November 22, 2022

Ref: 20789.01

Rebecca Hemenway
Trinity NY Development, LLC
75 Federal Street, 4th Floor
Boston, Massachusetts 02110

Re: Traffic Impact Study, 20 South 2nd Avenue, City of Mount Vernon, NY

Dear Ms. Hemenway:

VHB Engineering, Surveying, Landscape Architecture and Geology, PC (VHB) has conducted a traffic evaluation to assess the potential traffic impacts associated with the construction of the proposed mixed-use development project located at 20 South 2nd Avenue in the City of Mount Vernon, Westchester County, New York. The Proposed Project includes construction of a 12-story building with 317 multifamily units and a 12,548 square foot (sf) community center located on the ground floor. The site is currently a combination of surface parking lots and a vacant 3-story brick building, which will be demolished as part of this project. Sheet SK-002 prepared by Perkins Eastman, dated March 25, 2022, shows the building floor plans for the Proposed Project and is included in Attachment A. The traffic evaluation, which specifically addressed potential impacts associated with 20 South 2nd Avenue, is part of a wider Draft Generic Environmental Impact Statement (DGEIS) for the proposed rezoning of the Proposed Project and surrounding area with the new Downtown Transit Oriented Arts District (DTOAD) Zone.

This letter includes an evaluation of the existing traffic operations and future conditions with and without construction of the Proposed Project. As detailed herein, the Proposed Project is expected to have minimal impact on local traffic operations.

Site Location and Proposed Project

The approximate 1.00-acre project site, as shown in Figure 1, is located at 20 South 2nd Avenue in the City of Mount Vernon, New York. The site is currently occupied with a parking lot with approximately 62 parking spaces, a former YMCA building, and a vacant lot being used as a community garden. Access to the site is proposed via a new, stop-controlled full access driveway intersecting South 3rd Avenue that leads to a parking garage below the building. Pedestrian access will be provided on both South 3rd Avenue and South 2nd Avenue along the ground level. The project is anticipated to be fully constructed in 2027.

The project site was previously studied in 2017 for a mixed-use development which included 320 residential units and approximately 20,000 sf of retail space, community center, office space, and artist studio space.

Existing Conditions

The Scoping Document for the DTOAD DGEIS requires a detailed evaluation of the following four intersections for the weekday AM and PM peak hours:

- East 1st Street at South 2nd Avenue
- East 1st Street at South 3rd Avenue
- East 2nd Street at South 2nd Avenue
- East 2nd Street at South 3rd Avenue

The following sections provide a description of the existing study area roadways and intersections.

East 1st Street

East 1st Street is an urban major collector under the jurisdiction of the City of Mount Vernon. East 1st Street provides east/west travel from South 4th Avenue to North/South Fulton Avenue in the City of Mount Vernon. In the Study Area, East 1st Street provides one travel lane in each direction. Sidewalks are provided on both sides of East 1st Street. There is no posted speed limit on East 1st Street in the Study Area; therefore, it is assumed that the speed limit is consistent with the city-wide speed limit of 30 mph. The New York State Department of Transportation (NYSDOT) Traffic Data Viewer (TDV) indicates that the most recent available data (2017) annual average daily traffic (AADT) on East 1st Street in the Study Area is approximately 8,309 vehicles per day (vpd). On-street metered parking is generally provided on one side of the roadway in the study area.

East 2nd Street

East 2nd Street is an urban major collector under the jurisdiction of the City of Mount Vernon. East 2nd Street provides east/west travel from South 4th Avenue to South Fulton Avenue in the City of Mount Vernon. In the Study Area, East 2nd Street provides one travel lane in each direction. Sidewalks are provided on both sides of East 2nd Street. There is no posted speed limit on East 2nd Street in the Study Area; therefore, it is assumed that the speed limit is consistent with the city-wide speed limit of 30 mph. The most recent data on the NYSDOT TDV (2016) indicates that the AADT on East 2nd Street in the Study Area is approximately 3,165 vpd. On-street metered parking is generally provided on both sides of the roadway in the study area.

South 2nd Avenue

South 2nd Avenue is classified as an urban local road that is under the jurisdiction of the City of Mount Vernon. South 2nd Avenue is a one-way roadway with one travel lane that provides southbound travel from East 1st Street to Sanford Boulevard East in the City of Mount Vernon. There are sidewalks along both sides of the roadway. There is no posted speed limit on South 2nd Avenue in the Study Area; therefore, it is assumed that the speed limit is consistent with the city-wide speed limit of 30 mph. There is no volume data available for South 2nd Avenue on the NYSDOT TDV. On-street metered parking is generally provided on both sides of the roadway in the study area.

South 3rd Avenue

South 3rd Avenue is classified as an urban local road that is under the jurisdiction of the City of Mount Vernon. South 3rd Avenue provides north/south travel from East 1st Street to East 2nd Street within the City of Mount Vernon. South 3rd Avenue provides one travel lane in each direction. There are sidewalks along both sides of the roadway. There is no posted speed limit on South 3rd Avenue in the Study Area; therefore, it is assumed that the speed limit is

consistent with the city-wide speed limit of 30 mph. There is no volume data available for South 3rd Avenue on the NYSDOT TDV. On-street metered parking is generally provided on both sides of the roadway in the study area.

East 1st Street at South 2nd Avenue

The East 1st Street at South 2nd Avenue intersection is a three-leg intersection operating under free flow conditions as the south leg provides one-way southbound movements away from the intersection. The eastbound East 1st Street approach provides a single lane for shared through and right-turn movements. The westbound East 1st Street approach provides a single lane for shared left-turn and through movements. Sidewalks are provided on both sides of each approach. There is a marked crosswalk on the west leg of the intersection. No other pedestrian facilities are provided at this intersection.

East 1st Street at South 3rd Avenue

The East 1st Street at South 3rd Avenue intersection is a four-leg intersection operating under traffic signal control with the north leg providing one-way northbound movements away from the intersection. The eastbound and westbound East 1st Street approaches and the northbound South 3rd Avenue approach each provide a single lane for shared left-turn, through, and right-turn movements. Sidewalks are provided on both sides of each approach. Marked crosswalks, pedestrian pushbuttons, and pedestrian signals with countdown timers are provided on the south, east, and west legs of the intersection.

East 2nd Street at South 2nd Avenue

The East 2nd Street at South 2nd Avenue intersection is a four-leg intersection operating under traffic signal control with the north and south legs providing one-way southbound movements. The eastbound East 2nd Street approach provides a single lane for shared through and right-turn movements. The westbound East 2nd Street approach provides a single lane for shared left-turn and through movements. The southbound South 2nd Avenue approach provides a single lane for shared left-turn, through, and right-turn movements. Sidewalks are provided on both sides of each approach. There are marked crosswalks at the south, east, and west legs of the intersection with pedestrian signals and countdown timers. No other pedestrian facilities are provided at this intersection.

East 2nd Street at South 3rd Avenue

The East 2nd Street at South 3rd Avenue intersection is a four-leg intersection operating under traffic signal control. The eastbound and westbound East 1st Street approaches each provide a single lane for shared left-turn, through, and right-turn movements. The northbound Bogopa Plaza Driveway approach provides a gated access to a loading zone with a single lane for shared left-turn, through, and right-turn movements. The southbound South 3rd Avenue approach provides a single lane for shared left-turn, through, and right-turn movements. Sidewalks are provided on both sides of each approach. Marked crosswalks are provided on the north and east legs of the intersection. No other pedestrian facilities are provided at this intersection.

Traffic Volumes

Automatic Traffic Recorder (ATR) data collected by the NYSDOT illustrates general traffic volumes in the Study Area and is summarized in Table 1.

Table 1 Existing Traffic Volume Summary

Location	Weekday Daily Volume [a]	Weekday Morning Peak Hour			Weekday Evening Peak Hour		
		Vol [b]	K Factor [c]	Dir. Dist.	Vol	K Factor	Dir. Dist.
East 1st Street [d]	8,309	658	7.9%	52% WB	598	7.2%	52% WB
East 2nd Street [e]	3,165	218	6.9%	65% WB	251	7.9%	64% WB

a Daily traffic expressed in vehicles per day (vpd)
b Peak hour volumes expressed in vehicles per hour
c Percent of daily traffic which occurs during the peak hour
d Source: NYSDOT ATR data dated April 2017
e Source: NYSDOT ATR data dated June 2016

East 1st Street carries approximately 8,300 vpd on a typical weekday, with 7.9 percent of the daily traffic occurring during the weekday morning peak hour and 7.2 percent occurring during the evening peak hour. For this section of East 1st Street, traffic is slightly heavier in the westbound direction during both peak hours. East 2nd Street carries approximately 3,165 vpd on a typical weekday, with 6.9 percent of the daily traffic occurring during the weekday morning peak hour and 7.9 percent occurring during the evening peak hour. For this section of East 2nd Street, traffic is heavier in the westbound direction during both peak hours.

Peak hour turning movement counts (TMCs) were conducted at the four study intersections during the weekday morning peak period from 7:00 to 9:30 a.m. and during the weekday evening peak period from 4:00 to 6:30 p.m. in 2017 as part of a previous project in the study area. The data from the previous project was compared to field counts collected on July 26 and 27, 2022 during the morning and evening peak hours. The volumes collected in 2022 were significantly lower than the volumes collected in 2017. To avoid potentially underestimating traffic volumes in the Study Area, the 2017 volume data was used to represent 2022 Existing traffic volumes. The peak period traffic volume data is included in Attachment B. Based on the collected data, the weekday morning peak hour occurred from 7:30 to 8:30 a.m. and the weekday evening peak hour occurred from 5:00 to 6:00 pm. The 2022 Existing AM and PM peak hour traffic volumes are illustrated on Figure 2.

In 2017, the north leg of the East 1st Street at South 3rd Avenue intersection was not open to vehicle traffic. To estimate the number of vehicles northbound on the north leg at the intersection, the counts conducted in 2022 were reviewed and an estimate of eastbound left-turn, westbound right-turn, and northbound through traffic was added to the 2017 data.

Multi-Modal Accommodations

Bus service in the study area is provided by Westchester County's Bee-Line Bus system. Review of online service schedules shows that the nearest bus stops are provided approximately 0.15 miles to the west at the intersections of South 5th Avenue at West 1st Street and South 5th Avenue at West 2nd Street, and to the north at the East Prospect Avenue at North 3rd Avenue intersection (Petrillo Plaza). Table 2 summarizes the bus routes with service at the three bus stops:

Table 2 Existing Transit Service

Bee-Line Route	Stop Location	Weekday Time [1]	Frequency [2]	Saturday Time	Frequency	Sunday Time	Frequency
7 – Yonkers/Mt. Vernon/New Rochelle	Petrillo Plaza	5:18 AM – 12:06 AM	5-60	6:24 AM – 12:09 AM	5-60	6:58 AM – 11:45 PM	25-60
40 – Mt. Vernon/White Plains/Westchester Med. Ctr. (Local)	Petrillo Plaza	5:10 AM – 12:04 AM	5-30	5:40 AM – 10:50 PM	15-60	6:58 AM – 11:45PM	25-60
41 – Mt. Vernon/White Plains/Westchester Med. Ctr. (Limited)	Petrillo Plaza	6:50 AM – 5:56 PM	10–25 (directional route)	No Service		No Service	
42 – The Bronx/Mt. Vernon/New Rochelle	South 5th Ave	5:11 AM – 11:32 PM	10-40	6:05 AM – 12:00 AM	30-45	7:20AM – 11:45 PM	30-45
43 – The Bronx/Mt. Vernon/Westchester Med. Ctr.	Petrillo Plaza	6:07 AM – 5:51 PM	60 (directional route)	No Service		No Service	
52 – The Bronx/Mt. Vernon/Bronxville	South 5th Ave	6:32 AM – 7:43 PM	30-70	8:13 AM – 7:05 PM	30-70	No Service	
53 – Mt. Vernon/ Chester Heights	Petrillo Plaza South 5th Ave	6:22 AM – 6:41 PM	10-70	No Service		No Service	
54 – Mt. Vernon	Petrillo Plaza South 5th Ave	7:59 AM – 6:06 PM	35-45 (no service 9 AM-3:30 PM)	No Service		No Service	
55 – The Bronx/Mt. Vernon/Yonkers	Petrillo Plaza	5:40 AM – 10:00 PM	10-45	7:18 AM – 10:01 PM	25-75	10:33 AM – 7:32 PM	40-65
91 – Playland: Yonkers/Mt. Vernon/ New Rochelle (Limited)	South 5th Ave	7:55 AM – 12:42 PM	5-170 (directional route)	7:55 AM – 12:42 AM	5-135 (directional route)	7:55 AM – 11:42 PM	5-120 (directional route)
402 – Mt. Vernon Special Service (School Days, AM)	Petrillo Plaza	7:18 AM – 8:00 AM	42 (Two Buses)	No Service		No Service	
403 - Mt. Vernon Special Service (School Days, PM)	South 5th Ave	3:12 PM	One Bus	No Service		No Service	
405 - Mt. Vernon Special Service (School Days, PM)	South 5th Ave	3:12 PM	One Bus	No Service		No Service	

Source: Westchester County's Transportation website
1 Time of day that bus service is provided
2 Time between buses on the route in minutes

The Mount Vernon East station is on the New Haven line of the Metro North Railroad. Service to the east and west is provided at frequent intervals on weekdays, Saturdays, and Sundays. The Study Area also has a network of sidewalks and a mix of marked controlled and unmarked pedestrian crossings.

Crash History

Crash data for the Project Study Area was obtained from NYSDOT for the latest three-year period exclusive of the COVID-19 Pandemic from March 1, 2017, to February 29, 2020, for the four Study Area intersections. Review of the data shows that during the three-year period, a total of 4 crashes occurred at the four Study Area intersections. Table 3 summarizes the intersection crashes. Detailed crash data can be found in Attachment C.

Table 3 Summary of Three-Year Crash History – Intersections

Intersection	Total Crashes	Severity			
		Fatal	INJ [1]	PDO [2]	NR [3]
East 1st Street at South 2nd Avenue	0	0	0	0	0
East 1st Street at South 3rd Avenue	1	0	0	1	0
East 2nd Street at South 2nd Avenue	0	0	0	0	0
East 2nd Street at South 3rd Avenue	3	0	2	1	0
Total	4	0	2	2	0

Source: NYSDOT crash data dated March 2017 through February 2020.
1 Personal Injury
2 Property Damage Only
3 Non-Reportable

Of the four total intersection crashes, there were two injury crashes and two property damage only collisions. There were no non-reportable incidents (no injury and less than $1,000 in property damage) or fatalities. The following is noted regarding the intersection crashes:

East 1st Street at South 3rd Avenue

One crash with unknown details was reported at this intersection over the three-year study period.

East 2nd Street at South 3rd Avenue

A total of three crashes were reported at this intersection over the three-year study period including one right angle, one right-turn, and one with unknown details. There were no contributing factors entered for the three crashes.

No discernable crash pattern was identified at the Study Area intersections. The Proposed Project is not expected to increase the crash rate in the Study Area.

Future Conditions

To determine the impacts of the site-generated traffic volumes near the site, future traffic conditions were evaluated. The project is expected to be fully built and occupied in 2027.

Traffic growth on area roadways is a function of the expected land development, environmental activity, and changes in demographics. A frequently used procedure is to identify estimated traffic generated by planned developments that would be expected to affect the project study area roadways. An alternative procedure is to estimate an annual percentage increase and apply that increase to study area traffic volumes. For this evaluation, both procedures were used. The following summarizes this traffic forecasting process.

Historic Growth

The New York Metropolitan Transportation Council (NYMTC) provides annual average growth rates for the ten counties in the NYMTC area by roadway functional classification. The publicized growth rate for estimates that traffic volumes on the roadways in the Study Area are increasing by approximately 0.5 percent per year. The 2022 existing traffic volumes were increased by 0.5 percent for five years to represent the 2027 future year conditions.

Site Specific Growth

Based on information provided by the City of Mount Vernon, the following projects in the study area were considered:

- Parkview Terrace – Approved 8-story building with 53 apartment units located at 214 Gramatan Avenue (northwest corner of Gramatan Avenue and North Street) currently under construction.
- 65 West 2nd Street – Approved 8-unit townhouse development.
- The Pointe at South 4th Avenue and East 3rd Street – Urban renewal project; no activity.

