

APPENDIX A
Scope of Work Meeting Form



PRE-SCOPE OF WORK MEETING FORM

Information on the Project Traffic Impact Analysis Base Assumptions

The applicant is responsible for entering the relevant information and submitting the form to VDOT and the locality no less than three (3) business days prior to the meeting. If a form is not received by this deadline, the scope of work meeting may be postponed.

Contact Information

Consultant Name: Tele: E-mail:	William F. Johnson, P.E., Wells + Associates (703) 365-9262 wfjohnson@wellsandassociates.com
Developer/Owner Name: Tele: E-mail:	Jerry Liang, Sunrise Senior Living (703) 744-1873 jerry.liang@sunriseseniorliving.com

Project Information

Project Name:	100-102 Maple Avenue East	Locality/County:	Town of Vienna, Fairfax County
Project Location: (Attach regional and site specific location map)	The site is located in the Town of Vienna on the northeast quadrant of Maple Avenue (State Route 123) and Center Street. (see location map, ATTACHMENT 1)		
Submission Type	Comp Plan ☐	Rezoning ☒	Site Plan ☐ Subd Plat ☐
Project Description: (Including details on the land use, acreage, phasing, access location, etc. Attach additional sheet if necessary)	The subject property is identified as: Tax Map # 38-4 ((2)) 125A. This 32,130 SF parcel is currently zoned General Commercial (C-2) and is occupied with two low-rise (two-story) medical office buildings totaling 10,980 square feet of GFA. Access to the site is off Center Street. The Applicant proposes to raze the existing uses and replace with a new mixed use development consisting of 9,000 SF of ground floor retail and 80 assisted living units (95 beds) located above. Vehicular access to the site will remain via Center Street. The conceptual layout of the proposal is shown on ATTACHMENT 2.		
Proposed Use(s): (Check all that apply; attach additional pages as necessary)	Residential ☐	Commercial ☐	Mixed Use ☒ Other ☐

It is important for the applicant to provide sufficient information to county and VDOT staff so that questions regarding geographic scope, alternate methodology, or other issues can be answered at the scoping meeting.

	Residential Uses(s) Number of Units: _____ ITE LU Code(s): _____ Commercial Use(s) ITE LU Code(s): 820 _____ _____ Square Ft or Other Variable: _____	9,000 GSF _____ _____ Other Use(s) ITE LU Code(s): 254 95 Beds see Note 1 And ATTACHMENT 3 Independent Variable(s): _____ _____ _____			
Total Peak Hour Trip Projection:	Less than 100 ☒ 100 – 499 ☐ 500 – 999 ☐ 1,000 or more ☐				
Traffic Impact Analysis Assumptions					
Study Period	Existing Year: 2018	Build-out Year: 2021	Design Year: N/A		
Study Area Boundaries (Attach map)	North: Church Street	South: Maple Avenue			
	East:	West:			
External Factors That Could Affect Project (Planned road improvements, other nearby developments)	-I-66 Corridor Improvement Project -Potential Maple Avenue Traffic Signal Optimization Study (Town of Vienna)				
Consistency With Comprehensive Plan (Land use, transportation plan)	The proposed development is consistent with the Maple Avenue Commercial Zone Regulations (MAC).				
Available Traffic Data (Historical, forecasts)	2017 VDOT Average Annual Traffic Volumes (AADT) Maple Ave. from Nutley St to Follin Lane: 30,000 AADT (1% Heavy Vehicles) Center Street from Maple Ave. to Locust St.: 4,600 AADT Church Street from Lawyers Rd. to Beulah Rd.: 6,000 AADT				
Trip Distribution (Attach sketch)	Road Name: Maple Avenue: East: 30%/West: 40%	Road Name: Church Street: East: 8%/West: 7%			
	Road Name: Center Street: North: 5%/South: 10%	Road Name:			
Annual Vehicle Trip Growth Rate:	1% per year	Peak Period for Study (check all that apply)	☒ AM ☒ PM ☒ SAT		
		Peak Hour of the Generator	see ATTACHMENT 3		
Study Intersections and/or Road Segments (Attach additional sheets as necessary)	1. Maple Ave (State Route 123)/ Center Street	6.			
	2. Center Street/Church Street	7.			
	3. Center Street/Site Entrance	8.			

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	4.see ATTACHMENT 4	9.
	5.	10.
Trip Adjustment Factors	Internal allowance: ☒ Yes ☐ No Reduction: 5% AM/10% PM/15% Daily% trips	Pass-by allowance: ☒ Yes ☐ No Reduction: 35% trips
Software Methodology	☒ Synchro ☐ HCS (v.2000/+) ☐ aaSIDRA ☐ CORSIM ☐ Other _____	
Traffic Signal Proposed or Affected (Analysis software to be used, progression speed, cycle length)	Maple Avenue/Center Street (existing)	
Improvement(s) Assumed or to be Considered	The project will focus on Transportation Demand Management (TDM) strategies and multi-modal improvements as outlined in both the MAC and the recently approved Pedestrian Master Plan. These include but are not limited to: streetscape improvements, incorporating pedestrian and bicycle amenities into the site design, and coordinating with town staff regarding potential pavement marking improvements thereby enhancing and encouraging both pedestrian and bicycle movements through the Maple Avenue/Center Street intersection.	
Background Traffic Studies Considered	Pipeline developments to be included in the traffic forecasts were discussed with Town staff and will include the approved Marco Polo development site, the Flagship Car Wash/Chick-fil-A, and pending 444 Maple Avenue development (if approved by Council).	
Plan Submission	☐ Master Development Plan (MDP) ☒ Generalized Development Plan (GDP) ☐ Preliminary/Sketch Plan ☐ Other Plan type (Final Site, Subd. Plan)	
Additional Issues to be Addressed	☒ Queuing analysis ☐ Actuation/Coordination ☐ Weaving analysis ☐ Merge analysis ☒ Bike/Ped Accommodations ☐ Intersection(s) ☒ TDM Measures ☐ Other _____	

NOTES on ASSUMPTIONS:

(1) The applicant proposes 80 assisted living units, 65 units will be single bed units and 15 will be double bed units. ITE Trip generation calculations were based on number of beds. Therefore, a total of 95 beds were used to calculate generated trips.

(2) Trip Generation calculations are based on the ITE Trip Generation Manual, 10th Edition

It is important for the applicant to provide sufficient information to county and VDOT staff so that questions regarding geographic scope, alternate methodology, or other issues can be answered at the scoping meeting.

(3) Weekday traffic volumes will be collected between the hours of 6:00AM - 9:00AM and 4:00PM - 7:00PM.

Saturday traffic volumes will be collected between the hours: 10:00AM - 3:00PM

(4) A discussion of the applied Annual Vehicle Trip Growth Rate will be included in the study report.

(5) The "Pass-by allowance" reduction of 35% applies only to the retail component.

(6) Software Methodology - Synchro, Version 10.1, will be used to conduct capacity analysis with a peak hour factor (PHF) measured from traffic counts. The field measured PHF's will be adjusted to provide a minimum 0.85 PHF for existing conditions. Background and total future conditions, the minimum PHF will be set to 0.92 for all movements. Levels of service will be based on the HCM 2000 methodologies as reported by Synchro.

(7) A summary table will be included in the traffic study outlining the trip generation for the site including: existing uses, potential "by-right" development uses, and the proposed uses as outlined in this scope.

SIGNED: _____ DATE: _____
Applicant or Consultant

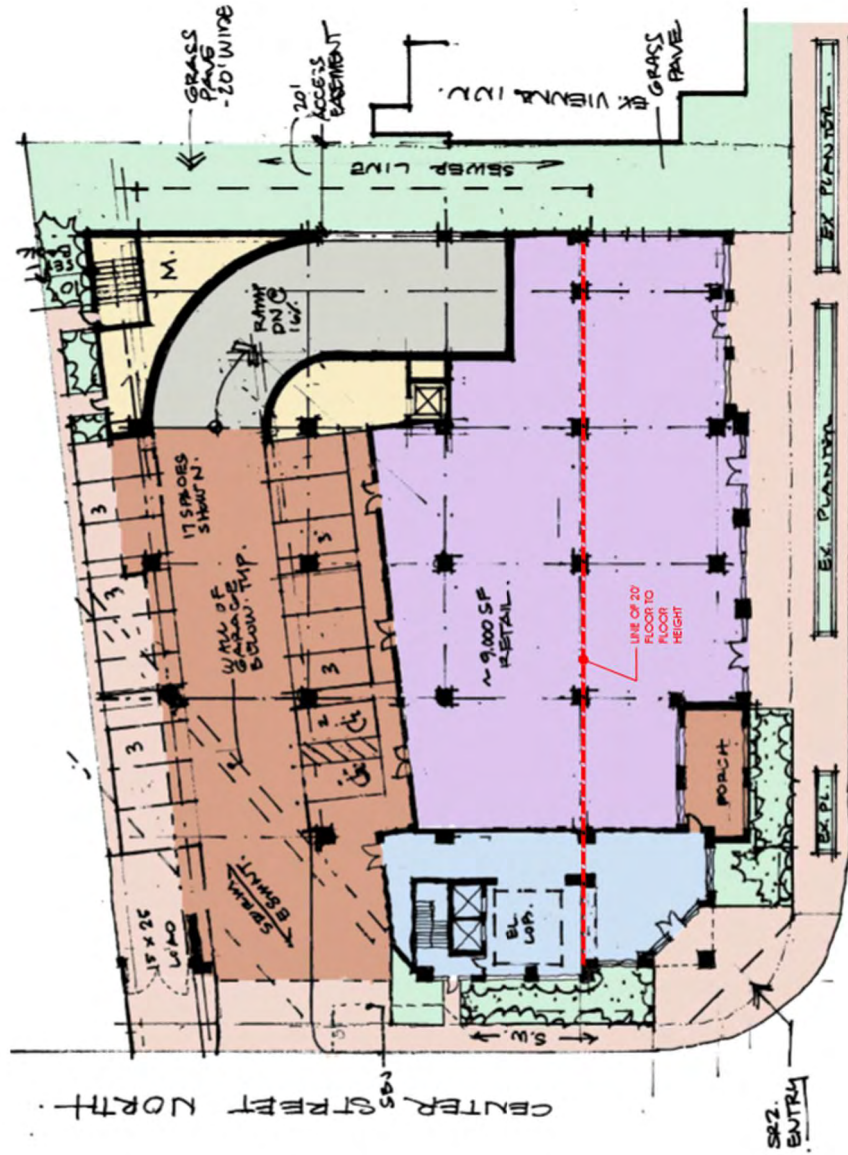
PRINT NAME: _____
Applicant or Consultant

It is important for the applicant to provide sufficient information to county and VDOT staff so that questions regarding geographic scope, alternate methodology, or other issues can be answered at the scoping meeting.

Attachment I, Site Location
100-102 Maple Avenue, Vienna, Virginia



Attachment 2, Conceptual Layout for 100-102 Maple Avenue, Vienna, Virginia



GROUND FLOOR PLAN

SUNRISE SENIOR LIVING - VIENNA

18012

June 1, 2018

1"=20'-0"

RUST | ORLING
ARCHITECTURE

\\rust01\projects\18012\18012_SunriseSeniorLiving_Vienna.dwg 6/1/2018 11:52:21 AM rust01\jrogers

Attachment 3

100- 102 Maple Avenue

Site Trip Generation ⁽¹⁾

Scenario	Land Use		AM Peak Hour of the Adj. Street Traffic			PM Peak Hour of the Adj. Street Traffic			Weekday		Saturday Peak Hour of Generator		
	Code	Amount	Units	In	Out	Total	In	Out	Total	Daily Trips	In	Out	Total
Existing Uses													
Medical Office	720	10,980	SF	24	7	31	11	28	39	334	19	15	34
Proposed Uses													
Assisted Living	254	95	Beds	11	7	18	10	17	27	247	12	14	26
Internal Reduction with Retail (5% AM/10% PM/15% SAT & Daily)				0	0	0	(1)	(1)	(2)	(37)	(1)	(1)	(2)
Total Assisted Living				11	7	18	9	16	25	210	11	13	24
Shopping Center	820	9,000	SF	5	3	8	9	9	18	264	8	8	16
Internal Reduction with Assisted Living (5% AM/10% PM/15% SAT & Daily)				0	0	0	(1)	(1)	(2)	(37)	(1)	(1)	(2)
Subtotal Retail				5	3	8	8	8	16	227	7	7	14
Pass-by Reduction (35%)				(2)	(1)	(3)	(3)	(3)	(6)	(79)	(2)	(2)	(4)
Total Retail				3	2	5	5	5	10	148	5	5	10
Total Proposed Trips				14	9	23	14	21	35	358	16	18	34

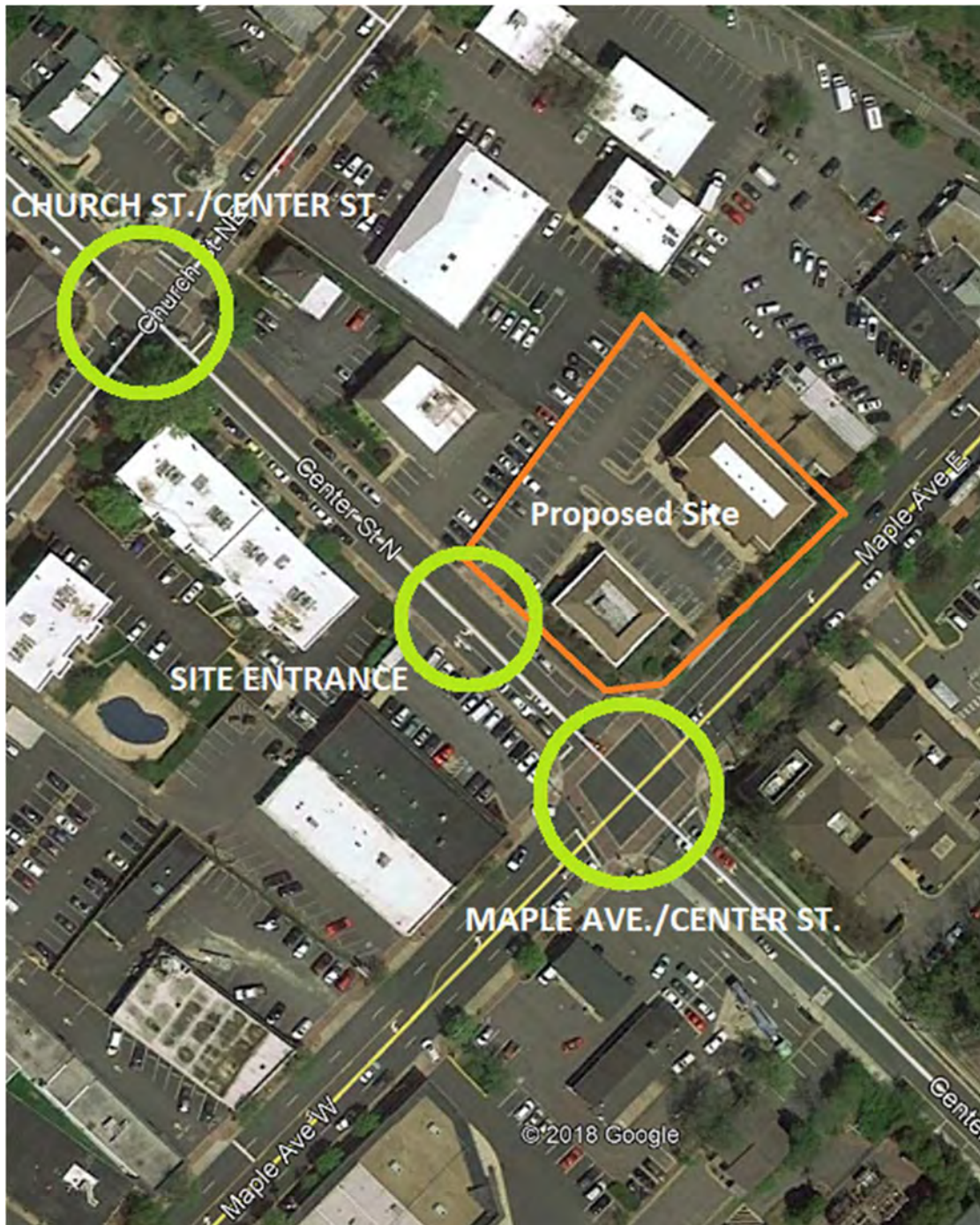
Existing vs. Proposed Trip Generation

-10	2	-8	3	-7	-4	24	-3	3	0
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Note(s):

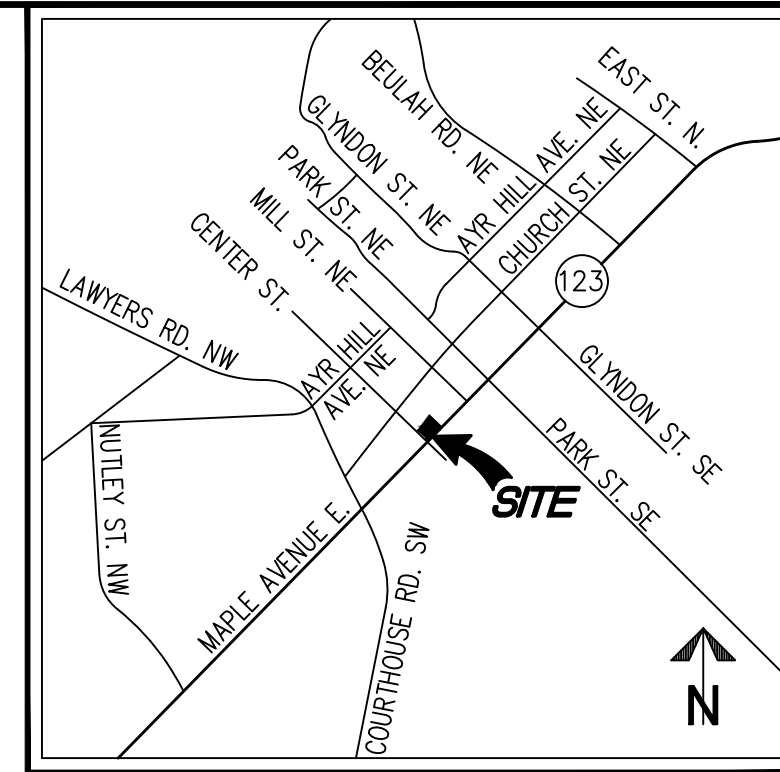
(1) Trip generation based on the Institute of Transportation Engineers' Trip Generation, 10th Edition.

Attachment 4, Study Intersections
100-102 Maple Avenue, Vienna, Virginia



APPENDIX B

Full-size Plan Layout



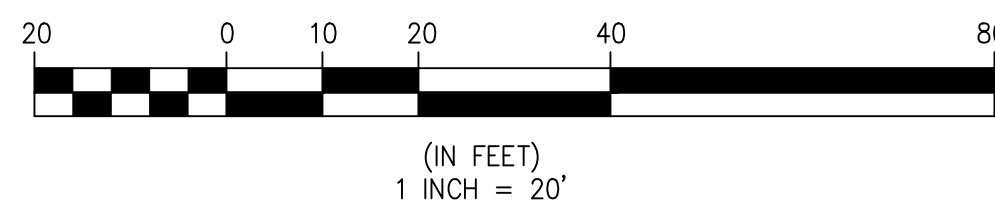
PROPOSED	DESCRIPTION	EXISTING
	CURB & GUTTER	
	CG-2	
	TRANSITION FROM CG-6 TO CG-6R	
	CG-6R CG-6	
	SANITARY SEWER	
	SL	
	CLEAN OUT	
	C.O.	
	STORM SEWER	
	W	
	WATER MAIN	
	E	
	FIRE HYDRANT	
	F	
	PLUG	
	P	
	OVERHEAD WIRES	
	O	
	UTILITY POLE	
	U	
	UNDERGROUND ELECTRIC	
	UE	
	TELEPHONE	
	T	
	GAS MAIN	
	G	
	ELECTRICAL	
	E	
	TRANSFORMER	
	HANDICAP RAMP (CG-12)	
	GUARDRAIL FENCE	
	TRAFFIC FLOW	
	LIGHT	
	DOOR	
	TREES	
	CONTOURS	
	SPOT ELEVATION	
	DRAINAGE FLOW DIRECTION	
	TOP OF CURB	
	BOTTOM OF CURB	
	TOP OF WALL	
	BOTTOM OF WALL	
	HIGH POINT	
	TEST PIT	
	LIMITS OF CLEARING AND GRADING	

ZONING TABULATION

ZONING TABULATIONS	MAC ZONING REQUIREMENTS	PROVIDED
LOT WIDTH	NONE	198.92 FT
BUILDING WIDTH	NONE	175.5 FT (MAPLE AVE)
BUILDING HEIGHT	4 STORIES, 54 FT	4 STORIES, 54 FT
AVERAGE FRONT GRADE	NONE	354.53'
YARD REQUIREMENTS		
FRONT - MAPLE AVENUE	20 FT	20.0 FT
FRONT - CENTER STREET	15 FT	16.1 FT
SIDE (EAST PROPERTY LINE)	8 FT	10.5 FT
REAR (NORTH PROPERTY LINE)	10 FT	10.7 FT
LOADING SPACE DEPTH	25 FT	25 FT
LOADING SPACE WIDTH	15 FT/50 FT BLDG WIDTH**	15 FT
LOADING SPACE HEIGHT	15 FT	15 FT
IMPERVIOUS AREA (MAXIMUM)	80% + 10% INCENTIVE BONUS = 90%	89.5%
OPEN SPACE	15% OF LOT AREA (4,820 SF)	7,050 SF (21.9%)

- ## NOTES
1. THE PROPERTY IS DESIGNATED BY FAIRFAX COUNTY, VIRGINIA, AS HAVING TAX ASSESSMENT MAP NUMBER 0384-02-0125A, ZONED C-2. THIS APPLICATION IS REQUESTING A REZONING TO THE MAC DISTRICT.
 2. TOTAL COMPUTED AREA OF THE PROPERTY IS 32,130 SQUARE FEET OR 0.7376 ACRES. TOTAL RECORD AREA OF THE PROPERTY IS 32,264 SQUARE FEET OR 0.7407 ACRES.
 3. BASED ON REVIEW OF AVAILABLE RECORDS, THERE ARE NO SIGNIFICANT HISTORICAL OR ENVIRONMENTAL FEATURES ON THIS SITE.
 4. SEE SHEET P-0100 FOR CONTEXT PLAN DEPICTING EXISTING STRUCTURES WITHIN 200 FT OF THE PROPOSED DEVELOPMENT.

CURVE TABLE						
CURVE	RADIUS	LENGTH	DELTA	TANGENT	CHORD	CHORD BEARING
C1	25.00'	39.27'	90°00'00"	25.00'	35.36'	N88°35'27"E



WALTER L. PHILLIPS
INCORPORATED
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[illegible]

CONCEPT PLAN

SUNRISE OF VIENNA
MAC REZONING PLAN
100, 102 & 112 MAPLE AVENUE EAST
TOWN OF VIENNA, VIRGINIA 22180

APPENDIX C

Level of Service Descriptions

Level of Service for Signalized Intersections

Level of service for signalized intersections is defined in terms of delay, which is a measure of driver discomfort and frustration, fuel consumption, and lost travel time. Specifically, level-of-service (LOS) criteria are stated in terms of the average stopped delay per vehicle for a 15-min analysis period. The criteria are given in Exhibit 16-2. Delay may be measured in the field or estimated using procedures presented later in this chapter. Delay is a complex measure and is dependent on a number of variables, including the quality of progression, the cycle length, the green ratio, and the v/c ratio for the lane group in question.

LOS A describes operations with very low delay, up to 10 sec per vehicle. This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

LOS B describes operations with delay greater than 10 and up to 20 sec per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay.

Exhibit 16-2. Level-of-Service Criteria for Signalized Intersections

LEVEL OF SERVICE	STOPPED DELAY PER VEHICLE (SEC)
A	≤ 10.0
B	> 10.0 and ≤ 20.0
C	> 20.0 and ≤ 35.0
D	> 35.0 and ≤ 55.0
E	> 55.0 and ≤ 80.0
F	> 80.0

LOS C describes operations with delay greater than 20 and up to 35 sec per vehicle. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

LOS D describes operations with delay greater than 35 and up to 55 sec per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

LOS E describes operations with delay greater than 55 and up to 80 sec per vehicle. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

LOS F describes operations with delay in excess of 80 sec per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Source: Highway Capacity Manual, 2000. Transportation Research Board, National Research Council

Level of Service Criteria for Stop Sign Controlled Intersections

The level of service criteria are given in Table 17-2. As used here, control delay is defined as the total elapsed time from the time a vehicle stops at the end of the queue until the vehicle departs from the stop line; this time includes the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position, including deceleration of vehicles from free-flow speed to the speed of vehicles in queue.

The average total delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation. . . .

