

MULTIMODAL TRANSPORTATION ANALYSIS

THE COVENANT SCHOOL NASHVILLE, TENNESSEE



THE COVENANT SCHOOL // AUGUST 2025

**MULTIMODAL TRANSPORTATION ANALYSIS
THE COVENANT SCHOOL
NASHVILLE, TENNESSEE**

PREPARED FOR:
THE COVENANT SCHOOL



PREPARED BY:
KCI TECHNOLOGIES, INC
500 11th Avenue North, Suite 290
Nashville, TN 37203
615.370.8410 office 615.370.8455 fax
www.kci.com

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EXECUTIVE SUMMARY

Project Description

The proposed Covenant School development is located along the north side of Harding Pike in the West Meade neighborhood of Nashville, Tennessee. According to the school representatives, the proposed development includes an elementary school that holds approximately 400 students and is expected to be completed by 2027. Access to the development is planned to be provided by two driveways, one on Brook Hollow Road and one on Harding Pike. The purpose of this study is to analyze the traffic operations, multimodal mobility, and safety of the transportation network within the vicinity of the proposed development.

Traffic Review

The following intersections were analyzed to evaluate the traffic impacts associated with this proposed development:

1. Harding Pike and Vaughns Gap Road (signalized)
2. Harding Pike and Brook Hollow Road (unsignalized)
3. Harding Pike and Vossland Drive/Percy Warner Boulevard (signalized)

Manual traffic counts were conducted at each of the study intersections in order to establish existing peak hour traffic volumes. The existing traffic volumes were grown to the design year, 2027, using a growth rate of 2.0% per year to account for traffic growth prior to the completion of the proposed development. A traffic generation process was used to estimate the number of trips expected to be generated by the proposed development. The estimated project-generated trips were added to the design year traffic volumes in order to obtain the total projected peak hour traffic volumes at the completion of the development.

Multimodal Review

In addition to the study intersections listed above, the following roadway segments were evaluated to identify the multimodal impacts associated with this proposed development:

1. Harding Pike between Vaughns Gap Road and Brook Hollow Road (1,270 feet)
2. Harding Pike between Brook Hollow Road and Vossland Drive/Percy Warner Boulevard (1,400 feet)

The pedestrian infrastructure, bicycle facilities, and transit services and facilities were evaluated for each study segment and intersection to identify MCSP compliance, measure intersection and segment level of traffic stress, and determine potential improvements.

Safety Review

According to Nashville’s Vision Zero Task Force, no roadway segments within the study area are included in the High Injury Network (HIN). These roadway segments were evaluated to identify any existing or potential future safety deficiencies and to provide mitigation measures to improve safety.

The site driveways were evaluated to determine conflict points between vehicles, bicycles, and pedestrians as well as any sight distance constraints. Driveway A will be adequate for left-turns onto Brook Hollow Road and will fall just short of the design value for right-turns. To the south, the vertical curvature of Brook Hollow Road restricts sight distance to 250 feet, falling 40 feet short of the design distance. Driveway B will be adequate for both left-turns and right-turns onto Harding Pike.

Historic crash data within the study area was obtained in order to determine the need to provide crash mitigation measures. Since 2020, there have been 49 crashes: including one fatalities and zero serious injury crashes. Additionally, of the total crashes, zero crashes included pedestrians and zero crashes included bicycles.

Recommended Improvements

The analyses and evaluations presented in this study indicate that the impacts of the proposed Covenant School development on the study area will be manageable by providing the recommended improvements below. These specific recommendations will provide safe and more efficient traffic operations and multimodal mobility within the study area following the completion of the proposed project. The recommended improvements as well as the benefits, base cost estimate, and development’s planned commitment associated with each improvement are as follows:

LOCATION	DESCRIPTION	RATIONAL NEXUS	COST	COMMITMENT
Harding Pike and Brook Hollow Road	Install traffic signal with protective-permissive left-turn phasing on the eastbound approach of Harding Pike and a right-turn overlap on the southbound right-turn. It should be noted that this improvement is needed based on existing traffic volumes.	Nearest intersection to project site	Around \$250,000	Yes
	Install pedestrian infrastructure including crosswalks and pedestrian signals			
	Restripe the eastbound two-way, left-turn lane to include a left-turn lane with 75 feet of storage.	Nearest intersection to project site	Around \$1,500	Yes
	Extend the southbound right-turn lane to 250 feet of storage on Brook Hollow Road.	Nearest intersection to project site	\$300 per linear foot	Yes
Project Frontage	Install sidewalks along the project frontages on Harding Pike and Brook Hollow Road.	Project frontage	\$27.50 per square foot	Yes
	Dedicate right-of-way for bicycle facilities on Brook Hollow Road.	Project frontage	n/a	Yes
	Upgrade the transit stop facility along the project frontage on Harding Pike.	Project frontage	Around \$200	Need to coordinate with NDOT and WeGo
Brook Hollow Road and Driveway A	Install southbound left-turn lane with 50 feet of storage.	Project site access	\$300 per linear foot	Yes

In addition to the improvements presented above, the following strategies are recommended to improve site operations:

Brook Hollow Road and Driveway A

- The westbound approach of Driveway A should be stop-controlled, and a stop bar and R1-1 'Stop' sign should be installed on the egress approach.
- Driveway A should be designed to include sufficient width for one entering lane and a minimum of one exiting lane.

Harding Pike and Driveway B

- The southbound approach of Driveway B should be stop-controlled, and a stop bar and R1-1 'Stop' sign should be installed on the egress approach.
- Driveway B should be designed to include sufficient width for one entering lane and a minimum of one exiting lane.
- In order to be conservative and evaluate the "worst case scenario" for the intersection of Harding Pike and Brook Hollow Road, trips were not distributed through this site driveway; however, it should be noted that this driveway is planned to be utilized for site circulation. Therefore, further coordination with NDOT will be required to determine the specific circulation and access details for this driveway.

Travel Demand Management

- Parking/storage options should be provided for bicycles on-site.

Additional Recommendations

- Parking should be developed per code.
- As part of the construction of the project, all internal and external driveway connections should be designed such that the departure sight triangles, as specified by AASHTO, will be clear of all sight obstructions, including landscaping, existing vegetation, monument signs/walls, fences, etc.
- Final design of internal roadways and parking should meet all NDOT standards and the latest version of "A Policy of Geometric Design of Highways and Streets" published by AASHTO. Any parking lots and streets associated with the development should ensure that passenger cars and emergency vehicles are capable of making all turning movements. Internal intersections should be two-way stop-controlled unless all-way stop control warrants are met.

In summary, based on the analyses and evaluations conducted, no further recommendations are presented for the proposed Covenant School development.

1.0 INTRODUCTION AND PROJECT DESCRIPTION

The purpose of this study is to analyze the traffic operations, multimodal mobility, and safety of the transportation network within the vicinity of the proposed Covenant School development located in the West Meade neighborhood of Nashville, Tennessee. According to the school representatives, the proposed development will include an elementary school that holds approximately 400 students and is expected to be completed by 2027.

As shown by Figure 1, the property is located along the north side of Harding Pike between Brook Hollow Road and Vossland Drive/Percy Warner Boulevard. The property is currently zoned RS80 (low-density residential). The proposed development is within an area that is characterized by low-to-medium-density land uses. The property is generally bounded on the north by residential, on the east by residential, on the south by Harding Pike, and on the west by Brook Hollow Road.

The current site plan for the Covenant School development is shown in Appendix A. Based on this site plan, proposed vehicular access for the development is planned to be provided by two driveways, one on Brook Hollow Road and one on Harding Pike.

- Driveway A will be located along Brook Hollow Road approximately 420 feet north of Harding Pike and Brook Hollow Road.
- Driveway B will be located along Harding Pike approximately 690 feet east of Harding Pike and Brook Hollow Road.

Surface parking is planned to accommodate the proposed development.

The study area, shown in Figure 1, includes the intersections and segments within the vicinity of the project site that are expected to be impacted by proposed development. The study intersections are as follows:

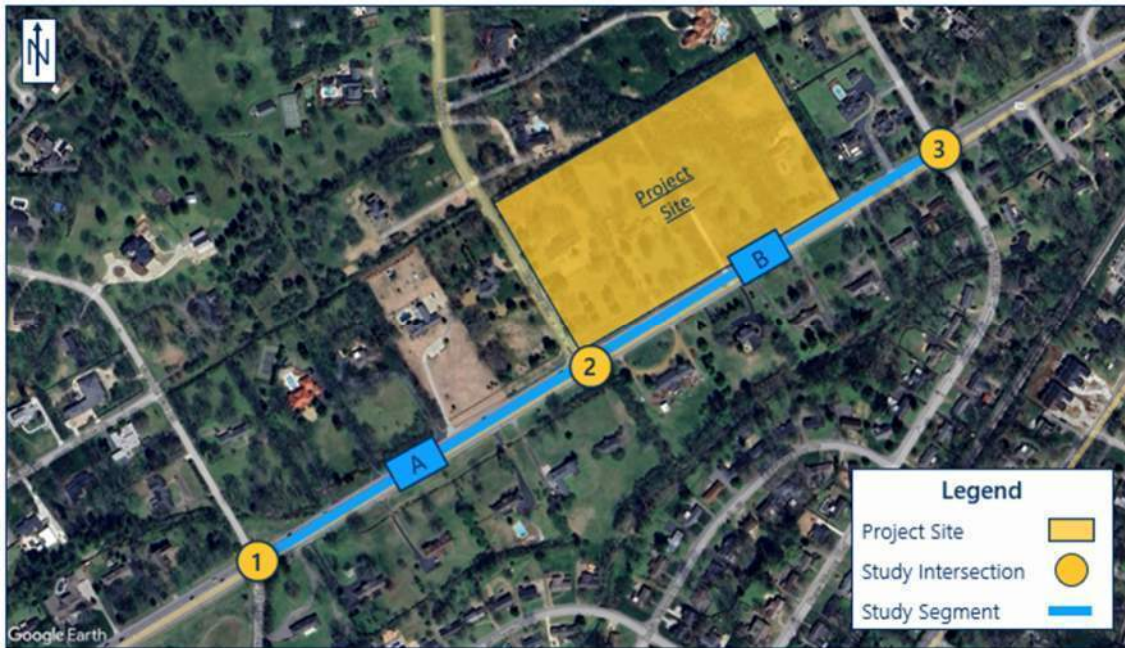
1. Harding Pike and Vaughns Gap Road (signalized)
2. Harding Pike and Brook Hollow Road (unsignalized)
3. Harding Pike and Vossland Drive/Percy Warner Boulevard (signalized)

The study segments are as follows:

1. Harding Pike between Vaughns Gap Road and Brook Hollow Road (1,270 feet)
2. Harding Pike between Brook Hollow Road and Vossland Drive/Percy Warner Boulevard (1,400 feet)

The scope of work for this study was determined in the *Scoping Evaluation Form*, included in Appendix B. The form was approved by the Nashville Department of Transportation (NDOT) on July 22, 2025 after collaboration with KCI Technologies and the school representatives.

FIGURE 1. STUDY AREA



2.0 TRAFFIC REVIEW

This chapter presents the traffic assessment of the intersections within the vicinity of the project site that are expected to be impacted by proposed development. The following intersections were evaluated:

1. Harding Pike and Vaughns Gap Road (signalized)
2. Harding Pike and Brook Hollow Road (unsignalized)
3. Harding Pike and Vossland Drive/Percy Warner Boulevard (signalized)

To determine the effects of the proposed development on the study area, the following scenarios were assessed:

1. Existing 2025 Conditions
2. Future 2027 No-Build Conditions
3. Future 2027 Build Conditions

2.1 Existing Roadway Network

A field inventory of the existing roadway network within the study area was conducted. The direction, number of lanes, roadway classification, and posted speed limit associated with each of the roadways included within the study area is presented in Table 1. The roadway classifications were obtained from Metro Nashville's *Major and Collector Street Plan* (MCSP). Per Nashville's current *Code of Ordinances*, in the absence of a posted speed limit the maximum speed limit for a road in an urban district is set at 25 mph.

TABLE 1. DESCRIPTION OF STUDY ROADWAYS

ROADWAY NAME	DIRECTION	NUMBER OF LANES			MCSP CLASSIFICATION	POSTED SPEED LIMIT (mph)
		EB/NB	WB/SB	TW/TL		
Harding Pike	East-West	2	2	1	Arterial-Boulevard (T3-R-AB5-S)	45
Vaughns Gap Road	North-South	1	1	0	Collector-Avenue (T3-R-CA2)	North of Harding Pike - 25 South of Harding Pike - 30
Brook Hollow Road	North-South	1	1	0	Collector-Avenue (T3-R-CA2)	30
Vossland Drive	North-South	1	1	0	Local	25
Percy Warner Boulevard	North-South	1	1	0	Local	30

The existing lane configurations and traffic control for each of the study intersections is illustrated in Figure 2.

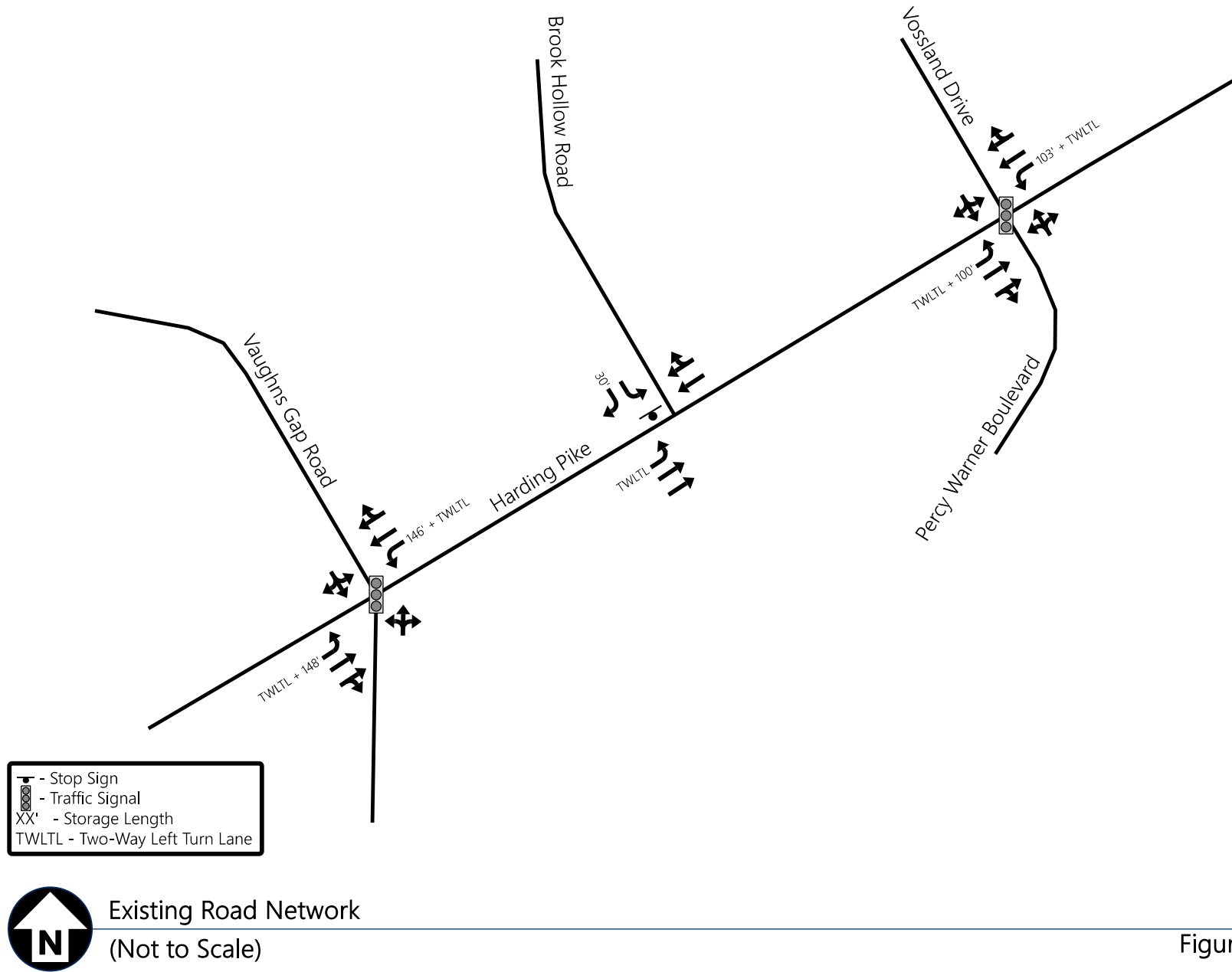


Figure 2.

2.2 Existing Traffic Volumes

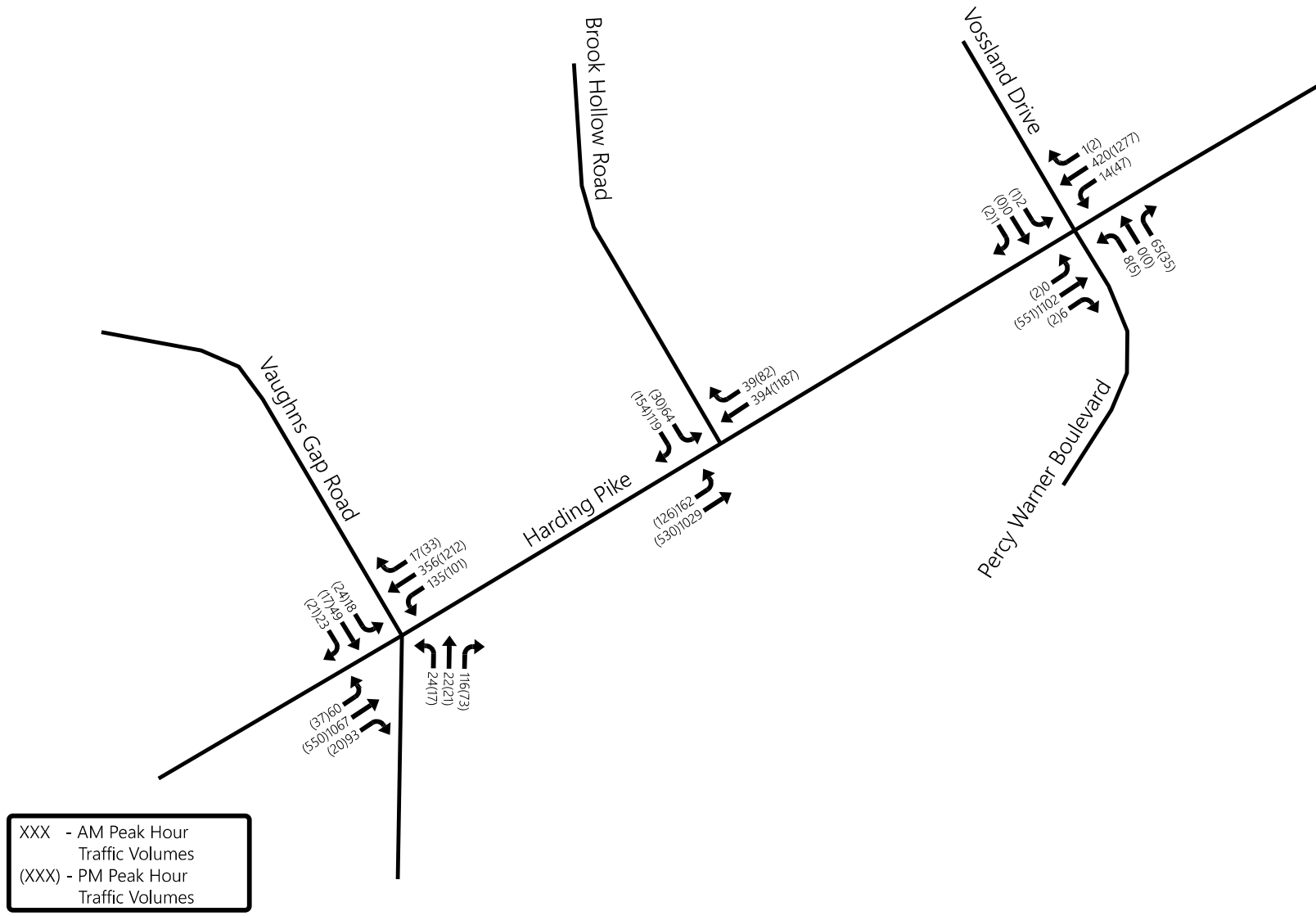
In order to provide data for the traffic impact analysis, manual traffic counts were conducted at each of the study intersections. Specifically, Marr Traffic Data Collection conducted the traffic counts from 7:00 – 9:00 AM and 4:00 – 6:00 PM on a typical weekday in April 2025 while local schools were in session. From the counts, it was determined that the peak hours of traffic flow for the majority of the study intersections occurred from 7:15 – 8:15 AM and 5:00 – 6:00 PM.

The existing peak hour turning movement volumes are presented in Figure 3. A detailed summary of the traffic counts is included in Appendix C.

In addition to the above information, average daily traffic volumes were obtained from the Tennessee Department of Transportation (TDOT). There are three TDOT count stations located in the vicinity of the project site. The count station locations and annual average daily traffic (AADT) in 2024 are shown in Table 2. Additional TDOT Count Station data is included in Appendix D.

TABLE 2. TDOT COUNT STATION DATA

ROADWAY	LOCATION	STATION NO.	2024 AADT (vpd)
Harding Pike	South of Project Site, Between Percy Warner Boulevard and Brookmont Terrace	197	15,087
Harding Pike	East of Project Site, Between Old Harding Pike and Highway 100	117	15,006
Brook Hollow Road	North of Project Site, Between Davidson Road and W Meade Drive	586	2,798



Existing Peak Hour Traffic Volumes
(Not to Scale)

Figure 3.

2.3 Existing Traffic Level of Service

To determine the current operation of the study intersections, capacity analyses were performed utilizing the latest version of Vistro traffic modeling software. The capacity calculations were performed according to the methods outlined in the *Highway Capacity Manual, 7th Edition*. The capacity analyses result in the determination of a Level of Service (LOS) for an intersection. The LOS is a concept used to describe how well an intersection or roadway operates. LOS A is the best, while LOS F is the worst. LOS D is typically considered as the minimum acceptable LOS for an intersection in an urbanized area. For stop-controlled intersections, a LOS is presented for each critical turning movement. For signalized intersections, a LOS is presented for the overall intersection. Table 3 presents the descriptions of LOS for signalized and unsignalized intersections.

TABLE 3. DESCRIPTIONS OF LEVEL OF SERVICE

LEVEL OF SERVICE	DESCRIPTION	UNSIGNALIZED CONTROL DELAY (sec/veh)	SIGNALIZED CONTROL DELAY (sec/veh)
A	Little or no delay	≤ 10.0	≤ 10.0
B	Short traffic delay	>10 and ≤ 15	>10 and ≤ 20
C	Average traffic delay	>15 and ≤ 25	>20 and ≤ 35
D	Long traffic delay	>25 and ≤ 35	>35 and ≤ 55
E	Very long traffic	>35 and ≤ 50	>55 and ≤ 80
F	Extreme traffic delay	> 50.0	> 80.0

Source: *Highway Capacity Manual, 7th Edition*

The signal timing and phasing plan for the signalized intersections in the study area were obtained from NDOT and were utilized for the capacity analysis. The signal timing data is included in Appendix E.

The results of the capacity analyses for the existing conditions at the study intersections are presented in Table 4. As shown, all intersections and critical movements operate at LOS D or better in the AM and PM peak hours with the following exceptions:

- Harding Pike and Brook Hollow Road
 - The southbound left-turn operates at LOS F in both the AM and PM peak hours.

Capacity analyses worksheets are included in Appendix F.

TABLE 4. EXISTING PEAK HOUR LEVELS OF SERVICE

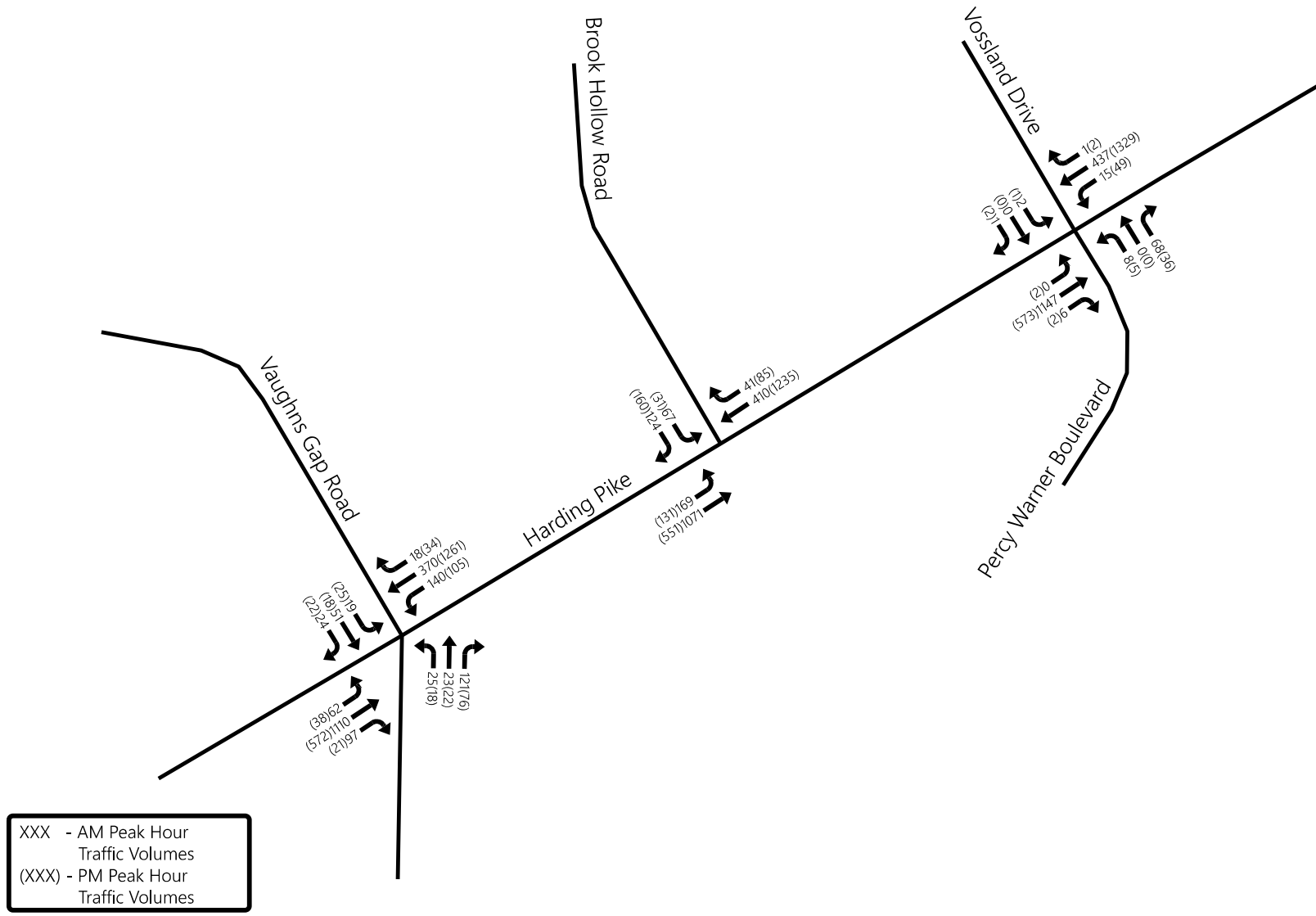
INTERSECTION	TURNING MOVEMENT	LEVEL OF SERVICE (Average Delay in sec/veh)	
		AM PEAK	PM PEAK
Harding Pike and Vaughns Gap Road	Overall Intersection	B (14.0)	B (10.4)
Harding Pike and Brook Hollow Road	Southbound Left-Turn	F (51.5)	F (123.4)
	Southbound Right-Turn	B (10.4)	C (18.4)
	Eastbound Left-Turn	A (8.8)	B (13.6)
Harding Pike and Vossland Drive/Percy Warner Boulevard	Overall Intersection	A (6.6)	A (4.9)

2.4 Future No-Build Traffic Volumes

In order to account for the traffic growth prior to the completion of the proposed project, future traffic volumes were established. For the purposes of this traffic study, the proposed development was assumed to be completed by the year 2027, which is a 2-year horizon. Historical daily traffic volumes were obtained from the three TDOT count stations located in the vicinity of the project site. Since 2025, the combined traffic at these three TDOT count stations has decreased. Some of this decrease could be attributed to a nearby high school closing. The TDOT count station data is included in Appendix D.

A growth factor was applied to the existing peak hour traffic volumes to account for background growth for the future conditions. The existing peak hour traffic volumes at the study intersections were increased by 2.0% per year for 2 years to account for anticipated background traffic growth within the study area.

The future no-build peak hour traffic volumes for horizon year 2027 are presented in Figure 4. These volumes represent the peak hour traffic that is expected to be on the roadway in 2027 even if the proposed Covenant School development is not completed.



XXX - AM Peak Hour Traffic Volumes
 (XXX) - PM Peak Hour Traffic Volumes


 Future No-Build Peak Hour Traffic Volumes
 (Not to Scale)

Figure 4.

2.5 Future No-Build Traffic Level of Service

To determine the operation of the study area intersections under future no-build conditions, capacity analyses were performed for the AM and PM peak hours. The analyses for the future no-build conditions were based on the same lane configurations and signal timings as the existing conditions.

As shown in Tables 5A and 5B, under future no-build conditions, the capacity analyses indicate that the operational performances of the critical movements at the study intersections are generally expected to continue to operate at the same level of service as under existing conditions or continue to operate at LOS D or better in the AM and PM peak. Capacity analyses worksheets are included in Appendix F.

TABLE 5A. FUTURE NO-BUILD AM PEAK HOUR LEVELS OF SERVICE

INTERSECTION	TURNING MOVEMENT	LEVEL OF SERVICE (Average Delay in sec/veh)	
		EXISTING	FUTURE NO-BUILD
Harding Pike and Vaughns Gap Road	Overall Intersection	B (14.0)	B (14.6)
Harding Pike and Brook Hollow Road	Southbound Left-Turn	F (51.5)	F (62.4)
	Southbound Right-Turn	B (10.4)	B (10.5)
	Eastbound Left-Turn	A (8.8)	A (8.8)
Harding Pike and Vossland Drive/Percy Warner Boulevard	Overall Intersection	A (6.6)	A (6.8)

TABLE 5B. FUTURE NO-BUILD PM PEAK HOUR LEVELS OF SERVICE

INTERSECTION	TURNING MOVEMENT	LEVEL OF SERVICE (Average Delay in sec/veh)	
		EXISTING	FUTURE NO-BUILD
Harding Pike and Vaughns Gap Road	Overall Intersection	B (10.4)	B (10.8)
Harding Pike and Brook Hollow Road	Southbound Left-Turn	F (123.4)	F (165.3)
	Southbound Right-Turn	C (18.4)	C (19.6)
	Eastbound Left-Turn	B (13.6)	B (14.3)
Harding Pike and Vossland Drive/Percy Warner Boulevard	Overall Intersection	A (5.0)	A (5.1)

2.6 Trip Generation

A traffic generation process was used to estimate the amount of traffic expected to be generated by the proposed Covenant School development. Factors for the trip generation were taken from ITE’s *Trip Generation*, 11th Edition. According to the school representatives, the proposed development includes an elementary school that holds approximately 400 students. No reductions were applied to the base trip generation to account for internal capture or pass-by trips.

Table 6A and Table 6B presents the daily, AM and PM peak hour trip generation as well as the school dismissal peak hour, respectively. These trips represent the new traffic that will be generated by the proposed Covenant School development. The calculations for trip generation are included in Appendix G.

TABLE 6A. DEVELOPMENT TRIP GENERATION – PEAK HOUR OF ADJACENT STREET

ITE CODE	LAND USE	SIZE	GENERATED TRAFFIC				
			DAILY TRAFFIC	AM PEAK		PM PEAK	
				Enter	Exit	Enter	Exit
530	Private School (K-8)	400 students	1,644	226	177	48	56
NEW TRIPS			1,644	226	177	48	56
				403		104	

Source: *Trip Generation*, 11th Edition

TABLE 6B. DEVELOPMENT TRIP GENERATION – PEAK HOUR GENERATOR (SCHOOL DISMISSAL TIME)

ITE CODE	LAND USE	SIZE	GENERATED TRAFFIC	
			SCHOOL PEAK HOUR	
			Enter	Exit
530	Private School (K-8)	400 students	114	129
NEW TRIPS			114	129
			243	

Source: *Trip Generation*, 11th Edition

It should be noted, this elementary school will offer Pre-K through 6th grade.

2.7 Mode Split

The development is located in an urban setting with access to pedestrian, bicycle, and transit facilities. It was assumed that 0% of the trips would utilize modes of transportation other than single occupancy vehicles. The vehicular and multimodal trips are broken down in Table 7A and Table 7B.

TABLE 7A. MODE SPLIT

PARAMETER	DAILY		AM PEAK				PM PEAK			
			Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit
Mode	Vehicle	Other	Vehicle		Other		Vehicle		Other	
Mode Split	100%	0%	100%		0%		100%		0%	
Net Modal Trips Added	1,644	0	226	177	0	0	48	56	0	0
			403		0		104		0	

TABLE 7B. MODE SPLIT

PARAMETER	PM PEAK			
	Enter	Exit	Enter	Exit
Mode	Vehicle		Other	
Mode Split	100%		0%	
Net Modal Trips Added	114	129	0	0
	243		0	

2.8 Future Build Traffic Volumes

A directional distribution of traffic generated by the proposed project was established based on the proposed access, the existing roadway network, and the existing travel patterns developed from the existing peak hour traffic counts. As previously discussed, access to the development is planned to be provided by two driveways, one on Harding Pike and one on Brook Hollow Road.

- Driveway A will be located along Brook Hollow Road approximately 420 feet north of Harding Pike and Brook Hollow Road.
- Driveway B will be located along Harding Pike approximately 690 feet east of Harding Pike and Brook Hollow Road.
 - In order to be conservative and evaluate the “worst case scenario” for the intersection of Harding Pike and Brook Hollow Road, trips were not distributed through this site driveway; however, it should be noted that this driveway is planned to be utilized for site circulation. Therefore, further coordination with NDOT will be required to determine the specific circulation and access details for this driveway.

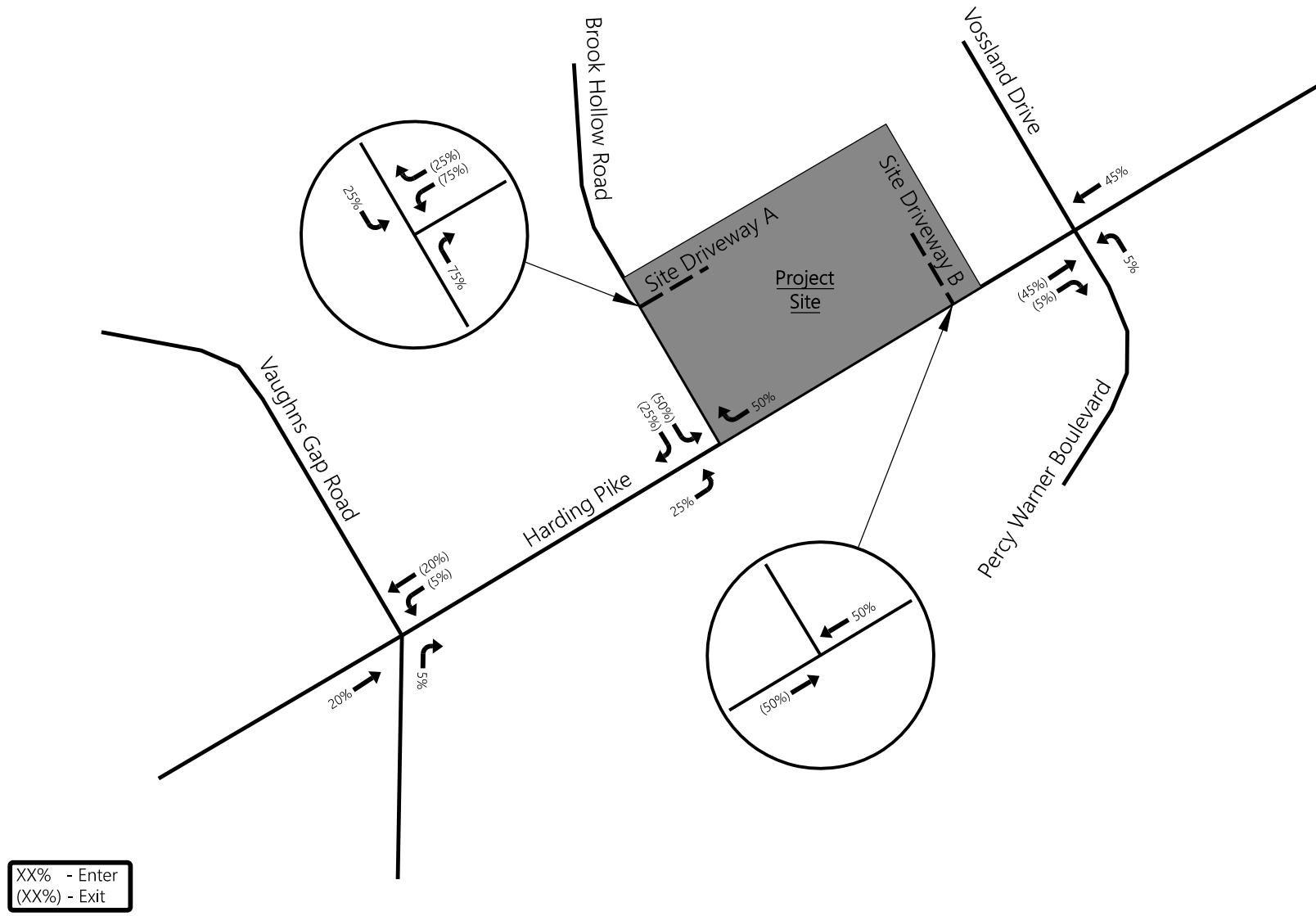
The overall directional distribution for the proposed development is shown in Figure 5. As shown in the figure,

- approximately 45% of the traffic generated by the development will be oriented to the east on Harding Pike,
- 25% to the north on Brook Hollow Road,

- 20% to the west on Harding Pike,
- 5% to the south on Vaughns Gap Road, and
- 5% to the south on Percy Warner Boulevard.

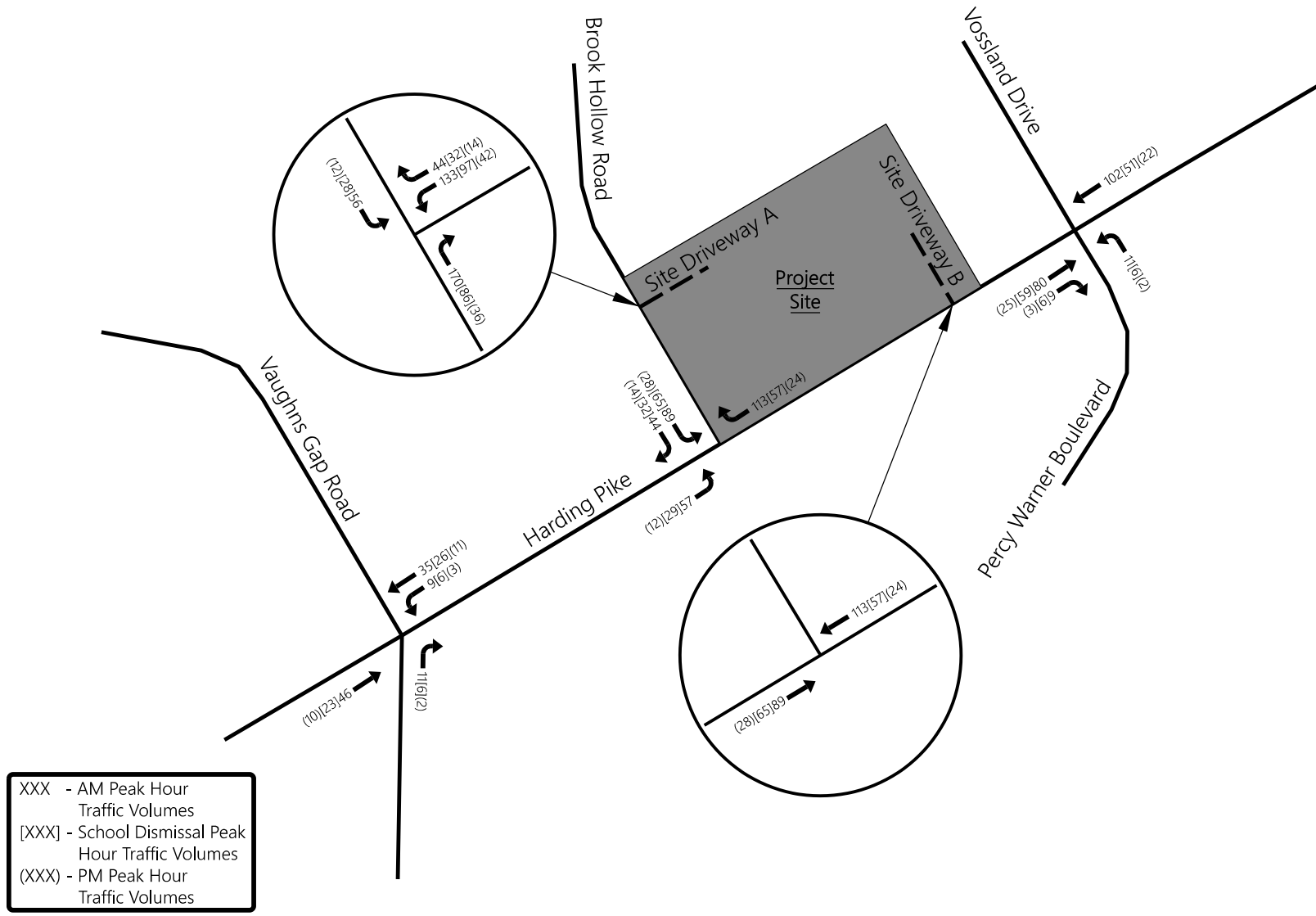
Based on the directional distribution, the project-generated traffic for the AM peak hour, PM peak hour, and school dismissal was assigned to the roadway network. The traffic assignment for the proposed development is shown in Figure 6.

The total site-generated traffic volumes were added to the future no-build peak hour traffic volumes in order to obtain the future build traffic volumes for the study intersections. Figure 7 presents the future build AM peak hour, PM peak hour and school dismissal traffic volumes expected at the completion of the proposed development.



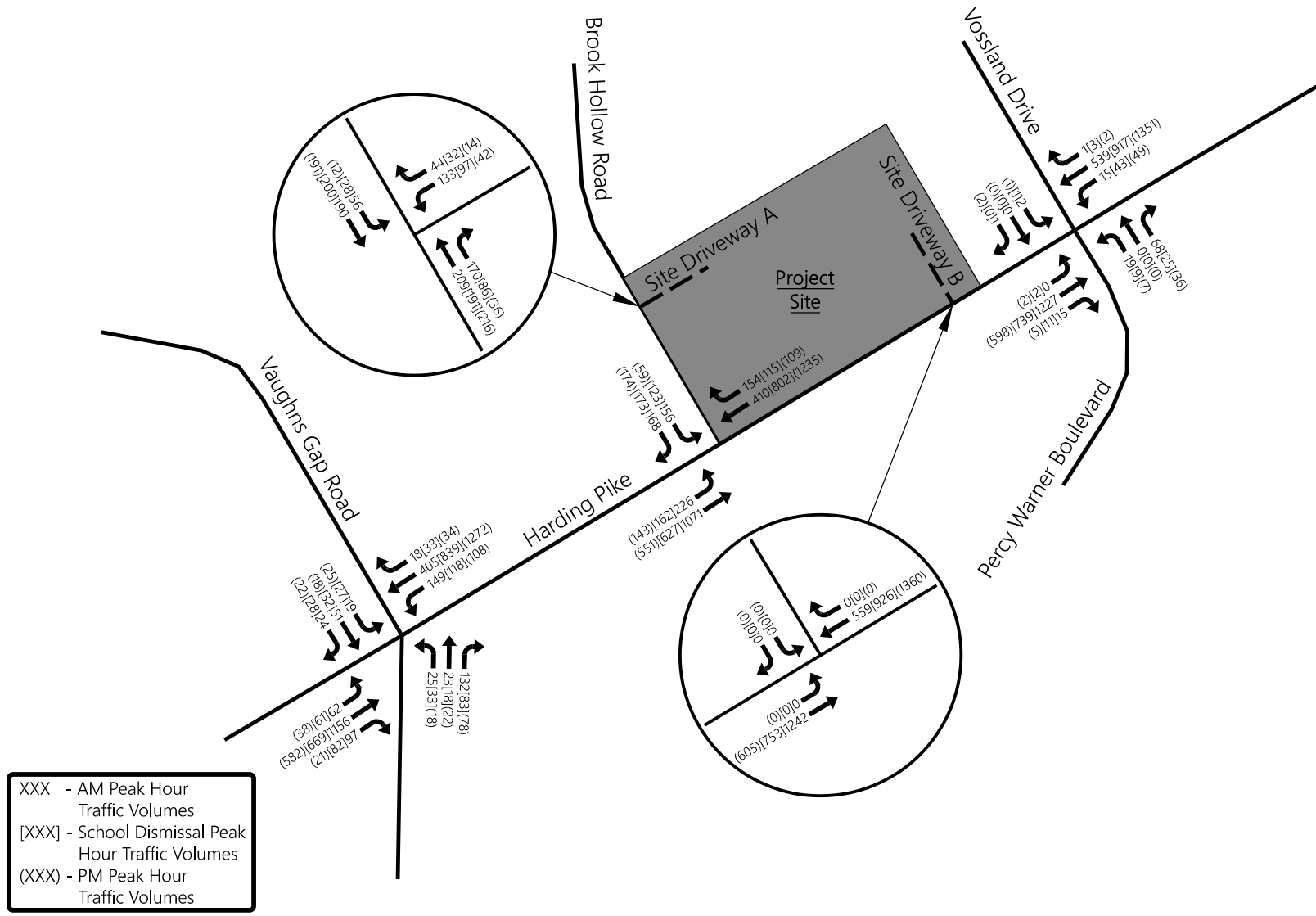
 Distribution of Traffic Generated by the Project Site
 (Not to Scale)

Figure 5.



 Assignment of Traffic Generated by the Project Site
(Not to Scale)

Figure 6.



Future Build Peak Hour Traffic Volumes
(Not to Scale)

Figure 7.

2.9 Lane Warrant Analysis

The site driveway and study intersection were evaluated for the need to provide a right-turn lane based on the future build traffic volumes. Since this project site is located with an urban environment, this analysis was based on the procedures outlined in the Highway Capacity Manual (HCM). The HCM indicates that an exclusive right-turn lane shall be considered when the right-turn volume exceeds 300 vph and the adjacent through-lane volume also exceeds 300 vphpl. The result of this analysis is presented in Table 8.

TABLE 8. RIGHT-TURN LANE ANALYSIS

INTERSECTION	APPROACH	AM PEAK	PM PEAK	SCHOOL DISMISSAL PEAK
Harding Pike and Brook Hollow Road	Westbound	No	No	No
Brook Hollow Road and Driveway A	Northbound	No	No	No

The site driveway and study intersection were evaluated for the need to provide a left-turn lane based on the future build traffic volumes. This analysis was based on the procedures outlined in AASHTO Green Book 2018. The result of this analysis is presented in Table 9.

TABLE 9. LEFT-TURN LANE ANALYSIS

INTERSECTION	APPROACH	AM PEAK	PM PEAK	SCHOOL DISMISSAL PEAK
Harding Pike and Brook Hollow Road	Eastbound	Yes	Yes	Yes
Brook Hollow Road and Driveway A	Southbound	Yes	No	Yes

It should be noted that Harding Pike has an existing two-way, left-turn lane.

The site driveway was evaluated for the need to provide a two-lane approach based on the future build traffic volumes. This analysis was based on the procedures outlined in *Evaluating Intersection Improvements: An Engineering Study Guide* (NCHRP 457). The result of this analysis is presented in Table 10.

TABLE 10. TWO-LANE MINOR APPROACH ANALYSIS

INTERSECTION	APPROACH	AM PEAK	PM PEAK	SCHOOL DISMISSAL PEAK
Brook Hollow Road and Driveway A	Westbound	No	No	No

All warrant analyses are included in Appendix H.

2.10 Future Build Traffic Level of Service

Capacity analyses were performed in order to determine the impact of the project on the study intersections. These capacity analyses were also used to evaluate the need for roadway and traffic control improvements at the intersections studied. The results of the capacity analyses for the future build conditions at the study area intersections are presented in Tables 11A and 11B. For the analyses, the intersection configurations and signal timings were the same as the future no-build conditions.

Based on preliminary lane warrant analysis, the proposed site driveways are expected to operate as follows:

- Driveway A
 - Driveway A will operate as stop-controlled with one entering lane and one exiting lane.

As shown in Tables 11A and 11B, under future build conditions, the capacity analyses indicate that the operational performances of the critical movements at the study intersections are generally expected to continue to operate at the same level of service as under future no-build conditions or continue to operate at LOS D or better in the AM and PM peak hours.

Additional analyses were conducted under a “build with improvements” scenario to evaluate the benefits of adding the following roadway improvements:

- Harding Pike and Brook Hollow Road
 - Install a traffic signal with protective-permissive left-turn phasing on the eastbound approach of Harding Pike and right-turn overlap on the southbound right-turn.
 - Restripe a portion of the eastbound two-way, left-turn lane on Harding Pike to include one left-turn lane with 75 feet of storage.
 - Extend the southbound right-turn lane to 250 feet of storage.
- Brook Hollow Road and Driveway A
 - Install a southbound left-turn with 50 feet of storage

Capacity analyses results for the “build with improvements” scenario are presented **in bold** in Tables 11A and 11B. As shown in Tables 11A and 11B, these improvements generally reduce delay at the corresponding study intersections. Capacity analyses worksheets are included in Appendix F.

TABLE 11A. FUTURE BUILD AM PEAK HOUR LEVELS OF SERVICE

INTERSECTION	TURNING MOVEMENT	LEVEL OF SERVICE (Average Delay in sec/veh)		
		EXISTING	FUTURE	
			NO-BUILD	BUILD
Harding Pike and Vaughns Gap Road	Overall Intersection	B (14.0)	B (14.6)	B (15.3)
Harding Pike and Brook Hollow Road	Southbound Left-Turn	F (51.5)	F (62.4)	F (>300.0)
	Southbound Right-Turn	B (10.4)	B (10.5)	B (11.6)
	Eastbound Left-Turn	A (8.8)	A (8.8)	A (9.6)
	Overall Intersection	--	--	B (11.6)
Harding Pike and Vossland Drive/Percy Warner Boulevard	Overall Intersection	A (6.6)	A (6.8)	A (7.4)
Brook Hollow Road and Driveway A	Southbound Left-Turn	--	--	A (8.1) A (8.2)
	Westbound Approach	--	--	C (16.4)
'Build with Improvements' Scenario				

TABLE 11B. FUTURE BUILD PM PEAK HOUR LEVELS OF SERVICE

INTERSECTION	TURNING MOVEMENT	LEVEL OF SERVICE (Average Delay in sec/veh)			
		EXISTING	FUTURE		
			NO-BUILD	BUILD	SCHOOL DISMISSAL
Harding Pike and Vaughns Gap Road	Overall Intersection	B (10.4)	B (10.8)	B (10.9)	A (9.8)
Harding Pike and Brook Hollow Road	Southbound Left-Turn	F (123.4)	F (165.3)	F (>300.0)	F (>300.0)
	Southbound Right-Turn	C (18.4)	C (19.6)	C (21.0)	B (14.6)
	Eastbound Left-Turn	B (13.6)	B (14.3)	B (14.8)	B (11.2)
	Overall Intersection	--	--	B (14.5)	B (13.6)
Harding Pike and Vossland Drive/Percy Warner Boulevard	Overall Intersection	A (5.0)	A (5.1)	A (5.2)	A (4.3)
Brook Hollow Road and Driveway A	Southbound Left-Turn	--	--	A (7.8) A (7.8)	A (7.8) A (7.9)
	Westbound Approach	--	--	B (11.5)	B (13.1)
'Build with Improvements' Scenario					

2.11 Queue Length Analysis

In addition to the capacity analyses, the 95th percentile queue lengths for the critical movements of the study intersections that are expected to be impacted by the proposed development were also analyzed and evaluated under the existing, future no-build, and future build conditions. Tables 12A and 12B indicate the results of the queue length analyses for the study intersections.

TABLE 12A. AM PEAK HOUR 95TH PERCENTILE QUEUE LENGTH

INTERSECTION	TURNING MOVEMENT	AVAILABLE STORAGE (Feet)	95 TH PERCENTILE QUEUE LENGTH (Feet)		
			EXISTING	FUTURE	
				NO BUILD	BUILD
Harding Pike and Vaughns Gap Road	Northbound Approach	--	212	221	235
	Southbound Approach	--	113	117	116
	Eastbound Left-Turn	148 + TWLTL	13	13	14
	Westbound Left-Turn	146 + TWLTL	35	38	44
Harding Pike and Brook Hollow Road	Southbound Left-Turn	--	59	74	966 217
	Southbound Right-Turn	30 250	13	14	23 186
	Eastbound Left-Turn	75 + TWLTL	13	14	22 41
Harding Pike and Vossland Drive/Percy Warner Boulevard	Northbound Approach	--	98	102	117
	Southbound Approach	--	4	4	4
	Eastbound Left-Turn	110 + TWLTL	0	0	0
	Westbound Left-Turn	103 + TWLTL	1	1	2
Brook Hollow Road and Driveway A	Southbound Left-Turn	50	--	--	2 4
	Westbound Left-Turn	--	--	--	42
	Westbound Right-Turn	--	--	--	42
'Build with Improvements' Scenario					

TABLE 12B. PM PEAK HOUR 95TH PERCENTILE QUEUE LENGTH

INTERSECTION	TURNING MOVEMENT	AVAILABLE STORAGE (Feet)	95 TH PERCENTILE QUEUE LENGTH (Feet)			
			EXISTING	FUTURE		
				NO BUILD	BUILD	SCHOOL DISMISSAL
Harding Pike and Vaughns Gap Road	Northbound Approach	--	162	169	172	57
	Southbound Approach	--	88	92	92	36
	Eastbound Left-Turn	148 + TWLTL	7	7	8	4
	Westbound Left-Turn	146 + TWLTL	14	16	17	8
Harding Pike and Brook Hollow Road	Southbound Left-Turn	--	65	84	320 82	618 181
	Southbound Right-Turn	30 250	43	48	57 207	34 206
	Eastbound Left-Turn	75 + TWLTL	23	25	29 32	21 33
Harding Pike and Vossland Drive/Percy Warner Boulevard	Northbound Approach	--	59	60	63	50
	Southbound Approach	--	4	4	4	1
	Eastbound Left-Turn	110 + TWLTL	1	1	1	1
	Westbound Left-Turn	103 + TWLTL	3	3	3	2
Brook Hollow Road and Driveway A	Southbound Left-Turn	50	--	--	1 1	1 2
	Westbound Left-Turn	--	--	--	8	22
	Westbound Right-Turn	--	--	--	8	22
'Build with Improvements' Scenario						

2.12 Signal Warrant Analysis

The intersection of Harding Pike and Brook Hollow Road is expected to operate at poor LOS under unsignalized existing conditions in the AM and PM peak hours.

A traffic signal should normally be installed at an intersection only when specific warrants are satisfied. Therefore, traffic signal warrant analyses were performed with available data for the intersections based on the anticipated traffic conditions at completion of the development.

The *Manual on Uniform Traffic Control Devices* (MUTCD) sets forth nine different warrants that have been developed by the traffic engineering profession to facilitate the determination of whether a signal is warranted. These warrants include minimum conditions that normally indicate when a traffic signal is justified at a particular location. The MUTCD states “traffic control signals should not be installed unless one or more of the signal warrants in the manual are met.”

Although the MUTCD provides nine different warrants, only the eight-hour vehicle volume warrant, four-hour vehicle volume warrant, and peak hour warrant were considered. These warrants, presented in the MUTCD, are as follows:

WARRANT 1, EIGHT-HOUR VEHICLE VOLUME

Warrant 1 is considered satisfied if any of the following three conditions are met for any eight hours of an average day:

1. Warrant 1A, Minimum Vehicle Volumes
2. Warrant 1B, Continuous Traffic
3. Warrant 1C, Combination

It should be noted that when the 85th percentile speed of the major street traffic exceeds 40 mph, or when the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the conditions presented in Warrant 1 can be evaluated at 70 percent of the requirements. The speed limit on Harding Pike is 45 mph; therefore, the intersection of Harding Pike and Brook Hollow Road does qualify for this reduction.

WARRANT 1A, MINIMUM VEHICULAR VOLUME

The Minimum Vehicular Volume warrant is intended for application where the volume of intersecting traffic is the principal reason for consideration of signal installation. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes given below in Table 13 exist on the major street and on the higher volume minor street approach to the intersection.

TABLE 13. MINIMUM VEHICULAR VOLUMES FOR WARRANT 1A

NUMBER OF LANES FOR MOVING TRAFFIC ON EACH APPROACH		VEHICLES PER HOUR ON MAJOR STREET (Total of Both Approaches)				VEHICLES PER HOUR ON HIGHER VOLUME MINOR APPROACH (One Direction Only)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

WARRANT 1B, INTERRUPTION OF CONTINUOUS TRAFFIC

The Interruption of Continuous Traffic warrant applies to operating conditions where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or hazard when entering or crossing the major street. The warrant is satisfied when, for each of any eight hours of an average day, the traffic volumes given below in Table 14 exist on the major street and on the higher volume minor street approach to an intersection. In addition, the signal installation shall not seriously disrupt progressive traffic flow.

TABLE 14. MINIMUM VEHICULAR VOLUMES FOR WARRANT 1B

NUMBER OF LANES FOR MOVING TRAFFIC ON EACH APPROACH		VEHICLES PER HOUR ON MAJOR STREET (Total of Both Approaches)				VEHICLES PER HOUR ON HIGHER VOLUME MINOR APPROACH (One Direction Only)			
Major Street	Minor Street	100%	80%	70%	56%	100%	80%	70%	56%
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

WARRANT 1C, COMBINATION WARRANT

In exceptional cases, traffic signals occasionally may be justified where no single warrant is satisfied but where Warrants 1A and 1B are satisfied to the extent of 80 percent or more of the stated values. This warrant is referred to as Warrant 1C (Combination Warrant).

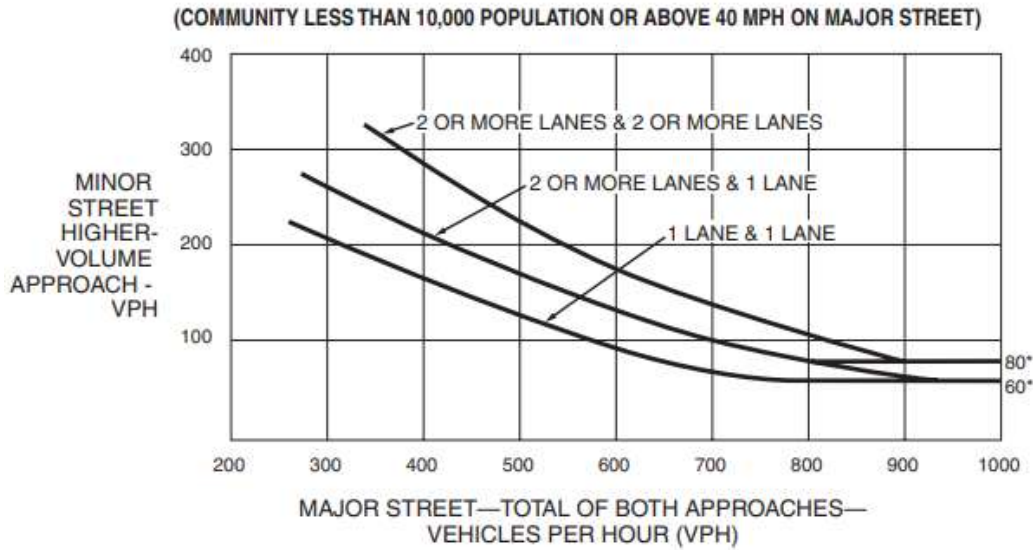
WARRANT 2, FOUR-HOUR VEHICLE VOLUME

Warrant 2 is satisfied when for each of any four high hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor street approach (one direction only) all fall above the curve in Figure 8, for the appropriate combination of approach lanes.

When the 85th percentile speed of the major street traffic exceeds 40 mph in either an urban or a rural area, or when the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the conditions presented in Warrant 2 can be evaluated at 70 percent of the requirements. The speed limit on

Harding Pike is 45 mph; therefore, the intersection of Harding Pike and Brook Hollow Road does qualify for this reduction.

FIGURE 8. FOUR-HOUR VEHICULAR VOLUME (REDUCED)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

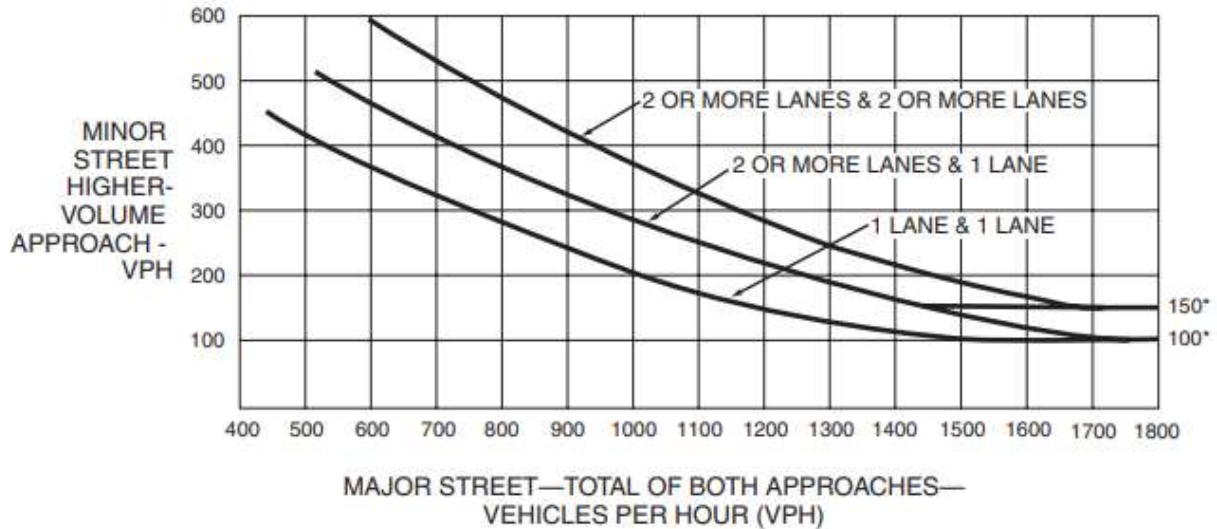
WARRANT 3, PEAK HOUR

Warrant 3 is intended for application when traffic conditions are such that for one hour of the day, minor street traffic suffers undue traffic delay in entering or crossing the major street. The Peak Hour Volume warrant is satisfied when the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor street approach (one direction only) for one hour (any four consecutive 15-minute periods) of an average day falls above the curve in Figure 9 for the appropriate combination of approach lanes.

When the 85th percentile speed of the major street traffic exceeds 40 mph in either an urban or a rural area, or when the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the conditions presented in Warrant 3 can be evaluated at 70 percent of the requirements. The speed limit on Harding Pike is 45 mph; therefore, the intersection of Harding Pike and Brook Hollow Road does qualify for this reduction.

If Warrant 3 is the only warrant that is met and a traffic signal is considered to be justified by an engineering study, then the traffic signal may be operated in flashing mode during the hours when Warrant 3 is not met.

FIGURE 9. WARRANT 3, PEAK HOUR (REDUCED)



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

TRAFFIC SIGNAL WARRANT ANALYSIS RESULTS

Based on the geometry of the intersection, the analyses were performed based on three lanes on the major street (Harding Pike) and two lanes on the minor street (Brook Hollow Road). The results of the warrant analyses indicated that the **existing** traffic volumes at the intersection of Harding Pike and Brook Hollow Road do warrant a traffic signal. Specifically, the intersection meets Warrant 1B for 11 hours, Warrant 1C for 11 hours, Warrant 2 for 11 hours, and Warrant 3 for 8 hours. Results of the warrant analyses are shown in Table 15.

TABLE 15. TRAFFIC SIGNAL WARRANT ANALYSIS – EXISTING TRAFFIC VOLUMES

Hour	Traffic Volumes		Full Warrants Met?				
	Main Street Both Directions	Minor Street Highest Approach	1A	1B	1C	2	3
6:00-7:00	764	43	--	--	--	--	--
7:00-8:00	1544	168	Yes	Yes	Yes	Yes	--
8:00-9:00	1405	150	Yes	Yes	Yes	Yes	Yes
9:00-10:00	1110	116	--	Yes	Yes	Yes	--
10:00-11:00	1076	125	--	Yes	Yes	Yes	--
11:00-12:00 PM	1072	135	--	Yes	Yes	Yes	Yes
12:00-1:00	1167	133	--	Yes	Yes	Yes	Yes
1:00-2:00	1193	145	Yes	Yes	Yes	Yes	Yes
2:00-3:00	1329	184	Yes	Yes	Yes	Yes	Yes
3:00-4:00	1689	169	Yes	Yes	Yes	Yes	Yes
4:00-5:00	1700	210	Yes	Yes	Yes	Yes	Yes
5:00-6:00	1925	184	Yes	Yes	Yes	Yes	Yes
Total Hours Met			7	11	11	11	8
Full Warrant Met?			No	Yes	Yes	Yes	Yes

Note: Warrants 1A, 1B, and 1C must be satisfied for at least 8 hours of a typical day. Warrant 2 must be met for at least 4 hours and Warrant 3 must be met for at least one hour of a typical day.

3.0 MULTIMODAL REVIEW

This chapter presents the multimodal assessment of the intersections and segments within the vicinity of the project site that are expected to be affected by the proposed development. The following intersections were included in the assessment:

1. Harding Pike and Vaughns Gap Road (signalized)
2. Harding Pike and Brook Hollow Road (unsignalized)
3. Harding Pike and Vossland Drive/Percy Warner Boulevard (signalized)

The following roadway segments were included in the assessment:

1. Harding Pike between Vaughns Gap Road and Brook Hollow Road (1,270 feet)
2. Harding Pike between Brook Hollow Road and Vossland Drive/Percy Warner Boulevard (1,400 feet)

For each study intersection and segment, the following multimodal networks were evaluated for the need to provide improvements:

1. Pedestrian Infrastructure
2. Bicycle Facilities
3. Greenway Facilities
4. Transit Services and Stops

3.1 Pedestrian Infrastructure

A detailed inventory of the existing and planned pedestrian infrastructure within the study area was conducted to identify MCSP compliance, measure intersection and segment level of traffic stress, and determine potential improvements. Table 16 presents existing and required sidewalk and buffer widths for all of the study segments.

TABLE 16. STUDY SEGMENT – PEDESTRIAN EVALUATION

SEGMENT	SIDE	EXISTING WIDTH (Feet)		REQUIRED WIDTH (Feet)		MCSP COMPLIANT?	
		SIDEWALK	BUFFER	SIDEWALK	BUFFER	SIDEWALK	BUFFER
1 Harding Pike	North	0	0	6	8	No	No
	South	0	0	6	8	No	No
2 Harding Pike	North	0	0	6	8	No	No
	South	0	0	6	8	No	No

Figure 10 depicts the existing sidewalk network and its compliance with NDOT standards, the planned sidewalk network, and locations where crosswalks and pedestrian signals are currently or are planned to be provided. Locations where improvements to existing infrastructure is needed are also indicated. The existing peak hour pedestrian crossing volumes are presented in Figure 11.

