Kimley»Horn

MEMORANDUM

To: David Low, P.E., PTOE - City of Sandy Springs

From: Jourdyn R. Fuga, P.E., RSP - Kimley-Horn

Date: January 31, 2022

Subject: Intersection Improvement Program: T-7247 Long Island Drive at Mount Vernon Highway
Sandy Springs, Georgia
Traffic Engineering Study

Kimley-Horn was retained by the City of Sandy Springs to conduct an intersection analysis of Mount Vernon Highway at Long Island Drive/Arlington Cemetery. Arlington Cemetery's driveway meets the intersection at a negative offset with Long Island Drive, causing overlapping left-turn movements on Mount Vernon Highway. Since reconfiguring Long Island Drive to a two-lane approach in 2017, heavy queueing and long delays have been observed at the approach. Additionally, when vehicles are queued in both lanes of the approach, intersection sight distance for motorists in one lane typically are obstructed by motorists in the other lane. The City of Sandy Springs previously studied this intersection and identified the need for either a roundabout and/or realignment of the driveway with Long Island Drive.

The purpose of this study is to complete traffic analyses of both alternatives, develop concept designs, and identify a preferred alternative to improve safety and operations of the intersection. This memorandum details the analyses and findings of this study.

Study Area

Mount Vernon Highway is a two-lane, minor arterial oriented in the northeast-southwest direction with a posted speed limit of 35 mph. Long Island Drive is a two-lane, major collector oriented in the north-south direction, south of Mount Vernon Highway, with a posted speed limit of 35 mph, and the Arlington Cemetery driveway is offset to the northeast of Long Island Drive. For the purposes of this analysis, Mount Vernon Highway will be considered east-west and Long Island Drive/Arlington Cemetery Driveway will be considered north-south. The intersection operates under side-street stop control with exclusive left-turn lanes at the northbound and westbound approaches. The signalized intersection of Mount Vernon Highway at Hammond Drive is located approximately 520 feet east of Long Island Drive. The study intersection is located nearly 0.5-miles north of I-285, though no freeway access is provided by either Mount Vernon Highway or Long Island Drive.

A continuous sidewalk is present along the north side of Mount Vernon Highway throughout the study area. Along Long Island Drive, a sidewalk is present along the east side of the roadway, north of Limestone Way, which continues along the south side of Mount Vernon Highway to the east. A crosswalk is present across the Long Island Drive approach of the intersection, and the nearest pedestrian crossing across Mount Vernon Highway is at the northeast leg of the intersection at Hammond Drive. Overhead utilities and streetlighting are present along the north side of Mount Vernon Highway.

The study area is located in central Sandy Springs, southwest of City Springs, in an area that is primarily residential. Mount Vernon Highway and Long Island Drive provide connection to multiple single-family homes and neighborhoods to the south, while Mount Vernon Highway also connects to commercial development to the northeast. Arlington Cemetery and Arlington Memorial Park are located on the north side of Mount Vernon Highway. A project location map is included in **Attachment A**.

Previous Study Review

The City of Sandy Springs Department of Public Works completed a traffic study, the findings of which are summarized in a memorandum dated April 24, 2020, included as **Attachment B**. The study was prompted by a meeting between City of Sandy Springs Transportation and Communications staff and neighborhood representatives from the Montrose and Grey Walls neighbors in July 2019. Area residents had five primary concerns about the intersection of Mount Vernon Highway at Long Island Drive:

- Heavy traffic volumes on Mount Vernon Highway make it difficult for traffic on Long Island Drive to turn left or right onto Mount Vernon Highway, leading to long queues and delays. This issue is most prominent during the morning period of 7:30 AM to 9:00 AM and the afternoon period of 3:00 PM to 5:00 PM. The problem also is exacerbated during the school year when delays worsen due to heavier travel patterns to/from Springmont School, which located on Long Island Drive south of the study area.
- Queuing at the Long Island Drive approach of the intersection has worsened since the City implemented T-SPLOST Project TS-115, which reconfigured the approach to provide an exclusive left-turn lane and a shared through/right-turn lane, since motorists' line of sight is obstructed when vehicles are queued in both lanes.
- Because of heavy delays and queueing on Long Island Drive, some motorists avoid the northbound left-turn movement by making a northbound right turn, followed by an immediate left turn into the Arlington Cemetery driveway, a U-turn movement around the landscaped median of the driveway, and a right tun onto westbound Mount Vernon Highway.
- There are safety concerns that heavy delays and queueing at the intersection is leading to poor driver behavior and risky maneuvers.
- Travel speeds on Mount Vernon Highway are excessive during off-peak time periods.

The study found that daily volumes along Mount Vernon Highway, west of Hammond Drive, were approximately 19,560 vehicles per day (vpd), though saturation of a two-lane roadway typically occurs around 17,000 vpd. The study also found that between 2015 and 2019, 17 crashes occurred at the study intersection, of which 6 were either angle or left-turn crashes. Geometric safety concerns were confirmed as part of the study, and the skewed, offset intersection was found to be a safety hazard that contributes to crashes, causes undue delay, and leads motorists to make riskier maneuvers. Since the City does not plan to widen Mount Vernon Highway, intersection-focused improvements were the priority for addressing safety and operational concerns.

A traffic signal warrant analysis was completed based on the nine warrants contained in the Federal Highway Administration's (FHWA) *Manual on Uniform Traffic Control Devices* (MUTCD). Four of the nine warrants were satisfied (Warrant 2, Condition B – Interruption of Continuous Traffic; Warrant 2 – Four-Hour Vehicular Volume; Warrant 3 – Peak Hour Volume; and Warrant 7 – Crash Experience), indicating that signalization of the intersection would be appropriate. However, the intersection is located approximately 520 feet west of the signalized intersection at Hammond Drive, and desired signal spacing is typically around 1,000 feet. Criteria for all-way stop control contained in the MUTCD was also reviewed, but volumes at the intersection do not satisfy the criteria for this type of intersection control.

Due to the residential nature of the surrounding area and the constrained, collector character of Mount Vernon Highway, a roundabout also was identified as a reasonable treatment for the intersection, though it was not analyzed in depth. The study noted that roundabouts can be appropriate treatments for skewed intersections, while providing 10 to 15 percent more capacity than a signalized intersection and reducing the severity of intersection crashes.

While the study determined that signalization may be appropriate, the City also identified alternative solutions to explore further:

- A channelizing island, with a radius of 75 to 125 feet, between the left- and right-turn lanes at the Long Island Drive approach
- A modern roundabout with an inscribed diameter of approximately 130 feet with a raised central island and truck apron
- A mini roundabout with an inscribed diameter of 80 to 90 feet and a domed central island that is flush with the adjacent pavement and rises gradually to four or five inches in the center, so that vehicles can turn across it
- A roundabout at the intersection of Mount Vernon Highway at Hammond Drive, which would allow northbound motorists on Long Island Drive to make a right turn onto Mount Vernon Highway, followed by a U-turn at Hammond Drive

Based on the City's findings and the identified solutions, the study provided three final recommendations:

1. Pursue alignment of Long Island Drive with the Arlington Cemetery driveway
    a. If a roundabout is determined to be the appropriate intersection solution, it likely will not be necessary to align the two side streets exactly, though some shift in the cemetery driveway will be needed.
2. If a roundabout is not identified as the appropriate intersection solution, signalize the intersection and provide fiberoptic cable communications along Mount Vernon Highway between Long Island Drive and Hammond Drive
3. Improve sight distance from Long Island Drive to the west along Mount Vernon Highway

Data Collection

Traffic count data was collected in October 2019 by the City of Sandy Springs and included three 13-hour turning movement counts (TMC) and nine 48-hour bidirectional tube counts. The TMCs were collected on Wednesday, October 2, 2019 from 6:00 AM to 7:00 PM and included passenger car, heavy vehicle, bicycle, and pedestrian volumes to capture the multimodal characteristics of the study area. The 48-hour tube counts were collected from 12:00 AM on Wednesday, October 2, 2019 to 12:00 AM on Friday, October 4, 2019. **Table 1** summarizes the counts that were collected. Traffic counts data is provided in **Attachment C**.

Peak Hour Determination

The TMC collected at the intersection of Mount Vernon Highway at Long Island Drive as well as the 48-hour bidirectional tube counts collected at each leg of the intersection were reviewed when determining the peak hours. The morning peak hour was determined to be from 7:30 AM to 8:30 AM, and the evening peak hour was determined to be from 5:00 PM to 6:00 PM.

Table 1: Collected Traffic Count Data (October 2019)

Count No.	Location	Description
1	Mt Vernon Hwy at Long Island Dr / Arlington Cemetery Driveway	TMC
2	Mt Vernon Hwy at Hammond Dr	TMC
3	Hammond Dr at Mitchell Rd	TMC
4	Mt Vernon Hwy, west of Long Island Dr	Bidirectional Tube
5	Long Island Dr, south of Mt Vernon Hwy	Bidirectional Tube
6	Arlington Cemetery Driveway, north of gate	Bidirectional Tube
7	Arlington Cemetery Driveway, NB entrance	Single Directional Tube
8	Arlington Cemetery Driveway, SB exit	Single Directional Tube
9	Arlington Cemetery Driveway, U-turn	Single Directional Tube
10	Mt Vernon Hwy, between Long Island Dr and Hammond Dr	Bidirectional Tube w/ Classification
11	Hammond Dr, east of Mt Vernon Hwy	Bidirectional Tube
12	Mt Vernon Hwy, northeast of Hammond Dr	Bidirectional Tube

Traffic Volume Development

To determine the appropriate intersection control for Mount Vernon Highway at Long Island Drive, three analysis years were evaluated:

- Base (2023) Year
- Interim (2033) Year
- Design (2043) Year

Traffic volumes for the three analysis years were based on existing traffic count data as well as calculated annual traffic growths from Sandy Springs-specific travel demand models developed as part of the *Sandy Springs Transportation Master Plan*. A selected growth rate of 0.37 percent was applied to the 2019 count data collected by the City of Sandy for the appropriate number of years to develop future, forecasted volumes for each analysis year. Traffic volume figures for each year are provided in **Attachment D**. Traffic forecasting and volume development efforts are detailed in the March 24, 2021 *Traffic Forecasting and Volume Development Methodology* memorandum, provided in **Attachment E**.

Traffic Operations Analysis

To evaluate the operational impacts of the proposed intersection treatments, three scenarios were modeled for each of the analysis years:

- No-Build conditions
- Roundabout conditions
- Signalized conditions

The intersection of Mount Vernon Highway at Hammond Drive was modeled in addition to the intersection of Mount Vernon Highway at Long Island Drive as part of this evaluation since the intersections are closely spaced, making it more likely that operational performance at one intersection could impact the other intersection.

Traffic operations were assessed by determining Level-of-Service (LOS) and delay for both intersections in the study network. LOS is a quantitative measure from the HCM that represents a transportation

facility's quality of service with six levels (A through F), with LOS A representing the best operating conditions and LOS F representing the worst. For both signalized and unsignalized intersections, LOS is based on delay and volume-to-capacity ratio, as summarized in **Table 2**.

Table 2: Level-of-Service Criteria

LOS	LOS Criteria (seconds of delay)	
	Signalized	Unsignalized
A	0-10	0-10
B	>10-20	>10-15
C	>20-35	>15-25
D	>35-55	>25-35
E	>55-80	>35-50
F	>80	>50

For signalized intersections, LOS A represents exceptionally favorable progression, with most vehicles arriving during the green indication and traveling through the intersection without stopping. LOS D represents inefficient progression, with most vehicles stopping at the intersection and with noticeable individual cycle failures, and LOS F represents very poor progression with most cycles failing to clear the queue. LOS for unsignalized intersections differs slightly from signalized intersections because of user perception and the expectation that a signalized intersection is designed to carry higher traffic volumes and will present greater delay.

Operational analyses were conducted for the AM peak hour and PM peak hour only using Trafficware's *Synchro 11.0* software, which applies methodologies outlined in the *Highway Capacity Manual 6th Edition*. Roundabouts were also analyzed with TRL's *ARCADY* software. Signal timing data for the intersection of Mount Vernon Highway at Hammond Drive was provided by the City of Sandy Springs. Operational analysis results are provided in **Attachment F**.

No-Build Conditions

To evaluate No-Build conditions, volume projections were evaluated with existing geometry and intersection control. Truck percentages, peak hour factors, and pedestrian inputs calculated from the traffic count data collected by the City of Sandy Springs. The results of the No-Build analyses for the Base (2023), Interim (2033), and Design (2043) years are summarized in **Table 3**.

The results of the No-Build capacity analyses indicate that existing, heavy delays experienced on Long Island Drive and at the Arlington Cemetery driveway continue to worsen over time, particularly during the PM peak hour. During the Base (2023) PM peak hour, delay at the Long Island Drive approach is projected to exceed 180 seconds, while delay at the Arlington Cemetery driveway is projected to exceed 900 seconds (though PM peak hour volumes at this approach are overall low). During the Design (2043) PM peak hour, these delays are anticipated to exceed 250 seconds and 1,800 seconds, respectively.

While heavy traffic patterns on Mount Vernon Highway are anticipated to grow, that growth will be constrained by capacity of the corridor. As such, the major-street left-turn movements at the intersection with Long Island Drive will continue to operate at either LOS A or LOS B, and the signalized intersection at Hammond Drive will continue to operate at acceptable LOS. The signalized intersection is anticipated to operate at LOS B during the AM peak hour for each of the three analysis years and at LOS C for the Base (2023) and Interim (2033) PM peak hours. During the Design (2043) PM peak hour, the intersection is anticipated to operate at LOS D, while the Hammond Drive approach is anticipated to operate at LOS E.

Table 3: Operational Analysis Results – No-Build Conditions

Intersection	Analysis Year	Control	LOS / Delay (sec/veh)				
			EB	WB	NB	SB	OVERALL
Mt Vernon Hwy at Long Island Dr/Arlington Dwy	Base (2023) Year AM	TWSC	A / 8.8[1]	B / 13.1[1]	F / 64.5	F / 91.9	-
	Base (2023) Year PM	TWSC	B / 10.9[1]	A / 10.0[1]	F / 182.8	F / 938.7	-
	Interim (2033) Year AM	TWSC	A / 8.8[1]	B / 13.6[1]	F / 78.5	F / 134.3	-
	Interim (2033) Year PM	TWSC	B / 11.1[1]	B / 10.1[1]	F / 217.1	F / 1,280	-
	Design (2043) Year AM	TWSC	A / 8.9[1]	B / 14.3[1]	F / 103.4	F / 258.7	-
	Design (2043) Year PM	TWSC	B / 11.3[1]	B / 10.3[1]	F / 295.5	F / 1,883.6	-
Mt Vernon Hwy at Hammond Dr	Base (2023) Year AM	Signal	A / 9.4	A / 7.1	C / 26.7	-	B / 12.7
	Base (2023) Year PM	Signal	B / 17.8	B / 16.9	D / 45.1	-	C / 27.0
	Interim (2033) Year AM	Signal	A / 9.9	A / 7.4	C / 28.2	-	B / 13.4
	Interim (2033) Year PM	Signal	B / 18.3	B / 17.4	D / 54.7	-	C / 30.7
	Design (2043) Year AM	Signal	B / 10.5	A / 7.7	C / 29.8	-	B / 14.1
	Design (2043) Year PM	Signal	B / 18.3	B / 17.3	E / 72.4	-	D / 36.9

[1] LOS and Delay are reported for major-street left-turn movement

Roundabout Conditions

To analyze conditions in the study area under which the intersection of Mount Vernon Highway at Long Island Drive operates with a roundabout, sketch layouts were completed to determine how either a modern or mini roundabout could fit at the intersection with Mount Vernon Highway width constraints and the steep vertical drop on the south side of the roadway. A single-lane, mini roundabout with dual entry lanes at the Long Island Drive approach was determined to be the most appropriate option based on design feasibility. Signal timings updates were made to the intersection at Hammond Drive based on simulating the interaction between the intersections. The results are summarized in **Table 4**.

Table 4: Operational Analysis Results – Roundabout Conditions

Intersection	Analysis Year	Control	LOS / Delay (sec/veh)				
			EB	WB	NB	SB	OVERALL
Mt Vernon Hwy at Long Island Dr/Arlington Dwy	Base (2023) Year AM	RAB[1]	F / 68.1	A / 7.9	B / 12.4	A / 5.5	E / 44.8
	Base (2023) Year PM	RAB[1]	B / 12.9	D / 34.2	B / 10.3	B / 11.1	C / 23.4
	Interim (2033) Year AM	RAB[1]	F / 82.4	A / 8.1	B / 12.8	A / 5.6	F / 53.7
	Interim (2033) Year PM	RAB[1]	B / 14.0	E / 40.5	B / 11.0	B / 11.6	D / 27.0
	Design (2043) Year AM	RAB[1]	F / 102.4	A / 8.5	B / 12.9	A / 5.8	F / 66.0
	Design (2043) Year PM	RAB[1]	B / 15.0	F / 52.5	B / 11.7	B / 11.8	D / 33.6
Mt Vernon Hwy at Hammond Dr	Base (2023) Year AM	Signal	A / 8.5	A / 7.3	D / 50.9	-	B / 17.8
	Base (2023) Year PM	Signal	B / 12.3	B / 13.0	F / 177.0	-	E / 70.0
	Interim (2033) Year AM	Signal	A / 9.1	A / 7.7	D / 52.3	-	B / 18.6
	Interim (2033) Year PM	Signal	B / 12.6	B / 13.2	F / 194.1	-	E / 76.1
	Design (2043) Year AM	Signal	A / 9.9	A / 8.1	D / 53.6	-	B / 19.4
	Design (2043) Year PM	Signal	B / 12.9	B / 13.6	F / 216.6	-	F / 84.3

The results indicate that the geometrically feasible roundabout footprint does not provide adequate capacity to serve heavy demand on Mount Vernon Highway. While side street delay is greatly reduced in comparison to No-Build conditions, LOS and delay increase at the Mount Vernon Highway approaches to unacceptable levels. During the AM peak hour for each of the three analysis years, the westbound approach operates at LOS F. The eastbound approach operates at LOS D during the Base (2023) PM peak hour then degrades to LOS F during the Design (2043) PM peak hour. It is likely that eastbound delay would be worse during the PM peak hour for all analysis years; however, the signal at Hammond Drive serves as a platooning mechanism for eastbound traffic.

Additional sensitivity analysis of the roundabout indicates that dual-lane entries at the eastbound and westbound approaches would provide adequate capacity to serve Mount Vernon Highway traffic, but this is not feasible due to geometric constraints.

Signalized Conditions

To evaluate conditions under which both study intersections operate with traffic signals, intersection control at the intersection of Mount Vernon Highway at Long Island Drive was modified from two-way stop control to signalized. Additionally, the skew and negative offset of the intersection were corrected. While the intersections are closely spaced, they are not close enough to require operating with a single traffic control cabinet. The two intersections were coordinated, and a cycle length evaluation was completed to optimize split times and balance traffic demand between the two intersections. Timing settings and offsets were set to provide coordination in both directions. During all analysis years, the intersections operate with a 120-second cycle length during the AM peak and a 140-second cycle length during the PM peak hour. Results of this scenario are summarized in **Table 5**.

Table 5: Realigned Signalized Intersection LOS and Delay Summary

Intersection	Analysis Year	Control	LOS / Delay (sec/veh)				
			EB	WB	NB	SB	OVERALL
Mt Vernon Hwy at Long Island Dr/Arlington Dwy	Base (2023) Year AM	Signal	C / 26.6	A / 2.2	E / 63.1	D / 47.8	C / 21.1
	Base (2023) Year PM	Signal	B / 14.6	A / 2.7	F / 113.6	F / 81.3	C / 22.2
	Interim (2033) Year AM	Signal	E / 61.1	A / 4.0	D / 52.4	D / 41.5	D / 40.4
	Interim (2033) Year PM	Signal	B / 15.3	A / 2.9	F / 122.0	F / 81.3	C / 23.5
	Design (2043) Year AM	Signal	D / 42.5	A / 5.4	E / 65.3	D / 47.0	C / 31.4
	Design (2043) Year PM	Signal	B / 16.0	A / 3.3	F / 128.6	F / 81.3	C / 24.8
Mt Vernon Hwy at Hammond Dr	Base (2023) Year AM	Signal	A / 7.6	A / 6.7	F / 91.6	-	C / 26.6
	Base (2023) Year PM	Signal	C / 21.3	C / 21.1	E / 79.0	-	D / 41.3
	Interim (2033) Year AM	Signal	A / 7.7	A / 6.8	F / 102.1	-	C / 29.1
	Interim (2033) Year PM	Signal	C / 21.0	C / 21.5	F / 87.4	-	D / 44.3
	Design (2043) Year AM	Signal	A / 7.9	A / 6.9	F / 112.6	-	C / 31.5
	Design (2043) Year PM	Signal	C / 21.8	C / 22.7	F / 92.4	-	D / 46.8

The results of this analysis indicate side-street delays at the intersection of Mount Vernon Highway at Long Island Drive continue to be a challenge during peak hours. However, signalization provides considerable relief to the side-street approaches while maintaining progression along Mount Vernon Highway, which continues to be challenged by heavy demands and constrained capacity. The intersection of Mount Vernon Highway at Hammond Drive is projected to operate at either LOS C or LOS

D during both peak hours, though there are some increases in delay at the Hammond Drive approach. These delay increases are tradeoffs for improving safety at the intersection with Long Island Drive and for improving overall operations at both study intersections, particularly for alleviating very heavy delays at the Long Island Drive and Arlington Cemetery driveway approaches.

Recommendations

Signalizing the intersection was determined to be the preferred alternative since it is not feasible to construct a roundabout at the intersection with Long Island Drive that would adequately serve traffic on Mount Vernon Highway. While the intersection of Mount Vernon Highway at Long Island Drive is closely spaced to the intersection at Hammond Drive, traffic modeling confirmed that the two intersections could be coordinated with appropriate cycle lengths, splits, and offsets to serve traffic in the study area. A Glance Smart City Supervisory unit with pass-through communications would be required as part of the signal design to coordinate the two signals; fiber interconnect would not.

A traffic signal concept design was prepared for the intersection of Mount Vernon Highway at Long Island Drive. The concept was designed to align the Arlington Cemetery driveway and Long Island Drive, improving sight distance and correcting the negative offset of the intersection as well as the skew. The concept design considered width constraints on Mount Vernon Highway, vertical grade challenges on the south side of the intersection, and heavy overhead utility conflicts on the north side of the intersection, while trying to minimize the impact to the cemetery driveway.

The traffic signal concept design is provided in **Attachment G**, and the opinion of probable cost is provided in **Attachment H**.

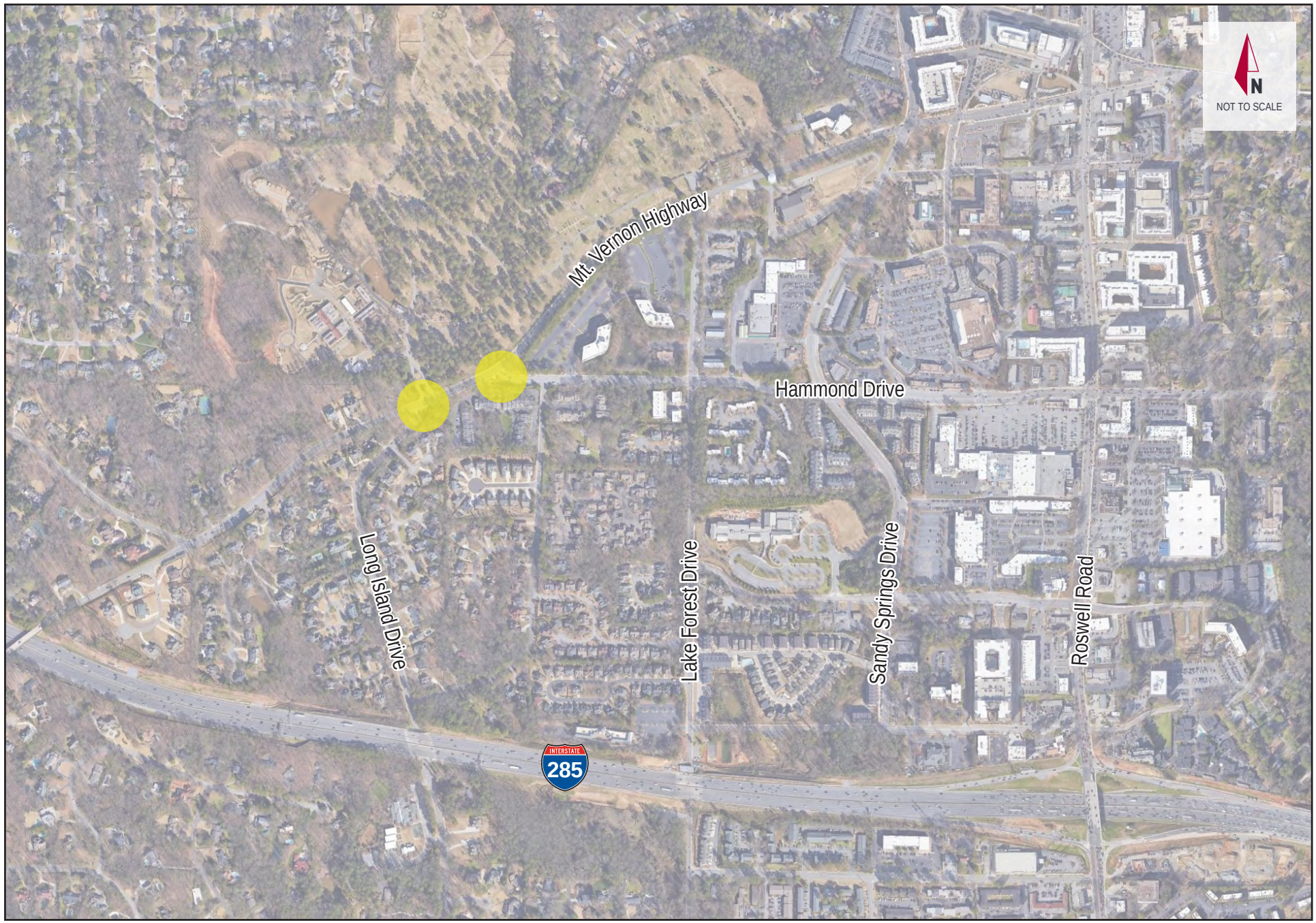
Attachments

The following attachments are included to supplement this memorandum:

A. Project Location Map
B. City of Sandy Springs' *Traffic Study Findings: Intersection of Long Island Drive at Mount Vernon Highway*
C. Traffic Count Data
D. Traffic Volume Figures
E. *Traffic Forecasting and Volume Development Methodology* memorandum
F. Operational Analysis Results
G. Traffic Signal Concept Design
H. Opinion of Probable Cost

Attachment A:

Project Location Map



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ATTACHMENT A

PROJECT LOCATION MAP

Attachment B:

Traffic Study Findings: Intersection of Long Island Drive at Mount Vernon Highway

SANDY SPRINGS
GEORGIA

Memorandum

To: Kristen Wescott, Traffic Services Unit Manager

From: David Low, Sr. Traffic Engineer

RE: Traffic Study Findings

Intersection of Long Island Drive at Mount Vernon Highway

Date: April 24, 2020

City of Sandy Springs Transportation and Communications staff met with neighborhood representatives from the Montrose and Grey Walls neighbors on July 11, 2019 to discuss concerns regarding the Mount Vernon Highway and Long Island Drive intersection. The City of Sandy Springs completed a project to provide dedicated right and left turn lanes on northbound Long Island Drive at its intersection with Mount Vernon Highway in the Fall of 2017, which was funded by TSPLOST (project TS 115).

Concerns expressed include:

1. A high volume of traffic on Mount Vernon Highway leads to long queues and delay trying to turn left or right onto Mount Vernon Highway from Long Island Drive. This problem is greatest during the morning (7:30 - 9:00 AM) and afternoon (3:00 -5:00 PM) peaks. During the school year, delay is increased by vehicles headed to the Springmont School on Long Island Drive.
2. Since the City improved the intersection with two lanes on the Long Island Drive approach, problems with queuing have gotten worse. When there are vehicles queued in both turn lanes, the vehicle line of sight is obstructed by the other vehicle (i.e., vehicles in the left turn lane block the line of sight for right turning vehicles and vice-versa).
3. Because there are long delays on the Long Island Drive approach waiting for a break in traffic to turn left, some vehicles turn right onto Mount Vernon Highway and then immediately turn left into the Arlington Cemetery driveway to turn right again to head west on Mount Vernon Highway.
4. Overall safety concern since the delay caused by queuing vehicles leads to poor driver behavior.
5. Excessive speeds on Mount Vernon Highway.

The neighbors asked what immediate relief might be provided, such as staging a police officer at the intersection to direct traffic, particularly during the morning peak period. Alternative travel options were discussed, including using Mitchell Road to Hammond Drive. The neighbors also asked if it was possible to signalize the intersection.

This traffic study evaluates the traffic signal warrants, all way stop warrants and other options.

City staff indicated there are roadway geometry concerns at the intersection with the skew of the intersection as well as the offset of Long Island Drive and the Arlington Cemetery driveway.

The distance between the intersections of Long Island Drive and Hammond Drive with Mount Vernon Highway is about 520 feet. Good signal spacing is at least 1000 feet apart.

One of the neighbors suggested that a roundabout at the Mount Vernon Highway at Hammond Drive intersection would allow vehicles from Long Island Drive to turn right onto Mount Vernon Highway, travel east to the roundabout, make a U-turn and head west past Long Island Drive.

Traffic Counts

In August 2019 the City ordered a series of traffic counts through Reliable Traffic Data which were counted in early October 2019 after school started and traffic volumes stabilized.

Traffic Count Requirements for Long Island Drive at Mount Vernon Highway Traffic Study

Legend

- 48 hour bidirectional machine count, tabulated in 15 minute intervals, hourly and daily
- 48 hour single direction machine count, tabulated in 15 minute intervals, hourly and daily
- 48 hour bidirectional classification count, tabulated in 15 minute intervals, hourly and daily
- 13 hour intersection turning movement count from 6:00 AM to 7:00 PM, tabulated in 15 minute intervals and hourly. Count vehicles, peds and bicycles separately.

Thirteen hour turning movement counts were made at the following intersections:

- Mount Vernon Highway at Long Island Drive/Arlington Cemetery Driveway

- Mount Vernon Highway at Hammond Drive
- Mount Vernon Highway at Mitchell Road

The counts at the Mitchell Road intersection were made to capture vehicles that may be diverted from the Long Island Road intersection because of left turn delays.

Counts at the Arlington Cemetery driveway captured any vehicles turning right from Long Island Drive, turning left into Arlington Cemetery, making a U turn, and turning right onto Mount Vernon Highway, in essence turning right from Long Island to go west on Mount Vernon. This happened 26 times on October 2nd and 29 times on October 3rd, an average of 27 times a day. This occurred predominantly in the afternoon from 12:15 p.m. to 7:30 p.m. but occurred throughout the day. Some of these U turns may have been related to cars destined for the cemetery, seeing the gates closed and making a U turn.

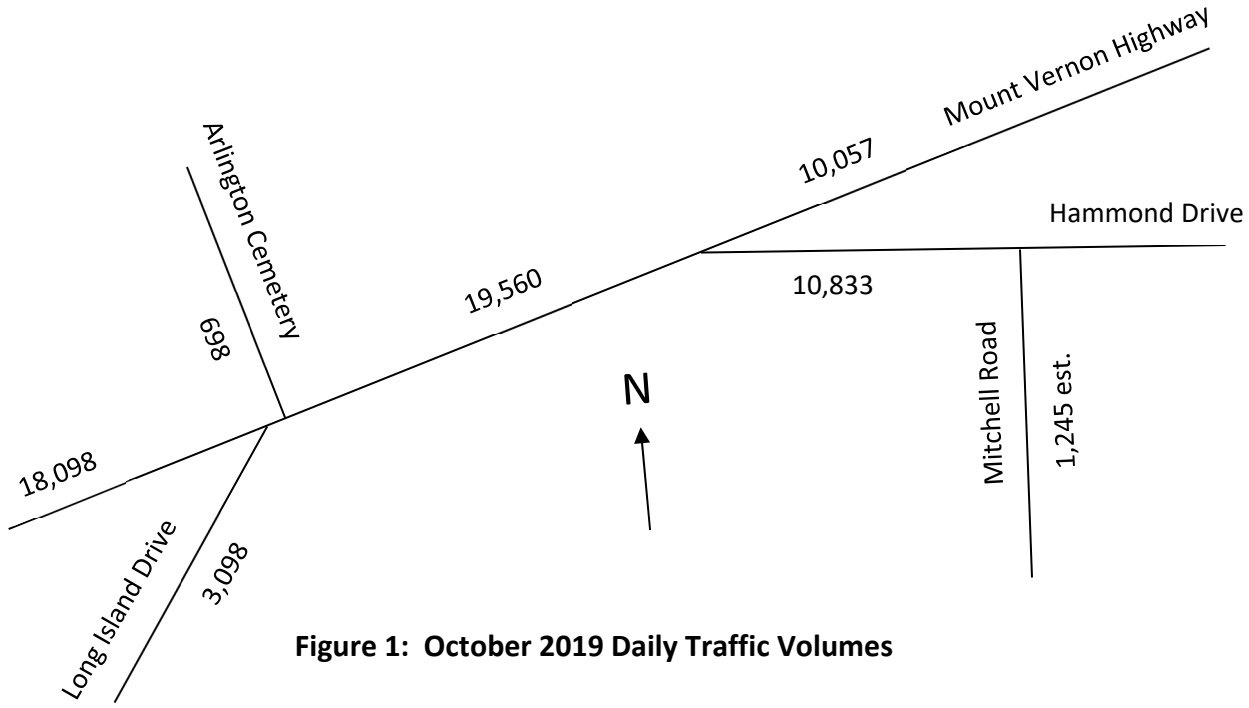

Figure 1: October 2019 Daily Traffic Volumes

Daily Volumes

Examination of the 2019 daily volumes reveals a great deal of volume on Mount Vernon Highway southwest of Hammond Drive: 19,560 vehicles per day (vpd). It's no wonder there are long delays on Long Island Drive! Mount Vernon is completely saturated with traffic, and there are very few gaps for side street traffic to turn onto Mount Vernon. Saturation of a two lane road occurs around 17,000 vpd, and Mount Vernon is carrying almost 20,000. Traffic splits at Hammond Drive and about half goes east onto Hammond (10,833 vpd), and the other half continues northeast on Mount Vernon (10,057 vpd).

Signal Warrants Analysis

Attached are the results of the signal warrants analysis. There are nine (9) signal warrants in the Federal Highway Administration's national *Manual on Traffic Control Devices* (latest edition is 2009). Four of the warrants are satisfied.

Warrant 1 – Eight-Hour Vehicular Volume – Met
Warrant 1, Condition A, Minimum Vehicular Volume, requires a moderate amount of volume on the main street and a moderate amount of volume on the side street. Not applicable to Long Island Drive.

Warrant 2, Condition B, Interruption of Continuous Traffic, requires a heavy volume of traffic on the main street and a relatively small amount of traffic on the side street. This is the warrant that most directly applies to Long Island Drive. There is plenty of volume on the main street (Mount Vernon Highway) to satisfy that part of the warrant, and enough traffic on the side street (Long Island Drive). Long Island Drive must have 75 vehicles per hour (vph) for at least eight hours of the day, and when combining the left and right turns it does have at least 75 vph for eight hours.

Table 1: Signal Warrant 1B Evaluation

	Long Island Drive Northbound		Arlington Cemetery Southbound	Mount Vernon Highway
Start Time	Left	Vehicle Total Includes Subtracting 30% of Right Turns	Vehicle Total	Vehicle Total of Both Approaches
6:00 AM	6	19	1	459
7:00 AM	16	70	4	1563**
8:00 AM	13	101*	5	1692**
9:00 AM	13	73	15	1340**
10:00 AM	16	65	16	859**
11:00 AM	18	73	21	881**
12:00 PM	30	95*	63	1001**
1:00 PM	29	80*	35	1048**
2:00 PM	22	83*	45	1099**
3:00 PM	34	158*	52	1553**
4:00 PM	43	171*	33	1788**
5:00 PM	46	166*	15	1892**
6:00 PM	25	98*	10	1514**

* Satisfies warrant requirement of 75 vehicles per hour on minor street approach
** Satisfies warrant requirement of 750 vehicles per hour on major street total of both approaches

The MUTCD says that an engineering study should consider the effects of right turns on the side street approach (Long Island Drive). Engineering judgement was used to determine what, if any, portion of the right turn traffic to subtract from the minor street traffic count when evaluating the count against the signal warrants. A decision was made to subtract 30% of the right turn volume, since the main street volume is so heavy, which results in fewer gaps and more conflicts with the side street.

It was decided to consider Long Island Drive a one lane approach since the left turn volume is minor. Therefore the required hourly volumes are 750 vehicles on the main street and 75 vehicles on the side street. Warrant 1B is satisfied.

Warrant 2 – Four-Hour Vehicular Volume – Met
Requires 80 vehicles per hour for four hours on the side street. 8 hours were met.

Warrant 3 – Peak Hour Volume – Met
Requires 120 vehicles for one hour on the side street. 3 hours were met.

Warrant 4 – Pedestrian Volume – Not Met

Warrant 5 – School Crossing – Not Applicable

Warrant 6 – Coordinate Signal System – Not Applicable
This warrant only applies to intersections that are spaced at least 1000 feet apart and where there is a need to signalize an adjacent intersection to keep vehicles in a tightly packed platoon.

The signal at Mount Vernon Highway at Hammond Drive is only 520 feet apart from the Long Island Drive intersection (center to center). The intersections are so close together that their operations are inextricably linked together.

Warrant 7 – Crash Experience – Met
Requires five crashes within a 12 month period that are correctable by a signal (such as a right angle or left turn crash). There were six (6) right angle or left turn crashes in 2017, one in 2018 and two in 2019.

Long Island Drive must have 80 vehicles per hour (vph) for at least eight hours of the day, and when combining the left and right turns (subtracting 30% of the right turns) it has at least 80 vph for 12 hours.