Table 17-2. Level of Service Criteria for TWSC Intersections

LEVEL OF SERVICE	AVERAGE CONTROL DELAY (sec/veh)
A	≤ 10
B	$> 10 \text{ and } \leq 15$
C	$> 15 \text{ and } \leq 25$
D	$> 25 \text{ and } \leq 35$
E	$> 35 \text{ and } \leq 50$
F	> 50

Average total delay less than 10 sec/veh is defined as Level of Service (LOS) A. Follow-up times of less than 5 sec have been measured when there is no conflicting traffic for a minor street movement, so control delays of less than 10 sec/veh are appropriate for low flow conditions. To remain consistent with the AWSC intersection analysis procedure described later in this chapter, a total delay of 50 sec/veh is assumed as the break point between LOS E and F.

The proposed level of service criteria for TWSC intersections are somewhat different from the criteria used in Chapter 16 for signalized intersections. The primary reason for this difference is that drivers expect different levels of performance from different kinds of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an unsignalized intersection. Additionally, several driver behavior considerations combine to make delays at signalized intersections less onerous than at unsignalized intersections. For example, drivers at signalized intersections are able to relax during the red interval, where drivers on the minor approaches to unsignalized intersections must remain attentive to the task of identifying acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at unsignalized than signalized intersections. For these reasons, it is considered that the total delay threshold for any given level of service is less for an unsignalized intersection than for a signalized intersection. . . .

LOS F exists when there are insufficient gaps of suitable size to allow a side street demand to cross safely through a major street traffic stream. This level of service is generally evident from extremely long total delays experienced by side street traffic and by queueing on the minor approaches. The method, however, is based on a constant critical gap size - that is, the critical gap remains constant, no matter how long the side street motorist waits. LOS F may also appear in the form of side street vehicles' selecting smaller-than-usual gaps. In such cases, safety may be a problem and some disruption to the major traffic stream may result. It is important to note that LOS F may not always result in long queues but may result in adjustments to normal gap acceptance behavior. The latter is more difficult to observe on the field than queueing, which is more obvious.

Source: Highway Capacity Manual, 2000. Transportation Research Board, National Research Council

APPENDIX D

Bus Schedule Information

Effective March 18, 2017

Flint Hill – Vienna

Vienna Metro Station • Nutley St • Flint Hill Rd •
James Madison High School • Park St • Tapawingo Rd

Weekday Rush Hour Service Only



FAIRFAX
CONNECTOR

For fares and important information
about the bus system, see the brochure:
Fares, Policies & General Information



FAIRFAX CONNECTOR
BusTracker
REAL-TIME SERVICE INFORMATION
fairfaxconnector.com



703-339-7200



TTY 703-339-1608



@ffxconnector



/fairfaxconnector

- Use exact fare; drivers do not carry change.
- Smoking, eating, drinking, and littering are strictly prohibited.
- Strollers must be folded.
- Use earphones with audio and video devices.
- Service animals are permitted on the bus. Other small animals are permitted only if transported in a closed pet carrier.

All Fairfax Connector buses are wheelchair accessible.

Fairfax County Department of Transportation (FCDOT) ensures nondiscrimination in all programs and activities in accordance with Title VI of the Civil Rights Act of 1964 and the Americans with Disabilities Act (ADA). To request this information in an alternate format, contact FCDOT at 703-877-5600, TTY 711.



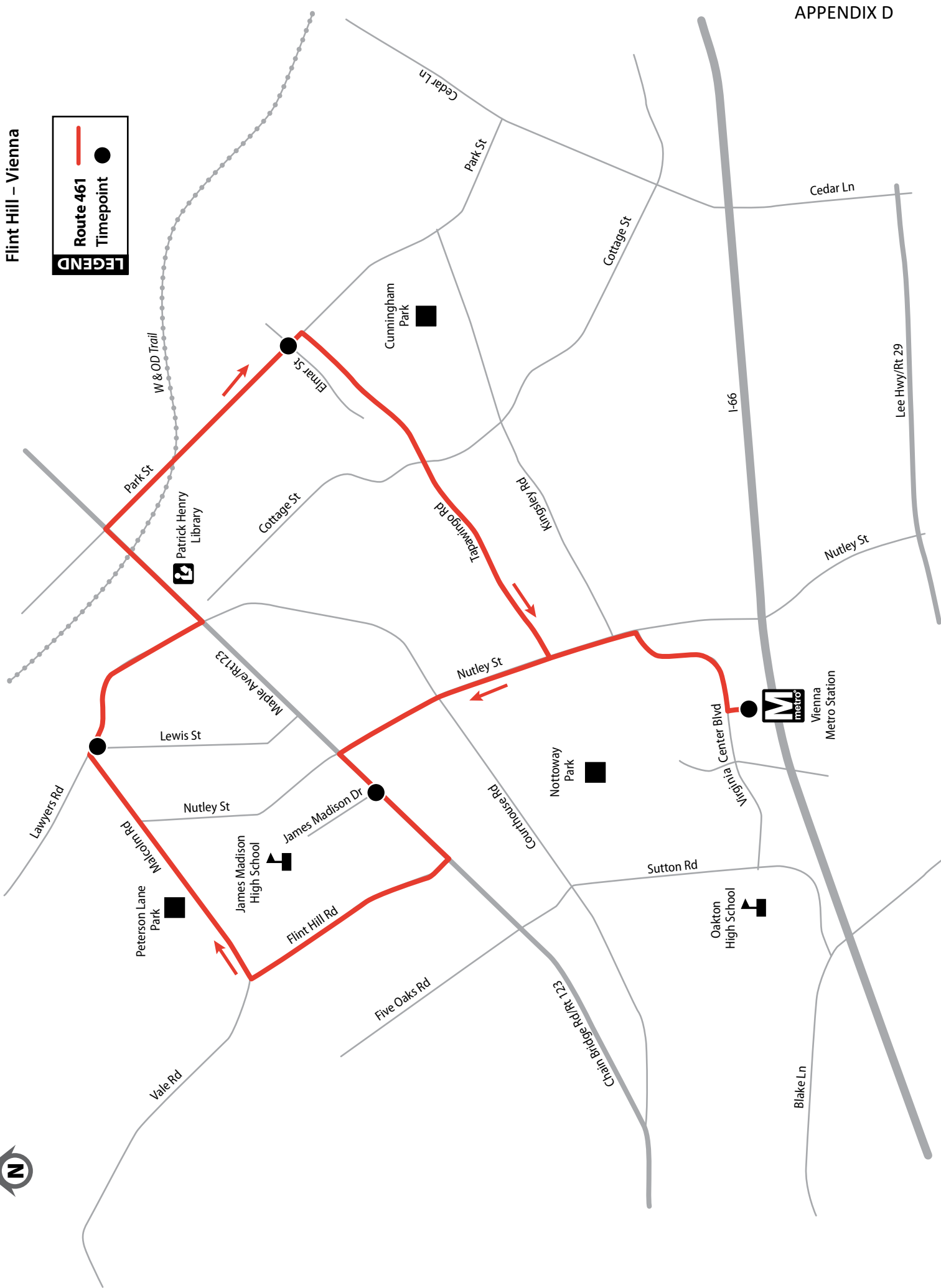
ROUTE 461

Flint Hill – Vienna

Route 461

Timepoint

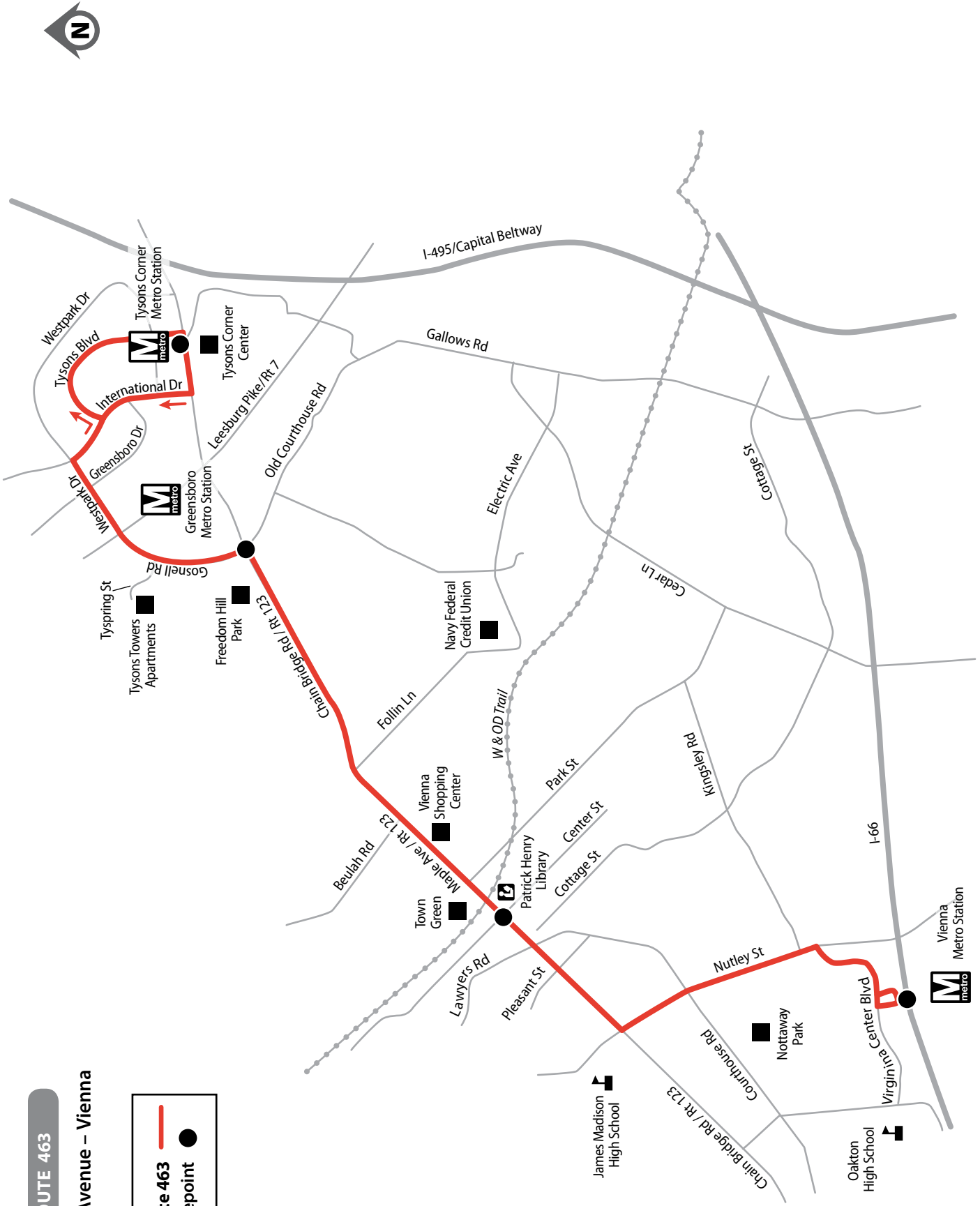
LEGEND



LEGEND

Route 463

Timepoint



463

Effective December 2, 2017

Maple Avenue – Vienna

Vienna Metro Station • Nutley St •
Maple Ave • Chain Bridge Rd • Gosnell Rd •
Tysons Corner Metro Station

Weekday, Saturday & Sunday Service



FAIRFAX
CONNECTOR

For fares and important information
about the bus system, see the brochure:

Fares, Policies & General Information



703-339-7200



TTY 703-339-1608

@ffxconnector



/fairfaxconnector

- Use exact fare; drivers do not carry change.
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 Vienna Metro Station (North side)	 Maple Ave & Center St	 Old Courthouse Rd & Chain Bridge Rd	 Tysons Corner Metro Station (North side)
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Weekday – AM Northbound Service 				
5:05	5:12	5:18	5:26	
5:35	5:42	5:48	5:56	
6:05	6:14	6:23	6:32	
6:35	6:44	6:53	7:02	
7:05	7:14	7:23	7:32	
7:35	7:44	7:53	8:02	
8:05	8:14	8:23	8:32	
8:35	8:44	8:53	9:02	
9:05	9:14	9:22	9:30	
9:35	9:44	9:52	10:00	
10:05	10:14	10:22	10:30	
10:35	10:44	10:52	11:00	
11:05	11:14	11:22	11:30	
11:35	11:44	11:52	12:00 PM	

Weekday – PM Northbound Service 				
12:05	12:14	12:22	12:30	
12:35	12:44	12:52	1:00	
1:05	1:14	1:22	1:30	
1:35	1:44	1:52	2:00	
2:05	2:14	2:22	2:30	
2:35	2:44	2:52	3:00	
3:05	3:15	3:24	3:33	
3:35	3:45	3:54	4:03	
4:00	4:10	4:19	4:28	
4:25	4:35	4:44	4:53	
4:50	5:00	5:09	5:18	
5:15	5:25	5:34	5:48	
5:40	5:50	5:59	6:13	
6:05	6:15	6:23	6:29	
6:30	6:40	6:48	6:54	
7:00	7:10	7:18	7:24	
7:30	7:40	7:48	7:54	
8:00	8:10	8:18	8:24	
8:30	8:40	8:48	8:54	
9:05	9:12	9:18	9:25	
9:30	9:37	9:43	9:50	
10:00	10:07	10:13	10:20	
10:30	10:37	10:43	10:50	
11:00	11:07	11:13	11:20	

 Vienna Metro Station (North side)	 Maple Ave & Center St	 Old Courthouse Rd & Chain Bridge Rd	 Tysons Corner Metro Station (North side)
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Weekday – AM Southbound Service 				
5:45	5:51	5:55	6:00	
6:15	6:24	6:30	6:38	
6:45	6:54	7:00	7:08	
7:15	7:24	7:30	7:38	
7:45	7:54	8:00	8:08	
8:15	8:24	8:30	8:38	
8:45	8:54	9:00	9:08	
9:15	9:23	9:30	9:38	
9:45	9:53	10:00	10:08	
10:15	10:23	10:30	10:38	
10:35	10:43	10:50	10:58	
11:05	11:13	11:20	11:28	
11:35	11:43	11:50	11:58	

Weekday – PM Southbound Service 				
12:05	12:13	12:20	12:28	
12:35	12:43	12:50	12:58	
1:05	1:13	1:20	1:28	
1:35	1:43	1:50	1:58	
2:05	2:13	2:20	2:28	
2:35	2:43	2:50	2:58	
3:05	3:17	3:29	3:38	
3:40	3:52	4:04	4:13	
4:10	4:22	4:34	4:48	
4:35	4:47	4:59	5:20	
5:00	5:12	5:24	5:45	
5:25	5:37	5:49	6:10	
5:55	6:07	6:19	6:40	
6:20	6:29	6:37	6:46	
6:45	6:54	7:02	7:11	
7:10	7:19	7:27	7:36	
7:35	7:44	7:52	8:01	
8:00	8:09	8:17	8:26	
8:30	8:39	8:47	8:56	
9:00	9:07	9:12	9:18	
9:30	9:37	9:42	9:48	
10:00	10:07	10:12	10:18	
10:30	10:37	10:42	10:48	
11:00	11:07	11:12	11:18	
11:30	11:37	11:42	11:48	

 Vienna Metro Station (North side)	 Maple Ave & Center St	 Old Courthouse Rd & Chain Bridge Rd	 Tysons Corner Metro Station (North side)
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Saturday – AM Northbound Service 				
6:00	6:07	6:15	6:26	
7:00	7:07	7:15	7:26	
8:00	8:07	8:15	8:26	
9:00	9:07	9:15	9:26	
10:00	10:07	10:15	10:26	
11:00	11:07	11:15	11:26	

Saturday – PM Northbound Service 				
12:00	12:07	12:15	12:26	
1:00	1:07	1:15	1:26	
2:00	2:07	2:15	2:26	
3:00	3:07	3:15	3:26	
4:00	4:07	4:15	4:26	
5:00	5:07	5:15	5:26	
6:00	6:07	6:15	6:26	
7:00	7:07	7:15	7:26	
8:00	8:07	8:15	8:26	
9:00	9:07	9:15	9:26	
10:00	10:07	10:15	10:26	
11:00	11:07	11:15	11:26	

Sunday – AM Northbound Service 				
8:00	8:07	8:15	8:26	
9:00	9:07	9:15	9:26	
10:00	10:07	10:15	10:26	
11:00	11:07	11:15	11:26	

Sunday – PM Northbound Service 				
12:00	12:07	12:15	12:26	
1:00	1:07	1:15	1:26	
2:00	2:07	2:15	2:26	
3:00	3:07	3:15	3:26	
4:00	4:07	4:15	4:26	
5:00	5:07	5:15	5:26	
6:00	6:07	6:15	6:26	
7:00	7:07	7:15	7:26	
8:00	8:07	8:15	8:26	

 Tysons Corner Metro Station (North side)	 Chain Bridge Rd & Old Courthouse Rd	 Maple Ave & Center St	 Vienna Metro Station (North side)
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Saturday – AM Southbound Service 				
6:30	6:40	6:46	6:54	
7:30	7:40	7:46	7:54	
8:30	8:40	8:46	8:54	
9:30	9:40	9:46	9:54	
10:30	10:40	10:46	10:54	
11:30	11:40	11:46	11:54	

Saturday – PM Southbound Service 				
12:30	12:40	12:46	12:54	
1:30	1:40	1:46	1:54	
2:30	2:40	2:46	2:54	
3:30	3:40	3:46	3:54	
4:30	4:40	4:46	4:54	
5:30	5:40	5:46	5:54	
6:30	6:40	6:46	6:54	
7:30	7:40	7:46	7:54	
8:30	8:40	8:46	8:54	
9:30	9:40	9:46	9:54	
10:30	10:40	10:46	10:54	

Sunday – AM Southbound Service 				
8:30	8:40	8:46	8:54	
9:30	9:40	9:46	9:54	
10:30	10:40	10:46	10:54	
11:30	11:40	11:46	11:54	

Sunday – PM Southbound Service 				
12:30	12:40	12:46	12:54	
1:30	1:40	1:46	1:54	
2:30	2:40	2:46	2:54	
3:30	3:40	3:46	3:54	
4:30	4:40	4:46	4:54	
5:30	5:40	5:46	5:54	
6:30	6:40	6:46	6:54	
7:30	7:40	7:46	7:54	

APPENDIX E

2018 Existing Traffic Counts

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: 100-102 Maple Avenue					DATE: 8/28/2018					SOUTHBOUND ROAD: Maple Avenue 123													
W+A JOB NO: 7541					DAY: Tuesday					NORTHBOUND ROAD: Maple Avenue 123													
INTERSECTION: Route 123 & Center St.					WEATHER: clear					WESTBOUND ROAD: Center Street													
LOCATION: Town of Vienna,VA					COUNTED BY: Luz & Katie					EASTBOUND ROAD: Center Street													
INPUTED BY: agan																							
Time Period	Southbound Maple Avenue 123					Westbound Center Street					Northbound Maple Avenue 123					Eastbound Center Street					North & South	East & West	Total
	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	2	38	1	41		6	2	3	11		3	120	6	129		7	3	4	14		170	25	195
6:15 AM - 6:30 AM	5	43	4	52		3	1	1	5		2	159	4	165		5	5	17	27		217	32	249
6:30 AM - 6:45 AM	3	64	1	68		8	1	3	12		1	229	11	241		6	7	15	28		309	40	349
6:45 AM - 7:00 AM	2	68	9	79		19	14	5	38		1	212	12	225		8	19	13	40		304	78	382
7:00 AM - 7:15 AM	2	108	10	120		20	6	3	29		6	256	5	267		7	25	20	52		387	81	468
7:15 AM - 7:30 AM	13	131	9	153		18	14	9	41		3	278	2	283		10	19	34	63		436	104	540
7:30 AM - 7:45 AM	5	169	12	186		26	13	16	55		4	261	5	270		19	26	26	71		456	126	582
7:45 AM - 8:00 AM	7	166	10	183		27	8	17	52		6	260	6	272		9	36	24	69		455	121	576
8:00 AM - 8:15 AM	7	137	21	165		21	12	7	40		8	210	6	224		18	33	42	93		389	133	522
8:15 AM - 8:30 AM	7	190	12	209		29	16	7	52		4	277	6	287		6	29	34	69		496	121	617
8:30 AM - 8:45 AM	10	146	15	171		42	14	13	69		4	195	4	203		5	22	31	58		374	127	501
8:45 AM - 9:00 AM	3	136	18	157		28	10	3	41		3	273	6	282		5	16	25	46		439	87	526
9:00 AM - 9:15 AM	5	124	11	140		25	8	8	41		1	257	6	264		8	17	34	59		404	100	504
9:15 AM - 9:30 AM	5	144	9	158		22	19	10	51		0	274	2	276		16	22	25	63		434	114	548
9:30 AM - 9:45 AM	9	172	18	199		31	13	8	52		4	258	3	265		16	14	22	52		464	104	568
9:45 AM - 10:00 AM	16	177	6	199		21	19	12	52		6	207	7	220		16	13	19	48		419	100	519
Total	101	2013	166	2280		346	170	125	641		56	3726	91	3873		161	306	385	852		6153	1493	7646
AM One Hour Volumes																							
6:00 AM - 7:00 AM	12	213	15	240	0.76	36	18	12	66	0.43	7	720	33	760	0.79	26	34	49	109	0.68	1000	175	1175
6:15 AM - 7:15 AM	12	283	24	319	0.66	50	22	12	84	0.55	10	856	32	898	0.84	26	56	65	147	0.71	1217	231	1448
6:30 AM - 7:30 AM	20	371	29	420	0.69	65	35	20	120	0.73	11	975	30	1016	0.90	31	70	82	183	0.73	1436	303	1739
6:45 AM - 7:45 AM	22	476	40	538	0.72	83	47	33	163	0.74	14	1007	24	1045	0.92	44	89	93	226	0.80	1583	389	1972
7:00 AM - 8:00 AM	27	574	41	642	0.86	91	41	45	177	0.80	19	1055	18	1092	0.96	45	106	104	255	0.90	1734	432	2166
7:15 AM - 8:15 AM	32	603	52	687	0.92	92	47	49	188	0.85	21	1009	19	1049	0.93	56	114	126	296	0.80	1736	484	2220
7:30 AM - 8:30 AM	26	662	55	743	0.89	103	49	47	199	0.90	22	1008	23	1053	0.92	52	124	126	302	0.81	1796	501	2297
7:45 AM - 8:45 AM	31	639	58	728	0.87	119	50	44	213	0.77	22	942	22	986	0.86	38	120	131	289	0.78	1714	502	2216
8:00 AM - 9:00 AM	27	609	66	702	0.84	120	52	30	202	0.73	19	955	22	996	0.87	34	100	132	266	0.72	1698	468	2166
8:15 AM - 9:15 AM	25	596	56	677	0.81	124	48	31	203	0.74	12	1002	22	1036	0.90	24	84	124	232	0.84	1713	435	2148
8:30 AM - 9:30 AM	23	550	53	626	0.92	117	51	34	202	0.73	8	999	18	1025	0.91	34	77	115	226	0.90			
8:45 AM - 9:45 AM	22	576	56	654	0.82	106	50	29	185	0.89	8	1062	17	1087	0.96	45	69	106	220	0.87			
9:00 AM - 10:00 AM	48	899	77	1024	1.29	169	83	54	306	1.11	18	1464	28	1510	1.34	66	104	156	326	1.29	2534	632	3166
PM 15 Minute Volumes																							
3:00 PM - 3:15 PM	11	301	18	330		14	15	1	30		18	202	7	227		24	16	10	50		557	80	637
3:15 PM - 3:30 PM	22	301	13	336		14	15	12	41		13	247	13	273		15	22	10	47		609	88	697
3:30 PM - 3:45 PM	16	311	14	341		22	21	26	69		6	173	11	190		14	20	12	46		531	115	646
3:45 PM - 4:00 PM	12	330	11	353		14	24	7	45		4	139	2	145		12	22	10	44		498	89	587
4:00 PM - 4:15 PM	13	343	16	372		19	15	11	45		7	199	6	212		16	19	15	50		584	95	679
4:15 PM - 4:30 PM	12	306	14	332		14	20	7	41		5	169	13	187		21	29	11	61		519	102	621
4:30 PM - 4:45 PM	16	331	10	357		16	37	21	74		2	181	6	189		8	23	15	46		546	120	666
4:45 PM - 5:00 PM	19	333	13	365		29	36	9	74		7	188	13	208		25	33	11	69		573	143	716
5:00 PM - 5:15 PM	12	330	13	355		14	37	13	64		5	210	14	229		26	37	25	88		584	152	736
5:15 PM - 5:30 PM	14	340	17	371		15	32	10	57		11	225	7	243		25	29	7	61		614	118	732
5:30 PM - 5:45 PM	14	318	15	347		17	38	9	64		8	172	13	193		24	29	17	70		540	134	674
5:45 PM - 6:00 PM	11	306	18	335		27	37	10	74		17	192	10	219		20	39	11	70		554	144	698
6:00 PM - 6:15 PM	13	365	35	413		31	30	17	78		10	173	8	191		12	37	10	59		604	137	741
6:15 PM - 6:30 PM	14	359	13	386		20	18	16	54		7	169	8	184		12	27	16	55		570	109	679
6:30 PM - 6:45 PM	12	336	21	369		26	23	14	63		9	157	8	174		6	14	10	30		543	93	636
6:45 PM - 7:00 PM	21	326	31	378		22	29	10	61		11	172	9	192		15	18	9	42		570	103	673
Total	171	3993	216	4380		250	352	147	749		99	2207	115	2421		210	334	157	701		6801	1450	8251
PM One Hour Volumes																							
3:00 PM - 4:00 PM	61	1243	56	1360	0.96	64	75	46	185	0.67	41	761	33	835	0.76	65	80	42	187	0.94	2195	372	2567
3:15 PM - 4:15 PM	63	1285	54	1402	0.94	69	75	56	200	0.72	30	758	32	820	0.75	57	83	47	187	0.94	2222	387	2609
3:30 PM - 4:30 PM	53	1290	55	1398	0.94	69	80	51	200	0.72	22	680	32	734	0.87	63	90	48	201	0.82	2132	401	2533
3:45 PM - 4:45 PM	53	1310	51	1414	0.95	63	96	46	205	0.69	18	688	27	733	0.86	57	93	51	201	0.82	2147	406	2553
4:00 PM - 5:00 PM	60	1313	53	1426	0.96	78	108	48	234	0.79	21	737	38	796	0.94	70	104	52	226	0.82	2222	460	2682
4:15 PM - 5:15 PM	59	1300	50	1409	0.97	73	130	50	253	0.85	19	748	46	813	0.89	80	122	62	264	0.75	2222	517	2739
4:30 PM - 5:30 PM	61	1334	53	1448	0.98	74	142	53	269	0.91	25	804	40	869	0.89	84	122	58	264	0.75	2317	533	2850
4:45 PM - 5:45 PM	59	1321	58	1438	0.97	75	143	41	259	0.88	31	795	47	873	0.90	100	128	60	288	0.82	2311	547	2858
5:00 PM - 6:00 PM	51	1294	63	1408	0.95	73	144	42	259	0.88	41	799	44	884	0.91	95	134	60	289	0.82	2292	548	2840
5:15 PM - 6:15 PM	52	1329	85	1466	0.89	90	137	46	273	0.88	46	762	38	846	0.87	81	134	45	260	0.93	2312	533	2845
5:30 PM - 6:30 PM	52	1348	81	1481	0.90	95	123	52	270	0.87	42	706	39	787	0.90	68	132	54	254	0.91	2268	524	2792
5:45 PM - 6:45 PM	50	1366	87	1503	0.91	104	108	57	269	0.86	43	691	34	768	0.88	50	117	47	214	0.76	2271	483	2754
6:00 PM - 7:00 PM	60	1386	100	1546	0.94	99	100	57	256	0.82	37	671	33										