Table 17 details where curb ramps and detectable warning mats are currently provided for each of the study intersections.

TABLE 17. PEDESTRIAN INFRASTRUCTURE INVENTORY - CORNER

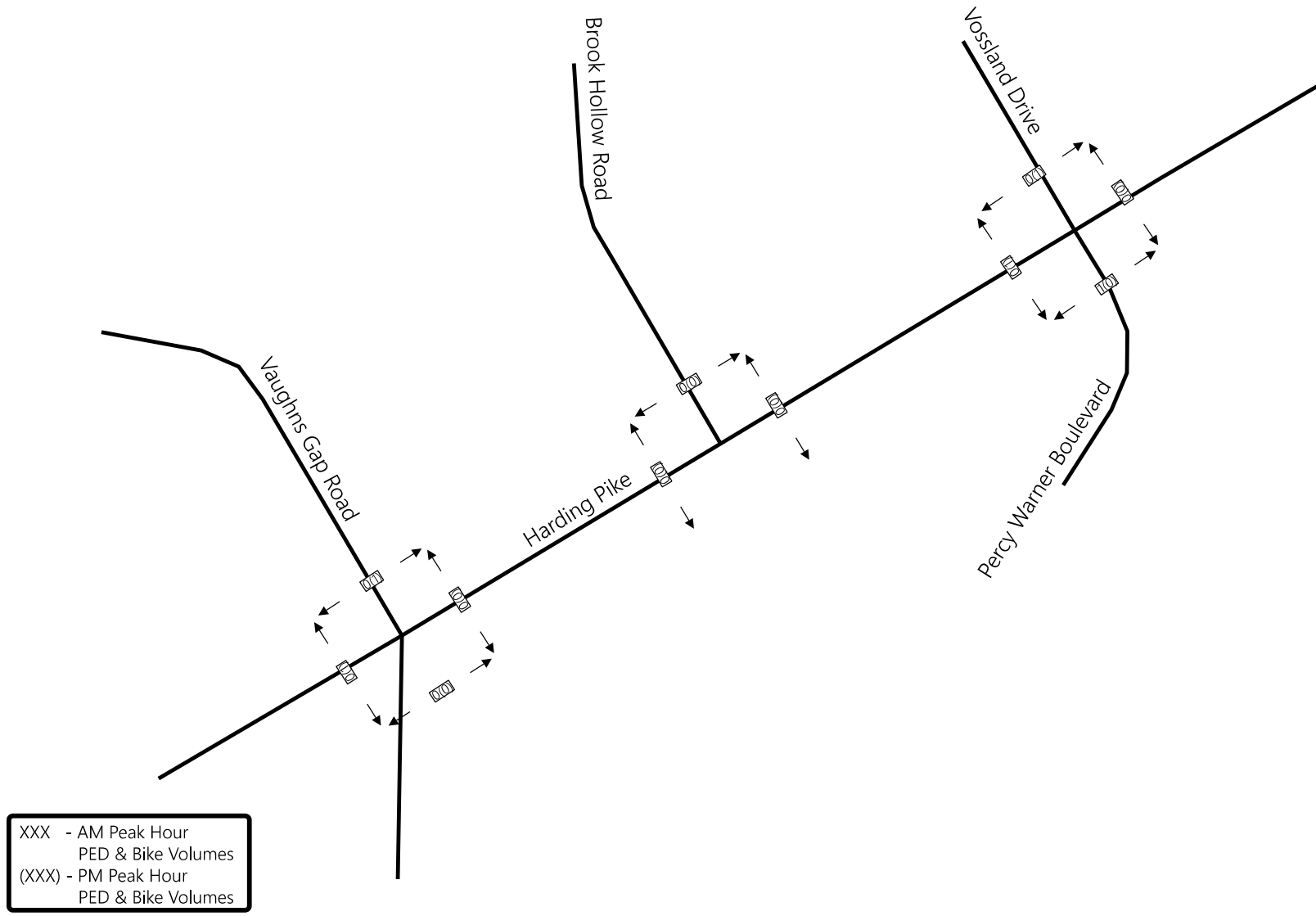
INTERSECTION	INFRASTRUCTURE	North Leg East Side	North Leg West Side	South Leg East Side	South Leg West Side	East Leg North Side	East Leg South Side	West Leg North Side	West Leg South Side
Harding Pike and Vaughns Gap Road	Detectable Warning Mat			✓					
	Curb Ramp			✓					
Harding Pike and Brook Hollow Road	Detectable Warning Mat			--	--				
	Curb Ramp			--	--				
Harding Pike and Vossland Drive/Percy Warner Boulevard	Detectable Warning Mat								
	Curb Ramp								
✓ – Pedestrian Infrastructure Currently Available -- -- Not Applicable									



Existing and Planned Pedestrian Network

(Not to Scale)

Figure 10.




 Existing Peak Hour Pedestrian Crossing Volumes
(Not to Scale)

Figure 11.

3.2 Pedestrian Level of Traffic Stress

Pedestrian level of traffic stress (PLTS) is a metric used to describe the perceived level of discomfort, or “stress,” that a pedestrian may experience when utilizing the pedestrian network. PLTS 1 is the least stressful experience, while PLTS 4 is the most stressful experience. Table 18 presents the criteria for the four levels of stress. As shown in Table 18, analyses of PLTS are based on the physical characteristics of the roadway in relation to the pedestrian infrastructure.

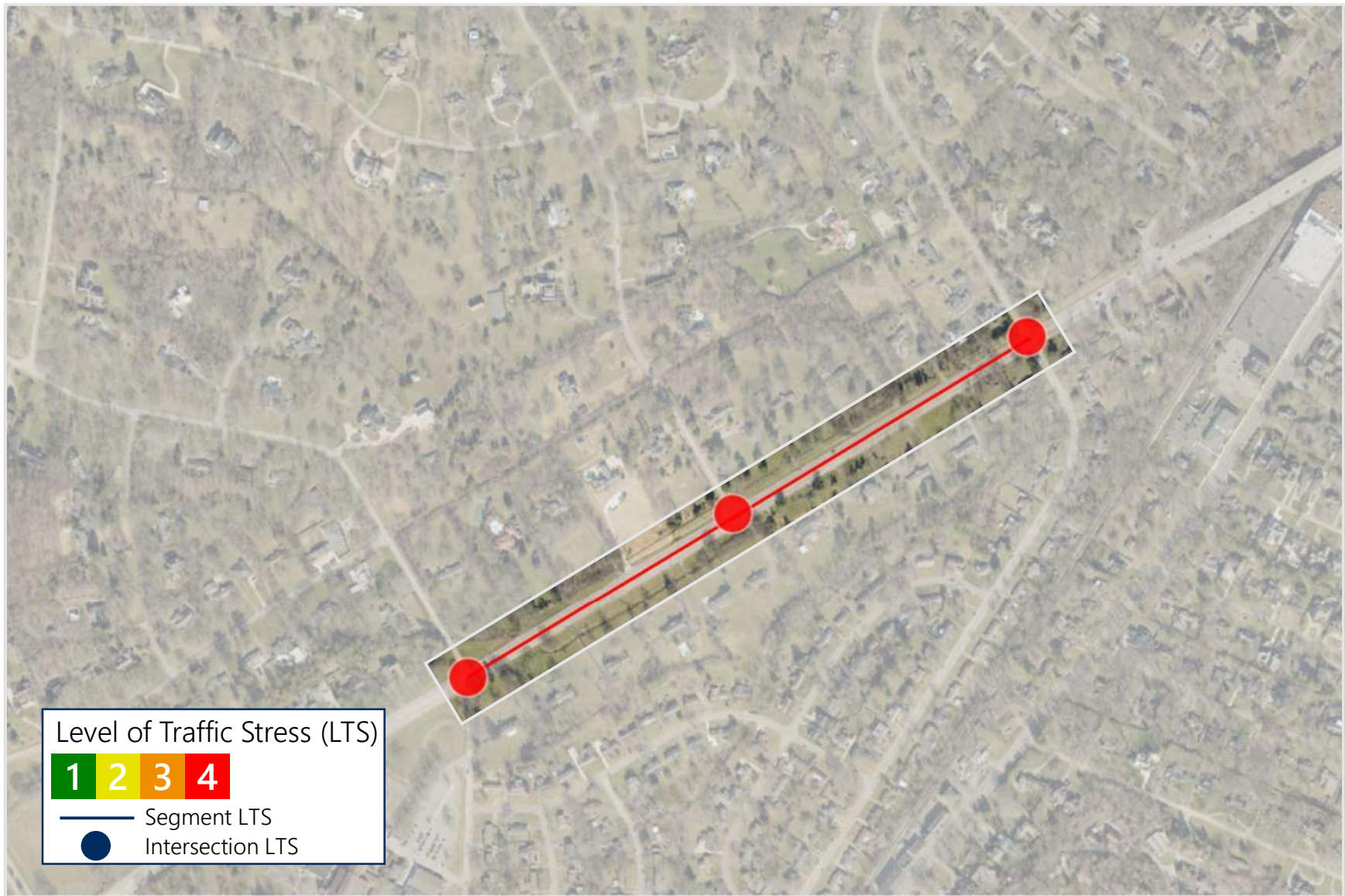
TABLE 18. PEDESTRIAN LEVEL OF TRAFFIC STRESS CRITERIA

PLTS	CRITERIA			
	USERS	BUFFER	SPEED AND VOLUME	NUMBER OF CURB CUTS
1	All users including children, elderly, and those with a mobility disability	Adequate	Low	Minimum
2	Most children and all adults	Varying	Low-to-Moderate	Moderate
3	Able-bodied adults	Lack	Moderate	High
4	Able-bodied adults with limited alternative routes	Lack	Moderate-to-High	Excessive

To determine the PLTS for the pedestrian infrastructure within the study area, each study segment and intersection was evaluated utilizing the flow charts provided by NDOT and presented in Appendix I. A summary of the evaluation is presented in Figure 12 and Table 19.

TABLE 19. PEDESTRIAN LEVEL OF TRAFFIC STRESS

NAME	WEAKEST LINK	CHARACTERISTICS	RATING	JUSTIFICATION
SEGMENTS				
Harding Pike between Vaughns Gap Road and Brook Hollow Road	N/A	Missing pedestrian infrastructure; no sidewalks; posted speed limit 45 mph; no vertical separation; two travel lanes in each direction with a two-way, left-turn lane	PLTS 4	Missing pedestrian infrastructure
Harding Pike between Brook Hollow Road and Vossland Drive/Percy Warner Boulevard	N/A	Missing pedestrian infrastructure; no sidewalk; posted speed limit 45 mph; no vertical separation; two travel lanes in each direction with a two-way, left-turn lane	PLTS 4	Missing pedestrian infrastructure
INTERSECTIONS				
Harding Pike and Vaughns Gap Road	North and east legs	Signalized intersection with permissive left turns on the east and west legs; 5 lane vehicular crossing on east and west legs; posted speed limit 45 mph; incomplete pedestrian infrastructure	PLTS 4	Includes legs missing pedestrian infrastructure
Harding Pike and Brook Hollow Road	N/A	Unsignalized intersection; 5 lane vehicular crossing on east and west legs; posted speed limit 45 mph; missing pedestrian infrastructure	PLTS 4	Missing pedestrian infrastructure
Harding Pike and Vossland Drive/Percy Warner Drive	East leg	Signalized intersection with permissive left turns on the east and west legs; 5 lane vehicular crossing on east and west legs; posted speed limit 45 mph; pedestrian crosswalks with pedestrian signals on north and west legs	PLTS 4	Includes legs missing pedestrian infrastructure



Pedestrian Level of Traffic Stress

(Not to Scale)

Figure 12.

3.3 Recommended Pedestrian Improvements

It is recommended that this development provide/upgrade the sidewalks along the following segments:

1. North side of Harding Pike along the project frontage (1,050 feet)
2. East side of Brook Hollow Road along the project frontage (585 feet)

This is approximately 1,635 feet of new/upgraded sidewalk.

Additionally, should the parcels along the following roadway segments get developed in the future, then those future developments should provide/upgrade the sidewalks along those segments:

1. North side of Harding Pike between Vaughns Gap Road and Brook Hollow Road (1,185 feet)
2. North side of Harding Pike between the project site and Vossland Drive/Percy Warner Boulevard (290 feet)
3. South side of Harding Pike between Vaughns Gap Road and Vossland Drive/Percy Warner Boulevard (2,600 feet)

All new/upgraded sidewalks should meet the requirements listed within the MCSP.

It is recommended that this development provide/upgrade the following approaches and should include crosswalks, signal heads, push buttons, pedestrian curb ramps, and detectable warning mats:

1. Harding Pike and Brook Hollow Road – all approaches

Additionally, when the parcels along Harding Pike are developed in the future to include sidewalks. The following approaches should be upgraded to include pedestrian signal heads, push buttons, pedestrian curb ramps, and detectable warning mats:

1. Harding Pike and Vaughns Gap Road – all approaches
2. Harding Pike and Vossland Drive/Percy Warner Boulevard – all approaches

Leading pedestrian intervals (LPIs) should be taken into consideration at signalized crosswalks where pedestrian signal heads and push buttons are provided.

At the time of construction, the deficient pedestrian infrastructure including restriping crosswalks at the following study intersections should be upgraded to current standards:

1. Harding Pike and Vaughns Gap Road

3.4 Bicycle Facilities

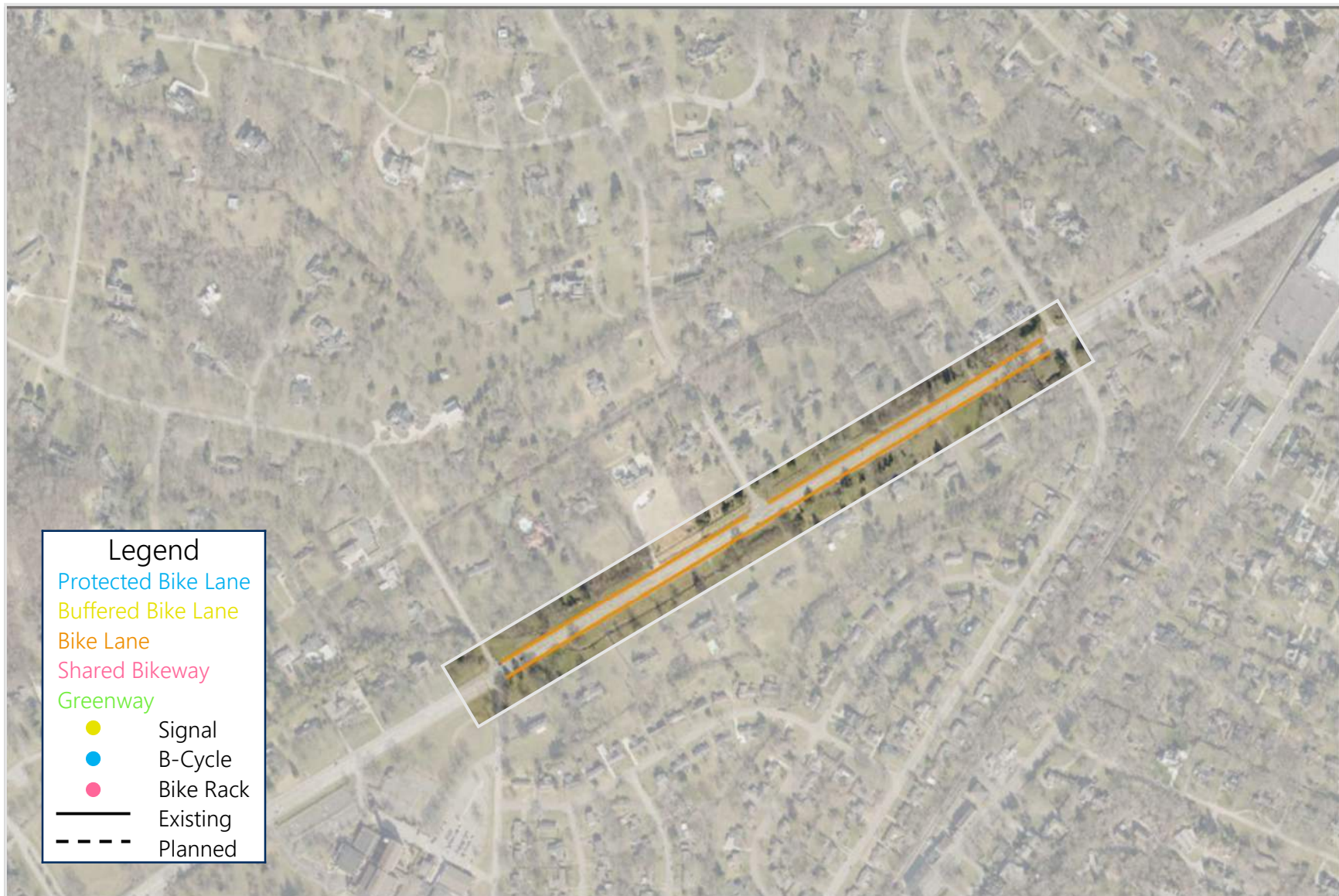
A detailed inventory of the existing and planned bicycle facilities within the study area was conducted to identify MCSP compliance, measure intersection and segment level of traffic stress, and determine potential improvements. Table 20 presents existing and required bicycle facility types and widths for of the study segments.

TABLE 20. STUDY SEGMENT – BICYCLE EVALUATION

SEGMENT	SIDE	EXISTING		REQUIRED		MCSP COMPLIANT?	
		FACILITY	WIDTH (Feet)	FACILITY	WIDTH (Feet)	FACILITY	WIDTH (Feet)
1	North	Bike Lane	6	Minor Separated Bike Lane Planned	0 Buffer + 6 Width	Yes	Yes
	South	Bike Lane	6			Yes	Yes
2	North	Bike Lane	6	Minor Separated Bike Lane Planned	0 Buffer + 6 Width	Yes	Yes
	South	Bike Lane	6			Yes	Yes

B-cycle stations provide rentable bikes at stations across the city, popular with tourists and commuters, including a free first hour and affordable monthly rates.

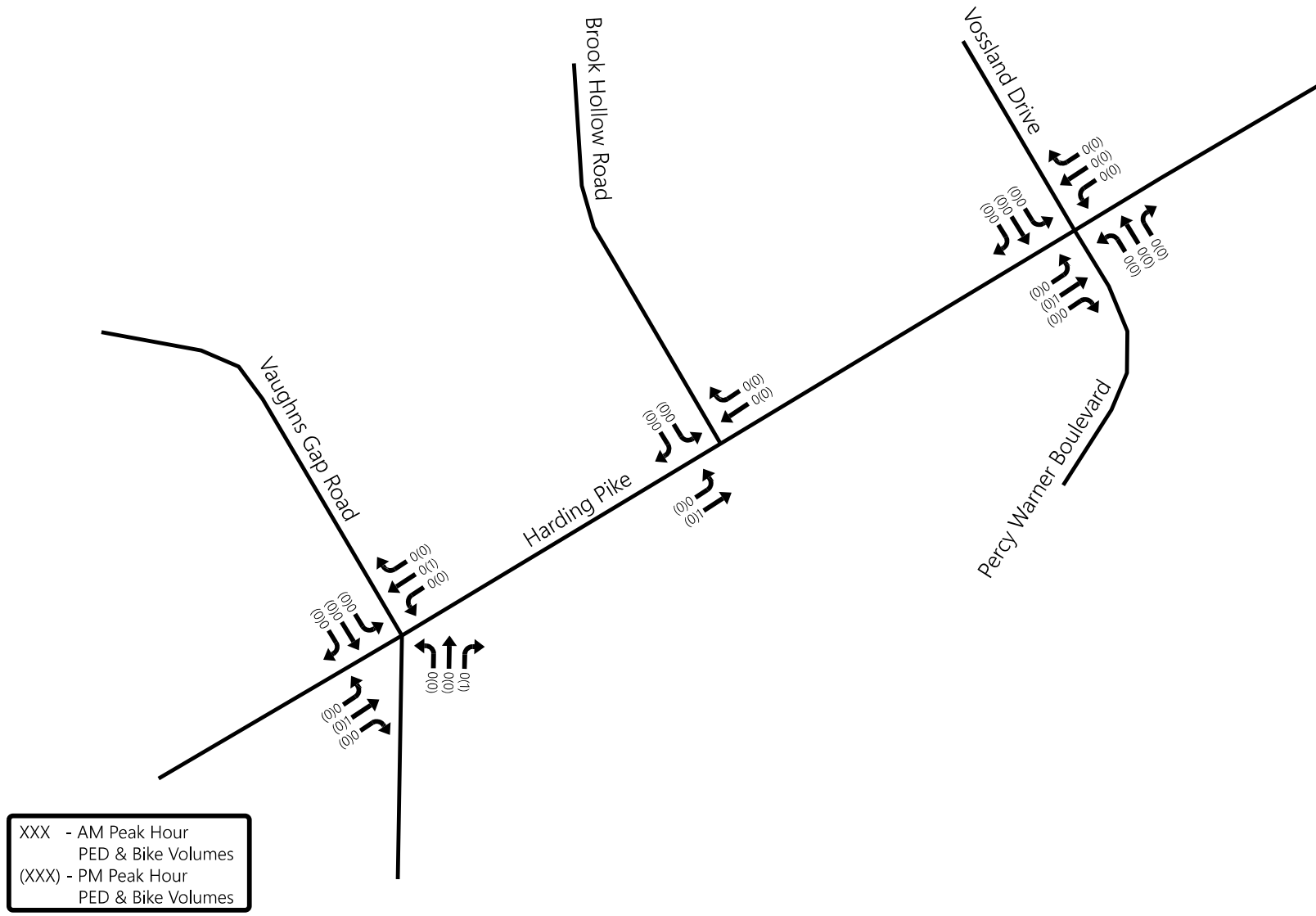
Figure 13 depicts the existing bicycle network and its compliance with NDOT standards, the planned bicycle network, and locations where B-cycle stations and public bike racks are currently provided. Locations where improvements to existing infrastructure is needed are also indicated. The existing peak hour bicycle turning movement volumes are presented in Figure 14.



Existing and Planned Bicycle Network

(Not to Scale)

Figure 13.




 Existing Peak Hour Bicycle Volumes
(Not to Scale)

Figure 14.

3.5 Bicycle Level of Traffic Stress Analysis

Similar to PLTS, bicycle level of traffic stress (BLTS) is used to describe the perceived level of discomfort, or “stress,” that a bicyclist may experience when utilizing the bicycle network. BLTS 1 is the least stressful experience, while BLTS 4 is the most stressful experience. Table 21 presents the criteria for the four levels of stress. As shown in Table 21, analyses of BLTS are based on the physical characteristics of the roadway in relation to the bicycle facilities.

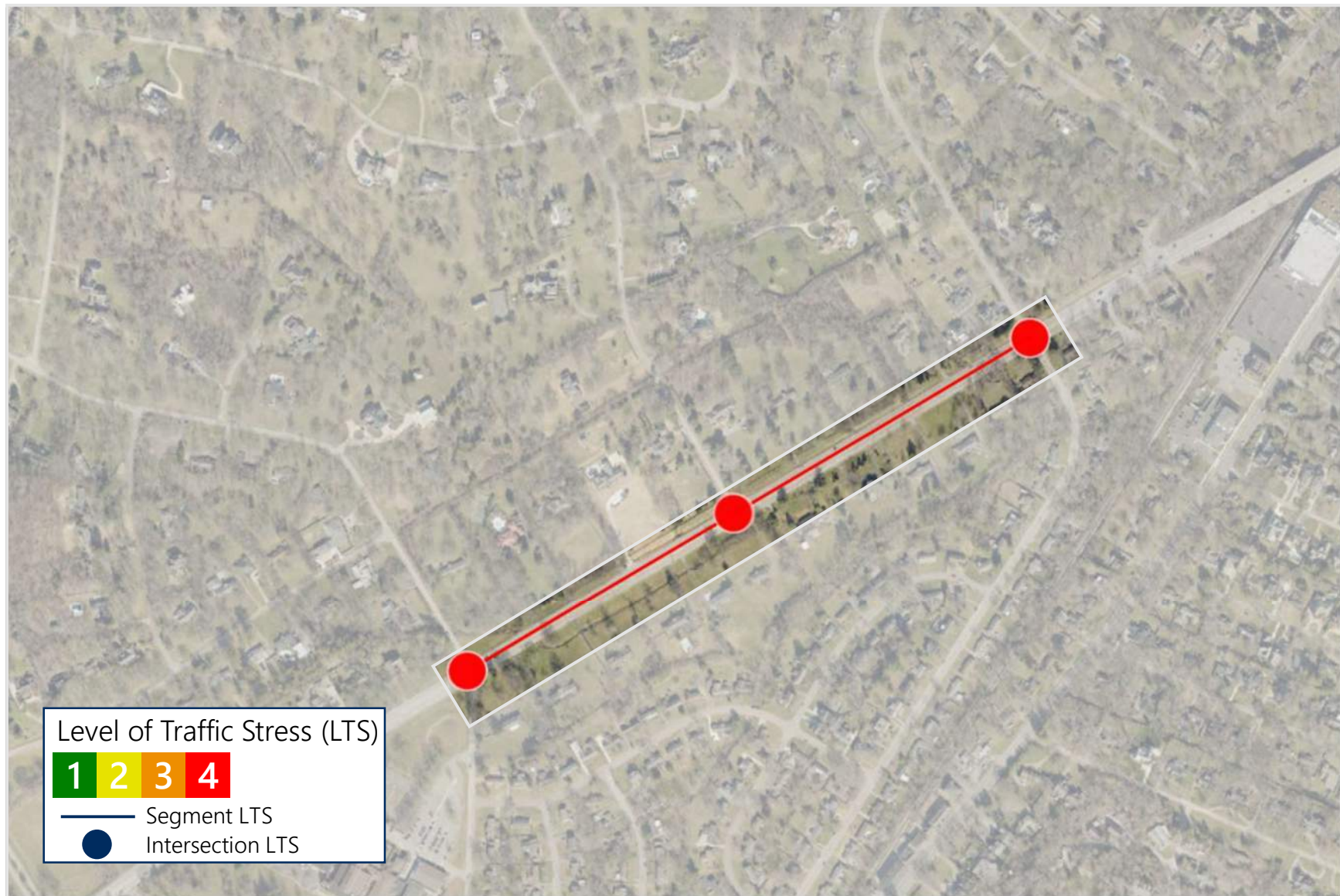
TABLE 21. BICYCLE LEVEL OF TRAFFIC STRESS CRITERIA

BLTS	CRITERIA			
	USERS	NUMBER OF VEHICULAR TRAVEL LANES	BUFFER	SPEED AND VOLUME
1	All cyclists including children trained to safely cross intersections	No more than two	Adequate	Low
2	Most adult cyclists and older children	Two to four	Adequate	Low-to-Moderate
3	Experienced and observant cyclists	Four to six	Limited	Moderate
4	Experienced and skilled cyclists	More than six	None (Mixed Traffic)	Moderate-to-High

To determine the BLTS for the bicycle facilities within the study area, each study segment and intersection was evaluated utilizing the flow charts provided by NDOT and presented in Appendix I. A summary of the evaluation is presented in Figure 15 and Table 22.

TABLE 22. BICYCLE LEVEL OF TRAFFIC STRESS

NAME	WEAKEST LINK	CHARACTERISTICS	RATING	JUSTIFICATION
SEGMENTS				
Harding Pike between Vaughns Gap Road and Brook Hollow Road	N/A	6-foot on-street bicycle lane on both sides with no buffer or vertical separation; posted speed limit 45 mph; two travel lanes in each direction with a two-way-left-turn lane	BLTS 4	Speed limit greater than 45 mph
Harding Pike between Brook Hollow Road and Vossland Drive/Percy Warner Boulevard	N/A	6-foot on-street bicycle lane on both sides with no buffer or vertical separation; posted speed limit 45 mph; two travel lanes in each direction with a two-way-left-turn lane	BLTS 4	Speed limit greater than 45 mph
INTERSECTIONS				
Harding Pike and Vaughns Gap Road	North and South legs	Signalized intersection with permissive left turns on the east and west legs; 5 lane vehicular crossing on east and west legs; posted speed limit 45 mph; no pocket bicycle lane	BLTS 4	No right turn lanes
Harding Pike and Brook Hollow Road	North and South legs	Unsignalized intersection; 5 lane vehicular crossing on east and west legs; no south leg; posted speed limit 45 mph; no pocket bicycle lane	BLTS 4	Includes an approach with BLTS 4
Harding Pike and Vossland Drive/Percy Warner Boulevard	North and South legs	Signalized intersection with permissive left turns on the east and west legs; 5 lane vehicular crossing on east and west legs; posted speed limit 45 mph; no pocket bicycle lane	BLTS 4	No right turn lanes



Bicycle Level of Traffic Stress

(Not to Scale)

Figure 15.

3.6 Recommended Bicycle Improvements

It is recommended that this development provide/upgrade/dedicate the right-of-way for bicycle facilities along the following segments:

1. North side of Harding Pike between Brook Hollow Road and Project Frontage Edge (1,050 feet)
2. East side of Brook Hollow Road between Harding Pike and Project Frontage Edge (585 feet)

Additionally, should the parcels along the following roadway segments be developed in the future, then those future developments should provide/upgrade/dedicate right-of-way for bicycle facilities along these segments:

1. North side of Harding Pike between Vaughns Gap Road and Brook Hollow Road (1,185 feet)
2. North side of Harding Pike between Project Frontage Edge and Vossland Drive/Percy Warner Boulevard (290 feet)
3. South side of Harding Pike between Vaughns Gap Road and Vossland Drive/Percy Warner Boulevard (2,600 feet)
4. West side of Brook Hollow Road between Harding Pike and across from Project Frontage Edge (585 feet)

All bicycle facilities should meet the requirements listed within the MCSP.

3.7 Transit Services

WeGo Public Transit (WeGo) provides 26 local bus routes and eight regional bus routes throughout Davidson County as well as to surrounding counties. According to WeGo, there are five types of bus routes that are provided. A summary of the frequency and location of service for each of the bus route designations is presented in Table 23.

TABLE 23. WEGO BUS ROUTE SERVICE DESIGNATIONS

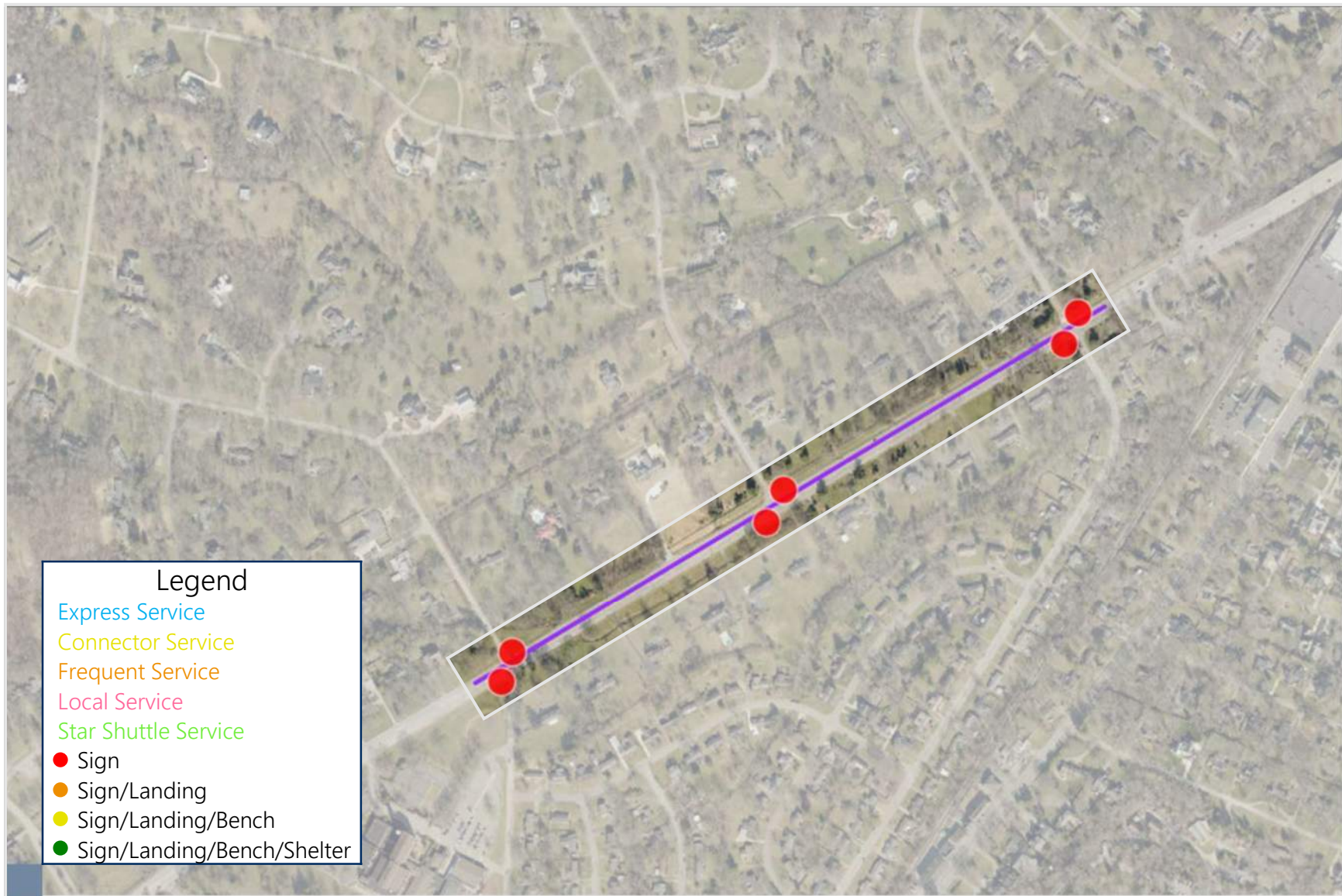
TYPE	FREQUENCY (Minutes)	LOCATION OF SERVICE
Frequent	15	Major corridors throughout Davidson County
Local	20-60	Convenience, regular stops throughout Davidson County
Connector	20-60	Neighborhoods throughout Davidson County
Express	Limited	Outlying counties
Train Shuttles	Limited	Downtown only

The project site has access to WeGo Route #3B (West End) within a half mile. A summary of the bus routes is included in Table 24.

TABLE 24. WEGO BUS ROUTE SUMMARY

TRANSIT ROUTE		SERVICE	START	END	WEEKDAY	WEEKEND
#	Name	DESIGNATION	TERMINAL	TERMINAL	INTERVAL	INTERVAL
3B	West End	Local	Central 5 th Ave-Bay 5	Bellevue Park & Ride	20-30	40-60

Figure 16 details the existing WeGo routes and associated transit stop locations within the study area.



Existing WeGo Route and Stop Locations

(Not to Scale)

Figure 16.

3.8 Transit Stop Evaluation

All transit stops within the study area should include at least a sign and a concrete landing. Where not currently provided, benches and bus shelters should be considered for installation to enhance transit facilities and encourage ridership. According to WeGo’s *Transit Design Guidelines*, benches should be installed when transit stops experience more 25 or more daily boardings. Therefore, existing transit stops were evaluated for the need to provide improvements based on Fall 2024 boarding data obtained from WeGo. Table 25 presents the average daily boardings for each of the transit stops that were evaluated.

TABLE 25. TRANSIT STOP BOARDINGS

	TRANSIT STOP	AVERAGE DAILY ON-BOARDING	AVERAGE DAILY OFF-BOARDING
1	Hwy 70 S & Vaughns Gap Rd EB	1.23	1.33
2	Hwy 70 S & Vaughns Gap Rd WB	0.24	0.74
3	Hwy 70 S & Brook Hollow Rd EB	0.93	0.40
4	Hwy 70 S & Brook Hollow Rd WB	0.00	0.60
5	Hwy 70 S & Percy Warner Blvd EB	0.64	0.00
6	Hwy 70 S & Vossland Dr WB	0.10	0.56

An inventory of the transit stops located within the study area is also included in Figure 16, and Table 26 summarizes the transit stop facility evaluation.

TABLE 26. TRANSIT STOP FACILITY EVALUATION

TRANSIT STOP		FACILITIES PROVIDED	DESIGN AND ADA COMPLIANCE	REQUIREMENT FOR COMPLIANCE	UPGRADE STOP?
1	Hwy 70 S & Vaughns Gap Rd EB	Sign	Noncompliant	Level landing	Yes
2	Hwy 70 S & Vaughns Gap Rd WB	Sign	Noncompliant	Level landing	Yes
3	Hwy 70 S & Brook Hollow Rd EB	Sign	Noncompliant	Level landing	Yes
4	Hwy 70 S & Brook Hollow Rd WB	Sign	Noncompliant	Level landing	Yes
5	Hwy 70 S & Percy Warner Blvd EB	Sign	Noncompliant	Level landing	Yes
6	Hwy 70 S & Vossland Dr WB	Sign	Noncompliant	Level landing	Yes

In addition to the facilities provided at each stop location, the distance between each stop was also evaluated. Table 27 presents WeGo’s guidelines for bus stop spacing based on the service designation of each route.

TABLE 27. GUIDELINES FOR BUS STOP SPACING

SERVICE TYPE	STOP DISTANCE
Frequent	1/3 Mile
Local	1/4 Mile
Connector	Key landmarks and destinations
Express	Wide spacing based on park & rides

Table 28 details the distance between each stop location and adjacent stops. If the distance between stops is greater than recommended, and new developments are initiated in the area between those stops, WeGo should consider constructing additional stops.

TABLE 28. TRANSIT STOP LOCATION EVALUATION

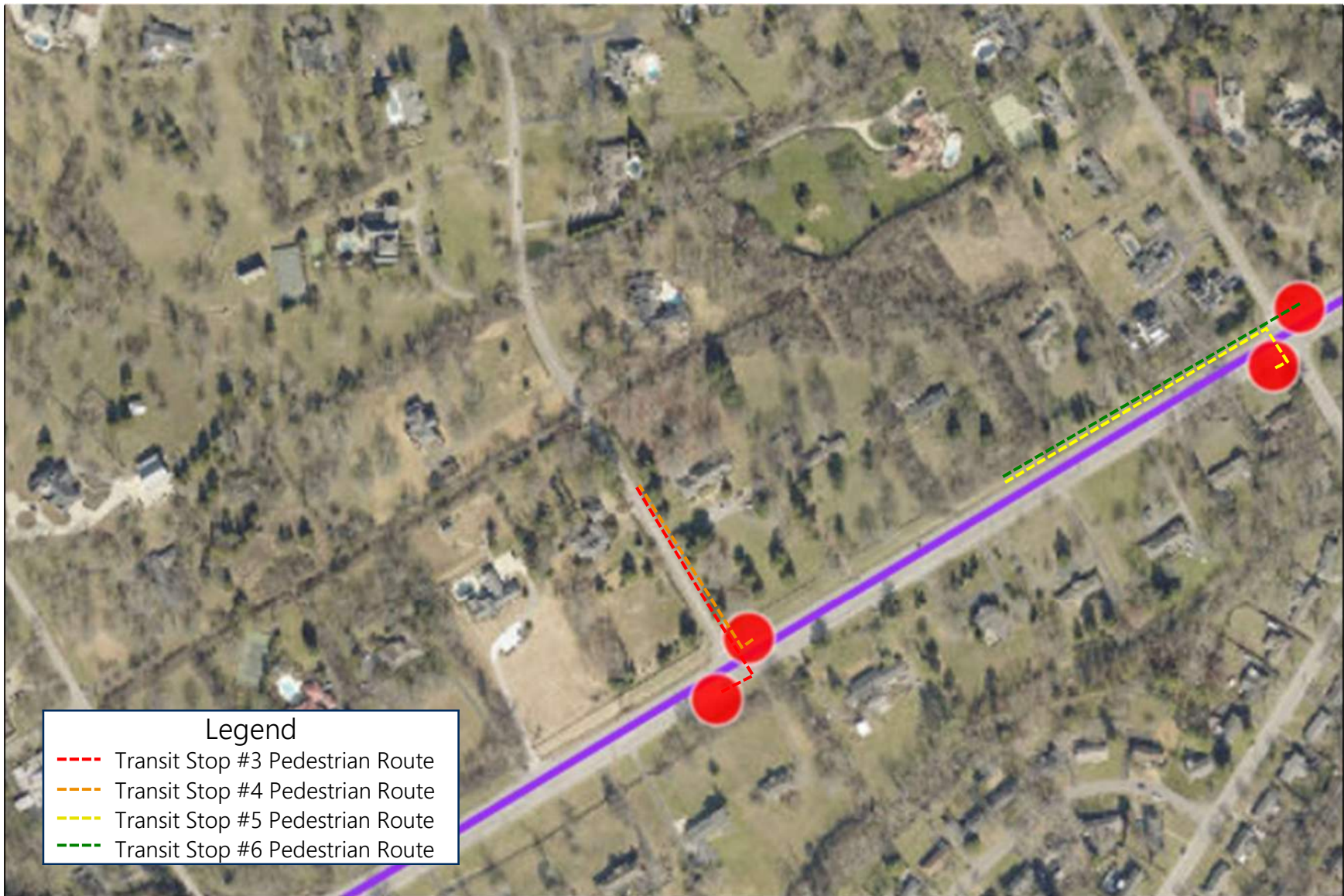
TRANSIT STOP		TRANSIT STOP SPACING (Miles)		CONSIDER CONSTRUCTING ADDITIONAL STOP?
1	Hwy 70 S & Vaughns Gap Rd EB	Previous Stop	0.36	No
		Following Stop	0.23	No
2	Hwy 70 S & Vaughns Gap Rd WB	Previous Stop	0.24	No
		Following Stop	0.37	No
3	Hwy 70 S & Brook Hollow Rd EB	Previous Stop	0.23	No
		Following Stop	0.27	No
4	Hwy 70 S & Brook Hollow Rd WB	Previous Stop	0.26	No
		Following Stop	0.24	No
5	Hwy 70 S & Percy Warner Blvd EB	Previous Stop	0.27	No
		Following Stop	0.60	No
6	Hwy 70 S & Vossland Dr WB	Previous Stop	0.46	No
		Following Stop	0.26	No

3.9 Transit Stop Access Evaluation

In addition to evaluating each of the transit stop facilities for the need to provide improvements, the pedestrian route between the proposed development and each transit stop was evaluated to determine the PLTS associated with accessing each transit stop. Figure 17 shows the pedestrian routes for each transit stop, and Table 29 presents the total distance, the average PLTS, and distance and number of crossings rated PLTS 4 for each pedestrian route. The step-by-step evaluation process is provided in Appendix J.

TABLE 29. AVERAGE PEDESTRIAN LEVEL OF TREAFFIC STRESS BY PEDESTRIAN ROUTE

TRANSIT STOP		ROUTE DISTANCE (Feet)	AVERAGE PLTS	DISTANCE ON PLTS 4 FACILITY (Feet)	NUMBER OF CROSSINGS RATED PLTS 4	IS TRANSIT STOP ON PLTS 4 FACILITY?
3	Hwy 70 S & Brook Hollow Rd EB	590	4	590	1	Yes
4	Hwy 70 S & Brook Hollow Rd WB	445	4	445	0	Yes
5	Hwy 70 S & Percy Warner Blvd EB	720	4	720	1	Yes
6	Hwy 70 S & Vossland Dr WB	730	4	730	1	Yes



Transit Stop Pedestrian Path of Travel

(Not to Scale)

Figure 17.

4.0 SAFETY REVIEW

This chapter presents the safety review that identifies roadway segments within the study area that are included on the High Injury Network (HIN), evaluates the vehicular movements at the site driveways for potential conflict points or sight distance constraints, and inventories the crash history at the study intersections in order to determine areas where improvements may be needed to increase safety within the study area.

4.1 High Injury Network

According to Nashville’s Vision Zero Task Force, the High Injury Network indicates the streets within Davidson County that have the highest number of injuries or deaths related to traffic crashes, whether driving, walking, bicycling, or riding a motorcycle. These streets are weighted with a ranking of either low, medium, or high in order to bring attention to fatal and serious injury crashes, crashes involving people walking or biking, and crashes that occur in an area that has been identified as being vulnerable. Streets in the HIN indicate areas where investment can be impactful in reducing serious crashes and achieving the targeted Vision Zero safety benchmarks.

No roadway segments within the study area are currently included in the HIN.

Table 30 lists roadway segments within the study area that are included in the HIN, the associated ranking, and whether or not the segment is also included in the Motorist High Injury Network (MHIN), Pedestrian High Injury Network (PHIN), or Bicycle High Injury Network (BHIN).

TABLE 30. HIGH INJURY NETWORK

SEGMENT	CROSS STREETS		RANKING	INCLUDED ON		
	BEGINNING	END		MHIN	PHIN	BHIN
Harding Pike	Vaughns Gap Road	Brook Hollow Road	Low	No	No	No
Harding Pike	Brook Hollow Road	Vosland Drive/Percy Warner Boulevard	Low	No	No	No

4.2 Site Access Evaluation

According to the information provided by the school representatives, access to the development is planned to be provided via two driveways, one on Harding Pike and one on Brook Hollow Road. The following describes the site accesses for the proposed Covenant School development:

- Driveway A will be located along Brook Hollow Road approximately 420 feet north of Harding Pike and Brook Hollow Road.
- Driveway B will be located along Harding Pike approximately 690 feet east of Harding Pike and Brook Hollow Road.

The site driveways were evaluated in order to identify any potential sight distance constraints or high-risk conflict points.

Field investigation and sight distance measurements were conducted to determine if adequate sight distance is available for accessing the project site. For the 45 mph on Harding Pike and the 30 mph on Brook Hollow Road, the guidelines from *A Policy on Geometric Design of Highways and Streets*, by the American Association of State Highway and Transportation Officials (AASHTO), call for a minimum stopping sight distance of 360 feet and 200 feet, respectively. These are the distances required for a motorist to detect an object in the roadway necessitating a stop and be able to stop before reaching the object.

AASHTO also provides minimum design values for intersection sight distance, which allows enough time gap for a motorist to turn from Driveway A onto Brook Hollow Road and from Driveway B onto Harding Pike without requiring motorists on Brook Hollow Road and Harding Pike to significantly reduce speed. For a speed of 30 mph, the design value for intersection sight distance for a motorist turning from a stop is 335 feet for left-turns and 290 feet for right-turns. For a speed of 45 mph, the design value for intersection sight distance for a motorist turning from a stop is 500 feet for left-turns and 430 feet for right-turns. The intersection sight distance results are presented in Table 31.

TABLE 31. INTERSECTION SIGHT DISTANCE ANALYSIS

INTERSECTION	LEFT-TURNS FROM STOP (Feet)		RIGHT-TURNS FROM STOP (Feet)	
	DESIGN	AVAILABLE	DESIGN	AVAILABLE
Brook Hollow Road and Driveway A	335	500	290	420
Harding Pike and Driveway B	500	>600	430	>600

The field investigations indicate that the existing sight distance available at the proposed intersection of Brook Hollow Road and Driveway A will be adequate for left-turns and right-turns onto Brook Hollow Road. The field investigations also indicate that the existing sight distance available at the proposed intersection of Harding Pike and Driveway B will be adequate for left-turns and right-turns onto Harding Pike. Sight distance triangles for each of the site driveways are included in Appendix KJ.

The site driveways were also evaluated in order to identify any potential high-risk conflict points and potential mitigation measures to reduce or eliminate the risk associated with those conflict points. Table 32 describes the types of conflict points, contributing factors, and recommended strategies for each of the site driveways. Detailed site driveway evaluations are included in Appendix J.

TABLE 32. SITE DRIVEWAY EVALUATION

SITE DRIVEWAY	HIGH-RISK CONFLICT POINT	MITIGATION
Driveway A	Pedestrians on sidewalk	Provide crosswalk and stop bar pavement markings to ensure vehicles stop before the crosswalk
Driveway B	Pedestrians on sidewalk	
	Bicyclists on bike lane	Provide bicycle and stop bar pavement markings to ensure vehicles stop before the bike lane

4.3 Historical Crash Evaluation

Historic crash data for the last five years, January 5, 2020 to October 22, 2024, was obtained from the AASHTOWare Safety Data Warehouse and TDOT in order to evaluate the study area for the need to provide crash mitigation measures. Since 2020, 49 crashes have occurred within the study area. Figure 18 presents the crash locations within the study area, and Table 33 details the crashes by severity and year. Of the total crashes, 2.0% were fatal crashes, 0.0% were serious injury, 26.5% were minor injury, 18.4% were possible injury, and 53.1% were property damage only. Detailed crash information is included in Appendix K.

TABLE 33. CRASH SEVERITY SUMMARY

YEAR	TOTAL CRASHES	CRASH SEVERITY				
		FATAL	SERIOUS INJURY	MINOR INJURY	POSSIBLE INJURY	PROPERTY-DAMAGE ONLY
2024	4	0	0	1	0	3
2023	9	0	0	3	2	4
2022	9	0	0	4	0	5
2021	12	1	0	2	3	6
2020	15	0	0	3	4	8
TOTAL	49	1	0	13	9	26



Study Area Crash History

(Not to Scale)

Figure 18.

In addition to crash severity, the crash data was evaluated by crash location and crash type. Table 34 presents a summary of the crash location and crash type data. As shown in Table 34, of the total crashes, 26 (53.1%) occurred at an intersection, and 23 (46.9%) occurred along the roadway. Additionally, of the 40 crashes involving two vehicles, 2.5% were head-on, 42.5% were rear-end, 52.5% were angle, and 2.5% were sideswipe. No crashes involved pedestrians or non-motorists.

TABLE 34. CRASH LOCATION AND TYPE SUMMARY

YEAR	TOTAL CRASHES	CRASH LOCATION		CRASH TYPE								
		AT INTERSECTION	ALONG ROADWAY	TWO VEHICLE CRASH				ONE VEHICLE CRASH			OTHER / UNKNOWN	
				HEAD ON	REAR-END	ANGLE	SIDESWIPE	PEDESTRIAN	OTHER NON-MOTORIST	PROPERTY		
2024	4	2	2	0	1	1	0	0	0	0	2	0
2023	9	4	5	1	3	3	0	0	0	0	1	1
2022	9	6	3	0	4	5	0	0	0	0	0	0
2021	12	5	7	0	6	5	0	0	0	0	1	0
2020	15	9	6	0	3	7	1	0	0	0	4	0
TOTAL	49	26	23	1	17	21	1	0	0	0	8	1

Crash analyses were conducted for each of the study intersections using AASHTOWare, TDOT, and peak hour count data in order to identify any crash patterns and determine locations where safety improvements can be provided to improve intersection safety. Table 35 presents the crash rates for each of the study intersections. As shown in Table 35, the intersection of Harding Pike and Brook Hollow Road has the highest crash rate of 0.68, the intersection of Harding Pike and Vaughns Gap Road has the second highest crash rate of 0.62, and the intersection of Harding Pike and Vossland Drive/Percy Warner Boulevard has the third highest crash rate of 0.61.

TABLE 35. CRASH SEVERITY SUMMARY

INTERSECTION	TOTAL CRASHES	PEAK HOUR ENTERING VOLUME ¹	K FACTOR	DAILY VOLUME	TOTAL ENTERING VOLUME ²	CRASHES PER MILLION ENTERING VEHICLES
Harding Pike and Vaughns Gap Road	23	2,126	10	21,260	37,247,520	0.62
Harding Pike and Brook Hollow Road	4	2,109	11	19,173	33,591,096	0.68
Harding Pike and Vossand Drive/Percy Warner Boulevard	11	1,924	9	21,378	37,454,256	0.61

Notes: 1 – Greater of the AM or PM peak hour entering volumes.
 2 – Estimated number of vehicles entering the intersection during the crash evaluation period (January 5, 2020 to October 22, 2024).

As previously mentioned, there were no crashes involving pedestrians or non-motorists (bicycles, scooters, etc.) within the study area.

Of the 49 total crashes, there was one fatal crash and zero crashes involving serious injuries within the study area. These crashes were evaluated to identify potential patterns in crashes and determine locations where improvements can be made to increase safety within the study area. A summary of the crashes is included in Table 36 and the location of each crash is shown in Figure 19.

TABLE 36. FATAL AND SERIOUS INJURY CRASH SUMMARY

LOCATION	DATE	TYPE	SEVERITY	CONDITIONS	VEHICLE DIRECTION	DRIVER ACTIONS
1 At an Intersection	01/05/2021 (Tuesday)	Angle	Fatal	Clear, Daylight	West, East	Failure to Yield Right-of-Way, Exceeding Posted Speed Limit

Review of the crashes within the study area indicate that there are no recognizable patterns to the observed crashes; therefore, no safety-focused improvements are recommended at this time.



Fatal and Serious Injury Crashes

(Not to Scale)

Figure 19.

5.0 CONCLUSION AND RECOMMENDATIONS

The purpose of this study was to analyze the traffic operations, multimodal mobility, and safety of the transportation network within the vicinity of the proposed Covenant School development located in the West Meade neighborhood of Nashville, Tennessee. The results of the analyses indicated the following:

- All study intersections except for Harding Pike and Brook Hollow Road operate at LOS D or better in the AM, PM, and school dismissal peak hours. With improvements, all study intersections and critical movements will operate at LOS D or better in the AM, PM, and school dismissal peak hours.
- There are currently no sidewalks in the study area. It is recommended that sidewalks be installed along the project frontages on Harding Pike and Brook Hollow Road.
- There are MCSP complaint on-street bikeways in the study area.
- There is currently access to WeGo route 3B within a half mile of the proposed project site. It is recommended that each of the six transit stops be upgraded to meet ADA-compliance.
- Historical crashes in the study area show no recognizable trends or patterns.

This chapter details the needs of the community and presents the mitigation measures needed to mitigate the impacts of the proposed development on the existing network.

5.1 Community Needs

Different communities have different needs when it comes to determining what improvements to transportation infrastructure and facilities are needed. Therefore, it is important to consider the needs of a community when determining what mitigation measures to provide within an area. Metrics from the US Department of Transportation's *Equitable Transportation Community (ETC) Explorer* tool were used to gather information on the community in which the proposed development is located. The USDOT ETC is currently unavailable; August 06, 2025. Subsection omitted.

5.2 Mitigation Measures

The analyses presented in this study indicate that the impacts of the proposed project on the existing street network will be manageable by utilizing the potential mitigation measures presented in Table 37.

TABLE 37. POTENTIAL MITIGATION MEASURES

LOCATION	DESCRIPTION	BENEFIT
Harding Pike and Brook Hollow Road	Install traffic signal with protective-permissive left-turn phasing on the eastbound approach of Harding Pike and a right-turn overlap on the southbound right-turn. It should be noted that this improvement is needed based on existing traffic volumes.	Reduces delay for minor approaches.
	Install pedestrian infrastructure including crosswalks and pedestrian signals	Provides safe crossing for pedestrians
	Restripe the eastbound two-way, left-turn lane to include a left-turn lane with 75 feet of storage.	Reduces delay for minor approaches.
	Extend the southbound right-turn lane to 250 feet of storage on Brook Hollow Road.	Provides additional storage and reduces delay to Harding Pike.
Project Frontage	Install sidewalks along the project frontages on Harding Pike and Brook Hollow Road.	Improves safety for pedestrians.
	Dedicate right-of-way for bicycle facilities on Brook Hollow Road.	Provides opportunity for facility in the future.
	Upgrade the transit stop facility along the project frontage on Harding Pike.	Improves pedestrian safety and encourages ridership.
Brook Hollow Road and Driveway A	Install southbound left-turn lane with 50 feet of storage.	Increases queuing capacity for vehicles entering the site.

5.3 Recommended Improvements

Based on the mitigation measures presented in Table 37, seven improvements are recommended to be provided and have been committed to by the Covenant School development. Table 38 presents the Covenant School recommended improvements

as well as the benefits, base cost estimate, and development’s planned commitment associated with each improvement.

TABLE 38. RECOMMENDED IMPROVEMENTS

LOCATION	DESCRIPTION	RATIONAL NEXUS	COST	COMMITMENT
Harding Pike and Brook Hollow Road	Install traffic signal with protective-permissive left-turn phasing on the eastbound approach of Harding Pike and a right-turn overlap on the southbound right-turn. It should be noted that this improvement is needed based on existing traffic volumes.	Nearest intersection to project site	Around \$250,000	Yes
	Install pedestrian infrastructure including crosswalks and pedestrian signals			
	Restripe the eastbound two-way, left-turn lane to include a left-turn lane with 75 feet of storage.	Nearest intersection to project site	Around \$1,500	Yes
	Extend the southbound right-turn lane to 250 feet of storage on Brook Hollow Road.	Nearest intersection to project site	\$300 per linear foot	Yes
Project Frontage	Install sidewalks along the project frontages on Harding Pike and Brook Hollow Road.	Project frontage	\$27.50 per square foot	Yes
	Dedicate right-of-way for bicycle facilities on Brook Hollow Road.	Project frontage	n/a	Yes
	Upgrade the transit stop facility along the project frontage on Harding Pike.	Project frontage	Around \$200	Need to coordinate with NDOT and WeGo
Brook Hollow Road and Driveway A	Install southbound left-turn lane with 50 feet of storage.	Project site access	\$300 per linear foot	Yes

In addition to the improvements presented in Table 38, the following strategies are recommended to improve site operations:

Brook Hollow Road and Driveway A

- The westbound approach of Driveway A should be stop-controlled, and a stop bar and R1-1 'Stop' sign should be installed on the egress approach.
- Driveway A should be designed to include sufficient width for one entering lane and a minimum of one exiting lane.

Harding Pike and Driveway B

- The southbound approach of Driveway B should be stop-controlled, and a stop bar and R1-1 'Stop' sign should be installed on the egress approach.
- Driveway B should be designed to include sufficient width for one entering lane and a minimum of one exiting lane.
- In order to be conservative and evaluate the "worst case scenario" for the intersection of Harding Pike and Brook Hollow Road, trips were not distributed through this site driveway; however, it should be noted that this driveway is planned to be utilized for site circulation. Therefore, further coordination with NDOT will be required to determine the specific circulation and access details for this driveway.

Travel Demand Management

- Parking/storage options should be provided for bicycles on-site.

Additional Recommendations

- Parking should be developed per code.
- As part of the construction of the project, all internal and external driveway connections should be designed such that the departure sight triangles, as specified by AASHTO, will be clear of all sight obstructions, including landscaping, existing vegetation, monument signs/walls, fences, etc.
- Final design of internal roadways and parking should meet all NDOT standards and the latest version of "A Policy of Geometric Design of Highways and Streets" published by AASHTO. Any parking lots and streets associated with the development should ensure that passenger cars and emergency vehicles are capable of making all turning movements. Internal intersections should be two-way stop-controlled unless all-way stop control warrants are met.

In summary, based on the analyses and evaluations conducted, no further recommendations are presented for the proposed Covenant School development.

APPENDICES

	APPENDIX A
	PRELIMINARY SITE PLAN
	APPENDIX B
	SCOPING MEETING MINUTES
	APPENDIX C
	DETAILED TURNING MOVEMENT COUNTS
	APPENDIX D
	TDOT COUNT DATA
	APPENDIX E
	SIGNAL TIMING SHEETS
	APPENDIX F
	CAPACITY ANALYSES
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	TRIP GENERATION CALCULATIONS
	APPENDIX H
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	APPENDIX I
	PEDESTRIAN AND BICYCLE LEVEL OF STRESS EVALUATION
	APPENDIX J
	SITE DRIVEWAY EVALUATION
	APPENDIX K
	CRASH ANALYSIS

**APPENDIX A
PRELIMINARY SITE PLAN**



Project Site

PLAN



**APPENDIX B
SCOPING MEETING MINUTES**

Nashville Department of Transportation and Multimodal
Infrastructure

Scoping Evaluation Form for Multimodal Transportation Analysis

Form A



1 Introduction

Submit this form to the Nashville Department of Transportation and Multimodal Infrastructure (NDOT) in advance of commencing a Multimodal Transportation Analysis (MMTA). The purpose of this form is to define MMTA parameters, outline the basic characteristics of a proposed development, and provide an overview of the transportation system in the study area. Along with this form, the Applicant should also submit a (1) site plan, (2) study area map, including labeled study intersections and study segments, (3) growth rate calculations, and (4) phasing plan, if applicable.

Information included in this form at the time of NDOT approval should be applied in the subsequent MMTA. The applicant should notify NDOT if information in this form changes at any point prior to approval of the MMTA.

Recommended MMTA trip generation thresholds are defined in the Guidelines on Multimodal Transportation Analysis for Site Development (referred to herein as the MMTA Guidelines). Before completing this document, recommended thresholds should be reviewed to ensure the completion of an MMTA is appropriate.

For additional guidance on completing this form refer to the MMTA Guidelines.

2 Application Information

Submittal Date

Codes, Planning Case #, or Building Permit #

Project Name (address preferred)

Submission Type

Council District

Applicant or Project Developer

Applicant or Project Developer E-mail

Applicant or Project Developer Phone #

MMTA Preparer

MMTA Preparer E-mail

MMTA Preparer Phone #

Notes

3 Project Review

Project Address

Project Parcel(s)

Existing Zoning

Proposed Zoning (if applicable)

Proposed Parking

Use table 3.1 to document the expected trip generation (all modes) for any existing development(s) at the project site. **If there is no existing trip generation at the project site, move on to Table 3.3.**

Table 3.1 Existing Trip Generation

Land Use	Size (Square Feet or Dwelling Units)	Peak Hour Trips		Daily Trips
		AM	PM	
Total				

No existing trip generation:

Use additional sheet if necessary. If applicable, alternative peak hours should be shown on an additional sheet.

In Table 3.2, differentiate vehicular and non-vehicular (e.g., pedestrian, bicycle, transit) trips by applying a mode split to the total trip generation volumes calculated in Table 3.1.

Table 3.2 Existing Mode Split

% Vehicle Trips	AM Trips		PM Trips		Daily Trips	
	Vehicular	Non-vehicular	Vehicular	Non-vehicular	Vehicular	Non-vehicular
Total						

No existing trip generation:

Existing Mode Split should be an estimation based on existing land use and surrounding area characteristics.

If applicable, alternative peak hours should be shown on an additional sheet.

For the % Vehicle Trips column, indicate the share of vehicular trips being taken as a percentage. For example, if 85% of the remaining trips are expected to be vehicular, and 15% are expected to be non-vehicular, enter "85%". For the remaining cells, input the number of vehicular and non-vehicular trips for each period based on the defined mode split.

Use Table 3.3 to document the expected trip generation (all modes) for the proposed development.

Table 3.3 Proposed Trip Generation

Land Use	Size (Square Feet or Dwelling Units)	Peak Hour Trips		Daily Trips
		AM	PM	
Total				

Use additional sheet if necessary. If applicable, alternative peak hours should be shown on an additional sheet.

In Table 3.4, apply expected trip reductions to the corresponding trip generation volumes calculated in Table 3.3. Refer to the MMTA Guidelines for additional information on applying trip reductions.

Table 3.4 Proposed Trip Reductions

Trip Reduction Type	Peak Hour Trips				Daily Trips	
	AM		PM		Percent	Value
	Percent	Value	Percent	Value		
Internal Capture						
Pass-By						
Remaining Trips						

Use additional sheet if necessary. If applicable, alternative peak hours should be shown on an additional sheet.

In the "Percent" columns, enter the trip reduction as a percentage of total trip generation for the specified period.

In the "Value" columns, enter the corresponding number of trips associated with the percent reduction for the specified period.

In the "Remaining Trips" row, subtract the total trip reductions for the from the total proposed trip generation of the specified period.

In Table 3.5, differentiate vehicular and non-vehicular trip generation by applying a mode split to the "Remaining Trips" volumes calculated in Table 3.4.

Table 3.5 Proposed Mode Split

% Vehicle Trips	AM Trips		PM Trips		Daily Trips	
	Vehicular	Non-vehicular	Vehicular	Non-vehicular	Vehicular	Non-vehicular
Total						

If applicable, alternative peak hours should be shown on an additional sheet.

For the % Vehicle Trips column, indicate the share of vehicular trips being taken as a percentage. For example, if 85% of the remaining trips are expected to be vehicular, and 15% are expected to be non-vehicular, enter "85%". For the remaining cells, input the number of vehicular and non-vehicular trips for each period based on the defined mode split.

Provide justification for the proposed trip reductions and mode split. Reasons could include, but are not limited to, existing and planned transportation infrastructure, land use, location, and population density.

Narrative summary of proposed trip reductions and mode split

In Table 3.6, calculate the net change in trip generation for the proposed development using values calculated in previous Project Review tables. **If there is no existing trip generation at the project site, skip this step.**

Table 3.6 Net Trip Generation

	AM		PM		Daily	
	Vehicular	Non-vehicular	Vehicular	Non-vehicular	Vehicular	Non-vehicular
Existing						
Proposed						
Net Change						
Total Net Change						

No existing trip generation:

If applicable, alternative peak hours should be shown on an additional sheet.

In the "Existing" row, enter values calculated in Table 3.2.

In the "Proposed" row, enter values calculated in Table 3.5.

In the "Net Change" row, enter the net difference between existing trip generation and proposed trip generation for each mode.

In the "Total Net Change" row, sum the vehicular net change and non-vehicular net change for the corresponding period to determine the total difference between existing trip generation and proposed trip generation.



4 Study Area Review

Build Year

Growth Rate

In Table 4.1, provide a list of background developments that are expected to impact the study area transportation network in the build year. To qualify, a background development must be one that is not occupied at the time of study but is expected to be occupied prior to the approved build year proposed in this section.

Table 4.1 Background Developments

Name	Address	Parcel ID	Available MMTA/TIS

In "Available MMTA/TIS" column, the applicant should indicate, to the best of their knowledge, whether an MMTA has been submitted to NDOT for the associated development with one of three answers: "Yes", "No", or "Unknown".

In Table 4.2, provide a list of study intersections to be analyzed.

Table 4.2 Study Intersections

	Major Street (Functional Classification)	Minor Street (Functional Classification)
1		
2		
3		
4		
5		
6		
7		
8		

The Applicant should populate each cell with the street name, followed by the associated functional classification, per MCSP, in parenthesis.

Table 4.3 Study Segments

	Street Name	Segment Origin	Segment Terminus
1			
2			
3			
4			
5			
6			
7			
8			

Study Segments are defined as roadways between two Study Intersections.

In the "Street Name" column, the Applicant should document the street name of the Study Segment.

In the "Segment Origin" column, the Applicant should document the name of the crossing street where the Study Segment originates, followed by the Study Intersection number in parenthesis, e.g., "Main Street (Int. 3)".

In the "Segment Terminus" column, the Applicant should document the name of the crossing street where the Study Segment terminates, followed by the Study Intersection number in parenthesis, e.g., "Main Street (Int. 3)".



5 Mobility Review

Use the prompts in the tables below to provide a high-level overview of the multimodal facilities in the study area.

Table 5.1 Bicycle Mobility Review

Describe the availability of bicycle infrastructure in the study area.	
--	--

Table 5.2 Pedestrian Mobility Review

Describe the availability of pedestrian infrastructure in the study area.	
---	--

Table 5.3 Transit Mobility Review

List all transit stops in the study area.	
---	--

Upon approval of this Scoping Evaluation Form (Form A), all transit stops in the study area that have been documented in Table 5.3 should be evaluated per guidance provided in the MMTA Guidelines unless otherwise directed by the NDOT Reviewer.