Warrant 8 – Roadway Network – Not Applicable

Warrant 9 – Intersection Near Railroad Grade Crossing – Not Applicable

All Way Stop Warrant – Not Met

Requires five or more crashes within a 12 month period that are correctable by a multi-way stop (such as a right angle or left turn crash). There were six (6) right angle or left turn crashes in 2017.

Minimum volumes:

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular street traffic of at least 30 seconds per vehicle during the highest hour.

There is enough volume on the main street (Mount Vernon Highway) to satisfy that part of the warrant, but not enough traffic on the side street (Long Island Drive). Long Island Drive must have 200 vehicles per hour (vph) for at least eight hours of the day, and when combining the left and right turns it only has 100 vph for eight hours.

It doesn't make sense for this intersection to be an all way stop and the Hammond Drive intersection to be signalized. Control of the two intersections must work together.

Collision Diagram

Five years of crash data were analyzed and depicted in a collision diagram shown below.

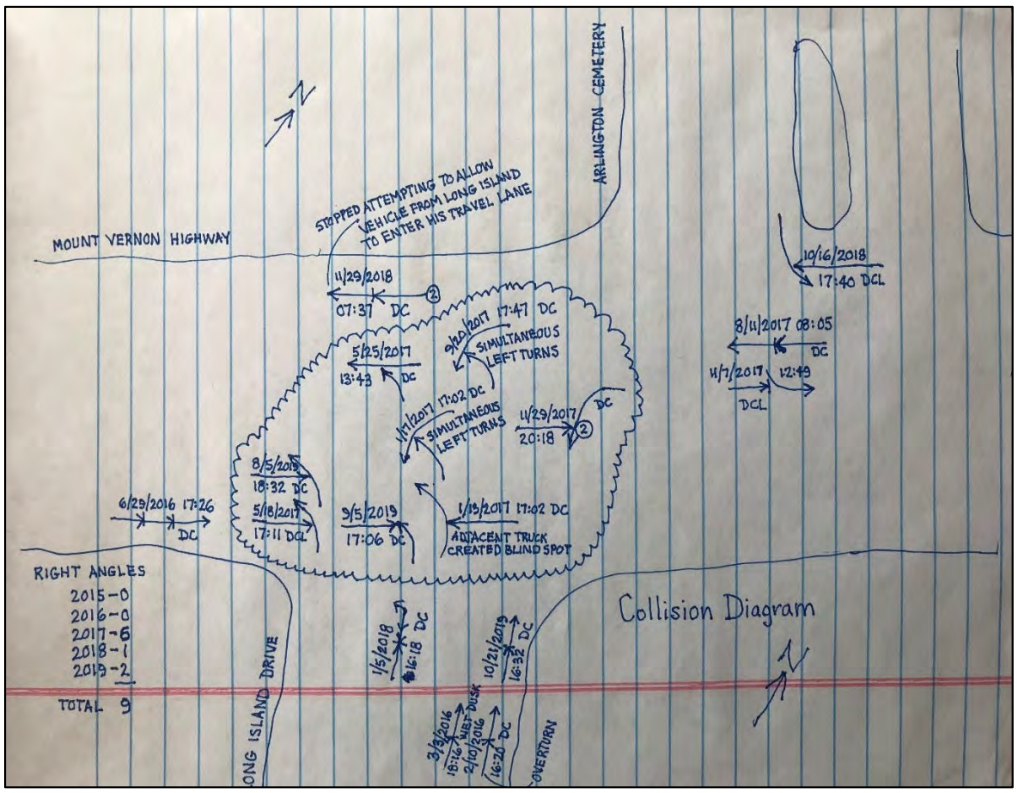

Figure 2: Collision Diagram for Crashes 2015-2019

TSPLOST Intersection Improvement

Project TS115 was constructed in 2017 to improve sight distance and to add a left turn lane on the Long Island Drive approach to the intersection with Mount Vernon Highway.

As shown in Figures 3 - 5, the construction plans set a 59 degree angle of intersection, removed some trees on the southwest corner to improve sight distance, and added a short left turn lane.

Note what was not done as part of this project. A large radius (75 to 125 feet) channelizing island was not installed between the left and right turn lanes to ensure that drivers in vehicles side by side could see past each other without vehicles blocking each other's sight distance. And Long Island Drive and the Arlington Cemetery driveway were not aligned. The budget for this improvement was about $140,000. There was a utility vault on the southeast corner that was to be avoided.

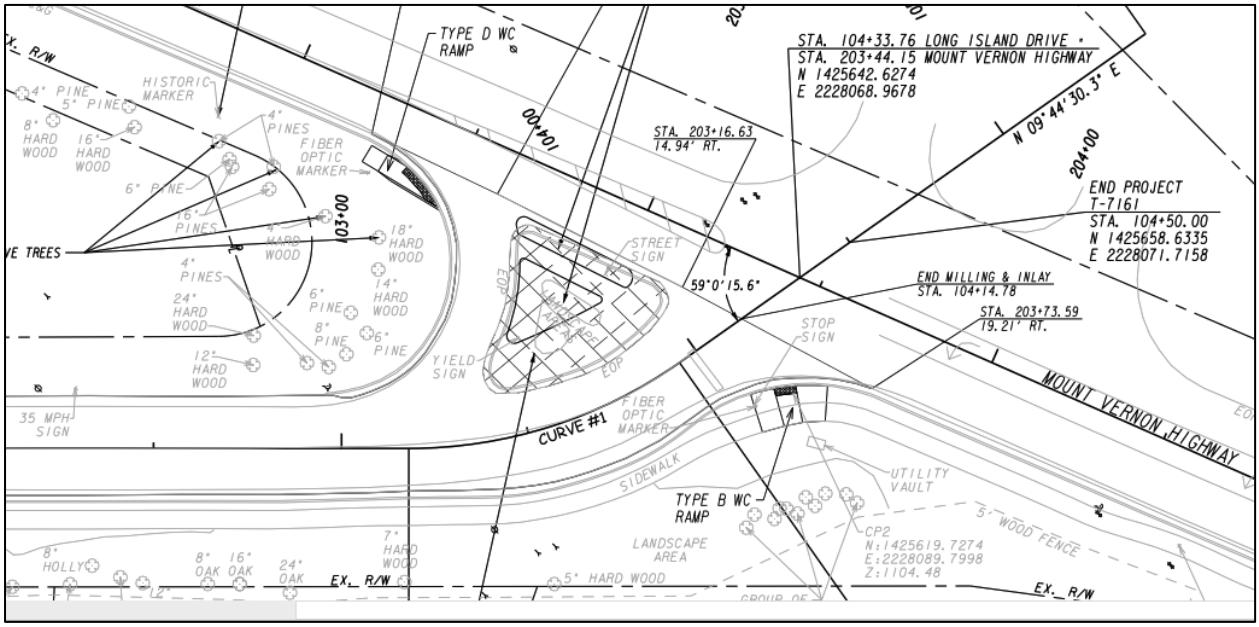

Figure 3: Construction Plan Sets 59 Degree Angle of Intersection

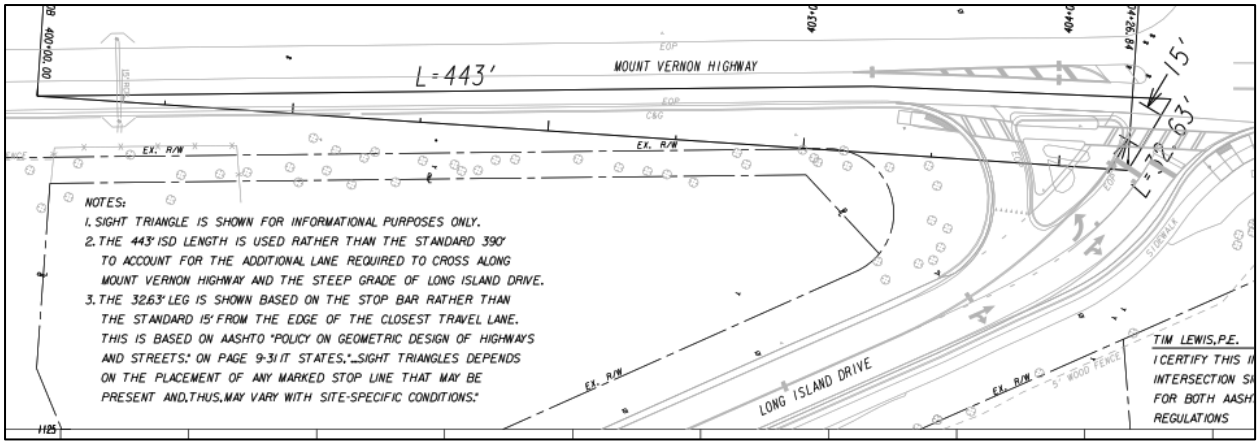

Figure 4: Improved Sight Distance

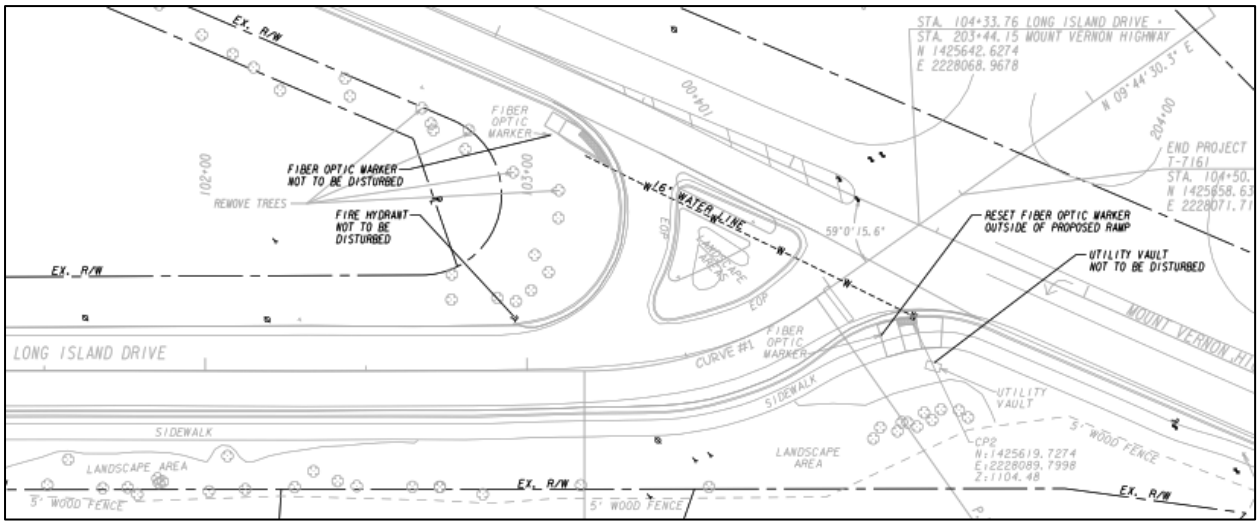

Figure 5: Utility Plans

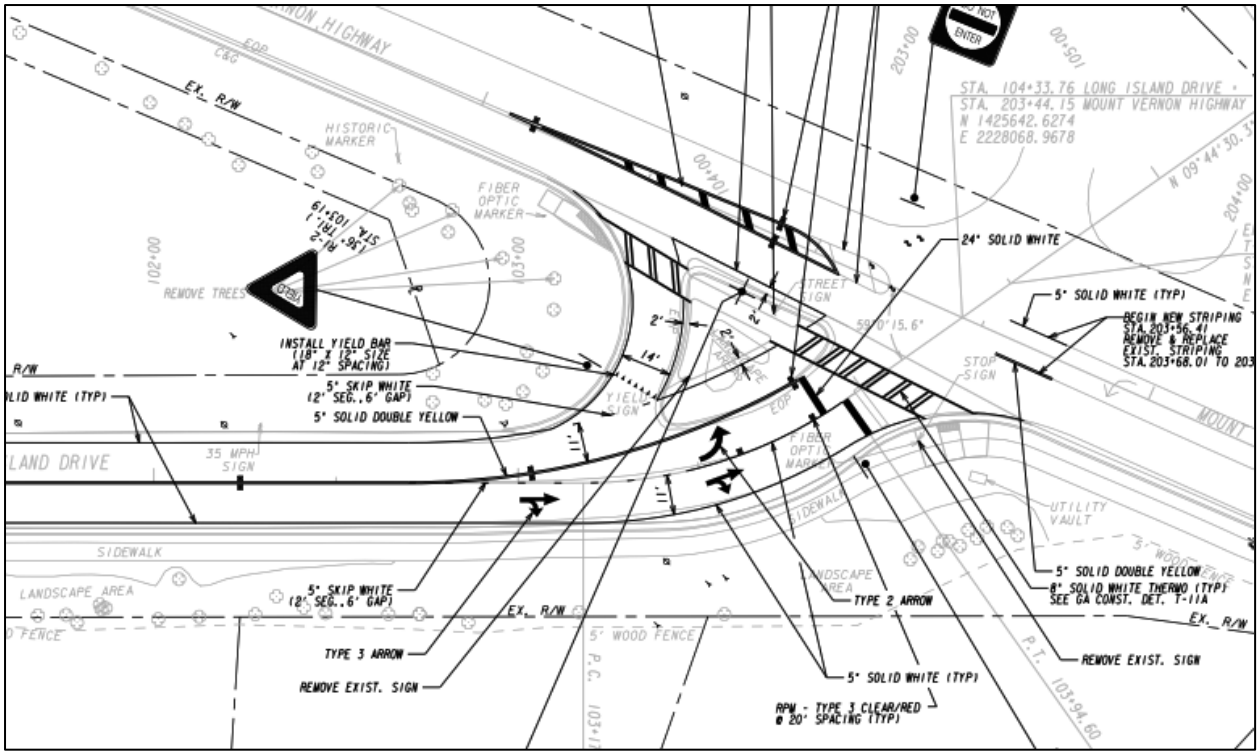

Figure 6: Signing and Marking Plan Ads 56 Foot Left Turn Lane

Conflict Points and Negative Offset

Although there is not a lot of traffic coming in and out of Arlington Cemetery, the left turns on Mount Vernon Highway overlap with each other in something called a negative offset. Alignment of the centerlines of these two legs of the intersection is recommended.

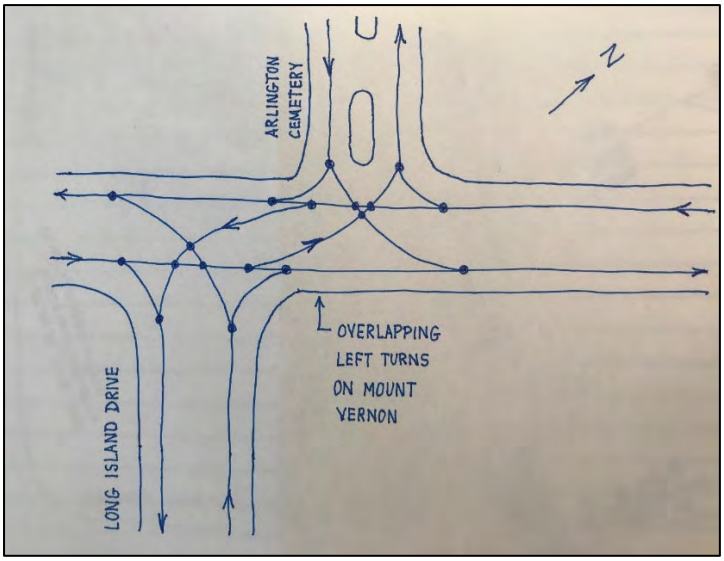

Figure 7: Conflict Points and Overlapping Left Turns on Mount Vernon Highway

Arlington Cemetery Redevelopment Plans

In January 2020, Arlington Memorial Park came in for a Condition Use Permit, U20-0001.

Executive Equities Inc., d/b/a Arlington Memorial Park applied for Conditional Use Permit U20-0001 to allow the existing cemetery use in the City's Conservation District and to modify previous conditions from ZM11-005/CV11-007. They submitted materials including a revised site plan, elevations, and traffic information. One of the issues was whether or not they generated enough traffic to require a traffic impact study.

The City of Sandy Springs made 13 hour turning movement counts at the intersection of Long Island Drive/Arlington Memorial Park at Mount Vernon Highway on October 2, 2019. The midday peak generates more than 100 vehicles per hour, therefore it meets the City's requirement for a traffic impact study.

Approach/departure tube counts were made on the Arlington Memorial Park driveway north of the gate on October 2nd and 3rd 2019. On October 2nd, hourly volumes exceeded 100 vehicles per hour from 12:00 to 1:00 PM and from 2:00 to 3:00 PM.

The offset alignment of the Arlington Memorial Park driveway and Long Island Drive at the intersection with Mount Vernon Highway is a safety hazard contributing to traffic crashes, causes undue traffic delay, and results in drivers making unusual maneuvers in an attempt to turn left from Long Island onto Mount Vernon Highway (by turning right on Mount Vernon, turning left into Arlington Memorial Park, making a U turn and turning right onto Mount Vernon Highway). There is an opportunity to align this offset intersection.

Further there is an opportunity to obtain agreement from the cemetery for right of way associated with future intersection improvements on Mount Vernon Highway at Long Island Drive/Arlington Memorial Park, Hammond Drive, and Lake Forrest Drive.

The Arlington Memorial Park site plan shows the northwest corner of the intersection with Mount Vernon Highway and Long Island Drive currently undeveloped but proposed for development of grave sites. This may be the only opportunity to realign the intersection.

Photos Taken April 22, 2020

Figure 8: Looking west from Long Island Drive right turn lane toward Mount Vernon Highway. Note how adjacent vehicle blocks view. Also notice that vehicle in adjacent left turn lane has pulled beyond the stop bar to get a better view of oncoming traffic.

Figure 9: View from the Long Island Drive left turn with front of vehicle at the stop bar. Note how embankment and a few trees still block adequate (390') sight distance. Suggest crews do additional clearing.

Mount Vernon Highway a Potential Roundabout Corridor

The Mount Vernon Highway corridor carries a relatively high volume of traffic for a predominately two lane road and is predominately residential in character. With this in mind it seems unlikely that the road would be a candidate for widening. This type of constrained two lane collector is a candidate for a series of roundabouts, not at every major intersection, but at several of the intersections.

Roundabout culture refers to the slogan "narrow roads, wide nodes" because roundabouts generally provide 10-15% more capacity than a signalized intersection (since more than one movement can go concurrently). The other benefit is a significant reduction in fatal and injury accidents, because right angle and left turn crashes at traditional intersections are replaced with less severe rear end and relatively minor sideswipe crashes. One strategy to squeeze 10-15% more capacity out of an intersection and to reduce crashes severity is to install more roundabouts. Intersections with bad skews

are also good candidates for roundabouts. Mount Vernon Highway is a good candidate for a roundabout corridor.

Some candidate intersections for roundabouts in the Mount Vernon Highway corridor include:

- Northside Drive – Y intersection, high crash location
- Glen Errol Road
- Heards Ferry Road – signalized, capacity constrained
- Long Island Drive/Arlington Cemetery driveway
- Hammond Drive
- Glenridge Drive - skew

Other Options

In addition to signalization, other options include:

- Alignment of Long Island Drive and the Arlington Cemetery driveway
- Develop a large (75 to 125 feet) radius channelizing island between the left and right turn lanes on the Long Island Drive approach to the intersection so that drivers in adjacent vehicles can see past each other
- Modern roundabout with an inscribed diameter of approximately 130 feet and a raised central island and truck apron. Side streets do not have to be aligned.
- Mini roundabout with an inscribed diameter of 80 to 90 feet and a domed central island that is flush with the adjacent pavement and rises gradually to four or five inches in the center so that vehicles can turn across it.
- A roundabout at the Hammond Drive intersection with Mount Vernon Highway. Vehicles on Long Island can turn right onto Mount Vernon Highway and make a U turn at Hammond Drive. The Eva Galambos Memorial is in the island at this intersection and would have to be relocated if this option is pursued, perhaps to the central island or on the side of the intersection.

Paired Options for What to Do at Adjacent Intersections in Order of Priority

1. Align the cemetery driveway with Long Island Drive. Add a channelizing island (125 foot radius) between the Long Island left and right turn lanes. Leave the Long Island Drive intersection unsignalized. Create a modern roundabout at the intersection of Hammond Drive and Mount Vernon Highway, where vehicles from Long Island Drive can make a U turn. Relocate the Eva Galambos Memorial to either the side of the intersection or the central island.

2. Create roundabouts at both the Long Island Drive and Hammond Drive intersections.

   Have a roundabout consultant evaluate paired options 1 and 2.

3. Signalize the Long Island Drive intersection and coordinate it with the signal at Hammond Drive.

Recommendations

1. Pursue alignment of Long Island Drive with the Arlington Cemetery driveway throughout Arlington Memorial Park's request for a conditional use permit. They should show on their new site plan a revised road alignment to provide either an aligned intersection or a modern roundabout with a 130 foot inscribed diameter (measured to outside edge of pavement).

   If the upgraded intersection is a roundabout, Long Island Drive and the cemetery driveway do not have to be aligned exactly, but some shift in the cemetery driveway is needed.

2. If a roundabout is abandoned as an option, and after alignment of Long Island Drive and the cemetery driveway, signalize the Long Island Drive at Mount Vernon Highway intersection. Provide fiberoptic cable communications along Mount Vernon Highway between Hammond Drive and Long Island Drive.

3. Improve sight distance looking west from Long island Drive toward Mount Vernon Highway, on the southwest corner of the intersection.

Attachments:
Warrants Analysis
Traffic Counts

Attachment C:

Traffic Count Data

Turning Movement Counts

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TMC Data
Mount Vernon Hwy @ Long Island Dr
Sandy Springs, GA
6am - 7pm

File Name : 43480001
Site Code : 43480001
Start Date : 10/2/2019
Page No : 1

Groups Printed- Cars, Buses and Trucks

	Long Island Dr Northbound					Arlington Memorial Park Drwy Southbound					Mt Vernon Hwyr Eastbound					Mt Vernon Hwy Westbound					
Start Time	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Int. Total
06:00 AM	2	0	2	1	5	0	0	0	0	0	0	35	0	2	37	0	15	0	0	15	57
06:15 AM	0	0	7	0	7	0	0	0	0	0	1	58	3	0	62	3	22	1	0	26	95
06:30 AM	4	0	6	0	10	1	0	0	5	6	0	70	2	0	72	8	35	2	0	45	133
06:45 AM	0	0	4	0	4	0	0	0	0	0	0	161	3	0	164	2	38	0	1	41	209
Total	6	0	19	1	26	1	0	0	5	6	1	324	8	2	335	13	110	3	1	127	494
07:00 AM	9	0	11	0	20	0	0	0	1	1	1	177	9	0	187	16	76	1	0	93	301
07:15 AM	1	0	19	0	20	0	0	0	0	0	2	218	9	0	229	21	96	3	0	120	369
07:30 AM	0	0	15	0	15	1	0	2	0	3	2	290	9	0	301	28	154	4	0	186	505
07:45 AM	6	1	30	0	37	0	0	1	0	1	0	283	13	0	296	13	133	5	0	151	485
Total	16	1	75	0	92	1	0	3	1	5	5	968	40	0	1013	78	459	13	0	550	1660
08:00 AM	0	0	26	0	26	0	0	2	1	3	1	268	6	0	275	24	104	6	0	134	438
08:15 AM	3	0	37	0	40	0	0	1	0	1	2	293	7	0	302	43	84	5	0	132	475
08:30 AM	7	0	30	1	38	1	0	0	1	2	1	296	15	1	313	19	100	3	0	122	475
08:45 AM	3	0	32	1	36	0	0	1	0	1	0	291	2	0	293	17	102	3	0	122	452
Total	13	0	125	2	140	1	0	4	2	7	4	1148	30	1	1183	103	390	17	0	510	1840
09:00 AM	0	0	17	0	17	3	0	1	1	5	1	242	7	0	250	17	87	1	0	105	377
09:15 AM	3	0	19	0	22	2	0	3	1	6	0	244	5	0	249	19	67	3	0	89	366
09:30 AM	3	0	32	0	35	1	0	2	0	3	0	239	11	0	250	13	64	4	0	81	369
09:45 AM	7	0	18	0	25	2	0	1	0	3	1	213	7	1	222	13	77	5	0	95	345
Total	13	0	86	0	99	8	0	7	2	17	2	938	30	1	971	62	295	13	0	370	1457
10:00 AM	6	0	26	0	32	3	0	1	0	4	0	178	3	0	181	19	70	4	0	93	310
10:15 AM	6	0	14	0	20	4	1	0	0	5	1	120	6	0	127	12	59	5	1	77	229
10:30 AM	2	1	9	0	12	5	0	0	0	5	1	95	9	0	105	12	62	3	0	77	199
10:45 AM	2	0	20	1	23	2	0	0	0	2	0	104	7	0	111	12	72	5	0	89	225
Total	16	1	69	1	87	14	1	1	0	16	2	497	25	0	524	55	263	17	1	336	963
11:00 AM	2	1	13	0	16	3	1	1	0	5	1	107	7	0	115	10	82	5	0	97	233
11:15 AM	3	0	18	0	21	4	0	0	3	7	0	91	4	0	95	9	86	4	1	100	223
11:30 AM	6	0	21	4	31	4	1	1	0	6	1	110	6	0	117	18	101	3	0	122	276
11:45 AM	7	0	25	1	33	5	0	1	0	6	2	114	9	0	125	22	83	6	0	111	275
Total	18	1	77	5	101	16	2	3	3	24	4	422	26	0	452	59	352	18	1	430	1007
12:00 PM	15	2	31	0	48	8	2	4	0	14	4	107	5	0	116	18	96	10	0	124	302
12:15 PM	4	1	21	0	26	9	1	5	0	15	5	115	5	0	125	19	78	11	0	108	274
12:30 PM	5	2	14	0	21	11	0	7	0	18	4	117	3	1	125	14	99	13	0	126	290
12:45 PM	6	1	18	4	29	8	0	8	0	16	4	126	6	0	136	19	112	11	0	142	323
Total	30	6	84	4	124	36	3	24	0	63	17	465	19	1	502	70	385	45	0	500	1189
01:00 PM	8	1	25	0	34	7	0	7	0	14	1	113	7	0	121	18	163	9	0	190	359
01:15 PM	7	0	14	0	21	5	1	5	0	11	2	107	5	0	114	10	120	6	0	136	282
01:30 PM	4	0	15	0	19	2	0	2	2	6	3	97	7	0	107	10	124	7	0	141	273
01:45 PM	10	0	17	0	27	2	1	3	0	6	1	95	1	0	97	9	127	6	0	142	272
Total	29	1	71	0	101	16	2	17	2	37	7	412	20	0	439	47	534	28	0	609	1186

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Start Time	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Int. Total
02:00 PM	3	1	10	0	14	5	0	3	0	8	3	98	5	0	106	25	122	6	0	153	281
02:15 PM	6	2	18	0	26	8	0	4	0	12	6	95	3	0	104	19	128	10	0	157	299
02:30 PM	5	2	21	0	28	7	0	6	0	13	5	102	9	0	116	17	134	14	0	165	322
02:45 PM	8	1	29	0	38	7	0	5	0	12	4	106	7	0	117	29	137	15	0	181	348
Total	22	6	78	0	106	27	0	18	0	45	18	401	24	0	443	90	521	45	0	656	1250
03:00 PM	7	0	55	0	62	5	0	5	0	10	3	102	6	0	111	19	212	12	0	243	426
03:15 PM	7	1	54	0	62	7	0	6	0	13	0	124	7	0	131	20	223	7	0	250	456
03:30 PM	8	0	36	0	44	8	0	5	1	14	1	156	8	0	165	11	199	5	0	215	438
03:45 PM	12	0	30	0	42	9	0	7	0	16	0	182	12	0	194	16	227	1	0	244	496
Total	34	1	175	0	210	29	0	23	1	53	4	564	33	0	601	66	861	25	0	952	1816
04:00 PM	12	1	65	0	78	6	0	5	0	11	0	167	6	0	173	18	268	3	0	289	551
04:15 PM	11	0	42	0	53	4	0	3	0	7	1	162	7	0	170	15	260	2	0	277	507
04:30 PM	10	0	31	0	41	5	1	1	0	7	0	157	3	0	160	16	242	3	0	261	469
04:45 PM	10	0	43	0	53	5	1	2	0	8	0	154	6	0	160	13	283	2	0	298	519
Total	43	1	181	0	225	20	2	11	0	33	1	640	22	0	663	62	1053	10	0	1125	2046
05:00 PM	12	0	65	0	77	4	0	2	0	6	1	193	5	0	199	22	242	2	0	266	548
05:15 PM	11	0	41	0	52	4	0	1	0	5	0	187	5	0	192	17	263	1	0	281	530
05:30 PM	11	0	32	0	43	2	0	0	0	2	1	190	2	0	193	18	279	2	0	299	537
05:45 PM	12	0	34	0	46	0	0	2	1	3	0	206	2	0	208	19	234	1	0	254	511
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06:15 PM	9	0	28	1	38	1	0	2	0	3	0	176	3	0	179	15	209	1	0	225	445
06:30 PM	3	0	26	0	29	2	0	0	0	2	0	115	4	0	119	16	211	2	0	229	379
06:45 PM	2	0	21	1	24	1	0	1	1	3	0	87	3	0	90	22	194	2	0	218	335
Total	25	1	103	3	132	6	0	4	1	11	0	590	18	1	609	69	831	6	0	906	1658
Grand Total	311	19	1315	16	1661	185	10	120	18	333	67	8145	309	6	8527	850	7072	246	3	8171	18692
Apprch %	18.7	1.1	79.2	1		55.6	3	36	5.4		0.8	95.5	3.6	0.1		10.4	86.5	3	0		
Total %	1.7	0.1	7	0.1	8.9	1	0.1	0.6	0.1	1.8	0.4	43.6	1.7	0	45.6	4.5	37.8	1.3	0	43.7	

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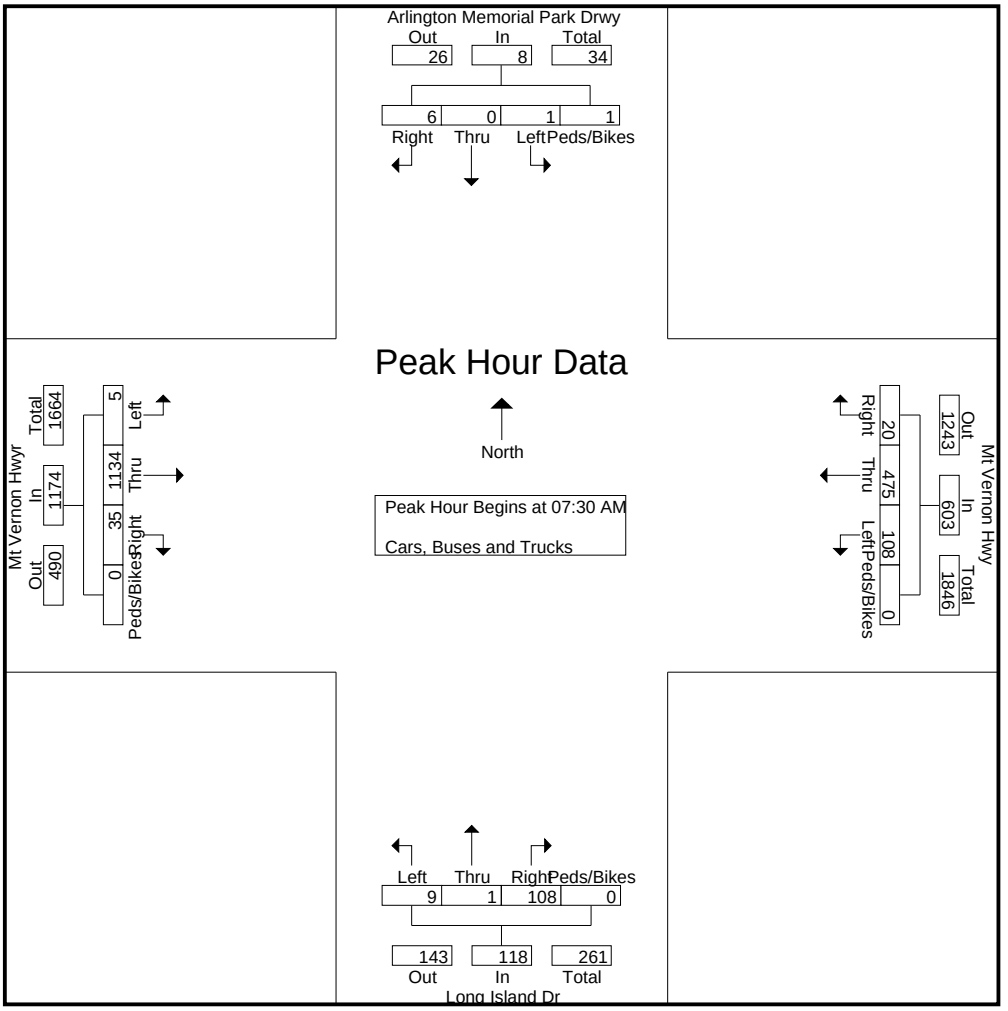
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	15	0	15	**1**	0	**2**	0	**3**	**2**	290	9	0	301	28	**154**	4	0	**186**	**505**
07:45 AM	**6**	**1**	30	0	37	0	0	1	0	1	0	283	**13**	0	296	13	133	5	0	151	485
08:00 AM	0	0	26	0	26	0	0	2	**1**	3	1	268	6	0	275	24	104	**6**	0	134	438
08:15 AM	3	0	**37**	0	**40**	0	0	1	0	1	2	**293**	7	0	**302**	**43**	84	5	0	132	475
Total Volume	9	1	108	0	118	1	0	6	1	8	5	1134	35	0	1174	108	475	20	0	603	1903
% App. Total	7.6	0.8	91.5	0		12.5	0	75	12.5		0.4	96.6	3	0		17.9	78.8	3.3	0		
PHF	.375	.250	.730	.000	.738	.250	.000	.750	.250	.667	.625	.968	.673	.000	.972	.628	.771	.833	.000	.810	.942



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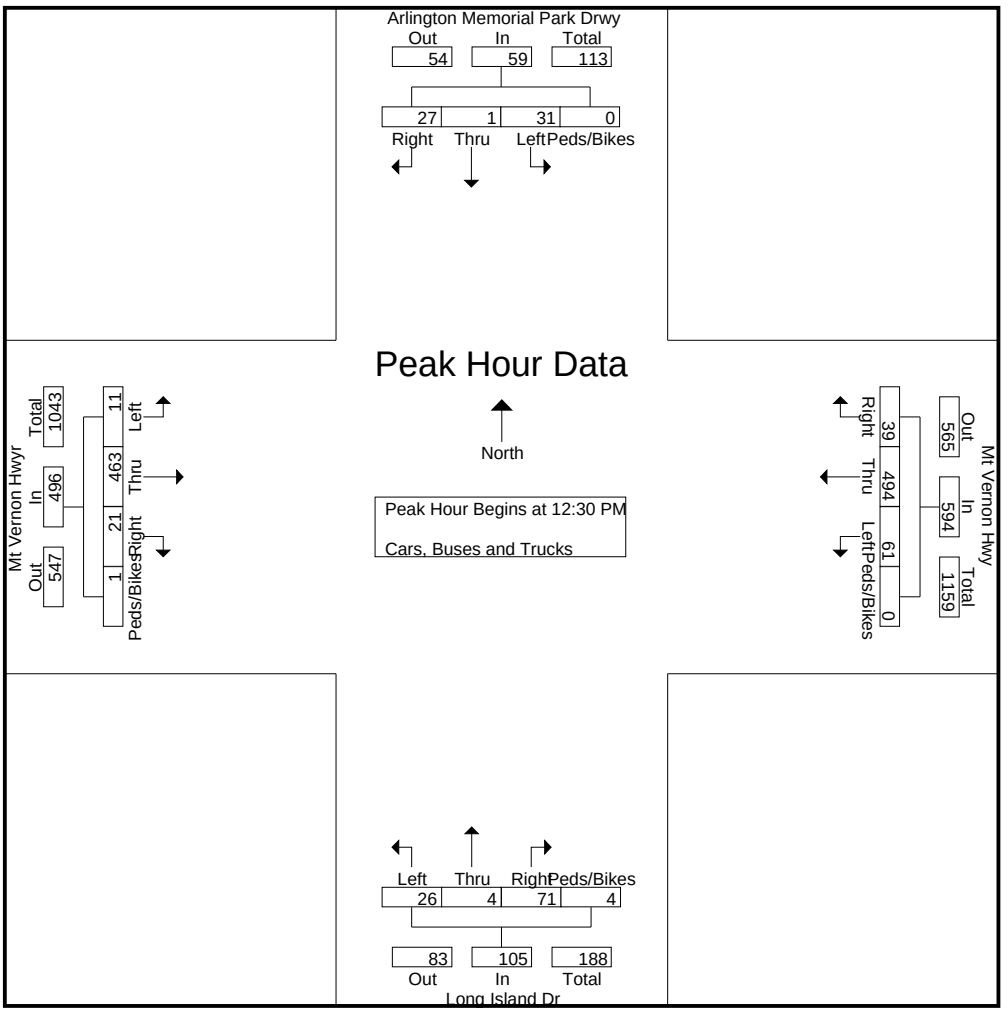
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	5	**2**	14	0	21	**11**	0	7	0	**18**	**4**	117	3	**1**	125	14	99	**13**	0	126	290
12:45 PM	6	1	18	**4**	29	8	0	**8**	0	16	4	**126**	6	0	**136**	**19**	112	11	0	142	323
01:00 PM	**8**	1	**25**	0	**34**	7	0	7	0	14	1	113	**7**	0	121	18	**163**	9	0	**190**	**359**
01:15 PM	7	0	14	0	21	5	**1**	5	0	11	2	107	5	0	114	10	120	6	0	136	282
Total Volume	26	4	71	4	105	31	1	27	0	59	11	463	21	1	496	61	494	39	0	594	1254
% App. Total																					
PHF	.813	.500	.710	.250	.772	.705	.250	.844	.000	.819	.688	.919	.750	.250	.912	.803	.758	.750	.000	.782	.873