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - Total Vehicles

PROJECT: 100-102 Maple Avenue W+A JOB NO: 7541 INTERSECTION: Route 123 & Center St. LOCATION: Town of Vienna,VA					DATE: 9/1/1988 DAY: Saturday WEATHER: clear COUNTED BY: Luz & Katy INPUTED BY: agan					SOUTHBOUND ROAD: Maple Avenue - 123 NORTHBOUND ROAD: Maple Avenue - 123 WESTBOUND ROAD: Center Street EASTBOUND ROAD: Center Street													
Time Period	Southbound Maple Avenue - 123				PHF	Westbound Center Street				PHF	Northbound Maple Avenue - 123				PHF	Eastbound Center Street				PHF	North & South	East & West	Total
	Right	Thru	Left	Total		Right	Thru	Left	Total		Right	Thru	Left	Total		Right	Thru	Left	Total				
15 Minute Volumes																							
10:00 AM - 10:15 AM	14	182	14	210		17	25	11	53		8	209	10	227		15	14	24	53		437	106	543
10:15 AM - 10:30 AM	9	188	14	211		17	14	9	40		17	226	16	259		21	16	20	57		470	97	567
10:30 AM - 10:45 AM	15	189	15	219		25	13	10	48		5	220	11	236		16	22	15	53		455	101	556
10:45 AM - 11:00 AM	11	198	10	219		24	26	15	65		13	250	16	279		29	21	19	69		498	134	632
11:00 AM - 11:15 AM	14	269	19	302		16	19	8	43		10	287	16	313		15	17	28	60		615	103	718
11:15 AM - 11:30 AM	18	206	8	232		33	19	15	67		14	243	20	277		22	23	27	72		509	139	648
11:30 AM - 11:45 AM	12	265	23	300		29	20	17	66		12	256	15	283		14	23	34	71		583	137	720
11:45 AM - 12:00 PM	13	247	6	266		21	25	13	59		11	250	18	279		20	27	33	80		545	139	684
12:00 PM - 12:15 PM	9	281	11	301		17	21	8	46		2	281	14	297		23	22	25	70		598	116	714
12:15 PM - 12:30 PM	26	251	7	284		18	25	8	51		8	260	19	287		21	18	27	66		571	117	688
12:30 PM - 12:45 PM	11	174	7	192		15	28	10	53		8	263	17	288		18	16	22	56		480	109	589
12:45 PM - 1:00 PM	20	259	10	289		20	13	6	39		11	293	15	319		19	26	24	69		608	108	716
1:00 PM - 1:15 PM	24	194	17	235		22	24	8	54		10	241	14	265		28	20	30	78		500	132	632
1:15 PM - 1:30 PM	11	257	14	282		9	20	7	36		7	264	16	287		20	10	24	54		569	90	659
1:30 PM - 1:45 PM	12	245	7	264		20	17	13	50		12	276	24	312		21	20	36	77		576	127	703
1:45 PM - 2:00 PM	13	189	10	212		17	11		28		10	263	13	286		29	22	23	74		498	102	600
2:00 PM - 2:15 PM	14	207	16	237		12	15	7	34		13	274	18	305		17	21	19	57		542	91	633
2:15 PM - 2:30 PM	18	180	12	210		20	16	6	42		5	260	14	279		28	14	28	70		489	112	601
2:30 PM - 2:45 PM	8	226	17	251		12	11	8	31		14	237	14	265		29	13	18	60		516	91	607
2:45 PM - 3:00 PM	19	175	9	203		17	13	6	36		4	227	15	246		23	17	17	57		449	93	542
Total	291	4382	246	4919		381	375	185	941		194	5080	315	5589		428	382	493	1303		10508	2244	12752
One Hour Volumes																							
10:00 AM - 11:00 AM	49	757	53	859	0.9806	83	78	45	206	0.7923	43	905	53	1001	0.897	81	73	78	232	0.8406	1860	438	2298
10:15 AM - 11:15 AM	49	844	58	951	0.7873	82	72	42	196	0.7538	45	983	59	1087	0.8682	81	76	82	239	0.8659	2038	435	2473
10:30 AM - 11:30 AM	58	862	52	972	0.8046	98	77	48	223	0.8321	42	1000	63	1105	0.8826	82	83	89	254	0.8819	2077	477	2554
10:45 AM - 11:45 AM	55	938	60	1053	0.8717	102	84	55	241	0.8993	49	1036	67	1152	0.9201	80	84	108	272	0.9444	2205	513	2718
11:00 AM - 12:00 PM	57	987	56	1100	0.9106	99	83	53	235	0.8769	47	1036	69	1152	0.9201	71	90	122	283	0.8844	2252	518	2770
11:15 AM - 12:15 PM	52	999	48	1099	0.9128	100	85	53	238	0.8881	39	1030	67	1136	0.9562	79	95	119	293	0.9156	2235	531	2766
11:30 AM - 12:30 PM	60	1044	47	1151	0.956	85	91	46	222	0.8409	33	1047	66	1146	0.9646	78	90	119	287	0.8969	2297	509	2806
11:45 AM - 12:45 PM	59	953	31	1043	0.8663	71	99	39	209	0.8856	29	1054	68	1151	0.9689	82	83	107	272	0.85	2194	481	2675
12:00 PM - 1:00 PM	66	965	35	1066	0.8854	70	87	32	189	0.8915	29	1097	65	1191	0.9334	81	82	98	261	0.9321	2257	450	2707
12:15 PM - 1:15 PM	81	878	41	1000	0.8651	75	90	32	197	0.912	37	1057	65	1159	0.9083	86	80	103	269	0.8622	2159	466	2625
12:30 PM - 1:30 PM	66	884	48	998	0.8633	66	85	31	182	0.8426	36	1061	62	1159	0.9083	85	72	100	257	0.8237	2157	439	2596
12:45 PM - 1:45 PM	67	955	48	1070	0.9256	71	74	34	179	0.8287	40	1074	69	1183	0.9271	88	76	114	278	0.891	2253	457	2710
1:00 PM - 2:00 PM	60	885	48	993	0.8803	68	72	28	168	0.7778	39	1044	67	1150	0.9215	98	72	113	283	0.9071	2143	451	2594
1:15 PM - 2:15 PM	50	898	47	995	0.8821	58	63	27	148	0.74	42	1077	71	1190	0.9535	87	73	102	262	0.8506	2185	410	2595
1:30 PM - 2:30 PM	57	821	45	923	0.8741	69	59	26	154	0.77	40	1073	69	1182	0.9471	95	77	106	278	0.9026	2105	432	2537
1:45 PM - 2:45 PM	53	802	55	910	0.9064	61	53	21	135	0.8036	42	1034	59	1135	0.9303	103	70	88	261	0.8818	2045	396	2441
2:00 PM - 3:00 PM	59	788	54	901	0.8974	61	55	27	143	0.8512	36	998	61	1095	0.8975	97	65	82	244	0.8714	1996	387	2383

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: 100-102 Maple Avenue					DATE: 8/28/2018					SOUTHBOUND ROAD: Church Street													
W+A JOB NO: 7541					DAY: Tuesday					NORTHBOUND ROAD: Church Street													
INTERSECTION: Center St. & Church St.					WEATHER: clear					WESTBOUND ROAD: Center Street													
LOCATION: Town of Vienna,VA					COUNTED BY: Ali & Meli					EASTBOUND ROAD: Center Street													
INPUT BY: agan																							
Time Period	Southbound Church Street					Westbound Center Street					Northbound Church Street					Eastbound Center Street					North & South	East & West	Total
	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	3	6	9	18		8	2	1	11		4	14	0	18		0	6	3	9		36	20	56
6:15 AM - 6:30 AM	1	6	6	13		5	4	2	11		12	13	0	25		0	15	2	17		38	28	66
6:30 AM - 6:45 AM	3	4	7	14		10	3	3	16		10	20	1	31		0	12	3	15		45	31	76
6:45 AM - 7:00 AM	3	9	6	18		13	11	6	30		12	29	0	41		0	29	4	33		59	63	122
7:00 AM - 7:15 AM	2	7	15	24		6	8	1	15		23	45	1	69		1	22	2	25		93	40	133
7:15 AM - 7:30 AM	1	23	11	35		11	13	7	31		18	54	0	72		0	35	5	40		107	71	178
7:30 AM - 7:45 AM	1	35	18	54		12	6	5	23		13	57	1	71		1	37	16	54		125	77	202
7:45 AM - 8:00 AM	1	30	15	46		8	10	3	21		20	64	0	84		0	49	20	69		130	90	220
8:00 AM - 8:15 AM	4	16	25	45		10	14	4	28		23	82	0	105		0	43	14	57		150	85	235
8:15 AM - 8:30 AM	5	25	20	50		16	10	3	29		12	59	1	72		0	48	8	56		122	85	207
8:30 AM - 8:45 AM	1	18	21	40		17	8	6	31		17	67	0	84		0	34	10	44		124	75	199
8:45 AM - 9:00 AM	5	23	13	41		13	7	5	25		18	71	1	90		2	35	17	54		131	79	210
9:00 AM - 9:15 AM	3	18	8	29		12	6	7	25		17	71	0	88		2	34	7	43		117	68	185
9:15 AM - 9:30 AM	2	23	19	44		10	15	7	32		20	62	0	82		2	28	5	35		126	67	193
9:30 AM - 9:45 AM	2	26	12	40		16	10	6	32		21	60	1	82		3	27	11	41		122	73	195
9:45 AM - 10:00 AM	5	23	19	47		18	16	5	39		16	52	2	70		2	19	6	27		117	66	183
Total	42	292	224	558		185	143	71	399		256	820	8	1084		13	473	133	619		1642	1018	2660
AM One Hour Volumes																							
6:00 AM - 7:00 AM	10	25	28	63	0.88	36	20	12	68	0.57	38	76	1	115	0.70	0	62	12	74	0.56	178	142	320
6:15 AM - 7:15 AM	9	26	34	69	0.72	34	26	12	72	0.60	57	107	2	166	0.60	1	78	11	90	0.68	235	162	397
6:30 AM - 7:30 AM	9	43	39	91	0.65	40	35	17	92	0.74	63	148	2	213	0.74	1	98	14	113	0.71	304	205	509
6:45 AM - 7:45 AM	7	74	50	131	0.61	42	38	19	99	0.80	66	185	2	253	0.88	2	123	27	152	0.70	384	251	635
7:00 AM - 8:00 AM	5	95	59	159	0.74	37	37	16	90	0.73	74	220	2	296	0.88	2	143	43	188	0.68	455	278	733
7:15 AM - 8:15 AM	7	104	69	180	0.83	41	43	19	103	0.83	74	257	1	332	0.79	1	164	55	220	0.80	512	323	835
7:30 AM - 8:30 AM	11	106	78	195	0.90	46	40	15	101	0.87	68	262	2	332	0.79	1	177	58	236	0.86	527	337	864
7:45 AM - 8:45 AM	11	89	81	181	0.91	51	42	16	109	0.88	72	272	1	345	0.82	0	174	52	226	0.82	526	335	861
8:00 AM - 9:00 AM	15	82	79	176	0.88	56	39	18	113	0.91	70	279	2	351	0.84	2	160	49	211	0.93	527	324	851
8:15 AM - 9:15 AM	14	84	62	160	0.80	58	31	21	110	0.89	64	268	2	334	0.93	4	151	42	197	0.88	494	307	801
8:30 AM - 9:30 AM	11	82	61	154	0.88	52	36	25	113	0.88	72	271	1	344	0.96	6	131	39	176	0.81			
8:45 AM - 9:45 AM	12	90	52	154	0.88	51	38	25	114	0.89	76	264	2	342	0.95	9	124	40	173	0.80			
9:00 AM - 10:00 AM	18	131	92	241	1.28	86	62	36	184	1.18	109	383	4	496	1.38	11	177	56	244	1.13	737	428	1165
PM 15 Minute Volumes																							
3:00 PM - 3:15 PM	5	49	16	70		12	16	6	34		23	65	2	90		0	9	3	12		160	46	206
3:15 PM - 3:30 PM	7	47	20	74		21	14	11	46		17	48	4	69		0	14	2	16		143	62	205
3:30 PM - 3:45 PM	13	49	29	91		15	26	9	50		13	34	1	48		2	14	4	20		139	70	209
3:45 PM - 4:00 PM	12	43	19	74		12	17	13	42		11	29	2	42		3	23	1	27		116	69	185
4:00 PM - 4:15 PM	11	51	25	87		13	18	7	38		11	36	2	49		3	16	3	22		136	60	196
4:15 PM - 4:30 PM	4	61	29	94		10	25	4	39		18	42	2	62		0	16	4	20		156	59	215
4:30 PM - 4:45 PM	17	60	14	91		19	26	12	57		14	40	2	56		1	21	6	28		147	85	232
4:45 PM - 5:00 PM	17	57	32	106		16	38	8	62		9	48	4	61		2	29	5	36		167	98	265
5:00 PM - 5:15 PM	14	58	41	113		14	33	15	62		14	36	4	54		0	35	1	36		167	98	265
5:15 PM - 5:30 PM	17	83	27	127		14	36	6	56		5	35	9	49		1	25	6	32		176	88	264
5:30 PM - 5:45 PM	17	61	36	114		21	39	8	68		16	47	2	65		2	21	4	27		179	95	274
5:45 PM - 6:00 PM	14	77	34	125		13	41	5	59		13	29	3	45		6	34	5	45		170	104	274
6:00 PM - 6:15 PM	24	65	20	109		21	32	10	63		16	40	2	58		2	39	5	46		167	109	276
6:15 PM - 6:30 PM	17	50	22	89		12	20	10	42		13	44	6	63		0	20	6	26		152	68	220
6:30 PM - 6:45 PM	9	50	20	79		15	23	10	48		14	23	2	39		0	11	2	13		118	61	179
6:45 PM - 7:00 PM	13	53	26	92		25	25	7	57		13	27	2	42		4	14	7	25		134	82	216
Total	174	726	326	1226		193	356	102	651		156	447	40	643		21	281	54	356		1869	1007	2876
PM One Hour Volumes																							
3:00 PM - 4:00 PM	37	188	84	309	0.85	60	73	39	172	0.86	64	176	9	249	0.69	5	60	10	75	0.69	558	247	805
3:15 PM - 4:15 PM	43	190	93	326	0.90	61	75	40	176	0.88	52	147	9	208	0.75	8	67	10	85	0.79	534	261	795
3:30 PM - 4:30 PM	40	204	102	346	0.92	50	86	33	169	0.85	53	141	7	201	0.81	8	69	12	89	0.82	547	258	805
3:45 PM - 4:45 PM	44	215	87	346	0.92	54	86	36	176	0.77	54	147	8	209	0.84	7	76	14	97	0.87	555	273	828
4:00 PM - 5:00 PM	49	229	100	378	0.89	58	107	31	196	0.79	52	166	10	228	0.92	6	82	18	106	0.74	606	302	908
4:15 PM - 5:15 PM	52	236	116	404	0.89	59	122	39	220	0.89	55	166	12	233	0.94	3	101	16	120	0.83	637	340	977
4:30 PM - 5:30 PM	65	258	114	437	0.86	63	133	41	237	0.96	42	159	19	220	0.90	4	110	18	132	0.92	657	369	1026
4:45 PM - 5:45 PM	65	259	136	460	0.91	65	146	37	248	0.91	44	166	19	229	0.88	5	110	16	131	0.91	689	379	1068
5:00 PM - 6:00 PM	62	279	138	479	0.94	62	149	34	245	0.90	48	147	18	213	0.82	9	115	16	140	0.78	692	385	1077
5:15 PM - 6:15 PM	72	286	117	475	0.94	69	148	29	246	0.90	50	151	16	217	0.83	11	119	20	150	0.82	692	396	1088
5:30 PM - 6:30 PM	72	253	112	437	0.87	67	132	33	232	0.85	58	160	13	231	0.89	10	114	20	144	0.78	668	376	1044
5:45 PM - 6:45 PM	64	242	96	402	0.80	61	116	35	212	0.84	56	136	13	205	0.81	8	104	18	130	0.71	607	342	949
6:00 PM - 7:00 PM	63	218	88	369	0.85	73	100	37	210	0.83	56	134	12	202	0.80	6	84	20	110	0.60	571	320	891

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - Total Vehicles

PROJECT: 100-102 Maple Avenue W+A JOB NO: 7541 INTERSECTION: Center St. & Church St. LOCATION: Town of Vienna,VA																			DATE: 9/8/2018 DAY: Saturday WEATHER: clear COUNTED BY: Ali & Meli INPUTED BY: agan										SOUTHBOUND ROAD: Church Street NORTHBOUND ROAD: Church Street WESTBOUND ROAD: Center Street EASTBOUND ROAD: Center Street											
Time Period	Southbound Church Street					Westbound Center Street					Northbound Church Street					Eastbound Center Street					North & South	East & West	Total																	
	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF																				
15 Minute Volumes																																								
10:00 AM - 10:15 AM	7	36	17	60		22	17	8	47		10	60	1	71		2	18	6	26		131	73	204																	
10:15 AM - 10:30 AM	6	37	27	70		15	14	11	40		11	40	2	53		3	22	9	34		123	74	197																	
10:30 AM - 10:45 AM	4	27	19	50		15	11	10	36		12	56	4	72		3	16	6	25		122	61	183																	
10:45 AM - 11:00 AM	9	34	27	70		31	16	7	54		15	71	3	89		3	17	6	26		159	80	239																	
11:00 AM - 11:15 AM	7	54	26	87		23	12	11	46		16	56	4	76		4	16	8	28		163	74	237																	
11:15 AM - 11:30 AM	7	47	21	75		24	23	10	57		28	52	7	87		2	24	6	32		162	89	251																	
11:30 AM - 11:45 AM	12	46	22	80		26	16	7	49		42	71	2	115		1	23	13	37		195	86	281																	
11:45 AM - 12:00 PM	6	50	32	88		29	19	14	62		33	56	4	93		5	15	3	23		181	85	266																	
12:00 PM - 12:15 PM	5	48	30	83		24	9	14	47		23	58	12	93		6	20	3	29		176	76	252																	
12:15 PM - 12:30 PM	12	23	16	51		28	26	13	67		15	52	6	73		9	25	4	38		124	105	229																	
12:30 PM - 12:45 PM	5	50	23	78		28	18	13	59		12	54	4	70		7	12	4	23		148	82	230																	
12:45 PM - 1:00 PM	15	45	31	91		25	16	18	59		19	57	6	82		3	20	4	27		173	86	259																	
1:00 PM - 1:15 PM	6	50	22	78		23	18	13	54		25	59	2	86		1	18	5	24		164	78	242																	
1:15 PM - 1:30 PM	13	52	18	83		21	13	8	42		21	72	10	103		4	19	7	30		186	72	258																	
1:30 PM - 1:45 PM	5	38	26	69		21	18	13	52		24	41	4	69		4	18	6	28		138	80	218																	
1:45 PM - 2:00 PM	6	55	25	86		14	11	10	35		12	56	1	69		5	25	3	33		155	68	223																	
2:00 PM - 2:15 PM	10	44	18	72		24	13	11	48		15	40	4	59		4	16	5	25		131	73	204																	
2:15 PM - 2:30 PM	4	42	25	71		22	18	14	54		10	49	2	61		2	17	4	23		132	77	209																	
2:30 PM - 2:45 PM	7	50	27	84		17	11	8	36		16	63	4	83			14	1	15		167	51	218																	
2:45 PM - 3:00 PM	3	42	19	64		16	15	15	46		14	47	2	63		1	25	3	29		127	75	202																	
Total	149	870	471	1490		448	314	228	990		373	1110	84	1567		69	380	106	555		3057	1545	4602																	
One Hour Volumes																																								
10:00 AM - 11:00 AM	26	134	90	250	0.8929	83	58	36	177	0.8194	48	227	10	285	0.8006	11	73	27	111	0.8162	535	288	823																	
10:15 AM - 11:15 AM	26	152	99	277	0.796	84	53	39	176	0.8148	54	223	13	290	0.8146	13	71	29	113	0.8309	567	289	856																	
10:30 AM - 11:30 AM	27	162	93	282	0.8103	93	62	38	193	0.8465	71	235	18	324	0.9101	12	73	26	111	0.8672	606	304	910																	
10:45 AM - 11:45 AM	35	181	96	312	0.8966	104	67	35	206	0.9035	101	250	16	367	0.7978	10	80	33	123	0.8311	679	329	1008																	
11:00 AM - 12:00 PM	32	197	101	330	0.9375	102	70	42	214	0.8629	119	235	17	371	0.8065	12	78	30	120	0.8108	701	334	1035																	
11:15 AM - 12:15 PM	30	191	105	326	0.9261	103	67	45	215	0.8669	126	237	25	388	0.8435	14	82	25	121	0.8176	714	336	1050																	
11:30 AM - 12:30 PM	35	167	100	302	0.858	107	70	48	225	0.8396	113	237	24	374	0.813	21	83	23	127	0.8355	676	352	1028																	
11:45 AM - 12:45 PM	28	171	101	300	0.8523	109	72	54	235	0.8769	83	220	26	329	0.8844	27	72	14	113	0.7434	629	348	977																	
12:00 PM - 1:00 PM	37	166	100	303	0.8324	105	69	58	232	0.8657	69	221	28	318	0.8548	25	77	15	117	0.7697	621	349	970																	
12:15 PM - 1:15 PM	38	168	92	298	0.8187	104	78	57	239	0.8918	71	222	18	311	0.9041	20	75	17	112	0.7368	609	351	960																	
12:30 PM - 1:30 PM	39	197	94	330	0.9066	97	65	52	214	0.9068	77	242	22	341	0.8277	15	69	20	104	0.8667	671	318	989																	
12:45 PM - 1:45 PM	39	185	97	321	0.8819	90	65	52	207	0.8771	89	229	22	340	0.8252	12	75	22	109	0.9083	661	316	977																	
1:00 PM - 2:00 PM	30	195	91	316	0.9186	79	60	44	183	0.8472	82	228	17	327	0.7937	14	80	21	115	0.8712	643	298	941																	
1:15 PM - 2:15 PM	34	189	87	310	0.9012	80	55	42	177	0.851	72	209	19	300	0.7282	17	78	21	116	0.8788	610	293	903																	
1:30 PM - 2:30 PM	25	179	94	298	0.8663	81	60	48	189	0.875	61	186	11	258	0.9348	15	76	18	109	0.8258	556	298	854																	
1:45 PM - 2:45 PM	27	191	95	313	0.9099	77	53	43	173	0.8009	53	208	11	272	0.8193	11	72	13	96	0.7273	585	269	854																	
2:00 PM - 3:00 PM	24	178	89	291	0.8661	79	57	48	184	0.8519	55	199	12	266	0.8012	7	72	13	92	0.7931	557	276	833																	