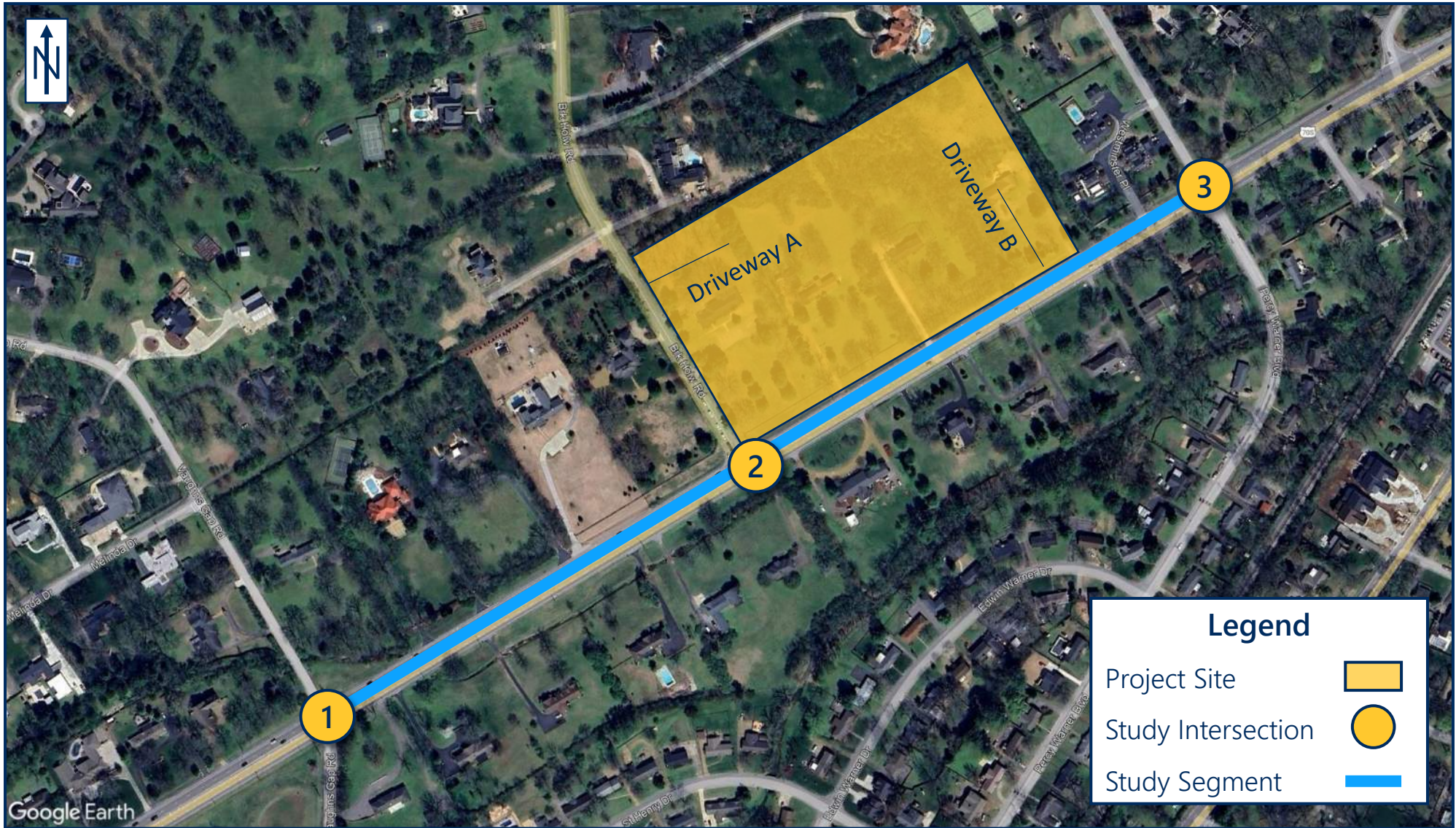
6 NDOT Reviewer Response

Table 6.1 should be completed by the NDOT Reviewer upon review of the Scoping Evaluation Form.

Table 6.1 NDOT Reviewer Response

NDOT Reviewer Name	
NDOT Reviewer E-Mail	
Date	
Response	<input type="checkbox"/> Approved <input type="checkbox"/> Additional Information/Revisions Needed <input type="checkbox"/> Denied
Study Type	<input type="checkbox"/> Level 1 <input type="checkbox"/> Level 2
Comments	

NDOT has reviewed and approved this Scoping Evaluation Form. The Applicant may now commence a Multimodal Transportation Analysis in alignment with the information provided in this form.

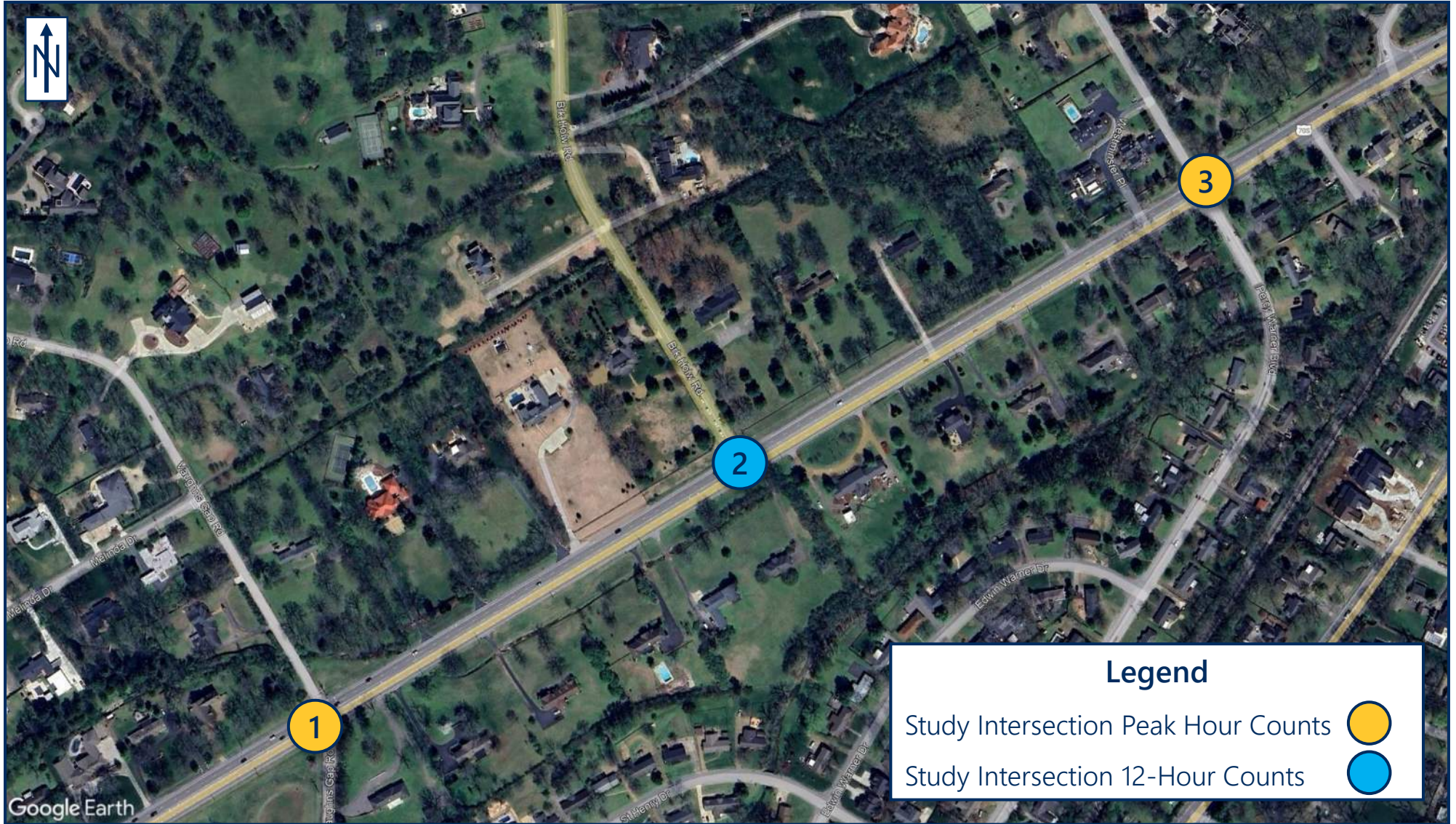


Study Intersections:

- 1) Harding Pike and Vaughns Gap Road
- 2) Harding Pike and Brook Hollow Road
- 3) Harding Pike and Vossland Drive/Percy Warner Boulevard

Data Collection Times:

- Weekday AM Peak (7-9 AM)
- Weekday PM Peak (4-6 PM)



Study Intersections:

- 1) Harding Pike and Vaughns Gap Road
- 2) Harding Pike and Brook Hollow Road
- 3) Harding Pike and Vossland Drive/Percy Warner Boulevard

Data Collection Times:

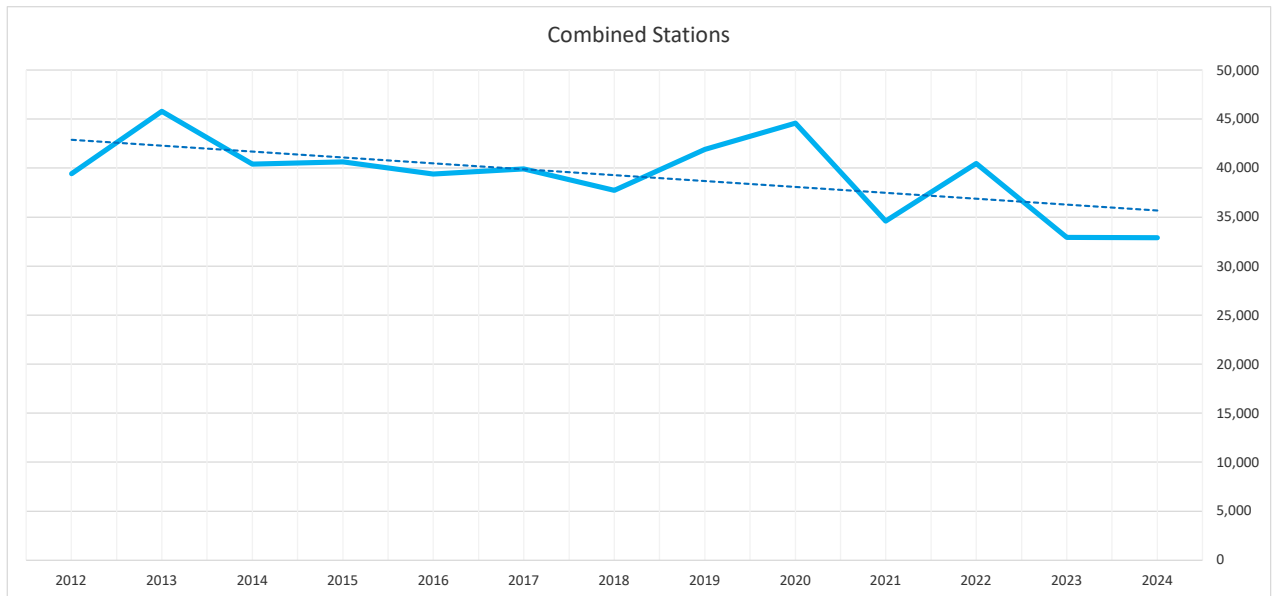
- Weekday AM Peak (7-9 AM)
- Weekday PM Peak (4-6 PM)
- Weekday 12-Hour Counts (6AM – 6PM)

TDOT AADT DATA			
Station	197	117	586
Location	Highway 70 S B/W Percy Warner Blvd and Brookmont Terrace	Highway 70S B/W Old Harding pike and Highway 100	Brook Hollow Road B/W Davidson Road and BW Meade Drive
County	Davidson	Davidson	Davidson
2024	15,087	15,006	2,798
2023	16,329	13,970	2,627
2022	18,629	19,007	2,843
2021	16,784	15,297	2,507
2020	21,985	19,030	3,565
2019	20,380	18,505	3,014
2018	18,672	16,491	2,550
2017	19,520	17,725	2,657
2016	19,230	17,616	2,561
2015	20,616	17,443	2,590
2014	18,913	19,007	2,494
2013	23,032	20,102	2,671
2012	19,637	17,404	2,390

TDOT AADT Background Growth Trend Analysis

Year	Highway 70 S B/W Percy Warner		Highway 70S B/W Old Harding pike		Brook Hollow Road B/W Davidson		TOTAL	
	197	% Difference	117	% Difference	586	% Difference		% Difference
2024	15,087	-7.6%	15,006	7.4%	2,798	6.5%	32,891	-0.1%
2023	16,329	-12.3%	13,970	-26.5%	2,627	-7.6%	32,926	-18.7%
2022	18,629	11.0%	19,007	24.3%	2,843	13.4%	40,479	17.0%
2021	16,784	-23.7%	15,297	-19.6%	2,507	-29.7%	34,588	-22.4%
2020	21,985	7.9%	19,030	2.8%	3,565	18.3%	44,580	6.4%
2019	20,380	9.1%	18,505	12.2%	3,014	18.2%	41,899	11.1%
2018	18,672	-4.3%	16,491	-7.0%	2,550	-4.0%	37,713	-5.5%
2017	19,520	1.5%	17,725	0.6%	2,657	3.7%	39,902	1.3%
2016	19,230	-6.7%	17,616	1.0%	2,561	-1.1%	39,407	-3.1%
2015	20,616	9.0%	17,443	-8.2%	2,590	3.8%	40,649	0.6%
2014	18,913	-17.9%	19,007	-5.4%	2,494	-6.6%	40,414	-11.8%
2013	23,032	17.3%	20,102	15.5%	2,671	11.8%	45,805	16.2%
2012	19,637	--	17,404	--	2,390	--	39,431	--
Since 2023 Annual		-7.61%		7.42%		6.51%		-0.11%
Since 2022 Annual		-10.01%		-11.15%		-0.79%		-9.86%
Since 2021 Annual		-3.49%		-0.64%		3.73%		-1.66%
Since 2020 Annual		-8.98%		-5.77%		-5.88%		-7.32%
Since 2019 Annual		-5.84%		-4.11%		-1.48%		-4.73%
Since 2018 Annual		-3.49%		-1.56%		1.56%		-2.25%
Since 2017 Annual		-3.61%		-2.35%		0.74%		-2.72%
Since 2016 Annual		-2.99%		-1.98%		1.11%		-2.23%
Since 2015 Annual		-3.41%		-1.66%		0.86%		-2.33%
Since 2014 Annual		-2.23%		-2.34%		1.16%		-2.04%

Exponential Rate



TOTAL TRIP GENERATION

ITE CODE	LAND USE	# UNITS	UNIT TYPE	ADT	AM			PM		
					Enter	Exit	Total	Enter	Exit	Total
530	Private School (K-8)	400	Students	1644	226	177	403	48	56	104
SUBTOTAL				1644	226	177	403	48	56	104
TOTAL NEW TRIPS				1644	226	177	403	48	56	104

TRIP GENERATION

Private School (K-8)

530 ITE Land Code

400 Students

Average Daily Traffic:

$$T = 4.11 * (X)$$

$$T = 4.11 * (400)$$

$$T = 1644$$

A.M. Peak Hour:

$$T = 1.11 * (X) - 40.99$$

$$T = 1.11 * (400) - 40.99$$

$$T = 403$$

Enter = 226

56%

Exit = 177

44%

P.M. Peak Hour:

$$T = 0.26 * (X)$$

$$T = 0.26 * (400)$$

$$T = 104$$

Enter = 48

46%

Exit = 56

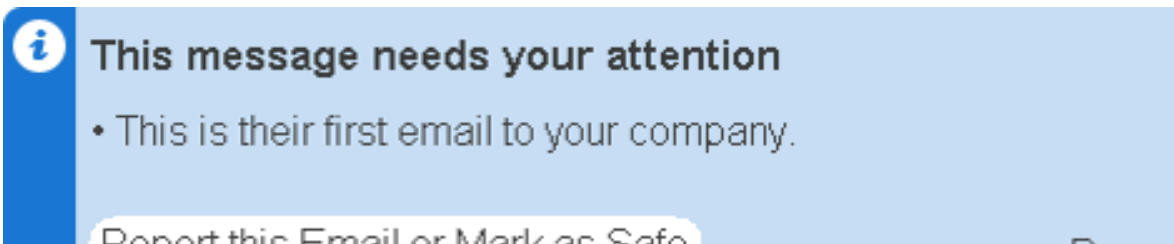
54%

Samantha Bowie

From: Salinas, Abraham F. (NDOT) <Abraham.Salinas@nashville.gov>
Sent: Tuesday, July 22, 2025 2:37 PM
To: Samantha Bowie
Cc: Hayes, Melisa (NDOT); Hattabaugh, Matthew (NDOT); King, Meredith (NDOT - Vendor); NDOT MMTA Review; Meghan Sigler; Doyle, Devin (NDOT)
Subject: [External Email] RE: Scoping Call Request
Attachments: Scoping Packet - 6222 Harding Pike - The Covenant School.pdf; Crash.csv

Follow Up Flag: Follow up
Flag Status: Flagged

From IT@KCI.COM 410-316-7820 *** This is an External Email from outside of KCI.



Samantha,

NDOT has completed our review, see attached approval with comments. I also attached the excel sheet crash data. See below comments:

- We agree with the proposed mode split, intersections study, and growth rate.
- Please provide an Intersection Sight Distance analysis, per AASHTO, with the MMTA of the proposed driveways.

Let me know if you have any questions.

Thank you,

Abraham Farias, EIT

Abraham.salinas@nashville.gov

C: 615.939.4514

750 South Fifth Street, Nashville TN 37206

Nashville Department of Transportation & Multimodal Infrastructure

>>>>>>



ZERO TRAFFIC DEATHS. ZERO EXCUSES. VISION ZERO



From: Hattabaugh, Matthew (NDOT) <Matthew.Hattabaugh@nashville.gov>
Sent: Monday, July 21, 2025 1:08 PM
To: Salinas, Abraham F. (NDOT) <Abraham.Salinas@nashville.gov>
Subject: Fw: Scoping Call Request

Matt Hattabaugh

Transportation E.I.T
Nashville Department of Transportation & Multimodal Infrastructure
720 South Fifth Street, Nashville, Tennessee 37206



From: Samantha Bowie <Samantha.Bowie@kci.com>
Sent: Wednesday, July 9, 2025 10:47 AM
To: Hayes, Melisa (NDOT) <Melisa.Hayes@nashville.gov>; Hattabaugh, Matthew (NDOT) <Matthew.Hattabaugh@nashville.gov>; King, Meredith (NDOT - Vendor) <Meredith.King@nashville.gov>
Cc: Doyle, Devin (NDOT) <Devin.Doyle@nashville.gov>; NDOT MMTA Review <ndotmmtareview@nashville.gov>; Meghan Sigler <Meghan.Sigler@kci.com>
Subject: RE: Scoping Call Request

Attention: This email originated from a source external to Metro Government. Please exercise caution when opening any attachments or links from external sources.

NDOT,

Please find attached the MMTA scoping packet for The Covenant School development. Let us know if you have any questions or concerns.

Sincerely,

Samantha Bowie, E.I.T

Design Engineer



From: Meghan Sigler <Meghan.Sigler@kci.com>
Sent: Monday, June 23, 2025 12:09 PM
To: Foxx, J'lese (NDOT) <Jlese.Foxx@nashville.gov>; Samantha Bowie <Samantha.Bowie@kci.com>
Cc: Doyle, Devin (NDOT) <Devin.Doyle@nashville.gov>; Hayes, Melisa (NDOT) <Melisa.Hayes@nashville.gov>; Hattabaugh, Matthew (NDOT) <Matthew.Hattabaugh@nashville.gov>; King, Meredith (NDOT - Vendor) <Meredith.King@nashville.gov>
Subject: Re: Scoping Call Request

All,

Attached are the data collection locations and the TDOT information for the proposed development. If you have any questions/comments, please let us know.

Best Wishes,
Meghan

Meghan Sigler, PE, PTOE
Project Manager
DL: 615.559.0174
KCI TECHNOLOGIES INC.

From: Foxx, J'lese (NDOT) <Jlese.Foxx@nashville.gov>
Sent: Thursday, June 12, 2025 1:52 PM
To: Samantha Bowie <Samantha.Bowie@kci.com>
Cc: Doyle, Devin (NDOT) <Devin.Doyle@nashville.gov>; Meghan Sigler <Meghan.Sigler@kci.com>; Hayes, Melisa (NDOT) <Melisa.Hayes@nashville.gov>; Hattabaugh, Matthew (NDOT) <Matthew.Hattabaugh@nashville.gov>; King, Meredith (NDOT - Vendor) <Meredith.King@nashville.gov>
Subject: [External Email] Re: Scoping Call Request

*****From IT@KCI.COM 410-316-7820 *** This is an External Email from outside of KCI.*****

Hi Samantha,

Please see below for upcoming availability:

- Tuesday 6/17 - 1pm, 2pm
- Wednesday 6/18 - 9am, 1pm, 2pm
- Monday 6/23 - 1pm, 2pm
- Tuesday 6/24 - 11am

If the dates shared above don't work for you all, just let me know and I'll be happy to send over additional options.

Best,
J'lese Foxx
720 South Fifth Street, Nashville TN 37206
O: 615.862.8784 | c: 615.339.0970



ZERO TRAFFIC DEATHS. ZERO EXCUSES. VISION ZERO

* **Effective July 1, 2023:** NDOT plan review comments, attachments, stamped approved plans, or conditions of approval are accessible in the Metropolitan Government of Nashville and Davidson County Online Permits System: <https://epermits.nashville.gov>

From: Samantha Bowie <Samantha.Bowie@kci.com>

Sent: Thursday, June 12, 2025 12:30 PM

To: Hayes, Melisa (NDOT) <Melisa.Hayes@nashville.gov>; Hattabaugh, Matthew (NDOT) <Matthew.Hattabaugh@nashville.gov>; King, Meredith (NDOT - Vendor) <Meredith.King@nashville.gov>; Foxx, J'lese (NDOT) <Jlese.Foxx@nashville.gov>

Cc: Doyle, Devin (NDOT) <Devin.Doyle@nashville.gov>; NDOT MMTA Review <ndotmmtareview@nashville.gov>; Meghan Sigler <Meghan.Sigler@kci.com>

Subject: Scoping Call Request

Attention: This email originated from a source external to Metro Government. Please exercise caution when opening any attachments or links from external sources.

Good Afternoon NDOT,

KCI would like to set up a scoping call for a new project. We are unable to share additional information at this time but we will share during the call. Please let us know some days/times that suit best.

Sincerely,

Samantha Bowie, E.I.T

Design Engineer



500 11th Avenue Suite 290, Nashville, Tennessee, 37203

samantha.bowie@kci.com

o: 615.277.0877 | m: 410.963.0362

www.kci.com

RISE TO THE CHALLENGE

Samantha Bowie

From: Johnson, Robert (MTA) <Robert.Johnson@nashville.gov>
Sent: Tuesday, September 2, 2025 4:30 PM
To: Samantha Bowie; Randall, Philip (MTA)
Cc: Meghan Sigler
Subject: [External Email] RE: WeGo Coordination

Follow Up Flag: Follow up
Flag Status: Flagged

From IT@KCI.COM 410-316-7820 *** This is an External Email from outside of KCI.

Dear Samantha,

That is great news. Yes, please study each of those bus stops, and the walking route between them and the site.

We will likely want to keep the stop spacing as-is, certainly until the sidewalk and crosswalk network is complete.

Pedestrian access between the site and an ADA upgrade of a pair of bus stops (including crossing Harding Pike) would be a desirable priority for any contribution to transit, compared to upgrading all of those bus stops.

Regards,

Robert

Robert Johnson | Transit Planner

WeGo Public Transit

430 Myatt Drive | Nashville, TN | 37115

Tel: 615-862-5625

Robert.Johnson@nashville.gov

From: Samantha Bowie <Samantha.Bowie@kci.com>

Sent: Wednesday, August 20, 2025 8:29 AM

To: Johnson, Robert (MTA) <Robert.Johnson@nashville.gov>; Randall, Philip (MTA) <Philip.Randall@nashville.gov>

Cc: Meghan Sigler <Meghan.Sigler@kci.com>

Subject: WeGo Coordination

Attention: This email originated from a source external to Metro Government. Please exercise caution when opening any attachments or links from external sources.

Good Morning Robert and Phillip,

We are reaching out to coordinate on transit improvements/changes that should be included in the MMTA. Please find attached the study area with the WeGo stops for the Covenant School development. The following transit stops are in the scoping study area:

- Highway 70 S and Vaughns Gap Road EB
- Highway 70 S and Vaughns Gap Road WB

- Highway 70 S and Brook Hollow Road EB
- Highway 70 S and Brook Hollow Road WB
- Highway 70 S and Percy Warner Boulevard EB
- Highway 70 S and Vossland Drive WB

Please let us know if you have any questions or concerns.

Sincerely,

Samantha Bowie, PE

Project Engineer



500 11th Avenue Suite 290, Nashville, Tennessee, 37203

samantha.bowie@kci.com

o: 615.277.0877 | m: 410.963.0362

www.kci.com

RISE TO THE CHALLENGE

APPENDIX C
DETAILED TURNING MOVEMENT COUNTS

Peak Hour Turning Movement Count

Nashville, TN



www.marrtraffic.com



[Click here for Map](#)

Wednesday, April 16, 2025		
	Fair	58°F
Period	0600 - 1800	APPLY
Peak Hour	1700 - 1800	APPLY
Global PH	1700 - 1800	APPLY

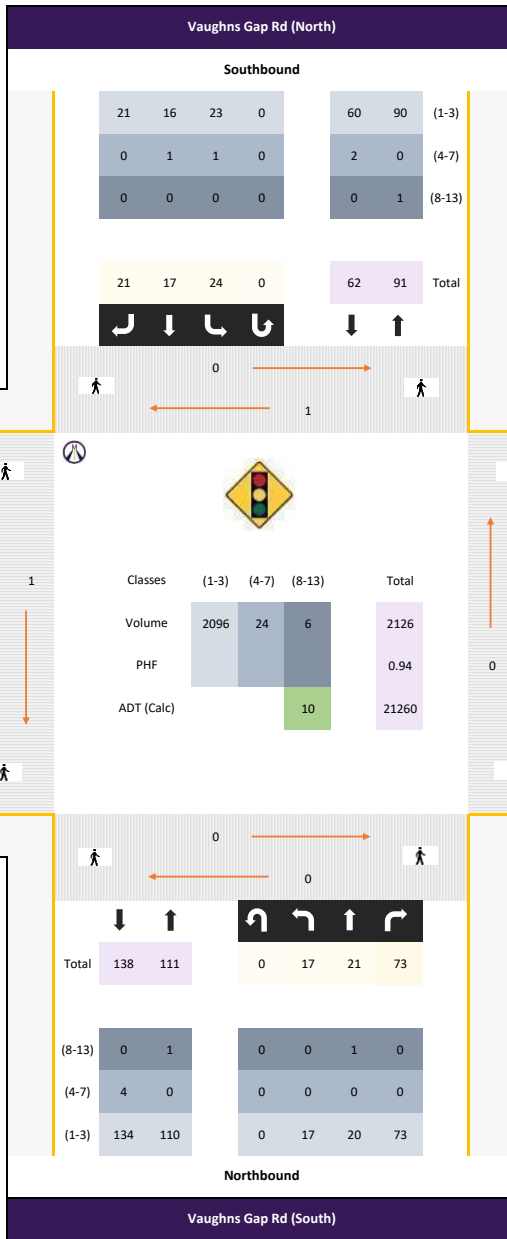
* the Peak Hour Diagram does not include bicycles

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



All vehicles

Time	Northbound						Southbound						Eastbound						Westbound						Int Total
	Vaughns Gap Rd (South)						Vaughns Gap Rd (North)						TN-1 Harding Pike (West)						TN-1 Harding Pike (East)						
	Left 1.1	Thru 1.2	Right 1.3	U-Turn 1.4	App Total		Left 1.5	Thru 1.6	Right 1.7	U-Turn 1.8	App Total		Left 1.9	Thru 1.10	Right 1.11	U-Turn 1.12	App Total		Left 1.13	Thru 1.14	Right 1.15	U-Turn 1.16	App Total		
1700 - 1715	2	6	8	-	0	16	7	9	4	-	0	20	8	142	3	-	0	153	21	281	8	-	0	310	499
1715 - 1730	3	7	21	-	0	31	5	4	8	-	0	17	8	131	9	-	0	148	36	321	10	-	0	367	563
1730 - 1745	7	1	23	-	0	31	9	1	3	-	0	13	5	128	4	-	0	137	22	315	5	-	0	342	523
1745 - 1800	5	7	21	-	0	33	3	3	6	-	0	12	16	149	4	-	0	169	22	295	10	-	0	327	541
Total	17	21	73	0	0	111	24	17	21	0	0	62	37	550	20	0	0	607	101	1212	33	0	0	1346	2126
Approach %	15.32	18.92	65.77	0.00	0.00	-	38.71	27.42	33.87	0.00	0.00	-	6.10	90.61	3.29	0.00	0.00	-	7.50	90.04	2.45	0.00	0.00	-	
PHF	0.61	0.75	0.79	0.00	0.00	0.84	0.67	0.47	0.66	0.00	0.00	0.78	0.58	0.92	0.56	0.00	0.00	0.90	0.70	0.94	0.83	0.00	0.00	0.92	0.94

Passenger Vehicles (1-3)

Time	Northbound						Southbound						Eastbound						Westbound						Int Total
	Vaughns Gap Rd (South)						Vaughns Gap Rd (North)						TN-1 Harding Pike (West)						TN-1 Harding Pike (East)						
	Left 1.1	Thru 1.2	Right 1.3	U-Turn 1.4	App Total		Left 1.5	Thru 1.6	Right 1.7	U-Turn 1.8	App Total		Left 1.9	Thru 1.10	Right 1.11	U-Turn 1.12	App Total		Left 1.13	Thru 1.14	Right 1.15	U-Turn 1.16	App Total		
1700 - 1715	2	5	8	-	0	15	6	9	4	-	0	19	8	139	2	-	0	149	21	279	8	-	0	308	491
1715 - 1730	3	7	21	-	0	31	5	3	8	-	0	16	8	130	7	-	0	145	36	316	10	-	0	362	554
1730 - 1745	7	1	23	-	0	31	9	1	3	-	0	13	5	127	4	-	0	136	22	310	5	-	0	337	517
1745 - 1800	5	7	21	-	0	33	3	3	6	-	0	12	16	147	4	-	0	167	22	290	10	-	0	322	534
Total	17	20	73	0	0	110	23	16	21	0	0	60	37	543	17	0	0	597	101	1195	33	0	0	1329	2096
Approach %	15.45	18.18	66.36	0.00	0.00	-	38.33	26.67	35.00	0.00	0.00	-	6.20	90.95	2.85	0.00	0.00	-	7.60	89.92	2.48	0.00	0.00	-	
PHF	0.61	0.71	0.79	0.00	0.00	0.83	0.64	0.44	0.66	0.00	0.00	0.79	0.58	0.92	0.61	0.00	0.00	0.89	0.70	0.95	0.83	0.00	0.00	0.92	0.95

Single Unit Trucks (4-7)

Time	Northbound						Southbound						Eastbound						Westbound						Int Total
	Vaughns Gap Rd (South)						Vaughns Gap Rd (North)						TN-1 Harding Pike (West)						TN-1 Harding Pike (East)						
	Left 1.1	Thru 1.2	Right 1.3	U-Turn 1.4	App Total		Left 1.5	Thru 1.6	Right 1.7	U-Turn 1.8	App Total		Left 1.9	Thru 1.10	Right 1.11	U-Turn 1.12	App Total		Left 1.13	Thru 1.14	Right 1.15	U-Turn 1.16	App Total		
1700 - 1715	0	0	0	-	0	0	1	0	0	-	0	1	0	1	1	-	0	2	0	1	0	-	0	1	4
1715 - 1730	0	0	0	-	0	0	0	1	0	-	0	1	0	1	2	-	0	3	0	5	0	-	0	5	9
1730 - 1745	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	0	1	0	4	0	-	0	4	5
1745 - 1800	0	0	0	-	0	0	0	0	0	-	0	0	0	2	0	-	0	2	0	4	0	-	0	4	6
Total	0	0	0	0	0	0	1	1	0	0	0	2	0	5	3	0	0	8	0	14	0	0	0	14	24
Approach %	0.00	0.00	0.00	0.00	0.00	-	50.00	50.00	0.00	0.00	0.00	-	0.00	62.50	37.50	0.00	0.00	-	0.00	100.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.25	0.00	0.00	0.00	0.50	0.00	0.63	0.38	0.00	0.00	0.67	0.00	0.70	0.00	0.00	0.00	0.70	0.67

Combination Trucks (8-13)

Time	Northbound						Southbound						Eastbound						Westbound						Int Total
	Vaughns Gap Rd (South)						Vaughns Gap Rd (North)						TN-1 Harding Pike (West)						TN-1 Harding Pike (East)						
	Left 1.1	Thru 1.2	Right 1.3	U-Turn 1.4	App Total		Left 1.5	Thru 1.6	Right 1.7	U-Turn 1.8	App Total		Left 1.9	Thru 1.10	Right 1.11	U-Turn 1.12	App Total		Left 1.13	Thru 1.14	Right 1.15	U-Turn 1.16	App Total		
1700 - 1715	0	1	0	-	0	1	0	0	0	-	0	0	0	2	0	-	0	2	0	1	0	-	0	1	4
1715 - 1730	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0
1730 - 1745	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	0	1	1
1745 - 1800	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	0	1	1
Total	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	3	0	0	0	3	6
Approach %	0.00	100.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	0.00	-	
PHF	0.00	0.25	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.25	0.00	0.75	0.00	0.00	0.00	0.75	0.38

Bicycles

Time	Northbound						Southbound						Eastbound						Westbound						Int Total
	Vaughns Gap Rd (South)						Vaughns Gap Rd (North)						TN-1 Harding Pike (West)						TN-1 Harding Pike (East)						
	Left 1.1	Thru 1.2	Right 1.3	U-Turn 1.4	App Total		Left 1.5	Thru 1.6	Right 1.7	U-Turn 1.8	App Total		Left 1.9	Thru 1.10	Right 1.11	U-Turn 1.12	App Total		Left 1.13	Thru 1.14	Right 1.15	U-Turn 1.16	App Total		
1700 - 1715	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0
1715 - 1730	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0
1730 - 1745	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0
1745 - 1800	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Approach %	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Peak Hour Turning Movement Count

Nashville, TN



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Wednesday, April 16, 2025		
	Fair	58°F
Period	0700 - 0900	APPLY
Peak Hour	0715 - 0815	APPLY
Global PH		APPLY

* the Peak Hour Diagram does not include bicycles

Session Parameters

(Drop Down Menu)

Peak Hour

Volume

Vaughns Gap Rd (North)

Southbound

23	49	18	0	90	97	(1-3)
0	0	0	0	0	2	(4-7)
0	0	0	0	0	0	(8-13)

23	49	18	0	90	99	Total
----	----	----	---	----	----	-------

Classes	(1-3)	(4-7)	(8-13)	Total
Volume	1933	44	3	1980
PHF				0.80
ADT (Calc)			10	19800

Northbound

Total	277	162	0	24	22	116
(8-13)	0	0	0	0	0	0
(4-7)	1	6	0	1	0	5
(1-3)	276	156	0	23	22	111

TN-1 Harding Pike (West)

(1-3)	(4-7)	(8-13)	Total
386	16	1	403
1195	23	2	1220
0	0	0	0
58	2	0	60
1045	20	2	1067
92	1	0	93

Classes	(1-3)	(4-7)	(8-13)	Total
Volume	1933	44	3	1980
PHF				0.80
ADT (Calc)			10	19800

(1-3)	(4-7)	(8-13)	Total
17	356	135	508
0	0	0	0
0	0	0	0
1201	15	492	1708
2	25	1174	1401

TN-1 Harding Pike (East)

Peak Hour Turning Movement Count

Nashville, TN



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Wednesday, April 16, 2025		
	Fair	58°F
Period	1600 - 1800	APPLY
Peak Hour	1700 - 1800	APPLY
Global PH		APPLY

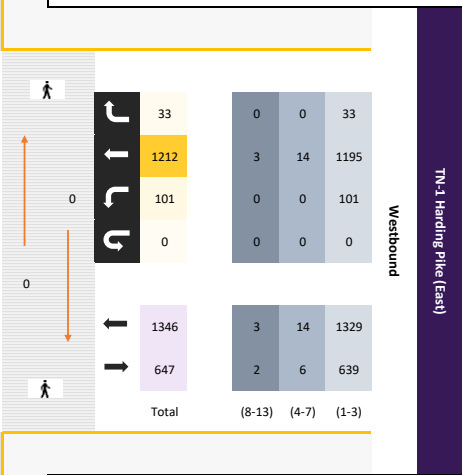
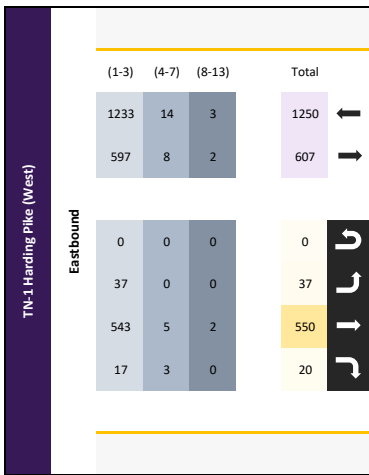
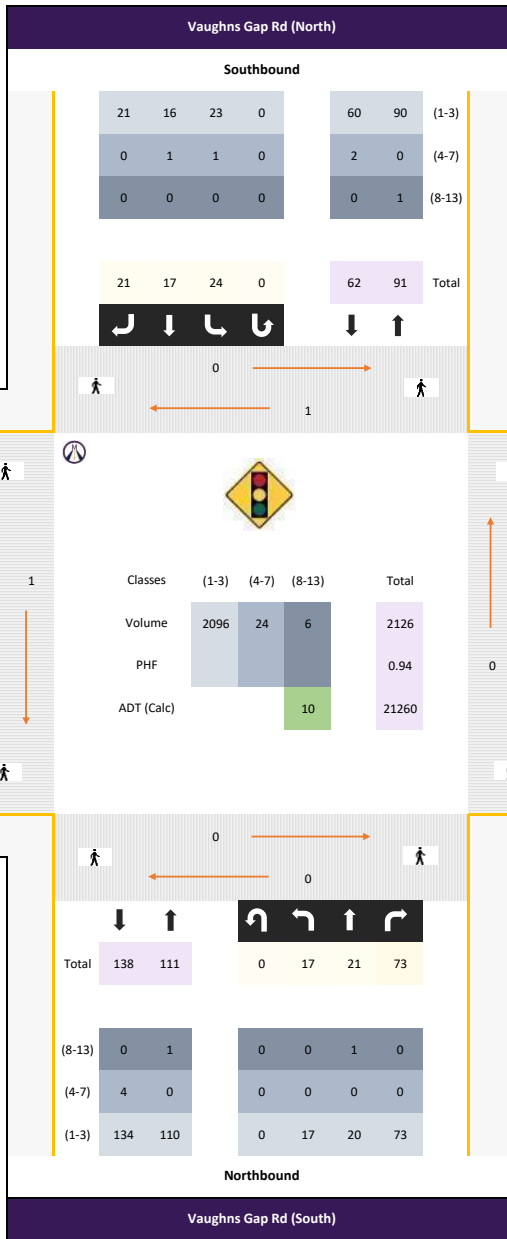
* the Peak Hour Diagram does not include bicycles

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



Classes

(1-3)	(4-7)	(8-13)	Total
2096	24	6	2126
PHF			0.94
ADT (Calc)		10	21260

Classified Turn Movement Count | All Vehicles



Nashville, TN

Site 1

Vaughns Gap Rd (South)
Vaughns Gap Rd (North)
TN-1 Harding Pike (West)
TN-1 Harding Pike (East)

Date
Wednesday, April 16, 2025

Weather

Fair

58°F

Click here for Detailed Weather

Lat/Long
36.092593°, -86.885421°

Click here for Map

0600 - 1800 (Weekday 12h Session) (04-16-2025)

All Vehicles

Table with 4 main sections: Northbound, Southbound, Eastbound, and Westbound. Each section contains a grid of turn movements (Left, Thru, Right) for various time intervals (e.g., 0600-0615, 0615-0630) and summary statistics (Grand Total, Approach %, Intersection %, Heavy Vehicle %, PHF, Peak Hour Total, Peak Hour HV %).

0700 - 0900 (Internal session 1) (04-16-2025)

All Vehicles

Table with 4 main sections: Northbound, Southbound, Eastbound, and Westbound. Each section contains a grid of turn movements (Left, Thru, Right) for various time intervals (e.g., 0700-0715, 0715-0730) and summary statistics (Grand Total, Approach %, Intersection %, Heavy Vehicle %, PHF, Peak Hour Total, Peak Hour HV %).

1600 - 1800 (Internal session 2) (04-16-2025)

All Vehicles

Table with 4 main sections: Northbound, Southbound, Eastbound, and Westbound. Each section contains a grid of turn movements (Left, Thru, Right) for various time intervals (e.g., 1600-1615, 1615-1630) and summary statistics (Grand Total, Approach %, Intersection %, Heavy Vehicle %, PHF, Peak Hour Total, Peak Hour HV %).

Classified Turn Movement Count | Passenger Vehicles (1-3)



Nashville, TN

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Site 1

Vaughns Gap Rd (South)
Vaughns Gap Rd (North)
TN-1 Harding Pike (West)
TN-1 Harding Pike (East)

Date
Wednesday, April 16, 2025

Weather
Fair 58°F
Click here for Detailed Weather

Lat/Long
36.092593°, -86.885421°
Click here for Map

0600 - 1800 (Weekday 12h Session) (04-16-2025)

Northbound Vaughns Gap Rd (South)				Southbound Vaughns Gap Rd (North)				Eastbound TN-1 Harding Pike (West)				Westbound TN-1 Harding Pike (East)										
TIME	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int	
	1.1	1.2	1.3	1.4	Total	1.5	1.6	1.7	1.8	Total	1.9	1.10	1.11	1.12	Total	1.13	1.14	1.15	1.16	Total		
0600-0615	1	0	3	0	4	1	0	2	0	3	2	9	2	0	97	0	15	0	0	0	15	119
0615-0630	0	0	3	0	3	2	1	2	0	5	1	127	1	0	129	0	35	3	0	0	38	175
0630-0645	3	2	3	0	8	0	3	3	0	4	0	383	3	0	387	3	40	0	0	0	43	230
0645-0700	1	4	16	0	21	3	2	5	0	10	1	186	4	0	191	2	37	3	0	0	42	264
Hourly Total	5	6	25	0	36	6	4	12	0	22	4	587	10	0	601	5	127	6	0	0	138	797
0700-0715	1	3	21	0	25	8	4	4	0	16	3	211	10	0	224	10	40	2	0	0	58	313
0715-0730	1	4	24	0	29	1	6	10	0	17	3	232	19	0	254	24	68	4	0	0	96	396
0730-0745	6	3	30	0	39	2	17	3	0	22	16	259	39	0	314	64	85	4	0	0	153	528
0745-0800	11	12	36	0	59	5	18	7	0	30	33	312	31	0	377	96	99	5	0	0	140	608
Hourly Total	19	22	111	0	152	16	45	28	0	85	55	1006	100	0	1169	134	292	15	0	0	441	1847
0800-0815	5	3	21	0	29	10	8	3	0	21	6	242	2	0	250	11	88	4	0	0	103	403
0815-0830	3	1	17	0	21	6	6	3	0	15	6	241	4	0	251	11	77	0	0	0	88	375
0830-0845	2	1	9	0	12	5	8	3	0	16	4	209	2	0	215	11	86	1	0	0	98	341
0845-0900	6	1	21	0	28	4	2	5	0	15	4	231	3	0	238	9	95	3	0	0	107	384
Hourly Total	16	6	68	0	90	25	24	14	0	63	20	923	11	0	954	42	346	8	0	0	396	1503
0900-0915	3	3	16	0	22	12	2	4	0	18	4	153	6	0	163	14	96	7	0	0	117	320
0915-0930	1	5	15	0	21	3	2	6	0	12	8	141	2	0	150	8	82	3	0	0	93	275
0930-0945	3	8	13	0	24	4	5	2	0	11	4	125	1	0	130	9	101	5	0	0	115	280
0945-1000	2	8	12	0	22	8	4	9	0	21	4	153	1	0	158	11	113	5	0	0	129	330
Hourly Total	9	24	56	0	89	27	13	21	0	61	19	572	10	0	601	42	392	20	0	0	404	1269
1000-1015	1	2	13	0	16	5	4	5	0	16	3	139	0	0	160	7	96	4	0	0	107	277
1015-1030	0	0	12	0	12	5	4	6	0	15	6	106	2	0	114	14	117	4	0	0	135	276
1030-1045	2	1	14	0	17	6	2	6	0	14	6	151	3	0	160	10	105	7	0	0	122	313
1045-1100	3	5	13	0	21	7	1	3	0	13	8	125	9	0	142	15	107	4	0	0	126	300
Hourly Total	6	8	52	0	66	23	11	20	0	54	21	521	14	0	556	46	425	19	0	0	490	1166
1100-1115	2	4	17	0	23	4	3	5	0	12	9	141	5	0	155	15	102	9	0	0	126	316
1115-1130	5	3	15	0	23	6	1	3	0	10	2	117	1	0	120	15	115	5	0	0	145	286
1130-1145	3	3	10	0	19	5	4	5	0	14	5	122	4	0	151	15	89	6	0	0	140	270
1145-1200	4	3	15	0	22	5	2	5	0	12	4	116	2	0	122	11	119	5	0	0	135	291
Hourly Total	16	13	57	0	86	20	7	18	0	45	20	496	12	0	528	54	425	25	0	0	504	1163
1200-1215	7	5	10	0	22	7	2	5	0	14	3	126	2	0	131	7	116	6	0	0	128	288
1215-1230	3	1	11	0	15	3	0	5	0	8	6	116	2	0	124	12	160	8	0	0	180	327
1230-1245	1	0	6	0	17	7	1	5	0	13	5	115	2	0	122	10	123	6	0	0	139	291
1245-1300	2	0	9	0	11	3	3	6	0	12	7	136	3	0	146	20	131	1	0	0	152	321
Hourly Total	13	6	46	0	62	20	6	21	0	47	21	493	9	0	523	68	500	21	0	0	609	1229
1300-1315	1	3	7	0	11	6	0	4	0	10	7	123	1	0	131	11	129	6	0	0	146	298
1315-1330	2	4	14	0	20	7	2	3	0	12	5	128	4	0	137	18	139	3	0	0	160	329
1330-1345	1	0	7	0	8	4	3	6	0	10	6	134	2	0	140	11	155	5	0	0	171	334
1345-1400	2	1	14	0	17	5	5	6	0	16	4	98	2	0	104	10	154	6	0	0	130	307
Hourly Total	6	8	42	0	56	22	10	19	0	51	22	483	9	0	514	50	577	20	0	0	647	1268
1400-1415	5	3	8	0	16	3	3	6	0	12	5	135	6	0	146	9	162	2	0	0	173	347
1415-1430	1	7	16	0	25	4	3	8	0	12	10	121	5	0	131	16	121	4	0	0	195	369
1430-1445	7	5	13	0	25	3	5	4	0	12	11	131	16	0	158	32	168	7	0	0	207	402
1445-1500	0	7	15	0	22	10	8	3	0	25	15	123	19	0	157	26	181	7	0	0	214	418
Hourly Total	13	22	52	0	89	20	17	26	0	63	36	510	46	0	592	90	678	20	0	0	789	1531
1500-1515	3	4	29	0	34	2	18	31	0	14	2	185	3	0	145	8	193	9	0	0	215	453
1515-1530	8	1	14	0	23	11	8	10	0	29	5	171	12	0	188	17	230	9	0	0	256	496
1530-1545	6	3	11	0	20	4	6	10	0	20	11	136	6	0	153	24	216	5	0	0	255	448
1545-1600	4	5	12	0	21	4	3	3	0	12	21	120	2	0	130	25	225	6	0	0	215	427
Hourly Total	35	13	66	0	114	20	28	28	0	76	52	612	51	0	715	102	878	29	0	0	1009	1914
1600-1615	4	4	11	0	19	8	5	4	0	17	9	128	6	0	143	23	240	8	0	0	271	450
1615-1630	5	2	10	0	17	5	4	4	0	13	4	146	2	0	152	26	245	5	0	0	276	458
1630-1645	5	4	11	0	20	3	2	9	0	14	5	127	7	0	139	29	251	10	0	0	292	465
1645-1700	6	4	23	0	33	3	6	9	0	18	6	128	7	0	141	32	259	4	0	0	295	487
Hourly Total	20	14	55	0	89	19	17	26	0	62	24	529	22	0	575	110	997	27	0	0	1134	1860
1700-1715	2	5	8	0	15	6	9	4	0	19	8	139	2	0	149	21	279	8	0	0	308	491
1715-1730	3	7	21	0	31	5	3	8	0	16	8	130	7	0	145	36	316	10	0	0	362	554
1730-1745	7	1	23	0	35	9	1	3	0	13	5	127	4	0	136	22	310	5	0	0	337	517
1745-1800	5	7	21	0	33	3	3	6	0	12	16	147	4	0	167	22	290	10	0	0	322	534
Hourly Total	17	20	73	0	110	23	16	21	0	60	37	543	17	0	597	101	1195	33	0	0	1329	2096
Grand Total	375	162	793	0	1040	242	198	250	0	689	331	7283	311	0	7925	825	6863	243	0	0	7991	17585
Approach %	16.83	11.58	61.60	0.00	24.58	28.74	36.28	0.00	4.28	61.90	31.92	0.00	0.00	10.40	66.53	31.06	0.00	0.00	0.00	0.00	45.10	
Intersection %	1.00	0.92	4.00	0.00	5.91	1.37	1.13	1.42	0.00	3.92	1.88	41.42	1.77	0.00	45.07	4.69	39.03	1.38	0.00	0.00	45.10	

0700 - 0900 (Internal session 1) (04-16-2025)

Northbound Vaughns Gap Rd (South)				Southbound Vaughns Gap Rd (North)				Eastbound TN-1 Harding Pike (West)				Westbound TN-1 Harding Pike (East)										
TIME	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int	
	1.1	1.2	1.3	1.4	Total	1.5	1.6	1.7	1.8	Total	1.9	1.10	1.11	1.12	Total	1.13	1.14	1.15	1.16	Total		
0700-0715	1	3	21	0	25	8	4	4	0	16	3	211	10	0	224	10	40	2	0	0	58	313
0715-0730	1	4	24	0	29	1	6	10	0	17	3	232	19	0								

Classified Turn Movement Count | Single Unit Trucks (4-7)



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Nashville, TN

Site 1
Vaughns Gap Rd (South)
Vaughns Gap Rd (North)
TN-1 Harding Pike (West)
TN-1 Harding Pike (East)

Date
Wednesday, April 16, 2025
Lat/Long
36.092593, -86.885421
Click here for Map

Weather
Fair
58°F
Click here for Detailed Weather

0600 - 1800 (Weekday 12h Session) (04-16-2025)
Single Unit Trucks (4-7)

Table with 18 columns for movement counts and 4 summary rows (Grand Total, Approach %, Intersection %). Includes sub-headers for Northbound, Southbound, Eastbound, and Westbound.

0700 - 0900 (Internal session 1) (04-16-2025)
Single Unit Trucks (4-7)

Table with 18 columns for movement counts and 4 summary rows (Grand Total, Approach %, Intersection %).

1600 - 1800 (Internal session 2) (04-16-2025)
Single Unit Trucks (4-7)

Table with 18 columns for movement counts and 4 summary rows (Grand Total, Approach %, Intersection %).

Classified Turn Movement Count | Combination Trucks (8-13)



Nashville, TN

Site 1

Vaughns Gap Rd (South)
Vaughns Gap Rd (North)
TN-1 Harding Pike (West)
TN-1 Harding Pike (East)

Date
Wednesday, April 16, 2025
Lat/Long
36.092593°, -86.885421°
[Click here for Map](#)

Weather
Fair
58°F
[Click here for Detailed Weather](#)

0600 - 1800 (Weekday 12h Session) (04-16-2025)
Combination Trucks (8-13)

TIME	Northbound				Southbound				Eastbound				Westbound				Int	Total		
	Vaughns Gap Rd (South)			App	Vaughns Gap Rd (North)			App	TN-1 Harding Pike (West)			App	TN-1 Harding Pike (East)			App				
	Left	Thru	Right		U-Turn	Left	Thru		Right	U-Turn	Left		Thru	Right	U-Turn				Left	Thru
1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10	1.11	1.12	1.13	1.14	1.15	1.16	1.17				
0600-0615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0615-0630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0630-0645	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0645-0700	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	2	0	0	2	1	3	0	0	4	
0700-0715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0715-0730	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
0730-0745	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0745-0800	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	
0800-0815	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
0815-0830	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0830-0845	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
0845-0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	
0900-0915	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	
0915-0930	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	
0930-0945	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
0945-1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	
1000-1015	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1015-1030	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
1030-1045	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1045-1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	
1100-1115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	
1115-1130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1130-1145	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	
1145-1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	
Hourly Total	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	3	0	0	6	
1200-1215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
1215-1230	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
1230-1245	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	2	
1300-1315	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	
1315-1330	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
1330-1345	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	
1345-1400	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	
Hourly Total	0	0	0	0	0	0	0	0	0	1	0	3	0	0	3	4	0	0	9	
1400-1415	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
1415-1430	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1430-1445	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
1445-1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	
1500-1515	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
1515-1530	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1530-1545	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
1545-1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	5	
1600-1615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1615-1630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	
1630-1645	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1645-1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	
1700-1715	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1715-1730	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1730-1745	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
1745-1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
Hourly Total	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	2	
Grand Total	0	2	0	0	4	0	0	3	0	1	0	14	0	0	14	5	30	1	0	36
Approach %	0.00	50.00	50.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	100.00	0.00	0.00	13.89	83.33	1.78	0.00	0.00	0.00	
Intersection %	0.00	3.64	3.64	0.00	7.27	0.00	0.00	1.82	0.00	1.82	0.00	25.45	0.00	0.00	25.45	9.09	54.55	1.82	0.00	65.45

0700 - 0900 (Internal session 1) (04-16-2025)
Combination Trucks (8-13)

TIME	Northbound				Southbound				Eastbound				Westbound				Int	Total		
	Vaughns Gap Rd (South)			App	Vaughns Gap Rd (North)			App	TN-1 Harding Pike (West)			App	TN-1 Harding Pike (East)			App				
	Left	Thru	Right		U-Turn	Left	Thru		Right	U-Turn	Left		Thru	Right	U-Turn				Left	Thru
1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10	1.11	1.12	1.13	1.14	1.15	1.16	1.17				
0700-0715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0715-0730	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0730-0745	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0745-0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
0800-0815	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
0815-0830	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0830-0845	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0845-0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	0	3	0	0	1	0	0	0	0	0	4
Approach %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.00	0.00	0.00	75.00	0.00	25.00	0.00	0.00	0.00	25.00

1600 - 1800 (Internal session 2) (04-16-2025)
Combination Trucks (8-13)

TIME	Northbound				Southbound				Eastbound				Westbound				Int	Total
	Vaughns Gap Rd (South)			App	Vaughns Gap Rd (North)			App	TN-1 Harding Pike (West)			App	TN-1 Harding Pike (East)			App		
	Left	Thru	Right		U-Turn	Left	Thru		Right	U-Turn	Left		Thru	Right	U-Turn			
1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9										

Classified Turn Movement Count | All Trucks (4-13)



Nashville, TN

Site 1

Vaughns Gap Rd (South)
Vaughns Gap Rd (North)
TN-1 Harding Pike (West)
TN-1 Harding Pike (East)

Date

Wednesday, April 16, 2025

Weather

Fair

58°F

[Click here for Detailed Weather](#)

Lat/Long

36.092593°, -86.885421°

[Click here for Map](#)

0600 - 1800 (Weekday 12h Session) (04-16-2025)

All Trucks (4-13)

TIME	Northbound Vaughns Gap Rd (South)			Southbound Vaughns Gap Rd (North)			Eastbound TN-1 Harding Pike (West)				Westbound TN-1 Harding Pike (East)				Int Total							
	Left 1.1	Thru 1.2	Right 1.3	U-Turn 1.4	App Total	Left 1.5	Thru 1.6	Right 1.7	U-Turn 1.8	App Total	Left 1.9	Thru 1.10	Right 1.11	U-Turn 1.12		App Total	Left 1.13	Thru 1.14	Right 1.15	U-Turn 1.16	App Total	
0600-0615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0615-0630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0630-0645	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0645-0700	0	0	1	0	1	0	0	0	0	0	0	5	1	0	6	2	5	0	0	0	0	7
Hourly Total	0	0	1	0	1	0	0	0	0	0	0	13	1	0	14	2	10	0	0	0	0	12
0700-0715	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	2	3	0	0	0	0	9
0715-0730	1	0	0	0	1	0	0	0	0	0	1	7	0	0	8	0	2	0	0	0	0	2
0730-0745	0	0	2	0	2	0	0	0	0	0	0	5	1	0	6	0	3	0	0	0	0	3
0745-0800	0	0	1	0	1	0	0	0	0	0	0	7	0	0	7	0	3	0	0	0	0	3
Hourly Total	1	1	3	0	5	0	0	0	0	0	1	22	1	0	24	2	11	0	0	0	0	13
0800-0815	0	0	2	0	2	0	0	0	0	0	0	1	3	0	4	0	8	0	0	0	0	8
0815-0830	0	0	0	0	0	1	0	0	0	0	1	4	0	0	4	0	6	0	0	0	0	6
0830-0845	0	0	0	0	0	0	0	0	0	0	1	4	1	0	6	0	7	0	0	0	0	2
0845-0900	0	0	1	0	1	0	0	0	0	0	0	7	0	0	7	0	4	0	0	0	0	4
Hourly Total	0	0	3	0	3	1	0	0	0	0	1	2	18	1	21	0	20	0	0	0	0	20
0900-0915	0	0	0	0	0	0	0	0	0	0	0	3	1	0	4	0	5	0	0	0	0	5
0915-0930	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	6	0	0	0	0	6
0930-0945	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	5	0	0	0	0	5
0945-1000	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	3	0	0	0	0	3
Hourly Total	0	0	1	0	1	0	0	0	0	0	0	9	1	0	10	0	19	0	0	0	0	19
1000-1015	1	0	0	0	1	0	0	0	0	0	0	1	1	0	1	0	7	0	0	0	0	8
1015-1030	0	0	1	0	1	0	0	0	0	0	0	5	0	0	5	2	4	1	0	0	0	7
1030-1045	0	0	0	0	0	0	0	0	0	0	2	7	0	0	9	1	1	1	0	0	0	3
1045-1100	0	0	1	0	1	0	0	0	0	0	0	4	0	0	4	0	3	2	0	0	0	5
Hourly Total	1	0	2	0	3	0	0	0	0	0	2	17	1	0	20	4	15	4	0	0	0	23
1100-1115	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	6	0	0	0	0	6
1115-1130	0	0	0	0	0	0	1	0	0	0	1	4	0	0	4	1	2	0	0	0	0	3
1130-1145	0	0	0	0	0	0	0	0	0	0	0	4	1	0	4	1	4	0	0	0	0	9
1145-1200	1	0	2	0	3	0	0	0	0	0	1	3	0	0	4	2	5	0	0	0	0	7
Hourly Total	1	0	3	0	4	0	0	0	0	0	1	13	0	0	14	4	17	0	0	0	0	21
1200-1215	0	0	0	0	0	0	1	0	0	0	1	0	3	0	3	0	4	0	0	0	0	4
1215-1230	0	1	0	0	1	0	0	0	0	0	0	8	0	0	8	0	2	0	0	0	0	2
1230-1245	0	1	0	0	1	2	0	0	0	0	2	2	0	0	2	1	3	0	0	0	0	4
1245-1300	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	3	2	0	0	0	5
Hourly Total	0	2	0	0	2	2	0	0	0	0	3	15	0	0	15	1	12	2	0	0	0	13
1300-1315	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	2
1315-1330	0	1	0	0	1	0	0	0	0	0	0	7	0	0	7	1	2	0	0	0	0	3
1330-1345	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	6	0	0	0	0	6
1345-1400	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	5	0	0	0	0	5
Hourly Total	0	1	1	0	2	0	0	0	0	0	1	0	11	0	11	2	15	0	0	0	0	17
1400-1415	0	0	1	0	1	0	0	0	0	0	0	2	1	0	3	0	2	0	0	0	0	2
1415-1430	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	2	0	0	0	0	2
1430-1445	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	0	3	0	0	0	0	3
1445-1500	0	0	0	0	0	0	1	0	0	0	1	0	4	0	4	0	0	0	0	0	0	4
Hourly Total	0	0	2	0	2	0	1	0	0	0	2	10	2	0	12	1	7	0	0	0	0	8
1500-1515	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2
1515-1530	0	0	2	0	2	1	1	0	0	0	2	0	5	0	5	0	4	0	0	0	0	4
1530-1545	0	1	1	0	2	0	0	0	0	0	0	2	0	0	2	0	7	1	0	0	0	8
1545-1600	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	1
Hourly Total	0	1	3	0	4	1	1	1	0	0	3	0	11	1	12	1	14	1	0	0	0	16
1600-1615	0	0	0	0	0	1	0	0	0	0	1	0	1	0	1	0	3	1	0	0	0	4
1615-1630	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	1	8	0	0	0	0	9
1630-1645	1	0	0	0	1	0	0	0	0	0	0	1	1	0	2	0	3	0	0	0	0	6
1645-1700	1	0	1	0	2	1	0	0	0	0	1	0	1	0	2	0	2	0	0	0	0	2
Hourly Total	3	0	1	0	4	2	0	0	0	0	2	0	5	1	6	1	16	1	0	0	0	18
1700-1715	0	1	0	0	1	1	0	0	0	0	1	0	3	0	4	0	2	0	0	0	0	2
1715-1730	0	0	0	0	0	0	1	0	0	0	1	0	1	2	3	0	5	0	0	0	0	5
1730-1745	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	5	0	0	0	0	5
1745-1800	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	5	0	0	0	0	7
Hourly Total	0	1	0	0	1	1	1	0	0	0	2	0	7	3	10	0	17	0	0	0	0	17
Grand Total	6	7	20	0	33	8	4	3	0	15	6	151	12	0	169	18	173	8	0	0	0	199
Approach %	18.18	21.21	60.61	0.00	53.33	16.67	20.00	0.00	0.00	3.57	89.29	71.00	0.00	0.00	9.09	46.93	40.02	0.00	0.00	0.00	0.00	0.00
Intersection %	1.48	1.68	4.81	0.00	7.93	1.92	0.96	0.72	0.00	3.61	1.44	36.30	2.88	0.00	40.63	4.33	41.59	1.92	0.00	0.00	0.00	47.84

0700 - 0900 (Internal session 1) (04-16-2025)

All Trucks (4-13)

TIME	Northbound Vaughns Gap Rd (South)			Southbound Vaughns Gap Rd (North)			Eastbound TN-1 Harding Pike (West)				Westbound TN-1 Harding Pike (East)				Int Total							
	Left 1.1	Thru 1.2	Right 1.3	U-Turn 1.4	App Total	Left 1.5	Thru 1.6	Right 1.7	U-Turn 1.8	App Total	Left 1.9	Thru 1.10	Right 1.11	U-Turn 1.12		App Total	Left 1.13	Thru 1.14	Right 1.15	U-Turn 1.16	App Total	
0700-0715	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0715-0730	1	0	0																			

Peak Hour Turning Movement Count

Nashville, TN



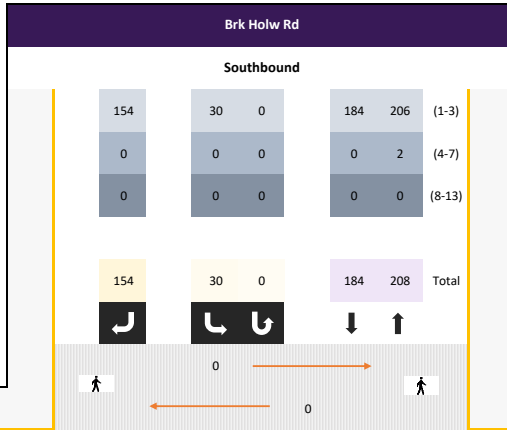
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Wednesday, April 16, 2025		
	Fair	58°F
Period	0600 - 1800	APPLY
Peak Hour	1700 - 1800	APPLY
Global PH	1700 - 1800	APPLY

* the Peak Hour Diagram does not include bicycles

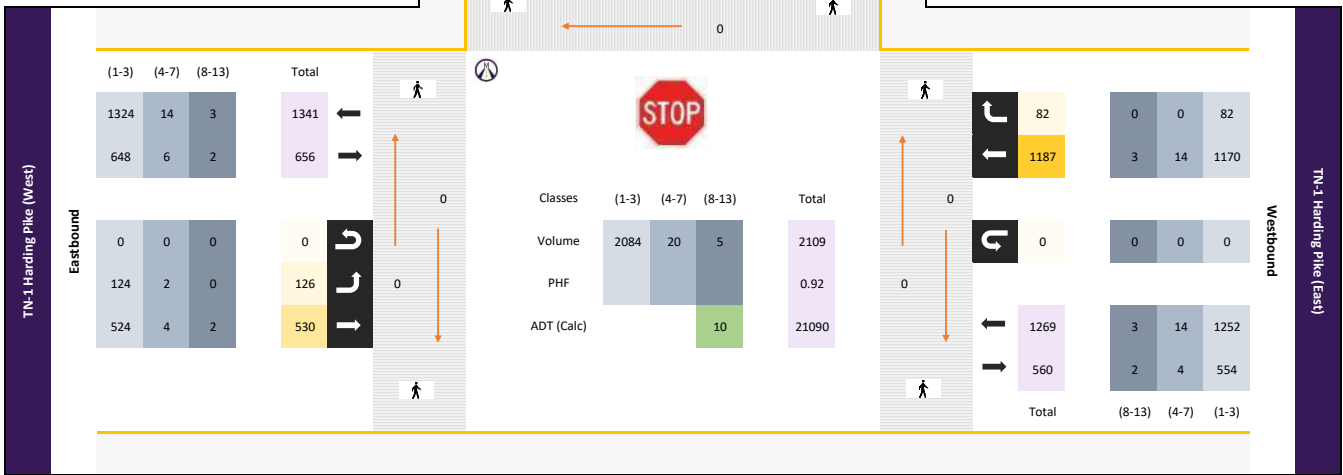


Session Parameters

(Drop Down Menu)

Peak Hour

Volume



Peak Hour Turning Movement Count

Nashville, TN



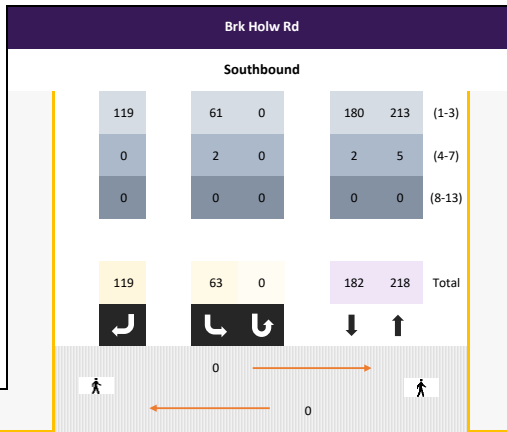
www.marrtraffic.com



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Wednesday, April 16, 2025		
	Fair	58°F
Period	0700 - 0900	APPLY
Peak Hour	0730 - 0830	APPLY
Global PH		APPLY

