0	0	0	0	1544	21-30	997 (64.6%)
1100 - 1200	156	226	480	535	223	62	16	1	0	0	0	0	0	0	1699	21-30	1015 (59.7%)
1200 - 1300	125	280	444	507	200	51	14	2	1	1	0	0	0	0	1625	20-29	889 (54.7%)
1300 - 1400	180	300	586	483	219	60	12	0	0	0	0	0	0	0	1840	20-29	1010 (54.9%)
1400 - 1500	229	349	644	498	208	45	9	0	2	0	0	0	0	0	1984	19-28	1091 (55.0%)
1500 - 1600	236	373	628	502	195	66	11	0	0	0	0	0	0	0	2011	19-28	1057 (52.6%)
1600 - 1700	293	367	594	457	172	67	15	0	0	0	0	0	0	0	1965	19-28	991 (50.4%)
1700 - 1800	88	251	534	514	239	68	12	6	2	0	0	0	0	0	1714	21-30	1048 (61.1%)
1800 - 1900	24	82	313	447	226	84	28	6	0	0	0	0	0	0	1210	24-33	789 (65.2%)
1900 - 2000	6	21	178	398	218	61	15	0	0	0	0	0	0	0	897	24-33	649 (72.4%)
2000 - 2100	0	10	96	286	183	72	16	1	0	0	0	0	0	0	664	26-35	469 (70.6%)
2100 - 2200	0	4	46	140	131	50	15	2	1	0	0	0	0	0	389	27-36	275 (70.7%)
2200 - 2300	1	1	21	84	73	43	11	1	1	0	0	0	0	0	236	28-37	159 (67.4%)
2300 - 2400	0	4	6	50	38	21	7	1	0	0	0	0	0	0	127	27-36	84 (66.1%)

Session Total	1823	3222	7036	8181	4139	1344	346	56	11	4	0	0	0	0	26162
Percentage	7.0%	12.3%	26.9%	31.3%	15.8%	5.1%	1.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

AM Peak Hour	0600 - 0700	0600 - 0700	0700 - 0800	0700 - 0800	0600 - 0700	0700 - 0800	0600 - 0700	0500 - 0600	0200 - 0300	0100 - 0200	-	-	-	-	0600 - 0700
AM Peak Hour Volume	167	254	491	594	301	90	32	9	1	1	0	0	0	0	1774

PM Peak Hour	1600 - 1700	1500 - 1600	1400 - 1500	1700 - 1800	1700 - 1800	1800 - 1900	1800 - 1900	1700 - 1800	1400 - 1500	1200 - 1300	-	-	-	-	1500 - 1600
PM Peak Hour Volume	293	373	644	514	239	84	28	6	2	1	0	0	0	0	2011

15th Percentile	19 mph
50th Percentile	26 mph
85th Percentile	32 mph
95th Percentile	37 mph

10mph Pace Speed	21-30 mph
Number in Pace	15217
Percent in Pace (%)	58.2
>PSL (40mph)	417
>PSL % (40mph) (%)	1.6
Mean Speed (Average)	26 mph

Speed Study || Ashland Terrace

Eastbound

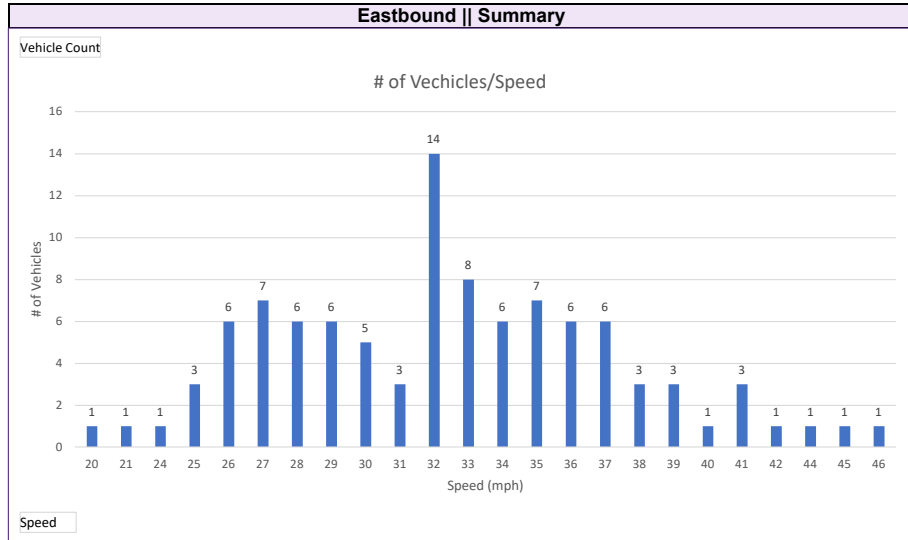


Vehicle Class	All
Total Count	100
Average Speed (mph)	32
Range (mph)	20 - 46
50th Percentile (mph)	33
85th Percentile (mph)	37

Date	Weather	Posted Speed
1/16/2025	Cloudy	25 MPH

<u>Eastbound</u>	
Start Time	10:00:00 AM
End Time	10:12:00 AM

Speed mph	Vehicles
20	1
21	1
24	1
25	3
26	6
27	7
28	6
29	6
30	5
31	3
32	14
33	8
34	6
35	7
36	6
37	6
38	3
39	3
40	1
41	3
42	1
44	1
45	1
46	1



Speed Study || Ashland Terrace

Westbound



Vehicle Class	All
Total Count	100
Average Speed (mph)	32
Range (mph)	23 - 44
50th Percentile (mph)	32
85th Percentile (mph)	36

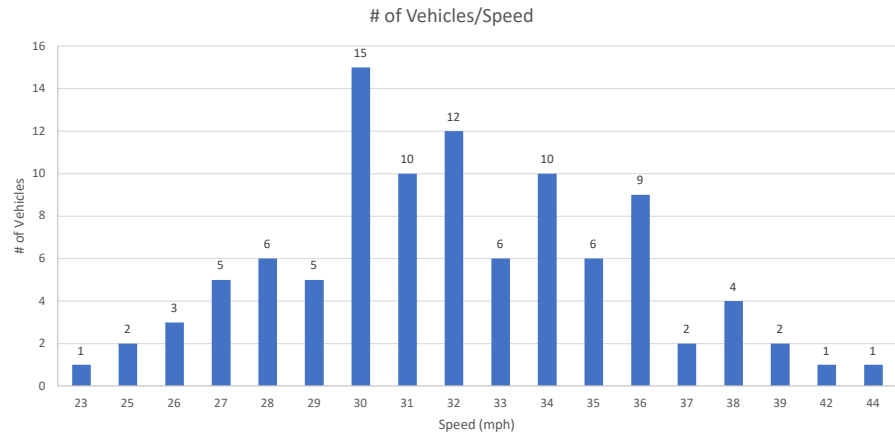
Date	Weather	Posted Speed
1/16/2025	Cloudy	25 MPH

<u>Westbound</u>	
Start Time	10:15:00 AM
End Time	10:25:00 AM

Speed (mph)	# of Vehicles
23	1
25	2
26	3
27	5
28	6
29	5
30	15
31	10
32	12
33	6
34	10
35	6
36	9
37	2
38	4
39	2
42	1
44	1

Westbound || Summary

Vehicle Count



Speed

APPENDIX B – SAFETY DATA

Safety Crash Data

TENNESSEE DEPARTMENT OF TRANSPORTATION

COUNTY	= Hamilton	Date:	2/27/2025
Route	= Ashland Terrace		
Location	= Red Bank, Tennessee		
Highway Type	= 4-lane undivided		
FUNCTIONAL CLASS	Minor Arterial		
DATA YEARS	= 2020-2024		
ADT YEARS USED	= 2023		
COMMENTS	= Crash Data Range - January 1, 2020 - December 31, 2024 Analysis segment - Dayton Blvd. to Knollwood Drive/Crestview Drive		
ANALYZED BY	=		

SECTION = MORE THAN 0.10 MILE / SPOT = LESS THAN OR EQUAL TO 0.10 MILE				
BLM	ELM	Length	Average AADT	VMT
0.000	0.450	0.450	17,604	7,922
0.000	0.000	0.000	0	0
0.000	0.000	0.000	0	0
0.000	0.000	0.000	0	0
0.000	0.000	0.000	0	0
0.000	0.000	0.000	0	0
0.000	0.000	0.000	0	0
		0.450	17,604	7,922

INTERSECTION

Log Mile =

**PRODUCED PURSUANT TO
PUBLIC RECORDS REQUEST**

This document is covered by 23 USC §407
and its production pursuant to a public
document records request does not
waive the provisions of §407

Leg	Traffic AADT
North =	0
East =	0
South =	0
West =	0
Entering AADT =	0

#VALUE!