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - All Vehicles

PROJECT: 100-102 Maple Avenue					DATE: 8/28/2018					SOUTHBOUND ROAD: Site Entrance													
W+A JOB NO: 7541					DAY: Tuesday					NORTHBOUND ROAD: Driveway													
INTERSECTION: Center St. & Site Entr.					WEATHER: clear					WESTBOUND ROAD: Center Street													
LOCATION: Town of Vienna,VA					COUNTED BY: Laura					EASTBOUND ROAD: Center Street													
INPUTED BY: agan																							
Time Period	Southbound Site Entrance					Westbound Center Street					Northbound Driveway					Eastbound Center Street					North South	East West	Total
	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF	Right	Thru	Left	Total	PHF			
AM 15 Minute Volumes																							
6:00 AM - 6:15 AM	0	0	0	0	0	0	6	0	6		0	0	2	2		3	15	0	18		2	24	26
6:15 AM - 6:30 AM	0	0	0	0	0	0	11	0	11		0	0	1	1		4	27	0	31		1	42	43
6:30 AM - 6:45 AM	0	0	0	0	0	0	14	0	14		6	0	1	7		5	25	0	30		7	44	51
6:45 AM - 7:00 AM	0	0	0	0	0	0	29	0	29		1	0	1	2		3	40	0	43		2	72	74
7:00 AM - 7:15 AM	0	0	0	0	0	0	13	0	13		7	0	3	10		11	52	0	63		10	76	86
7:15 AM - 7:30 AM	0	0	0	0	0	0	27	1	28		5	0	3	8		8	50	0	58		8	86	94
7:30 AM - 7:45 AM	0	0	0	0	0	0	21	1	22		9	0	4	13		8	58	0	66		13	88	101
7:45 AM - 8:00 AM	0	0	0	0	0	0	16	2	18		3	0	2	5		2	75	0	77		5	95	100
8:00 AM - 8:15 AM	0	0	0	0	0	0	24	0	24		9	0	5	14		19	93	0	112		14	136	150
8:15 AM - 8:30 AM	0	0	0	0	0	1	27	0	28		1	0	4	5		5	75	0	80		5	108	113
8:30 AM - 8:45 AM	0	0	1	1		1	29	1	31		2	0	4	6		7	62	0	69		7	100	107
8:45 AM - 9:00 AM	0	0	0	0	0	0	17	3	20		2	0	4	6		2	55	0	57		6	77	83
9:00 AM - 9:15 AM	0	0	0	0	0	0	19	0	19		4	0	1	5		3	59	0	62		5	81	86
9:15 AM - 9:30 AM	0	0	0	0	0	0	29	2	31		5	0	6	11		5	65	0	70		11	101	112
9:30 AM - 9:45 AM	0	0	0	0	0	0	27	1	28		2	0	3	5		6	49	0	55		5	83	88
9:45 AM - 10:00 AM	0	0	0	0	0	0	37	3	40		4	0	4	8		1	50	0	51		8	91	99
Total	0	0	1	1		2	346	14	362		60	0	48	108		92	850	0	942		109	1304	1413
AM One Hour Volumes																							
6:00 AM - 7:00 AM	0	0	0	0	0.00	0	60	0	60	0.52	7	0	5	12	0.43	15	107	0	122	0.71	12	182	194
6:15 AM - 7:15 AM	0	0	0	0	0.00	0	67	0	67	0.58	14	0	6	20	0.50	23	144	0	167	0.66	20	234	254
6:30 AM - 7:30 AM	0	0	0	0	0.00	0	83	1	84	0.72	19	0	8	27	0.68	27	167	0	194	0.77	27	278	305
6:45 AM - 7:45 AM	0	0	0	0	0.00	0	90	2	92	0.79	22	0	11	33	0.63	30	200	0	230	0.87	33	322	355
7:00 AM - 8:00 AM	0	0	0	0	0.00	0	77	4	81	0.72	24	0	12	36	0.69	29	235	0	264	0.86	36	345	381
7:15 AM - 8:15 AM	0	0	0	0	0.00	0	88	4	92	0.82	26	0	14	40	0.71	37	276	0	313	0.70	40	405	445
7:30 AM - 8:30 AM	0	0	0	0	0.00	1	88	3	92	0.82	22	0	15	37	0.66	34	301	0	335	0.75	37	427	464
7:45 AM - 8:45 AM	0	0	1	1	0.25	2	96	3	101	0.81	15	0	15	30	0.54	33	305	0	338	0.75	31	439	470
8:00 AM - 9:00 AM	0	0	1	1	0.25	2	97	4	103	0.83	14	0	17	31	0.55	33	285	0	318	0.71	32	421	453
8:15 AM - 9:15 AM	0	0	1	1	0.25	2	92	4	98	0.79	9	0	13	22	0.92	17	251	0	268	0.84	23	366	389
8:30 AM - 9:30 AM	0	0	1	1	0.25	1	94	6	101	0.81	13	0	15	28	0.64	17	241	0	258	0.92			
8:45 AM - 9:45 AM	0	0	0	0	0.00	0	92	6	98	0.79	13	0	14	27	0.61	16	228	0	244	0.87			
9:00 AM - 10:00 AM	0	0	1	1	0.25	1	158	10	169	1.06	19	0	22	41	0.93	24	340	0	364	1.30	42	533	575
PM 15 Minute Volumes																							
3:00 PM - 3:15 PM	0	0	0	0	0	0	25	1	26		4	0	2	6		3	44	0	47		6	73	79
3:15 PM - 3:30 PM	0	0	0	0	0	1	45	2	48		3	0	3	6		4	41	0	45		6	93	99
3:30 PM - 3:45 PM	1	0	0	1		0	45	5	50		4	0	5	9		2	52	0	54		10	104	114
3:45 PM - 4:00 PM	0	0	0	0	0	0	39	1	40		1	0	5	6		1	47	0	48		6	88	94
4:00 PM - 4:15 PM	0	0	0	0	0	0	28	2	30		2	0	4	6		0	54	0	54		6	84	90
4:15 PM - 4:30 PM	0	0	0	0	0	0	42	4	46		2	0	0	2		2	59	0	61		2	107	109
4:30 PM - 4:45 PM	0	0	0	0	0	0	48	2	50		5	0	2	7		2	44	1	47		7	97	104
4:45 PM - 5:00 PM	0	0	2	2		0	66	2	68		1	0	1	2		1	64	0	65		4	133	137
5:00 PM - 5:15 PM	0	0	0	0	0	0	55	2	57		1	0	1	2		3	83	0	86		2	143	145
5:15 PM - 5:30 PM	0	0	0	0	0	1	49	1	51		2	0	1	3		4	62	0	66		3	117	120
5:30 PM - 5:45 PM	0	0	0	0	0	0	61	0	61		3	0	4	7		3	77	0	80		7	141	148
5:45 PM - 6:00 PM	0	0	0	0	0	0	62	1	63		2	0	2	4		7	88	0	95		4	158	162
6:00 PM - 6:15 PM	0	0	0	0	0	0	54	1	55		1	0	3	4		2	73	3	78		4	133	137
6:30 PM - 6:45 PM	0	0	0	0	0	0	38	1	39		3	0	0	3		0	66	0	66		3	105	108
6:45 PM - 7:00 PM	0	0	0	0	0	0	41	1	42		4	0	1	5		4	38	1	43		5	85	90
8:15 AM - 8:30 AM	0	0	0	0	0	1	58	2	61		1	0	3	4		2	61	0	63		4	124	128
Total	0	0	2	2		2	602	19	623		27	0	22	49		30	769	5	804		51	1427	1478
PM One Hour Volumes																							
3:00 PM - 4:00 PM	1	0	0	1	0.25	1	154	9	164	0.82	12	0	15	27	0.75	10	184	0	194	0.90	28	358	386
3:15 PM - 4:15 PM	1	0	0	1	0.25	1	157	10	168	0.84	10	0	17	27	0.75	7	194	0	201	0.93	28	369	397
3:30 PM - 4:30 PM	1	0	0	1	0.25	0	154	12	166	0.83	9	0	14	23	0.64	5	212	0	217	0.89	24	383	407
3:45 PM - 4:45 PM	0	0	0	0	0.00	0	157	9	166	0.83	10	0	11	21	0.75	5	204	1	210	0.86	21	376	397
4:00 PM - 5:00 PM	0	0	2	2	0.25	0	184	10	194	0.71	10	0	7	17	0.61	5	221	1	227	0.87	19	421	440
4:15 PM - 5:15 PM	0	0	2	2	0.25	0	211	10	221	0.81	9	0	4	13	0.46	8	250	1	259	0.75	15	480	495
4:30 PM - 5:30 PM	0	0	2	2	0.25	1	218	7	226	0.83	9	0	5	14	0.50	10	253	1	264	0.77	16	490	506
4:45 PM - 5:45 PM	0	0	2	2	0.25	1	231	5	237	0.87	7	0	7	14	0.50	11	286	0	297	0.86	16	534	550
5:00 PM - 6:00 PM	0	0	0	0	0.00	1	227	4	232	0.92	8	0	8	16	0.57	17	310	0	327	0.86	16	559	575
5:15 PM - 6:15 PM	0	0	0	0	0.00	1	226	3	230	0.91	8	0	10	18	0.64	16	300	3	319	0.84	18	549	567
5:30 PM - 6:30 PM	0	0	0	0	0.00	0	215	3	218	0.87	9	0	9	18	0.64	12	304	3	319	0.84	18	537	555
5:45 PM - 6:45 PM	0	0	0	0	0.00	0	195	4	199	0.79	10	0	6	16	0.80	13	265	4	282	0.74	16	481	497
6:00 PM - 7:00 PM	0	0	0	0	0.00	1	191	5	197	0.81	9	0	7	16	0.80	8	238	4	250	0.80	16	447	463

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - Total Vehicles

PROJECT: 100-102 Maple Avenue W+A JOB NO: 7541 INTERSECTION: Center St. & Site Entr. LOCATION: Town of Vienna,VA					DATE: 9/8/2018 DAY: Saturday WEATHER: clear COUNTED BY: Amina INPUTED BY: agan					SOUTHBOUND ROAD: Site Entrance NORTHBOUND ROAD: Driveway WESTBOUND ROAD: Center Street EASTBOUND ROAD: Center Street													
Time Period	Southbound Site Entrance				PHF	Westbound Center Street				PHF	Northbound Driveway				PHF	Eastbound Center Street				PHF	North & South	East & West	Total
	Right	Thru	Left	Total		Right	Thru	Left	Total		Right	Thru	Left	Total		Right	Thru	Left	Total				
15 Minute Volumes																							
10:00 AM - 10:15 AM						50	1	51			7	2	9			1	45	46			9	97	106
10:15 AM - 10:30 AM						39	5	44			4	1	5			8	52	60			5	104	109
10:30 AM - 10:45 AM						31	4	35			7	7	14			5	46	51			14	86	100
10:45 AM - 11:00 AM		2	2			2	53	2	57		5	1	3	9		3	56	59			11	116	127
11:00 AM - 11:15 AM	1			1		1	43	4	48		5		3	8		4	57	61			9	109	118
11:15 AM - 11:30 AM	1		1	2		57	1	58			8	1	9			8	60	1	69		11	127	138
11:30 AM - 11:45 AM		1	1			1	42	3	46		3		6	9		8	72	80			10	126	136
11:45 AM - 12:00 PM						55	2	57			4		5	9		6	74	1	81		9	138	147
12:00 PM - 12:15 PM	2			2		1	43	1	45		4	1	2	7		6	64	70			9	115	124
12:15 PM - 12:30 PM	1		1	2		1	63	7	71		4		4	8		4	53	57			10	128	138
12:30 PM - 12:45 PM						55	3	58			5		5	10		2	49	51			10	109	119
12:45 PM - 1:00 PM						47		47			1		3	4		2	73	75			4	122	126
1:00 PM - 1:15 PM						1	49	2	52		10		1	11		2	68	70			11	122	133
1:15 PM - 1:30 PM			1	1		45	1	46			4		2	6		3	52	2	57		7	103	110
1:30 PM - 1:45 PM						48	2	50			4		1	5		2	67	69			5	119	124
1:45 PM - 2:00 PM						37		37			4		2	6		2	64	1	67		6	104	110
2:00 PM - 2:15 PM			1	1		44	2	46			5		1	6		4	48	52			7	98	105
2:15 PM - 2:30 PM						46	1	47			7		5	12			55	55			12	102	114
2:30 PM - 2:45 PM						31	1	32			4		2	6		3	57	60			6	92	98
2:45 PM - 3:00 PM						43	1	44			3	1	2	6		2	52	54			6	98	104
Total	5	0	7	12		7	921	43	971		98	3	58	159		75	1164	5	1244		171	2215	2386
One Hour Volumes																							
10:00 AM - 11:00 AM		2	2	0.25		2	173	12	187	0.8202	23	1	13	37	0.6607	17	199	216	0.9		39	403	442
10:15 AM - 11:15 AM	1	2	3	0.375		3	166	15	184	0.807	21	1	14	36	0.6429	20	211	231	0.9467		39	415	454
10:30 AM - 11:30 AM	2	3	5	0.625		3	184	11	198	0.8534	25	1	14	40	0.7143	20	219	1	240	0.8696	45	438	483
10:45 AM - 11:45 AM	2	4	6	0.75		4	195	10	209	0.9009	21	1	13	35	0.9722	23	245	1	269	0.8406	41	478	519
11:00 AM - 12:00 PM	2	2	4	0.5		2	197	10	209	0.9009	20		15	35	0.9722	26	263	2	291	0.8981	39	500	539
11:15 AM - 12:15 PM	3	2	5	0.625		2	197	7	206	0.8879	19	1	14	34	0.9444	28	270	2	300	0.9259	39	506	545
11:30 AM - 12:30 PM	3	2	5	0.625		3	203	13	219	0.7711	15	1	17	33	0.9167	24	263	1	288	0.8889	38	507	545
11:45 AM - 12:45 PM	3	1	4	0.5		2	216	13	231	0.8134	17	1	16	34	0.85	18	240	1	259	0.7994	38	490	528
12:00 PM - 1:00 PM	3	1	4	0.5		2	208	11	221	0.7782	14	1	14	29	0.725	14	239	253	0.8433		33	474	507
12:15 PM - 1:15 PM	1	1	2	0.25		2	214	12	228	0.8028	20		13	33	0.75	10	243	253	0.8433		35	481	516
12:30 PM - 1:30 PM		1	1	0.25		1	196	6	203	0.875	20		11	31	0.7045	9	242	2	253	0.8433	32	456	488
12:45 PM - 1:45 PM		1	1	0.25		1	189	5	195	0.9375	19		7	26	0.5909	9	260	2	271	0.9033	27	466	493
1:00 PM - 2:00 PM		1	1	0.25		1	179	5	185	0.8894	22		6	28	0.6364	9	251	3	263	0.9393	29	448	477
1:15 PM - 2:15 PM		2	2	0.5			174	5	179	0.895	17		6	23	0.9583	11	231	3	245	0.8877	25	424	449
1:30 PM - 2:30 PM		1	1	0.25			175	5	180	0.9	20		9	29	0.6042	8	234	1	243	0.8804	30	423	453
1:45 PM - 2:45 PM		1	1	0.25			158	4	162	0.8617	20		10	30	0.625	9	224	1	234	0.8731	31	396	427
2:00 PM - 3:00 PM		1	1	0.25			164	5	169	0.8989	19	1	10	30	0.625	9	212	221	0.9208		31	390	421

Wells + Associates, Inc.

McLean, Virginia

Pedestrian Volume Survey

PROJECT: 100-102 Maple Avenue W+A JOB NO: 7541 INTERSECTION: Route 123 & Center St. LOCATION: Town of Vienna, VA DATE: 8/28/2018 DAY: Tuesday WEATHER: clear COUNTED BY: Luz INPUTED BY: agan													
Time Period	Movement												
	1	2	3	4	5	6	7	8	1 + 2	3 + 4	5 + 6	7 + 8	Total
AM 15 Minute Volumes													
6:00 AM - 6:15 AM				1	1			1					
6:15 AM - 6:30 AM								1					
6:30 AM - 6:45 AM					1								
6:45 AM - 7:00 AM	3			1				1					
7:00 AM - 7:15 AM													
7:15 AM - 7:30 AM			2			2							
7:30 AM - 7:45 AM								1				3	
7:45 AM - 8:00 AM	2	1	1	1									
8:00 AM - 8:15 AM	1		2	1	2								
8:15 AM - 8:30 AM	3	4	1										
8:30 AM - 8:45 AM	4	5	5	1	9*	4		2					
8:45 AM - 9:00 AM	4	6	7	1	10	7	1	1					
9:00 AM - 9:15 AM	1	1	4	1	3	2	1	2					
9:15 AM - 9:30 AM	1				2								
9:30 AM - 9:45 AM		1	1	2	3	1	1	1					
9:45 AM - 10:00 AM	2	1			1	1	1						
Total	21	19	23	9	23	17	6	12					
AM One Hour Volumes													
6:00 AM - 7:00 AM	3	0	0	2	2	0	1	3	3	2	2	4	11
6:15 AM - 7:15 AM	3	0	0	1	1	0	1	2	3	1	1	3	8
6:30 AM - 7:30 AM	3	0	2	1	1	2	1	1	3	3	3	2	11
6:45 AM - 7:45 AM	3	0	2	1	0	2	2	4	3	3	2	6	14
7:00 AM - 8:00 AM	2	1	3	1	0	2	1	3	3	4	2	4	13
7:15 AM - 8:15 AM	3	1	5	2	2	2	1	3	4	7	4	4	19
7:30 AM - 8:30 AM	6	5	4	2	2	0	1	3	11	6	2	4	23
7:45 AM - 8:45 AM	10	10	9	3	2	4	0	2	20	12	6	2	40
8:00 AM - 9:00 AM	12	15	15	3	12	11	1	3	27	18	23	4	72
8:15 AM - 9:15 AM	12	16	17	3	13	13	2	5	28	20	26	7	81
8:30 AM - 9:30 AM	10	12	16	3	15	13	2	5	22	19	28	7	76
8:45 AM - 9:45 AM	6	8	12	4	18	10	3	4	14	16	28	7	65
9:00 AM - 10:00 AM	12	14	17	5	19	15	4	6	26	22	34	10	92
PM 15 Minute Volumes													
3:00 PM - 3:15 PM	1		1	1	7								
3:15 PM - 3:30 PM	2	1	2	2	1	3	1	2					
3:30 PM - 3:45 PM	3		9			8		1					
3:45 PM - 4:00 PM						1	1						
4:00 PM - 4:15 PM													
4:15 PM - 4:30 PM					1	6		1					
4:30 PM - 4:45 PM	3	1				1							
4:45 PM - 5:00 PM	1												
5:00 PM - 5:15 PM		1						3					
5:15 PM - 5:30 PM		3		1				1					
5:30 PM - 5:45 PM	1			1	1			1					
5:45 PM - 6:00 PM		1											
6:00 PM - 6:15 PM								1					
6:15 PM - 6:30 PM													
6:30 PM - 6:45 PM			2										
6:45 PM - 7:00 PM		1	5					1					
Total	5	7	7	2	2	7	0	8					
PM One Hour Volumes													
3:00 PM - 4:00 PM	6	1	12	3	8	12	2	3	7	15	20	5	47
3:15 PM - 4:15 PM	5	1	11	2	1	12	2	3	6	13	13	5	37
3:30 PM - 4:30 PM	3	0	9	0	1	15	1	2	3	9	16	3	31
3:45 PM - 4:45 PM	3	1	0	0	1	8	1	1	4	0	9	2	15
4:00 PM - 5:00 PM	4	1	0	0	1	7	0	1	5	0	8	1	14
4:15 PM - 5:15 PM	4	2	0	0	1	7	0	4	6	0	8	4	18
4:30 PM - 5:30 PM	4	5	0	1	0	1	0	4	9	1	1	4	15
4:45 PM - 5:45 PM	2	4	0	2	1	0	0	5	6	2	1	5	14
5:00 PM - 6:00 PM	1	5	0	2	1	0	0	5	6	2	1	5	14
5:15 PM - 6:15 PM	1	4	0	2	1	0	0	3	5	2	1	3	11
5:30 PM - 6:30 PM	1	1	0	1	1	0	0	2	2	1	1	2	6
5:45 PM - 6:45 PM	0	1	2	0	0	0	0	1	1	2	0	1	4
6:00 PM - 7:00 PM	0	1	7	0	0	0	0	2	1	7	0	2	10

Wells + Associates, Inc.

McLean, Virginia

Pedestrian Volume Survey

PROJECT: 100-102 Maple Avenue W + A JOB NO: 7541 INTERSECTION: Route 123 & Center St. LOCATION: Town of Vienna, VA DATE: 9/1/1988 DAY: Saturday WEATHER: clear COUNTED BY: Luz INPUTED BY: agan														
Time Period	Movement													
	1	2	3	4	5	6	7	8	1 + 2	3 + 4	5 + 6	7 + 8	Total	
15 Minute Volumes														
10:00 AM - 10:15 AM		2	1	2	1	1	2	1						
10:15 AM - 10:30 AM			7		2	2	4	1						
10:30 AM - 10:45 AM	1				1		1	1						
10:45 AM - 11:00 AM	2	3	2	3	4	3	7	2						
11:00 AM - 11:15 AM	3	2	3	2	4	4	1	3						
11:15 AM - 11:30 AM	2	6	3	5	2	10	6	3						
11:30 AM - 11:45 AM	1	2	5	1	9	3	2	1						
11:45 AM - 12:00 PM	1	1	1	1	7	2	2	1						
12:00 PM - 12:15 PM	1	2	4	7	1	1	1							
12:15 PM - 12:30 PM	4	4	6	6	1	3	1	1						
12:30 PM - 12:45 PM	4	9	9	6		1								
12:45 PM - 1:00 PM	5	1	6	2		2	1	1						
1:00 PM - 1:15 PM	1	2	3	3	3		1	1						
1:15 PM - 1:30 PM	1			1		2	1							
1:30 PM - 1:45 PM		6	1	1		2		1						
1:45 PM - 2:00 PM	1	1	6	3	1	1	3	4						
2:00 PM - 2:15 PM			2	1	1		1	3						
2:15 PM - 2:30 PM					3	3		3						
2:30 PM - 2:45 PM	1		2											
2:45 PM - 3:00 PM	2	1	2		1	1	2	1						
Total	30	42	63	44	41	41	36	28						
One Hour Volumes														
10:00 AM - 11:00 AM	3	5	10	5	8	6	14	5	8	15	14	19	56	
10:15 AM - 11:15 AM	6	5	12	5	11	9	13	7	11	17	20	20	68	
10:30 AM - 11:30 AM	8	11	8	10	11	17	15	9	19	18	28	24	89	
10:45 AM - 11:45 AM	8	13	13	11	19	20	16	9	21	24	39	25	109	
11:00 AM - 12:00 PM	7	11	12	9	22	19	11	8	18	21	41	19	99	
11:15 AM - 12:15 PM	5	11	13	14	19	16	11	5	16	27	35	16	94	
11:30 AM - 12:30 PM	7	9	16	15	18	9	6	3	16	31	27	9	83	
11:45 AM - 12:45 PM	10	16	20	20	9	7	4	2	26	40	16	6	88	
12:00 PM - 1:00 PM	14	16	25	21	2	7	3	2	30	46	9	5	90	
12:15 PM - 1:15 PM	14	16	24	17	4	6	3	3	30	41	10	6	87	
12:30 PM - 1:30 PM	11	12	18	12	3	5	3	2	23	30	8	5	66	
12:45 PM - 1:45 PM	7	9	10	7	3	6	3	3	16	17	9	6	48	
1:00 PM - 2:00 PM	3	9	10	8	4	5	5	6	12	18	9	11	50	
1:15 PM - 2:15 PM	2		9	6	2	5	5	8	2	15	7	13	37	
1:30 PM - 2:30 PM	1	7	9	5	5	6	4	11	8	14	11	15	48	
1:45 PM - 2:45 PM	2	1	10	4	5	4	4	10	3	14	9	14	40	
2:00 PM - 3:00 PM	3	1	6	1	5	4	3	7	4	7	9	10	30	

Wells + Associates, Inc.