* the Peak Hour Diagram does not include bicycles

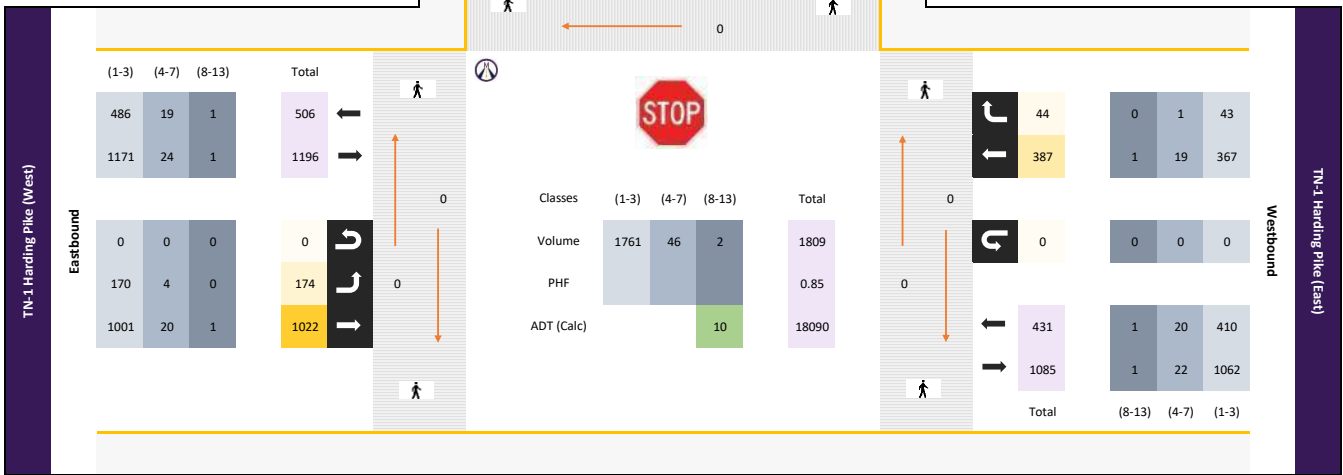


Session Parameters

(Drop Down Menu)

Peak Hour

Volume



All vehicles

Time	Southbound						Eastbound						Westbound						Int Total		
	Brk Holw Rd						TN-1 Harding Pike (West)						TN-1 Harding Pike (East)								
	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Left 2.4	Thru 2.5	U-Turn 2.6	App Total	Left 2.7	Right 2.8	U-Turn 2.9	App Total	Left 2.1	Right 2.2	U-Turn 2.3	App Total					
0730 - 0745	-	-	-	0	13	-	47	0	60	48	239	-	0	287	-	116	13	-	0	129	476
0745 - 0800	-	-	-	0	14	-	24	0	38	59	314	-	0	373	-	109	13	-	0	122	533
0800 - 0815	-	-	-	0	17	-	25	0	42	32	240	-	0	272	-	86	9	-	0	95	409
0815 - 0830	-	-	-	0	19	-	23	0	42	35	229	-	0	264	-	76	9	-	0	85	391
Total	0	0	0	0	63	0	119	0	182	174	1022	0	0	1196	0	387	44	0	0	431	1809
Approach %	0.00	0.00	0.00	0.00	34.62	0.00	65.38	0.00	-	14.55	85.45	0.00	0.00	0.00	-	89.79	10.21	0.00	0.00	-	-
PHF	0.00	0.00	0.00	0.00	0.83	0.00	0.63	0.00	0.76	0.74	0.81	0.00	0.00	0.80	0.00	0.83	0.85	0.00	0.00	0.84	0.85

Passenger Vehicles (1-3)

Time	Southbound						Eastbound						Westbound						Int Total		
	Brk Holw Rd						TN-1 Harding Pike (West)						TN-1 Harding Pike (East)								
	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Left 2.4	Thru 2.5	U-Turn 2.6	App Total	Left 2.7	Right 2.8	U-Turn 2.9	App Total	Left 2.1	Right 2.2	U-Turn 2.3	App Total					
0730 - 0745	-	-	-	0	11	-	47	0	58	47	233	-	0	280	-	117	13	-	0	126	464
0745 - 0800	-	-	-	0	14	-	24	0	38	58	307	-	0	365	-	106	13	-	0	119	522
0800 - 0815	-	-	-	0	17	-	25	0	42	31	236	-	0	267	-	78	8	-	0	86	395
0815 - 0830	-	-	-	0	19	-	23	0	42	34	225	-	0	259	-	70	9	-	0	79	380
Total	0	0	0	0	61	0	119	0	180	170	1001	0	0	1171	0	367	43	0	0	410	1761
Approach %	0.00	0.00	0.00	0.00	33.89	0.00	66.11	0.00	-	14.52	85.48	0.00	0.00	0.00	-	89.51	10.49	0.00	0.00	-	-
PHF	0.00	0.00	0.00	0.00	0.80	0.00	0.63	0.00	0.78	0.73	0.82	0.00	0.00	0.80	0.00	0.81	0.83	0.00	0.00	0.81	0.84

Single Unit Trucks (4-7)

Time	Southbound						Eastbound						Westbound						Int Total		
	Brk Holw Rd						TN-1 Harding Pike (West)						TN-1 Harding Pike (East)								
	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Left 2.4	Thru 2.5	U-Turn 2.6	App Total	Left 2.7	Right 2.8	U-Turn 2.9	App Total	Left 2.1	Right 2.2	U-Turn 2.3	App Total					
0730 - 0745	-	-	-	0	2	-	0	0	2	1	6	-	0	7	-	3	0	-	0	3	12
0745 - 0800	-	-	-	0	0	-	0	0	0	1	6	-	0	7	-	3	0	-	0	3	10
0800 - 0815	-	-	-	0	0	-	0	0	0	1	4	-	0	5	-	7	1	-	0	8	13
0815 - 0830	-	-	-	0	0	-	0	0	0	1	4	-	0	5	-	6	0	-	0	6	11
Total	0	0	0	0	2	0	0	0	2	4	20	0	0	24	0	19	1	0	0	20	46
Approach %	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	-	16.67	83.33	0.00	0.00	0.00	-	95.00	5.00	0.00	0.00	-	-
PHF	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.25	1.00	0.83	0.00	0.00	0.86	0.00	0.68	0.25	0.00	0.00	0.63	0.88

Combination Trucks (8-13)

Time	Southbound						Eastbound						Westbound						Int Total		
	Brk Holw Rd						TN-1 Harding Pike (West)						TN-1 Harding Pike (East)								
	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Left 2.4	Thru 2.5	U-Turn 2.6	App Total	Left 2.7	Right 2.8	U-Turn 2.9	App Total	Left 2.1	Right 2.2	U-Turn 2.3	App Total					
0730 - 0745	-	-	-	0	0	-	0	0	0	0	0	-	0	0	-	0	0	-	0	0	0
0745 - 0800	-	-	-	0	0	-	0	0	0	0	1	-	0	1	-	0	0	-	0	0	1
0800 - 0815	-	-	-	0	0	-	0	0	0	0	0	-	0	0	-	1	0	-	0	1	1
0815 - 0830	-	-	-	0	0	-	0	0	0	0	0	-	0	0	-	0	0	-	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	1	2
Approach %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	0.00	-	100.00	0.00	0.00	0.00	-	-
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.25	0.00	0.25	0.00	0.00	0.00	0.25	0.50

Bicycles

Time	Southbound						Eastbound						Westbound						Int Total		
	Brk Holw Rd						TN-1 Harding Pike (West)						TN-1 Harding Pike (East)								
	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Left 2.4	Thru 2.5	U-Turn 2.6	App Total	Left 2.7	Right 2.8	U-Turn 2.9	App Total	Left 2.1	Right 2.2	U-Turn 2.3	App Total					
0730 - 0745	-	-	-	0	0	-	0	0	0	0	0	-	0	0	-	0	0	-	0	0	0
0745 - 0800	-	-	-	0	0	-	0	0	0	0	0	-	0	0	-	0	0	-	0	0	0
0800 - 0815	-	-	-	0	0	-	0	0	0	0	0	-	0	0	-	0	0	-	0	0	0
0815 - 0830	-	-	-	0	0	-	0	0	0	0	0	-	0	0	-	0	0	-	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	-
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Peak Hour Turning Movement Count

Nashville, TN



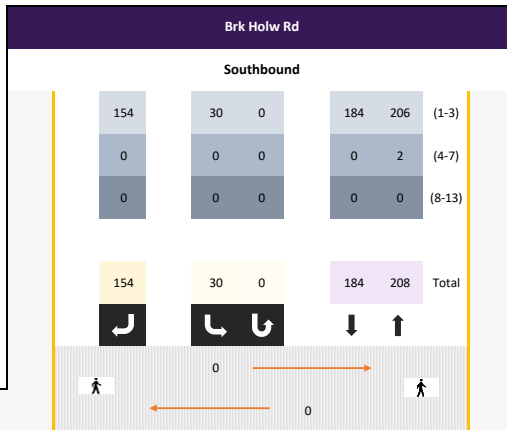
www.marrtraffic.com



[Click here for Map](#)

Wednesday, April 16, 2025		
	Fair	58°F
Period	1600 - 1800	APPLY
Peak Hour	1700 - 1800	APPLY
Global PH		APPLY

* the Peak Hour Diagram does not include bicycles

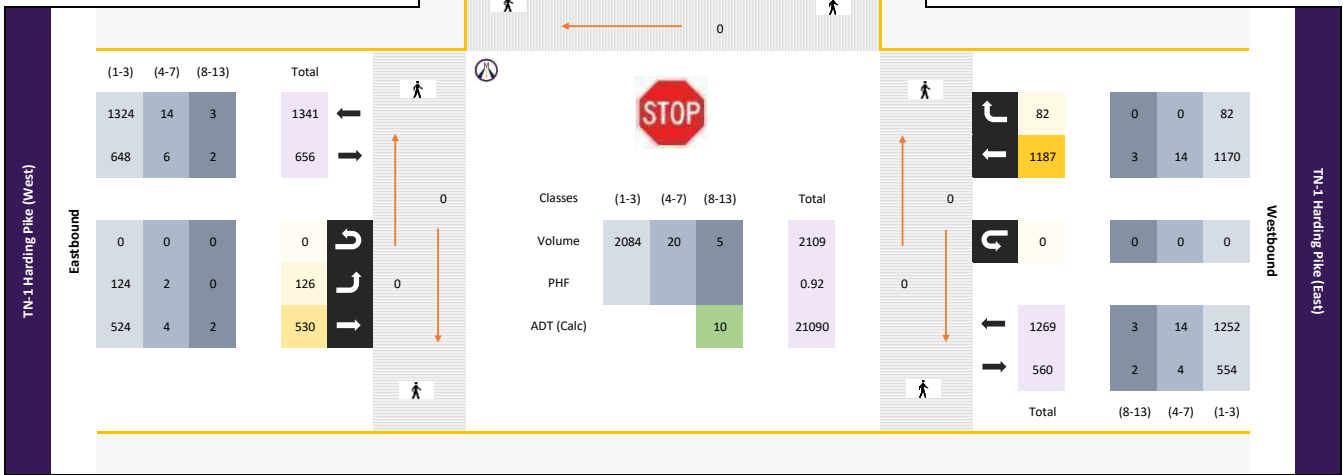


Session Parameters

(Drop Down Menu)

Peak Hour

Volume



All vehicles

Time							Southbound				Eastbound				Westbound				Int Total	
							Brk Holw Rd				TN-1 Harding Pike (West)				TN-1 Harding Pike (East)					
						App Total	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Left 2.4	Thru 2.5	U-Turn 2.6	App Total	Thru 2.7	Right 2.8	U-Turn 2.9	App Total		
1700 - 1715	-	-	-	-	-	0	9	32	0	41	31	130	-	161	274	23	-	297	499	
1715 - 1730	-	-	-	-	-	0	10	50	0	60	37	128	-	165	322	26	-	348	573	
1730 - 1745	-	-	-	-	-	0	7	41	0	48	29	132	-	161	295	17	-	312	521	
1745 - 1800	-	-	-	-	-	0	4	31	0	35	29	140	-	169	296	16	-	312	516	
Total	0	0	0	0	0	0	30	154	0	184	126	530	0	656	0	1187	82	1269	2109	
Approach %	0.00	0.00	0.00	0.00	0.00	-	16.30	83.70	0.00	-	19.21	80.79	0.00	-	0.00	93.54	6.46	0.00	-	
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.77	0.00	0.77	0.85	0.95	0.00	0.97	0.00	0.92	0.79	0.00	0.91	0.92

Passenger Vehicles (1-3)

Time							Southbound				Eastbound				Westbound				Int Total	
							Brk Holw Rd				TN-1 Harding Pike (West)				TN-1 Harding Pike (East)					
						App Total	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Left 2.4	Thru 2.5	U-Turn 2.6	App Total	Thru 2.7	Right 2.8	U-Turn 2.9	App Total		
1700 - 1715	-	-	-	-	-	0	9	32	0	41	30	127	-	157	272	23	-	295	493	
1715 - 1730	-	-	-	-	-	0	10	50	0	60	37	127	-	164	317	26	-	343	567	
1730 - 1745	-	-	-	-	-	0	7	41	0	48	28	132	-	160	290	17	-	307	515	
1745 - 1800	-	-	-	-	-	0	4	31	0	35	29	138	-	167	291	16	-	307	509	
Total	0	0	0	0	0	0	30	154	0	184	124	524	0	648	0	1170	82	1252	2084	
Approach %	0.00	0.00	0.00	0.00	0.00	-	16.30	83.70	0.00	-	19.14	80.86	0.00	-	0.00	93.45	6.55	0.00	-	
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.77	0.00	0.77	0.84	0.95	0.00	0.97	0.00	0.92	0.79	0.00	0.91	0.92

Single Unit Trucks (4-7)

Time							Southbound				Eastbound				Westbound				Int Total
							Brk Holw Rd				TN-1 Harding Pike (West)				TN-1 Harding Pike (East)				
						App Total	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Left 2.4	Thru 2.5	U-Turn 2.6	App Total	Thru 2.7	Right 2.8	U-Turn 2.9	App Total	
1700 - 1715	-	-	-	-	-	0	0	0	0	0	1	1	-	2	1	0	-	1	3
1715 - 1730	-	-	-	-	-	0	0	0	0	0	0	1	-	1	5	0	-	5	6
1730 - 1745	-	-	-	-	-	0	0	0	0	0	1	0	-	1	4	0	-	4	5
1745 - 1800	-	-	-	-	-	0	0	0	0	0	0	2	-	2	4	0	-	4	6
Total	0	0	0	0	0	0	0	0	0	0	2	4	0	6	0	14	0	14	20
Approach %	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-	33.33	66.67	0.00	-	0.00	100.00	0.00	-	-
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.00	0.75	0.00	0.70	0.00	0.70	0.83

Combination Trucks (8-13)

Time							Southbound				Eastbound				Westbound				Int Total
							Brk Holw Rd				TN-1 Harding Pike (West)				TN-1 Harding Pike (East)				
						App Total	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Left 2.4	Thru 2.5	U-Turn 2.6	App Total	Thru 2.7	Right 2.8	U-Turn 2.9	App Total	
1700 - 1715	-	-	-	-	-	0	0	0	0	0	0	2	-	2	1	0	-	1	3
1715 - 1730	-	-	-	-	-	0	0	0	0	0	0	0	-	0	0	0	-	0	0
1730 - 1745	-	-	-	-	-	0	0	0	0	0	0	0	-	0	1	0	-	1	1
1745 - 1800	-	-	-	-	-	0	0	0	0	0	0	0	-	0	1	0	-	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	3	0	3	5
Approach %	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-	0.00	100.00	0.00	-	0.00	100.00	0.00	-	-
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.25	0.00	0.75	0.00	0.75	0.42

Bicycles

Time							Southbound				Eastbound				Westbound				Int Total
							Brk Holw Rd				TN-1 Harding Pike (West)				TN-1 Harding Pike (East)				
						App Total	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Left 2.4	Thru 2.5	U-Turn 2.6	App Total	Thru 2.7	Right 2.8	U-Turn 2.9	App Total	
1700 - 1715	-	-	-	-	-	0	0	0	0	0	0	0	-	0	0	0	-	0	0
1715 - 1730	-	-	-	-	-	0	0	0	0	0	0	0	-	0	0	0	-	0	0
1730 - 1745	-	-	-	-	-	0	0	0	0	0	0	0	-	0	0	0	-	0	0
1745 - 1800	-	-	-	-	-	0	0	0	0	0	0	0	-	0	0	0	-	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	-	0.00	0.00	0.00	-	0.00	0.00	0.00	-	-
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Classified Turn Movement Count | All vehicles



Nashville, TN

Site 2

Date
Wednesday, April 16, 2025

Weather
Fair
58°F
[Click here for Detailed Weather](#)

Birk Hollow Rd
TN-1 Harding Pike (West)
TN-1 Harding Pike (East)

Lat/Long
36.094388°, -86.881740°
[Click here for Map](#)

0600 - 1800 (Weekday 12h Session) (04-16-2025)
All vehicles

TIME	Southbound Birk Hollow Rd				Eastbound TN-1 Harding Pike (West)				Westbound TN-1 Harding Pike (East)				Int Total
	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Left 2.4	Right 2.5	U-Turn 2.6	App Total	Thru 2.7	Right 2.8	U-Turn 2.9	App Total	
0600-0615	3	1	0	4	3	95	0	98	14	0	0	14	116
0615-0630	3	7	0	10	2	123	0	125	37	0	0	37	172
0630-0645	6	9	0	15	7	189	0	196	38	1	0	39	250
0645-0700	9	5	0	14	12	193	0	205	48	2	0	50	269
Hourly Total	24	19	0	43	24	600	0	624	137	3	0	140	807
0700-0715	12	15	0	27	17	225	0	263	41	4	0	45	314
0715-0730	20	23	0	43	23	236	0	259	83	4	0	87	389
0730-0745	13	47	0	60	48	239	0	287	116	13	0	129	476
0745-0800	14	24	0	38	59	314	0	373	109	13	0	122	531
Hourly Total	68	108	0	168	147	1004	0	1141	365	34	0	383	1712
0800-0815	17	25	0	42	32	240	0	272	86	9	0	95	409
0815-0830	19	23	0	42	35	229	0	264	76	9	0	85	391
0830-0845	14	20	0	34	31	208	0	239	73	12	0	85	358
0845-0900	12	20	0	32	34	226	0	260	91	14	0	105	397
Hourly Total	62	88	0	150	132	903	0	1035	326	44	0	370	1555
0900-0915	11	20	0	31	21	162	0	183	101	13	0	114	328
0915-0930	3	23	0	26	24	138	0	162	78	12	0	90	278
0930-0945	12	17	0	29	14	131	0	145	102	16	0	118	292
0945-1000	14	16	0	30	17	153	0	170	117	11	0	128	328
Hourly Total	40	76	0	116	76	586	0	660	396	52	0	450	1276
1000-1015	8	20	0	28	23	133	0	155	96	8	0	104	287
1015-1030	16	25	0	41	17	111	0	128	118	6	0	124	293
1030-1045	10	15	0	25	23	152	0	175	107	12	0	119	319
1045-1100	12	19	0	31	22	124	0	146	116	9	0	125	303
Hourly Total	46	79	0	125	84	520	0	604	437	35	0	472	1201
1100-1115	14	16	0	30	21	141	0	162	115	12	0	127	319
1115-1130	12	24	0	36	19	121	0	140	109	15	0	124	300
1130-1145	20	20	0	40	14	120	0	143	95	18	0	113	277
1145-1200	18	20	0	38	21	119	0	140	122	12	0	134	312
Hourly Total	55	80	0	135	73	501	0	575	441	57	0	498	1208
1200-1215	13	17	0	30	15	139	0	154	114	18	0	132	318
1215-1230	8	25	0	33	16	126	0	142	158	21	0	179	354
1230-1245	16	17	0	33	21	114	0	135	127	18	0	145	313
1245-1300	12	25	0	37	15	131	0	146	120	14	0	134	317
Hourly Total	49	84	0	133	63	500	0	572	528	71	0	600	1300
1300-1315	11	29	0	40	16	124	0	140	126	12	0	138	318
1315-1330	12	20	0	32	18	144	0	162	143	11	0	154	348
1330-1345	15	28	0	43	22	126	0	147	150	12	0	162	347
1345-1400	10	20	0	30	22	104	0	126	154	15	0	169	325
Hourly Total	48	97	0	145	72	488	0	570	573	50	0	623	1338
1400-1415	14	18	0	32	21	122	0	143	163	16	0	179	354
1415-1430	14	30	0	44	22	118	0	140	143	16	0	159	307
1430-1445	19	32	0	51	17	131	0	148	171	10	0	181	380
1445-1500	61	43	0	57	21	141	0	162	182	11	0	193	412
Hourly Total	141	123	0	184	84	524	0	593	685	51	0	736	1513
1500-1515	11	33	0	44	49	163	0	192	212	22	0	234	387
1515-1530	12	28	0	40	41	168	0	209	206	13	0	219	468
1530-1545	8	35	0	43	21	130	0	151	241	19	0	260	454
1545-1600	27	32	0	42	35	150	0	160	242	22	0	264	466
Hourly Total	46	123	0	169	146	566	0	712	901	76	0	977	1858
1600-1615	17	37	0	54	28	117	0	145	241	25	0	266	465
1615-1630	19	34	0	53	27	146	0	173	251	19	0	270	496
1630-1645	14	33	0	47	26	108	0	154	263	13	0	276	451
1645-1700	12	44	0	56	30	130	0	160	252	24	0	276	492
Hourly Total	62	148	0	210	111	501	0	612	1007	81	0	1088	1910
1700-1715	9	33	0	42	31	130	0	161	274	23	0	297	499
1715-1730	10	50	0	60	37	128	0	165	322	26	0	348	573
1730-1745	7	41	0	48	29	132	0	161	295	17	0	312	521
1745-1800	4	31	0	35	29	140	0	169	296	16	0	312	516
Hourly Total	30	154	0	184	126	530	0	656	1187	82	0	1269	2109
Grand Total	582	1180	0	1762	1139	7239	0	8379	6960	636	0	7596	17737
Approach %	33.03	62.97	0.00	12.70	13.59	86.39	0.01	91.61	41.37	0.00	0.00	41.37	83.22
Intersection %	3.28	6.65	0.00	9.93	6.42	40.81	0.01	47.24	39.24	3.59	0.00	42.83	85.82
Heavy Vehicle %	3	2	0	2	1	2	0	2	3	4	0	3	2
PHF	0.75	0.77	0.00	0.77	0.85	0.95	0.00	0.97	0.92	0.79	0.00	0.91	0.92
Peak Hour Total	30	154	0	184	126	530	0	656	1187	82	0	1269	2109
Peak Hour HV %	0	0	0	0	2	1	0	1	1	0	0	1	1

0700 - 0900 (Internal session 1) (04-16-2025)
All vehicles

TIME	Southbound Birk Hollow Rd				Eastbound TN-1 Harding Pike (West)				Westbound TN-1 Harding Pike (East)				Int Total
	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Left 2.4	Right 2.5	U-Turn 2.6	App Total	Thru 2.7	Right 2.8	U-Turn 2.9	App Total	
0700-0715	2	1	0	3	0	1	0	1	0	0	0	0	1
0715-0730	2	1	0	3	0	1	0	1	0	0	0	0	1
0730-0745	2	1	0	3	0	1	0	1	0	0	0	0	1
Hourly Total	6	3	0	9	0	3	0	3	0	0	0	0	3
0745-0800	13	47	0	60	48	239	0	287	116	13	0	129	476
Hourly Total	19	58	0	77	56	278	0	334	132	13	0	145	502
0800-0815	17	25	0	42	32	240	0	272	86	9	0	95	409
0815-0830	19	23	0	42	35	229	0	264	76	9	0	85	391
0830-0845	14	20	0	34	31	208	0	239	73	12	0	85	358
0845-0900	12	20	0	32	34	226	0	260	91	14	0	105	397
Hourly Total	62	88	0	150	132	903	0	1035	326	44	0	370	1555
Grand Total	121	197	0	318	279	1917	0	2196	675	78	0	753	3267
Approach %	38.05	61.95	0.00	12.70	13.70	87.30	0.00	91.61	41.37	0.00	0.00	41.37	83.22
Intersection %	3.70	6.03	0.00	9.73	6.54	38.68	0.00	47.22	39.24	3.59	0.00	42.83	85.82
Heavy Vehicle %	2	1	0	3	0	1	0	1	0	0	0	0	1
PHF	0.83	0.63	0.00	0.76	0.74	0.81	0.00	0.80	0.83	0.85	0.00	0.84	0.85
Peak Hour Total	63	119	0	182	174	1022	0	1196	387	44	0	431	1809
Peak Hour HV %	3	0	0	3	2	2	0	3	5	2	0	5	3

1600 - 1800 (Internal session 2) (04-16-2025)
All vehicles

TIME	Southbound Birk Hollow Rd				Eastbound TN-1 Harding Pike (West)				Westbound TN-1 Harding Pike (East)				Int Total
	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Left 2.4	Right 2.5	U-Turn 2.6	App Total	Thru 2.7	Right 2.8	U-Turn 2.9	App Total	
1600-1615	17	37	0	54	28	117	0	145	241	25	0	266	465
1615-1630	19	34	0	53	27	146	0	173	251	19	0	270	496
1630-1645	14	33	0	47	26	108	0	154	263	13	0	276	451
1645-1700	12	44	0	56	30	130	0	160	252	24	0	276	492
Hourly Total	62	148	0	210	111	501	0	612	1007	81	0	1088	1910
1700-1715	9	32	0	41	31	130	0	161	274	23	0	297	499
1715-1730	10	50	0	60	37	128	0	165	322	26	0	348	573
1730-1745	7	41	0	48	29	132	0	161	295	17	0	312	521
1745-1800	4	31	0	35	29	140	0	169	296	16	0	312	516
Hourly Total	30	154	0	184	126	530	0	656	1187	82	0	1269	2109
Grand Total	92	302	0	394	237	1031	0	1268	2194	163	0	2357	4013
Approach %	23.35	76.65	0.00	12.70	18.69	81.31	0.00	91.61	41.37	6.92	0.00	48.29	88.29
Intersection %	2.29	7.52	0.00	9.80	5.90	31.55	0.00	47.24	39.24	3.59	0.00	42.8	

Classified Turn Movement Count | Passenger Vehicles (1-3)



Nashville, TN

Site 2

Birk Hollow Rd
TN-1 Harding Pike (West)
TN-1 Harding Pike (East)

Date
Wednesday, April 16, 2025

Lat/Long
36.094388°, -86.881740°
[Click here for Map](#)

Weather
Fair
58°F
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0600 - 1800 (Weekday 12h Session) (04-16-2025)
Passenger Vehicles (1-3)

TIME	Southbound				Eastbound				Westbound				Int. Total
	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Left 2.4	Thru 2.5	U-Turn 2.6	App Total	Thru 2.7	Right 2.8	U-Turn 2.9	App Total	
0600-0615	3	1	0	4	3	92	0	95	14	0	0	14	113
0615-0630	7	7	0	10	2	121	0	125	35	0	0	35	170
0630-0645	9	6	0	15	7	184	0	191	35	1	0	36	242
0645-0700	9	5	0	14	12	187	0	199	41	2	0	43	256
Hourly Total	24	19	0	43	24	586	0	610	125	3	0	128	781
0700-0715	12	14	0	26	16	223	0	239	37	4	0	41	306
0715-0730	10	23	0	43	23	229	0	252	81	4	0	85	380
0730-0745	11	47	0	58	47	233	0	280	113	13	0	126	464
0745-0800	14	24	0	38	58	307	0	365	106	13	0	119	522
Hourly Total	57	108	0	165	144	992	0	1134	387	34	0	391	1612
0800-0815	17	25	0	42	31	236	0	267	78	8	0	86	395
0815-0830	19	23	0	42	34	225	0	259	70	9	0	79	380
0830-0845	14	20	0	34	31	204	0	235	70	11	0	81	350
0845-0900	12	18	0	30	33	219	0	252	89	13	0	102	384
Hourly Total	62	86	0	148	129	884	0	1013	307	41	0	348	1509
0900-0915	11	20	0	31	21	159	0	180	96	12	0	108	319
0915-0930	3	22	0	25	24	135	0	159	73	12	0	85	260
0930-0945	11	17	0	28	14	129	0	143	97	13	0	110	281
0945-1000	14	16	0	30	17	151	0	168	114	11	0	125	323
Hourly Total	39	75	0	114	76	574	0	650	380	48	0	428	1152
1000-1015	9	17	0	26	24	132	0	154	91	7	0	98	277
1015-1030	15	23	0	38	15	107	0	122	113	6	0	119	279
1030-1045	10	15	0	25	23	145	0	168	104	10	0	114	307
1045-1100	12	19	0	31	21	120	0	141	111	9	0	120	292
Hourly Total	45	74	0	119	81	504	0	585	419	32	0	451	1155
1100-1115	14	16	0	30	21	138	0	159	109	12	0	121	310
1115-1130	12	24	0	36	19	117	0	136	106	14	0	120	292
1130-1145	19	11	0	30	19	119	0	139	91	17	0	108	297
1145-1200	17	18	0	35	20	115	0	135	117	12	0	129	299
Hourly Total	54	77	0	131	72	486	0	559	423	55	0	478	1168
1200-1215	16	16	0	32	15	135	0	150	111	17	0	128	309
1215-1230	8	25	0	33	16	118	0	134	156	21	0	177	344
1230-1245	15	16	0	31	20	111	0	131	124	18	0	142	304
1245-1300	11	25	0	36	15	129	0	144	115	12	0	127	307
Hourly Total	82	82	0	124	69	493	0	599	506	68	0	574	1243
1300-1315	11	29	0	40	16	123	0	139	124	10	0	134	313
1315-1330	11	20	0	31	18	137	0	155	139	9	0	148	334
1330-1345	15	27	0	42	24	124	0	143	144	12	0	156	339
1345-1400	9	19	0	28	22	101	0	123	150	14	0	164	315
Hourly Total	46	95	0	141	72	486	0	558	557	45	0	602	1301
1400-1415	13	18	0	31	21	119	0	140	161	16	0	177	348
1415-1430	19	28	0	47	19	115	0	136	126	17	0	143	357
1430-1445	19	32	0	51	17	129	0	146	168	10	0	178	375
1445-1500	14	43	0	57	21	137	0	158	182	11	0	193	408
Hourly Total	58	122	0	180	80	509	0	580	678	50	0	748	1488
1500-1515	11	33	0	44	49	162	0	141	210	22	0	232	461
1515-1530	12	28	0	40	40	161	0	201	202	13	0	215	456
1530-1545	7	35	0	42	20	128	0	148	232	19	0	251	441
1545-1600	15	27	0	42	26	102	0	137	240	20	0	260	439
Hourly Total	45	123	0	168	144	553	0	697	884	74	0	958	1823
1600-1615	16	36	0	52	28	115	0	143	238	24	0	262	457
1615-1630	18	33	0	51	27	144	0	171	243	19	0	262	484
1630-1645	14	33	0	47	26	106	0	132	259	13	0	272	451
1645-1700	12	44	0	56	30	127	0	157	250	23	0	273	486
Hourly Total	60	146	0	206	111	492	0	603	990	79	0	1069	1878
1700-1715	9	32	0	41	30	127	0	157	272	23	0	295	493
1715-1730	10	50	0	60	37	127	0	164	317	26	0	343	567
1730-1745	7	41	0	48	28	132	0	160	290	17	0	307	515
1745-1800	4	31	0	35	29	138	0	167	291	16	0	307	509
Hourly Total	30	154	0	184	124	524	0	648	1170	82	0	1252	2084
Grand Total	566	1161	0	1727	1123	7074	0	8198	6776	611	0	7387	17312
Approach %	33.77	67.23	0.00	9.58	6.40	40.86	0.01	47.35	39.14	3.53	0.00	42.67	
Intersection %	3.27	6.71	0.00	9.58	6.40	40.86	0.01	47.35	39.14	3.53	0.00	42.67	

0700 - 0900 (Internal session 1) (04-16-2025)
Passenger Vehicles (1-3)

TIME	Southbound				Eastbound				Westbound				Int. Total
	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Left 2.4	Thru 2.5	U-Turn 2.6	App Total	Thru 2.7	Right 2.8	U-Turn 2.9	App Total	
0700-0715	2	1	0	3	3	92	0	95	14	0	0	14	113
0715-0730	7	7	0	10	2	121	0	125	35	0	0	35	170
0730-0745	9	6	0	15	7	184	0	191	35	1	0	36	242
0745-0800	9	5	0	14	12	187	0	199	41	2	0	43	256
Hourly Total	24	19	0	43	24	586	0	610	125	3	0	128	781
0800-0815	17	25	0	42	31	236	0	267	78	8	0	86	395
0815-0830	19	23	0	42	34	225	0	259	70	9	0	79	380
0830-0845	14	20	0	34	31	204	0	235	70	11	0	81	350
0845-0900	12	18	0	30	33	219	0	252	89	13	0	102	384
Hourly Total	62	86	0	148	129	884	0	1013	307	41	0	348	1509
Grand Total	119	184	0	313	273	1876	0	2149	644	75	0	739	3161
Approach %	38.02	61.98	0.00	12.70	87.30		0.00		89.57	10.43	0.00		
Intersection %	3.74	6.10	0.00	9.84	8.58	58.98	0.00	67.56	20.25	2.36	0.00	22.60	

1600 - 1800 (Internal session 2) (04-16-2025)
Passenger Vehicles (1-3)

TIME	Southbound				Eastbound				Westbound				Int. Total
	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Left 2.4	Thru 2.5	U-Turn 2.6	App Total	Thru 2.7	Right 2.8	U-Turn 2.9	App Total	
1600-1615	16	36	0	52	28	115	0	143	238	24	0	262	457
1615-1630	18	33	0	51	27	144	0	171	243	19	0	262	484
1630-1645	14	33	0	47	26	106	0	132	259	13	0	272	451
1645-1700	12	44	0	56	30	127	0	157	250	23	0	273	486
Hourly Total	60	146	0	206	111	492	0	603	990	79	0	1069	1878
1700-1715	9	32	0	41	30	127	0	157	272	23	0	295	493
1715-1730	10	50	0	60	37	127	0	164	317	26	0	343	567
1730-1745	7	41	0	48	28	132	0	160	290	17	0	307	515
1745-1800	4	31	0	35	29	138	0	167	291	16	0	307	509
Hourly Total	30	154	0	184	124	524	0	648	1170	82	0	1252	2084
Grand Total	90	300	0	390	235	1016	0	1251	2160	161	0	2321	3962
Approach %	23.08	76.92	0.00	18.78	81.22		0.00		93.06	6.94	0.00		
Intersection %	2.27	7.57	0.00	9.84	5.93	25.64	0.00	31.57	54.52	4.06	0.00	58.58	

Classified Turn Movement Count || Single Unit Trucks (4-7)



Nashville, TN

Site 2

Birk Hollow Rd
TN-1 Harding Pike (West)
TN-1 Harding Pike (East)

Date
Wednesday, April 16, 2025

Lat/Long
36.094388°, -86.881740°
[Click here for Map](#)

Weather

Fair

58°F

[Click here for Detailed Weather](#)

0600 - 1800 (Weekday 12h Session) (04-16-2025)
Single Unit Trucks (4-7)

TIME	Southbound				Eastbound				Westbound				Int Total	
	Birk Hollow Rd		U-Turn Total	App	TN-1 Harding Pike (West)		U-Turn Total	App	TN-1 Harding Pike (East)		U-Turn Total	App		
	Left 2.1	Right 2.2			Left 2.4	Thru 2.5			Thru 2.7	Right 2.8				Thru 2.9
0600 - 0615	0	0	0	0	0	0	0	0	0	0	0	0	0	
0615 - 0630	0	0	0	0	0	0	0	0	0	0	0	0	0	
0630 - 0645	0	0	0	0	0	0	0	0	0	0	0	0	0	
0645 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	
0700 - 0715	0	1	0	0	1	2	0	0	0	0	0	0	0	
0715 - 0730	0	0	0	0	0	6	0	0	0	0	0	0	0	
0730 - 0745	2	0	0	2	1	6	0	0	0	0	0	0	0	
0745 - 0800	0	0	0	0	1	6	0	0	0	0	0	0	0	
Hourly Total	2	1	0	3	3	20	0	0	0	0	0	0	0	
0800 - 0815	0	0	0	0	1	4	0	0	0	0	0	0	0	
0815 - 0830	0	0	0	0	1	4	0	0	0	0	0	0	0	
0830 - 0845	0	0	0	0	0	3	0	0	0	0	0	0	0	
0845 - 0900	0	2	0	2	1	7	0	0	0	0	0	0	0	
Hourly Total	0	2	0	2	3	18	0	0	0	0	0	0	0	
0900 - 0915	0	0	0	0	0	3	0	0	0	0	0	0	0	
0915 - 0930	0	1	0	0	1	4	0	0	0	0	0	0	0	
0930 - 0945	1	0	0	1	0	2	0	0	0	0	0	0	0	
0945 - 1000	0	0	0	0	0	2	0	0	0	0	0	0	0	
Hourly Total	1	1	0	2	1	10	0	0	0	0	0	0	0	
1000 - 1015	0	3	0	3	0	1	0	0	0	0	0	0	0	
1015 - 1030	0	2	0	2	2	4	0	0	0	0	0	0	0	
1030 - 1045	0	0	0	0	0	7	0	0	0	0	0	0	0	
1045 - 1100	0	0	0	0	0	1	4	0	0	0	0	0	0	
Hourly Total	0	5	0	5	3	16	0	0	0	0	0	0	0	
1100 - 1115	0	0	0	0	0	3	0	0	0	0	0	0	0	
1115 - 1130	0	0	0	0	0	4	0	0	0	0	0	0	0	
1130 - 1145	0	1	0	1	0	3	0	0	0	0	0	0	0	
1145 - 1200	1	0	0	1	1	4	0	0	0	0	0	0	0	
Hourly Total	1	1	0	2	1	14	0	0	0	0	0	0	0	
1200 - 1215	0	1	0	1	0	3	0	0	0	0	0	0	0	
1215 - 1230	0	0	0	0	0	7	0	0	0	0	0	0	0	
1230 - 1245	1	1	0	2	1	3	0	0	0	0	0	0	0	
1245 - 1300	1	0	0	1	0	1	0	0	0	0	0	0	0	
Hourly Total	3	2	0	5	1	14	0	0	0	0	0	0	0	
1300 - 1315	0	0	0	0	0	0	0	0	0	0	0	0	0	
1315 - 1330	1	0	0	1	0	6	0	0	0	0	0	0	0	
1330 - 1345	0	0	0	0	0	3	0	0	0	0	0	0	0	
1345 - 1400	1	0	0	1	0	2	0	0	0	0	0	0	0	
Hourly Total	2	0	0	2	0	9	0	0	0	0	0	0	0	
1400 - 1415	1	0	0	1	0	3	0	0	0	0	0	0	0	
1415 - 1430	1	1	0	2	0	3	0	0	0	0	0	0	0	
1430 - 1445	0	0	0	0	0	2	0	0	0	0	0	0	0	
1445 - 1500	0	0	0	0	0	4	0	0	0	0	0	0	0	
Hourly Total	3	1	0	4	0	12	0	0	0	0	0	0	0	
1500 - 1515	0	0	0	0	0	1	0	0	0	0	0	0	0	
1515 - 1530	0	0	0	0	1	6	0	0	0	0	0	0	0	
1530 - 1545	1	0	0	1	1	1	0	0	0	0	0	0	0	
1545 - 1600	0	0	0	0	0	3	0	0	0	0	0	0	0	
Hourly Total	1	0	0	1	2	11	0	0	0	0	0	0	0	
1600 - 1615	1	1	0	2	0	2	0	0	0	0	0	0	0	
1615 - 1630	1	1	0	2	0	2	0	0	0	0	0	0	0	
1630 - 1645	0	0	0	0	0	1	0	0	0	0	0	0	0	
1645 - 1700	0	0	0	0	0	2	0	0	0	0	0	0	0	
Hourly Total	2	2	0	4	0	7	0	0	0	0	0	0	0	
1700 - 1715	0	0	0	0	0	1	0	0	0	0	0	0	0	
1715 - 1730	0	0	0	0	0	1	0	0	0	0	0	0	0	
1730 - 1745	0	0	0	0	1	0	0	0	0	0	0	0	0	
1745 - 1800	0	0	0	0	0	2	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	2	4	0	0	0	0	0	0	0	
Grand Total	15	14	0	29	16	147	0	0	163	149	19	0	168	360
Approach %	51.72	48.28	0.00	9.82	60.16	0.00	0.00	45.28	41.39	5.28	0.00	0.00	46.67	
Intersection %	4.17	3.89	0.00	8.06	4.44	40.83	0.00	45.28	41.39	5.28	0.00	0.00	46.67	

0700 - 0900 (Internal session 1) (04-16-2025)
Single Unit Trucks (4-7)

TIME	Southbound				Eastbound				Westbound				Int Total	
	Birk Hollow Rd		U-Turn Total	App	TN-1 Harding Pike (West)		U-Turn Total	App	TN-1 Harding Pike (East)		U-Turn Total	App		
	Left 2.1	Right 2.2			Left 2.4	Thru 2.5			Thru 2.7	Right 2.8				Thru 2.9
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0	
0715 - 0730	0	0	0	0	0	6	0	0	0	0	0	0	0	
0730 - 0745	2	0	0	2	1	6	0	0	0	0	0	0	0	
0745 - 0800	0	0	0	0	1	6	0	0	0	0	0	0	0	
Hourly Total	2	1	0	3	3	20	0	0	0	0	0	0	0	
0800 - 0815	0	0	0	0	1	4	0	0	0	0	0	0	0	
0815 - 0830	0	0	0	0	1	4	0	0	0	0	0	0	0	
0830 - 0845	0	0	0	0	0	3	0	0	0	0	0	0	0	
0845 - 0900	0	2	0	2	1	7	0	0	0	0	0	0	0	
Hourly Total	0	2	0	2	3	18	0	0	0	0	0	0	0	
Grand Total	2	3	0	5	6	38	0	0	44	29	3	0	32	81
Approach %	40.00	60.00	0.00	13.64	36.36	0.00	0.00	54.32	35.80	3.70	0.00	0.00	39.51	
Intersection %	2.47	3.70	0.00	6.17	7.41	46.91	0.00	54.32	35.80	3.70	0.00	0.00	39.51	

1600 - 1800 (Internal session 2) (04-16-2025)
Single Unit Trucks (4-7)

TIME	Southbound				Eastbound				Westbound				Int Total	
	Birk Hollow Rd		U-Turn Total	App	TN-1 Harding Pike (West)		U-Turn Total	App	TN-1 Harding Pike (East)		U-Turn Total	App		
	Left 2.1	Right 2.2			Left 2.4	Thru 2.5			Thru 2.7	Right 2.8				Thru 2.9
1600 - 1615	1	1	0	2	0	2	0	0	0	3	1	0	4	8
1615 - 1630	1	1	0	2	0	2	0	0	0	6	0	0	6	10
1630 - 1645	0	0	0	0	0	1	0	0	0	3	0	0	3	4
1645 - 1700	0	0	0	0	0	2	0	0	0	2	1	0	3	5
Hourly Total	2	2	0	4	0	7	0	0	0	14	2	0	16	27
1700 - 1715	0	0	0	0	1	1	0	0	0	1	0	0	1	3
1715 - 1730	0	0	0	0	0	1	0	0	0	5	0	0	5	6
1730 - 1745	0	0	0	0	1	0	0	0	0	4	0	0	4	5
1745 - 1800	0	0	0	0	0	2	0	0	0	4	0	0	4	6
Hourly Total	0	0	0	0	2	4	0	0	0	14	0	0	14	20
Grand Total	2	2	0	4	2	11	0	0	13	28	2	0	30	47
Approach %	50.00	50.00	0.00	15.38	34.62	0.00	0.00	27.66	33.33	6.67	0.00	0.00	33.33	50.00
Intersection %	4.26	4.26	0.00	8.51	4.26	23.40	0.00	27.66	33.33	6.67	0.00	0.00	33.33	50.00

Classified Turn Movement Count | Combination Trucks (8-13)



Nashville, TN

Site 2

Birk Hollow Rd
TN-1 Harding Pike (West)
TN-1 Harding Pike (East)

Date
Wednesday, April 16, 2025

Lat/Long
36.094388°, -86.881740°
[Click here for Map](#)

Weather

Fair

58°F

[Click here for Detailed Weather](#)

0600 - 1800 (Weekday 12h Session) (04-16-2025)

Combination Trucks (8-13)

TIME	Southbound				Eastbound				Westbound				Int. Total
	Left	Right	U-Turn	App	Left	Thru	U-Turn	App	Thru	Right	U-Turn	App	
	2.1	2.2	2.3	Total	2.4	2.5	2.6	Total	2.7	2.8	2.9	Total	
0600-0615	0	0	0	0	0	0	0	0	0	0	0	0	0
0615-0630	0	0	0	0	0	0	0	0	0	0	0	0	0
0630-0645	0	0	0	0	0	0	0	0	0	0	0	0	0
0645-0700	0	0	0	0	0	0	1	0	2	0	0	0	3
Hourly Total	0	0	0	0	0	0	1	0	2	0	0	0	3
0700-0715	0	0	0	0	0	0	0	0	0	0	0	0	0
0715-0730	0	0	0	0	0	0	1	0	1	0	0	0	1
0730-0745	0	0	0	0	0	0	0	0	0	0	0	0	0
0745-0800	0	0	0	0	0	0	1	0	1	0	0	0	1
Hourly Total	0	0	0	0	0	0	1	0	2	0	0	0	2
0800-0815	0	0	0	0	0	0	0	0	0	1	0	0	1
0815-0830	0	0	0	0	0	0	0	0	0	0	0	0	0
0830-0845	0	0	0	0	0	0	1	0	1	0	0	0	1
0845-0900	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	1	0	1	0	0	0	1
0900-0915	0	0	0	0	0	0	0	0	0	2	0	0	2
0915-0930	0	0	0	0	0	0	0	0	0	1	0	0	1
0930-0945	0	0	0	0	0	0	0	0	0	1	3	0	4
0945-1000	0	0	0	0	0	0	0	0	0	1	0	0	1
Hourly Total	0	0	0	0	0	0	0	0	0	2	3	0	5
1000-1015	0	0	0	0	0	0	0	0	0	0	0	0	0
1015-1030	1	0	0	1	0	0	0	0	0	1	0	0	1
1030-1045	0	0	0	0	0	0	0	0	0	0	0	0	0
1045-1100	0	0	0	0	0	0	0	0	0	2	0	0	2
Hourly Total	1	0	0	1	0	0	0	0	0	3	0	0	3
1100-1115	0	0	0	0	0	0	0	0	0	2	0	0	2
1115-1130	0	0	0	0	0	0	0	0	0	0	0	0	0
1130-1145	0	0	0	0	0	0	1	0	1	0	0	0	1
1145-1200	0	2	0	2	0	0	0	0	0	1	0	0	1
Hourly Total	0	2	0	2	0	0	0	0	0	1	0	0	1
1200-1215	0	1	0	1	0	0	0	0	0	0	0	0	0
1215-1230	0	0	0	0	0	0	1	0	1	0	0	0	1
1230-1245	0	0	0	0	0	0	0	0	0	0	0	0	0
1245-1300	0	0	0	0	0	0	1	0	1	2	0	0	3
Hourly Total	0	0	0	0	0	0	1	0	2	2	0	0	4
1300-1315	0	0	0	0	0	0	1	0	1	1	0	0	2
1315-1330	0	0	0	0	0	1	0	0	1	0	1	0	2
1330-1345	0	1	0	1	0	0	0	0	0	2	0	0	2
1345-1400	0	1	0	1	0	0	0	0	0	0	0	0	0
Hourly Total	0	2	0	2	0	0	0	0	0	3	1	0	4
1400-1415	0	0	0	0	0	0	0	0	0	1	0	0	1
1415-1430	0	0	0	0	0	0	0	0	0	1	0	0	1
1430-1445	0	0	0	0	0	0	0	0	0	1	0	0	1
1445-1500	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	2	0	0	2
1500-1515	0	0	0	0	0	0	0	0	0	1	0	0	1
1515-1530	0	0	0	0	0	0	1	0	1	0	0	0	1
1530-1545	0	0	0	0	0	0	1	0	1	1	0	0	2
1545-1600	0	0	0	0	0	0	0	0	0	1	0	0	1
Hourly Total	0	0	0	0	0	0	2	0	2	3	0	0	5
1600-1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1615-1630	0	0	0	0	0	0	0	0	0	2	0	0	2
1630-1645	0	0	0	0	0	0	0	0	0	0	0	0	0
1645-1700	0	0	0	0	0	0	1	0	1	0	0	0	1
Hourly Total	0	0	0	0	0	0	1	0	1	2	0	0	3
1700-1715	0	0	0	0	0	0	0	0	0	1	0	0	1
1715-1730	0	0	0	0	0	0	0	0	0	0	0	0	0
1730-1745	0	0	0	0	0	0	0	0	0	1	0	0	1
1745-1800	0	0	0	0	0	0	0	0	0	1	0	0	1
Hourly Total	0	0	0	0	0	0	0	0	0	3	0	0	3
Grand Total	1	5	0	6	0	16	0	16	31	4	0	35	57
Approach %	16.67	83.33	0.00	100.00	0.00	100.00	0.00	100.00	88.27	11.73	0.00	100.00	100.00
Intersection %	1.75	8.77	0.00	10.33	0.00	28.07	0.00	28.07	54.39	7.02	0.00	61.40	61.40

0700 - 0900 (Internal session 1) (04-16-2025)

Combination Trucks (8-13)

TIME	Southbound				Eastbound				Westbound				Int. Total
	Left	Right	U-Turn	App	Left	Thru	U-Turn	App	Thru	Right	U-Turn	App	
	2.1	2.2	2.3	Total	2.4	2.5	2.6	Total	2.7	2.8	2.9	Total	
0700-0715	0	0	0	0	0	0	0	0	0	0	0	0	0
0715-0730	0	0	0	0	0	0	1	0	1	0	0	0	1
0730-0745	0	0	0	0	0	0	0	0	0	0	0	0	0
0745-0800	0	0	0	0	0	0	1	0	1	0	0	0	1
Hourly Total	0	0	0	0	0	0	1	0	1	0	0	0	1
0800-0815	0	0	0	0	0	0	0	0	0	1	0	0	1
0815-0830	0	0	0	0	0	0	0	0	0	0	0	0	0
0830-0845	0	0	0	0	0	0	1	0	1	0	0	0	1
0845-0900	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	1	0	1	0	0	0	1
Grand Total	0	0	0	0	0	0	3	0	3	1	0	0	4
Approach %	0.00	0.00	0.00	0.00	0.00	100.00	0.00	100.00	100.00	0.00	0.00	0.00	100.00
Intersection %	0.00	0.00	0.00	0.00	0.00	75.00	0.00	75.00	25.00	0.00	0.00	25.00	25.00

1600 - 1800 (Internal session 2) (04-16-2025)

Combination Trucks (8-13)

TIME	Southbound				Eastbound				Westbound				Int. Total
	Left	Right	U-Turn	App	Left	Thru	U-Turn	App	Thru	Right	U-Turn	App	
	2.1	2.2	2.3	Total	2.4	2.5	2.6	Total	2.7	2.8	2.9	Total	
1600-1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1615-1630	0	0	0	0	0	0	0	0	0	2	0	0	2
1630-1645	0	0	0	0	0	0	0	0	0	0	0	0	0
1645-1700	0	0	0	0	0	0	1	0	1	0	0	0	1
Hourly Total	0	0	0	0	0	0	1	0	1	2	0	0	3
1700-1715	0	0	0	0	0	0	2	0	2	1	0	0	3
1715-1730	0	0	0	0	0	0	0	0	0	0	0	0	0
1730-1745	0	0	0	0	0	0	0	0	0	1	0	0	1
1745-1800	0	0	0	0	0	0	0	0	0	1	0	0	1
Hourly Total	0	0	0	0	0	0	2	0	2	3	0	0	5
Grand Total	0	0	0	0	0	0	3	0	3	5	0	0	8
Approach %	0.00	0.00	0.00	0.00	0.00	100.00	0.00	100.00	100.00	0.00	0.00	0.00	100.00
Intersection %	0.00	0.00	0.00	0.00	0.00	37.50	0.00	37.50	62.50	0.00	0.00	62.50	62.50

Classified Turn Movement Count | Bicycles

Nashville, TN



www.marrtraffic.com

Site 2

Birk Hollow Rd
TN-1 Harding Pike (West)
TN-1 Harding Pike (East)

Date
Wednesday, April 16, 2025

Lat/Long
36.094388°, -86.881740°
[Click here for Map](#)

Weather

Fair

58°F

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0600 - 1800 (Weekday 12h Session) (04-16-2025)

Bicycles

TIME	Southbound Birk Hollow Rd				Eastbound TN-1 Harding Pike (West)				Westbound TN-1 Harding Pike (East)				Int Total
	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Left 2.4	Thru 2.5	U-Turn 2.6	App Total	Thru 2.7	Right 2.8	U-Turn 2.9	App Total	
0600 - 0615	0	0	0	0	0	0	0	0	0	0	0	0	0
0615 - 0630	0	0	0	0	0	0	0	0	0	0	0	0	0
0630 - 0645	0	0	0	0	0	0	0	0	0	0	0	0	0
0645 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	1	0	0	0	0	1
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	1	0	0	0	1	1
0900 - 0915	0	0	0	0	0	0	0	0	0	0	0	0	0
0915 - 0930	0	0	0	0	0	0	0	0	0	0	0	0	0
0930 - 0945	0	0	0	0	0	0	0	0	0	0	0	0	0
0945 - 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1000 - 1015	0	0	0	0	0	0	0	0	0	0	0	0	0
1015 - 1030	0	0	0	0	0	0	0	0	0	0	0	0	0
1030 - 1045	0	0	0	0	0	0	0	0	0	0	0	0	0
1045 - 1100	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1100 - 1115	0	0	0	0	0	0	0	0	0	0	0	0	0
1115 - 1130	0	0	0	0	0	0	0	0	0	0	0	0	0
1130 - 1145	0	0	0	0	0	0	0	0	0	0	0	0	0
1145 - 1200	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1200 - 1215	0	0	0	0	0	0	0	0	0	0	0	0	0
1215 - 1230	0	0	0	0	0	0	0	0	0	0	0	0	0
1230 - 1245	0	0	0	0	0	0	0	0	0	0	0	0	0
1245 - 1300	0	0	0	0	0	0	0	0	1	0	1	1	1
Hourly Total	0	0	0	0	0	0	0	1	0	1	2	2	2
1300 - 1315	0	0	0	0	0	0	0	0	0	0	0	0	0
1315 - 1330	0	0	0	0	0	0	0	1	1	0	2	2	2
1330 - 1345	0	0	0	0	0	0	0	0	0	0	0	0	0
1345 - 1400	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	1	1	0	2	2	2
1400 - 1415	0	0	0	0	0	0	0	0	0	0	0	0	0
1415 - 1430	0	0	0	0	0	0	0	0	0	0	0	0	0
1430 - 1445	0	0	0	0	0	0	0	0	0	0	0	0	0
1445 - 1500	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
1500 - 1515	0	0	0	0	0	0	0	0	0	0	0	0	0
1515 - 1530	0	0	0	0	0	0	0	0	0	0	0	0	0
1530 - 1545	0	0	0	0	0	0	0	1	0	0	1	1	1
1545 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	1	0	0	1	1	1
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	1	0	0	1	1	1
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	1	0	0	1	2	2
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	2	2	2	4	2	0	6	8
Approach %	0.00	0.00	0.00	0.00	0.00	100.00	0.00	66.67	33.33	0.00	0.00	0.00	0.00
Intersection %	0.00	0.00	0.00	0.00	0.00	25.00	0.00	25.00	50.00	25.00	0.00	75.00	0.00

0700 - 0900 (Internal session 1) (04-16-2025)

Bicycles

TIME	Southbound Birk Hollow Rd				Eastbound TN-1 Harding Pike (West)				Westbound TN-1 Harding Pike (East)				Int Total
	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Left 2.4	Thru 2.5	U-Turn 2.6	App Total	Thru 2.7	Right 2.8	U-Turn 2.9	App Total	
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	1	0	0	0	1	1
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	1	0	0	1	1	1
Grand Total	0	0	0	0	0	0	0	1	0	0	1	1	1
Approach %	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	100.00
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00

1600 - 1800 (Internal session 2) (04-16-2025)

Bicycles

TIME	Southbound Birk Hollow Rd				Eastbound TN-1 Harding Pike (West)				Westbound TN-1 Harding Pike (East)				Int Total
	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Left 2.4	Thru 2.5	U-Turn 2.6	App Total	Thru 2.7	Right 2.8	U-Turn 2.9	App Total	
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	1	0	0	1	1
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	1	1	0	1	2	2
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	1	1	1	0	1	2	2
Approach %	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00
Intersection %	0.00	0.00	0.00	0.00	0.00	50.00	0.00	50.00	50.00	0.00	0.00	50.00	0.00

Classified Turn Movement Count | All Trucks (4-13)



Nashville, TN

Site 2

Birk Hollow Rd
TN-1 Harding Pike (West)
TN-1 Harding Pike (East)

Date
Wednesday, April 16, 2025

Lat/Long
36.094388°, -86.881740°
[Click here for Map](#)

Weather

Fair

58°F

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0600 - 1800 (Weekday 12h Session) (04-16-2025)

All Trucks (4-13)

TIME	Southbound				Eastbound				Westbound				Int	Total		
	Birk Hollow Rd		TN-1 Harding Pike (West)		TN-1 Harding Pike (West)		TN-1 Harding Pike (East)		TN-1 Harding Pike (East)		App	Total			App	Total
	Left	Right	U-Turn	App	Left	Thru	U-Turn	App	Thru	Right						
2.1	2.2	2.3	Total	2.4	2.5	2.6	Total	2.7	2.8	2.9	Total	2.9	Total			
0600 - 0615	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0615 - 0630	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0630 - 0645	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0645 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0700 - 0715	0	1	0	1	1	2	0	3	4	0	4	0	4	8		
0715 - 0730	0	0	0	0	0	7	0	7	2	0	0	2	9	9		
0730 - 0745	2	0	0	2	1	6	0	7	3	0	0	3	12	12		
0745 - 0800	0	0	0	0	1	7	0	8	3	0	0	3	11	11		
Hourly Total	2	1	0	3	8	22	0	25	12	0	0	12	45	45		
0800 - 0815	0	0	0	0	1	4	0	5	8	1	0	9	14	14		
0815 - 0830	0	0	0	0	1	4	0	5	6	0	0	6	11	11		
0830 - 0845	0	0	0	0	0	4	0	4	5	1	0	6	7	7		
0845 - 0900	0	2	0	2	1	7	0	8	2	1	0	3	13	13		
Hourly Total	0	2	0	2	3	19	0	22	18	3	0	21	45	45		
0900 - 0915	0	0	0	0	0	3	0	3	5	1	0	6	9	9		
0915 - 0930	0	1	0	1	0	3	0	4	5	0	0	5	9	9		
0930 - 0945	1	0	0	1	0	2	0	2	5	3	0	8	11	11		
0945 - 1000	0	0	0	0	0	2	0	2	3	0	0	3	5	5		
Hourly Total	1	1	0	2	0	10	0	10	18	4	0	22	34	34		
1000 - 1015	0	3	0	3	0	1	0	1	5	1	0	6	7	7		
1015 - 1030	1	2	0	3	2	4	0	6	5	0	0	5	14	14		
1030 - 1045	0	0	0	0	0	7	0	7	3	2	0	5	12	12		
1045 - 1100	0	0	0	0	1	4	0	5	5	0	0	5	10	10		
Hourly Total	1	5	0	6	3	16	0	19	18	3	0	21	46	46		
1100 - 1115	0	0	0	0	0	3	0	3	6	0	0	6	9	9		
1115 - 1130	0	0	0	0	0	4	0	4	3	1	0	4	8	8		
1130 - 1145	0	1	0	1	0	4	0	4	4	1	0	5	10	10		
1145 - 1200	1	2	0	3	1	4	0	5	5	0	0	5	13	13		
Hourly Total	1	3	0	4	1	15	0	16	18	2	0	20	40	40		
1200 - 1215	1	1	0	2	0	3	0	3	3	1	0	4	9	9		
1215 - 1230	0	0	0	0	0	8	0	8	2	0	0	2	10	10		
1230 - 1245	1	1	0	2	1	3	0	4	3	0	0	3	9	9		
1245 - 1300	1	0	0	1	0	2	0	2	5	1	0	6	9	9		
Hourly Total	2	2	0	4	1	16	0	17	13	2	0	15	17	17		
1300 - 1315	0	0	0	0	0	1	0	1	2	2	0	4	5	5		
1315 - 1330	1	0	0	1	0	7	0	7	3	1	0	4	12	12		
1330 - 1345	0	1	0	1	0	1	0	1	6	0	0	6	8	8		
1345 - 1400	1	1	0	2	0	3	0	3	4	1	0	5	10	10		
Hourly Total	2	2	0	4	0	12	0	12	15	4	0	19	35	35		
1400 - 1415	1	0	0	1	0	3	0	3	2	0	0	2	6	6		
1415 - 1430	1	1	0	2	0	3	0	3	2	1	0	3	6	6		
1430 - 1445	0	0	0	0	0	2	0	2	3	0	0	3	5	5		
1445 - 1500	0	0	0	0	0	4	0	4	0	0	0	0	4	4		
Hourly Total	0	0	0	0	4	12	0	16	7	1	0	8	25	25		
1500 - 1515	0	0	0	0	0	1	0	1	2	0	0	2	3	3		
1515 - 1530	0	0	0	0	1	7	0	8	4	0	0	4	12	12		
1530 - 1545	1	0	0	1	1	2	0	3	8	0	0	8	12	12		
1545 - 1600	0	0	0	0	0	1	0	1	2	2	0	4	7	7		
Hourly Total	1	0	0	1	2	13	0	16	16	2	0	18	34	34		
1600 - 1615	1	1	0	2	0	2	0	2	3	1	0	4	8	8		
1615 - 1630	1	1	0	2	0	2	0	2	8	0	0	8	12	12		
1630 - 1645	0	0	0	0	0	1	0	1	3	0	0	3	4	4		
1645 - 1700	0	0	0	0	0	3	0	3	2	1	0	3	6	6		
Hourly Total	2	2	0	4	0	8	0	8	16	2	0	18	30	30		
1700 - 1715	0	0	0	0	0	1	0	1	2	0	0	2	3	3		
1715 - 1730	0	0	0	0	0	1	0	1	5	0	0	5	6	6		
1730 - 1745	0	0	0	0	1	0	0	1	5	0	0	5	6	6		
1745 - 1800	0	0	0	0	0	2	0	2	5	0	0	5	7	7		
Hourly Total	0	0	0	0	2	6	0	8	17	0	0	17	25	25		
Grand Total	16	19	0	35	16	163	0	179	180	23	0	203	417	417		
Approach %	45.71	54.29	0.00	8.84	91.06	0.00	88.67	11.33	0.00	0.00	0.00	0.00	48.68	48.68		
Intersection %	3.84	4.56	0.00	8.39	3.84	39.00	0.00	42.93	43.17	5.52	0.00	48.68	48.68	48.68		

0700 - 0900 (Internal session 1) (04-16-2025)

All Trucks (4-13)

TIME	Southbound				Eastbound				Westbound				Int	Total		
	Birk Hollow Rd		TN-1 Harding Pike (West)		TN-1 Harding Pike (West)		TN-1 Harding Pike (East)		TN-1 Harding Pike (East)		App	Total			App	Total
	Left	Right	U-Turn	App	Left	Thru	U-Turn	App	Thru	Right						
2.1	2.2	2.3	Total	2.4	2.5	2.6	Total	2.7	2.8	2.9	Total	2.9	Total			
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0715 - 0730	0	0	0	0	0	7	0	7	2	0	0	2	9	9		
0730 - 0745	2	0	0	2	1	6	0	7	3	0	0	3	12	12		
0745 - 0800	0	0	0	0	1	7	0	8	3	0	0	3	11	11		
Hourly Total	2	1	0	3	8	22	0	25	12	0	0	12	45	45		
0800 - 0815	0	0	0	0	1	4	0	5	8	1	0	9	14	14		
0815 - 0830	0	0	0	0	1	4	0	5	6	0	0	6	11	11		
0830 - 0845	0	0	0	0	0	4	0	4	5	1	0	6	7	7		
0845 - 0900	0	2	0	2	1	7	0	8	2	1	0	3	13	13		
Hourly Total	0	2	0	2	3	19	0	22	18	3	0	21	45	45		
Grand Total	2	3	0	5	6	41	0	47	30	3	0	33	85	85		
Approach %	40.00	60.00	0.00	12.77	87.23	0.00	90.91	9.09	0.00	0.00	0.00	0.00	38.82	38.82		
Intersection %	2.35	3.53	0.00	5.88	7.06	48.24	0.00	55.29	15.29	3.53	0.00	38.82	38.82	38.82		

1600 - 1800 (Internal session 2) (04-16-2025)

All Trucks (4-13)

TIME	Southbound				Eastbound				Westbound				Int	Total		
	Birk Hollow Rd		TN-1 Harding Pike (West)		TN-1 Harding Pike (West)		TN-1 Harding Pike (East)		TN-1 Harding Pike (East)		App	Total			App	Total
	Left	Right	U-Turn	App	Left	Thru	U-Turn	App	Thru	Right						
2.1	2.2	2.3	Total	2.4	2.5	2.6	Total	2.7	2.8	2.9	Total	2.9	Total			
1600 - 1615	1	1	0	2	0	2	0	2	0	2	0	0	4	8		
1615 - 1630	1	1	0	2	0	2	0	2	8	0	0	8	12	12		
1630 - 1645	0	0	0	0	0	7	0	7	3	0	0	3	4	4		
1645 - 1700	0	0	0	0	0	3	0	3	2	1	0	3	6	6		
Hourly Total	2	2	0	4	0	8	0	8	16	2	0	18	30	30		
1700 - 1715	0	0	0	0	1	3	0	4	2	0	0	2	6	6		
1715 - 1730	0	0	0	0	0	1	0	1	5	0	0	5	6	6		
1730 - 1745	0	0	0	0	1	0	0	1	5	0	0	5	6	6		
1745 - 1800	0	0	0	0	0	2	0	2	5	0	0	5	7	7		
Hourly Total	0	0	0	0	2	6	0	8	17	0	0	17	25	25		
Grand Total	2	2	0	4	2	14	0	16	33	2	0	35	55	55		
Approach %	50.00	50.00	0.00	12.50	87.50	0.00	94.29	5.71	0.00	0.00	0.00	63.64	63.64	63.64		
Intersection %	3.64	3.64	0.00	7.27	3.64	35.45	0.00	39.09	60.00	3.64	0.00	63.64	63.64	63.64		

Crosswalk Counts | Bicycles

Nashville, TN



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Site 2

Brk Holw Rd
TN-1 Harding Pike (West)
TN-1 Harding Pike (East)

Date

Wednesday, April 16, 2025

Weather

Fair
58°F

Lat/Long

36.094385, -86.881740
[Click here for Map](#)