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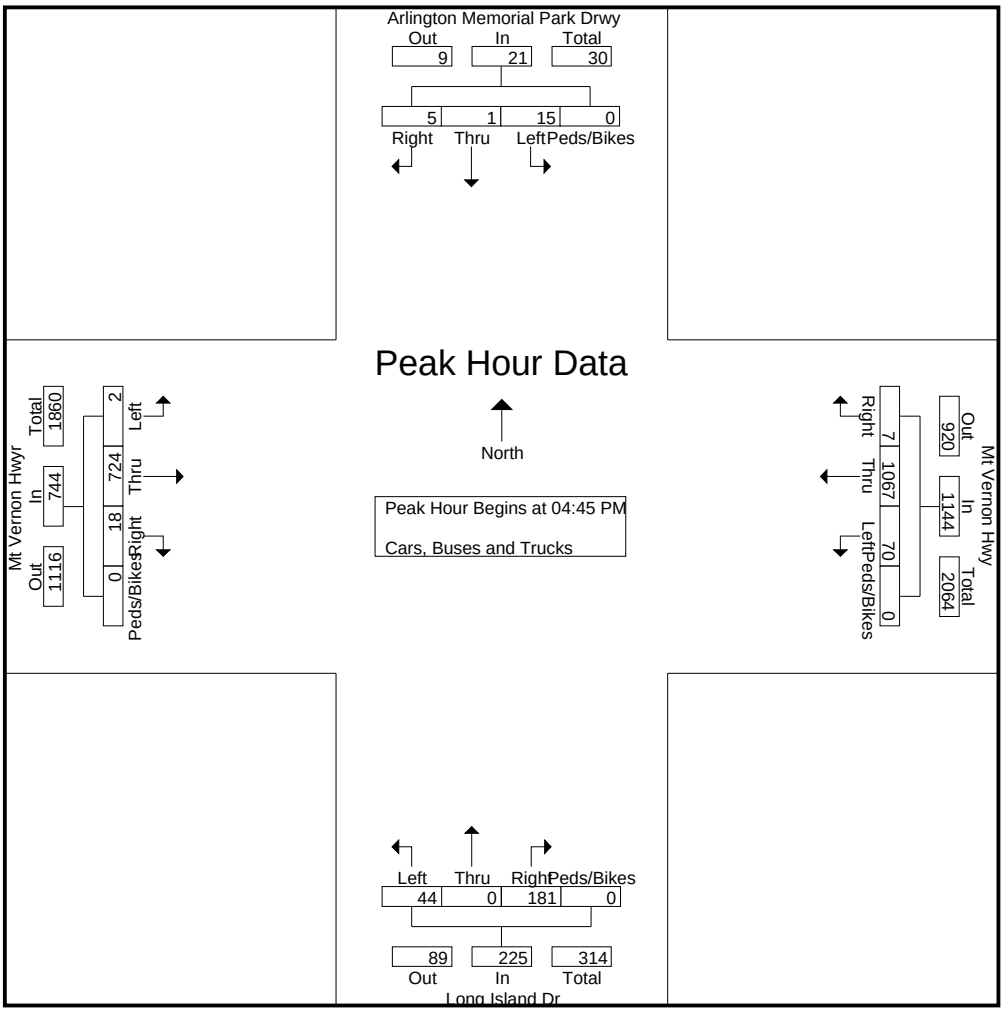
TMC Data
Mount Vernon Hwy @ Long Island Dr
Sandy Springs, GA
6am - 7pm

File Name : 43480001
Site Code : 43480001
Start Date : 10/2/2019
Page No : 5

	Long Island Dr Northbound					Arlington Memorial Park Drwy Southbound					Mt Vernon Hwyr Eastbound					Mt Vernon Hwy Westbound					
Start Time	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	10	0	43	0	53	**5**	**1**	**2**	0	**8**	0	154	**6**	0	160	13	**283**	**2**	0	298	519
05:00 PM	**12**	0	**65**	0	**77**	4	0	2	0	6	**1**	**193**	5	0	**199**	**22**	242	2	0	266	**548**
05:15 PM	11	0	41	0	52	4	0	1	0	5	0	187	5	0	192	17	263	1	0	281	530
05:30 PM	11	0	32	0	43	2	0	0	0	2	1	190	2	0	193	18	279	2	0	**299**	537
Total Volume	44	0	181	0	225	15	1	5	0	21	2	724	18	0	744	70	1067	7	0	1144	2134
% App. Total	19.6	0	80.4	0		71.4	4.8	23.8	0		0.3	97.3	2.4	0		6.1	93.3	0.6	0		
PHF	.917	.000	.696	.000	.731	.750	.250	.625	.000	.656	.500	.938	.750	.000	.935	.795	.943	.875	.000	.957	.974



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TMC Data
Mount Vernon Hwy @ Hammond Dr
Sandy Springs, GA
6am - 7pm

File Name : 43480002
Site Code : 43480002
Start Date : 10/2/2019

Groups Printed- Cars, Buses and Trucks

	Mt Vernon Hwy Northbound					Mt Vernon Hwy Southbound					Eastbound					Hammond Dr Westbound					
Start Time	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Int. Total
06:00 AM	0	17	19	0	36	0	10	0	0	10	0	0	0	0	0	7	0	0	0	7	53
06:15 AM	0	26	34	0	60	0	14	0	0	14	0	0	0	0	0	13	0	0	0	13	87
06:30 AM	0	34	41	0	75	1	17	0	0	18	0	0	0	0	0	19	0	1	0	20	113
06:45 AM	0	56	96	0	152	1	23	0	0	24	0	0	0	1	1	22	0	0	0	22	199
Total	0	133	190	0	323	2	64	0	0	66	0	0	0	1	1	61	0	1	0	62	452
07:00 AM	0	78	114	0	192	0	52	0	0	52	0	0	0	0	0	46	0	0	0	46	290
07:15 AM	0	106	144	0	250	1	68	0	0	69	0	0	0	0	0	63	0	0	0	63	382
07:30 AM	0	138	129	0	267	0	94	0	0	94	0	0	0	0	0	74	0	0	0	74	435
07:45 AM	0	148	175	0	323	4	64	0	0	68	0	0	0	0	0	70	0	0	0	70	461
Total	0	470	562	0	1032	5	278	0	0	283	0	0	0	0	0	253	0	0	0	253	1568
08:00 AM	0	154	172	0	326	1	85	0	0	86	0	0	0	0	0	59	0	0	0	59	471
08:15 AM	0	181	153	0	334	1	80	0	0	81	0	0	0	1	1	42	0	1	0	43	459
08:30 AM	0	142	158	0	300	2	72	0	0	74	0	0	0	0	0	49	0	2	0	51	425
08:45 AM	0	137	160	0	297	0	55	0	0	55	0	0	0	0	0	40	0	0	0	40	392
Total	0	614	643	0	1257	4	292	0	0	296	0	0	0	1	1	190	0	3	0	193	1747
09:00 AM	0	134	141	0	275	3	52	0	0	55	0	0	0	0	0	63	0	2	0	65	395
09:15 AM	0	121	146	0	267	3	50	0	0	53	0	0	0	0	0	40	0	1	0	41	361
09:30 AM	0	98	154	0	252	1	48	0	0	49	0	0	0	0	0	50	0	2	0	52	353
09:45 AM	0	87	149	0	236	3	47	0	0	50	0	0	0	0	0	47	0	1	0	48	334
Total	0	440	590	0	1030	10	197	0	0	207	0	0	0	0	0	200	0	6	0	206	1443
10:00 AM	0	98	100	0	198	1	49	0	0	50	0	0	0	0	0	40	0	1	0	41	289
10:15 AM	0	59	64	0	123	0	35	0	0	35	0	0	0	0	0	36	0	1	0	37	195
10:30 AM	0	57	53	0	110	0	35	0	0	35	0	0	0	1	1	50	0	2	0	52	198
10:45 AM	0	46	80	0	126	3	40	0	0	43	0	0	0	0	0	53	0	2	0	55	224
Total	0	260	297	0	557	4	159	0	0	163	0	0	0	1	1	179	0	6	0	185	906
11:00 AM	0	63	68	0	131	3	47	0	0	50	0	0	0	0	0	53	0	0	0	53	234
11:15 AM	0	50	49	1	100	2	44	0	0	46	0	0	0	3	3	58	0	5	0	63	212
11:30 AM	0	58	66	0	124	3	57	0	0	60	0	0	0	0	0	75	0	2	4	81	265
11:45 AM	0	80	81	0	161	3	53	0	0	56	0	0	0	0	0	62	0	4	1	67	284
Total	0	251	264	1	516	11	201	0	0	212	0	0	0	3	3	248	0	11	5	264	995
12:00 PM	0	70	86	0	156	4	56	0	0	60	0	0	0	0	0	74	0	2	0	76	292
12:15 PM	0	81	78	0	159	2	40	0	0	42	0	0	0	2	2	69	0	6	0	75	278
12:30 PM	0	54	61	0	115	1	55	0	0	56	0	0	0	0	0	69	0	7	0	76	247
12:45 PM	0	55	82	0	137	1	45	0	0	46	0	0	0	0	0	81	0	4	4	89	272
Total	0	260	307	0	567	8	196	0	0	204	0	0	0	2	2	293	0	19	4	316	1089
01:00 PM	0	55	64	0	119	3	66	0	0	69	0	0	0	0	0	98	0	2	1	101	289
01:15 PM	0	58	61	0	119	6	57	0	0	63	0	0	0	0	0	75	0	3	0	78	260
01:30 PM	0	55	63	0	118	1	51	0	0	52	0	0	0	0	0	83	0	1	0	84	254
01:45 PM	0	64	56	0	120	2	73	0	0	75	0	0	0	0	0	89	0	2	0	91	286
Total	0	232	244	0	476	12	247	0	0	259	0	0	0	0	0	345	0	8	1	354	1089

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TMC Data
Mount Vernon Hwy @ Hammond Dr
Sandy Springs, GA
6am - 7pm

File Name : 43480002
Site Code : 43480002
Start Date : 10/2/2019
Page No : 2

Groups Printed- Cars, Buses and Trucks

	Mt Vernon Hwy Northbound					Mt Vernon Hwy Southbound					Eastbound					Hammond Dr Westbound					
Start Time	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Int. Total
02:00 PM	0	55	65	0	120	3	73	0	0	76	0	0	0	0	0	76	0	5	0	81	277
02:15 PM	0	52	63	0	115	3	83	0	0	86	0	0	0	0	0	82	0	3	1	86	287
02:30 PM	0	56	62	0	118	1	74	0	0	75	0	0	0	0	0	91	0	2	0	93	286
02:45 PM	0	67	67	0	134	1	65	0	0	66	0	0	0	0	0	107	0	3	0	110	310
Total	0	230	257	0	487	8	295	0	0	303	0	0	0	0	0	356	0	13	1	370	1160
03:00 PM	0	74	55	0	129	1	96	0	0	97	0	0	0	0	0	126	0	1	0	127	353
03:15 PM	0	104	84	0	188	0	89	0	0	89	0	0	0	1	1	137	0	3	0	140	418
03:30 PM	0	109	112	0	221	2	96	0	0	98	0	0	0	0	0	148	0	3	0	151	470
03:45 PM	0	108	113	0	221	3	117	0	0	120	0	0	0	0	0	156	0	6	0	162	503
Total	0	395	364	0	759	6	398	0	0	404	0	0	0	1	1	567	0	13	0	580	1744
04:00 PM	0	117	98	0	215	3	126	0	0	129	0	0	0	0	0	151	0	8	0	159	503
04:15 PM	0	127	75	0	202	6	126	0	0	132	0	0	0	0	0	156	0	3	0	159	493
04:30 PM	0	141	69	0	210	1	143	0	0	144	0	0	0	0	0	137	0	5	0	142	496
04:45 PM	0	156	66	0	222	1	147	0	0	148	0	0	0	0	0	143	0	8	0	151	521
Total	0	541	308	0	849	11	542	0	0	553	0	0	0	0	0	587	0	24	0	611	2013
05:00 PM	0	167	80	0	247	1	139	0	0	140	0	0	0	0	0	153	0	4	0	157	544
05:15 PM	0	164	89	0	253	3	140	0	0	143	0	0	0	0	0	146	0	2	0	148	544
05:30 PM	0	118	108	1	227	5	135	0	0	140	0	0	0	2	2	145	0	6	0	151	520
05:45 PM	0	100	112	0	212	3	100	0	0	103	0	0	0	0	0	148	0	3	0	151	466
Total	0	549	389	1	939	12	514	0	0	526	0	0	0	2	2	592	0	15	0	607	2074
06:00 PM	0	116	108	0	224	2	100	0	0	102	0	0	0	0	0	131	0	6	0	137	463
06:15 PM	0	120	100	0	220	5	113	0	0	118	0	0	0	0	0	123	0	3	0	126	464
06:30 PM	0	87	72	0	159	1	124	0	0	125	0	0	0	1	1	116	0	6	0	122	407
06:45 PM	0	63	52	0	115	1	102	0	0	103	0	0	0	0	0	107	0	2	0	109	327
Total	0	386	332	0	718	9	439	0	0	448	0	0	0	1	1	477	0	17	0	494	1661
Grand Total	0	4761	4747	2	9510	102	3822	0	0	3924	0	0	0	12	12	4348	0	136	11	4495	17941
Apprch %	0	50.1	49.9	0		2.6	97.4	0	0		0	0	0	100		96.7	0	3	0.2		
Total %	0	26.5	26.5	0	53	0.6	21.3	0	0	21.9	0	0	0	0.1	0.1	24.2	0	0.8	0.1	25.1	

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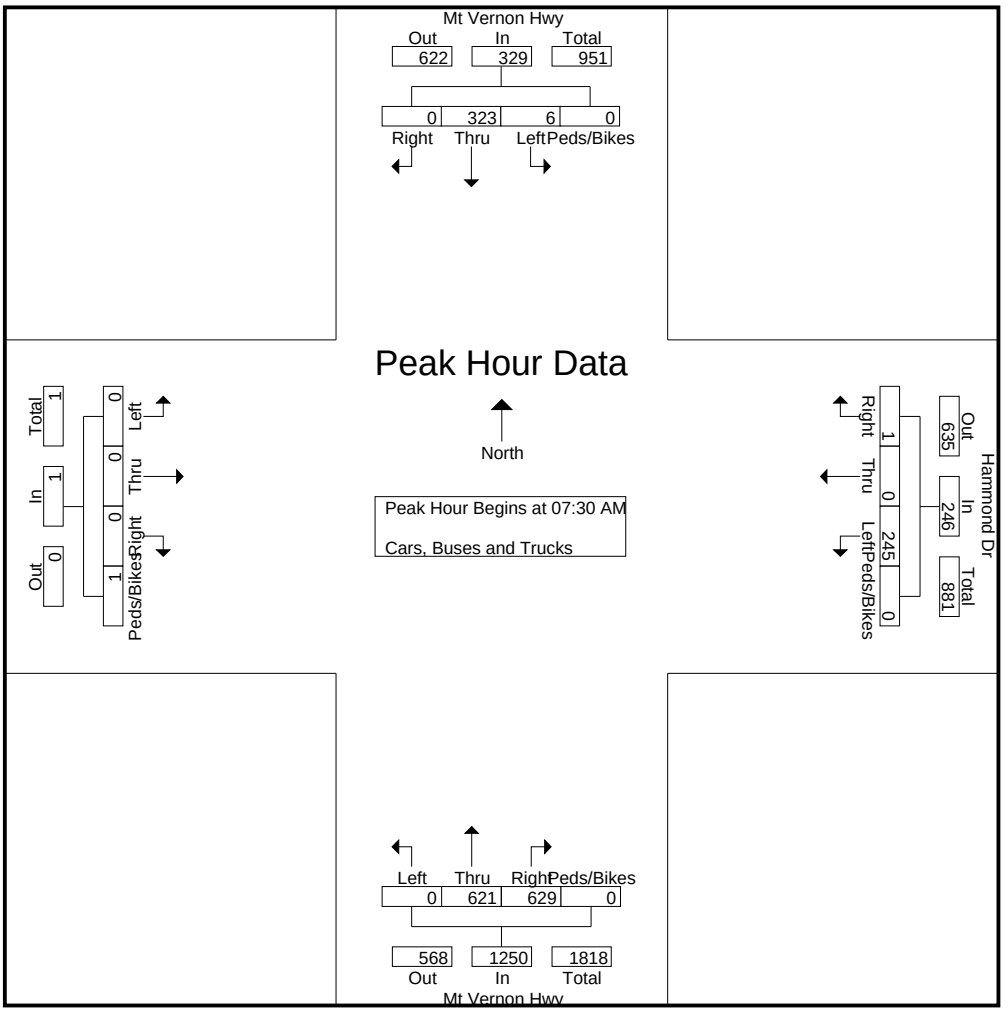
TMC Data
Mount Vernon Hwy @ Hammond Dr
Sandy Springs, GA
6am - 7pm

File Name : 43480002
Site Code : 43480002
Start Date : 10/2/2019
Page No : 3

	Mt Vernon Hwy Northbound					Mt Vernon Hwy Southbound					Eastbound					Hammond Dr Westbound					
Start Time	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	138	129	0	267	0	**94**	0	0	**94**	0	0	0	0	0	**74**	0	0	0	**74**	435
07:45 AM	0	148	**175**	0	323	**4**	64	0	0	68	0	0	0	0	0	70	0	0	0	70	461
08:00 AM	0	154	172	0	326	1	85	0	0	86	0	0	0	0	0	59	0	0	0	59	**471**
08:15 AM	0	**181**	153	0	**334**	1	80	0	0	81	0	0	0	**1**	**1**	42	0	**1**	0	43	459
Total Volume	0	621	629	0	1250	6	323	0	0	329	0	0	0	1	1	245	0	1	0	246	1826
% App. Total																					
PHF	.000	.858	.899	.000	.936	.375	.859	.000	.000	.875	.000	.000	.000	.250	.250	.828	.000	.250	.000	.831	.969



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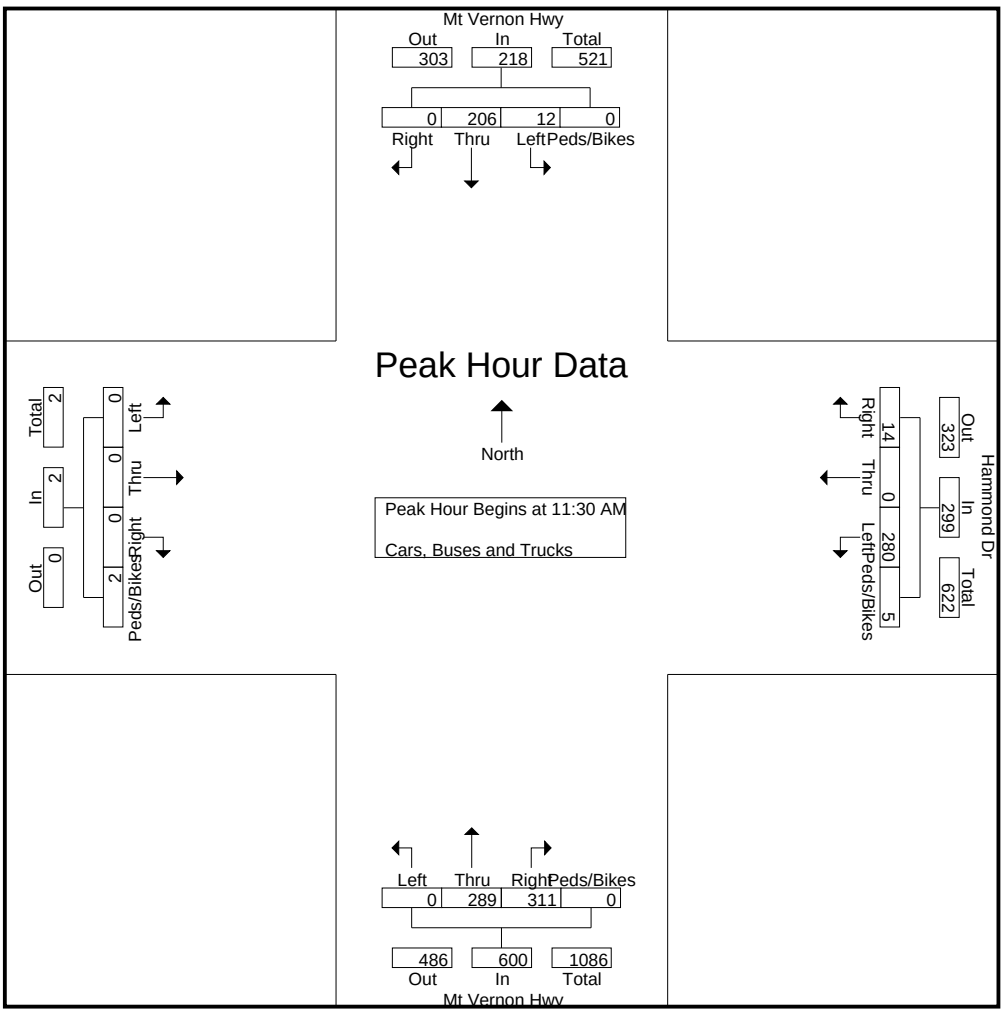
TMC Data
Mount Vernon Hwy @ Hammond Dr
Sandy Springs, GA
6am - 7pm

File Name : 43480002
Site Code : 43480002
Start Date : 10/2/2019
Page No : 4

	Mt Vernon Hwy Northbound					Mt Vernon Hwy Southbound					Eastbound					Hammond Dr Westbound					
Start Time	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Int. Total
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:30 AM																					
11:30 AM	0	58	66	0	124	3	**57**	0	0	**60**	0	0	0	0	0	**75**	0	2	**4**	**81**	265
11:45 AM	0	80	81	0	**161**	3	53	0	0	56	0	0	0	0	0	62	0	4	1	67	284
12:00 PM	0	70	**86**	0	156	**4**	56	0	0	60	0	0	0	0	0	74	0	2	0	76	**292**
12:15 PM	0	**81**	78	0	159	2	40	0	0	42	0	0	0	**2**	**2**	69	0	**6**	0	75	278
Total Volume	0	289	311	0	600	12	206	0	0	218	0	0	0	2	2	280	0	14	5	299	1119
% App. Total																					
PHF	.000	.892	.904	.000	.932	.750	.904	.000	.000	.908	.000	.000	.000	.250	.250	.933	.000	.583	.313	.923	.958



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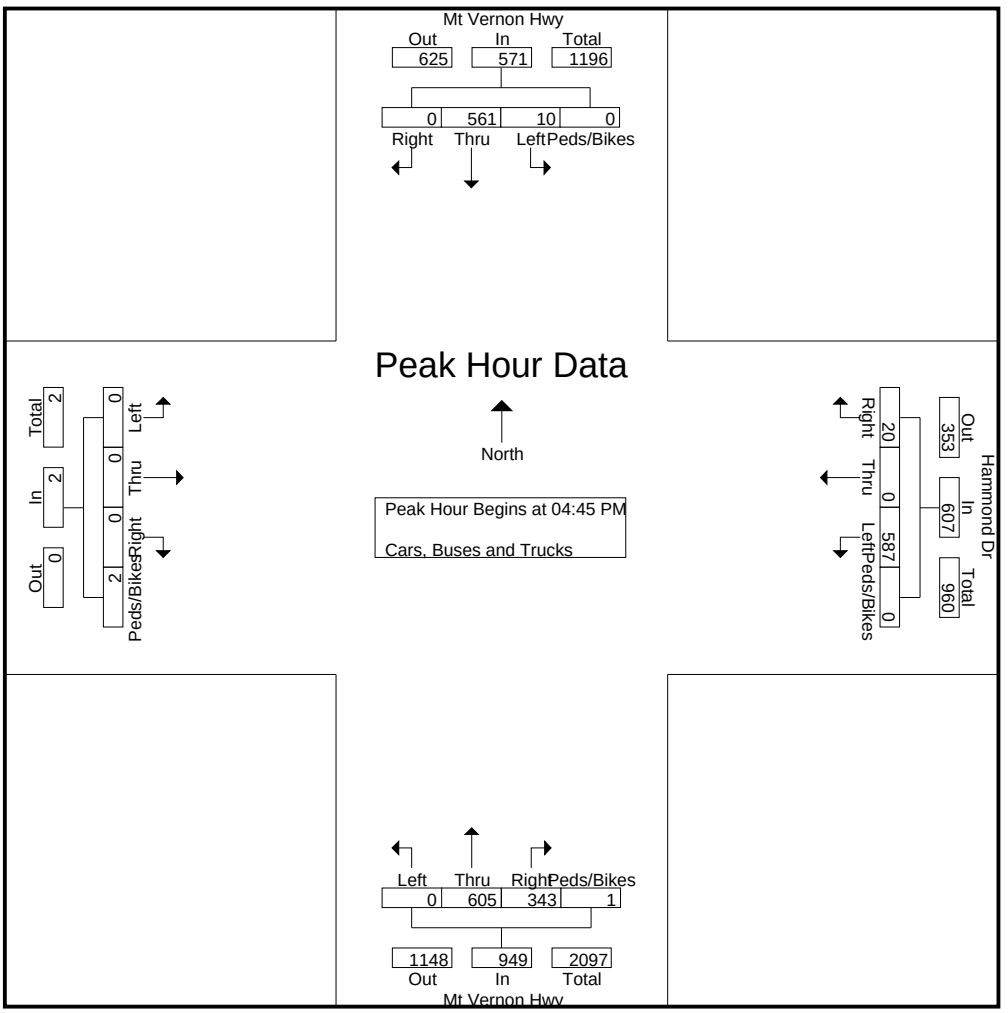
TMC Data
Mount Vernon Hwy @ Hammond Dr
Sandy Springs, GA
6am - 7pm

File Name : 43480002
Site Code : 43480002
Start Date : 10/2/2019
Page No : 5

	Mt Vernon Hwy Northbound					Mt Vernon Hwy Southbound					Eastbound					Hammond Dr Westbound					
Start Time	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	156	66	0	222	1	**147**	0	0	**148**	0	0	0	0	0	143	0	**8**	0	151	521
05:00 PM	0	**167**	80	0	247	1	139	0	0	140	0	0	0	0	0	**153**	0	4	0	**157**	**544**
05:15 PM	0	164	89	0	**253**	3	140	0	0	143	0	0	0	0	0	146	0	2	0	148	544
05:30 PM	0	118	**108**	**1**	227	**5**	135	0	0	140	0	0	0	**2**	**2**	145	0	6	0	151	520
Total Volume	0	605	343	1	949	10	561	0	0	571	0	0	0	2	2	587	0	20	0	607	2129
% App. Total																					
PHF	.000	.906	.794	.250	.938	.500	.954	.000	.000	.965	.000	.000	.000	.250	.250	.959	.000	.625	.000	.967	.978



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TMC Data
Hammond Dr @ Mitchell Rd
Sandy Springs, GA
6am - 7pm

File Name : 43480003
Site Code : 43480003
Start Date : 10/2/2019

Groups Printed- Cars, Buses and Trucks

	Mitchell Rd Northbound					Southbound					Hammond Dr Eastbound					Hammond Dr Westbound					
Start Time	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Int. Total
06:00 AM	0	0	3	0	3	0	0	0	0	0	0	25	0	0	25	2	8	0	0	10	38
06:15 AM	0	0	5	0	5	0	0	0	0	0	0	35	0	0	35	0	17	0	0	17	57
06:30 AM	0	0	3	1	4	0	0	0	0	0	0	50	0	0	50	1	21	0	0	22	76
06:45 AM	3	0	1	1	5	0	0	0	0	0	0	90	0	0	90	1	15	0	1	17	112
Total	3	0	12	2	17	0	0	0	0	0	0	200	0	0	200	4	61	0	1	66	283
07:00 AM	2	0	3	0	5	0	0	0	0	0	0	96	0	0	96	2	36	0	0	38	139
07:15 AM	4	0	5	0	9	0	0	0	0	0	0	114	1	0	115	4	59	0	0	63	187
07:30 AM	9	0	13	2	24	0	0	0	0	0	0	147	0	0	147	5	78	0	0	83	254
07:45 AM	3	0	17	2	22	0	0	0	0	0	0	190	3	0	193	7	75	0	0	82	297
Total	18	0	38	4	60	0	0	0	0	0	0	547	4	0	551	18	248	0	0	266	877
08:00 AM	4	0	15	0	19	0	0	0	0	0	0	163	2	0	165	13	58	0	0	71	255
08:15 AM	3	0	20	0	23	0	0	0	0	0	0	167	0	0	167	13	30	0	0	43	233
08:30 AM	10	0	22	0	32	0	0	0	0	0	0	174	1	0	175	2	39	0	0	41	248
08:45 AM	1	0	10	0	11	0	0	0	0	0	0	156	0	0	156	3	33	0	0	36	203
Total	18	0	67	0	85	0	0	0	0	0	0	660	3	0	663	31	160	0	0	191	939
09:00 AM	5	0	10	0	15	0	0	0	1	1	0	137	1	0	138	4	56	0	0	60	214
09:15 AM	5	0	10	0	15	0	0	0	0	0	0	138	3	0	141	5	37	0	0	42	198
09:30 AM	1	0	6	0	7	0	0	0	1	1	0	150	2	0	152	4	50	0	0	54	214
09:45 AM	3	0	7	0	10	0	0	0	0	0	0	146	6	0	152	2	46	0	0	48	210
Total	14	0	33	0	47	0	0	0	2	2	0	571	12	0	583	15	189	0	0	204	836
10:00 AM	1	0	10	0	11	0	0	0	0	0	0	100	2	0	102	5	42	0	0	47	160
10:15 AM	1	0	8	0	9	0	0	0	0	0	0	65	0	0	65	5	41	0	0	46	120
10:30 AM	2	0	5	0	7	0	0	0	0	0	0	59	3	0	62	5	52	0	0	57	126
10:45 AM	2	0	7	1	10	0	0	0	0	0	0	79	2	0	81	2	52	0	0	54	145
Total	6	0	30	1	37	0	0	0	0	0	0	303	7	0	310	17	187	0	0	204	551
11:00 AM	2	0	6	0	8	0	0	0	0	0	0	73	2	0	75	10	54	0	0	64	147
11:15 AM	4	0	5	0	9	0	0	0	0	0	0	48	1	0	49	5	64	0	0	69	127
11:30 AM	2	0	13	2	17	0	0	0	0	0	0	69	4	0	73	6	68	0	0	74	164
11:45 AM	5	0	8	0	13	0	0	0	0	0	0	76	1	0	77	9	63	0	0	72	162
Total	13	0	32	2	47	0	0	0	0	0	0	266	8	0	274	30	249	0	0	279	600
12:00 PM	0	0	11	0	11	0	0	0	0	0	0	85	2	0	87	11	80	0	0	91	189
12:15 PM	3	0	2	0	5	0	0	0	0	0	0	70	1	0	71	7	56	0	0	63	139
12:30 PM	1	0	2	1	4	0	0	0	0	0	0	78	3	0	81	10	75	0	0	85	170
12:45 PM	2	0	6	0	8	0	0	0	0	0	0	85	3	0	88	6	91	0	0	97	193
Total	6	0	21	1	28	0	0	0	0	0	0	318	9	0	327	34	302	0	0	336	691
01:00 PM	2	0	9	0	11	0	0	0	0	0	0	64	2	0	66	8	100	0	0	108	185
01:15 PM	4	0	9	0	13	0	0	0	0	0	0	63	3	0	66	3	72	0	0	75	154
01:30 PM	2	0	5	0	7	0	0	0	0	0	0	62	1	0	63	2	92	0	0	94	164
01:45 PM	1	0	3	2	6	0	0	0	0	0	0	67	3	0	70	5	90	0	0	95	171
Total	9	0	26	2	37	0	0	0	0	0	0	256	9	0	265	18	354	0	0	372	674

Reliable Traffic Data Services

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TMC Data
Hammond Dr @ Mitchell Rd
Sandy Springs, GA
6am - 7pm

File Name : 43480003
Site Code : 43480003
Start Date : 10/2/2019
Page No : 2

Groups Printed- Cars, Buses and Trucks

	Mitchell Rd Northbound					Southbound					Hammond Dr Eastbound					Hammond Dr Westbound					
Start Time	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Int. Total
02:00 PM	4	0	6	0	10	0	0	0	0	0	0	73	1	0	74	5	70	0	0	75	159
02:15 PM	1	0	7	0	8	0	0	0	0	0	0	62	4	0	66	9	90	0	0	99	173
02:30 PM	6	0	10	0	16	0	0	0	0	0	0	61	1	0	62	6	105	0	0	111	189
02:45 PM	8	0	2	0	10	0	0	0	0	0	0	69	3	0	72	15	105	0	0	120	202
Total	19	0	25	0	44	0	0	0	0	0	0	265	9	0	274	35	370	0	0	405	723
03:00 PM	5	0	7	0	12	0	0	0	0	0	0	74	2	0	76	16	135	0	0	151	239
03:15 PM	4	0	9	0	13	0	0	0	0	0	0	72	0	0	72	11	148	0	0	159	244
03:30 PM	3	0	12	0	15	0	0	0	0	0	0	116	4	1	121	7	135	0	0	142	278
03:45 PM	5	0	5	1	11	0	0	0	0	0	0	112	5	0	117	14	153	0	0	167	295
Total	17	0	33	1	51	0	0	0	0	0	0	374	11	1	386	48	571	0	0	619	1056
04:00 PM	4	0	9	0	13	0	0	0	0	0	0	94	2	0	96	7	174	0	0	181	290
04:15 PM	1	0	8	0	9	0	0	0	0	0	0	86	4	0	90	9	156	0	0	165	264
04:30 PM	0	0	4	0	4	0	0	0	0	0	0	75	1	0	76	7	142	0	0	149	229
04:45 PM	0	0	2	0	2	0	0	0	0	0	0	67	0	0	67	4	137	0	0	141	210
Total	5	0	23	0	28	0	0	0	0	0	0	322	7	0	329	27	609	0	0	636	993
05:00 PM	0	0	2	0	2	0	0	0	0	0	0	79	2	0	81	9	156	0	0	165	248
05:15 PM	1	0	11	0	12	0	0	0	0	0	0	96	1	0	97	4	146	0	0	150	259
05:30 PM	0	0	13	0	13	0	0	0	0	0	0	119	4	0	123	6	167	0	0	173	309
05:45 PM	6	0	17	1	24	0	0	0	0	0	0	112	3	0	115	7	137	0	0	144	283
Total	7	0	43	1	51	0	0	0	0	0	0	406	10	0	416	26	606	0	0	632	1099
06:00 PM	2	0	9	0	11	0	0	0	0	0	0	102	0	0	102	11	141	0	0	152	265
06:15 PM	1	0	6	1	8	0	0	0	0	0	0	98	0	0	98	10	122	0	0	132	238
06:30 PM	1	0	4	0	5	0	0	0	0	0	0	78	2	0	80	5	123	0	0	128	213
06:45 PM	1	0	6	1	8	0	0	0	0	0	0	74	3	0	77	4	117	0	0	121	206
Total	5	0	25	2	32	0	0	0	0	0	0	352	5	0	357	30	503	0	0	533	922
Grand Total	140	0	408	16	564	0	0	0	2	2	0	4840	94	1	4935	333	4409	0	1	4743	10244
Apprch %	24.8	0	72.3	2.8		0	0	0	100		0	98.1	1.9	0		7	93	0	0		
Total %	1.4	0	4	0.2	5.5	0	0	0	0	0	0	47.2	0.9	0	48.2	3.3	43	0	0	46.3	

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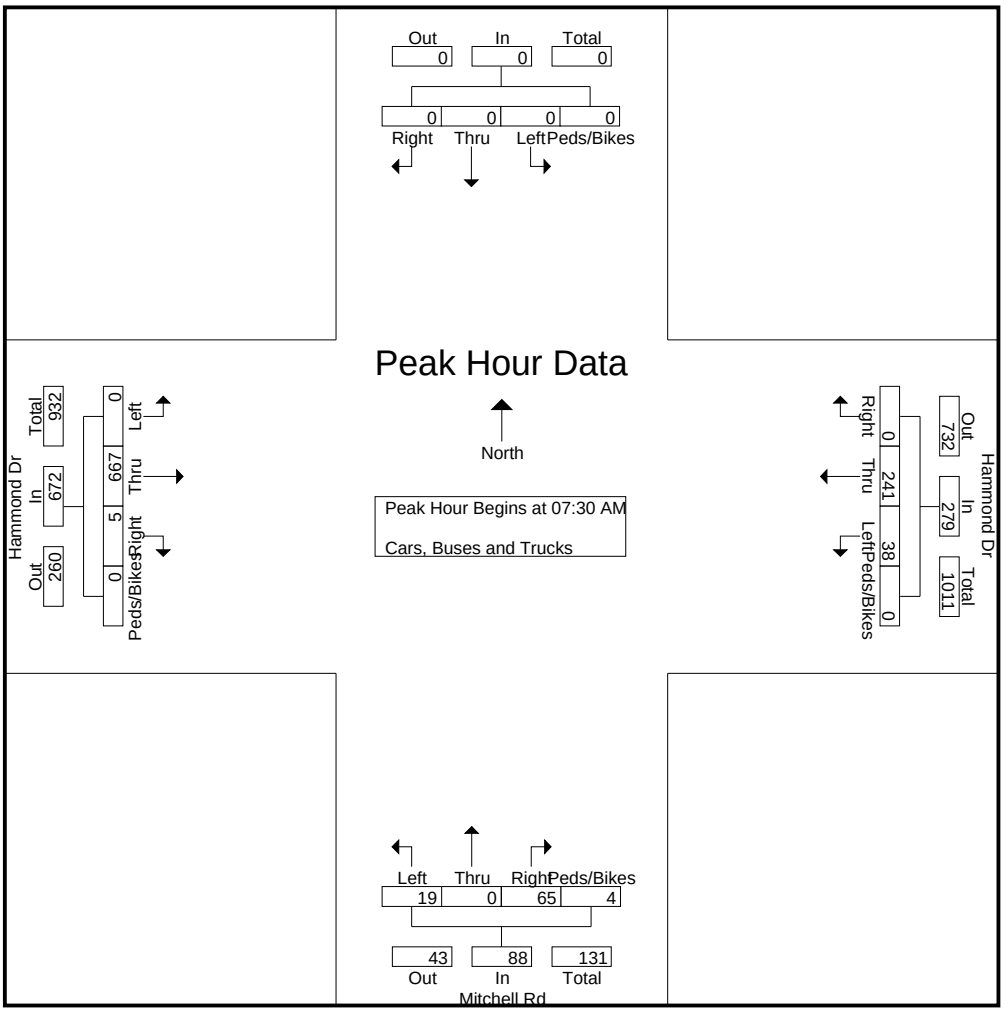
TMC Data
Hammond Dr @ Mitchell Rd
Sandy Springs, GA
6am - 7pm