McLean, Virginia

Pedestrian Volume Survey

PROJECT: 100-102 Maple Avenue W+A JOB NO: 7541 INTERSECTION: Center St. & Church St. LOCATION: Town of Vienna, VA DATE: 8/28/2018 DAY: Tuesday WEATHER: clear COUNTED BY: Ali INPUTED BY: agan													
Time Period	Movement												
	1	2	3	4	5	6	7	8	1 + 2	3 + 4	5 + 6	7 + 8	Total
AM 15 Minute Volumes													
6:00 AM - 6:15 AM	1		1										
6:15 AM - 6:30 AM			2					1	2				
6:30 AM - 6:45 AM	1		1	1	1			1	2				
6:45 AM - 7:00 AM													
7:00 AM - 7:15 AM	1												
7:15 AM - 7:30 AM	1			1									
7:30 AM - 7:45 AM				1	1								
7:45 AM - 8:00 AM			2		1	1			1				
8:00 AM - 8:15 AM				3	2								
8:15 AM - 8:30 AM	3	1	4					1					
8:30 AM - 8:45 AM	2	3	5	2				9					
8:45 AM - 9:00 AM			2	2	6	2							
9:00 AM - 9:15 AM	1	1							1				
9:15 AM - 9:30 AM		2	4	2					1				
9:30 AM - 9:45 AM	1		2	3	2		1						
9:45 AM - 10:00 AM			2			1		2					
Total	11	7	25	15	13	15	2	9					
AM One Hour Volumes													
6:00 AM - 7:00 AM	2	0	4	1	1	0	2	4	2	5	1	6	14
6:15 AM - 7:15 AM	2	0	3	1	1	0	2	4	2	4	1	6	13
6:30 AM - 7:30 AM	3	0	1	2	1	0	1	2	3	3	1	3	10
6:45 AM - 7:45 AM	2	0	0	2	1	0	0	0	2	2	1	0	5
7:00 AM - 8:00 AM	2	0	2	2	2	1	0	1	2	4	3	1	10
7:15 AM - 8:15 AM	1	0	2	5	4	1	0	1	1	7	5	1	14
7:30 AM - 8:30 AM	3	1	6	4	4	2	0	1	4	10	6	1	21
7:45 AM - 8:45 AM	5	4	11	5	3	11	0	1	9	16	14	1	40
8:00 AM - 9:00 AM	5	4	11	7	8	12	0	0	9	18	20	0	47
8:15 AM - 9:15 AM	6	5	11	4	6	12	0	1	11	15	18	1	45
8:30 AM - 9:30 AM	3	6	11	6	6	11	0	2	9	17	17	2	45
8:45 AM - 9:45 AM	2	3	8	7	8	3	0	2	5	15	11	2	33
9:00 AM - 10:00 AM	4	6	15	9	8	13	0	4	10	24	21	4	59
PM 15 Minute Volumes													
3:00 PM - 3:15 PM				1	2	1							
3:15 PM - 3:30 PM			5	4		1	2						
3:30 PM - 3:45 PM				2	15								
3:45 PM - 4:00 PM	1		1			1	1						
4:00 PM - 4:15 PM			3	1	3	1	2	2					
4:15 PM - 4:30 PM		2	1	1				4	3				
4:30 PM - 4:45 PM	5	6	2	4	2			7	2				
4:45 PM - 5:00 PM	1		2			1	1	5					
5:00 PM - 5:15 PM			3	2	2	2	2	1					
5:15 PM - 5:30 PM					2		1	2					
5:30 PM - 5:45 PM		1	1		5	1	1	1					
5:45 PM - 6:00 PM					8	2	3	4					
6:00 PM - 6:15 PM		2	2	1	3	1	1	2					
6:15 PM - 6:30 PM		4	2	5	9			1	5				
6:30 PM - 6:45 PM		3	1					1					
6:45 PM - 7:00 PM			1	7		2	5	1					
Total	6	18	18	21	34	10	29	28					
PM One Hour Volumes													
3:00 PM - 4:00 PM	1	0	6	7	17	3	3	0	1	13	20	3	37
3:15 PM - 4:15 PM	1	0	9	7	18	3	5	2	1	16	21	7	45
3:30 PM - 4:30 PM	1	2	5	4	18	2	7	5	3	9	20	12	44
3:45 PM - 4:45 PM	6	8	7	6	5	2	14	7	14	13	7	21	55
4:00 PM - 5:00 PM	6	8	8	6	5	2	14	12	14	14	7	26	61
4:15 PM - 5:15 PM	6	8	8	7	4	3	14	11	14	15	7	25	61
4:30 PM - 5:30 PM	6	6	7	6	6	3	11	10	12	13	9	21	55
4:45 PM - 5:45 PM	1	1	6	2	9	4	5	9	2	8	13	14	37
5:00 PM - 6:00 PM	0	1	4	2	17	5	7	8	1	6	22	15	44
5:15 PM - 6:15 PM	0	3	3	1	18	4	6	9	3	4	22	15	44
5:30 PM - 6:30 PM	0	7	5	6	25	4	6	12	7	11	29	18	65
5:45 PM - 6:45 PM	0	9	5	6	20	3	6	11	9	11	23	17	60
6:00 PM - 7:00 PM	0	9	6	13	12	3	8	8	9	19	15	16	59

Wells + Associates, Inc.

McLean, Virginia

Pedestrian Volume Survey

PROJECT: 100-102 Maple Avenue W + A JOB NO: 7541 INTERSECTION: Center St. & Church St. LOCATION: Town of Vienna, VA DATE: 9/8/2018 DAY: Saturday WEATHER: clear COUNTED BY: Ali INPUTED BY: agan Church Street 1 2 8 7 4 3 5 6 Center Street Center Street Church Street North													
Time Period	Movement								1 + 2	3 + 4	5 + 6	7 + 8	Total
15 Minute Volumes													
10:00 AM - 10:15 AM	2	2	2	8	2	5	4	3					
10:15 AM - 10:30 AM	1	3	3	2	2		7	3					
10:30 AM - 10:45 AM			4	4	1	2							
10:45 AM - 11:00 AM	1		3	4	3		1	4					
11:00 AM - 11:15 AM	4	2	7	15	4	3	6	6					
11:15 AM - 11:30 AM			1		5	1		2					
11:30 AM - 11:45 AM			1	10	2	4	2	9					
11:45 AM - 12:00 PM	2	5	8	9	2	1	9	7					
12:00 PM - 12:15 PM		1	3	8	2	2	3						
12:15 PM - 12:30 PM	2	4	20	11	5	3	11	9					
12:30 PM - 12:45 PM			5	4		17	11	12					
12:45 PM - 1:00 PM		6	10	8	2	2	3	4					
1:00 PM - 1:15 PM	2	10	2	6	3		2	10					
1:15 PM - 1:30 PM	1	4	6	4		15	4	6					
1:30 PM - 1:45 PM	5	2	2	4	3	3	8	3					
1:45 PM - 2:00 PM		2	9	12	2			2					
2:00 PM - 2:15 PM	2		2	4	2	3	5	4					
2:15 PM - 2:30 PM		4	9	4	3		1						
2:30 PM - 2:45 PM	1			5			1	5					
2:45 PM - 3:00 PM			2				2	2					
Total	23	45	99	122	43	61	80	91					
One Hour Volumes													
10:00 AM - 11:00 AM	4	5	12	18	8	7	12	10	9	30	15	22	76
10:15 AM - 11:15 AM	6	5	17	25	10	5	14	13	11	42	15	27	95
10:30 AM - 11:30 AM	5	2	15	23	13	6	7	12	7	38	19	19	83
10:45 AM - 11:45 AM	5	2	12	29	14	8	9	21	7	41	22	30	100
11:00 AM - 12:00 PM	6	7	17	34	13	9	17	24	13	51	22	41	127
11:15 AM - 12:15 PM	2	6	13	27	11	8	14	18	8	40	19	32	99
11:30 AM - 12:30 PM	4	10	32	38	11	10	25	25	14	70	21	50	155
11:45 AM - 12:45 PM	4	10	36	32	9	23	34	28	14	68	32	62	176
12:00 PM - 1:00 PM	2	11	38	31	9	24	28	25	13	69	33	53	168
12:15 PM - 1:15 PM	4	20	37	29	10	22	27	35	24	66	32	62	184
12:30 PM - 1:30 PM	3	20	23	22	5	34	20	32	23	45	39	52	159
12:45 PM - 1:45 PM	8	22	20	22	8	20	17	23	30	42	28	40	140
1:00 PM - 2:00 PM	8	18	19	26	8	18	14	21	26	45	26	35	132
1:15 PM - 2:15 PM	8		19	24	7	21	17	15	8	43	28	32	111
1:30 PM - 2:30 PM	7	8	22	24	10	6	14	9	15	46	16	23	100
1:45 PM - 2:45 PM	3	6	20	25	7	3	7	11	9	45	10	18	82
2:00 PM - 3:00 PM	3	4	13	13	5	3	9	11	7	26	8	20	61

Wells + Associates, Inc.

McLean, Virginia

Pedestrian Volume Survey

PROJECT: 100-102 Maple Avenue W+A JOB NO: 7541 INTERSECTION: Center St. & Site Entr. LOCATION: Town of Vienna, VA DATE: 8/28/2018 DAY: Tuesday WEATHER: clear COUNTED BY: Laura INPUTED BY: agan														
Time Period	Movement													
	1	2	3	4	5	6	7	8	1 + 2	3 + 4	5 + 6	7 + 8	Total	
AM 15 Minute Volumes														
6:00 AM - 6:15 AM					2									
6:15 AM - 6:30 AM					1		1							
6:30 AM - 6:45 AM					1									
6:45 AM - 7:00 AM														
7:00 AM - 7:15 AM		1					1	1						
7:15 AM - 7:30 AM		1					1							
7:30 AM - 7:45 AM														
7:45 AM - 8:00 AM			1				1					1		
8:00 AM - 8:15 AM					2		1							
8:15 AM - 8:30 AM		4					1							
8:30 AM - 8:45 AM	4	3			3		6							
8:45 AM - 9:00 AM	4				1									
9:00 AM - 9:15 AM							2							
9:15 AM - 9:30 AM	1													
9:30 AM - 9:45 AM					1		1							
9:45 AM - 10:00 AM														
Total	9	9	1	0	11	15	1	1						
AM One Hour Volumes														
6:00 AM - 7:00 AM	0	0	0	0	4	1	0	0	0	0	5	0	5	
6:15 AM - 7:15 AM	0	1	0	0	2	2	1	0	1	0	4	1	6	
6:30 AM - 7:30 AM	0	2	0	0	1	2	1	0	2	0	3	1	6	
6:45 AM - 7:45 AM	0	2	0	0	0	2	1	0	2	0	2	1	5	
7:00 AM - 8:00 AM	0	2	1	0	0	3	1	1	2	1	3	2	8	
7:15 AM - 8:15 AM	0	1	1	0	2	3	0	1	1	1	5	1	8	
7:30 AM - 8:30 AM	0	4	1	0	2	3	0	1	4	1	5	1	11	
7:45 AM - 8:45 AM	4	7	1	0	5	9	0	1	11	1	14	1	27	
8:00 AM - 9:00 AM	8	7	0	0	6	8	0	0	15	0	14	0	29	
8:15 AM - 9:15 AM	8	7	0	0	4	9	0	0	15	0	13	0	28	
8:30 AM - 9:30 AM	9	3	0	0	4	8	0	0	12	0	12	0	24	
8:45 AM - 9:45 AM	5	0	0	0	2	3	0	0	5	0	5	0	10	
9:00 AM - 10:00 AM	9	3	0	0	5	9	0	0	12	0	14	0	26	
PM 15 Minute Volumes														
3:00 PM - 3:15 PM					1									
3:15 PM - 3:30 PM	1	1	1		1	1								
3:30 PM - 3:45 PM	5	2			7			1						
3:45 PM - 4:00 PM														
4:00 PM - 4:15 PM														
4:15 PM - 4:30 PM						5								
4:30 PM - 4:45 PM	2													
4:45 PM - 5:00 PM														
5:00 PM - 5:15 PM		4												
5:15 PM - 5:30 PM	1				1									
5:30 PM - 5:45 PM		1			1									
5:45 PM - 6:00 PM		1												
6:00 PM - 6:15 PM														
6:15 PM - 6:30 PM		2												
6:30 PM - 6:45 PM	3													
6:45 PM - 7:00 PM														
Total	6	8	0	0	2	5	0	0						
PM One Hour Volumes														
3:00 PM - 4:00 PM	6	3	1	0	9	1	0	1	9	1	10	1	21	
3:15 PM - 4:15 PM	6	3	1	0	8	1	0	1	9	1	9	1	20	
3:30 PM - 4:30 PM	5	2	0	0	7	5	0	1	7	0	12	1	20	
3:45 PM - 4:45 PM	2	0	0	0	0	5	0	0	2	0	5	0	7	
4:00 PM - 5:00 PM	2	0	0	0	0	5	0	0	2	0	5	0	7	
4:15 PM - 5:15 PM	2	4	0	0	0	5	0	0	6	0	5	0	11	
4:30 PM - 5:30 PM	3	4	0	0	1	0	0	0	7	0	1	0	8	
4:45 PM - 5:45 PM	1	5	0	0	2	0	0	0	6	0	2	0	8	
5:00 PM - 6:00 PM	1	6	0	0	2	0	0	0	7	0	2	0	9	
5:15 PM - 6:15 PM	1	2	0	0	2	0	0	0	3	0	2	0	5	
5:30 PM - 6:30 PM	0	4	0	0	1	0	0	0	4	0	1	0	5	
5:45 PM - 6:45 PM	3	3	0	0	0	0	0	0	6	0	0	0	6	
6:00 PM - 7:00 PM	3	2	0	0	0	0	0	0	5	0	0	0	5	

Wells + Associates, Inc.

McLean, Virginia

Pedestrian Volume Survey

PROJECT: 100-102 Maple Avenue W + A JOB NO: 7541 INTERSECTION: Center St. & Site Entr. LOCATION: Town of Vienna,VA DATE: 9/8/2018 DAY: Saturday WEATHER: clear COUNTED BY: Amina INPUTED BY: agan Site Entrance Center Street 1 2 3 4 5 6 7 8 Driveway Center Street North ↑													
Time Period	Movement												
	1	2	3	4	5	6	7	8	1 + 2	3 + 4	5 + 6	7 + 8	Total
15 Minute Volumes													
10:00 AM - 10:15 AM					1		1						
10:15 AM - 10:30 AM					3		5						
10:30 AM - 10:45 AM	1	1			3		5						
10:45 AM - 11:00 AM	3	1	1		2	6	4	4					
11:00 AM - 11:15 AM	3		2		3		4						
11:15 AM - 11:30 AM		2	1		1		1						
11:30 AM - 11:45 AM		2		1		1	1	1					
11:45 AM - 12:00 PM	2				2	5		1					
12:00 PM - 12:15 PM	2	2	3	2	3	1		1					
12:15 PM - 12:30 PM	4	4				3		1					
12:30 PM - 12:45 PM	2	3			2			1					
12:45 PM - 1:00 PM	1	2				2							
1:00 PM - 1:15 PM		2	1		2								
1:15 PM - 1:30 PM						1							
1:30 PM - 1:45 PM	1				2	2							
1:45 PM - 2:00 PM													
2:00 PM - 2:15 PM		1			1	1							
2:15 PM - 2:30 PM													
2:30 PM - 2:45 PM		1			1								
2:45 PM - 3:00 PM	3			1		1		2					
Total	22	21	8	4	26	39	5	11					
One Hour Volumes													
10:00 AM - 11:00 AM	4	2	1		9	17	4	4	6	1	26	8	41
10:15 AM - 11:15 AM	7	2	3		11	20	4	4	9	3	31	8	51
10:30 AM - 11:30 AM	7	4	4		9	16	4	4	11	4	25	8	48
10:45 AM - 11:45 AM	6	5	4	1	6	12	5	5	11	5	18	10	44
11:00 AM - 12:00 PM	5	4	3	1	6	11	1	2	9	4	17	3	33
11:15 AM - 12:15 PM	4	6	4	3	6	8	1	3	10	7	14	4	35
11:30 AM - 12:30 PM	8	8	3	3	5	10	1	4	16	6	15	5	42
11:45 AM - 12:45 PM	10	9	3	2	7	9		4	19	5	16	4	44
12:00 PM - 1:00 PM	9	11	3	2	5	6	3		20	5	11	3	39
12:15 PM - 1:15 PM	7	11	1		4	5		2	18	1	9	2	30
12:30 PM - 1:30 PM	3	7	1		4	3		1	10	1	7	1	19
12:45 PM - 1:45 PM	2	4	1		4	5			6	1	9		16
1:00 PM - 2:00 PM	1	2	1		4	3			3	1	7		11
1:15 PM - 2:15 PM	1				3	4			1		7		8
1:30 PM - 2:30 PM	1	1			3	3			2		6		8
1:45 PM - 2:45 PM		2			2	1			2		3		5
2:00 PM - 3:00 PM	3	2		1	2	2		2	5	1	4	2	12

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - Bicycles

PROJECT: 100-102 Maple Avenue				DATE: 8/28/2018				SOUTHBOUND ROAD: Maple Avenue 123												
W+A JOB NO: 7541				DAY: Tuesday				NORTHBOUND ROAD: Maple Avenue 123												
INTERSECTION: Route 123 & Center St.				WEATHER: clear				WESTBOUND ROAD: Center Street												
LOCATION: Town of Vienna,VA				COUNTED BY: Katie				EASTBOUND ROAD: Center Street												
INPUTED BY: agan																				
Time Period	Southbound Maple Avenue 123				Westbound Center Street				Northbound Maple Avenue 123				Eastbound Center Street				North & South	East & West	Total	
	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total				
AM 15 Minute Volumes																				
6:00 AM - 6:15 AM				0				0				0				0	0	0	0	
6:15 AM - 6:30 AM				0				0				0		I		I	0	I	I	
6:30 AM - 6:45 AM		I		I				0		I		I				0	2	0	2	
6:45 AM - 7:00 AM				0				0				0		I		I	0	I	I	
7:00 AM - 7:15 AM				0				0		I		I				0	I	0	I	
7:15 AM - 7:30 AM				0				0				0				0	0	0	0	
7:30 AM - 7:45 AM				0				0				0				0	0	0	0	
7:45 AM - 8:00 AM		I		I				0		3		3		I		I	4	I	5	
8:00 AM - 8:15 AM				0				0				0				0	0	0	0	
8:15 AM - 8:30 AM				0				0		I		I				0	I	0	I	
8:30 AM - 8:45 AM				0				0		I		I				0	I	0	I	
8:45 AM - 9:00 AM				0				0		2	I	3				0	3	0	3	
9:00 AM - 9:15 AM	I	2		3				0		2		2				0	5	0	5	
9:15 AM - 9:30 AM				0				0				0		I		I	0	I	I	
9:30 AM - 9:45 AM	I			I				0		I		I				0	2	0	2	
9:45 AM - 10:00 AM				0				0				0		I	I	2	0	2	2	
Total	2	4	0	6	0	0	0	0	0	0	12	I	13	I	5	0	6	19	6	25
AM One Hour Volumes																				
6:00 AM - 7:00 AM	0	I	0	I	0	0	0	0	0	0	I	0	I	0	2	0	2	2	4	
6:15 AM - 7:15 AM	0	I	0	I	0	0	0	0	0	0	2	0	2	0	2	0	2	3	5	
6:30 AM - 7:30 AM	0	I	0	I	0	0	0	0	0	0	2	0	2	0	I	0	I	3	4	
6:45 AM - 7:45 AM	0	0	0	0	0	0	0	0	0	0	I	0	I	0	I	0	I	I	2	
7:00 AM - 8:00 AM	0	I	0	I	0	0	0	0	0	0	4	0	4	0	I	0	I	5	6	
7:15 AM - 8:15 AM	0	I	0	I	0	0	0	0	0	0	3	0	3	0	I	0	I	4	5	
7:30 AM - 8:30 AM	0	I	0	I	0	0	0	0	0	0	4	0	4	0	I	0	I	5	6	
7:45 AM - 8:45 AM	0	I	0	I	0	0	0	0	0	0	5	0	5	0	I	0	I	6	7	
8:00 AM - 9:00 AM	0	0	0	0	0	0	0	0	0	0	4	I	5	0	0	0	0	5	5	
8:15 AM - 9:15 AM	I	2	0	3	0	0	0	0	0	0	6	I	7	0	0	0	0	10	10	
8:30 AM - 9:30 AM	2	2	0	4	0	0	0	0	0	0	6	I	7	I	2	0	3	11	14	
8:45 AM - 9:45 AM	4	6	0	10	0	0	0	0	0	0	17	2	19	2	7	0	9	29	38	
9:00 AM - 10:00 AM	2	2	0	4	0	0	0	0	0	0	6	I	7	I	2	0	3	11	14	
PM 15 Minute Volumes																				
3:00 PM - 3:15 PM				0				0				0				0	0	0	0	
3:15 PM - 3:30 PM				0				0		I		I				0	I	0	I	
3:30 PM - 3:45 PM	3			3				0		3		3				0	6	0	6	
3:45 PM - 4:00 PM				0				0			I	I				0	I	0	I	
4:00 PM - 4:15 PM				0		I	I	2		I		I				0	I	2	3	
4:15 PM - 4:30 PM				0	I	2		3		I		I				0	I	3	4	
4:30 PM - 4:45 PM				0				0				0				0	0	0	0	
4:45 PM - 5:00 PM				0				0		I		I				0	I	0	I	
5:00 PM - 5:15 PM	3			3				0				0				0	3	0	3	
5:15 PM - 5:30 PM				0				0				0				0	0	0	0	
5:30 PM - 5:45 PM			I	I				0				0				0	I	0	I	
5:45 PM - 6:00 PM				0				0				0				0	0	0	0	
6:00 PM - 6:15 PM				0				0				0				0	0	0	0	
6:15 PM - 6:30 PM				0				0				0				0	0	0	0	
6:30 PM - 6:45 PM				0				0				0				0	0	0	0	
6:45 PM - 7:00 PM		I		I				0				0				0	I	0	I	
Total	0	4	I	5	I	3	I	5	0	3	0	3	0	0	0	0	8	5	13	
PM One Hour Volumes																				
3:00 PM - 4:00 PM	3	0	0	3	0	0	0	0	0	0	4	I	5	0	0	0	0	8	0	8
3:15 PM - 4:15 PM	3	0	0	3	0	I	I	2	0	5	I	6	0	0	0	0	0	9	2	11
3:30 PM - 4:30 PM	3	0	0	3	I	3	I	5	0	5	I	6	0	0	0	0	0	9	5	14
3:45 PM - 4:45 PM	0	0	0	0	I	3	I	5	0	2	I	3	0	0	0	0	0	3	5	8
4:00 PM - 5:00 PM	0	0	0	0	I	3	I	5	0	3	0	3	0	0	0	0	0	3	5	8
4:15 PM - 5:15 PM	0	3	0	3	I	2	0	3	0	2	0	2	0	0	0	0	0	5	3	8
4:30 PM - 5:30 PM	0	3	0	3	0	0	0	0	0	I	0	I	0	0	0	0	0	4	0	4
4:45 PM - 5:45 PM	0	3	I	4	0	0	0	0	0	I	0	I	0	0	0	0	0	5	0	5
5:00 PM - 6:00 PM	0	3	I	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4
5:15 PM - 6:15 PM	0	0	I	I	0	0	0	0	0	0	0	0	0	0	0	0	0	I	0	I
5:30 PM - 6:30 PM	0	0	I	I	0	0	0	0	0	0	0	0	0	0	0	0	0	I	0	I
5:45 PM - 6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM - 7:00 PM	0	I	0	I	0	0	0	0	0	0	0	0	0	0	0	0	0	I	0	0

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - Bicycles

PROJECT: 100-102 Maple Avenue					DATE: 9/1/1988					SOUTHBOUND ROAD: Maple Avenue - 123									
W+A JOB NO: 7541					DAY: Saturday					NORTHBOUND ROAD: Maple Avenue - 123									
INTERSECTION: Route 123 & Center St.					WEATHER: clear					WESTBOUND ROAD: Center Street									
LOCATION: Town of Vienna,VA					COUNTED BY: Katy					EASTBOUND ROAD: Center Street									
INPUTED BY: agan																			
Time Period	Southbound Maple Avenue - 123				Westbound Center Street				Northbound Maple Avenue - 123				Eastbound Center Street				North & South	East & West	Total
	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total			
15 Minute Volumes																			
10:00 AM - 10:15 AM	1			1									2			2	1	2	3
10:15 AM - 10:30 AM										1		1	13			13	1	13	14
10:30 AM - 10:45 AM			1	1													1		1
10:45 AM - 11:00 AM										1		1					1		1
11:00 AM - 11:15 AM																			
11:15 AM - 11:30 AM	1			1													1		1
11:30 AM - 11:45 AM										1		1					1		1
11:45 AM - 12:00 PM	3			3													3		3
12:00 PM - 12:15 PM	3			3													3		3
12:15 PM - 12:30 PM	1			1						1		1					2		2
12:30 PM - 12:45 PM	3	3		6						1		1		1		1	7	1	8
12:45 PM - 1:00 PM	4			4						4		4					8		8
1:00 PM - 1:15 PM	4			4													4		4
1:15 PM - 1:30 PM	4			4													4		4
1:30 PM - 1:45 PM	3			3			1	1		1		1		1		1	4	2	6
1:45 PM - 2:00 PM	1			1													1		1
2:00 PM - 2:15 PM	1			1													1		1
2:15 PM - 2:30 PM			2	2						1		1					3		3
2:30 PM - 2:45 PM																			
2:45 PM - 3:00 PM										2		2					2		2
Total	4	28	3	35	0	0	1	1	1	12	0	13	0	16	1	17	48	18	66
One Hour Volumes																			
10:00 AM - 11:00 AM	1		1	2						2		2	15			15	4	15	19
10:15 AM - 11:15 AM			1	1						2		2	13			13	3	13	16
10:30 AM - 11:30 AM	1		1	2						1		1					3		3
10:45 AM - 11:45 AM	1			1						2		2					3		3
11:00 AM - 12:00 PM	4			4						1		1					5		5
11:15 AM - 12:15 PM	7			7						1		1					8		8
11:30 AM - 12:30 PM	1	6		7						2		2					9		9
11:45 AM - 12:45 PM	4	9		13						2		2			1	1	15	1	16
12:00 PM - 1:00 PM	4	10		14						6		6			1	1	20	1	21
12:15 PM - 1:15 PM	4	11		15						6		6			1	1	21	1	22
12:30 PM - 1:30 PM	3	15		18						5		5			1	1	23	1	24
12:45 PM - 1:45 PM	15			15			1	1	1	4		5		1		1	20	2	22
1:00 PM - 2:00 PM	12			12			1	1	1			1		1		1	13	2	15
1:15 PM - 2:15 PM	9			9			1	1	1			1		1		1	10	2	12
1:30 PM - 2:30 PM	5	2		7			1	1	1	1		2		1		1	9	2	11
1:45 PM - 2:45 PM	2	2		4						1		1					5		5
2:00 PM - 3:00 PM	1	2		3						3		3					6		6