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0600 - 1800 (Weekday 12h Session) (04-16-2025)
Bicycles

TIME	Southbound			Eastbound			Westbound			App Total	Int Total
	Brk Holw Rd			TN-1 Harding Pike (West)			TN-1 Harding Pike (East)				
	EB 2c	WB 2d	App Total	NB 2e	SB 2f	App Total	NB 2g	SB 2h	App Total		
0600 - 0615	0	0	0	0	0	0	0	0	0	0	0
0615 - 0630	0	0	0	0	0	0	0	0	0	0	0
0630 - 0645	0	0	0	0	0	0	0	0	0	0	0
0645 - 0700	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	0	0	0	0
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
0900 - 0915	0	0	0	0	0	0	0	0	0	0	0
0915 - 0930	0	0	0	0	0	0	0	0	0	0	0
0930 - 0945	0	0	0	0	0	0	0	0	0	0	0
0945 - 1000	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
1000 - 1015	0	0	0	0	0	0	0	0	0	0	0
1015 - 1030	0	0	0	0	0	0	0	0	0	0	0
1030 - 1045	0	0	0	0	0	0	0	0	0	0	0
1045 - 1100	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
1100 - 1115	0	0	0	0	0	0	0	0	0	0	0
1115 - 1130	0	0	0	0	0	0	0	0	0	0	0
1130 - 1145	0	0	0	0	0	0	0	0	0	0	0
1145 - 1200	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
1200 - 1215	0	0	0	0	0	0	0	0	0	0	0
1215 - 1230	0	0	0	0	0	0	0	0	0	0	0
1230 - 1245	0	0	0	0	0	0	0	0	0	0	0
1245 - 1300	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
1300 - 1315	0	0	0	0	0	0	0	0	0	0	0
1315 - 1330	0	0	0	0	0	0	0	0	0	0	0
1330 - 1345	0	0	0	0	0	0	0	0	0	0	0
1345 - 1400	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
1400 - 1415	0	0	0	0	0	0	0	0	0	0	0
1415 - 1430	0	0	0	0	0	0	0	0	0	0	0
1430 - 1445	0	0	0	0	0	0	0	0	0	0	0
1445 - 1500	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
1500 - 1515	0	0	0	0	0	0	0	0	0	0	0
1515 - 1530	0	0	0	0	0	0	0	0	0	0	0
1530 - 1545	0	0	0	0	0	0	0	0	0	0	0
1545 - 1600	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00		0.00	0.00		0.00	0.00		0.00	
Intersection %	0.00	0.00		0.00	0.00		0.00	0.00		0.00	

0700 - 0900 (Internal session 1) (04-16-2025)
Bicycles

TIME	Southbound			Eastbound			Westbound			App Total	Int Total
	Brk Holw Rd			TN-1 Harding Pike (West)			TN-1 Harding Pike (East)				
	EB 2c	WB 2d	App Total	NB 2e	SB 2f	App Total	NB 2g	SB 2h	App Total		
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	0	0	0	0
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00		0.00	0.00		0.00	0.00		0.00	
Intersection %	0.00	0.00		0.00	0.00		0.00	0.00		0.00	

1600 - 1800 (Internal session 2) (04-16-2025)
Bicycles

TIME	Southbound			Eastbound			Westbound			App Total	Int Total
	Brk Holw Rd			TN-1 Harding Pike (West)			TN-1 Harding Pike (East)				
	EB 2c	WB 2d	App Total	NB 2e	SB 2f	App Total	NB 2g	SB 2h	App Total		
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00		0.00	0.00		0.00	0.00		0.00	
Intersection %	0.00	0.00		0.00	0.00		0.00	0.00		0.00	

Crosswalk Counts | Motorized Vehicles

Nashville, TN



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Site 2

Brk Holw Rd
 TN-1 Harding Pike (West)
 TN-1 Harding Pike (East)

Date

Wednesday, April 16, 2025

Weather

Fair
 58°F

Lat/Long

36.094385° - 86.881740°
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0600 - 1800 (Weekday 12h Session) (04-16-2025)
 Motorized Vehicles

TIME	Southbound			Eastbound			Westbound			App Total	Int Total
	Brk Holw Rd			TN-1 Harding Pike (West)			TN-1 Harding Pike (East)				
	EB 2c	WB 2d	App Total	NB 2e	SB 2f	App Total	NB 2g	SB 2h	App Total		
0600 - 0615	0	0	0	0	0	0	0	0	0	0	0
0615 - 0630	0	0	0	0	0	0	0	0	0	0	0
0630 - 0645	0	0	0	0	0	0	0	0	0	0	0
0645 - 0700	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	0	0	0	0
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
0900 - 0915	0	0	0	0	0	0	0	0	0	0	0
0915 - 0930	0	0	0	0	0	0	0	0	0	0	0
0930 - 0945	0	0	0	0	0	0	0	0	0	0	0
0945 - 1000	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
1000 - 1015	0	0	0	0	0	0	0	0	0	0	0
1015 - 1030	0	0	0	0	0	0	0	0	0	0	0
1030 - 1045	0	0	0	0	0	0	0	0	0	0	0
1045 - 1100	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
1100 - 1115	0	0	0	0	0	0	0	0	0	0	0
1115 - 1130	0	0	0	0	0	0	0	0	0	0	0
1130 - 1145	0	0	0	0	0	0	0	0	0	0	0
1145 - 1200	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
1200 - 1215	0	0	0	0	0	0	0	0	0	0	0
1215 - 1230	0	0	0	0	0	0	0	0	0	0	0
1230 - 1245	0	0	0	0	0	0	0	0	0	0	0
1245 - 1300	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
1300 - 1315	0	0	0	0	0	0	0	0	0	0	0
1315 - 1330	0	0	0	0	0	0	0	0	0	0	0
1330 - 1345	0	0	0	0	0	0	0	0	0	0	0
1345 - 1400	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
1400 - 1415	0	0	0	0	0	0	0	0	0	0	0
1415 - 1430	0	0	0	0	0	0	0	0	0	0	0
1430 - 1445	0	0	0	0	0	0	0	0	0	0	0
1445 - 1500	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
1500 - 1515	0	0	0	0	0	0	0	0	0	0	0
1515 - 1530	0	0	0	0	0	0	0	0	0	0	0
1530 - 1545	0	0	0	0	0	0	0	0	0	0	0
1545 - 1600	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00		0.00	0.00		0.00	0.00		0.00	
Intersection %	0.00	0.00		0.00	0.00		0.00	0.00		0.00	

0700 - 0900 (Internal session 1) (04-16-2025)
 Motorized Vehicles

TIME	Southbound			Eastbound			Westbound			App Total	Int Total
	Brk Holw Rd			TN-1 Harding Pike (West)			TN-1 Harding Pike (East)				
	EB 2c	WB 2d	App Total	NB 2e	SB 2f	App Total	NB 2g	SB 2h	App Total		
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	0	0	0	0
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00		0.00	0.00		0.00	0.00		0.00	
Intersection %	0.00	0.00		0.00	0.00		0.00	0.00		0.00	

1600 - 1800 (Internal session 2) (04-16-2025)
 Motorized Vehicles

TIME	Southbound			Eastbound			Westbound			App Total	Int Total
	Brk Holw Rd			TN-1 Harding Pike (West)			TN-1 Harding Pike (East)				
	EB 2c	WB 2d	App Total	NB 2e	SB 2f	App Total	NB 2g	SB 2h	App Total		
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00		0.00	0.00		0.00	0.00		0.00	
Intersection %	0.00	0.00		0.00	0.00		0.00	0.00		0.00	

Peak Hour Turning Movement Count

Nashville, TN



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Wednesday, April 16, 2025		
	Fair	58°F
Period	0600 - 1800	APPLY
Peak Hour	1700 - 1800	APPLY
Global PH	1700 - 1800	APPLY

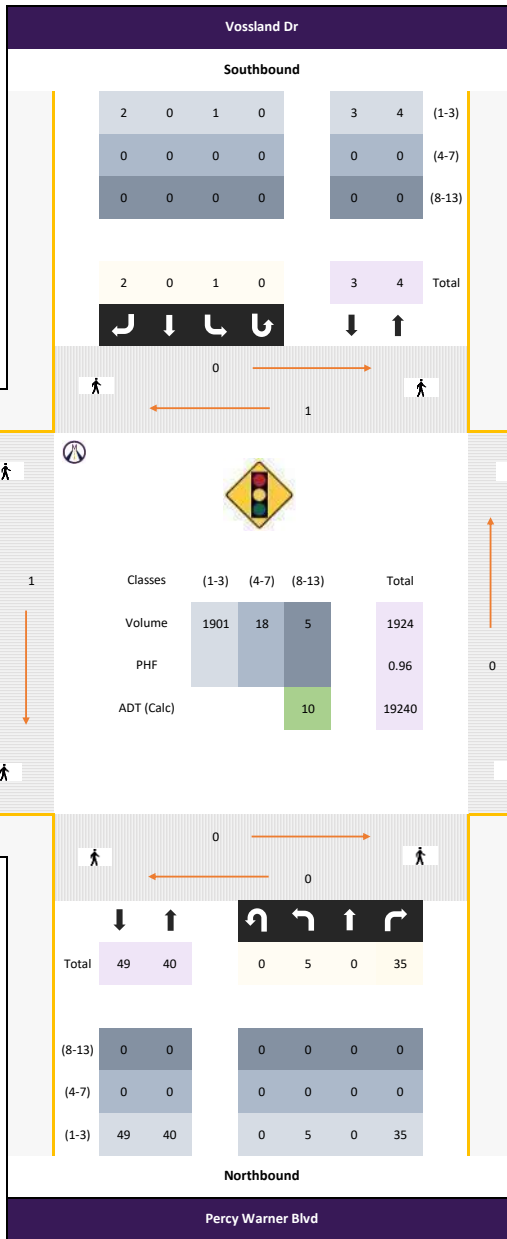
* the Peak Hour Diagram does not include bicycles

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



Eastbound

(1-3)	(4-7)	(8-13)	Total
1267	14	3	1284
549	4	2	555
0	0	0	0
2	0	0	2
545	4	2	551
2	0	0	2

TN-1 Harding Pike (West)

Westbound

(8-13)	(4-7)	(1-3)
3	14	1260
0	0	47
0	0	0
1326	587	Total

TN-1 Harding Pike (East)

Classes	(1-3)	(4-7)	(8-13)	Total
Volume	1901	18	5	1924
PHF				0.96
ADT (Calc)			10	19240

All vehicles

Time	Northbound						Southbound						Eastbound						Westbound						Int Total
	Percy Warner Blvd						Vossland Dr						TN-1 Harding Pike (West)						TN-1 Harding Pike (East)						
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total		Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total		Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total		Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total		
1700 - 1715	1	0	10	-	0	11	1	0	0	-	0	1	0	137	1	-	0	138	16	307	0	-	0	323	473
1715 - 1730	1	0	12	-	0	13	0	0	1	-	0	1	1	136	0	-	0	137	9	341	1	-	0	351	502
1730 - 1745	1	0	8	-	0	9	0	0	0	-	0	0	0	137	0	-	0	137	14	320	0	-	0	334	480
1745 - 1800	2	0	6	-	0	8	0	0	1	-	0	1	1	141	1	-	0	143	8	310	1	-	0	319	471
Total	5	0	36	0	0	41	1	0	2	0	0	3	2	551	2	0	0	555	47	1278	2	0	0	1327	1926
Approach %	12.20	0.00	87.80	0.00	0.00	-	33.33	0.00	66.67	0.00	0.00	-	0.36	99.28	0.36	0.00	0.00	-	3.54	96.31	0.15	0.00	0.00	-	-
PHF	0.63	0.00	0.75	0.00	0.00	0.79	0.25	0.00	0.50	0.00	0.00	0.75	0.50	0.98	0.50	0.00	0.00	0.97	0.73	0.94	0.50	0.00	0.00	0.95	0.96

Passenger Vehicles (1-3)

Time	Northbound						Southbound						Eastbound						Westbound						Int Total
	Percy Warner Blvd						Vossland Dr						TN-1 Harding Pike (West)						TN-1 Harding Pike (East)						
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total		Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total		Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total		Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total		
1700 - 1715	1	0	10	-	0	11	1	0	0	-	0	1	0	134	1	-	0	135	16	305	0	-	0	321	468
1715 - 1730	1	0	12	-	0	13	0	0	1	-	0	1	1	135	0	-	0	136	9	336	1	-	0	346	496
1730 - 1745	1	0	7	-	0	8	0	0	0	-	0	0	0	137	0	-	0	137	14	315	0	-	0	329	474
1745 - 1800	2	0	6	-	0	8	0	0	1	-	0	1	1	139	1	-	0	141	8	304	1	-	0	313	463
Total	5	0	35	0	0	40	1	0	2	0	0	3	2	545	2	0	0	549	47	1260	2	0	0	1309	1901
Approach %	12.50	0.00	87.50	0.00	0.00	-	33.33	0.00	66.67	0.00	0.00	-	0.36	99.27	0.36	0.00	0.00	-	3.59	96.26	0.15	0.00	0.00	-	-
PHF	0.63	0.00	0.73	0.00	0.00	0.77	0.25	0.00	0.50	0.00	0.00	0.75	0.50	0.98	0.50	0.00	0.00	0.97	0.73	0.94	0.50	0.00	0.00	0.95	0.96

Single Unit Trucks (4-7)

Time	Northbound						Southbound						Eastbound						Westbound						Int Total
	Percy Warner Blvd						Vossland Dr						TN-1 Harding Pike (West)						TN-1 Harding Pike (East)						
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total		Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total		Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total		Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total		
1700 - 1715	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	0	1	0	1	0	-	0	1	2
1715 - 1730	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	0	1	0	5	0	-	0	5	6
1730 - 1745	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	4	0	-	0	4	4
1745 - 1800	0	0	0	-	0	0	0	0	0	-	0	0	0	2	0	-	0	2	0	4	0	-	0	4	6
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	14	0	0	0	14	18
Approach %	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	0.00	-	-
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.50	0.00	0.70	0.00	0.00	0.00	0.70	0.75

Combination Trucks (8-13)

Time	Northbound						Southbound						Eastbound						Westbound						Int Total
	Percy Warner Blvd						Vossland Dr						TN-1 Harding Pike (West)						TN-1 Harding Pike (East)						
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total		Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total		Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total		Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total		
1700 - 1715	0	0	0	-	0	0	0	0	0	-	0	0	0	2	0	-	0	2	0	1	0	-	0	1	3
1715 - 1730	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0
1730 - 1745	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	0	1	1
1745 - 1800	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	3	0	0	0	3	5
Approach %	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	0.00	-	-
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.25	0.00	0.75	0.00	0.00	0.00	0.75	0.42

Bicycles

Time	Northbound						Southbound						Eastbound						Westbound						Int Total
	Percy Warner Blvd						Vossland Dr						TN-1 Harding Pike (West)						TN-1 Harding Pike (East)						
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total		Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total		Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total		Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total		
1700 - 1715	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0
1715 - 1730	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0
1730 - 1745	0	0	1	-	0	1	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1
1745 - 1800	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	0	1	1
Total	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2
Approach %	0.00	0.00	100.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	0.00	-	-
PHF	0.00	0.00	0.25	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.25	0.50

Peak Hour Turning Movement Count

Nashville, TN



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Wednesday, April 16, 2025		
	Fair	58°F
Period	0700 - 0900	APPLY
Peak Hour	0715 - 0815	APPLY
Global PH		APPLY

* the Peak Hour Diagram does not include bicycles

Session Parameters

(Drop Down Menu)

Peak Hour

Volume

Vossland Dr

Southbound

1	0	2	0	3	1	(1-3)
0	0	0	0	0	0	(4-7)
0	0	0	0	0	0	(8-13)
1	0	2	0	3	1	Total

0 0

← →

Classes

	(1-3)	(4-7)	(8-13)	Total
Volume	1572	43	4	1619
PHF				0.86
ADT (Calc)			10	16190

Northbound

Total	20	73	0	8	0	65
(8-13)	0	1	0	0	0	1
(4-7)	2	3	0	1	0	2
(1-3)	18	69	0	7	0	62

Percy Warner Blvd

TN-1 Harding Pike (West)

Eastbound

(1-3)	(4-7)	(8-13)	Total
412	16	1	429
1082	24	2	1108
0	0	0	0
0	0	0	0
1077	23	2	1102
5	1	0	6

TN-1 Harding Pike (East)

Westbound

(1-3)	(4-7)	(8-13)	Total
1	420	14	435
0	0	0	0
1	15	404	420
0	1	13	14
0	0	0	0
1	16	418	435
3	25	1141	1169

Peak Hour Turning Movement Count

Nashville, TN



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Wednesday, April 16, 2025		
	Fair	58°F
Period	1600 - 1800	APPLY
Peak Hour	1700 - 1800	APPLY
Global PH		APPLY

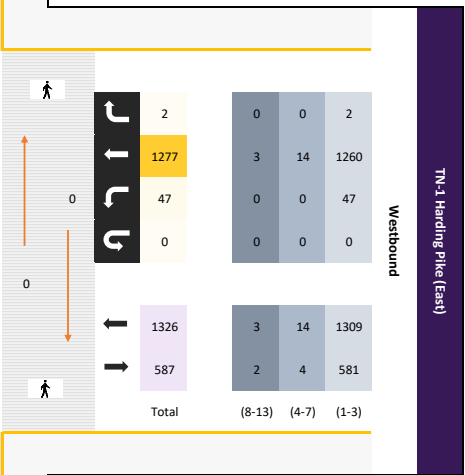
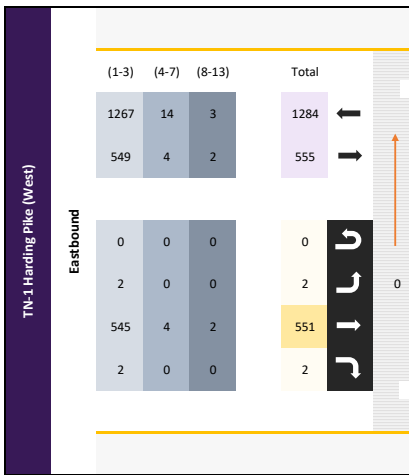
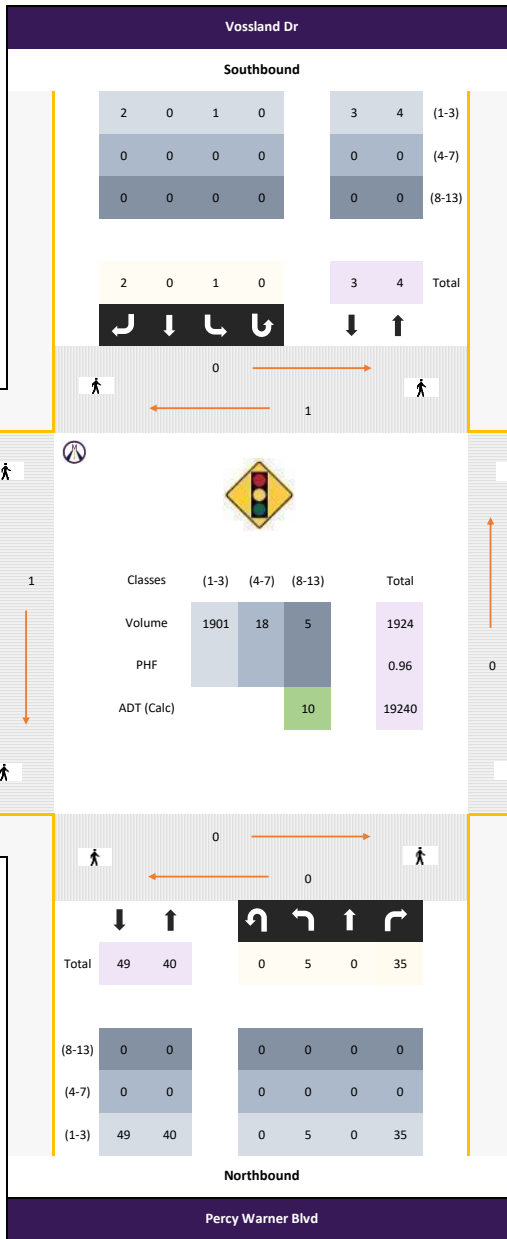
* the Peak Hour Diagram does not include bicycles

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



Classes	(1-3)	(4-7)	(8-13)	Total
Volume	1901	18	5	1924
PHF				0.96
ADT (Calc)			10	19240

All vehicles

Time	Northbound						Southbound						Eastbound						Westbound						Int Total
	Percy Warner Blvd						Vossland Dr						TN-1 Harding Pike (West)						TN-1 Harding Pike (East)						
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total		Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total		Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total		Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total		
1700 - 1715	1	0	10	-	0	11	1	0	0	-	0	1	0	137	1	-	0	138	16	307	0	-	0	323	473
1715 - 1730	1	0	12	-	0	13	0	0	1	-	0	1	1	136	0	-	0	137	9	341	1	-	0	351	502
1730 - 1745	1	0	8	-	0	9	0	0	0	-	0	0	0	137	0	-	0	137	14	320	0	-	0	334	480
1745 - 1800	2	0	6	-	0	8	0	0	1	-	0	1	1	141	1	-	0	143	8	310	1	-	0	319	471
Total	5	0	36	0	0	41	1	0	2	0	3	2	551	2	0	0	555	47	1278	2	0	0	1327	1926	
Approach %	12.20	0.00	87.80	0.00	0.00	-	33.33	0.00	66.67	0.00	0.00	-	0.36	99.28	0.36	0.00	0.00	-	3.54	96.31	0.15	0.00	0.00	-	-
PHF	0.63	0.00	0.75	0.00	0.00	0.79	0.25	0.00	0.50	0.00	0.75	0.50	0.98	0.50	0.00	0.00	0.97	0.73	0.94	0.50	0.00	0.00	0.95	0.96	

Passenger Vehicles (1-3)

Time	Northbound						Southbound						Eastbound						Westbound						Int Total
	Percy Warner Blvd						Vossland Dr						TN-1 Harding Pike (West)						TN-1 Harding Pike (East)						
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total		Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total		Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total		Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total		
1700 - 1715	1	0	10	-	0	11	1	0	0	-	0	1	0	134	1	-	0	135	16	305	0	-	0	321	468
1715 - 1730	1	0	12	-	0	13	0	0	1	-	0	1	1	135	0	-	0	136	9	336	1	-	0	346	496
1730 - 1745	1	0	7	-	0	8	0	0	0	-	0	0	0	137	0	-	0	137	14	315	0	-	0	329	474
1745 - 1800	2	0	6	-	0	8	0	0	1	-	0	1	1	139	1	-	0	141	8	304	1	-	0	313	463
Total	5	0	35	0	0	40	1	0	2	0	3	2	545	2	0	0	549	47	1260	2	0	0	1309	1901	
Approach %	12.50	0.00	87.50	0.00	0.00	-	33.33	0.00	66.67	0.00	0.00	-	0.36	99.27	0.36	0.00	0.00	-	3.59	96.26	0.15	0.00	0.00	-	-
PHF	0.63	0.00	0.73	0.00	0.00	0.77	0.25	0.00	0.50	0.00	0.75	0.50	0.98	0.50	0.00	0.00	0.97	0.73	0.94	0.50	0.00	0.00	0.95	0.96	

Single Unit Trucks (4-7)

Time	Northbound						Southbound						Eastbound						Westbound						Int Total
	Percy Warner Blvd						Vossland Dr						TN-1 Harding Pike (West)						TN-1 Harding Pike (East)						
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total		Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total		Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total		Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total		
1700 - 1715	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	0	1	0	1	0	-	0	1	2
1715 - 1730	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	0	1	0	5	0	-	0	5	6
1730 - 1745	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	4	0	-	0	4	4
1745 - 1800	0	0	0	-	0	0	0	0	0	-	0	0	0	2	0	-	0	2	0	4	0	-	0	4	6
Total	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	14	0	0	0	14	18	
Approach %	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	0.00	-	-
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.50	0.00	0.70	0.00	0.00	0.00	0.70	0.75	

Combination Trucks (8-13)

Time	Northbound						Southbound						Eastbound						Westbound						Int Total
	Percy Warner Blvd						Vossland Dr						TN-1 Harding Pike (West)						TN-1 Harding Pike (East)						
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total		Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total		Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total		Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total		
1700 - 1715	0	0	0	-	0	0	0	0	0	-	0	0	0	2	0	-	0	2	0	1	0	-	0	1	3
1715 - 1730	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0
1730 - 1745	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	0	1	1
1745 - 1800	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	3	0	0	0	3	5	
Approach %	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	0.00	-	-
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.25	0.00	0.75	0.00	0.00	0.00	0.75	0.42	

Bicycles

Time	Northbound						Southbound						Eastbound						Westbound						Int Total
	Percy Warner Blvd						Vossland Dr						TN-1 Harding Pike (West)						TN-1 Harding Pike (East)						
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total		Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total		Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total		Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total		
1700 - 1715	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0
1715 - 1730	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0
1730 - 1745	0	0	1	-	0	1	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1
1745 - 1800	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	0	1	1
Total	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	
Approach %	0.00	0.00	100.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	0.00	-	-
PHF	0.00	0.00	0.25	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.25	0.50	

Classified Turn Movement Count | All Vehicles



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Nashville, TN

Site 3

Percy Warner Blvd
Vossland Dr
TN-1 Harding Pike (West)
TN-1 Harding Pike (East)

Date

Wednesday, April 16, 2025

Weather

Fair

58°F

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Lat/Long

36.096377, -86.877646°

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0600 - 1800 (Weekday 12h Session) (04-16-2025)

All Vehicles

TIME	Northbound			Southbound			Eastbound					Westbound						
	Percy Warner Blvd			Vossland Dr			TN-1 Harding Pike (West)					TN-1 Harding Pike (East)						
	Left	Thru	Right	U-Turn	App	Total	Left	Thru	Right	U-Turn	App	Total	Left	Thru	Right	U-Turn	App	Total
0600 - 0615	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
0615 - 0630	0	0	2	0	2	0	0	1	0	0	1	0	0	0	0	0	0	0
0630 - 0645	0	0	3	0	3	0	0	1	0	0	0	0	0	0	0	0	0	0
0645 - 0700	3	0	13	0	16	0	0	0	0	0	0	0	0	194	2	0	47	259
Hourly Total	3	0	23	0	26	0	0	2	0	0	1	0	0	617	3	0	140	785
0700 - 0715	0	0	21	0	21	0	0	2	0	0	250	2	0	253	6	0	45	326
0715 - 0730	0	0	16	0	16	0	0	0	0	0	259	0	0	259	3	0	85	363
0730 - 0745	4	0	21	0	25	0	0	0	0	0	257	3	0	260	2	0	126	413
0745 - 0800	2	0	23	0	25	0	0	0	0	0	322	1	0	323	3	0	119	470
Hourly Total	6	0	81	0	87	0	0	2	0	0	1088	6	0	1094	14	0	376	1572
0800 - 0815	2	0	5	0	7	0	0	3	0	0	365	2	0	267	6	0	90	374
0815 - 0830	2	0	7	0	9	0	0	1	0	0	244	0	0	245	2	0	84	341
0830 - 0845	0	0	8	0	8	0	0	0	0	0	221	3	0	224	2	0	85	318
0845 - 0900	2	0	3	0	5	0	0	0	0	0	240	0	0	240	6	0	106	352
Hourly Total	6	0	23	0	29	0	0	4	0	0	970	5	0	976	16	0	365	1392
0900 - 0915	0	0	6	0	6	0	0	2	1	0	178	1	0	180	5	0	113	306
0915 - 0930	1	0	6	0	7	0	0	0	0	0	138	0	0	139	5	0	87	230
0930 - 0945	0	0	8	0	8	0	0	0	0	0	150	1	0	151	5	0	114	279
0945 - 1000	0	0	10	0	10	0	0	1	1	0	164	1	0	166	5	0	130	314
Hourly Total	0	0	39	0	31	0	0	4	2	0	690	3	0	696	20	0	147	1198
1000 - 1015	0	0	4	0	4	0	0	4	1	0	144	0	0	145	3	0	105	259
1015 - 1030	0	0	4	0	4	0	0	1	0	0	126	2	0	128	2	0	121	258
1030 - 1045	0	0	6	0	6	0	0	1	1	0	158	0	0	159	7	0	119	292
1045 - 1100	1	0	6	0	7	0	0	1	0	0	142	0	0	143	7	0	120	276
Hourly Total	1	0	20	0	21	0	0	5	2	0	570	2	0	574	19	0	465	1088
1100 - 1115	0	0	9	0	9	0	0	1	1	0	148	0	0	149	5	0	127	291
1115 - 1130	2	0	9	0	11	0	0	1	0	0	130	2	0	132	7	0	120	271
1130 - 1145	0	0	8	0	8	0	0	0	0	0	134	1	0	135	7	0	120	270
1145 - 1200	3	0	2	0	5	0	0	2	1	0	136	0	0	137	6	0	127	271
Hourly Total	5	0	28	0	33	0	0	4	2	0	548	3	0	553	25	0	494	1110
1200 - 1215	0	0	4	0	4	0	0	0	0	0	142	1	0	143	5	0	132	283
1215 - 1230	0	0	8	0	8	0	0	0	0	0	134	3	0	137	3	0	182	330
1230 - 1245	2	0	10	0	12	0	0	1	0	0	131	2	0	133	6	0	142	295
1245 - 1300	0	0	8	0	8	0	0	3	1	0	142	1	0	144	7	0	140	302
Hourly Total	2	0	30	0	32	0	0	4	2	0	569	7	0	572	23	0	506	1212
1300 - 1315	2	0	0	0	2	0	0	1	2	0	133	4	0	139	5	0	136	300
1315 - 1330	0	0	5	0	5	0	0	3	1	0	153	0	0	154	7	0	147	316
1330 - 1345	4	0	8	0	12	0	0	1	0	0	133	2	0	135	3	0	162	321
1345 - 1400	1	0	8	0	9	0	0	1	1	0	112	2	0	115	8	0	161	296
Hourly Total	7	0	21	0	28	0	0	8	4	0	531	8	0	543	29	0	606	1217
1400 - 1415	1	0	8	0	9	0	0	0	0	0	145	0	0	145	7	0	188	349
1415 - 1430	1	1	6	0	3	0	0	0	1	0	128	7	0	131	4	0	181	311
1430 - 1445	2	1	5	0	8	1	0	1	0	0	144	2	0	146	7	0	184	329
1445 - 1500	0	0	4	0	4	0	0	0	0	0	156	2	0	158	13	0	203	379
Hourly Total	6	2	29	0	31	1	0	2	1	0	578	6	0	580	34	0	757	1407
1500 - 1515	1	0	10	0	11	0	0	0	0	0	168	0	0	170	6	0	227	414
1515 - 1530	0	0	5	0	5	0	0	0	0	0	187	1	0	188	15	0	218	426
1530 - 1545	1	0	7	0	8	0	0	0	0	0	139	0	0	139	10	0	262	420
1545 - 1600	2	0	4	0	6	0	0	0	1	0	221	0	0	223	11	0	260	493
Hourly Total	4	0	26	0	30	1	0	4	2	0	615	1	0	618	42	0	967	1662
1600 - 1615	0	0	9	0	9	0	0	4	1	0	121	1	0	123	8	0	263	407
1615 - 1630	5	0	5	0	10	0	0	2	2	0	168	2	0	172	13	0	269	465
1630 - 1645	0	0	7	0	7	0	0	0	0	0	133	2	0	135	11	0	276	421
1645 - 1700	3	0	10	0	13	1	0	4	0	0	140	2	0	142	12	0	275	446
Hourly Total	8	0	31	0	39	2	0	8	3	0	552	7	0	562	44	0	1083	1738
1700 - 1715	1	0	10	0	11	0	0	1	0	0	137	1	0	138	16	0	307	473
1715 - 1730	1	0	12	0	13	0	0	1	1	0	136	0	0	137	9	0	341	471
1730 - 1745	1	0	8	0	9	0	0	0	0	0	137	0	0	137	14	0	320	480
1745 - 1800	2	0	6	0	8	0	0	1	1	0	141	1	0	143	8	0	310	471
Hourly Total	5	0	36	0	41	1	0	3	2	0	551	2	0	555	47	0	1278	1926
Grand Total	54	2	372	0	428	15	0	50	20	0	7794	50	0	7885	314	0	7567	12317
Approach %	12.62	0.47	85.93	0.00	20.00	6.00	0.00	0.25	69.10	0.64	0.01	3.97	0.01	3.97	95.74	0.29	0.00	0.00
Intersection %	0.33	0.01	2.29	0.00	2.63	0.09	0.00	0.31	0.12	47.97	0.31	0.01	0.48	1.93	46.57	0.14	0.00	48.05
Heavy Vehicle %	9	0	3	4	0	0	10	10	2	16	0	2	3	3	3	4	2	3
PHF	0.63	0.00	0.75	0.00	0.79	0.25	0.00	0.25	0.50	0.98	0.50	0.00	0.97	0.73	0.94	0.50	0.00	0.95
Peak Hour Total	5	0	36	0	41	1	0	3	2	0	551	2	0	555	47	0	1278	1926
Peak Hour HV %	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0

0700 - 0900 (Internal session 1) (04-16-2025)

All Vehicles

TIME	Northbound			Southbound			Eastbound					Westbound						
	Percy Warner Blvd			Vossland Dr			TN-1 Harding Pike (West)					TN-1 Harding Pike (East)						
	Left	Thru	Right	U-Turn	App	Total	Left	Thru	Right	U-Turn	App	Total	Left	Thru	Right	U-Turn	App	Total
0700 - 0715	0	0	21	0	21	0	0	0	0	0	250	2	0	253	6	0	0	0
0715 - 0730	0	0	16	0	16	0	0	0	0	0	259	0	0	259	3	0	0	0
0730 - 0745	4	0	21	0	25	0	0	0	0	0	257	3	0	260	2	0	0	0
0745 - 0800	2	0	23	0	25	0	0	0	0	0	322	1	0	323	3	0	0	0
Hourly Total	6	0	81	0	87	0	0	2	0	0	1088	6	0	1094	14	0	0	0
0800 - 0815	2	0	5	0	7	0	0	3	0	0	365	2	0	267	6	0	0	0
0815 - 0830	2	0	7	0	9	0	0	1	0	0	244	0	0	245	2	0	0	0
0830 - 0845	0	0	8	0	8	0	0	0	0	0	221	3	0					

Classified Turn Movement Count || Passenger Vehicles (1-3)



Nashville, TN

Site 3
Percy Warner Blvd
Vossland Dr
TN-1 Harding Pike (East)
TN-1 Harding Pike (West)

Date
Wednesday, April 16, 2025
Lat/Long
36.096377, -86.877646
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Weather
Fair
58°F
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0600 - 1800 (Weekday 12h Session) (04-16-2025)
Passenger Vehicles (1-3)

TIME	Northbound Percy Warner Blvd			Southbound Vossland Dr			Eastbound TN-1 Harding Pike (West)				Westbound TN-1 Harding Pike (East)				Int Total					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12		App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16
0600-0615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0615-0630	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0630-0645	0	0	3	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0645-0700	1	0	12	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	1	0	22	0	23	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700-0715	0	0	21	0	21	0	0	2	0	2	0	248	2	0	250	4	41	0	0	0
0715-0730	0	0	16	0	16	0	0	0	0	0	0	252	0	0	252	3	83	0	0	0
0730-0745	3	0	19	0	22	0	0	0	0	0	0	250	2	0	252	2	124	0	0	0
0745-0800	2	0	22	0	24	0	0	0	0	0	0	315	1	0	316	2	116	0	0	0
Hourly Total	5	0	78	0	83	0	0	2	0	2	0	3065	5	0	1070	13	366	0	0	0
0800-0815	2	0	5	0	7	2	0	1	0	3	0	260	2	0	262	6	81	1	0	0
0815-0830	2	0	7	0	9	1	0	0	0	1	1	240	0	0	241	2	78	0	0	0
0830-0845	0	0	8	0	8	0	0	0	0	0	0	218	2	0	220	2	82	0	0	0
0845-0900	1	0	3	0	4	0	0	0	0	0	0	233	0	0	233	6	104	1	0	0
Hourly Total	5	0	23	0	28	3	0	1	0	4	1	951	4	0	956	16	345	2	0	0
0900-0915	0	0	6	0	6	0	0	1	0	1	0	176	1	0	177	5	108	0	0	0
0915-0930	1	0	6	0	7	0	0	1	0	1	0	135	0	0	136	6	82	0	0	0
0930-0945	0	0	8	0	8	0	0	0	0	0	0	148	0	0	148	5	106	1	0	0
0945-1000	0	0	10	0	10	0	0	1	0	1	0	163	1	0	164	5	127	2	0	0
Hourly Total	1	0	39	0	40	0	0	3	0	3	0	624	2	0	625	20	423	3	0	0
1000-1015	0	0	4	0	4	1	0	0	0	1	1	143	0	0	144	3	99	1	0	0
1015-1030	0	0	4	0	4	0	0	1	0	1	0	122	1	0	123	2	116	2	0	0
1030-1045	0	0	6	0	6	0	0	1	0	1	1	151	0	0	152	6	114	0	0	0
1045-1100	1	0	4	0	5	1	0	1	0	2	0	138	0	0	138	6	115	1	0	0
Hourly Total	1	0	18	0	19	2	0	3	0	5	2	554	1	0	557	17	444	4	0	0
1100-1115	0	0	8	0	8	1	0	0	0	1	1	145	0	0	146	4	121	0	0	0
1115-1130	2	0	9	0	11	0	0	1	0	1	0	126	2	0	128	4	116	0	0	0
1130-1145	0	0	7	0	7	0	0	0	0	0	0	130	1	0	131	7	115	0	0	0
1145-1200	3	0	2	0	5	0	0	2	0	2	1	131	0	0	132	6	122	1	0	0
Hourly Total	5	0	26	0	31	1	0	3	0	4	2	532	3	0	537	23	474	1	0	0
1200-1215	0	0	4	0	4	0	0	0	0	0	0	138	1	0	139	5	128	1	0	0
1215-1230	0	0	6	0	6	0	0	0	0	0	0	126	3	0	129	3	180	0	0	0
1230-1245	2	0	9	0	11	0	0	1	0	1	0	128	1	0	129	6	139	1	0	0
1245-1300	0	0	8	0	8	0	0	2	0	2	1	139	1	0	141	7	134	0	0	0
Hourly Total	2	0	27	0	29	0	0	3	0	3	2	531	6	0	534	23	581	2	0	0
1300-1315	2	0	0	0	2	0	0	1	0	1	2	132	3	0	137	5	132	0	0	0
1315-1330	0	0	5	0	5	2	1	0	0	3	1	146	0	0	147	7	141	0	0	0
1330-1345	4	0	8	0	12	1	0	0	0	1	0	133	2	0	134	9	156	2	0	0
1345-1400	1	0	8	0	9	0	0	3	0	8	1	108	2	0	111	8	156	0	0	0
Hourly Total	7	0	21	0	28	3	1	4	0	8	4	518	7	0	529	29	585	2	0	0
1400-1415	1	0	7	0	8	0	0	0	0	0	0	141	0	0	141	7	186	0	0	0
1415-1430	1	0	6	0	7	0	0	0	0	0	0	123	7	0	126	6	152	0	0	0
1430-1445	2	0	5	0	7	1	0	0	0	1	0	142	1	0	143	7	181	2	0	0
1445-1500	0	0	4	0	4	0	0	0	0	0	0	152	2	0	154	13	202	1	0	0
Hourly Total	6	0	22	0	28	1	0	0	0	1	1	558	3	0	564	34	746	3	0	0
1500-1515	1	0	10	0	11	0	0	0	0	0	0	167	0	0	167	6	225	0	0	0
1515-1530	0	0	5	0	5	0	0	0	0	0	0	180	0	0	180	15	214	0	0	0
1530-1545	1	0	6	0	7	0	0	0	0	0	0	137	0	0	137	10	253	1	0	0
1545-1600	1	0	4	0	5	1	0	2	0	0	0	118	0	0	118	11	258	0	0	0
Hourly Total	3	0	25	0	28	1	0	2	0	3	2	602	0	0	604	42	950	1	0	0
1600-1615	0	0	9	0	9	1	0	2	0	3	1	118	1	0	120	8	259	0	0	0
1615-1630	5	0	5	0	10	0	0	0	0	0	2	165	2	0	169	13	261	1	0	0
1630-1645	0	0	6	0	6	0	0	0	0	0	0	121	2	0	123	11	272	1	0	0
1645-1700	3	0	10	0	13	1	0	2	0	3	0	137	2	0	139	12	272	0	0	0
Hourly Total	8	0	30	0	38	2	0	4	0	6	3	541	7	0	551	44	1064	2	0	0
1700-1715	1	0	10	0	11	1	0	0	0	1	0	134	1	0	135	16	305	0	0	0
1715-1730	1	0	12	0	13	0	0	1	0	1	1	135	0	0	136	9	336	1	0	0
1730-1745	1	0	7	0	8	0	0	0	0	0	0	137	0	0	137	14	315	0	0	0
1745-1800	2	0	6	0	8	0	0	1	0	1	1	139	1	0	141	8	304	1	0	0
Hourly Total	5	0	35	0	40	1	0	2	0	3	2	545	2	0	549	47	1260	2	0	0
Grand Total	49	0	357	0	407	15	1	27	0	43	18	7622	42	0	1	7683	304	7395	22	0
Approach %	12.04	0.25	87.71	0.00	34.88	2.31	62.79	0.00	0.21	69.21	0.55	0.01	0.00	3.95	95.76	0.29	0.00	0.00	0.00	0.00
Intersection %	0.31	0.01	2.26	0.00	2.57	0.09	0.01	0.17	0.00	0.27	0.11	48.17	0.27	0.01	48.55	1.92	46.54	0.14	0.00	48.60

0700 - 0900 (Internal session 1) (04-16-2025)
Passenger Vehicles (1-3)

TIME	Northbound Percy Warner Blvd			Southbound Vossland Dr			Eastbound TN-1 Harding Pike (West)				Westbound TN-1 Harding Pike (East)				Int Total					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12		App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16
0700-0715	0	0	21	0	21	0	0	2	0	2	0	248	2	0	250	4	41	0	0	0
0715-0730	0	0	16	0	16	0	0	0	0	0	0	252	0	0	252	3	83	0	0	0
0730-0745	3	0	19	0	22	0	0	0	0	0	0	250	2	0	252	2	124	0	0	0
0745-0800	2	0	22	0	24	0	0	0	0	0	0	315	1	0	316	2	116	0	0	0
Hourly Total	5	0	78	0	83	0	0	2	0	2	0	3065	5	0	1070	13	366	0	0	0
0800-0815	2	0	5	0	7	2	0	1	0	3	0	260	2	0	262	6	81	1	0	0
0815-0830	2	0	7	0	9	1	0	0	0	1	1	240	0	0	241	2	78	0	0	0
0830-0845	0	0	8	0	8	0	0	0	0	0	0	218	2	0	220	2	82	0	0	0
0845-0900	1	0	3	0	4	0	0	0	0	0	0	233	0	0	233	6	104	1	0	0
Hourly Total	5	0	23	0	28	3	0	1	0	4	1	951	4	0	956	16	345	2	0	0
Grand Total	10	0	301	0	111	3	0	3	0	6	1	2016	9	0	2026	27	709	2	0	0
Approach %	9.01	0.00	90.99	0.00	30.50	0.00	50.00	0.00	0.00	0.05	99.51	0.44	0.00	0.00	3.66	96.07	0.27	0.00	0.00	0.00
Intersection %	0.35	0.00	3.51	0.00	3.85															

Classified Turn Movement Count | Single Unit Trucks (4-7)

Nashville, TN

Site 3
Percy Warner Blvd
Vossland Dr
TN-1 Harding Pike (West)
TN-1 Harding Pike (East)

Date
Wednesday, April 16, 2025

Lat/Long
36.096377°, -86.877646°
[Click here for Map](#)

Weather
Fair
58°F
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0600 - 1800 (Weekday 12h Session) (04-16-2025)
Single Unit Trucks (4-7)

TIME	Northbound Percy Warner Blvd			Southbound Vossland Dr			Eastbound TN-1 Harding Pike (West)				Westbound TN-1 Harding Pike (East)				Int Total							
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12		App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
0600-0615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
0615-0630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
0630-0645	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	1	0	0	0	6
0645-0700	1	0	0	0	1	0	0	0	0	0	5	0	0	0	5	1	4	0	0	0	0	11
Hourly Total	1	0	0	0	1	0	0	0	0	0	12	0	0	12	1	7	0	0	0	0	21	
0700-0715	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	4	0	0	0	0	6
0715-0730	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	0	2	0	0	0	0	8
0730-0745	1	0	1	0	2	0	0	0	0	0	7	1	0	0	8	0	2	0	0	0	0	12
0745-0800	0	0	1	0	1	0	0	0	0	0	6	0	0	0	6	1	3	0	0	0	0	13
Hourly Total	1	0	2	0	3	0	0	0	0	0	21	1	0	22	3	11	0	0	0	0	35	
0800-0815	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	8	0	0	0	0	12
0815-0830	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	6	0	0	0	0	10
0830-0845	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	0	3	0	0	0	0	6
0845-0900	1	0	0	0	1	0	0	0	0	0	7	0	0	0	7	0	2	0	0	0	0	10
Hourly Total	1	0	0	0	1	0	0	0	0	0	17	1	0	18	0	19	0	0	0	0	38	
0900-0915	0	0	0	0	0	0	0	1	0	1	2	0	0	0	3	0	3	0	0	0	0	7
0915-0930	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	4	0	0	0	0	7
0930-0945	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	0	4	0	0	0	0	7
0945-1000	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0	2	0	0	0	0	2
Hourly Total	0	0	0	0	0	0	0	1	1	8	1	0	0	11	0	16	0	6	0	0	25	
1000-1015	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	6	0	0	0	0	8
1015-1030	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	0	4	0	0	0	0	8
1030-1045	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	1	5	0	0	0	0	13
1045-1100	0	0	2	0	2	0	0	0	0	0	4	0	0	0	4	1	3	0	0	0	0	10
Hourly Total	0	0	2	0	2	0	0	0	0	0	15	1	0	16	2	18	0	0	0	0	38	
1100-1115	0	0	1	0	1	0	0	0	0	0	3	0	0	0	3	1	4	0	0	0	0	9
1115-1130	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	3	4	0	0	0	0	11
1130-1145	0	0	1	0	1	0	0	0	0	0	3	0	0	0	3	0	5	0	0	0	0	9
1145-1200	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	0	4	0	0	0	0	9
Hourly Total	0	0	2	0	2	0	0	0	0	0	15	0	0	15	4	17	0	0	0	0	38	
1200-1215	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	4	0	0	0	0	8
1215-1230	0	0	2	0	2	0	0	0	0	0	7	0	0	0	7	0	2	0	0	0	0	11
1230-1245	0	0	1	0	1	0	0	0	0	0	3	1	0	0	4	0	3	0	0	0	0	8
1245-1300	0	0	0	0	0	0	0	1	0	1	2	0	0	0	2	0	3	0	0	0	0	6
Hourly Total	0	0	3	0	3	0	0	1	1	16	3	1	0	17	3	12	0	0	0	0	19	
1300-1315	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	3	0	0	0	0	4
1315-1330	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	0	3	0	0	0	0	9
1330-1345	0	0	0	0	0	0	0	0	0	0	4	1	0	0	5	0	4	0	0	0	0	6
1345-1400	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	5	0	0	0	0	8
Hourly Total	0	0	0	0	0	0	0	0	0	0	10	1	0	11	0	15	1	0	0	0	27	
1400-1415	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	1	0	0	0	0	5
1415-1430	0	0	0	0	0	0	0	1	0	0	5	0	0	0	5	0	2	0	0	0	0	7
1430-1445	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	2	0	0	0	0	4
1445-1500	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	1	0	0	0	0	5
Hourly Total	0	0	0	0	0	0	0	1	1	14	1	0	0	15	0	6	0	0	0	0	22	
1500-1515	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	2
1515-1530	0	0	0	0	0	0	0	0	0	0	6	1	0	0	7	0	4	0	0	0	0	11
1530-1545	0	0	1	0	1	0	0	0	0	0	1	0	0	0	3	0	7	0	0	0	0	7
1545-1600	1	0	0	0	1	0	0	0	0	0	3	0	0	0	3	0	1	0	0	0	0	6
Hourly Total	1	0	1	0	2	0	0	1	1	11	1	0	0	12	0	13	0	0	0	0	28	
1600-1615	0	0	0	0	0	0	0	1	0	1	3	0	0	0	3	0	3	0	0	0	0	7
1615-1630	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	6	0	0	0	0	9
1630-1645	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	0	3	0	0	0	0	5
1645-1700	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	3	0	0	0	0	5
Hourly Total	0	0	1	0	1	0	0	1	1	9	0	0	0	9	0	15	0	0	0	0	26	
1700-1715	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	2
1715-1730	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	5	0	0	0	0	6
1730-1745	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4
1745-1800	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4	0	0	0	0	6
Hourly Total	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	14	0	0	0	0	18	
Grand Total	4	0	11	0	15	0	0	5	0	5	2	152	8	0	162	10	160	1	0	0	353	
Approach %	16.67	0.00	73.33	0.00	42.5	0.00	0.00	100.00	0.00	1.42	0.57	63.81	4.94	0.00	5.85	62.57	0.58	0.00	0.00	0.00	84.44	
Intersection %	1.13	0.00	3.12	0.00	4.25	0.00	0.00	1.42	0.00	1.42	0.57	63.86	2.27	0.00	45.89	2.83	45.33	0.28	0.00	0.00	48.44	

0700 - 0900 (Internal session 1) (04-16-2025)
Single Unit Trucks (4-7)

TIME	Northbound Percy Warner Blvd			Southbound Vossland Dr			Eastbound TN-1 Harding Pike (West)				Westbound TN-1 Harding Pike (East)				Int Total							
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12		App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
0700-0715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0715-0730	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	0	2	0	0	0	0	8
0730-0745	1	0	1																			

Classified Turn Movement Count | Combination Trucks (8-13)

Nashville, TN

Site 3

Percy Warner Blvd
Vossland Dr
TN-1 Harding Pike (West)
TN-1 Harding Pike (East)

Date

Wednesday, April 16, 2025

Weather

Fair
58°F

Lat/Long
36.096377°, -86.877646°
[Click here for Map](#)

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0600 - 1800 (Weekday 12h Session) (04-16-2025)

Combination Trucks (8-13)

TIME	Northbound			Southbound			Eastbound				Westbound				Int	Total				
	Percy Warner Blvd			Vossland Dr			TN-1 Harding Pike (West)				TN-1 Harding Pike (East)									
	Left	Thru	Right	U-Turn	App	Total	U-Turn	App	Left	Thru	Right	U-Turn	App	Left			Thru	Right	U-Turn	App
0600-0615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	1	0	0	0	2	0	0	0	17	0	0	17	0	34	0	0	0	34	53	
Approach %	50.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	
Intersection %	1.89	0.00	1.89	0.00	3.77	0.00	0.00	0.00	32.08	0.00	0.00	32.08	0.00	64.15	0.00	0.00	0.00	64.15		

0700 - 0900 (Internal session 1) (04-16-2025)

Combination Trucks (8-13)

TIME	Northbound			Southbound			Eastbound				Westbound				Int	Total				
	Percy Warner Blvd			Vossland Dr			TN-1 Harding Pike (West)				TN-1 Harding Pike (East)									
	Left	Thru	Right	U-Turn	App	Total	U-Turn	App	Left	Thru	Right	U-Turn	App	Left			Thru	Right	U-Turn	App
0700-0715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	1	0	1	0	0	0	3	0	0	3	0	1	0	0	0	1	5	
Approach %	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	
Intersection %	0.00	0.00	20.00	0.00	20.00	0.00	0.00	0.00	60.00	0.00	0.00	60.00	0.00	20.00	0.00	0.00	0.00	20.00		

1600 - 1800 (Internal session 2) (04-16-2025)

Combination Trucks (8-13)

TIME	Northbound			Southbound			Eastbound				Westbound				Int	Total				
	Percy Warner Blvd			Vossland Dr			TN-1 Harding Pike (West)				TN-1 Harding Pike (East)									
	Left	Thru	Right	U-Turn	App	Total	U-Turn	App	Left	Thru	Right	U-Turn	App	Left			Thru	Right	U-Turn	App
1600-1615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	3	0	0	3	0	5	0	0	0	5	8	
Approach %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37.50	0.00	0.00	37.50	0.00	62.50	0.00	0.00	0.00	62.50		

Classified Turn Movement Count | Bicycles



Nashville, TN

Site 3
Percy Warner Blvd
Vossland Dr
TN-1 Harding Pike (West)
TN-1 Harding Pike (East)

Date
Wednesday, April 16, 2025

Lat/Long
36.096377°, -86.877646°
[Click here for Map](#)

Weather
Fair
58°F

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0600 - 1800 (Weekday 12h Session) (04-16-2025)

TIME	Northbound			Southbound			Eastbound				Westbound				Int Total			
	Percy Warner Blvd			Vossland Dr			TN-1 Harding Pike (West)				TN-1 Harding Pike (East)							
	Left	Thru	Right	U-Turn	App	Total	Left	Thru	Right	U-Turn	App	Total	Left	Thru		Right	U-Turn	App
3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	3.10	3.11	3.12	3.13	3.14	3.15	3.16	3.17	3.18	
0600-0615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0615-0630	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1
0630-0645	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0645-0700	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Hourly Total	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
0700-0715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0715-0730	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0730-0745	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0745-0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800-0815	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
0815-0830	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0830-0845	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0845-0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
0900-0915	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0915-0930	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0930-0945	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0945-1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000-1015	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1015-1030	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1030-1045	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1045-1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100-1115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1115-1130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1130-1145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1145-1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200-1215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1215-1230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1230-1245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1245-1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300-1315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1315-1330	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1330-1345	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1345-1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400-1415	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
1415-1430	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1430-1445	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1445-1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1500-1515	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1515-1530	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1530-1545	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1545-1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600-1615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1615-1630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1630-1645	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1645-1700	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1
Hourly Total	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
1700-1715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1715-1730	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1730-1745	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
1745-1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	1	3	0	4	0	2	0	2	0	3	0	0	8	0	0	0	17
Approach %	0.00	25.00	75.00	0.00	0.00	100.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Intersection %	0.00	5.88	17.65	0.00	23.53	0.00	11.76	0.00	11.76	0.00	17.65	0.00	0.00	17.65	0.00	47.06	0.00	47.06

0700 - 0900 (Internal session 1) (04-16-2025)

TIME	Northbound			Southbound			Eastbound				Westbound				Int Total			
	Percy Warner Blvd			Vossland Dr			TN-1 Harding Pike (West)				TN-1 Harding Pike (East)							
	Left	Thru	Right	U-Turn	App	Total	Left	Thru	Right	U-Turn	App	Total	Left	Thru		Right	U-Turn	App
3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	3.10	3.11	3.12	3.13	3.14	3.15	3.16	3.17	3.18	
0700-0715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0715-0730	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0730-0745	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0745-0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800-0815	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
0815-0830	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0830-0845	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0845-0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Approach %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1600 - 1800 (Internal session 2) (04-16-2025)

TIME	Northbound			Southbound			Eastbound				Westbound				Int Total			
	Percy Warner Blvd			Vossland Dr			TN-1 Harding Pike (West)				TN-1 Harding Pike (East)							
	Left	Thru	Right	U-Turn	App	Total	Left	Thru	Right	U-Turn	App	Total	Left	Thru		Right	U-Turn	App
3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8	3.9	3.10	3.11	3.12	3.13	3.14	3.15	3.16	3.17	3.18	
1600-1615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1615-1630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1630-1645	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1645-1700	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	1	0	0	0	0	0						

Classified Turn Movement Count | All Trucks (4-13)

Nashville, TN

Site 3
Percy Warner Blvd
Vossland Dr
TN-1 Harding Pike (West)
TN-1 Harding Pike (East)

Date
Wednesday, April 16, 2025

Lat/Long
36.096377°, -86.877646°
[Click here for Map](#)

Weather
Fair
58°F
[Click here for Detailed Weather](#)

0600 - 1800 (Weekday 12h Session) (04-16-2025)
All Trucks (4-13)

TIME	Northbound			Southbound			Eastbound				Westbound				Int. Total				
	Left	Thru	Right	U-Turn	App	Total	U-Turn	App	Left	Thru	Right	U-Turn	App	Left		Thru	Right		
0600 - 0615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Grand Total	5	0	12	0	17	0	0	5	2	169	8	0	179	10	194	1	0	205	406
Approach %	29.41	0.00	70.59	0.00	0.00	100.00	0.00	1.12	0.42	14.27	0.00	4.98	0.62	0.49	0.00	0.00	0.00		
Intersection %	1.23	0.00	2.96	0.00	4.19	0.00	0.00	1.23	0.49	41.63	1.97	0.00	44.09	2.46	47.78	0.25	0.00	50.49	

0700 - 0900 (Internal session 1) (04-16-2025)
All Trucks (4-13)

TIME	Northbound			Southbound			Eastbound				Westbound				Int. Total				
	Left	Thru	Right	U-Turn	App	Total	U-Turn	App	Left	Thru	Right	U-Turn	App	Left		Thru	Right		
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Grand Total	2	0	3	0	5	0	0	0	0	41	2	0	43	3	31	0	0	34	82
Approach %	40.00	0.00	60.00	0.00	0.00	100.00	0.00	0.00	0.00	95.35	4.65	0.00	8.92	91.18	0.00	0.00	0.00		
Intersection %	2.44	0.00	3.66	0.00	6.10	0.00	0.00	0.00	0.00	50.00	2.44	0.00	52.44	3.66	37.80	0.00	0.00	41.66	

1600 - 1800 (Internal session 2) (04-16-2025)
All Trucks (4-13)

TIME	Northbound			Southbound			Eastbound				Westbound				Int. Total				
	Left	Thru	Right	U-Turn	App	Total	U-Turn	App	Left	Thru	Right	U-Turn	App	Left		Thru	Right		
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Grand Total	0	0	1	0	1	0	0	1	0	16	0	0	16	0	34	0	0	34	52
Approach %	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00		
Intersection %	0.00	0.00	1.92	0.00	1.92	0.00	0.00	1.92	0.00	30.77	0.00	0.00	30.77	0.00	65.38	0.00	0.00	65.38	

Crosswalk Counts || Pedestrians

Nashville, TN



www.marrtraffic.com

Site 3

Percy Warner Blvd
Vossland Dr
TN-1 Harding Pike (West)
TN-1 Harding Pike (East)

Date

Wednesday, April 16, 2025

Weather

Fair

58°F

Click here for Detailed Weather

Lat/Long

36.096377, -86.877646

Click here for Map

0600 - 1800 (Weekday 12h Session) (04-16-2025)

Pedestrians

Table with columns for Northbound, Southbound, Eastbound, and Westbound directions. Rows include time intervals (e.g., 0600-0615), counts for various directions (EB, WB, etc.), and Grand Total/Approach %/Intersection %.

0700 - 0900 (Internal session 1) (04-16-2025)

Pedestrians

Table with columns for Northbound, Southbound, Eastbound, and Westbound directions. Rows include time intervals (e.g., 0700-0715), counts for various directions, and Grand Total/Approach %/Intersection %.

1600 - 1800 (Internal session 2) (04-16-2025)

Pedestrians

Table with columns for Northbound, Southbound, Eastbound, and Westbound directions. Rows include time intervals (e.g., 1600-1615), counts for various directions, and Grand Total/Approach %/Intersection %.