New vehicle trips associated with these three developments will be minimal and are accommodated for in the background traffic growth in the study area.

No-Build Traffic Volumes

The 2027 No-Build traffic volumes were generated with consideration of the general and site-specific growth described above. The resulting 2027 No-Build peak hour traffic volumes are provided on Figure 3 and represent future traffic volumes in the study area prior to development of the Proposed Project.

Site-Generated Traffic Volumes

To estimate the site-generated traffic anticipated at the project site, the Institute of Transportation Engineers' (ITE) publication *Trip Generation,11th Edition*[1] was utilized. The number of vehicle trips generated by the Proposed Project at full buildout was estimated based on the following ITE Land Use Codes (LUC):

1 Trip Generation Manual, 11th Edition, Institute of Transportation Engineers, Washington D.C., September 2021

› ITE LUC 222 – Multifamily Housing (High-Rise)

› ITE LUC 495 – Recreational Community Center

The proposed development is located about 1,400 feet from the Mount Vernon East Metro North train station with a good pedestrian network resulting in a relatively high percentage of resident trips made by non-auto modes. According to the Center for Transit-Oriented Development (CTOD) website, about 42 percent of residents currently residing within a 0.25-mile (1,320 feet) radius from the Mount Vernon East Metro North station either use transit, walk, or bicycle to work. To avoid overestimating project impacts, a thirty percent transit-oriented development credit was taken for the Proposed Project. The trip generation for the site is summarized in Table 4.

Table 4 Trip Generation

Land Use	AM Peak Hour			PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
Multifamily Housing (High-Rise) [a]	29	57	86	56	45	101
Recreational Community Center [b]	16	8	24	14	17	31
TOD Credit [c]	-14	-19	-33	-21	-19	-40
Total New Trips	31	46	77	49	43	92

a Trip generation estimate based on ITE LUC 222 – Multifamily Housing (High-Rise) for 317 units
b Trips generation estimate based on ITE LUC 495- Recreational Community Center for 12,548 sf
c Transit Oriented Development credit of 30% based on CTOD data

Based on the projections outlined above, the Proposed Project is expected to generate 77 new vehicle trips during the weekday AM peak hour (31 entering and 46 exiting) and 92 new vehicle trips during the weekday PM peak hour (49 entering and 43 exiting).

The magnitude of site generated trips results in less than the NYSDOT and ITE trip thresholds of the generation of 100 vehicle trips on a single intersection approach for determining the need for detailed off-site intersection analysis. These agency thresholds were developed as a tool to identify locations where the magnitude of traffic generated has the potential to impact operations at off-site intersections and screen out locations that do not meet the threshold and are therefore unlikely to require mitigation. However, based on the adopted Scoping Document, a detailed capacity analysis for the four Study Area intersections was prepared.

Trip Distribution

The directional distribution of traffic approaching and departing the site is a function of several variables including population densities, existing travel patterns, and the efficiency of the roadways leading to and from the site. Based on a review of the existing travel patterns and population centers in the area, it is estimated that approximately 35 percent of the site-generated traffic will travel to the site from the east on East 1st Street, 30 percent of the site-generated traffic will travel from the west on East 1st Street, 20 percent of the site-generated traffic will travel from the east on East 2nd Street, and 15 percent of the site-generated traffic will travel from the west on East 2nd Street. When exiting the site, it is estimated that approximately 15 percent of the site-generated traffic will travel to the east on East 1st Street, 15 percent of the site-generated traffic will travel to the west on East 1st Street, 35 percent of the site-generated traffic will travel to the north on South 3rd Avenue, 20 percent of the site-generated traffic will

travel to the east on East 2nd Street, and 15 percent of the site-generated traffic will travel to the west on East 2nd Street. The primary trip distribution patterns for the Proposed Project are illustrated on Figure 4.

Build Traffic Volumes

The project-related traffic volumes shown in Table 4 were assigned to the Study Area roadway network based on the primary trip distributions for the project and are illustrated on Figure 5. These assigned volumes were then added to the 2027 No-Build peak hour traffic volumes to develop the 2027 Build peak hour traffic volumes. The 2027 Build traffic volumes are summarized on Figure 6.

Traffic Operations Analysis

Capacity analyses provide an indication of how well the roadway facilities serve the traffic demands placed upon them. Roadway operating conditions are classified by calculated levels-of-service (LOS). The evaluation criteria used to analyze the study area intersections is based on the procedures set forth in the latest version of the *Highway Capacity Manual (HCM)*[2]. The HCM 2000 methodologies were used for analysis at the unsignalized intersection of East 1st Street at South 2nd Avenue because the most recent program version does not support unsignalized intersections with no traffic control. LOS is a measure that considers many factors including roadway geometry, speed, and travel delay. Levels of service range from A to F, with LOS A representing short vehicle delays and LOS F representing longer vehicle delays. The level of service designations, which are based on delay and capacity, are reported differently for signalized and unsignalized intersections. The LOS definitions are included in Attachment D.

Intersection Capacity Analysis

LOS analyses were conducted for the 2022 Existing, 2027 No-Build, and 2027 Build conditions for the Study Area intersections. Tables 5 and 6 summarize the capacity analysis results included in Attachment E.

The analyses show that the existing signalized and unsignalized intersections will operate with the same overall intersection LOS during the Build condition as the No-Build condition during both the weekday AM and PM peak hours. The analysis also shows that the signalized intersection lane groups during both peak hours will have the same LOS during the Build condition as the No-Build condition. No mitigation is recommended or proposed for the four Study Area intersections.

The analysis shows that the proposed South 3rd Avenue access point at the site will operate at LOS A during the Build condition for each of the peak hours. Given the acceptable LOS, no mitigation is recommended or proposed for this intersection beyond the current proposed geometry as illustrated in the Site Plan.

2 Highway Capacity Manual, 6th Edition, Transportation Research Board, Washington D.C., 2016

Table 5 Weekday AM Peak Hour LOS Summary

Intersection	Approach	Lane Group	Existing 2022		No-Build 2027		Build 2027	
			Delay [1]	LOS [2]	Delay	LOS	Delay	LOS
East 1st Street at South 2nd Avenue (Unsignalized)								
	WB	LT	2.2	A	2.2	A	2.2	A
East 1st Street at South 3rd Avenue (Signalized)								
	EB	LTR	13.1	B	13.2	B	13.5	B
	WB	LTR	13.0	B	13.2	B	13.4	B
	NB	LTR	10.7	B	10.8	B	11.3	B
	Overall		12.7	B	12.8	B	13.0	B
East 2nd Street at South 2nd Avenue (Signalized)								
	EB	TR	10.6	B	10.7	B	10.8	B
	WB	LT	9.7	A	9.7	A	9.8	A
	SB	LTR	13.2	B	13.3	B	13.3	B
	Overall		10.9	B	11.0	B	11.0	B
East 2nd Street at South 3rd Avenue (Signalized)								
	EB	LTR	13.3	B	13.5	B	13.7	B
	WB	LTR	10.9	B	11.0	B	11.1	B
	NB	LTR	11.1	B	11.1	B	11.1	B
	SB	LTR	13.1	B	13.2	B	13.7	B
	Overall		12.5	B	12.6	B	12.8	B
South 3rd Avenue at Site Driveway (Unsignalized)								
	WB	LR	--	--	--	--	9.8	A
	SB	LT	--	--	--	--	1.2	A

EB, WB, NB, SB = Eastbound, Westbound, Northbound, Southbound approach
L, T, R = Left-turn, Through, or Right-turn movement
-- = Not Applicable for the condition
1 Average delay in seconds per vehicle
2 Level of service

Table 6 Weekday PM Peak Hour LOS Summary

Intersection	Approach	Lane Group	Existing 2022		No-Build 2027		Build 2027	
			Delay [1]	LOS [2]	Delay	LOS	Delay	LOS
East 1st Street at South 2nd Avenue (Unsignalized)								
	WB	LT	2.5	A	2.5	A	2.5	A
East 1st Street at South 3rd Avenue (Signalized)								
	EB	LTR	14.8	B	15.1	B	15.7	B
	WB	LTR	13.4	B	13.6	B	14.0	B
	NB	LTR	10.9	B	11.0	B	17.3	B
	Overall		13.6	B	13.8	B	15.3	B
East 2nd Street at South 2nd Avenue (Signalized)								
	EB	TR	10.7	B	10.8	B	10.9	B
	WB	LT	9.7	A	9.8	A	9.9	A
	SB	LTR	13.4	B	13.5	B	13.5	B
	Overall		11.0	B	11.1	B	11.2	B
East 2nd Street at South 3rd Avenue (Signalized)								
	EB	LTR	12.2	B	12.4	B	12.6	B
	WB	LTR	10.8	B	10.9	B	11.1	B
	NB	LTR	11.4	B	11.4	B	11.4	B
	SB	LTR	12.5	B	12.6	B	12.9	B
	Overall		11.8	B	11.9	B	12.1	B
South 3rd Avenue at Site Driveway (Unsignalized)								
	WB	LR	--	--	--	--	10.0	A
	SB	LT	--	--	--	--	1.9	A

EB, WB, NB, SB = Eastbound, Westbound, Northbound, Southbound approach
L, T, R = Left-turn, Through, or Right-turn movement
-- = Not Applicable for the condition
1 Average delay in seconds per vehicle
2 Level of service

Parking

Based on a review of plan sheet SK-002, the Proposed Project includes construction of 62 on-site parking spaces and a 1,662 sf room for secure bicycle storage and removal of the existing 62 parking spaces. The project site's proximity to local bus stops and the Mount Vernon East rail station would encourage residents and users of the community center to use multiple modes of transportation. The proposed off-street parking supply was evaluated based on the proposed Downtown Transit Oriented Arts District (DTOAD) zoning code. Section 6 of the Draft Zoning Document states required parking in a DTOAD zoning district for certain land uses, including multifamily dwellings, business offices, retail, restaurants, and community indoor recreation facilities.

For multifamily residential land uses, the reduced off-street parking ratios are dependent on the affordability of the housing and the Area Median Income (AMI). To accommodate diverse ages and incomes, a range of multifamily unit types, price levels, and income percentages were provided by the Applicant. Information provided by the Applicant indicates that 90 percent of the residential units will be at 60 percent AMI and 10 percent of the units will

be at 90 percent AMI. Table 7 shows the off-street parking demand for the residential portion of the Proposed Project per the DTOAD zoning.

Table 7 Residential Parking Requirement

Residential Unit Type	Number of Units	Housing Affordability 60 % AMI [a]			90% AMI [b]			Total Required Parking Spaces
		Number of Units	Parking Rate [c]	Parking Spaces	Number of Units	Parking Rate [c]	Parking Spaces	
Studio	99	89	0.15	13.4	10	0.30	3.0	16.4
One Bedroom	141	127	0.25	31.7	14	0.50	7.1	38.8
Two Bedroom	77	69	0.35	24.3	8	0.70	5.6	29,9
Total	317	285		69.4	32		15.7	85.1

a 90% of all units affordable to Households earning 60% of the AMI
b 10% of all units affordable to Households earning 90% of the AMI
c Required parking rates per Section 6 of the DTOAD

Based on the applicable rates in the DTOAD zoning, the total required parking supply for the residential units is 85 spaces.

The DTOAD zoning code also specifies off-street parking ratios for non-residential uses. Table 8 shows the off-street parking requirement for the Proposed Project's recreational community center per the DTOAD zoning.

Table 8 Non – Residential Parking Requirement

Land Use	Size (sf)	Parking Rate [a]	Required Parking Spaces
Community Recreational Center	12,548	1 per 2,000 sf	6

a Required parking rate per Section 6 of the DTOAD

Based on the applicable parking rate, the total required peak parking demand for the community recreational facility is 6 spaces. The total required parking for the Proposed Project is 91 spaces, which is 29 spaces more than the proposed 62-space parking garage.

In accordance with the proposed zoning, properties located within the DTOAD zoning district may be eligible for off-street parking reductions. Such reductions may be applied to a project's parking requirement if the Applicant provides one or more of the incentives described in Section 5 of the DTOAD zoning code. Incentives include off-site civic improvements, amenities, or development actions above and beyond those necessary for the Proposed Project, such as:

› Providing Zip Cars, or other shared vehicles on site
› Providing plug in electrical vehicle charging stations
› Providing bicycle storage inside the building for residents
› Providing outdoor bicycle parking spaces
› Providing a dedicated drop-off/pick-up location for car sharing services

- Providing a shuttle service between transit stations, including Metro North
- Providing a secure package room for deliveries (courier packages, groceries, etc.) that may reduce the need for vehicle dependency for shopping
- Providing live/work space for residents
- Developing sites in walkable communities and/or areas well served by public transit, thereby decreasing the need for private vehicle use

The DTOAD zoning code states that the City Council will only grant a parking reduction of up to 50 percent in exchange for an Applicant providing one or more of the incentives listed above. Table 9 shows the off-street parking reduction incentives that are met for the Proposed Project based on information provided by the Applicant.

Table 9 Parking Reductions

Description	Reduction [a]	Amount	Parking Spaces
Shared Vehicle	5 spaces/vehicle	10% (6.2 spaces)	31
Vehicle Charging Station	2 spaces/station	100% (62 spaces)	124
Indoor Bicycle Storage	1 spaces/10 bicycle spaces	1662 sf/9 sf = 184.7 bicycle spaces	18.5
Package Room for Deliveries	1% of parking requirement	1% (0.97 spaces)	0.9
Walk Score > 85 (89) and/or Transit Score >50 (59)	5% of parking requirement	5% (4.9 spaces)	4.6
Total Reductions			178.9
Maximum Reduction	50% of parking requirement	50% (48.5 spaces)	45.5
Required Spaces			46

a Parking reductions per Section 5 of the DTOAD

The Parking Reduction Incentives included in Section 5 of the DTOAD zoning result in a requirement of 46 spaces for the Proposed Project.

The Development Site currently provides approximately 62 parking spaces. The Applicant has been in discussions with Westchester County concerning the County's potential development of a parking garage on the Westchester County owned site adjacent to the Metro North Mount Vernon East Train Station. The County has added potential use of this site to support parking for affordable housing projects in the area to the County's current real estate survey being conducted by Jones, Lang, Lasalle (JLL). As proposed, the loss of the existing 62 parking spaces on the Development Site would be offset by the additional parking available at the new County Parking Garage.

Site Construction and Operations

Construction traffic associated with the Proposed Project will include trucks for performing operations on the site, delivery and removal of materials, and construction worker's vehicles. The number and types of construction vehicles will vary depending on the phase of construction and the particular operations underway at any given time. Construction vehicles will arrive and depart on Study Area roadways as needed. As with any construction project, the Proposed Project would necessitate deliveries of materials and supplies. It is anticipated that deliveries to the

Project Area would occur throughout the workday, from Monday to Friday and staging of materials will occur on the Subject Property or negotiated for staging on adjacent parcels as needed. Construction vehicle parking will be located such that it causes the least amount of disruption to the adjacent properties. Relevant requirements of the City will be followed during the course of the site construction.

The Proposed Project will have a designated secure package room for deliveries. Package deliveries to residences increased during the COVID-19 pandemic, as many people shopped online for items such as groceries, clothing, cleaning supplies, gifts, prescriptions, etc. Online shopping and deliveries continue to be a common way for residents to obtain necessities for ease and convenience, which reduces the need for vehicle dependency. Review of the LOS evaluations shows that the Study Area intersections operate with good levels of service. The increased delivery vehicle activity is not expected to impact overall intersection or site operations since this is an existing condition in the Study Area. The Proposed Project is located within a half-mile of the East Mount Vernon Metro North train station and two blocks from the nearest bus stop locations, with a good pedestrian network throughout the Study Area. Residents and visitors to the Proposed Project will use the available multi-modal accommodations. No additional services will need to be provided as a result of the Proposed Project.

Conclusions

VHB has conducted a traffic impact evaluation to assess the potential traffic impacts associated with the construction of the proposed multifamily residential development located at 20 South 2nd Avenue in the City of Mount Vernon, New York. The proposed development includes construction of a 12-story building with 317 multifamily apartment units and a 12,548 sf of community center space. Access to the site is proposed via a new, stop-controlled full access driveway intersecting South 3rd Avenue. The project is anticipated to be fully constructed in 2027.