File Name : 43480003
Site Code : 43480003
Start Date : 10/2/2019

	Mitchell Rd Northbound					Southbound					Hammond Dr Eastbound					Hammond Dr Westbound					
Start Time	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	**9**	0	13	**2**	**24**	0	0	0	0	0	0	147	0	0	147	5	**78**	0	0	**83**	254
07:45 AM	3	0	17	2	22	0	0	0	0	0	0	**190**	**3**	0	**193**	7	75	0	0	82	**297**
08:00 AM	4	0	15	0	19	0	0	0	0	0	0	163	2	0	165	**13**	58	0	0	71	255
08:15 AM	3	0	**20**	0	23	0	0	0	0	0	0	167	0	0	167	13	30	0	0	43	233
Total Volume	19	0	65	4	88	0	0	0	0	0	0	667	5	0	672	38	241	0	0	279	1039
% App. Total																					
PHF	.528	.000	.813	.500	.917	.000	.000	.000	.000	.000	.000	.878	.417	.000	.870	.731	.772	.000	.000	.840	.875



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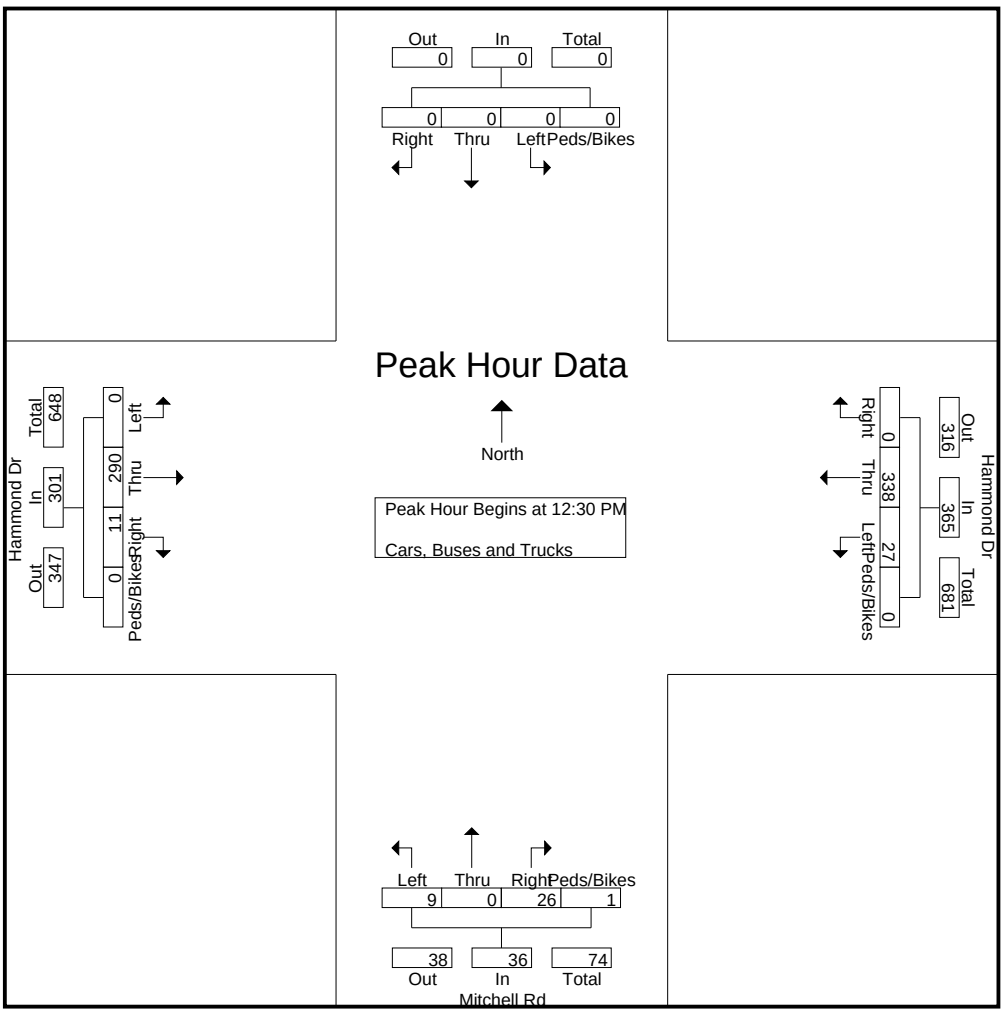
TMC Data
Hammond Dr @ Mitchell Rd
Sandy Springs, GA
6am - 7pm

File Name : 43480003
Site Code : 43480003
Start Date : 10/2/2019
Page No : 4

	Mitchell Rd Northbound					Southbound					Hammond Dr Eastbound					Hammond Dr Westbound					
Start Time	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Int. Total
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	1	0	2	**1**	4	0	0	0	0	0	0	78	**3**	0	81	**10**	75	0	0	85	170
12:45 PM	2	0	6	0	8	0	0	0	0	0	0	**85**	3	0	**88**	6	91	0	0	97	**193**
01:00 PM	2	0	**9**	0	11	0	0	0	0	0	0	64	2	0	66	8	**100**	0	0	**108**	185
01:15 PM	**4**	0	9	0	**13**	0	0	0	0	0	0	63	3	0	66	3	72	0	0	75	154
Total Volume	9	0	26	1	36	0	0	0	0	0	0	290	11	0	301	27	338	0	0	365	702
% App. Total																					
PHF	.563	.000	.722	.250	.692	.000	.000	.000	.000	.000	.000	.853	.917	.000	.855	.675	.845	.000	.000	.845	.909



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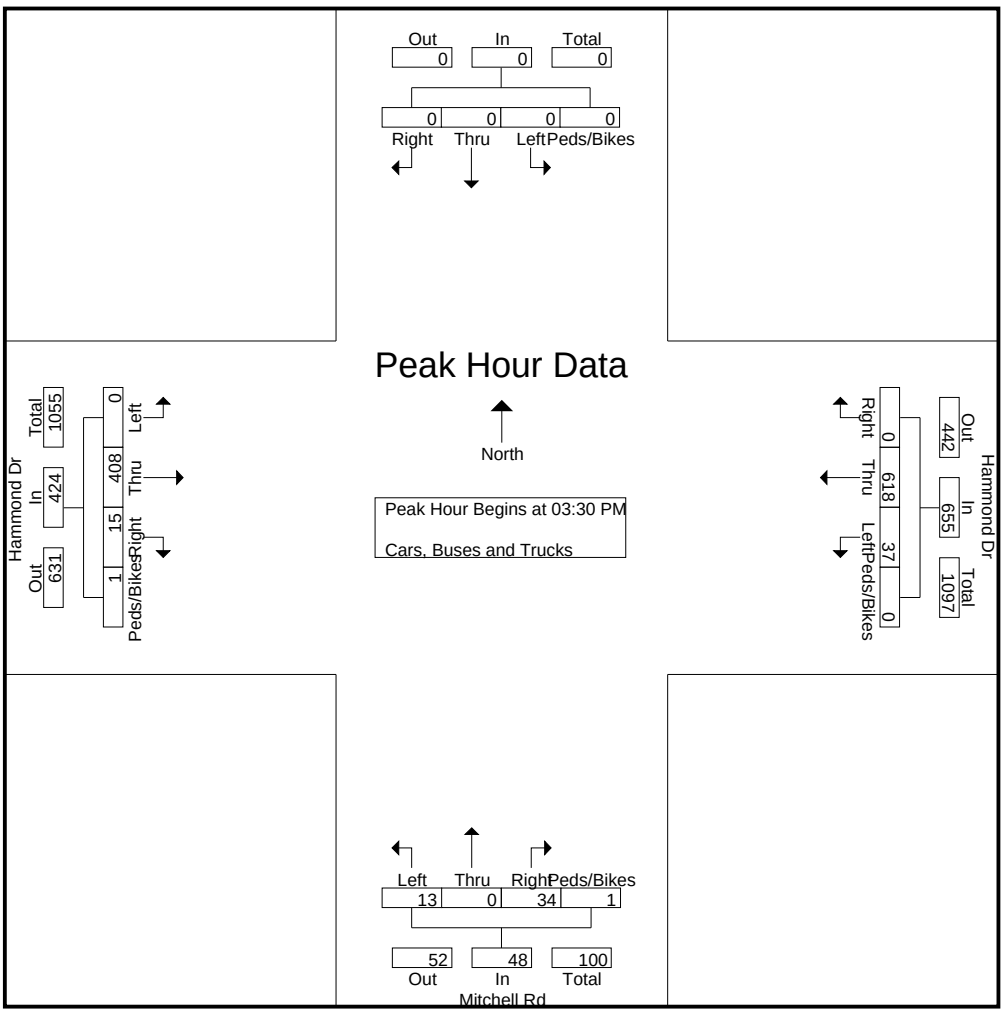
TMC Data
Hammond Dr @ Mitchell Rd
Sandy Springs, GA
6am - 7pm

File Name : 43480003
Site Code : 43480003
Start Date : 10/2/2019
Page No : 5

	Mitchell Rd Northbound					Southbound					Hammond Dr Eastbound					Hammond Dr Westbound					
Start Time	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Left	Thru	Right	Peds/Bikes	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:30 PM																					
03:30 PM	3	0	**12**	0	**15**	0	0	0	0	0	0	**116**	4	**1**	**121**	7	135	0	0	142	278
03:45 PM	**5**	0	5	**1**	11	0	0	0	0	0	0	112	**5**	0	117	**14**	153	0	0	167	**295**
04:00 PM	4	0	9	0	13	0	0	0	0	0	0	94	2	0	96	7	**174**	0	0	**181**	290
04:15 PM	1	0	8	0	9	0	0	0	0	0	0	86	4	0	90	9	156	0	0	165	264
Total Volume	13	0	34	1	48	0	0	0	0	0	0	408	15	1	424	37	618	0	0	655	1127
% App. Total																					
PHF	.650	.000	.708	.250	.800	.000	.000	.000	.000	.000	.000	.879	.750	.250	.876	.661	.888	.000	.000	.905	.955



Bidirectional Counts

Reliable Traffic Data Services

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ADT Data

Site Code: 43480101
Station ID: 183
Mt Vernon Hwy west of Long Island Dr
Sandy Springs, GA

Start	02-Oct-19	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Wed	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		0	115			3	121				
12:15		0	145			3	108				
12:30		1	102			5	109				
12:45		1	132	2	494	4	102	15	440	17	934
01:00		1	102			0	152				
01:15		4	104			1	136				
01:30		1	111			1	139				
01:45		1	114	7	431	1	165	3	592	10	1023
02:00		1	115			1	119				
02:15		1	109			1	151				
02:30		0	114			1	145				
02:45		0	110	2	448	0	157	3	572	5	1020
03:00		0	90			1	223				
03:15		0	138			0	235				
03:30		0	178			1	220				
03:45		1	180	1	586	0	231	2	909	3	1495
04:00		1	170			2	268				
04:15		1	151			2	276				
04:30		1	162			2	267				
04:45		2	173	5	656	2	280	8	1091	13	1747
05:00		7	171			2	262				
05:15		14	197			5	289				
05:30		16	199			4	282				
05:45		23	203	60	770	5	225	16	1058	76	1828
06:00		28	199			18	204				
06:15		57	176			21	219				
06:30		68	123			39	216				
06:45		173	97	326	595	36	207	114	846	440	1441
07:00		182	71			91	136				
07:15		286	76			119	123				
07:30		257	66			136	111				
07:45		294	70	1019	283	124	76	470	446	1489	729
08:00		280	42			109	85				
08:15		302	45			94	103				
08:30		303	27			103	60				
08:45		301	35	1186	149	101	75	407	323	1593	472
09:00		244	24			97	57				
09:15		259	16			67	48				
09:30		238	17			68	31				
09:45		218	17	959	74	64	54	296	190	1255	264
10:00		167	17			69	28				
10:15		129	6			72	28				
10:30		104	8			63	10				
10:45		121	7	521	38	76	15	280	81	801	119
11:00		120	6			84	6				
11:15		86	4			89	5				
11:30		105	4			110	7				
11:45		134	4	445	18	103	4	386	22	831	40
Total		4533	4542			2000	6570			6533	11112
Percent		50.0%	50.0%			23.3%	76.7%			37.0%	63.0%

Reliable Traffic Data Services

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ADT Data

Site Code: 43480101
Station ID: 183
Mt Vernon Hwy west of Long Island Dr
Sandy Springs, GA

Start	03-Oct-19	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Thu	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		4	125			6	106				
12:15		1	124			9	115				
12:30		3	129			1	129				
12:45		2	115	10	493	5	178	21	528	31	1021
01:00		1	107			4	135				
01:15		3	145			2	145				
01:30		0	150			1	138				
01:45		0	177	4	579	1	140	8	558	12	1137
02:00		0	172			1	112				
02:15		0	125			1	143				
02:30		1	103			0	194				
02:45		0	131	1	531	0	207	2	656	3	1187
03:00		0	121			1	239				
03:15		0	155			0	244				
03:30		0	156			2	260				
03:45		2	130	2	562	0	268	3	1011	5	1573
04:00		2	146			2	306				
04:15		0	135			1	310				
04:30		3	146			3	309				
04:45		8	156	13	583	2	274	8	1199	21	1782
05:00		5	192			2	285				
05:15		12	192			2	289				
05:30		21	196			6	256				
05:45		15	178	53	758	13	260	23	1090	76	1848
06:00		21	164			19	224				
06:15		44	148			24	194				
06:30		91	136			37	267				
06:45		156	120	312	568	37	174	117	859	429	1427
07:00		201	92			86	174				
07:15		287	77			133	135				
07:30		295	70			119	97				
07:45		245	54	1028	293	139	84	477	490	1505	783
08:00		282	57			117	89				
08:15		316	55			92	69				
08:30		233	49			95	51				
08:45		297	31	1128	192	92	81	396	290	1524	482
09:00		324	28			73	56				
09:15		281	33			76	52				
09:30		228	23			65	42				
09:45		229	33	1062	117	78	33	292	183	1354	300
10:00		203	31			65	31				
10:15		159	18			73	35				
10:30		124	14			78	19				
10:45		114	7	600	70	108	14	324	99	924	169
11:00		94	5			92	14				
11:15		125	10			88	7				
11:30		126	2			89	9				
11:45		150	10	495	27	114	7	383	37	878	64
Total		4708	4773			2054	7000			6762	11773
Percent		49.7%	50.3%			22.7%	77.3%			36.5%	63.5%
Grand Total		9241	9315			4054	13570			13295	22885
Percent		49.8%	50.2%			23.0%	77.0%			36.7%	63.3%
ADT		ADT 18,090		AADT 18,090							

Reliable Traffic Data Services

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ADT Data

Site Code: 43480102
Station ID: 43
Long Island Dr south of Mt Vernon Hwy
Sandy Springs, GA

Start	02-Oct-19	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Wed	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		1	36			1	24				
12:15		3	25			0	25				
12:30		0	27			0	17				
12:45		0	24	4	112	0	25	1	91	5	203
01:00		0	28			0	23				
01:15		0	20			0	16				
01:30		1	23			1	17				
01:45		0	26	1	97	1	16	2	72	3	169
02:00		0	13			2	27				
02:15		0	23			0	26				
02:30		0	25			0	28				
02:45		0	43	0	104	0	33	2	114	2	218
03:00		0	53			0	23				
03:15		0	57			0	25				
03:30		0	52			0	27				
03:45		0	47	0	209	0	26	0	101	0	310
04:00		1	73			0	25				
04:15		1	58			0	20				
04:30		0	45			0	23				
04:45		1	51	3	227	0	18	0	86	3	313
05:00		0	69			0	26				
05:15		2	54			0	27				
05:30		0	49			3	16				
05:45		2	46	4	218	1	21	4	90	8	308
06:00		5	37			1	24				
06:15		6	48			5	18				
06:30		8	28			7	25				
06:45		5	23	24	136	8	22	21	89	45	225
07:00		13	19			14	12				
07:15		24	14			27	22				
07:30		27	12			35	18				
07:45		24	13	88	58	39	17	115	69	203	127
08:00		34	5			34	6				
08:15		37	8			39	11				
08:30		32	8			31	10				
08:45		34	10	137	31	26	6	130	33	267	64
09:00		31	9			30	7				
09:15		27	6			27	6				
09:30		22	2			19	2				
09:45		18	3	98	20	14	9	90	24	188	44
10:00		18	1			18	10				
10:15		19	5			16	4				
10:30		22	1			24	1				
10:45		25	0	84	7	22	0	80	15	164	22
11:00		20	2			17	2				
11:15		22	0			20	1				
11:30		25	0			23	0				
11:45		29	0	96	2	27	0	87	3	183	5
Total		539	1221			532	787			1071	2008
Percent		30.6%	69.4%			40.3%	59.7%			34.8%	65.2%

Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159
Info@reliabletraffic.org I www.reliabletraffic.org

ADT Data

Site Code: 43480102
Station ID: 43
Long Island Dr south of Mt Vernon Hwy
Sandy Springs, GA

Start	03-Oct-19	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Thu	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		1	32			2	22				
12:15		2	28			0	25				
12:30		0	26			0	19				
12:45		1	27	4	113	1	24	3	90	7	203
01:00		0	32			0	21				
01:15		0	25			0	18				
01:30		2	23			1	17				
01:45		1	28	3	108	0	15	1	71	4	179
02:00		0	17			1	26				
02:15		0	22			0	23				
02:30		0	28			0	27				
02:45		0	41	0	108	0	32	1	108	1	216
03:00		0	55			1	25				
03:15		1	54			0	27				
03:30		0	58			0	23				
03:45		0	46	1	213	0	28	1	103	2	316
04:00		1	68			0	24				
04:15		0	62			0	20				
04:30		0	48			0	22				
04:45		1	54	2	232	0	20	0	86	2	318
05:00		1	67			0	25				
05:15		1	55			0	27				
05:30		0	46			2	19				
05:45		3	48	5	216	1	20	3	91	8	307
06:00		4	39			0	23				
06:15		5	46			4	18				
06:30		7	31			7	24				
06:45		8	24	24	140	10	21	21	86	45	226
07:00		12	20			13	17				
07:15		23	16			25	19				
07:30		25	13			36	16				
07:45		26	12	86	61	39	15	113	67	199	128
08:00		33	8			35	10				
08:15		38	9			41	7				
08:30		34	10			36	8				
08:45		31	7	136	34	25	7	137	32	273	66
09:00		33	8			29	9				
09:15		28	5			24	5				
09:30		23	3			21	3				
09:45		20	4	104	20	16	7	90	24	194	44
10:00		19	3			19	5				
10:15		21	4			15	3				
10:30		22	2			23	1				
10:45		25	1	87	10	20	1	77	10	164	20
11:00		23	1			18	2				
11:15		25	2			22	0				
11:30		24	1			25	1				
11:45		27	0	99	4	24	0	89	3	188	7
Total		551	1259			536	771			1087	2030
Percent		30.4%	69.6%			41.0%	59.0%			34.9%	65.1%
Grand Total		1090	2480			1068	1558			2158	4038
Percent		30.5%	69.5%			40.7%	59.3%			34.8%	65.2%
ADT		ADT 3,098		AADT 3,098							

Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159
Info@reliabletraffic.org I www.reliabletraffic.org

ADT Data

Site Code: 43480106
Station ID: 116
Arlington Memorial Park Drwy north of the Gate, Sandy Springs, GA

Start	02-Oct-19	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Wed	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		0	3			0	6				
12:15		0	54			0	4				
12:30		0	6			0	6				
12:45		0	3	0	66	0	46	0	62	0	128
01:00		0	9			0	14				
01:15		0	4			0	2				
01:30		0	3			0	7				
01:45		0	16	0	32	0	7	0	30	0	62
02:00		0	9			0	6				
02:15		0	13			0	6				
02:30		0	24			0	16				
02:45		0	19	0	65	0	12	0	40	0	105
03:00		0	6			0	5				
03:15		0	13			0	5				
03:30		0	2			0	14				
03:45		0	4	0	25	0	29	0	53	0	78
04:00		0	4			0	9				
04:15		0	2			0	9				
04:30		0	0			0	2				
04:45		0	2	0	8	0	3	0	23	0	31
05:00		0	0			0	2				
05:15		0	4			0	1				
05:30		0	2			0	3				
05:45		0	0	0	6	0	2	0	8	0	14
06:00		2	2			0	0				
06:15		1	2			0	5				
06:30		1	1			0	1				
06:45		0	3	4	8	0	2	0	8	4	16
07:00		3	1			0	3				
07:15		3	3			0	4				
07:30		3	2			1	4				
07:45		6	0	15	6	0	0	1	11	16	17
08:00		4	0			1	1				
08:15		10	0			1	0				
08:30		6	0			1	0				
08:45		1	0	21	0	2	0	5	1	26	1
09:00		4	0			4	0				
09:15		1	0			3	0				
09:30		4	0			4	1				
09:45		2	0	11	0	2	1	13	2	24	2
10:00		5	0			0	0				
10:15		6	0			2	0				
10:30		4	0			7	0				
10:45		6	0	21	0	8	0	17	0	38	0
11:00		3	0			4	0				
11:15		2	0			3	0				
11:30		3	0			3	0				
11:45		9	0	17	0	8	0	18	0	35	0
Total		89	216			54	238			143	454
Percent		29.2%	70.8%			18.5%	81.5%			24.0%	76.0%

Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159
Info@reliabletraffic.org I www.reliabletraffic.org

ADT Data

Site Code: 43480106
Station ID: 116
Arlington Memorial Park Drwy north of the Gate, Sandy Springs, GA

Start Time	03-Oct-19 Thu	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	12			0	9				
12:15		0	3			0	7				
12:30		0	30			0	6				
12:45		0	17	0	62	0	5	0	27	0	89
01:00		0	8			0	2				
01:15		0	9			0	20				
01:30		0	14			0	33				
01:45		0	7	0	38	0	5	0	60	0	98
02:00		0	8			0	17				
02:15		0	1			0	6				
02:30		0	29			0	3				
02:45		0	7	0	45	0	9	0	35	0	80
03:00		0	5			0	16				
03:15		0	4			0	12				
03:30		0	3			0	8				
03:45		0	2	0	14	0	5	0	41	0	55
04:00		0	2			0	4				
04:15		0	1			0	2				
04:30		0	1			0	3				
04:45		0	7	0	11	0	4	0	13	0	24
05:00		0	1			0	3				
05:15		0	5			0	11				
05:30		0	0			0	5				
05:45		0	0	0	6	0	4	0	23	0	29
06:00		2	1			0	4				
06:15		3	0			0	1				
06:30		0	10			0	5				
06:45		1	3	6	14	0	5	0	15	6	29
07:00		1	1			0	4				
07:15		3	0			0	5				
07:30		1	1			0	3				
07:45		2	0	7	2	0	2	0	14	7	16
08:00		5	0			4	0				
08:15		7	0			0	0				
08:30		2	0			2	0				
08:45		5	0	19	0	3	0	9	0	28	0
09:00		6	0			3	0				
09:15		11	0			2	0				
09:30		5	0			3	0				
09:45		5	0	27	0	4	0	12	0	39	0
10:00		7	0			5	0				
10:15		6	0			7	0				
10:30		4	0			4	0				
10:45		32	0	49	0	9	0	25	0	74	0
11:00		7	0			6	0				
11:15		8	0			17	0				
11:30		5	0			7	0				
11:45		5	0	25	0	28	0	58	0	83	0
Total		133	192			104	228			237	420
Percent		40.9%	59.1%			31.3%	68.7%			36.1%	63.9%
Grand Total		222	408			158	466			380	874
Percent		35.2%	64.8%			25.3%	74.7%			30.3%	69.7%
ADT		ADT 627		AADT 627							

Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159
Info@reliabletraffic.org I www.reliabletraffic.org

Northbound Data

Site Code: 43480103
Station ID: 36
Arlington Memorial Park Drwy just north
of Mt Vernon Hwy, Sandy Springs, GA

Start Time	02-Oct-19 Wed	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon
12:00		0	3		
12:15		0	57		
12:30		0	6		
12:45		0	4	0	70
01:00		0	9		
01:15		0	5		
01:30		0	5		
01:45		0	16	0	35
02:00		0	12		
02:15		0	17		
02:30		0	24		
02:45		0	20	0	73
03:00		0	9		
03:15		0	13		
03:30		0	3		
03:45		0	5	0	30
04:00		0	4		
04:15		0	3		
04:30		0	2		
04:45		0	2	0	11
05:00		0	1		
05:15		0	5		
05:30		1	2		
05:45		0	1	1	9
06:00		2	2		
06:15		1	1		
06:30		1	1		
06:45		0	2	4	6
07:00		2	1		
07:15		3	3		
07:30		4	1		
07:45		9	0	18	5
08:00		5	1		
08:15		9	0		
08:30		6	0		
08:45		2	0	22	1
09:00		4	0		
09:15		2	0		
09:30		4	1		
09:45		3	0	13	1
10:00		5	0		
10:15		6	0		
10:30		5	1		
10:45		5	0	21	1
11:00		3	0		
11:15		2	0		
11:30		4	0		
11:45		9	0	18	0
Total		97	242		
Percent		28.6%	71.4%		

Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159
Info@reliabletraffic.org I www.reliabletraffic.org

Northbound Data

Site Code: 43480103
Station ID: 36
Arlington Memorial Park Drwy just north
of Mt Vernon Hwy, Sandy Springs, GA

Start Time	03-Oct-19 Thu	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon
12:00		0	12		
12:15		0	3		
12:30		0	29		
12:45		0	16	0	60
01:00		0	10		
01:15		0	8		
01:30		0	14		
01:45		0	7	0	39
02:00		0	9		
02:15		0	1		
02:30		0	30		
02:45		0	13	0	53
03:00		0	7		
03:15		0	8		
03:30		0	5		
03:45		0	3	0	23
04:00		0	3		
04:15		0	2		
04:30		0	4		
04:45		0	7	0	16
05:00		0	2		
05:15		1	5		
05:30		1	1		
05:45		0	0	2	8
06:00		2	1		
06:15		3	0		
06:30		0	11		
06:45		1	4	6	16
07:00		2	3		
07:15		3	1		
07:30		1	1		
07:45		3	0	9	5
08:00		5	1		
08:15		7	0		
08:30		4	0		
08:45		5	0	21	1
09:00		5	0		
09:15		10	0		
09:30		6	0		
09:45		5	0	26	0
10:00		7	1		
10:15		6	0		
10:30		6	0		
10:45		32	0	51	1
11:00		7	0		
11:15		9	0		
11:30		5	0		
11:45		7	0	28	0
Total		143	222		
Percent		39.2%	60.8%		
Grand Total		240	464		
Percent		34.1%	65.9%		
ADT		ADT 698		AADT 698	

Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159
Info@reliabletraffic.org I www.reliabletraffic.org

Southbound Data

Site Code: 43480104
Station ID: 68
Arlington Memorial Park Drwy just north
of Mt Vernon Hwy, Sandy Springs, GA

Start Time	02-Oct-19 Wed	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon
12:00		0	7		
12:15		0	7		
12:30		0	6		
12:45		0	45	0	65
01:00		0	14		
01:15		0	5		
01:30		0	8		
01:45		0	8	0	35
02:00		0	7		
02:15		0	10		
02:30		0	15		
02:45		0	12	0	44
03:00		0	6		
03:15		0	7		
03:30		0	15		
03:45		0	27	0	55
04:00		0	10		
04:15		0	9		
04:30		0	7		
04:45		1	5	1	31
05:00		0	5		
05:15		0	4		
05:30		1	4		
05:45		0	2	1	15
06:00		0	2		
06:15		0	4		
06:30		0	2		
06:45		1	2	1	10
07:00		0	3		
07:15		0	4		
07:30		1	3		
07:45		2	0	3	10
08:00		0	1		
08:15		2	0		
08:30		1	1		
08:45		2	0	5	2
09:00		4	0		
09:15		5	0		
09:30		4	2		
09:45		2	1	15	3
10:00		0	0		
10:15		2	0		
10:30		6	0		
10:45		8	0	16	0
11:00		3	1		
11:15		4	0		
11:30		3	0		
11:45		8	0	18	1
Total		60	271		
Percent		18.1%	81.9%		

Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159
Info@reliabletraffic.org I www.reliabletraffic.org

Southbound Data

Site Code: 43480104
Station ID: 68
Arlington Memorial Park Drwy just north
of Mt Vernon Hwy, Sandy Springs, GA

Start Time	03-Oct-19 Thu	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon
12:00		0	10		
12:15		0	7		
12:30		0	6		
12:45		0	5	0	28
01:00		0	3		
01:15		0	21		
01:30		0	28		
01:45		0	8	0	60
02:00		0	18		
02:15		0	7		
02:30		0	8		
02:45		0	10	0	43
03:00		0	14		
03:15		0	11		
03:30		0	9		
03:45		0	6	0	40
04:00		0	5		
04:15		0	4		
04:30		0	4		
04:45		0	5	0	18
05:00		0	5		
05:15		0	6		
05:30		1	7		
05:45		0	5	1	23
06:00		0	4		
06:15		1	3		
06:30		0	7		
06:45		0	5	1	19
07:00		0	7		
07:15		0	6		
07:30		0	4		
07:45		1	3	1	20
08:00		3	0		
08:15		1	0		
08:30		3	0		
08:45		4	0	11	0
09:00		3	1		
09:15		3	0		
09:30		5	0		
09:45		4	0	15	1
10:00		5	1		
10:15		7	0		
10:30		5	0		
10:45		9	0	26	1
11:00		7	0		
11:15		15	0		
11:30		7	0		
11:45		24	0	53	0
Total		108	253		
Percent		29.9%	70.1%		
Grand Total		168	524		
Percent		24.3%	75.7%		
ADT		ADT 698		AADT 698	

U-Turn Data

Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159
Info@reliabletraffic.org I www.reliabletraffic.org

Site Code: 43480105
Station ID: 206
U-Turn outside Arlington Memorial Park
Drwy Gate, Sandy Springs, GA

Start Time	02-Oct-19 Wed	U-Turn outside Gate Morning	U-Turn outside Gate Afternoon	Hour Totals Morning	Hour Totals Afternoon
12:00		0	0		
12:15		0	3		
12:30		0	0		
12:45		0	0	0	3
01:00		0	0		
01:15		0	1		
01:30		0	1		
01:45		0	1	0	3
02:00		0	1		
02:15		0	4		
02:30		0	0		
02:45		0	1	0	6
03:00		0	1		
03:15		0	0		
03:30		0	0		
03:45		0	0	0	1
04:00		0	0		
04:15		0	1		
04:30		0	1		
04:45		0	1	0	3
05:00		0	0		
05:15		0	1		
05:30		2	0		
05:45		0	0	2	1
06:00		0	0		
06:15		0	0		
06:30		0	0		
06:45		0	0	0	0
07:00		0	0		
07:15		0	0		
07:30		0	0		
07:45		3	0	3	0
08:00		0	0		
08:15		0	0		
08:30		0	0		
08:45		0	0	0	0
09:00		0	0		
09:15		1	0		
09:30		0	2		
09:45		0	0	1	2
10:00		0	0		
10:15		0	0		
10:30		0	1		
10:45		0	0	0	1
11:00		0	0		
11:15		0	0		
11:30		0	0		
11:45		0	0	0	0
Total		6	20		
Percent		23.1%	76.9%		

Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159
Info@reliabletraffic.org I www.reliabletraffic.org

U-Turn Data

Site Code: 43480105
Station ID: 206
U-Turn outside Arlington Memorial Park
Drwy Gate, Sandy Springs, GA

Start Time	03-Oct-19 Thu	U-Turn outside Gate Morning	U-Turn outside Gate Afternoon	Hour Totals Morning	Hour Totals Afternoon
12:00		0	0		
12:15		0	0		
12:30		0	0		
12:45		0	0	0	0
01:00		0	0		
01:15		0	1		
01:30		0	1		
01:45		0	0	0	2
02:00		0	1		
02:15		0	0		
02:30		0	2		
02:45		0	1	0	4
03:00		0	0		
03:15		0	0		
03:30		0	1		
03:45		0	1	0	2
04:00		0	0		
04:15		0	1		
04:30		0	1		
04:45		0	0	0	2
05:00		0	0		
05:15		0	0		
05:30		2	0		
05:45		0	0	2	0
06:00		0	0		
06:15		0	0		
06:30		0	2		
06:45		0	0	0	2
07:00		0	2		
07:15		0	1		
07:30		0	1		
07:45		0	0	0	4
08:00		0	0		
08:15		1	0		
08:30		1	0		
08:45		0	0	2	0
09:00		0	0		
09:15		1	0		
09:30		1	0		
09:45		0	0	2	0
10:00		0	1		
10:15		0	0		
10:30		1	0		
10:45		1	0	2	1
11:00		0	0		
11:15		2	0		
11:30		0	0		
11:45		2	0	4	0
Total		12	17		
Percent		41.4%	58.6%		
Grand Total		18	37		
Percent		32.7%	67.3%		
ADT		ADT 28		AADT 28	

Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159
Info@reliabletraffic.org I www.reliabletraffic.org

Classification Data

Site Code: 43480107
Station ID: 198
Mt Vernon Hwy east of Long Island Dr

Eastbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
10/02/19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
00:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
00:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
01:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:15	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
02:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
02:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
05:00	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8
05:15	0	14	0	0	0	0	0	0	0	0	0	0	0	0	14
05:30	0	8	4	0	2	0	0	0	0	0	0	0	0	0	14
05:45	0	22	0	0	0	0	0	0	0	0	0	0	0	0	22
	0	52	4	0	2	0	0	0	0	0	0	0	0	0	58
06:00	0	28	2	0	0	0	0	0	0	0	0	0	0	0	30
06:15	0	49	7	2	3	0	0	0	0	0	0	0	0	0	61
06:30	0	56	12	3	2	0	0	0	0	0	0	0	0	0	73
06:45	0	152	14	0	6	0	0	0	0	0	0	0	0	0	172
	0	285	35	5	11	0	0	0	0	0	0	0	0	0	336
07:00	0	165	11	0	6	0	0	0	0	0	0	0	0	0	182
07:15	0	236	24	4	8	0	0	0	0	0	0	0	1	0	273
07:30	0	281	13	2	4	0	0	2	0	0	1	0	0	0	303
07:45	0	268	16	4	7	0	0	1	0	0	0	0	0	0	296
	0	950	64	10	25	0	0	3	0	0	1	0	1	0	1054
08:00	0	293	20	4	6	0	0	1	0	0	0	0	0	0	324
08:15	0	294	18	6	7	0	0	1	0	0	1	0	0	0	327
08:30	0	297	22	1	8	0	0	0	0	0	0	0	0	0	328
08:45	0	285	18	0	9	0	0	0	0	0	0	0	0	0	312
	0	1169	78	11	30	0	0	2	0	0	1	0	0	0	1291
09:00	0	219	26	1	7	0	0	0	0	0	0	0	0	0	253
09:15	1	244	14	1	8	1	0	0	0	0	0	0	0	0	269
09:30	0	234	15	2	8	0	0	0	1	0	0	0	1	0	261
09:45	0	228	12	0	9	1	0	0	0	0	0	0	0	0	250
	1	925	67	4	32	2	0	0	1	0	0	0	1	0	1033
10:00	0	172	12	0	9	0	0	1	0	0	0	0	0	0	194
10:15	0	122	7	0	9	0	0	0	0	0	0	0	0	0	138
10:30	0	97	14	1	2	0	0	0	0	0	0	0	0	0	114
10:45	0	111	8	0	6	0	0	0	0	0	0	0	0	0	125
	0	502	41	1	26	0	0	1	0	0	0	0	0	0	571
11:00	0	99	14	2	3	0	0	1	0	0	0	0	0	0	119
11:15	0	107	12	1	6	0	0	0	0	0	0	0	0	0	126
11:30	0	103	13	0	6	0	0	0	0	0	0	0	0	0	122
11:45	0	124	21	1	5	1	0	0	1	0	0	0	0	0	153
	0	433	60	4	20	1	0	1	1	0	0	0	0	0	520
Total	1	4331	351	35	147	3	0	7	2	0	2	0	2	0	4881
Percent	0.0%	88.7%	7.2%	0.7%	3.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

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Classification Data

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Mt Vernon Hwy east of Long Island Dr

Eastbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
12 PM	0	122	15	0	10	0	0	0	0	0	0	0	0	0	147
12:15	0	142	13	0	9	0	0	0	0	0	0	0	0	0	164
12:30	0	99	15	0	9	0	0	0	0	0	0	0	0	0	123
12:45	0	129	10	0	6	0	0	0	0	0	0	0	0	0	145
	0	492	53	0	34	0	0	0	0	0	0	0	0	0	579
13:00	0	110	10	1	2	0	0	0	0	0	0	0	0	0	123
13:15	0	111	10	1	3	0	0	0	0	0	0	0	0	0	125
13:30	0	94	11	4	7	0	0	1	0	0	0	0	0	0	117
13:45	0	109	12	6	5	2	0	0	0	0	0	0	0	0	134
	0	424	43	12	17	2	0	1	0	0	0	0	0	0	499
14:00	0	101	12	0	5	0	0	0	0	0	0	0	0	0	118
14:15	0	103	18	0	6	0	0	0	0	0	0	0	0	0	127
14:30	0	104	13	0	7	0	0	0	0	0	0	0	0	0	124
14:45	0	114	17	1	2	1	0	0	0	0	0	0	0	0	135
	0	422	60	1	20	1	0	0	0	0	0	0	0	0	504
15:00	0	124	9	1	6	0	0	1	0	0	0	0	0	0	141
15:15	1	157	19	0	6	0	0	0	0	0	0	0	0	0	183
15:30	0	194	17	0	4	0	0	0	0	0	0	0	0	0	215
15:45	0	178	21	12	2	0	0	0	0	0	0	0	0	0	213
	1	653	66	13	18	0	0	1	0	0	0	0	0	0	752
16:00	0	179	16	1	6	0	0	0	0	1	0	0	0	0	203
16:15	0	183	11	1	6	0	0	1	0	0	0	0	0	0	202
16:30	0	194	18	0	7	0	0	0	0	0	0	0	0	0	219
16:45	0	185	19	2	2	0	0	0	0	0	0	0	1	0	209
	0	741	64	4	21	0	0	1	0	1	0	0	1	0	833
17:00	1	191	20	1	7	0	0	0	0	0	0	1	0	0	221
17:15	0	213	9	0	3	0	0	0	0	0	1	0	0	0	226
17:30	0	224	12	0	8	0	0	0	0	0	0	0	0	0	244
17:45	0	236	11	0	9	0	0	0	0	0	0	0	0	0	256
	1	864	52	1	27	0	0	0	0	0	1	1	0	0	947
18:00	1	217	19	0	9	0	0	0	0	0	0	0	2	0	248
18:15	0	180	11	0	6	0	0	0	0	0	0	0	0	0	197
18:30	0	134	10	1	4	0	0	0	0	0	0	0	0	0	149
18:45	0	102	11	0	2	0	0	1	0	0	0	0	0	0	116
	1	633	51	1	21	0	0	1	0	0	0	0	2	0	710
19:00	0	81	9	0	6	0	0	0	0	0	0	0	0	0	96
19:15	0	78	3	0	5	0	0	1	0	0	0	0	0	0	87
19:30	0	69	3	0	0	0	0	0	0	0	0	0	0	0	72
19:45	0	72	0	0	5	0	0	0	0	0	0	0	0	0	77
	0	300	15	0	16	0	0	1	0	0	0	0	0	0	332
20:00	0	42	2	0	1	0	0	0	0	0	0	0	0	0	45
20:15	0	44	5	0	1	0	0	0	0	0	0	0	0	0	50
20:30	0	31	1	0	2	0	0	0	0	0	0	0	0	0	34
20:45	0	39	0	0	1	0	0	0	0	0	0	0	0	0	40
	0	156	8	0	5	0	0	0	0	0	0	0	0	0	169
21:00	0	26	2	0	1	0	0	0	0	0	0	0	0	0	29
21:15	0	18	2	0	1	0	0	0	0	0	0	0	0	0	21
21:30	0	16	1	0	0	0	0	0	0	0	0	0	0	0	17
21:45	0	13	2	0	0	0	0	0	0	0	0	0	0	0	15
	0	73	7	0	2	0	0	0	0	0	0	0	0	0	82
22:00	0	14	1	0	0	0	0	0	0	0	0	0	0	0	15
22:15	0	10	0	0	0	0	0	0	0	0	0	0	0	0	10
22:30	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
22:45	0	7	1	0	0	0	0	0	0	0	0	0	0	0	8
	0	37	2	0	0	0	0	0	0	0	0	0	0	0	39
23:00	0	7	1	0	0	0	0	0	0	0	0	0	0	0	8
23:15	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
23:30	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
23:45	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
	0	20	1	0	0	0	0	0	0	0	0	0	0	0	21
Total	3	4815	422	32	181	3	0	5	0	1	1	1	3	0	5467
Percent	0.1%	88.1%	7.7%	0.6%	3.3%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	

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Eastbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
10/03/19	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
00:15	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
00:30	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
00:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
	0	7	1	0	1	0	0	0	0	0	0	0	0	0	9
01:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
01:15	0	1	2	0	1	0	0	0	0	0	0	0	0	0	4
01:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	2	3	0	1	0	0	0	0	0	0	0	0	0	6
02:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30	0	2	0	1	0	0	0	0	0	0	0	0	0	0	3
04:45	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
	0	10	0	1	0	0	0	0	0	0	0	0	0	0	11
05:00	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
05:15	0	8	4	0	1	0	0	0	0	0	0	0	0	0	13
05:30	0	14	3	0	1	0	0	0	0	0	0	0	0	0	18
05:45	0	14	1	0	1	0	0	0	0	0	0	0	0	0	16
	0	41	9	0	3	0	0	0	0	0	0	0	0	0	53
06:00	0	22	1	0	1	0	0	0	0	0	0	0	0	0	24
06:15	0	37	5	3	2	0	0	0	0	0	0	0	0	0	47
06:30	0	68	13	1	2	0	0	0	0	0	0	0	0	0	84
06:45	0	150	11	1	4	1	0	0	0	0	0	0	0	0	167
	0	277	30	5	9	1	0	0	0	0	0	0	0	0	322
07:00	0	178	10	0	6	0	0	0	0	0	0	0	0	0	194
07:15	0	250	9	2	6	0	0	0	0	0	0	0	0	0	267
07:30	0	285	19	2	4	0	0	0	0	0	0	0	0	0	310
07:45	0	256	25	7	7	1	0	1	0	0	0	0	0	0	297
	0	969	63	11	23	1	0	1	0	0	0	0	0	0	1068
08:00	1	284	19	4	7	0	0	0	0	0	0	0	1	0	316
08:15	0	263	21	1	4	0	0	0	0	0	0	0	0	0	289
08:30	0	290	22	0	5	0	0	1	0	0	0	0	1	0	319
08:45	0	305	15	2	10	0	0	0	0	0	0	0	1	0	333
	1	1142	77	7	26	0	0	1	0	0	0	0	3	0	1257
09:00	0	256	22	0	7	0	0	1	0	0	0	0	1	0	287
09:15	0	260	19	0	14	0	0	0	0	0	0	0	0	0	293
09:30	0	224	11	1	6	0	0	0	0	0	0	0	0	0	242
09:45	0	198	25	0	14	0	0	0	0	0	0	0	0	0	237
	0	938	77	1	41	0	0	1	0	0	0	0	1	0	1059
10:00	0	176	19	0	10	0	0	0	0	0	0	0	0	0	205
10:15	0	138	15	2	6	0	0	0	0	0	0	0	0	0	161
10:30	0	114	12	0	9	0	0	1	0	0	0	0	0	0	136
10:45	0	111	11	0	12	0	0	0	0	0	0	0	0	0	134
	0	539	57	2	37	0	0	1	0	0	0	0	0	0	636
11:00	0	94	4	1	6	1	0	0	0	0	0	0	0	0	106
11:15	0	101	21	0	8	0	0	0	0	0	0	0	0	0	130
11:30	1	113	21	0	7	0	0	0	0	0	0	0	0	0	142
11:45	0	132	16	0	11	0	0	0	0	0	0	0	0	0	159
	1	440	62	1	32	1	0	0	0	0	0	0	0	0	537
Total	2	4369	379	28	173	3	0	4	0	0	0	0	4	0	4962
Percent	0.0%	88.0%	7.6%	0.6%	3.5%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	

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Mt Vernon Hwy east of Long Island Dr

Eastbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
12 PM	0	126	11	1	9	0	0	1	0	0	0	0	0	0	148
12:15	1	106	9	0	6	0	0	0	0	0	0	0	0	0	122
12:30	0	115	16	1	8	0	0	1	0	0	0	0	0	0	141
12:45	0	121	16	0	3	1	0	0	0	0	0	0	0	0	141
	1	468	52	2	26	1	0	2	0	0	0	0	0	0	552
13:00	0	123	14	1	8	0	0	0	1	0	0	0	0	0	147
13:15	0	153	13	2	5	0	0	0	0	0	0	0	0	0	173
13:30	0	150	20	8	3	0	0	0	0	0	0	0	0	0	181
13:45	0	180	17	9	13	0	0	0	0	0	0	0	0	0	219
	0	606	64	20	29	0	0	0	1	0	0	0	0	0	720
14:00	0	191	20	1	13	0	0	2	0	0	0	0	0	0	227
14:15	0	137	10	1	9	0	0	1	0	0	0	0	0	0	158
14:30	1	120	21	0	11	0	0	0	0	0	0	0	0	0	153
14:45	0	135	17	0	7	0	0	1	0	0	0	0	0	0	160
	1	583	68	2	40	0	0	4	0	0	0	0	0	0	698
15:00	0	129	12	0	7	0	0	1	0	0	0	0	1	0	150
15:15	0	138	14	1	9	1	0	0	0	0	0	0	0	0	163
15:30	0	168	23	2	7	0	0	1	0	0	0	0	0	0	201
15:45	0	179	15	6	2	0	0	0	0	0	0	0	0	0	202
	0	614	64	9	25	1	0	2	0	0	0	0	1	0	716
16:00	0	170	12	1	4	0	0	0	0	0	1	0	0	0	188
16:15	0	165	16	0	8	0	0	0	0	0	0	0	0	0	189
16:30	0	193	14	0	6	0	0	0	0	0	0	0	2	0	215
16:45	0	167	8	2	4	1	0	0	0	0	0	0	0	0	182
	0	695	50	3	22	1	0	0	0	0	1	0	2	0	774
17:00	1	198	19	2	7	0	0	0	0	0	0	0	0	0	227
17:15	0	200	11	0	3	0	0	0	0	0	0	0	0	0	214
17:30	0	241	15	0	6	0	0	0	0	0	0	0	0	0	262
17:45	0	194	15	0	3	0	0	0	0	0	0	0	0	0	212
	1	833	60	2	19	0	0	0	0	0	0	0	0	0	915
18:00	0	198	15	0	3	0	0	0	0	0	0	0	0	0	216
18:15	0	147	13	0	2	0	0	1	0	0	0	0	0	0	163
18:30	0	136	9	0	6	0	0	1	0	0	0	0	0	0	152
18:45	0	131	15	0	7	0	0	0	0	0	0	0	0	0	153
	0	612	52	0	18	0	0	2	0	0	0	0	0	0	684
19:00	0	103	5	0	2	0	0	0	0	0	0	0	0	0	110
19:15	0	88	11	0	2	0	0	0	0	0	0	0	0	0	101
19:30	0	75	7	0	0	0	0	0	0	0	0	0	0	0	82
19:45	0	58	4	0	2	0	0	0	0	0	0	0	0	0	64
	0	324	27	0	6	0	0	0	0	0	0	0	0	0	357
20:00	0	57	4	0	2	0	0	0	0	0	0	0	0	0	63
20:15	0	51	4	0	1	0	0	0	0	0	0	0	0	0	56
20:30	0	42	6	0	2	0	0	0	0	0	0	0	0	0	50
20:45	0	30	2	0	0	0	0	0	1	0	0	0	0	0	33
	0	180	16	0	5	0	0	0	1	0	0	0	0	0	202
21:00	0	22	3	0	0	0	0	0	0	0	0	0	0	0	25
21:15	0	32	2	0	1	0	0	0	0	0	0	0	0	0	35
21:30	0	20	2	0	1	0	0	0	0	0	0	0	0	0	23
21:45	0	25	4	0	3	0	0	0	0	0	0	0	0	0	32
	0	99	11	0	5	0	0	0	0	0	0	0	0	0	115
22:00	0	28	2	0	1	0	0	0	0	0	0	0	0	0	31
22:15	0	17	1	0	1	0	0	0	0	0	0	0	0	0	19
22:30	0	12	2	0	0	0	0	0	0	0	0	0	0	0	14
22:45	0	8	1	0	1	0	0	0	0	0	0	0	0	0	10
	0	65	6	0	3	0	0	0	0	0	0	0	0	0	74
23:00	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
23:15	0	12	2	0	0	0	0	0	0	0	0	0	0	0	14
23:30	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
23:45	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9
	0	33	2	0	0	0	0	0	0	0	0	0	0	0	35
Total	3	5112	472	38	198	3	0	10	2	0	1	0	3	0	5842
Percent	0.1%	87.5%	8.1%	0.7%	3.4%	0.1%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	
Grand Total	9	18627	1624	133	699	12	0	26	4	1	4	1	12	0	21152
Percent	0.0%	88.1%	7.7%	0.6%	3.3%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	

Reliable Traffic Data Services

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Info@reliabletraffic.org I www.reliabletraffic.org

Classification Data

Site Code: 43480107
Station ID: 198
Mt Vernon Hwy east of Long Island Dr

Westbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
10/02/19	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
00:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
00:30	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
00:45	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
	0	14	0	0	0	0	0	0	0	0	0	0	0	0	14
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
02:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
05:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
05:15	0	3	0	0	1	0	0	0	0	0	0	0	0	0	4
05:30	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
05:45	1	4	0	0	0	0	0	0	0	0	0	0	0	0	5
	1	13	1	0	1	0	0	0	0	0	0	0	0	0	16
06:00	0	14	1	1	1	0	0	0	0	0	0	0	0	0	17
06:15	0	24	2	0	0	0	0	0	0	0	0	0	0	0	26
06:30	1	35	6	0	2	0	0	0	0	0	0	0	0	0	44
06:45	0	37	5	0	0	0	0	0	0	0	0	0	0	0	42
	1	110	14	1	3	0	0	0	0	0	0	0	0	0	129
07:00	0	82	10	0	1	0	0	0	0	0	0	0	0	0	93
07:15	0	132	11	1	0	0	0	0	0	0	0	0	0	0	144
07:30	0	147	15	6	7	1	2	0	0	0	0	0	0	0	178
07:45	0	129	11	8	0	1	0	0	0	0	0	0	0	0	149
	0	490	47	15	8	2	2	0	0	0	0	0	0	0	564
08:00	0	124	12	1	2	0	0	0	2	0	0	0	0	0	141
08:15	0	109	6	2	4	1	0	0	0	0	0	0	0	0	122
08:30	0	97	14	1	4	1	0	0	0	0	0	0	0	0	117
08:45	0	109	7	0	5	0	0	0	1	0	0	0	0	0	122
	0	439	39	4	15	2	0	0	3	0	0	0	0	0	502
09:00	0	92	12	1	7	0	0	0	0	0	0	0	0	0	112
09:15	0	80	10	1	4	0	0	0	2	0	0	0	0	0	97
09:30	0	82	11	0	2	0	0	0	0	0	0	0	0	0	95
09:45	0	78	13	1	5	0	0	0	0	0	0	0	0	0	97
	0	332	46	3	18	0	0	0	2	0	0	0	0	0	401
10:00	0	74	11	1	6	0	0	0	0	0	0	0	0	0	92
10:15	0	57	12	1	6	0	0	0	0	0	0	0	0	0	76
10:30	0	61	11	1	5	0	0	0	0	0	0	0	0	0	78
10:45	0	78	9	0	6	0	0	0	0	0	0	0	0	0	93
	0	270	43	3	23	0	0	0	0	0	0	0	0	0	339
11:00	0	87	12	0	4	0	0	0	0	0	0	0	0	0	103
11:15	0	89	12	0	4	1	0	0	0	0	0	0	0	0	106
11:30	0	112	13	0	2	0	0	0	0	0	0	0	0	0	127
11:45	0	100	11	1	0	1	0	0	0	0	0	0	0	0	113
	0	388	48	1	10	2	0	0	0	0	0	0	0	0	449
Total	2	2070	238	27	78	6	2	0	5	0	0	0	0	0	2428
Percent	0.1%	85.3%	9.8%	1.1%	3.2%	0.2%	0.1%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	

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Classification Data

Site Code: 43480107
Station ID: 198
Mt Vernon Hwy east of Long Island Dr

Westbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
12 PM	0	104	17	0	10	0	0	0	0	0	0	0	0	0	131
12:15	0	88	11	0	8	0	0	0	0	0	0	0	0	0	107
12:30	0	102	16	0	4	0	0	0	0	0	0	0	0	0	122
12:45	0	111	16	0	5	0	0	0	0	0	0	0	0	0	132
	0	405	60	0	27	0	0	0	0	0	0	0	0	0	492
13:00	0	143	16	0	8	0	0	0	0	0	0	0	0	0	167
13:15	0	112	13	2	2	0	0	0	0	0	0	0	0	0	129
13:30	0	119	14	0	13	0	0	0	0	0	0	0	0	0	146
13:45	0	138	13	1	8	2	0	0	0	0	0	0	0	0	162
	0	512	56	3	31	2	0	0	0	0	0	0	0	0	604
14:00	0	126	12	0	2	1	0	0	0	0	0	0	0	0	141
14:15	0	144	18	0	5	2	0	1	0	0	0	0	2	0	172
14:30	0	139	23	6	4	0	0	0	0	0	0	0	0	0	172
14:45	0	158	12	4	6	0	0	0	0	0	0	0	0	0	180
	0	567	65	10	17	3	0	1	0	0	0	0	2	0	665
15:00	0	200	21	0	5	0	0	0	0	0	0	0	0	0	226
15:15	0	223	17	1	4	0	0	0	0	0	0	0	0	0	245
15:30	0	216	19	0	4	0	0	0	0	0	0	0	0	0	239
15:45	0	214	20	2	7	0	0	0	0	0	0	0	0	0	243
	0	853	77	3	20	0	0	0	0	0	0	0	0	0	953
16:00	0	247	15	3	12	0	0	0	0	0	0	0	0	0	277
16:15	0	251	25	0	2	0	0	2	0	0	0	0	0	0	280
16:30	0	259	16	1	5	0	0	0	0	0	0	0	0	0	281
16:45	0	275	19	1	2	0	0	0	0	0	0	0	0	0	297
	0	1032	75	5	21	0	0	2	0	0	0	0	0	0	1135
17:00	0	256	28	2	2	0	0	0	0	0	0	0	0	0	288
17:15	0	262	17	2	4	1	0	0	0	0	0	0	0	0	286
17:30	0	247	13	0	5	0	0	0	0	0	0	0	0	0	265
17:45	1	238	13	0	5	0	1	1	0	0	0	0	0	0	259
	1	1003	71	4	16	1	1	1	0	0	0	0	0	0	1098
18:00	0	225	10	0	2	0	0	0	0	0	0	0	0	0	237
18:15	0	217	15	2	4	0	0	0	0	0	0	0	0	0	238
18:30	0	215	13	0	4	1	0	3	0	0	0	0	0	0	236
18:45	0	185	8	0	6	1	0	0	0	0	0	0	0	0	200
	0	842	46	2	16	2	0	3	0	0	0	0	0	0	911
19:00	0	136	9	0	2	0	0	0	0	0	0	0	0	0	147
19:15	0	133	9	0	2	0	0	0	0	0	0	0	0	0	144
19:30	0	98	6	0	0	0	1	0	0	0	0	0	0	0	105
19:45	0	83	6	0	5	0	0	0	0	0	0	0	0	0	94
	0	450	30	0	9	0	1	0	0	0	0	0	0	0	490
20:00	0	83	3	0	1	0	0	0	0	0	0	0	0	0	87
20:15	0	99	3	0	2	0	0	0	0	0	0	0	0	0	104
20:30	0	58	4	0	0	0	0	0	0	0	0	0	0	0	62
20:45	0	65	6	0	1	0	0	0	0	0	0	0	0	0	72
	0	305	16	0	4	0	0	0	0	0	0	0	0	0	325
21:00	0	51	5	0	0	0	0	0	0	0	0	0	0	0	56
21:15	0	46	2	0	0	0	0	0	0	0	0	0	0	0	48
21:30	0	35	0	0	0	0	0	0	0	0	0	0	0	0	35
21:45	0	53	1	0	2	0	0	0	0	0	0	0	0	0	56
	0	185	8	0	2	0	0	0	0	0	0	0	0	0	195
22:00	0	33	2	0	1	0	0	0	0	0	0	0	0	0	36
22:15	0	23	4	0	1	0	0	0	0	0	0	0	0	0	28
22:30	0	11	0	0	0	0	0	0	0	0	0	0	0	0	11
22:45	0	10	2	0	0	0	0	0	0	0	0	0	0	0	12
	0	77	8	0	2	0	0	0	0	0	0	0	0	0	87
23:00	0	8	1	0	0	0	0	0	0	0	0	0	0	0	9
23:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
23:30	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8
23:45	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
	0	21	1	0	0	0	0	0	0	0	0	0	0	0	22
Total	1	6252	513	27	165	8	2	7	0	0	0	0	2	0	6977
Percent	0.0%	89.6%	7.4%	0.4%	2.4%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

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Station ID: 198
Mt Vernon Hwy east of Long Island Dr

Westbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
10/03/19	0	6	2	0	0	0	0	0	0	0	0	0	0	0	8
00:15	1	7	0	0	1	0	0	0	0	0	0	0	0	0	9
00:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
00:45	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
	1	19	2	0	1	0	0	0	0	0	0	0	0	0	23
01:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
01:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
01:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
01:45	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
	0	7	1	0	0	0	0	0	0	0	0	0	0	0	8
02:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
03:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
03:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
04:00	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
04:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
04:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
	0	8	1	0	0	0	0	0	0	0	0	0	0	0	9
05:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
05:45	0	12	0	0	0	0	0	0	0	0	0	0	0	0	12
	1	17	1	0	0	0	0	0	0	0	0	0	0	0	19
06:00	0	20	2	0	0	0	0	0	0	0	0	0	0	0	22
06:15	0	23	5	1	1	0	0	0	0	0	0	0	0	0	30
06:30	0	30	6	0	0	0	0	0	0	0	0	0	0	0	36
06:45	0	41	6	0	1	1	0	0	0	0	0	0	0	0	49
	0	114	19	1	2	1	0	0	0	0	0	0	0	0	137
07:00	0	81	8	0	5	0	0	0	0	0	0	0	0	0	94
07:15	0	149	13	1	1	0	0	0	0	0	0	0	0	0	164
07:30	0	129	8	5	5	1	1	0	0	0	0	0	0	0	149
07:45	0	144	12	7	5	0	0	0	0	0	0	0	0	0	168
	0	503	41	13	16	1	1	0	0	0	0	0	0	0	575
08:00	0	138	10	0	5	1	0	0	0	0	0	0	0	0	154
08:15	0	106	13	1	1	0	0	0	0	0	0	0	0	0	121
08:30	0	85	17	0	6	1	0	0	2	0	0	0	0	0	111
08:45	1	96	6	0	8	0	0	0	0	0	0	0	0	0	111
	1	425	46	1	20	2	0	0	2	0	0	0	0	0	497
09:00	0	67	17	0	7	0	0	0	0	0	0	0	0	0	91
09:15	0	75	14	1	2	0	0	0	0	0	0	0	0	0	92
09:30	0	76	11	1	11	0	0	0	0	0	0	0	0	0	99
09:45	0	76	9	0	6	0	0	0	0	0	0	0	0	0	91
	0	294	51	2	26	0	0	0	0	0	0	0	0	0	373
10:00	0	59	14	0	5	0	0	0	0	0	0	0	0	0	78
10:15	0	59	15	1	4	0	0	0	0	0	0	0	0	0	79
10:30	0	78	11	0	5	0	0	0	0	0	0	0	0	0	94
10:45	0	99	11	0	4	1	0	0	0	0	0	0	0	0	115
	0	295	51	1	18	1	0	0	0	0	0	0	0	0	366
11:00	0	91	10	0	1	0	0	0	0	0	0	0	0	0	102
11:15	0	82	9	0	8	0	0	0	0	0	0	0	0	0	99
11:30	0	97	12	0	6	0	0	0	0	0	0	0	0	0	115
11:45	0	110	9	0	5	0	0	2	0	0	0	0	0	0	126
	0	380	40	0	20	0	0	2	0	0	0	0	0	0	442
Total	3	2065	255	18	103	5	1	2	2	0	0	0	0	0	2454
Percent	0.1%	84.1%	10.4%	0.7%	4.2%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

Reliable Traffic Data Services

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Classification Data

Site Code: 43480107
Station ID: 198
Mt Vernon Hwy east of Long Island Dr

Westbound

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
12 PM	1	101	7	1	6	0	0	0	0	0	0	0	0	0	116
12:15	0	91	10	0	5	1	0	0	0	0	0	0	0	0	107
12:30	1	121	16	0	4	0	0	1	0	0	0	0	0	0	143
12:45	0	140	15	0	5	0	0	0	1	0	0	0	0	0	161
	2	453	48	1	20	1	0	1	1	0	0	0	0	0	527
13:00	2	121	17	0	6	0	0	0	0	0	0	0	0	0	146
13:15	0	124	23	0	5	0	0	0	0	0	0	0	0	0	152
13:30	0	123	17	1	7	0	0	0	0	0	0	0	0	0	148
13:45	0	159	21	2	5	0	0	0	0	0	0	0	0	0	187
	2	527	78	3	23	0	0	0	0	0	0	0	0	0	633
14:00	0	117	17	0	2	0	0	0	0	0	0	0	0	0	136
14:15	0	153	15	0	2	0	0	0	0	0	0	0	0	0	170
14:30	0	210	16	5	6	0	0	0	0	0	0	0	0	0	237
14:45	1	210	21	7	10	1	1	0	2	0	0	0	0	0	253
	1	690	69	12	20	1	1	0	2	0	0	0	0	0	796
15:00	2	231	21	1	10	0	0	0	0	0	0	0	2	0	267
15:15	1	238	20	0	7	0	0	2	0	0	0	0	0	0	268
15:30	0	257	21	1	5	0	0	1	0	0	0	0	0	0	285
15:45	0	224	25	3	6	1	1	2	0	0	0	0	0	0	262
	3	950	87	5	28	1	1	5	0	0	0	0	2	0	1082
16:00	0	318	20	3	11	0	0	0	0	0	0	0	0	0	352
16:15	0	303	33	1	6	0	0	0	0	0	0	0	0	0	343
16:30	1	292	29	1	7	0	0	0	0	0	0	0	0	0	330
16:45	1	264	20	1	8	0	1	0	0	0	0	0	0	0	295
	2	1177	102	6	32	0	1	0	0	0	0	0	0	0	1320
17:00	0	283	21	4	5	0	0	0	0	0	0	0	0	0	313
17:15	0	278	26	0	5	0	0	0	2	0	0	0	0	0	311
17:30	0	282	22	0	8	0	0	0	0	0	0	0	0	0	312
17:45	0	283	22	1	2	0	0	0	0	0	0	0	0	0	308
	0	1126	91	5	20	0	0	0	2	0	0	0	0	0	1244
18:00	0	232	12	0	7	0	0	2	0	0	0	0	0	0	253
18:15	0	211	13	0	6	0	0	0	0	0	0	0	0	0	230
18:30	0	252	16	1	5	0	0	0	0	0	0	0	0	0	274
18:45	1	175	13	0	1	0	0	0	0	0	0	0	0	0	190
	1	870	54	1	19	0	0	2	0	0	0	0	0	0	947
19:00	0	161	11	0	1	0	0	0	0	0	0	0	0	0	173
19:15	0	125	9	0	2	0	0	0	0	0	0	0	0	0	136
19:30	0	108	5	0	0	0	0	0	0	0	0	0	0	0	113
19:45	0	83	5	0	1	0	0	0	0	0	0	0	0	0	89
	0	477	30	0	4	0	0	0	0	0	0	0	0	0	511
20:00	0	91	3	0	0	0	0	0	0	0	0	0	0	0	94
20:15	0	76	4	0	1	0	0	0	0	0	0	0	0	0	81
20:30	0	45	3	0	1	0	0	0	0	0	0	0	0	0	49
20:45	0	87	3	0	0	0	0	0	0	0	0	0	0	0	90
	0	299	13	0	2	0	0	0	0	0	0	0	0	0	314
21:00	0	55	2	0	0	0	0	0	0	0	0	0	0	0	57
21:15	0	53	2	0	0	0	0	0	0	0	0	0	0	0	55
21:30	0	42	1	0	1	0	0	0	0	0	0	0	0	0	44
21:45	0	34	1	1	0	0	0	0	0	0	0	0	0	0	36
	0	184	6	1	1	0	0	0	0	0	0	0	0	0	192
22:00	0	27	2	0	0	0	0	0	0	0	0	0	0	0	29
22:15	0	31	0	0	1	0	0	0	0	0	0	0	0	0	32
22:30	0	19	0	0	0	0	0	0	0	0	0	0	0	0	19
22:45	0	13	1	0	0	0	0	0	0	0	0	0	0	0	14
	0	90	3	0	1	0	0	0	0	0	0	0	0	0	94
23:00	0	14	1	0	0	0	0	0	0	0	0	0	0	0	15
23:15	0	9	1	0	0	0	0	0	0	0	0	0	0	0	10
23:30	0	7	1	0	0	0	0	0	0	0	0	0	0	0	8
23:45	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8
	0	38	3	0	0	0	0	0	0	0	0	0	0	0	41
Total	11	6881	584	34	170	3	3	8	5	0	0	0	2	0	7701
Percent	0.1%	89.4%	7.6%	0.4%	2.2%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
Grand Total	17	17268	1590	106	516	22	8	17	12	0	0	0	4	0	19560
Percent	0.1%	88.3%	8.1%	0.5%	2.6%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

Reliable Traffic Data Services

Tel: (770) 578-8158 I Fax: (770) 578-8159
Info@reliabletraffic.org I www.reliabletraffic.org

ADT Data

Site Code: 43480109
Station ID: 23
Hammond Dr west of Mitchell Rd
Sandy Springs, GA

Start	02-Oct-19	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Wed	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		0	89			5	79				
12:15		0	80			1	67				
12:30		2	75			3	79				
12:45		1	85	3	329	3	82	12	307	15	636
01:00		0	74			0	104				
01:15		3	69			0	78				
01:30		0	63			0	82				
01:45		0	61	3	267	1	93	1	357	4	624
02:00		0	68			1	79				
02:15		0	80			1	89				
02:30		0	63			1	99				
02:45		0	63	0	274	0	111	3	378	3	652
03:00		0	62			0	137				
03:15		0	84			0	142				
03:30		0	109			1	148				
03:45		1	127	1	382	0	153	1	580	2	962
04:00		1	94			1	158				
04:15		1	88			1	155				
04:30		1	65			1	147				
04:45		2	90	5	337	0	143	3	603	8	940
05:00		6	80			1	158				
05:15		9	94			1	155				
05:30		8	117			1	157				
05:45		14	123	37	414	2	154	5	624	42	1038
06:00		21	127			6	139				
06:15		33	110			13	124				
06:30		50	74			20	118				
06:45		95	53	199	364	22	112	61	493	260	857
07:00		112	40			36	97				
07:15		138	41			67	92				
07:30		129	44			73	71				
07:45		184	50	563	175	73	55	249	315	812	490
08:00		178	24			67	55				
08:15		167	35			46	58				
08:30		169	23			50	39				
08:45		163	21	677	103	42	41	205	193	882	296
09:00		143	15			64	27				
09:15		149	13			47	25				
09:30		149	10			47	19				
09:45		160	9	601	47	54	31	212	102	813	149
10:00		113	12			38	24				
10:15		74	5			43	18				
10:30		53	5			46	4				
10:45		83	2	323	24	55	9	182	55	505	79
11:00		76	2			57	4				
11:15		54	1			62	2				
11:30		69	5			74	4				
11:45		82	6	281	14	65	5	258	15	539	29
Total		2693	2730			1192	4022			3885	6752
Percent		49.7%	50.3%			22.9%	77.1%			36.5%	63.5%

Reliable Traffic Data Services

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ADT Data

Site Code: 43480109
Station ID: 23
Hammond Dr west of Mitchell Rd
Sandy Springs, GA

Start	03-Oct-19	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Thu	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		3	84			2	59				
12:15		0	67			9	79				
12:30		2	78			0	84				
12:45		0	86	5	315	4	87	15	309	20	624
01:00		1	81			3	94				
01:15		3	99			1	93				
01:30		1	113			2	75				
01:45		0	124	5	417	1	101	7	363	12	780
02:00		0	138			1	85				
02:15		0	82			0	102				
02:30		0	75			0	134				
02:45		0	72	0	367	0	144	1	465	1	832
03:00		0	74			0	134				
03:15		0	91			0	147				
03:30		0	123			0	142				
03:45		2	114	2	402	0	138	0	561	2	963
04:00		1	87			0	131				
04:15		0	92			1	157				
04:30		3	71			1	153				
04:45		7	85	11	335	1	164	3	605	14	940
05:00		4	108			0	146				
05:15		8	98			1	156				
05:30		8	112			2	131				
05:45		10	108	30	426	5	148	8	581	38	1007
06:00		13	92			8	147				
06:15		24	82			19	128				
06:30		46	68			13	154				
06:45		95	61	178	303	20	100	60	529	238	832
07:00		108	56			31	118				
07:15		141	60			51	88				
07:30		128	49			60	67				
07:45		142	27	519	192	75	56	217	329	736	521
08:00		165	34			73	59				
08:15		152	29			49	45				
08:30		159	29			50	44				
08:45		150	29	626	121	47	46	219	194	845	315
09:00		171	11			47	37				
09:15		166	20			48	30				
09:30		123	16			41	27				
09:45		137	16	597	63	58	25	194	119	791	182
10:00		122	22			52	20				
10:15		95	11			46	21				
10:30		69	8			56	13				
10:45		74	6	360	47	66	8	220	62	580	109
11:00		62	3			58	6				
11:15		65	7			64	7				
11:30		80	4			57	7				
11:45		85	5	292	19	74	4	253	24	545	43
Total		2625	3007			1197	4141			3822	7148
Percent		46.6%	53.4%			22.4%	77.6%			34.8%	65.2%
Grand Total		5318	5737			2389	8163			7707	13900
Percent		48.1%	51.9%			22.6%	77.4%			35.7%	64.3%
ADT		ADT 10,804		AADT 10,804							

Reliable Traffic Data Services

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ADT Data

Site Code: 43480108
Station ID: 133
Mt Vernon Hwy north of Hammond Dr
Sandy Springs, GA

Start	02-Oct-19	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Wed	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		1	66			0	64				
12:15		2	70			0	47				
12:30		0	78			3	48				
12:45		0	70	3	284	1	49	4	208	7	492
01:00		0	65			0	69				
01:15		2	51			0	63				
01:30		0	64			1	52				
01:45		0	75	2	255	0	76	1	260	3	515
02:00		1	56			1	75				
02:15		0	62			0	86				
02:30		1	59			1	70				
02:45		0	74	2	251	0	70	2	301	4	552
03:00		0	67			1	98				
03:15		0	112			0	96				
03:30		1	120			0	99				
03:45		0	115	1	414	1	111	2	404	3	818
04:00		0	142			0	120				
04:15		0	138			0	133				
04:30		0	126			0	142				
04:45		0	153	0	559	3	146	3	541	3	1100
05:00		2	159			1	141				
05:15		4	143			3	137				
05:30		6	136			2	133				
05:45		9	126	21	564	4	124	10	535	31	1099
06:00		11	127			8	107				
06:15		15	123			9	113				
06:30		35	85			24	116				
06:45		63	64	124	399	27	111	68	447	192	846
07:00		75	56			37	67				
07:15		124	57			76	51				
07:30		156	32			106	46				
07:45		127	32	482	177	73	43	292	207	774	384
08:00		139	20			80	33				
08:15		167	25			81	51				
08:30		154	20			63	38				
08:45		167	16	627	81	67	28	291	150	918	231
09:00		125	16			62	35				
09:15		132	15			43	20				
09:30		93	9			59	20				
09:45		96	6	446	46	46	23	210	98	656	144
10:00		86	7			59	14				
10:15		77	4			34	19				
10:30		58	6			37	7				
10:45		53	5	274	22	43	5	173	45	447	67
11:00		65	5			48	3				
11:15		53	4			47	4				
11:30		55	0			48	3				
11:45		80	3	253	12	57	2	200	12	453	24
Total		2235	3064			1256	3208			3491	6272
Percent		42.2%	57.8%			28.1%	71.9%			35.8%	64.2%

Reliable Traffic Data Services

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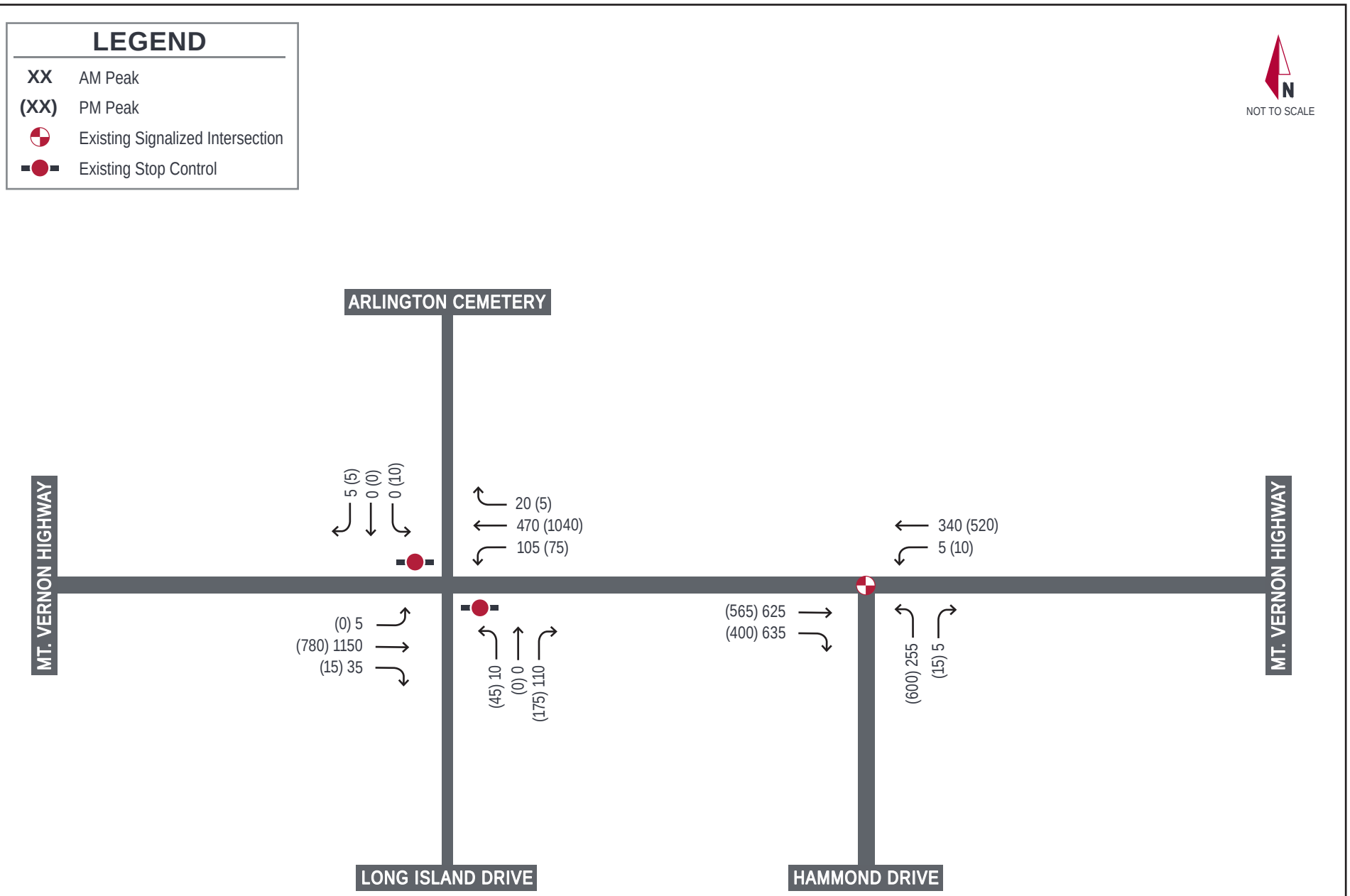
ADT Data