Crosswalk Counts | Bicycles

Nashville, TN



www.marrtraffic.com

Site 3

Percy Warner Blvd
Vossland Dr
TN-1 Harding Pike (West)
TN-1 Harding Pike (East)

Date

Wednesday, April 16, 2025

Weather

Fair
58°F

Lat/Long

36.096377, -86.877646

[Click here for Detailed Weather](#)

[Click here for Map](#)

0600 - 1800 (Weekday 12h Session) (04-16-2025)

Bicycles

TIME	Northbound Percy Warner Blvd			Southbound Vossland Dr			Eastbound TN-1 Harding Pike (West)			Westbound TN-1 Harding Pike (East)			App Total	Int Total
	EB 3a	WB 3b	App Total	EB 3c	WB 3d	App Total	NB 3e	SB 3f	App Total	NB 3g	SB 3h	App Total		
0600 - 0615	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0615 - 0630	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0630 - 0645	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0645 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900 - 0915	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0915 - 0930	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0930 - 0945	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0945 - 1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000 - 1015	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1015 - 1030	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1030 - 1045	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1045 - 1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100 - 1115	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1115 - 1130	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1130 - 1145	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1145 - 1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200 - 1215	1	0	1	0	0	0	0	0	0	0	0	0	0	1
1215 - 1230	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1230 - 1245	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1245 - 1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	1	0	1	0	0	0	0	0	0	0	0	0	0	1
1300 - 1315	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1315 - 1330	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1330 - 1345	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1345 - 1400	0	0	0	0	0	0	1	1	0	0	0	1	0	1
Hourly Total	0	0	0	0	0	0	1	1	0	0	0	1	0	1
1400 - 1415	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1415 - 1430	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1430 - 1445	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1445 - 1500	0	0	0	0	1	1	1	1	0	0	0	1	0	2
Hourly Total	0	0	0	0	1	1	1	1	0	0	0	1	0	2
1500 - 1515	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1515 - 1530	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1530 - 1545	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1545 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600 - 1615	0	0	0	0	0	0	0	1	1	0	0	0	0	1
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	1	1	0	0	0	0	1
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	1	1	1	0	0	0	0	0	0	1
Hourly Total	0	0	0	0	1	1	1	0	0	0	0	0	0	1
Grand Total	1	0	1	0	2	2	0	3	3	0	0	0	0	6
Approach %	100.00	0.00	-	0.00	100.00	-	0.00	100.00	-	0.00	0.00	-	-	-
Intersection %	16.67	0.00	16.67	0.00	33.33	33.33	0.00	50.00	50.00	0.00	0.00	0.00	0.00	0.00

0700 - 0900 (Internal session 1) (04-16-2025)

Bicycles

TIME	Northbound Percy Warner Blvd			Southbound Vossland Dr			Eastbound TN-1 Harding Pike (West)			Westbound TN-1 Harding Pike (East)			App Total	Int Total
	EB 3a	WB 3b	App Total	EB 3c	WB 3d	App Total	NB 3e	SB 3f	App Total	NB 3g	SB 3h	App Total		
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	-	-
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1600 - 1800 (Internal session 2) (04-16-2025)

Bicycles

TIME	Northbound Percy Warner Blvd			Southbound Vossland Dr			Eastbound TN-1 Harding Pike (West)			Westbound TN-1 Harding Pike (East)			App Total	Int Total
	EB 3a	WB 3b	App Total	EB 3c	WB 3d	App Total	NB 3e	SB 3f	App Total	NB 3g	SB 3h	App Total		
1600 - 1615	0	0	0	0	0	0	0	0	1	0	0	0	0	1
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	1	0	0	0	0	1
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	1	1	1	0	0	0	0	0	0	1
Hourly Total	0	0	0	0	1	1	1	0	0	0	0	0	0	1
Grand Total	0	0	0	0	1	1	1	0	1	0	0	0	0	2
Approach %	0.00	0.00	-	0.00	100.00	-	0.00	100.00	-	0.00	0.00	-	-	-
Intersection %	0.00	0.00	0.00	0.00	50.00	50.00	0.00	50.00	50.00	0.00	0.00	0.00	0.00	0.00

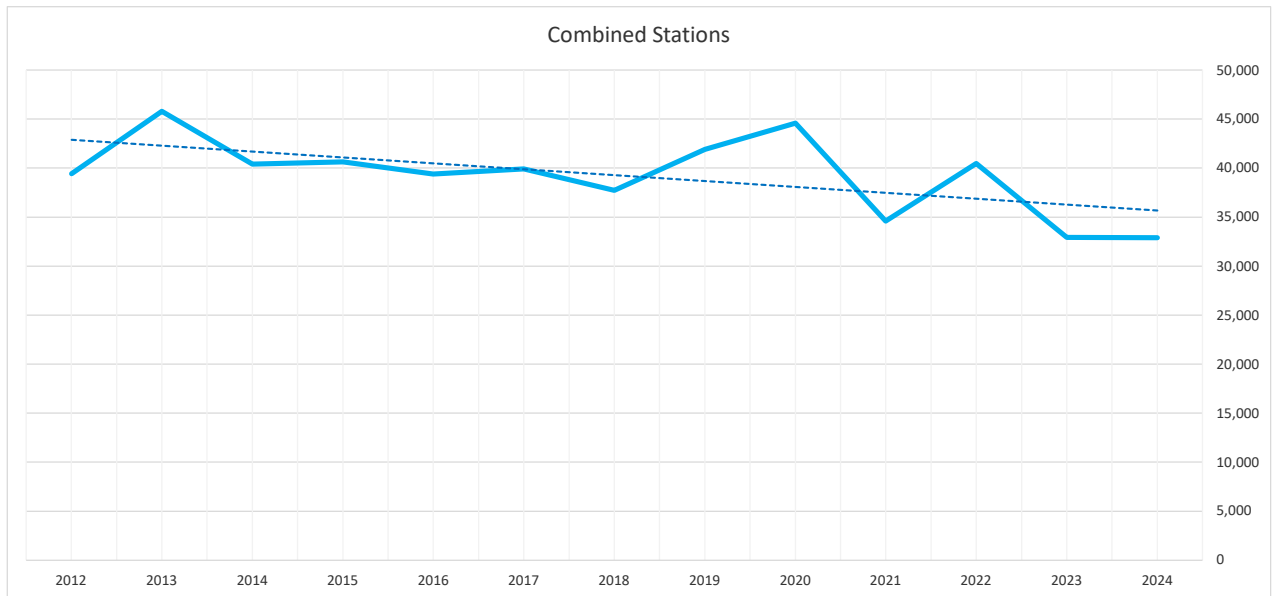
APPENDIX D
TDOT COUNT DATA

TDOT AADT DATA			
Station	197	117	586
Location	Highway 70 S B/W Percy Warner Blvd and Brookmont Terrace	Highway 70S B/W Old Harding pike and Highway 100	Brook Hollow Road B/W Davidson Road and BW Meade Drive
County	Davidson	Davidson	Davidson
2024	15,087	15,006	2,798
2023	16,329	13,970	2,627
2022	18,629	19,007	2,843
2021	16,784	15,297	2,507
2020	21,985	19,030	3,565
2019	20,380	18,505	3,014
2018	18,672	16,491	2,550
2017	19,520	17,725	2,657
2016	19,230	17,616	2,561
2015	20,616	17,443	2,590
2014	18,913	19,007	2,494
2013	23,032	20,102	2,671
2012	19,637	17,404	2,390

TDOT AADT Background Growth Trend Analysis

Year	Highway 70 S B/W Percy Warner		Highway 70S B/W Old Harding pike		Brook Hollow Road B/W Davidson		TOTAL	
	197	% Difference	117	% Difference	586	% Difference		% Difference
2024	15,087	-7.6%	15,006	7.4%	2,798	6.5%	32,891	-0.1%
2023	16,329	-12.3%	13,970	-26.5%	2,627	-7.6%	32,926	-18.7%
2022	18,629	11.0%	19,007	24.3%	2,843	13.4%	40,479	17.0%
2021	16,784	-23.7%	15,297	-19.6%	2,507	-29.7%	34,588	-22.4%
2020	21,985	7.9%	19,030	2.8%	3,565	18.3%	44,580	6.4%
2019	20,380	9.1%	18,505	12.2%	3,014	18.2%	41,899	11.1%
2018	18,672	-4.3%	16,491	-7.0%	2,550	-4.0%	37,713	-5.5%
2017	19,520	1.5%	17,725	0.6%	2,657	3.7%	39,902	1.3%
2016	19,230	-6.7%	17,616	1.0%	2,561	-1.1%	39,407	-3.1%
2015	20,616	9.0%	17,443	-8.2%	2,590	3.8%	40,649	0.6%
2014	18,913	-17.9%	19,007	-5.4%	2,494	-6.6%	40,414	-11.8%
2013	23,032	17.3%	20,102	15.5%	2,671	11.8%	45,805	16.2%
2012	19,637	--	17,404	--	2,390	--	39,431	--
Since 2023 Annual		-7.61%		7.42%		6.51%		-0.11%
Since 2022 Annual		-10.01%		-11.15%		-0.79%		-9.86%
Since 2021 Annual		-3.49%		-0.64%		3.73%		-1.66%
Since 2020 Annual		-8.98%		-5.77%		-5.88%		-7.32%
Since 2019 Annual		-5.84%		-4.11%		-1.48%		-4.73%
Since 2018 Annual		-3.49%		-1.56%		1.56%		-2.25%
Since 2017 Annual		-3.61%		-2.35%		0.74%		-2.72%
Since 2016 Annual		-2.99%		-1.98%		1.11%		-2.23%
Since 2015 Annual		-3.41%		-1.66%		0.86%		-2.33%
Since 2014 Annual		-2.23%		-2.34%		1.16%		-2.04%

Exponential Rate



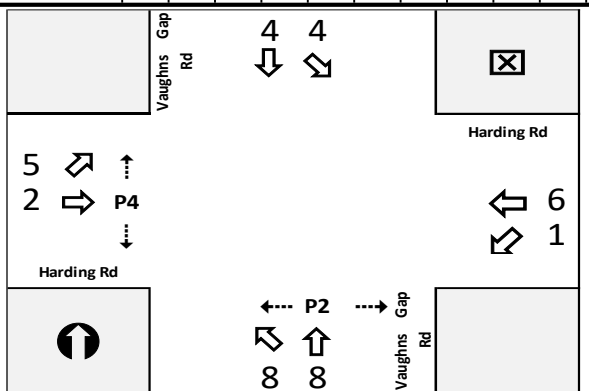
APPENDIX E
SIGNAL TIMING SHEETS

ID Number: **3995** ZONE: **D**
 Location: **Highway 70S & Vaughns Gap Rd**
 Install Date: _____ Address: _____
 Program. By: _____ Switch: _____
New Max times SR32897 1/16/24



TP #	CONTROLLER PHASE RING SEQUENCE												
1	PHASE												
MM 1-1-1	RING 1	1	2	3	4	9	10	13	14				
	RING 2	5	6	7	8	11	12	15	16				
	RING 3												
	RING 4												
MM 1-1-3	BACKUP PREVENT PHASES												
	PHASE	1	2	3	4	5	6	7	8	9	10	11	12
	PHASE 1												
	PHASE 2					X							
	PHASE 3												
	PHASE 4												
	PHASE 5												
	PHASE 6	X											
	PHASE 7												
	PHASE 8												
	PHASE 9												
	PHASE 10												
	PHASE 11												
PHASE 12													
MM 1-2	PHASE IN USE & EXCLUSIVE PEDS												
	PHASE	1	2	3	4	5	6	7	8	9	10	11	12
	PH. IN USE	X	X		X	X	X		X				
	EXCL. PED												
MM 2-1	CONTROLLER TIMING PLANS												
	PHASE	1	2	3	4	5	6	7	8	9	10	11	12
	MIN GREEN	5	20		7	5	20		7				
	BK MIN GRN												
	CS MGRN												
	DELAY GRN												
	WALK		7		7								
	WALK 2												
	WALK MAX												
	PED CLR		12		18								
	PED CLR 2												
	PED CLR MX												
	PED CO												
	VEH EXT	2.0	2.0		2.0	2.0	2.0		2.0				
	VEH EXT2				3.0				3.0				
	MAX 1	15	50		20	15	50		20				
	MAX 2	15	45		30	15	45		30				
	MAX 3												
	DYM MAX												
	DYM STP												
	YELLOW	4.5	4.5		3.5	4.5	4.5		3.5				
	RED CLR	2.0	1.5		2.5	1.5	1.5		2.5				
	RED MAX												
RED RVT													
ACT B4													
SEC/ACT													
MAX INT													
TIME B4													
CARS WT													
STPTDUC													
TTREDUC													
MIN GAP													

OVERLAPS													
PHASE	TYPE	1	2	3	4	5	6	7	8	LG	LY	LR	AG
MM 2-2	VEH OL A												
	VEH OL B												
	VEH OL C												
	VEH OL D												
MM 2-3	PED OL 01												
	PED OL 02												
	PED OL 03												
	PED OL 04												
MM 2-5	START UP / FLASH DATA												
	START UP - PHASE	1	2	3	4	5	6	7	8	9	10	11	12
	START UP		G					G					
	OVERLAPS												
	FLASH>MON		Y						7			ALL RED	0
	PWR START SEQ		1						MUTCD N			MUTCD Y→G	N
	FLASH - PHASE	1	2	3	4	5	6	7	8	9	10	11	12
	FLASH - ENTRY				X				X				
FLASH - EXIT		X				X							
OVERLAP EXIT													
FLASH>MON		Y						EXIT FLASH G			MIN FLASH	8	
MINIMUM RECALL		N									CYCLE THRU PHASES	N	
MM 2-6-1	CONTROLLER OPTIONS												
	PHASE	1	2	3	4	5	6	7	8	9	10	11	12
	FLASHING GRN PH												
	GUAR PASSAGE												
	NON-ACT I			X				X					
	NON-ACT II												
	DUAL ENTRY					X				X			
	COND. SERVICE												
	COND. RESERVICE												
	PED RESERVICE												
	REST IN WALK												
	FLASH WALK												
	PED CLR > YEL.												
PED CLR > RED													
IGRN + VEH EXT													
MM 2-8	PHASE DETECTOR OPTIONS												
	PHASE	1	2	3	4	5	6	7	8	9	10	11	12
	LOCK DET												
	VE RCALL												
	PD RCALL												
	MX RCALL		X					X					
	SF RCALL												
	NO REST												
AI CALC													



ID #: 3995 **ZONE:** D
Location: Highway 70S & Vaughns Gap Rd
Install Date: _____
Program. By: _____
Notes: SR32897 new TOD School Plans



COORDINATOR PATTERN DATA																
MM 3-2																
Phase	Cycle Length		Offset		1	2	3	4	5	6	7	8	9	10	11	12
PATTERN 1	120	SEC.	43	SEC.	22	70		28	14	78		28				
COORD PHS						X				X						
FUNCTION																
PATTERN 2																
COORD PHS																
FUNCTION																
PATTERN 3	130	SEC.	53	SEC.	22	80		28	14	88		28				
COORD PHS						X				X						
FUNCTION																
PATTERN 4	100	SEC.	18	SEC.	16	56		28	14	58		28				
COORD PHS						X				X						
FUNCTION																
PATTERN 5																
COORD PHS																
FUNCTION																
PATTERN 6																
COORD PHS																
FUNCTION																
PATTERN 7	120	SEC.	40	SEC.	22	67		35	14	71		35				
COORD PHS						X				X						
FUNCTION																
PATTERN 8																
COORD PHS																
FUNCTION																
PATTERN 9																
COORD PHS																
FUNCTION																
PATTERN 10																
COORD PHS																
FUNCTION																

COORD OPTIONS			
MM 3-1			
MANUAL PATTERN	AUTO	ECPI COORD	YES
SYSTEM SOURCE	SYS	TBC SYS FORMAT	PTN
SPLITS IN	SEC.	OFFSET IN	SEC.
TRANSITION	SMTH	MAX SELECT.	MAXINH
DWELL/ADD TIME	0	ENBL. MN. SYNC.	NO
DLY COORD WK-LZ.	NO	FORCE OFF	FLOAT
OFFSET REF	YELLOW	CAL USE PED TM	YES
PED RECALL	NO	PED RESERVE	NO
LOCAL ZERO OVRT	YES	FO ADD INI GRN	NO
RE-SYNC COUNT	0	MULTISYNC	NO

CLOCK / CALENDAR DATA	
MM 5-1	
ENABLE ACTION PLAN	0
SYNC REFERENCE TIME	00:00
SYNCHRONIZATION REFERENCE	REF TIME
TIME FROM GMT	0
DAY LIGHT SAVE	NO
TIME RESET INPUT	0:00:00

DAY PLAN SCHEDULE										
MM 5-4										
Day Plan	Months	S 1	M 2	T 3	W 4	T 5	F 6	S 7	DOM	
1	1-12		X	X	X	X	X			ALL
2	1-12	X						X		ALL

ACTION PLANS									
MM 5-2									
Action Plan #	Pattern #	Funct.	Phs.	Funct.	Phs.	Funct.	Phs.	Funct.	Phs.
1	1								
3	3								
4	4								
99	254								
98	253	MX 2		VEX 2	4,8				
100	255								
7	7	VEX 2	4,8						

DAY PLAN EVENTS				
MM 5-3				
Day Plan	Event #	Action Plan	Start Time	Description
1	1	100	00:00	FLASH
1	2	1	06:00	AM PEAK
1	3	7	07:20	School
1	4	1	07:45	AM PEAK
1	5	99	09:00	FREE
1	6	98	15:00	School
1	4	3	15:30	PM PEAK
1	5	99	19:00	FREE
2	1	100	00:00	FLASH
2	2	99	06:00	FREE

DAY PLAN EVENTS - CONTINUED				
MM 5-3				
Day Plan	Event #	Action Plan	Start Time	Description

ACTION PLAN PROGRAMMING NOTES
Pattern #4 is alternate AM plan

SPECIAL DEFINED PATTERNS		
PATTERN	ACTION PLAN	DESCRIPTION
255	100	FLASH
254	99	FREE

ID Number: **3995**

ZONE: **D**

Location: **Highway 70S & Vaughns Gap Rd**

Install Date: _____

Program. By: **Add Delay 7/19**

Notes: _____



VDP # 1		VEHICLE DETECTOR PHASE ASSIGNMENT MM 6-1												VEHICLE DETECTOR SETUP MM 6-2													
DET. #	PHASE	ADDITIONAL PHASE CALLS												TYPE	TS2 DET.	ECPI LOG	EXT/PASS. TIME	DELAY TIME	USE ADD. INIT.	CROSS SW PH	LOCK IN	NTCIP VOL	NTCIP OCC	PMT Q DELAY	DISCON. TIME	CALL OPTION	EXT OPTION
		1	2	3	4	5	6	7	8	9	10	11	12														
1		X												S	NO	NO		2									
2			X											S	NO	NO											
3				X										S	NO	NO											
4					X									S	NO	NO		6									
5						X								S	NO	NO		2									
6							X							S	NO	NO											
7								X						S	NO	NO											
8									X					S	NO	NO		6									
9														S	NO	NO											
10														S	NO	NO											
11														S	NO	NO											
12														S	NO	NO											
13														S	NO	NO											
14														S	NO	NO											
15														S	NO	NO											
16														S	NO	NO											

PEDESTRIAN PHASE ASSIGNMENT MM 6-3													
DET. #	PHASE	1	2	3	4	5	6	7	8	9	10	11	12
1		X											
2			X										
3				X									
4					X								
5						X							
6							X						
7								X					
8									X				
9										X			
10											X		
11												X	
12													X
13													
14													
15													
16													

DETECTOR PROGRAMMING NOTES

ID Number: **3934** ZONE: **D**
 Location: **Harding Rd & Vosland Dr/Percy Warner Blvd**
 Install Date: _____ Address: _____
 Program. By: _____ Switch: _____



CONTROLLER SETTINGS
 ASC3/2100 & COBALT SERIES
SECONOLITE
 CONTROL PRODUCTS, INC.

TP #	CONTROLLER PHASE RING SEQUENCE												
1	PHASE												
MM 1-1-1	RING 1	1	2	3	4	9	10	13	14				
	RING 2	5	6	7	8	11	12	15	16				
	RING 3												
	RING 4												
MM 1-1-3	BACKUP PREVENT PHASES												
	PHASE	1	2	3	4	5	6	7	8	9	10	11	12
	PHASE 1												
	PHASE 2					X							
	PHASE 3												
	PHASE 4												
	PHASE 5												
	PHASE 6	X											
	PHASE 7												
	PHASE 8												
	PHASE 9												
	PHASE 10												
	PHASE 11												
PHASE 12													
MM 1-2	PHASE IN USE & EXCLUSIVE PEDS												
	PHASE	1	2	3	4	5	6	7	8	9	10	11	12
	PH. IN USE	X	X		X	X	X		X				
	EXCL. PED												
MM 2-1	CONTROLLER TIMING PLANS												
	PHASE	1	2	3	4	5	6	7	8	9	10	11	12
	MIN GREEN	4	10		7	4	10		7				
	BK MIN GRN												
	CS MGRN												
	DELAY GRN												
	WALK				7		7						
	WALK 2												
	WALK MAX												
	PED CLR				18		11						
	PED CLR 2												
	PED CLR MX												
	PED CO												
	VEH EXT	2.0	2.0		2.0	2.0	2.0		2.0				
	VEH EXT2												
	MAX 1	15	60		15	15	60		20				
	MAX 2												
	MAX 3												
	DYM MAX												
	DYM STP												
YELLOW	4.0	4.0		3.5	4.0	4.0		3.5					
RED CLR	2.0	2.0		2.5	2.0	2.0		2.5					
RED MAX													
RED RVT													
ACT B4													
SEC/ACT													
MAX INT													
TIME B4													
CARS WT													
STPTDUC													
TTREDUC													
MIN GAP													

OVERLAPS													
PHASE	TYPE	1	2	3	4	5	6	7	8	LG	LY	LR	AG
MM 2-2	VEH OL A												
	VEH OL B												
	VEH OL C												
	VEH OL D												
MM 2-3	PED OL 01												
	PED OL 02												
	PED OL 03												
	PED OL 04												
MM 2-5	START UP / FLASH DATA												
	START UP - PHASE	1	2	3	4	5	6	7	8	9	10	11	12
	START UP		W					W					
	OVERLAPS												
	FLASH>MON		Y						7				ALL RED 0
	PWR START SEQ		1						MUTCD N				MUTCD Y→G N
	FLASH - PHASE	1	2	3	4	5	6	7	8	9	10	11	12
	FLASH - ENTRY				X				X				
	FLASH - EXIT		X				X						
	OVERLAP EXIT												
FLASH>MON		Y						EXIT FLASH W				MIN FLASH 8	
MINIMUM RECALL		N										CYCLE THRU PHASES N	
MM 2-6-1	CONTROLLER OPTIONS												
	PHASE	1	2	3	4	5	6	7	8	9	10	11	12
	FLASHING GRN PH												
	GUAR PASSAGE												
	NON-ACT I			X				X					
	NON-ACT II												
	DUAL ENTRY					X				X			
	COND. SERVICE												
	COND. RESERVICE												
	PED RESERVICE												
	REST IN WALK			X				X					
	FLASH WALK												
	PED CLR > YEL.												
PED CLR > RED													
IGRN + VEH EXT													
MM 2-8	PHASE DETECTOR OPTIONS												
	PHASE	1	2	3	4	5	6	7	8	9	10	11	12
	LOCK DET												
	VE RCALL												
	PD RCALL			X				X					
	MX RCALL			X				X					
	SF RCALL												
	NO REST												
AI CALC													
<p style="text-align: center;">PHASE ORIENTATION</p>													

ID #: **3934** ZONE: **D**
 Location: **Harding Rd & Vossland Dr/Percy Warner Blvd**
 Install Date: _____
 Program. By: _____
 Notes: _____



COORDINATION & TIME OF DAY (TOD)
 ASC3/2100 & COBALT SERIES
SECONOLITE
 CONTROL PRODUCTS, INC.

COORDINATOR PATTERN DATA MM 3-2																
Phase	Cycle Length		Offset		1	2	3	4	5	6	7	8	9	10	11	12
PATTERN 1	120	SEC.	97	SEC.	15	73		32	15	73		32				
COORD PHS						X				X						
FUNCTION																
PATTERN 2	90	SEC.	9	SEC.	15	49		26	15	49		26				
COORD PHS						X				X						
FUNCTION																
PATTERN 3	130	SEC.	10	SEC.	15	82		33	15	82		33				
COORD PHS						X				X						
FUNCTION																
PATTERN 4	90	SEC.	10	SEC.	14	53		23	14	53		23				
COORD PHS						X				X						
FUNCTION																
PATTERN 5	100	SEC.	66	SEC.	15	53		32	15	53		32				
COORD PHS						X				X						
FUNCTION																
PATTERN 6																
COORD PHS																
FUNCTION																
PATTERN 7																
COORD PHS																
FUNCTION																
PATTERN 8																
COORD PHS																
FUNCTION																
PATTERN 9																
COORD PHS																
FUNCTION																
PATTERN 10																
COORD PHS																
FUNCTION																

COORD OPTIONS MM 3-1			
MANUAL PATTERN	AUTO	ECPI COORD	YES
SYSTEM SOURCE	SYS	TBC SYS FORMAT	PTN
SPLITS IN	SEC.	OFFSET IN	SEC.
TRANSITION	SMTH	MAX SELECT.	MAXINH
DWELL/ADD TIME	0	ENBL. MN. SYNC.	NO
DLY COORD WK-LZ.	NO	FORCE OFF	FLOAT
OFFSET REF	YELLOW	CAL USE PED TM	YES
PED RECALL	NO	PED RESERVE	NO
LOCAL ZERO OVRD	YES	FO ADD INI GRN	NO
RE-SYNC COUNT	0	MULTISYNC	NO

CLOCK / CALENDAR DATA MM 5-1	
ENABLE ACTION PLAN	0
SYNC REFERENCE TIME	00:00
SYNCHRONIZATION REFERENCE	REF TIME
TIME FROM GMT	0
DAY LIGHT SAVE	NO
TIME RESET INPUT	0:00:00

DAY PLAN SCHEDULE MM 5-4									
Day Plan	Months	S	M	T	W	T	F	S	DOM
1	1-12		X	X	X	X	X		ALL
2	1-12	X						X	ALL

ACTION PLANS MM 5-2									
Action Plan #	Pattern #	Funct.	Phs.	Funct.	Phs.	Funct.	Phs.	Funct.	Phs.
1	1								
2	2								
3	3								
4	4								
5	5								
99	254								
100	255								

DAY PLAN EVENTS MM 5-3				
Day Plan	Event #	Action Plan	Start Time	Description
1	1	100	00:00	FLASH
1	2	1	06:00	AM PEAK
1	3	2	09:00	MD PEAK
1	4	3	14:00	PM PEAK
1	5	4	19:00	OFF PEAK
1	6	100	00:00	FLASH
2	1	100	00:00	FLASH
2	2	4	06:00	OFF PEAK
2	3	5	09:00	WKE PEAK
2	4	4	20:00	OFF PEAK
2	5	100	00:00	FLASH

DAY PLAN EVENTS - CONTINUED MM 5-3				
Day Plan	Event #	Action Plan	Start Time	Description

SPECIAL DEFINED PATTERNS		
PATTERN	ACTION PLAN	DESCRIPTION
255	100	FLASH
254	99	FREE

ACTION PLAN PROGRAMMING NOTES

Traffic Signal Timing - Sheet 2 of 3

ID Number: **3934**

ZONE: **D**



Location: **Harding Rd & Vossland Dr/Percy Warner Blvd**

Install Date: _____

Program. By: _____

Notes: _____

VDP # 1		VEHICLE DETECTOR PHASE ASSIGNMENT MM 6-1												VEHICLE DETECTOR SETUP MM 6-2													
DET. #	PHASE	ADDITIONAL PHASE CALLS												TYPE	TS2 DET.	ECPI LOG	EXT/PASS. TIME	DELAY TIME	USE ADD. INIT.	CROSS SW PH	LOCK IN	NTCIP VOL	NTCIP OCC	PMT Q DELAY	DISCON. TIME	CALL OPTION	EXT OPTION
		1	2	3	4	5	6	7	8	9	10	11	12														
1		X												S	NO	NO											
2			X											S	NO	NO											
3				X										S	NO	NO											
4					X									S	NO	NO		8									
5						X								S	NO	NO											
6							X							S	NO	NO											
7								X						S	NO	NO											
8									X					S	NO	NO		8									
9														S	NO	NO											
10														S	NO	NO											
11														S	NO	NO											
12														S	NO	NO											
13														S	NO	NO											
14														S	NO	NO											
15														S	NO	NO											
16														S	NO	NO											

PEDESTRIAN PHASE ASSIGNMENT MM 6-3													
DET. #	PHASE	1	2	3	4	5	6	7	8	9	10	11	12
1		X											
2			X										
3				X									
4					X								
5						X							
6							X						
7								X					
8									X				
9										X			
10											X		
11												X	
12													X
13													
14													
15													
16													

DETECTOR PROGRAMMING NOTES

APPENDIX F
CAPACITY ANALYSES

EXISTING CONDITIONS
CAPACITY ANALYSES

Table of Contents

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Traffic Volume - Future Total Volume	15

Covenant School

Vistro File: \\...\The Covenant School.vistro

Scenario 1 Existing AM Peak

Report File: \\...\1_Existing AM.pdf

8/19/2025

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Harding Pike & Vaughns Gap Road	Signalized	HCM 7th Edition	NB Right	0.485	14.0	B
2	Harding Pike & Brook Hollow Road	Two-way stop	HCM 7th Edition	SB Left	0.455	51.5	F
3	Harding Pike & Vossland Drive/Percy Warner Boulevard	Signalized	HCM 7th Edition	NB Right	0.382	6.6	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Harding Pike & Vaughns Gap Road

Control Type:	Signalized	Delay (sec / veh):	14.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.485

Intersection Setup

Name	Vaughns Gap Road			Vaughns Gap Road			Harding Pike			Harding Pike		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	148.00	100.00	100.00	146.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name	Vaughns Gap Road			Vaughns Gap Road			Harding Pike			Harding Pike		
Base Volume Input [veh/h]	24	22	116	18	49	23	60	1067	93	135	356	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	22	116	18	49	23	60	1067	93	135	356	17
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	6	32	5	13	6	16	290	25	37	97	5
Total Analysis Volume [veh/h]	26	24	126	20	53	25	65	1160	101	147	387	18
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	43.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	20	0	0	20	0	15	50	0	15	50	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	4.5	4.5	0.0	4.5	4.5	0.0
All red [s]	0.0	2.5	0.0	0.0	2.5	0.0	1.5	1.5	0.0	2.0	1.5	0.0
Walk [s]	0.0	0.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	18.0	0.0	0.0	12.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	28.0	0.0	0.0	28.0	0.0	14.0	70.0	0.0	22.0	78.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	5	20	0	5	20	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	Yes		No	Yes	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	16.7	16.7	95.3	83.9	83.9	95.3	85.0	85.0
g / C, Green / Cycle	0.14	0.14	0.79	0.70	0.70	0.79	0.71	0.71
(v / s)_i Volume / Saturation Flow Rate	0.11	0.06	0.06	0.35	0.35	0.24	0.11	0.11
s, saturation flow rate [veh/h]	1475	1502	969	1683	1636	552	1683	1656
c, Capacity [veh/h]	240	245	820	1175	1142	451	1191	1172
d1, Uniform Delay [s]	49.81	47.09	3.19	8.40	8.41	5.78	5.76	5.77
k, delay calibration	0.09	0.04	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.66	0.34	0.17	1.53	1.58	1.70	0.28	0.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.37	0.07	0.50	0.50	0.30	0.16	0.16
d, Delay for Lane Group [s/veh]	52.46	47.43	3.36	9.94	9.99	7.49	6.05	6.05
Lane Group LOS	D	D	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.87	2.51	0.28	6.34	6.20	0.78	1.39	1.38
50th-Percentile Queue Length [ft/ln]	121.65	62.66	6.97	158.62	154.99	19.48	34.83	34.46
95th-Percentile Queue Length [veh/ln]	8.48	4.51	0.50	10.48	10.28	1.40	2.51	2.48
95th-Percentile Queue Length [ft/ln]	212.09	112.79	12.54	261.90	257.07	35.06	62.70	62.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.46	52.46	52.46	47.43	47.43	47.43	3.36	9.96	9.99	7.49	6.05	6.05
Movement LOS	D	D	D	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	52.46			47.43			9.64			6.43		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	14.04											
Intersection LOS	B											
Intersection V/C	0.485											

Emissions

Vehicle Miles Traveled [mph]	4.88	2.45	3.41	33.44	32.56	32.52	45.21	44.65
Stops [stops/h]	145.98	75.20	8.36	190.35	185.99	23.38	41.80	41.35
Fuel consumption [US gal/h]	2.74	1.27	0.26	4.70	4.59	1.61	2.30	2.27
CO [g/h]	191.29	88.58	18.32	328.61	321.03	112.62	160.79	158.89
NOx [g/h]	37.22	17.23	3.56	63.94	62.46	21.91	31.28	30.91
VOC [g/h]	44.33	20.53	4.25	76.16	74.40	26.10	37.27	36.82

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	49.50	0.00
I_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.823	0.000
Crosswalk LOS	F	F	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	367	367	1067	1200
d_b, Bicycle Delay [s]	40.02	40.02	13.07	9.60
I_b,int, Bicycle LOS Score for Intersection	1.827	1.708	1.494	0.907
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Harding Pike & Brook Hollow Road

Control Type:	Two-way stop	Delay (sec / veh):	51.5
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.455

Intersection Setup

Name	Brook Hollow Road		Harding Pike		Harding Pike	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	⇐⇐		⇐		⇐	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	30.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Brook Hollow Road		Harding Pike		Harding Pike	
Base Volume Input [veh/h]	64	119	162	1029	394	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	64	119	162	1029	394	39
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	32	44	280	107	11
Total Analysis Volume [veh/h]	70	129	176	1118	428	42
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.46	0.15	0.14	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	51.54	10.38	8.75	0.00	0.00	0.00
Movement LOS	F	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	2.36	0.53	0.51	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	59.01	13.32	12.63	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	24.77		1.19		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	3.29					
Intersection LOS	F					

Intersection Level Of Service Report

Intersection 3: Harding Pike & Vossland Drive/Percy Warner Boulevard

Control Type:	Signalized	Delay (sec / veh):	6.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.382

Intersection Setup

Name	Percy Warner Boulevard			Vossland Drive			Harding Pike			Harding Pike		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	103.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Percy Warner Boulevard			Vossland Drive			Harding Pike			Harding Pike		
Base Volume Input [veh/h]	8	0	65	2	0	1	0	1102	6	14	420	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	0	65	2	0	1	0	1102	6	14	420	1
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	18	1	0	0	0	299	2	4	114	0
Total Analysis Volume [veh/h]	9	0	71	2	0	1	0	1198	7	15	457	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	97.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	20	0	0	15	0	15	60	0	15	60	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	2.5	0.0	0.0	2.5	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			Yes			Yes	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	32.0	0.0	0.0	32.0	0.0	15.0	73.0	0.0	15.0	73.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	4	10	0	4	10	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	Yes		No	Yes	
Pedestrian Recall		No			No		No	Yes		No	Yes	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	9.3	9.3	102.7	95.2	95.2	102.7	96.7	96.7
g / C, Green / Cycle	0.08	0.08	0.86	0.79	0.79	0.86	0.81	0.81
(v / s)_i Volume / Saturation Flow Rate	0.05	0.00	0.00	0.33	0.33	0.03	0.13	0.13
s, saturation flow rate [veh/h]	1434	1223	898	1683	1680	520	1683	1682
c, Capacity [veh/h]	145	145	824	1334	1331	480	1355	1353
d1, Uniform Delay [s]	53.72	51.12	0.00	3.85	3.85	2.36	2.61	2.61
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.01	0.02	0.00	0.96	0.96	0.01	0.24	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.50	0.02	0.00	0.42	0.42	0.03	0.16	0.16
d, Delay for Lane Group [s/veh]	54.73	51.14	0.00	4.81	4.81	2.37	2.85	2.86
Lane Group LOS	D	D	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.18	0.09	0.00	3.11	3.10	0.03	0.79	0.79
50th-Percentile Queue Length [ft/ln]	54.57	2.13	0.00	77.68	77.55	0.66	19.84	19.83
95th-Percentile Queue Length [veh/ln]	3.93	0.15	0.00	5.59	5.58	0.05	1.43	1.43
95th-Percentile Queue Length [ft/ln]	98.23	3.84	0.00	139.83	139.60	1.19	35.71	35.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.73	54.73	54.73	51.14	51.14	51.14	0.00	4.81	4.81	2.37	2.86	2.86
Movement LOS	D	D	D	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	54.73			51.14			4.81			2.84		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	6.62											
Intersection LOS	A											
Intersection V/C	0.382											

Emissions

Vehicle Miles Traveled [mph]	2.00	0.10	0.00	147.61	147.34	0.66	9.94	9.93
Stops [stops/h]	65.49	2.56	0.00	93.22	93.06	0.80	23.80	23.79
Fuel consumption [US gal/h]	1.26	0.05	0.00	6.76	6.75	0.04	0.76	0.76
CO [g/h]	87.87	3.18	0.00	472.63	471.78	2.75	53.05	53.02
NOx [g/h]	17.10	0.62	0.00	91.96	91.79	0.53	10.32	10.32
VOC [g/h]	20.37	0.74	0.00	109.54	109.34	0.64	12.29	12.29

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	23.0	11.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	39.20	49.50	0.00
I_p,int, Pedestrian LOS Score for Intersectio	0.000	1.721	2.775	0.000
Crosswalk LOS	F	A	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	433	433	1117	1117
d_b, Bicycle Delay [s]	36.82	36.82	11.70	11.70
I_b,int, Bicycle LOS Score for Intersection	1.680	1.565	1.402	0.846
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Traffic Volume - Future Total Volume

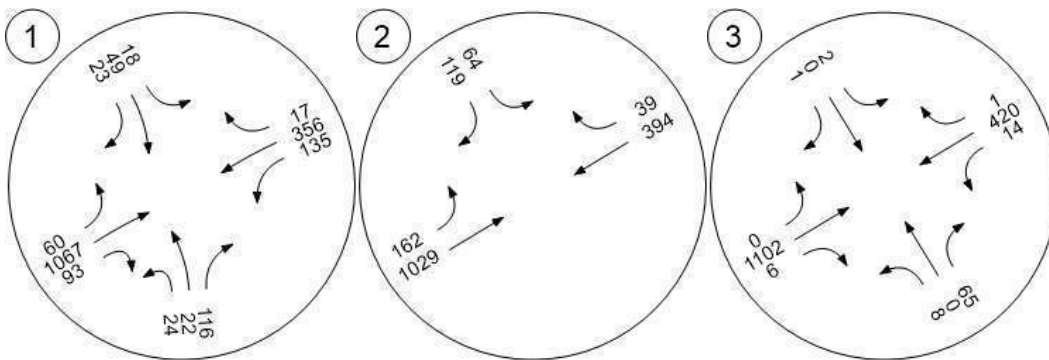


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Covenant School

Vistro File: \\...\\The Covenant School.vistro

Scenario 2 Existing PM Peak

Report File: \\...\\2_Existing PM.pdf

8/19/2025

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Harding Pike & Vaughns Gap Road	Signalized	HCM 7th Edition	NB Right	0.451	10.4	B
2	Harding Pike & Brook Hollow Road	Two-way stop	HCM 7th Edition	SB Left	0.504	123.4	F
3	Harding Pike & Vossland Drive/Percy Warner Boulevard	Signalized	HCM 7th Edition	NB Right	0.408	4.9	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Harding Pike & Vaughns Gap Road

Control Type:	Signalized	Delay (sec / veh):	10.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.451

Intersection Setup

Name	Vaughns Gap Road			Vaughns Gap Road			Harding Pike			Harding Pike		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	148.00	100.00	100.00	146.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name	Vaughns Gap Road			Vaughns Gap Road			Harding Pike			Harding Pike		
Base Volume Input [veh/h]	17	21	73	24	17	21	37	550	20	101	1212	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	21	73	24	17	21	37	550	20	101	1212	33
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	6	20	7	5	6	10	149	5	27	329	9
Total Analysis Volume [veh/h]	18	23	79	26	18	23	40	598	22	110	1317	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	130
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	53.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	20	0	0	20	0	15	50	0	15	50	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	4.5	4.5	0.0	4.5	4.5	0.0
All red [s]	0.0	2.5	0.0	0.0	2.5	0.0	1.5	1.5	0.0	2.0	1.5	0.0
Walk [s]	0.0	0.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	18.0	0.0	0.0	12.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	28.0	0.0	0.0	28.0	0.0	14.0	80.0	0.0	22.0	88.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	5	20	0	5	20	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	Yes		No	Yes	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	13.1	13.1	108.9	97.5	97.5	108.9	99.2	99.2
g / C, Green / Cycle	0.10	0.10	0.84	0.75	0.75	0.84	0.76	0.76
(v / s)_i Volume / Saturation Flow Rate	0.07	0.05	0.08	0.17	0.17	0.12	0.37	0.37
s, saturation flow rate [veh/h]	1501	1323	487	1683	1662	831	1683	1667
c, Capacity [veh/h]	183	172	430	1262	1246	734	1284	1272
d1, Uniform Delay [s]	56.65	54.76	3.60	4.91	4.91	2.42	5.81	5.82
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.09	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.20	0.47	0.39	0.42	0.43	0.07	1.33	1.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	0.36	0.09	0.23	0.23	0.14	0.49	0.49
d, Delay for Lane Group [s/veh]	57.85	55.24	4.00	5.33	5.33	2.50	7.14	7.16
Lane Group LOS	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.60	1.95	0.15	2.03	2.01	0.32	5.43	5.39
50th-Percentile Queue Length [ft/ln]	90.05	48.86	3.87	50.74	50.26	8.04	135.64	134.79
95th-Percentile Queue Length [veh/ln]	6.48	3.52	0.28	3.65	3.62	0.58	9.25	9.20
95th-Percentile Queue Length [ft/ln]	162.09	87.94	6.97	91.33	90.48	14.47	231.14	229.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.85	57.85	57.85	55.24	55.24	55.24	4.00	5.33	5.33	2.50	7.15	7.16
Movement LOS	E	E	E	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	57.85			55.24			5.25			6.80		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	10.44											
Intersection LOS	B											
Intersection V/C	0.451											

Emissions

Vehicle Miles Traveled [mph]	3.34	1.69	2.11	16.30	16.13	24.33	150.57	149.38
Stops [stops/h]	99.75	54.12	4.29	56.20	55.68	8.90	150.25	149.30
Fuel consumption [US gal/h]	2.00	0.98	0.16	1.57	1.55	1.00	7.94	7.88
CO [g/h]	139.47	68.52	10.87	109.61	108.55	69.63	554.85	550.84
NOx [g/h]	27.14	13.33	2.12	21.33	21.12	13.55	107.95	107.17
VOC [g/h]	32.32	15.88	2.52	25.40	25.16	16.14	128.59	127.66

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	54.47	0.00
I_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.885	0.000
Crosswalk LOS	F	F	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	338	338	1138	1262
d_b, Bicycle Delay [s]	44.86	44.86	12.06	8.86
I_b,int, Bicycle LOS Score for Intersection	1.743	1.662	0.988	1.598
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Harding Pike & Brook Hollow Road

Control Type:	Two-way stop	Delay (sec / veh):	123.4
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.504

Intersection Setup

Name	Brook Hollow Road		Harding Pike		Harding Pike	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	⇐⇐		⇐		⇐	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	30.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Brook Hollow Road		Harding Pike		Harding Pike	
Base Volume Input [veh/h]	30	154	126	530	1187	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	154	126	530	1187	82
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	42	34	144	323	22
Total Analysis Volume [veh/h]	33	167	137	576	1290	89
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.50	0.37	0.23	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	123.39	18.44	13.62	0.00	0.00	0.00
Movement LOS	F	C	B	A	A	A
95th-Percentile Queue Length [veh/ln]	2.60	1.71	0.90	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	64.91	42.63	22.55	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	35.55		2.62		0.00	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	3.92					
Intersection LOS	F					

Intersection Level Of Service Report

Intersection 3: Harding Pike & Vossland Drive/Percy Warner Boulevard

Control Type:	Signalized	Delay (sec / veh):	4.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.408

Intersection Setup

Name	Percy Warner Boulevard			Vossland Drive			Harding Pike			Harding Pike		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	103.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Percy Warner Boulevard			Vossland Drive			Harding Pike			Harding Pike		
Base Volume Input [veh/h]	5	0	35	1	0	2	2	551	2	47	1277	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	0	35	1	0	2	2	551	2	47	1277	2
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	10	0	0	1	1	150	1	13	347	1
Total Analysis Volume [veh/h]	5	0	38	1	0	2	2	599	2	51	1388	2
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	130
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	10.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	20	0	0	15	0	15	60	0	15	60	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	2.5	0.0	0.0	2.5	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			Yes			Yes	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	33.0	0.0	0.0	33.0	0.0	15.0	82.0	0.0	15.0	82.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	4	10	0	4	10	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	Yes		No	Yes	
Pedestrian Recall		No			No		No	Yes		No	Yes	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	7.4	7.4	114.6	105.3	105.3	114.6	108.3	108.3
g / C, Green / Cycle	0.06	0.06	0.88	0.81	0.81	0.88	0.83	0.83
(v / s)_i Volume / Saturation Flow Rate	0.03	0.00	0.00	0.16	0.16	0.06	0.38	0.38
s, saturation flow rate [veh/h]	1435	1500	435	1683	1681	823	1683	1682
c, Capacity [veh/h]	113	123	420	1363	1361	773	1401	1401
d1, Uniform Delay [s]	59.41	57.89	1.97	2.81	2.81	1.33	2.93	2.93
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.70	0.03	0.02	0.34	0.34	0.01	1.08	1.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.02	0.00	0.20	0.20	0.06	0.46	0.46
d, Delay for Lane Group [s/veh]	60.11	57.92	1.99	3.15	3.15	1.34	4.01	4.01
Lane Group LOS	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.30	0.10	0.00	1.22	1.21	0.06	2.96	2.96
50th-Percentile Queue Length [ft/ln]	32.60	2.38	0.12	30.39	30.37	1.60	73.92	73.89
95th-Percentile Queue Length [veh/ln]	2.35	0.17	0.01	2.19	2.19	0.11	5.32	5.32
95th-Percentile Queue Length [ft/ln]	58.68	4.29	0.22	54.71	54.66	2.87	133.05	133.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.11	60.11	60.11	57.92	57.92	57.92	1.99	3.15	3.15	1.34	4.01	4.01
Movement LOS	E	E	E	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	60.11			57.92			3.15			3.92		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	4.95											
Intersection LOS	A											
Intersection V/C	0.408											

Emissions

Vehicle Miles Traveled [mph]	1.10	0.10	0.53	73.64	73.57	2.22	30.19	30.17
Stops [stops/h]	36.11	2.64	0.14	33.67	33.64	1.77	81.88	81.85
Fuel consumption [US gal/h]	0.73	0.05	0.02	3.12	3.12	0.11	2.57	2.57
CO [g/h]	51.30	3.50	1.45	218.10	217.88	7.75	179.98	179.91
NOx [g/h]	9.98	0.68	0.28	42.43	42.39	1.51	35.02	35.00
VOC [g/h]	11.89	0.81	0.34	50.55	50.50	1.80	41.71	41.70

Other Modes

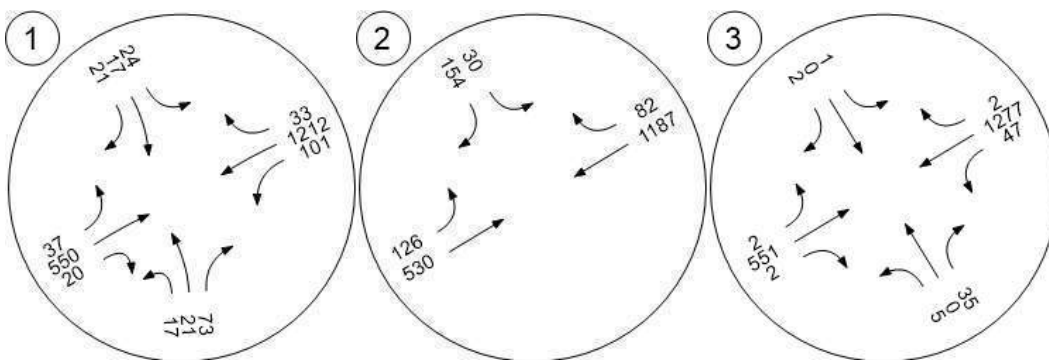
g_Walk,mi, Effective Walk Time [s]	0.0	23.0	11.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	44.03	54.47	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	1.729	2.862	0.000
Crosswalk LOS	F	A	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	415	415	1169	1169
d_b, Bicycle Delay [s]	40.80	40.80	11.22	11.22
l_b,int, Bicycle LOS Score for Intersection	1.626	1.565	0.945	1.582
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Traffic Volume - Future Total Volume



**FUTURE NO-BUILD CONDITIONS
CAPACITY ANALYSES**

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Covenant School

Vistro File: \\...\\The Covenant School.vistro

Scenario 3 Future No-Build AM Peak

Report File: \\...\\3_Future No-Build AM.pdf

8/19/2025

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Harding Pike & Vaughns Gap Road	Signalized	HCM 7th Edition	NB Right	0.505	14.6	B
2	Harding Pike & Brook Hollow Road	Two-way stop	HCM 7th Edition	SB Left	0.521	62.4	F
3	Harding Pike & Vossland Drive/Percy Warner Boulevard	Signalized	HCM 7th Edition	NB Right	0.398	6.8	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Harding Pike & Vaughns Gap Road

Control Type:	Signalized	Delay (sec / veh):	14.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.505

Intersection Setup

Name	Vaughns Gap Road			Vaughns Gap Road			Harding Pike			Harding Pike		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	148.00	100.00	100.00	146.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name	Vaughns Gap Road			Vaughns Gap Road			Harding Pike			Harding Pike		
Base Volume Input [veh/h]	25	23	121	19	51	24	62	1110	97	140	370	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	23	121	19	51	24	62	1110	97	140	370	18
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	6	33	5	14	7	17	302	26	38	101	5
Total Analysis Volume [veh/h]	27	25	132	21	55	26	67	1207	105	152	402	20
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	43.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	20	0	0	20	0	15	50	0	15	50	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	4.5	4.5	0.0	4.5	4.5	0.0
All red [s]	0.0	2.5	0.0	0.0	2.5	0.0	1.5	1.5	0.0	2.0	1.5	0.0
Walk [s]	0.0	0.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	18.0	0.0	0.0	12.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	28.0	0.0	0.0	28.0	0.0	14.0	70.0	0.0	22.0	78.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	5	20	0	5	20	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	Yes		No	Yes	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	17.2	17.2	94.8	83.3	83.3	94.8	84.4	84.4
g / C, Green / Cycle	0.14	0.14	0.79	0.69	0.69	0.79	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.11	0.06	0.06	0.36	0.36	0.26	0.12	0.12
s, saturation flow rate [veh/h]	1476	1485	959	1683	1636	536	1683	1656
c, Capacity [veh/h]	247	250	806	1167	1134	433	1183	1164
d1, Uniform Delay [s]	49.53	46.71	3.33	8.86	8.87	6.46	5.99	5.99
k, delay calibration	0.11	0.04	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.38	0.35	0.19	1.69	1.75	1.98	0.30	0.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.69	0.38	0.08	0.52	0.53	0.32	0.17	0.17
d, Delay for Lane Group [s/veh]	52.91	47.06	3.52	10.55	10.62	8.44	6.29	6.30
Lane Group LOS	D	D	A	B	B	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.12	2.61	0.30	6.91	6.76	0.85	1.49	1.48
50th-Percentile Queue Length [ft/ln]	127.98	65.24	7.48	172.80	169.06	21.26	37.37	36.94
95th-Percentile Queue Length [veh/ln]	8.83	4.70	0.54	11.22	11.03	1.53	2.69	2.66
95th-Percentile Queue Length [ft/ln]	220.75	117.42	13.46	280.59	275.68	38.28	67.26	66.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.91	52.91	52.91	47.06	47.06	47.06	3.52	10.58	10.62	8.44	6.29	6.30
Movement LOS	D	D	D	D	D	D	A	B	B	A	A	A
d_A, Approach Delay [s/veh]	52.91			47.06			10.24			6.86		
Approach LOS	D			D			B			A		
d_I, Intersection Delay [s/veh]	14.56											
Intersection LOS	B											
Intersection V/C	0.505											

Emissions

Vehicle Miles Traveled [mph]	5.09	2.56	3.53	34.78	33.90	33.73	47.04	46.44
Stops [stops/h]	153.58	78.28	8.97	207.36	202.87	25.52	44.84	44.33
Fuel consumption [US gal/h]	2.88	1.32	0.28	5.08	4.97	1.71	2.42	2.39
CO [g/h]	201.13	91.95	19.36	355.29	347.54	119.79	169.16	167.06
NOx [g/h]	39.13	17.89	3.77	69.13	67.62	23.31	32.91	32.50
VOC [g/h]	46.61	21.31	4.49	82.34	80.55	27.76	39.20	38.72

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	49.50	0.00
I_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.843	0.000
Crosswalk LOS	F	F	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	367	367	1067	1200
d_b, Bicycle Delay [s]	40.02	40.02	13.07	9.60
I_b,int, Bicycle LOS Score for Intersection	1.838	1.715	1.535	0.923
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Harding Pike & Brook Hollow Road

Control Type:	Two-way stop	Delay (sec / veh):	62.4
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.521

Intersection Setup

Name	Brook Hollow Road		Harding Pike		Harding Pike	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	⇐⇐		⇐		⇐	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	30.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Brook Hollow Road		Harding Pike		Harding Pike	
Base Volume Input [veh/h]	67	124	169	1071	410	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	124	169	1071	410	41
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	34	46	291	111	11
Total Analysis Volume [veh/h]	73	135	184	1164	446	45
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.52	0.16	0.15	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	62.35	10.51	8.84	0.00	0.00	0.00
Movement LOS	F	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	2.97	0.57	0.54	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	74.29	14.20	13.51	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	28.69		1.21		0.00	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	3.71					
Intersection LOS	F					

Intersection Level Of Service Report

Intersection 3: Harding Pike & Vossland Drive/Percy Warner Boulevard

Control Type:	Signalized	Delay (sec / veh):	6.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.398

Intersection Setup

Name	Percy Warner Boulevard			Vossland Drive			Harding Pike			Harding Pike		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	103.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Percy Warner Boulevard			Vossland Drive			Harding Pike			Harding Pike		
Base Volume Input [veh/h]	8	0	68	2	0	1	0	1147	6	15	437	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	0	68	2	0	1	0	1147	6	15	437	1
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	18	1	0	0	0	312	2	4	119	0
Total Analysis Volume [veh/h]	9	0	74	2	0	1	0	1247	7	16	475	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	97.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	20	0	0	15	0	15	60	0	15	60	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	2.5	0.0	0.0	2.5	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			Yes			Yes	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	32.0	0.0	0.0	32.0	0.0	15.0	73.0	0.0	15.0	73.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	4	10	0	4	10	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	Yes		No	Yes	
Pedestrian Recall		No			No		No	Yes		No	Yes	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	9.6	9.6	102.4	94.8	94.8	102.4	96.4	96.4
g / C, Green / Cycle	0.08	0.08	0.85	0.79	0.79	0.85	0.80	0.80
(v / s)_i Volume / Saturation Flow Rate	0.05	0.00	0.00	0.34	0.34	0.03	0.13	0.13
s, saturation flow rate [veh/h]	1434	1199	885	1683	1680	503	1683	1682
c, Capacity [veh/h]	148	146	810	1329	1326	462	1351	1350
d1, Uniform Delay [s]	53.56	50.85	0.00	4.05	4.05	2.53	2.69	2.69
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.02	0.02	0.00	1.04	1.04	0.01	0.26	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.51	0.02	0.00	0.43	0.43	0.03	0.16	0.16
d, Delay for Lane Group [s/veh]	54.58	50.87	0.00	5.08	5.09	2.54	2.95	2.95
Lane Group LOS	D	D	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.27	0.09	0.00	3.40	3.39	0.03	0.85	0.85
50th-Percentile Queue Length [ft/ln]	56.77	2.13	0.00	84.89	84.76	0.74	21.28	21.27
95th-Percentile Queue Length [veh/ln]	4.09	0.15	0.00	6.11	6.10	0.05	1.53	1.53
95th-Percentile Queue Length [ft/ln]	102.19	3.83	0.00	152.80	152.57	1.34	38.30	38.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.58	54.58	54.58	50.87	50.87	50.87	0.00	5.09	5.09	2.54	2.95	2.95
Movement LOS	D	D	D	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	54.58			50.87			5.09			2.94		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	6.82											
Intersection LOS	A											
Intersection V/C	0.398											

Emissions

Vehicle Miles Traveled [mph]	2.08	0.10	0.00	153.60	153.33	0.71	10.34	10.33
Stops [stops/h]	68.13	2.55	0.00	101.87	101.71	0.89	25.53	25.52
Fuel consumption [US gal/h]	1.31	0.05	0.00	7.13	7.12	0.04	0.80	0.80
CO [g/h]	91.31	3.17	0.00	498.30	497.45	3.01	56.15	56.12
NOx [g/h]	17.76	0.62	0.00	96.95	96.79	0.59	10.92	10.92
VOC [g/h]	21.16	0.73	0.00	115.49	115.29	0.70	13.01	13.01

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	23.0	11.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	39.20	49.50	0.00
I_p,int, Pedestrian LOS Score for Intersectio	0.000	1.721	2.793	0.000
Crosswalk LOS	F	A	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	433	433	1117	1117
d_b, Bicycle Delay [s]	36.82	36.82	11.70	11.70
I_b,int, Bicycle LOS Score for Intersection	1.685	1.565	1.439	0.861
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Traffic Volume - Future Total Volume

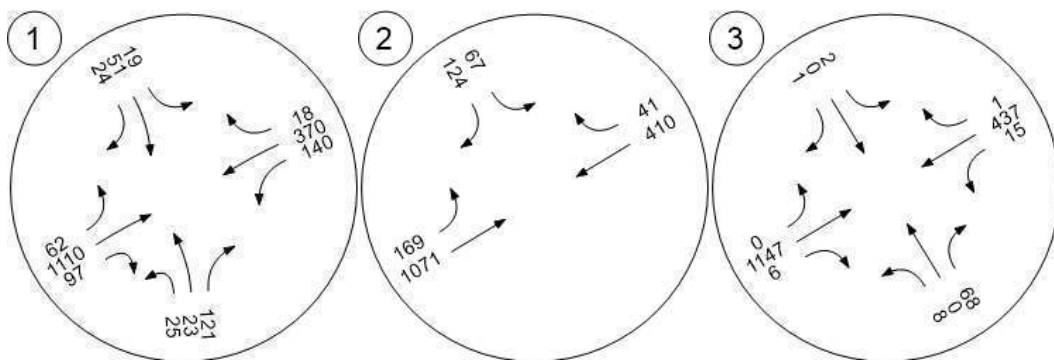


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Covenant School

Vistro File: \\...\\The Covenant School.vistro

Scenario 4 Future No-Build PM Peak

Report File: \\...\\4_Future No-Build PM.pdf

8/19/2025

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Harding Pike & Vaughns Gap Road	Signalized	HCM 7th Edition	NB Right	0.470	10.8	B
2	Harding Pike & Brook Hollow Road	Two-way stop	HCM 7th Edition	SB Left	0.597	165.3	F
3	Harding Pike & Vossland Drive/Percy Warner Boulevard	Signalized	HCM 7th Edition	NB Right	0.424	5.1	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Harding Pike & Vaughns Gap Road

Control Type:	Signalized	Delay (sec / veh):	10.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.470

Intersection Setup

Name	Vaughns Gap Road			Vaughns Gap Road			Harding Pike			Harding Pike		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	148.00	100.00	100.00	146.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name	Vaughns Gap Road			Vaughns Gap Road			Harding Pike			Harding Pike		
Base Volume Input [veh/h]	18	22	76	25	18	22	38	572	21	105	1261	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	22	76	25	18	22	38	572	21	105	1261	34
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	6	21	7	5	6	10	155	6	29	343	9
Total Analysis Volume [veh/h]	20	24	83	27	20	24	41	622	23	114	1371	37
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	130
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	53.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	20	0	0	20	0	15	50	0	15	50	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	4.5	4.5	0.0	4.5	4.5	0.0
All red [s]	0.0	2.5	0.0	0.0	2.5	0.0	1.5	1.5	0.0	2.0	1.5	0.0
Walk [s]	0.0	0.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	18.0	0.0	0.0	12.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	28.0	0.0	0.0	28.0	0.0	14.0	80.0	0.0	22.0	88.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	5	20	0	5	20	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	Yes		No	Yes	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	13.5	13.5	108.5	97.1	97.1	108.5	98.8	98.8
g / C, Green / Cycle	0.10	0.10	0.83	0.75	0.75	0.83	0.76	0.76
(v / s)_i Volume / Saturation Flow Rate	0.08	0.05	0.08	0.18	0.18	0.13	0.39	0.39
s, saturation flow rate [veh/h]	1503	1307	470	1683	1662	816	1683	1667
c, Capacity [veh/h]	189	175	413	1256	1240	718	1278	1266
d1, Uniform Delay [s]	56.43	54.50	3.95	5.08	5.08	2.54	6.14	6.14
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.13	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.22	0.49	0.44	0.45	0.45	0.11	1.46	1.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	0.37	0.09	0.24	0.24	0.15	0.51	0.51
d, Delay for Lane Group [s/veh]	57.65	54.99	4.39	5.53	5.54	2.66	7.59	7.62
Lane Group LOS	E	D	A	A	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.76	2.05	0.17	2.18	2.15	0.36	5.93	5.90
50th-Percentile Queue Length [ft/ln]	94.04	51.16	4.15	54.38	53.85	8.88	148.21	147.40
95th-Percentile Queue Length [veh/ln]	6.77	3.68	0.30	3.92	3.88	0.64	9.92	9.88
95th-Percentile Queue Length [ft/ln]	169.27	92.09	7.47	97.88	96.93	15.99	248.03	246.95

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.65	57.65	57.65	54.99	54.99	54.99	4.39	5.53	5.54	2.66	7.60	7.62
Movement LOS	E	E	E	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	57.65			54.99			5.46			7.23		
Approach LOS	E			D			A			A		
d_I, Intersection Delay [s/veh]	10.78											
Intersection LOS	B											
Intersection V/C	0.470											

Emissions

Vehicle Miles Traveled [mph]	3.49	1.77	2.16	16.96	16.78	25.30	156.58	155.41
Stops [stops/h]	104.17	56.67	4.60	60.23	59.65	9.84	164.17	163.27
Fuel consumption [US gal/h]	2.08	1.02	0.17	1.67	1.65	1.05	8.41	8.36
CO [g/h]	145.39	71.59	11.55	116.44	115.27	73.13	588.04	584.18
NOx [g/h]	28.29	13.93	2.25	22.65	22.43	14.23	114.41	113.66
VOC [g/h]	33.70	16.59	2.68	26.99	26.71	16.95	136.28	135.39

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	54.47	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.908	0.000
Crosswalk LOS	F	F	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	338	338	1138	1262
d_b, Bicycle Delay [s]	44.86	44.86	12.06	8.86
l_b,int, Bicycle LOS Score for Intersection	1.751	1.667	1.008	1.643
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Harding Pike & Brook Hollow Road

Control Type:	Two-way stop	Delay (sec / veh):	165.3
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.597

Intersection Setup

Name	Brook Hollow Road		Harding Pike		Harding Pike	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	⇐⇐		⇐		⇐	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	30.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Brook Hollow Road		Harding Pike		Harding Pike	
Base Volume Input [veh/h]	31	160	131	551	1235	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	160	131	551	1235	85
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	43	36	150	336	23
Total Analysis Volume [veh/h]	34	174	142	599	1342	92
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.60	0.39	0.25	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	165.33	19.63	14.26	0.00	0.00	0.00
Movement LOS	F	C	B	A	A	A
95th-Percentile Queue Length [veh/ln]	3.36	1.92	1.01	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	83.99	48.11	25.16	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	43.28		2.74		0.00	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	4.62					
Intersection LOS	F					

Intersection Level Of Service Report

Intersection 3: Harding Pike & Vossland Drive/Percy Warner Boulevard

Control Type:	Signalized	Delay (sec / veh):	5.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.424

Intersection Setup

Name	Percy Warner Boulevard			Vossland Drive			Harding Pike			Harding Pike		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	103.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Percy Warner Boulevard			Vossland Drive			Harding Pike			Harding Pike		
Base Volume Input [veh/h]	5	0	36	1	0	2	2	573	2	49	1329	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	0	36	1	0	2	2	573	2	49	1329	2
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	10	0	0	1	1	156	1	13	361	1
Total Analysis Volume [veh/h]	5	0	39	1	0	2	2	623	2	53	1445	2
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	130
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	10.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	20	0	0	15	0	15	60	0	15	60	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	2.5	0.0	0.0	2.5	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			Yes			Yes	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	33.0	0.0	0.0	33.0	0.0	15.0	82.0	0.0	15.0	82.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	4	10	0	4	10	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	Yes		No	Yes	
Pedestrian Recall		No			No		No	Yes		No	Yes	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	7.4	7.4	114.6	105.2	105.2	114.6	108.3	108.3
g / C, Green / Cycle	0.06	0.06	0.88	0.81	0.81	0.88	0.83	0.83
(v / s)_i Volume / Saturation Flow Rate	0.03	0.00	0.00	0.17	0.17	0.06	0.40	0.40
s, saturation flow rate [veh/h]	1435	1502	417	1683	1681	808	1683	1682
c, Capacity [veh/h]	114	123	403	1362	1360	759	1401	1400
d1, Uniform Delay [s]	59.40	57.84	2.09	2.86	2.86	1.35	3.03	3.03
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.71	0.03	0.02	0.35	0.35	0.01	1.16	1.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.36	0.02	0.00	0.21	0.21	0.06	0.48	0.48
d, Delay for Lane Group [s/veh]	60.11	57.87	2.11	3.21	3.22	1.36	4.19	4.19
Lane Group LOS	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.34	0.10	0.01	1.29	1.28	0.07	3.18	3.18
50th-Percentile Queue Length [ft/ln]	33.43	2.38	0.13	32.13	32.10	1.69	79.45	79.43
95th-Percentile Queue Length [veh/ln]	2.41	0.17	0.01	2.31	2.31	0.12	5.72	5.72
95th-Percentile Queue Length [ft/ln]	60.17	4.29	0.23	57.83	57.78	3.04	143.01	142.97

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.11	60.11	60.11	57.87	57.87	57.87	2.11	3.21	3.22	1.36	4.19	4.19
Movement LOS	E	E	E	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	60.11			57.87			3.21			4.09		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	5.06											
Intersection LOS	A											
Intersection V/C	0.424											

Emissions

Vehicle Miles Traveled [mph]	1.12	0.10	0.53	76.57	76.49	2.31	31.41	31.40
Stops [stops/h]	37.03	2.64	0.14	35.59	35.56	1.87	88.00	87.98
Fuel consumption [US gal/h]	0.75	0.05	0.02	3.26	3.25	0.12	2.74	2.74
CO [g/h]	52.58	3.49	1.46	227.55	227.32	8.12	191.40	191.34
NOx [g/h]	10.23	0.68	0.28	44.27	44.23	1.58	37.24	37.23
VOC [g/h]	12.19	0.81	0.34	52.74	52.68	1.88	44.36	44.34

Other Modes

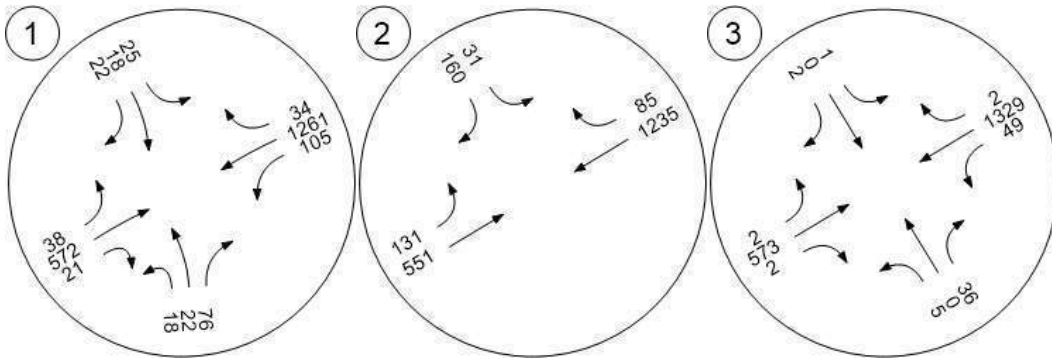
g_Walk,mi, Effective Walk Time [s]	0.0	23.0	11.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	44.03	54.47	0.00
I_p,int, Pedestrian LOS Score for Intersectio	0.000	1.729	2.884	0.000
Crosswalk LOS	F	A	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	415	415	1169	1169
d_b, Bicycle Delay [s]	40.80	40.80	11.22	11.22
I_b,int, Bicycle LOS Score for Intersection	1.627	1.565	0.964	1.626
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Traffic Volume - Future Total Volume



**FUTURE BUILD CONDITIONS
CAPACITY ANALYSES**

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Covenant School

Vistro File: \\...\\The Covenant School.vistro

Scenario 5 Future Build AM Peak

Report File: \\...\\5_Future Build AM.pdf

8/19/2025

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Harding Pike & Vaughns Gap Road	Signalized	HCM 7th Edition	NB Right	0.530	15.3	B
2	Harding Pike & Brook Hollow Road	Two-way stop	HCM 7th Edition	SB Left	1.717	1,424.0	F
3	Harding Pike & Vossland Drive/Percy Warner Boulevard	Signalized	HCM 7th Edition	NB Right	0.433	7.4	A
4	Brook Hollow Road and Driveway A	Two-way stop	HCM 7th Edition	WB Left	0.301	17.3	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Harding Pike & Vaughns Gap Road

Control Type:	Signalized	Delay (sec / veh):	15.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.530

Intersection Setup

Name	Vaughns Gap Road			Vaughns Gap Road			Harding Pike			Harding Pike		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	148.00	100.00	100.00	146.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name	Vaughns Gap Road			Vaughns Gap Road			Harding Pike			Harding Pike		
Base Volume Input [veh/h]	25	23	132	19	51	24	62	1156	97	149	405	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	23	132	19	51	24	62	1156	97	149	405	18
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	6	36	5	14	7	17	314	26	40	110	5
Total Analysis Volume [veh/h]	27	25	143	21	55	26	67	1257	105	162	440	20
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	43.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	20	0	0	20	0	15	50	0	15	50	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	4.5	4.5	0.0	4.5	4.5	0.0
All red [s]	0.0	2.5	0.0	0.0	2.5	0.0	1.5	1.5	0.0	2.0	1.5	0.0
Walk [s]	0.0	0.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	18.0	0.0	0.0	12.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	28.0	0.0	0.0	28.0	0.0	14.0	70.0	0.0	22.0	78.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	5	20	0	5	20	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	Yes		No	Yes	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	18.2	18.2	93.8	82.3	82.3	93.8	83.4	83.4
g / C, Green / Cycle	0.15	0.15	0.78	0.69	0.69	0.78	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.12	0.06	0.07	0.38	0.38	0.29	0.13	0.13
s, saturation flow rate [veh/h]	1467	1459	933	1683	1638	522	1683	1658
c, Capacity [veh/h]	257	258	775	1153	1122	415	1169	1152
d1, Uniform Delay [s]	49.05	45.84	3.60	9.55	9.57	7.49	6.40	6.40
k, delay calibration	0.14	0.04	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.70	0.32	0.20	1.90	1.97	2.43	0.34	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.70	0.36	0.08	0.55	0.55	0.36	0.18	0.18
d, Delay for Lane Group [s/veh]	53.75	46.16	3.80	11.46	11.54	9.92	6.74	6.75
Lane Group LOS	D	D	A	B	B	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.54	2.58	0.32	7.64	7.49	0.98	1.72	1.70
50th-Percentile Queue Length [ft/ln]	138.40	64.53	7.96	190.93	187.23	24.50	42.93	42.45
95th-Percentile Queue Length [veh/ln]	9.39	4.65	0.57	12.17	11.98	1.76	3.09	3.06
95th-Percentile Queue Length [ft/ln]	234.86	116.15	14.33	304.23	299.43	44.11	77.27	76.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.75	53.75	53.75	46.16	46.16	46.16	3.80	11.50	11.54	9.92	6.74	6.75
Movement LOS	D	D	D	D	D	D	A	B	B	A	A	A
d_A, Approach Delay [s/veh]	53.75			46.16			11.14			7.57		
Approach LOS	D			D			B			A		
d_I, Intersection Delay [s/veh]	15.27											
Intersection LOS	B											
Intersection V/C	0.530											

Emissions

Vehicle Miles Traveled [mph]	5.42	2.56	3.53	36.07	35.22	35.90	51.27	50.64
Stops [stops/h]	166.07	77.43	9.55	229.11	224.68	29.40	51.51	50.94
Fuel consumption [US gal/h]	3.11	1.29	0.29	5.56	5.45	1.90	2.69	2.66
CO [g/h]	217.34	90.51	20.10	388.88	381.29	132.60	188.02	185.77
NOx [g/h]	42.29	17.61	3.91	75.66	74.19	25.80	36.58	36.14
VOC [g/h]	50.37	20.98	4.66	90.13	88.37	30.73	43.58	43.06

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	49.50	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.867	0.000
Crosswalk LOS	F	F	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	367	367	1067	1200
d_b, Bicycle Delay [s]	40.02	40.02	13.07	9.60
l_b,int, Bicycle LOS Score for Intersection	1.857	1.715	1.572	0.960
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Harding Pike & Brook Hollow Road

Control Type:	Two-way stop	Delay (sec / veh):	1,424.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	1.717

Intersection Setup

Name	Brook Hollow Road		Harding Pike		Harding Pike	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	⇐⇐		⇐		⇐	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	30.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Brook Hollow Road		Harding Pike		Harding Pike	
Base Volume Input [veh/h]	156	168	226	1071	410	154
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	156	168	226	1071	410	154
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	46	61	291	111	42
Total Analysis Volume [veh/h]	170	183	246	1164	446	167
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.72	0.23	0.23	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	1423.99	11.58	9.63	0.00	0.00	0.00
Movement LOS	F	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	38.63	0.92	0.87	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	965.73	22.96	21.75	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	691.63		1.68		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	103.55					
Intersection LOS	F					

Intersection Level Of Service Report

Intersection 3: Harding Pike & Vossland Drive/Percy Warner Boulevard

Control Type:	Signalized	Delay (sec / veh):	7.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.433