- The proposed project is expected to generate 77 new vehicle trips during the weekday morning peak hour (31 entering and 46 exiting) and 92 new vehicle trips during the weekday evening peak hour (49 entering and 43 exiting).
- The capacity analysis shows that all four Study Area intersections will operate at an acceptable LOS B or better for the weekday morning and evening peak hours during the Build condition with no change in LOS between No-Build and Build condition.
- The proposed Site Access approach to South 3rd Avenue will operate at LOS A with average vehicle delays of ten seconds or less during both peak hours. The intersection will operate adequately with single lanes entering and exiting the site and unsignalized control.
- Per the proposed DTOAD zoning code, 91 parking spaces are required for the Proposed Project. Through TOD parking reduction incentives, the parking requirement is reduced to 46 parking spaces The Proposed Project includes the construction of a 62-space parking garage, which exceeds the parking requirement.

The proposed development will be adequately serviced by the existing roadway network. Please call with any questions regarding the above evaluation.

Sincerely,

VHB

Alanna Moran, PE
Project Manager

Denise Williams, PE
Project Engineer

Attachments

Not to Scale

Legend

Study Intersection

Project Location
20 South 2nd Avenue
Mount Vernon, New York

Figure 1

Key: AM Peak (PM Peak)

Not to Scale

2022 Existing Traffic Volumes
20 South 2nd Avenue
Mount Vernon, New York

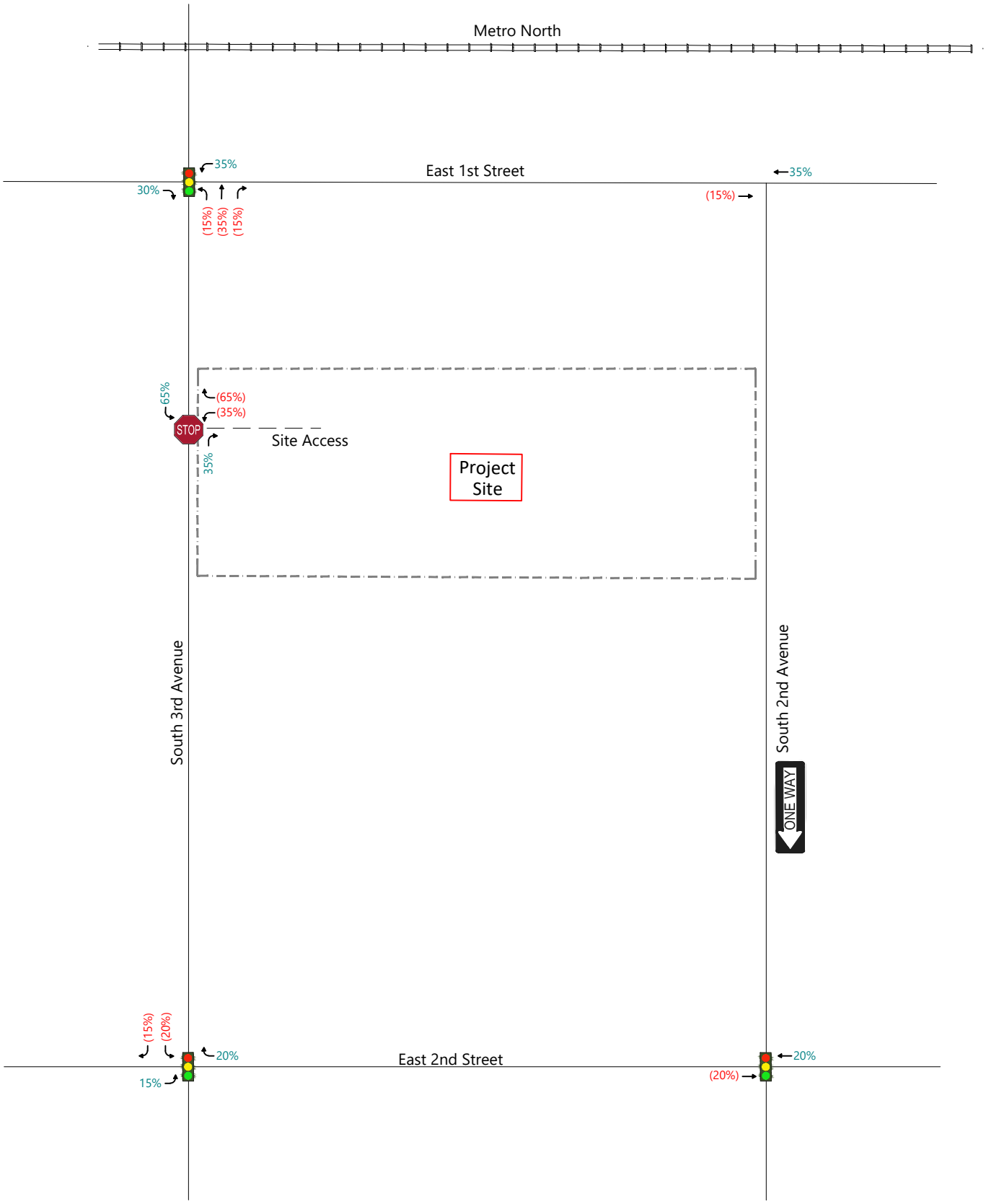
Figure 2

Key: AM Peak (PM Peak)

Not to Scale

2027 No-Build Traffic Volumes
20 South 2nd Avenue
Mount Vernon, New York

Figure 3

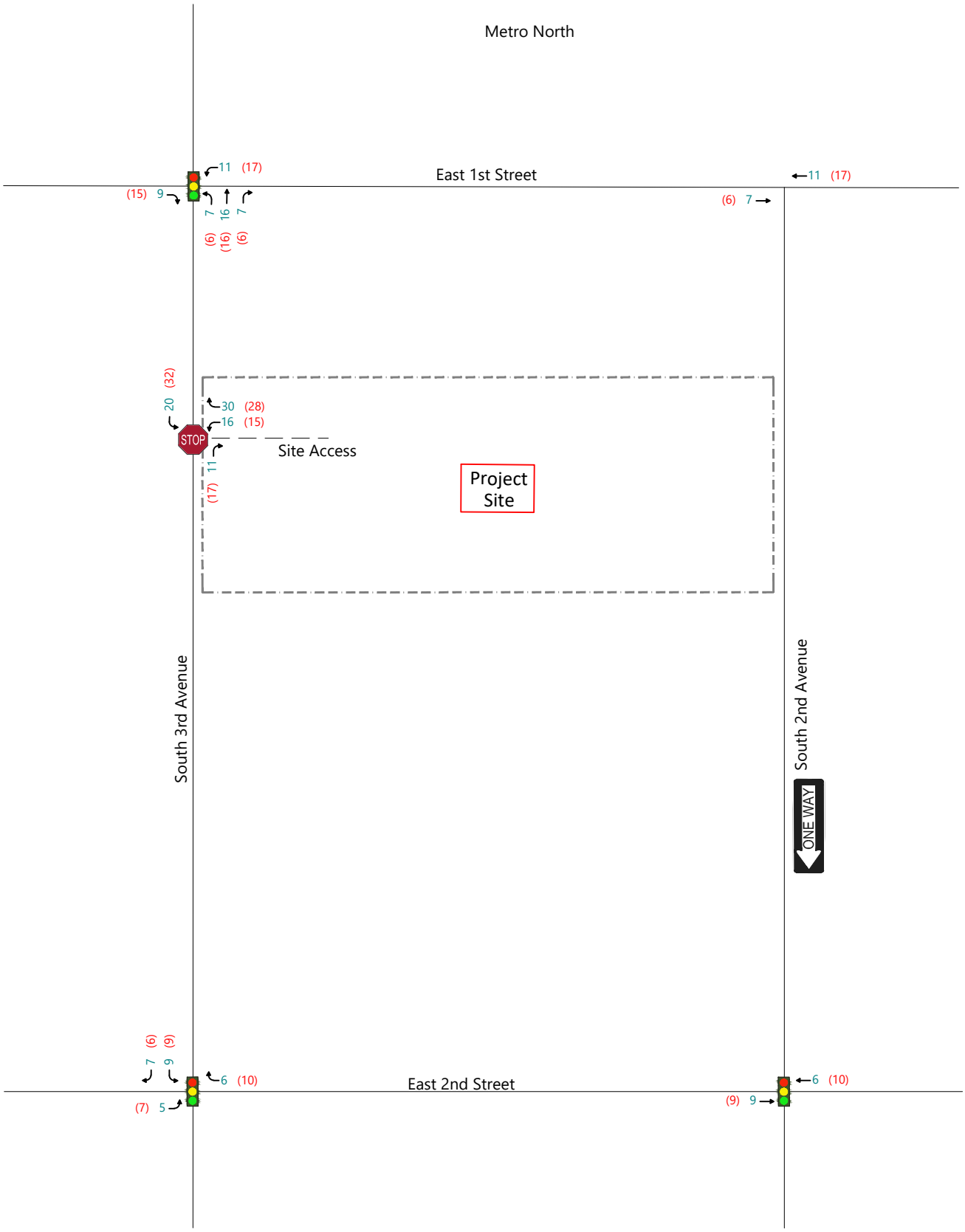


Key: Entering %, (Exiting %)

Not to Scale

Trip Distribution
20 South 2nd Avenue
Mount Vernon, New York

Figure 4



Key: AM Peak (PM Peak)

Not to Scale

Trip Assignment
20 South 2nd Avenue
Mount Vernon, New York

Figure 5

Key: AM Peak (PM Peak)

Not to Scale

2027 Build Traffic Volumes
20 South 2nd Avenue
Mount Vernon, New York

Figure 6

Attachments

A. Sheet SK-002, Proposed Floor Plans

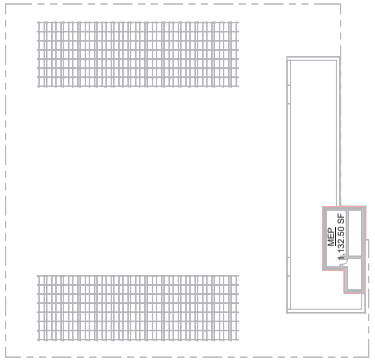
B. Turning Movement Count Data

C. Crash Data

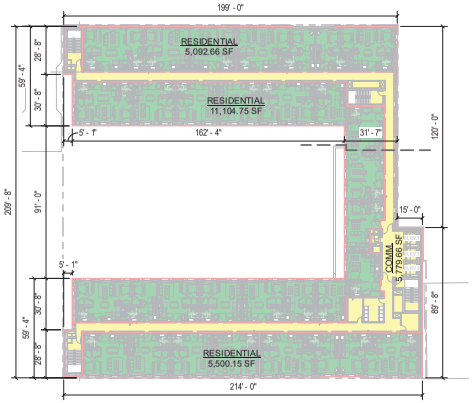
D. Capacity Analysis LOS Definitions

E. Capacity Analysis Worksheets

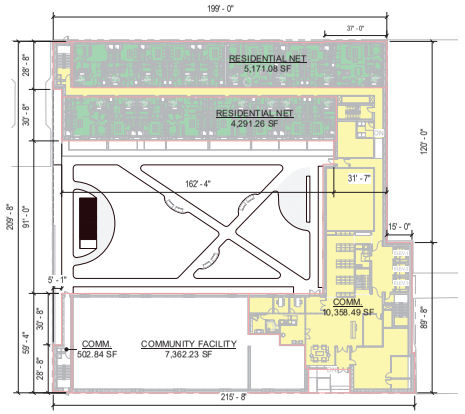
Attachment A – Sheet SK-002, Proposed Floor Plans



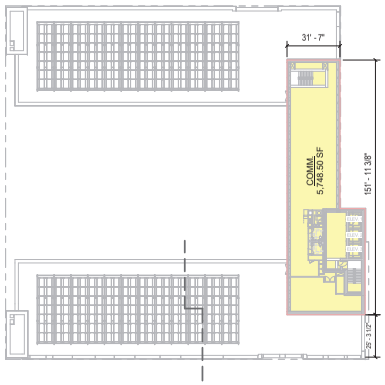
6 MECHANICAL BULKHEAD FLOOR
1" = 30'-0"



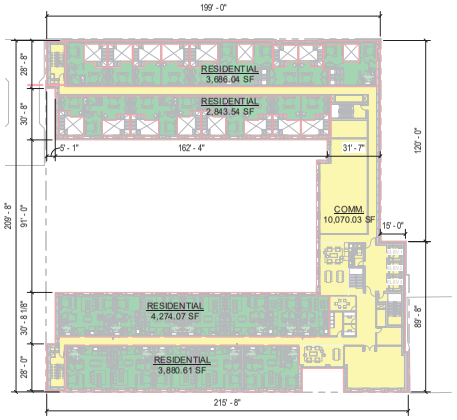
4 3RD-11TH FLOOR (TYPICAL) - GROSS AREAS
1" = 30'-0"



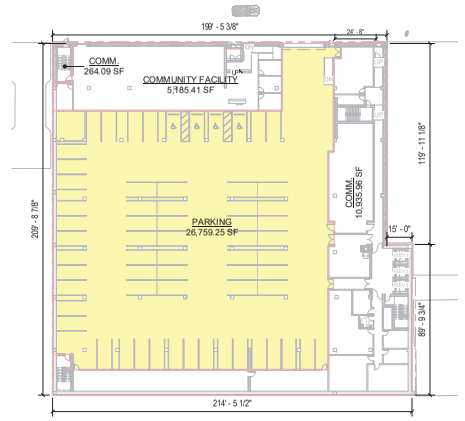
2 1ST FLOOR - GROSS AREAS
1" = 30'-0"



5 12TH FLOORPLAN - GROSS AREAS
1" = 30'-0"



3 2ND FLOOR - GROSS AREAS
1" = 30'-0"



1 P1 FLOOR - GROSS AREAS
1" = 30'-0"

C:\Users\r.rahimpour\Documents\68560_ARCH_2021_Reza.Rahimpour.rvt
10/17/2022 2:17:43 PM

No.	Date	Description

SEAL

KEY PLAN

PERKINS EASTMAN
115 Fifth Avenue
New York, NY 10003
T. +1 212 353 7200
F. +1 212 353 7676

Owner:
Trinity Financial
1359 Broadway, Suite 1700
New York, NY 10018

Structural:
McNamara Salvia
62 West 45th Street, 11th Floor

Mechanical, Electrical & Plumbing:
Dagher Engineering
29 Broadway, New York, NY 10006

PROJECT TITLE:
20 SOUTH 2ND AVENUE

20 S 2ND AVE, MOUNT VERNON, NEW YORK

PROJECT No: 68561

DRAWING TITLE:
Unnamed

SCALE: 1" = 30'-0"

SK-002

03/25/2022

Attachment B – Turning Movement Count Data

Project 20 South 2nd Avenue, Mt Vernon, NY
Location 1st St/2nd Ave
Count Date 2/28/2017
Time Period AM
Peak Hour 7:30 AM

Time Period	Vehicle Class	Eastbound				Westbound				Northbound				Southbound				15-Minute Volume	Hourly Volume
		L	T	R	X	L	T	R	X	L	T	R	X	L	T	R	X		
7:00 AM - 7:15 AM	Passenger Car		41	5		13	35												
	Bus		0	0		0	0												
	Heavy Truck		0	0		0	0												
	Medium Truck		1	0		0	4											99	601
7:15 AM - 7:30 AM	Passenger Car		43	6		16	66												
	Bus		0	0		0	0												
	Heavy Truck		0	0		0	0												
	Medium Truck		1	0		0	6											138	690
7:30 AM - 7:45 AM	**Passenger Car**		**66**	**3**		**19**	**96**												
	Bus		**0**	**0**		**0**	**0**												
	Heavy Truck		**0**	**0**		**0**	**0**												
	Medium Truck		**1**	**0**		**0**	**5**											**190**	**762**
7:45 AM - 8:00 AM	**Passenger Car**		**75**	**10**		**13**	**73**												
	Bus		**0**	**1**		**0**	**0**												
	Heavy Truck		**0**	**0**		**0**	**0**												
	Medium Truck		**0**	**0**		**0**	**2**											**174**	761
8:00 AM - 8:15 AM	**Passenger Car**		**63**	**13**		**18**	**86**												
	Bus		**1**	**0**		**0**	**0**												
	Heavy Truck		**0**	**0**		**0**	**0**												
	Medium Truck		**3**	**0**		**0**	**4**											**188**	759
8:15 AM - 8:30 AM	**Passenger Car**		**63**	**12**		**31**	**100**												
	Bus		**1**	**0**		**0**	**0**												
	Heavy Truck		**0**	**0**		**0**	**0**												
	Medium Truck		**1**	**1**		**0**	**1**											**210**	734
8:30 AM - 8:45 AM	Passenger Car		57	6		18	94												
	Bus		0	0		0	0												
	Heavy Truck		0	0		0	0												
	Medium Truck		4	0		0	10											189	680
8:45 AM - 9:00 AM	Passenger Car		52	18		21	74												
	Bus		0	0		0	0												
	Heavy Truck		0	0		0	0												
	Medium Truck		2	1		0	4											172	491
9:00 AM - 9:15 AM	Passenger Car		58	12		16	72												
	Bus		0	0		0	0												
	Heavy Truck		0	0		0	0												
	Medium Truck		1	0		1	3											163	319
9:15 AM - 9:30 AM	Passenger Car		49	10		22	66												
	Bus		0	0		0	0												
	Heavy Truck		0	0		0	0												
	Medium Truck		6	1		0	2											156	156