		4-Lane Undivided 2020-2024				
		Total	Fatal	Incap. Injury	*Severe Crashes	Other Injury
No. of Crashes	=	182	0	2	2	28
No. of Years	=	5				
SW avg. rate	=	4.145	0.032	0.081	0.113	0.272

19-21 S/W Rates

Exposure (E)	=	14.4573				
Crash Rate (A)	=	12.589	0.000	0.138	0.138	1.937
Critical Rate (C)	=	5.426				
Severity Index (SI)	=	0.1758				
Actual Rate/SW Average	=	3.04	0.00	1.71	1.22	7.12
Ratio of A/C	=	2.32				

* Severe Crashes are the sum of fatal and incapacitating injury crashes

Revised 4/8/15

APPENDIX C – CAPACITY ANALYSIS

Capacity Analysis - Synchro

Queues

1: Dayton Blvd & Driveway/Ashland Terrace

02/26/2025



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	3	19	346	349	91	6	284	846	201	608
v/c Ratio	0.02	0.11	0.56	0.56	0.10	0.02	0.38	0.66	0.41	0.43
Control Delay (s/veh)	45.0	25.2	28.0	28.1	2.3	17.8	32.5	4.7	20.5	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	45.0	25.2	28.0	28.1	2.3	17.8	32.5	4.7	20.5	22.7
Queue Length 50th (ft)	1	1	123	124	0	2	65	21	65	110
Queue Length 95th (ft)	4	2	327	329	18	10	124	129	122	218
Internal Link Dist (ft)		187		457			545			523
Turn Bay Length (ft)			310			100		510	100	
Base Capacity (vph)	257	250	706	708	983	492	1516	1333	521	1501
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.08	0.49	0.49	0.09	0.01	0.19	0.63	0.39	0.41
Intersection Summary										

HCM 7th Signalized Intersection Summary

1: Dayton Blvd & Driveway/Ashland Terrace

02/26/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	5	610	2	80	5	256	761	163	492	1
Future Volume (veh/h)	1	1	5	610	2	80	5	256	761	163	492	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1885	1885	1885	1856	1856	1856
Adj Flow Rate, veh/h	3	3	16	694	0	91	6	284	846	201	607	1
Peak Hour Factor	0.31	0.31	0.31	0.88	0.88	0.88	0.90	0.90	0.90	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	3	3	3	1	1	1	3	3	3
Cap, veh/h	66	9	51	875	0	552	381	1301	976	410	1629	3
Arrive On Green	0.04	0.04	0.04	0.25	0.00	0.25	0.02	0.36	0.36	0.10	0.45	0.45
Sat Flow, veh/h	1781	256	1368	3534	0	1572	1795	3582	1598	1767	3611	6
Grp Volume(v), veh/h	3	0	19	694	0	91	6	284	846	201	296	312
Grp Sat Flow(s),veh/h/ln	1781	0	1624	1767	0	1572	1795	1791	1598	1767	1763	1854
Q Serve(g_s), s	0.2	0.0	1.1	17.7	0.0	3.8	0.2	5.3	35.0	6.3	10.7	10.7
Cycle Q Clear(g_c), s	0.2	0.0	1.1	17.7	0.0	3.8	0.2	5.3	35.0	6.3	10.7	10.7
Prop In Lane	1.00		0.84	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	66	0	60	875	0	552	381	1301	976	410	795	836
V/C Ratio(X)	0.05	0.00	0.32	0.79	0.00	0.16	0.02	0.22	0.87	0.49	0.37	0.37
Avail Cap(c_a), veh/h	222	0	202	1283	0	733	633	1301	976	502	795	836
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	0.0	45.2	33.9	0.0	21.6	18.7	21.2	14.1	14.8	17.5	17.5
Incr Delay (d2), s/veh	0.3	0.0	3.0	2.8	0.0	0.2	0.0	0.2	9.0	0.9	0.6	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.5	7.8	0.0	1.4	0.1	2.1	22.2	2.4	4.2	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	45.1	0.0	48.2	36.7	0.0	21.7	18.7	21.4	23.1	15.7	18.1	18.0
LnGrp LOS	D		D	D		C	B	C	C	B	B	B
Approach Vol, veh/h	22			785			1136			809		
Approach Delay, s/veh	47.8			35.0			22.6			17.5		
Approach LOS	D			C			C			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.0	41.0		9.6	7.5	49.5		29.9				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	15.0	35.0		12.0	15.0	35.0		35.0				
Max Q Clear Time (g_c+I1), s	8.3	37.0		3.1	2.2	12.7		19.7				
Green Ext Time (p_c), s	0.3	0.0		0.0	0.0	6.6		4.1				
Intersection Summary												
HCM 7th Control Delay, s/veh	24.8											
HCM 7th LOS	C											
Notes												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												

Intersection

Int Delay, s/veh 1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	941	1	3	712	1	6	1	8	13	1	9
Future Vol, veh/h	8	941	1	3	712	1	6	1	8	13	1	9
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	130	-	-	150	-	-	70	-	-	65	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	90	90	90	50	50	50	56	56	56
Heavy Vehicles, %	2	2	2	3	3	3	7	7	7	5	5	5
Mvmt Flow	10	1148	1	3	791	1	12	2	16	23	2	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	792	0	0	1149	0	0	1571	1967	574	1393	1967	396
Stage 1	-	-	-	-	-	-	1168	1168	-	798	798	-
Stage 2	-	-	-	-	-	-	403	799	-	594	1168	-
Critical Hdwy	4.14	-	-	4.16	-	-	7.64	6.64	7.04	7.6	6.6	7
Critical Hdwy Stg 1	-	-	-	-	-	-	6.64	5.64	-	6.6	5.6	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.64	5.64	-	6.6	5.6	-
Follow-up Hdwy	2.22	-	-	2.23	-	-	3.57	4.07	3.37	3.55	4.05	3.35
Pot Cap-1 Maneuver	824	-	-	598	-	-	71	59	449	99	60	595
Stage 1	-	-	-	-	-	-	198	256	-	339	389	-
Stage 2	-	-	-	-	-	-	582	384	-	451	260	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	824	-	-	598	-	-	66	58	449	90	59	595
Mov Cap-2 Maneuver	-	-	-	-	-	-	66	58	-	90	59	-
Stage 1	-	-	-	-	-	-	195	253	-	337	387	-
Stage 2	-	-	-	-	-	-	560	382	-	426	256	-

Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0.08			0.05			40.67			40.39		
HCM LOS							E			E		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	66	256	824	-	-	598	-	-	90	312
HCM Lane V/C Ratio	0.182	0.07	0.012	-	-	0.006	-	-	0.257	0.057
HCM Ctrl Dly (s/v)	71.5	20.1	9.4	-	-	11.1	-	-	58.2	17.3
HCM Lane LOS	F	C	A	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	0.6	0.2	0	-	-	0	-	-	0.9	0.2

Intersection

Int Delay, s/veh 1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑↑		↑
Traffic Vol, veh/h	923	0	0	732	0	39
Future Vol, veh/h	923	0	0	732	0	39
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	84	84	92	92	42	42
Heavy Vehicles, %	2	2	4	4	3	3
Mvmt Flow	1099	0	0	796	0	93

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	-	- 1099
Stage 1	-	-	- -
Stage 2	-	-	- -
Critical Hdwy	-	-	- 6.245
Critical Hdwy Stg 1	-	-	- -
Critical Hdwy Stg 2	-	-	- -
Follow-up Hdwy	-	-	- 3.3285
Pot Cap-1 Maneuver	-	0	0 - 256
Stage 1	-	0	0 -
Stage 2	-	0	0 -
Platoon blocked, %	-		-
Mov Cap-1 Maneuver	-	-	- 256
Mov Cap-2 Maneuver	-	-	- -
Stage 1	-	-	- -
Stage 2	-	-	- -

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	26.85
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	256	-	-
HCM Lane V/C Ratio	0.363	-	-
HCM Ctrl Dly (s/v)	26.8	-	-
HCM Lane LOS	D	-	-
HCM 95th %tile Q(veh)	1.6	-	-

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	1	916	8	21	705	2	1	1	4	0	1	1
Future Vol, veh/h	1	916	8	21	705	2	1	1	4	0	1	1
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	85	85	85	58	58	58	50	50	50	50	50	50
Heavy Vehicles, %	2	2	2	4	4	4	2	2	2	2	2	2
Mvmt Flow	1	1078	9	36	1216	3	2	2	8	0	2	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1219	0	0	1087	0	0	1766	2376	1082	-	2379	609
Stage 1	-	-	-	-	-	-	1085	1085	-	-	1290	-
Stage 2	-	-	-	-	-	-	681	1291	-	-	1089	-
Critical Hdwy	4.13	-	-	4.16	-	-	7.33	6.53	6.23	-	6.53	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	-	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.53	5.53	-	-	5.53	-
Follow-up Hdwy	2.219	-	-	2.238	-	-	3.519	4.019	3.319	-	4.019	3.319
Pot Cap-1 Maneuver	570	-	-	630	-	-	59	34	263	0	34	439
Stage 1	-	-	-	-	-	-	262	292	-	0	233	-
Stage 2	-	-	-	-	-	-	407	233	-	0	290	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	570	-	-	630	-	-	50	31	263	-	31	439
Mov Cap-2 Maneuver	-	-	-	-	-	-	50	31	-	-	31	-
Stage 1	-	-	-	-	-	-	260	290	-	-	213	-
Stage 2	-	-	-	-	-	-	367	212	-	-	289	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.01	1.2	51.46	71.61
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	89	2	-	-	103	-	-	58
HCM Lane V/C Ratio	0.134	0.002	-	-	0.057	-	-	0.069
HCM Ctrl Dly (s/v)	51.5	11.3	0	-	11.1	0.9	-	71.6
HCM Lane LOS	F	B	A	-	B	A	-	F
HCM 95th %tile Q(veh)	0.4	0	-	-	0.2	-	-	0.2

Queues

1: Dayton Blvd & Driveway/Ashland Terrace

02/26/2025



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	18	81	364	363	206	48	561	914	129	478
v/c Ratio	0.12	0.40	0.64	0.63	0.24	0.12	0.64	0.72	0.39	0.44
Control Delay (s/veh)	48.8	22.7	36.3	36.1	2.3	19.5	37.9	6.7	22.7	32.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.8	22.7	36.3	36.1	2.3	19.5	37.9	6.7	22.7	32.0
Queue Length 50th (ft)	11	9	206	205	0	19	173	60	53	143
Queue Length 95th (ft)	34	50	382	380	28	43	248	232	96	199
Internal Link Dist (ft)		187		457			545			523
Turn Bay Length (ft)			310			100		510	100	
Base Capacity (vph)	213	256	610	613	911	480	1285	1285	403	1314
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.32	0.60	0.59	0.23	0.10	0.44	0.71	0.32	0.36
Intersection Summary										