Intersection Setup

Name	Percy Warner Boulevard			Vossland Drive			Harding Pike			Harding Pike		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	103.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Percy Warner Boulevard			Vossland Drive			Harding Pike			Harding Pike		
Base Volume Input [veh/h]	19	0	68	2	0	1	0	1227	15	15	539	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	0	68	2	0	1	0	1227	15	15	539	1
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	0	18	1	0	0	0	333	4	4	146	0
Total Analysis Volume [veh/h]	21	0	74	2	0	1	0	1334	16	16	586	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	97.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	20	0	0	15	0	15	60	0	15	60	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	2.5	0.0	0.0	2.5	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			Yes			Yes	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	32.0	0.0	0.0	32.0	0.0	15.0	73.0	0.0	15.0	73.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	4	10	0	4	10	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	Yes		No	Yes	
Pedestrian Recall		No			No		No	Yes		No	Yes	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	10.7	10.7	101.3	93.7	93.7	101.3	95.3	95.3
g / C, Green / Cycle	0.09	0.09	0.84	0.78	0.78	0.84	0.79	0.79
(v / s)_i Volume / Saturation Flow Rate	0.06	0.00	0.00	0.37	0.37	0.03	0.16	0.16
s, saturation flow rate [veh/h]	1422	1160	812	1683	1676	470	1683	1682
c, Capacity [veh/h]	163	153	736	1314	1308	427	1336	1335
d1, Uniform Delay [s]	52.94	49.88	0.00	4.58	4.58	3.02	3.04	3.04
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.01	0.02	0.00	1.23	1.24	0.01	0.34	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.53	0.02	0.00	0.47	0.47	0.04	0.20	0.20
d, Delay for Lane Group [s/veh]	53.95	49.90	0.00	5.81	5.82	3.03	3.38	3.38
Lane Group LOS	D	D	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.59	0.08	0.00	4.13	4.12	0.03	1.19	1.19
50th-Percentile Queue Length [ft/ln]	64.77	2.10	0.00	103.23	102.89	0.86	29.64	29.63
95th-Percentile Queue Length [veh/ln]	4.66	0.15	0.00	7.43	7.41	0.06	2.13	2.13
95th-Percentile Queue Length [ft/ln]	116.59	3.78	0.00	185.81	185.21	1.55	53.36	53.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.95	53.95	53.95	49.90	49.90	49.90	0.00	5.81	5.82	3.03	3.38	3.38
Movement LOS	D	D	D	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	53.95			49.90			5.81			3.37		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	7.39											
Intersection LOS	A											
Intersection V/C	0.433											

Emissions

Vehicle Miles Traveled [mph]	2.38	0.10	0.00	165.63	164.98	0.71	12.74	12.74
Stops [stops/h]	77.73	2.52	0.00	123.88	123.47	1.03	35.57	35.56
Fuel consumption [US gal/h]	1.48	0.04	0.00	7.95	7.92	0.05	1.07	1.06
CO [g/h]	103.64	3.12	0.00	555.96	553.91	3.24	74.46	74.42
NOx [g/h]	20.16	0.61	0.00	108.17	107.77	0.63	14.49	14.48
VOC [g/h]	24.02	0.72	0.00	128.85	128.37	0.75	17.26	17.25

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	23.0	11.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	39.20	49.50	0.00
I_p,int, Pedestrian LOS Score for Intersectio	0.000	1.721	2.867	0.000
Crosswalk LOS	F	A	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	433	433	1117	1117
d_b, Bicycle Delay [s]	36.82	36.82	11.70	11.70
I_b,int, Bicycle LOS Score for Intersection	1.703	1.565	1.512	0.945
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Brook Hollow Road and Driveway A

Control Type:	Two-way stop	Delay (sec / veh):	17.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.301

Intersection Setup

Name	Brook Hollow Road		Brook Hollow Road		Driveway A	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Brook Hollow Road		Brook Hollow Road		Driveway A	
Base Volume Input [veh/h]	209	170	56	190	133	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	209	170	56	190	133	44
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	57	46	15	52	36	12
Total Analysis Volume [veh/h]	227	185	61	207	145	48
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.05	0.00	0.30	0.06
d_M, Delay for Movement [s/veh]	0.00	0.00	8.12	0.00	17.26	13.94
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.10	0.10	1.67	1.67
95th-Percentile Queue Length [ft/ln]	0.00	0.00	2.41	2.41	41.78	41.78
d_A, Approach Delay [s/veh]	0.00		1.85		16.44	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	4.19					
Intersection LOS	C					

Traffic Volume - Future Total Volume

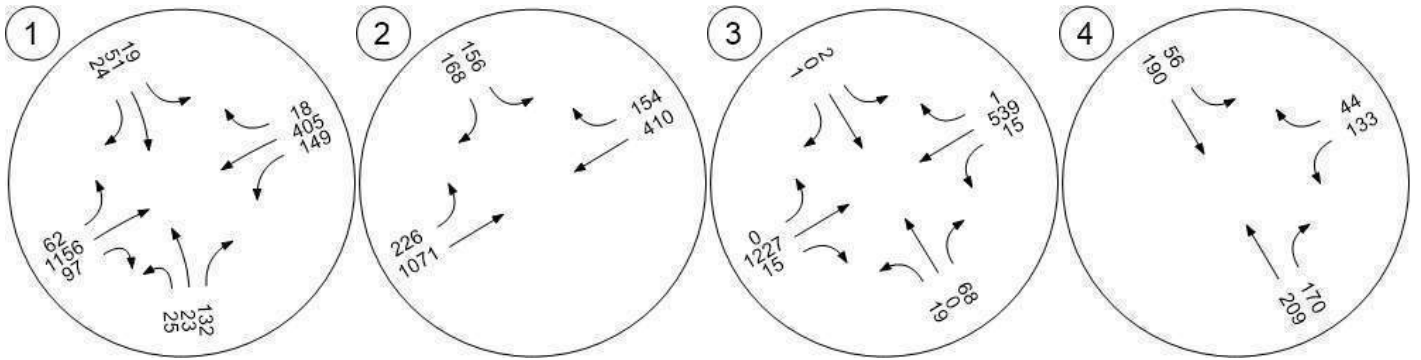


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Covenant School

Vistro File: \\...\The Covenant School.vistro

Scenario 6 Future Build PM Peak

Report File: \\...\6_Future Build PM.pdf

8/19/2025

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Harding Pike & Vaughns Gap Road	Signalized	HCM 7th Edition	NB Right	0.474	10.9	B
2	Harding Pike & Brook Hollow Road	Two-way stop	HCM 7th Edition	SB Left	1.249	776.1	F
3	Harding Pike & Vossland Drive/Percy Warner Boulevard	Signalized	HCM 7th Edition	NB Right	0.432	5.2	A
4	Brook Hollow Road and Driveway A	Two-way stop	HCM 7th Edition	WB Left	0.075	12.0	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: Harding Pike & Vaughns Gap Road

Control Type:	Signalized	Delay (sec / veh):	10.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.474

Intersection Setup

Name	Vaughns Gap Road			Vaughns Gap Road			Harding Pike			Harding Pike		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	148.00	100.00	100.00	146.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name	Vaughns Gap Road			Vaughns Gap Road			Harding Pike			Harding Pike		
Base Volume Input [veh/h]	18	22	78	25	18	22	38	582	21	108	1272	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	22	78	25	18	22	38	582	21	108	1272	34
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	6	21	7	5	6	10	158	6	29	346	9
Total Analysis Volume [veh/h]	20	24	85	27	20	24	41	633	23	117	1383	37
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	130
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	53.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	20	0	0	20	0	15	50	0	15	50	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	4.5	4.5	0.0	4.5	4.5	0.0
All red [s]	0.0	2.5	0.0	0.0	2.5	0.0	1.5	1.5	0.0	2.0	1.5	0.0
Walk [s]	0.0	0.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	18.0	0.0	0.0	12.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	28.0	0.0	0.0	28.0	0.0	14.0	80.0	0.0	22.0	88.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	5	20	0	5	20	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	Yes		No	Yes	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	13.7	13.7	108.3	96.9	96.9	108.3	98.6	98.6
g / C, Green / Cycle	0.11	0.11	0.83	0.75	0.75	0.83	0.76	0.76
(v / s)_i Volume / Saturation Flow Rate	0.08	0.05	0.08	0.18	0.18	0.13	0.39	0.39
s, saturation flow rate [veh/h]	1501	1298	467	1683	1662	810	1683	1668
c, Capacity [veh/h]	191	176	408	1253	1238	711	1275	1264
d1, Uniform Delay [s]	56.33	54.32	4.05	5.17	5.17	2.60	6.25	6.25
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.16	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.23	0.48	0.45	0.46	0.46	0.14	1.49	1.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.62	0.37	0.09	0.24	0.24	0.15	0.51	0.51
d, Delay for Lane Group [s/veh]	57.56	54.80	4.51	5.62	5.63	2.74	7.74	7.76
Lane Group LOS	E	D	A	A	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.83	2.04	0.17	2.24	2.22	0.38	6.07	6.04
50th-Percentile Queue Length [ft/ln]	95.64	51.07	4.22	56.04	55.51	9.43	151.81	151.02
95th-Percentile Queue Length [veh/ln]	6.89	3.68	0.30	4.04	4.00	0.68	10.11	10.07
95th-Percentile Queue Length [ft/ln]	172.16	91.93	7.59	100.88	99.91	16.97	252.84	251.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.56	57.56	57.56	54.80	54.80	54.80	4.51	5.63	5.63	2.74	7.75	7.76
Movement LOS	E	E	E	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	57.56			54.80			5.56			7.37		
Approach LOS	E			D			A			A		
d_I, Intersection Delay [s/veh]	10.87											
Intersection LOS	B											
Intersection V/C	0.474											

Emissions

Vehicle Miles Traveled [mph]	3.55	1.77	2.16	17.25	17.06	26.02	157.90	156.75
Stops [stops/h]	105.94	56.57	4.67	62.08	61.48	10.44	168.16	167.28
Fuel consumption [US gal/h]	2.11	1.02	0.17	1.71	1.69	1.08	8.53	8.48
CO [g/h]	147.73	71.40	11.68	119.53	118.34	75.63	596.60	592.81
NOx [g/h]	28.74	13.89	2.27	23.26	23.02	14.71	116.08	115.34
VOC [g/h]	34.24	16.55	2.71	27.70	27.43	17.53	138.27	137.39

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	54.47	0.00
I_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.914	0.000
Crosswalk LOS	F	F	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	338	338	1138	1262
d_b, Bicycle Delay [s]	44.86	44.86	12.06	8.86
I_b,int, Bicycle LOS Score for Intersection	1.754	1.667	1.016	1.654
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Harding Pike & Brook Hollow Road

Control Type:	Two-way stop	Delay (sec / veh):	776.1
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	1.249

Intersection Setup

Name	Brook Hollow Road		Harding Pike		Harding Pike	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	⇐⇐		⇐		⇐	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	30.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Brook Hollow Road		Harding Pike		Harding Pike	
Base Volume Input [veh/h]	59	174	143	551	1235	109
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	174	143	551	1235	109
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	47	39	150	336	30
Total Analysis Volume [veh/h]	64	189	155	599	1342	118
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.25	0.44	0.28	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	776.11	21.00	14.84	0.00	0.00	0.00
Movement LOS	F	C	B	A	A	A
95th-Percentile Queue Length [veh/ln]	12.80	2.28	1.17	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	319.94	57.02	29.15	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	212.21		3.06		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	22.71					
Intersection LOS	F					

Intersection Level Of Service Report

Intersection 3: Harding Pike & Vossland Drive/Percy Warner Boulevard

Control Type:	Signalized	Delay (sec / veh):	5.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.432

Intersection Setup

Name	Percy Warner Boulevard			Vossland Drive			Harding Pike			Harding Pike		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	103.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Percy Warner Boulevard			Vossland Drive			Harding Pike			Harding Pike		
Base Volume Input [veh/h]	7	0	36	1	0	2	2	598	5	49	1351	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	0	36	1	0	2	2	598	5	49	1351	2
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	10	0	0	1	1	163	1	13	367	1
Total Analysis Volume [veh/h]	8	0	39	1	0	2	2	650	5	53	1468	2
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	130
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	10.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	20	0	0	15	0	15	60	0	15	60	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	2.5	0.0	0.0	2.5	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			Yes			Yes	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	33.0	0.0	0.0	33.0	0.0	15.0	82.0	0.0	15.0	82.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	4	10	0	4	10	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	Yes		No	Yes	
Pedestrian Recall		No			No		No	Yes		No	Yes	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	7.6	7.6	114.4	105.1	105.1	114.4	108.1	108.1
g / C, Green / Cycle	0.06	0.06	0.88	0.81	0.81	0.88	0.83	0.83
(v / s)_i Volume / Saturation Flow Rate	0.03	0.00	0.00	0.18	0.18	0.06	0.40	0.40
s, saturation flow rate [veh/h]	1431	1506	409	1683	1678	790	1683	1682
c, Capacity [veh/h]	116	125	396	1360	1356	741	1399	1399
d1, Uniform Delay [s]	59.36	57.74	2.16	2.92	2.92	1.38	3.09	3.09
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.73	0.03	0.02	0.38	0.38	0.01	1.20	1.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.02	0.01	0.22	0.22	0.07	0.48	0.48
d, Delay for Lane Group [s/veh]	60.10	57.76	2.19	3.29	3.29	1.39	4.29	4.29
Lane Group LOS	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.40	0.10	0.01	1.37	1.37	0.07	3.30	3.30
50th-Percentile Queue Length [ft/ln]	35.06	2.38	0.13	34.36	34.29	1.73	82.59	82.56
95th-Percentile Queue Length [veh/ln]	2.52	0.17	0.01	2.47	2.47	0.12	5.95	5.94
95th-Percentile Queue Length [ft/ln]	63.11	4.29	0.23	61.85	61.72	3.11	148.65	148.61

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.10	60.10	60.10	57.76	57.76	57.76	2.19	3.29	3.29	1.39	4.29	4.29
Movement LOS	E	E	E	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	60.10			57.76			3.29			4.19		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	5.18											
Intersection LOS	A											
Intersection V/C	0.432											

Emissions

Vehicle Miles Traveled [mph]	1.18	0.10	0.53	80.36	80.16	2.31	31.93	31.92
Stops [stops/h]	38.84	2.64	0.14	38.06	37.98	1.92	91.48	91.45
Fuel consumption [US gal/h]	0.79	0.05	0.02	3.43	3.42	0.12	2.82	2.82
CO [g/h]	55.14	3.49	1.46	239.76	239.18	8.18	197.33	197.27
NOx [g/h]	10.73	0.68	0.28	46.65	46.54	1.59	38.39	38.38
VOC [g/h]	12.78	0.81	0.34	55.57	55.43	1.90	45.73	45.72

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	23.0	11.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	44.03	54.47	0.00
I_p,int, Pedestrian LOS Score for Intersectio	0.000	1.729	2.902	0.000
Crosswalk LOS	F	A	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	415	415	1169	1169
d_b, Bicycle Delay [s]	40.80	40.80	11.22	11.22
I_b,int, Bicycle LOS Score for Intersection	1.631	1.565	0.987	1.644
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Brook Hollow Road and Driveway A

Control Type:	Two-way stop	Delay (sec / veh):	12.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.075

Intersection Setup

Name	Brook Hollow Road		Brook Hollow Road		Driveway A	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Brook Hollow Road		Brook Hollow Road		Driveway A	
Base Volume Input [veh/h]	216	36	12	191	42	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	216	36	12	191	42	14
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	10	3	52	11	4
Total Analysis Volume [veh/h]	235	39	13	208	46	15
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.07	0.02
d_M, Delay for Movement [s/veh]	0.00	0.00	7.75	0.00	12.01	10.07
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.02	0.02	0.30	0.30
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.50	0.50	7.60	7.60
d_A, Approach Delay [s/veh]	0.00		0.46		11.52	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.45					
Intersection LOS	B					

Traffic Volume - Future Total Volume

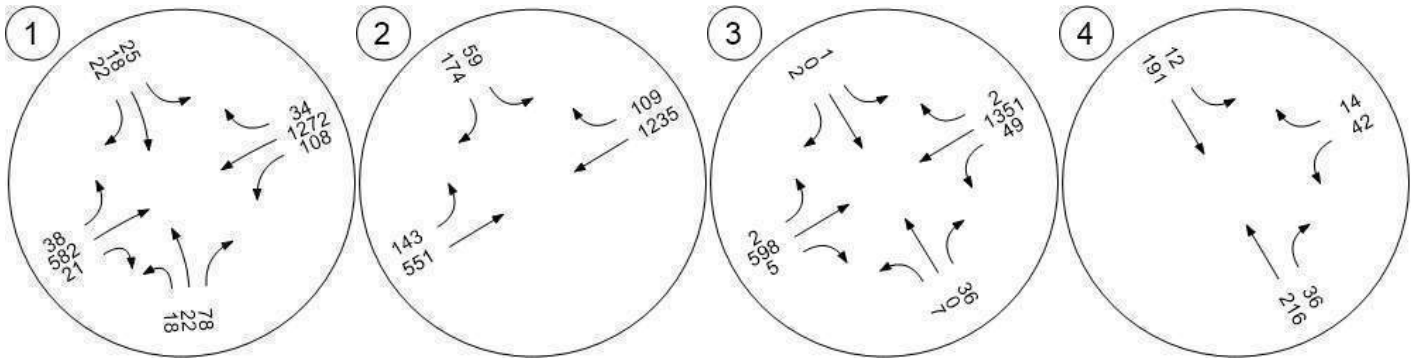


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Covenant School

Vistro File: \\...\\The Covenant School.vistro

Scenario 7 Future Build Dismissal Peak

Report File: \\...\\7_Future Build School Dismissal.pdf

8/19/2025

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Harding Pike & Vaughns Gap Road	Signalized	HCM 7th Edition	NB Right	0.371	9.8	A
2	Harding Pike & Brook Hollow Road	Two-way stop	HCM 7th Edition	SB Left	1.390	871.1	F
3	Harding Pike & Vossland Drive/Percy Warner Boulevard	Signalized	HCM 7th Edition	NB Right	0.298	4.3	A
4	Brook Hollow Road and Driveway A	Two-way stop	HCM 7th Edition	WB Left	0.185	13.7	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Harding Pike & Vaughns Gap Road

Control Type:	Signalized	Delay (sec / veh):	9.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.371

Intersection Setup

Name	Vaughns Gap Road			Vaughns Gap Road			Harding Pike			Harding Pike		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	148.00	100.00	100.00	146.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name	Vaughns Gap Road			Vaughns Gap Road			Harding Pike			Harding Pike		
Base Volume Input [veh/h]	33	18	83	27	32	28	61	669	82	118	839	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	18	83	27	32	28	61	669	82	118	839	33
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	5	23	7	9	8	17	182	22	32	228	9
Total Analysis Volume [veh/h]	36	20	90	29	35	30	66	727	89	128	912	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	<i>Free Running</i>
Actuation Type	<i>Fully actuated</i>
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	20	0	0	20	0	15	50	0	15	50	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	4.5	4.5	0.0	4.5	4.5	0.0
All red [s]	0.0	2.5	0.0	0.0	2.5	0.0	1.5	1.5	0.0	2.0	1.5	0.0
Walk [s]	0.0	0.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	18.0	0.0	0.0	12.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	0.0	14.0	0.0	0.0	14.0	0.0	9.0	14.0	0.0	9.0	14.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	5	20	0	5	20	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	49	49	49	49	49	49	49	49
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	7.9	7.9	32.6	22.1	22.1	32.6	23.7	23.7
g / C, Green / Cycle	0.16	0.16	0.67	0.45	0.45	0.67	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.09	0.06	0.10	0.23	0.23	0.13	0.26	0.26
s, saturation flow rate [veh/h]	1481	1560	605	1683	1619	893	1683	1661
c, Capacity [veh/h]	335	353	702	764	735	712	822	811
d1, Uniform Delay [s]	18.64	17.99	4.40	9.39	9.39	4.34	8.62	8.62
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	0.13	0.02	0.19	0.20	0.04	0.20	0.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.40	0.25	0.09	0.50	0.50	0.17	0.53	0.53
d, Delay for Lane Group [s/veh]	18.93	18.12	4.42	9.58	9.59	4.38	8.83	8.83
Lane Group LOS	B	B	A	A	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.26	0.81	0.09	1.91	1.85	0.19	2.02	1.99
50th-Percentile Queue Length [ft/ln]	31.49	20.15	2.34	47.86	46.15	4.71	50.46	49.80
95th-Percentile Queue Length [veh/ln]	2.27	1.45	0.17	3.45	3.32	0.34	3.63	3.59
95th-Percentile Queue Length [ft/ln]	56.68	36.28	4.21	86.14	83.07	8.47	90.82	89.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.93	18.93	18.93	18.12	18.12	18.12	4.42	9.58	9.59	4.38	8.83	8.83
Movement LOS	B	B	B	B	B	B	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	18.93			18.12			9.19			8.30		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	9.78											
Intersection LOS	A											
Intersection V/C	0.371											

Emissions

Vehicle Miles Traveled [mph]	4.03	2.37	3.47	21.77	20.96	28.43	105.74	104.34
Stops [stops/h]	93.45	59.81	6.94	142.03	136.96	13.96	149.75	147.81
Fuel consumption [US gal/h]	1.20	0.66	0.26	3.26	3.14	1.25	6.27	6.19
CO [g/h]	83.77	45.91	18.18	227.71	219.53	87.60	438.62	432.86
NOx [g/h]	16.30	8.93	3.54	44.30	42.71	17.04	85.34	84.22
VOC [g/h]	19.42	10.64	4.21	52.77	50.88	20.30	101.65	100.32

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	14.51	0.00
I_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.812	0.000
Crosswalk LOS	F	F	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	824	824	2061	2061
d_b, Bicycle Delay [s]	8.38	8.38	0.02	0.02
I_b,int, Bicycle LOS Score for Intersection	1.781	1.703	1.158	1.304
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Harding Pike & Brook Hollow Road

Control Type:	Two-way stop	Delay (sec / veh):	871.1
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	1.390

Intersection Setup

Name	Brook Hollow Road		Harding Pike		Harding Pike	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	⇐⇐		⇐		⇐	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	30.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Brook Hollow Road		Harding Pike		Harding Pike	
Base Volume Input [veh/h]	123	173	162	627	802	115
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	123	173	162	627	802	115
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	47	44	170	218	31
Total Analysis Volume [veh/h]	134	188	176	682	872	125
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	1.39	0.31	0.22	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	871.14	14.56	11.23	0.00	0.00	0.00
Movement LOS	F	B	B	A	A	A
95th-Percentile Queue Length [veh/ln]	24.72	1.37	0.84	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	618.02	34.22	20.98	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	370.50		2.31		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	55.69					
Intersection LOS	F					

Intersection Level Of Service Report

Intersection 3: Harding Pike & Vossland Drive/Percy Warner Boulevard

Control Type:	Signalized	Delay (sec / veh):	4.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.298

Intersection Setup

Name	Percy Warner Boulevard			Vossland Drive			Harding Pike			Harding Pike		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	103.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Percy Warner Boulevard			Vossland Drive			Harding Pike			Harding Pike		
Base Volume Input [veh/h]	9	0	25	1	0	0	2	739	11	43	917	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	0	25	1	0	0	2	739	11	43	917	3
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	7	0	0	0	1	201	3	12	249	1
Total Analysis Volume [veh/h]	10	0	27	1	0	0	2	803	12	47	997	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	130
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	10.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	20	0	0	15	0	15	60	0	15	60	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	2.5	0.0	0.0	2.5	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			Yes			Yes	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	33.0	0.0	0.0	33.0	0.0	15.0	82.0	0.0	15.0	82.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	4	10	0	4	10	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	Yes		No	Yes	
Pedestrian Recall		No			No		No	Yes		No	Yes	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	7.0	7.0	115.0	105.8	105.8	115.0	108.7	108.7
g / C, Green / Cycle	0.05	0.05	0.88	0.81	0.81	0.88	0.84	0.84
(v / s)_i Volume / Saturation Flow Rate	0.02	0.00	0.00	0.22	0.22	0.06	0.27	0.27
s, saturation flow rate [veh/h]	1424	1336	586	1683	1674	701	1683	1681
c, Capacity [veh/h]	112	128	561	1370	1362	662	1407	1405
d1, Uniform Delay [s]	59.51	58.20	1.42	2.90	2.90	1.39	2.41	2.41
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.56	0.01	0.01	0.50	0.50	0.02	0.62	0.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.30	0.01	0.00	0.27	0.27	0.06	0.33	0.33
d, Delay for Lane Group [s/veh]	60.07	58.21	1.43	3.40	3.40	1.40	3.03	3.04
Lane Group LOS	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.11	0.03	0.00	1.71	1.70	0.05	1.73	1.73
50th-Percentile Queue Length [ft/ln]	27.65	0.80	0.10	42.79	42.61	1.35	43.27	43.23
95th-Percentile Queue Length [veh/ln]	1.99	0.06	0.01	3.08	3.07	0.10	3.12	3.11
95th-Percentile Queue Length [ft/ln]	49.77	1.43	0.18	77.02	76.69	2.42	77.88	77.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.07	60.07	60.07	58.21	58.21	58.21	1.43	3.40	3.40	1.40	3.04	3.04
Movement LOS	E	E	E	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	60.07			58.21			3.40			2.96		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	4.29											
Intersection LOS	A											
Intersection V/C	0.298											

Emissions

Vehicle Miles Traveled [mph]	0.93	0.03	0.53	100.07	99.58	2.03	21.72	21.70
Stops [stops/h]	30.63	0.88	0.11	47.40	47.19	1.49	47.93	47.88
Fuel consumption [US gal/h]	0.62	0.02	0.02	4.28	4.26	0.10	1.62	1.62
CO [g/h]	43.56	1.17	1.42	299.14	297.72	7.02	113.57	113.45
NOx [g/h]	8.48	0.23	0.28	58.20	57.93	1.37	22.10	22.07
VOC [g/h]	10.10	0.27	0.33	69.33	69.00	1.63	26.32	26.29

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	23.0	11.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	44.03	54.47	0.00
I_p,int, Pedestrian LOS Score for Intersectio	0.000	1.729	2.821	0.000
Crosswalk LOS	F	A	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	415	415	1169	1169
d_b, Bicycle Delay [s]	40.80	40.80	11.22	11.22
I_b,int, Bicycle LOS Score for Intersection	1.616	1.561	1.108	1.282
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Brook Hollow Road and Driveway A

Control Type:	Two-way stop	Delay (sec / veh):	13.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.185

Intersection Setup

Name	Brook Hollow Road		Brook Hollow Road		Driveway A	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Brook Hollow Road		Brook Hollow Road		Driveway A	
Base Volume Input [veh/h]	191	86	28	200	97	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	191	86	28	200	97	32
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	52	23	8	54	26	9
Total Analysis Volume [veh/h]	208	93	30	217	105	35
Pedestrian Volume [ped/h]	0		0		0	

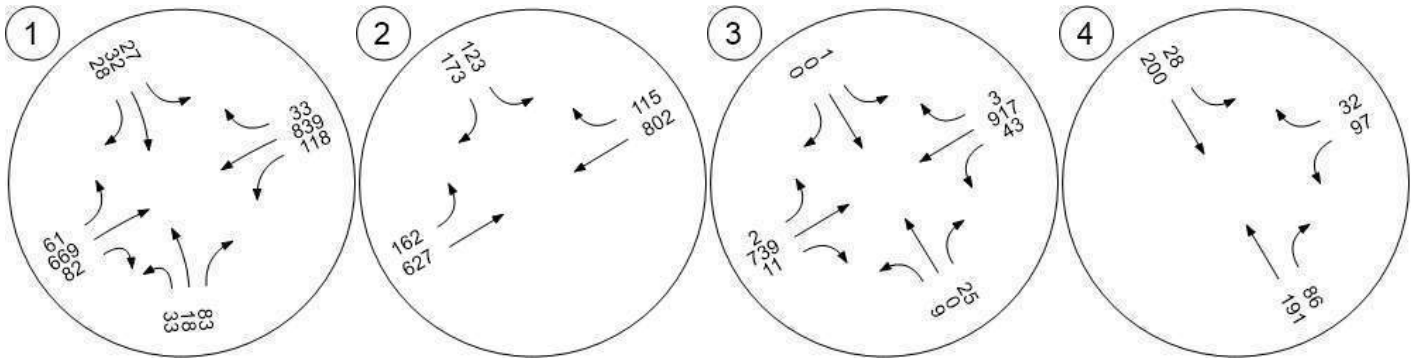
Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.00	0.19	0.04
d_M, Delay for Movement [s/veh]	0.00	0.00	7.83	0.00	13.68	11.29
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.05	0.05	0.87	0.87
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.19	1.19	21.66	21.66
d_A, Approach Delay [s/veh]	0.00		0.96		13.09	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.01					
Intersection LOS	B					

Traffic Volume - Future Total Volume



**FUTURE BUILD WITH IMPROVEMENTS CONDITIONS
CAPACITY ANALYSES**

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Covenant School

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Scenario 11 Alt Improved Future Build AM Peak

Report File: \\...\8_Improved Future Build AM.pdf

8/19/2025

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Harding Pike & Vaughns Gap Road	Signalized	HCM 7th Edition	NB Right	0.530	15.3	B
2	Harding Pike & Brook Hollow Road	Signalized	HCM 7th Edition	SB Left	0.435	11.6	B
3	Harding Pike & Vossland Drive/Percy Warner Boulevard	Signalized	HCM 7th Edition	NB Right	0.433	7.4	A
4	Brook Hollow Road and Driveway A	Two-way stop	HCM 7th Edition	WB Left	0.299	17.2	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Harding Pike & Vaughns Gap Road

Control Type:	Signalized	Delay (sec / veh):	15.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.530

Intersection Setup

Name	Vaughns Gap Road			Vaughns Gap Road			Harding Pike			Harding Pike		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	148.00	100.00	100.00	146.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name	Vaughns Gap Road			Vaughns Gap Road			Harding Pike			Harding Pike		
Base Volume Input [veh/h]	25	23	132	19	51	24	62	1156	97	149	405	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	23	132	19	51	24	62	1156	97	149	405	18
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	6	36	5	14	7	17	314	26	40	110	5
Total Analysis Volume [veh/h]	27	25	143	21	55	26	67	1257	105	162	440	20
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	43.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	20	0	0	20	0	15	50	0	15	50	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	4.5	4.5	0.0	4.5	4.5	0.0
All red [s]	0.0	2.5	0.0	0.0	2.5	0.0	1.5	1.5	0.0	2.0	1.5	0.0
Walk [s]	0.0	0.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	18.0	0.0	0.0	12.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	28.0	0.0	0.0	28.0	0.0	14.0	70.0	0.0	22.0	78.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	5	20	0	5	20	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	Yes		No	Yes	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	18.2	18.2	93.8	82.3	82.3	93.8	83.4	83.4
g / C, Green / Cycle	0.15	0.15	0.78	0.69	0.69	0.78	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.12	0.06	0.07	0.38	0.38	0.29	0.13	0.13
s, saturation flow rate [veh/h]	1467	1459	933	1683	1638	522	1683	1658
c, Capacity [veh/h]	257	258	775	1153	1122	415	1169	1152
d1, Uniform Delay [s]	49.05	45.84	3.60	9.55	9.57	7.49	6.40	6.40
k, delay calibration	0.14	0.04	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.70	0.32	0.20	1.90	1.97	2.43	0.34	0.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.70	0.36	0.08	0.55	0.55	0.36	0.18	0.18
d, Delay for Lane Group [s/veh]	53.75	46.16	3.80	11.46	11.54	9.92	6.74	6.75
Lane Group LOS	D	D	A	B	B	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.54	2.58	0.32	7.64	7.49	0.98	1.72	1.70
50th-Percentile Queue Length [ft/ln]	138.40	64.53	7.96	190.93	187.23	24.50	42.93	42.45
95th-Percentile Queue Length [veh/ln]	9.39	4.65	0.57	12.17	11.98	1.76	3.09	3.06
95th-Percentile Queue Length [ft/ln]	234.86	116.15	14.33	304.23	299.43	44.11	77.27	76.41

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.75	53.75	53.75	46.16	46.16	46.16	3.80	11.50	11.54	9.92	6.74	6.75
Movement LOS	D	D	D	D	D	D	A	B	B	A	A	A
d_A, Approach Delay [s/veh]	53.75			46.16			11.14			7.57		
Approach LOS	D			D			B			A		
d_I, Intersection Delay [s/veh]	15.27											
Intersection LOS	B											
Intersection V/C	0.530											

Emissions

Vehicle Miles Traveled [mph]	5.42	2.56	3.53	36.07	35.22	35.90	51.27	50.64
Stops [stops/h]	166.07	77.43	9.55	229.11	224.68	29.40	51.51	50.94
Fuel consumption [US gal/h]	3.11	1.29	0.29	5.56	5.45	1.90	2.69	2.66
CO [g/h]	217.34	90.51	20.10	388.88	381.29	132.60	188.02	185.77
NOx [g/h]	42.29	17.61	3.91	75.66	74.19	25.80	36.58	36.14
VOC [g/h]	50.37	20.98	4.66	90.13	88.37	30.73	43.58	43.06

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	49.50	0.00
I_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.867	0.000
Crosswalk LOS	F	F	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	367	367	1067	1200
d_b, Bicycle Delay [s]	40.02	40.02	13.07	9.60
I_b,int, Bicycle LOS Score for Intersection	1.857	1.715	1.572	0.960
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 2: Harding Pike & Brook Hollow Road

Control Type:	Signalized	Delay (sec / veh):	11.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.435

Intersection Setup

Name	Brook Hollow Road		Harding Pike		Harding Pike	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	250.00	75.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Brook Hollow Road		Harding Pike		Harding Pike	
Base Volume Input [veh/h]	156	168	226	1071	410	154
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	156	168	226	1071	410	154
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	46	61	291	111	42
Total Analysis Volume [veh/h]	170	183	246	1164	446	167
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Overlap	ProtPerm	Permissive	Permissive	Permissive
Flashing Yellow Arrow			No			
Signal Group	7	5	5	2	6	0
Auxiliary Signal Groups		5,7				
Maximum Green [s]	5	11	11	10	10	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0
Walk [s]	5.0	0.0	0.0	5.0	5.0	0.0
Pedestrian Clearance [s]	10.0	0.0	0.0	10.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	47.0	38.0	38.0	73.0	35.0	0.0
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	5	5	10	10	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0
Minimum Recall	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	L	C	C	C
C, Calculated Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	0.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14.5	33.0	97.5	97.5	79.0	79.0
g / C, Green / Cycle	0.12	0.28	0.81	0.81	0.66	0.66
(v / s)_i Volume / Saturation Flow Rate	0.10	0.12	0.25	0.33	0.17	0.18
s, saturation flow rate [veh/h]	1603	1431	904	3204	1683	1535
c, Capacity [veh/h]	195	395	747	2602	1107	1009
d1, Uniform Delay [s]	51.31	35.65	3.28	3.19	8.46	8.62
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.91	0.73	1.04	0.48	0.56	0.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.43	0.30	0.41	0.25	0.28
d, Delay for Lane Group [s/veh]	59.22	36.38	4.32	3.67	9.01	9.31
Lane Group LOS	E	D	A	A	A	A
Critical Lane Group	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.00	4.13	0.92	2.33	2.82	2.90
50th-Percentile Queue Length [ft/ln]	124.88	103.28	23.02	58.18	70.54	72.42
95th-Percentile Queue Length [veh/ln]	8.66	7.44	1.66	4.19	5.08	5.21
95th-Percentile Queue Length [ft/ln]	216.51	185.90	41.43	104.72	126.96	130.35

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	59.22	36.38	4.32	3.67	9.11	9.31
Movement LOS	E	D	A	A	A	A
d_A, Approach Delay [s/veh]	47.38		3.78		9.16	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	11.64					
Intersection LOS	B					
Intersection V/C	0.435					

Emissions

Vehicle Miles Traveled [mph]	16.07	17.30	54.45	258.03	75.07	75.07
Stops [stops/h]	149.85	123.94	27.62	139.63	84.64	86.90
Fuel consumption [US gal/h]	3.37	2.64	2.41	11.38	4.14	4.19
CO [g/h]	235.50	184.59	168.35	795.52	289.58	292.75
NOx [g/h]	45.82	35.91	32.76	154.78	56.34	56.96
VOC [g/h]	54.58	42.78	39.02	184.37	67.11	67.85

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0		0.0		0.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00	
d_p, Pedestrian Delay [s]	0.00		0.00		0.00	
I_p,int, Pedestrian LOS Score for Intersectio	0.000		0.000		0.000	
Crosswalk LOS	F		F		F	
s_b, Saturation Flow Rate of the bicycle lane	2000		2000		2000	
c_b, Capacity of the bicycle lane [bicycles/h]	717		1150		517	
d_b, Bicycle Delay [s]	24.70		10.84		33.00	
I_b,int, Bicycle LOS Score for Intersection	1.560		1.558		0.953	
Bicycle LOS	A		A		A	

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 3: Harding Pike & Vossland Drive/Percy Warner Boulevard

Control Type:	Signalized	Delay (sec / veh):	7.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.433

Intersection Setup

Name	Percy Warner Boulevard			Vossland Drive			Harding Pike			Harding Pike		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	103.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Percy Warner Boulevard			Vossland Drive			Harding Pike			Harding Pike		
Base Volume Input [veh/h]	19	0	68	2	0	1	0	1227	15	15	539	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	0	68	2	0	1	0	1227	15	15	539	1
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	0	18	1	0	0	0	333	4	4	146	0
Total Analysis Volume [veh/h]	21	0	74	2	0	1	0	1334	16	16	586	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	97.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	20	0	0	15	0	15	60	0	15	60	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	2.5	0.0	0.0	2.5	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			Yes			Yes	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	45.0	0.0	0.0	45.0	0.0	10.0	65.0	0.0	10.0	65.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	4	10	0	4	10	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	Yes		No	Yes	
Pedestrian Recall		No			No		No	Yes		No	Yes	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	10.7	10.7	101.3	93.7	93.7	101.3	95.3	95.3
g / C, Green / Cycle	0.09	0.09	0.84	0.78	0.78	0.84	0.79	0.79
(v / s)_i Volume / Saturation Flow Rate	0.06	0.00	0.00	0.37	0.37	0.03	0.16	0.16
s, saturation flow rate [veh/h]	1422	1188	812	1683	1676	469	1683	1682
c, Capacity [veh/h]	164	156	733	1313	1308	425	1335	1334
d1, Uniform Delay [s]	52.87	49.82	0.00	4.59	4.59	3.09	3.05	3.05
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.99	0.02	0.00	1.23	1.24	0.01	0.34	0.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.53	0.02	0.00	0.47	0.47	0.04	0.20	0.20
d, Delay for Lane Group [s/veh]	53.87	49.83	0.00	5.82	5.83	3.10	3.39	3.39
Lane Group LOS	D	D	A	A	A	A	A	A
Critical Lane Group	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.59	0.08	0.00	4.14	4.12	0.03	1.19	1.19
50th-Percentile Queue Length [ft/ln]	64.73	2.10	0.00	103.38	103.04	0.86	29.69	29.68
95th-Percentile Queue Length [veh/ln]	4.66	0.15	0.00	7.44	7.42	0.06	2.14	2.14
95th-Percentile Queue Length [ft/ln]	116.52	3.78	0.00	186.08	185.47	1.55	53.44	53.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.87	53.87	53.87	49.83	49.83	49.83	0.00	5.83	5.83	3.10	3.39	3.39
Movement LOS	D	D	D	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	53.87			49.83			5.83			3.38		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	7.39											
Intersection LOS	A											
Intersection V/C	0.433											

Emissions

Vehicle Miles Traveled [mph]	2.38	0.10	0.00	165.63	164.98	0.71	12.74	12.74
Stops [stops/h]	77.68	2.52	0.00	124.05	123.65	1.04	35.63	35.61
Fuel consumption [US gal/h]	1.48	0.04	0.00	7.96	7.93	0.05	1.07	1.07
CO [g/h]	103.52	3.12	0.00	556.22	554.17	3.26	74.53	74.50
NOx [g/h]	20.14	0.61	0.00	108.22	107.82	0.63	14.50	14.49
VOC [g/h]	23.99	0.72	0.00	128.91	128.43	0.75	17.27	17.27

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	23.0	11.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	39.20	49.50	0.00
I_p,int, Pedestrian LOS Score for Intersectio	0.000	1.721	2.867	0.000
Crosswalk LOS	F	A	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	650	650	983	983
d_b, Bicycle Delay [s]	27.34	27.34	15.50	15.50
I_b,int, Bicycle LOS Score for Intersection	1.703	1.565	1.512	0.945
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Brook Hollow Road and Driveway A

Control Type:	Two-way stop	Delay (sec / veh):	17.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.299

Intersection Setup

Name	Brook Hollow Road		Brook Hollow Road		Driveway A	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Brook Hollow Road		Brook Hollow Road		Driveway A	
Base Volume Input [veh/h]	209	170	56	190	133	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	209	170	56	190	133	44
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	57	46	15	52	36	12
Total Analysis Volume [veh/h]	227	185	61	207	145	48
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.05	0.00	0.30	0.06
d_M, Delay for Movement [s/veh]	0.00	0.00	8.20	0.00	17.16	13.89
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.15	0.00	1.66	1.66
95th-Percentile Queue Length [ft/ln]	0.00	0.00	3.74	0.00	41.46	41.46
d_A, Approach Delay [s/veh]	0.00		1.87		16.35	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	4.18					
Intersection LOS	C					

Traffic Volume - Future Total Volume

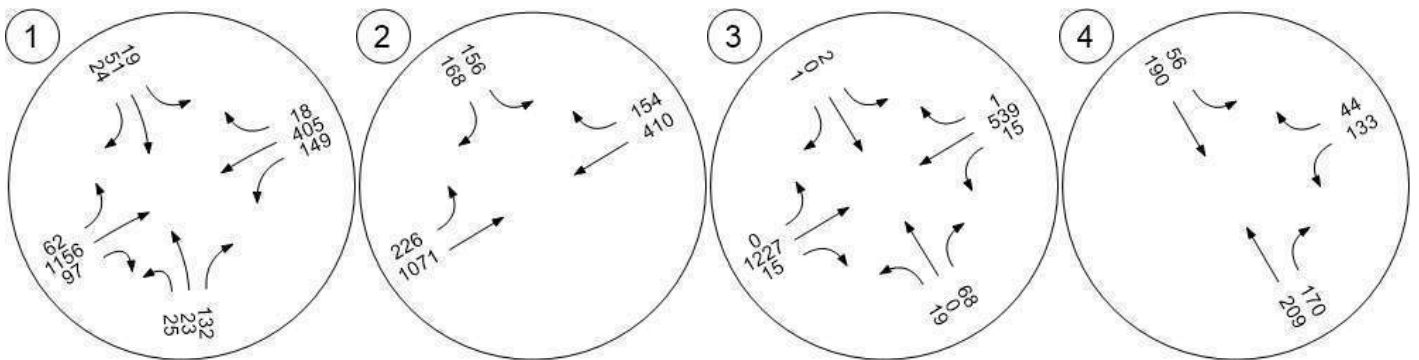


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Covenant School

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Scenario 12 Alt Improved Future Build PM Peak

Report File: \\...\9_Improved Future Build PM.pdf

8/19/2025

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Harding Pike & Vaughns Gap Road	Signalized	HCM 7th Edition	NB Right	0.474	10.9	B
2	Harding Pike & Brook Hollow Road	Signalized	HCM 7th Edition	SB Left	0.544	14.5	B
3	Harding Pike & Vossland Drive/Percy Warner Boulevard	Signalized	HCM 7th Edition	NB Right	0.432	5.2	A
4	Brook Hollow Road and Driveway A	Two-way stop	HCM 7th Edition	WB Left	0.075	12.0	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Harding Pike & Vaughns Gap Road

Control Type:	Signalized	Delay (sec / veh):	10.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.474

Intersection Setup

Name	Vaughns Gap Road			Vaughns Gap Road			Harding Pike			Harding Pike		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	148.00	100.00	100.00	146.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name	Vaughns Gap Road			Vaughns Gap Road			Harding Pike			Harding Pike		
Base Volume Input [veh/h]	18	22	78	25	18	22	38	582	21	108	1272	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	22	78	25	18	22	38	582	21	108	1272	34
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	6	21	7	5	6	10	158	6	29	346	9
Total Analysis Volume [veh/h]	20	24	85	27	20	24	41	633	23	117	1383	37
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	130
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	53.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	20	0	0	20	0	15	50	0	15	50	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	4.5	4.5	0.0	4.5	4.5	0.0
All red [s]	0.0	2.5	0.0	0.0	2.5	0.0	1.5	1.5	0.0	2.0	1.5	0.0
Walk [s]	0.0	0.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	18.0	0.0	0.0	12.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	28.0	0.0	0.0	28.0	0.0	14.0	80.0	0.0	22.0	88.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	5	20	0	5	20	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	Yes		No	Yes	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	13.7	13.7	108.3	96.9	96.9	108.3	98.6	98.6
g / C, Green / Cycle	0.11	0.11	0.83	0.75	0.75	0.83	0.76	0.76
(v / s)_i Volume / Saturation Flow Rate	0.08	0.05	0.08	0.18	0.18	0.13	0.39	0.39
s, saturation flow rate [veh/h]	1501	1298	467	1683	1662	810	1683	1668
c, Capacity [veh/h]	191	176	408	1253	1238	711	1275	1264
d1, Uniform Delay [s]	56.33	54.32	4.05	5.17	5.17	2.60	6.25	6.25
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.16	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.23	0.48	0.45	0.46	0.46	0.14	1.49	1.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.62	0.37	0.09	0.24	0.24	0.15	0.51	0.51
d, Delay for Lane Group [s/veh]	57.56	54.80	4.51	5.62	5.63	2.74	7.74	7.76
Lane Group LOS	E	D	A	A	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.83	2.04	0.17	2.24	2.22	0.38	6.07	6.04
50th-Percentile Queue Length [ft/ln]	95.64	51.07	4.22	56.04	55.51	9.43	151.81	151.02
95th-Percentile Queue Length [veh/ln]	6.89	3.68	0.30	4.04	4.00	0.68	10.11	10.07
95th-Percentile Queue Length [ft/ln]	172.16	91.93	7.59	100.88	99.91	16.97	252.84	251.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.56	57.56	57.56	54.80	54.80	54.80	4.51	5.63	5.63	2.74	7.75	7.76
Movement LOS	E	E	E	D	D	D	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	57.56			54.80			5.56			7.37		
Approach LOS	E			D			A			A		
d_I, Intersection Delay [s/veh]	10.87											
Intersection LOS	B											
Intersection V/C	0.474											

Emissions

Vehicle Miles Traveled [mph]	3.55	1.77	2.16	17.25	17.06	26.02	157.90	156.75
Stops [stops/h]	105.94	56.57	4.67	62.08	61.48	10.44	168.16	167.28
Fuel consumption [US gal/h]	2.11	1.02	0.17	1.71	1.69	1.08	8.53	8.48
CO [g/h]	147.73	71.40	11.68	119.53	118.34	75.63	596.60	592.81
NOx [g/h]	28.74	13.89	2.27	23.26	23.02	14.71	116.08	115.34
VOC [g/h]	34.24	16.55	2.71	27.70	27.43	17.53	138.27	137.39

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	54.47	0.00
I_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.914	0.000
Crosswalk LOS	F	F	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	338	338	1138	1262
d_b, Bicycle Delay [s]	44.86	44.86	12.06	8.86
I_b,int, Bicycle LOS Score for Intersection	1.754	1.667	1.016	1.654
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Harding Pike & Brook Hollow Road

Control Type:	Signalized	Delay (sec / veh):	14.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.544

Intersection Setup

Name	Brook Hollow Road		Harding Pike		Harding Pike	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	250.00	75.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Brook Hollow Road		Harding Pike		Harding Pike	
Base Volume Input [veh/h]	59	174	143	551	1235	109
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	174	143	551	1235	109
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	47	39	150	336	30
Total Analysis Volume [veh/h]	64	189	155	599	1342	118
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	130
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Overlap	ProtPerm	Permissive	Permissive	Permissive
Flashing Yellow Arrow			No			
Signal Group	7	5	5	2	6	0
Auxiliary Signal Groups		5,7				
Maximum Green [s]	5	5	5	10	10	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0
Walk [s]	5.0	0.0	0.0	5.0	5.0	0.0
Pedestrian Clearance [s]	10.0	0.0	0.0	10.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	47.0	15.0	15.0	83.0	68.0	0.0
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	5	5	10	10	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0
Minimum Recall	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	L	C	C	C
C, Calculated Cycle Length [s]	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	0.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15.7	35.4	106.3	106.3	86.6	86.6
g / C, Green / Cycle	0.12	0.27	0.82	0.82	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.04	0.12	0.25	0.17	0.40	0.41
s, saturation flow rate [veh/h]	1603	1431	571	3204	1683	1636
c, Capacity [veh/h]	195	390	459	2617	1120	1089
d1, Uniform Delay [s]	52.06	39.15	8.49	2.63	12.09	12.32
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.86	0.80	1.77	0.18	2.40	2.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.30	0.45	0.31	0.21	0.60	0.62
d, Delay for Lane Group [s/veh]	52.93	39.95	10.26	2.82	14.49	14.97
Lane Group LOS	D	D	B	A	B	B
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.81	4.72	0.70	1.07	10.26	10.50
50th-Percentile Queue Length [ft/ln]	45.36	117.97	17.54	26.87	256.43	262.43
95th-Percentile Queue Length [veh/ln]	3.27	8.28	1.26	1.93	15.51	15.81
95th-Percentile Queue Length [ft/ln]	81.64	207.04	31.58	48.37	387.74	395.27

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.93	39.95	10.26	2.82	14.71	14.97
Movement LOS	D	D	B	A	B	B
d_A, Approach Delay [s/veh]	43.23		4.35		14.73	
Approach LOS	D		A		B	
d_I, Intersection Delay [s/veh]	14.48					
Intersection LOS	B					
Intersection V/C	0.544					

Emissions

Vehicle Miles Traveled [mph]	6.08	17.92	34.45	132.75	178.88	178.88
Stops [stops/h]	50.24	130.68	19.43	59.54	284.05	290.69
Fuel consumption [US gal/h]	1.16	2.87	1.72	5.61	11.64	11.79
CO [g/h]	81.30	200.89	120.31	391.90	813.95	824.37
NOx [g/h]	15.82	39.09	23.41	76.25	158.37	160.39
VOC [g/h]	18.84	46.56	27.88	90.83	188.64	191.06

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0		0.0		0.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00	
d_p, Pedestrian Delay [s]	0.00		0.00		0.00	
I_p,int, Pedestrian LOS Score for Intersectio	0.000		0.000		0.000	
Crosswalk LOS	F		F		F	
s_b, Saturation Flow Rate of the bicycle lane	2000		2000		2000	
c_b, Capacity of the bicycle lane [bicycles/h]	662		1215		985	
d_b, Bicycle Delay [s]	29.11		10.00		16.75	
I_b,int, Bicycle LOS Score for Intersection	1.560		1.060		1.596	
Bicycle LOS	A		A		A	

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 3: Harding Pike & Vossland Drive/Percy Warner Boulevard

Control Type:	Signalized	Delay (sec / veh):	5.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.432

Intersection Setup

Name	Percy Warner Boulevard			Vossland Drive			Harding Pike			Harding Pike		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	103.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Percy Warner Boulevard			Vossland Drive			Harding Pike			Harding Pike		
Base Volume Input [veh/h]	7	0	36	1	0	2	2	598	5	49	1351	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	0	36	1	0	2	2	598	5	49	1351	2
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	10	0	0	1	1	163	1	13	367	1
Total Analysis Volume [veh/h]	8	0	39	1	0	2	2	650	5	53	1468	2
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	130
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	10.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	20	0	0	15	0	15	60	0	15	60	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	2.5	0.0	0.0	2.5	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			Yes			Yes	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	33.0	0.0	0.0	33.0	0.0	15.0	82.0	0.0	15.0	82.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	4	10	0	4	10	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	Yes		No	Yes	
Pedestrian Recall		No			No		No	Yes		No	Yes	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	7.6	7.6	114.4	105.1	105.1	114.4	108.1	108.1
g / C, Green / Cycle	0.06	0.06	0.88	0.81	0.81	0.88	0.83	0.83
(v / s)_i Volume / Saturation Flow Rate	0.03	0.00	0.00	0.18	0.18	0.06	0.40	0.40
s, saturation flow rate [veh/h]	1431	1506	409	1683	1678	790	1683	1682
c, Capacity [veh/h]	116	125	396	1360	1356	741	1399	1399
d1, Uniform Delay [s]	59.36	57.74	2.16	2.92	2.92	1.38	3.09	3.09
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.73	0.03	0.02	0.38	0.38	0.01	1.20	1.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.02	0.01	0.22	0.22	0.07	0.48	0.48
d, Delay for Lane Group [s/veh]	60.10	57.76	2.19	3.29	3.29	1.39	4.29	4.29
Lane Group LOS	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.40	0.10	0.01	1.37	1.37	0.07	3.30	3.30
50th-Percentile Queue Length [ft/ln]	35.06	2.38	0.13	34.36	34.29	1.73	82.59	82.56
95th-Percentile Queue Length [veh/ln]	2.52	0.17	0.01	2.47	2.47	0.12	5.95	5.94
95th-Percentile Queue Length [ft/ln]	63.11	4.29	0.23	61.85	61.72	3.11	148.65	148.61

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.10	60.10	60.10	57.76	57.76	57.76	2.19	3.29	3.29	1.39	4.29	4.29
Movement LOS	E	E	E	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	60.10			57.76			3.29			4.19		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	5.18											
Intersection LOS	A											
Intersection V/C	0.432											

Emissions

Vehicle Miles Traveled [mph]	1.18	0.10	0.53	80.36	80.16	2.31	31.93	31.92
Stops [stops/h]	38.84	2.64	0.14	38.06	37.98	1.92	91.48	91.45
Fuel consumption [US gal/h]	0.79	0.05	0.02	3.43	3.42	0.12	2.82	2.82
CO [g/h]	55.14	3.49	1.46	239.76	239.18	8.18	197.33	197.27
NOx [g/h]	10.73	0.68	0.28	46.65	46.54	1.59	38.39	38.38
VOC [g/h]	12.78	0.81	0.34	55.57	55.43	1.90	45.73	45.72

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	23.0	11.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	44.03	54.47	0.00
I_p,int, Pedestrian LOS Score for Intersectio	0.000	1.729	2.902	0.000
Crosswalk LOS	F	A	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	415	415	1169	1169
d_b, Bicycle Delay [s]	40.80	40.80	11.22	11.22
I_b,int, Bicycle LOS Score for Intersection	1.631	1.565	0.987	1.644
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Brook Hollow Road and Driveway A

Control Type:	Two-way stop	Delay (sec / veh):	12.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.075

Intersection Setup

Name	Brook Hollow Road		Brook Hollow Road		Driveway A	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Brook Hollow Road		Brook Hollow Road		Driveway A	
Base Volume Input [veh/h]	216	36	12	191	42	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	216	36	12	191	42	14
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	59	10	3	52	11	4
Total Analysis Volume [veh/h]	235	39	13	208	46	15
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.07	0.02
d_M, Delay for Movement [s/veh]	0.00	0.00	7.77	0.00	12.00	10.07
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.03	0.00	0.30	0.30
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.69	0.00	7.60	7.60
d_A, Approach Delay [s/veh]	0.00		0.46		11.52	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.44					
Intersection LOS	B					

Traffic Volume - Future Total Volume

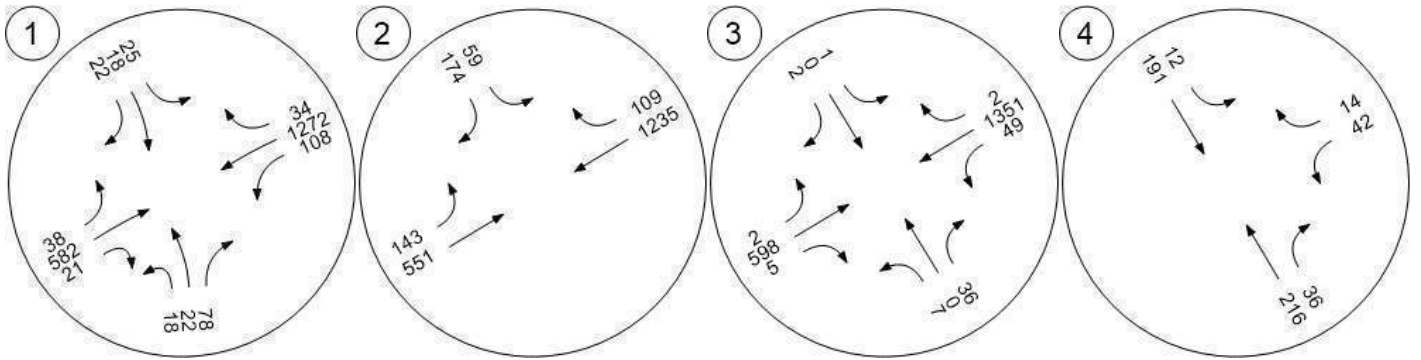


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Covenant School

Vistro File: \\...\The Covenant School.vistro

Scenario 13 Alt Improved Future Build Dismissal Peak

Report File: \\...\10_Improved Future Build School

8/19/2025

Dismissal.pdf

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Harding Pike & Vaughns Gap Road	Signalized	HCM 7th Edition	NB Right	0.371	9.8	A
2	Harding Pike & Brook Hollow Road	Signalized	HCM 7th Edition	SB Left	0.421	13.5	B
3	Harding Pike & Vossland Drive/Percy Warner Boulevard	Signalized	HCM 7th Edition	NB Right	0.298	4.3	A
4	Brook Hollow Road and Driveway A	Two-way stop	HCM 7th Edition	WB Left	0.184	13.7	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Harding Pike & Vaughns Gap Road

Control Type:	Signalized	Delay (sec / veh):	9.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.371

Intersection Setup

Name	Vaughns Gap Road			Vaughns Gap Road			Harding Pike			Harding Pike		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	148.00	100.00	100.00	146.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	Yes			No			No			No		
Crosswalk	No			No			Yes			No		

Volumes

Name	Vaughns Gap Road			Vaughns Gap Road			Harding Pike			Harding Pike		
Base Volume Input [veh/h]	33	18	83	27	32	28	61	669	82	118	839	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	18	83	27	32	28	61	669	82	118	839	33
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	5	23	7	9	8	17	182	22	32	228	9
Total Analysis Volume [veh/h]	36	20	90	29	35	30	66	727	89	128	912	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Free Running (No Pattern)
Coordination Type	<i>Free Running</i>
Actuation Type	<i>Fully actuated</i>
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	20	0	0	20	0	15	50	0	15	50	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	4.5	4.5	0.0	4.5	4.5	0.0
All red [s]	0.0	2.5	0.0	0.0	2.5	0.0	1.5	1.5	0.0	2.0	1.5	0.0
Walk [s]	0.0	0.0	0.0	0.0	7.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	18.0	0.0	0.0	12.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Free Running (No Pattern)

Split [s]	0.0	14.0	0.0	0.0	14.0	0.0	9.0	14.0	0.0	9.0	14.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	5	20	0	5	20	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	49	49	49	49	49	49	49	49
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	7.9	7.9	32.6	22.1	22.1	32.6	23.7	23.7
g / C, Green / Cycle	0.16	0.16	0.67	0.45	0.45	0.67	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.09	0.06	0.10	0.23	0.23	0.13	0.26	0.26
s, saturation flow rate [veh/h]	1481	1560	605	1683	1619	893	1683	1661
c, Capacity [veh/h]	335	353	702	764	735	712	822	811
d1, Uniform Delay [s]	18.64	17.99	4.40	9.39	9.39	4.34	8.62	8.62
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.29	0.13	0.02	0.19	0.20	0.04	0.20	0.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.40	0.25	0.09	0.50	0.50	0.17	0.53	0.53
d, Delay for Lane Group [s/veh]	18.93	18.12	4.42	9.58	9.59	4.38	8.83	8.83
Lane Group LOS	B	B	A	A	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.26	0.81	0.09	1.91	1.85	0.19	2.02	1.99
50th-Percentile Queue Length [ft/ln]	31.49	20.15	2.34	47.86	46.15	4.71	50.46	49.80
95th-Percentile Queue Length [veh/ln]	2.27	1.45	0.17	3.45	3.32	0.34	3.63	3.59
95th-Percentile Queue Length [ft/ln]	56.68	36.28	4.21	86.14	83.07	8.47	90.82	89.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.93	18.93	18.93	18.12	18.12	18.12	4.42	9.58	9.59	4.38	8.83	8.83
Movement LOS	B	B	B	B	B	B	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	18.93			18.12			9.19			8.30		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	9.78											
Intersection LOS	A											
Intersection V/C	0.371											

Emissions

Vehicle Miles Traveled [mph]	4.03	2.37	3.47	21.77	20.96	28.43	105.74	104.34
Stops [stops/h]	93.45	59.81	6.94	142.03	136.96	13.96	149.75	147.81
Fuel consumption [US gal/h]	1.20	0.66	0.26	3.26	3.14	1.25	6.27	6.19
CO [g/h]	83.77	45.91	18.18	227.71	219.53	87.60	438.62	432.86
NOx [g/h]	16.30	8.93	3.54	44.30	42.71	17.04	85.34	84.22
VOC [g/h]	19.42	10.64	4.21	52.77	50.88	20.30	101.65	100.32

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	14.51	0.00
I_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	2.812	0.000
Crosswalk LOS	F	F	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	824	824	2061	2061
d_b, Bicycle Delay [s]	8.38	8.38	0.02	0.02
I_b,int, Bicycle LOS Score for Intersection	1.781	1.703	1.158	1.304
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 2: Harding Pike & Brook Hollow Road

Control Type:	Signalized	Delay (sec / veh):	13.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.421

Intersection Setup

Name	Brook Hollow Road		Harding Pike		Harding Pike	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	250.00	75.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		No	

Volumes

Name	Brook Hollow Road		Harding Pike		Harding Pike	
Base Volume Input [veh/h]	123	173	162	627	802	115
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	123	173	162	627	802	115
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	47	44	170	218	31
Total Analysis Volume [veh/h]	134	188	176	682	872	125
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	130
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permissive	Overlap	ProtPerm	Permissive	Permissive	Permissive
Flashing Yellow Arrow			No			
Signal Group	7	5	5	2	6	0
Auxiliary Signal Groups		5,7				
Maximum Green [s]	5	5	5	10	10	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0
Walk [s]	5.0	0.0	0.0	5.0	5.0	0.0
Pedestrian Clearance [s]	10.0	0.0	0.0	10.0	10.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	35.0	29.0	29.0	95.0	66.0	0.0
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	5	5	10	10	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0
Minimum Recall	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	R	L	C	C	C
C, Calculated Cycle Length [s]	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	0.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	15.7	35.5	106.3	106.3	86.5	86.5
g / C, Green / Cycle	0.12	0.27	0.82	0.82	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.08	0.12	0.22	0.20	0.27	0.28
s, saturation flow rate [veh/h]	1603	1431	724	3204	1683	1612
c, Capacity [veh/h]	195	392	588	2617	1119	1071
d1, Uniform Delay [s]	54.29	39.00	4.57	2.72	10.04	10.21
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.37	0.79	1.16	0.22	1.12	1.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.63	0.44	0.28	0.24	0.41	0.43
d, Delay for Lane Group [s/veh]	57.66	39.79	5.73	2.93	11.16	11.47
Lane Group LOS	E	D	A	A	B	B
Critical Lane Group	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.03	4.68	0.74	1.26	5.71	5.83
50th-Percentile Queue Length [ft/ln]	100.67	117.11	18.40	31.49	142.83	145.76
95th-Percentile Queue Length [veh/ln]	7.25	8.23	1.32	2.27	9.63	9.79
95th-Percentile Queue Length [ft/ln]	181.21	205.85	33.11	56.68	240.83	244.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.66	39.79	5.73	2.93	11.29	11.47
Movement LOS	E	D	A	A	B	B
d_A, Approach Delay [s/veh]	47.21		3.51		11.31	
Approach LOS	D		A		B	
d_I, Intersection Delay [s/veh]	13.55					
Intersection LOS	B					
Intersection V/C	0.421					

Emissions

Vehicle Miles Traveled [mph]	12.67	17.82	39.03	151.06	122.05	122.05
Stops [stops/h]	111.52	129.72	20.38	69.76	158.21	161.46
Fuel consumption [US gal/h]	2.58	2.85	1.78	6.42	7.19	7.26
CO [g/h]	180.39	199.26	124.43	448.74	502.73	507.56
NOx [g/h]	35.10	38.77	24.21	87.31	97.81	98.75
VOC [g/h]	41.81	46.18	28.84	104.00	116.51	117.63

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0		0.0		0.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00	
d_p, Pedestrian Delay [s]	0.00		0.00		0.00	
I_p,int, Pedestrian LOS Score for Intersectio	0.000		0.000		0.000	
Crosswalk LOS	F		F		F	
s_b, Saturation Flow Rate of the bicycle lane	2000		2000		2000	
c_b, Capacity of the bicycle lane [bicycles/h]	477		1400		954	
d_b, Bicycle Delay [s]	37.70		5.85		17.78	
I_b,int, Bicycle LOS Score for Intersection	1.560		1.139		1.244	
Bicycle LOS	A		A		A	

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 3: Harding Pike & Vossland Drive/Percy Warner Boulevard

Control Type:	Signalized	Delay (sec / veh):	4.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.298

Intersection Setup

Name	Percy Warner Boulevard			Vossland Drive			Harding Pike			Harding Pike		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	103.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Percy Warner Boulevard			Vossland Drive			Harding Pike			Harding Pike		
Base Volume Input [veh/h]	9	0	25	1	0	0	2	739	11	43	917	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	0	25	1	0	0	2	739	11	43	917	3
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	7	0	0	0	1	201	3	12	249	1
Total Analysis Volume [veh/h]	10	0	27	1	0	0	2	803	12	47	997	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	130
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	10.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Flashing Yellow Arrow							No			No		
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Maximum Green [s]	0	20	0	0	15	0	15	60	0	15	60	0
Amber [s]	0.0	3.5	0.0	0.0	3.5	0.0	4.0	4.0	0.0	4.0	4.0	0.0
All red [s]	0.0	2.5	0.0	0.0	2.5	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Walk [s]	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	18.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			Yes			Yes	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	33.0	0.0	0.0	33.0	0.0	15.0	82.0	0.0	15.0	82.0	0.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	0	0	7	0	4	10	0	4	10	0
Vehicle Extension [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	Yes		No	Yes	
Pedestrian Recall		No			No		No	Yes		No	Yes	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	C	L	C	C
C, Calculated Cycle Length [s]	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00
g_i, Effective Green Time [s]	7.0	7.0	115.0	105.8	105.8	115.0	108.7	108.7
g / C, Green / Cycle	0.05	0.05	0.88	0.81	0.81	0.88	0.84	0.84
(v / s)_i Volume / Saturation Flow Rate	0.02	0.00	0.00	0.22	0.22	0.06	0.27	0.27
s, saturation flow rate [veh/h]	1424	1336	586	1683	1674	701	1683	1681
c, Capacity [veh/h]	112	128	561	1370	1362	662	1407	1405
d1, Uniform Delay [s]	59.51	58.20	1.42	2.90	2.90	1.39	2.41	2.41
k, delay calibration	0.04	0.04	0.50	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.56	0.01	0.01	0.50	0.50	0.02	0.62	0.62
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.30	0.01	0.00	0.27	0.27	0.06	0.33	0.33
d, Delay for Lane Group [s/veh]	60.07	58.21	1.43	3.40	3.40	1.40	3.03	3.04
Lane Group LOS	E	E	A	A	A	A	A	A
Critical Lane Group	Yes	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.11	0.03	0.00	1.71	1.70	0.05	1.73	1.73
50th-Percentile Queue Length [ft/ln]	27.65	0.80	0.10	42.79	42.61	1.35	43.27	43.23
95th-Percentile Queue Length [veh/ln]	1.99	0.06	0.01	3.08	3.07	0.10	3.12	3.11
95th-Percentile Queue Length [ft/ln]	49.77	1.43	0.18	77.02	76.69	2.42	77.88	77.81