Summary Calculations

	Eastbound				Westbound				Northbound				Southbound			
	L	T	R	X	L	T	R	X	L	T	R	X	L	T	R	X
Peak Hour Vehicle Volume by Movement	0	274	40	0	81	367	0	0	0	0	0	0	0	0	0	0
Peak Hour Vehicle Volume by Approach	314				448				0				0			
PHF by Movement		0.91	0.77		0.65	0.91										
Adjusted PHF		0.91	0.80		0.80	0.91										
PHF by Intersection	0.91															
Total Passenger Car	0	267	38	0	81	355	0	0	0	0	0	0	0	0	0	0
Total Bus	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Heavy Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Medium Truck	0	5	1	0	0	12	0	0	0	0	0	0	0	0	0	0
% Passenger Cars		97%	95%		100%	97%										
% Heavy Vehicles		3%	5%		0%	3%										

Project 20 South 2nd Avenue, Mt Vernon, NY
Location 1st St/2nd Ave
Count Date 2/28/2017
Time Period PM
Peak Hour 5:00 PM

Time Period	Vehicle Class	Eastbound				Westbound				Northbound				Southbound				15-Minute Volume	Hourly Volume
		L	T	R	X	L	T	R	X	L	T	R	X	L	T	R	X		
4:00 PM - 4:15 PM	Passenger Car		58	14		20	101												
	Bus		0	0		0	0												
	Heavy Truck		0	0		0	0												
	Medium Truck		5	0		0	0											198	809
4:15 PM - 4:30 PM	Passenger Car		65	22		22	91												
	Bus		1	1		0	0												
	Heavy Truck		0	0		0	0												
	Medium Truck		2	0		0	3											207	818
4:30 PM - 4:45 PM	Passenger Car		72	17		22	96												
	Bus		0	0		0	0												
	Heavy Truck		0	0		0	0												
	Medium Truck		0	0		0	2											209	808
4:45 PM - 5:00 PM	Passenger Car		65	11		27	90												
	Bus		0	0		0	0												
	Heavy Truck		0	0		0	0												
	Medium Truck		2	0		0	0											195	786
5:00 PM - 5:15 PM	**Passenger Car**		**65**	**11**		**31**	**96**												
	Bus		**0**	**0**		**0**	**0**												
	Heavy Truck		**0**	**0**		**0**	**0**												
	Medium Truck		**3**	**1**		**0**	**0**											**207**	**805**
5:15 PM - 5:30 PM	**Passenger Car**		**56**	**16**		**30**	**94**												
	Bus		**0**	**0**		**0**	**0**												
	Heavy Truck		**0**	**0**		**0**	**0**												
	Medium Truck		**1**	**0**		**0**	**0**											**197**	802
5:30 PM - 5:45 PM	**Passenger Car**		**64**	**18**		**17**	**84**												
	Bus		**0**	**0**		**0**	**0**												
	Heavy Truck		**0**	**0**		**0**	**0**												
	Medium Truck		**2**	**0**		**0**	**2**											**187**	779
5:45 PM - 6:00 PM	**Passenger Car**		**87**	**13**		**16**	**95**												
	Bus		**0**	**0**		**0**	**0**												
	Heavy Truck		**0**	**0**		**0**	**0**												
	Medium Truck		**2**	**0**		**0**	**1**											**214**	592
6:00 PM - 6:15 PM	Passenger Car		79	15		16	92												
	Bus		0	0		0	0												
	Heavy Truck		0	0		0	0												
	Medium Truck		1	0		0	1											204	378
6:15 PM - 6:30 PM	Passenger Car		63	9		16	83												
	Bus		0	0		0	0												
	Heavy Truck		0	0		0	0												
	Medium Truck		1	0		0	2											174	174

Summary Calculations

	Eastbound				Westbound				Northbound				Southbound			
	L	T	R	X	L	T	R	X	L	T	R	X	L	T	R	X
Peak Hour Vehicle Volume by Movement	0	280	59	0	94	372	0	0	0	0	0	0	0	0	0	0
Peak Hour Vehicle Volume by Approach	339				466				0				0			
PHF by Movement		0.79	0.82		0.76	0.97										
Adjusted PHF		0.80	0.82		0.80	0.97										
PHF by Intersection	0.94															
Total Passenger Car	0	272	58	0	94	369	0	0	0	0	0	0	0	0	0	0
Total Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Heavy Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Medium Truck	0	8	1	0	0	3	0	0	0	0	0	0	0	0	0	0
% Passenger Cars		97%	98%		100%	99%										
% Heavy Vehicles		3%	2%		0%	1%										

Project 20 South 2nd Avenue, Mt Vernon, NY
Location 1st St/3rd Ave
Count Date 2/28/2017
Time Period AM
Peak Hour 7:30 AM

Time Period	Vehicle Class	Eastbound				Westbound				Northbound				Southbound				15-Minute Volume	Hourly Volume
		L	T	R	X	L	T	R	X	L	T	R	X	L	T	R	X		
7:00 AM - 7:15 AM	Passenger Car		42	3		2	33			5		4							
	Bus		0	0		0	0			0		0							
	Heavy Truck		0	0		0	0			0		0							
	Medium Truck		1	1		0	3			0		0						94	655
7:15 AM - 7:30 AM	Passenger Car		45	7		10	56			6		5							
	Bus		0	0		0	0			0		0							
	Heavy Truck		0	0		0	0			0		0							
	Medium Truck		1	2		1	5			0		0						138	758
7:30 AM - 7:45 AM	**Passenger Car**		**55**	**12**		**23**	**72**			**25**		**16**							
	Bus		**0**	**0**		**0**	**0**			**0**		**0**							
	Heavy Truck		**0**	**0**		**0**	**0**			**0**		**0**							
	Medium Truck		**0**	**0**		**0**	**5**			**0**		**0**						**208**	**810**
7:45 AM - 8:00 AM	**Passenger Car**		**60**	**26**		**15**	**60**			**25**		**24**							
	Bus		**0**	**1**		**0**	**0**			**0**		**1**							
	Heavy Truck		**0**	**0**		**0**	**0**			**0**		**0**							
	Medium Truck		**0**	**0**		**0**	**2**			**1**		**0**						**215**	805
8:00 AM - 8:15 AM	**Passenger Car**		**60**	**11**		**3**	**81**			**17**		**14**							
	Bus		**1**	**0**		**0**	**0**			**0**		**0**							
	Heavy Truck		**0**	**0**		**0**	**0**			**0**		**0**							
	Medium Truck		**2**	**0**		**0**	**4**			**3**		**1**						**197**	757
8:15 AM - 8:30 AM	**Passenger Car**		**69**	**7**		**13**	**88**			**3**		**5**							
	Bus		**1**	**0**		**0**	**0**			**0**		**0**							
	Heavy Truck		**0**	**0**		**0**	**0**			**0**		**0**							
	Medium Truck		**2**	**0**		**0**	**1**			**1**		**0**						**190**	727
8:30 AM - 8:45 AM	Passenger Car		56	9		4	89			22		8							
	Bus		0	0		0	0			0		0							
	Heavy Truck		0	0		0	0			0		0							
	Medium Truck		4	0		0	10			1		0						203	687
8:45 AM - 9:00 AM	Passenger Car		58	7		7	67			11		12							
	Bus		0	0		0	1			0		0							
	Heavy Truck		0	0		0	0			0		0							
	Medium Truck		1	0		0	3			0		0						167	484
9:00 AM - 9:15 AM	Passenger Car		66	10		5	66			8		5							
	Bus		0	0		0	0			0		0							
	Heavy Truck		0	0		0	0			0		0							
	Medium Truck		1	2		0	3			1		0						167	317
9:15 AM - 9:30 AM	Passenger Car		49	9		1	65			8		9							
	Bus		0	0		0	0			0		0							
	Heavy Truck		0	0		0	0			0		0							
	Medium Truck		7	0		0	2			0		0						150	150

Summary Calculations

	Eastbound				Westbound				Northbound				Southbound			
	L	T	R	X	L	T	R	X	L	T	R	X	L	T	R	X
Peak Hour Vehicle Volume by Movement	0	250	57	0	54	313	0	0	75	0	61	0	0	0	0	0
Peak Hour Vehicle Volume by Approach	307				367				136				0			
PHF by Movement		0.87	0.53		0.59	0.88			0.72		0.61					
Adjusted PHF		0.87	0.80		0.80	0.88			0.80		0.80					
PHF by Intersection	0.94															
Total Passenger Car	0	244	56	0	54	301	0	0	70	0	59	0	0	0	0	0
Total Bus	0	2	1	0	0	0	0	0	0	0	1	0	0	0	0	0
Total Heavy Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Medium Truck	0	4	0	0	0	12	0	0	5	0	1	0	0	0	0	0
% Passenger Cars		98%	98%		100%	96%			93%		97%					
% Heavy Vehicles		2%	2%		0%	4%			7%		3%					

Project 20 South 2nd Avenue, Mt Vernon, NY
Location 1st St/3rd Ave
Count Date 2/28/2017
Time Period PM
Peak Hour 5:00 PM

Time Period	Vehicle Class	Eastbound				Westbound				Northbound				Southbound				15-Minute Volume	Hourly Volume
		L	T	R	X	L	T	R	X	L	T	R	X	L	T	R	X		
4:00 PM - 4:15 PM	Passenger Car		61	9		11	91			19		13							
	Bus		0	0		0	0			0		0							
	Heavy Truck		0	0		0	0			0		0							
	Medium Truck		4	0		0	0			0		1						209	873
4:15 PM - 4:30 PM	Passenger Car		66	18		7	83			22		19							
	Bus		2	0		0	0			1		0							
	Heavy Truck		0	0		0	0			0		0							
	Medium Truck		2	0		0	2			0		0						222	882
4:30 PM - 4:45 PM	Passenger Car		74	18		5	91			22		17							
	Bus		0	0		0	0			0		0							
	Heavy Truck		0	0		0	0			0		0							
	Medium Truck		0	1		0	2			0		0						230	855
4:45 PM - 5:00 PM	Passenger Car		62	13		6	83			28		17							
	Bus		0	0		0	0			0		0							
	Heavy Truck		0	0		0	0			0		0							
	Medium Truck		1	1		0	0			0		1						212	829
5:00 PM - 5:15 PM	**Passenger Car**		**59**	**20**		**5**	**93**			**19**		**17**							
	Bus		**0**	**0**		**0**	**0**			**0**		**0**							
	Heavy Truck		**0**	**0**		**0**	**0**			**0**		**0**							
	Medium Truck		**3**	**1**		**0**	**0**			**0**		**1**						**218**	**852**
5:15 PM - 5:30 PM	**Passenger Car**		**55**	**10**		**9**	**86**			**15**		**16**							
	Bus		**0**	**0**		**0**	**0**			**0**		**0**							
	Heavy Truck		**0**	**0**		**0**	**0**			**0**		**0**							
	Medium Truck		**2**	**1**		**0**	**0**			**1**		**0**						**195**	862
5:30 PM - 5:45 PM	**Passenger Car**		**67**	**15**		**8**	**79**			**15**		**16**							
	Bus		**0**	**0**		**0**	**0**			**0**		**0**							
	Heavy Truck		**0**	**0**		**0**	**0**			**0**		**0**							
	Medium Truck		**2**	**0**		**0**	**2**			**0**		**0**						**204**	847
5:45 PM - 6:00 PM	**Passenger Car**		**75**	**18**		**15**	**76**			**25**		**22**							
	Bus		**0**	**0**		**0**	**0**			**0**		**0**							
	Heavy Truck		**0**	**0**		**0**	**0**			**0**		**0**							
	Medium Truck		**2**	**0**		**0**	**2**			**0**		**0**						**235**	643
6:00 PM - 6:15 PM	Passenger Car		79	12		5	91			22		17							
	Bus		0	0		0	0			0		0							
	Heavy Truck		0	0		0	0			0		0							
	Medium Truck		1	0		0	1			0		0						228	408
6:15 PM - 6:30 PM	Passenger Car		54	3		5	71			29		15							
	Bus		0	0		0	0			0		0							
	Heavy Truck		0	0		0	0			0		0							
	Medium Truck		1	0		0	2			0		0						180	180

Summary Calculations

	Eastbound				Westbound				Northbound				Southbound			
	L	T	R	X	L	T	R	X	L	T	R	X	L	T	R	X
Peak Hour Vehicle Volume by Movement	0	265	65	0	37	338	0	0	75	0	72	0	0	0	0	0
Peak Hour Vehicle Volume by Approach	330				375				147				0			
PHF by Movement		0.86	0.77		0.62	0.91			0.75		0.82					
Adjusted PHF		0.86	0.80		0.80	0.91			0.80		0.82					
PHF by Intersection	0.91															
Total Passenger Car	0	256	63	0	37	334	0	0	74	0	71	0	0	0	0	0
Total Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Heavy Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Medium Truck	0	9	2	0	0	4	0	0	1	0	1	0	0	0	0	0
% Passenger Cars		97%	97%		100%	99%			99%		99%					
% Heavy Vehicles		3%	3%		0%	1%			1%		1%					

Project 20 South 2nd Avenue, Mt Vernon, NY
Location 2nd St/2nd Ave
Count Date 2/28/2017
Time Period AM
Peak Hour 7:30 AM

Time Period	Vehicle Class	Eastbound				Westbound				Northbound				Southbound				15-Minute Volume	Hourly Volume
		L	T	R	X	L	T	R	X	L	T	R	X	L	T	R	X		
7:00 AM - 7:15 AM	Passenger Car	0	13	3		3	10	0		0	0	0		2	7	3			
	Bus	0	0	0		0	0	0		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	0	0	0		0	0	0		0	0	0		0	0	0		41	359
7:15 AM - 7:30 AM	Passenger Car	0	23	1		8	19	0		0	0	0		4	12	7			
	Bus	0	0	0		0	0	0		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	0	0	0		0	0	0		0	0	0		0	0	0		74	434
7:30 AM - 7:45 AM	**Passenger Car**	**0**	**27**	**6**		**8**	**41**	**0**		**0**	**0**	**0**		**3**	**12**	**6**			
	Bus	**0**	**0**	**0**		**0**	**1**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Heavy Truck	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Medium Truck	**0**	**0**	**0**		**0**	**1**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**105**	**498**
7:45 AM - 8:00 AM	**Passenger Car**	**0**	**52**	**16**		**4**	**39**	**0**		**0**	**0**	**0**		**3**	**16**	**8**			
	Bus	**0**	**1**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Heavy Truck	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Medium Truck	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**139**	511
8:00 AM - 8:15 AM	**Passenger Car**	**0**	**35**	**4**		**7**	**31**	**0**		**0**	**0**	**0**		**4**	**23**	**10**			
	Bus	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**1**	**0**	**0**			
	Heavy Truck	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Medium Truck	**0**	**0**	**1**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**116**	484
8:15 AM - 8:30 AM	**Passenger Car**	**0**	**49**	**11**		**6**	**32**	**0**		**0**	**0**	**0**		**6**	**27**	**6**			
	Bus	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Heavy Truck	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Medium Truck	**0**	**0**	**0**		**0**	**1**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**138**	456
8:30 AM - 8:45 AM	Passenger Car	0	39	7		6	42	0		0	0	0		2	10	9			
	Bus	0	0	0		0	0	0		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	0	0	0		1	1	0		0	0	0		1	0	0		118	407
8:45 AM - 9:00 AM	Passenger Car	0	31	12		7	32	0		0	0	0		2	20	6			
	Bus	0	0	0		0	0	0		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	0	0	0		0	2	0		0	0	0		0	0	0		112	289
9:00 AM - 9:15 AM	Passenger Car	0	19	7		7	21	1		0	0	0		7	16	7			
	Bus	0	0	0		0	0	0		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	0	1	0		0	1	0		0	0	0		0	0	1		88	177
9:15 AM - 9:30 AM	Passenger Car	0	16	9		5	16	0		0	0	0		12	14	11			
	Bus	0	0	0		0	0	0		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	0	1	2		1	2	0		0	0	0		0	0	0		89	89