HCM 7th Signalized Intersection Summary

1: Dayton Blvd & Driveway/Ashland Terrace

02/26/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	12	56	692	14	200	46	533	868	125	463	1
Future Volume (veh/h)	15	12	56	692	14	200	46	533	868	125	463	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	18	14	67	723	0	206	48	561	914	129	477	1
Peak Hour Factor	0.83	0.83	0.83	0.97	0.97	0.97	0.95	0.95	0.95	0.97	0.97	0.97
Percent Heavy Veh, %	5	5	5	2	2	2	2	2	2	1	1	1
Cap, veh/h	128	20	97	909	0	555	447	1215	946	320	1336	3
Arrive On Green	0.07	0.07	0.07	0.26	0.00	0.26	0.07	0.34	0.34	0.10	0.36	0.36
Sat Flow, veh/h	1739	275	1315	3563	0	1585	1781	3554	1585	1795	3667	8
Grp Volume(v), veh/h	18	0	81	723	0	206	48	561	914	129	233	245
Grp Sat Flow(s),veh/h/ln	1739	0	1589	1781	0	1585	1781	1777	1585	1795	1791	1884
Q Serve(g_s), s	1.0	0.0	5.1	19.4	0.0	9.9	1.7	12.6	35.0	4.5	9.7	9.7
Cycle Q Clear(g_c), s	1.0	0.0	5.1	19.4	0.0	9.9	1.7	12.6	35.0	4.5	9.7	9.7
Prop In Lane	1.00		0.83	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	128	0	117	909	0	555	447	1215	946	320	652	686
V/C Ratio(X)	0.14	0.00	0.69	0.80	0.00	0.37	0.11	0.46	0.97	0.40	0.36	0.36
Avail Cap(c_a), veh/h	204	0	186	1218	0	693	578	1215	946	412	652	686
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.4	0.0	46.3	35.6	0.0	24.8	18.3	26.3	15.4	18.7	23.8	23.8
Incr Delay (d2), s/veh	0.5	0.0	7.2	3.2	0.0	0.6	0.1	0.6	21.6	0.8	0.7	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	2.3	8.8	0.0	3.8	0.7	5.2	28.6	1.8	4.1	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.9	0.0	53.5	38.9	0.0	25.4	18.4	26.9	36.9	19.5	24.5	24.5
LnGrp LOS	D		D	D		C	B	C	D	B	C	C
Approach Vol, veh/h	99			929			1523			607		
Approach Delay, s/veh	51.9			35.9			32.7			23.4		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.7	41.0		13.5	13.4	43.3		32.1				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	15.0	35.0		12.0	15.0	35.0		35.0				
Max Q Clear Time (g_c+I1), s	6.5	37.0		7.1	3.7	11.7		21.4				
Green Ext Time (p_c), s	0.2	0.0		0.2	0.1	5.1		4.7				
Intersection Summary												
HCM 7th Control Delay, s/veh	32.4											
HCM 7th LOS	C											
Notes												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												

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	9	1032	3	14	977	13	1	1	12	5	1	5
Future Vol, veh/h	9	1032	3	14	977	13	1	1	12	5	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	130	-	-	150	-	-	70	-	-	65	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	91	91	91	75	75	75	55	55	55
Heavy Vehicles, %	2	2	2	2	2	2	0	0	0	0	0	0
Mvmt Flow	9	1042	3	15	1074	14	1	1	16	9	2	9
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1088	0	0	1045	0	0	1631	2181	523	1652	2175	544
Stage 1	-	-	-	-	-	-	1062	1062	-	1112	1112	-
Stage 2	-	-	-	-	-	-	568	1119	-	540	1064	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	637	-	-	661	-	-	69	47	504	66	47	488
Stage 1	-	-	-	-	-	-	242	303	-	226	287	-
Stage 2	-	-	-	-	-	-	480	285	-	499	302	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	637	-	-	661	-	-	62	45	504	60	45	488
Mov Cap-2 Maneuver	-	-	-	-	-	-	62	45	-	60	45	-
Stage 1	-	-	-	-	-	-	239	298	-	221	280	-
Stage 2	-	-	-	-	-	-	457	278	-	474	298	-
Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0.09			0.15			21.83			48.28		
HCM LOS							C			E		
Minor Lane/Major Mvmt	NBLn1 NBLn2		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	62	282	637	-	-	661	-	-	60	186		
HCM Lane V/C Ratio	0.021	0.061	0.014	-	-	0.023	-	-	0.152	0.059		
HCM Ctrl Dly (s/v)	64	18.6	10.7	-	-	10.6	-	-	75.5	25.6		
HCM Lane LOS	F	C	B	-	-	B	-	-	F	D		
HCM 95th %tile Q(veh)	0.1	0.2	0	-	-	0.1	-	-	0.5	0.2		

Intersection

Int Delay, s/veh 0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑↑		↑
Traffic Vol, veh/h	1003	0	0	978	0	52
Future Vol, veh/h	1003	0	0	978	0	52
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	98	98	93	93	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1023	0	0	1052	0	64

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	-	- 1023
Stage 1	-	-	- -
Stage 2	-	-	- -
Critical Hdwy	-	-	- 6.23
Critical Hdwy Stg 1	-	-	- -
Critical Hdwy Stg 2	-	-	- -
Follow-up Hdwy	-	-	- 3.319
Pot Cap-1 Maneuver	-	0	0 - 285
Stage 1	-	0	0 -
Stage 2	-	0	0 -
Platoon blocked, %	-		-
Mov Cap-1 Maneuver	-	-	- 285
Mov Cap-2 Maneuver	-	-	- -
Stage 1	-	-	- -
Stage 2	-	-	- -

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	21.26
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	285	-	-
HCM Lane V/C Ratio	0.225	-	-
HCM Ctrl Dly (s/v)	21.3	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	0.8	-	-

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	1	1000	6	34	934	12	1	1	2	0	1	3
Future Vol, veh/h	1	1000	6	34	934	12	1	1	2	0	1	3
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	96	96	96	95	95	95	38	38	38	50	50	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	1042	6	36	983	13	3	3	5	0	2	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	996	0	0	1048	0	0	1611	2114	1045	-	2111	498
Stage 1	-	-	-	-	-	-	1047	1047	-	-	1061	-
Stage 2	-	-	-	-	-	-	564	1067	-	-	1050	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.23	-	6.53	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	-	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.53	5.53	-	-	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	-	4.019	3.319
Pot Cap-1 Maneuver	693	-	-	662	-	-	76	50	277	0	51	519
Stage 1	-	-	-	-	-	-	275	304	-	0	300	-
Stage 2	-	-	-	-	-	-	478	297	-	0	303	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	693	-	-	662	-	-	67	46	277	-	47	519
Mov Cap-2 Maneuver	-	-	-	-	-	-	67	46	-	-	47	-
Stage 1	-	-	-	-	-	-	274	303	-	-	277	-
Stage 2	-	-	-	-	-	-	434	275	-	-	302	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.01	1.09	49.35	30.88
HCM LOS			E	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	92	2	-	-	123	-	-	147
HCM Lane V/C Ratio	0.115	0.002	-	-	0.054	-	-	0.054
HCM Ctrl Dly (s/v)	49.4	10.2	0	-	10.7	0.7	-	30.9
HCM Lane LOS	E	B	A	-	B	A	-	D
HCM 95th %tile Q(veh)	0.4	0	-	-	0.2	-	-	0.2

Queues

1: Dayton Blvd & Driveway/Ashland Terrace

02/26/2025



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	3	19	346	349	91	6	284	846	201	608
v/c Ratio	0.02	0.11	0.54	0.55	0.10	0.02	0.38	0.66	0.42	0.44
Control Delay (s/veh)	45.0	25.2	27.6	27.7	2.3	17.8	32.9	4.6	20.9	23.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	45.0	25.2	27.6	27.7	2.3	17.8	32.9	4.6	20.9	23.1
Queue Length 50th (ft)	1	1	123	124	0	2	65	21	65	110
Queue Length 95th (ft)	4	2	327	329	18	10	124	129	122	218
Internal Link Dist (ft)		187		457			545			523
Turn Bay Length (ft)			310			100		510	100	
Base Capacity (vph)	253	246	695	696	990	484	1491	1323	512	1477
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.08	0.50	0.50	0.09	0.01	0.19	0.64	0.39	0.41

Intersection Summary

HCM 7th Signalized Intersection Summary

1: Dayton Blvd & Driveway/Ashland Terrace

02/26/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	5	610	2	80	5	256	761	163	492	1
Future Volume (veh/h)	1	1	5	610	2	80	5	256	761	163	492	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1885	1885	1885	1856	1856	1856
Adj Flow Rate, veh/h	3	3	16	694	0	91	6	284	846	201	607	1
Peak Hour Factor	0.31	0.31	0.31	0.88	0.88	0.88	0.90	0.90	0.90	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	3	3	3	1	1	1	3	3	3
Cap, veh/h	66	9	51	877	0	552	381	1300	976	409	1628	3
Arrive On Green	0.04	0.04	0.04	0.25	0.00	0.25	0.02	0.36	0.36	0.10	0.45	0.45
Sat Flow, veh/h	1781	256	1368	3534	0	1572	1795	3582	1598	1767	3611	6
Grp Volume(v), veh/h	3	0	19	694	0	91	6	284	846	201	296	312
Grp Sat Flow(s),veh/h/ln	1781	0	1624	1767	0	1572	1795	1791	1598	1767	1763	1854
Q Serve(g_s), s	0.2	0.0	1.1	17.7	0.0	3.8	0.2	5.3	35.0	6.4	10.7	10.7
Cycle Q Clear(g_c), s	0.2	0.0	1.1	17.7	0.0	3.8	0.2	5.3	35.0	6.4	10.7	10.7
Prop In Lane	1.00		0.84	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	66	0	60	877	0	552	381	1300	976	409	794	836
V/C Ratio(X)	0.05	0.00	0.32	0.79	0.00	0.16	0.02	0.22	0.87	0.49	0.37	0.37
Avail Cap(c_a), veh/h	222	0	202	1283	0	733	632	1300	976	502	794	836
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	0.0	45.3	33.9	0.0	21.5	18.7	21.3	14.1	14.8	17.5	17.5
Incr Delay (d2), s/veh	0.3	0.0	3.0	2.8	0.0	0.2	0.0	0.2	8.9	0.9	0.6	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.5	7.9	0.0	1.5	0.1	2.1	22.2	2.4	4.2	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	45.1	0.0	48.2	36.7	0.0	21.7	18.7	21.4	23.0	15.7	18.1	18.1
LnGrp LOS	D		D	D		C	B	C	C	B	B	B
Approach Vol, veh/h	22				785				1136			
Approach Delay, s/veh	47.8				34.9				22.6			
Approach LOS	D				C				C			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.0	41.0		9.6	7.5	49.5		29.9				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	15.0	35.0		12.0	15.0	35.0		35.0				
Max Q Clear Time (g_c+I1), s	8.4	37.0		3.1	2.2	12.7		19.7				
Green Ext Time (p_c), s	0.3	0.0		0.0	0.0	6.6		4.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	24.8											
HCM 7th LOS	C											
Notes												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												

Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	941	1	3	712	1	6	1	8	13	1	9
Future Vol, veh/h	8	941	1	3	712	1	6	1	8	13	1	9
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	130	-	125	150	-	-	70	-	-	65	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	90	90	90	50	50	50	56	56	56
Heavy Vehicles, %	2	2	2	3	3	3	7	7	7	5	5	5
Mvmt Flow	10	1148	1	3	791	1	12	2	16	23	2	16
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	792	0	0	1149	0	0	1570	1966	1148	1966	1967	396
Stage 1	-	-	-	-	-	-	1167	1167	-	798	798	-
Stage 2	-	-	-	-	-	-	403	799	-	1168	1168	-
Critical Hdwy	4.13	-	-	4.145	-	-	7.405	6.605	6.305	7.375	6.575	6.975
Critical Hdwy Stg 1	-	-	-	-	-	-	6.205	5.605	-	6.575	5.575	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.605	5.605	-	6.175	5.575	-
Follow-up Hdwy	2.219	-	-	2.2285	-	-	3.5665	4.0665	3.3665	3.5475	4.0475	3.3475
Pot Cap-1 Maneuver	826	-	-	601	-	-	79	60	234	41	61	597
Stage 1	-	-	-	-	-	-	228	259	-	341	391	-
Stage 2	-	-	-	-	-	-	584	387	-	230	262	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	826	-	-	601	-	-	73	59	234	36	60	597
Mov Cap-2 Maneuver	-	-	-	-	-	-	73	59	-	36	60	-
Stage 1	-	-	-	-	-	-	225	256	-	339	389	-
Stage 2	-	-	-	-	-	-	563	385	-	210	259	-
Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0.08			0.05			42.17			127		
HCM LOS							E			F		
Minor Lane/Major Mvmt	NBLn1		NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	
Capacity (veh/h)	73		176	826	-	-	601	-	-	36	314	
HCM Lane V/C Ratio	0.164		0.102	0.012	-	-	0.006	-	-	0.642	0.057	
HCM Ctrl Dly (s/v)	63.7		27.8	9.4	-	-	11	-	-	211.5	17.1	
HCM Lane LOS	F		D	A	-	-	B	-	-	F	C	
HCM 95th %tile Q(veh)	0.5		0.3	0	-	-	0	-	-	2.2	0.2	

Intersection

Int Delay, s/veh 1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑		↑
Traffic Vol, veh/h	923	0	0	732	0	39
Future Vol, veh/h	923	0	0	732	0	39
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	84	84	92	92	42	42
Heavy Vehicles, %	2	2	4	4	3	3
Mvmt Flow	1099	0	0	796	0	93

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	-	- 1099
Stage 1	-	-	- -
Stage 2	-	-	- -
Critical Hdwy	-	-	- 6.23
Critical Hdwy Stg 1	-	-	- -
Critical Hdwy Stg 2	-	-	- -
Follow-up Hdwy	-	-	- 3.327
Pot Cap-1 Maneuver	-	0	0 - 257
Stage 1	-	0	0 -
Stage 2	-	0	0 -
Platoon blocked, %	-		-
Mov Cap-1 Maneuver	-	-	- 257
Mov Cap-2 Maneuver	-	-	- -
Stage 1	-	-	- -
Stage 2	-	-	- -

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	26.69
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	257	-	-
HCM Lane V/C Ratio	0.361	-	-
HCM Ctrl Dly (s/v)	26.7	-	-
HCM Lane LOS	D	-	-
HCM 95th %tile Q(veh)	1.6	-	-

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	1	916	8	21	705	2	1	1	4	0	1	1
Future Vol, veh/h	1	916	8	21	705	2	1	1	4	0	1	1
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	85	85	85	58	58	58	50	50	50	50	50	50
Heavy Vehicles, %	2	2	2	4	4	4	2	2	2	2	2	2
Mvmt Flow	1	1078	9	36	1216	3	2	2	8	0	2	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1219	0	0	1087	0	0	1766	2376	1082	-	2379	609
Stage 1	-	-	-	-	-	-	1085	1085	-	-	1290	-
Stage 2	-	-	-	-	-	-	681	1291	-	-	1089	-
Critical Hdwy	4.13	-	-	4.16	-	-	7.33	6.53	6.23	-	6.53	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	-	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.53	5.53	-	-	5.53	-
Follow-up Hdwy	2.219	-	-	2.238	-	-	3.519	4.019	3.319	-	4.019	3.319
Pot Cap-1 Maneuver	570	-	-	630	-	-	59	34	263	0	34	439
Stage 1	-	-	-	-	-	-	262	292	-	0	233	-
Stage 2	-	-	-	-	-	-	407	233	-	0	290	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	570	-	-	630	-	-	50	31	263	-	31	439
Mov Cap-2 Maneuver	-	-	-	-	-	-	50	31	-	-	31	-
Stage 1	-	-	-	-	-	-	260	290	-	-	213	-
Stage 2	-	-	-	-	-	-	367	212	-	-	289	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.01	1.2	51.46	71.61
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	89	2	-	-	103	-	-	58
HCM Lane V/C Ratio	0.134	0.002	-	-	0.057	-	-	0.069
HCM Ctrl Dly (s/v)	51.5	11.3	0	-	11.1	0.9	-	71.6
HCM Lane LOS	F	B	A	-	B	A	-	F
HCM 95th %tile Q(veh)	0.4	0	-	-	0.2	-	-	0.2

Queues

1: Dayton Blvd & Driveway/Ashland Terrace

02/26/2025



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	18	81	364	363	206	48	561	914	129	478
v/c Ratio	0.12	0.40	0.64	0.63	0.24	0.12	0.64	0.72	0.39	0.44
Control Delay (s/veh)	48.8	22.7	36.3	36.1	2.3	19.5	37.9	6.7	22.7	32.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.8	22.7	36.3	36.1	2.3	19.5	37.9	6.7	22.7	32.0
Queue Length 50th (ft)	11	9	206	205	0	19	173	60	53	143
Queue Length 95th (ft)	34	50	382	380	28	43	248	232	96	199
Internal Link Dist (ft)		187		457			545			523
Turn Bay Length (ft)			310			100		510	100	
Base Capacity (vph)	213	256	610	613	911	480	1285	1285	403	1314
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.32	0.60	0.59	0.23	0.10	0.44	0.71	0.32	0.36

Intersection Summary

HCM 7th Signalized Intersection Summary

1: Dayton Blvd & Driveway/Ashland Terrace

02/26/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	12	56	692	14	200	46	533	868	125	463	1
Future Volume (veh/h)	15	12	56	692	14	200	46	533	868	125	463	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	18	14	67	723	0	206	48	561	914	129	477	1
Peak Hour Factor	0.83	0.83	0.83	0.97	0.97	0.97	0.95	0.95	0.95	0.97	0.97	0.97
Percent Heavy Veh, %	5	5	5	2	2	2	2	2	2	1	1	1
Cap, veh/h	128	20	97	909	0	555	447	1215	946	320	1336	3
Arrive On Green	0.07	0.07	0.07	0.26	0.00	0.26	0.07	0.34	0.34	0.10	0.36	0.36
Sat Flow, veh/h	1739	275	1315	3563	0	1585	1781	3554	1585	1795	3667	8
Grp Volume(v), veh/h	18	0	81	723	0	206	48	561	914	129	233	245
Grp Sat Flow(s),veh/h/ln	1739	0	1589	1781	0	1585	1781	1777	1585	1795	1791	1884
Q Serve(g_s), s	1.0	0.0	5.1	19.4	0.0	9.9	1.7	12.6	35.0	4.5	9.7	9.7
Cycle Q Clear(g_c), s	1.0	0.0	5.1	19.4	0.0	9.9	1.7	12.6	35.0	4.5	9.7	9.7
Prop In Lane	1.00		0.83	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	128	0	117	909	0	555	447	1215	946	320	652	686
V/C Ratio(X)	0.14	0.00	0.69	0.80	0.00	0.37	0.11	0.46	0.97	0.40	0.36	0.36
Avail Cap(c_a), veh/h	204	0	186	1218	0	693	578	1215	946	412	652	686
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.4	0.0	46.3	35.6	0.0	24.8	18.3	26.3	15.4	18.7	23.8	23.8
Incr Delay (d2), s/veh	0.5	0.0	7.2	3.2	0.0	0.6	0.1	0.6	21.6	0.8	0.7	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	2.3	8.8	0.0	3.8	0.7	5.2	28.6	1.8	4.1	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.9	0.0	53.5	38.9	0.0	25.4	18.4	26.9	36.9	19.5	24.5	24.5
LnGrp LOS	D		D	D		C	B	C	D	B	C	C
Approach Vol, veh/h	99			929			1523			607		
Approach Delay, s/veh	51.9			35.9			32.7			23.4		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.7	41.0		13.5	13.4	43.3		32.1				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	15.0	35.0		12.0	15.0	35.0		35.0				
Max Q Clear Time (g_c+l1), s	6.5	37.0		7.1	3.7	11.7		21.4				
Green Ext Time (p_c), s	0.2	0.0		0.2	0.1	5.1		4.7				
Intersection Summary												
HCM 7th Control Delay, s/veh	32.4											
HCM 7th LOS	C											
Notes												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												