Site Code: 43480108
Station ID: 133
Mt Vernon Hwy north of Hammond Dr
Sandy Springs, GA

Start	03-Oct-19	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Thu	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		0	71			2	52				
12:15		2	44			5	53				
12:30		1	78			1	64				
12:45		4	66	7	259	0	68	8	237	15	496
01:00		0	67			2	69				
01:15		0	77			0	72				
01:30		1	68			0	72				
01:45		0	92	1	304	1	92	3	305	4	609
02:00		1	106			0	53				
02:15		0	72			1	71				
02:30		1	85			0	98				
02:45		0	79	2	342	0	93	1	315	3	657
03:00		0	81			1	137				
03:15		0	103			1	105				
03:30		0	93			0	142				
03:45		0	122	0	399	1	156	3	540	3	939
04:00		0	114			3	146				
04:15		0	123			0	182				
04:30		0	146			2	169				
04:45		1	142	1	525	2	127	7	624	8	1149
05:00		3	111			1	133				
05:15		4	131			2	158				
05:30		12	115			3	151				
05:45		3	145	22	502	9	156	15	598	37	1100
06:00		15	97			5	112				
06:15		18	90			12	98				
06:30		38	67			27	123				
06:45		61	82	132	336	27	112	71	445	203	781
07:00		76	52			47	64				
07:15		135	54			94	57				
07:30		177	34			78	61				
07:45		157	33	545	173	89	43	308	225	853	398
08:00		157	33			86	34				
08:15		166	31			92	43				
08:30		172	27			63	22				
08:45		170	11	665	102	57	38	298	137	963	239
09:00		165	8			50	35				
09:15		142	14			54	27				
09:30		119	13			47	21				
09:45		105	15	531	50	41	18	192	101	723	151
10:00		88	10			32	23				
10:15		74	12			37	16				
10:30		66	7			33	10				
10:45		67	4	295	33	54	11	156	60	451	93
11:00		53	5			53	7				
11:15		54	9			40	6				
11:30		69	2			50	2				
11:45		67	2	243	18	52	4	195	19	438	37
Total		2444	3043			1257	3606			3701	6649
Percent		44.5%	55.5%			25.8%	74.2%			35.8%	64.2%
Grand Total		4679	6107			2513	6814			7192	12921
Percent		43.4%	56.6%			26.9%	73.1%			35.8%	64.2%
ADT		ADT 10,056		AADT 10,056							

Attachment D:

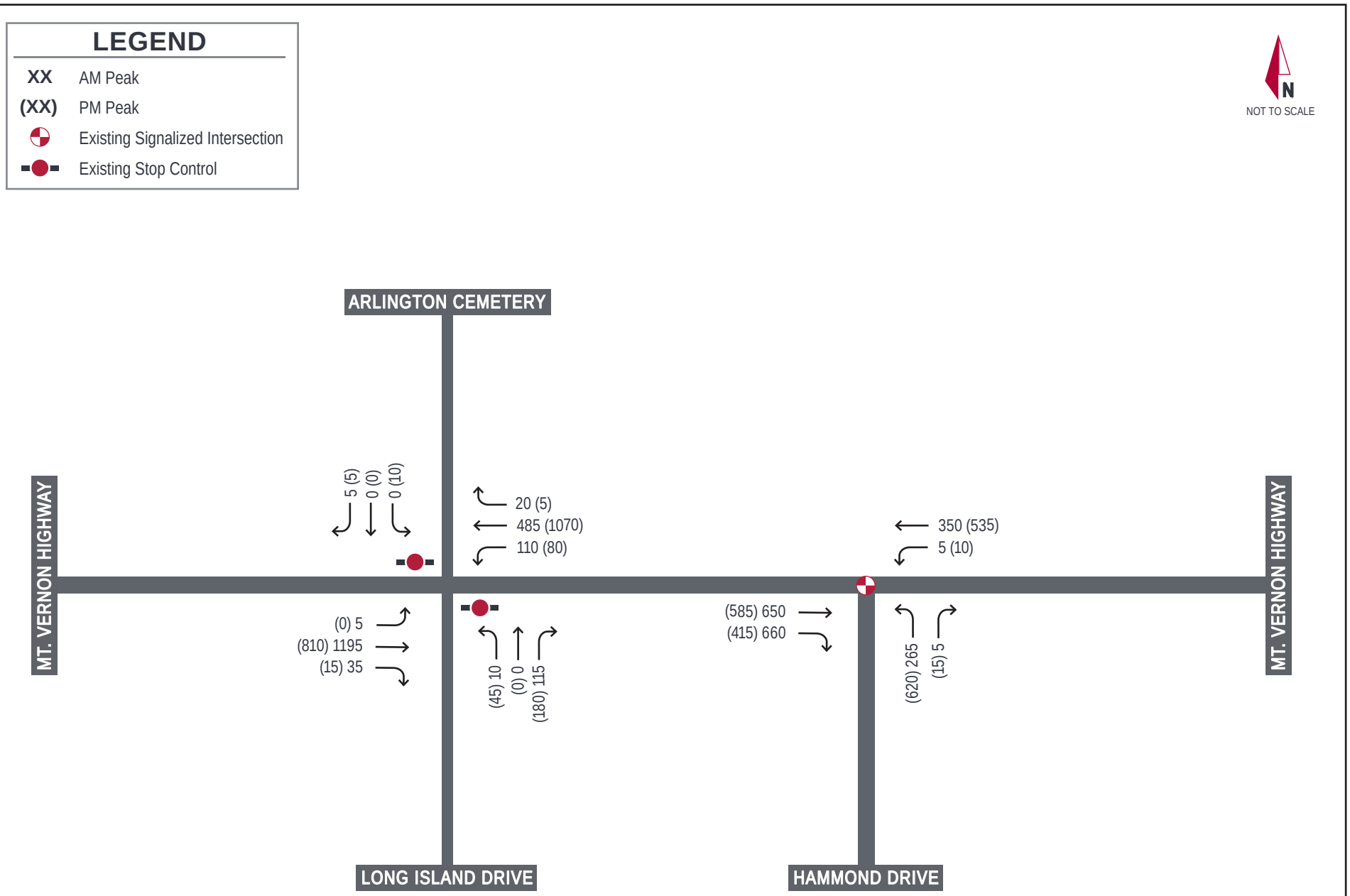
Traffic Volume Figures



Kimley»Horn

FIGURE D-1

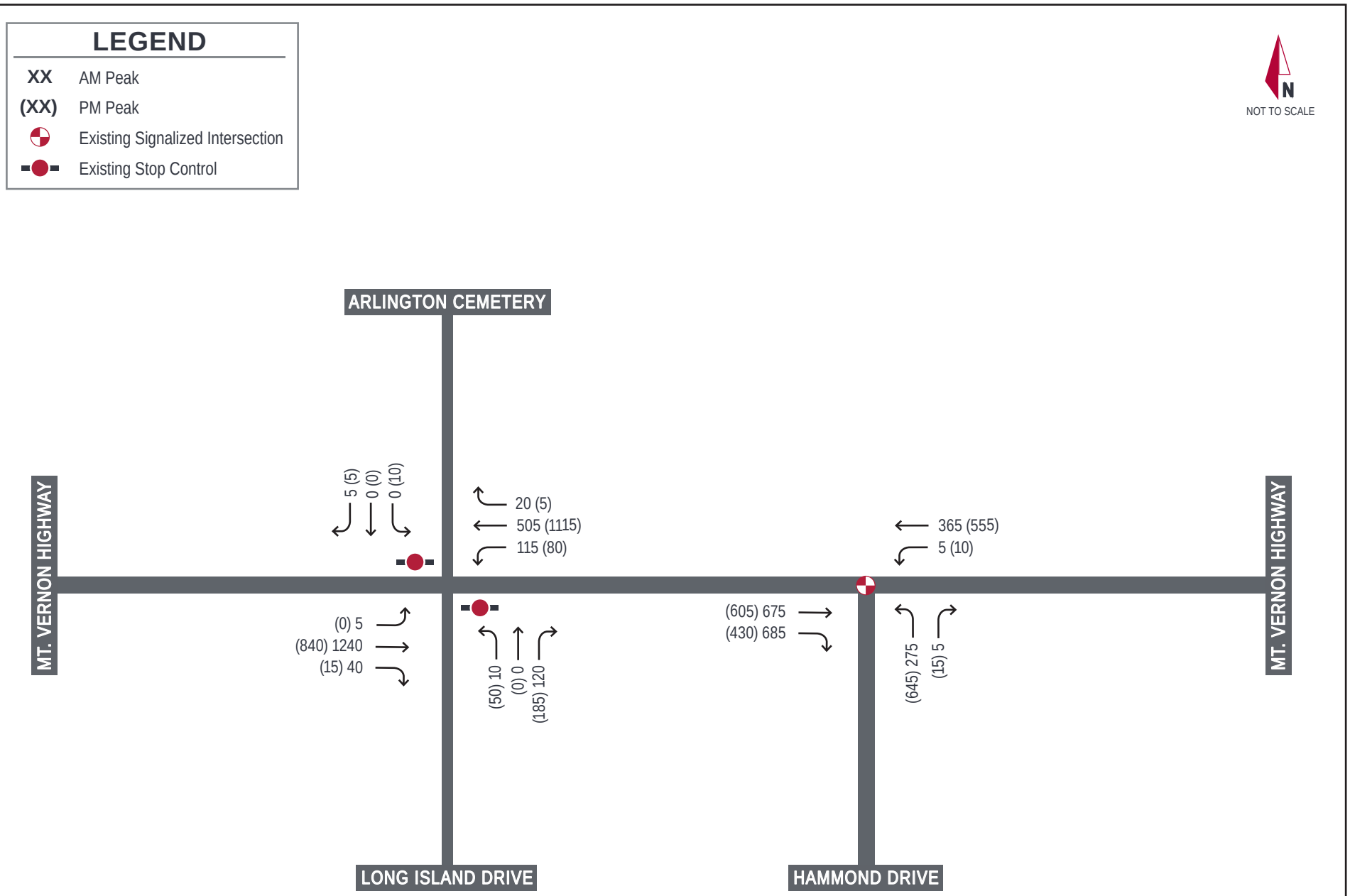
BASE (2023) TRAFFIC CONDITIONS



Kimley»Horn

FIGURE D-2

INTERIM (2033) TRAFFIC CONDITIONS



Kimley»Horn

FIGURE D-3

DESIGN (2043) TRAFFIC CONDITIONS

Attachment E:

Traffic Forecasting and Volume Development Methodology

Kimley»Horn

MEMORANDUM

To: David Low, P.E., PTOE - City of Sandy Springs

From: Jourdyn R. Fuga, P.E., RSP - Kimley-Horn

Date: March 24, 2021

Subject: Intersection Improvement Program: Long Island Drive at Mount Vernon Highway
Traffic Forecasting and Volume Development Methodology

Kimley-Horn was retained by the City of Sandy Springs to conduct an intersection analysis of Mount Vernon Highway at Long Island Drive/Arlington Cemetery. Arlington Cemetery's driveway meets the intersection at a negative offset with Long Island Drive, causing overlapping left-turn movements on Mount Vernon Highway. Since reconfiguring Long Island Drive to a two-lane approach in 2017, heavy queueing and long delays have been observed at the approach. Additionally, when vehicles are queued in both lanes of the approach, intersection sight distances for motorists in one lane typically are obstructed by motorists in the other lane. The City of Sandy Springs previously studied this intersection and identified the need for either a roundabout and/or realignment of the driveway with Long Island Drive.

The purpose of this study is to complete traffic analyses of both alternatives, develop concept designs, and identify a preferred alternative. This memorandum details the procedures and assumptions used to develop AM and PM peak hour traffic forecasts for the intersection of Mount Vernon Highway at Long Island Drive/Arlington Cemetery Driveway and at the adjacent intersection of Mount Vernon Highway at Hammond Drive, to be used in traffic analysis efforts of this study.

Study Area

Mount Vernon Highway is a two-lane, minor arterial oriented in the northeast-southwest direction with a posted speed limit of 35 mph. Long Island Drive is a two-lane, major collector oriented in the north-south direction, south of Mount Vernon Highway, with a posted speed limit of 35 mph, and the Arlington Cemetery driveway is offset to the northeast of Long Island Drive. For the purposes of this analysis, Mount Vernon Highway will be considered east-west and Long Island Drive/Arlington Cemetery Driveway will be considered north-south. The intersection operates under side-street stop control with exclusive left-turn lanes at the northbound and westbound approaches. The signalized intersection of Mount Vernon Highway at Hammond Drive is located approximately 500 feet east of Long Island Drive. The study intersection is located nearly 0.5-miles north of I-285, though no Interstate access is provided on either Mount Vernon Highway or Long Island Drive.

The study area is located in central Sandy Springs, southwest of City Springs, in an area that is primarily residential. Mount Vernon Highway and Long Island Drive provide connection to multiple single-family homes and neighborhoods to the south, while Mount Vernon Highway also connects to commercial development to the northeast. Arlington Cemetery and Arlington Memorial Park are located on the north side of Mount Vernon Highway.

Data Collection

Raw traffic counts were collected in October 2019 by the City of Sandy Springs and included three 13-hour turning movement counts (TMC) and nine 48-hour tube counts. The TMCs were collected on Wednesday, October 2, 2019 from 6:00 AM to 7:00 PM and included passenger car, heavy vehicle, bicycle, and pedestrian volumes to capture the multimodal characteristics of the study area. The 48-hour tube counts were collected from 12:00 AM on Wednesday, October 2, 2019 to 12:00 AM on Friday, October 4, 2019. **Table 1** summarizes the counts that were collected.

Table 1: Collected Traffic Count Data (October 2019)

Count No.	Location	Description
1	Mt Vernon Hwy at Long Island Dr / Arlington Cemetery Driveway	TMC
2	Mt Vernon Hwy at Hammond Dr	TMC
3	Hammond Dr at Mitchell Rd	TMC
4	Mt Vernon Hwy, west of Long Island Dr	Bidirectional Tube
5	Long Island Dr, south of Mt Vernon Hwy	Bidirectional Tube
6	Arlington Cemetery Driveway, north of gate	Bidirectional Tube
7	Arlington Cemetery Driveway, NB entrance	Single Directional Tube
8	Arlington Cemetery Driveway, SB exit	Single Directional Tube
9	Arlington Cemetery Driveway, U-turn	Single Directional Tube
10	Mt Vernon Hwy, between Long Island Dr and Hammond Dr	Bidirectional Tube w/ Classification
11	Hammond Dr, east of Mt Vernon Hwy	Bidirectional Tube
12	Mt Vernon Hwy, northeast of Hammond Dr	Bidirectional Tube

Peak Hour Determination

The TMC collected at the intersection of Mount Vernon Highway at Long Island Drive as well as the 48-hour bidirectional tube counts collected at each leg of the intersection were reviewed when determining the peak hours. The morning peak hour was determined to be from 7:30 AM to 8:30 AM, and the evening peak hour was determined to be from 5:00 PM to 6:00 PM.

Proposed Forecasting Methodology

Traffic volumes for future conditions are proposed to be based on annual traffic growth calculated from the Atlanta Regional Commission's (ARC) Activity Based Travel Demand Model (ABM). Future-year volumes will be forecasted by applying the selected growth rate(s) to the 2019 count data collected by the City of Sandy Springs for three analysis years:

- Base (2023) Year
- Interim (2033) Year
- Design (2043) Year

Travel Demand Model Growth

Travel demand models developed as part of the City's current Transportation Master Plan (TMP) were built from the most recent version of the ARC's ABM, released in 2020 as part of the Atlanta Region's Plan. The Existing (2018) TMP travel demand model was developed from the ARC 2015 base model and then refined by reviewing the roadway network, daily traffic volumes (in comparison to the latest count

data available from the GDOT Traffic Analysis & Data Application [TADA] website), and accompanying socioeconomic data. The Future (2050) TMP travel demand model was developed from the Existing (2018) TMP travel demand model network, applying 2050 socioeconomic data and editing the model network to accurately reflect projects programmed within the study area, including roadway widening projects as well as the most recent express lane alignments included in the GDOT Major Mobility Investment Program (MMIP).

Daily volumes projected along each leg of the Long Island Drive and Hammond Drive intersections for both the 2018 and 2050 models were used to calculate annual growth rates for each intersection leg and for the study area as a whole. **Table 2** summarizes the projected daily volumes at each leg, as well as the calculated growth rates. Growth rates vary for each leg, with an overall growth rate of approximately 0.65 percent. Long Island Drive is projected to grow the most with an annual percent growth rate of 1.37 percent, while capacity along Mount Vernon Highway is anticipated to constrain growth along the corridor, with an annual percent growth rate of 0.37 percent observed northeast of the study area and 0.78 percent southwest of the study area.

Table 2: ARC ABM Volume Projections & Annual Percent Growth

Section	2018			2050			Growth Rate
	Inbound	Outbound	**Total**	Inbound	Outbound	**Total**	
Mt Vernon Hwy, west of Long Island Dr	6,106	5,899	**12,005**	7,995	7,298	**15,293**	**0.76%**
Long Island Dr, south of Mt Vernon Hwy	683	632	**1,315**	955	1,080	**2,035**	**1.37%**
Hammond Dr, east of Mt Vernon Hwy	4,218	4,274	**8,492**	5,127	5,767	**10,894**	**0.78%**
Mt Vernon Hwy, northeast of Hammond Dr	6,140	6,339	**12,479**	7,047	6,987	**14,034**	**0.37%**
Total	17,147	17,144	**34,291**	21,124	21,132	**42,256**	**0.65%**

Growth Rate Determination

Average daily traffic along Mount Vernon Highway through the study area ranges between 10,000 and 20,000 vehicles per day. Additionally, the City does not have any projects programmed or planned to widen the major street, Mount Vernon Highway, through the study area. Since projected growth rates observed along the travel demand model links vary and overall growth through the study area will be constrained by the capacity of Mount Vernon Highway, using the most constrained growth rate observed along Mount Vernon Highway, 0.37 percent, is recommended.

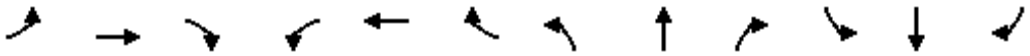
Growth Rate Application

For each analysis year, the recommended growth rate of 0.37 percent will be applied to the 2019 turning movement count data collected by the City of Sandy Springs for the appropriate number of years to develop future forecasted volumes. Developed volumes will then be balanced between the two intersections.

Attachment F:

Operational Analysis Results

No-Build Conditions



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1150	35	105	470	20	10	1	110	1	1	5
Future Volume (vph)	5	1150	35	105	470	20	10	1	110	1	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	40		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			40			25		
Link Speed (mph)		35			30			35			25	
Link Distance (ft)		1187			388			679			700	
Travel Time (s)		23.1			8.8			13.2			19.1	
Peak Hour Factor	0.97	0.97	0.97	0.81	0.81	0.81	0.74	0.74	0.74	0.58	0.58	0.58
Heavy Vehicles (%)	4%	4%	4%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	1150	35	105	470	20	10	1	110	1	1	5
Future Vol, veh/h	5	1150	35	105	470	20	10	1	110	1	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	40	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	81	81	81	74	74	74	58	58	58
Heavy Vehicles, %	4	4	4	6	6	6	2	2	2	2	2	2
Mvmt Flow	5	1186	36	130	580	25	14	1	149	2	2	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	605	0	0	1186	0	0	2072	2079	1204	2124	2049	593
Stage 1	-	-	-	-	-	-	1214	1214	-	853	853	-
Stage 2	-	-	-	-	-	-	858	865	-	1271	1196	-
Critical Hdwy	4.14	-	-	4.16	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.236	-	-	2.254	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	963	-	-	575	-	-	40	53	224	36	56	506
Stage 1	-	-	-	-	-	-	222	254	-	354	376	-
Stage 2	-	-	-	-	-	-	352	371	-	206	259	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	963	-	-	575	-	-	31	40	224	10	43	506
Mov Cap-2 Maneuver	-	-	-	-	-	-	31	40	-	10	43	-
Stage 1	-	-	-	-	-	-	218	250	-	348	291	-
Stage 2	-	-	-	-	-	-	266	287	-	68	255	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.3	64.5	91.9
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	31	215	963	-	-	575	-	-	53
HCM Lane V/C Ratio	0.436	0.698	0.005	-	-	0.225	-	-	0.228
HCM Control Delay (s)	191.4	53.1	8.8	0	-	13.1	-	-	91.9
HCM Lane LOS	F	F	A	A	-	B	-	-	F
HCM 95th %tile Q(veh)	1.4	4.5	0	-	-	0.9	-	-	0.8

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	625	635	5	340	255	5
Future Volume (vph)	625	635	5	340	255	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	100		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			45		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	35	
Link Distance (ft)	388			1708	1273	
Travel Time (s)	7.6			33.3	24.8	
Peak Hour Factor	0.94	0.94	0.88	0.88	0.83	0.83
Heavy Vehicles (%)	4%	4%	6%	6%	6%	6%
Shared Lane Traffic (%)						
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	6.0	6.0
Minimum Split (s)	40.9		24.9	24.9	23.1	23.1
Total Split (s)	75.0		75.0	75.0	35.0	35.0
Total Split (%)	68.2%		68.2%	68.2%	31.8%	31.8%
Yellow Time (s)	4.0		4.0	4.0	3.0	3.0
All-Red Time (s)	2.9		2.9	2.9	2.1	2.1
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9		6.9	6.9	5.1	5.1
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		Min	Min	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 103.3	
Natural Cycle: 140	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 2: Hammond Dr & Mt Vernon Hwy

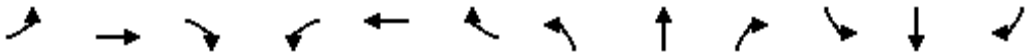
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	625	635	5	340	255	5
Future Volume (veh/h)	625	635	5	340	255	5
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1811	1811	1811	1811
Adj Flow Rate, veh/h	665	0	6	386	307	6
Peak Hour Factor	0.94	0.94	0.88	0.88	0.83	0.83
Percent Heavy Veh, %	4	4	6	6	6	6
Cap, veh/h	1073		379	1056	373	332
Arrive On Green	0.58	0.00	0.58	0.58	0.22	0.22
Sat Flow, veh/h	1841	0	746	1811	1725	1535
Grp Volume(v), veh/h	665	0	6	386	307	6
Grp Sat Flow(s),veh/h/ln	1841	0	746	1811	1725	1535
Q Serve(g_s), s	14.1	0.0	0.3	6.7	10.1	0.2
Cycle Q Clear(g_c), s	14.1	0.0	14.4	6.7	10.1	0.2
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1073		379	1056	373	332
V/C Ratio(X)	0.62		0.02	0.37	0.82	0.02
Avail Cap(c_a), veh/h	2098		795	2065	863	768
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.1	0.0	12.8	6.6	22.3	18.4
Incr Delay (d2), s/veh	1.3	0.0	0.0	0.5	4.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	0.1	2.0	4.2	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.4	0.0	12.9	7.1	26.9	18.4
LnGrp LOS	A		B	A	C	B
Approach Vol, veh/h	665	A		392	313	
Approach Delay, s/veh	9.4			7.1	26.7	
Approach LOS	A			A	C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		41.7		18.0		41.7
Change Period (Y+Rc), s		6.9		5.1		6.9
Max Green Setting (Gmax), s		68.1		29.9		68.1
Max Q Clear Time (g_c+I1), s		16.4		12.1		16.1
Green Ext Time (p_c), s		5.4		0.9		18.7

Intersection Summary	
HCM 6th Ctrl Delay	12.7
HCM 6th LOS	B

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	780	15	75	1040	5	45	1	175	10	1	5
Future Volume (vph)	1	780	15	75	1040	5	45	1	175	10	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	40		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			40			25		
Link Speed (mph)		35			30			35			25	
Link Distance (ft)		1187			388			679			700	
Travel Time (s)		23.1			8.8			13.2			19.1	
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.71	0.71	0.71	0.63	0.63	0.63
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	34.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	780	15	75	1040	5	45	1	175	10	1	5
Future Vol, veh/h	1	780	15	75	1040	5	45	1	175	10	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	40	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	92	92	92	71	71	71	63	63	63
Heavy Vehicles, %	3	3	3	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	821	16	82	1130	5	63	1	246	16	2	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1135	0	0	821	0	0	2133	2130	829	2244	2120	1133
Stage 1	-	-	-	-	-	-	831	831	-	1297	1297	-
Stage 2	-	-	-	-	-	-	1302	1299	-	947	823	-
Critical Hdwy	4.13	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.227	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	612	-	-	808	-	-	~ 36	50	370	30	50	247
Stage 1	-	-	-	-	-	-	364	384	-	199	232	-
Stage 2	-	-	-	-	-	-	198	232	-	314	388	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	612	-	-	808	-	-	~ 31	45	370	~ 9	45	247
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 31	45	-	~ 9	45	-
Stage 1	-	-	-	-	-	-	363	383	-	198	209	-
Stage 2	-	-	-	-	-	-	171	209	-	104	387	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.7	182.8	$ 938.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	31	355	612	-	-	808	-	-	14
HCM Lane V/C Ratio	2.045	0.698	0.002	-	-	0.101	-	-	1.814
HCM Control Delay (s)	$ 758.7	35.5	10.9	0	-	10	-	-	$ 938.7
HCM Lane LOS	F	E	B	A	-	A	-	-	F
HCM 95th %tile Q(veh)	7.3	5	0	-	-	0.3	-	-	3.9

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

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	565	400	10	520	600	15
Future Volume (vph)	565	400	10	520	600	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	100		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			45		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	35	
Link Distance (ft)	388			1708	1273	
Travel Time (s)	7.6			33.3	24.8	
Peak Hour Factor	0.93	0.93	0.92	0.92	0.97	0.97
Heavy Vehicles (%)	3%	3%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	6.0	6.0
Minimum Split (s)	40.9		24.9	24.9	23.1	23.1
Total Split (s)	75.0		75.0	75.0	35.0	35.0
Total Split (%)	68.2%		68.2%	68.2%	31.8%	31.8%
Yellow Time (s)	4.0		4.0	4.0	3.0	3.0
All-Red Time (s)	2.9		2.9	2.9	2.1	2.1
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9		6.9	6.9	5.1	5.1
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		Min	Min	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 108.6	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 2: Hammond Dr & Mt Vernon Hwy

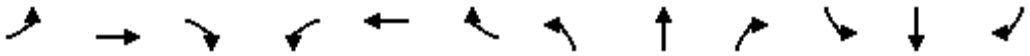
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	565	400	10	520	600	15
Future Volume (veh/h)	565	400	10	520	600	15
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	608	0	11	565	619	15
Peak Hour Factor	0.93	0.93	0.92	0.92	0.97	0.97
Percent Heavy Veh, %	3	3	2	2	2	2
Cap, veh/h	890		275	897	655	583
Arrive On Green	0.48	0.00	0.48	0.48	0.37	0.37
Sat Flow, veh/h	1856	0	813	1870	1781	1585
Grp Volume(v), veh/h	608	0	11	565	619	15
Grp Sat Flow(s),veh/h/ln	1856	0	813	1870	1781	1585
Q Serve(g_s), s	19.9	0.0	0.8	17.7	26.4	0.5
Cycle Q Clear(g_c), s	19.9	0.0	20.7	17.7	26.4	0.5
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	890		275	897	655	583
V/C Ratio(X)	0.68		0.04	0.63	0.95	0.03
Avail Cap(c_a), veh/h	1611		591	1624	679	604
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.8	0.0	23.8	15.2	24.0	15.8
Incr Delay (d2), s/veh	2.0	0.0	0.1	1.6	21.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	0.0	0.2	7.1	14.1	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.8	0.0	24.0	16.8	45.8	15.9
LnGrp LOS	B		C	B	D	B
Approach Vol, veh/h	608	A		576	634	
Approach Delay, s/veh	17.8			16.9	45.1	
Approach LOS	B			B	D	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		44.5		33.9		44.5
Change Period (Y+Rc), s		6.9		5.1		6.9
Max Green Setting (Gmax), s		68.1		29.9		68.1
Max Q Clear Time (g_c+I1), s		22.7		28.4		21.9
Green Ext Time (p_c), s		8.8		0.4		15.7

Intersection Summary	
HCM 6th Ctrl Delay	27.0
HCM 6th LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1195	35	110	485	20	10	1	115	1	1	5
Future Volume (vph)	5	1195	35	110	485	20	10	1	115	1	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	40		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			40			25		
Link Speed (mph)		35			30			35			25	
Link Distance (ft)		1187			388			679			700	
Travel Time (s)		23.1			8.8			13.2			19.1	
Peak Hour Factor	0.97	0.97	0.97	0.81	0.81	0.81	0.74	0.74	0.74	0.58	0.58	0.58
Heavy Vehicles (%)	4%	4%	4%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	7.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	1195	35	110	485	20	10	1	115	1	1	5
Future Vol, veh/h	5	1195	35	110	485	20	10	1	115	1	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	40	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	81	81	81	74	74	74	58	58	58
Heavy Vehicles, %	4	4	4	6	6	6	2	2	2	2	2	2
Mvmt Flow	5	1232	36	136	599	25	14	1	155	2	2	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	624	0	0	1232	0	0	2149	2156	1250	2204	2126	612
Stage 1	-	-	-	-	-	-	1260	1260	-	884	884	-
Stage 2	-	-	-	-	-	-	889	896	-	1320	1242	-
Critical Hdwy	4.14	-	-	4.16	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.236	-	-	2.254	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	948	-	-	552	-	-	35	48	211	32	50	493
Stage 1	-	-	-	-	-	-	209	242	-	340	363	-
Stage 2	-	-	-	-	-	-	338	359	-	193	247	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	948	-	-	552	-	-	27	36	211	7	37	493
Mov Cap-2 Maneuver	-	-	-	-	-	-	27	36	-	7	37	-
Stage 1	-	-	-	-	-	-	205	238	-	334	274	-
Stage 2	-	-	-	-	-	-	249	271	-	50	243	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.4	78.5	134.3
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	27	203	948	-	-	552	-	-	39
HCM Lane V/C Ratio	0.501	0.772	0.005	-	-	0.246	-	-	0.309
HCM Control Delay (s)	232.5	65.2	8.8	0	-	13.6	-	-	134.3
HCM Lane LOS	F	F	A	A	-	B	-	-	F
HCM 95th %tile Q(veh)	1.6	5.3	0	-	-	1	-	-	1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	650	660	5	350	265	5
Future Volume (vph)	650	660	5	350	265	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	100		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			45		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	35	
Link Distance (ft)	388			1708	1273	
Travel Time (s)	7.6			33.3	24.8	
Peak Hour Factor	0.94	0.94	0.88	0.88	0.83	0.83
Heavy Vehicles (%)	4%	4%	6%	6%	6%	6%
Shared Lane Traffic (%)						
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	6.0	6.0
Minimum Split (s)	40.9		24.9	24.9	23.1	23.1
Total Split (s)	75.0		75.0	75.0	35.0	35.0
Total Split (%)	68.2%		68.2%	68.2%	31.8%	31.8%
Yellow Time (s)	4.0		4.0	4.0	3.0	3.0
All-Red Time (s)	2.9		2.9	2.9	2.1	2.1
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9		6.9	6.9	5.1	5.1
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		Min	Min	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 104	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 2: Hammond Dr & Mt Vernon Hwy

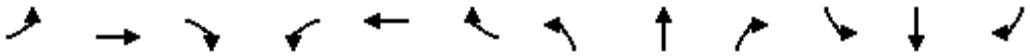
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	650	660	5	350	265	5
Future Volume (veh/h)	650	660	5	350	265	5
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1811	1811	1811	1811
Adj Flow Rate, veh/h	691	0	6	398	319	6
Peak Hour Factor	0.94	0.94	0.88	0.88	0.83	0.83
Percent Heavy Veh, %	4	4	6	6	6	6
Cap, veh/h	1084		363	1066	382	340
Arrive On Green	0.59	0.00	0.59	0.59	0.22	0.22
Sat Flow, veh/h	1841	0	729	1811	1725	1535
Grp Volume(v), veh/h	691	0	6	398	319	6
Grp Sat Flow(s),veh/h/ln	1841	0	729	1811	1725	1535
Q Serve(g_s), s	15.6	0.0	0.3	7.3	11.2	0.2
Cycle Q Clear(g_c), s	15.6	0.0	16.0	7.3	11.2	0.2
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1084		363	1066	382	340
V/C Ratio(X)	0.64		0.02	0.37	0.84	0.02
Avail Cap(c_a), veh/h	1982		718	1950	816	726
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.6	0.0	13.8	6.9	23.5	19.2
Incr Delay (d2), s/veh	1.3	0.0	0.0	0.5	4.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	0.0	0.1	2.2	4.7	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.9	0.0	13.9	7.3	28.4	19.3
LnGrp LOS	A		B	A	C	B
Approach Vol, veh/h	691	A		404	325	
Approach Delay, s/veh	9.9			7.4	28.2	
Approach LOS	A			A	C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		44.1		19.1		44.1
Change Period (Y+Rc), s		6.9		5.1		6.9
Max Green Setting (Gmax), s		68.1		29.9		68.1
Max Q Clear Time (g_c+I1), s		18.0		13.2		17.6
Green Ext Time (p_c), s		5.6		0.9		19.6

Intersection Summary		
HCM 6th Ctrl Delay		13.4
HCM 6th LOS		B

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	810	15	80	1070	5	45	1	180	10	1	5
Future Volume (vph)	1	810	15	80	1070	5	45	1	180	10	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	40		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			40			25		
Link Speed (mph)		35			30			35			25	
Link Distance (ft)		1187			388			679			700	
Travel Time (s)		23.1			8.8			13.2			19.1	
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.71	0.71	0.71	0.63	0.63	0.63
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	41.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	810	15	80	1070	5	45	1	180	10	1	5
Future Vol, veh/h	1	810	15	80	1070	5	45	1	180	10	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	40	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	92	92	92	71	71	71	63	63	63
Heavy Vehicles, %	3	3	3	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	853	16	87	1163	5	63	1	254	16	2	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1168	0	0	853	0	0	2208	2205	861	2323	2195	1166
Stage 1	-	-	-	-	-	-	863	863	-	1340	1340	-
Stage 2	-	-	-	-	-	-	1345	1342	-	983	855	-
Critical Hdwy	4.13	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.227	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	594	-	-	786	-	-	~ 32	44	355	26	45	236
Stage 1	-	-	-	-	-	-	349	372	-	188	221	-
Stage 2	-	-	-	-	-	-	187	221	-	299	375	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	594	-	-	786	-	-	~ 27	39	355	~ 7	40	236
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 27	39	-	~ 7	40	-
Stage 1	-	-	-	-	-	-	348	371	-	187	196	-
Stage 2	-	-	-	-	-	-	159	196	-	85	374	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.7	217.1	$ 1280
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	27	340	594	-	-	786	-	-	11
HCM Lane V/C Ratio	2.347	0.75	0.002	-	-	0.111	-	-	2.309
HCM Control Delay (s)	$ 924	41.4	11.1	0	-	10.1	-	-	$ 1280
HCM Lane LOS	F	E	B	A	-	B	-	-	F
HCM 95th %tile Q(veh)	7.7	5.8	0	-	-	0.4	-	-	4.1

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

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	585	415	10	535	620	15
Future Volume (vph)	585	415	10	535	620	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	100		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			45		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	35	
Link Distance (ft)	388			1708	1273	
Travel Time (s)	7.6			33.3	24.8	
Peak Hour Factor	0.93	0.93	0.92	0.92	0.97	0.97
Heavy Vehicles (%)	3%	3%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	6.0	6.0
Minimum Split (s)	40.9		24.9	24.9	23.1	23.1
Total Split (s)	75.0		75.0	75.0	35.0	35.0
Total Split (%)	68.2%		68.2%	68.2%	31.8%	31.8%
Yellow Time (s)	4.0		4.0	4.0	3.0	3.0
All-Red Time (s)	2.9		2.9	2.9	2.1	2.1
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9		6.9	6.9	5.1	5.1
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		Min	Min	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Natural Cycle: 130	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 2: Hammond Dr & Mt Vernon Hwy

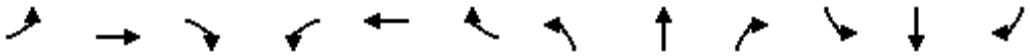
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	585	415	10	535	620	15
Future Volume (veh/h)	585	415	10	535	620	15
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	629	0	11	582	639	15
Peak Hour Factor	0.93	0.93	0.92	0.92	0.97	0.97
Percent Heavy Veh, %	3	3	2	2	2	2
Cap, veh/h	903		266	911	652	580
Arrive On Green	0.49	0.00	0.49	0.49	0.37	0.37
Sat Flow, veh/h	1856	0	797	1870	1781	1585
Grp Volume(v), veh/h	629	0	11	582	639	15
Grp Sat Flow(s),veh/h/ln	1856	0	797	1870	1781	1585
Q Serve(g_s), s	21.5	0.0	0.9	18.9	28.9	0.5
Cycle Q Clear(g_c), s	21.5	0.0	22.4	18.9	28.9	0.5
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	903		266	911	652	580
V/C Ratio(X)	0.70		0.04	0.64	0.98	0.03
Avail Cap(c_a), veh/h	1548		543	1560	652	580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.3	0.0	24.9	15.6	25.6	16.6
Incr Delay (d2), s/veh	2.1	0.0	0.1	1.6	30.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	0.0	0.2	7.6	16.7	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.3	0.0	25.1	17.2	55.6	16.6
LnGrp LOS	B		C	B	E	B
Approach Vol, veh/h	629	A		593	654	
Approach Delay, s/veh	18.3			17.4	54.7	
Approach LOS	B			B	D	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		46.7		35.0		46.7
Change Period (Y+Rc), s		6.9		5.1		6.9
Max Green Setting (Gmax), s		68.1		29.9		68.1
Max Q Clear Time (g_c+I1), s		24.4		30.9		23.5
Green Ext Time (p_c), s		9.1		0.0		16.3