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - Bicycles

PROJECT: 100-102 Maple Avenue				DATE: 8/28/2018				SOUTHBOUND ROAD: Church Street											
W+A JOB NO: 7541				DAY: Tuesday				NORTHBOUND ROAD: Church Street											
INTERSECTION: Center St. & Church St.				WEATHER: clear				WESTBOUND ROAD: Center Street											
LOCATION: Town of Vienna,VA				COUNTED BY: Melisa				EASTBOUND ROAD: Center Street											
INPUTED BY: agan																			
Time Period	Southbound Church Street				Westbound Center Street				Northbound Church Street				Eastbound Center Street				North & South	East & West	Total
	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total			
AM 15 Minute Volumes																			
6:00 AM - 6:15 AM		1		1				0				0				0	1	0	1
6:15 AM - 6:30 AM		1		1				0				0				0	1	0	1
6:30 AM - 6:45 AM			1	1				0				0				0	1	0	1
6:45 AM - 7:00 AM			1	1				0		1		1				0	2	0	2
7:00 AM - 7:15 AM		1		1				0				0				0	1	0	1
7:15 AM - 7:30 AM				0				0				0				0	0	0	0
7:30 AM - 7:45 AM			1	1				0				0				0	1	0	1
7:45 AM - 8:00 AM		2		2				0		1		1				0	3	0	3
8:00 AM - 8:15 AM				0				0		2		2				0	2	0	2
8:15 AM - 8:30 AM				0				0				0				0	0	0	0
8:30 AM - 8:45 AM				0				0				0				0	0	0	0
8:45 AM - 9:00 AM		1		1	2		1	3		2		2				0	3	3	6
9:00 AM - 9:15 AM				0				0				0				0	0	0	0
9:15 AM - 9:30 AM			1	1				0				0				0	1	0	1
9:30 AM - 9:45 AM				0		1		1				0	1			1	0	2	2
9:45 AM - 10:00 AM			1	1				0				0				0	1	0	1
Total	0	6	5	11	2	1	1	4	0	6	0	6	1	0	0	1	17	5	22
AM One Hour Volumes																			
6:00 AM - 7:00 AM	0	2	2	4	0	0	0	0	0	1	0	1	0	0	0	0	5	0	5
6:15 AM - 7:15 AM	0	2	2	4	0	0	0	0	0	1	0	1	0	0	0	0	5	0	5
6:30 AM - 7:30 AM	0	1	2	3	0	0	0	0	0	1	0	1	0	0	0	0	4	0	4
6:45 AM - 7:45 AM	0	1	2	3	0	0	0	0	0	1	0	1	0	0	0	0	4	0	4
7:00 AM - 8:00 AM	0	3	1	4	0	0	0	0	0	1	0	1	0	0	0	0	5	0	5
7:15 AM - 8:15 AM	0	2	1	3	0	0	0	0	0	3	0	3	0	0	0	0	6	0	6
7:30 AM - 8:30 AM	0	2	1	3	0	0	0	0	0	3	0	3	0	0	0	0	6	0	6
7:45 AM - 8:45 AM	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5	0	5
8:00 AM - 9:00 AM	0	1	0	1	2	0	1	3	0	4	0	4	0	0	0	0	5	3	8
8:15 AM - 9:15 AM	0	1	0	1	2	0	1	3	0	2	0	2	0	0	0	0	3	3	6
8:30 AM - 9:30 AM	0	1	2	3	2	1	1	4	0	2	0	2	1	0	0	1	5	5	10
8:45 AM - 9:45 AM	0	7	7	14	4	2	2	8	0	8	0	8	2	0	0	2	22	10	32
9:00 AM - 10:00 AM	0	1	2	3	2	1	1	4	0	2	0	2	1	0	0	1	5	5	10
PM 15 Minute Volumes																			
3:00 PM - 3:15 PM		1		1				0		1		1				0	2	0	2
3:15 PM - 3:30 PM		1		1				0		1		1				0	2	0	2
3:30 PM - 3:45 PM				0				0				0				0	0	0	0
3:45 PM - 4:00 PM				0	1			1				0				0	0	1	1
4:00 PM - 4:15 PM				0				0		1		1				0	1	0	1
4:15 PM - 4:30 PM		1		1				0				0				0	1	0	1
4:30 PM - 4:45 PM		1		1				0		1		1				0	2	0	2
4:45 PM - 5:00 PM				0		1		1		1		1		1		1	1	2	3
5:00 PM - 5:15 PM		1		1				0				0				0	1	0	1
5:15 PM - 5:30 PM		1		1				0				0				0	1	0	1
5:30 PM - 5:45 PM				0				0				0				0	0	0	0
5:45 PM - 6:00 PM	1	2		3				0				0				0	3	0	3
6:00 PM - 6:15 PM		1		1				0				0				0	1	0	1
6:15 PM - 6:30 PM		1		1				0				0				0	1	0	1
6:30 PM - 6:45 PM		1		1				0		1		1				0	2	0	2
6:45 PM - 7:00 PM		1		1				0				0				0	1	0	1
Total	1	10	0	11	0	1	0	1	0	4	0	4	0	1	0	1	15	2	17
PM One Hour Volumes																			
3:00 PM - 4:00 PM	0	2	0	2	1	0	0	1	0	2	0	2	0	0	0	0	4	1	5
3:15 PM - 4:15 PM	0	1	0	1	1	0	0	1	0	2	0	2	0	0	0	0	3	1	4
3:30 PM - 4:30 PM	0	1	0	1	1	0	0	1	0	1	0	1	0	0	0	0	2	1	3
3:45 PM - 4:45 PM	0	2	0	2	1	0	0	1	0	2	0	2	0	0	0	0	4	1	5
4:00 PM - 5:00 PM	0	2	0	2	0	1	0	1	0	3	0	3	0	1	0	1	5	2	7
4:15 PM - 5:15 PM	0	3	0	3	0	1	0	1	0	2	0	2	0	1	0	1	5	2	7
4:30 PM - 5:30 PM	0	3	0	3	0	1	0	1	0	2	0	2	0	1	0	1	5	2	7
4:45 PM - 5:45 PM	0	2	0	2	0	1	0	1	0	1	0	1	0	1	0	1	3	2	5
5:00 PM - 6:00 PM	1	4	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5
5:15 PM - 6:15 PM	1	4	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5
5:30 PM - 6:30 PM	1	4	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5
5:45 PM - 6:45 PM	1	5	0	6	0	0	0	0	0	1	0	1	0	0	0	0	7	0	7
6:00 PM - 7:00 PM	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5	0	5

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - Bicycles

PROJECT: 100-102 Maple Avenue					DATE: 9/8/2018					SOUTHBOUND ROAD: Church Street									
W+A JOB NO: 7541					DAY: Saturday					NORTHBOUND ROAD: Church Street									
INTERSECTION: Center St. & Church St.					WEATHER: clear					WESTBOUND ROAD: Center Street									
LOCATION: Town of Vienna, VA					COUNTED BY: Meli					EASTBOUND ROAD: Center Street									
					INPUTED BY: agan														
Time Period	Southbound Church Street				Westbound Center Street				Northbound Church Street				Eastbound Center Street				North & South	East & West	Total
	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total			
15 Minute Volumes																			
10:00 AM - 10:15 AM			2	2													2	2	
10:15 AM - 10:30 AM			13	13						1		1					14	14	
10:30 AM - 10:45 AM		1		1						2		2					3	3	
10:45 AM - 11:00 AM	1			1						2		2					3	3	
11:00 AM - 11:15 AM		1		1													1	1	
11:15 AM - 11:30 AM		1		1													1	1	
11:30 AM - 11:45 AM																			
11:45 AM - 12:00 PM										1		1					1	1	
12:00 PM - 12:15 PM		1		1						1		1					2	2	
12:15 PM - 12:30 PM										1		1					1	1	
12:30 PM - 12:45 PM		1		1	1	1		1	1	1		1					2	1 3	
12:45 PM - 1:00 PM																			
1:00 PM - 1:15 PM		4		4						1		1					5	5	
1:15 PM - 1:30 PM										5		5					5	5	
1:30 PM - 1:45 PM		1	1	2													2	2	
1:45 PM - 2:00 PM		2		2													2	2	
2:00 PM - 2:15 PM		2		2													2	2	
2:15 PM - 2:30 PM																			
2:30 PM - 2:45 PM																			
2:45 PM - 3:00 PM										1		1					1	1	
Total	1	14	16	31	1	0	0	1	1	15	0	16	0	0	0	0	47	1 48	
One Hour Volumes																			
10:00 AM - 11:00 AM	1	1	15	17						5		5					22	22	
10:15 AM - 11:15 AM	1	2	13	16						5		5					21	21	
10:30 AM - 11:30 AM	1	3		4						4		4					8	8	
10:45 AM - 11:45 AM	1	2		3						2		2					5	5	
11:00 AM - 12:00 PM		2		2						1		1					3	3	
11:15 AM - 12:15 PM		2		2						2		2					4	4	
11:30 AM - 12:30 PM	1		1							3		3					4	4	
11:45 AM - 12:45 PM		2		2	1			1	1	3		4					6	1 7	
12:00 PM - 1:00 PM		2		2	1			1	1	2		3					5	1 6	
12:15 PM - 1:15 PM		5		5	1			1	1	2		3					8	1 9	
12:30 PM - 1:30 PM		5		5	1			1	1	6		7					12	1 13	
12:45 PM - 1:45 PM		5	1	6						6		6					12	12	
1:00 PM - 2:00 PM		7	1	8						6		6					14	14	
1:15 PM - 2:15 PM		5	1	6						5		5					11	11	
1:30 PM - 2:30 PM		5	1	6													6	6	
1:45 PM - 2:45 PM		4		4													4	4	
2:00 PM - 3:00 PM		2		2						1		1					3		

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - Bicycles

PROJECT: 100-102 Maple Avenue				DATE: 8/28/2018				SOUTHBOUND ROAD: Site Entrance											
W+A JOB NO: 7541				DAY: Tuesday				NORTHBOUND ROAD: Driveway											
INTERSECTION: Center St. & Site Entr.				WEATHER: clear				WESTBOUND ROAD: Center Street											
LOCATION: Town of Vienna,VA				COUNTED BY: Laura				EASTBOUND ROAD: Center Street											
INPUTED BY: agan																			
Time Period	Southbound Site Entrance				Westbound Center Street				Northbound Driveway				Eastbound Center Street				North & South	East & West	Total
	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total			
AM 15 Minute Volumes																			
6:00 AM - 6:15 AM				0				0				0		1		1	0	1	1
6:15 AM - 6:30 AM				0				0				0				0	0	0	0
6:30 AM - 6:45 AM				0				0				0		1		1	0	1	1
6:45 AM - 7:00 AM				0				0				0				0	0	0	0
7:00 AM - 7:15 AM				0			1	1				0				0	0	1	1
7:15 AM - 7:30 AM				0				0				0				0	0	0	0
7:30 AM - 7:45 AM				0				0				0		1		1	0	1	1
7:45 AM - 8:00 AM				0				0				0				0	0	0	0
8:00 AM - 8:15 AM				0				0				0				0	0	0	0
8:15 AM - 8:30 AM				0				0				0				0	0	0	0
8:30 AM - 8:45 AM				0				0				0				0	0	0	0
8:45 AM - 9:00 AM				0			1	1			1	1				0	1	1	2
9:00 AM - 9:15 AM				0				0				1				0	1	0	1
9:15 AM - 9:30 AM				0				0				0		1		1	0	1	1
9:30 AM - 9:45 AM				0			1	1				0				0	0	1	1
9:45 AM - 10:00 AM				0				0				0		1		1	0	1	1
Total	0	0	0	0	0	3	0	3	0	0	2	2	0	5	0	5	2	8	10
AM One Hour Volumes																			
6:00 AM - 7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	2	2
6:15 AM - 7:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	2	2
6:30 AM - 7:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	2	2
6:45 AM - 7:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	2	2
7:00 AM - 8:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	2	2
7:15 AM - 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1
7:30 AM - 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1
7:45 AM - 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM - 9:00 AM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	1	1	2
8:15 AM - 9:15 AM	0	0	0	0	0	1	0	1	0	0	2	2	0	0	0	0	2	1	3
8:30 AM - 9:30 AM	0	0	0	0	0	2	0	2	0	0	2	2	0	2	0	2	2	4	6
8:45 AM - 9:45 AM	0	0	0	0	0	5	0	5	0	0	4	4	0	7	0	7	4	12	16
9:00 AM - 10:00 AM	0	0	0	0	0	2	0	2	0	0	2	2	0	2	0	2	2	4	6
PM 15 Minute Volumes																			
3:00 PM - 3:15 PM				0				0				0				0	0	0	0
3:15 PM - 3:30 PM				0				0				0				0	0	0	0
3:30 PM - 3:45 PM				0				0				0				0	0	0	0
3:45 PM - 4:00 PM				0				0				0				0	0	0	0
4:00 PM - 4:15 PM				0				0				0				0	0	0	0
4:15 PM - 4:30 PM				0				0				0				0	0	0	0
4:30 PM - 4:45 PM				0			1	1				0				0	0	1	1
4:45 PM - 5:00 PM				0				0				0				0	0	0	0
5:00 PM - 5:15 PM				0				0				0				0	0	0	0
5:15 PM - 5:30 PM				0				0				0				0	0	0	0
5:30 PM - 5:45 PM				0				0				0		1		1	0	1	1
5:45 PM - 6:00 PM				0				0				0				0	0	0	0
6:00 PM - 6:15 PM				0				0				0				0	0	0	0
6:15 PM - 6:30 PM				0				0				0				0	0	0	0
6:30 PM - 6:45 PM				0				0				0				0	0	0	0
6:45 PM - 7:00 PM				0				0				0				0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	2	2
PM One Hour Volumes																			
3:00 PM - 4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM - 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM - 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM - 4:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1
4:00 PM - 5:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1
4:15 PM - 5:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1
4:30 PM - 5:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1
4:45 PM - 5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1
5:00 PM - 6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1
5:15 PM - 6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1
5:30 PM - 6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1
5:45 PM - 6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM - 7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Wells + Associates, Inc.

McLean, Virginia

Turning Movement Count - Bicycles

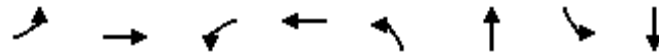
PROJECT: 100-102 Maple Avenue				DATE: 9/8/2018				SOUTHBOUND ROAD: Site Entrance											
W+A JOB NO: 7541				DAY: Saturday				NORTHBOUND ROAD: Driveway											
INTERSECTION: Center St. & Site Entr.				WEATHER: clear				WESTBOUND ROAD: Center Street											
LOCATION: Town of Vienna,VA				COUNTED BY: Amina				EASTBOUND ROAD: Center Street											
				INPUTED BY: agan															
Time Period	Southbound Site Entrance				Westbound Center Street				Northbound Driveway				Eastbound Center Street				North & South	East & West	Total
	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total			
15 Minute Volumes																			
10:00 AM - 10:15 AM													2			2		2	2
10:15 AM - 10:30 AM													12			12		12	12
10:30 AM - 10:45 AM													1			1		1	1
10:45 AM - 11:00 AM																			
11:00 AM - 11:15 AM																			
11:15 AM - 11:30 AM						1		1										1	1
11:30 AM - 11:45 AM																			
11:45 AM - 12:00 PM																			
12:00 PM - 12:15 PM																			
12:15 PM - 12:30 PM																			
12:30 PM - 12:45 PM						1		1										1	1
12:45 PM - 1:00 PM													1			1		1	1
1:00 PM - 1:15 PM	1			1													1		1
1:15 PM - 1:30 PM																			
1:30 PM - 1:45 PM													1			1		1	1
1:45 PM - 2:00 PM																			
2:00 PM - 2:15 PM																			
2:15 PM - 2:30 PM																			
2:30 PM - 2:45 PM						1		1										1	1
2:45 PM - 3:00 PM																			
Total	1	0	0	1	1	2	0	3	0	0	0	0	0	17	0	17	1	20	21
One Hour Volumes																			
10:00 AM - 11:00 AM													15			15		15	15
10:15 AM - 11:15 AM													13			13		13	13
10:30 AM - 11:30 AM						1		1					1			1		2	2
10:45 AM - 11:45 AM						1		1										1	1
11:00 AM - 12:00 PM						1		1										1	1
11:15 AM - 12:15 PM						1		1										1	1
11:30 AM - 12:30 PM																			
11:45 AM - 12:45 PM						1		1										1	1
12:00 PM - 1:00 PM						1		1					1			1		2	2
12:15 PM - 1:15 PM	1			1	1			1					1			1	1	2	3
12:30 PM - 1:30 PM	1			1	1			1					1			1	1	2	3
12:45 PM - 1:45 PM	1			1									2			2	1	2	3
1:00 PM - 2:00 PM	1			1									1			1	1	1	2
1:15 PM - 2:15 PM													1			1		1	1
1:30 PM - 2:30 PM													1			1		1	1
1:45 PM - 2:45 PM						1		1										1	1
2:00 PM - 3:00 PM						1		1										1	1

APPENDIX F
2018 Existing Levels of Service & Queue
(Synchro Worksheets)

Queues

1: Center Street & Maple Avenue

09/17/2018



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	25	1120	62	773	52	168	159	221
v/c Ratio	0.06	0.56	0.22	0.37	0.26	0.67	0.60	0.63
Control Delay	11.0	22.2	12.3	17.2	41.7	47.3	50.7	56.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.0	22.2	12.3	17.2	41.7	47.3	50.7	56.1
Queue Length 50th (ft)	8	343	19	202	36	88	118	176
Queue Length 95th (ft)	22	476	43	282	67	160	160	232
Internal Link Dist (ft)		231		292		258		85
Turn Bay Length (ft)	140		200		100			
Base Capacity (vph)	410	2011	276	2092	202	393	274	504
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.56	0.22	0.37	0.26	0.43	0.58	0.44
Intersection Summary								

HCM 2010 Signalized Intersection Summary

1: Center Street & Maple Avenue

09/17/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	1008	22	55	662	26	47	49	103	135	133	55
Future Volume (veh/h)	23	1008	22	55	662	26	47	49	103	135	133	55
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	25	1096	24	62	744	29	52	54	114	159	156	65
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.89	0.89	0.89	0.90	0.90	0.90	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	399	1959	43	286	1956	76	211	77	163	268	251	104
Arrive On Green	0.02	0.55	0.55	0.03	0.56	0.56	0.03	0.15	0.15	0.09	0.20	0.20
Sat Flow, veh/h	1774	3539	77	1774	3469	135	1774	526	1111	1774	1243	518
Grp Volume(v), veh/h	25	548	572	62	379	394	52	0	168	159	0	221
Grp Sat Flow(s),veh/h/ln	1774	1770	1846	1774	1770	1835	1774	0	1637	1774	0	1761
Q Serve(g_s), s	0.8	28.0	28.1	2.1	16.7	16.7	3.5	0.0	13.7	10.3	0.0	16.0
Cycle Q Clear(g_c), s	0.8	28.0	28.1	2.1	16.7	16.7	3.5	0.0	13.7	10.3	0.0	16.0
Prop In Lane	1.00		0.04	1.00		0.07	1.00		0.68	1.00		0.29
Lane Grp Cap(c), veh/h	399	980	1022	286	998	1034	211	0	240	268	0	355
V/C Ratio(X)	0.06	0.56	0.56	0.22	0.38	0.38	0.25	0.00	0.70	0.59	0.00	0.62
Avail Cap(c_a), veh/h	430	980	1022	298	998	1034	214	0	339	300	0	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.6	20.2	20.2	15.6	17.0	17.0	48.7	0.0	56.8	44.3	0.0	51.0
Incr Delay (d2), s/veh	0.1	2.3	2.2	0.4	1.1	1.1	0.6	0.0	7.7	2.5	0.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	14.3	14.9	1.0	8.4	8.7	1.7	0.0	6.7	5.2	0.0	8.2
LnGrp Delay(d),s/veh	13.7	22.5	22.4	16.0	18.1	18.0	49.3	0.0	64.5	46.8	0.0	54.8
LnGrp LOS	B	C	C	B	B	B	D		E	D		D
Approach Vol, veh/h	1145				835				220		380	
Approach Delay, s/veh	22.3				17.9				60.9		51.5	
Approach LOS	C				B				E		D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.1	84.0	10.7	34.2	9.6	85.4	18.4	26.5				
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0				
Max Green Setting (Gmax), s	5.5	65.5	5.0	39.0	5.5	65.5	15.0	29.0				
Max Q Clear Time (g_c+I1), s	4.1	30.1	5.5	18.0	2.8	18.7	12.3	15.7				
Green Ext Time (p_c), s	0.0	25.2	0.0	2.3	0.0	19.7	0.1	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay	28.4											
HCM 2010 LOS	C											

HCM 2010 AWSC

2: Center Street & Church Street

09/17/2018

Intersection

Intersection Delay, s/veh14.1

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	262	70	81	106	11	15	43	51	58	184	1
Future Vol, veh/h	2	262	70	81	106	11	15	43	51	58	184	1
Peak Hour Factor	0.85	0.85	0.85	0.90	0.90	0.90	0.87	0.87	0.87	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	308	82	90	118	12	17	49	59	67	214	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16.2	12.3	10.7	14.1
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	1%	41%	24%
Vol Thru, %	39%	78%	54%	76%
Vol Right, %	47%	21%	6%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	109	334	198	243
LT Vol	15	2	81	58
Through Vol	43	262	106	184
RT Vol	51	70	11	1
Lane Flow Rate	125	393	220	283
Geometry Grp	1	1	1	1
Degree of Util (X)	0.208	0.593	0.359	0.465
Departure Headway (Hd)	5.974	5.429	5.877	5.925
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	595	660	607	605
Service Time	4.07	3.498	3.959	4.002
HCM Lane V/C Ratio	0.21	0.595	0.362	0.468
HCM Control Delay	10.7	16.2	12.3	14.1
HCM Lane LOS	B	C	B	B
HCM 95th-tile Q	0.8	3.9	1.6	2.5

HCM 2010 TWSC

3: Center Street & Driveway/Site Entr

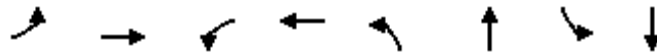
09/17/2018

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	15	0	22	0	0	0	3	94	1	0	301	34
Future Vol, veh/h	15	0	22	0	0	0	3	94	1	0	301	34
Conflicting Peds, #/hr	1	0	1	1	0	1	5	0	4	4	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	0	26	0	0	0	4	111	1	0	354	40
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	500	503	380	512	523	117	399	0	0	116	0	0
Stage 1	379	379	-	124	124	-	-	-	-	-	-	-
Stage 2	121	124	-	388	399	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	481	471	667	472	459	935	1160	-	-	1473	-	-
Stage 1	643	615	-	880	793	-	-	-	-	-	-	-
Stage 2	883	793	-	636	602	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	477	465	663	450	453	931	1154	-	-	1467	-	-
Mov Cap-2 Maneuver	477	465	-	450	453	-	-	-	-	-	-	-
Stage 1	637	612	-	873	787	-	-	-	-	-	-	-
Stage 2	879	787	-	611	599	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	11.8		0		0.2		0					
HCM LOS	B		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1154	-	-	572	-	1467	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.076	-	-	-	-				
HCM Control Delay (s)	8.1	0	-	11.8	0	0	-	-				
HCM Lane LOS	A	A	-	B	A	A	-	-				
HCM 95th %tile O(veh)	0	-	-	0.2	-	0	-	-				

Queues

1: Center Street & Maple Avenue

09/17/2018



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	52	917	60	1423	47	248	72	275
v/c Ratio	0.27	0.43	0.16	0.66	0.33	0.85	0.47	0.83
Control Delay	12.5	18.1	10.0	22.6	53.4	85.9	58.2	79.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.5	18.1	10.0	22.6	53.4	85.9	58.2	79.4
Queue Length 50th (ft)	17	272	20	518	38	240	59	263
Queue Length 95th (ft)	33	331	37	597	73	#361	99	#378
Internal Link Dist (ft)		231		292		258		85
Turn Bay Length (ft)	140		200		100			
Base Capacity (vph)	197	2142	388	2161	141	307	154	331
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.43	0.15	0.66	0.33	0.81	0.47	0.83