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	9	1032	3	14	977	13	1	1	12	5	1	5
Future Vol, veh/h	9	1032	3	14	977	13	1	1	12	5	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	130	-	125	150	-	-	70	-	-	65	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	91	91	91	75	75	75	55	55	55
Heavy Vehicles, %	2	2	2	2	2	2	0	0	0	0	0	0
Mvmt Flow	9	1042	3	15	1074	14	1	1	16	9	2	9
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1088	0	0	1045	0	0	1629	2179	1042	2173	2175	544
Stage 1	-	-	-	-	-	-	1061	1061	-	1112	1112	-
Stage 2	-	-	-	-	-	-	568	1119	-	1061	1064	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.3	6.5	6.2	7.3	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	639	-	-	663	-	-	75	47	281	30	47	488
Stage 1	-	-	-	-	-	-	273	303	-	226	287	-
Stage 2	-	-	-	-	-	-	480	285	-	273	302	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	639	-	-	663	-	-	68	45	281	27	45	488
Mov Cap-2 Maneuver	-	-	-	-	-	-	68	45	-	27	45	-
Stage 1	-	-	-	-	-	-	269	299	-	221	280	-
Stage 2	-	-	-	-	-	-	457	278	-	253	298	-
Approach	EB			WB			NB			SB		
HCM Ctrl Dly, s/v	0.09			0.15			27.08			104.36		
HCM LOS							D			F		
Minor Lane/Major Mvmt	NBLn1 NBLn2		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	68	200	639	-	-	663	-	-	27	186		
HCM Lane V/C Ratio	0.019	0.086	0.014	-	-	0.023	-	-	0.342	0.059		
HCM Ctrl Dly (s/v)	58.6	24.7	10.7	-	-	10.6	-	-	198.9	25.6		
HCM Lane LOS	F	C	B	-	-	B	-	-	F	D		
HCM 95th %tile Q(veh)	0.1	0.3	0	-	-	0.1	-	-	1.1	0.2		

Intersection

Int Delay, s/veh 0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑		↑
Traffic Vol, veh/h	1003	0	0	978	0	52
Future Vol, veh/h	1003	0	0	978	0	52
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	98	98	93	93	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1023	0	0	1052	0	64

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	-	- 1023
Stage 1	-	-	- -
Stage 2	-	-	- -
Critical Hdwy	-	-	- 6.22
Critical Hdwy Stg 1	-	-	- -
Critical Hdwy Stg 2	-	-	- -
Follow-up Hdwy	-	-	- 3.318
Pot Cap-1 Maneuver	-	0	0 - 286
Stage 1	-	0	0 -
Stage 2	-	0	0 -
Platoon blocked, %	-		-
Mov Cap-1 Maneuver	-	-	- 286
Mov Cap-2 Maneuver	-	-	- -
Stage 1	-	-	- -
Stage 2	-	-	- -

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	21.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	286	-	-
HCM Lane V/C Ratio	0.225	-	-
HCM Ctrl Dly (s/v)	21.2	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	0.8	-	-

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	1	1000	6	34	934	12	1	1	2	0	1	3
Future Vol, veh/h	1	1000	6	34	934	12	1	1	2	0	1	3
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	96	96	96	95	95	95	38	38	38	50	50	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	1042	6	36	983	13	3	3	5	0	2	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	996	0	0	1048	0	0	1611	2114	1045	-	2111	498
Stage 1	-	-	-	-	-	-	1047	1047	-	-	1061	-
Stage 2	-	-	-	-	-	-	564	1067	-	-	1050	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.23	-	6.53	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	-	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.53	5.53	-	-	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	-	4.019	3.319
Pot Cap-1 Maneuver	693	-	-	662	-	-	76	50	277	0	51	519
Stage 1	-	-	-	-	-	-	275	304	-	0	300	-
Stage 2	-	-	-	-	-	-	478	297	-	0	303	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	693	-	-	662	-	-	67	46	277	-	47	519
Mov Cap-2 Maneuver	-	-	-	-	-	-	67	46	-	-	47	-
Stage 1	-	-	-	-	-	-	274	303	-	-	277	-
Stage 2	-	-	-	-	-	-	434	275	-	-	302	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.01	1.09	49.35	30.88
HCM LOS			E	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	92	2	-	-	123	-	-	147
HCM Lane V/C Ratio	0.115	0.002	-	-	0.054	-	-	0.054
HCM Ctrl Dly (s/v)	49.4	10.2	0	-	10.7	0.7	-	30.9
HCM Lane LOS	E	B	A	-	B	A	-	D
HCM 95th %tile Q(veh)	0.4	0	-	-	0.2	-	-	0.2

Queues

1: Dayton Blvd & Driveway/Ashland Terrace

02/26/2025



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	3	22	497	499	130	8	408	1211	290	870
v/c Ratio	0.02	0.14	0.77	0.77	0.14	0.03	0.53	0.96	0.67	0.62
Control Delay (s/veh)	46.0	24.4	37.6	37.7	2.1	17.4	35.6	27.7	27.2	26.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	46.0	24.4	37.6	37.7	2.1	17.4	35.6	27.7	27.2	26.2
Queue Length 50th (ft)	2	2	240	241	0	2	104	281	99	173
Queue Length 95th (ft)	4	1	#568	#570	21	12	175	#993	176	327
Internal Link Dist (ft)		187		457			545			523
Turn Bay Length (ft)			310			100		510	100	
Base Capacity (vph)	234	231	643	644	986	407	1380	1259	454	1444
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.10	0.77	0.77	0.13	0.02	0.30	0.96	0.64	0.60

Intersection Summary

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

Queue shown is maximum after two cycles.

HCM 7th Signalized Intersection Summary

1: Dayton Blvd & Driveway/Ashland Terrace

02/26/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	6	875	2	114	7	367	1090	235	704	1
Future Volume (veh/h)	1	1	6	875	2	114	7	367	1090	235	704	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1885	1885	1885	1856	1856	1856
Adj Flow Rate, veh/h	3	3	19	995	0	130	8	408	1211	290	869	1
Peak Hour Factor	0.31	0.31	0.31	0.88	0.88	0.88	0.90	0.90	0.90	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	3	3	3	1	1	1	3	3	3
Cap, veh/h	69	9	54	1080	0	678	252	1127	991	356	1519	2
Arrive On Green	0.04	0.04	0.04	0.31	0.00	0.31	0.02	0.31	0.31	0.13	0.42	0.42
Sat Flow, veh/h	1781	221	1398	3534	0	1572	1795	3582	1598	1767	3613	4
Grp Volume(v), veh/h	3	0	22	995	0	130	8	408	1211	290	424	446
Grp Sat Flow(s),veh/h/ln	1781	0	1619	1767	0	1572	1795	1791	1598	1767	1763	1855
Q Serve(g_s), s	0.2	0.0	1.5	30.3	0.0	5.7	0.3	9.8	35.0	11.8	20.4	20.4
Cycle Q Clear(g_c), s	0.2	0.0	1.5	30.3	0.0	5.7	0.3	9.8	35.0	11.8	20.4	20.4
Prop In Lane	1.00		0.86	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	69	0	63	1080	0	678	252	1127	991	356	741	780
V/C Ratio(X)	0.04	0.00	0.35	0.92	0.00	0.19	0.03	0.36	1.22	0.81	0.57	0.57
Avail Cap(c_a), veh/h	192	0	175	1112	0	692	459	1127	991	373	741	780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	0.0	52.1	37.3	0.0	19.6	25.1	29.5	14.7	22.7	24.6	24.6
Incr Delay (d2), s/veh	0.3	0.0	3.3	12.4	0.0	0.2	0.1	0.4	109.2	12.5	1.7	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.7	14.9	0.0	0.0	0.1	4.2	57.3	5.9	8.5	8.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	51.7	0.0	55.4	49.7	0.0	19.8	25.1	29.9	123.8	35.1	26.3	26.3
LnGrp LOS	D		E	D		B	C	C	F	D	C	C
Approach Vol, veh/h	25			1125			1627			1160		
Approach Delay, s/veh	55.0			46.3			99.8			28.5		
Approach LOS	D			D			F			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.9	41.0		10.3	8.2	52.8		40.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	15.0	35.0		12.0	15.0	35.0		35.0				
Max Q Clear Time (g_c+I1), s	13.8	37.0		3.5	2.3	22.4		32.3				
Green Ext Time (p_c), s	0.1	0.0		0.0	0.0	6.8		1.7				
Intersection Summary												
HCM 7th Control Delay, s/veh	63.2											
HCM 7th LOS	E											
Notes												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												

Intersection												
Int Delay, s/veh	7.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↱		↰	↰↱		↰	↰		↰	↰	
Traffic Vol, veh/h	10	1349	1	4	1021	1	8	1	10	17	1	12
Future Vol, veh/h	10	1349	1	4	1021	1	8	1	10	17	1	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	130	-	-	150	-	-	70	-	-	65	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	90	90	90	50	50	50	56	56	56
Heavy Vehicles, %	2	2	2	3	3	3	7	7	7	5	5	5
Mvmt Flow	12	1645	1	4	1134	1	16	2	20	30	2	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1136	0	0	1646	0	0	2247	2815	823	1992	2815	568
Stage 1	-	-	-	-	-	-	1670	1670	-	1144	1144	-
Stage 2	-	-	-	-	-	-	577	1144	-	848	1671	-
Critical Hdwy	4.14	-	-	4.16	-	-	7.64	6.64	7.04	7.6	6.6	7
Critical Hdwy Stg 1	-	-	-	-	-	-	6.64	5.64	-	6.6	5.6	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.64	5.64	-	6.6	5.6	-
Follow-up Hdwy	2.22	-	-	2.23	-	-	3.57	4.07	3.37	3.55	4.05	3.35
Pot Cap-1 Maneuver	611	-	-	384	-	-	21	16	306	35	17	459
Stage 1	-	-	-	-	-	-	95	144	-	208	267	-
Stage 2	-	-	-	-	-	-	457	262	-	316	147	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	611	-	-	384	-	-	18	16	306	~ 27	16	459
Mov Cap-2 Maneuver	-	-	-	-	-	-	18	16	-	~ 27	16	-
Stage 1	-	-	-	-	-	-	93	141	-	205	264	-
Stage 2	-	-	-	-	-	-	428	259	-	286	144	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.08	0.06	226.24	250.55
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	18	115	611	-	-	384	-	-	27	149
HCM Lane V/C Ratio	0.907	0.192	0.02	-	-	0.012	-	-	1.106	0.156
HCM Ctrl Dly (s/v)	\$ 477.3	43.6	11	-	-	14.5	-	-	\$ 416.5	33.6
HCM Lane LOS	F	E	B	-	-	B	-	-	F	D
HCM 95th %tile Q(veh)	2.3	0.7	0.1	-	-	0	-	-	3.6	0.5