Summary Calculations

	Eastbound				Westbound				Northbound				Southbound			
	L	T	R	X	L	T	R	X	L	T	R	X	L	T	R	X
Peak Hour Vehicle Volume by Movement	0	164	38	0	25	146	0	0	0	0	0	0	17	78	30	0
Peak Hour Vehicle Volume by Approach	202				171				0				125			
PHF by Movement		0.77	0.59		0.78	0.85							0.71	0.72	0.75	
Adjusted PHF		0.80	0.80		0.80	0.85							0.80	0.80	0.80	
PHF by Intersection	0.90															
Total Passenger Car	0	163	37	0	25	143	0	0	0	0	0	0	16	78	30	0
Total Bus	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0
Total Heavy Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Medium Truck	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0
% Passenger Cars		99%	97%		100%	98%							94%	100%	100%	
% Heavy Vehicles		1%	3%		0%	2%							6%	0%	0%	

Project 20 South 2nd Avenue, Mt Vernon, NY
Location 2nd St/2nd Ave
Count Date 2/28/2017
Time Period PM
Peak Hour 5:00 PM

Time Period	Vehicle Class	Eastbound				Westbound				Northbound				Southbound				15-Minute Volume	Hourly Volume
		L	T	R	X	L	T	R	X	L	T	R	X	L	T	R	X		
4:00 PM - 4:15 PM	Passenger Car	0	49	7		7	24	0		0	0	0		11	18	7			
	Bus	0	0	0		0	0	0		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	0	0	0		0	0	0		0	0	0		0	0	0		123	542
4:15 PM - 4:30 PM	Passenger Car	0	50	9		10	31	0		0	0	0		8	22	9			
	Bus	0	0	0		0	1	0		0	0	0		0	1	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	0	1	0		0	0	0		0	0	0		0	0	0		142	560
4:30 PM - 4:45 PM	Passenger Car	0	38	6		10	35	0		0	0	0		15	26	9			
	Bus	0	0	0		0	0	0		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	0	0	0		0	0	0		0	0	0		0	0	0		139	558
4:45 PM - 5:00 PM	Passenger Car	0	35	8		11	44	0		0	0	0		5	25	9			
	Bus	0	0	0		0	0	0		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	0	1	0		0	0	0		0	0	0		0	0	0		138	560
5:00 PM - 5:15 PM	**Passenger Car**	**0**	**37**	**11**		**8**	**45**	**0**		**0**	**0**	**0**		**6**	**21**	**13**			
	Bus	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Heavy Truck	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Medium Truck	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**141**	**560**
5:15 PM - 5:30 PM	**Passenger Car**	**0**	**44**	**12**		**8**	**34**	**0**		**0**	**0**	**0**		**9**	**18**	**13**			
	Bus	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Heavy Truck	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Medium Truck	**0**	**0**	**0**		**0**	**1**	**0**		**0**	**0**	**0**		**0**	**1**	**0**		**140**	548
5:30 PM - 5:45 PM	**Passenger Car**	**0**	**51**	**5**		**5**	**43**	**0**		**0**	**0**	**0**		**7**	**23**	**7**			
	Bus	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Heavy Truck	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Medium Truck	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**141**	518
5:45 PM - 6:00 PM	**Passenger Car**	**0**	**42**	**20**		**12**	**37**	**0**		**0**	**0**	**0**		**0**	**17**	**9**			
	Bus	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Heavy Truck	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Medium Truck	**0**	**0**	**1**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**138**	377
6:00 PM - 6:15 PM	Passenger Car	0	44	6		9	37	0		0	0	0		8	20	5			
	Bus	0	0	0		0	0	0		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	0	0	0		0	0	0		0	0	0		0	0	0		129	239
6:15 PM - 6:30 PM	Passenger Car	0	39	10		10	27	0		0	0	0		7	15	2			
	Bus	0	0	0		0	0	0		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	0	0	0		0	0	0		0	0	0		0	0	0		110	110

Summary Calculations

	Eastbound				Westbound				Northbound				Southbound			
	L	T	R	X	L	T	R	X	L	T	R	X	L	T	R	X
Peak Hour Vehicle Volume by Movement	0	174	49	0	33	160	0	0	0	0	0	0	22	80	42	0
Peak Hour Vehicle Volume by Approach		223				193				0				144		
PHF by Movement		0.85	0.58		0.69	0.89							0.61	0.87	0.81	
Adjusted PHF		0.85	0.80		0.80	0.89							0.80	0.87	0.81	
PHF by Intersection	0.99															
Total Passenger Car	0	174	48	0	33	159	0	0	0	0	0	0	22	79	42	0
Total Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Heavy Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Medium Truck	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0
% Passenger Cars		100%	98%		100%	99%							100%	99%	100%	
% Heavy Vehicles		0%	2%		0%	1%							0%	1%	0%	

Project 20 South 2nd Avenue, Mt Vernon, NY
Location 2nd St/3rd Ave
Count Date 2/28/2017
Time Period AM
Peak Hour 7:30 AM

Time Period	Vehicle Class	Eastbound				Westbound				Northbound				Southbound				15-Minute Volume	Hourly Volume
		L	T	R	X	L	T	R	X	L	T	R	X	L	T	R	X		
7:00 AM - 7:15 AM	Passenger Car	4	17	0		0	12	2		0	1	0		0	0	2			
	Bus	0	0	0		0	0	0		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	0	0	1		0	0	0		0	0	0		0	1	0		40	456
7:15 AM - 7:30 AM	Passenger Car	12	24	0		0	19	7		0	1	0		1	0	8			
	Bus	0	0	0		0	0	0		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	0	0	0		0	0	0		1	0	0		0	3	0		76	527
7:30 AM - 7:45 AM	**Passenger Car**	**39**	**20**	**2**		**0**	**33**	**12**		**1**	**0**	**0**		**15**	**0**	**23**			
	Bus	**0**	**0**	**0**		**0**	**1**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Heavy Truck	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Medium Truck	**0**	**0**	**0**		**1**	**0**	**0**		**1**	**0**	**0**		**0**	**0**	**0**		**148**	**574**
7:45 AM - 8:00 AM	**Passenger Car**	**34**	**55**	**0**		**0**	**33**	**18**		**1**	**1**	**1**		**18**	**2**	**24**			
	Bus	**1**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**1**	**0**	**0**			
	Heavy Truck	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Medium Truck	**1**	**0**	**0**		**0**	**0**	**0**		**0**	**2**	**0**		**0**	**0**	**0**		**192**	562
8:00 AM - 8:15 AM	**Passenger Car**	**20**	**36**	**0**		**0**	**30**	**9**		**0**	**1**	**0**		**3**	**1**	**7**			
	Bus	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Heavy Truck	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Medium Truck	**1**	**0**	**0**		**0**	**0**	**0**		**1**	**1**	**1**		**0**	**0**	**0**		**111**	480
8:15 AM - 8:30 AM	**Passenger Car**	**12**	**47**	**0**		**0**	**37**	**3**		**1**	**1**	**0**		**7**	**1**	**12**			
	Bus	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Heavy Truck	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Medium Truck	**0**	**0**	**0**		**0**	**0**	**1**		**0**	**1**	**0**		**0**	**0**	**0**		**123**	451
8:30 AM - 8:45 AM	Passenger Car	25	40	1		0	42	8		1	1	1		5	2	7			
	Bus	0	0	0		0	0	0		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	0	0	1		0	1	0		0	0	0		0	0	1		136	406
8:45 AM - 9:00 AM	Passenger Car	15	36	1		1	30	8		0	1	2		5	1	7			
	Bus	0	0	0		0	0	0		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	0	0	0		0	2	0		1	0	0		0	0	0		110	270
9:00 AM - 9:15 AM	Passenger Car	8	21	1		0	25	4		1	2	2		3	2	6			
	Bus	0	0	0		0	0	0		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	1	1	1		1	1	0		0	0	0		0	0	2		82	160
9:15 AM - 9:30 AM	Passenger Car	8	19	0		1	22	3		1	4	2		4	1	4			
	Bus	0	0	0		0	0	0		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	0	3	0		0	0	1		3	0	1		1	0	0		78	78

Summary Calculations

	Eastbound				Westbound				Northbound				Southbound			
	L	T	R	X	L	T	R	X	L	T	R	X	L	T	R	X
Peak Hour Vehicle Volume by Movement	108	158	2	0	1	134	43	0	5	7	2	0	44	4	66	0
Peak Hour Vehicle Volume by Approach	268				178				14				114			
PHF by Movement	0.69	0.72	0.25		0.25	0.91	0.60		0.63	0.58	0.50		0.58	0.50	0.69	
Adjusted PHF	0.80	0.80	0.80		0.80	0.91	0.80		0.80	0.80	0.80		0.80	0.80	0.80	
PHF by Intersection	0.75															
Total Passenger Car	105	158	2	0	0	133	42	0	3	3	1	0	43	4	66	0
Total Bus	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0
Total Heavy Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Medium Truck	2	0	0	0	1	0	1	0	2	4	1	0	0	0	0	0
% Passenger Cars	97%	100%	100%		0%	99%	98%		60%	43%	50%		98%	100%	100%	
% Heavy Vehicles	3%	0%	0%		100%	1%	2%		40%	57%	50%		2%	0%	0%	

Project 20 South 2nd Avenue, Mt Vernon, NY
Location 2nd St/3rd Ave
Count Date 2/28/2017
Time Period PM
Peak Hour 5:00 PM

Time Period	Vehicle Class	Eastbound				Westbound				Northbound				Southbound				15-Minute Volume	Hourly Volume
		L	T	R	X	L	T	R	X	L	T	R	X	L	T	R	X		
4:00 PM - 4:15 PM	Passenger Car	18	39	0		0	22	9		3	9	8		10	3	12			
	Bus	0	0	0		0	0	0		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	1	0	0		0	0	0		0	0	0		0	0	0		134	553
4:15 PM - 4:30 PM	Passenger Car	22	42	1		0	30	7		2	8	7		4	8	10			
	Bus	0	0	0		0	0	1		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	0	1	0		0	0	0		0	0	0		0	0	0		143	571
4:30 PM - 4:45 PM	Passenger Car	21	37	0		0	34	13		1	9	7		4	3	12			
	Bus	0	0	0		0	0	0		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	1	0	0		0	0	0		0	0	0		0	0	0		142	580
4:45 PM - 5:00 PM	Passenger Car	19	26	0		0	42	8		0	9	5		8	2	14			
	Bus	0	0	0		0	0	0		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	0	1	0		0	0	0		0	0	0		0	0	0		134	580
5:00 PM - 5:15 PM	**Passenger Car**	**17**	**35**	**1**		**1**	**46**	**12**		**2**	**5**	**7**		**5**	**5**	**15**			
	Bus	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Heavy Truck	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Medium Truck	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**1**	**0**		**0**	**0**	**0**		**152**	**630**
5:15 PM - 5:30 PM	**Passenger Car**	**17**	**50**	**2**		**3**	**37**	**8**		**0**	**7**	**6**		**7**	**4**	**10**			
	Bus	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Heavy Truck	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Medium Truck	**0**	**0**	**0**		**0**	**1**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**152**	609
5:30 PM - 5:45 PM	**Passenger Car**	**21**	**44**	**0**		**0**	**37**	**10**		**0**	**7**	**4**		**3**	**4**	**11**			
	Bus	**0**	**0**	**0**		**0**	**0**	**1**		**0**	**0**	**0**		**0**	**0**	**0**			
	Heavy Truck	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Medium Truck	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**142**	576
5:45 PM - 6:00 PM	**Passenger Car**	**34**	**48**	**1**		**0**	**35**	**10**		**2**	**8**	**5**		**15**	**8**	**17**			
	Bus	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Heavy Truck	**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**			
	Medium Truck	**0**	**1**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**0**	**0**	**0**		**184**	434
6:00 PM - 6:15 PM	Passenger Car	24	31	0		0	37	5		1	8	6		6	2	9			
	Bus	0	0	0		0	1	0		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	0	0	0		0	0	0		0	0	0		0	0	1		131	250
6:15 PM - 6:30 PM	Passenger Car	26	41	0		0	23	5		1	5	1		6	4	7			
	Bus	0	0	0		0	0	0		0	0	0		0	0	0			
	Heavy Truck	0	0	0		0	0	0		0	0	0		0	0	0			
	Medium Truck	0	0	0		0	0	0		0	0	0		0	0	0		119	119

Summary Calculations

	Eastbound				Westbound				Northbound				Southbound			
	L	T	R	X	L	T	R	X	L	T	R	X	L	T	R	X
Peak Hour Vehicle Volume by Movement	89	178	4	0	4	156	41	0	4	28	22	0	30	21	53	0
Peak Hour Vehicle Volume by Approach	271				201				54				104			
PHF by Movement	0.65	0.89	0.50		0.33	0.85	0.85		0.50	0.88	0.79		0.50	0.66	0.78	
Adjusted PHF	0.80	0.89	0.80		0.80	0.85	0.85		0.80	0.88	0.80		0.80	0.80	0.80	
PHF by Intersection	0.86															
Total Passenger Car	89	177	4	0	4	155	40	0	4	27	22	0	30	21	53	0
Total Bus	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Total Heavy Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Medium Truck	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0
% Passenger Cars	100%	99%	100%		100%	99%	98%		100%	96%	100%		100%	100%	100%	
% Heavy Vehicles	0%	1%	0%		0%	1%	2%		0%	4%	0%		0%	0%	0%	

20 South 2nd Avenue
Mount Vernon, NY
Pedestrian Peak Hour Counts
2/28/2017

AM

Crosswalk	North	West	South	East
Approach	SB	EB	NB	WB
1st St at 2nd Ave		8	49	2
1st St at 3rd Ave	47	87	49	16
2nd St at 2nd Ave	51	44	39	46
2nd St at 3rd Ave	113	51	31	7

PM

Crosswalk	North	West	South	East
Approach	SB	EB	NB	WB
1st St at 2nd Ave		11	60	6
1st St at 3rd Ave	30	104	94	16
2nd St at 2nd Ave	43	56	51	42
2nd St at 3rd Ave	119	66	41	15

Attachment C – Crash Data

Table C1 Summary of Three-Year Crash History – Study Intersections

Intersection	Crash Severity					Crash Type												
	Fatality	Injury	Property Damage Only	Non-Reportable	Total	Rear-End	Overtaking	Right-Angle	Left-Turn	Right-Turn	Fixed Object	Side-Swipe	Bicycle	Pedestrian	Head On	Animal	Other	Unknown/Not Entered
East 1st Street at South 2nd Avenue	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0	0
East 1st Street at South 3rd Avenue	0	0	1	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
East 2nd Street at South 2nd Avenue	0	0	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0	0
East 2nd Street at South 3rd Avenue	0	2	1	0	**3**	0	0	1	0	1	0	0	0	0	0	0	0	1

A non-reportable crash is one which involves no injury and property damage of less than $1,000.00.

The NYSDOT crash data can be provided upon request.

Attachment D – Capacity Analysis LOS Definitions

Level of Service Definitions

Signal Controlled Intersections

The evaluation criteria used to analyze signalized intersections is based on the procedures set forth in the latest version of the *Highway Capacity Manual* (HCM)[1].

The level of service (LOS) of a signalized intersection can be characterized for the entire intersection, each intersection approach, and each lane group. Control delay alone is used to characterize LOS for the entire intersection or an approach. Control delay and volume-to-capacity ratio are used to characterize LOS for a lane group. Delay quantifies the increase in travel time due to traffic signal control. It is also a measure of driver discomfort and fuel consumption. The volume-to-capacity ratio quantifies the degree to which a phase's capacity is utilized by a lane group.