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.07	60.07	60.07	58.21	58.21	58.21	1.43	3.40	3.40	1.40	3.04	3.04
Movement LOS	E	E	E	E	E	E	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	60.07			58.21			3.40			2.96		
Approach LOS	E			E			A			A		
d_I, Intersection Delay [s/veh]	4.29											
Intersection LOS	A											
Intersection V/C	0.298											

Emissions

Vehicle Miles Traveled [mph]	0.93	0.03	0.53	100.07	99.58	2.03	21.72	21.70
Stops [stops/h]	30.63	0.88	0.11	47.40	47.19	1.49	47.93	47.88
Fuel consumption [US gal/h]	0.62	0.02	0.02	4.28	4.26	0.10	1.62	1.62
CO [g/h]	43.56	1.17	1.42	299.14	297.72	7.02	113.57	113.45
NOx [g/h]	8.48	0.23	0.28	58.20	57.93	1.37	22.10	22.07
VOC [g/h]	10.10	0.27	0.33	69.33	69.00	1.63	26.32	26.29

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	23.0	11.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	44.03	54.47	0.00
I_p,int, Pedestrian LOS Score for Intersectio	0.000	1.729	2.821	0.000
Crosswalk LOS	F	A	C	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	415	415	1169	1169
d_b, Bicycle Delay [s]	40.80	40.80	11.22	11.22
I_b,int, Bicycle LOS Score for Intersection	1.616	1.561	1.108	1.282
Bicycle LOS	A	A	A	A

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Brook Hollow Road and Driveway A

Control Type:	Two-way stop	Delay (sec / veh):	13.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.184

Intersection Setup

Name	Brook Hollow Road		Brook Hollow Road		Driveway A	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Brook Hollow Road		Brook Hollow Road		Driveway A	
Base Volume Input [veh/h]	191	86	28	200	97	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	191	86	28	200	97	32
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	52	23	8	54	26	9
Total Analysis Volume [veh/h]	208	93	30	217	105	35
Pedestrian Volume [ped/h]	0		0		0	

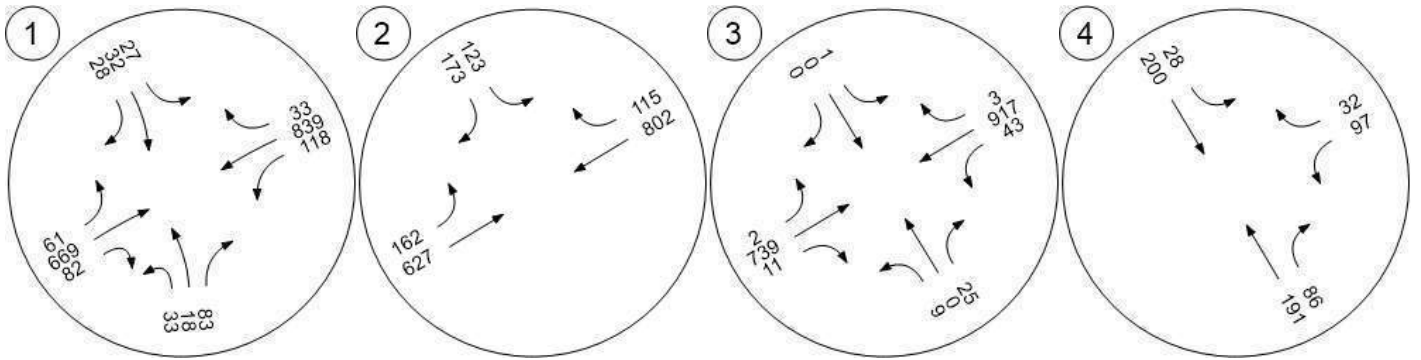
Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.00	0.18	0.04
d_M, Delay for Movement [s/veh]	0.00	0.00	7.86	0.00	13.65	11.28
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.07	0.00	0.86	0.86
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.67	0.00	21.60	21.60
d_A, Approach Delay [s/veh]	0.00		0.97		13.06	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.01					
Intersection LOS	B					

Traffic Volume - Future Total Volume



APPENDIX G
TRIP GENERATION CALCULATIONS

TRIP GENERATION

Private School (K-8)

530 ITE Land Code

400 Students

Average Daily Traffic:

$$T = 4.11 * (X)$$

$$T = 4.11 * (400)$$

$$T = 1644$$

A.M. Peak Hour:

$$T = 1.11 * (X) - 40.99$$

$$T = 1.11 * (400) - 40.99$$

$$T = 403$$

Enter = 226 56%

Exit = 177 44%

P.M. Peak Hour:

$$T = 0.26 * (X)$$

$$T = 0.26 * (400)$$

$$T = 104$$

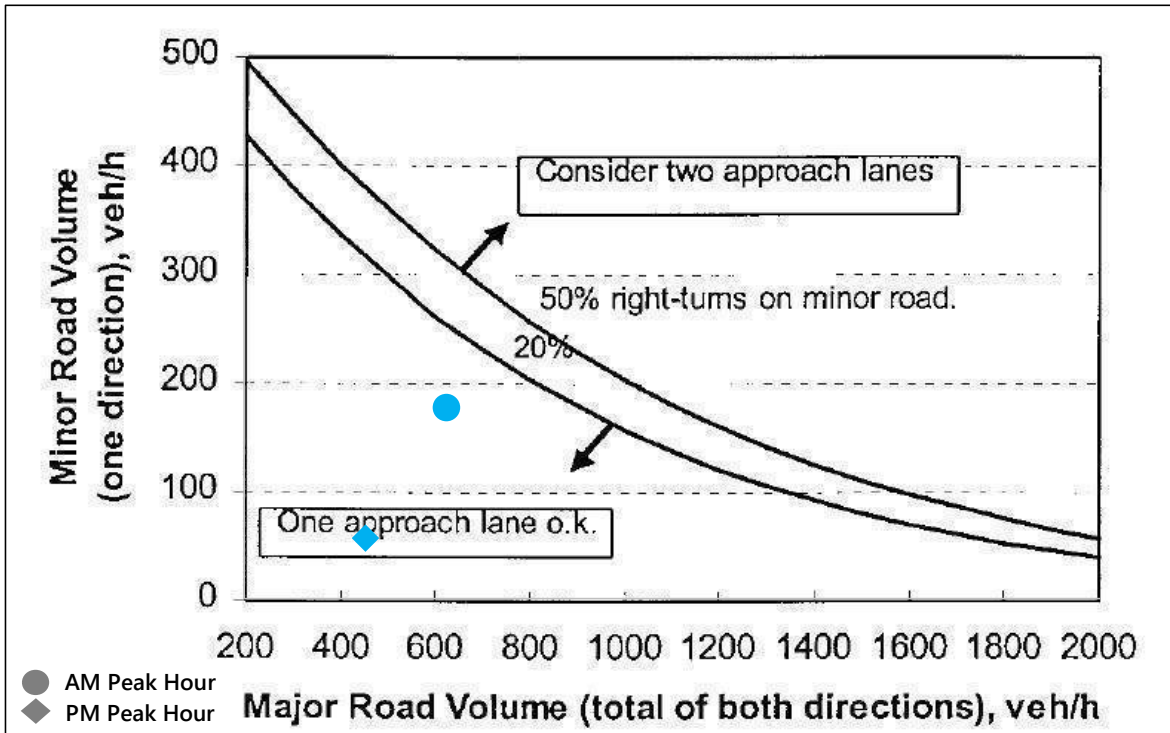
Enter = 48 46%

Exit = 56 54%

APPENDIX H
WARRANT ANALYSIS

Projected Conditions (Peak Hours)
MINOR APPROACH ANALYSES
(Based on Intersection Channelization Design Guide)

Approach - Intersection	AM Peak Hour			PM Peak Hour		
	Minor Road Volume	Major Road Volume	2-Lane Approach?	Minor Road Volume	Major Road Volume	2-Lane Approach?
Brook Hollow Road and Driveway A	177	625	No	56	455	No

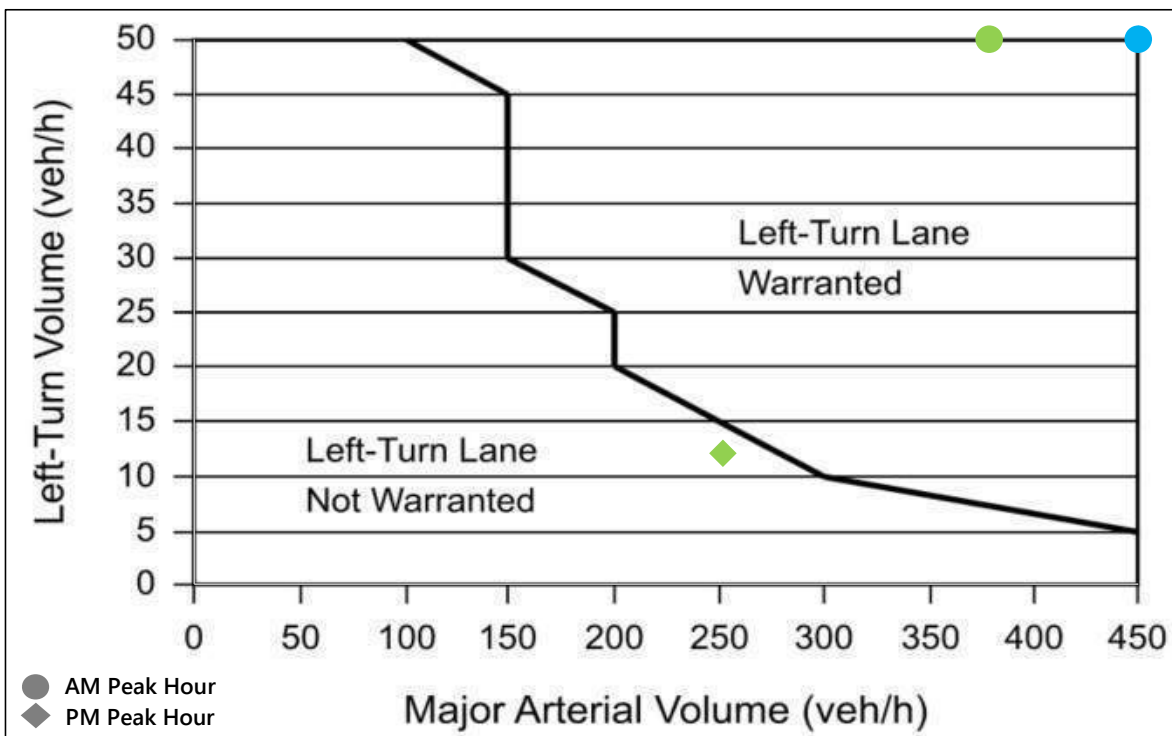


Projected Conditions (Peak Hours)

LEFT-TURN LANE ANALYSES - THREE-LEG INTERSECTION IN URBAN AREAS

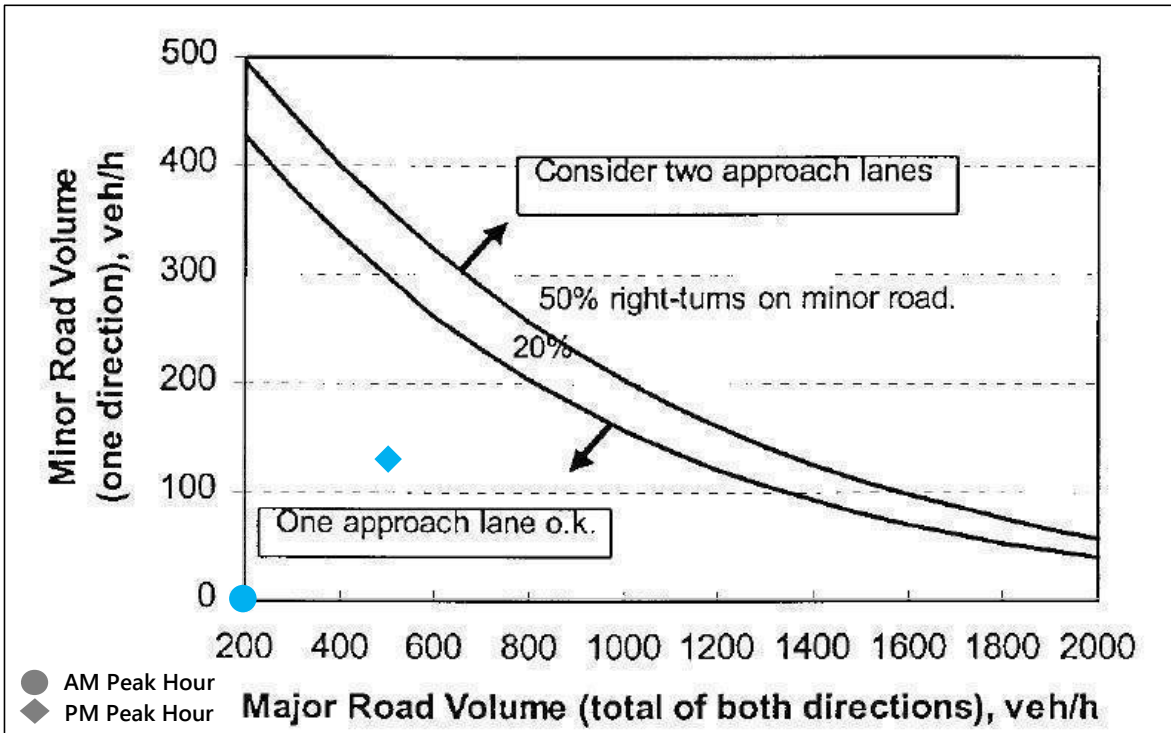
(Based on AASHTO Green Book 2018)

Approach - Intersection	AM Peak Hour			PM Peak Hour		
	Left-Turn Volume	Major Arterial Volume	Left-Turn Warranted?	Left-Turn Volume	Major Arterial Volume	Left-Turn Warranted?
Harding Pike and Brook Hollow Road	226	564	Yes	143	1344	Yes
Brook Hollow Road and Driveway A	56	379	Yes	12	252	No



Projected Conditions (Peak Hours)
MINOR APPROACH ANALYSES
(Based on Intersection Channelization Design Guide)

Approach - Intersection				Dismissal Hour		
	Minor Road Volume	Major Road Volume	2-Lane Approach?	Minor Road Volume	Major Road Volume	2-Lane Approach?
Brook Hollow Road and Driveway A				129	505	No

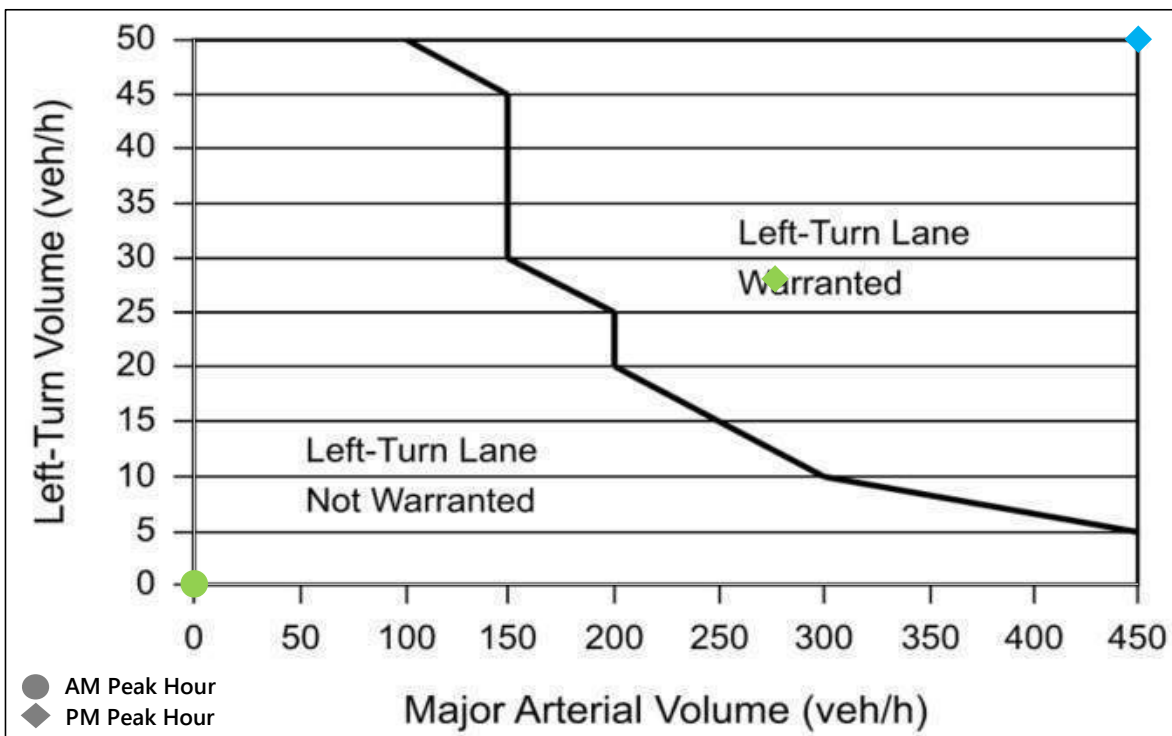


Projected Conditions (Peak Hours)

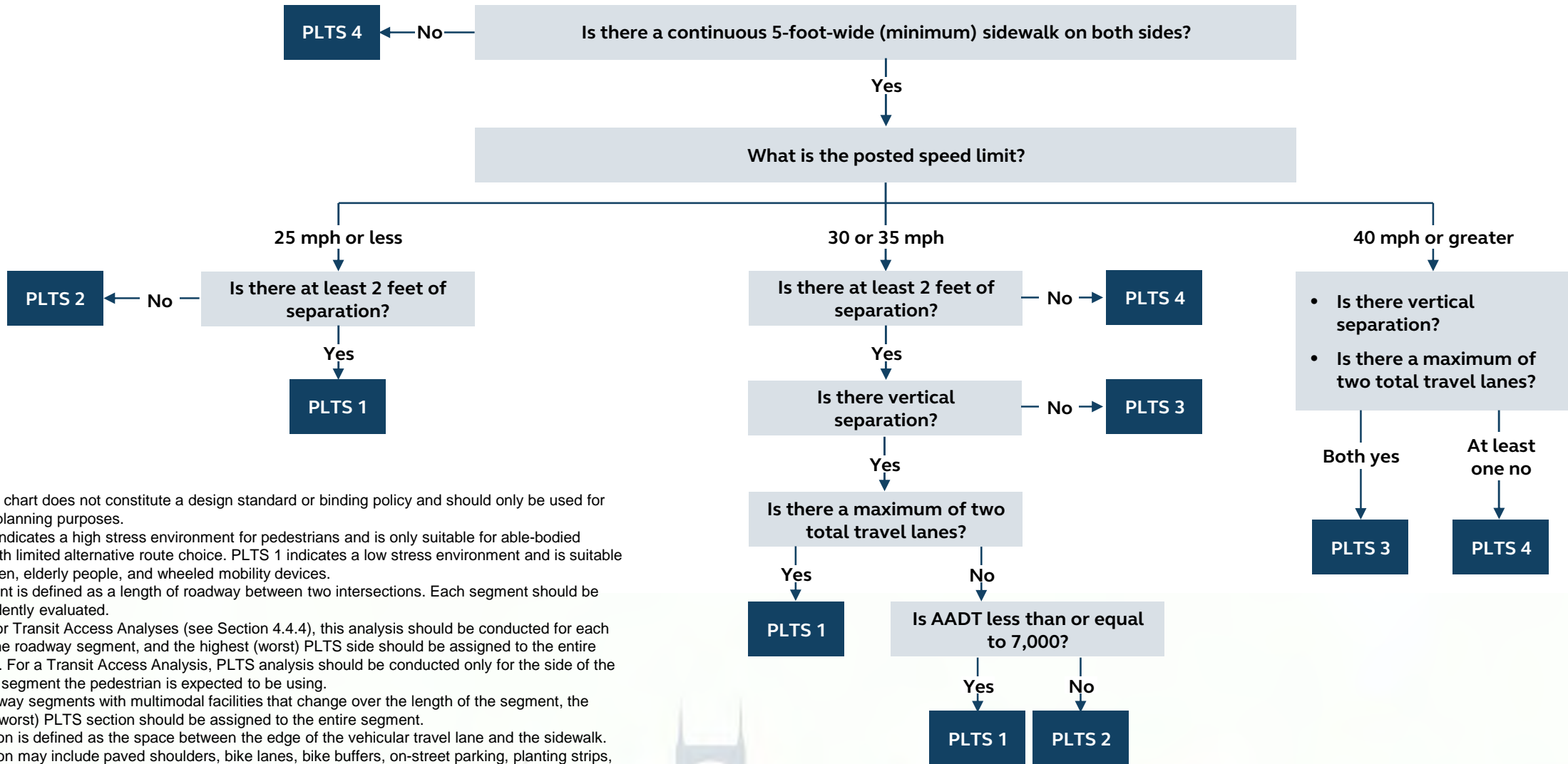
LEFT-TURN LANE ANALYSES - THREE-LEG INTERSECTION IN URBAN AREAS

(Based on AASHTO Green Book 2018)

Approach - Intersection				Dismissal Hour		
	Left-Turn Volume	Major Arterial Volume	Left-Turn Warranted?	Left-Turn Volume	Major Arterial Volume	Left-Turn Warranted?
Harding Pike and Brook Hollow Road				162	917	Yes
Brook Hollow Road and Driveway A				28	277	Yes



APPENDIX I
PEDESTRIAN AND BICYCLE LEVEL OF STRESS EVALUATION

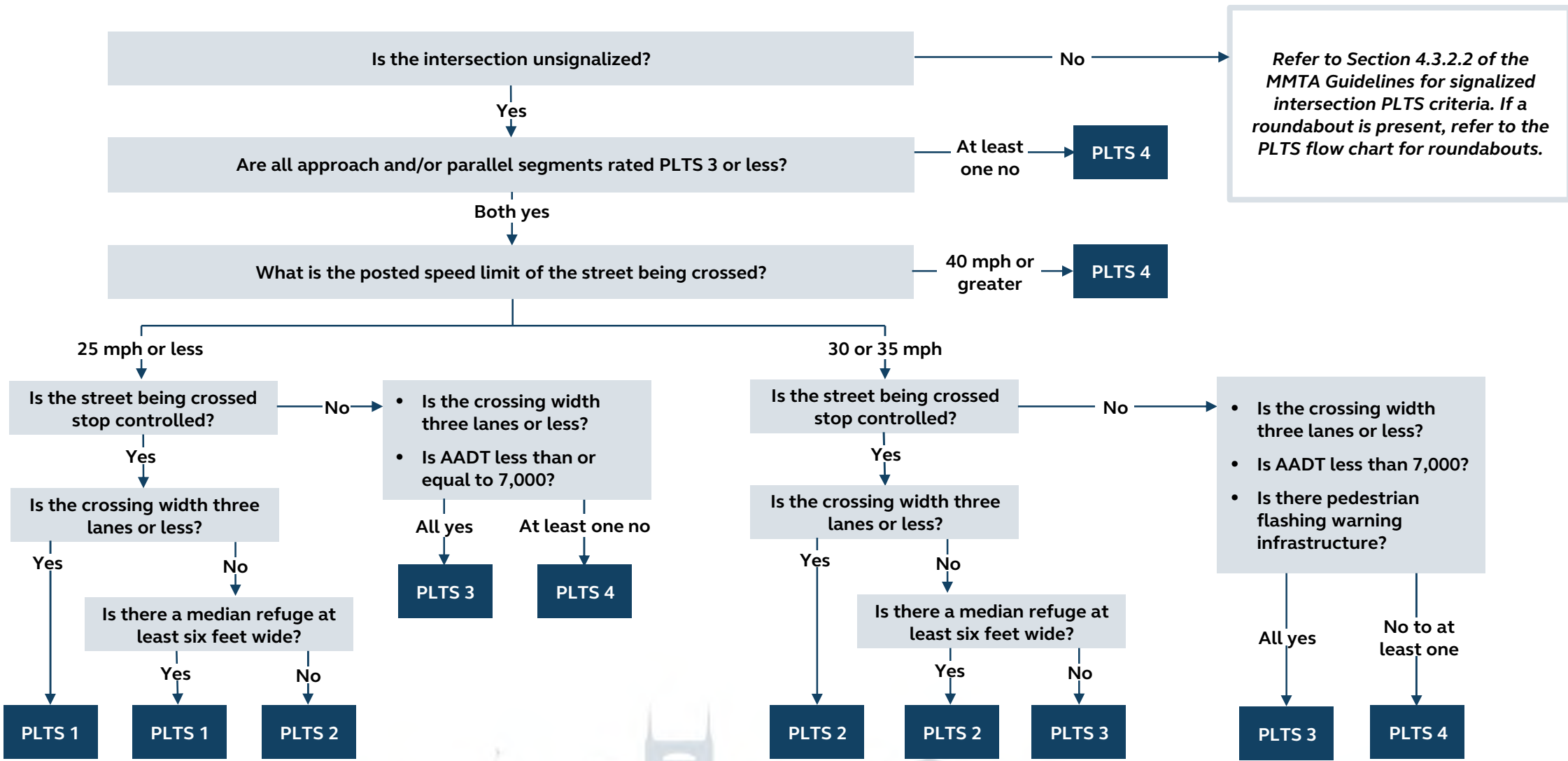


Notes

1. This flow chart does not constitute a design standard or binding policy and should only be used for general planning purposes.
2. PLTS 4 indicates a high stress environment for pedestrians and is only suitable for able-bodied adults with limited alternative route choice. PLTS 1 indicates a low stress environment and is suitable for children, elderly people, and wheeled mobility devices.
3. A segment is defined as a length of roadway between two intersections. Each segment should be independently evaluated.
4. Except for Transit Access Analyses (see Section 4.4.4), this analysis should be conducted for each side of the roadway segment, and the highest (worst) PLTS side should be assigned to the entire segment. For a Transit Access Analysis, PLTS analysis should be conducted only for the side of the roadway segment the pedestrian is expected to be using.
5. For roadway segments with multimodal facilities that change over the length of the segment, the highest (worst) PLTS section should be assigned to the entire segment.
6. Separation is defined as the space between the edge of the vehicular travel lane and the sidewalk. Separation may include paved shoulders, bike lanes, bike buffers, on-street parking, planting strips, and sidewalk width greater than 6 feet (i.e., a 10-foot sidewalk would add 4 feet of separation). Separation may not include curb and gutter.
7. Vertical separation may include on-street parking, landscaping such as tall shrubs or trees, raised bicycle lane buffers such as delineators, and other tall rigid structures.
8. Travel lanes are defined as vehicular lanes used for through travel along a segment. Travel lanes do not include center turn lanes, shoulders, parking lanes, or intersection approach turn lanes.
9. If AADT data is not available, the higher PLTS rating should be assigned.

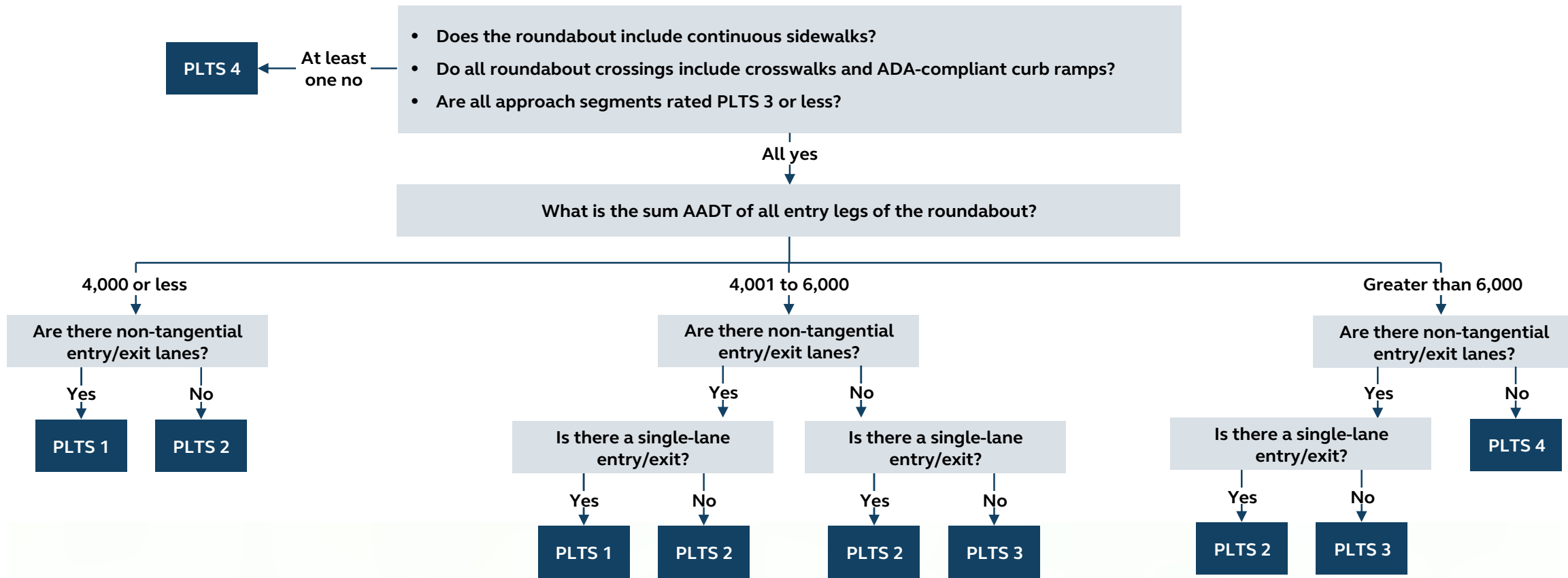


Pedestrian Level of Traffic Stress: Unsignalized Intersections



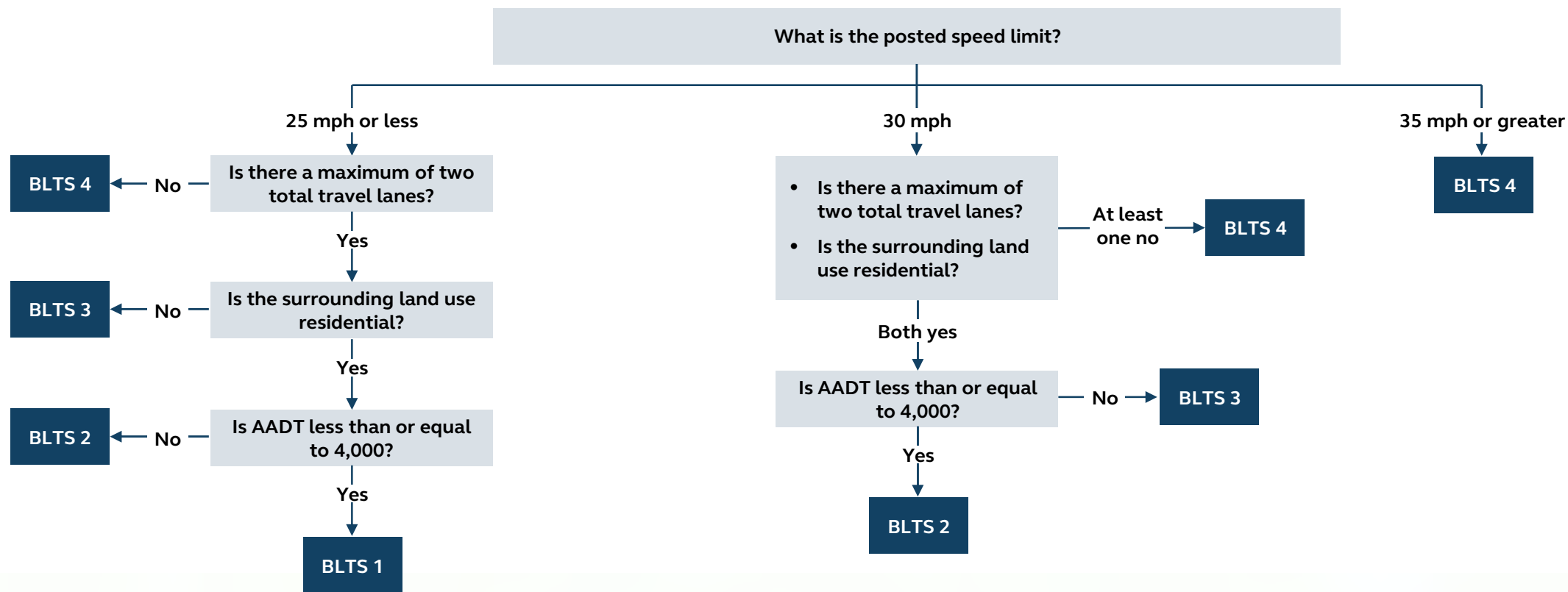
Notes

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2. PLTS 4 indicates a high stress environment for pedestrians and is only suitable for able-bodied adults with limited alternative route choice. PLTS 1 indicates a low stress environment and is suitable for children, elderly people, and wheeled mobility devices.
3. Except for Transit Access Analyses (see Section 4.4.4), this analysis should be conducted for each leg of the intersection, and the highest (worst) PLTS leg should be assigned to the entire intersection. For a Transit Access Analysis, PLTS analysis should be conducted only for the leg of the intersection the pedestrian is expected to be crossing.
4. Intersection PLTS ratings provided in this flow chart are minimums. Intersections should not be rated less (better) than the lowest rated PLTS approach.
5. Crossing width includes vehicular travel lanes, center turn lanes, intersection approach turn lanes and all other lanes designated for vehicular travel. Permanent parking lanes are not included in crossing width.
6. Pedestrian flashing warning infrastructure must be functional and push-button activated. Infrastructure may include HAWKs, RFBs, or other flashing pedestrian crossing signs.
7. AADT should be assessed for the leg being crossed. If AADT data is not available, the higher PLTS rating should be assigned.



Notes

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2. PLTS 4 indicates a high stress environment for pedestrians and is only suitable for able-bodied adults with limited alternative route choice. PLTS 1 indicates a low stress environment and is suitable for children, elderly people, and wheeled mobility devices.
3. This analysis should be conducted for each crossing of the roundabout, and the highest (worst) PLTS crossing should be assigned to the entire roundabout.
4. Roundabout PLTS ratings provided in this flow chart are minimums. Roundabouts should not be rated less (better) than the lowest rated PLTS approach.
5. If sum AADT of all entry legs of the roundabout is unknown or can't be reasonably estimated, assume greater than 6,000.
6. An entry or exit lane is defined as non-tangential if a driver must turn right to enter or exit the roundabout. If a driver can continue straight when entering or exiting a roundabout, the entry or exit lane is tangential. Refer to the MMTA Guidelines Appendix for examples.

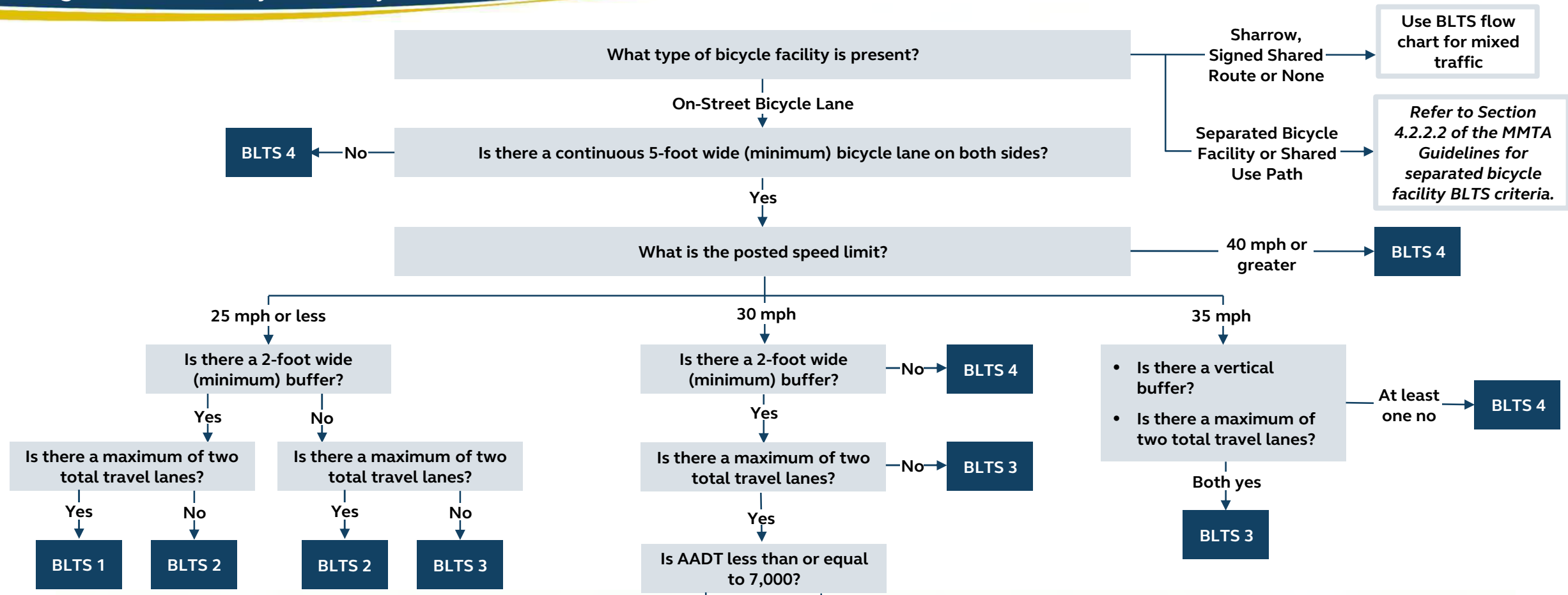


Notes

1. This flow chart does not constitute a design standard or binding policy and should only be used for general planning purposes.
2. BLTS 4 indicates a high stress environment for bicyclists and is only suitable for skilled adult bicyclists with a high stress tolerance. BLTS 1 indicates a low stress environment and is suitable for children trained to obey traffic laws.
3. A segment is defined as a length of roadway between two intersections. Each segment should be independently evaluated.
4. This analysis should be conducted for each side of the roadway segment, and the highest (worst) BLTS side should be assigned to the entire segment.
5. For roadway segments with multimodal facilities that change over the length of the segment, the highest (worst) BLTS section should be assigned to the entire segment.
6. Travel lanes are defined as vehicular lanes used for through travel along a segment. Travel lanes do not include center turn lanes, shoulders, parking lanes, or intersection approach turn lanes.
7. If reliable AADT data is not available or can't be reasonably estimated, assume the AADT is higher than the given threshold by default.



Bicycle Level of Traffic Stress: Segments with a Bicycle Facility

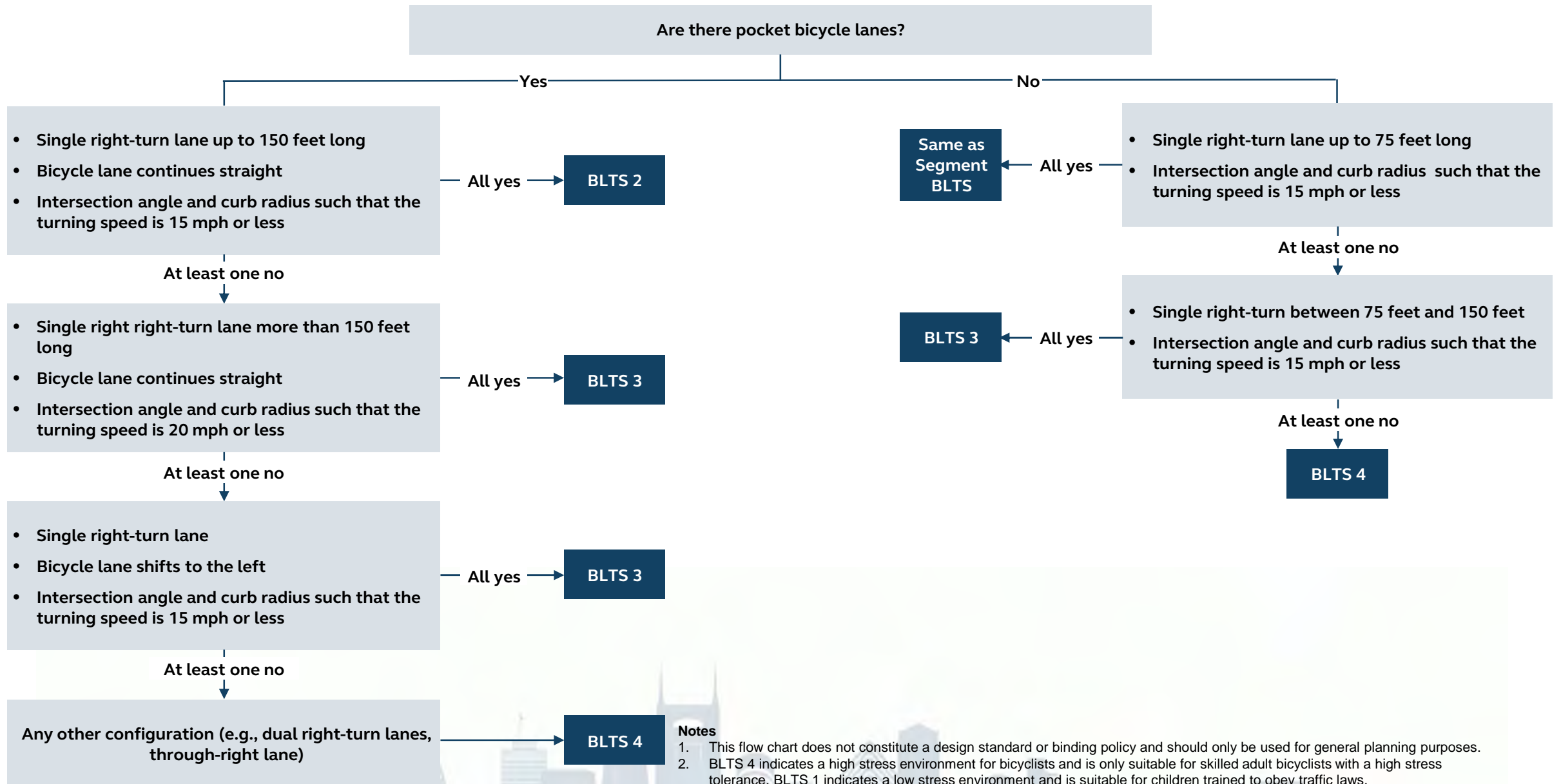


Notes

1. This flow chart does not constitute a design standard or binding policy and should only be used for general planning purposes.
2. BLTS 4 indicates a high stress environment for bicyclists and is only suitable for skilled adult bicyclists with a high stress tolerance. BLTS 1 indicates a low stress environment and is suitable for children trained to obey traffic laws.
3. A segment is defined as a length of roadway between two intersections. Each segment should be independently evaluated.
4. This analysis should be conducted for each side of the roadway segment, and the highest (worst) BLTS side should be assigned to the entire segment.
5. For roadway segments with multimodal facilities that change over the length of the segment, the highest (worst) BLTS section should be assigned to the entire segment.
6. If there is a separated bicycle lane or shared use path and an on-street bicycle lane, evaluate the segment as having a separated bicycle lane or shared use path.
7. Refer to Section 4.2.2.2 of the MMTA Guidelines for separated bicycle path or shared use path criteria.

Notes cont.

8. Bicycle lane width is defined as the distance from the face of curb to the outer edge of the bicycle lane pavement marking.
9. Buffer width is defined as the distance between the outer edge of the bicycle lane pavement parking and the vehicular travel lane. Buffer width may include a bicycle lane buffer or a vehicular parking lane.
10. Vertical buffer may include raised bicycle lane buffers such as delineators, on-street parking, landscaping such as tall shrubs or trees, and other tall rigid structures between the bicycle lane and the vehicular travel lane.
11. Travel lanes are defined as vehicular lanes used for through travel along a segment. Travel lanes do not include center turn lanes, shoulders, parking lanes, or intersection approach turn lanes.
12. If AADT data is not available, the higher BLTS rating should be assigned.

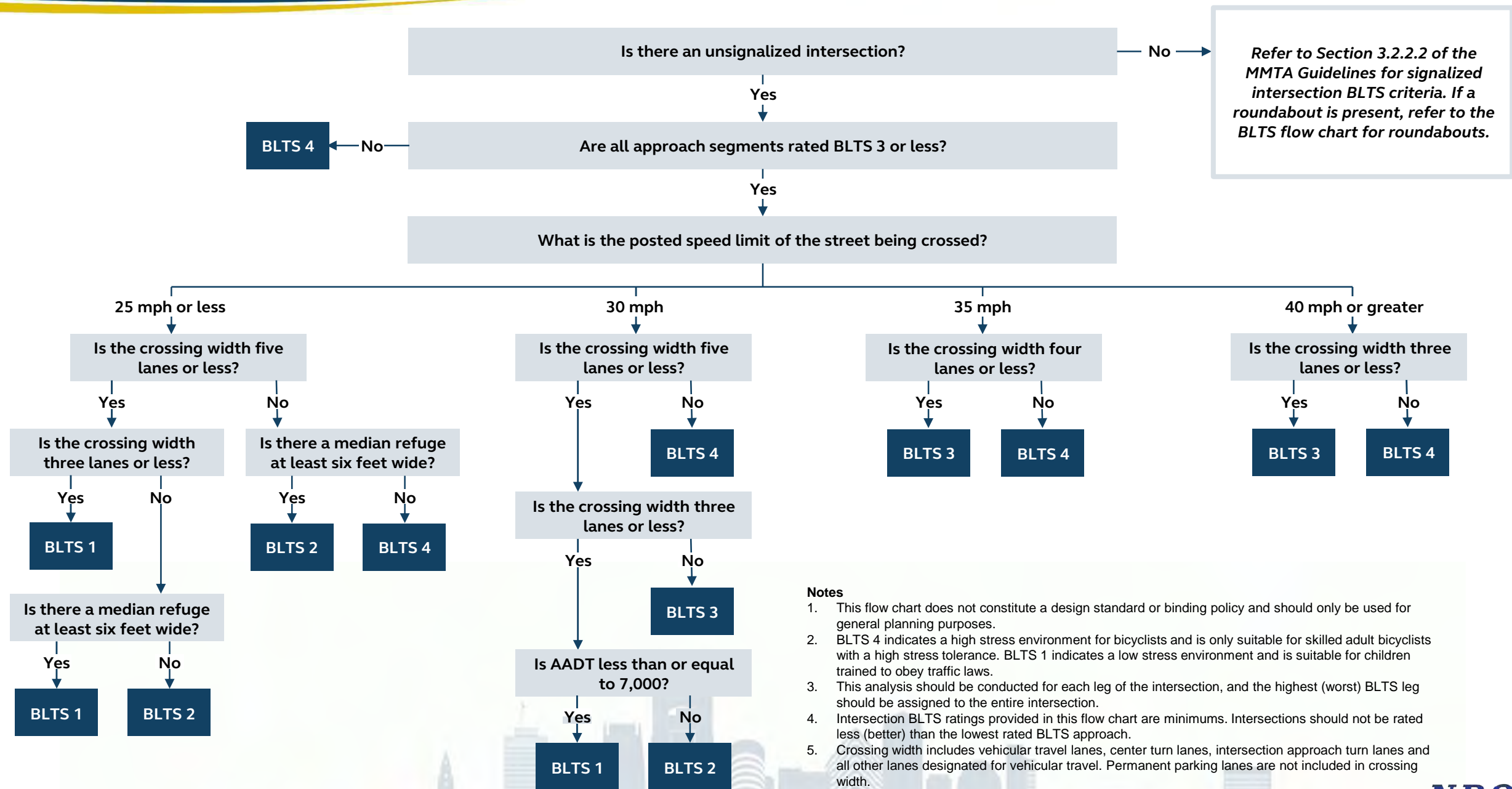


Notes

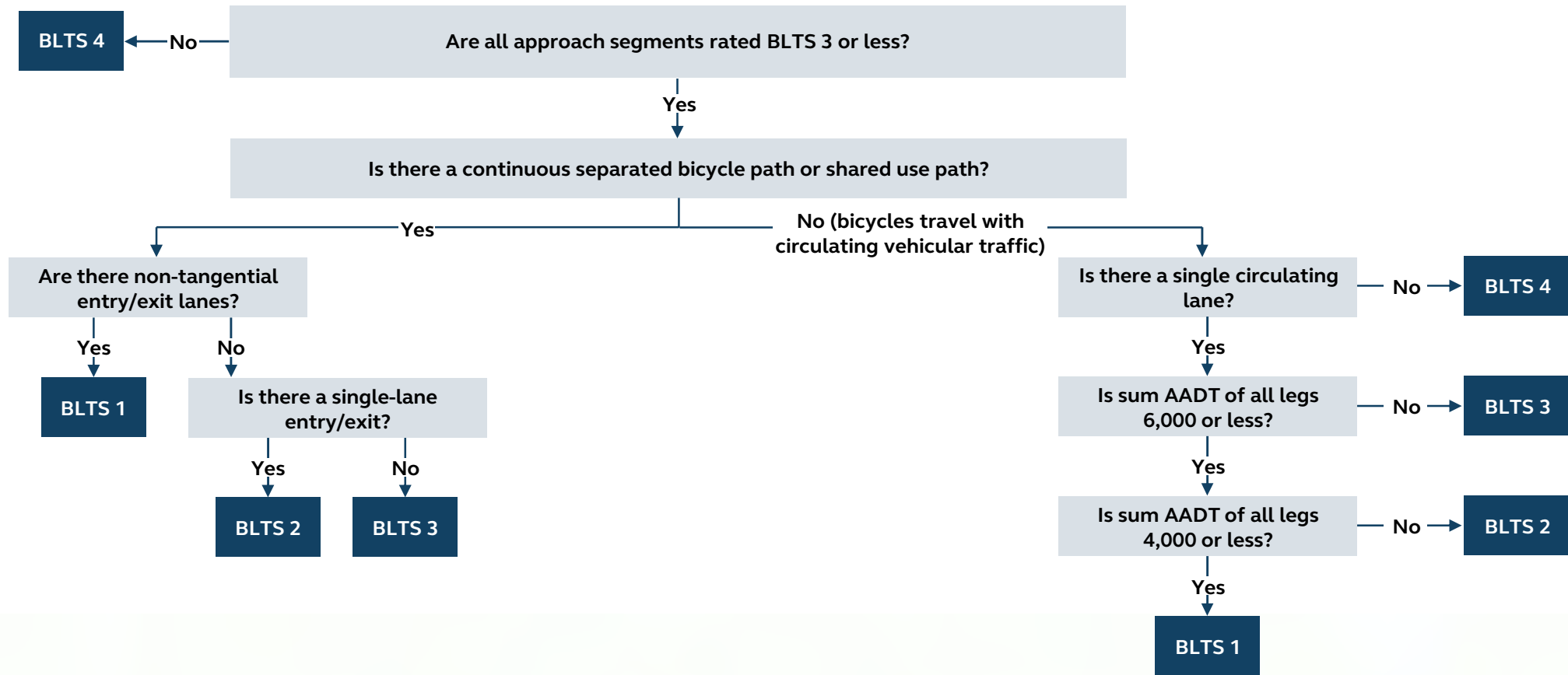
1. This flow chart does not constitute a design standard or binding policy and should only be used for general planning purposes.
2. BLTS 4 indicates a high stress environment for bicyclists and is only suitable for skilled adult bicyclists with a high stress tolerance. BLTS 1 indicates a low stress environment and is suitable for children trained to obey traffic laws.
3. Approach BLTS ratings provided in this flow chart are minimums. Approaches should not be rated less (better) than segment BLTS preceding the approach.
4. A pocket bicycle lane is a bicycle lane positioned between a vehicular right-turn lane and a through lane.



Bicycle Level of Traffic Stress: Unsignalized Intersections



- Notes**
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 2. BLTS 4 indicates a high stress environment for bicyclists and is only suitable for skilled adult bicyclists with a high stress tolerance. BLTS 1 indicates a low stress environment and is suitable for children trained to obey traffic laws.
 3. This analysis should be conducted for each leg of the intersection, and the highest (worst) BLTS leg should be assigned to the entire intersection.
 4. Intersection BLTS ratings provided in this flow chart are minimums. Intersections should not be rated less (better) than the lowest rated BLTS approach.
 5. Crossing width includes vehicular travel lanes, center turn lanes, intersection approach turn lanes and all other lanes designated for vehicular travel. Permanent parking lanes are not included in crossing width.
 6. AADT should be assessed for the leg being crossed. If AADT data is not available or a reasonable estimation can't be made, the higher BLTS rating should be assigned.



Notes

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2. BLTS 4 indicates a high stress environment for bicyclists and is only suitable for skilled adult bicyclists with a high stress tolerance. BLTS 1 indicates a low stress environment and is suitable for children trained to obey traffic laws.
3. This analysis should be conducted for each crossing of the roundabout, and the highest (worst) BLTS crossing should be assigned to the entire roundabout.
4. Roundabout BLTS ratings provided in this flow chart are minimums. Roundabouts should not be rated less (better) than the lowest rated BLTS approach.
5. Refer to Section 4.2.2.2 of the MMTA Guidelines for separated bicycle path or shared use path criteria.
6. An entry or exit lane is defined as non-tangential if a driver must turn right to enter or exit the roundabout. If a driver can continue straight when entering or exiting a roundabout, the entry or exit lane is tangential. Refer to the MMTA Guidelines Appendix for examples.
7. If sum AADT of all entry legs of the roundabout is unknown or can't be reasonably estimated, assume greater than 6,000.

APPENDIX J
SITE DRIVEWAY EVALUATION

SIGHT DISTANCE

1

BROOK HOLLOW ROAD AND DRIVEWAY A



Legend

Project Site



Sight Distance Triangle



LEFT-TURNS FROM STOP
(Feet)

RIGHT-TURNS FROM STOP
(Feet)

DESIGN

AVAILABLE

DESIGN

AVAILABLE

335

500

290

420

Notes:

- X

SIGHT DISTANCE

HARDING PIKE AND DRIVEWAY B

2



Legend

Project Site



Sight Distance Triangle



LEFT-TURNS FROM STOP
(Feet)

RIGHT-TURNS FROM STOP
(Feet)

DESIGN

AVAILABLE

DESIGN

AVAILABLE

500

>600

430

?600

Notes:

- X

VEHICULAR MOVEMENTS

1

BROOK HOLLOW ROAD AND DRIVEWAY A



Legend

- Project Site
- NB Ingress 1
- NB Egress 2
- SB Ingress 3
- SB Egress 4

HIGH-RISK CONFLICT POINT	MITIGATION
--------------------------	------------

<p>Pedestrians on sidewalk</p>	<p>Provide crosswalk and stop bar pavement markings to ensure vehicles stop before the crosswalk</p>
--------------------------------	--

Notes:

- X

VEHICULAR MOVEMENTS

2

BROOK HOLLOW ROAD AND DRIVEWAY B



Legend

- Project Site
- WB Ingress 1
- WB Egress 2
- EB Ingress 3
- EB Egress 4

HIGH-RISK CONFLICT POINT

1. Pedestrians on sidewalk
2. Bicyclists on bike lane

MITIGATION

1. Provide crosswalk and stop bar pavement markings to ensure vehicles stop before the crosswalk
2. Provide bicycle and stop bar pavement markings to ensure vehicles stop before the bike lane

Notes:

- X

APPENDIX K
CRASH ANALYSIS

ID Number	Crash Repr	County	Route	Special Ca	County Sec	Log Mile	Date of Crash	Crash Location	Type of Crash	Total Fatali	Total Suspri	Total Other	Total Vehic	Vehicle Nu	Vehicle Mo	Manner of First Collision	Driver Acti	Vehicle Go	Relation to First R	Weather Con	Light Cond	Case Numl	Gps Coord	Gps Coordinate	Longitude
190C790001	https://tita	Davidson	0C9790	0-None	1	1.641	6/18/2022 23:53	Along Roadway	(B) Suspected Minor Injury	0	0	2	2			[Vehicle in Angle	[Failure to [East", "No On Roadway			Clear	Dark-Light	1.03E+08	36.09634	-86.8776	
190C971001	https://tita	Davidson	0C971	0-None	1	0.983	5/3/2020 20:43	Along Roadway	(B) Suspected Minor Injury	0	0	2	1			Bridge Rail No Collision W/ Vehicle	Other (Nan North	Shoulder		Cloudy	Dark-Light	1.03E+08	36.09297	-86.8856	
190C971001	https://tita	Davidson	0C971	0-None	1	0.913	2/7/2021 16:15	Along Roadway	(B) Suspected Minor Injury	0	0	1	2			[Vehicle in Angle	[Unknown [South", "E On Roadway			Clear	Daylight	1.03E+08	36.09201	-86.8854	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.985	3/28/2021 21:00	Along Roadway	(O) Property-Damage Only	0	0	0	2			[Vehicle in Rear-End	[Following [East", "Ea On Roadway			Clear	Daylight	1.03E+08	36.09256	-86.8855	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.23	4/14/2022 17:43	At an Intersection	(B) Suspected Minor Injury	0	0	3	3			[Vehicle in Angle	[Failure to [East", "W On Roadway			Clear	Daylight	1.03E+08	36.0944	-86.8817	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.511	9/17/2021 6:50	Along Roadway	(O) Property-Damage Only	0	0	0	4			[Vehicle in Rear-End	[Other (Nc [West", "W On Roadway			Cloudy	Daylight	1.03E+08	36.09643	-86.8774	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.99	4/21/2022 7:22	At an Intersection	(B) Suspected Minor Injury	0	0	1	2			[Vehicle in Angle	No Contrib [East", "No On Roadway			Cloudy	Daylight	1.03E+08	36.09258	-86.8854	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.99	8/31/2020 14:18	At an Intersection	(O) Property-Damage Only	0	0	0	2			[Vehicle in Angle	[No Contri [North", "West"]			Cloudy	Daylight	1.03E+08	36.09258	-86.8854	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.33	9/26/2020 0:00	Along Roadway	(O) Property-Damage Only	0	0	0	1			Deer (Anim No Collision W/ Vehicle	No Contrib South	On Roadway		Clear	Dark-Light	1.03E+08	36.09251	-86.8803	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.99	11/18/2020 15:40	At an Intersection	(C) Possible Injury	0	0	1	2			[Vehicle in Angle	[No Contri [South", "V On Roadway			Clear	Daylight	1.03E+08	36.09258	-86.8854	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.99	2/26/2020 7:15	At an Intersection	(O) Property-Damage Only	0	0	0	2			[Vehicle in Angle	[Failure to [West", "St On Roadway			Cloudy	Daylight	1.03E+08	36.09258	-86.8854	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.567	8/18/2022 15:54	At an Intersection	(B) Suspected Minor Injury	0	0	1	2			[Vehicle in Angle	[Failure to [West", "E On Roadway			Clear	Daylight	1.03E+08	36.09684	-86.8766	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.966	12/10/2020 9:50	Along Roadway	(C) Possible Injury	0	0	1	2			[Vehicle in Rear-End	[No Contri [East", "Ea On Roadway			Clear	Daylight	1.03E+08	36.09242	-86.8858	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.99	9/11/2020 10:04	At an Intersection	(C) Possible Injury	0	0	2	2			[Vehicle in Angle	[No Contri [West", "N On Roadway			Clear	Daylight	1.03E+08	36.09258	-86.8854	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.23	8/31/2022 13:40	At an Intersection	(O) Property-Damage Only	0	0	0	2			[Vehicle in Rear-End	[No Contri [South", "South"]			Clear	Daylight	1.03E+08	36.0944	-86.8817	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.518	11/3/2021 3:02	Along Roadway	(O) Property-Damage Only	0	0	0	1			Standing Tl No Collision W/ Vehicle	No Contrib West	Shoulder		Clear	Dark-Not L	1.03E+08	36.09648	-86.8773	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.902	10/28/2022 0:48	Along Roadway	(O) Property-Damage Only	0	0	0	2			[Parked M Rear-End	Lane Depa [South", "S Roadside -- Right			Clear	Dark-Light	1.03E+08	36.09195	-86.8868	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.99	6/10/2020 12:01	At an Intersection	(B) Suspected Minor Injury	0	0	1	2			[Vehicle in Rear-End	No Contrib [East", "Ea On Roadway			Clear	Daylight	1.03E+08	36.09258	-86.8854	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.44	9/14/2020 7:37	Along Roadway	(B) Suspected Minor Injury	0	0	1	1			Other Post, No Collision W/ Vehicle	Other (Nan West	Roadside -- Right		Cloudy	Daylight	1.03E+08	36.09592	-86.8785	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.23	10/27/2021 6:00	At an Intersection	(O) Property-Damage Only	0	0	0	2			[Vehicle in Angle	[No Contri [East", "East"]			Clear	Daylight	1.03E+08	36.0944	-86.8817	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.99	11/6/2021 10:05	At an Intersection	(C) Possible Injury	0	0	1	2			[Vehicle in Rear-End	[Inattentiv [East", "Ea On Roadway			Clear	Daylight	1.03E+08	36.09258	-86.8854	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.99	3/2/2021 18:55	At an Intersection	(O) Property-Damage Only	0	0	0	2			[Vehicle in Angle	[No Contri [West", "E On Roadway			Clear	Dark-Light	1.03E+08	36.09258	-86.8854	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.23	1/27/2020 15:00	At an Intersection	(O) Property-Damage Only	0	0	0	2			[Vehicle in Angle	[No Contri [West", "W On Roadway			Clear	Daylight	1.03E+08	36.0944	-86.8817	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.383	10/13/2020 12:35	Along Roadway	(O) Property-Damage Only	0	0	0	1			Mail Box No Collision W/ Vehicle	No Contrib East	Outside Trafficwa		Clear	Daylight	1.03E+08	36.09551	-86.8794	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.99	1/5/2020 14:37	At an Intersection	(C) Possible Injury	0	0	2	2			[Vehicle in Angle	[No Contri [North", "V On Roadway			Clear	Daylight	1.03E+08	36.09264	-86.8854	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.99	12/31/2020 15:17	At an Intersection	(O) Property-Damage Only	0	0	0	3			[Vehicle in Sideswipe, Same Dir	[Improper [East", "Ea On Roadway			Clear	Daylight	1.03E+08	36.09258	-86.8854	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.567	5/16/2022 7:20	At an Intersection	(O) Property-Damage Only	0	0	0	2			[Vehicle in Rear-End	[No Contri [East", "East"]			Clear	Daylight	1.03E+08	36.09684	-86.8766	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.99	1/5/2021 13:29	At an Intersection	(K) Fatal Injury	2	0	1	2			[Vehicle in Angle	[Failure to [West", "E On Roadway			Clear	Daylight	1.03E+08	36.09258	-86.8854	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.99	10/8/2022 17:38	At an Intersection	(O) Property-Damage Only	0	0	0	2			[Vehicle in Angle	[Failure to [East", "No On Roadway			Clear	Daylight	1.03E+08	36.09258	-86.8854	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.913	2/3/2023 14:00	Along Roadway	(C) Possible Injury	0	0	1	1			Utility Pole No Collision W/ Vehicle	Lane Depa North	Shoulder		Clear	Daylight	1.04E+08	36.09203	-86.8866	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.5	8/2/2021 11:05	At an Intersection	(O) Property-Damage Only	0	0	0	2			[Vehicle in Rear-End	[Following [West", "W On Roadway			Cloudy	Daylight	1.03E+08	36.09611	-86.8781	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.99	12/14/2023 16:01	At an Intersection	(C) Possible Injury	0	0	2	2			[Vehicle in Angle	[No Contri [South", "V On Roadway			Clear	Daylight	1.04E+08	36.09254	-86.8856	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.99	8/17/2023 7:50	Along Roadway	(O) Property-Damage Only	0	0	0	2			[Vehicle in Angle	[Unknown Action", "Unknown Action"]			Clear	Daylight	1.04E+08	36.09258	-86.8854	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.5	4/14/2023 0:00	At an Intersection	(B) Suspected Minor Injury	0	0	2	2			[Vehicle in Angle	[No Contri [North", "S On Roadway			Clear	Daylight	1.04E+08	36.09634	-86.8776	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.491	4/26/2023 9:40	Along Roadway	(O) Property-Damage Only	0	0	0	2			[Vehicle in Rear-End	[No Contri [East", "Ea On Roadway			Clear	Daylight	1.04E+08	36.09628	-86.8777	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.99	8/2/2023 6:28	At an Intersection	(B) Suspected Minor Injury	0	0	1	2			[Vehicle in Angle	[No Contri [South", "V On Roadway			Clear	Daylight	1.04E+08	36.09258	-86.8854	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.513	2/16/2024 2:57	Along Roadway	(O) Property-Damage Only	0	0	0	1			Utility Pole No Collision W/ Vehicle	Lane Depa East	Roadside -- Right		Clear	Dark-Light	1.04E+08	36.09644	-86.8774	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.404	2/20/2024 5:47	Along Roadway	(B) Suspected Minor Injury	0	0	1	1			Utility Pole No Collision W/ Vehicle	Lane Depa East			Clear	Dark-Light	1.04E+08	36.09566	-86.8791	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.99	9/1/2024 14:34	At an Intersection	(O) Property-Damage Only	0	0	0	4			[Vehicle in Angle	[Failure to [East", "No On Roadway			Cloudy	Daylight	4E+08	36.09275	-86.8851	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.5	10/22/2024 16:53	At an Intersection	(O) Property-Damage Only	0	0	0	2			[Vehicle in Rear-End	[No Contri [East", "East"]			Clear	Daylight	4E+08	36.09622	-86.8778	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.561	3/3/2021 9:00	Along Roadway	(C) Possible Injury	0	0	1	2			[Vehicle in Rear-End	[No Contri [West", "W On Roadway			Clear	Daylight	1.03E+08	36.0968	-86.8767	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.994	10/6/2021 7:30	Along Roadway	(C) Possible Injury	0	0	1	2			[Vehicle in Angle	[No Contri [North", "S On Roadway			Rain	Daylight	1.03E+08	36.09262	-86.8853	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.532	8/3/2021 17:15	Along Roadway	(B) Suspected Minor Injury	0	0	1	2			[Vehicle in Rear-End	[Unknown [East", "Ea On Roadway			Clear	Daylight	1.03E+08	36.09658	-86.8771	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.527	2/22/2023 7:38	Along Roadway	(O) Property-Damage Only	0	0	0	2			[Vehicle in Rear-End	[No Contri [East", "East"]			Cloudy	Daylight	1.04E+08	36.09654	-86.8772	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.5	7/18/2020 6:00	At an Intersection	(O) Property-Damage Only	0	0	0	2			[Vehicle in Angle	No Contrib [South", "S On Roadway			Clear	Daylight	1.03E+08	36.09634	-86.8776	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.975	7/4/2020 14:19	Along Roadway	(O) Property-Damage Only	0	0	0	2			[Vehicle in Rear-End	[Following [East", "East"]			Clear	Daylight	1.03E+08	36.09248	-86.8856	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.138	2/1/2023 10:06	Along Roadway	(O) Property-Damage Only	0	0	0	2			[Vehicle in Rear-End	[No Contri [North", "North"]			Snow	Daylight	1.04E+08	36.09365	-86.8831	
19SR001001	https://tita	Davidson	SR001	0-None	1	9.99	1/18/2023 18:30	At an Intersection	(B) Suspected Minor Injury	0	0	2	2			[Vehicle in Head-On	[No Contri [East", "W On Roadway			Clear	Dark-Light	1.04E+08	36.09258	-86.8854	
19SR001001	https://tita	Davidson	SR001	0-None	1	10.408	10/26/2022 8:45	Along Roadway	(O) Property-Damage Only	0	0	0	2			[Vehicle in Rear-End	[No Contri [North", "N On Roadway			Cloudy					