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

Intersection

Int Delay, s/veh 6.6

Movement EBT EBR WBL WBT NBL NBR

Lane Configurations ↑ ↑↑ ↑

Traffic Vol, veh/h 1323 0 0 1050 0 56

Future Vol, veh/h 1323 0 0 1050 0 56

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 84 84 92 92 42 42

Heavy Vehicles, % 2 2 4 4 3 3

Mvmt Flow 1575 0 0 1141 0 133

Major/Minor Major1 Major2 Minor1

Conflicting Flow All 0 - - - - 1575

Stage 1 - - - - - -

Stage 2 - - - - - -

Critical Hdwy - - - - - 6.245

Critical Hdwy Stg 1 - - - - - -

Critical Hdwy Stg 2 - - - - - -

Follow-up Hdwy - - - - - 3.3285

Pot Cap-1 Maneuver - 0 0 - 0 134

Stage 1 - 0 0 - 0 -

Stage 2 - 0 0 - 0 -

Platoon blocked, % - - - - -

Mov Cap-1 Maneuver - - - - - 134

Mov Cap-2 Maneuver - - - - - -

Stage 1 - - - - - -

Stage 2 - - - - - -

Approach EB WB NB

HCM Ctrl Dly, s/v 0 0 141.36

HCM LOS F

Minor Lane/Major Mvmt NBLn1 EBT WBT

Capacity (veh/h) 134 - -

HCM Lane V/C Ratio 0.998 - -

HCM Ctrl Dly (s/v) 141.4 - -

HCM Lane LOS F - -

HCM 95th %tile Q(veh) 7.1 - -

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	1	1313	10	29	1010	3	1	1	6	0	1	1
Future Vol, veh/h	1	1313	10	29	1010	3	1	1	6	0	1	1
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	85	85	85	58	58	58	50	50	50	50	50	50
Heavy Vehicles, %	2	2	2	4	4	4	2	2	2	2	2	2
Mvmt Flow	1	1545	12	50	1741	5	2	2	12	0	2	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1747	0	0	1556	0	0	2525	3399	1551	-	3403	873
Stage 1	-	-	-	-	-	-	1553	1553	-	-	1844	-
Stage 2	-	-	-	-	-	-	972	1847	-	-	1559	-
Critical Hdwy	4.13	-	-	4.16	-	-	7.33	6.53	6.23	-	6.53	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	-	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.53	5.53	-	-	5.53	-
Follow-up Hdwy	2.219	-	-	2.238	-	-	3.519	4.019	3.319	-	4.019	3.319
Pot Cap-1 Maneuver	357	-	-	416	-	-	16	7	139	0	7	294
Stage 1	-	-	-	-	-	-	141	174	-	0	124	-
Stage 2	-	-	-	-	-	-	272	124	-	0	172	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	357	-	-	416	-	-	8	5	139	-	5	294
Mov Cap-2 Maneuver	-	-	-	-	-	-	8	5	-	-	5	-
Stage 1	-	-	-	-	-	-	138	169	-	-	95	-
Stage 2	-	-	-	-	-	-	203	95	-	-	168	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.01	3.59	\$ 322.48	\$ 479.34
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	23	~ 1	-	-	100	-	-	11
HCM Lane V/C Ratio	0.692	0.003	-	-	0.12	-	-	0.375
HCM Ctrl Dly (s/v)	\$ 322.5	15.1	0	-	14.8	3.3	-	\$ 479.3
HCM Lane LOS	F	C	A	-	B	A	-	F
HCM 95th %tile Q(veh)	2	0	-	-	0.4	-	-	0.9

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

Queues

1: Dayton Blvd & Driveway/Ashland Terrace

02/26/2025



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	18	81	364	363	206	71	804	1309	184	686
v/c Ratio	0.13	0.43	0.67	0.67	0.25	0.22	0.78	1.05	0.64	0.55
Control Delay (s/veh)	52.5	24.2	41.8	41.6	2.4	19.6	42.1	54.1	30.2	32.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	52.5	24.2	41.8	41.6	2.4	19.6	42.1	54.1	30.2	32.6
Queue Length 50th (ft)	13	10	249	248	0	28	279	~917	78	220
Queue Length 95th (ft)	34	50	392	390	29	58	378	#1245	140	296
Internal Link Dist (ft)		187		457			545			523
Turn Bay Length (ft)			310			100		510	100	
Base Capacity (vph)	190	235	543	545	860	409	1144	1243	330	1264
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.34	0.67	0.67	0.24	0.17	0.70	1.05	0.56	0.54

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

HCM 7th Signalized Intersection Summary

1: Dayton Blvd & Driveway/Ashland Terrace

02/26/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	12	56	692	14	200	67	764	1244	178	664	1
Future Volume (veh/h)	15	12	56	692	14	200	67	764	1244	178	664	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	18	14	67	723	0	206	71	804	1309	184	685	1
Peak Hour Factor	0.83	0.83	0.83	0.97	0.97	0.97	0.95	0.95	0.95	0.97	0.97	0.97
Percent Heavy Veh, %	5	5	5	2	2	2	2	2	2	1	1	1
Cap, veh/h	127	20	96	909	0	558	376	1212	945	273	1297	2
Arrive On Green	0.07	0.07	0.07	0.26	0.00	0.26	0.08	0.34	0.34	0.10	0.35	0.35
Sat Flow, veh/h	1739	275	1315	3563	0	1585	1781	3554	1585	1795	3670	5
Grp Volume(v), veh/h	18	0	81	723	0	206	71	804	1309	184	334	352
Grp Sat Flow(s),veh/h/ln	1739	0	1589	1781	0	1585	1781	1777	1585	1795	1791	1884
Q Serve(g_s), s	1.0	0.0	5.1	19.5	0.0	9.9	2.4	19.8	35.0	6.6	15.2	15.2
Cycle Q Clear(g_c), s	1.0	0.0	5.1	19.5	0.0	9.9	2.4	19.8	35.0	6.6	15.2	15.2
Prop In Lane	1.00		0.83	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	127	0	116	909	0	558	376	1212	945	273	633	666
V/C Ratio(X)	0.14	0.00	0.70	0.80	0.00	0.37	0.19	0.66	1.39	0.67	0.53	0.53
Avail Cap(c_a), veh/h	203	0	186	1215	0	694	485	1212	945	361	633	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	0.0	46.4	35.7	0.0	24.8	18.7	28.8	15.4	22.8	26.4	26.4
Incr Delay (d2), s/veh	0.5	0.0	7.2	3.3	0.0	0.6	0.2	1.8	180.1	3.1	1.6	1.5
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	0.4	0.0	2.3	8.8	0.0	3.8	1.0	8.3	71.0	2.8	6.5	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	45.0	0.0	53.7	39.0	0.0	25.4	18.9	30.7	195.6	25.9	28.0	27.9
LnGrp LOS	D		D	D		C	B	C	F	C	C	C
Approach Vol, veh/h	99			929			2184			870		
Approach Delay, s/veh	52.1			36.0			129.1			27.5		
Approach LOS	D			D			F			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.9	41.0		13.5	14.7	42.3		32.2				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	15.0	35.0		12.0	15.0	35.0		35.0				
Max Q Clear Time (g_c+I1), s	8.6	37.0		7.1	4.4	17.2		21.5				
Green Ext Time (p_c), s	0.2	0.0		0.2	0.1	6.7		4.7				
Intersection Summary												
HCM 7th Control Delay, s/veh	84.4											
HCM 7th LOS	F											
Notes												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												

Intersection

Int Delay, s/veh 3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	1480	4	19	1401	18	1	1	15	7	1	7
Future Vol, veh/h	13	1480	4	19	1401	18	1	1	15	7	1	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	130	-	-	150	-	-	70	-	-	65	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	91	91	91	75	75	75	55	55	55
Heavy Vehicles, %	2	2	2	2	2	2	0	0	0	0	0	0
Mvmt Flow	13	1495	4	21	1540	20	1	1	20	13	2	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1559	0	0	1499	0	0	2336	3124	749	2366	3116	780
Stage 1	-	-	-	-	-	-	1523	1523	-	1591	1591	-
Stage 2	-	-	-	-	-	-	812	1601	-	774	1525	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	420	-	-	443	-	-	20	11	359	19	12	343
Stage 1	-	-	-	-	-	-	126	182	-	114	169	-
Stage 2	-	-	-	-	-	-	343	167	-	362	182	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	420	-	-	443	-	-	15	11	359	15	11	343
Mov Cap-2 Maneuver	-	-	-	-	-	-	15	11	-	15	11	-
Stage 1	-	-	-	-	-	-	122	176	-	109	161	-
Stage 2	-	-	-	-	-	-	311	159	-	328	176	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.12	0.18	55.65	285.76
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	15	117	420	-	-	443	-	-	15	70
HCM Lane V/C Ratio	0.089	0.182	0.031	-	-	0.047	-	-	0.87	0.207
HCM Ctrl Dly (s/v)	267.3	42.4	13.8	-	-	13.5	-	-	533.2	69.2
HCM Lane LOS	F	E	B	-	-	B	-	-	F	F
HCM 95th %tile Q(veh)	0.3	0.6	0.1	-	-	0.1	-	-	2.1	0.7

Intersection

Int Delay, s/veh 1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑↑		↑
Traffic Vol, veh/h	1436	0	0	1401	0	75
Future Vol, veh/h	1436	0	0	1401	0	75
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	98	98	93	93	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1465	0	0	1506	0	93