Intersection Summary

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

HCM 2010 Signalized Intersection Summary

1: Center Street & Maple Avenue

09/17/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	795	31	58	1321	59	41	143	75	61	131	103
Future Volume (veh/h)	47	795	31	58	1321	59	41	143	75	61	131	103
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.99	1.00		0.98
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	52	883	34	60	1362	61	47	162	85	72	154	121
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.90	0.90	0.90	0.97	0.97	0.97	0.88	0.88	0.88	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	230	2125	82	388	2113	94	114	182	96	146	165	130
Arrive On Green	0.03	0.61	0.61	0.03	0.61	0.61	0.03	0.16	0.16	0.04	0.17	0.17
Sat Flow, veh/h	1774	3471	134	1774	3446	154	1774	1147	602	1774	957	752
Grp Volume(v), veh/h	52	450	467	60	698	725	47	0	247	72	0	275
Grp Sat Flow(s),veh/h/ln	1774	1770	1835	1774	1770	1831	1774	0	1748	1774	0	1709
Q Serve(g_s), s	1.7	21.2	21.2	2.0	40.3	40.6	3.5	0.0	22.1	5.4	0.0	25.4
Cycle Q Clear(g_c), s	1.7	21.2	21.2	2.0	40.3	40.6	3.5	0.0	22.1	5.4	0.0	25.4
Prop In Lane	1.00		0.07	1.00		0.08	1.00		0.34	1.00		0.44
Lane Grp Cap(c), veh/h	230	1083	1123	388	1085	1122	114	0	278	146	0	294
V/C Ratio(X)	0.23	0.42	0.42	0.15	0.64	0.65	0.41	0.00	0.89	0.49	0.00	0.93
Avail Cap(c_a), veh/h	252	1083	1123	441	1085	1122	126	0	295	146	0	299
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.6	16.1	16.1	12.2	19.8	19.8	55.8	0.0	65.9	54.7	0.0	65.3
Incr Delay (d2), s/veh	0.5	1.2	1.1	0.2	2.9	2.9	2.4	0.0	27.7	2.6	0.0	35.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	10.6	11.0	1.0	20.5	21.2	1.8	0.0	12.8	2.7	0.0	14.9
LnGrp Delay(d),s/veh	17.1	17.3	17.3	12.4	22.7	22.7	58.2	0.0	93.6	57.2	0.0	101.2
LnGrp LOS	B	B	B	B	C	C	E		F	E		F
Approach Vol, veh/h		969			1483			294			347	
Approach Delay, s/veh		17.3			22.3			87.9			92.1	
Approach LOS		B			C			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.2	104.4	10.8	33.6	11.0	104.6	13.0	31.4				
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0				
Max Green Setting (Gmax), s	9.5	91.5	6.0	28.0	6.5	94.5	7.0	27.0				
Max Q Clear Time (g_c+I1), s	4.0	23.2	5.5	27.4	3.7	42.6	7.4	24.1				
Green Ext Time (p_c), s	0.0	29.1	0.0	0.2	0.0	42.1	0.0	0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				34.8								
HCM 2010 LOS				C								

HCM 2010 AWSC

2: Center Street & Church Street

09/17/2018

Intersection												
Intersection Delay, s/veh	22											
Intersection LOS	C											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	166	45	139	259	65	37	148	65	16	113	5
Future Vol, veh/h	19	166	45	139	259	65	37	148	65	16	113	5
Peak Hour Factor	0.88	0.88	0.88	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	189	51	153	285	71	41	163	71	18	124	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.6	31.7	15.9	12.9
HCM LOS	B	D	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	8%	30%	12%
Vol Thru, %	59%	72%	56%	84%
Vol Right, %	26%	20%	14%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	250	230	463	134
LT Vol	37	19	139	16
Through Vol	148	166	259	113
RT Vol	65	45	65	5
Lane Flow Rate	275	261	509	147
Geometry Grp	1	1	1	1
Degree of Util (X)	0.497	0.457	0.833	0.287
Departure Headway (Hd)	6.514	6.297	5.895	7.005
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	552	570	611	511
Service Time	4.576	4.362	3.948	5.077
HCM Lane V/C Ratio	0.498	0.458	0.833	0.288
HCM Control Delay	15.9	14.6	31.7	12.9
HCM Lane LOS	C	B	D	B
HCM 95th-tile Q	2.7	2.4	8.8	1.2

HCM 2010 TWSC

3: Center Street & Driveway/Site Entr

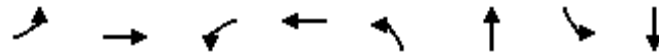
09/17/2018

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	0	7	2	0	0	5	243	1	0	286	11
Future Vol, veh/h	7	0	7	2	0	0	5	243	1	0	286	11
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	6	6	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	87	87	87	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	0	8	2	0	0	6	279	1	0	333	13
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	634	640	342	642	646	286	348	0	0	286	0	0
Stage 1	342	342	-	298	298	-	-	-	-	-	-	-
Stage 2	292	298	-	344	348	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	392	393	701	387	390	753	1211	-	-	1276	-	-
Stage 1	673	638	-	711	667	-	-	-	-	-	-	-
Stage 2	716	667	-	671	634	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	390	387	700	378	385	749	1209	-	-	1269	-	-
Mov Cap-2 Maneuver	390	387	-	378	385	-	-	-	-	-	-	-
Stage 1	668	637	-	702	659	-	-	-	-	-	-	-
Stage 2	712	659	-	663	633	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	12.4		14.6		0.2		0					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1209	-	-	501	378	1269	-	-				
HCM Lane V/C Ratio	0.005	-	-	0.033	0.006	-	-	-				
HCM Control Delay (s)	8	0	-	12.4	14.6	0	-	-				
HCM Lane LOS	A	A	-	B	B	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-				

Queues

1: Center Street & Maple Avenue

09/17/2018



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	79	1271	55	1284	54	211	141	199
v/c Ratio	0.38	0.66	0.26	0.70	0.22	0.72	0.55	0.50
Control Delay	17.1	26.8	14.8	28.6	38.0	60.9	46.1	44.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.1	26.8	14.8	28.6	38.0	60.9	46.1	44.5
Queue Length 50th (ft)	27	437	18	450	36	159	100	138
Queue Length 95th (ft)	53	547	40	562	62	217	138	191
Internal Link Dist (ft)		231		292		258		85
Turn Bay Length (ft)	140		200		100			
Base Capacity (vph)	213	1916	231	1840	246	400	259	481
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.66	0.24	0.70	0.22	0.53	0.54	0.41
Intersection Summary								

HCM 2010 Signalized Intersection Summary

1: Center Street & Maple Avenue

09/17/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	1047	33	47	1044	60	46	94	85	120	91	78
Future Volume (veh/h)	67	1047	33	47	1044	60	46	94	85	120	91	78
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	0.97		0.95	0.98		0.96
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	79	1232	39	55	1214	70	54	111	100	141	107	92
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.85	0.85	0.85	0.86	0.86	0.86	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	229	1874	59	230	1809	104	244	156	140	255	199	171
Arrive On Green	0.03	0.54	0.54	0.03	0.53	0.53	0.03	0.18	0.18	0.08	0.22	0.22
Sat Flow, veh/h	1774	3495	111	1774	3390	195	1774	882	795	1774	909	781
Grp Volume(v), veh/h	79	623	648	55	633	651	54	0	211	141	0	199
Grp Sat Flow(s),veh/h/ln	1774	1770	1836	1774	1770	1815	1774	0	1677	1774	0	1690
Q Serve(g_s), s	2.8	35.3	35.4	1.9	36.4	36.5	3.5	0.0	16.6	8.8	0.0	14.6
Cycle Q Clear(g_c), s	2.8	35.3	35.4	1.9	36.4	36.5	3.5	0.0	16.6	8.8	0.0	14.6
Prop In Lane	1.00		0.06	1.00		0.11	1.00		0.47	1.00		0.46
Lane Grp Cap(c), veh/h	229	949	985	230	944	969	244	0	296	255	0	371
V/C Ratio(X)	0.35	0.66	0.66	0.24	0.67	0.67	0.22	0.00	0.71	0.55	0.00	0.54
Avail Cap(c_a), veh/h	263	949	985	282	944	969	247	0	371	270	0	459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.5	23.3	23.3	18.7	23.7	23.7	45.3	0.0	54.3	42.1	0.0	48.3
Incr Delay (d2), s/veh	0.9	3.6	3.4	0.5	3.8	3.7	0.5	0.0	7.6	2.2	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	18.1	18.8	1.0	18.7	19.3	1.7	0.0	8.3	4.5	0.0	7.1
LnGrp Delay(d),s/veh	20.4	26.8	26.7	19.2	27.5	27.5	45.7	0.0	62.0	44.3	0.0	50.9
LnGrp LOS	C	C	C	B	C	C	D		E	D		D
Approach Vol, veh/h	1350				1339				265		340	
Approach Delay, s/veh	26.4				27.1				58.7		48.2	
Approach LOS	C				C				E		D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.9	81.6	10.8	36.7	11.3	81.2	16.8	30.7				
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0				
Max Green Setting (Gmax), s	8.5	63.5	5.0	38.0	7.5	64.5	12.0	31.0				
Max Q Clear Time (g_c+I1), s	3.9	37.4	5.5	16.6	4.8	38.5	10.8	18.6				
Green Ext Time (p_c), s	0.0	21.7	0.0	2.1	0.0	21.8	0.0	1.7				
Intersection Summary												
HCM 2010 Ctrl Delay	31.5											
HCM 2010 LOS	C											

HCM 2010 AWSC

2: Center Street & Church Street

09/17/2018

Intersection

Intersection Delay, s/veh15.2

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	237	113	100	167	35	48	70	107	23	83	21
Future Vol, veh/h	24	237	113	100	167	35	48	70	107	23	83	21
Peak Hour Factor	0.97	0.97	0.97	0.96	0.96	0.96	0.85	0.85	0.85	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	244	116	104	174	36	56	82	126	26	92	23
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB	WB		NB		SB						
Opposing Approach	WB	EB		SB		NB						
Opposing Lanes	1	1		1		1						
Conflicting Approach Left SB		NB		EB		WB						
Conflicting Lanes Left	1	1		1		1						
Conflicting Approach Right NB		SB		WB		EB						
Conflicting Lanes Right	1	1		1		1						
HCM Control Delay	17.2	15.3		13.9		11.8						
HCM LOS	C	C		B		B						

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	6%	33%	18%
Vol Thru, %	31%	63%	55%	65%
Vol Right, %	48%	30%	12%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	225	374	302	127
LT Vol	48	24	100	23
Through Vol	70	237	167	83
RT Vol	107	113	35	21
Lane Flow Rate	265	386	315	141
Geometry Grp	1	1	1	1
Degree of Util (X)	0.445	0.61	0.522	0.256
Departure Headway (Hd)	6.052	5.696	5.972	6.534
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	593	636	607	548
Service Time	4.103	3.71	3.988	4.595
HCM Lane V/C Ratio	0.447	0.607	0.519	0.257
HCM Control Delay	13.9	17.2	15.3	11.8
HCM Lane LOS	B	C	C	B
HCM 95th-tile Q	2.3	4.1	3	1

HCM 2010 TWSC

3: Center Street & Driveway/Site Entr

09/17/2018

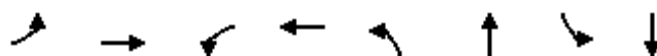
Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	0	15	2	0	3	13	205	3	0	272	24
Future Vol, veh/h	17	0	15	2	0	3	13	205	3	0	272	24
Conflicting Peds, #/hr	5	0	6	6	0	5	15	0	16	16	0	15
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	85	85	85	85	85	85	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	0	16	2	0	4	15	241	4	0	306	27
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	615	626	341	623	637	264	348	0	0	261	0	0
Stage 1	335	335	-	289	289	-	-	-	-	-	-	-
Stage 2	280	291	-	334	348	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	403	401	701	398	395	775	1211	-	-	1303	-	-
Stage 1	679	643	-	719	673	-	-	-	-	-	-	-
Stage 2	727	672	-	680	634	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	389	384	687	376	378	760	1194	-	-	1283	-	-
Mov Cap-2 Maneuver	389	384	-	376	378	-	-	-	-	-	-	-
Stage 1	659	634	-	697	653	-	-	-	-	-	-	-
Stage 2	709	652	-	660	625	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	12.9		11.7		0.5		0					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1194	-	-	488	540	1283	-	-				
HCM Lane V/C Ratio	0.013	-	-	0.071	0.011	-	-	-				
HCM Control Delay (s)	8.1	0	-	12.9	11.7	0	-	-				
HCM Lane LOS	A	A	-	B	B	A	-	-				
HCM 95th %tile O(veh)	0	-	-	0.2	0	0	-	-				

APPENDIX G
2021 Background Levels of Service & Queue
(Synchro Worksheets)

Queues

1: Center Street & Maple Avenue

09/17/2018



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	26	1174	62	783	52	169	151	211
v/c Ratio	0.06	0.58	0.24	0.37	0.25	0.67	0.58	0.60
Control Delay	11.0	22.7	12.5	17.2	41.6	47.3	50.0	55.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.0	22.7	12.5	17.2	41.6	47.3	50.0	55.1
Queue Length 50th (ft)	8	368	19	206	36	88	111	166
Queue Length 95th (ft)	23	510	44	291	67	159	163	238
Internal Link Dist (ft)		231		292		258		85
Turn Bay Length (ft)	140		200		100			
Base Capacity (vph)	408	2017	261	2098	206	394	271	504
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.58	0.24	0.37	0.25	0.43	0.56	0.42
Intersection Summary								

HCM 2010 Signalized Intersection Summary

1: Center Street & Maple Avenue

09/17/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	1057	23	57	694	27	48	50	106	139	137	57
Future Volume (veh/h)	24	1057	23	57	694	27	48	50	106	139	137	57
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	26	1149	25	62	754	29	52	54	115	151	149	62
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	399	1971	43	273	1967	76	214	77	164	261	246	103
Arrive On Green	0.02	0.56	0.56	0.03	0.57	0.57	0.03	0.15	0.15	0.08	0.20	0.20
Sat Flow, veh/h	1774	3539	77	1774	3471	133	1774	523	1113	1774	1244	517
Grp Volume(v), veh/h	26	574	600	62	384	399	52	0	169	151	0	211
Grp Sat Flow(s),veh/h/ln	1774	1770	1847	1774	1770	1835	1774	0	1636	1774	0	1761
Q Serve(g_s), s	0.9	29.8	29.8	2.1	16.8	16.8	3.5	0.0	13.8	9.8	0.0	15.3
Cycle Q Clear(g_c), s	0.9	29.8	29.8	2.1	16.8	16.8	3.5	0.0	13.8	9.8	0.0	15.3
Prop In Lane	1.00		0.04	1.00		0.07	1.00		0.68	1.00		0.29
Lane Grp Cap(c), veh/h	399	985	1028	273	1003	1040	214	0	241	261	0	349
V/C Ratio(X)	0.07	0.58	0.58	0.23	0.38	0.38	0.24	0.00	0.70	0.58	0.00	0.60
Avail Cap(c_a), veh/h	428	985	1028	285	1003	1040	217	0	339	300	0	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.4	20.4	20.4	15.9	16.8	16.8	48.6	0.0	56.8	44.5	0.0	51.1
Incr Delay (d2), s/veh	0.1	2.5	2.4	0.4	1.1	1.1	0.6	0.0	7.7	2.1	0.0	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	15.2	15.8	1.0	8.5	8.8	1.7	0.0	6.8	4.9	0.0	7.8
LnGrp Delay(d),s/veh	13.5	22.9	22.8	16.3	17.9	17.9	49.2	0.0	64.5	46.6	0.0	54.7
LnGrp LOS	B	C	C	B	B	B	D		E	D		D
Approach Vol, veh/h	1200				845				221		362	
Approach Delay, s/veh	22.6				17.8				60.9		51.3	
Approach LOS	C				B				E		D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.1	84.5	10.7	33.7	9.7	85.8	17.9	26.6				
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0				
Max Green Setting (Gmax), s	5.5	65.5	5.0	39.0	5.5	65.5	15.0	29.0				
Max Q Clear Time (g_c+I1), s	4.1	31.8	5.5	17.3	2.9	18.8	11.8	15.8				
Green Ext Time (p_c), s	0.0	25.3	0.0	2.3	0.0	20.0	0.1	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay			28.2									
HCM 2010 LOS			C									

HCM 2010 AWSC

2: Center Street & Church Street

09/17/2018

Intersection												
Intersection Delay, s/veh13.4												
Intersection LOS B												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	2	270	72	83	109	11	15	44	53	60	190	1
Future Vol, veh/h	2	270	72	83	109	11	15	44	53	60	190	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	293	78	90	118	12	16	48	58	65	207	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15	12	10.4	13.5
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	1%	41%	24%
Vol Thru, %	39%	78%	54%	76%
Vol Right, %	47%	21%	5%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	112	344	203	251
LT Vol	15	2	83	60
Through Vol	44	270	109	190
RT Vol	53	72	11	1
Lane Flow Rate	122	374	221	273
Geometry Grp	1	1	1	1
Degree of Util (X)	0.199	0.557	0.354	0.443
Departure Headway (Hd)	5.87	5.367	5.777	5.847
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	606	669	618	614
Service Time	3.95	3.43	3.849	3.913
HCM Lane V/C Ratio	0.201	0.559	0.358	0.445
HCM Control Delay	10.4	15	12	13.5
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	0.7	3.4	1.6	2.3

HCM 2010 TWSC

3: Center Street & Driveway/Site Entr

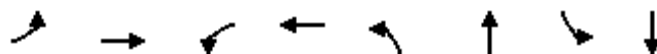
09/17/2018

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	15	0	22	0	0	0	3	97	1	0	310	34
Future Vol, veh/h	15	0	22	0	0	0	3	97	1	0	310	34
Conflicting Peds, #/hr	1	0	1	1	0	1	5	0	4	4	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	24	0	0	0	3	105	1	0	337	37
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	474	477	362	485	495	111	379	0	0	110	0	0
Stage 1	361	361	-	116	116	-	-	-	-	-	-	-
Stage 2	113	116	-	369	379	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	501	487	683	492	476	942	1179	-	-	1480	-	-
Stage 1	657	626	-	889	800	-	-	-	-	-	-	-
Stage 2	892	800	-	651	615	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	497	481	679	471	470	938	1173	-	-	1474	-	-
Mov Cap-2 Maneuver	497	481	-	471	470	-	-	-	-	-	-	-
Stage 1	652	623	-	883	794	-	-	-	-	-	-	-
Stage 2	888	794	-	627	612	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	11.5		0		0.2		0					
HCM LOS	B		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1173	-	-	591	-	1474	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.068	-	-	-	-				
HCM Control Delay (s)	8.1	0	-	11.5	0	0	-	-				
HCM Lane LOS	A	A	-	B	A	A	-	-				
HCM 95th %tile O(veh)	0	-	-	0.2	-	0	-	-				

Queues

1: Center Street & Maple Avenue

09/17/2018



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	52	940	62	1493	46	244	68	262
v/c Ratio	0.29	0.44	0.17	0.69	0.31	0.84	0.44	0.80
Control Delay	13.2	18.1	10.0	23.4	52.5	85.8	57.0	76.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.2	18.1	10.0	23.4	52.5	85.8	57.0	76.5
Queue Length 50th (ft)	17	282	21	562	37	235	56	247
Queue Length 95th (ft)	33	342	38	647	74	#368	101	#392
Internal Link Dist (ft)		231		292		258		85
Turn Bay Length (ft)	140		200		100			
Base Capacity (vph)	182	2148	379	2168	149	307	155	330
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.44	0.16	0.69	0.31	0.79	0.44	0.79

Intersection Summary

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

HCM 2010 Signalized Intersection Summary

1: Center Street & Maple Avenue

09/17/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	833	32	60	1387	61	42	147	77	63	135	106
Future Volume (veh/h)	48	833	32	60	1387	61	42	147	77	63	135	106
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.99	1.00		0.98
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	52	905	35	62	1430	63	46	160	84	68	147	115
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.97	0.97	0.97	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	215	2135	83	382	2126	93	119	180	94	143	163	127
Arrive On Green	0.03	0.62	0.62	0.03	0.62	0.62	0.03	0.16	0.16	0.04	0.17	0.17
Sat Flow, veh/h	1774	3470	134	1774	3449	152	1774	1146	602	1774	959	750
Grp Volume(v), veh/h	52	461	479	62	732	761	46	0	244	68	0	262
Grp Sat Flow(s),veh/h/ln	1774	1770	1835	1774	1770	1831	1774	0	1748	1774	0	1709
Q Serve(g_s), s	1.7	21.7	21.7	2.1	43.3	43.7	3.5	0.0	21.9	5.1	0.0	24.1
Cycle Q Clear(g_c), s	1.7	21.7	21.7	2.1	43.3	43.7	3.5	0.0	21.9	5.1	0.0	24.1
Prop In Lane	1.00		0.07	1.00		0.08	1.00		0.34	1.00		0.44
Lane Grp Cap(c), veh/h	215	1089	1129	382	1091	1129	119	0	274	143	0	290
V/C Ratio(X)	0.24	0.42	0.42	0.16	0.67	0.67	0.39	0.00	0.89	0.48	0.00	0.90
Avail Cap(c_a), veh/h	238	1089	1129	435	1091	1129	133	0	295	145	0	299
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.4	16.0	16.0	12.1	20.1	20.1	55.9	0.0	66.1	54.9	0.0	65.2
Incr Delay (d2), s/veh	0.6	1.2	1.2	0.2	3.3	3.2	2.0	0.0	27.6	2.5	0.0	30.0
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	0.9	10.9	11.3	1.0	22.1	23.0	1.8	0.0	12.7	2.6	0.0	13.8
LnGrp Delay(d),s/veh	18.0	17.2	17.2	12.3	23.4	23.4	58.0	0.0	93.6	57.4	0.0	95.2
LnGrp LOS	B	B	B	B	C	C	E		F	E		F
Approach Vol, veh/h		992			1555			290			330	
Approach Delay, s/veh		17.3			22.9			88.0			87.4	
Approach LOS		B			C			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.2	104.9	10.8	33.1	11.0	105.1	12.8	31.1				
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0				
Max Green Setting (Gmax), s	9.5	91.5	6.0	28.0	6.5	94.5	7.0	27.0				
Max Q Clear Time (g_c+I1), s	4.1	23.7	5.5	26.1	3.7	45.7	7.1	23.9				
Green Ext Time (p_c), s	0.0	30.1	0.0	0.5	0.0	41.5	0.0	0.7				
Intersection Summary												
HCM 2010 Ctrl Delay				33.8								
HCM 2010 LOS				C								

HCM 2010 AWSC

2: Center Street & Church Street

09/17/2018

Intersection

Intersection Delay, s/veh23.2

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	171	46	143	267	67	38	152	67	16	116	5
Future Vol, veh/h	20	171	46	143	267	67	38	152	67	16	116	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	186	50	155	290	73	41	165	73	17	126	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.7	34.1	16.3	13
HCM LOS	B	D	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	8%	30%	12%
Vol Thru, %	59%	72%	56%	85%
Vol Right, %	26%	19%	14%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	257	237	477	137
LT Vol	38	20	143	16
Through Vol	152	171	267	116
RT Vol	67	46	67	5
Lane Flow Rate	279	258	518	149
Geometry Grp	1	1	1	1
Degree of Util (X)	0.508	0.455	0.853	0.292
Departure Headway (Hd)	6.553	6.36	5.924	7.057
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	548	564	612	506
Service Time	4.619	4.428	3.978	5.134
HCM Lane V/C Ratio	0.509	0.457	0.846	0.294
HCM Control Delay	16.3	14.7	34.1	13
HCM Lane LOS	C	B	D	B
HCM 95th-tile Q	2.9	2.4	9.4	1.2

HCM 2010 TWSC

3: Center Street & Driveway/Site Entr

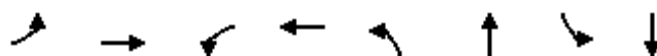
09/17/2018

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	0	7	2	0	0	5	250	1	0	295	11
Future Vol, veh/h	7	0	7	2	0	0	5	250	1	0	295	11
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	6	6	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	0	8	2	0	0	5	272	1	0	321	12
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	612	618	329	620	624	279	335	0	0	279	0	0
Stage 1	329	329	-	289	289	-	-	-	-	-	-	-
Stage 2	283	289	-	331	335	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	405	405	712	400	402	760	1224	-	-	1284	-	-
Stage 1	684	646	-	719	673	-	-	-	-	-	-	-
Stage 2	724	673	-	682	643	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	403	400	711	392	397	756	1222	-	-	1277	-	-
Mov Cap-2 Maneuver	403	400	-	392	397	-	-	-	-	-	-	-
Stage 1	679	645	-	711	666	-	-	-	-	-	-	-
Stage 2	720	666	-	675	642	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	12.2		14.2		0.2		0					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1222	-	-	514	392	1277	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.03	0.006	-	-	-				
HCM Control Delay (s)	8	0	-	12.2	14.2	0	-	-				
HCM Lane LOS	A	A	-	B	B	A	-	-				
HCM 95th %tile O(veh)	0	-	-	0.1	0	0	-	-				