Intersection Summary	
HCM 6th Ctrl Delay	30.7
HCM 6th LOS	C

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1240	40	115	505	20	10	1	120	1	1	5
Future Volume (vph)	5	1240	40	115	505	20	10	1	120	1	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	40		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			40			25		
Link Speed (mph)		35			30			35			25	
Link Distance (ft)		1187			388			679			700	
Travel Time (s)		23.1			8.8			13.2			19.1	
Peak Hour Factor	0.97	0.97	0.97	0.81	0.81	0.81	0.74	0.74	0.74	0.58	0.58	0.58
Heavy Vehicles (%)	4%	4%	4%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	10.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↰	↱		↰	↱		↕	
Traffic Vol, veh/h	5	1240	40	115	505	20	10	1	120	1	1	5
Future Vol, veh/h	5	1240	40	115	505	20	10	1	120	1	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	40	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	81	81	81	74	74	74	58	58	58
Heavy Vehicles, %	4	4	4	6	6	6	2	2	2	2	2	2
Mvmt Flow	5	1278	41	142	623	25	14	1	162	2	2	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	648	0	0	1278	0	0	2234	2241	1299	2290	2208	636
Stage 1	-	-	-	-	-	-	1309	1309	-	920	920	-
Stage 2	-	-	-	-	-	-	925	932	-	1370	1288	-
Critical Hdwy	4.14	-	-	4.16	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.236	-	-	2.254	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	928	-	-	530	-	-	30	42	197	28	44	478
Stage 1	-	-	-	-	-	-	196	229	-	325	350	-
Stage 2	-	-	-	-	-	-	323	345	-	181	234	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	928	-	-	530	-	-	22	30	197	4	32	478
Mov Cap-2 Maneuver	-	-	-	-	-	-	22	30	-	4	32	-
Stage 1	-	-	-	-	-	-	192	224	-	318	256	-
Stage 2	-	-	-	-	-	-	231	253	-	31	229	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.6	103.4	258.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	22	188	928	-	-	530	-	-	24
HCM Lane V/C Ratio	0.614	0.87	0.006	-	-	0.268	-	-	0.503
HCM Control Delay (s)	$ 311.5	86.2	8.9	0	-	14.3	-	-	258.7
HCM Lane LOS	F	F	A	A	-	B	-	-	F
HCM 95th %tile Q(veh)	1.8	6.4	0	-	-	1.1	-	-	1.5

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	675	685	5	365	275	5
Future Volume (vph)	675	685	5	365	275	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	100		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			45		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	35	
Link Distance (ft)	388			1708	1273	
Travel Time (s)	7.6			33.3	24.8	
Peak Hour Factor	0.94	0.94	0.88	0.88	0.83	0.83
Heavy Vehicles (%)	4%	4%	6%	6%	6%	6%
Shared Lane Traffic (%)						
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	6.0	6.0
Minimum Split (s)	40.9		24.9	24.9	23.1	23.1
Total Split (s)	75.0		75.0	75.0	35.0	35.0
Total Split (%)	68.2%		68.2%	68.2%	31.8%	31.8%
Yellow Time (s)	4.0		4.0	4.0	3.0	3.0
All-Red Time (s)	2.9		2.9	2.9	2.1	2.1
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9		6.9	6.9	5.1	5.1
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		Min	Min	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 104.7	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 2: Hammond Dr & Mt Vernon Hwy

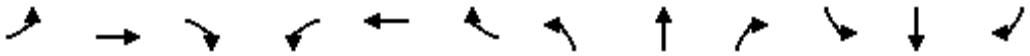
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	675	685	5	365	275	5
Future Volume (veh/h)	675	685	5	365	275	5
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1811	1811	1811	1811
Adj Flow Rate, veh/h	718	0	6	415	331	6
Peak Hour Factor	0.94	0.94	0.88	0.88	0.83	0.83
Percent Heavy Veh, %	4	4	6	6	6	6
Cap, veh/h	1094		345	1077	391	348
Arrive On Green	0.59	0.00	0.59	0.59	0.23	0.23
Sat Flow, veh/h	1841	0	710	1811	1725	1535
Grp Volume(v), veh/h	718	0	6	415	331	6
Grp Sat Flow(s),veh/h/ln	1841	0	710	1811	1725	1535
Q Serve(g_s), s	17.4	0.0	0.4	8.1	12.3	0.2
Cycle Q Clear(g_c), s	17.4	0.0	17.8	8.1	12.3	0.2
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1094		345	1077	391	348
V/C Ratio(X)	0.66		0.02	0.39	0.85	0.02
Avail Cap(c_a), veh/h	1871		645	1841	770	685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.0	0.0	14.9	7.1	24.8	20.1
Incr Delay (d2), s/veh	1.4	0.0	0.0	0.5	5.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	0.1	2.5	5.2	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.5	0.0	15.0	7.6	29.9	20.1
LnGrp LOS	B		B	A	C	C
Approach Vol, veh/h	718	A		421	337	
Approach Delay, s/veh	10.5			7.7	29.8	
Approach LOS	B			A	C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		46.7		20.3		46.7
Change Period (Y+Rc), s		6.9		5.1		6.9
Max Green Setting (Gmax), s		68.1		29.9		68.1
Max Q Clear Time (g_c+I1), s		19.8		14.3		19.4
Green Ext Time (p_c), s		5.9		0.9		20.5

Intersection Summary	
HCM 6th Ctrl Delay	14.1
HCM 6th LOS	B

Notes

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	840	15	80	1115	5	50	1	185	10	1	5
Future Volume (vph)	1	840	15	80	1115	5	50	1	185	10	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	40		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			40			25		
Link Speed (mph)		35			30			35			25	
Link Distance (ft)		1187			388			679			700	
Travel Time (s)		23.1			8.8			13.2			19.1	
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.71	0.71	0.71	0.63	0.63	0.63
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	57.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	840	15	80	1115	5	50	1	185	10	1	5
Future Vol, veh/h	1	840	15	80	1115	5	50	1	185	10	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	40	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	92	92	92	71	71	71	63	63	63
Heavy Vehicles, %	3	3	3	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	884	16	87	1212	5	70	1	261	16	2	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1217	0	0	884	0	0	2288	2285	892	2406	2275	1215
Stage 1	-	-	-	-	-	-	894	894	-	1389	1389	-
Stage 2	-	-	-	-	-	-	1394	1391	-	1017	886	-
Critical Hdwy	4.13	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.227	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	570	-	-	765	-	-	~ 28	40	341	23	40	221
Stage 1	-	-	-	-	-	-	336	360	-	176	210	-
Stage 2	-	-	-	-	-	-	175	209	-	287	363	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	570	-	-	765	-	-	~ 24	35	341	~ 5	35	221
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 24	35	-	~ 5	35	-
Stage 1	-	-	-	-	-	-	335	359	-	175	186	-
Stage 2	-	-	-	-	-	-	148	185	-	67	362	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.7	295.5	$ 1883.6
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	24	326	570	-	-	765	-	-	8
HCM Lane V/C Ratio	2.934	0.804	0.002	-	-	0.114	-	-	3.175
HCM Control Delay (s)	$ 1212.7	49	11.3	0	-	10.3	-	-	$ 1883.6
HCM Lane LOS	F	E	B	A	-	B	-	-	F
HCM 95th %tile Q(veh)	8.8	6.7	0	-	-	0.4	-	-	4.4

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

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	605	430	10	555	645	15
Future Volume (vph)	605	430	10	555	645	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	100		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			45		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	35	
Link Distance (ft)	388			1708	1273	
Travel Time (s)	7.6			33.3	24.8	
Peak Hour Factor	0.93	0.93	0.92	0.92	0.97	0.97
Heavy Vehicles (%)	3%	3%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	6.0	6.0
Minimum Split (s)	40.9		24.9	24.9	23.1	23.1
Total Split (s)	75.0		75.0	75.0	35.0	35.0
Total Split (%)	68.2%		68.2%	68.2%	31.8%	31.8%
Yellow Time (s)	4.0		4.0	4.0	3.0	3.0
All-Red Time (s)	2.9		2.9	2.9	2.1	2.1
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9		6.9	6.9	5.1	5.1
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		Min	Min	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Natural Cycle: 140	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 2: Hammond Dr & Mt Vernon Hwy

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	605	430	10	555	645	15
Future Volume (veh/h)	605	430	10	555	645	15
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	651	0	11	603	665	15
Peak Hour Factor	0.93	0.93	0.92	0.92	0.97	0.97
Percent Heavy Veh, %	3	3	2	2	2	2
Cap, veh/h	924		263	931	638	568
Arrive On Green	0.50	0.00	0.50	0.50	0.36	0.36
Sat Flow, veh/h	1856	0	781	1870	1781	1585
Grp Volume(v), veh/h	651	0	11	603	665	15
Grp Sat Flow(s),veh/h/ln	1856	0	781	1870	1781	1585
Q Serve(g_s), s	22.6	0.0	0.9	19.9	29.9	0.5
Cycle Q Clear(g_c), s	22.6	0.0	23.6	19.9	29.9	0.5
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	924		263	931	638	568
V/C Ratio(X)	0.70		0.04	0.65	1.04	0.03
Avail Cap(c_a), veh/h	1515		512	1527	638	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.2	0.0	25.3	15.5	26.8	17.3
Incr Delay (d2), s/veh	2.1	0.0	0.1	1.6	46.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	0.0	0.2	8.0	20.0	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.3	0.0	25.5	17.2	73.7	17.4
LnGrp LOS	B		C	B	F	B
Approach Vol, veh/h	651	A		614	680	
Approach Delay, s/veh	18.3			17.3	72.4	
Approach LOS	B			B	E	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		48.4		35.0		48.4
Change Period (Y+Rc), s		6.9		5.1		6.9
Max Green Setting (Gmax), s		68.1		29.9		68.1
Max Q Clear Time (g_c+I1), s		25.6		31.9		24.6
Green Ext Time (p_c), s		9.6		0.0		16.9

Intersection Summary	
HCM 6th Ctrl Delay	36.9
HCM 6th LOS	D

Notes

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

Roundabout Conditions

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	625	635	5	340	255	5
Future Volume (vph)	625	635	5	340	255	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		220	100		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			45		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	35	
Link Distance (ft)	309			1708	1273	
Travel Time (s)	6.0			33.3	24.8	
Peak Hour Factor	0.94	0.94	0.88	0.88	0.83	0.83
Heavy Vehicles (%)	4%	4%	6%	6%	6%	6%
Shared Lane Traffic (%)						
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	6.0	6.0
Minimum Split (s)	40.9	40.9	24.9	24.9	23.1	23.1
Total Split (s)	75.0	75.0	75.0	75.0	35.0	35.0
Total Split (%)	68.2%	68.2%	68.2%	68.2%	31.8%	31.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	3.0
All-Red Time (s)	2.9	2.9	2.9	2.9	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9	6.9	6.9	6.9	5.1	5.1
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Max	Max	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 103.3	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 2: Hammond Dr & Mt Vernon Hwy

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	625	635	5	340	255	5
Future Volume (veh/h)	625	635	5	340	255	5
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1811	1811	1811	1811
Adj Flow Rate, veh/h	665	0	6	386	307	6
Peak Hour Factor	0.94	0.94	0.88	0.88	0.83	0.83
Percent Heavy Veh, %	4	4	6	6	6	6
Cap, veh/h	1252		444	1232	345	307
Arrive On Green	0.68	0.00	0.68	0.68	0.20	0.20
Sat Flow, veh/h	1841	1560	746	1811	1725	1535
Grp Volume(v), veh/h	665	0	6	386	307	6
Grp Sat Flow(s),veh/h/ln	1841	1560	746	1811	1725	1535
Q Serve(g_s), s	18.1	0.0	0.4	8.7	17.3	0.3
Cycle Q Clear(g_c), s	18.1	0.0	18.5	8.7	17.3	0.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1252		444	1232	345	307
V/C Ratio(X)	0.53		0.01	0.31	0.89	0.02
Avail Cap(c_a), veh/h	1252		444	1232	515	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.0	0.0	12.7	6.5	39.0	32.2
Incr Delay (d2), s/veh	0.4	0.0	0.1	0.7	12.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.0	0.1	3.1	8.3	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.5	0.0	12.7	7.2	51.3	32.2
LnGrp LOS	A		B	A	D	C
Approach Vol, veh/h	665	A		392	313	
Approach Delay, s/veh	8.5			7.3	50.9	
Approach LOS	A			A	D	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		75.0		25.1		75.0
Change Period (Y+Rc), s		6.9		5.1		6.9
Max Green Setting (Gmax), s		68.1		29.9		68.1
Max Q Clear Time (g_c+I1), s		20.5		19.3		20.1
Green Ext Time (p_c), s		2.6		0.7		5.2

Intersection Summary	
HCM 6th Ctrl Delay	17.8
HCM 6th LOS	B

Notes

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

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	565	400	10	520	600	15
Future Volume (vph)	565	400	10	520	600	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		220	100		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			45		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	35	
Link Distance (ft)	309			1708	1273	
Travel Time (s)	6.0			33.3	24.8	
Peak Hour Factor	0.93	0.93	0.92	0.92	0.97	0.97
Heavy Vehicles (%)	3%	3%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	6.0	6.0
Minimum Split (s)	40.9	40.9	24.9	24.9	23.1	23.1
Total Split (s)	75.0	75.0	75.0	75.0	35.0	35.0
Total Split (%)	68.2%	68.2%	68.2%	68.2%	31.8%	31.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	3.0
All-Red Time (s)	2.9	2.9	2.9	2.9	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9	6.9	6.9	6.9	5.1	5.1
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Max	Max	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 2: Hammond Dr & Mt Vernon Hwy

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	565	400	10	520	600	15
Future Volume (veh/h)	565	400	10	520	600	15
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	608	0	11	565	619	15
Peak Hour Factor	0.93	0.93	0.92	0.92	0.97	0.97
Percent Heavy Veh, %	3	3	2	2	2	2
Cap, veh/h	1149		418	1158	484	431
Arrive On Green	0.62	0.00	0.62	0.62	0.27	0.27
Sat Flow, veh/h	1856	1572	813	1870	1781	1585
Grp Volume(v), veh/h	608	0	11	565	619	15
Grp Sat Flow(s),veh/h/ln	1856	1572	813	1870	1781	1585
Q Serve(g_s), s	20.4	0.0	0.9	18.1	29.9	0.8
Cycle Q Clear(g_c), s	20.4	0.0	21.3	18.1	29.9	0.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1149		418	1158	484	431
V/C Ratio(X)	0.53		0.03	0.49	1.28	0.03
Avail Cap(c_a), veh/h	1149		418	1158	484	431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.9	0.0	17.9	11.4	40.0	29.4
Incr Delay (d2), s/veh	0.5	0.0	0.1	1.5	140.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	0.0	0.2	7.4	31.6	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.3	0.0	18.0	12.9	180.6	29.5
LnGrp LOS	B		B	B	F	C
Approach Vol, veh/h	608	A		576	634	
Approach Delay, s/veh	12.3			13.0	177.0	
Approach LOS	B			B	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		75.0		35.0		75.0
Change Period (Y+Rc), s		6.9		5.1		6.9
Max Green Setting (Gmax), s		68.1		29.9		68.1
Max Q Clear Time (g_c+I1), s		23.3		31.9		22.4
Green Ext Time (p_c), s		4.2		0.0		4.5

Intersection Summary		
HCM 6th Ctrl Delay		70.0
HCM 6th LOS		E

Notes

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

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	650	660	5	350	265	5
Future Volume (vph)	650	660	5	350	265	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		220	100		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			45		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	35	
Link Distance (ft)	309			1708	1273	
Travel Time (s)	6.0			33.3	24.8	
Peak Hour Factor	0.94	0.94	0.88	0.88	0.83	0.83
Heavy Vehicles (%)	4%	4%	6%	6%	6%	6%
Shared Lane Traffic (%)						
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	6.0	6.0
Minimum Split (s)	40.9	40.9	24.9	24.9	23.1	23.1
Total Split (s)	75.0	75.0	75.0	75.0	35.0	35.0
Total Split (%)	68.2%	68.2%	68.2%	68.2%	31.8%	31.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	3.0
All-Red Time (s)	2.9	2.9	2.9	2.9	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9	6.9	6.9	6.9	5.1	5.1
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Max	Max	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 104	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 2: Hammond Dr & Mt Vernon Hwy

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	650	660	5	350	265	5
Future Volume (veh/h)	650	660	5	350	265	5
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1811	1811	1811	1811
Adj Flow Rate, veh/h	691	0	6	398	319	6
Peak Hour Factor	0.94	0.94	0.88	0.88	0.83	0.83
Percent Heavy Veh, %	4	4	6	6	6	6
Cap, veh/h	1241		420	1221	357	317
Arrive On Green	0.67	0.00	0.67	0.67	0.21	0.21
Sat Flow, veh/h	1841	1560	729	1811	1725	1535
Grp Volume(v), veh/h	691	0	6	398	319	6
Grp Sat Flow(s),veh/h/ln	1841	1560	729	1811	1725	1535
Q Serve(g_s), s	19.8	0.0	0.4	9.3	18.2	0.3
Cycle Q Clear(g_c), s	19.8	0.0	20.2	9.3	18.2	0.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1241		420	1221	357	317
V/C Ratio(X)	0.56		0.01	0.33	0.89	0.02
Avail Cap(c_a), veh/h	1241		420	1221	511	454
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.6	0.0	13.8	6.9	39.0	31.9
Incr Delay (d2), s/veh	0.6	0.0	0.1	0.7	13.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	0.0	0.1	3.3	8.9	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.1	0.0	13.9	7.6	52.7	31.9
LnGrp LOS	A		B	A	D	C
Approach Vol, veh/h	691	A		404	325	
Approach Delay, s/veh	9.1			7.7	52.3	
Approach LOS	A			A	D	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		75.0		26.0		75.0
Change Period (Y+Rc), s		6.9		5.1		6.9
Max Green Setting (Gmax), s		68.1		29.9		68.1
Max Q Clear Time (g_c+I1), s		22.2		20.2		21.8
Green Ext Time (p_c), s		2.7		0.7		5.5

Intersection Summary	
HCM 6th Ctrl Delay	18.6
HCM 6th LOS	B

Notes

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

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	585	415	10	535	620	15
Future Volume (vph)	585	415	10	535	620	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		220	100		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			45		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	35	
Link Distance (ft)	309			1708	1273	
Travel Time (s)	6.0			33.3	24.8	
Peak Hour Factor	0.93	0.93	0.92	0.92	0.97	0.97
Heavy Vehicles (%)	3%	3%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	6.0	6.0
Minimum Split (s)	40.9	40.9	24.9	24.9	23.1	23.1
Total Split (s)	75.0	75.0	75.0	75.0	35.0	35.0
Total Split (%)	68.2%	68.2%	68.2%	68.2%	31.8%	31.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	3.0
All-Red Time (s)	2.9	2.9	2.9	2.9	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9	6.9	6.9	6.9	5.1	5.1
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Max	Max	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 2: Hammond Dr & Mt Vernon Hwy

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	585	415	10	535	620	15
Future Volume (veh/h)	585	415	10	535	620	15
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	629	0	11	582	639	15
Peak Hour Factor	0.93	0.93	0.92	0.92	0.97	0.97
Percent Heavy Veh, %	3	3	2	2	2	2
Cap, veh/h	1149		403	1158	484	431
Arrive On Green	0.62	0.00	0.62	0.62	0.27	0.27
Sat Flow, veh/h	1856	1572	797	1870	1781	1585
Grp Volume(v), veh/h	629	0	11	582	639	15
Grp Sat Flow(s),veh/h/ln	1856	1572	797	1870	1781	1585
Q Serve(g_s), s	21.5	0.0	0.9	18.9	29.9	0.8
Cycle Q Clear(g_c), s	21.5	0.0	22.4	18.9	29.9	0.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1149		403	1158	484	431
V/C Ratio(X)	0.55		0.03	0.50	1.32	0.03
Avail Cap(c_a), veh/h	1149		403	1158	484	431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.1	0.0	18.5	11.6	40.0	29.4
Incr Delay (d2), s/veh	0.5	0.0	0.1	1.6	157.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	0.0	0.2	7.7	34.0	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.6	0.0	18.6	13.1	197.9	29.5
LnGrp LOS	B		B	B	F	C
Approach Vol, veh/h	629	A		593	654	
Approach Delay, s/veh	12.6			13.2	194.1	
Approach LOS	B			B	F	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	75.0		35.0		75.0
Change Period (Y+Rc), s	6.9		5.1		6.9
Max Green Setting (Gmax), s	68.1		29.9		68.1
Max Q Clear Time (g_c+I1), s	24.4		31.9		23.5
Green Ext Time (p_c), s	4.3		0.0		4.8

Intersection Summary	
HCM 6th Ctrl Delay	76.1
HCM 6th LOS	E

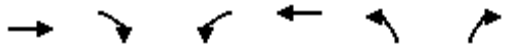
Notes

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

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	675	685	5	365	275	5
Future Volume (vph)	675	685	5	365	275	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		220	100		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			45		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	35	
Link Distance (ft)	309			1708	1273	
Travel Time (s)	6.0			33.3	24.8	
Peak Hour Factor	0.94	0.94	0.88	0.88	0.83	0.83
Heavy Vehicles (%)	4%	4%	6%	6%	6%	6%
Shared Lane Traffic (%)						
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	6.0	6.0
Minimum Split (s)	40.9	40.9	24.9	24.9	23.1	23.1
Total Split (s)	75.0	75.0	75.0	75.0	35.0	35.0
Total Split (%)	68.2%	68.2%	68.2%	68.2%	31.8%	31.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	3.0
All-Red Time (s)	2.9	2.9	2.9	2.9	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9	6.9	6.9	6.9	5.1	5.1
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Max	Max	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 104.7	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 2: Hammond Dr & Mt Vernon Hwy



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	675	685	5	365	275	5
Future Volume (veh/h)	675	685	5	365	275	5
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1811	1811	1811	1811
Adj Flow Rate, veh/h	718	0	6	415	331	6
Peak Hour Factor	0.94	0.94	0.88	0.88	0.83	0.83
Percent Heavy Veh, %	4	4	6	6	6	6
Cap, veh/h	1231		395	1211	368	327
Arrive On Green	0.67	0.00	0.67	0.67	0.21	0.21
Sat Flow, veh/h	1841	1560	710	1811	1725	1535
Grp Volume(v), veh/h	718	0	6	415	331	6
Grp Sat Flow(s),veh/h/ln	1841	1560	710	1811	1725	1535
Q Serve(g_s), s	21.6	0.0	0.5	10.0	19.0	0.3
Cycle Q Clear(g_c), s	21.6	0.0	22.0	10.0	19.0	0.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1231		395	1211	368	327
V/C Ratio(X)	0.58		0.02	0.34	0.90	0.02
Avail Cap(c_a), veh/h	1231		395	1211	507	451
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.2	0.0	15.1	7.2	39.0	31.6
Incr Delay (d2), s/veh	0.7	0.0	0.1	0.8	15.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	0.0	0.1	3.6	9.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.9	0.0	15.2	8.0	54.0	31.7
LnGrp LOS	A		B	A	D	C
Approach Vol, veh/h	718	A		421	337	
Approach Delay, s/veh	9.9			8.1	53.6	
Approach LOS	A			A	D	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		75.0		26.8		75.0
Change Period (Y+Rc), s		6.9		5.1		6.9
Max Green Setting (Gmax), s		68.1		29.9		68.1
Max Q Clear Time (g_c+I1), s		24.0		21.0		23.6
Green Ext Time (p_c), s		2.8		0.7		5.8

Intersection Summary	
HCM 6th Ctrl Delay	19.4
HCM 6th LOS	B

Notes

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

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	605	430	10	555	645	15
Future Volume (vph)	605	430	10	555	645	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		220	100		0	0
Storage Lanes		1	1		1	1
Taper Length (ft)			45		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	35	
Link Distance (ft)	309			1708	1273	
Travel Time (s)	6.0			33.3	24.8	
Peak Hour Factor	0.93	0.93	0.92	0.92	0.97	0.97
Heavy Vehicles (%)	3%	3%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Turn Type	NA	Perm	Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases		6	2			4
Detector Phase	6	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	6.0	6.0
Minimum Split (s)	40.9	40.9	24.9	24.9	23.1	23.1
Total Split (s)	75.0	75.0	75.0	75.0	35.0	35.0
Total Split (%)	68.2%	68.2%	68.2%	68.2%	31.8%	31.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	3.0
All-Red Time (s)	2.9	2.9	2.9	2.9	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9	6.9	6.9	6.9	5.1	5.1
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	Max	Max	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	

Splits and Phases: 2: Hammond Dr & Mt Vernon Hwy

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	605	430	10	555	645	15
Future Volume (veh/h)	605	430	10	555	645	15
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	651	0	11	603	665	15
Peak Hour Factor	0.93	0.93	0.92	0.92	0.97	0.97
Percent Heavy Veh, %	3	3	2	2	2	2
Cap, veh/h	1149		388	1158	484	431
Arrive On Green	0.62	0.00	0.62	0.62	0.27	0.27
Sat Flow, veh/h	1856	1572	781	1870	1781	1585
Grp Volume(v), veh/h	651	0	11	603	665	15
Grp Sat Flow(s),veh/h/ln	1856	1572	781	1870	1781	1585
Q Serve(g_s), s	22.6	0.0	0.9	19.9	29.9	0.8
Cycle Q Clear(g_c), s	22.6	0.0	23.6	19.9	29.9	0.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1149		388	1158	484	431
V/C Ratio(X)	0.57		0.03	0.52	1.37	0.03
Avail Cap(c_a), veh/h	1149		388	1158	484	431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.3	0.0	19.2	11.8	40.0	29.4
Incr Delay (d2), s/veh	0.7	0.0	0.1	1.7	180.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	0.0	0.2	8.1	37.0	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.9	0.0	19.3	13.5	220.8	29.5
LnGrp LOS	B		B	B	F	C
Approach Vol, veh/h	651	A		614	680	
Approach Delay, s/veh	12.9			13.6	216.6	
Approach LOS	B			B	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		75.0		35.0		75.0
Change Period (Y+Rc), s		6.9		5.1		6.9
Max Green Setting (Gmax), s		68.1		29.9		68.1
Max Q Clear Time (g_c+I1), s		25.6		31.9		24.6
Green Ext Time (p_c), s		4.5		0.0		5.0

Intersection Summary		
HCM 6th Ctrl Delay		84.3
HCM 6th LOS		F

Notes

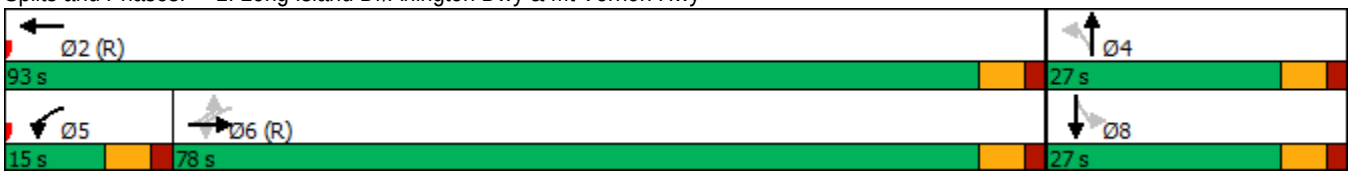
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

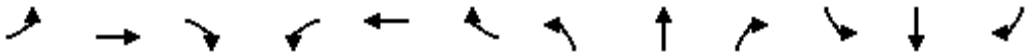
Signalized Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1150	35	105	470	20	10	1	110	1	1	5
Future Volume (vph)	5	1150	35	105	470	20	10	1	110	1	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	40		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			40			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			25	
Link Distance (ft)		1187			388			679			700	
Travel Time (s)		23.1			7.6			13.2			19.1	
Peak Hour Factor	0.97	0.97	0.97	0.81	0.81	0.81	0.74	0.74	0.74	0.58	0.58	0.58
Heavy Vehicles (%)	4%	4%	4%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		D.P+P	NA		Perm	NA		Perm	NA	
Protected Phases		6		5	2			4			8	
Permitted Phases	6			6			4			8		
Detector Phase	6	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	27.0	27.0		15.0	27.0		27.0	27.0		27.0	27.0	
Total Split (s)	78.0	78.0		15.0	93.0		27.0	27.0		27.0	27.0	
Total Split (%)	65.0%	65.0%		12.5%	77.5%		22.5%	22.5%		22.5%	22.5%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0		6.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	C-Max	C-Max		None	C-Max		None	None		None	None	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 1 (1%), Referenced to phase 2:WBT and 6:EBWB, Start of 1st Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Long Island Dr/Arlington Dwy & Mt Vernon Hwy





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1150	35	105	470	20	10	1	110	1	1	5
Future Volume (veh/h)	5	1150	35	105	470	20	10	1	110	1	1	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1811	1811	1811	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	5	1186	0	130	580	25	14	1	149	2	2	9
Peak Hour Factor	0.97	0.97	0.97	0.81	0.81	0.81	0.74	0.74	0.74	0.58	0.58	0.58
Percent Heavy Veh, %	4	4	4	6	6	6	2	2	2	2	2	2
Cap, veh/h	32	1278		250	1357	58	154	1	178	39	37	93
Arrive On Green	0.70	0.70	0.00	0.08	1.00	1.00	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	2	1836	0	1725	1723	74	1404	11	1576	43	324	826
Grp Volume(v), veh/h	1191	0	0	130	0	605	14	0	150	13	0	0
Grp Sat Flow(s),veh/h/ln	1838	0	0	1725	0	1798	1404	0	1587	1194	0	0
Q Serve(g_s), s	5.7	0.0	0.0	2.7	0.0	0.0	0.0	0.0	11.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	67.0	0.0	0.0	2.7	0.0	0.0	2.1	0.0	11.1	11.1	0.0	0.0
Prop In Lane	0.00		0.00	1.00		0.04	1.00		0.99	0.15		0.69
Lane Grp Cap(c), veh/h	1309	0		250	0	1415	154	0	179	169	0	0
V/C Ratio(X)	0.91	0.00		0.52	0.00	0.43	0.09	0.00	0.84	0.08	0.00	0.00
Avail Cap(c_a), veh/h	1309	0		309	0	1415	241	0	278	266	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.76	0.00	0.76	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.7	0.0	0.0	7.9	0.0	0.0	48.2	0.0	52.1	47.6	0.0	0.0
Incr Delay (d2), s/veh	10.9	0.0	0.0	1.3	0.0	0.7	0.3	0.0	12.4	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.7	0.0	0.0	0.8	0.0	0.3	0.4	0.0	5.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.6	0.0	0.0	9.2	0.0	0.7	48.4	0.0	64.5	47.8	0.0	0.0
LnGrp LOS	C	A		A	A	A	D	A	E	D	A	A
Approach Vol, veh/h		1191	A		735			164			13	
Approach Delay, s/veh		26.6			2.2			63.1			47.8	
Approach LOS		C			A			E			D	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		100.5		19.5	10.9	89.5		19.5				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s		87.0		21.0	9.0	72.0		21.0				
Max Q Clear Time (g_c+I1), s		2.0		13.1	4.7	69.0		13.1				
Green Ext Time (p_c), s		4.6		0.5	0.1	2.3		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		21.1
HCM 6th LOS		C

Notes

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

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	625	635	5	340	255	5
Future Volume (vph)	625	635	5	340	255	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	100		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			45		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	35	
Link Distance (ft)	388			1708	1273	
Travel Time (s)	7.6			33.3	24.8	
Peak Hour Factor	0.94	0.94	0.88	0.88	0.83	0.83
Heavy Vehicles (%)	4%	4%	6%	6%	6%	6%
Shared Lane Traffic (%)						
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	6.0	6.0
Minimum Split (s)	40.9		24.9	24.9	25.1	25.1
Total Split (s)	93.0		93.0	93.0	27.0	27.0
Total Split (%)	77.5%		77.5%	77.5%	22.5%	22.5%
Yellow Time (s)	4.0		4.0	4.0	3.0	3.0
All-Red Time (s)	2.9		2.9	2.9	2.1	2.1
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9		6.9	6.9	5.1	5.1
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		C-Min	C-Min	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 8 (7%), Referenced to phase 2:WBTL, Start of 1st Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Hammond Dr & Mt Vernon Hwy

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	625	635	5	340	255	5
Future Volume (veh/h)	625	635	5	340	255	5
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1811	1811	1811	1811
Adj Flow Rate, veh/h	665	0	6	386	307	6
Peak Hour Factor	0.94	0.94	0.88	0.88	0.83	0.83
Percent Heavy Veh, %	4	4	6	6	6	6
Cap, veh/h	1321		476	1299	315	280
Arrive On Green	0.72	0.00	0.72	0.72	0.18	0.18
Sat Flow, veh/h	1841	0	746	1811	1725	1535
Grp Volume(v), veh/h	665	0	6	386	307	6
Grp Sat Flow(s),veh/h/ln	1841	0	746	1811	1725	1535
Q Serve(g_s), s	19.2	0.0	0.4	9.2	21.2	0.4
Cycle Q Clear(g_c), s	19.2	0.0	19.6	9.2	21.2	0.4
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1321		476	1299	315	280
V/C Ratio(X)	0.50		0.01	0.30	0.98	0.02
Avail Cap(c_a), veh/h	1321		476	1299	315	280
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.22	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.5	0.0	11.8	6.1	48.8	40.3
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.6	43.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.0	0.1	3.3	12.8	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.6	0.0	11.9	6.7	92.6	40.3
LnGrp LOS	A		B	A	F	D
Approach Vol, veh/h	665	A		392	313	
Approach Delay, s/veh	7.6			6.7	91.6	
Approach LOS	A			A	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		93.0		27.0		93.0
Change Period (Y+Rc), s		6.9		5.1		6.9
Max Green Setting (Gmax), s		86.1		21.9		86.1
Max Q Clear Time (g_c+I1), s		21.6		23.2		21.2
Green Ext Time (p_c), s		5.5		0.0		20.1

Intersection Summary	
HCM 6th Ctrl Delay	26.6
HCM 6th LOS	C

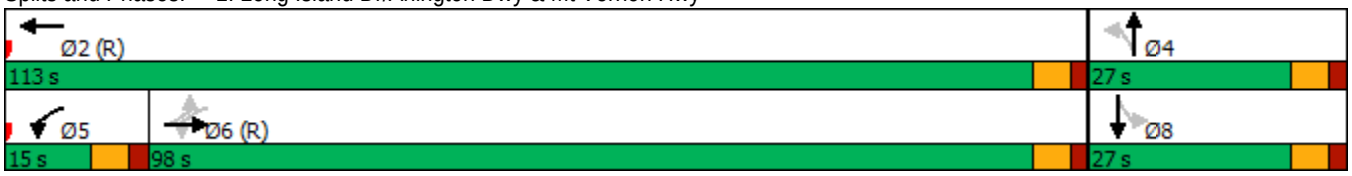
Notes

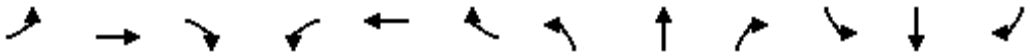
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	780	15	75	1040	5	45	1	175	10	1	5
Future Volume (vph)	1	780	15	75	1040	5	45	1	175	10	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	40		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			40			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1187			388			679			700	
Travel Time (s)		23.1			7.6			18.5			19.1	
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.71	0.71	0.71	0.63	0.63	0.63
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		D.P+P	NA		Perm	NA		Perm	NA	
Protected Phases		6		5	2			4			8	
Permitted Phases	6			6			4			8		
Detector Phase	6	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	27.0	27.0		15.0	27.0		27.0	27.0		27.0	27.0	
Total Split (s)	98.0	98.0		15.0	113.0		27.0	27.0		27.0	27.0	
Total Split (%)	70.0%	70.0%		10.7%	80.7%		19.3%	19.3%		19.3%	19.3%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0		6.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	C-Max	C-Max		None	C-Max		Max	Max		Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 14 (10%), Referenced to phase 2:WBT and 6:EBWB, Start of 1st Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Long Island Dr/Arlington Dwy & Mt Vernon Hwy





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	780	15	75	1040	5	45	1	175	10	1	5
Future Volume (veh/h)	1	780	15	75	1040	5	45	1	175	10	1	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	821	0	82	1130	5	63	1	246	16	2	8
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.71	0.71	0.71	0.63	0.63	0.63
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	2	2	2
Cap, veh/h	26	1274		453	1422	6	225	1	237	42	11	5
Arrive On Green	0.69	0.69	0.00	0.07	1.00	1.00	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	0	1854	0	1781	1861	8	1405	6	1580	0	73	32
Grp Volume(v), veh/h	822	0	0	82	0	1135	63	0	247	26	0	0
Grp Sat Flow(s),veh/h/ln	1855	0	0	1781	0	1869	1405	0	1586	105	0	0
Q Serve(g_s), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	34.8	0.0	0.0	1.9	0.0	0.0	6.9	0.0	21.0	21.0	0.0	0.0
Prop In Lane	0.00		0.00	1.00		0.00	1.00		1.00	0.62		0.31
Lane Grp Cap(c), veh/h	1300	0		453	0	1428	225	0	238	57	0	0
V/C Ratio(X)	0.63	0.00		0.18	0.00	0.79	0.28	0.00	1.04	0.45	0.00	0.00
Avail Cap(c_a), veh/h	1300	0		506	0	1428	225	0	238	57	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.53	0.00	0.53	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.3	0.0	0.0	5.5	0.0	0.0	53.5	0.0	59.5	57.6	0.0	0.0
Incr Delay (d2), s/veh	2.3	0.0	0.0	0.1	0.0	2.5	3.1	0.0	68.7	23.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.2	0.0	0.0	0.6	0.0	1.0	2.2	0.0	13.0	1.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.6	0.0	0.0	5.6	0.0	2.5	56.6	0.0	128.2	81.3	0.0	0.0
LnGrp LOS	B	A		A	A	A	E	A	F	F	A	A
Approach Vol, veh/h		822	A		1217			310			26	
Approach Delay, s/veh		14.6			2.7			113.6			81.3	
Approach LOS		B			A			F			F	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		113.0		27.0	10.8	102.2		27.0				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s		107.0		21.0	9.0	92.0		21.0				
Max Q Clear Time (g_c+I1), s		2.0		23.0	3.9	36.8		23.0				
Green Ext Time (p_c), s		15.5		0.0	0.1	7.4		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		22.2
HCM 6th LOS		C