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	-	- 1465
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	- 6.23
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	- 3.319
Pot Cap-1 Maneuver	-	0	0 - 157
Stage 1	-	0	0 -
Stage 2	-	0	0 -
Platoon blocked, %	-		-
Mov Cap-1 Maneuver	-	-	- 157
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	56.74
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	157	-	-
HCM Lane V/C Ratio	0.591	-	-
HCM Ctrl Dly (s/v)	56.7	-	-
HCM Lane LOS	F	-	-
HCM 95th %tile Q(veh)	3.1	-	-

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	1	1433	8	48	1339	16	1	1	3	0	1	3
Future Vol, veh/h	1	1433	8	48	1339	16	1	1	3	0	1	3
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	96	96	96	95	95	95	38	38	38	50	50	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	1493	8	51	1409	17	3	3	8	0	2	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1426	0	0	1501	0	0	2306	3026	1497	-	3022	713
Stage 1	-	-	-	-	-	-	1499	1499	-	-	1519	-
Stage 2	-	-	-	-	-	-	807	1527	-	-	1503	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.23	-	6.53	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	-	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.53	5.53	-	-	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	-	4.019	3.319
Pot Cap-1 Maneuver	475	-	-	444	-	-	24	13	150	0	13	375
Stage 1	-	-	-	-	-	-	152	185	-	0	180	-
Stage 2	-	-	-	-	-	-	342	179	-	0	184	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	475	-	-	444	-	-	16	10	150	-	10	375
Mov Cap-2 Maneuver	-	-	-	-	-	-	16	10	-	-	10	-
Stage 1	-	-	-	-	-	-	150	182	-	-	146	-
Stage 2	-	-	-	-	-	-	270	145	-	-	181	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.01	2.86	221.37	121.54
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	28	~ 1	-	-	121	-	-	39
HCM Lane V/C Ratio	0.475	0.002	-	-	0.114	-	-	0.208
HCM Ctrl Dly (s/v)	221.4	12.6	0	-	14.1	2.5	-	121.5
HCM Lane LOS	F	B	A	-	B	A	-	F
HCM 95th %tile Q(veh)	1.5	0	-	-	0.4	-	-	0.7

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

Queues

1: Dayton Blvd & Driveway/Ashland Terrace

02/26/2025



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	3	22	497	499	130	8	408	1211	290	870
v/c Ratio	0.02	0.14	0.77	0.77	0.14	0.03	0.53	0.96	0.67	0.62
Control Delay (s/veh)	46.0	24.4	37.6	37.7	2.1	17.4	35.6	27.7	27.2	26.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	46.0	24.4	37.6	37.7	2.1	17.4	35.6	27.7	27.2	26.2
Queue Length 50th (ft)	2	2	240	241	0	2	104	281	99	173
Queue Length 95th (ft)	4	1	#568	#570	21	12	175	#993	176	327
Internal Link Dist (ft)		187		457			545			523
Turn Bay Length (ft)			310			100		510	100	
Base Capacity (vph)	234	231	643	644	986	407	1380	1259	454	1444
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.10	0.77	0.77	0.13	0.02	0.30	0.96	0.64	0.60

Intersection Summary

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

Queue shown is maximum after two cycles.

HCM 7th Signalized Intersection Summary

1: Dayton Blvd & Driveway/Ashland Terrace

02/26/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	6	875	2	114	7	367	1090	235	704	1
Future Volume (veh/h)	1	1	6	875	2	114	7	367	1090	235	704	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1885	1885	1885	1856	1856	1856
Adj Flow Rate, veh/h	3	3	19	995	0	130	8	408	1211	290	869	1
Peak Hour Factor	0.31	0.31	0.31	0.88	0.88	0.88	0.90	0.90	0.90	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	3	3	3	1	1	1	3	3	3
Cap, veh/h	69	9	54	1080	0	678	252	1127	991	356	1519	2
Arrive On Green	0.04	0.04	0.04	0.31	0.00	0.31	0.02	0.31	0.31	0.13	0.42	0.42
Sat Flow, veh/h	1781	221	1398	3534	0	1572	1795	3582	1598	1767	3613	4
Grp Volume(v), veh/h	3	0	22	995	0	130	8	408	1211	290	424	446
Grp Sat Flow(s),veh/h/ln	1781	0	1619	1767	0	1572	1795	1791	1598	1767	1763	1855
Q Serve(g_s), s	0.2	0.0	1.5	30.3	0.0	5.7	0.3	9.8	35.0	11.8	20.4	20.4
Cycle Q Clear(g_c), s	0.2	0.0	1.5	30.3	0.0	5.7	0.3	9.8	35.0	11.8	20.4	20.4
Prop In Lane	1.00		0.86	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	69	0	63	1080	0	678	252	1127	991	356	741	780
V/C Ratio(X)	0.04	0.00	0.35	0.92	0.00	0.19	0.03	0.36	1.22	0.81	0.57	0.57
Avail Cap(c_a), veh/h	192	0	175	1112	0	692	459	1127	991	373	741	780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	0.0	52.1	37.3	0.0	19.6	25.1	29.5	14.7	22.7	24.6	24.6
Incr Delay (d2), s/veh	0.3	0.0	3.3	12.4	0.0	0.2	0.1	0.4	109.2	12.5	1.7	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.7	14.9	0.0	0.0	0.1	4.2	57.3	5.9	8.5	8.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	51.7	0.0	55.4	49.7	0.0	19.8	25.1	29.9	123.8	35.1	26.3	26.3
LnGrp LOS	D		E	D		B	C	C	F	D	C	C
Approach Vol, veh/h	25			1125			1627			1160		
Approach Delay, s/veh	55.0			46.3			99.8			28.5		
Approach LOS	D			D			F			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.9	41.0		10.3	8.2	52.8		40.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	15.0	35.0		12.0	15.0	35.0		35.0				
Max Q Clear Time (g_c+I1), s	13.8	37.0		3.5	2.3	22.4		32.3				
Green Ext Time (p_c), s	0.1	0.0		0.0	0.0	6.8		1.7				
Intersection Summary												
HCM 7th Control Delay, s/veh	63.2											
HCM 7th LOS	E											
Notes												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												

Intersection

Int Delay, s/veh 31

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	1349	1	4	1021	1	8	1	10	17	1	12
Future Vol, veh/h	10	1349	1	4	1021	1	8	1	10	17	1	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	130	-	125	150	-	-	70	-	-	65	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	90	90	90	50	50	50	56	56	56
Heavy Vehicles, %	2	2	2	3	3	3	7	7	7	5	5	5
Mvmt Flow	12	1645	1	4	1134	1	16	2	20	30	2	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1136	0	0	1646	0	0	2247	2814	1645	2814	2815	568
Stage 1	-	-	-	-	-	-	1670	1670	-	1144	1144	-
Stage 2	-	-	-	-	-	-	577	1144	-	1671	1671	-
Critical Hdwy	4.13	-	-	4.145	-	-	7.405	6.605	6.305	7.375	6.575	6.975
Critical Hdwy Stg 1	-	-	-	-	-	-	6.205	5.605	-	6.575	5.575	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.605	5.605	-	6.175	5.575	-
Follow-up Hdwy	2.219	-	-	2.2285	-	-	3.5665	4.0665	3.3665	3.5475	4.0475	3.3475
Pot Cap-1 Maneuver	613	-	-	387	-	-	25	17	117	~9	17	461
Stage 1	-	-	-	-	-	-	116	146	-	209	269	-
Stage 2	-	-	-	-	-	-	460	266	-	118	148	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	613	-	-	387	-	-	21	16	117	~7	17	461
Mov Cap-2 Maneuver	-	-	-	-	-	-	21	16	-	~7	17	-
Stage 1	-	-	-	-	-	-	114	143	-	207	266	-
Stage 2	-	-	-	-	-	-	430	262	-	95	145	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.08	0.06	203.21	\$ 1527.1
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	21	75	613	-	-	387	-	-	7	151
HCM Lane V/C Ratio	0.78	0.293	0.02	-	-	0.011	-	-	4.559	0.154
HCM Ctrl Dly (s/v)	\$ 384	71.7	11	-	-	14.4	-	-	\$ 2669.6	33.1
HCM Lane LOS	F	F	B	-	-	B	-	-	F	D
HCM 95th %tile Q(veh)	2.2	1.1	0.1	-	-	0	-	-	5.2	0.5