Queues

1: Center Street & Maple Avenue

09/17/2018



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	75	1267	52	1288	51	201	135	189
v/c Ratio	0.36	0.65	0.24	0.69	0.21	0.71	0.53	0.49
Control Delay	16.1	25.9	14.2	28.1	38.3	60.6	45.9	44.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.1	25.9	14.2	28.1	38.3	60.6	45.9	44.4
Queue Length 50th (ft)	25	428	17	446	34	150	96	130
Queue Length 95th (ft)	53	589	40	610	64	224	144	197
Internal Link Dist (ft)		231		292		258		85
Turn Bay Length (ft)	140		200		100			
Base Capacity (vph)	216	1943	236	1860	240	399	259	481
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.65	0.22	0.69	0.21	0.50	0.52	0.39
Intersection Summary								

HCM 2010 Signalized Intersection Summary

1: Center Street & Maple Avenue

09/17/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	1132	34	48	1123	62	47	97	88	124	94	80
Future Volume (veh/h)	69	1132	34	48	1123	62	47	97	88	124	94	80
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	0.97		0.95	0.98		0.96
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	75	1230	37	52	1221	67	51	105	96	135	102	87
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	231	1895	57	234	1831	100	245	153	139	255	198	169
Arrive On Green	0.03	0.54	0.54	0.03	0.54	0.54	0.03	0.17	0.17	0.07	0.22	0.22
Sat Flow, veh/h	1774	3502	105	1774	3401	186	1774	875	800	1774	912	778
Grp Volume(v), veh/h	75	621	646	52	635	653	51	0	201	135	0	189
Grp Sat Flow(s),veh/h/ln	1774	1770	1838	1774	1770	1818	1774	0	1676	1774	0	1690
Q Serve(g_s), s	2.6	34.7	34.8	1.8	36.1	36.3	3.3	0.0	15.8	8.5	0.0	13.8
Cycle Q Clear(g_c), s	2.6	34.7	34.8	1.8	36.1	36.3	3.3	0.0	15.8	8.5	0.0	13.8
Prop In Lane	1.00		0.06	1.00		0.10	1.00		0.48	1.00		0.46
Lane Grp Cap(c), veh/h	231	958	995	234	953	979	245	0	292	255	0	366
V/C Ratio(X)	0.33	0.65	0.65	0.22	0.67	0.67	0.21	0.00	0.69	0.53	0.00	0.52
Avail Cap(c_a), veh/h	266	958	995	287	953	979	251	0	371	275	0	459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.1	22.7	22.7	18.2	23.2	23.3	45.6	0.0	54.2	42.4	0.0	48.4
Incr Delay (d2), s/veh	0.8	3.4	3.3	0.5	3.7	3.6	0.4	0.0	6.6	1.7	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	17.8	18.5	0.9	18.6	19.1	1.6	0.0	7.8	4.3	0.0	6.7
LnGrp Delay(d),s/veh	19.9	26.1	26.0	18.6	26.9	26.9	46.0	0.0	60.8	44.1	0.0	50.8
LnGrp LOS	B	C	C	B	C	C	D		E	D		D
Approach Vol, veh/h	1342			1340			252			324		
Approach Delay, s/veh	25.7			26.6			57.8			48.0		
Approach LOS	C			C			E			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.8	82.3	10.6	36.3	11.2	81.9	16.5	30.4				
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0				
Max Green Setting (Gmax), s	8.5	63.5	5.0	38.0	7.5	64.5	12.0	31.0				
Max Q Clear Time (g_c+I1), s	3.8	36.8	5.3	15.8	4.6	38.3	10.5	17.8				
Green Ext Time (p_c), s	0.0	22.1	0.0	2.0	0.0	22.0	0.0	1.6				
Intersection Summary												
HCM 2010 Ctrl Delay			30.8									
HCM 2010 LOS			C									

HCM 2010 AWSC

2: Center Street & Church Street

09/17/2018

Intersection												
Intersection Delay, s/veh15.5												
Intersection LOS C												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	25	244	116	103	172	36	49	72	110	24	86	22
Future Vol, veh/h	25	244	116	103	172	36	49	72	110	24	86	22
Peak Hour Factor	0.97	0.97	0.97	0.96	0.96	0.96	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	252	120	107	179	38	53	78	120	26	93	24
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	17.8	15.6	13.7	12
HCM LOS	C	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	6%	33%	18%
Vol Thru, %	31%	63%	55%	65%
Vol Right, %	48%	30%	12%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	231	385	311	132
LT Vol	49	25	103	24
Through Vol	72	244	172	86
RT Vol	110	116	36	22
Lane Flow Rate	251	397	324	143
Geometry Grp	1	1	1	1
Degree of Util (X)	0.427	0.628	0.534	0.262
Departure Headway (Hd)	6.117	5.699	5.938	6.566
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	588	639	606	545
Service Time	4.167	3.699	3.984	4.625
HCM Lane V/C Ratio	0.427	0.621	0.535	0.262
HCM Control Delay	13.7	17.8	15.6	12
HCM Lane LOS	B	C	C	B
HCM 95th-tile Q	2.1	4.4	3.2	1

HCM 2010 TWSC

3: Center Street & Driveway/Site Entr

09/17/2018

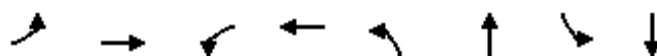
Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	0	15	2	0	3	13	211	3	0	280	24
Future Vol, veh/h	17	0	15	2	0	3	13	211	3	0	280	24
Conflicting Peds, #/hr	5	0	6	6	0	5	15	0	16	16	0	15
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	0	16	2	0	3	14	229	3	0	304	26
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	597	608	338	606	620	252	345	0	0	248	0	0
Stage 1	332	332	-	275	275	-	-	-	-	-	-	-
Stage 2	265	276	-	331	345	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	415	410	704	409	404	787	1214	-	-	1318	-	-
Stage 1	681	644	-	731	683	-	-	-	-	-	-	-
Stage 2	740	682	-	682	636	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	401	393	690	387	387	771	1197	-	-	1298	-	-
Mov Cap-2 Maneuver	401	393	-	387	387	-	-	-	-	-	-	-
Stage 1	663	635	-	711	664	-	-	-	-	-	-	-
Stage 2	724	663	-	662	627	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	12.8		11.6		0.5		0					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1197	-	-	499	552	1298	-	-				
HCM Lane V/C Ratio	0.012	-	-	0.07	0.01	-	-	-				
HCM Control Delay (s)	8	0	-	12.8	11.6	0	-	-				
HCM Lane LOS	A	A	-	B	B	A	-	-				
HCM 95th %tile O(veh)	0	-	-	0.2	0	0	-	-				

APPENDIX H
2021 Total Future Levels of Service & Queue
(Synchro Worksheets)

Queues

1: Center Street & Maple Avenue

09/17/2018



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	34	1173	62	789	52	170	154	217
v/c Ratio	0.08	0.58	0.24	0.38	0.25	0.67	0.59	0.61
Control Delay	11.2	22.9	12.6	17.5	41.5	47.6	50.0	55.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.2	22.9	12.6	17.5	41.5	47.6	50.0	55.2
Queue Length 50th (ft)	11	370	20	209	36	90	113	171
Queue Length 95th (ft)	28	511	44	297	67	162	166	244
Internal Link Dist (ft)		231		292		258		85
Turn Bay Length (ft)	140		200		100			
Base Capacity (vph)	404	2011	259	2084	205	394	273	504
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.58	0.24	0.38	0.25	0.43	0.56	0.43
Intersection Summary								

HCM 2010 Signalized Intersection Summary

1: Center Street & Maple Avenue

09/17/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	1056	23	57	693	33	48	51	106	142	138	62
Future Volume (veh/h)	31	1056	23	57	693	33	48	51	106	142	138	62
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	34	1148	25	62	753	36	52	55	115	154	150	67
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	397	1965	43	272	1928	92	211	78	163	263	243	108
Arrive On Green	0.03	0.56	0.56	0.03	0.56	0.56	0.03	0.15	0.15	0.09	0.20	0.20
Sat Flow, veh/h	1774	3539	77	1774	3434	164	1774	530	1108	1774	1214	542
Grp Volume(v), veh/h	34	574	599	62	388	401	52	0	170	154	0	217
Grp Sat Flow(s),veh/h/ln	1774	1770	1847	1774	1770	1829	1774	0	1637	1774	0	1756
Q Serve(g_s), s	1.1	29.9	29.9	2.1	17.2	17.3	3.5	0.0	13.8	10.0	0.0	15.8
Cycle Q Clear(g_c), s	1.1	29.9	29.9	2.1	17.2	17.3	3.5	0.0	13.8	10.0	0.0	15.8
Prop In Lane	1.00		0.04	1.00		0.09	1.00		0.68	1.00		0.31
Lane Grp Cap(c), veh/h	397	982	1025	272	994	1027	211	0	241	263	0	351
V/C Ratio(X)	0.09	0.58	0.58	0.23	0.39	0.39	0.25	0.00	0.70	0.59	0.00	0.62
Avail Cap(c_a), veh/h	421	982	1025	284	994	1027	215	0	339	300	0	489
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.5	20.5	20.5	16.0	17.2	17.2	48.6	0.0	56.8	44.4	0.0	51.1
Incr Delay (d2), s/veh	0.1	2.5	2.4	0.4	1.2	1.1	0.6	0.0	7.8	2.3	0.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	15.2	15.8	1.0	8.7	9.0	1.7	0.0	6.8	5.0	0.0	8.0
LnGrp Delay(d),s/veh	13.6	23.0	22.9	16.4	18.4	18.4	49.2	0.0	64.5	46.6	0.0	54.9
LnGrp LOS	B	C	C	B	B	B	D		E	D		D
Approach Vol, veh/h	1207				851				222			
Approach Delay, s/veh	22.7				18.2				60.9			
Approach LOS	C				B				E			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.1	84.2	10.7	34.0	10.2	85.1	18.1	26.6				
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0				
Max Green Setting (Gmax), s	5.5	65.5	5.0	39.0	5.5	65.5	15.0	29.0				
Max Q Clear Time (g_c+I1), s	4.1	31.9	5.5	17.8	3.1	19.3	12.0	15.8				
Green Ext Time (p_c), s	0.0	25.2	0.0	2.3	0.0	20.1	0.1	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay	28.5											
HCM 2010 LOS	C											

HCM 2010 AWSC

2: Center Street & Church Street

09/17/2018

Intersection												
Intersection Delay, s/veh13.5												
Intersection LOS B												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	270	73	84	109	11	16	44	54	60	191	1
Future Vol, veh/h	2	270	73	84	109	11	16	44	54	60	191	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	293	79	91	118	12	17	48	59	65	208	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15.2	12.1	10.5	13.6
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	1%	41%	24%
Vol Thru, %	39%	78%	53%	76%
Vol Right, %	47%	21%	5%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	114	345	204	252
LT Vol	16	2	84	60
Through Vol	44	270	109	191
RT Vol	54	73	11	1
Lane Flow Rate	124	375	222	274
Geometry Grp	1	1	1	1
Degree of Util (X)	0.203	0.561	0.357	0.446
Departure Headway (Hd)	5.884	5.382	5.795	5.86
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	605	667	616	611
Service Time	3.97	3.446	3.87	3.931
HCM Lane V/C Ratio	0.205	0.562	0.36	0.448
HCM Control Delay	10.5	15.2	12.1	13.6
HCM Lane LOS	B	C	B	B
HCM 95th-tile Q	0.8	3.5	1.6	2.3

HCM 2010 TWSC

3: Center Street & Driveway/Site Entr

09/17/2018

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	15	0	22	8	0	2	3	97	15	3	310	34
Future Vol, veh/h	15	0	22	8	0	2	3	97	15	3	310	34
Conflicting Peds, #/hr	1	0	1	1	0	1	5	0	4	4	0	5
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	24	9	0	2	3	105	16	3	337	37

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	488	498	362	498	508	118	379	0	0	125	0	0
Stage 1	367	367	-	123	123	-	-	-	-	-	-	-
Stage 2	121	131	-	375	385	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	490	474	683	483	468	934	1179	-	-	1462	-	-
Stage 1	653	622	-	881	794	-	-	-	-	-	-	-
Stage 2	883	788	-	646	611	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	484	467	679	462	461	930	1173	-	-	1456	-	-
Mov Cap-2 Maneuver	484	467	-	462	461	-	-	-	-	-	-	-
Stage 1	648	617	-	875	788	-	-	-	-	-	-	-
Stage 2	877	782	-	621	606	-	-	-	-	-	-	-

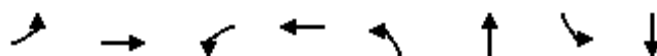
Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.6		12.2		0.2		0.1	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1173	-	-	584	514	1456	-
HCM Lane V/C Ratio	0.003	-	-	0.069	0.021	0.002	-
HCM Control Delay (s)	8.1	0	-	11.6	12.2	7.5	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-

Queues

1: Center Street & Maple Avenue

09/17/2018



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	60	939	62	1498	46	245	77	274
v/c Ratio	0.34	0.44	0.17	0.69	0.32	0.84	0.49	0.83
Control Delay	14.4	18.3	10.1	23.7	52.9	84.9	59.3	78.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.4	18.3	10.1	23.7	52.9	84.9	59.3	78.2
Queue Length 50th (ft)	20	281	21	566	37	236	64	260
Queue Length 95th (ft)	37	342	38	652	74	#370	112	#420
Internal Link Dist (ft)		231		292		258		85
Turn Bay Length (ft)	140		200		100			
Base Capacity (vph)	179	2140	378	2157	143	307	157	332
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.44	0.16	0.69	0.32	0.80	0.49	0.83

Intersection Summary

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

Queue shown is maximum after two cycles.

HCM 2010 Signalized Intersection Summary

1: Center Street & Maple Avenue

09/17/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	832	32	60	1385	68	42	148	77	71	136	116
Future Volume (veh/h)	55	832	32	60	1385	68	42	148	77	71	136	116
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.99	1.00		0.98
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	60	904	35	62	1428	70	46	161	84	77	148	126
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.97	0.97	0.97	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	214	2126	82	380	2101	103	112	182	95	146	158	135
Arrive On Green	0.03	0.61	0.61	0.03	0.61	0.61	0.03	0.16	0.16	0.04	0.17	0.17
Sat Flow, veh/h	1774	3470	134	1774	3430	168	1774	1149	600	1774	920	783
Grp Volume(v), veh/h	60	461	478	62	735	763	46	0	245	77	0	274
Grp Sat Flow(s),veh/h/ln	1774	1770	1835	1774	1770	1828	1774	0	1749	1774	0	1702
Q Serve(g_s), s	2.0	21.8	21.8	2.1	44.0	44.4	3.5	0.0	21.9	5.8	0.0	25.4
Cycle Q Clear(g_c), s	2.0	21.8	21.8	2.1	44.0	44.4	3.5	0.0	21.9	5.8	0.0	25.4
Prop In Lane	1.00		0.07	1.00		0.09	1.00		0.34	1.00		0.46
Lane Grp Cap(c), veh/h	214	1084	1124	380	1084	1120	112	0	277	146	0	293
V/C Ratio(X)	0.28	0.43	0.43	0.16	0.68	0.68	0.41	0.00	0.89	0.53	0.00	0.93
Avail Cap(c_a), veh/h	234	1084	1124	433	1084	1120	126	0	295	146	0	298
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.1	16.2	16.2	12.3	20.5	20.6	55.9	0.0	65.9	54.9	0.0	65.3
Incr Delay (d2), s/veh	0.7	1.2	1.2	0.2	3.4	3.4	2.4	0.0	27.0	3.5	0.0	36.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	11.0	11.4	1.0	22.5	23.3	1.8	0.0	12.7	3.0	0.0	14.9
LnGrp Delay(d),s/veh	18.8	17.5	17.4	12.5	23.9	24.0	58.3	0.0	92.9	58.3	0.0	101.3
LnGrp LOS	B	B	B	B	C	C	E		F	E		F
Approach Vol, veh/h		999			1560			291			351	
Approach Delay, s/veh		17.5			23.5			87.4			91.9	
Approach LOS		B			C			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.2	104.5	10.8	33.6	11.2	104.5	13.0	31.3				
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0				
Max Green Setting (Gmax), s	9.5	91.5	6.0	28.0	6.5	94.5	7.0	27.0				
Max Q Clear Time (g_c+I1), s	4.1	23.8	5.5	27.4	4.0	46.4	7.8	23.9				
Green Ext Time (p_c), s	0.0	30.0	0.0	0.2	0.0	41.0	0.0	0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				34.9								
HCM 2010 LOS				C								

HCM 2010 AWSC

2: Center Street & Church Street

09/17/2018

Intersection

Intersection Delay, s/veh 23.7

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	171	47	144	267	67	40	153	69	16	117	5
Future Vol, veh/h	20	171	47	144	267	67	40	153	69	16	117	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	186	51	157	290	73	43	166	75	17	127	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.9	35.1	16.6	13.2
HCM LOS	B	E	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	8%	30%	12%
Vol Thru, %	58%	72%	56%	85%
Vol Right, %	26%	20%	14%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	262	238	478	138
LT Vol	40	20	144	16
Through Vol	153	171	267	117
RT Vol	69	47	67	5
Lane Flow Rate	285	259	520	150
Geometry Grp	1	1	1	1
Degree of Util (X)	0.52	0.46	0.86	0.296
Departure Headway (Hd)	6.578	6.402	5.961	7.097
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	547	559	608	504
Service Time	4.647	4.473	4.018	5.18
HCM Lane V/C Ratio	0.521	0.463	0.855	0.298
HCM Control Delay	16.6	14.9	35.1	13.2
HCM Lane LOS	C	B	E	B
HCM 95th-tile Q	3	2.4	9.6	1.2

HCM 2010 TWSC

3: Center Street & Driveway/Site Entr

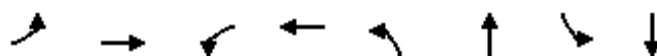
09/17/2018

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	0	7	21	0	4	5	250	15	3	295	11
Future Vol, veh/h	7	0	7	21	0	4	5	250	15	3	295	11
Conflicting Peds, #/hr	0	0	0	0	0	0	2	0	6	6	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	0	8	23	0	4	5	272	16	3	321	12
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	627	639	329	633	637	286	335	0	0	294	0	0
Stage 1	335	335	-	296	296	-	-	-	-	-	-	-
Stage 2	292	304	-	337	341	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	396	394	712	392	395	753	1224	-	-	1268	-	-
Stage 1	679	643	-	712	668	-	-	-	-	-	-	-
Stage 2	716	663	-	677	639	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	390	388	711	383	389	749	1222	-	-	1261	-	-
Mov Cap-2 Maneuver	390	388	-	383	389	-	-	-	-	-	-	-
Stage 1	674	640	-	704	661	-	-	-	-	-	-	-
Stage 2	708	656	-	668	636	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	12.4		14.3		0.1		0.1					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1222	-	-	504	415	1261	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.03	0.065	0.003	-	-				
HCM Control Delay (s)	8	0	-	12.4	14.3	7.9	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile O(veh)	0	-	-	0.1	0.2	0	-	-				

Queues

1: Center Street & Maple Avenue

09/17/2018



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	83	1266	52	1293	51	203	141	200
v/c Ratio	0.39	0.65	0.24	0.70	0.21	0.71	0.55	0.51
Control Delay	17.0	26.1	14.3	28.4	38.2	60.7	46.5	44.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.0	26.1	14.3	28.4	38.2	60.7	46.5	44.6
Queue Length 50th (ft)	28	430	17	452	34	152	100	137
Queue Length 95th (ft)	58	590	40	614	64	227	149	206
Internal Link Dist (ft)		231		292		258		85
Turn Bay Length (ft)	140		200		100			
Base Capacity (vph)	215	1936	235	1850	239	400	260	480
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.65	0.22	0.70	0.21	0.51	0.54	0.42
Intersection Summary								

HCM 2010 Signalized Intersection Summary

1: Center Street & Maple Avenue

09/17/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	1131	34	48	1122	67	47	98	88	130	95	89
Future Volume (veh/h)	76	1131	34	48	1122	67	47	98	88	130	95	89
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	0.97		0.95	0.98		0.96
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	83	1229	37	52	1220	73	51	107	96	141	103	97
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	228	1885	57	232	1809	108	240	154	139	259	190	179
Arrive On Green	0.03	0.54	0.54	0.03	0.53	0.53	0.03	0.17	0.17	0.08	0.22	0.22
Sat Flow, veh/h	1774	3502	105	1774	3381	202	1774	884	793	1774	866	816
Grp Volume(v), veh/h	83	621	645	52	638	655	51	0	203	141	0	200
Grp Sat Flow(s),veh/h/ln	1774	1770	1838	1774	1770	1814	1774	0	1677	1774	0	1682
Q Serve(g_s), s	3.0	34.9	35.0	1.8	36.7	36.8	3.3	0.0	15.9	8.9	0.0	14.7
Cycle Q Clear(g_c), s	3.0	34.9	35.0	1.8	36.7	36.8	3.3	0.0	15.9	8.9	0.0	14.7
Prop In Lane	1.00		0.06	1.00		0.11	1.00		0.47	1.00		0.49
Lane Grp Cap(c), veh/h	228	952	989	232	947	970	240	0	293	259	0	369
V/C Ratio(X)	0.36	0.65	0.65	0.22	0.67	0.68	0.21	0.00	0.69	0.54	0.00	0.54
Avail Cap(c_a), veh/h	262	952	989	285	947	970	246	0	371	274	0	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.7	23.0	23.0	18.4	23.7	23.7	45.6	0.0	54.2	42.2	0.0	48.4
Incr Delay (d2), s/veh	1.0	3.5	3.3	0.5	3.8	3.8	0.4	0.0	6.8	2.0	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	18.0	18.7	0.9	18.9	19.4	1.6	0.0	7.9	4.5	0.0	7.1
LnGrp Delay(d),s/veh	20.6	26.4	26.4	18.9	27.5	27.5	46.0	0.0	61.0	44.2	0.0	51.0
LnGrp LOS	C	C	C	B	C	C	D		E	D		D
Approach Vol, veh/h	1349				1345				254		341	
Approach Delay, s/veh	26.0				27.2				58.0		48.2	
Approach LOS	C				C				E		D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.8	81.9	10.6	36.8	11.3	81.4	16.9	30.5				
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0				
Max Green Setting (Gmax), s	8.5	63.5	5.0	38.0	7.5	64.5	12.0	31.0				
Max Q Clear Time (g_c+I1), s	3.8	37.0	5.3	16.7	5.0	38.8	10.9	17.9				
Green Ext Time (p_c), s	0.0	21.9	0.0	2.1	0.0	21.6	0.0	1.7				
Intersection Summary												
HCM 2010 Ctrl Delay			31.3									
HCM 2010 LOS			C									

HCM 2010 AWSC

2: Center Street & Church Street

09/17/2018

Intersection												
Intersection Delay, s/veh15.6												
Intersection LOS C												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	25	244	117	104	172	36	49	72	111	24	87	22
Future Vol, veh/h	25	244	117	104	172	36	49	72	111	24	87	22
Peak Hour Factor	0.97	0.97	0.97	0.96	0.96	0.96	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	252	121	108	179	38	53	78	121	26	95	24
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	18	15.7	13.7	12
HCM LOS	C	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	6%	33%	18%
Vol Thru, %	31%	63%	55%	65%
Vol Right, %	48%	30%	12%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	232	386	312	133
LT Vol	49	25	104	24
Through Vol	72	244	172	87
RT Vol	111	117	36	22
Lane Flow Rate	252	398	325	145
Geometry Grp	1	1	1	1
Degree of Util (X)	0.429	0.631	0.537	0.264
Departure Headway (Hd)	6.128	5.711	5.952	6.581
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	588	637	605	544
Service Time	4.18	3.711	3.997	4.641
HCM Lane V/C Ratio	0.429	0.625	0.537	0.267
HCM Control Delay	13.7	18	15.7	12
HCM Lane LOS	B	C	C	B
HCM 95th-tile Q	2.1	4.4	3.2	1.1

HCM 2010 TWSC

3: Center Street & Driveway/Site Entr

09/17/2018

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	0	15	17	0	4	13	211	16	3	280	24
Future Vol, veh/h	17	0	15	17	0	4	13	211	16	3	280	24
Conflicting Peds, #/hr	5	0	6	6	0	5	15	0	16	16	0	15
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	0	16	18	0	4	14	229	17	3	304	26
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	611	628	338	619	633	259	345	0	0	262	0	0
Stage 1	338	338	-	282	282	-	-	-	-	-	-	-
Stage 2	273	290	-	337	351	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	406	400	704	401	397	780	1214	-	-	1302	-	-
Stage 1	676	641	-	725	678	-	-	-	-	-	-	-
Stage 2	733	672	-	677	632	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	391	382	690	379	379	764	1197	-	-	1282	-	-
Mov Cap-2 Maneuver	391	382	-	379	379	-	-	-	-	-	-	-
Stage 1	657	630	-	704	658	-	-	-	-	-	-	-
Stage 2	715	653	-	655	621	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	12.9		14.1		0.4		0.1					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1197	-	-	491	419	1282	-	-				
HCM Lane V/C Ratio	0.012	-	-	0.071	0.054	0.003	-	-				
HCM Control Delay (s)	8	0	-	12.9	14.1	7.8	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0	-	-				