Notes

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

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	565	400	10	520	600	15
Future Volume (vph)	565	400	10	520	600	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	100		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			45		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	35	
Link Distance (ft)	388			1708	1273	
Travel Time (s)	7.6			33.3	24.8	
Peak Hour Factor	0.93	0.93	0.92	0.92	0.97	0.97
Heavy Vehicles (%)	3%	3%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	6.0	6.0
Minimum Split (s)	40.9		24.9	24.9	23.1	23.1
Total Split (s)	86.0		86.0	86.0	54.0	54.0
Total Split (%)	61.4%		61.4%	61.4%	38.6%	38.6%
Yellow Time (s)	4.0		4.0	4.0	3.0	3.0
All-Red Time (s)	2.9		2.9	2.9	2.1	2.1
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9		6.9	6.9	5.1	5.1
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max		C-Min	C-Min	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 34 (24%), Referenced to phase 2:WBTL and 6:EBT, Start of 1st Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Hammond Dr & Mt Vernon Hwy

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	565	400	10	520	600	15
Future Volume (veh/h)	565	400	10	520	600	15
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	608	0	11	565	619	15
Peak Hour Factor	0.93	0.93	0.92	0.92	0.97	0.97
Percent Heavy Veh, %	3	3	2	2	2	2
Cap, veh/h	1048		338	1057	622	554
Arrive On Green	0.56	0.00	0.56	0.56	0.35	0.35
Sat Flow, veh/h	1856	0	813	1870	1781	1585
Grp Volume(v), veh/h	608	0	11	565	619	15
Grp Sat Flow(s),veh/h/ln	1856	0	813	1870	1781	1585
Q Serve(g_s), s	29.7	0.0	1.2	26.4	48.5	0.9
Cycle Q Clear(g_c), s	29.7	0.0	30.9	26.4	48.5	0.9
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1048		338	1057	622	554
V/C Ratio(X)	0.58		0.03	0.53	0.99	0.03
Avail Cap(c_a), veh/h	1048		338	1057	622	554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.68	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.7	0.0	29.7	19.0	45.4	29.9
Incr Delay (d2), s/veh	1.6	0.0	0.2	1.9	34.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.9	0.0	0.3	11.7	27.0	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.3	0.0	29.9	20.9	80.1	29.9
LnGrp LOS	C		C	C	F	C
Approach Vol, veh/h	608	A		576	634	
Approach Delay, s/veh	21.3			21.1	79.0	
Approach LOS	C			C	E	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		86.0		54.0		86.0
Change Period (Y+Rc), s		6.9		5.1		6.9
Max Green Setting (Gmax), s		79.1		48.9		79.1
Max Q Clear Time (g_c+I1), s		32.9		50.5		31.7
Green Ext Time (p_c), s		8.9		0.0		15.9

Intersection Summary	
HCM 6th Ctrl Delay	41.3
HCM 6th LOS	D

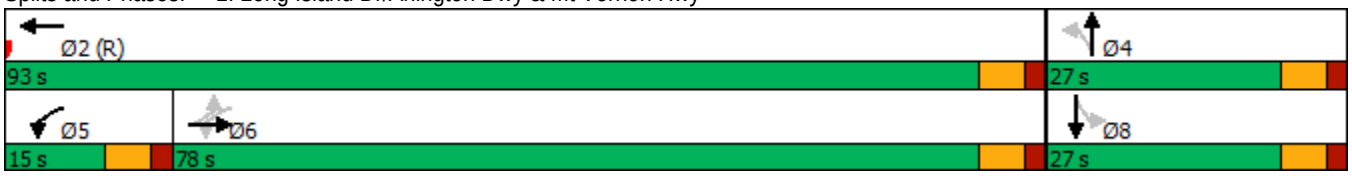
Notes

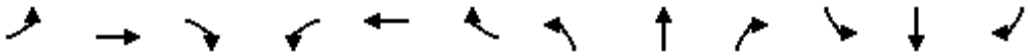
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1195	35	110	485	20	10	1	115	1	1	5
Future Volume (vph)	5	1195	35	110	485	20	10	1	115	1	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	40		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			40			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			25	
Link Distance (ft)		1187			388			679			700	
Travel Time (s)		23.1			7.6			13.2			19.1	
Peak Hour Factor	0.97	0.97	0.97	0.81	0.81	0.81	0.74	0.74	0.74	0.58	0.58	0.58
Heavy Vehicles (%)	4%	4%	4%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		D.P+P	NA		Perm	NA		Perm	NA	
Protected Phases		6		5	2			4			8	
Permitted Phases	6			6			4			8		
Detector Phase	6	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	27.0	27.0		15.0	27.0		27.0	27.0		27.0	27.0	
Total Split (s)	78.0	78.0		15.0	93.0		27.0	27.0		27.0	27.0	
Total Split (%)	65.0%	65.0%		12.5%	77.5%		22.5%	22.5%		22.5%	22.5%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0		6.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	Max	Max		None	C-Max		Max	Max		Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 106 (88%), Referenced to phase 2:WBT, Start of 1st Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Long Island Dr/Arlington Dwy & Mt Vernon Hwy





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1195	35	110	485	20	10	1	115	1	1	5
Future Volume (veh/h)	5	1195	35	110	485	20	10	1	115	1	1	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1811	1811	1811	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	5	1232	0	136	599	25	14	1	155	2	2	9
Peak Hour Factor	0.97	0.97	0.97	0.81	0.81	0.81	0.74	0.74	0.74	0.58	0.58	0.58
Percent Heavy Veh, %	4	4	4	6	6	6	2	2	2	2	2	2
Cap, veh/h	31	1155		196	1251	52	245	2	276	55	59	179
Arrive On Green	0.63	0.63	0.00	0.09	1.00	1.00	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	2	1836	0	1725	1726	72	1404	10	1576	116	338	1021
Grp Volume(v), veh/h	1237	0	0	136	0	624	14	0	156	13	0	0
Grp Sat Flow(s),veh/h/ln	1838	0	0	1725	0	1798	1404	0	1587	1475	0	0
Q Serve(g_s), s	20.4	0.0	0.0	3.5	0.0	0.0	0.0	0.0	10.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	75.5	0.0	0.0	3.5	0.0	0.0	1.9	0.0	10.8	10.8	0.0	0.0
Prop In Lane	0.00		0.00	1.00		0.04	1.00		0.99	0.15		0.69
Lane Grp Cap(c), veh/h	1186	0		196	0	1304	245	0	278	293	0	0
V/C Ratio(X)	1.04	0.00		0.69	0.00	0.48	0.06	0.00	0.56	0.04	0.00	0.00
Avail Cap(c_a), veh/h	1186	0		246	0	1304	245	0	278	293	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.74	0.00	0.74	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.2	0.0	0.0	13.5	0.0	0.0	41.6	0.0	45.3	41.2	0.0	0.0
Incr Delay (d2), s/veh	38.0	0.0	0.0	4.5	0.0	0.9	0.4	0.0	8.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	43.5	0.0	0.0	1.6	0.0	0.3	0.4	0.0	4.8	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.1	0.0	0.0	18.0	0.0	0.9	42.1	0.0	53.3	41.5	0.0	0.0
LnGrp LOS	F	A		B	A	A	D	A	D	D	A	A
Approach Vol, veh/h		1237	A		760			170			13	
Approach Delay, s/veh		61.1			4.0			52.4			41.5	
Approach LOS		E			A			D			D	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		93.0		27.0	11.5	81.5		27.0				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s		87.0		21.0	9.0	72.0		21.0				
Max Q Clear Time (g_c+I1), s		2.0		12.8	5.5	77.5		12.8				
Green Ext Time (p_c), s		4.8		0.5	0.1	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	40.4	
HCM 6th LOS	D	

Notes

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

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	650	660	5	350	265	5
Future Volume (vph)	650	660	5	350	265	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	100		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			45		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	35	
Link Distance (ft)	388			1708	1273	
Travel Time (s)	7.6			33.3	24.8	
Peak Hour Factor	0.94	0.94	0.88	0.88	0.83	0.83
Heavy Vehicles (%)	4%	4%	6%	6%	6%	6%
Shared Lane Traffic (%)						
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	6.0	6.0
Minimum Split (s)	40.9		24.9	24.9	23.1	23.1
Total Split (s)	93.0		93.0	93.0	27.0	27.0
Total Split (%)	77.5%		77.5%	77.5%	22.5%	22.5%
Yellow Time (s)	4.0		4.0	4.0	3.0	3.0
All-Red Time (s)	2.9		2.9	2.9	2.1	2.1
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9		6.9	6.9	5.1	5.1
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		C-Min	C-Min	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 1 (1%), Referenced to phase 2:WBTL, Start of 1st Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Hammond Dr & Mt Vernon Hwy

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	650	660	5	350	265	5
Future Volume (veh/h)	650	660	5	350	265	5
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1811	1811	1811	1811
Adj Flow Rate, veh/h	691	0	6	398	319	6
Peak Hour Factor	0.94	0.94	0.88	0.88	0.83	0.83
Percent Heavy Veh, %	4	4	6	6	6	6
Cap, veh/h	1321		459	1299	315	280
Arrive On Green	0.72	0.00	0.72	0.72	0.18	0.18
Sat Flow, veh/h	1841	0	729	1811	1725	1535
Grp Volume(v), veh/h	691	0	6	398	319	6
Grp Sat Flow(s),veh/h/ln	1841	0	729	1811	1725	1535
Q Serve(g_s), s	20.4	0.0	0.5	9.5	21.9	0.4
Cycle Q Clear(g_c), s	20.4	0.0	20.8	9.5	21.9	0.4
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1321		459	1299	315	280
V/C Ratio(X)	0.52		0.01	0.31	1.01	0.02
Avail Cap(c_a), veh/h	1321		459	1299	315	280
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.7	0.0	12.4	6.1	49.0	40.3
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.6	54.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	0.0	0.1	3.4	14.0	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.7	0.0	12.4	6.7	103.2	40.3
LnGrp LOS	A		B	A	F	D
Approach Vol, veh/h	691	A		404	325	
Approach Delay, s/veh	7.7			6.8	102.1	
Approach LOS	A			A	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		93.0		27.0		93.0
Change Period (Y+Rc), s		6.9		5.1		6.9
Max Green Setting (Gmax), s		86.1		21.9		86.1
Max Q Clear Time (g_c+I1), s		22.8		23.9		22.4
Green Ext Time (p_c), s		5.7		0.0		21.3

Intersection Summary	
HCM 6th Ctrl Delay	29.1
HCM 6th LOS	C

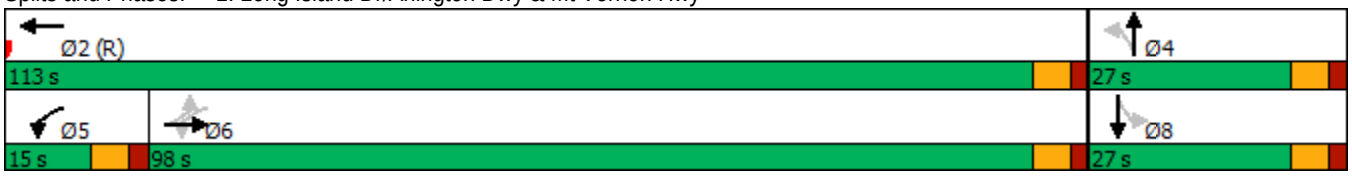
Notes

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	810	15	80	1070	5	45	1	180	10	1	5
Future Volume (vph)	1	810	15	80	1070	5	45	1	180	10	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	40		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			40			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			25	
Link Distance (ft)		1187			388			679			700	
Travel Time (s)		23.1			7.6			13.2			19.1	
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.71	0.71	0.71	0.63	0.63	0.63
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		D.P+P	NA		Perm	NA		Perm	NA	
Protected Phases		6		5	2			4			8	
Permitted Phases	6			6			4			8		
Detector Phase	6	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	27.0	27.0		15.0	27.0		27.0	27.0		27.0	27.0	
Total Split (s)	98.0	98.0		15.0	113.0		27.0	27.0		27.0	27.0	
Total Split (%)	70.0%	70.0%		10.7%	80.7%		19.3%	19.3%		19.3%	19.3%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0		6.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	Max	Max		None	C-Max		Max	Max		Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 122 (87%), Referenced to phase 2:WBT, Start of 1st Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Long Island Dr/Arlington Dwy & Mt Vernon Hwy



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	810	15	80	1070	5	45	1	180	10	1	5
Future Volume (veh/h)	1	810	15	80	1070	5	45	1	180	10	1	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	853	0	87	1163	5	63	1	254	16	2	8
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.71	0.71	0.71	0.63	0.63	0.63
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	2	2	2
Cap, veh/h	26	1274		433	1422	6	225	1	237	42	11	5
Arrive On Green	0.69	0.69	0.00	0.05	1.00	1.00	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	0	1854	0	1781	1861	8	1405	6	1580	0	73	32
Grp Volume(v), veh/h	854	0	0	87	0	1168	63	0	255	26	0	0
Grp Sat Flow(s),veh/h/ln	1855	0	0	1781	0	1869	1405	0	1586	105	0	0
Q Serve(g_s), s	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	37.4	0.0	0.0	2.0	0.0	0.0	6.9	0.0	21.0	21.0	0.0	0.0
Prop In Lane	0.00		0.00	1.00		0.00	1.00		1.00	0.62		0.31
Lane Grp Cap(c), veh/h	1300	0		433	0	1428	225	0	238	57	0	0
V/C Ratio(X)	0.66	0.00		0.20	0.00	0.82	0.28	0.00	1.07	0.45	0.00	0.00
Avail Cap(c_a), veh/h	1300	0		486	0	1428	225	0	238	57	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.49	0.00	0.49	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.7	0.0	0.0	5.6	0.0	0.0	53.5	0.0	59.5	57.6	0.0	0.0
Incr Delay (d2), s/veh	2.6	0.0	0.0	0.1	0.0	2.7	3.1	0.0	78.7	23.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.3	0.0	0.0	0.7	0.0	1.1	2.2	0.0	13.6	1.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.3	0.0	0.0	5.8	0.0	2.7	56.6	0.0	138.2	81.3	0.0	0.0
LnGrp LOS	B	A		A	A	A	E	A	F	F	A	A
Approach Vol, veh/h		854	A		1255			318			26	
Approach Delay, s/veh		15.3			2.9			122.0			81.3	
Approach LOS		B			A			F			F	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		113.0		27.0	10.8	102.2		27.0				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s		107.0		21.0	9.0	92.0		21.0				
Max Q Clear Time (g_c+I1), s		2.0		23.0	4.0	39.4		23.0				
Green Ext Time (p_c), s		16.9		0.0	0.1	7.9		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		23.5
HCM 6th LOS		C

Notes

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

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	585	415	10	535	620	15
Future Volume (vph)	585	415	10	535	620	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	100		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			45		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	35	
Link Distance (ft)	388			1708	1273	
Travel Time (s)	7.6			33.3	24.8	
Peak Hour Factor	0.93	0.93	0.92	0.92	0.97	0.97
Heavy Vehicles (%)	3%	3%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	6.0	6.0
Minimum Split (s)	40.9		24.9	24.9	23.1	23.1
Total Split (s)	86.0		86.0	86.0	54.0	54.0
Total Split (%)	61.4%		61.4%	61.4%	38.6%	38.6%
Yellow Time (s)	4.0		4.0	4.0	3.0	3.0
All-Red Time (s)	2.9		2.9	2.9	2.1	2.1
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9		6.9	6.9	5.1	5.1
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		C-Min	C-Min	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 1 (1%), Referenced to phase 2:WBTL, Start of 1st Green	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Hammond Dr & Mt Vernon Hwy

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	585	415	10	535	620	15
Future Volume (veh/h)	585	415	10	535	620	15
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	629	0	11	582	639	15
Peak Hour Factor	0.93	0.93	0.92	0.92	0.97	0.97
Percent Heavy Veh, %	3	3	2	2	2	2
Cap, veh/h	1048		324	1057	622	554
Arrive On Green	0.56	0.00	0.56	0.56	0.35	0.35
Sat Flow, veh/h	1856	0	797	1870	1781	1585
Grp Volume(v), veh/h	629	0	11	582	639	15
Grp Sat Flow(s),veh/h/ln	1856	0	797	1870	1781	1585
Q Serve(g_s), s	31.2	0.0	1.3	27.5	48.9	0.9
Cycle Q Clear(g_c), s	31.2	0.0	32.5	27.5	48.9	0.9
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1048		324	1057	622	554
V/C Ratio(X)	0.60		0.03	0.55	1.03	0.03
Avail Cap(c_a), veh/h	1048		324	1057	622	554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.0	0.0	30.7	19.2	45.5	29.9
Incr Delay (d2), s/veh	0.9	0.0	0.2	2.1	43.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.4	0.0	0.3	12.3	28.7	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.0	0.0	30.9	21.3	88.7	29.9
LnGrp LOS	C		C	C	F	C
Approach Vol, veh/h	629	A		593	654	
Approach Delay, s/veh	21.0			21.5	87.4	
Approach LOS	C			C	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		86.0		54.0		86.0
Change Period (Y+Rc), s		6.9		5.1		6.9
Max Green Setting (Gmax), s		79.1		48.9		79.1
Max Q Clear Time (g_c+I1), s		34.5		50.9		33.2
Green Ext Time (p_c), s		9.2		0.0		16.4

Intersection Summary		
HCM 6th Ctrl Delay		44.3
HCM 6th LOS		D

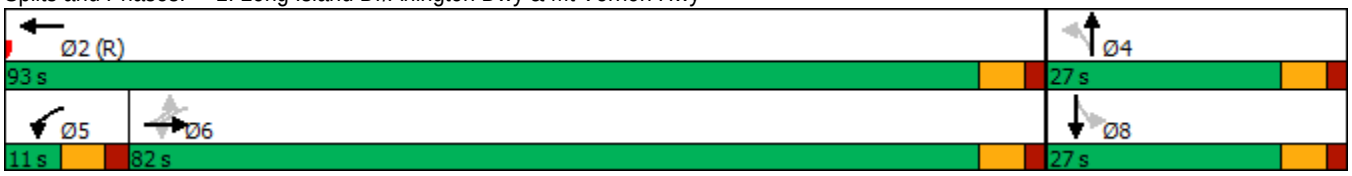
Notes

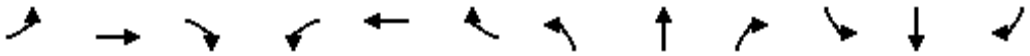
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1240	40	115	505	20	10	1	120	1	1	5
Future Volume (vph)	5	1240	40	115	505	20	10	1	120	1	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	40		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			40			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			25	
Link Distance (ft)		1187			388			679			700	
Travel Time (s)		23.1			7.6			13.2			19.1	
Peak Hour Factor	0.97	0.97	0.97	0.81	0.81	0.81	0.74	0.74	0.74	0.58	0.58	0.58
Heavy Vehicles (%)	4%	4%	4%	6%	6%	6%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		D.P+P	NA		Perm	NA		Perm	NA	
Protected Phases		6		5	2			4			8	
Permitted Phases	6			6			4			8		
Detector Phase	6	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	27.0	27.0		11.0	27.0		27.0	27.0		27.0	27.0	
Total Split (s)	82.0	82.0		11.0	93.0		27.0	27.0		27.0	27.0	
Total Split (%)	68.3%	68.3%		9.2%	77.5%		22.5%	22.5%		22.5%	22.5%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0		6.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	Max	Max		None	C-Max		None	None		None	None	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 114.5 (95%), Referenced to phase 2:WBT, Start of 1st Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Long Island Dr/Arlington Dwy & Mt Vernon Hwy





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1240	40	115	505	20	10	1	120	1	1	5
Future Volume (veh/h)	5	1240	40	115	505	20	10	1	120	1	1	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1811	1811	1811	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	5	1278	0	142	623	25	14	1	162	2	2	9
Peak Hour Factor	0.97	0.97	0.97	0.81	0.81	0.81	0.74	0.74	0.74	0.58	0.58	0.58
Percent Heavy Veh, %	4	4	4	6	6	6	2	2	2	2	2	2
Cap, veh/h	31	1262		189	1347	54	156	1	191	39	38	96
Arrive On Green	0.69	0.69	0.00	0.08	1.00	1.00	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	2	1836	0	1725	1729	69	1404	10	1577	40	313	794
Grp Volume(v), veh/h	1283	0	0	142	0	648	14	0	163	13	0	0
Grp Sat Flow(s),veh/h/ln	1838	0	0	1725	0	1799	1404	0	1587	1146	0	0
Q Serve(g_s), s	22.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0	12.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	82.5	0.0	0.0	3.1	0.0	0.0	2.3	0.0	12.1	12.1	0.0	0.0
Prop In Lane	0.00		0.00	1.00		0.04	1.00		0.99	0.15		0.69
Lane Grp Cap(c), veh/h	1293	0		189	0	1401	156	0	192	173	0	0
V/C Ratio(X)	0.99	0.00		0.75	0.00	0.46	0.09	0.00	0.85	0.07	0.00	0.00
Avail Cap(c_a), veh/h	1293	0		189	0	1401	231	0	278	257	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.71	0.00	0.71	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	19.4	0.0	0.0	15.3	0.0	0.0	47.3	0.0	51.7	46.8	0.0	0.0
Incr Delay (d2), s/veh	23.2	0.0	0.0	11.5	0.0	0.8	0.2	0.0	15.2	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	39.4	0.0	0.0	2.6	0.0	0.3	0.4	0.0	5.6	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.5	0.0	0.0	26.7	0.0	0.8	47.6	0.0	66.8	47.0	0.0	0.0
LnGrp LOS	D	A		C	A	A	D	A	E	D	A	A
Approach Vol, veh/h		1283	A		790			177			13	
Approach Delay, s/veh		42.5			5.4			65.3			47.0	
Approach LOS		D			A			E			D	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		99.5		20.5	11.0	88.5		20.5				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s		87.0		21.0	5.0	76.0		21.0				
Max Q Clear Time (g_c+I1), s		2.0		14.1	5.1	84.5		14.1				
Green Ext Time (p_c), s		5.1		0.5	0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	31.4	
HCM 6th LOS	C	

Notes

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

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	675	685	5	365	275	5
Future Volume (vph)	675	685	5	365	275	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	100		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			45		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	35	
Link Distance (ft)	388			1708	1273	
Travel Time (s)	7.6			33.3	24.8	
Peak Hour Factor	0.94	0.94	0.88	0.88	0.83	0.83
Heavy Vehicles (%)	4%	4%	6%	6%	6%	6%
Shared Lane Traffic (%)						
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	6.0	6.0
Minimum Split (s)	40.9		24.9	24.9	23.1	23.1
Total Split (s)	93.0		93.0	93.0	27.0	27.0
Total Split (%)	77.5%		77.5%	77.5%	22.5%	22.5%
Yellow Time (s)	4.0		4.0	4.0	3.0	3.0
All-Red Time (s)	2.9		2.9	2.9	2.1	2.1
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9		6.9	6.9	5.1	5.1
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		C-Max	C-Max	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 6 (5%), Referenced to phase 2:WBTL, Start of 1st Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Hammond Dr & Mt Vernon Hwy

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	675	685	5	365	275	5
Future Volume (veh/h)	675	685	5	365	275	5
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1811	1811	1811	1811
Adj Flow Rate, veh/h	718	0	6	415	331	6
Peak Hour Factor	0.94	0.94	0.88	0.88	0.83	0.83
Percent Heavy Veh, %	4	4	6	6	6	6
Cap, veh/h	1321		441	1299	315	280
Arrive On Green	0.72	0.00	0.72	0.72	0.18	0.18
Sat Flow, veh/h	1841	0	710	1811	1725	1535
Grp Volume(v), veh/h	718	0	6	415	331	6
Grp Sat Flow(s),veh/h/ln	1841	0	710	1811	1725	1535
Q Serve(g_s), s	21.7	0.0	0.5	10.1	21.9	0.4
Cycle Q Clear(g_c), s	21.7	0.0	22.2	10.1	21.9	0.4
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1321		441	1299	315	280
V/C Ratio(X)	0.54		0.01	0.32	1.05	0.02
Avail Cap(c_a), veh/h	1321		441	1299	315	280
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.9	0.0	13.0	6.2	49.0	40.3
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.6	64.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	0.0	0.1	3.6	15.0	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.9	0.0	13.0	6.9	113.9	40.3
LnGrp LOS	A		B	A	F	D
Approach Vol, veh/h	718	A		421	337	
Approach Delay, s/veh	7.9			6.9	112.6	
Approach LOS	A			A	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		93.0		27.0		93.0
Change Period (Y+Rc), s		6.9		5.1		6.9
Max Green Setting (Gmax), s		86.1		21.9		86.1
Max Q Clear Time (g_c+I1), s		24.2		23.9		23.7
Green Ext Time (p_c), s		2.8		0.0		12.9

Intersection Summary	
HCM 6th Ctrl Delay	31.5
HCM 6th LOS	C

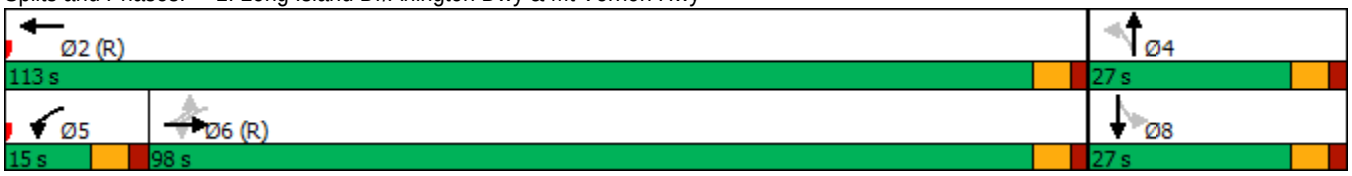
Notes

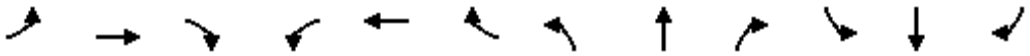
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	840	15	80	1115	5	50	1	185	10	1	5
Future Volume (vph)	1	840	15	80	1115	5	50	1	185	10	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	40		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			40			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		1187			388			679			700	
Travel Time (s)		23.1			7.6			18.5			19.1	
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.71	0.71	0.71	0.63	0.63	0.63
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		D.P+P	NA		Perm	NA		Perm	NA	
Protected Phases		6		5	2			4			8	
Permitted Phases	6			6			4			8		
Detector Phase	6	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0		5.0	15.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	27.0	27.0		15.0	27.0		27.0	27.0		27.0	27.0	
Total Split (s)	98.0	98.0		15.0	113.0		27.0	27.0		27.0	27.0	
Total Split (%)	70.0%	70.0%		10.7%	80.7%		19.3%	19.3%		19.3%	19.3%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0		6.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Recall Mode	C-Max	C-Max		None	C-Max		Max	Max		Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 121 (86%), Referenced to phase 2:WBT and 6:EBWB, Start of 1st Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	

Splits and Phases: 1: Long Island Dr/Arlington Dwy & Mt Vernon Hwy





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	840	15	80	1115	5	50	1	185	10	1	5
Future Volume (veh/h)	1	840	15	80	1115	5	50	1	185	10	1	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	884	0	87	1212	5	70	1	261	16	2	8
Peak Hour Factor	0.95	0.95	0.95	0.92	0.92	0.92	0.71	0.71	0.71	0.63	0.63	0.63
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	2	2	2
Cap, veh/h	26	1274		413	1423	6	225	1	237	42	11	5
Arrive On Green	0.69	0.69	0.00	0.05	1.00	1.00	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	0	1854	0	1781	1861	8	1405	6	1580	0	73	32
Grp Volume(v), veh/h	885	0	0	87	0	1217	70	0	262	26	0	0
Grp Sat Flow(s),veh/h/ln	1855	0	0	1781	0	1869	1405	0	1586	105	0	0
Q Serve(g_s), s	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	40.0	0.0	0.0	2.0	0.0	0.0	7.7	0.0	21.0	21.0	0.0	0.0
Prop In Lane	0.00		0.00	1.00		0.00	1.00		1.00	0.62		0.31
Lane Grp Cap(c), veh/h	1300	0		413	0	1428	225	0	238	57	0	0
V/C Ratio(X)	0.68	0.00		0.21	0.00	0.85	0.31	0.00	1.10	0.45	0.00	0.00
Avail Cap(c_a), veh/h	1300	0		467	0	1428	225	0	238	57	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.45	0.00	0.45	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.1	0.0	0.0	5.6	0.0	0.0	53.8	0.0	59.5	57.6	0.0	0.0
Incr Delay (d2), s/veh	2.9	0.0	0.0	0.1	0.0	3.1	3.6	0.0	88.1	23.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.4	0.0	0.0	0.7	0.0	1.2	2.5	0.0	14.3	1.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.0	0.0	0.0	5.8	0.0	3.1	57.4	0.0	147.6	81.3	0.0	0.0
LnGrp LOS	B	A		A	A	A	E	A	F	F	A	A
Approach Vol, veh/h		885	A		1304			332			26	
Approach Delay, s/veh		16.0			3.3			128.6			81.3	
Approach LOS		B			A			F			F	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		113.0		27.0	10.8	102.2		27.0				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s		107.0		21.0	9.0	92.0		21.0				
Max Q Clear Time (g_c+I1), s		2.0		23.0	4.0	42.0		23.0				
Green Ext Time (p_c), s		19.2		0.0	0.1	8.4		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		24.8
HCM 6th LOS		C

Notes

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

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	605	430	10	555	645	15
Future Volume (vph)	605	430	10	555	645	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	100		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			45		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			35	35	
Link Distance (ft)	388			1708	1273	
Travel Time (s)	7.6			33.3	24.8	
Peak Hour Factor	0.93	0.93	0.92	0.92	0.97	0.97
Heavy Vehicles (%)	3%	3%	2%	2%	2%	2%
Shared Lane Traffic (%)						
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Detector Phase	6		2	2	4	4
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	6.0	6.0
Minimum Split (s)	40.9		24.9	24.9	23.1	23.1
Total Split (s)	85.0		85.0	85.0	55.0	55.0
Total Split (%)	60.7%		60.7%	60.7%	39.3%	39.3%
Yellow Time (s)	4.0		4.0	4.0	3.0	3.0
All-Red Time (s)	2.9		2.9	2.9	2.1	2.1
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9		6.9	6.9	5.1	5.1
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		C-Max	C-Max	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 140	
Actuated Cycle Length: 140	
Offset: 1 (1%), Referenced to phase 2:WBTL, Start of Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Hammond Dr & Mt Vernon Hwy

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	605	430	10	555	645	15
Future Volume (veh/h)	605	430	10	555	645	15
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	651	0	11	603	665	15
Peak Hour Factor	0.93	0.93	0.92	0.92	0.97	0.97
Percent Heavy Veh, %	3	3	2	2	2	2
Cap, veh/h	1035		300	1043	635	565
Arrive On Green	0.56	0.00	0.56	0.56	0.36	0.36
Sat Flow, veh/h	1856	0	781	1870	1781	1585
Grp Volume(v), veh/h	651	0	11	603	665	15
Grp Sat Flow(s),veh/h/ln	1856	0	781	1870	1781	1585
Q Serve(g_s), s	33.5	0.0	1.4	29.5	49.9	0.9
Cycle Q Clear(g_c), s	33.5	0.0	34.8	29.5	49.9	0.9
Prop In Lane		0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1035		300	1043	635	565
V/C Ratio(X)	0.63		0.04	0.58	1.05	0.03
Avail Cap(c_a), veh/h	1035		300	1043	635	565
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.61	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.1	0.0	32.9	20.2	45.0	29.3
Incr Delay (d2), s/veh	0.7	0.0	0.2	2.3	48.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.3	0.0	0.3	13.2	30.2	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.8	0.0	33.2	22.5	93.8	29.3
LnGrp LOS	C		C	C	F	C
Approach Vol, veh/h	651	A		614	680	
Approach Delay, s/veh	21.8			22.7	92.4	
Approach LOS	C			C	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		85.0		55.0		85.0
Change Period (Y+Rc), s		6.9		5.1		6.9
Max Green Setting (Gmax), s		78.1		49.9		78.1
Max Q Clear Time (g_c+I1), s		36.8		51.9		35.5
Green Ext Time (p_c), s		4.5		0.0		10.2

Intersection Summary		
HCM 6th Ctrl Delay		46.8
HCM 6th LOS		D

Notes

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

Attachment G:

Traffic Signal Concept Design

ARLINGTON MEMORIAL CEMETERY

REMOVE PAVEMENT AND LANDSCAPE

REQUIRED RIGHT OF WAY

EXISTING MONUMENT SIGN TO REMAIN

INSTALL NEW CONCRETE ISLAND

EXIST R/W

EXIST R/W

MOUNT VERNON HIGHWAY

MOUNT VERNON HIGHWAY

EXIST R/W

FOURTH LATITUDE LONG ISLAND, LLC

JONATHAN W. TEMPLE

LONG ISLAND DRIVE

EXIST R/W

EXIST R/W

CONDOMINIUM SURREY PLACE

ERIC J & JENNIFER S. HANSON

SCALE IN FEET
0 20 40 80

MT. VERNON HWY @ LONG ISLAND DR
CONCEPT SIGNALIZED INTERSECTION
FULTON COUNTY

Kimley»Horn

11/2/2021

Engineering, Planning, and Environmental Consultants
Suite 601, 817 W. Peachtree Street NW
Atlanta, Georgia 30308

LEGEND

- EXISTING R.O.W./PROPERTY LINE
- PROPOSED CONCRETE MEDIAN
- PROPOSED ASPHALT
- PROPOSED LANDSCAPING
- PROPOSED TRAFFIC SIGNAL
- PROPOSED PERMANENT EASEMENT
- PROPOSED SIDEWALK
- PROPOSED CURB & GUTTER
- EXISTING LAND LOT LINE
- TRAFFIC FLOW ARROWS
- REQUIRED R.O.W

Attachment H:

Opinion of Probable Cost

Mount Vernon Highway at Long Island Drive
Project Cost Estimate
Prepared by: Kimley-Horn and Associates, Inc.
November 3, 2021

DESIGN	**TOTAL**
ROADWAY CONSTRUCTION DOCUMENTS	$20,000.00
SIGNAL DESIGN AND CONSTRUCTION DOCUMENTS	$13,000.00
PERMITTING[1]	$0.00
Subtotal	$33,000.00

RIGHT-OF-WAY	**TOTAL**
ARLINGTON MEMORIAL CEMETERY[2]	$0.00
LANDSCAPING & COST-TO-CURE	$15,000.00
SIGN MONUMENT RELOCATION[3]	$0.00
Subtotal	$15,000.00

UTILITY RELOCATION	**TOTAL**
MINOR UTILITY ADJUSTMENTS	$6,000.00
Subtotal	$6,000.00

CONSTRUCTION AND CEI	**TOTAL**
CONSTRUCTION[4]	$486,454.00
CONSTRUCTION ENGINEERING & INSPECTION	$25,000.00
Subtotal	$511,454.00

Total **$565,454.00**

NOTES:
1- Permitting not anticipated
2- Right-of-way provided as part of Conditional Use Permit
3- No sign relocation anticipated
4- Construction cost estimate details provided on next page

Mount Vernon Highway at Long Island Drive
Opinion of Probable Construction Cost - Concept
Prepared by: Kimley-Horn and Associates, Inc.
November 3, 2021

ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
GR AGGR BASE CRS, INCL MATL (8 IN)	390	SY	$25.00	$9,750.00
RECYCLED ASPH. CONC. 12.5 MM SUPERPAVE, GP 2, INCL BITUM MATL & H LIME	130	TN	$125.00	$16,250.00
RECYCLED ASPH. CONC. 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	21	TN	$140.00	$2,940.00
BITUM. TACK COAT	88	GL	$3.00	$264.00
MILL ASPH CONC PVMT, 1 1/2 IN DEPTH	1370	SY	$5.00	$6,850.00
CONC. SIDEWALK, 8 IN	110	SY	$75.00	$8,250.00
CONCRETE MEDIAN, 6 IN	150	SY	$80.00	$12,000.00
CONCRETE HEADER CURB	100	LF	$25.00	$2,500.00
CONCRETE CURB & GUTTER, 8 IN X 30 IN, TYPE 2	150	LF	$35.00	$5,250.00
CLASS B CONC, BASE OR PVMT WIDENING	3	CY	$350.00	$1,050.00
SAWED JOINTS IN EXIST PAVEMENTS - PCC	100	LF	$20.00	$2,000.00
HIGHWAY SIGNS	5	EA	$200.00	$1,000.00
STEEL STRAIN POLE, TP IV - WITH MAST ARM	2	EA	$40,000.00	$80,000.00
STEEL STRAIN POLE, TP IV - WITH DUAL MAST ARM	1	EA	$50,000.00	$50,000.00
GLANCE PASS THROUGH UNIT	1	EA	$4,500.00	$4,500.00
DIRECTIONAL BORE	150	LF	$35.00	$5,250.00
PULL BOX, PB-3	2	EA	$750.00	$1,500.00
THERMOPLASTIC TRAF STRIPE	LUMP	LS	$10,000.00	$10,000.00
EROSION CONTROL	LUMP	LS	$5,000.00	$5,000.00
TRAFFIC SIGNAL INSTALLATION	LUMP	LS	$125,000.00	$125,000.00
TRAFFIC CONTROL	LUMP	LS	$25,000.00	$25,000.00
DEMOLITION OF EXISTING	LUMP	L	$6,000.00	$6,000.00
GRADING COMPLETE	LUMP	LS	$25,000.00	$25,000.00
			Subtotal	$405,354.00
		Contingency	20%	$81,100.00
		Total		**$486,454.00**

The Consultant has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Consultant at this time and represent only the Consultant's judgment as a design professional familiar with the construction industry. The Consultant cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.