Notes

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

Intersection

Int Delay, s/veh 6.5

Movement EBT EBR WBL WBT NBL NBR

Lane Configurations ↑ ↑ ↑

Traffic Vol, veh/h 1323 0 0 1050 0 56

Future Vol, veh/h 1323 0 0 1050 0 56

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 84 84 92 92 42 42

Heavy Vehicles, % 2 2 4 4 3 3

Mvmt Flow 1575 0 0 1141 0 133

Major/Minor Major1 Major2 Minor1

Conflicting Flow All 0 - - - - 1575

Stage 1 - - - - - -

Stage 2 - - - - - -

Critical Hdwy - - - - - 6.23

Critical Hdwy Stg 1 - - - - - -

Critical Hdwy Stg 2 - - - - - -

Follow-up Hdwy - - - - - 3.327

Pot Cap-1 Maneuver - 0 0 - 0 135

Stage 1 - 0 0 - 0 -

Stage 2 - 0 0 - 0 -

Platoon blocked, % - - - - -

Mov Cap-1 Maneuver - - - - - 135

Mov Cap-2 Maneuver - - - - - -

Stage 1 - - - - - -

Stage 2 - - - - - -

Approach EB WB NB

HCM Ctrl Dly, s/v 0 0 138.95

HCM LOS F

Minor Lane/Major Mvmt NBLn1 EBT WBT

Capacity (veh/h) 135 - -

HCM Lane V/C Ratio 0.991 - -

HCM Ctrl Dly (s/v) 138.9 - -

HCM Lane LOS F - -

HCM 95th %tile Q(veh) 7 - -

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	1	1313	10	29	1010	3	1	1	6	0	1	1
Future Vol, veh/h	1	1313	10	29	1010	3	1	1	6	0	1	1
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	85	85	85	58	58	58	50	50	50	50	50	50
Heavy Vehicles, %	2	2	2	4	4	4	2	2	2	2	2	2
Mvmt Flow	1	1545	12	50	1741	5	2	2	12	0	2	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1747	0	0	1556	0	0	2525	3399	1551	-	3403	873
Stage 1	-	-	-	-	-	-	1553	1553	-	-	1844	-
Stage 2	-	-	-	-	-	-	972	1847	-	-	1559	-
Critical Hdwy	4.13	-	-	4.16	-	-	7.33	6.53	6.23	-	6.53	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	-	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.53	5.53	-	-	5.53	-
Follow-up Hdwy	2.219	-	-	2.238	-	-	3.519	4.019	3.319	-	4.019	3.319
Pot Cap-1 Maneuver	357	-	-	416	-	-	16	7	139	0	7	294
Stage 1	-	-	-	-	-	-	141	174	-	0	124	-
Stage 2	-	-	-	-	-	-	272	124	-	0	172	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	357	-	-	416	-	-	8	5	139	-	5	294
Mov Cap-2 Maneuver	-	-	-	-	-	-	8	5	-	-	5	-
Stage 1	-	-	-	-	-	-	138	169	-	-	95	-
Stage 2	-	-	-	-	-	-	203	95	-	-	168	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.01	3.59	\$ 322.48	\$ 479.34
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	23	~ 1	-	-	100	-	-	11
HCM Lane V/C Ratio	0.692	0.003	-	-	0.12	-	-	0.375
HCM Ctrl Dly (s/v)	\$ 322.5	15.1	0	-	14.8	3.3	-	\$ 479.3
HCM Lane LOS	F	C	A	-	B	A	-	F
HCM 95th %tile Q(veh)	2	0	-	-	0.4	-	-	0.9

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

Queues

1: Dayton Blvd & Driveway/Ashland Terrace

02/26/2025



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	18	81	364	363	206	71	804	1309	184	686
v/c Ratio	0.13	0.43	0.67	0.67	0.25	0.22	0.78	1.05	0.64	0.55
Control Delay (s/veh)	52.5	24.2	41.8	41.6	2.4	19.6	42.1	54.1	30.2	32.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	52.5	24.2	41.8	41.6	2.4	19.6	42.1	54.1	30.2	32.6
Queue Length 50th (ft)	13	10	249	248	0	28	279	~917	78	220
Queue Length 95th (ft)	34	50	392	390	29	58	378	#1245	140	296
Internal Link Dist (ft)		187		457			545			523
Turn Bay Length (ft)			310			100		510	100	
Base Capacity (vph)	190	235	543	545	860	409	1144	1243	330	1264
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.34	0.67	0.67	0.24	0.17	0.70	1.05	0.56	0.54

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

HCM 7th Signalized Intersection Summary

1: Dayton Blvd & Driveway/Ashland Terrace

02/26/2025

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	12	56	692	14	200	67	764	1244	178	664	1
Future Volume (veh/h)	15	12	56	692	14	200	67	764	1244	178	664	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1826	1826	1826	1870	1870	1870	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	18	14	67	723	0	206	71	804	1309	184	685	1
Peak Hour Factor	0.83	0.83	0.83	0.97	0.97	0.97	0.95	0.95	0.95	0.97	0.97	0.97
Percent Heavy Veh, %	5	5	5	2	2	2	2	2	2	1	1	1
Cap, veh/h	127	20	96	909	0	558	376	1212	945	273	1297	2
Arrive On Green	0.07	0.07	0.07	0.26	0.00	0.26	0.08	0.34	0.34	0.10	0.35	0.35
Sat Flow, veh/h	1739	275	1315	3563	0	1585	1781	3554	1585	1795	3670	5
Grp Volume(v), veh/h	18	0	81	723	0	206	71	804	1309	184	334	352
Grp Sat Flow(s),veh/h/ln	1739	0	1589	1781	0	1585	1781	1777	1585	1795	1791	1884
Q Serve(g_s), s	1.0	0.0	5.1	19.5	0.0	9.9	2.4	19.8	35.0	6.6	15.2	15.2
Cycle Q Clear(g_c), s	1.0	0.0	5.1	19.5	0.0	9.9	2.4	19.8	35.0	6.6	15.2	15.2
Prop In Lane	1.00		0.83	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	127	0	116	909	0	558	376	1212	945	273	633	666
V/C Ratio(X)	0.14	0.00	0.70	0.80	0.00	0.37	0.19	0.66	1.39	0.67	0.53	0.53
Avail Cap(c_a), veh/h	203	0	186	1215	0	694	485	1212	945	361	633	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	0.0	46.4	35.7	0.0	24.8	18.7	28.8	15.4	22.8	26.4	26.4
Incr Delay (d2), s/veh	0.5	0.0	7.2	3.3	0.0	0.6	0.2	1.8	180.1	3.1	1.6	1.5
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	0.4	0.0	2.3	8.8	0.0	3.8	1.0	8.3	71.0	2.8	6.5	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	45.0	0.0	53.7	39.0	0.0	25.4	18.9	30.7	195.6	25.9	28.0	27.9
LnGrp LOS	D		D	D		C	B	C	F	C	C	C
Approach Vol, veh/h	99			929			2184			870		
Approach Delay, s/veh	52.1			36.0			129.1			27.5		
Approach LOS	D			D			F			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.9	41.0		13.5	14.7	42.3		32.2				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	15.0	35.0		12.0	15.0	35.0		35.0				
Max Q Clear Time (g_c+I1), s	8.6	37.0		7.1	4.4	17.2		21.5				
Green Ext Time (p_c), s	0.2	0.0		0.2	0.1	6.7		4.7				
Intersection Summary												
HCM 7th Control Delay, s/veh	84.4											
HCM 7th LOS	F											
Notes												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												

Intersection												
Int Delay, s/veh	11.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↑		↰	↱		↰	↱	
Traffic Vol, veh/h	13	1480	4	19	1401	18	1	1	15	7	1	7
Future Vol, veh/h	13	1480	4	19	1401	18	1	1	15	7	1	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	130	-	125	150	-	-	70	-	-	65	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	99	99	99	91	91	91	75	75	75	55	55	55
Heavy Vehicles, %	2	2	2	2	2	2	0	0	0	0	0	0
Mvmt Flow	13	1495	4	21	1540	20	1	1	20	13	2	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1559	0	0	1499	0	0	2334	3122	1495	3113	3116	780
Stage 1	-	-	-	-	-	-	1521	1521	-	1591	1591	-
Stage 2	-	-	-	-	-	-	812	1601	-	1522	1525	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.3	6.5	6.2	7.3	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	422	-	-	445	-	-	23	11	153	~6	12	343
Stage 1	-	-	-	-	-	-	150	183	-	114	169	-
Stage 2	-	-	-	-	-	-	343	167	-	150	182	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	422	-	-	445	-	-	17	11	153	~4	11	343
Mov Cap-2 Maneuver	-	-	-	-	-	-	17	11	-	~4	11	-
Stage 1	-	-	-	-	-	-	145	177	-	109	161	-
Stage 2	-	-	-	-	-	-	311	159	-	125	176	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.12	0.18	72.65	\$ 1199.46
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	17	83	422	-	-	445	-	-	4	70
HCM Lane V/C Ratio	0.078	0.257	0.031	-	-	0.047	-	-	3.029	0.207
HCM Ctrl Dly (s/v)	232	62.7	13.8	-	-	13.5	-	-	\$ 2491.2	69.2
HCM Lane LOS	F	F	B	-	-	B	-	-	F	F
HCM 95th %tile Q(veh)	0.2	0.9	0.1	-	-	0.1	-	-	2.8	0.7

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

Intersection

Int Delay, s/veh 1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑		↑
Traffic Vol, veh/h	1436	0	0	1401	0	75
Future Vol, veh/h	1436	0	0	1401	0	75
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	98	98	93	93	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1465	0	0	1506	0	93

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	-	- 1465
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	- 6.22
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	- 3.318
Pot Cap-1 Maneuver	-	0	0 - 157
Stage 1	-	0	0 -
Stage 2	-	0	0 -
Platoon blocked, %	-		-
Mov Cap-1 Maneuver	-	-	- 157
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	56.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	157	-	-
HCM Lane V/C Ratio	0.589	-	-
HCM Ctrl Dly (s/v)	56.3	-	-
HCM Lane LOS	F	-	-
HCM 95th %tile Q(veh)	3.1	-	-

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	1	1433	8	48	1339	16	1	1	3	0	1	3
Future Vol, veh/h	1	1433	8	48	1339	16	1	1	3	0	1	3
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	96	96	96	95	95	95	38	38	38	50	50	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	1493	8	51	1409	17	3	3	8	0	2	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1426	0	0	1501	0	0	2306	3026	1497	-	3022	713
Stage 1	-	-	-	-	-	-	1499	1499	-	-	1519	-
Stage 2	-	-	-	-	-	-	807	1527	-	-	1503	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.33	6.53	6.23	-	6.53	6.93
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	-	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.53	5.53	-	-	5.53	-
Follow-up Hdwy	2.219	-	-	2.219	-	-	3.519	4.019	3.319	-	4.019	3.319
Pot Cap-1 Maneuver	475	-	-	444	-	-	24	13	150	0	13	375
Stage 1	-	-	-	-	-	-	152	185	-	0	180	-
Stage 2	-	-	-	-	-	-	342	179	-	0	184	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	475	-	-	444	-	-	16	10	150	-	10	375
Mov Cap-2 Maneuver	-	-	-	-	-	-	16	10	-	-	10	-
Stage 1	-	-	-	-	-	-	150	182	-	-	146	-
Stage 2	-	-	-	-	-	-	270	145	-	-	181	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.01	2.86	221.37	121.54
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	28	~ 1	-	-	121	-	-	39
HCM Lane V/C Ratio	0.475	0.002	-	-	0.114	-	-	0.208
HCM Ctrl Dly (s/v)	221.4	12.6	0	-	14.1	2.5	-	121.5
HCM Lane LOS	F	B	A	-	B	A	-	F
HCM 95th %tile Q(veh)	1.5	0	-	-	0.4	-	-	0.7

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