The levels of service range between level of service A (relatively congestion-free) and level of service F (congested).

Level of service A – This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If LOS A is the result of favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

Level of service B – This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.

Level of service C – This level is typically assigned when progression is favorable or the cycle length is moderate. Individual *cycle failures* (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

Level of service D – This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective, or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

Level of service E - This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

[1] Highway Capacity Manual, 6th Edition, Transportation Research Board, Washington D.C., 2016.

Level of Service F - This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

A lane group can incur a delay less than 80 s/veh when the volume-to-capacity ratio exceeds 1.0. This condition typically occurs when the cycle length is short, the signal progression is favorable, or both. As a result, both the delay and volume-to-capacity ratio are considered when lane group LOS is established. A ratio of 1.0 or more indicates cycle capacity is fully utilized and represents failure from a capacity perspective (just as delay in excess of 80 s/veh represents failure from a delay perspective).

The following lists the LOS thresholds established for motorized vehicle mode at a signalized intersection.

CONTROL DELAY (s/veh)	LOS by Volume-to-Capacity Ratio[a]	
	≤1.0	≥1.0
≤10	A	F
>10-20	B	F
>20-35	C	F
>35-55	D	F
>55-80	E	F
>80	F	F

[a] For approach-based and intersection wide assessments, LOS is defined solely by control delay.

Two Way Stop Controlled Intersections

The evaluation criteria used to analyze Two-Way Stop Controlled (TWSC) intersections is based on the procedures set forth in the latest version of the *Highway Capacity Manual* (HCM)[1].

Level of service (LOS) for a TWSC intersection is determined by the computed or measured control delay. For motor vehicles, LOS is determined for each minor street movement (or shared movement), as well as the major -street left turns, by using the criteria given in the Table below. LOS is not defined for the intersection as a whole or for major-street approaches for three primary reasons: (a) major-street through vehicles are assumed to experience zero delay; (b) the disproportionate number of major-street through vehicles at a typical TWSC intersection skews the weighted average of all movements, resulting in a very low overall average delay for all vehicles; and (c) the resulting low delay can mask LOS deficiencies for minor movements. LOS F is assigned to a movement if its volume-to-capacity ratio exceeds 1.0, regardless of the control delay.

The LOS criteria for TWSC intersections differ somewhat from the criteria for signalized intersections, primarily because user perceptions differ among transportation facility types. The expectation is that a signalized intersection is designed to carry higher traffic volumes and will present greater delay than an unsignalized intersection. Unsignalized intersections are also associated with more uncertainty for users, as delays are less predictable than they are at signals.

The levels of service range between level of service A (relatively congestion-free) and level of service F (very congested).

The following thresholds are used to determine TWSC levels of service:

CONTROL DELAY (s/veh)	LOS by Volume-to-Capacity Ratio[a]	
	v/c≤1.0	v/c≥1.0
≤10	A	F
>10-15	B	F
>15-25	C	F
>25-35	D	F
>35-50	E	F
>50	F	F

[a] The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection as a whole.

Attachment E – Capacity Analysis Worksheets

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	274	40	81	367	0	0
Future Volume (Veh/h)	274	40	81	367	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	301	44	89	403	0	0
Pedestrians					49	
Lane Width (ft)					0.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	279					
pX, platoon unblocked			0.88		0.88	0.88
vC, conflicting volume			394		953	372
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			247		880	222
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		100	100
cM capacity (veh/h)			1175		259	722

Direction, Lane #	EB 1	WB 1
Volume Total	345	492
Volume Left	0	89
Volume Right	44	0
cSH	1700	1175
Volume to Capacity	0.20	0.08
Queue Length 95th (ft)	0	6
Control Delay (s)	0.0	2.2
Lane LOS		A
Approach Delay (s)	0.0	2.2
Approach LOS		

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	47.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕				
Traffic Volume (veh/h)	12	286	25	9	318	40	32	76	28	0	0	0
Future Volume (veh/h)	12	286	25	9	318	40	32	76	28	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.97		0.94	0.97		0.94	1.00		0.90			
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	0.85	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1945	1945	1945	1976	1914	1945	1796	1870	1856			
Adj Flow Rate, veh/h	13	304	27	10	338	43	34	81	30			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	2	2	0	4	2	7	2	3			
Cap, veh/h	78	638	55	75	695	87	147	351	130			
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43			
Sat Flow, veh/h	21	1499	129	15	1632	204	346	825	305			
Grp Volume(v), veh/h	344	0	0	391	0	0	145	0	0			
Grp Sat Flow(s),veh/h/ln	1650	0	0	1851	0	0	1477	0	0			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0			
Cycle Q Clear(g_c), s	8.0	0.0	0.0	8.2	0.0	0.0	3.4	0.0	0.0			
Prop In Lane	0.04		0.08	0.03		0.11	0.23		0.21			
Lane Grp Cap(c), veh/h	772	0	0	857	0	0	629	0	0			
V/C Ratio(X)	0.45	0.00	0.00	0.46	0.00	0.00	0.23	0.00	0.00			
Avail Cap(c_a), veh/h	772	0	0	857	0	0	629	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	11.2	0.0	0.0	11.3	0.0	0.0	9.9	0.0	0.0			
Incr Delay (d2), s/veh	1.9	0.0	0.0	1.8	0.0	0.0	0.9	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.9	0.0	0.0	3.2	0.0	0.0	1.1	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.1	0.0	0.0	13.0	0.0	0.0	10.7	0.0	0.0			
LnGrp LOS	B	A	A	B	A	A	B	A	A			
Approach Vol, veh/h		344			391			145				
Approach Delay, s/veh		13.1			13.0			10.7				
Approach LOS		B			B			B				
Timer - Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		27.0		27.0				27.0				
Change Period (Y+Rc), s		4.0		4.0				4.0				
Max Green Setting (Gmax), s		23.0		23.0				23.0				
Max Q Clear Time (g_c+I1), s		5.4		10.0				10.2				
Green Ext Time (p_c), s		0.7		1.7				2.0				

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	166	38	25	148	0	0	0	0	17	78	30
Future Volume (veh/h)	0	166	38	25	148	0	0	0	0	17	78	30
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	0.97		1.00				1.00		0.94
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	1.00				1.00	0.85	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1885	1856	1900	1870	0				1884	1976	1976
Adj Flow Rate, veh/h	0	184	42	28	164	0				19	87	33
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	3	0	2	0				6	0	0
Cap, veh/h	0	602	137	142	738	0				78	358	136
Arrive On Green	0.00	0.45	0.45	0.45	0.45	0.00				0.36	0.36	0.36
Sat Flow, veh/h	0	1324	302	148	1623	0				215	984	373
Grp Volume(v), veh/h	0	0	226	192	0	0				139	0	0
Grp Sat Flow(s),veh/h/ln	0	0	1626	1771	0	0				1572	0	0
Q Serve(g_s), s	0.0	0.0	4.8	0.0	0.0	0.0				3.4	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	4.8	3.4	0.0	0.0				3.4	0.0	0.0
Prop In Lane	0.00		0.19	0.15		0.00				0.14		0.24
Lane Grp Cap(c), veh/h	0	0	739	880	0	0				572	0	0
V/C Ratio(X)	0.00	0.00	0.31	0.22	0.00	0.00				0.24	0.00	0.00
Avail Cap(c_a), veh/h	0	0	739	880	0	0				572	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	9.5	9.1	0.0	0.0				12.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.1	0.6	0.0	0.0				1.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.6	1.3	0.0	0.0				1.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	10.6	9.7	0.0	0.0				13.2	0.0	0.0
LnGrp LOS	A	A	B	A	A	A				B	A	A
Approach Vol, veh/h		226			192						139	
Approach Delay, s/veh		10.6			9.7						13.2	
Approach LOS		B			A						B	

Timer - Assigned Phs		4		6		8						
Phs Duration (G+Y+Rc), s		30.0		25.0		30.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		25.0		20.0		25.0						
Max Q Clear Time (g_c+I1), s		6.8		5.4		5.4						
Green Ext Time (p_c), s		1.2		0.6		1.0						

Intersection Summary												
HCM 6th Ctrl Delay		10.9										
HCM 6th LOS		B										

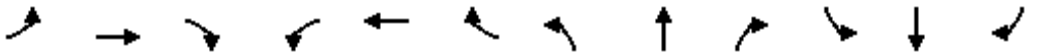
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	158	2	1	134	43	5	7	2	44	4	66
Future Volume (veh/h)	108	158	2	1	134	43	5	7	2	44	4	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.92		0.87	0.92		0.87	0.95		0.93	0.93		0.93
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1900	418	1885	1870	1359	1097	1205	1870	1900	1900
Adj Flow Rate, veh/h	144	211	3	1	179	57	7	9	3	59	5	88
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	3	0	0	100	1	2	40	57	50	2	0	0
Cap, veh/h	303	399	5	67	527	167	193	187	54	245	48	276
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	471	899	12	1	1187	376	275	504	146	412	130	745
Grp Volume(v), veh/h	358	0	0	237	0	0	19	0	0	152	0	0
Grp Sat Flow(s),veh/h/ln	1381	0	0	1564	0	0	924	0	0	1287	0	0
Q Serve(g_s), s	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Cycle Q Clear(g_c), s	9.3	0.0	0.0	5.4	0.0	0.0	0.6	0.0	0.0	4.2	0.0	0.0
Prop In Lane	0.40		0.01	0.00		0.24	0.37		0.16	0.39		0.58
Lane Grp Cap(c), veh/h	707	0	0	762	0	0	433	0	0	569	0	0
V/C Ratio(X)	0.51	0.00	0.00	0.31	0.00	0.00	0.04	0.00	0.00	0.27	0.00	0.00
Avail Cap(c_a), veh/h	707	0	0	762	0	0	433	0	0	569	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.7	0.0	0.0	9.8	0.0	0.0	10.9	0.0	0.0	12.0	0.0	0.0
Incr Delay (d2), s/veh	2.6	0.0	0.0	1.1	0.0	0.0	0.2	0.0	0.0	1.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	0.0	1.7	0.0	0.0	0.1	0.0	0.0	1.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.3	0.0	0.0	10.9	0.0	0.0	11.1	0.0	0.0	13.1	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		358			237			19			152	
Approach Delay, s/veh		13.3			10.9			11.1			13.1	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.0		29.0		25.0		29.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		20.0		24.0		20.0		24.0				
Max Q Clear Time (g_c+I1), s		2.6		11.3		6.2		7.4				
Green Ext Time (p_c), s		0.0		1.9		0.7		1.2				
Intersection Summary												
HCM 6th Ctrl Delay			12.5									
HCM 6th LOS			B									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	280	59	94	375	0	0
Future Volume (Veh/h)	280	59	94	375	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	298	63	100	399	0	0
Pedestrians					60	
Lane Width (ft)					0.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	279					
pX, platoon unblocked			0.85		0.85	0.85
vC, conflicting volume			421		988	390
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			235		900	198
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			91		100	100
cM capacity (veh/h)			1147		241	719

Direction, Lane #	EB 1	WB 1
Volume Total	361	499
Volume Left	0	100
Volume Right	63	0
cSH	1700	1147
Volume to Capacity	0.21	0.09
Queue Length 95th (ft)	0	7
Control Delay (s)	0.0	2.5
Lane LOS		A
Approach Delay (s)	0.0	2.5
Approach LOS		

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	321	23	7	301	67	35	94	18	0	0	0
Future Volume (veh/h)	32	321	23	7	301	67	35	94	18	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.95		0.89	0.95		0.89	1.00		0.88			
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	0.85	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1945	1930	1930	1976	1961	1945	1885	1870	1885			
Adj Flow Rate, veh/h	35	353	25	8	331	74	38	103	20			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	3	3	0	1	2	1	2	1			
Cap, veh/h	101	607	41	72	640	141	152	411	80			
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43			
Sat Flow, veh/h	68	1425	96	10	1503	330	356	964	187			
Grp Volume(v), veh/h	413	0	0	413	0	0	161	0	0			
Grp Sat Flow(s),veh/h/ln	1589	0	0	1843	0	0	1508	0	0			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0			
Cycle Q Clear(g_c), s	10.3	0.0	0.0	8.9	0.0	0.0	3.7	0.0	0.0			
Prop In Lane	0.08		0.06	0.02		0.18	0.24		0.12			
Lane Grp Cap(c), veh/h	749	0	0	853	0	0	642	0	0			
V/C Ratio(X)	0.55	0.00	0.00	0.48	0.00	0.00	0.25	0.00	0.00			
Avail Cap(c_a), veh/h	749	0	0	853	0	0	642	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	11.9	0.0	0.0	11.5	0.0	0.0	10.0	0.0	0.0			
Incr Delay (d2), s/veh	2.9	0.0	0.0	2.0	0.0	0.0	0.9	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.7	0.0	0.0	3.5	0.0	0.0	1.2	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.8	0.0	0.0	13.4	0.0	0.0	10.9	0.0	0.0			
LnGrp LOS	B	A	A	B	A	A	B	A	A			
Approach Vol, veh/h		413			413			161				
Approach Delay, s/veh		14.8			13.4			10.9				
Approach LOS		B			B			B				
Timer - Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		27.0		27.0				27.0				
Change Period (Y+Rc), s		4.0		4.0				4.0				
Max Green Setting (Gmax), s		23.0		23.0				23.0				
Max Q Clear Time (g_c+I1), s		5.7		12.3				10.9				
Green Ext Time (p_c), s		0.8		2.0				2.1				
Intersection Summary												
HCM 6th Ctrl Delay			13.6									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	181	49	33	160	0	0	0	0	22	80	42
Future Volume (veh/h)	0	181	49	33	160	0	0	0	0	22	80	42
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	0.96		1.00				1.00		0.92
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	1.00				1.00	0.85	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1870	1900	1885	0				1976	1961	1976
Adj Flow Rate, veh/h	0	183	49	33	162	0				22	81	42
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	0	0	2	0	1	0				0	1	0
Cap, veh/h	0	582	156	160	715	0				84	311	161
Arrive On Green	0.00	0.45	0.45	0.45	0.45	0.00				0.36	0.36	0.36
Sat Flow, veh/h	0	1281	343	185	1573	0				232	855	444
Grp Volume(v), veh/h	0	0	232	195	0	0				145	0	0
Grp Sat Flow(s),veh/h/ln	0	0	1624	1758	0	0				1531	0	0
Q Serve(g_s), s	0.0	0.0	5.0	0.0	0.0	0.0				3.7	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	5.0	3.5	0.0	0.0				3.7	0.0	0.0
Prop In Lane	0.00		0.21	0.17		0.00				0.15		0.29
Lane Grp Cap(c), veh/h	0	0	738	876	0	0				557	0	0
V/C Ratio(X)	0.00	0.00	0.31	0.22	0.00	0.00				0.26	0.00	0.00
Avail Cap(c_a), veh/h	0	0	738	876	0	0				557	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	9.5	9.1	0.0	0.0				12.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.1	0.6	0.0	0.0				1.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.7	1.3	0.0	0.0				1.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	10.7	9.7	0.0	0.0				13.4	0.0	0.0
LnGrp LOS	A	A	B	A	A	A				B	A	A
Approach Vol, veh/h		232			195						145	
Approach Delay, s/veh		10.7			9.7						13.4	
Approach LOS		B			A						B	

Timer - Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				30.0		25.0		30.0				
Change Period (Y+Rc), s				5.0		5.0		5.0				
Max Green Setting (Gmax), s				25.0		20.0		25.0				
Max Q Clear Time (g_c+I1), s				7.0		5.7		5.5				
Green Ext Time (p_c), s				1.2		0.6		1.0				

Intersection Summary												
HCM 6th Ctrl Delay			11.0									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	178	4	4	157	41	4	28	22	30	21	53
Future Volume (veh/h)	89	178	4	4	157	41	4	28	22	30	21	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.91		0.87	0.92		0.87	0.93		0.91	0.92		0.91
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1870	1976	1914	1976	1900	1900	1900
Adj Flow Rate, veh/h	103	207	5	5	183	48	5	33	26	35	24	62
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	1	0	0	1	2	0	4	0	0	0	0
Cap, veh/h	253	455	10	72	554	142	88	355	254	190	134	250
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	369	1025	22	8	1247	320	44	958	686	282	361	676
Grp Volume(v), veh/h	315	0	0	236	0	0	64	0	0	121	0	0
Grp Sat Flow(s),veh/h/ln	1417	0	0	1575	0	0	1688	0	0	1319	0	0
Q Serve(g_s), s	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.5	0.0	0.0	5.3	0.0	0.0	1.3	0.0	0.0	3.1	0.0	0.0
Prop In Lane	0.33		0.02	0.02		0.20	0.08		0.41	0.29		0.51
Lane Grp Cap(c), veh/h	718	0	0	768	0	0	697	0	0	574	0	0
V/C Ratio(X)	0.44	0.00	0.00	0.31	0.00	0.00	0.09	0.00	0.00	0.21	0.00	0.00
Avail Cap(c_a), veh/h	718	0	0	768	0	0	697	0	0	574	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.3	0.0	0.0	9.8	0.0	0.0	11.1	0.0	0.0	11.7	0.0	0.0
Incr Delay (d2), s/veh	1.9	0.0	0.0	1.0	0.0	0.0	0.3	0.0	0.0	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.0	1.7	0.0	0.0	0.5	0.0	0.0	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.2	0.0	0.0	10.8	0.0	0.0	11.4	0.0	0.0	12.5	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		315			236			64			121	
Approach Delay, s/veh		12.2			10.8			11.4			12.5	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.0		29.0		25.0		29.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		20.0		24.0		20.0		24.0				
Max Q Clear Time (g_c+I1), s		3.3		9.5		5.1		7.3				
Green Ext Time (p_c), s		0.2		1.7		0.5		1.2				
Intersection Summary												
HCM 6th Ctrl Delay			11.8									
HCM 6th LOS			B									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	281	41	83	376	0	0
Future Volume (Veh/h)	281	41	83	376	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	309	45	91	413	0	0
Pedestrians					49	
Lane Width (ft)					0.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	279					
pX, platoon unblocked			0.88		0.88	0.88
vC, conflicting volume			403		976	380
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			250		902	225
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		100	100
cM capacity (veh/h)			1165		249	715

Direction, Lane #	EB 1	WB 1
Volume Total	354	504
Volume Left	0	91
Volume Right	45	0
cSH	1700	1165
Volume to Capacity	0.21	0.08
Queue Length 95th (ft)	0	6
Control Delay (s)	0.0	2.2
Lane LOS		A
Approach Delay (s)	0.0	2.2
Approach LOS		

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	293	26	9	326	41	33	78	29	0	0	0
Future Volume (veh/h)	12	293	26	9	326	41	33	78	29	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.97		0.94	0.97		0.94	1.00		0.90			
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	0.85	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1945	1945	1945	1976	1914	1945	1796	1870	1856			
Adj Flow Rate, veh/h	13	312	28	10	347	44	35	83	31			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	2	2	0	4	2	7	2	3			
Cap, veh/h	78	638	56	74	696	87	148	350	131			
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43			
Sat Flow, veh/h	21	1498	131	14	1633	203	347	822	307			
Grp Volume(v), veh/h	353	0	0	401	0	0	149	0	0			
Grp Sat Flow(s),veh/h/ln	1649	0	0	1851	0	0	1476	0	0			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0			
Cycle Q Clear(g_c), s	8.3	0.0	0.0	8.5	0.0	0.0	3.5	0.0	0.0			
Prop In Lane	0.04		0.08	0.02		0.11	0.23		0.21			
Lane Grp Cap(c), veh/h	772	0	0	857	0	0	629	0	0			
V/C Ratio(X)	0.46	0.00	0.00	0.47	0.00	0.00	0.24	0.00	0.00			
Avail Cap(c_a), veh/h	772	0	0	857	0	0	629	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	11.3	0.0	0.0	11.3	0.0	0.0	9.9	0.0	0.0			
Incr Delay (d2), s/veh	2.0	0.0	0.0	1.8	0.0	0.0	0.9	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.0	0.0	0.0	3.4	0.0	0.0	1.1	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.2	0.0	0.0	13.2	0.0	0.0	10.8	0.0	0.0			
LnGrp LOS	B	A	A	B	A	A	B	A	A			
Approach Vol, veh/h		353			401			149				
Approach Delay, s/veh		13.2			13.2			10.8				
Approach LOS		B			B			B				
Timer - Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		27.0		27.0				27.0				
Change Period (Y+Rc), s		4.0		4.0				4.0				
Max Green Setting (Gmax), s		23.0		23.0				23.0				
Max Q Clear Time (g_c+I1), s		5.5		10.3				10.5				
Green Ext Time (p_c), s		0.7		1.7				2.0				
Intersection Summary												
HCM 6th Ctrl Delay			12.8									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	170	39	26	152	0	0	0	0	17	80	31
Future Volume (veh/h)	0	170	39	26	152	0	0	0	0	17	80	31
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	0.97		1.00				1.00		0.94
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	1.00				1.00	0.85	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1885	1856	1900	1870	0				1884	1976	1976
Adj Flow Rate, veh/h	0	189	43	29	169	0				19	89	34
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	3	0	2	0				6	0	0
Cap, veh/h	0	602	137	143	737	0				76	358	137
Arrive On Green	0.00	0.45	0.45	0.45	0.45	0.00				0.36	0.36	0.36
Sat Flow, veh/h	0	1325	301	149	1621	0				210	985	376
Grp Volume(v), veh/h	0	0	232	198	0	0				142	0	0
Grp Sat Flow(s),veh/h/ln	0	0	1626	1770	0	0				1571	0	0
Q Serve(g_s), s	0.0	0.0	5.0	0.0	0.0	0.0				3.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	5.0	3.6	0.0	0.0				3.5	0.0	0.0
Prop In Lane	0.00		0.19	0.15		0.00				0.13		0.24
Lane Grp Cap(c), veh/h	0	0	739	879	0	0				571	0	0
V/C Ratio(X)	0.00	0.00	0.31	0.23	0.00	0.00				0.25	0.00	0.00
Avail Cap(c_a), veh/h	0	0	739	879	0	0				571	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	9.5	9.2	0.0	0.0				12.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.1	0.6	0.0	0.0				1.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.7	1.3	0.0	0.0				1.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	10.7	9.7	0.0	0.0				13.3	0.0	0.0
LnGrp LOS	A	A	B	A	A	A				B	A	A
Approach Vol, veh/h		232			198						142	
Approach Delay, s/veh		10.7			9.7						13.3	
Approach LOS		B			A						B	

Timer - Assigned Phs		4		6		8						
Phs Duration (G+Y+Rc), s		30.0		25.0		30.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		25.0		20.0		25.0						
Max Q Clear Time (g_c+I1), s		7.0		5.5		5.6						
Green Ext Time (p_c), s		1.2		0.6		1.0						

Intersection Summary												
HCM 6th Ctrl Delay		11.0										
HCM 6th LOS		B										

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	162	2	1	138	44	5	7	2	45	4	68
Future Volume (veh/h)	111	162	2	1	138	44	5	7	2	45	4	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.92		0.87	0.93		0.87	0.95		0.93	0.93		0.93
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1900	418	1885	1870	1359	1097	1205	1870	1900	1900
Adj Flow Rate, veh/h	148	216	3	1	184	59	7	9	3	60	5	91
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	3	0	0	100	1	2	40	57	50	2	0	0
Cap, veh/h	303	399	5	67	526	168	193	187	54	243	48	278
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	472	897	11	1	1184	378	275	504	146	407	129	751
Grp Volume(v), veh/h	367	0	0	244	0	0	19	0	0	156	0	0
Grp Sat Flow(s),veh/h/ln	1380	0	0	1563	0	0	924	0	0	1287	0	0
Q Serve(g_s), s	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0
Cycle Q Clear(g_c), s	9.7	0.0	0.0	5.5	0.0	0.0	0.6	0.0	0.0	4.3	0.0	0.0
Prop In Lane	0.40		0.01	0.00		0.24	0.37		0.16	0.38		0.58
Lane Grp Cap(c), veh/h	707	0	0	762	0	0	434	0	0	569	0	0
V/C Ratio(X)	0.52	0.00	0.00	0.32	0.00	0.00	0.04	0.00	0.00	0.27	0.00	0.00
Avail Cap(c_a), veh/h	707	0	0	762	0	0	434	0	0	569	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.8	0.0	0.0	9.9	0.0	0.0	10.9	0.0	0.0	12.0	0.0	0.0
Incr Delay (d2), s/veh	2.7	0.0	0.0	1.1	0.0	0.0	0.2	0.0	0.0	1.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	0.0	1.8	0.0	0.0	0.1	0.0	0.0	1.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	0.0	0.0	11.0	0.0	0.0	11.1	0.0	0.0	13.2	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		367			244			19			156	
Approach Delay, s/veh		13.5			11.0			11.1			13.2	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.0		29.0		25.0		29.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		20.0		24.0		20.0		24.0				
Max Q Clear Time (g_c+I1), s		2.6		11.7		6.3		7.5				
Green Ext Time (p_c), s		0.0		2.0		0.7		1.3				
Intersection Summary												
HCM 6th Ctrl Delay			12.6									
HCM 6th LOS			B									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	287	60	96	385	0	0
Future Volume (Veh/h)	287	60	96	385	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	305	64	102	410	0	0
Pedestrians					60	
Lane Width (ft)					0.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	279					
pX, platoon unblocked			0.85		0.85	0.85
vC, conflicting volume			429		1011	397
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			236		923	198
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			91		100	100
cM capacity (veh/h)			1138		231	714

Direction, Lane #	EB 1	WB 1
Volume Total	369	512
Volume Left	0	102
Volume Right	64	0
cSH	1700	1138
Volume to Capacity	0.22	0.09
Queue Length 95th (ft)	0	7
Control Delay (s)	0.0	2.5
Lane LOS		A
Approach Delay (s)	0.0	2.5
Approach LOS		

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	329	24	7	309	69	36	96	18	0	0	0
Future Volume (veh/h)	33	329	24	7	309	69	36	96	18	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.95		0.89	0.95		0.89	1.00		0.88			
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	0.85	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1945	1930	1930	1976	1961	1945	1885	1870	1885			
Adj Flow Rate, veh/h	36	362	26	8	340	76	40	105	20			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	3	3	0	1	2	1	2	1			
Cap, veh/h	102	605	41	72	640	141	156	409	78			
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43			
Sat Flow, veh/h	69	1421	97	10	1503	330	366	960	183			
Grp Volume(v), veh/h	424	0	0	424	0	0	165	0	0			
Grp Sat Flow(s),veh/h/ln	1586	0	0	1843	0	0	1509	0	0			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0			
Cycle Q Clear(g_c), s	10.7	0.0	0.0	9.2	0.0	0.0	3.8	0.0	0.0			
Prop In Lane	0.08		0.06	0.02		0.18	0.24		0.12			
Lane Grp Cap(c), veh/h	748	0	0	853	0	0	643	0	0			
V/C Ratio(X)	0.57	0.00	0.00	0.50	0.00	0.00	0.26	0.00	0.00			
Avail Cap(c_a), veh/h	748	0	0	853	0	0	643	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	12.0	0.0	0.0	11.5	0.0	0.0	10.0	0.0	0.0			
Incr Delay (d2), s/veh	3.1	0.0	0.0	2.1	0.0	0.0	1.0	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.9	0.0	0.0	3.6	0.0	0.0	1.2	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.1	0.0	0.0	13.6	0.0	0.0	11.0	0.0	0.0			
LnGrp LOS	B	A	A	B	A	A	B	A	A			
Approach Vol, veh/h		424			424			165				
Approach Delay, s/veh		15.1			13.6			11.0				
Approach LOS		B			B			B				
Timer - Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		27.0		27.0				27.0				
Change Period (Y+Rc), s		4.0		4.0				4.0				
Max Green Setting (Gmax), s		23.0		23.0				23.0				
Max Q Clear Time (g_c+I1), s		5.8		12.7				11.2				
Green Ext Time (p_c), s		0.8		2.0				2.1				
Intersection Summary												
HCM 6th Ctrl Delay			13.8									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	186	50	34	164	0	0	0	0	23	82	43
Future Volume (veh/h)	0	186	50	34	164	0	0	0	0	23	82	43
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	0.96		1.00				1.00		0.92
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	1.00				1.00	0.85	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1870	1900	1885	0				1976	1961	1976
Adj Flow Rate, veh/h	0	188	51	34	166	0				23	83	43
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	0	0	2	0	1	0				0	1	0
Cap, veh/h	0	580	157	161	714	0				86	310	161
Arrive On Green	0.00	0.45	0.45	0.45	0.45	0.00				0.36	0.36	0.36
Sat Flow, veh/h	0	1277	346	185	1570	0				236	853	442
Grp Volume(v), veh/h	0	0	239	200	0	0				149	0	0
Grp Sat Flow(s),veh/h/ln	0	0	1623	1755	0	0				1532	0	0
Q Serve(g_s), s	0.0	0.0	5.2	0.0	0.0	0.0				3.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	5.2	3.6	0.0	0.0				3.8	0.0	0.0
Prop In Lane	0.00		0.21	0.17		0.00				0.15		0.29
Lane Grp Cap(c), veh/h	0	0	738	874	0	0				557	0	0
V/C Ratio(X)	0.00	0.00	0.32	0.23	0.00	0.00				0.27	0.00	0.00
Avail Cap(c_a), veh/h	0	0	738	874	0	0				557	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	9.6	9.2	0.0	0.0				12.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.2	0.6	0.0	0.0				1.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.8	1.4	0.0	0.0				1.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	10.8	9.8	0.0	0.0				13.5	0.0	0.0
LnGrp LOS	A	A	B	A	A	A				B	A	A
Approach Vol, veh/h		239			200						149	
Approach Delay, s/veh		10.8			9.8						13.5	
Approach LOS		B			A						B	

Timer - Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				30.0		25.0		30.0				
Change Period (Y+Rc), s				5.0		5.0		5.0				
Max Green Setting (Gmax), s				25.0		20.0		25.0				
Max Q Clear Time (g_c+I1), s				7.2		5.8		5.6				
Green Ext Time (p_c), s				1.3		0.6		1.1				

Intersection Summary												
HCM 6th Ctrl Delay			11.1									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	182	4	4	161	42	4	29	23	31	22	54
Future Volume (veh/h)	91	182	4	4	161	42	4	29	23	31	22	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.91		0.87	0.92		0.87	0.93		0.91	0.92		0.91
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1870	1976	1914	1976	1900	1900	1900
Adj Flow Rate, veh/h	106	212	5	5	187	49	5	34	27	36	26	63
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	1	0	0	1	2	0	4	0	0	0	0
Cap, veh/h	253	455	10	71	554	142	87	354	256	190	139	247
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	371	1023	22	8	1247	320	42	955	690	281	374	666
Grp Volume(v), veh/h	323	0	0	241	0	0	66	0	0	125	0	0
Grp Sat Flow(s),veh/h/ln	1416	0	0	1575	0	0	1688	0	0	1321	0	0
Q Serve(g_s), s	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.8	0.0	0.0	5.4	0.0	0.0	1.4	0.0	0.0	3.2	0.0	0.0
Prop In Lane	0.33		0.02	0.02		0.20	0.08		0.41	0.29		0.50
Lane Grp Cap(c), veh/h	718	0	0	768	0	0	697	0	0	575	0	0
V/C Ratio(X)	0.45	0.00	0.00	0.31	0.00	0.00	0.09	0.00	0.00	0.22	0.00	0.00
Avail Cap(c_a), veh/h	718	0	0	768	0	0	697	0	0	575	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.4	0.0	0.0	9.8	0.0	0.0	11.1	0.0	0.0	11.7	0.0	0.0
Incr Delay (d2), s/veh	2.0	0.0	0.0	1.1	0.0	0.0	0.3	0.0	0.0	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.0	1.8	0.0	0.0	0.5	0.0	0.0	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.4	0.0	0.0	10.9	0.0	0.0	11.4	0.0	0.0	12.6	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		323			241			66			125	
Approach Delay, s/veh		12.4			10.9			11.4			12.6	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.0		29.0		25.0		29.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		20.0		24.0		20.0		24.0				
Max Q Clear Time (g_c+I1), s		3.4		9.8		5.2		7.4				
Green Ext Time (p_c), s		0.2		1.8		0.6		1.3				
Intersection Summary												
HCM 6th Ctrl Delay			11.9									
HCM 6th LOS			B									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	288	41	83	387	0	0
Future Volume (Veh/h)	288	41	83	387	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	316	45	91	425	0	0
Pedestrians					49	
Lane Width (ft)					0.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	279					
pX, platoon unblocked			0.88		0.88	0.88
vC, conflicting volume			410		994	388
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			256		923	230
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		100	100
cM capacity (veh/h)			1157		242	709

Direction, Lane #	EB 1	WB 1
Volume Total	361	516
Volume Left	0	91
Volume Right	45	0
cSH	1700	1157
Volume to Capacity	0.21	0.08
Queue Length 95th (ft)	0	6
Control Delay (s)	0.0	2.2
Lane LOS		A
Approach Delay (s)	0.0	2.2
Approach LOS		

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	293	35	20	326	41	40	94	36	0	0	0
Future Volume (veh/h)	12	293	35	20	326	41	40	94	36	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.97		0.94	0.97		0.94	1.00		0.90			
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	0.85	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1945	1945	1945	1976	1914	1945	1796	1870	1856			
Adj Flow Rate, veh/h	13	312	37	21	347	44	43	100	38			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	2	2	0	4	2	7	2	3			
Cap, veh/h	78	619	71	87	680	83	149	347	132			
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43			
Sat Flow, veh/h	20	1453	168	39	1597	196	350	815	310			
Grp Volume(v), veh/h	362	0	0	412	0	0	181	0	0			
Grp Sat Flow(s),veh/h/ln	1641	0	0	1831	0	0	1475	0	0			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0			
Cycle Q Clear(g_c), s	8.7	0.0	0.0	8.8	0.0	0.0	4.3	0.0	0.0			
Prop In Lane	0.04		0.10	0.05		0.11	0.24		0.21			
Lane Grp Cap(c), veh/h	768	0	0	850	0	0	628	0	0			
V/C Ratio(X)	0.47	0.00	0.00	0.48	0.00	0.00	0.29	0.00	0.00			
Avail Cap(c_a), veh/h	768	0	0	850	0	0	628	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	11.4	0.0	0.0	11.4	0.0	0.0	10.1	0.0	0.0			
Incr Delay (d2), s/veh	2.1	0.0	0.0	2.0	0.0	0.0	1.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.1	0.0	0.0	3.5	0.0	0.0	1.4	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	0.0	0.0	13.4	0.0	0.0	11.3	0.0	0.0			
LnGrp LOS	B	A	A	B	A	A	B	A	A			
Approach Vol, veh/h		362			412			181				
Approach Delay, s/veh		13.5			13.4			11.3				
Approach LOS		B			B			B				
Timer - Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		27.0		27.0				27.0				
Change Period (Y+Rc), s		4.0		4.0				4.0				
Max Green Setting (Gmax), s		23.0		23.0				23.0				
Max Q Clear Time (g_c+I1), s		6.3		10.7				10.8				
Green Ext Time (p_c), s		0.9		1.8				2.1				
Intersection Summary												
HCM 6th Ctrl Delay			13.0									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	179	39	26	158	0	0	0	0	17	80	31
Future Volume (veh/h)	0	179	39	26	158	0	0	0	0	17	80	31
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	0.97		1.00				1.00		0.94
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	1.00				1.00	0.85	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1885	1856	1900	1870	0				1884	1976	1976
Adj Flow Rate, veh/h	0	199	43	29	176	0				19	89	34
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	1	3	0	2	0				6	0	0
Cap, veh/h	0	609	132	139	742	0				76	358	137
Arrive On Green	0.00	0.45	0.45	0.45	0.45	0.00				0.36	0.36	0.36
Sat Flow, veh/h	0	1340	289	141	1631	0				210	985	376
Grp Volume(v), veh/h	0	0	242	205	0	0				142	0	0
Grp Sat Flow(s),veh/h/ln	0	0	1629	1773	0	0				1571	0	0
Q Serve(g_s), s	0.0	0.0	5.2	0.0	0.0	0.0				3.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	5.2	3.7	0.0	0.0				3.5	0.0	0.0
Prop In Lane	0.00		0.18	0.14		0.00				0.13		0.24
Lane Grp Cap(c), veh/h	0	0	741	881	0	0				571	0	0
V/C Ratio(X)	0.00	0.00	0.33	0.23	0.00	0.00				0.25	0.00	0.00
Avail Cap(c_a), veh/h	0	0	741	881	0	0				571	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	9.6	9.2	0.0	0.0				12.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.2	0.6	0.0	0.0				1.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.8	1.4	0.0	0.0				1.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	10.8	9.8	0.0	0.0				13.3	0.0	0.0
LnGrp LOS	A	A	B	A	A	A				B	A	A
Approach Vol, veh/h		242			205						142	
Approach Delay, s/veh		10.8			9.8						13.3	
Approach LOS		B			A						B	

Timer - Assigned Phs		4		6		8						
Phs Duration (G+Y+Rc), s		30.0		25.0		30.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		25.0		20.0		25.0						
Max Q Clear Time (g_c+I1), s		7.2		5.5		5.7						
Green Ext Time (p_c), s		1.3		0.6		1.1						

Intersection Summary												
HCM 6th Ctrl Delay		11.0										
HCM 6th LOS		B										

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	162	2	1	138	50	5	7	2	54	4	75
Future Volume (veh/h)	116	162	2	1	138	50	5	7	2	54	4	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.92		0.87	0.93		0.87	0.95		0.93	0.93		0.93
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1900	418	1885	1870	1359	1097	1205	1870	1900	1900
Adj Flow Rate, veh/h	155	216	3	1	184	67	7	9	3	72	5	100
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	3	0	0	100	1	2	40	57	50	2	0	0
Cap, veh/h	310	389	5	67	506	183	194	187	54	255	45	268
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	486	876	11	1	1138	412	276	506	147	436	121	724
Grp Volume(v), veh/h	374	0	0	252	0	0	19	0	0	177	0	0
Grp Sat Flow(s),veh/h/ln	1373	0	0	1551	0	0	929	0	0	1282	0	0
Q Serve(g_s), s	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0
Cycle Q Clear(g_c), s	9.9	0.0	0.0	5.8	0.0	0.0	0.6	0.0	0.0	5.1	0.0	0.0
Prop In Lane	0.41		0.01	0.00		0.27	0.37		0.16	0.41		0.56
Lane Grp Cap(c), veh/h	705	0	0	756	0	0	435	0	0	569	0	0
V/C Ratio(X)	0.53	0.00	0.00	0.33	0.00	0.00	0.04	0.00	0.00	0.31	0.00	0.00
Avail Cap(c_a), veh/h	705	0	0	756	0	0	435	0	0	569	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.9	0.0	0.0	9.9	0.0	0.0	10.9	0.0	0.0	12.2	0.0	0.0
Incr Delay (d2), s/veh	2.9	0.0	0.0	1.2	0.0	0.0	0.2	0.0	0.0	1.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	0.0	1.9	0.0	0.0	0.1	0.0	0.0	1.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.7	0.0	0.0	11.1	0.0	0.0	11.1	0.0	0.0	13.7	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		374			252			19			177	
Approach Delay, s/veh		13.7			11.1			11.1			13.7	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.0		29.0		25.0		29.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		20.0		24.0		20.0		24.0				
Max Q Clear Time (g_c+I1), s		2.6		11.9		7.1		7.8				
Green Ext Time (p_c), s		0.0		2.0		0.8		1.3				
Intersection Summary												
HCM 6th Ctrl Delay			12.8									
HCM 6th LOS			B									

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	16	30	139	11	20	117
Future Volume (Veh/h)	16	30	139	11	20	117
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	33	151	12	22	127
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			652			351
pX, platoon unblocked						
vC, conflicting volume	328	157			163	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	328	157			163	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	96			98	
cM capacity (veh/h)	660	894			1428	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	50	163	149
Volume Left	17	0	22
Volume Right	33	12	0
cSH	798	1700	1428
Volume to Capacity	0.06	0.10	0.02
Queue Length 95th (ft)	5	0	1
Control Delay (s)	9.8	0.0	1.2
Lane LOS	A		A
Approach Delay (s)	9.8	0.0	1.2
Approach LOS	A		

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	28.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	293	60	96	402	0	0
Future Volume (Veh/h)	293	60	96	402	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	312	64	102	428	0	0
Pedestrians					60	
Lane Width (ft)					0.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	279					
pX, platoon unblocked			0.84		0.84	0.84
vC, conflicting volume			436		1036	404
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			236		949	198
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			91		100	100
cM capacity (veh/h)			1131		221	710

Direction, Lane #	EB 1	WB 1
Volume Total	376	530
Volume Left	0	102
Volume Right	64	0
cSH	1700	1131
Volume to Capacity	0.22	0.09
Queue Length 95th (ft)	0	7
Control Delay (s)	0.0	2.5
Lane LOS		A
Approach Delay (s)	0.0	2.5
Approach LOS		

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	329	39	24	309	69	42	112	24	0	0	0
Future Volume (veh/h)	33	329	39	24	309	69	42	112	24	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	0.95		0.89	0.95		0.89	1.00		0.88			
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	0.85	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1945	1930	1930	1976	1961	1945	1885	1870	1885			
Adj Flow Rate, veh/h	36	362	43	26	340	76	46	123	26			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	3	3	0	1	2	1	2	1			
Cap, veh/h	100	576	65	91	618	133	151	404	85			
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.14	0.14	0.14			
Sat Flow, veh/h	65	1353	153	48	1451	311	355	948	200			
Grp Volume(v), veh/h	441	0	0	442	0	0	195	0	0			
Grp Sat Flow(s),veh/h/ln	1571	0	0	1811	0	0	1503	0	0			
Q Serve(g_s), s	0.7	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0			
Cycle Q Clear(g_c), s	11.5	0.0	0.0	9.7	0.0	0.0	6.3	0.0	0.0			
Prop In Lane	0.08		0.10	0.06		0.17	0.24		0.13			
Lane Grp Cap(c), veh/h	741	0	0	842	0	0	640	0	0			
V/C Ratio(X)	0.59	0.00	0.00	0.53	0.00	0.00	0.30	0.00	0.00			
Avail Cap(c_a), veh/h	741	0	0	842	0	0	640	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	12.2	0.0	0.0	11.7	0.0	0.0	16.0	0.0	0.0			
Incr Delay (d2), s/veh	3.5	0.0	0.0	2.3	0.0	0.0	1.2	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.2	0.0	0.0	3.9	0.0	0.0	2.3	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.7	0.0	0.0	14.0	0.0	0.0	17.3	0.0	0.0			
LnGrp LOS	B	A	A	B	A	A	B	A	A			
Approach Vol, veh/h		441			442			195				
Approach Delay, s/veh		15.7			14.0			17.3				
Approach LOS		B			B			B				
Timer - Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		27.0		27.0				27.0				
Change Period (Y+Rc), s		4.0		4.0				4.0				
Max Green Setting (Gmax), s		23.0		23.0				23.0				
Max Q Clear Time (g_c+I1), s		8.3		13.5				11.7				
Green Ext Time (p_c), s		0.9		2.0				2.2				
Intersection Summary												
HCM 6th Ctrl Delay			15.3									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	195	50	34	174	0	0	0	0	23	82	43
Future Volume (veh/h)	0	195	50	34	174	0	0	0	0	23	82	43
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	0.96		1.00				1.00		0.92
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	1.00				1.00	0.85	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1870	1900	1885	0				1976	1961	1976
Adj Flow Rate, veh/h	0	197	51	34	176	0				23	83	43
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	0	0	2	0	1	0				0	1	0
Cap, veh/h	0	587	152	155	722	0				86	310	161
Arrive On Green	0.00	0.45	0.45	0.45	0.45	0.00				0.36	0.36	0.36
Sat Flow, veh/h	0	1292	334	173	1589	0				236	853	442
Grp Volume(v), veh/h	0	0	248	210	0	0				149	0	0
Grp Sat Flow(s),veh/h/ln	0	0	1626	1762	0	0				1532	0	0
Q Serve(g_s), s	0.0	0.0	5.4	0.0	0.0	0.0				3.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	5.4	3.8	0.0	0.0				3.8	0.0	0.0
Prop In Lane	0.00		0.21	0.16		0.00				0.15		0.29
Lane Grp Cap(c), veh/h	0	0	739	877	0	0				557	0	0
V/C Ratio(X)	0.00	0.00	0.34	0.24	0.00	0.00				0.27	0.00	0.00
Avail Cap(c_a), veh/h	0	0	739	877	0	0				557	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	9.7	9.2	0.0	0.0				12.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.2	0.6	0.0	0.0				1.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.8	1.4	0.0	0.0				1.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	10.9	9.9	0.0	0.0				13.5	0.0	0.0
LnGrp LOS	A	A	B	A	A	A				B	A	A
Approach Vol, veh/h		248			210						149	
Approach Delay, s/veh		10.9			9.9						13.5	
Approach LOS		B			A						B	

Timer - Assigned Phs		4		6		8						
Phs Duration (G+Y+Rc), s		30.0		25.0		30.0						
Change Period (Y+Rc), s		5.0		5.0		5.0						
Max Green Setting (Gmax), s		25.0		20.0		25.0						
Max Q Clear Time (g_c+I1), s		7.4		5.8		5.8						
Green Ext Time (p_c), s		1.3		0.6		1.1						

Intersection Summary												
HCM 6th Ctrl Delay		11.2										
HCM 6th LOS		B										

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	182	4	4	161	52	4	29	23	40	22	60
Future Volume (veh/h)	98	182	4	4	161	52	4	29	23	40	22	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.92		0.87	0.92		0.87	0.93		0.91	0.92		0.91
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	0.88
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1900	1900	1885	1870	1976	1914	1976	1900	1900	1900
Adj Flow Rate, veh/h	114	212	5	5	187	60	5	34	27	47	26	70
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	1	0	0	1	2	0	4	0	0	0	0
Cap, veh/h	264	441	9	71	524	165	87	354	256	212	123	236
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	392	992	21	7	1179	371	42	955	690	333	333	638
Grp Volume(v), veh/h	331	0	0	252	0	0	66	0	0	143	0	0
Grp Sat Flow(s),veh/h/ln	1405	0	0	1557	0	0	1687	0	0	1303	0	0
Q Serve(g_s), s	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.0	0.0	0.0	5.8	0.0	0.0	1.4	0.0	0.0	3.7	0.0	0.0
Prop In Lane	0.34		0.02	0.02		0.24	0.08		0.41	0.33		0.49
Lane Grp Cap(c), veh/h	714	0	0	760	0	0	697	0	0	571	0	0
V/C Ratio(X)	0.46	0.00	0.00	0.33	0.00	0.00	0.09	0.00	0.00	0.25	0.00	0.00
Avail Cap(c_a), veh/h	714	0	0	760	0	0	697	0	0	571	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.4	0.0	0.0	9.9	0.0	0.0	11.1	0.0	0.0	11.9	0.0	0.0
Incr Delay (d2), s/veh	2.2	0.0	0.0	1.2	0.0	0.0	0.3	0.0	0.0	1.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.0	1.9	0.0	0.0	0.5	0.0	0.0	1.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.6	0.0	0.0	11.1	0.0	0.0	11.4	0.0	0.0	12.9	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		331			252			66			143	
Approach Delay, s/veh		12.6			11.1			11.4			12.9	
Approach LOS		B			B			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.0		29.0		25.0		29.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		20.0		24.0		20.0		24.0				
Max Q Clear Time (g_c+I1), s		3.4		10.0		5.7		7.8				
Green Ext Time (p_c), s		0.2		1.8		0.6		1.3				
Intersection Summary												
HCM 6th Ctrl Delay			12.1									
HCM 6th LOS			B									

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	15	28	151	17	32	107
Future Volume (Veh/h)	15	28	151	17	32	107
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	30	164	18	35	116
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			652			351
pX, platoon unblocked						
vC, conflicting volume	359	173			182	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	359	173			182	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	97			98	
cM capacity (veh/h)	628	876			1405	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	46	182	151
Volume Left	16	0	35
Volume Right	30	18	0
cSH	770	1700	1405
Volume to Capacity	0.06	0.11	0.02
Queue Length 95th (ft)	5	0	2
Control Delay (s)	10.0	0.0	1.9
Lane LOS	A		A
Approach Delay (s)	10.0	0.0	1.9
Approach LOS	A		

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	29.7%	ICU Level of Service	A
Analysis Period (min)	15		